



ST. GEORGE 20 N. MAIN ST. #103 ST. GEORGE, UT 435.522.7070



PCSD TRAILSIDE ELEM. ADDITION

5700 Trailside Dr, Park City, UT 84098 PCSD PARK CITY SCHOOL DISTRICT

VCBO NUMBER: 21635.04

CONSTRUCTION DOCUMENTS 2024 03 08





PCSD PARK CITY SCHOOL DISTRICT 2700 KEARNS BLVD

PARK CITY, UT 84060 435.645.5600

owner

architect

801.575.8800

VERN LATHAM | BREANNA BONSAVAGE VCBO ARCHITECTURE 524 SOUTH 600 EAST SALT LAKE CITY, UT 84102 bbonsavage@vcbo.com

civil engineer

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structural engineer

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mechanical engineer

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electrical engineer

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landscape architect

RICHARD GILBERT ARCSITIO DESIGN, INC. 1058 E 2100 S SALT LAKE CITY, UT 84106 rgilbert@archsitiodesign.com 801.487.4923

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	ABBRE	EVIATIONS	NOT ALL	ABBREVIATIONS MAY BE USED	UTILITY CONTACTS	PROJECT TEAM
	& @	AND AT	LAV LB / LBS	LAVATORY POUND (S)	power	owner
	ACT ADJ AFF ALT AL / ALUM APPROX ARCH	ACOUSTICAL CEILING TILE ADJUSTABLE ABOVE FINISH FLOOR ALTERNATE ALUMINUM APPROXIMATE ARCHITECTURAL	MAT MAX MDF MECH MEMB MEZZ MFR	MATERIAL (S) MAXIMUM MEDIUM DENSITY MECHANICAL MEMBRANE MEZZANINE MANUFACTURER	LOUIS DISTEFANO ROCKY MOUNTAIN POWER louis.distefano@pacificorp.com 801.516.8297	PCSD PARK CITY SCHOOL DISTRICT 2700 KEARNS BLVD PARK CITY, UT 84060 435.645.5600 architect
E	BD BLDG BLK BO BRG BSMT	BOARD BUILDING BLOCK(ING) BOTTOM OF BEARING BASEMENT	MGR MIN MIR MISC MO MTD MTL	MANAGER MINIMUM MIRROR MISCELANEOUS MASONRY OPENING MOUNT (ED) METAL	333 S. STATE STREET P.O. BOX 45360 SALT LAKE CITY, UT 84145 801.324.5555	VERN LATHAM BREANNA BONSAVAGE VCBO ARCHITECTURE 524 SOUTH 600 EAST SALT LAKE CITY, UT 84102 bbonsavage@vcbo.com 801.575.8800
	BS BW CAB CB CCSA CG	BOTH SIDES BOTH WAYS CABINET CATCH BASIN CUSTOM COLOR SELECTED BY ARCHITECT CORNER GUARD	MW NIC NO. NOM NRC NTS	MICROWAVE NORTH NOT IN CONTRACT NUMBER NOMINAL NOISE REDUCTION COEFFICIENT NOT TO SCALE	water/storm drain mike Bradley MOUNTAIN REGIONAL mike@mtregional.org 435.940.1916	CIVII engineer NICHOLE LUTHI MERIDIAN ENGINEERING, INC 1628 WEST 11010 SOUTH, SUITE 102 SOUTH JORDAN, UTAH 84095 nluthi@meiamerica.com 801.569.1315
	CHAM CJ CL CLG CLR CR CM COL COMP	CHAMFER CONTROL JOINT CENTER LINE CEILING CLEAR CONSTRUCTION MANAGER COLUMN COMPUTER CONCRETE	OC OD OFCI OFD OH OPG OPP	ON CENTER OUTSIDE DIAMETER OWNER FURNISHED/ CONTRACTOR INSTALLED OVERFLOW DRAIN OVERHEAD OPENING OPPOSITE	SEWER KEVIN BERKLEY SNYDERVILLE BASIN WATER RECLAMATION DISTRICT 2800 HOMESTEAD RD. PARK CITY, UT 84098 435.214.5228	structural engineer JEROD JOHNSON REAVELEY ENGINEERING 675 EAST 500 SOUTH, SUITE 400 SALT LAKE CITY, UT 84102 jjohnson@reaveley.com 801.505.4016
	CONT CMU CSBA CT D DB	CONTINUOUS CONCRETE MASONRY UNIT COLOR SELECTED BY ARCHITECT CERAMIC TILE DEPTH DECK BEARING	OSB OZ PERI PERM PL PLAM	OFFOSITE ORIENTED STRAND BOARD OUNCE PERIMETER PERMANENT PLATE PLASTIC LAMINATE	telephone KORBY WHITING CENTURY LINK korby.whiting@lumen.com 385.208.6724	mechanical engineer GABE ROBERTS VBFA ENGINEERING 181 EAST 5600 SOUTH MURRAY, UT 84107 groberts@vbfa.com 801.530.3148
	DBL DEPT DF DIA DIM DN DRN DTL/DET DW	DOUBLE DEPARTMENT DRINKING FOUNTAIN DIAMETER DIMENSION DOWN DRAIN DETAIL DISHWASHER	PNL PNT P.O. PR PT PART PLY QT	PANEL PAINT (ED) POINT OF PAIR POST TENSIONED PARTITION PLYWOOD QUARRY TILE		electrical engineer SCOTT KINGERY ENVISION ENGINEERING 240 E MORRIS AVE, SUITE 200 SALT LAKE CITY, UT 84115 skingery@envisioneng.com 801.534.1130
D	DWG E (E) EA EIFS EJ ELEC ELEV EQ EQUIP EVAP EXIST	DRAWING EAST EXISTING EACH EXTERIOR INSULATION SYSTEM EXPANSION JOINT ELECTRICAL ELEVATION EQUAL EQUIPMENT EVAPORATIVE EXISTING	R / RAD RCP REC REF REFG REINF REM REPL REQD REV RM RO	RADIUS REFLECTED CEILING PLAN RECESSED REFERENCE REFRIGERATOR REINFORCE (ED) REMOVE (ED) REPLACE REQUIRED REVISION (S) ROOM ROUGH OPENING	SHEET NUMBERING +	Iandscape architect RICHARD GILBERT ARCSITIO DESIGN, INC. 1058 E 2100 S SALT LAKE CITY , UT 84106 rgilbert@archsitiodesign.com 801.487.4923
	EXP EXT EWC FA FD FDN FE FEC FG FH FIN FLR F.O. FT	EXPANSION EXTERIOR ELECTRIC WATER COOLER FIRE ALARM FLOOR DRAIN FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISH GRADE FIRE HYDRANT FINISHED FLOOR FACE OF FOOT. FEET	S SALV SECT SF SIM SLNT SPEC SQ SS STC STD STL STOR STRUC	SOUTH SALVAGE (ED) SECTION SQUARE FOOT SIMILAR SEALANT SPECIFICATION (S) SQUARE STAINLESS STEEL SOUND TRANSMISSION CLASS STANDARD STEEL STORAGE STRUCTURE (AL)	 DESIGNATOR <	THIS IS A QUICK REFERENCE GUIDE TO THE SHEET NUMBERING AND NAMING SYSTEM USE IN VCBO CONSTRUCTION DOCUMENTS. PLAN TYPE .0 SLAB PLAN .1 ANNOTATED PLAN .2 DIMENSION + WALL TYPE PLAN .3 EINISH PLAN
С	FRP FRT FV GA GALV GB GC GFRC GYP GWB	FIBER REINFORCED PANEL FIRE RETARDANT TREATED WOOD FOOTING FIELD VERIFY GAUGE GALVANIZED GRAB BAR GENERAL CONTRACTOR GLASSFIBER REINFORCED PANEL GYPSUM GYPSUM WALLBOARD	SUSP SYM T & B T & G TBD TEMP THRU T.O. TRANS TS	SUSPENDED SYMMETRY (ICAL) THICKNESS TOP AND BOTTOM TONGUE AND GROOVE TO BE DETERMINED TEMPORARY THROUGH TOP OF TRANSFORMER TUBE STEEL		.4 REFLECTED CEILING PLAN SEQUENCE DENOTES AREA SEQUENCE IN PLAN, AND NUM SEQUENCE IN NON-PLAN SHEETS LEVEL DENOTES LEVEL IN A MULTI-STORY BUILDING. BECOMES A SEQUENCE NUMBER DENOTING DIVISIONS IN NON-PLAN SHEETS SHEET TYPE SEQUENCE
	HB HC HDW HDF HM H HOR	HOSE BIB HANDICAP ACCESSIBLE HARDWARE HIGH DENSITY FIBERBOARD HOLLOW METAL HEIGHT HORIZONTAL	TYP UNF UNO VAR VB VCT VFRT	TYPICAL UNFINISHED UNLESS OTHERWISE NOTED VARIES VAPOR BARRIER VINYL COMPOSITION TILE VERTICAL		 GENERAL NOTES + LEGENDS FLOOR PLANS ELEVATIONS SECTIONS ENLARGED PLANS, ELEVATIONS, SECTION DETAILS DOOR, WINDOW, OTHER SCHEDULES SIGNAGE USER DEFINED DETAILS
	ID ICF INCL INFO INT INSUL INV	INSIDE DIAMETER INSULATED CONCRETE FORM INCH INCLUDE INFORMATION INTERIOR INSULATE, (D), (ION) INVERT	W W W W/ WC WD W/O	VESTIBULE VINYL WALL COVERING WEST WIDTH WITH WATER CLOSET WOOD WITHOUT		9 3D DRAWINGS + PERSPECTIVES
	JST JT	JOIST JOINT	WSCT WWF	WAINSCOT WELDED WIRE FABRIC		

VICINITY MAP



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DEFERRED SUBMITTALS

CONTRACTOR IS RESPONSIBLE TO SUBMIT DEFERRED SUBMITTALS IN ACCORDANCE WITH IBC 107.3.4.2. AS PART OF THE SUBMITTAL PROCESS, THE CONTRACTOR IS TO SUBMIT ALL ICC ERS REPORTS FOR ITEMS NOTED.

- METAL FABRICATIONS (STAIRS AND LADDERS)
- ALUMINUM CURTAIN WALLS SUSPENDED CEILING SYSTEMS CUSTOM SUSPENDED MILLWORK
- MECHANICAL SEISMIC RESTRAINTS FIRE ALARM SYSTEMS
- ELECTRICAL SEISMIC RESTRAINTS FIRE PROTECTION PER 107.2.2 ROOFING MATERIALS

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CASEWORK DETAILS

DOOR SCHEDULE + ELEVATIONS

A571

A600

4

4

1.0 GENERAL		A711	SIGNAGE DETAILS & PLAN
CV	COVER		
G001	GENERAL INFORMATION + INDEX	10 - STRUCTURA	-
G101	CODE + LIFE SAFETY	SE001	GENERAL STRUCTURAL NOTES
G201		SE002	
G202	UL RATED CAVITY WALL + COLUMN ASSEMBLIES	SE003	LEGENDS & ABBREVIATIONS
G301	TYP ANSI ACCESSIBILITY STANDARDS	SG101	
0.0.011		SB101	FOOTING & FOUNDATION PLAN - ADDITION
2.0 - CIVIL		SB501	TYPICAL FOOTING & FOUNDATION DETAILS
C100	GENERAL NOTES AND DETAILS	SB502	TYPICAL FOOTING & FOUNDATION DETAILS
C101	GENERAL DE TAILS	SB601	CONCRETE SCHEDULES
C200	EXISTING SURVEY AND TOPOGRAPHY	SB602	REINFORCING SCHEDULES
CS210	DEMOLITION PLAN	SB611	MASONRY SCHEDULES
CS230	SHEPLAN	SD101	
CU300		S101	
CG400	GRADING PLAN	SF101	ROOF FRAMING PLAN - ADDITION
CG450	HYDROLOGY PLAN	SF501	ROOF FRAMING DETAILS
CG460	CUT/FILL PLAN	SF502	ROOF FRAMING DETIALS
C500	EROSION CONTROL PLAN	SF601	TYPICAL STEEL FRAMING SCHEDULES
C510	EROSION CONTROL DETAILS	SF602	STEEL COLUMN SCHEDULE AND DETAILS
		SF603	STEEL DECK SCHEDULES
2.2 LANDSCAPE		SW501	STEEL STUD DETAILS & SCHEDULES
L-L101	LANDSCAPE PLAN		
L-L501	LANDSCAPE DETAILS	20 - MECHANICAL	
L-R101	IRRIGATION PALN	M001	MECHANICAL SYMBOLS AND LEGEND
L-R102	IRRIGATION DETAILS	M002	MECHANICAL GENERAL NOTES
		MD111.1	MECHANICAL DEMOLITION PLANS
3.0 SITE DEMOL	ITION	MPD111.1	MECHANICAL PIPING DEMOLITION FLOOR PLANS
ADS101	OVERALL SITE DEMOLITION PLAN	M111.1	MECHANICAL FLOOR PLANS
		M121.1	ROOF MECHANICAL PLANS
3.5 ARCHITECTL	JRAL SITE	M501	MECHANICAL DETAILS
AS101	OVERALL SITE PLAN - TRAILSIDE ELEM.	M502	MECHANICAL DETAILS
AS201	PLAN - ENLARGED SITE	M601	MECHANICAL SCHEDULES
AS501	SITE DETAILS	M801	MECHANCIAL ZONE PLANS
		MP111.1	MECHANICAL PIPING FLOOR PLANS
4.0 DEMOLITION			
AD111.1	DEMOLITION FLOOR PLAN - LEVEL 01	30 - PLUMBING	
AD111.4	DEMOLITION - RCP LEVEL 01	PD111.1	PLUMBING DEMOLITION PLANS
AD301	DEMOLITION SECTIONS	P111.1	PLUMBING FLOOR PLANS
		P401	ENLARGED PLUMBING PLANS
5.0 ARCHITECTL	JRAL	P501	PLUMBING DETAILS AND SCHEDULES
A110	OVERALL FLOOR PLAN - LEVEL 01		
A111.1	ANNOTATED + FINISH PLAN- LEVEL 01	50 - ELECTRICAL	
A111.2	DIMENSION + WALL TYPE PLAN - LEVEL 01	EG001	GENERAL NOTES AND SYMBOLS LISTS
A111 4	REFLECTED CEILING PLAN - LEVEL 01	EG002	
A120		ED101	LEVEL 01 - LIGHTING DEMOLITION PLAN
A121 1	PLAN - ROOF - AREA A	ED 101	LEVEL 01 - POWER AND SYSTEMS DEMOLITION PLAN
A201	EXTERIOR ELEVATIONS	ED 102	
A301	BUILDING SECTIONS	FI 101	I EVEL 01 - LIGHTING PLAN
A351		EL 501	LIGHTING DETAILS AND LIGHT FIXTURE SCHEDULE
Δ352	WALL SECTIONS	ED101	
A332		EP601	
A400		EF001	
A401 A402		EP 002	
A402		EF701	
A403			
A404			
A500			
ALOO		EY/U3	
A520		EA101	
A530	CEILING DETAILS	EA301	AUDIO VISUAL SECTIONS AND ELEVATIONS
A540		EI101	LEVEL 1 - INTERCOM
A550	VERTICAL CIRCULATION DETAILS	EI701	AUDIO VISUAL RISER AND EQUIPMENT LIST
A560	DOOR + WINDOW DETAILS	Grand total: 110	
A561	DOOR + WINDOW DETAILS		
A563	INTERIOR STOREFRONT GLAZING DETAILS		
A565	BUTT GLAZING DETAILS		
A570	CASEWORK DETAILS		

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NOTES TO BIDDERS

1.	THIS SHEET CONTAINS A LIST OF DRAWINGS WHICH COMPRISE A FULL SET C
	FOR THIS PROJECT. ANY CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY
	PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT SHALL BE RESPON
	THE INFORMATION CONTAINED IN ANY AND ALL SHEETS OF DRAWINGS AND
	SPECIFICATIONS. IF ANY PERSON, PARTY OR ENTITY ELECTS TO SUBMIT BID
	PORTION, OR ALL, OF THIS PROJECT, THAT PERSON, PARTY OR ENTITY SHAL
	RESPONSIBLE FOR ANY AND ALL INFORMATION CONTAINED IN THESE DRAWI
	SPECIFICATIONS, INCLUDING, BUT NOT LIMITED TO, ANY SUBSEQUENT ADDE
	CLARIFICATIONS THAT MAY BE ISSUED.

- 2. THESE DOCUMENTS SHOW THE DESIGN INTENT. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE EVERYTHING SHOWN ON THE DRAWINGS OR SPECIFIED REGARDLESS OF WHERE IT IS SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS. FOR EXAMPLE; SOME MILLWORK DETAILS HAVE STEEL FRAMES WHICH MAY BE PROVIDED BY DIVISION 05 OR WITH THE MILLWORK AT THE CONTRACTOR'S DISCRETION, BUT IT SHALL BE PROVIDED AS PART OF THE CONTRACT.
- 3. EVERYTHING CALLED FOR IN THESE DOCUMENTS SHALL BE "NEW" AND PROVIDED BY THE CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT UNLESS NOTED OTHERWISE AS EXISTING (EXIST), NOT IN CONTRACT (NIC) OR FOR REFERENCE ONLY. FURNISHINGS SHOWN DASHED SHALL BE FOR REFERENCE ONLY.





LEGEND - OCCUPANCY							
Occupancy	Table 10-A	Occupant Load Factor	Total Occupants	Level	Coun		
	Assembly - Concentrated (chairs only - not fixed)	7	448	LEVEL 100'	1		
	Assembly - Unconcentrated (tables and chairs)	15	180	LEVEL 100'	1		
	Business Area	100	85	LEVEL 100'	28		
	Education - Classroom	20	1265	LEVEL 100'	30		
	Educational Shop and Vocational Area	50	115	LEVEL 100'	6		
	Kitchen - Commercial	200	8	LEVEL 100'	2		
	Library - Reading Room	50	37	LEVEL 100'	2		
	Library - Stack Area	100	13	LEVEL 100'	1		
	Stage and Platform	15	78	LEVEL 100'	1		
	Acessory Storage Area, Mechanical, Equipment Room	300	22	LEVEL 100'	19		
nd total		1	2251				

PLUMBING FIXTURE A	NALY	SIS	DESIGN DATA	6
EXISTING			EXISTING BUILDING NARRATIVE:	AUTOMATIC SPRINKLER SYSTEM: PER SECTION 903 - YES
OCCUPANCY TYPE	E		 TOTAL BUILDING AREA 74,987 SQUARE FEET 	DESIGN OCCUPANCY LOAD: PER SECTION 1004
TOTAL APPLICABLE S.F.	80,450	74,987 EXG. + 5,463 ADDITION	REMODELED AREA A 104 SOLVADE EFET	TOTAL OCCUPANTS - 2,251 OCCUPANTS
TOTAL OCCUPANT LOAD DESIGN OCCUPANT LOAD* - (MULT-PURPOSE, MEDIA CENTER, PLATFORM, AND ACTIVITY COMMONS)	2,251 1,420		 2001 EXISTING BUILDING CONSTRUCTED WITH TYPE OF CONSTRUCTION II-N FOR THE MAIN BUILDING AND II-1 HR AT THE MULTI-PURPOSE ROOM, UNDER THE 1997 U.B.C. WITH A BUILDING OCCUPANCY CLASSIFICATION OF E - EDUCATIONAL EXISTING CONSTRUCTION IS SPRINKLERED 	 EGRESS WIDTH FOR OCCUPANCY SERVED: PER 1005 REQUIRED STAIR WIDTH: 295 OCCS. x 0.3 = 88.5" TOTAL STAIR WIDTH PROVIDED: 327"
	740		REMODELED CLASSROOMS INCLUDE NEW FINISHES, LIGHTING AND (2) NEW RESTROOMS	 MAIN LEVEL: 2,251 OCCS. x 0.2 = 450" MAIN LEVEL PROVIDED: 1,530"
WATER CLOSETS	710		BUILDING ADDITION DESIGN DATA	EXIT ACCESS - CH 10
FEMALE (1:50)	15	REQUIRED		
	21	PROVIDED - (19 - EXG., 2 - ADDITION)	GOVERNING BUILDING CODES: IBC 2021: ANSI 117-1 2017: NEPA 101 LIFE SAFETY 2019: IMC 2021: IPC 2021: IECC 2021. for	COMMON PATH OF EGRESS TRAVEL: PER TABLE 1006.2.1 - 75 FEET
MALE (1:50)	15	REQUIRED	commercial projects; IFGC 2021; NEC 2020	2 EXITS REQUIRED - PER 1006.3.2
URINALS (67% OF WC IN A and E, 50% all other occupancies)	8	URINAL PROVIDED - (EXG - 8, 0 - ADDITION)	PROJECT DESCRIPTION: ONE STORY ELEMENTARY SCHOOL - STEPPED	 WHERE THE OCCUPANCY LOAD TOTALS MORE THAN 50 PLACE FAR ENOUGH APART - NOT LESS THAT 1/2 MAXIMUM DIA AREA SERVED (MEASURED STRAIGHT LINE BETWEEN EXITS) OR
			OCCUPANCY TYPE - CH.3	DIMESION OF AREA SERVED WHERE BUIDING IS SPRINKLED.
	45			THROUGH INTERVENING SPACES PER 1016.2
FEMALE (1.50)	15		CONSTRUCTION TYPE - CH.6 • TYPE II-B (SECTION 602)	 PERMITTED WHERE ADJOINING ROOMS OR AREAS ACCESSORY NOT HIGH HAZARD OCCUPANCY AND PROVIDE A DISCERNIBLE
MALE (1:50)	15	REQUIRED		TO AN EXIT.
	30	PROVIDED - (28 - EXG., 2 - ADDITION)	ALLOWABLE BUILDING HEIGHT: PER TABLE 504.3: 75 FEET • ACTUAL HEIGHT - 18'-0" AT ADDITION	TRAVEL DISTANCE: PER TABLE 1017.2
			ALLOWABLE STORIES ABOVE GRADE PLANE: PER TABLE 504.4: 3 STORIES	WITT OF MINICELY OF OTHER - 200 MAXIMUM EENOTTOP EXTRAC
			ACTUAL STORIES - 1 (STEPPED PLAN)	CORRIDOR FIRE RESISTANCE RATING: PER TABLE 1020.2 WITH SPRINKLER SYSTEM - 0 HOUR FIRE RATED CONSTRUCTION
1:100 (50% may be water coolers or bottled water per IPC 2021 410 3 Substitution)	15	REQUIRED	BUILDING AREA: PER SECTION 507	
	40	PROVIDED - (35 - EXG., 0 - ADDITION)	 ADDITION AREA = 5,463 SQUARE FEET TOTAL BUILDING AREA = 80,450 SQUARE FEET 	 MINIMUM CORRIDOR WIDTH: PER TABLE 1020.3 IN INCHES 44" UNLESS NOTED OTHERWISE 36" WITH AN OCCUPANT LOAD OF LESS THAN 50 72" CROUDE WITH OCCUPANT LOAD OF 100 OF MODE
SERVICE SINK	·		• PER SECTION 507.11 FOR GROUP E BUILDINGS OF TYPE IIB CONSTRUCTION AND SINGLE	72 GROUP E WITH OCCUPANT LOAD OF 100 OR MORE
	1	REQUIRED PROVIDED - (2 - EXG.)	STORY, UNLIMITED AREA APPLIES. EACH CLASSROOM HAS TWO MEANS OF EGRESS, ONE OF WHICH EXITS TO THE EXTERIOR. THE EXISTING AND ADDITION IS FOULIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM IN	 DEAD ENDS: PER 1020.5, EXCEPTION 2 50'-0" GROUP E WITH AUTOMATIC SPRINKLER SYSTEM
SHOWERS			ACCORDANCE WITH SECTION 903.3.1.1.	INTERIOR WALL & CEILING FINISH REQUIREMENTS: PER TABLE 803.1
	2	EXISTING	THE BUILDING IS SURROUNDED AND ADJOINED BY PUBLIC WAYS OR YARDS NOT LESS THAN 60 FEET IN WIDTH ON ALL SIDES.	 IN SPRINKLERED BUILDING : EXIT ENCLOSURES AND EXIT PASSAGEWAYS - CLASS B CORRIDORS AND OTHER EXIT WAYS - CLASS C BOOMS AND ENCLOSED SPACES - CLASS C^m
			INCIDENTAL USE AREAS: PER TABLE 509.1	• ROOMS AND ENCLOSED SPACES - CLASS C*
* MULTIPURPOSE, PLATFORM, MEDIA CEN BY THE SAME STUDENTS AND FACULTY AS EXCLUDED FROM THE OCCUPANT LOAD F	TER, AND A S THE CLAS OR THE TC	ACTIVITY COMMONS WILL BE OCCUPIED SSROOMS, AND THUS HAVE BEEN ILET FIXTURES	 PROTECTION: PER SECTION 509.4.2 Where Table 509 permits an automatic sprinkler system without a fire barrier, the incidental uses shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. Doors shall be self- or automatic-closing upon detection of smoke in accordance with Section 716.2.6.6. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80. Walls surrounding the incidental use shall not have air transfer openings unless provided with smoke dampers in accordance with Section 710.8. 	INTERIOR FLOORS FINISH: PER 804 • IN SPRINKLERED BUILDING - CLASS I & II

UL DESIGN No. U415 - 1, 2, 3 OR 4 HR SHAFT WALL

Design No. U415 Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr



Horizontal Section System F - 2 Hr





1. Floor, Side and Ceiling Runners — "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. Steel Studs — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are

2A. Steel Studs — (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. Furring Channels — (Optional, not shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7).

2C. Furring Channels — For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in.

2D. Steel Framing Members* — (Optional, not shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7):

- a. Furring Channels Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
- b. Steel Framing Members* Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels. PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in

b. Steel Framing Members* — Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7)

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to study. Channels secured to study as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3. b. Steel Framing Members* — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PLITEQ INC — Type GENIECLIP 2G. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. **REGUPOL AMERICA** — Type SonusClip

2H. Steel Framing Members* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7)

a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4. b. Steel Framing Members* — Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

3. Gypsum Board* — Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.

CGC INC — Type SLX **UNITED STATES GYPSUM CO** — Type SLX USG BORAL DRYWALL SFZ LLC — Type SLX USG MEXICO S A DE C V — Type SLX

4. Gypsum Board* — System A - 1 H

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, WRC, WRX, USGX. When ULIX is used insulation, Item 6, Batts and Blankets* is required and minimum stud depth is

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX System B - 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX USGX WRC WRX UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX. USG BORAL DRYWALL SFZ LLC - 1/2 in. Type C: 5/8 in. Types C. SCX. SGX. USGX USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR. SCX. SHX. ULX. USGX. WRC. WRX

System C — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per Items 1, 2 and 3. Requires min 3 in. thick mineral wool batts per Item 6.

CGC INC — Types IP-X3 or ULTRACODE **UNITED STATES GYPSUM CO** — Types IP-X3 or ULTRACODE **USG BORAL DRYWALL SFZ LLC** — Type ULTRACODE **USG MEXICO S A DE C V** — Types IP-X3 or ULTRACODE

Svstem D — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.

CGC INC — Types AR. C. IP-AR. IP-X1. IP-X2. IPC-AR. SCX. SHX. ULX. USGX. WRC. WRX UNITED STATES GYPSUM CO - Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX, USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX. USG BORAL DRYWALL SFZ LLC - 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face laver attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S s screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX. **USG BORAL DRYWALL SFZ LLC** — 1/2 in. Type C; 5/8 in. Types C, SCX USG MEXICO S A DE C V - 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-

System G — 3 Hr

AR. SCX. SHX. ULX. USGX. WRC. WRX

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. . Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on

CGC INC — Types C, IP-X2, IPC-AR, WRC UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System H — 3 Hr

adiacent lavers.

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the studs, one layer over the flange of the "H" section of the studs. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, WRC UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, selftapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CGC INC — Types IP-X3 or ULTRACODE **UNITED STATES GYPSUM CO** — Types IP-X3 or ULTRACODE **USG BORAL DRYWALL SFZ LLC** — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10). **RAY-BAR ENGINEERING CORP** — Type RB-LBG

4B. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) - Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. **NEW ENGLAND LEAD BURNING CO INC, DBA NELCO** — Type Nelco

4C. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4D. Gypsum Board* - (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". **RADIATION PROTECTION PRODUCTS INC** — Type RPP - Lead Lined Drywall

5. Joint Tape and Compound — (Not Shown) Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. Batts and Blankets* ----Systems A, B, E, F, G, H, I (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance. System A With Type ULIX Gypsum Boards Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies

Systems C & D Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

ROCKWOOL — Type AFB **THERMAFIBER INC** — Type SAFB, SAFB FF

7. Cementitious Backer Units* - (System D) - Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from avpsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints. **UNITED STATES GYPSUM CO** — Type DCB

8. Laminating Adhesive* — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified companies.

9. Lead Batten Strips — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in, long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

9A. Lead Batten Strips — (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".. Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

10. Lead Discs or Tabs — (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Iter 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f. Grade "C".

10A. Lead Discs — (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B. C or D".

11. Lead Batten Strips — (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

12. Lead Tabs — (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs frictionfit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary. * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL

Certification (such as Canada), respectively. Reprinted from the Online Certifications Directory with permission from UL

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UL DESIGN NO. U419 - 1, 2, 3 OR 4 HR NON-BEARING WALL (SEE ITEMS 4 & 5 THROUGH 5K)

Last Updated on 2018-09-27



1. Floor and Ceiling Runners — (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max. CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25[™] Track CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25[™] Track **FUSION BUILDING PRODUCTS** — Viper25[™] Track **IMPERIAL MANUFACTURING GROUP INC** — Viper25[™] Track

1B. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track FUSION BUILDING PRODUCTS — Viper20[™] Track

IMPERIAL MANUFACTURING GROUP INC — Viper20[™] Track

1C. Framing Members* — Floor and Ceiling Runners — (Not Shown) — In lieu of Item 1 — Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20 QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20 SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20 **STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME D24/30EQD and Type SUPREME D20 **UNITED METAL PRODUCTS INC** — Type SUPREME D24/30EQD and Type SUPREME D20

1D. Floor and Ceiling Runners — (Not Shown) — For use with Item 2A — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1E. Framing Members* — Floor and Ceiling Runners — (Not Shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max. CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK DMFCWBS L L C — ProTRAK

MBA METAL FRAMING — ProTRAK **RAM SALES L L C** — Ram ProTRAK

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK

1E. Framing Members* — Floor and Ceiling Runners — (Not Shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max **CLARKDIETRICH BUILDING SYSTEMS** — CD ProTRAK

DMFCWBS L L C — ProTRAK **MBA METAL FRAMING** — ProTRAK

RAM SALES L L C — Ram ProTRAK STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK

1F. Framing Members* - Floor and Ceiling Runner - Not Shown - In lieu of Item 1 - For use with Item 2F. proprietary channel shaped runners, minimum width to accommodate stud size, with 1-1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC SUPER STUD BUILDING PRODUCTS — The Edge

1G. Framing Members* — Floor and Ceiling Runner — For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size attached to floor and ceiling with fasteners 24 in. OC max. **STUDCO BUILDING SYSTEMS** — CROCSTUD Track

1H. Floor and Ceiling Runners - (Not Shown) - Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.018 in. oalv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC. MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100 FUSION BUILDING PRODUCTS — Viper20[™] Track VT100 **IMPERIAL MANUFACTURING GROUP INC** — Viper20[™] Track VT100

11. Framing Members* — Floor and Ceiling Runners — (Not Shown, As an alternate to Item 1) — For use with Items 2H, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max. TELLING INDUSTRIES L L C — TRUE-TRACK™

1J. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 21, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max. **TELLING INDUSTRIES L L C** — Viper25[™] Track

1K. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2J, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel. attached to floor and ceiling with fasteners spaced 24 in. OC max. TELLING INDUSTRIES L L C — Viper20™ Track

1L. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2N, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-1/2 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. **STEEL INVESTMENT GROUP L L C** — AlphaTRAK

UL DESIGN No. U419 (continued)

1M. Framing Members* — Floor and Ceiling Runners — Not Shown — As an alternate to Item 1 — For use with Item 5A. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer 20, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling to one side of the assembly. Secured as described in Item 6. CGC INC — Type SHX with fasteners spaced 24 in. OC max. UNITED STATES GYPSUM CO — Type FRX-G. SHX. RONDO BUILDING SERVICES PTY LTD - Rondo Wall Track USG MEXICO S A DE C V — Type SHX. 1N. Framing Members* — Floor and Ceiling Runners — Not Shown — As an alternate to Item 1 — For use with Item

2P, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. **OEG BUILDING MATERIALS** — OEG Track

10. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2Q. proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max. CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X Track

2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in, OC, Studs to be cut 3/8 to 3/4 in, less than assembly height. 2A. Steel Studs — (As an alternate to Item 2, For use with Items 5B, 5E, 5H, 5J and 5K) — Channel shaped, fabricated

from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height. 2B. Framing Members* - Steel Studs — (As an alternate to Item 2, For use with Items 5C, 5I or 5K) — Proprietary

channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of avosum board only. CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™ CRACO MFG INC — SmartStud25™ MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ FUSION BUILDING PRODUCTS — Viper25™

IMPERIAL MANUFACTURING GROUP INC — Viper25[™] 2C. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min

depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in, to 3/4 in, less in lengths than assembly heights CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ FUSION BUILDING PRODUCTS — Viper20™ **IMPERIAL MANUFACTURING GROUP INC** — Viper20™

2D. Framing Members* — Steel Studs — In lieu of Item 2 — Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20 CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20 **SCAFCO STEEL STUD MANUFACTURING CO** — Type SUPREME D24/30EQD and Type SUPREME D20 **STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME D24/30EQD and Type SUPREME D20 UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

2E. Framing Members* — Steel Studs — (Not Shown, As an alternate to Item 2) — For use with Items 5F or 5G or 5I or 5K only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD DMFCWBS L L C — ProSTUD **MBA METAL FRAMING** — ProSTUD

RAM SALES L L C — Ram ProSTUD STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProSTUD

2F. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights. SUPER STUD BUILDING PRODUCTS — The Edge

2G. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped studs, minimum width indicated under Item 5. Studs to be cut 3/8 to 3/4 in less than the assembly height. STUDCO BUILDING SYSTEMS - CROCSTUD

2H. Framing Members* — Steel Studs — (Not Shown, As an alternate to Item 2) — Fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. TELLING INDUSTRIES L L C — TRUE-STUD™

21. Framing Members* — Steel Studs — (As an alternate to Item 2. For use with Items 5C or 5L or 5K) — Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly heigh and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of avpsum board only. TELLING INDUSTRIES L L C — Viper25™

2J. Framing Members* — Metal Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights TELLING INDUSTRIES L L C — Viper20™

2K. Framing Members* — Steel Studs — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. EB METAL INC — NITROSTUD

2L. Framing Members* — Steel Studs — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. **OLMAR SUPPLY INC** — PRIMESTUD

2M. Framing Members* — Steel Studs — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in, less than assembly height MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudRite™

2N. Framing Members*— Steel Studs — As an alternate to Item 2 — proprietary channel shaped steel studs, min depth 3-1/2 in. and as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in length than assembly height. **STEEL INVESTMENT GROUP L L C** — AlphaSTUD

20. Framing Members* — Steel Studs — As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max RONDO BUILDING SERVICES PTY LTD — Rondo Lipped Wall Stud

2P. Framing Members* — Steel Studs — As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max. **OEG BUILDING MATERIALS** — OEG Stud

2Q. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — For use with Item 10, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights. CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X

3. Wood Structural Panel Sheathing — (Optional, For use with Item 5 Only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in.

4. Batts and Blankets* — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

4A. Batts and Blankets* — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

4B. Batts and Blankets* — For use with Item 5K. Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

4C. Fiber, Sprayed* — (Optional) and as an alternate to Batts and Blankets (Item 4B) where insulation is required -Spray applied granulated mineral fiber material. The fiber is applied with adhesive at a minimum density of 4.0 pcf to completely fill the wall cavity in accordance with the application instructions supplied with the product. See **Fiber**, Sprayed (CCAZ). AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge ioints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Rating, Hr	Min Stud Depth, in. Items 2, 2C, 2D, 2F, 2G, 2O	No. of Layers & Thkns of Panel	Min Thkn Insulatior
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in thick Type C. IP-X2 or IPC-AR: WRC. 5/8 in thick Type AR. C. IP-AR. IP-X1. IP-X2. IPC-AR. SCX. SHX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE **UNITED STATES GYPSUM CO** — 1/2 in. thick Type C. IP-X2. IPC-AR or WRC: 5/8 in. thick Type SCX, SGX, SHX. WRX. IP-X1. AR. C. WRC. FRX-G. IP-AR. IP-X2. IPC-AR: 3/4 in. thick Types IP-X3 or ULTRACODE USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

CGC INC — Type USGX

nkns of ion (Item 4

5B. Gypsum Board* — (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with

Item 3) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12). **RAY-BAR ENGINEERING CORP** — Type RB-LBG

5C. Gypsum Board* — (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as

CGC INC — Type SCX. **UNITED STATES GYPSUM CO** — Type SCX, SGX. **USG BORAL DRYWALL SFZ LLC** — Type SCX

outlined under section VI of Volume 1 in the Fire Resistive Directory.

5D. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only

UNITED STATES GYPSUM CO — Type USGX USG BORAL DRYWALL SFZ LLC — Type USGX

USG MEXICO S A DE C V — Type USGX

USG MEXICO S A DE C V — Type SCX

5E. Gypsum Board* — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in, or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5F. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1E and 2E and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in. **UNITED STATES GYPSUM CO** — 5/8 in. thick Type SCX, SGX **USG BORAL DRYWALL SFZ LLC** — 5/8 in. thick Type SCX, SGX

5G. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1E and 2E only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel raming. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2E	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 lavers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR;, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, , FRX-G, IP-AR, IP-X2, IPC-AR, ULIX; 3/4 in. thick Types IP-X3 or ULTRACODE **USG BORAL DRYWALL SFZ LLC** — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

5H. Gypsum Board* — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or _ead Discs (see Item 12A) MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

51, Gypsum Board* — (As an alternate to Item 5) — Nom, 5/8 in thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5. CGC INC — Type ULX

UNITED STATES GYPSUM CO — Type ULX USG MEXICO S A DE C V — Type ULX

5J. Gypsum Board* — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5K. Gypsum Board* — (Not Shown) — (As an alternate to Item 5) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) need not be staggered. The number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows: Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2 through 2O	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
1	3-5/8	1 layer, 5/8 in. thick	3-1/2 in.
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 lavers, 5/8 in. thick	Optional

UNITED STATES GYPSUM CO — 5/8 in. thick Type ULIX

channels as described in Item 6. Not for use with Item 5A.

6. Fasteners — (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Two layer systems:** First layer-1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. Three-layer systems: First layer-1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer-1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third laver- 2-1/4 in, long for 1/2 in, thick panels or 2-5/8 in, long for 5/8 in, thick panels, spaced 24 in, OC, Fourth laver- 2-5/8 in, long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

7. Furring Channels — (Optional, Not Shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A.

- 7A. Framing Members* (Optional on one or both sides, not shown, for single or double layer systems) As an alternate to Item 7, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring
- b. Steel Framing Members* Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. JC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 X 1-1/2 in. minimum seit-drilling, S-12 steel scre through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 9/16 in. minimum selfdrilling. S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
- PAC INTERNATIONAL L L C Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75). 7B. Framing Members* - (Optional, Not Shown) - As an alternate to Item 7, for single or double layer systems, furring
- channels and Steel Framing Members on only one side of studs as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A.
- b. Steel Framing Members* Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips. **KINETICS NOISE CONTROL INC** — Type Isomax
- 7C. Framing Members* (Not Shown) (Optional on one or both sides, not shown, for single or double laver systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below: a. Furring Channels - Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. Steel Framing Members* — Used to attach furring channels (Item 7Ca) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. PLITEQ INC — Type GENIECLIP

7D. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. Steel Framing Members* — Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7E. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Eb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in

b. Steel Framing Members* — Used to attach furring channels (Item 7Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. **REGUPOL AMERICA** — Type SonusClip

7F. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Resilient channels and Steel Framing Members as described below: a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with Item 5A and 5E. b. Steel Framing Members* — Used to attach resilient channels (Item 7Fa) to studs. Clips spaced 48 in. OC., and

secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

Item 6. Not for use with Item 5A and 5E.

8. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in, wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. Siding, Brick or Stucco - (Optional, Not Shown) - Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. Caulking and Sealants* — (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control. UNITED STATES GYPSUM CO — Type AS

11. Lead Batten Strips — (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

11A. Lead Batten Strips — (Not Shown, For Use With Item 5H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.

12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

12A. Lead Discs — (Not Shown, for use with Item 5H) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

13. Lead Batten Strips — (Not Shown, For Use With Item 5E) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. Lead Tabs — (Not Shown, For Use With Item 5E) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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Last Updated on 2018-09-28





VCBO NUMBER CLIENT NUMBER: DATE:

REV

DATE DESCRIPTION







— 1 and 2 Hr (See Items 2 and 3A) Assembly Ratings Nominal Joint Width <u>Class II Movement Capabilities — 50% Compression or Extension</u> L Rating At Ambient — Less Than 1 CFM/Lin Ft

1. Floor Assembly — The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D900 Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features: A. Steel Floor And Form Units* — Max 3 in. (76 mm) deep galv steel fluted units

— Less Than 1 CFM/Lin Ft

A1. Steel Floor And Form Units* (Configuration B) — Composite max 2.5 in. (64 mm) deep galv steel fluted units. EPIC METALS CORP — Types "EC" or "Toris C"

B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor

C. Spray-Applied Fire Resistive Materials* — (Optional, Not Shown) — Prior to or after the installation of the steel ceiling runners, Forming Material and Fill, Void or Cavity Material (Items 2A, 3A, 3B, respectively) the steel floor units may be sprayed with a min 5/16 in. (8 mm) to max 1-3/4 in. (45 mm) thickness of fire resistive material.

GCP APPLIED TECHNOLOGIES INC — Types MK-6-HY or MK-10HB **ISOLATEK INTERNATIONAL** — Type 300

L Rating At 400°F

1A. Roof Assembly - (Not Shown) - As an alternate to the floor assembly, a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

A. Steel Roof Deck — Max 3 in. (76 mm) deep galv steel fluted roof deck. A1. Steel Floor And Form Units* (Configuration B) — Composite max 2.5 in. (64 mm) deep galv steel fluted units. EPIC METALS CORP — Types "Toris C" or "ER2R"

B. Roof Insulation — Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the floor units.

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1B. Roof Assembly — As an alternate to Items 1 and 1A, a fire rated protected fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

A. Steel Roof Deck — Max 3 in. (76 mm) deep galv steel fluted roof deck. A1. Steel Floor And Form Units* (Configuration B) — Composite max 2.5 in. (64 mm) deep galv steel fluted units. EPIC METALS CORP — Type "Toris C"

B. Spray Applied Fire Resistive Materials* — (Not Shown) — Prior to or after the installation of the steel ceiling runners. Forming Material and Fill, Void or Cavity Material (Items 2A, 3A, 3B), the roof assembly shall be sprayed with the type and thickness of fire resistive material indicated in the individual P700 Series

GCP APPLIED TECHNOLOGIES INC — Types MK-6-HY or MK-10HB **ISOLATEK INTERNATIONAL** — Type 300

2. Wall Assembly — The 1 or 2 hr fire rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2C). Flange height of ceiling runner shall be min 1/4 in. (6 mm) greater than max extended joint width. Ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. before or after optional spray-applied fire resistive material is used. The use of welds to secure the ceiling runner may only be used prior to the installation of the optional spray-applied material. A1. Light Gauge Framing* — Slotted Ceiling Runner — As an alternate to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2C). Slotted ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel fasteners or welds spaced max 24 in. (610 mm) OC before optional spray-applied fire resistive material is used. Ceiling runner installed perpendicular to direction of fluted steel deck and secured

to valleys with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. before or after optional spray-applied fire resistive material is used. The use of welds to secure the ceiling runner may only be used prior to the installation of the optional spray-applied material. BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS - SLP-TRK CALIFORNIA EXPANDED METAL PRODUCTS CO - CST CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — SDT250, SDT300 MARINO/WARE, DIV OF WARE INDUSTRIES INC - Type SLT METAL-LITE INC — The System

OLMAR SUPPLY INC — STT250, STT300 **R & P SUPPLY** — SCT250, SCT300

RAM SALES L L C — RAM Slotted Track SCAFCO STEEL STUD MANUFACTURING CO

TELLING INDUSTRIES L L C — True-Action Deflection Track

A2. Light Gauge Framing* — Vertical Deflection Ceiling Runner — When the nom joint width is less than or equal to 3/4 in. (19 mm), vertical deflection ceiling runner may be used as an alternate to the ceiling runners in Items 2A and 2A1. Vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips provided with step bushings for permanent fastening of steel studs. Flanges sized to accommodate steel studs (Item 2C). Vertical deflection ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. before or after optional sprayapplied fire resistive material is used. The use of welds to secure the ceiling runner may only be used prior to the installation of the optional spray-applied material. THE STEEL NETWORK INC — VertiTrack VTD250, VTD362, VTD400, VTD600 and VTD800

A3. Light Gauge Framing* - Notched Ceiling Runner - As an alternate to the ceiling runners in Items 2A through 2A3, notched ceiling runners to consist of C-shaped galv steel channel with notched return flanges sized to accommodate steel studs (Item 2C). Notched ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. before or after optional spray-applied fire resistive material is used. The use of welds to secure the ceiling runner may only be used prior to the installation of the optional sprayapplied material. **OLMAR SUPPLY INC** — Type SCR

B. Steel Attachment Clips — (Optional — Not Shown) — When spray applied fireproofing is used ceiling runner may be secured to deck with Z-shaped clips formed from min 1 in. (25 mm) long strips of min 20 ga galv steel. Length of clips should not exceed the width (thickness) of the wall. Clips to be sized to extend through the thickness of the spray-applied fire-resistive material on the bottom of the steel deck with 1-1/2 or 2 in. (38 or 51 mm) long upper and lower legs. Legs of clips fastened to valleys of steel deck (prior to application of spray-applied fire-resistive materials) and top of ceiling runner with steel masonry anchors. steel fasteners or welds. Clips spaced max 24 in. (610 mm) OC.

C. Studs — Steel studs to be min 2-1/2 in. (64 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. When Epic Metals composite floor or roof deck (Item 1A1) is used, steel studs to be min 3-5/8 in. (92 mm) wide. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When vertical deflection ceiling runner (Item 2A2) is used, steel studs secured to slotted vertical deflection clips, through the bushings, with steel screws at midheight of each slot. Stud spacing not to exceed 24 in. (610 mm) OC.

D. Gypsum Board* — Gypsum board installed to a min total thickness of 5/8 in. and 1-1/4 in. (16 and 32 mm) on each side of wall for 1 and 2 hr rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom of the steel deck units and the top row of screws shall be installed into the studs 1-1/2 to 2 in. (38 to 51 mm) below the bottom of the ceiling runner. The hourly rating of the joint system is dependent on the hourly rating of the wall.

3. Joint System — Max separation between bottom of floor or roof and top of wall at time of installation of joint system is 1 in. (13 mm). The joint system is designed to accommodate a max 50 percent compression or extension from its installed width. The joint system consists of forming material and a fill material, as follows: A. Forming Material* — Nom 4 pcf (64 kg/m³) density mineral wool batt insulation cut with a length approx equal to the overall thickness of the wall. Multiple pieces stacked on top of each other, as needed, and then compressed 25 percent in thickness and inserted into the flutes of the steel deck above the top of the ceiling runner. The mineral wool batt insulation is to project beyond each side of the ceiling runner. flush with wall surfaces. Alternately, nom 4 pcf (64 kg/m³) forming material cut to shape of flute and nom 1 in. (25 mm) longer than thickness of wall; mineral wool compressed from ends and firmly packed into each flute to attain a min compression rate of 14.3 percent in the length (wall thickness) direction to be flush with both wall surfaces. When Epic Metals Type "EC", "ER2R" or Type "Toris C" decks (Item 1A1) are used, the mineral wool is to be tightly packed into the inverted flutes to the full thickness of the wall. In addition, for the Epic Metals "Toris C" deck, the mineral wool is to be packed to min 25% compression within the recessed indentations immediately above the ceiling runners. Additional 5/8 in. and 1-1/4 in. (16 and 32 mm) wide strips for 1 and 2 hr rated assemblies, respectively, of nom 4 pcf (64 kg/m³) mineral wool batt insulation are to be cut to fill the gap between the top of the gypsum board and bottom of the steel deck. The strips of mineral wool are compressed 50 percent and tightly packed, cut edge first, into the gap between the top of the gypsum board and bottom of the steel deck on both sides of the wall. INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing ROCK WOOL MANUFACTURING CO — Delta- Board

ROCKWOOL — SAFE THERMAFIBER INC — Type SAF

A1. Forming Material* - Plugs - (Optional, Not Shown) - Preformed mineral wool plugs, formed to the shape of the trapezoidal fluted floor units, friction fit to completely fill the flutes above the ceiling channel. The plugs shall project beyond each side of the ceiling runner, flush with wall surfaces. Additional forming material, described in Item 3A, to be used in conjunction with the plugs to fill the gap between the top of gypsum board and bottom of steel floor units. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CP777 Speed Pluas

A2. Forming Material* — Strips — (Optional) — Nom 5/8 in. and 1-1/4 in. (16 and 32 mm) wide by 2 in. (51 mm) high precut mineral wool strips for 1 and 2 hr rated assemblies respectively. The strips are compressed 50 percent and firmly packed, cut edge first, into the gap between the top of the gypsum board and bottom of the steel floor units on both sides of the wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CP 767 Speed Strips

B. Fill, Void or Cavity Material* - Min 1/16 in. (1.6 mm) dry thickness (1/8 in. or 3.2 mm wet thickness) of fill material sprayed or troweled on each side of the wall to completely cover mineral wool forming material and to overlap a min of 1/2 in. (13 mm) onto gypsum board and steel deck on both sides of wall. When Spray-Applied Fire Resistive Material* is applied to the Steel Floor and Form Units*, the fill material is to overlap the gypsum board a min of 1/2 in. (13 mm) and the Spray-Applied Fire Resistive Material a min of 2 in. (51 mm) on both sides of wall. When spray-applied fire resistive materials are used, the firestop joint spray shall overlap the wall a min 1/2 in. (13 mm) and overlap the spray-applied fire resistive material a min of 2 in. (51 mm) on both sides of the wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-SP WB Firestop Joint Spray

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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Design No. X528 Rating



- 1, 2, OR 3 HR COLUMN PROTECTION

CORNER DETAILS OF WALLBOARD SUPPORT SYSTEMS WITHOUT STEEL COVERS

Steel Column -- Min sizes of W-shaped and tubular steel columns which appear in the AISC Steel Construction Manual as shown under Item 2

2. Gypsum Board* -- Any 1/2 in. thick UL Classified Gypsum Board that is eligible for use in Design No. X515. Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Nom 1/2 in. or 5/8 in. thick gypsum board. Applied in layers as noted in the above illustrations. Boards are to be applied vertically without horizontal joints. Min total thickness of

V Shaped Column Ratir	ng (Hr)	Corr	ner De	etails	For Various Ratin	
Iin Column Size 1	2 3		1 Hr	2 Hr	3 Hr	
	Total thic	kness (In.)				
V4x13 1	1-1/2	2-1/4	В	С	D	
V6x15.5 1	1-1/2	2-1/4	В	С	D	
V10x49 1/2	1-1/8	1-7/8	А	В	С	
ube Shaped columns						
S 4 by 4 by 0.188 1	1-3/4	2-5/8	В	С	D	
S 8 by 8 by 0.250 5/8	1-1/2	2-1/4	А	С	D	

layers in inches for the various ratings and min column sizes are as follows:

ACADIA DRYWALL SUPPLIES LTD - CKNX.R25370

AMERICAN GYPSUM CO — CKNX.R14196 **BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO** — CKNX.R19374

CERTAINTEED GYPSUM INC — CKNX.R3660 CGC INC — CKNX.R19751 CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — CKNX.R18482 GEORGIA-PACIFIC GYPSUM L L C - CKNX.R2717

LOADMASTER SYSTEMS INC - CKNX.R11809 NATIONAL GYPSUM CO — eXP-C, CKNX.R3507

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — CKNX.R7094 PANEL REY S A — CKNX.R21796 SIAM GYPSUM INDUSTRY (SARABURI) CO LTD - CKNX.R19262

THAI GYPSUM PRODUCTS PCL — CKNX.R27517 **UNITED STATES GYPSUM CO** — CKNX.R1319

USG BORAL DRYWALL SFZ LLC — CKNX.R38438 USG MEXICO S A DE C V — CKNX.R16089

2A. Gypsum Board* — As an alternate to Item 2- 3/4 in. thick gypsum wallboard. For 2 Hr rating, 1-1/2 in. total thickness, installed in accordance with corner detail B. For 3 Hr rating, 2-1/4 in. total thickness installed in accordance with corner detail C. Boards are to be applied vertically without horizontal joints. CGC INC — Type IP-X3 or ULTRACODE **UNITED STATES GYPSUM CO** — Type IP-X3 or ULTRACODE **USG BORAL DRYWALL SFZ LLC** — Type ULTRACODE

USG MEXICO S A DE C V - Type IP-X3 or ULTRACODE

2B. Gypsum Board* — (As an alternate to Items 2 and 2A) — Nominal 5/8 in. thick panels. One of the layers of Gypsum Board (Item 2) used to obtain the minimum required thickness in Item 2 may be substituted with one laver and secured as described in Item 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES

2C. Wall and Partition Facings and Accessories* — (As an alternate to Item 2 through 2B) — Composite Gypsum Panel — Nominal 5/8 in. thick panels. One of the layers of Gypsum Board (Item 2) used to obtain the minimum required thickness in Item 2 may be substituted with one layer of composite gypsum panel and secured as described in Item 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR

3. Steel Stud — 1-5/8 in. wide with 1-5/16 and 1-7/16 in. legs having a 1/4- in. folded flange, fabricated from No. 25 MSG galv steel. Length to be 1/2 in. less than the assembly height.

3A. As an alternate to Item 3 Steel Framing Members* — galv. steel clips spaced 4 ft OC and 1-1/4 in. from top and bottem of column. A No. 28 MSG galv steel support angle with 1-1/4 in. length shall be placed over clips and secured with screws attaching the wallboard. The angle cut 1 in. less than assembly height splices in angle to occur over clips. The clips for use with wide flange columns only. JOHN WAGNER ASSOCIATES INC, DBA GRABBER — Types CB, CB1Clips.

4. Corner Beads — No. 28 MSG galv steel, 1-1/4 in. legs to be attached to the wallboard with No. 6 by 1 in. screws spaced 12 in. OC max.

5. Tie Wire — No. 18 SWG steel wire spaced 24 in. OC used with second layer of wallboard. 6. Screws — For attaching first layer of wallboard to steel studs, and third layer of wallboard to 2 in, by 2 in. steel angle (25 Ga) to be No. 6 by 1 in. (or 1-1/4 in. for 3/4 in. thick wallboard) Phillips head selfdrilling, self-tapping double lead screws spaced 24 in. OC For attaching second layer of wallboard to steel studs and fourth layer of wallboard to 2 in. by 2 in. steel angle (25 Ga) to be No. 6 by 1-3/4 in. (or 2-1/4 in. for 3/4 in. thick wallboard) steel screws of the same type spaced 12 in. OC For attaching third layer of wallboard to steel studs to be No. 8 by 2-1/4 in. screws of the same type spaced 12 in. OC 7. Finishing System — (Not Shown) — Joint compound applied over corner beads to a thickness of

1/16 in * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL

or cUL Certification (such as Canada), respectively.

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Design No. U420



Nonbearing Wall Rating -- 1 or 2 HR.

1. Studs - Channel shaped, min. 1 5/8 in. depth. Fabricated from No. 25 MSG galv steel. Studs to be cut 1/4 in. less than assembly height. 1A. Framing Members*— Steel Studs — As an alternate to Item 1 for a 2 hour rating only - For use with Item

3A, channel shaped studs, min 1-5/8 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than

assembly height. CLARKDIETRICH BUILDING SYSTEMS - CD ProSTUD

DMFCWBS L L C — ProSTUD **MBA METAL FRAMING** — ProSTUD

Last Updated on 2019-02-07

RAM SALES L L C — Ram ProSTUD **STEEL STRUCTURAL PRODUCTS L L C** — Tri-S ProSTUD

1B. Framing Members*— Steel Studs — As an alternate to Item 1- For use with Item 3B, channel shaped studs, min 1-5/8 in. wide, fabricated from No. 25 MSG galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in, less than assembly height.

KIRII (HONG KONG) LTD — Type KIRII

1C. Framing Members*- Steel Studs - As an alternate to Item 1- For use with Item 3, channel shaped studs, min 1-5/8 in. wide, fabricated from No. 25 MSG galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. EB METAL INC - NITROSTUD

1D. Framing Members* — Steel Studs — As an alternate to Item 1 - For use with Item 3C, channel shaped, min 3-5/8 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. **BAILEY METAL PRODUCTS LTD** — Type PLATINUM PLUS

1E. Framing Members*- Steel Studs - As an alternate to Item 1 for a 2 hour rating only - For use with Item 3D, channel shaped studs, min 1-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper25™

FUSION BUILDING PRODUCTS — Viper25™ **IMPERIAL MANUFACTURING GROUP INC** — Viper25[™]

2. Bracing - Cut from the steel runners, min. 4-1/4 in. long, fastened to the studs with two No. 8 by 1/2 in. long self-drilling, self-tapping steel screws in each stud. As an alternate, but limits the stud cavity depth to maximum 9-1/2 in., cut from the gypsum wallboard, 9-1/2 in. long and 12 in. wide, fastened to the studs with three Type S wallboard screws in each stud. Vertical spacing of bracing not to exceed 48 in. OC.

3. Floor and Ceiling Runners — Channel — shaped 1 5/8 in. wide with 1 in. legs, fabricated from No. 25 MSG galv steel. Attached to floor and ceiling with fasteners spaced 24 in. OC. 3A. Framing Members*— Floor and Ceiling Runners — (Not shown) — As an alternate to Item 3 for a 2 hour rating only - For use with Item 1A, channel shaped, min 1-5/8 in. wide, attached to floor and ceiling with fasteners 24 in. OC. max.

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK DMFCWBS L L C — ProTRAK

MBA METAL FRAMING — ProTRAK **RAM SALES L L C** — Ram ProTRAK

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK 3B. Framing Members*— Floor and Ceiling Runners — (Not shown) — As an alternate to Item 3 - For use

with Item 1B, channel shaped, min 1-5/8 in. wide fabricated from No. 25 MSG, attached to floor and ceiling with fasteners 24 in. OC. max. KIRII (HONG KONG) LTD — Type KIRII

3C. Framing Members* — Floor and Ceiling Runners — (Not Shown) — As an alternate to Item 3 - For use with Item 1D. Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max. **BAILEY METAL PRODUCTS LTD** — Type PLATINUM PLUS

3D. Framing Members*— Floor and Ceiling Runners — (Not shown) — As an alternate to Item 3 for a 2 hour rating only - For use with Item 1E, channel shaped, min 1-5/8 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max. MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™Track

FUSION BUILDING PRODUCTS — Viper25[™] Track **IMPERIAL MANUFACTURING GROUP INC** — Viper25[™] Track

4. Gypsum Board* — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Nom 5/8 in. thick gypsum board with beveled, square, or tapered edges. For 1 Hr Rating — One layer of gypsum board to be used. Applied vertically with joints centered over studs. Fastened to studs with 1 in. long, Type S, gypsum board screws spaced 8 in. OC at the joints, located 3/8 in. from the edges, and 12 in, OC in the field. Fasteners to be spaced 8 in, OC at the runners. For 2 Hr Rating — Two layers of gypsum board to be used. The inner layer to be applied in the same manner as for the 1 Hr Rating. The outer layer to be fastened to the studs (through the inner layer) using 1 5/8 in. long, Type S, wallboard screws spaced 8 in. OC at the joints, located 3/8 in. from the edges and 12 in. OC in the field. Fasteners to be spaced 8 in. OC at the runners. Joints to be staggered 24 in. from the inner layer. ACADIA DRYWALL SUPPLIES LTD — CKNX.R25370 AMERICAN GYPSUM CO — CKNX.R14196 **BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO** — CKNX.R19374 **CERTAINTEED GYPSUM INC** — CKNX.R3660 CGC INC — CKNX.R19751 **CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C** — CKNX.R18482 GEORGIA-PACIFIC GYPSUM L L C — CKNX.R2717

LOADMASTER SYSTEMS INC — CKNX.R11809 NATIONAL GYPSUM CO — CKNX.R3501 NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — CKNX.R15208 PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — CKNX.R7094 PANEL REY S A — CKNX.R21796 SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — CKNX.R19262

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — CKNX.R27321 THAI GYPSUM PRODUCTS PCL — CKNX.R27517 **UNITED STATES GYPSUM CO** — CKNX.R1319 USG BORAL DRYWALL SFZ LLC — CKNX.R38438 USG MEXICO S A DE C V — CKNX.R16089

4A. Gypsum Board* — (As alternate to Item 4) - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (2-hr system) staggered one stud cavity. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed with steel framing. Horizontal edge joints and horizontal butt joints in adjacent layers (2-hr system) staggered a minimum of 12 in. For the single layer system, panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when applied vertically. For the double layer system, base layer panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 16 in. Face layer panels attached to steel studs and floor runner with 1-5/8 in. long Type S steel screws spaced 16 in. OC. CGC INC — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or USG BORAL DRYWALL SFZ LLC — Types C, SCX USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4B. Gypsum Board* — (As an alternate to Items 4 or 4A) - Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in. CGC INC — Types AR, IP-AR.

UNITED STATES GYPSUM CO — Types AR, IP-AR. USG MEXICO S A DE C V — Types AR, IP-AR.

4C. Gypsum Board* — (As an alternate to Items 4 through 4B) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4 PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type QuietRock ES.

4D. **Gypsum Board*** — As an alternate to Item 4 - For 2 Hr Rating - Nom. 5/8 in. thick gypsum board with beveled, square, or tapered edges. Two layers of gypsum board to be used. Inner layer applied vertically with joints centered over studs. Fastened to studs with 1 in. long, Type S, gypsum board screws spaced 8 in. OC at the joints, located 3/8 in. from the edges, and 12 in. OC in the field. Fasteners to be spaced 8 in. OC at the runners. The outer layer to be fastened to the studs horizontally using 1 5/8 in. long, Type S, gypsum board screws spaced 8 in. OC at the joints, located 3/8 in. from the edges and 12 in. OC in the field. Fasteners to be spaced 8 in. OC at the runners. ACADIA DRYWALL SUPPLIES LTD — 5/8 Type X, Type Blueglass Exterior Sheathing

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Types C, PG-11, PGS-WRS.

4E. Gypsum Board* — (As an alternate to Item 4A, not for use with Items 1A and 3A) - Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 4A. CGC INC — Type ULX

UNITED STATES GYPSUM CO — Type ULX USG MEXICO S A DE C V — Type ULX

4F. Gypsum Board* — (As an alternate to 5/8 in. Type FSW in Item 4) - Nom. 5/16 in. thick gypsum panels applied vertically. Two layers of 5/16 in. for every single layer of 5/8 in. gypsum board described in Item 4. Horizontal joints on the same side need not be staggered. Inner layer of each double 5/16 in. layer attached with fasteners, as described in item 4, spaced 24 in. OC. Outer layer of each double 5/16 in. layer attached per Item 4. NATIONAL GYPSUM CO — Type FSW.

4G. Wall and Partition Facings and Accessories* — (As an alternate to Items 4 through 4E) — Nominal 5/8 in. thick. 4 ft wide panels, applied vertically and secured as described in Item 4. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

4H. **Gypsum Board*** — (As alternate to Item 4) - For use with Item 6D, **Batts and Blankets*** for the 1 hour system. Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (2-hr system) need not to be staggered. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed with steel framing. Horizontal edge joints and horizontal butt joints in adjacent layers (2-hr system) need not be staggered. For the single layer system, panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when applied vertically. For the double layer system, base layer panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 16 in. Face layer panels attached to steel studs and floor runner with 1-5/8 in. long Type S steel screws spaced 8 in. OC. Screws offset min 6 in. from laver below. **UNITED STATES GYPSUM CO** — Type ULIX.

4I. Gypsum Board* — As an alternate to Item 4 (for 1 hour rating) — Nom. 5/8 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Gypsum panels fastened to framing with 1 in. long Type S steel screws 12 in. OC along vertical edges and in the field. Screws spaced a max 12 in. along the top and bottom edges of the wall for both vertical and horizontal applications. NATIONAL GYPSUM CO - Types eXP-C, FSK, FSK-C, FSK-G, FSL, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6, FSMR-C

spaced, 12 in. OC.

and screw heads. Paper tape, 2 in. wide, embedded in first laver of compound over all ioints.

BZJZ) Categories for names of Classified companies.

application instructions supplied with the product. to be used for dry application only.

pounds per cubic ft. NU-WOOL CO INC — Cellulose Insulation

with the product. The minimum dry density shall be 4.30 lbs/ft³. **INTERNATIONAL CELLULOSE CORP** — Celbar-RL

minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC.

or cUL Certification (such as Canada), respectively.

Design No. X771 Rating



maximum of 32 in. with a minimum wall thickness of 3/16 in. and a minimum wall thickness of 3/16 in

Information Section, preceding these designs.

Where:

tube can be determined by the equation:

R = the hourly rating (hrs).

Sonophone 5, Z-106, Z-106/G.

Z-106, Z-106/G. PYROK INC — Type LD.

5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

7-106. 7-106/G.

cUL Certification (such as Canada), respectively.



SPECIAL PROJECT NOTE:

FIELD.

GENERAL NOTES

1

 ALL CONSTRUCTION ACTIVITY WITHIN STREET ROW AND FOR SITE WATER LINES AND SEWER LINES SHALL CONFORM TO SUMMIT COUNTY STANDARD PLANS AND "APWA MANUAL OF STANDARD PLANS" (LATEST EDITION) AND THE DEVELOPMENT GUIDELINES AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN COPIES OF SAID CITY STANDARDS AND APWA STANDARDS PRIOR TO CONSTRUCTION.

- GENERAL ANY MODIFICATION TO THIS CONSTRUCTION PACKAGE SHALL BE APPROVED BY THE OWNER. PRIOR TO SAID APPROVAL, ALL IMPROVEMENT DRAWINGS SHALL BE RESUBMITTED AND APPROVED BY THE CITY ENGINEER.
- THE CONTRACTOR SHALL LOCATE, RETAIN AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE DIRECTED BY THE ENGINEER. EXISTING GAS, TELEPHONE, POWER, OR WATERLINES WHICH MUST BE RELOCATED OR LOWERED FOR NEW GRAVITY LINES WILL BE COMPLETED BY THE CONTRACTOR TO THE UTILITY COMPANY SPECIFICATIONS.
- 3. ALL SUITABLE EXCAVATION MATERIAL MAY BE STOCKPILED ON LANDSCAPE AREAS (NOT OVER 3' DEEP) AND GRADED TO DRAIN. EXCESS TOPSOIL SHALL BE REMOVED AND STORED AS INDICATED ON THE LANDSCAPE PLANS. SUITABLE MATERIAL IS DEFINED IN THE PROJECT GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT AS WELL AS CITY EARTHWORK SPECIFICATIONS. ALL EARTHWORK SHALL BE COMPLIANT WITH THESE DOCUMENTS. IF CITY SPECIFICATIONS AND THE GEOTECHNICAL REPORT ARE IN CONFLICT REFER TO THE CITY ENGINEER FOR DIRECTION ON WHICH REQUIREMENTS MUST BE FOLLOWED IN THE
- TRACER TAPE SHALL BE PLACED ABOVE ALL SEWER, PVC ROOF DRAIN LINES. WATER AND SECONDARY WATER LINES PER CITY AND DISTRICT STANDARD SPECIFICATIONS. TRACER WIRE SHALL BE INSTALLED OVER THE WATER LINES.
- ALL EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AS INDICATED ON THE C200 SHEET. CONTRACTOR SHALL NOTIFY BLUE STAKES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION. CONTRACTOR SHALL POTHOLE AND FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL UTILITY CONFLICTS UPON DISCOVERY.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BACKFILLING, COMPACTING, AND PAVEMENT RESTORATION WERE NECESSARY TO INSTALL NEW UTILITIES OR NEW IMPROVEMENTS PER CITY STANDARDS IN EXISTING ROADWAYS.
- 7. CONTRACTOR SHALL PROVIDE COUNTY INSPECTOR WITH CONSTRUCTION SCHEDULE AFTER SAID SCHEDULE HAS BEEN APPROVED BY OWNER.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION DEMOLITION AND INSTALLATION OF ELECTRICAL, AND COMMUNICATION SERVICES WITH THE UTILITY COMPANY. OWNER SHALL PAY ALL ASSOCIATED UTILITY COMPANY FEES. CONTRACTOR TO PROVIDE ELECTRICAL LINE OR COMMUNICATION TRENCHING AND BACKFILL. COORDINATE LOCATIONS WITH POWER AND COMMUNICATION COMPANY. ALL DEMOLITION OF EXISTING AND PROPOSED NEW SITE ELECTRICAL EQUIPMENT STRUCTURES AND LINES SHOWN ON CIVIL PLANS ARE SCHEMATICALLY SHOWN ONLY AS A COORDINATION BETWEEN ELECTRICAL AND CIVIL. PLEASE REFER DIRECTLY TO ELECTRICAL PLANS FOR THE LAYOUT AND DETAILS OF ALL SITE ELECTRICAL EQUIPMENT AND LINES.
- CONTRACTOR TO KEEP A SET OF NEAT PLANS ON WHICH ALL CHANGES HAVE BEEN CLEARLY SHOWN. THIS SET OF REDLINES SHALL BE TURNED INTO THE ARCHITECT.
- CONTRACTOR TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE COUNTY PRIOR TO ANY WORK.
- 11. ALL UTILITY STRUCTURES WITHIN PAVEMENT SHALL BE RAISED TO ACCURATE FINISHED GRADE WITH A CONCRETE COLLAR. SEE DETAIL ON THIS SHEET.
- 12. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS, BONDS, AND APPROVALS HAVE BEEN OBTAINED. ALL PERMIT AND BOND FEES ARE TO BE PAID BY THE OWNER.
- 13. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED, AND THOROUGHLY REVIEWED, ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- 14. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE CURRENT REQUIREMENTS AND DEVELOPMENT STANDARDS OF THE CITY. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND SHALL TAKE PRECEDENCE IN CASE OF CONFLICT UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY BETWEEN THE SOILS REPORT AND PLANS ETC.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DUST AND EROSION CONTROL, CLEANING STREET AND OTHER SWPP REGULATIONS.
- 16. ALL EXISTING ASPHALT TO REMAIN SHALL BE SAW CUT IN NEAT, STRAIGHT LINES BY THE CONTRACTOR PRIOR TO EXCAVATION.
- 17. NO CHANGE IN DESIGN LOCATIONS OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE OWNER AND ENGINEER.
- 18. CONTRACTOR SHALL NOT ALLOW ANY GROUND WATER, SURFACE WATER, ANIMALS, OR DEBRIS TO ENTER NEW PIPING DURING CONSTRUCTION.
- 19. CONTRACTOR SHALL TAKE NECESSARY MEASURES TO PROTECT ALL NEW FACILITIES DURING THE CONSTRUCTION PERIOD UNTIL THE DESIGN GRADE AND COVER HAVE BEEN REACHED AND WORK HAS BEEN ACCEPTED BY OWNER.
- 20. CONTRACTOR IS TO REMAIN WITHIN THE CONTRACT LIMITS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS DURING CONSTRUCTION.
- 21. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF, OR DAMAGE TO, EXISTING AND NEW UTILITIES AND FACILITIES. INCLUDING WORK DONE WITHIN THE WARRANTY PERIOD.
- 22. ALL ONSITE PAVEMENT SECTIONS, GRADING, EXCAVATION, BACKFILLING, AND OTHER EARTHWORK OPERATIONS SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS PREPARED FOR THIS PROJECT. STRUCTURAL FILL, BEDDING, IMPORTED BACKFILL, GRANULAR SUBBASE, BASE COURSE AND ASPHALTIC CONCRETE MATERIALS SHALL MEET THE REQUIREMENTS OUTLINED IN THE PROJECT SPECIFICATIONS.
- 33. SEE SHEET C200 FOR SURVEY CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING THAT MAY BE NEEDED TO COMPLETE THE
- 4. CONTRACTOR SHALL COORDINATE CONSTRUCTION AND INSTALLATION OF ELECTRICAL, TELEPHONE, NATURAL GAS, AND SERVICES WITH THE UTILITY COMPANY. ASSOCIATED UTILITY COMPANY FEES WILL BE PAID AS OUTLINED IN CONTRACT GENERAL CONDITIONS. CONTRACTOR TO PROVIDE ELECTRICAL AND TELEPHONE LINE TRENCHING AND BACKFILL. COORDINATE LOCATIONS WITH ROCKY MOUNTAIN POWER AND CENTURY LINK. COORDINATE AND SCHEDULE WITH DOMINION ENERGY, CENTURY LINK, AND ROCKY MOUNTAIN POWER FOR CONNECTION OF THESE UTILITIES TO THE NEW BUILDING. GAS TELEPHONE AND POWER ALL MUST BE EXTENDED TO THE SITE FROM THE NEW DEVELOPMENT IN THE AREA. COORDINATE WITH THESE UTILITIES FOR LOCATION OF THESE NEW EXTENSIONS.
- 35. THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS, FOR DUST SUPPRESSION, IS ABSOLUTELY PROHIBITED.
- 36. NO DRIVEWAY SHALL BE CONSTRUCTED TO CONVEY STORM RUNOFF TOWARDS ANY BUILDING.
- 37. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.
- 38. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES AND FOR THE PROTECTION OF WORKERS.
- 39. CONTACT FOR UTILITY COORDINATION INCLUDE:
 - SEWER SNYDERVILLE BASIN WATER RECLAMATION DISTRICT (435) 649-7993
 - WATER MOUNTAIN REGIONAL WATER (435) 940-1916 STORM - SUMMIT COUNTY - (435) 336-3970
 - GAS DOMINION ENERGY 1-800-323-5517
 - POWER ROCKY MOUNTAIN POWER 1-800-469-3981

40. CONTRACTOR TO COORDINATE INSTALLATION OF ALL LANDSCAPE SLEEVES PRIOR TO FORMING CONCRETE SIDEWALKS, RETAINING WALLS, SEAT WALLS OR STAIR WALLS. SEE LANDSCAPE PLANS.

LINE LEGEND

FXISTING

PROPOSED ____ _____ _____ ______ ______SD________ $\xrightarrow{\longrightarrow} \xrightarrow{\rightarrow} LD \xrightarrow{\longrightarrow} LD \xleftarrow{}$ _____T__________ ______W______ _____IRR _____ ___ - - -_____G ______ _____P ______ _____CATV_____ ____ ————F0——————————————— $\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow$ _____X _____ ______SF______ --- xx --- xx -

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|                           | LIMITS OF PROJECT   |
|---------------------------|---------------------|
|                           | MATCHLINE           |
|                           | CENTERLINE          |
|                           | SAW CUT LINE        |
| 4435                      | PROPOSED MAJOR C    |
| 4434                      | PROPOSED MINOR CO   |
| ssss                      | SANITARY SEWER PIF  |
| sdsd                      | STORM DRAIN PIPELI  |
|                           | LAND DRAIN          |
| TTT                       | TELEPHONE           |
| ww                        | WATER PIPELINE      |
| — — — IRR — — — — — IRR — | SECONDARY WATER     |
|                           | GAS PIPELINE        |
| рр                        | <b>BURIED POWER</b> |
|                           | CATV                |
| F0F0F0                    | FIBER OPTIC         |
|                           | <b>RIDGE LINE</b>   |
|                           | FLOW LINE           |
| -0                        | FENCE               |
|                           | SILT FENCE          |

PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR SANITARY SEWER PIPELINE STORM DRAIN PIPELINE LAND DRAIN TELEPHONE WATER PIPELINE SECONDARY WATER PIPELINE GAS PIPELINE BURIED POWER CATV FIBER OPTIC RIDGE LINE FLOW LINE FENCE SILT FENCE TEMPORARY SHORING REMOVAL ABANDON

PROPERTY LINE

| 3" ASPHALTIC CONCRETE<br>(1/2" APWA MIX) |  |
|------------------------------------------|--|
| COURSE                                   |  |
|                                          |  |
| COMPACTED FILL OR SUB BASE               |  |













|                  |                                    | SYMBOL              |
|------------------|------------------------------------|---------------------|
| ΥH               |                                    | LEGEND              |
| ₩<br>₩           | WATER VALVE                        |                     |
| Ŵ                | WATER METER                        |                     |
| ● <sup>PIV</sup> | POST INDICATOR VALVE               |                     |
| DC               | FIRE DEPARTMENT CONNECTION         |                     |
| C                | WATER CAP                          |                     |
| _<br>_'          | WATER TEE                          |                     |
| _ı               | WATER CROSS                        | 33.<br>Ti           |
| ί I              | WATER WYE                          |                     |
|                  | WATER REDUCER                      |                     |
|                  | WATER BENDS                        | <del>ر</del> م<br>۲ |
|                  | AREA DRAIN (SIZE PER PLAN)         | u                   |
|                  | CATCH BASIN (SIZE PER PLAN)        |                     |
|                  | PRE-TREATMENT CURB INLET BOX (PRE- | TREAT CIB)          |
|                  | CURB INLET BOX (CIB)               |                     |
|                  | COMBO BOX (COMBO)                  |                     |
| Ø                | STORM DRAIN FLARED END SECTION     |                     |
| 8                | STORM DRAIN / SANITARY SEWER CLEAN | NOUT                |
|                  |                                    |                     |





### SECTION A

NOTES

- 1. USE MONOLITHIC CONSTRUCTION 4" THICK EXCEPT AT DRIVEWAYS WHERE THICKNESS OF 6" IS REQUIRED. SAWCUT AND CHAMFER SCORE LINES AT INTERVALS EQUAL TO 1 TIMES THE WIDTH OF THE SIDEWALK UNIFORMLY PLACED ALONG LENGTH OF SIDEWALK AFTER POUR. SAW CUTTING SHOULD
- BE DONE 4 TO 12 HOURS AFTER THE CONCRETE HAS BEEN FINISHED. IN HOT WEATHER EARLY-ENTRY DRY-CUT JOINTS SHOULD BE CUT 1 TO 4 HOURS AFTER FINISHING. 3. SIDEWALK EXPANSION JOINTS SHALL BE 20' ON CENTER MAXIMUM. THE EXPANSION JOINT SHALL INCLUDE ASPHALT IMPREGNATED FIBER EXPANSION MATERIAL. THE CONTRACTOR WILL USE
- BOND BREAKER TAPE WITH POLYURETHANE JOINT SEALANT TO A DEPTH OF 3/8". 4. EDGE SIDEWALK WITH 1/2" RADIUS EDGING TOOL. ROUND EDGES AT EXPANSION JOINTS TO A RADIUS OF 1/2". 5. USE HAIR-BROOM BRUSH TO FINISH SIDEWALKS.
- 6. OVER NEWLY BACKFILLED TRENCHES, PLACEMENT OF 2-10' #4 BARS IN SIDEWALK IS REQUIRED.
- REMOVE NON-ENGINEERFILL BELOW SIDEWALK AND 2' MINIMUM BEYOND THE EDGE OF CONCRETE AND REPLACE WITH STRUCTURAL FILL. 8. ALL CONCRETE SIDEWALK SLABS SHALL BE DOWELED TO ADJACENT SLABS WITH REBAR DOWELS AT EXPANSION JOINTS OR ANY BREAK IN THE POUR. DOWELS ARE TO BE EVENLY SPACED WITH MAXIMUM DISTANCE BETWEEN DOWELS NOT TO EXCEED 24". REBAR DOWELS MUST BE #4 OR LARGER AT LEAST 24" LONG. DOWELS MUST BE EMBEDDED AT LEAST 3" DEEP AND NO CLOSER THAN 6" FROM THE EDGE OF THE SLAB.



STEP NOTES

- ALL MANHOLE STEPS SHALL PROTRUDE 5" FROM INSIDE FACE OF THE STRUCTURE WALL AND SHALL BE EMBEDDED A MINIMUM OF 4" INTO THE STRUCTURE WALL.
- MANHOLE STEPS SHALL BE CAPABLE OF WITH-STANDING A SINGLE CONCENTRATED LOAD OF 300 POUNDS APPLIED AT A DISTANCE OF 5" FROM THE FACE OF THE STRUCTURE WALL.
- 3. STEPS ARE TO BE VERTICALLY ALIGNED AND UNIFORMLY SPACED WITH A MINIMUM SPACING OF 12" AND A MAXIMUM SPACING OF 16" UNLESS SHOWN OTHERWISE ON STRUCTURE PLANS.
- MANHOLE STEPS MAY BE CAST-IN-PLACE, OR GROUTED INTO STRUCTURE WALL IN SUCH A MANNER AS TO PREVENT PULLOUT UNDER A LOAD OF 300 POUNDS APPLIED 5" FROM THE FACE OF THE STRUCTURE WALL.
- 5. STEEL REINFORCING OF MANHOLE STEPS SHALL CONFORM TO ASTM DESIGNATION A-615, GRADE 60 PLASTIC COATING OF MANHOLE STEPS SHALL CONFORM TO ASTM DESIGNATION D-2146, TYPE II GRADE 16906.
- DIMENSIONS SHOWN MAY VARY ACCORDING TO MANUFACTURERS DESIGN.

BOX OR MANHOLE LADDER RUNG DETAIL N.T.S.













1



NDTES: SECURE AN INSPECTION OF PREPARATION PRIOR TO POURING THRUST BLOCK. SECURE AN INSPECTION PRIOR TO BACKFILLING. ALL WORK MUST BE INSPECTED PRIOR TO BACKFILLING. THRUST BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED BACKFILL. ALL PIPE JOINTS MUST BE LEFT ACCESSIBLE. ALL FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED WITH 8 MILL THICK POLYETHYLENE SHEET AND TAPE WRAP. CONCRETE MUST BE ALLOWED TO CURE FOR 5 DAYS PRIOR TO PRESSURIZING WATER LINES. CONCRETE MUST HAVE A MINIMUM OF 3000 P.S.I. COMPRESSIVE STRENGTH IN 28 DAYS. THRUST BLOCKS MUST BE POURED AS CLOSE AS POSSIBLE TO THE CONFIGURATION SHOWN. BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 200 P.S.I. AND AN ALLOWARDE SOIL BEARING STRESS OF 2000 LBS./SQ.FT. COMPUTATIONS OF BEARING AREAS SHALL BE REQUIRED FOR DIFFERENT TEST PRESSURES AND SOIL BEARING PRESSURES. BEARING AREAS, VOLUMES, AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER THIS STANDARD. BEARING AREAS FOR PIPE SIZES OR CONFIGURATIONS NOT SHOWN REQUIRE A SPECIAL DESIGN. · NO 90'BENDS ALLOWED UNLESS APPROVED BY THE DISTRICT.

| PIPE<br>SIZE | TEES, VAL<br>DEAD END | *90<br>BEND | 45<br>BEND | 22.5<br>BEND | 11-25<br>BENI |
|--------------|-----------------------|-------------|------------|--------------|---------------|
| 4*           | 2                     | 3           | 2          | 2            | 2             |
| 6*           | 4                     | 5.5         | 3          | 2            | 2             |
| 8*           | 6.5                   | 9.5         | 5          | 3            | 2             |
| 10-          | 10                    | 14          | 8          | 5            | 3             |
| 12"          | 14                    | 20          | 11         | 6            | 3             |
| 14*          | 19                    | 26.5        | 14.5       | 7.5          | 4             |
| 16'          | 24                    | 34          | 18.5       | 9.5          | 6             |





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1 2 SURVEYOR'S CERTIFICATE I, MICHAEL W. NADEAU, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, HOLDING CERTIFICATE NUMBER 4938744, AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH AND STATE THAT INFORMATION SHOWN ON THIS PLAT HAS BEEN OBTAINED THROUGH SURFACE SURVEYS OF STRUCTURES, UTILITIES AND IMPROVEMENTS VISIBLE TO THE SURVEYOR AT THE TIME OF THE SURVEY. UNDERGROUND STRUCTURES, UTILITIES AND IMPROVEMENTS HAVE NOT BEEN SURVEYED. UNDERGROUND FEATURES, INCLUDING ELEVATIONS, SIZES, TYPES, CAPACITIES AND DIMENSIONS ARE SHOWN GRAPHICALLY AS OBTAINED THROUGH MUNICIPAL OR GOVERNING ENTITY RECORDS AND MAPS. INFORMATION AS REPRESENTED HEREON DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED. MICHAEL W. NADEAU PLS NO. 4938744 — CP-208 (PLUG) N=421349.640 E=639643.766 ELEVATION=6511.1 " N INV=6504.8 15" W INV=6504.7 15" E INV=6504.9 8" S INV=6506.16 SDCB-RIM=6511.41 15" N INV=6508.16 \\5" W INV=6507.86 SUCB RIM-EGS11.28 12 2.V=6508.28 15" E INV=PIPE NOT VISIBLE TO GET MEASUREMENT SDCB -/ RIM=6511.93 \_\_\_\_\_ 2" E INV=PIPE NOT VISIBLE TO GET MEASUREMENT SSMH — RIM=6518.12 MEASURE-PAVED OVER) TRAILSIDE ELEMENTARY SCHOOL SDCB (LAND DRAIN) RIM=6516.42 BOTTOM=6512.92 RIM=6528.65 (COVERED-UNABLE TO MEASURE) **TRAILSIDE DRIVE** SDCB (LAND DRAIN) -RIM=6515.65 BOTTOM=6512.00 CP-209 (NAIL) ---N=420803.770 E=639914.294 ELEVATION=6524.81' E SOUTHWEST CORNER OF SEC 21, T1S, R4E, SLB&M FOUND ORIGINAL STONE N=419941.317 E=637874.708 

### EXISTING TOPO NOTES:

- 1. THIS SURVEY AND CONTROL POINTS SHOWN WERE ESTABLISHED BY MERIDIAN ENGINEERING, INC. IN SEPTEMBER OF 2022. ALL CONTROL POINTS SHOULD BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES TO ENSURE THEY ARE STILL INSIDE AN ACCEPTABLE MEASUREMENT TOLERANCE.
- 2. CONTROL POINT ELEVATIONS SHOWN WERE DERIVED FROM THE PROJECT BENCHMARK USING DIFFERENTIAL LEVELING.
- 3. THE LOCATIONS OF UNDERGROUND STRUCTURES, UTILITIES OR IMPROVEMENTS AS SHOWN HEREON ARE BASED ON ABOVE GROUND APPURTENANCES VISIBLE AT THE TIME OF THE SURVEY TO THE SURVEYOR. EXACT LOCATIONS OF UNDERGROUND STRUCTURES, UTILITIES OR IMPROVEMENTS MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL UNDERGROUND STRUCTURES, UTILITIES OR IMPROVEMENTS MAY EXIST.
- 4. ELEVATIONS, SIZES, TYPES AND CONDITIONS OF UNDERGROUND STRUCTURES, UTILITIES OR IMPROVEMENTS AS SHOWN ON THIS PLAT ARE APPROXIMATE ONLY AND SHOULD BE VERIFIED WITH THE APPROPRIATE AGENCY OR CONTROLLING PARTY BEFORE DESIGN OR CONSTRUCTION.
- 5. ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS, FACILITIES, DEPOSITS OR DISPOSALS THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.
- 6. UNLESS OTHERWISE SHOWN, NO ATTEMPT HAS BEEN MADE AS PART OF THIS PLAT AND THE SURVEY ON WHICH IT IS BASED TO DISCLOSE THE LOCATIONS, SIZE, TYPE OR CONDITION OF ANY TREE, HEDGE, GROUND COVER, LAWN,
- 7. CONTRACTOR MUST OBTAIN A PERMIT BEFORE BEGINNING WORK WITHIN THIRTY FEET OF AN ESTABLISHED COUNTY SURVEY MONUMENT, PER UTAH STATE CODE 17-23-14 SUBSECTIONS 2 AND 4.

PLANTINGS OR ANY OTHER LANDSCAPING OR SPRINKLER HEADS, PIPES OR ANY APPURTENANT PARTS THEREOF. ADDITIONAL LANDSCAPING OR IRRIGATION FACILITIES MAY EXIST.





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|      | P = P = P $BP = BP$ $BP = BP$ $SD = SD$ $SD = SD$ $SS = SS$ $W = W$ $T = T$ $T = T$ $BT = BT$ $BT = BT$ $T = CTV = CTV$ $F0 = F0$ $CTV = CTV$ $CTV$                                                                                                                                                                                                                                                                               | PROPERTY BOUNDARY<br>ADJOINER BOUNDARY<br>SECTION LINE<br>EASEMENT LINE<br>EXISTING POWER LINE<br>EXISTING BOWER LINE<br>EXISTING STORM DRAIN LINE<br>EXISTING SEWER LINE<br>EXISTING SEWER LINE<br>EXISTING WATER LINE<br>EXISTING BURIED TELEPHONE LINE<br>EXISTING BURIED TELEPHONE LINE<br>EXISTING GABLE LINE<br>EXISTING GABLE LINE<br>EXISTING GABLE LINE<br>EXISTING GABLE LINE<br>EXISTING GAS LINE<br>EXISTING CHAIN LINK FENCE<br>EXISTING CHAIN LINK FENCE<br>EXISTING CORRETE<br>EXISTING CURB & GUTTER<br>EXISTING BUILDING<br>EXISTING POWER POLE<br>EXISTING POWER POLE<br>EXISTING STORM DRAIN MANHOLE<br>EXISTING STORM DRAIN MANHOLE<br>EXISTING STORM DRAIN MANHOLE | □ <sup>EJB</sup><br>□ <sup>JB</sup><br>□ <sup>TP</sup><br>□ <sup>TBX</sup><br>□ <sup>TBX</sup><br>□ <sup>TSJ</sup><br>□ <sup>TSJ</sup><br>EI<br>RC<br>W<br>X<br>RR<br>RX<br>PRX<br>FLAG<br>C<br>FLAG<br>C<br>FLAG<br>C<br>V<br>C<br>V<br>C<br>V<br>C<br>V<br>C<br>V<br>C<br>V<br>C<br>V<br>C<br>V<br>C<br>V<br>C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EXISTING ELECTRICAL BOX<br>EXISTING IRRIGATION BOX<br>EXISTING TELEPHONE PEDESTAL<br>EXISTING TELEPHONE BOX<br>EXISTING CABLE TV BOX<br>EXISTING CABLE TV BOX<br>EXISTING TRAFFIC SIGNAL BOX<br>EXISTING TRAFFIC SIGNAL JUNCTION BOX<br>EXISTING EXISTING SIGNAL JUNCTION BOX<br>EXISTING ELECTRICAL TRANSFORMER<br>EXISTING BELECTRICAL TRANSFORMER<br>EXISTING AIR CONDITIONER<br>EXISTING WATER VALVE<br>EXISTING WATER VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING FIRE HYDRANT<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE<br>EXISTING SIGN<br>EXISTING SPRINKLER VALVE                  |
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|      | P = P = P $BP = BP$ $SD = SD$ $SS = SS$ $W = W$ $T = T$ $BT = BT$ $T = T$ $T = T$ $BT = BT$ $T = T$                                                                                                                                                                                                                                                                               | ADJOINER BOUNDARY<br>SECTION LINE<br>EASEMENT LINE<br>EXISTING POWER LINE<br>EXISTING BURIED POWER LINE<br>EXISTING STORM DRAIN LINE<br>EXISTING STORM DRAIN LINE<br>EXISTING SEWER LINE<br>EXISTING WATER LINE<br>EXISTING WATER LINE<br>EXISTING BURIED TELEPHONE LINE<br>EXISTING CABLE LINE<br>EXISTING CABLE LINE<br>EXISTING GAS LINE<br>EXISTING GAS LINE<br>EXISTING GAS LINE<br>EXISTING GAS LINE<br>EXISTING ODD FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING FLOWLINE<br>EXISTING CURB & GUTTER<br>EXISTING CONCRETE<br>EXISTING BUILDING<br>EXISTING POWER POLE<br>EXISTING POWER POLE & LIGHT STAND<br>EXISTING STORM DRAIN MANHOLE<br>EXISTING STORM DRAIN MANHOLE                                                                                                                                                                                                                | $ \begin{bmatrix} \\ \\ \\ \\ \\ \\ \end{bmatrix}^{JBI} \\ \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EXISTING EREIGATION BOX<br>EXISTING TELEPHONE PEDESTAL<br>EXISTING TELEPHONE BOX<br>EXISTING TELEPHONE BOX<br>EXISTING CABLE TV BOX<br>EXISTING CABLE TV BOX<br>EXISTING TRAFFIC SIGNAL BOX<br>EXISTING TRAFFIC SIGNAL JUNCTION BOX<br>EXISTING TRAFFIC SIGNAL JUNCTION BOX<br>EXISTING ELECTRICAL TRANSFORMER<br>EXISTING ELECTRICAL TRANSFORMER<br>EXISTING AIR CONDITIONER<br>EXISTING AIR CONDITIONER<br>EXISTING WATER VALVE<br>EXISTING WATER VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING FIRE HYDRANT<br>EXISTING FLAG POLE<br>EXISTING FLAG POLE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE |
|      | P = P = P = BP $BP = BP$ $SD = SD = SD$ $SS = SS$ $W = W$ $T = T$ $BT = BT$ $BT = BT$ $CTV = CTV$ $FO = FO$ $G = G$ $G = G$ $CTV = CTV$ $CTV$ $CTV = CTV$ $CTV$ $CTV$ $CTV = CTV$                                                                                                                                                                                                                                                                                                 | SECTION LINE<br>EASEMENT LINE<br>EXISTING POWER LINE<br>EXISTING BURIED POWER LINE<br>EXISTING STORM DRAIN LINE<br>EXISTING SEWER LINE<br>EXISTING SEWER LINE<br>EXISTING WATER LINE<br>EXISTING BURIED TELEPHONE LINE<br>EXISTING CABLE LINE<br>EXISTING CABLE LINE<br>EXISTING GABLE NE<br>EXISTING COD FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING GURB & GUTTER<br>EXISTING CONCRETE<br>EXISTING CONCRETE<br>EXISTING DULLDING<br>EXISTING POWER POLE<br>EXISTING POWER POLE<br>EXISTING SEWER MANHOLE<br>EXISTING STORM DRAIN MANHOLE                                                                                                                                                        | $ \begin{bmatrix} P \\ B \\ B \\ C \\ C$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EXISTING TELEPHONE PEDESTAL<br>EXISTING TELEPHONE BOX<br>EXISTING CABLE TV BOX<br>EXISTING CABLE TV BOX<br>EXISTING TRAFFIC SIGNAL BOX<br>EXISTING TRAFFIC SIGNAL BOX<br>EXISTING TRAFFIC SIGNAL JUNCTION BOX<br>EXISTING ELECTRICAL TRANSFORMER<br>EXISTING ELECTRICAL TRANSFORMER<br>EXISTING AIR CONDITIONER<br>EXISTING AIR CONDITIONER<br>EXISTING WATER VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING FIRE HYDRANT<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE<br>EXISTING SPRINKLER VALVE                                                                          |
|      | P = P = P = P $BP = BP$ $SD = SD = SD$ $SS = SS$ $W = W$ $W = W$ $T = T$ $BT = BT$ $BT = BT$ $T = T$ $CTV = CTV$ $CTV = CTV$ $FO = FO$ $G = G$ $G = G$ $CTV = CTV$ $CTV = C$                                                                                                                                                                                                                                                                              | EASEMENT LINE<br>EXISTING POWER LINE<br>EXISTING BURIED POWER LINE<br>EXISTING STORM DRAIN LINE<br>EXISTING STORM DRAIN LINE<br>EXISTING SEWER LINE<br>EXISTING WATER LINE<br>EXISTING TELEPHONE LINE<br>EXISTING DURIED TELEPHONE LINE<br>EXISTING GABLE LINE<br>EXISTING GABLE LINE<br>EXISTING GAS LINE<br>EXISTING GAS LINE<br>EXISTING GAS LINE<br>EXISTING WOOD FENCE<br>EXISTING WOOD FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING CURB & GUTTER<br>EXISTING CURB & GUTTER<br>EXISTING POWER POLE<br>EXISTING POWER POLE & LIGHT STAND<br>EXISTING SEWER MANHOLE<br>EXISTING STORM DRAIN MANHOLE                                                                                                                                                                                                                                                            | $\Box$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EXISTING FELEPHONE PEDESTAL<br>EXISTING TELEPHONE BOX<br>EXISTING CABLE TV BOX<br>EXISTING CABLE TV BOX<br>EXISTING TRAFFIC SIGNAL BOX<br>EXISTING TRAFFIC SIGNAL BOX<br>EXISTING TRAFFIC SIGNAL JUNCTION BOX<br>EXISTING EXISTING SIGNAL JUNCTION BOX<br>EXISTING ELECTRICAL TRANSFORMER<br>EXISTING AIR CONDITIONER<br>EXISTING AIR CONDITIONER<br>EXISTING WATER VALVE<br>EXISTING WATER VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING FIRE HYDRANT<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING SIGN<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE<br>EXISTING SPRINKLER VALVE                                                                                            |
|      | P = P = P = P = BP = BP = SD = SD = SD =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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CONDITIONER<br>EXISTING WATER VALVE<br>EXISTING WATER VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING FIRE HYDRANT<br>EXISTING FLAG POLE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING SIGN<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE<br>EXISTING GAS VALVE                                                                                                                      |
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|      | SS =SS =SS =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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|      | $ \begin{array}{c}        WW$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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TRANSFORMER<br>EXISTING AIR CONDITIONER<br>EXISTING WATER VALVE<br>EXISTING WATER VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING FIRE HYDRANT<br>EXISTING FLAG POLE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING SIGN<br>EXISTING SIGN<br>EXISTING SOR VALVE<br>EXISTING SPRINKLER VALVE                                                                                                                                                                                                                                                  |
|      | $ \begin{array}{c}       - & - & T \\       - & - & BT \\       - & - & CTV \\  $                                                                                                                                                          | EXISTING TELEPHONE LINE<br>EXISTING BURIED TELEPHONE LINE<br>EXISTING CABLE LINE<br>EXISTING FIBER OPTIC LINE<br>EXISTING FIBER OPTIC LINE<br>EXISTING GAS LINE<br>EXISTING GAS LINE<br>EXISTING IRRIGATION LINE<br>EXISTING WOOD FENCE<br>EXISTING CHAIN LINK FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING DECORATIVE FENCE<br>EXISTING FLOWLINE<br>EXISTING FLOWLINE<br>EXISTING CURB & GUTTER<br>EXISTING CONCRETE<br>EXISTING BUILDING<br>EXISTING POWER POLE<br>EXISTING POWER POLE & LIGHT STAND<br>EXISTING SEWER MANHOLE<br>EXISTING STORM DRAIN MANHOLE                                                                                                                                                                                                                                                                                                                                                             | E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>C<br>E<br>C<br>E<br>C<br>E<br>C<br>C<br>E<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EXISTING EXISTING SIGNAL JUNCTION BOX<br>EXISTING ELECTRICAL TRANSFORMER<br>EXISTING AIR CONDITIONER<br>EXISTING AIR CONDITIONER<br>EXISTING WATER VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING GUY WIRE<br>EXISTING FLAG POLE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING SIGN<br>EXISTING GAS VALVE<br>EXISTING SPRINKLER VALVE<br>EXISTING BOLLARD<br>EXISTING PINE TREE                                                                                                                                                                                                                       |
|      | BT BT CTV CTV CTV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING GUY WIRE<br>EXISTING FLAG POLE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING GAS VALVE<br>EXISTING SIGN<br>EXISTING SPRINKLER VALVE<br>EXISTING BOLLARD<br>EXISTING PINE TREE                                                                                                                                                                                                                                                                                            |
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FIRE HYDRANT<br>EXISTING GUY WIRE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING SIGN<br>EXISTING GAS VALVE<br>EXISTING SPRINKLER VALVE<br>EXISTING BOLLARD<br>EXISTING PINE TREE                                                                                                                                                                                                                                                                                                                                                                                  |
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VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING GUY WIRE<br>EXISTING GUY WIRE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING SIGN<br>EXISTING GAS VALVE<br>EXISTING SPRINKLER VALVE<br>EXISTING BOLLARD<br>EXISTING PINE TREE                                                                                                                                                                                                                                                                                                                                                     |
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    | EXISTING WATER VALVE<br>EXISTING IRRIGATION VALVE<br>EXISTING PRESSURE REDUCING VALVE<br>EXISTING FIRE HYDRANT<br>EXISTING GUY WIRE<br>EXISTING FLAG POLE<br>EXISTING GATE POST<br>EXISTING SIGN<br>EXISTING GAS VALVE<br>EXISTING SPRINKLER VALVE<br>EXISTING BOLLARD<br>EXISTING PINE TREE                                                                                                                                                                                                                                                                                                                                                                                                              |
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|      | (MT)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EXISTING TELEPHONE MANHOLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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|      | (PMH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EXISTING ELECTRICAL MANHOLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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|      | (GMH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EXISTING GAS MANHOLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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|      | (M)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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|      | WM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EXISTING WATER METER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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|      | GM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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CAP IS STAMPED<br>"MERIDIAN PLS 801-569-1315"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      | (EM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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|      | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EXISTING ELECTRICAL METER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 36 <b>V</b> 36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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                                                                                                                                                                                                                                                                                                                                 | EXISTING OUTDOOR DECORATIVE LIGHT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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|      | $ 6511^{-} 6512^{-} 6513^{-} 6518^{-} 6518^{-} 6518^{-} 6518^{-} 6518^{-} 6518^{-} 6521^{-} 6522^{-} 6523^{-} 6524^{-} 6524^{-} 6524^{-} 6524^{-} 6524^{-} 6524^{-} 6524^{-} $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SOUTHE<br>SEC 21,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | AST CORNER OF<br>T1S, R4E, SLB&M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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- GENERAL SITE LAYOUT NOTES:
- 1. REFER TO ELECTRICAL PLANS FOR TRANSFORMER LOCATIONS AND LIGHTING.
- 2. REFER TO LANDSCAPE PLANS FOR LAYOUT OF PLANTINGS.
- 3. VERIFY THE GRID DISTANCES SHOWN FOR BUILDING LOCATIONS WITH ARCH PLANS.
- 4. ALL PAVEMENT REPAIR TO MEET REQUIREMENT STANDARD DETAILS ON C100.
- 5. TRANSITION CURB FROM STANDARD CURB HEIGHT TO CURB TERMINATION OVER 6' MINIMUM AT ALL LOCATIONS.

6. CURVE AND LINE DATA IS BASED ON THE TOP BACK OF CURB AND FRONT OF SIDEWALK.

|     | TBC L  | ine Table        |
|-----|--------|------------------|
| L#  | L      | Bearing          |
| L1  | 6.99   | S15° 59' 25.59"W |
| L2  | 11.84  | S31° 57' 28.03"W |
| L3  | 38.96  | S7° 24' 45.64"E  |
| L4  | 8.40   | N45° 00' 00.00"W |
| L5  | 16.54  | N68° 09' 24.59"W |
| L6  | 14.31  | N71° 00' 47.39"W |
| L8  | 98.23  | S82° 49' 56.51"E |
| L9  | 5.80   | N7° 15' 29.46"E  |
| L10 | 63.71  | N82° 46' 28.22"E |
| L11 | 10.11  | S72° 52' 55.78"E |
| L12 | 29.95  | S72° 52' 55.78"E |
| L13 | 183.30 | N17° 07' 04.22"E |
| L14 | 79.11  | N14° 27' 06.23"W |
| L15 | 34.19  | S87° 19' 10.25"W |
| L16 | 24.84  | S72° 52' 55.97"E |
| L17 | 9.72   | S5° 23' 14.45"E  |
| L18 | 20.53  | S17° 07' 03.99"W |
| L19 | 28.18  | N17° 04' 36.41"E |
| L20 | 56.44  | S72* 52' 55.97"E |
| L21 | 15.17  | S72* 56' 49.37"E |
|     |        |                  |

| TBC Line Table |       |                  |  |  |  |  |
|----------------|-------|------------------|--|--|--|--|
| L# L Bearing   |       |                  |  |  |  |  |
| L22            | 20.73 | N84° 10' 39.07"E |  |  |  |  |
| L23            | 38.74 | S16° 55' 38.10"W |  |  |  |  |
| L24            | 26.97 | S68° 07' 32.46"E |  |  |  |  |
| L25            | 33.30 | S17° 07' 03.99"W |  |  |  |  |
|                |       |                  |  |  |  |  |

| TBC Curve Table |       |        |            |               |         |  |
|-----------------|-------|--------|------------|---------------|---------|--|
| C#              | L     | R      | Δ          | Chord Bearing | Chord L |  |
| C1              | 33.16 | 191.11 | 009*56'35" | S62° 37' 05"E | 33.12   |  |
| C2              | 30.76 | 286.30 | 006*09'25" | S61° 41' 31"E | 30.75   |  |
| C3              | 7.15  | 7.14   | 057*22'35" | N31° 00' 56"W | 6.85    |  |
| C4              | 78.23 | 88.68  | 050*32'38" | S71° 57' 44"W | 75.72   |  |
| C5              | 28.37 | 148.64 | 010*56'02" | S62° 59' 08"W | 28.32   |  |
| C6              | 6.22  | 2.67   | 133*34'39" | N1° 22' 05"W  | 4.90    |  |
| C7              | 5.09  | 2.50   | 116•43'30" | S50° 41' 19"W | 4.25    |  |
| C8              | 5.08  | 2.50   | 116°29'18" | S65° 36' 37"E | 4.25    |  |
| C9              | 5.03  | 1.84   | 156°06'16" | S2°01'31"W    | 3.61    |  |
| C10             | 21.67 | 51.00  | 024°20'36" | N85° 03' 14"W | 21.51   |  |
| C11             | 2.16  | 1.83   | 067*28'00" | N39°08'56"W   | 2.04    |  |
| C12             | 3.69  | 2.25   | 093*59'36" | N41° 36' 33"E | 3.29    |  |
| C13             | 30.15 | 446.39 | 003•52'10" | S89° 27' 34"E | 30.14   |  |
| C14             | 57.09 | 794.20 | 004°07'08" | S84° 27' 53"E | 57.08   |  |
| C15             | 3.46  | 2.00   | 09915'07"  | S32° 46' 46"E | 3.05    |  |
| C16             | 2.89  | 1.83   | 090°16'16" | S61° 58' 56"W | 2.60    |  |
| C17             | 7.52  | 82.95  | 005"11'39" | S72° 05' 55"E | 7.52    |  |



ASPHALT PAVEMENT SEE DETAIL A ON SHEET C100

PER DETAIL C ON SHEET C100

PLAYGROUND BARK REFER TO LANDSCAPING PLANS

NEW SURFACE UTILITIES REFER TO



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|                                       | STRUCTURE LABEL                        | DETAIL #            |
|---------------------------------------|----------------------------------------|---------------------|
|                                       | SDMH - STORM DRAIN MANHOLE             | DETAIL F SHEET C100 |
| RUCTURES. PROVIDE NEW SECTIONS OF     | SSDCO - SANITARY SEWER DOUBLE CLEANOUT | DETAIL H SHEET C100 |
|                                       | BUB - BUBBLE UP BOX                    | DETAIL A SHEET C101 |
| O MAIN LINE PIPE WITH FLANGE FITTING. | 12" AD - 12" AREA DRAIN                | DETAIL B SHEET C101 |
|                                       |                                        |                     |







|            |                                        | 5                                               |                           |                   | 6                      |              |                 |
|------------|----------------------------------------|-------------------------------------------------|---------------------------|-------------------|------------------------|--------------|-----------------|
|            |                                        |                                                 |                           | . ,               | \                      | \            |                 |
|            | 2 <del>92</del>                        |                                                 |                           | `\                |                        | \<br>\       | \               |
|            | )<br>/                                 |                                                 |                           | \                 |                        | `\           | 1               |
|            |                                        |                                                 |                           | \                 |                        | `\           |                 |
|            |                                        |                                                 | <b>Proposed Basin</b>     | Calculations      | 5                      |              |                 |
|            |                                        | Drainage calculations for :                     | Trailside Elementry Sch   | ool Addtion       |                        |              |                 |
|            | j j                                    | Rasi                                            | n 1                       |                   |                        |              |                 |
| <          |                                        | Dasi                                            |                           |                   |                        |              |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
|            |                                        | Location:                                       | Summit County, UT         |                   |                        |              |                 |
|            |                                        |                                                 | 3/7/2024                  |                   |                        |              |                 |
|            |                                        | Pre-Develop #                                   |                           |                   |                        |              |                 |
| ` <u> </u> |                                        | 1.32                                            | Ac                        | 57,611            | SF                     |              |                 |
|            |                                        | 0.37                                            | C                         | Undeveloped Group | B Soil (~4%)           |              |                 |
|            |                                        | 325                                             | K Slope                   |                   |                        |              |                 |
|            |                                        | 16.1                                            | Tc =1.8*(1.1-C)L^.5/S^.33 |                   |                        |              |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
| <u>_</u>   |                                        | Pre-Development Release Rate (10-yr):           | 0.88                      | cfs               | C <sub>f</sub> (10-yr) | 1            |                 |
|            |                                        |                                                 | 0.67                      | cfs/acre          | l(in/hr)=              | 1.80         |                 |
|            |                                        | 1                                               |                           |                   |                        |              |                 |
|            |                                        | Pre-Development Release Rate (100-yr):          | 2.45                      | cfs               | $C_{f}$ (100-yr)       | 1.25         |                 |
|            |                                        |                                                 | 1.05                      | CIS/ACIE          | i(iii/iii)=            | 4.00         |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
| i          |                                        |                                                 |                           |                   | Runoff Coefficients    |              |                 |
|            |                                        | Pavement:                                       | 20388                     | ft <sup>2</sup>   | C=                     | 0.9          |                 |
|            |                                        | Landscape Area:                                 | 31,631                    | ft <sup>-</sup>   | C=                     | - 0.15       |                 |
|            |                                        |                                                 | `                         |                   |                        |              |                 |
|            |                                        |                                                 |                           | 05                | (                      | 0.49         | *1.05.0         |
|            |                                        |                                                 | 57,611<br>1 32            | SF<br>Ac.         | VVeighted C            | , U.61       | Factor          |
|            |                                        |                                                 | 1.52                      |                   |                        |              |                 |
| JIRED DET  | TENTION VOLUME:791 CF                  | Lapsed Time                                     | Accum. Rainfall           | "CA"              | Accum Flow             | Discharge    | Req'd Storag    |
|            | TENTION VOLUME:1,126 CF                | Minutes                                         | Inches (10 yr)            | acre              | ft"                    | ft           | ft°             |
| JIRED LID  | VOLUME:349 CF                          | 15                                              | 0.52                      | 0.65              | 1.209                  | 793          | 416             |
| VIDED LID  | VOLUME:1,126 CF                        | 30                                              | 0.70                      | 0.65              | 1,629                  | 1585         | 44              |
| TORAGE     | WILL BE HELD BELOW HIGH WATER LINE AND | 60                                              | 0.87                      | 0.65              | 2,015                  | 3171<br>6342 | 0               |
|            |                                        | 180                                             | 1.10                      | 0.65              | 2,557                  | 9513         | 0               |
|            |                                        | 360                                             | 1.36                      | 0.65              | 3,161                  | 19026        | 0               |
|            |                                        | 1440                                            | 1.67                      | 0.65              | 3,882                  | 76104        | 0               |
|            |                                        |                                                 |                           |                   | .,                     |              | -               |
|            |                                        | Required Detention Storage:                     |                           | 416               | cf                     | 10 yr Event  |                 |
|            |                                        | Lanced Time                                     | Assume Deinfell           | "04"              |                        | Discharge    | Deald Stores    |
|            |                                        | Lapsed Time                                     | Inches (100 vr)           | acre              | ft <sup>3</sup>        | Discharge    | ft <sup>3</sup> |
|            |                                        |                                                 |                           |                   |                        |              |                 |
|            |                                        | 15                                              | 1.03                      | 0.81              | 2,993                  | 2202         | 791             |
|            |                                        | 30                                              | 1.39                      | 0.81              | 4,039                  | 8808         | 0               |
|            |                                        | 120                                             | 1.93                      | 0.81              | 5,608                  | 17617        | 0               |
|            |                                        | 180                                             | 1.97                      | 0.81              | 5,724                  | 26425        | 0               |
|            |                                        | 720                                             | 2.15                      | 0.81              | 6,247                  | 105700       | 0               |
|            |                                        | 1440                                            | 2.97                      | 0.81              | 8,630                  | 211399       | 0               |
| l          |                                        |                                                 |                           |                   |                        |              |                 |
|            |                                        | Required Detention Storage:                     |                           | 791               | cf                     | 100 yr Event |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
|            |                                        | LID Retention                                   |                           |                   |                        |              |                 |
| l          |                                        | Project Area                                    | 57,611                    | ft <sup>2</sup>   |                        |              |                 |
|            |                                        | 80th Percentile Storm                           | 0.48                      | in                |                        |              |                 |
|            |                                        | Runoff Volume                                   | 2304                      | CF                |                        |              |                 |
|            |                                        | Impervous Area                                  | 25980                     | п <b>с</b> -      |                        |              |                 |
|            |                                        | Volumetric Runoff Coefficient R                 | 0.45                      |                   |                        |              |                 |
|            |                                        | V <sub>noal</sub> , WQV                         | 349                       | CF                |                        |              |                 |
|            |                                        | gour, mart -                                    | 0.10                      |                   |                        |              |                 |
| $\searrow$ |                                        | Pond Volume:                                    | * Volume=(Area1+Area2)/   | 2*(Elev1-Elev2)   |                        |              |                 |
|            |                                        |                                                 | TOD                       | 7.00              | Area (SF)              | Volume (CF)  | *               |
|            |                                        |                                                 | IOP                       | 7.00              | 1,442                  | 856          |                 |
|            |                                        |                                                 | BOTTOM                    | 6.00              | 269                    |              |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
|            |                                        | TOTAL REQUIRED LID RETENTION STO                | RAGE                      | Total:            | 349                    | CF           |                 |
|            |                                        | TOTAL PROVIDED LID RETENTION STO                | RAGE:                     | Total:            | 1,126                  | CF           |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
|            |                                        | TOTAL REQUIRED DETENTION STORAG                 |                           | Total:            | 791                    | CF           |                 |
| · ·        |                                        | TO TAL PROVIDED DETENTION STORAG                |                           | Total:            | 1,126                  | CF           |                 |
|            |                                        | * THE RETENTION VOLUME IS INCLUDED IN THE TOTAL | DETENTION VOLUME.         |                   |                        |              |                 |
|            |                                        |                                                 |                           | /                 | i / i / /              |              |                 |
|            |                                        |                                                 |                           | , , , ,           | 11/ /                  |              |                 |
|            |                                        |                                                 |                           |                   | /// /                  |              |                 |
|            |                                        |                                                 |                           |                   |                        |              |                 |
| +          |                                        |                                                 | 6511                      | ', / /            | 11//                   |              |                 |
| -          |                                        |                                                 |                           | 1                 | 1 1 /                  | 111          |                 |
|            |                                        |                                                 |                           | / / /             |                        |              |                 |
|            |                                        | ~                                               |                           |                   |                        |              |                 |







1 NLET SEDIMENT BARRIER ET SEDIMENT BARRIER al of the second s

### NOTES:

1) THERE ARE ABOUT 1.32 ACRES WITHIN THE PROJECT BOUNDARY THAT WILL BE DISTURBED WITH NEW CONSTRUCTION OR CONTRACTOR STORAGE ACTIVITIES. SEQUENCE OF CONSTRUCTION ACTIVITIES:

1) FIELD MARK LIMIT OF DISTURBANCE FOR APPROVAL BY SUMMIT COUNTY AND OBTAIN A STORM WATER MANAGEMENT PERMIT AS NEEDED BY SUMMIT COUNTY.

2) INSTALL SILT FENCE AND/OR ENVIRONMENTAL FENCE AROUND PERIMETER OF PROJECT AS INDICATED ON THIS PLAN SHEET.

3) INSTALL SEDIMENT CONTROL MEASURES INDICATED IN ALL EXISTING STORM DRAIN INLETS ADJACENT TO THE CONSTRUCTION SITE.

4) CONTRACTOR WILL BEGIN DEMOLITION, GRADING, EXCAVATION, AND CONSTRUCTING UTILITY SITE IMPROVEMENTS. AS NEW DRAINAGE ELEMENTS ARE COMPLETED, CONSTRUCT SEDIMENT PROTECTION AT ALL NEW INLETS.

5) AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WILL BE STABILIZED WITH SOD IN LANDSCAPED AREAS AND PAVEMENT IN PARKING AND DRIVEWAY AREAS. SITE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION ACTIVATES TO BE COMPLETED WITHIN 21 DAYS OF FINISHING AN AREA TO THE FINAL LINES AND GRADES INDICATED ON THE GRADING PLAN.

6) UPON LANDSCAPE ESTABLISHMENT, REMOVE TEMPORARY MEASURE & CLEAN STORM DRAIN SYSTEM PRIOR TO RELEASE OF SYSTEM TO THE OWNER.

RUNOFF COEFFICIENTS AND DISCHARGE: 1) THE EXISTING RUNOFF COEFFICIENT FOR THE PROJECT AREA IS ESTIMATED TO BE 0.37. THE NEW RUNOFF COEFFICIENT WILL BE APPROXIMATELY 0.49 FOR THE NEW IMPROVEMENTS.

2) RUNOFF WILL BE COLLECTED ON SITE AND RETAINED IN AN ABOVEGROUND DETENTION POND.

POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES:

1) THE OWNER WILL SUBMIT POST CONSTRUCTION BEST MANAGEMENT PRACTICES TO SUMMIT COUNTY.

GENERAL STORM WATER POLLUTION CONTROL NOTES:

1) SEE C510 FOR STORM WATER POLLUTION CONTROL NOTES AND GENERAL PRACTICES.

2) ALL CONSTRUCTION PERIOD BEST MANAGEMENT PRACTICES ARE TO BE INSPECTED AND MAINTAINED AT LEAST WEEKLY, ALSO BEFORE AND AFTER EACH STORM EVENT.

1 2

3) CONTRACTOR SHALL BE REQUIRED TO KEEP RECORD OF ALL INSPECTIONS AND MAINTENANCE ON SITE WITH THE STORM WATER POLLUTION PREVENTION PLAN.









# ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR ALL MEASURES CONTAINED IN THIS PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT. ANY NEEDED CLEANING AND REPAIRS SHALL BE DONE 14. ALL UTILITY LINES SHALL BE CLEANED OF DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. DOWN-GRADE LINES MUST BE PROTECTED FROM WASH-WATER DURING THE CLEANING TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS. NOTES: DRAINAGE AREAS. (LEES THAN 5%)

- BACK OF SIDEWALK FLOW

THE STRUCTURE.

- INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT
- FRENCH DETAI NOTES: SILT FENCE SHALL BE PLACED ON THE SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.



WIRE MESH SUPPORT STEEL OR WOOD POST ( 1-1/2"x1-1/2" MIN.)

ATTACH FILTER FABRIC

SECURELY TO UPSTREAM SIDE

2

- 6.3 DRIVE BOTH POST INTO THE GROUND SO THAT 8 12 INCHES OF MATERIAL REMAINS IN THE GROUND.
- 6.2 ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION, TO CREATE A TIGHT SEAL WITH THE FENCE MATERIAL.

AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DUE TO

WIND AND RUNOFF. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL FACILITIES SHOWN.

ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS

ALL BEST MANAGEMENT PRACTICES AND EROSION CONTROL MEASURES ARE TO CONFORM TO THE CITY LAND DISTURBANCE DESIGN AND

INTENDED. A REPRESENTATIVE OF THE CITY PUBLIC WORKS DEPARTMENT MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON

4. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE STREETS CLEAN AND FREE FROM DEBRIS DEPOSITED BY TRAFFIC FROM THE SITE.

6. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE PAVED, SEEDED WITH NATIVE VEGETATION OR LANDSCAPED. REFER TO

DEVICES SHALL BE INSTALLED IMMEDIATELY AS INDIVIDUAL INLETS ARE INSTALLED.

LANDSCAPE PLANS FOR SEED MIX AND PLANTING SPECIFICATIONS.

TO GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT.

STORM WATER DISCHARGES FROM THE SITE.

IMMEDIATELY UPON DISCOVERY.

ALL STORM DRAIN FACILITIES ON SITE AND ADJACENT TO THE SITE NEED TO BE PROTECTED FROM SITE RUNOFF. INLET PROTECTION

EROSION CONTROL STRUCTURES BELOW SODDED AREAS MAY BE REMOVED ONCE SOD AND FINAL LANDSCAPING ARE IN PLACE. EROSION

CONTROL STRUCTURES BELOW SEEDED AREAS MUST REMAIN IN PLACE UNTIL THE ENTIRE AREA HAS ESTABLISHED A MATURE COVERING

OF HEALTHY VEGETATION. EROSION CONTROL IN PROPOSED PAVEMENT AREAS SHALL REMAIN IN PLACE UNTIL PAVEMENT IS COMPLETE.

FACILITIES SHALL BE MAINTAINED WHILE CONSTRUCTION IS IN PROGRESS, MOVED WHEN NECESSARY AND REMOVED WHEN THE SITE IS

CONTRACTOR SHALL USE VEHICLE TRACKING CONTROL AT ALL LOCATIONS WHERE VEHICLES WILL ENTER OR EXIT THE SITE. CONTROL

9. ALL WASH WATER (CONCRETE TRUCKS. VEHICLE CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT WITH

OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS ABSOLUTELY PROHIBITED.

UTILITY CONSTRUCTION AND PLACEMENT OF BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

BLOWING DUST MUST BE CONTROLLED AT ALL TIMES. SITE WATERING SHALL BE USED TO CONTROL DUST. THE USE OF MOTOR OILS AND

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, GRAVEL BAGS, ETC.) DUE

- 6.1 PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
- 6. WHEN ATTACHING TWO LENGTHS OF FENCE TOGETHER, DO THE FOLLOWING:
- 5. REPEAT STEP 4 UNTIL THE STAKES ARE DRIVEN INTO THE GROUND.
- MUST BE DRIVEN FAR ENOUGH INTO THE GROUND SO THAT 8 12 INCHES OF MATERIAL REMAINS IN THE GROUND.
- AT THE NEXT STAKE, PULL THE MATERIAL TAUT BEFORE DRIVING THE SECOND STAKE INTO THE GROUND. NOTE THAT THE STAKE
- FAR ENOUGH INTO THE GROUND SO THAT 8 12 INCHES OF MATERIAL REMAINS IN THE GROUND.
- AND THE BOTTOM FLAP LAY IN THE TRENCH. STARTING AT ONE END, DRIVE THE FIRST STAKE AT LEAST 10 INCHES INTO THE GROUND. NOTE THAT THE STAKE MUST BE DRIVEN
- 1. DIG OR TRENCH A FOUR INCH WIDE BY SIX INCH DEEP TRENCH, THE LENGTH OF THE SILT FENCE 2. ROLL OUT SILT FENCE MATERIAL ALONG THE FRONT OF THE TRENCH SUCH THAT THE STAKES WILL BE ON THE DOWNSTREAM SIDE

SILT FENCES. INSTALLATION OF SILT FENCES NOTE:

EROSION CONTROL GENERAL NOTES

INSPECTION OF PROPOSED FACILITIES.

CONSTRUCTION STANDARDS.

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12.

PAVFD

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# CONSTRUCTION PERIOD BEST MANAGEMENT PRACTICES



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- 11. ALL DISTURBED SOIL WILL BE MADE STABLE AS WITHIN 21 DAYS OF DISTURBANCE. THE PROJECT CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PAVED STREETS ADJACENT TO OR ABUTTING THE GRADING PROJECT CLEAN AND FREE OF DIRT, MUD, AND DEBRIS AT ALL TIMES. WHEREAS THIS IS A PUBLIC HEALTH AND SAFETY ISSUE, FAILURE TO COMPLY WILL RESULT IN A MANDATORY WORK STOP ORDER BEING ISSUED OVER THE ENTIRE PROJECT, INCLUDING COMMERCIAL AND RESIDENTIAL CONSTRUCTION PROJECTS.

STATE OF UTAH AS REQUIRED THROUGHOUT THE DURATION OF THE PROJECT.

RIGHT-OF-WAY.

EACH STORM EVENT.

PREVENTION PLAN.

13. IF THE EXISTING GRADES ARE DIFFERENT THAN WHAT IS SHOWN ON THE GRADING PLAN, STOP WORK AND NOTIFY THE CITY. 14. IF THE PROJECT REQUIRES EXPORT OR IMPORT MATERIAL TO ACHIEVE A BALANCED SITE. THE CONTRACTOR IS TO KEEP OFFSITE ROADS CLEAN AT ALL TIMES. FAILURE TO KEEP STREETS CLEAN WILL RESULT IN A MANDATORY WORK STOP ORDER BEING ISSUED ON THE IMPORT/ EXPORT OPERATION.

16. THE CONTRACTOR WILL PROVIDE ADDITIONAL TEMPORARY EROSION CONTROL PLANS, AND PERMITS AS REQUIRED BY THE CITY, THE COUNTY AND THE

18. CONCRETE TRUCKS TO USE PRE-ASSIGNED WASH OUT AREA. CONCRETE TRUCKS ARE NOT TO BE CLEANED OUT OR WASHED DOWN IN THE PUBLIC

21. ALL CONSTRUCTION PERIOD BEST MANAGEMENT PRACTICES (BMPS) ARE TO BE INSPECTED AND MAINTAINED AT LEAST WEEKLY, ALSO BEFORE AND AFTER

17. FAILURE TO FOLLOW THE SEQUENCE OF CONSTRUCTION SHALL RESULT IN THE ISSUANCE OF A WORK STOP ORDER BEING ISSUED.

19. PORTABLE TOILETS TO BE LOCATED ADJACENT TO CONTRACTOR TRAILER. TOILETS SHALL BE MAINTAINED BY CONTRACTOR.

20. CONSTRUCTION WASTE BIN TO BE LOCATED NEAR CONTRACTOR TRAILER. ALL CONSTRUCTION WASTE TO BE PLACED IN WASTE BIN.

22. CONTRACTOR SHALL BE REQUIRED TO KEEP A RECORD OF ALL INSPECTIONS AND MAINTENANCE ON SITE WITH THE STORM WATER POLLUTION

- 12. TEMPORARY AND PERMANENT SEDIMENT BEST MANAGEMENT PRACTICES WILL REMAIN FUNCTIONAL AT ALL TIMES THROUGH THE ENTIRE PROJECT AND UNTIL ALL DISTURBED SOIL HAS BEEN STABILIZED TO PREVENT EROSION. WRITTEN APPROVAL MUST BE OBTAINED FROM THE CITY CERTIFYING ALL DISTURBED SOIL IS STABLE BEFORE ABANDONING SEDIMENTATION BEST MANAGEMENT PRACTICES.
- 10. INSTALL IMPROVEMENTS AS SHOWN ON THE APPROVED CONSTRUCTION PLANS.
- DUST CONTROL MEASURES WILL BE ON SITE AND IN WORKING ORDER WHEN SOIL IS DISTURBED. DUST CONTROL WILL BE USED 24 HOURS SEVEN DAYS PER WEEK UNTIL SOIL IS RESEEDED AND PROTECTED. WATER USED TO CONTROL DUST WILL CONTAIN CALCIUM CHLORIDE OR SIMILAR ADDITIVE. THE DUST CONTROL PLAN AS REQUIRED BY THE STATE OF UTAH DEPARTMENT OF ENVIRONMENTAL DIVISION OF AIR QUALITY DOES NOT REPLACE THE CALCIUM CHLORIDE REQUIREMENT.
- INSTALL ALL SEDIMENTATION BMPS AS SHOWN ON PLANS AND AS DIRECTED BY THE CITY
- APPROVED BY THE CITY.
- WITHIN THE SAME WORKING DAY SOIL IS DISTURBED ALL SEDIMENT CONTROL B.M.PS. WILL BE INSTALLED. AN EXAMPLE OF SEDIMENT CONTROL BMP IS A SILT FENCE OR A TEMPORARY SEDIMENTATION BASIN. EXISTING VEGETATION WILL NOT BE BURIED, THE METHOD OF DISPOSAL WILL BE SUBMITTED AND
- THE L.O.D. SILT FENCE BARRIERS DO NOT REPLACE OR FUNCTION AS SEDIMENTATION B.M.PS.. ADDITIONAL SEDIMENT (BEST MANAGEMENT PRACTICES) BMPS WILL BE REQUIRED AS SHOWN ON THE PLANS OR AS REQUIRED BY THE CITY THROUGHOUT THE PROJECT AS UNFORESEEN SITUATIONS OCCUR.
- 5. ENVIRONMENTAL FENCES ARE TO BE INSTALLED ON ALL UPHILL SIDE OF L.O.D.
- 4. INSTALL SILT FENCE ON ALL DOWNHILL SIDE OF L.O.D. SEE DETAIL AND SILT FENCE NOTES FOR CORRECT INSTALLATION PROCEDURE.
- 3. L.O.D. BARRIERS WILL BE PROPERLY INSTALLED PRIOR TO ANY DISTURBANCE. L.O.D. BARRIERS ARE DEFINED AS SILT FENCE AND ENVIRONMENTAL FENCE.
- THE CONTRACTOR WILL PERFORM EARTHWORK IN ACCORDANCE WITH THE PROJECT EARTHWORK SPECIFICATIONS AND THE EARTHWORK RECOMMENDATIONS FOUND IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED FOR THIS PROJECT. IN THE EVENT THAT THERE IS A CONFLICT BETWEEN THE DOCUMENTS MENTIONED (NOTE 2) AND THE CITY'S EROSION AND SEDIMENT CONTROL REQUIREMENTS OR THE DUST CONTROL PLAN AS REQUIRED BY THE STATE OF UTAH DEPARTMENT OF ENVIRONMENTAL DIVISION OF AIR QUALITY, THE CITY'S REQUIREMENTS AND THE STATE REQUIREMENTS WILL CONTROL.
- CONTRACTOR WILL PERFORM EARTHWORK IN ACCORDANCE WITH THE CITY STANDARD SPECIFICATIONS, CITY EROSION, SEDIMENT, REVEGETATION REQUIREMENTS AND THE DUST CONTROL PLAN AS REQUIRED BY THE STATE OF UTAH DEPARTMENT OF ENVIRONMENTAL DIVISION OF AIR QUALITY.
- CONSTRUCTION PERIOD BEST MANAGEMENT PRACTICES NOTES:
- BEEN REVIEWED AND APPROVED PRIOR TO WORK BEGINNING
- MODIFICATION OF L.O.D. AS REQUIRED BY RESULTS OF PRECONSTRUCTION MEETING. THE CONTRACTOR TO OBTAIN WRITTEN APPROVAL FROM THE CITY CERTIFYING THE L.O.D., DUST CONTROL, AND TREE PROTECTION HAS
- PRECONSTRUCTION EROSION AND SEDIMENT CONTROL MEETING REQUIRED PRIOR TO ANY DISTURBANCE. THE REQUIRED ATTENDEES WILL BE DEVELOPER'S PROJECT MANAGER, CONSTRUCTION COMPANY'S ON SITE MANAGER.
- 1. THE LIMITS OF DISTURBANCE (L.O.D.) TO BE FIELD MARKED. 2. FIELD VERIFICATION OF AN L.O.D. BY CITY ENGINEERING.
- LIMIT OF DISTURBANCE NOTES:

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|                                                                                                                                                                                                                                                                                     | PCSD TRAILSIDE ELEM. ADDITION                   | PCSD PARK CITY SCHOOL DISTRICT<br>PARK CITY, UT 84098                                                 | CONSTRUCTION DOCUMENTS                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------|
| ONTRACTOR                                                                                                                                                                                                                                                                           | VCBO NUMBI<br>CLIENT NUME<br>DATE:              | ER:<br>BER:<br>202                                                                                    | 21855<br>00000<br>24 03 08               |
| QTY<br>E<br>2DW<br>RE<br>D 3,740 sf                                                                                                                                                                                                                                                 | REV                                             | DATE DESCR                                                                                            | IPTION                                   |
| F GRADE IN TURF<br>IES IN SHRUB BED<br>H OF MULCH AROUND<br>SUBGRADE IN SHRUB<br>ID TOPSOIL. THE<br>E REMOVED PRIOR<br>RADE AND<br>WITH PLANTS OF<br>F, COLOR, FRUIT<br>DECIDUOUS TREES<br>R SHALL BE TRIPLE<br>ALL DESCRIBE THE<br>OIL AT THE SITE<br>R TO SPECS.<br>NDARDS AND/OR | Arc<br>Des<br>Landsca<br>Architec               | Sit<br>ign, I<br>ape Architectu<br>ast 2100 s<br>e City, Utah 8<br>87.4923 fax 801.46<br>csitiodesign | 1 0<br>n C<br>ure 8<br>esign             |
| ENTATIVE UPON<br>THE FIELD AND<br>NER'S<br>TS KNOWN WILL<br>PPROVAL OF THE<br>HE PROTECTION OF<br>HAIN. THE<br>YED GUARDS<br>PROTECT FROM<br>5 SUFFICIENT TO                                                                                                                        | LICENSE A                                       | ANDSCAPE AND<br>Richard L.<br>Gilbert<br>No. 5734299<br>ianvol Guesent<br>Tar. 8, 2024<br>TE OF UTAT  | TECT                                     |
| A<br>WITH ALL<br>L TAKE SOLE<br>UTILITIES.<br>DESIGNED WHEN IT<br>ES EXIST THAT MAY<br>IMMEDIATELY<br>CONTRACTOR<br>DUE TO FAILURE<br>UBCONTRACTORS AS<br>PROJECT.                                                                                                                  | ARCH<br>524 SOUTH 600 EAS<br>SALT LAKE CITY, UT |                                                                                                       | <b>DI R E</b><br>01.575.8800<br>VCBO.COM |
|                                                                                                                                                                                                                                                                                     |                                                 |                                                                                                       |                                          |



TREE PROTECTION

— SHRUB BED -

W/ MULCH

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SCALE: NTS

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- 1 PROTECTIVE ROOT ZONE (PRZ)-TO CALCULATE CRITICAL ROOT RADIUS, MEASURE THE TREE'S DIAMETER (DBH) 4.5 FEET ABOVE THE GROUND. MEASURE IN INCHES. FOR EACH INCH, ALLOW FOR 1 TO 1.5 FEET OF CRITICAL ROOT RADIUS. IF A TREE'S DBH IS TEN INCHES, ITS CRITICAL ROOT RADIUS IS 10 TO 15 FEET. (2) CONTRACTOR TO INSTALL AND MAINTAIN 6" OF TEMPORARY BARK MULCH WITHIN THE PRZ FOR PROPOSED TREES TO BE
- PROTECTED IN PLACE. REMOVE AND REPLACE PRIOR TO FINAL INSTALLATION OF PROPOSED MULCHES AND SURFACING. (3) TREE PROTECTION BARRIER- SEE SPECIFICATIONS. REVIEW DESIGN WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

(4) TREE TRUNK NOTES: 1. IF THERE IS TRENCHING WITHIN THE PRZ, TRENCHES SHALL ONLY BE DUG ON ONE SIDE OF THE TREE NOTES: AND SHALL BE DONE ONLY DONE I. PLANT SHRUB PLUMB. WITH APPROVAL FROM THE OWNER'S REPRESENTATIVE. HAND PLANTING TIME. DO NOT PRUNE LEADER. EXCAVATION ONLY. 2. DO NOT STOCKPILE ANY MATERIALS OR LOCATE ANY HEAVY 5. DEEP WATER WITH HOSE ALL PLANTS.

MACHINERY WITHIN THE PRZ. THERE SHALL BE NO TRAFFIC ALLOWED WITHIN THE PRZ. 3. ONLY MOVE BARRIER WITH THE PERMISSION OF THE OWNER'S REPRESENTATIVE.

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SECTION/PLAN

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MOIST ROOT SYSTEM.



1. PLANT TREE PLUMB.  $\rightarrow$  TURF  $\rightarrow$  2. REMOVE ALL LABELS, WIRES, ETC. FROM THE TREE'S STEM. 3. SEE "HANDOUT B" IN THE

- SPECS. FOR "STEPS FOR PLANTING A TREE". 4. DO NOT USE AN AUGER FOR  $\gamma/\gamma$ TREE HOLES.
- 5. TREE'S OVERHANGING ACCESSIBLE ROUTES MUST PROVIDE A MINIMUM HEAD CLEARANCE OF 80" AND







SCALE: NTS







NDICH ON ' LAK AN ANA ANA C 2 (4)(3) ھ 3 -98 (5) 1 TURF IF USED (9) USE ANCHOR PINS (6 X 1 (5) SUBGRADE X 6 INCHES) ALONG EDGE AT 3'-0" O.C. AND AT WULCH TO BE LEVEL (2) MULCH - SEE SPECS. AND DRAWINGS 3'-0" TO 5'-0" FEET IN (7) WEED BARRIER FABRIC (3) Amended topsoil - see specs. THE INTERIOR - SEE SPECS. AND DRAWINGS (8) ROAD BASE (4) CONCRETE MOW CURB OR WALK MULCH IN SHRUB BEDS SCALE: NTS SECTION

- CONCRETE -

MOW CURB

OR WALK



### 2. PRUNE DEAD, DISEASED, DAMAGED, OR RUBBING BRANCHES AT 3. REMOVE ALL LABELS, WIRES, ETC. FROM SHRUB. 4. DO NOT USE AN AUGAR FOR TREE HOLES.

6. WATER PLANT IN POT PRIOR TO REMOVING PLANT FROM POT. DO (12) EXISTING GRADE NOT PLANT DRY PLANTS. ALL POTTED PLNATS MUST HAVE A



EXCEPT IN RARE CASES TREES SHOULD NOT BE STAKED WALK (ALL TREES LESS THAN 2" CALIPER)

> TREE STAKING IN OPEN SPACES (ALL TREES LESS THAN 2" CALIPER). ALIGN STAKES PERPENDICULAR W/ DIRECTION OF PREVAILING WINDS. ALL STAKES TO BE CONSISTENT. PARALLEL W/ ROAD OR WALK (USE THREE STAKES FOR ALL DECIDUOUS TREES GREATER THAN 2" CAL.)

DECIDUOUS TREE WITH STAKING



PLAN

- (1) MULCH I" TO 2" BACK FROM TRUNK 2 MULCH LAYER - SEE SPECS.
- (3) AMENDED TOPSOIL- SEE SPECS.
- (4) UNDISTURBED SUBGRADE (5) IF THE SHRUB IS BALLED AND
- BURLAPPED (OR CONTAINED IN A WIRE BASKET), CUT AND REMOVE THE ROPE, STRING, WIRE, AND/OR WIRE BASKET FROM AROUND THE
- TRUNK AND TOP 1/3 OF THE ROOT BALL (6) SET ROOTBALL ON FIRMLY PACKED TOPSOIL TO PREVENT SETTLING
- (7) TRUNK FLAIR- SET I" TO 2" ABOVE FINISH GRADE (8) MAKE THE HOLE WIDE, AS MUCH
- AS THREE TIMES THE DIAMETER OF THE ROOT BALL, BUT ONLY AS DEEP AS THE ROOT BALL. BACKFILL TOPSOIL BORROW -SEE SPECS. BACKFILL IN 12 INCH
- LIFTS. (9) ROUGHEN SIDES PRIOR TO
- BACKFILLING. SETTLE W/ WATER IN 12" LIFTS
- (10) CONSTRUCT WATERING DISH AT EACH PLANT USING TOPSOIL
- (II) FINISH GRADE
- (13) FERTILIZER TABLET SEE SPECS.

# SECTION

- 1) MULCH I" TO 2" BACK FROM TRUNK (2) MULCH LAYER - SEE SPECS. AND PLANS
- (3) AMENDED TOPSOIL SEE SPECS.
- (4) UNDISTURBED SUBGRADE 5) IF THE TREE IS BALLED AND BURLAPPED (OR CONTAINED IN A WIRE BASKET), CUT AND REMOVE THE ROPE, STRING, WIRE, AND/OR WIRE BASKET FROM AROUND THE TRUNK AND TOP 1/3 OF THE ROOT
- BALL 6 SET ROOTBALL ON FIRMLY PACKED TOPSOIL TO PREVENT SETTLING
- (7) TRUNK FLAIR- SET I" TO 2" ABOVE FINISH GRADE (8) MAKE THE HOLE WIDE, AS MUCH
- AS THREE TIMES THE DIAMETER OF THE ROOT BALL, BUT ONLY AS DEEP AS THE ROOT BALL. BACKFILL TOPSOIL BORROW -SEE SPECS. BACKFILL IN 12 INCH LIFTS.
- PREPARE A WATERING CIRCLE OF (9) 2' DIAMETER AROUND THE TRUNK. FOR CONIFERS, EXTEND THE WATERING WELL TO THE DRIP LINE OF THE TREE CANOPY.
- ) ROUGHEN SIDES PRIOR TO BACKFILLING. SETTLE W/ WATER IN 12" LIFTS
- (II) FERTILIZER TABLET SEE SPECS. (12) DO NOT PLANT LAWN IN TREE PIT
- (13) 3" OR WIDER NYLON WEBBING W/ METAL GROMMETS
- (14) 6'-0" X 2" DIA. ROUND WOOD STAKES, TWO PER TREE (THE STAKES SHALL BE PLUMB AND SET AT THE SAME HIEGHT) (15) DOUBLE STRAND PLIABLE NO.
- 14-GAGE GALVANIZED STEEL WIRE OR VINYL-COATED STEEL WIRE, DO NOT PULL TAUT (16) PRUNE DEAD, DISEASED,
- DAMAGED, OR RUBBING BRANCHES AT PLANTING TIME. DO NOT PRUNE LEADER. IMPROPER PRUNING SHALL BE CAUSE FOR REJECTION OF THE PLANT MATERIAL.
  - SECTION
- (I) KEEP MULCH BACK FROM BASE OF PLANT
- (2) MULCH LAYER SEE SPECS. (3) AMENDED TOPSOIL - SEE SPECS.
- ) UNDISTURBED SUBGRADE 5) IF PLANTS ARE POT-BOUND AT PLANTING TIME, LOOSEN THE ROOTS AROUND THE BOTTOM AND SIDES OF THE ROOT BALL
- (6) PLANT (7) BE SURE THE CROWN OF THE PLANT (THE POINT WHERE ROOTS AND TOP JOIN) IS EVEN WITH THE SOIL SURFACE
- (8) PLANT SPACING VARIES REFER
- TO PLANT SCHEDULE OR PLAN (9) CENTER OF PLANT
- (10) FERTILIZER TABLET SEE SPECS.

<u>NOTES:</u> 1. PRUNE DEAD, DISEASED, DAMAGED, OR RUBBING

- BRANCHES AT PLANTING TIME. 2. REMOVE ALL LABELS, WIRES,
- ETC. FROM PLANT.
- 3. WATER PLANTS THOROUGHLY FOLLOWING PLANTING TO SETTLE THE SOIL AROUND THE ROOTS.

SECTION/PLAN

| PLANTING                                       | SCHEDULE                                                                                                                                                                                                                       |                                  |                 |                    | А  |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------|--------------------|----|
| SYMBOL                                         | BOTANICAL / COMMON NAME                                                                                                                                                                                                        | <u>CONT</u>                      | CAL             | QTY                | -  |
| TREES                                          | Malus x 'Spring Snow' / Spring Snow Crab Apple                                                                                                                                                                                 | B¢B                              | 2"Cal           | 2                  |    |
| <u>SYMBOL</u>                                  | BOTANICAL / COMMON NAME                                                                                                                                                                                                        | <u>SIZE</u>                      | FIELD2          |                    |    |
| SHRUBS<br>(arct)<br>(jun2)<br>(mah)<br>(rhugr) | Cornus sanguinea 'Arctic Fire' TM / Arctic Fire Bloodtwig Dogwood<br>Juniperus sabina 'Arcadia' / Arcadia Juniper<br>Mahonia aquifolium 'Compacta' / Compact Oregon Grape<br>Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac | 5 gal<br>5 gal<br>5 gal<br>5 gal |                 | 15<br>9<br>13<br>7 |    |
| rhuty                                          | Rhus typhina 'Tiger Eyes' / Tiger Eyes Sumac                                                                                                                                                                                   | 5 gal                            |                 | 8                  |    |
| <u>GRASSES</u>                                 | 2<br>Calamagrostis acutifolia 'Karl Foerster' / Foerster's Reed Grass                                                                                                                                                          | 5 gal                            |                 | 11                 |    |
| <u>SYMBOL</u>                                  | BOTANICAL / COMMON NAME                                                                                                                                                                                                        | <u>CONT</u>                      | FIELD2          | QTY                |    |
| GROUND                                         | <u>COVERS</u><br>Turf-Grass / Turf-Grass                                                                                                                                                                                       | sod                              |                 | 15,776             | sf |
|                                                | * QUANTITIES PROVIDED FOR REFERENCE ONLY. CONTRACTOR RESPONS                                                                                                                                                                   | IBLE TO VER                      | IFY ALL QUANTI" | TIES.              |    |



VCBO NUMBER:

CLIENT NUMBER:

DATE:

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21855 00000 2024 03 08





|                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L-R1                                                                                                                | 01                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| D NULLES<br>D HEAD<br>C<br><u>GPM</u> <u>DESIGN PSI</u><br>39.68 30<br>31.18 30<br>** **<br>52.8 50<br>** **<br>** **<br>5.47 30<br>** **<br>** **<br>63.6 50<br>** **<br>D                                              | <b>PCSD TRAILSIDE ELEM. ADDITION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PCSD PARK CITY SCHOOL DISTRICT<br>PARK CITY, UT 84098                                                               | CONSTRUCTION DOCUMENTS                                           |
| B<br>- ADJUST<br>ED TO<br>FY<br>EXISTING<br>COMMODATE NEW<br>FIELD VERIFY<br>- FEILD VERIFY<br>- FEILD VERIFY<br>ES TO<br>AREAS FOR<br>COATED INSIDE<br>E ARCHITECT.<br>E AND CONTROL<br>WITH EDGE<br>ED NOZZLES         | VCBO NUMBA<br>CLIENT NUMA<br>DATE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ER:<br>BER:<br>20:                                                                                                  | 2185:<br>00000<br>24 03 08                                       |
| IE PROPER AMOUNT<br>IGATION SYSTEM AS<br>UE TO PROPOSED<br>BUT IS NOT LIMITED<br>ES, RELOCATING<br>G EXISTING<br>G PLANT MATERIAL<br>(STEM AS<br>R EXISTING<br>MATERIAL CHANGE,<br>ATION TO THE NEW<br>THE PLANS SHOW IT | REV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DATE DESCR                                                                                                          | IPTION                                                           |
| AND IN ACCORDANCE<br>AND VALVES FOR<br>OF THE<br>ADJUST ALL<br>SHALL BE                                                                                                                                                  | Arc<br>Des<br>Landsca<br>Architec<br>1058 ea<br>Salt Lake<br>office 801.44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sit<br>ign, I<br>ape Architect<br>tural Site De<br>ast 2100 s<br>City, Utah &<br>87.4923 fax 801.46<br>csitiodesign | 1 C<br>1 C<br>ure &<br>esign<br>south<br>34106<br>36.304<br>.com |
| FOR THE LOCATION<br>LS AND UNDER<br>THE PLANS WHEN IT<br>G DIFFERENCES MAY<br>INS OR DIFFERENCES<br>FECT. IN THE EVENT<br>LL ASSUME FULL<br>VALVES, ETC.,<br>AND SHALL BE<br>IRRIGATION<br>OOTS ARE<br>FOR IRRIGATION    | THE REAL PROPERTY OF THE REAL | ANDSCAPE AP<br>Richard L.<br>Gilbert<br>No. 5734299<br>ianvol GussenTar. 8, 2024<br>TE OF UTAT                      | MITECT .                                                         |
| ITRACTOR WITH<br>D INSTALL A<br>R SHALL PROVIDE<br><u>EPRESENTATIVE.</u> IN<br>TO THE START OF<br>TY FOR ANY<br>SURE FOR EACH<br>D UTILITIES. THE<br>MAGED BY HIS                                                        | ARCH<br>524 SOUTH 600 EAS<br>SALT LAKE CITY, UT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DBC<br>IITECTU<br><sup>T</sup> 84102                                                                                | URE<br>01.575.8800<br>VCBO.COM                                   |
| A                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                     |                                                                  |



| PIPE                                      | NO.                                       | BOLT                                                                                                             | TORQUE                                   |
|-------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| SIZE                                      | BOLTS                                     | SIZE                                                                                                             | FT-LBS.                                  |
| 2"<br>2.5"<br>3"<br>4"<br>6"<br>8"<br>10" | 2<br>2<br>2<br>2<br>2<br>2<br>4<br>4<br>4 | 3/8" x 2.5"<br>3/8" x 2.5"<br>3/8" x 2.5"<br>1/2" x 3"<br>1/2" x 3.5"<br>1/2" x 4"<br>5/8" x 5.5"<br>5/8" x 5.5" | 20<br>20<br>50<br>50<br>50<br>100<br>100 |

| SIZE         II°         22°         45°         90°         I STEP         2 STEP         3 STEP         BLIND         SERV. B.           2"         I'         I'         2'         6'         -         -         -         IQI         6'           2.5"         I'         2'         4'         9'         4'         -         -         23'         IO'           3"         2'         3'         6'         II'         8'         IO'         -         30'         I5'           4"         2'         4'         9'         20'         I4'         20'         31'         45'         25'           6"         3'         6'         I3'         29'         30'         40'         53'         63'         40'           8"         4'         8'         15         38'         33'         55'         63'         75'         70'           10"         5'         9'         19'         45'         36'         56'         75'         96'         90'           12"         5'         10'         21'         53'         38'         60'         83'         II2'         II0' <th>PIPE</th> <th colspan="4">BENDS</th> <th colspan="3">REDUCERS</th> <th colspan="3">DEAD END</th> | PIPE                                             | BENDS                                  |                                         |                                           |                                             | REDUCERS                                         |                                             |                                           | DEAD END                                              |                                                      |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------|-----------------------------------------|-------------------------------------------|---------------------------------------------|--------------------------------------------------|---------------------------------------------|-------------------------------------------|-------------------------------------------------------|------------------------------------------------------|--|
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SIZE                                             | 11°                                    | 22°                                     | 45°                                       | 90°                                         | 1 STEP                                           | 2 STEP                                      | 3 STEP                                    | BLIND                                                 | SERV. B.                                             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2"<br>2.5"<br>3"<br>4"<br>6"<br>8"<br>10"<br>12" | 1'<br>1'<br>2'<br>3'<br>4'<br>5'<br>5' | 1'<br>2'<br>3'<br>4'<br>8'<br>8'<br>10' | 2'<br>4'<br>6'<br>13'<br>15<br>19'<br>21' | 6'<br>9'<br>20'<br>29'<br>38'<br>45'<br>53' | -<br>4'<br>8'<br>14'<br>30'<br>33'<br>36'<br>38' | -<br>10'<br>20'<br>40'<br>55'<br>56'<br>60' | -<br>-<br>31'<br>53'<br>63'<br>75'<br>83' | 19'<br>23'<br>30'<br>45'<br>63'<br>75'<br>96'<br>112' | 6'<br>10'<br>15'<br>25'<br>40'<br>70'<br>90'<br>110' |  |

(6) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5) - (5)

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3M DBR-Y-6 DIRECT BURY SPLICE KIT

|                    |                   | А          |
|--------------------|-------------------|------------|
| <u>GPM</u><br>1.58 | <u>RAD</u><br>10' | <u>IUS</u> |
| 1.3                | 12'               |            |
| 3.7                | 15'               |            |
| 1.85               | 15'               |            |
| 0.92               | 15'               |            |
| ≤2.38              | 12'               |            |
| ≤3.67              | 15'               |            |
| <u>GPM</u>         | <u>RADI</u>       | <u>US</u>  |
| 8.4                | 45'               |            |
|                    |                   |            |









### 1058 east 2100 south Salt Lake City, Utah 84106 office 801.487.4923 fax 801.466.3046 www.arcsitiodesign.com

DATE DESCRIPTION

VCBO NUMBER:

CLIENT NUMBER:

DATE:

REV

21855 00000 2024 03 08





# **KEYED NOTES**

| 205.0 | EXISTING CONCRETE SIDEWALK, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                                                                                                                                                                |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 205.1 | EXISTING CONCRETE SIDEWALK TO BE REMOVED COMPLETELY                                                                                                                                                                                                                                 |
| 206.1 | EXISTING ASPHALT/CONCRETE PAVING, TO BE REMOVED                                                                                                                                                                                                                                     |
| 210.1 | EXISTING LANDSCAPING TO BE REMOVED                                                                                                                                                                                                                                                  |
| 210.2 | EXISTING TREE TO REMAIN, PROTECT AS NECESSARY, REPAIR AS REQUIRED. TREE TO BE<br>WATERED AND MAINTAINED DURING CONSTRUCTION PERIOD, AND IS TO BE EXCLUDED<br>FROM CONSTRUCTION OR STAGING ZONES. TREE WILL BE REPLACED AT CONTRACTORS<br>EXPENSE SHOULD THEY BE DAMAGED IN ANY WAY. |
| 210.3 | EXISTING TREE TO BE REMOVED COMPLETELY                                                                                                                                                                                                                                              |
| 210.4 | EXISTING PAINT STRIPING, TO BE REMOVED COMPLETELY                                                                                                                                                                                                                                   |
| 210.5 | EXISTING TURF, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                                                                                                                                                                             |
| 216.0 | EXISTING FENCE, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                                                                                                                                                                            |
| 216.1 | EXISTING FENCE TO BE REMOVED COMPLETELY                                                                                                                                                                                                                                             |
| 221.2 | EXISTING PLAYGROUND EQUIPMENT, RELOCATE AS SHOWN ON AS101, REPAIR AS REQUIRED                                                                                                                                                                                                       |
| 222.1 | EXISTING CURB AND GUTTER TO BE REMOVED COMPLETELY                                                                                                                                                                                                                                   |

5

### GENERAL DEMOLITION NOTES

- 1. FIELD VERIFY DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING.
- 2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER. ABATEMENT MUST BE COMPLETED PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS.
- 3. PROVIDE DUSTPROOF ENCLOSURES AT PERIMETER OF CONSTRUCTION & DEMOLITION FOR PROTECTION OF ADJACENT SPACES.
- 4. COORDINATE MAINTENANCE OF FIRE EGRESS FOR OCCUPANTS IN EXISTING BUILDING WITH THE OWNER AND FIRE MARSHAL. PROVIDE NECESSARY TEMPORARY WALLS OR ENCLOSURES, EMERGENCY LIGHTS, ETC., FOR THE DURATION OF CONSTRUCTION.
- 5. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, INCORRECT CONSTRUCTION OR SAFETY PROBLEMS. 6. MAINTAIN EXISTING FIRE RATINGS, AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION.
- COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS. 7. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR
- DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
- 8. REMOVE BUILDINGS TO BE DEMOLISHED IN THEIR ENTIRETY, INCLUDING CONCRETE FOOTINGS AND FOUNDATIONS. DISPOSE PER CITY REQUIREMENTS.
- 9. REMOVE AND DISPOSE SELECTIVE DEMOLITION MATERIAL PER CITY REQUIREMENTS.
- 10. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR TRANSPORT BY THE OWNER.

## GENERAL SITE DEMOLITION NOTES

- 1. REFER TO CIVIL, LANDSCAPE AND ELECTRICAL SITE PLANS FOR ADDITIONAL DEMOLITION WHICH IS REQUIRED.
- 2. MAINTAIN EXISTING UTILITY SERVICES FOR EXISTING FACILITIES. COORDINATE REQUIRED DISRUPTION OF THESE SERVICES WITH OWNER PRIOR TO DISCONNECTING. PROVIDE TEMPORARY UTILITY SERVICES TO KEEP FACILITIES IN OPERATION DURING UTILITY RELOCATION INCLUDING BUT NOT LIMITED TO FIRE WATCHES, ELECTRICAL GENERATORS, ETC.
- 3. FOR EXISITING UTILITIES TO BE REMOVED OR ABANDONED, CAP OR PLUG AND SEAL ENDS OF REMAINING PIPES FOR OTHER CONDUITS.
  - SANITARY SEWER: CAP OR PLUG AND SEAL AT PROPERTY LINE. CULINARY WATER: CAP OR PLUG AND SEAL AT MAIN PER CITY REQUIREMENTS; WORK SHALL BE WITNESSED BY AUTHORIZED CITY REPRESENTATIVE.
  - OVERHEAD POWER AND PHONE LINES: TERMINATE AT POLE PER UTLITY COMPANY REQUIREMENTS.
- 4. REMOVING OR ABANDONING UTILITIES IN THE STREET SHALL INCLUDE NECESSARY TRAFFIC CONTROL, PAVEMENT SAW CUTTING, PAVEMENT DISPOSAL AND PAVEMENT RESTORATION AS PER CITY STANDARDS.
- 5. WHERE EXISITING DRIVEWAYS AND APRONS ARE REMOVED, SAW CUT SIDEWALK AT NEAREST JOINT. REPLACE SIDEWALK, CURB AND GUTTER PER CITY STANDARDS.
- 6. REMOVE EXISTING LAWN AND TREES, SHRUBS, AND PLANTER BEDS LOCATED WITHIN THE EXTENTS OF CONSTRUCTION, UNLESS NOTED OTHERWISE.
- 7. FIELD VERIFY LOCATION OF EXISTING SPRINKLER LINES AND CONTROLS IN LANDSCAPED AREAS AFFECTED BY DEMOLITION CONSTRUCTION. CAP OR REROUTE LINES TO ACCOMODATE LANDSCAPING UNAFFECTED BY CONSTRUCTION.

# DEMOLITION LEGEND

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| <br>HALF-TONE LINE DENOTES ITEMS TO REMAIN     |
|------------------------------------------------|
| <br>DASHED LINE DENOTES ITEMS TO BE DEMOLISHED |
| AREA TO REMAIN UNDISTURBED DURING CONSTRUCT    |



**OVERALL SITE DEMOLITION** PLAN

SD

**P** 

**ADS101** 

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|   |    |            |     |  |   |
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|   |    |            |     |  |   |

| — X  |    | <br>4   | 4'<br>MC   |
|------|----|---------|------------|
| ——×— | -× | <br>6   | 6' -<br>MC |
| ——X— |    | <br>F   | 5' ·       |
|      |    | <br>Ρ   | PF         |
|      |    | <br>NIC |            |
|      |    | <br>M1  | 0'-        |
|      |    | <br>M2  | 1'-        |

- 0" CHAINLINK FENCE W/ 24" WIDE CONCRETE IOW STRIP - 0" CHAINLINK FENCE W/ 24" WIDE CONCRETE IOW STRIP

- 0" DECORATIVE IRON FENCE

ROPERTY LINE

5

ONSTRUCTION NOT COVERED UNDER THIS ONTRACT

'-8" WIDE CONCRETE MOW STRIP

1'-0" WIDE CONCRETE MOW STRIP

# GENERAL SITE PLAN NOTES

- 1. GRADING AT THE BUILDING SHALL HAVE A 5% MINIMUM SLOPE AWAY FROM THE BUILDING FOR A MINIMUM OF 10'-0", UNO. CONCRETE SHALL BE SLOPED 2% AWAY FROM BUILDING. IBC 2018 SECTION 1804.3
- 2. FOUNDATION TO BE 6" ABOVE FINISHED GRADE UNO. (8" FOR DFCM PROJECT, ALSO REVIEW IBC 2018 SECTION 1808)
- 3. ALL CONNECTIONS FROM CITY STREETS TO THE BUILDING ARE TO BE PROVIDED UNDER THIS CONTRACT. CONTRACTOR TO VERIFY CITY STANDARDS FOR ROAD, CURB, UTILITY AND SIGNAGE REQUIREMENTS.
- 4. ALL EXTERIOR SIDEWALKS, STAIRS AND LANDINGS TO HAVE POSITIVE DRAINAGE BUT NO MORE THAN A MAXIMUM OF 1/4" SLOPE PER FOOT TO ALLOW POSITIVE DRAINAGE. ALL STAIRS AND RAMPS TO HAVE A LANDING OF 48 INCHES LONG AT THE TOP AND BOTTOM WITH A MAXIMUM SLOPE OF 1/4" PER FOOT. ALL REBAR IN EXTERIOR APPLICATIONS TO BE EPOXY COATED.
- 5. ALL HARDSCAPE TO BE A MINIMUM OF 4" THICK AIR ENTRAINED CONCRETE OVER 6" ROAD BASE, UNO, AND ALL SIDEWALKS SHALL BE NO LESS THAN 5'-0" WIDE. 6. FINISH GRADE OF SOFTSCAPE SHALL BE 2" UNIFORMLY BELOW PAVING SURFACES
- UNLESS NOTED OTHERWISE.
- 7. FINISH GRADE OF SOFTSCAPE SHALL BE 2" UNIFORMLY BELOW PAVING SURFACES UNLESS NOTED OTHERWISE.
- 8. 12" X 4" CONTINUOUS MINIMUM CONCRETE MOW STRIP, TO BE PROVIDED AROUND ENTIRE BUILDING EXCEPT WHERE CONCRETE SIDEWALKS OR PLANTERS OCCUR, TYP.
- 9. LIGHT POLE BASE IN ALL LANDSCAPE LOCATIONS TO BE 6" ABOVE FINISHED GRADE, BE LOCATED AT LEAST 36" FROM FACE OF POLE BASE TO BACK OF CURB AND HAVE A CONCRETE MOW STRIP. VERIFY LOCATION ON SITE WITH ARCHITECT PRIOR TO ANY INSTALLATION.
- 10. LIGHT POLE BASE IN ALL PAVED LOCATIONS TO BE 36" ABOVE FINISHED GRADE. VERIFY LOCATION ON SITE WITH ARCHITECT PRIOR TO ANY INSTALLATION.
- 11. REMOTE FDC TO HAVE VAULT FOR DRAINAGE.
- 12. COORDINATE ORIENTATION OF FIRE HYDRANT OUTLETS WITH THE FIRE MARSHALL'S OFFICE PRIOR TO THE FINAL INSTALLATION OF THE HYDRANT ASSEMBLY.

# TREE PRESERVATION GUIDELINES + NOTES

- 1. FENCES WILL BE ERECTED TO PROTECT TREES TO BE PRESERVED. FENCES DEFINE A SPECIFIC PROTECTION ZONE FOR EACH TREE OR GROUP OF TREES. FENCE TO BE AT A MINIMUM OF 20' FROM TRUNK OR AT DRIP LINE OF TREE, WHICHEVER IS GREATER. FENCES ARE TO REMAIN UNTIL ALL SITE WORK HAS BEEN COMPLETED. FENCES MAY NOT BE RELOCATED OR REMOVED WITHOUT THE WRITTEN PERMISSION OF THE CONSULTING ARBORIST OR THE ARCHITECT.
- 2. INSIDE ALL PROTECTED TREE FENCE AREAS, CONTRACTOR TO PROVIDE WOOD CHIPS, MINIMUM 4" DEEP.
- 3. CONSTRUCTION TRAILERS AND TRAFFIC AND STORAGE AREAS MUST REMAIN OUTSIDE FENCED AREAS AT ALL TIMES.
- 4. ALL UNDERGROUND UTILITIES AND DRAIN OR IRRIGATION LINES SHALL BE ROUTED OUTSIDE THE TREE PROTECTION ZONE. IF LINES MUST TRAVERSE THE PROTECTION AREA, THEY SHALL BE TUNNELED OR BORED UNDER THE TREE(S).
- 5. NO MATERIALS, EQUIPMENT, SPOIL OR WASTE OR WASHOUT WATER MAY BE DEPOSITED, STORED OR PARKED WITHIN THE TREE PROTECTION ZONE (FENCED AREA).
- 6. ADDITIONAL TREE PRUNING REQUIRED FOR CLEARANCE OR TREE HEALTH DURING CONSTRUCTION MUST BE PERFORMED BY A QUALIFIED ARBORIST AND NOT BY CONSTRUCTION PERSONNEL.
- ANY HERBICIDES PLACED UNDER PAVING MATERIALS MUST BE SAFE FOR USE AROUND TREES AND LABELED FOR THAT USE. ANY PESTICIDES USED ON SITE MUST BE TREE-SAFE AND NOT EASILY WASHED OFF SITE, CAUSING POLLUTION.
- 8. IF INJURY SHOULD OCCUR TO ANY TREE DURING CONSTRUCTION IT SHOULD BE EVALUATED AS SOON AS POSSIBLE BY THE CONSULTING ARBORIST OR LANDSCAPE ARCHITECT SO THAT APPROPRIATE TREATMENTS CAN BE APPLIED.
- 9. ANY GRADING, CONSTRUCTION, DEMOLITION, OR OTHER WORK THAT IS EXPECTED TO ENCOUNTER TREE ROOTS MUST BE MONITORED BY THE CONSULTING ARBORIST/LANDSCAPE ARCHITECT. ALL TREES NOT BEING REMOVED AS INDICATED ON LANDSCAPE DEMOLITION PLAN SHALL BE PROTECTED / MONITORED.
- 10. IRRIGATION WATER TO THE TREES AND SHRUBS TO REMAIN SHOULD BE AT LEAST 1 INCH A WEEK DURING GROWING SEASON UNTIL PROJECT COMPLETION (MAY - OCT) THIS WILL BE APPLIED WITH SPRINKLERS EVENLY OVER THE WHOLE ROOT SYSTEM, TWICE A WEEK TWO DAYS APART WITH 1/2 INCH OF WATER DELIVERED EACH WATERING CYCLE. NEWLY PLANTED PLANTS THAT HAVE NOT BECOME ESTABLISHED (2 YEARS OR LESS) WILL ALSO NEED IRRIGATION TO ENSURE THEIR SURVIVAL. IT IS RECOMMENDED THAT A TEMPORARY IRRIGATION SYSTEM BE DESIGNED ACCORDING TO THE VOLUME AND FLOW OF THE WATER SOURCE TO WATER THE PLANT MATERIAL.
- 11. EROSION CONTROL DEVICES SUCH AS SILT FENCING, DEBRIS, BASINS, AND WATER DIVERSION STRUCTURES SHALL BE INSTALLED TO PREVENT SILTATION AND OR EROSION WITHIN THE TREE PROTECTION ZONE.
- 12. ANY ROOTS DAMAGED DURING GRADING, TRENCHING OR CONSTRUCTION SHALL BE EXPOSED TO SOUND TISSUE AND CUT CLEANLY WITH A SAW. CONTRACTOR SHALL HAVE A QUALIFIED ARBORIST OR LANDSCAPE ARCHITECT OBSERVE THIS WORK.
- 13. IF TEMPORARY HAUL OR ACCESS ROADS MUST PASS OVER THE ROOT AREA OF TREES TO BE RETAINED, A ROADBED OF 6 INCHES OF COURSE WOOD CHIP MULCH SHALL BE CREATED TO PROTECT THE SOIL AND ROOTS. THE ROAD BED MATERIAL SHALL BE REPLENISHED AS NECESSARY TO MAINTAIN A 6-INCH DEPTH. UNDER NO CIRCUMSTANCES SHALL SUCH ACCESS ROADS BE USED ON A FREQUENT BASIS.
- 14. SPOIL OR SUBSOIL FROM TRENCHES, BASEMENTS, OR OTHER EXCAVATIONS SHALL NOT BE PLACED WITHIN THE TREE PROTECTION ZONE, EITHER TEMPORARILY OR PERMANENTLY.
- 15. MONITORING ONCE A MONTH SHALL OCCUR NOW AND FOR AT LEAST ONE YEAR AFTER CONSTRUCTION IS COMPLETED. CONTRACTOR SHALL HAVE A QUALIFIED ARBORIST PERFORM THIS TASK.
- 16. A SOIL SAMPLE SHALL BE SENT TO USU SOILS LAB TO DETERMINE IF ANY NUTRIENTS CAN BE ADDED TO HELP RELIEVE SOME STRESS TO THE TREES.

# SITE MATERIALS LEGEND

|                                       | BUILDING                                                                                 |
|---------------------------------------|------------------------------------------------------------------------------------------|
| · · · · · · · · · · · · · · · · · · · | LAWN                                                                                     |
|                                       | CONCRETE SIDEWALK (CONCRETE SLA<br>BASE OVER COMPACTED SUB-BASE. SI                      |
|                                       | RIGID CONCRETE PAVEMENT (RIGID CO<br>PAVEMENT OVER COMPACTED ROAD E                      |
|                                       | LIGHT DUTY ASPHALT PAVEMENT (FLE)<br>OVER COMPACTED ROAD BASE OVER (<br>BASE. SEE CIVIL) |
|                                       | HEAVY DUTY ASPHALT PAVEMENT (FLE<br>OVER COMPACTED ROAD BASE OVER (<br>BASE. SEE CIVIL)  |
|                                       | IMAGINARY LINE INDICATING FIRE ACC                                                       |
|                                       | LANDSCAPNG, DECORATIVE COBBLE R                                                          |
|                                       | PLAY TOY WOOD FIBER SOFT FALL MA                                                         |
|                                       | NOT IN CONTRACT - AREA TO REMAIN U                                                       |
|                                       |                                                                                          |

AB OVER GRAVEL SEE CIVIL)

ONCRETE BASE. SEE CIVIL) EX PAVEMENT R COMPACTED SUB-

EX PAVEMENT R COMPACTED SUB-

CESS LANES

ROCK MULCH

TERIAL

UNDISTURBED

WHERE EXISTING PARKING IS TO REMAIN WITHIN THE PROJECT BOUNDARY, CONTRACTOR AND INSPECTOR TO VERIFY EXISTING PASSENGER LOADING ZONE(S) COMPLY WITH THE PROVISIONS OF IBC 1106 AND ICC A117.1-09 SECTION 503 FOR PULL UP SPACES, ACCESS AISLES, SIGNAGE, ETC. IF THE EXISTING IS NOT COMPLIANT, THE CONTRACTOR WIL UPDATE AS NECESSARY.





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PRIOR TO BIDDING.

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- FOR PROTECTION OF ADJACENT SPACES.
- VIOLATIONS, INCORRECT CONSTRUCTION OR SAFETY PROBLEMS.
- THESE SYSTEMS.
- CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
- PUBLIC SIDE OF WALLS WITH DEMOLITION ACTIVITIES.
- PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.

- PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.
- SMOOTH SURFACE SUITABLE FOR PAINTING OR WALL COVERING.

- MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.

- HARDWARE ARE TO BE REMOVED AND DISPOSED.

| <br>HALF-TONE LINE DENOTES ITEMS TO REMAIN                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>DASHED LINE DENOTES ITEMS TO BE DEMOLISHE                                                                                                      |
| WALL, FLOOR, AND CEILING FINISHES, TO BE REM<br>INDICATED. REMOVED VINYL WALL COVERING TO<br>WHERE VISIBLE TO PROVIDE A SMOOTH SURFACI<br>PAINTING |
| CONCRETE SLAB TO BE REMOVED WITHIN AREA                                                                                                            |
| AREA TO REMAIN UNDISTURBED DURING CONSTR                                                                                                           |

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| 207.0 | EXISTING MASONRY WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                    |
|-------|------------------------------------------------------------------------------------------------------------------------------------|
| 208.0 | EXISTING CMU WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                        |
| 218.0 | EXISTING DOOR/WINDOW, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                     |
| 218.1 | EXISTING DOOR AND FRAME TO BE REMOVED COMPLETELY                                                                                   |
| 18.2  | EXISTING WINDOW AND FRAME TO BE REMOVED COMPLETELY                                                                                 |
| 219.1 | EXISTING MILLWORK, REMOVE & DISPOSE IN ITS ENTIRELY                                                                                |
| 28.0  | EXISTING METAL STUD WALL, PROTECT AS NECESSARY, REPAIR & PAINT AS R                                                                |
| 28.2  | EXISTING METAL STUD WALL, TO BE REMOVED COMPLETELY & DISPOSED AS S<br>CONTRACTOR TO PATCH & REPAIR DAMAGED STUBSTRATE, AS REQUIRED |
| 33.0  | EXISTING CORRAGUTAE METAL PANEL, REMOVE & REPLACE IT WITH A NEW                                                                    |
| 33.3  | EXISTING DOOR REPAIR, PATCH & REPAINT COLONIAL RED                                                                                 |
| 616.0 | COUNTERTOP, PLASTIC LAMINATE                                                                                                       |
|       |                                                                                                                                    |







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# **KEYED NOTES**

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| 208.0 | EXISTING CMU WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                                                                                                                     |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 208.1 | EXISTING CMU WALL, TO BE REMOVED                                                                                                                                                                                                |
| 211.0 | EXISTING LIGHT FIXTURE, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                                                                                                                |
| 211.2 | EXISTING LIGHT FIXTURE, TO BE REMOVED COMPLETELY                                                                                                                                                                                |
| 218.0 | EXISTING DOOR/WINDOW, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                                                                                                                  |
| 218.2 | EXISTING WINDOW AND FRAME TO BE REMOVED COMPLETELY                                                                                                                                                                              |
| 223.1 | EXISTING SUSPENDED GYPSUM BOARD CEILING SYSTEM, TO BE REMOVED                                                                                                                                                                   |
| 224.0 | EXISTING LAY-IN TILE CEILING SYSTEM, REMOVE & DISPOSE AS SHOWN. REMOVAL TO<br>INCLUDE, BUT NOT LIMITED TO EXISTING LIGHT FIXTURES, DIFFUSERS, & OTHER CEILING<br>MOUNTED DEVICES. REFER MEP DRAWINGS FOR ADDITIONAL INFORMATION |
| 224.1 | EXISTING LAY IN TILE CEILING SYSTEM, PROTECT AS NECESSARY, REPAIR AS REQUIRED                                                                                                                                                   |
| 225.0 | EXISTING FLAT METAL PANEL, TO BE REMOVED COMPLETELY                                                                                                                                                                             |
| 226.0 | EXISTING METAL DECK ROOF, TO BE REMOVED COMPLETELY                                                                                                                                                                              |
| 226.1 | EXISTING METAL DECK ROOF, PROTECT IN PLACE, REPAIR AS REQUIRED                                                                                                                                                                  |
| 233.0 | EXISTING CORRAGUTAE METAL PANEL, REMOVE & REPLACE IT WITH A NEW                                                                                                                                                                 |

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### GENERAL DEMOLITION NOTES

### 1. FIELD VERIFY DIMENSIONS AND CONDITIONS INCLUDING EXISTING UTILITIES PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING.

- 2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER. ABATEMENT MUST BE COMPLETED PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS.
- 3. PROVIDE DUSTPROOF ENCLOSURES AT PERIMETER OF CONSTRUCTION & DEMOLITION FOR PROTECTION OF ADJACENT SPACES.
- 4. COORDINATE MAINTENANCE OF FIRE EGRESS FOR OCCUPANTS IN EXISTING BUILDING WITH THE OWNER AND FIRE MARSHAL. PROVIDE NECESSARY TEMPORARY WALLS OR ENCLOSURES, EMERGENCY LIGHTS, ETC., FOR THE DURATION OF CONSTRUCTION.
- 5. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, INCORRECT CONSTRUCTION OR SAFETY PROBLEMS.
- 6. MAINTAIN EXISTING FIRE RATINGS, AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION. COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS.
- 7. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
- 8. REMOVE BUILDINGS TO BE DEMOLISHED IN THEIR ENTIRETY, INCLUDING CONCRETE FOOTINGS AND FOUNDATIONS. DISPOSE PER CITY REQUIREMENTS.
- 9. REMOVE AND DISPOSE SELECTIVE DEMOLITION MATERIAL PER CITY REQUIREMENTS. 10. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR TRANSPORT BY THE OWNER.

## GENERAL SITE DEMOLITION NOTES

- 1. REFER TO CIVIL, LANDSCAPE AND ELECTRICAL SITE PLANS FOR ADDITIONAL DEMOLITION WHICH IS REQUIRED.
- 2. MAINTAIN EXISTING UTILITY SERVICES FOR EXISTING FACILITIES. COORDINATE REQUIRED DISRUPTION OF THESE SERVICES WITH OWNER PRIOR TO DISCONNECTING. PROVIDE TEMPORARY UTILITY SERVICES TO KEEP FACILITIES IN OPERATION DURING UTILITY RELOCATION INCLUDING BUT NOT LIMITED TO FIRE WATCHES, ELECTRICAL GENERATORS, ETC.
- 3. "FOR EXISTING UTILITIES TO BE REMOVED OR ABANDONED, CAP OR PLUG AND SEAL ENDS OF REMAINING PIPES OR OTHER CONDUITS.
- SANITARY SEWER: CAP OR PLUG AND SEAL AT PROPERTY LINE. • CULINARY WATER: CAP OR PLUG AND SEAL AT MAIN PER CITY REQUIREMENTS; WORK SHALL BE WITNESSED BY AUTHORIZED CITY REPRESENTATIVE. OVERHEAD POWER AND PHONE LINES: TERMINATE AT POLE PER UTILITY COMPANY
- REQUIREMENTS. " 4. REMOVING OR ABANDONING UTILITIES IN THE STREET SHALL INCLUDE NECESSARY
- TRAFFIC CONTROL, PAVEMENT SAW CUTTING, PAVEMENT DISPOSAL AND PAVEMENT RESTORATION AS PER CITY STANDARDS. 5. WHERE EXISTING DRIVEWAYS AND APRONS ARE REMOVED, SAW CUT SIDEWALK AT
- NEAREST JOINT. REPLACE SIDEWALK, CURB AND GUTTER PER CITY STANDARDS. 6. REMOVE EXISTING LAWN AND TREES, SHRUBS AND PLANTER BEDS LOCATED WITHIN
- THE EXTENTS OF CONSTRUCTION, UNLESS NOTED OTHERWISE. 7. FIELD VERIFY LOCATION OF EXISTING SPRINKLER LINES AND CONTROLS IN
- LANDSCAPED AREAS AFFECTED BY DEMOLITION CONSTRUCTION. CAP OR REROUT LINES TO ACCOMMODATE LANDSCAPING UNAFFECTED BY CONSTRUCTION.

## GENERAL PLAN DEMOLITION NOTES

- 1. REFER TO ELECTRICAL AND MECHANICAL PLANS FOR REQUIRED ADDITIONAL DEMOLITION
- 2. MAINTAIN EXISTING FIRE RATINGS THROUGHOUT CONSTRUCTION
- 3. DO NOT DISTURB EXISTING FIRE RATED ELEMENTS INCLUDING FIREPROOFING. PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.
- 4. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SMOOTH SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
- 5. PATCH & LEVEL EXISTING CONCRETE SLABS FOR NEW FINISHES WITH FLOOR LEVELING COMPOUND.
- 6. FIELD VERIFY AND COORDINATE SAW CUTTING OF THE CONCRETE FLOOR SLAB WITH PLUMBING AND ELECTRICAL.
- 7. REPLACE SLAB AND TRENCH BY COMPACTING CLEAN GRAVEL IN 8 INCH LIFTS. DRILL #4 EPOXY-COATED REBAR INTO EXISTING SLAB @ 12 INCHES OC. POUR SLAB TO PROVIDE A SMOOTH EVEN FLOOR.
- 8. WHERE ELECTRICAL CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.
- 9. REMOVE ELECTRICAL BOXES BEHIND RELOCATED MILLWORK AND CAP AS REQUIRED.
- 10. CAP EXISTING DUCT WORK FOR DUST CONTROL.

# DEMOLITION LEGEND - REFLECTED CEILING



HALF-TONE LINE DENOTES ITEMS TO REMAIN DASHED LINE DENOTES ITEMS TO BE DEMOLISHED EXISTING SUSPENDED GYPSUM BOARD CEILING SYSTEM, TO BE REMOVED WITHIN AREA INDICATED EXISTING SUSPENDED ACOUSTICAL CEILING TILE SYSTEM, TO BE REMOVED WITHIN AREA INDICATED EXISTING FLAT METAL PANEL, TO BE REMOVED WITHIN AREA INDICATED

AREA TO REMAIN UNDISTURBED DURING CONSTRUCTION

## **CEILING SYMBOLS**

### ELECTRICAL



EXISTING 2'X4' FLUORESCENT FIXTURE, REMOVE AND DISPOSED EXISTING 2'X2' FLUORESCENT FIXTURE, REMOVE AND DISPOSED EXISTING 1'X4' FLUORESCENT FIXTURE, REMOVE AND

# MECHANICAL

| EXISTING SUPPLY GRILLE, REMOVE AND DISPOSED  |
|----------------------------------------------|
| EXISTING RETURN GRILLE, REMOVE AND DISPOSED  |
| EXISTING EXHAUST GRILLE, REMOVE AND DISPOSED |







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| 230.0  | EXISTING CARD READER, PROTECT & REPAIR AS NEEDED               |
|--------|----------------------------------------------------------------|
| 615.0  | ADJUSTABLE SHELVING SEE DETAILS D1/A570                        |
| 616.0  | COUNTERTOP, PLASTIC LAMINATE                                   |
| 621.0  | 24" ADJUSTABLE SHELVING, 3SHELVES, U.N.O                       |
| 914.0  | TACKABLE WALL SYSTEM                                           |
| 1002.0 | 192"X48" WALL MOUNTED MARKER BOARD                             |
| 1002.1 | 96"X48" WALL MOUNTED MARKER BOARD                              |
| 1105.0 | PROJECTOR, CEILING MOUNTED, WITH MOUNT, OWNER PROIVD INSTALLED |
| 2200.0 | SINK + FAUCET                                                  |
| 2609.0 | ADA DOOR ACTUATOR                                              |
| 2803.0 | SECURITY ACCESS CARD READER                                    |
|        |                                                                |



|          | ROOM DESIGNATION                                                                                                                                                                                                                           |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | ROOM NUMBER<br>SYMBOL                                                                                                                                                                                                                      |
| C        | LAN NOTES                                                                                                                                                                                                                                  |
|          | WHERE FLOOR DRAINS ARE INSTALLED THE FLOOR IN<br>DRAIN. THE MAXIMUM SLOPE IS NOT TO EXCEED 2%                                                                                                                                              |
| <u>.</u> | SLOPE IS NOT TO BE LESS THAN 1%.<br>WHERE CONCRETE PADS ARE CALLED TO BE CONST                                                                                                                                                             |
|          | EQUIPMENT THE SLAB IS TO BE 6 THICK, & EXTEND 6<br>EQUIPMENT, U.N.O., AND IS TO HAVE #4 BARS AT 16"<br>DOWELED INTO PRIMARY STRUCTURAL SLAB. COOR                                                                                          |
| 5.       | OF PAD WITH ACTUAL EQUIPMENT SPEC.<br>SEE SHEET A505 FOR TYPICAL FLOORING TRANSITION<br>THE CONTRACTOR IS TO ENSURE THAT BETWEEN AN<br>ELEVATION TO 34" A.F.F. ALL GUARDRAILS ARE TO BE<br>INSTALLED SO THAT A 4" SPHERE WILL NOT PASS BET |
|          | ADJACENT GUARDRAIL COMPONENTS OR BETWEEN<br>GUARDRAIL AND ALL ADJACENT BUILDING ELEMENT<br>FLOOR. AN 8" DIAMETER SPHERE IS NOT TO PASS BE<br>MENTIONED COMPONENTS AND ELEMENTS FROM AN                                                     |
| 5.       | AND HIGHER.<br>SEE D2/A520 AND D4/A520 FOR TYPICAL FIRE EXTING<br>INSTALLATION DETAILS.                                                                                                                                                    |
| j.       | WHERE SHOWN, ALL FURNITURE SHOWN DASHED IS<br>ONLY. SEE PLANS AND SPECIFICATIONS FOR ANY BA<br>FURNITURE TO BE PROVIDED UNDER THIS CONTRAC                                                                                                 |

A111.1







| ECTRICAL    |                                |
|-------------|--------------------------------|
|             | 2'X4' FLUORESCENT FIXTURE      |
|             | 2'X2' FLUORESCENT FIXTURE      |
|             | 1'X4' FLUORESCENT FIXTURE      |
|             | FLUORESCENT STRIP FIXTURE      |
| 0           | RECESSED DOWN LIGHT            |
| $\Diamond$  | WALL WASH                      |
| <u> </u>    | 1'X4' FLUORESCENT FIXTURE      |
| <b></b>     | PENDANT LIGHT FIXTURE          |
| $\otimes$   | EXIT SIGN, SINGLE-SIDED        |
| $\otimes$   | EXIT SIGN, DOUBLE-SIDED        |
| F           | FIRE ALARM                     |
| S           | SPEAKER                        |
| P           | SMOKE DETECTOR                 |
| W           | WIRELESS INTERNET              |
| CHANICAL    |                                |
| $\boxtimes$ | SUPPLY GRILLE                  |
|             | RETURN GRILLE                  |
|             | EXHAUST GRILLE                 |
|             | LINEAR DIFFUSER                |
| $\otimes$   | SPRINKLER HEAD - CEILING MOUNT |
|             | SPRINKLER HEAD - WALL MOUNT    |
|             |                                |



| EXISTING ROOF SYSTEMS                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SINGLE PLY MEMBRANE ROOFING SYSTEM                                                                                                                                                                   |
| STANDING SEAM METAL ROOFING SYSTEM, W/ SELF-ADHER<br>ROOFING UNDERLAYMENT OVER ENTIRE ROOF AREA U.N.O.<br>SNOW GUARDS FULL LENGTH AND HEIGHT OF ROOF, SPACE<br>36" UP RAKE AND CONTINUOUS HORIZONTAL |
| TAPERED INSULATION CRICKET MINIMUM SLOPES: 1/8"<br>ALONG VALLEY, 1/4" ACROSS CRICKET                                                                                                                 |
| PROTECTIVE WALKABLE SURFACE                                                                                                                                                                          |
| <br>DECK RIDGE OR VALLEY                                                                                                                                                                             |

A120



# **KEYED NOTES**

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- REQUIRED SLOPE.
- ARCHITECT'S REFERENCE ON ALL STEEL SHOP DRAWINGS.
- ACROSS THE FACE OF THE CRICKET.
- MINIMUM STANDARDS PER THE CURRENT EDITION OF SMACNA.
- TO MAINTAIN INTEGRITY OF ROOFING SYSTEMS.
- THICKNESS TO MEET REQUIREMENTS FOR WARRANTY.
- CONTRACTOR TO SEQUENCE WORK TO MEET THIS REQUIREMENT.

- TYPICAL SKYLIGHT CURB, SEE DETAIL XX/AXXX.
- E6/A520.

| EXISTING ROOF SYSTEMS                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SINGLE PLY MEMBRANE ROOFING SYSTEM                                                                                                                            |
| STANDING SEAM METAL ROOFING SYSTEM,<br>ROOFING UNDERLAYMENT OVER ENTIRE R<br>SNOW GUARDS FULL LENGTH AND HEIGHT<br>36" UP RAKE AND CONTINUOUS HORIZONTA       |
| TAPERED INSULATION CRICKET MINIMUM S<br>ALONG VALLEY, 1/4" ACROSS CRICKET                                                                                     |
| PROTECTIVE WALKABLE SURFACE                                                                                                                                   |
| <br>DECK RIDGE OR VALLEY                                                                                                                                      |
| AREAS HATCHED AS SUCH SHALL NOT HAV<br>PENETRATIONS THRU THE ROOF IN ORDER<br>THE 2 HOUR FIRE WALL ASSEMBLY LOCATE<br>DECK (AS PER 2018 IBC SECTION 705.6.3). |
|                                                                                                                                                               |





|     | EXT. FINISH LEGEND                           |                  |                    |                                        |                                                                     |
|-----|----------------------------------------------|------------------|--------------------|----------------------------------------|---------------------------------------------------------------------|
| ARK | DESCRIPTION                                  | MANUFACTURER     | NAME               | COLOR                                  | COMMENTS                                                            |
|     | CAST-IN-PLACE ARCHITECTURAL CONCRETE         |                  | NATURAL CONCRETE   | NATURAL CONCRETE                       | 1                                                                   |
|     | ATLAS BRICK                                  | INTERSTATE BRICK | STANDARD FINISH    | 50% AND 50% MIXTURE OF EM1.1 AND EM1.2 | RUNNING BOND - MORTAR COLOR: C.                                     |
| 1   | 8x8x16 HONED INTEGRAL COLOR CMU, SINGLE KERF | SUNROCK          | HONED CMU          | SANDAL W/O RED AGGRAGATE               | RUNNING BOND - MORTAR COLOR: MO<br>PER 70 LBS. RAKED & BRUSHED JOIN |
| .2  | 8x8x16 SPLIT FACE INTEGRAL COLOR CMU         | SUNROCK          | SPLIT FACE CMU     | SANDAL W/O RED AGGRAGATE               | RUNNING BOND - MORTAR COLOR: MO<br>PER 70 LBS. CONCAVED TOOLED & BF |
|     | ATLAS BRICK                                  | INTERSTATE BRICK | STANDARD FINISH    | ARCTIC WHITE                           | RUNNING BOND - MORTAR COLOR: C.                                     |
|     | RED METAL PANEL                              | FABRAL           | CORRUGATED         | COLONIAL RED                           | TO MATCH EXISTING                                                   |
|     | GRAY METAL PANEL                             | FABRAL           | CORRUGATED         | PEWTER                                 | TO MATCH EXISTING                                                   |
|     | METAL FLASHING/COPING AT EM1 BRICK           | MBCI             |                    | C.S.B.A.                               |                                                                     |
|     | METAL FLASHING/COPING AT MT1 METAL           | MBCI             |                    | C.S.B.A.                               |                                                                     |
|     | METAL FLASHING/COPING AT MT2 METAL           | MBCI             |                    | C.S.B.A.                               |                                                                     |
|     | CURTAINWALL ALUMINUM CLIP PROFILE            |                  |                    | DARK BRONZE                            |                                                                     |
|     | PAINT - EXTERIOR ACCENT                      | SHERWIN WILLIAMS | SEE SPECIFICATIONS | C.S.B.A.                               | EPOXY AT WET AREAS                                                  |
|     |                                              |                  |                    |                                        |                                                                     |

| 207.0 | EXISTING MASONRY WALL, PROTECT AS NECESSARY, REPAIR AS REQ   |
|-------|--------------------------------------------------------------|
| 208.0 | EXISTING CMU WALL, PROTECT AS NECESSARY, REPAIR AS REQUIRED  |
| 218.0 | EXISTING DOOR/WINDOW, PROTECT AS NECESSARY, REPAIR AS REQU   |
| 218.2 | EXISTING WINDOW AND FRAME TO BE REMOVED COMPLETELY           |
| 232.0 | EXISTING PARAPET CAP FLASHING, REMOVE & REPLACE IT WITH A NE |
| 233.0 | EXISTING CORRAGUTAE METAL PANEL, REMOVE & REPLACE IT WITH A  |
| 233.1 | EXISTING STANDING SEAM METAL ROOF REPAIR, PATCH & REPAINT C  |
| 233.2 | EXISTING STEEL TUBE PAINTED COLONIAL RED WHERE EXPOSED       |
| 400.2 | 8"X8"X16" CMU                                                |
| 705.3 | R-35 ROOF RIGID INSULATION BOARD SYSTEM                      |
| 709.3 | PRE-FINISHED METAL CAP AND CLEAT                             |
| 800.0 | DOOR AND FRAME                                               |
| 802.0 | ALUMINUM STOREFRONT                                          |
| 814.0 | HOLLOW METAL SYSTEM                                          |
|       |                                                              |







| 203.0 | EXISTING CONCRETE WALL AND FOOTINGS, PROTECT AS NECESSARY, REQUIRED                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 203.1 | EXISTING CONCRETE FOUNDATION WALL, PROTECT AS NECESSARY, RE                                                                                                                                                                                                                                                                                                                                                                                                            |
| 203.2 | EXISTING 4" THICK CONCRETE SLAB ON GRADE                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 207.0 | EXISTING MASONRY WALL, PROTECT AS NECESSARY, REPAIR AS REQU                                                                                                                                                                                                                                                                                                                                                                                                            |
| 231.0 | EXISTING ROOF SYSTEM, PORTECT & REPAIR AS NEEDED                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 301.0 | REINFORCED CONCRETE FOOTING                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 302.0 | REINFORCED CONCRETE FOUNDATION WALL, ARCHITECTURAL GRADE EXPOSED                                                                                                                                                                                                                                                                                                                                                                                                       |
| 306.1 | 4" THICK CONCRETE SLAB ON GRADE                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 306.2 | EXPANSION JOINT W/ 1/2" MINERAL FIBER/ASPHALTIC FILLER MATERIAL,                                                                                                                                                                                                                                                                                                                                                                                                       |
| 400.2 | 8"X8"X16" CMU                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 500.1 | STEEL TUBE PAINTED WHERE EXPOSED                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 500.3 | STEEL JOIST PAINTED WHERE EXPOSED                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 500.4 | STEEL DECK PAINTED WHERE EXPOSED                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 701.1 | FLUID APPLIED BELOW GRADE DAMPROOFING WITH 1/8" ASPHALT PROT<br>FROM TOE OF FOOTING TO FINISH GRADE, TYP.                                                                                                                                                                                                                                                                                                                                                              |
| 701.2 | UNDERSLAB VAPOR RETARDER WITH JOINTS LAPPED. AT ALL SLAB ON WITHIN THE BUILDING FOOTPRINT, TYP.                                                                                                                                                                                                                                                                                                                                                                        |
| 702.1 | ROOF INSULATION - (2) LAYERS 2.5" RIGID INSULATION MIN. R-30, TYP                                                                                                                                                                                                                                                                                                                                                                                                      |
| 702.3 | BATT INSULATION FULL THICKNESS                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 702.9 | 3" RIGID BD. INSUL. CONT. AT FOUNDATION WALL                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 705.1 | PVC SINGLE-PLY MEMBRANE ROOFING SYSTEM. ALL VERTICAL MEMBRA<br>STEPPED WALLS, CURBS, ETC. TO BE 12" MINIMUM FROM LOWER ROOF<br>TERMINATION BAR OR CURB, TYP. COORDINATE WITH ARCHITECT ANY<br>VARY FROM THIS REQUIREMENT PRIOR TO INSTALLATION OF ROOFING                                                                                                                                                                                                              |
| 705.3 | R-35 ROOF RIGID INSULATION BOARD SYSTEM                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 722.0 | R6.8 PER INCH MINIMUM 2# SPRAY APPLIED CLOSED CELL THERMAL INS<br>IGNITION BARRIER WHERE EXPOSED, TYP. PROVIDE MINIMUM 2" THICK<br>LAYER BETWEEN METAL STUD FURRING AND MASONRY WALL, FULL HEI<br>ADDITIONALLY, INSULATE ALL BACK TO BACK STUDS, BOX HEADERS, AN<br>THAT CREATES CONCEALED SPACES IN OTHERWISE INSULATED WALLS<br>INTERSECTS FLOOR/ROOF DECK EXTEND INSULATION 18" MINUMUM OL<br>SURFACE. FILL ALL ASSOCIATED VOIDS FOR A COMPLETE THERMALLY S<br>TYP. |
| 902.1 | 3-5/8" METAL STUD FRAMING                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 902.3 | 2-1/2" METAL STUD FRAMING                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 903.2 | 8" METAL CH STUD FRAMING                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 904.0 | 5/8" GYPSUM BOARD PAINTED WHERE EXPOSED                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 911.2 | SUSPENDED GYPSUM BOARD CEILING, PAINTED WHERE EXPOSED                                                                                                                                                                                                                                                                                                                                                                                                                  |



EXISTING LEVEL 95'-4" 95' - 4"

500.3

904.0



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# FLUID APPLIED BELOW GRADE DAMPROOFING WITH 1/8" ASPHALT PROTECTION BOARD UNDERSLAB VAPOR RETARDER WITH JOINTS LAPPED. AT ALL SLAB ON GRADE LOCATIONS PVC SINGLE-PLY MEMBRANE ROOFING SYSTEM. ALL VERTICAL MEMBRANE SURFACES AT STEPPED WALLS, CURBS, ETC. TO BE 12" MINIMUM FROM LOWER ROOF MEMBRANE TO TERMINATION BAR OR CURB, TYP. COORDINATE WITH ARCHITECT ANY CONDITIONS THAT VARY FROM THIS REQUIREMENT PRIOR TO INSTALLATION OF ROOFING SYSTEM, TYP.

- R6.8 PER INCH MINIMUM 2# SPRAY APPLIED CLOSED CELL THERMAL INSULATION WITH IGNITION BARRIER WHERE EXPOSED, TYP. PROVIDE MINIMUM 2" THICK UNINTERRUPTED LAYER BETWEEN METAL STUD FURRING AND MASONRY WALL, FULL HEIGHT, TYP. ADDITIONALLY, INSULATE ALL BACK TO BACK STUDS, BOX HEADERS, AND OTHER FRAMING THAT CREATES CONCEALED SPACES IN OTHERWISE INSULATED WALLS, TYP. WHERE WALL INTERSECTS FLOOR/ROOF DECK EXTEND INSULATION 18" MINUMUM OUT ONTO DECK



A352
|                |                                                                    |                                      | KEY - FINISH                               |                                                         |                                                                                                |
|----------------|--------------------------------------------------------------------|--------------------------------------|--------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Key Name       | Finish - Description                                               | Finish - Manufacturer                | Finish - Name                              | Finish - Color                                          | Finish - Co                                                                                    |
| FLOOR          |                                                                    |                                      |                                            |                                                         |                                                                                                |
| F1<br>F2<br>F3 | ENTRY CARPET<br>CARPET TILE, GENERAL                               | MOHAWK<br>MOHAWK                     | FIST STEP II<br>REFINED PASS               | 983 IRON ORE<br>978 ALDER                               | QUARTER TURN INS<br>BRICK ASHLAR INST                                                          |
| F4<br>F5       | FLOOR TILE - MOSAIC<br>FLOOR TILE - PORCELAIN                      | DALTILE<br>DALTILE                   | KEYSTONES<br>FABRIQUE 12"X24"              | DESERT GRAY SPECKLE D200<br>P686 CREME LININ UNPOLISHED | 2"X2" SIZE GROUT C<br>ALIGH GROUT LINES<br>WHERE APPLICABLE                                    |
| F6<br>F8       | SEALED CONCRETE<br>EPOXY TRAFFIC COATING                           | SHERWIN WILLIAMS                     | ARMORSEAL 8100 W/ SHARK GRIP<br>ADDITIVE   | CSBA                                                    | SATIN FINISH                                                                                   |
| BASE<br>B0     | NO BASE                                                            | -                                    | -                                          | -                                                       | -                                                                                              |
| B1             | CARPET BASE                                                        | MOHAWK                               | -                                          | -                                                       | MATCH ADJACENT C                                                                               |
| B2             | RUBBER BASE                                                        | MOHAWK                               | 4" COVE RUBBER WALL BASE                   | 846 GREIGE                                              |                                                                                                |
| B3             | TILE BASE TRIM                                                     | SCHLUTER                             | -                                          | -                                                       | SEE TRIM T2 BELOW<br>RESTROOMS/SHOW<br>USE @ DRINKING FC<br>CAULK JOINT BETWI<br>FLOOR INSTEAD |
| B4<br>PAINT    | TRAFFIC COATING ON CONCRETE<br>CURB                                | -                                    | -                                          | MATCH F8                                                | AT CURBS IN MECHA                                                                              |
| P1<br>P2       | PAINT FINISH - GENERAL<br>PAINT FINISH - ACCENT                    | SHERWIN WILLIAMS<br>SHERWIN WILLIAMS | 7006 EXTRA WHITE                           | WHITE<br>SEE P2.1-P2.3                                  | SEE ACCENT COLOF<br>FOR GENERAL LOCA<br>FINISH PLANS FOR E                                     |
| P2.1           | PAINT FINISH - ACCENT                                              | SHERWIN WILLIAMS                     | 7536 BITTERSWEET STEM                      | ACCENT COLOR 1                                          | ACCENT IN ADMIN/P<br>AREA                                                                      |
| P2.3<br>P3     | PAINT FINISH - ACCENT<br>PAINT FINISH - ACCENT                     | SHERWIN WILLIAMS<br>SHERWIN WILLIAMS | 6486 REFLECTING POOL<br>6258 TRICORN BLACK | ACCENT COLOR 3<br>ACCENT COLOR @ WOOD SLATS             | ACCENT IN LEARNIN<br>PAINT WALL BEHIND                                                         |
| SURFACE        |                                                                    |                                      |                                            |                                                         | INSTALLATIONS                                                                                  |
| S1             | PLASTIC LAMINATE @ GENERAL<br>CABINET                              | FORMICA                              | WHITE DROPS 8824-58                        | -                                                       | MATTE FINISH                                                                                   |
| S2             | SOLID SURFACE @ COUNTERTOPS                                        | CORIAN                               | ARISTA BEIGE                               | •                                                       | 1/2" THICKNESS                                                                                 |
| S3<br>S4       | SOLID SURFACE @ WINDOW SILLS                                       | CORIAN                               | MODERN WHITE                               | -                                                       |                                                                                                |
| S6             | SOLID WOOD TRIM                                                    | -                                    | - MAPLE                                    | -<br>CLEAR FINISH                                       | SEE DETAILS                                                                                    |
| S7             | RECEPTION DESK TACKABLE                                            | -                                    | NATURAL CORK                               | -                                                       | 1/4" THICKNESS                                                                                 |
| S8             | MILLWORK EDGEBAND                                                  |                                      |                                            |                                                         | 3MM PVC, MATCH AI<br>LAMINATE                                                                  |
| S9<br>S10      | CHANNELS                                                           | -<br>SILESTONE                       | BI ANCO MAPI F                             |                                                         | STANDARD COLOR L                                                                               |
| S11<br>S12     | PLASTIC LAMINATE @ RECEPTION<br>PLASTIC LAMINATE @ KITCHEN         | NEVAMAR<br>FORMICA                   | S7024MG<br>BUFF ELM 5793-NG                | CHALK WHITE<br>-                                        | MEDIUM GLOSS FINI<br>NATURAL GRAIN TEX                                                         |
| WALL<br>W1     | PAINT - GENERAL - SEE P1 ABOVE                                     | -                                    | -                                          | -                                                       | EPOXY AT WET ARE                                                                               |
| W2             | PAINT - ACCENT COLOR - FEE P2'S<br>ABOVE                           | -                                    | -                                          | -                                                       | EPOXY AT WET ARE                                                                               |
| W3             | CERAMIC TILE @ RESTROOMS                                           | DALTILE                              | 3"X6" CERAMIC TILE                         | 0190 ARTIC WHITE                                        | TILE UP WALL TO 7'C<br>STACKED PATTERN,<br>& OUTSIDE EDGES, I<br>U.N.O                         |
| W4             | CERAMIC TILE @ JANITOR'S SINK                                      | DALTILE                              | 4"X4" CERAMIC TILE                         | 0190 ARTIC WHITE                                        | TO 4'-0" @ JANITOR<br>GROUT:CSBA. PROV<br>EDGES AND CORNE                                      |
| W5             | PORCELAIN TILE WAINSCOT                                            | DALTILE                              | FABRIQUE 12"X24"                           | 0686 CRENE LININ, UNPOLISHED                            | WAINSCOT TO 4'-4".                                                                             |
| W6             | GENERAL TACKBOARD/TACK<br>WALL/TACK PANELS                         | KOROSEAL                             | DESERT SAND                                | 5621-02 SNOW                                            | 7'-0" HEIGHT VINYL<br>OVER 1/2" FIBERBOA                                                       |
| W7<br>W8       | NOT USED<br>WOOD SLAT SYSTEM                                       | -                                    | -<br>MAPLE                                 | -<br>CLEAR FINISH                                       | SEE SURFACE S6. 5/                                                                             |
| 14/0           |                                                                    |                                      |                                            |                                                         | TO SIZES SHOWN IN                                                                              |
| VV9            |                                                                    | SUNRUCK                              | HONED CMU, SEALED                          | SANDAL W/O RED AGGRAGATE                                | MC54 SAND 6 LBS. P<br>RAKED & BRUSHED                                                          |
| DOORS & TR     | WOOD DOOR PANELS                                                   | MASONITE ARCHITECTURAL               | WHITE BIRCH (ROTARY CUT)                   | CARAMEL                                                 | ASPIRO SERIES                                                                                  |
| D2             | ALUMINUM STOREFRONT                                                |                                      | CLEAR ANODIZED ALUMINUM                    | -<br>CSBA                                               |                                                                                                |
| <u>D</u>       | FRAMES                                                             |                                      |                                            |                                                         |                                                                                                |
| D4.1           | FRAMES @ ALL CLASSROOM AREAS<br>TYPICAL HM DOOR PANELS &<br>FRAMES | SHERWIN WILLIAMS                     | SEE P2 ABOVE<br>SW 7017 DORIAN GRAY        | -                                                       | AT ALL INTERIOR HN<br>DOORS/FRAMES EX<br>CLASSROOMS, AS IN                                     |
| D5<br>D6       | INTERIOR OVERHEAD SECTIONAL                                        | THE OVERHEAD DOOR COMPANY            | ANODIZED ALUMINUM                          | SILVER METALLIC                                         |                                                                                                |
| T1             | TILE TRIM - ALUMINUM EDGE TRIM                                     | SCHLUTER                             | JOLLY/SCHEINE                              | CLEAR ANODIZED ALUMINUM                                 | INSTALL @ ANY EXP<br>TILE, U.N.O, FILE AN                                                      |
| T2             | TILE TRIM - ALUMINUM COVE BASE                                     | SCHULTER                             | DILEX                                      | CLEAR ANODIZED ALUMINUM                                 | INSTALL WHERE WA<br>FLOOR TILE IN REST<br>SHOWERS. FLOAT F<br>MATCH THICKNESS                  |
| Т3             | FLOORING TRANSITION STRIP                                          | MOHAWK/SCHULTER                      | -                                          | 846 GREIGE                                              | SEE DETAIL A1/A505<br>ANODIZED ALUMINU                                                         |
| T4             | TACK STRIP                                                         | KOROSEAL                             | TAC-WALL                                   | 87 SANDALWOOD                                           | AT TOP OF TILE WAI                                                                             |
| T5             | BYP BD REVEAL W/ SNAP-IN TRIM                                      | FRY REGLET                           | DRM-SNAP-IN-50                             |                                                         |                                                                                                |
| MISC<br>M1     |                                                                    | _                                    | _                                          | CSBA                                                    |                                                                                                |
| M2             | ROLLER SHADE FACIA                                                 | -                                    | CLEAR ANODIZED ALUMINUM                    |                                                         |                                                                                                |
| M3<br>M4       |                                                                    | -                                    | -                                          | MATCH WALL COLOR                                        |                                                                                                |
| M5             | INTERIOR HORN STROBES                                              | -                                    | -                                          | WHITE                                                   |                                                                                                |
| M6             | ELECTRICAL DEVICES                                                 | -                                    | -                                          | GRAY                                                    |                                                                                                |
| M8             | STAINLESS STEEL CORNER GUARDS                                      | -                                    | SURFACE MOUNT                              | STAINLESS STEEL                                         | 1"X1"X48", MOUNT TO<br>SCHEDULE BASF                                                           |
| M9<br>M10      | ROOM SIGNAGE - FIELD COLOR<br>ROOM SIGNAGE - ACCENT COLOR          | -                                    | -                                          | CSBA<br>CSBA                                            |                                                                                                |
| M11            | EXTERIOR ALUMINUM SIGNAGE                                          | -                                    | -                                          | CLEAR ANODIZED ALUMINUM                                 |                                                                                                |
| M13            | GROMMETS @ COUNTERTOPS                                             |                                      |                                            | BLACK                                                   |                                                                                                |
| M14            | MECHANICAL WALL DIFFUSER                                           | -                                    | -                                          | CSBA                                                    |                                                                                                |

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# Finish - Comments

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4

# JARTER TURN INSTALLATION

CK ASHLAR INSTALLATION 2" SIZE GROUT CSBA GH GROUT LINES W/ WALL TILE

HERE APPLICABLE TIN FINISH

ATCH ADJACENT CARPET

ORING

E TRIM T2 BELOW. USE AT STROOMS/SHOWERS. DO NOT © DRINKING FOUNTAINS, AULK JOINT BETWEEN WALL AND

CURBS IN MECHANICAL ROOM 

ACCENT COLOR PLAN BELOW R GENERAL LOCATION. SEE ISH PLANS FOR EXENTST ENT IN ADMIN/PUBLIC/OFFICE

ENT IN LEARNING STUDIO 3YO ENT IN LEARNING STUDIO 4YO NT WALL BEHIND WOOD SLAT

THICKNESS IM PVC, MATCH ADJACENT **/INATE** 

BA, FROM MANUFACTURER'S NDARD COLOR LINE I THICKNESS DIUM GLOSS FINISH

TURAL GRAIN TEXTURE OXY AT WET AREAS

OXY AT WET AREAS

LE UP WALL TO 7'0", VERTICAL FACKED PATTERN, BULLNOSE TOP UTSIDE EDGES, PAIN P2 ABOVE

9 4'-0" @ Janitor Sinks. Rout:CSBA. Provide Bullnose GES AND CORNERS. INSCOT TO 4'-4". PAINT W1

OVE, U.N.O 0" HEIGHT VINYL UPHOLSTERY /ER 1/2" FIBERBOARD, SEE SPECS

EE SURFACE S6. 5/4 & 4/4 HICKNESS SOLID HARDWOOD, CUT O SIZES SHOWN IN DETAILS

RUNNING BOND - MORTAR COLOR: MC54 SAND 6 LBS. PER 70 LBS. KED & BRUSHED JOINTS

ATCH AREA ACCENT COLORS IOWN IN FINISH PLANS T ALL INTERIOR HM DORS/FRAMES EXCEPT AT LASSROOMS, AS INDICATED IN D4

ISTALL @ ANY EXPOSED EDGE OF ILE, U.N.O, FILE ANY SHARP ORNERS ISTALL WHERE WALL TILE MEETS LOOR TILE IN RESTROOMS & HOWERS. FLOAT FLOOR TIL UP TO MATCH THICKNESS OF TRIM AS

CESSARYE EE DETAIL A1/A505. CLEAR NODIZED ALUMINUM FOR ALL IETAL TILE TRIMS.

TOP OF TILE WAINSCOT, AND AS IOWN ON ELEVATIONS

K1"X48", MOUNT TO WALL ABOVE HEDULE BASE





# 912.0

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# E5 RESTROOM 1309 - LEFT ELEVATION SCALE: 1/4" = 1'-0"



# D5 RESTROOM 1316A - LEFT ELEVATION



| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|
| ARCHITECTURAL MILLWORK KEY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                                       |
| EXAMPLE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | $\setminus /($                        | RO                                    |
| ACCESSORY (IF NOTED)<br>ONE ADJUSTABLE SHELF<br>ONE DOOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ARCI                                  | HITECTURE                             |
| ONE DRAWER<br>BASE CABINET *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 524 SOUTH 600 EA<br>SALT LAKE CITY, U | AST 801.575.8800<br>JT 84102 VCBO.COM |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       | TE OF US                              |
| TWO DOORS<br>ZERO DRAWERS<br>WALL CABINET *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       | ALLIAN VERNON                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       | No Sestan                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 13                                    | SED ARCHITE                           |
| ACCESSORY (IF NOTED)<br>FIVE ADJUSTABLE SHELVES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                                       |
| ZERO DRAWERS<br>TALL CABINET *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                       |                                       |
| SB DENOTES SINK BASE CABINET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                       |                                       |
| Image: Two denotes fall wardrobe cabinet       Image: Two denotes framed performed metal       Image: Two denotes framed metal       Image: Two |                                       |                                       |
| FGD     DENOTES FRAMED GLASS PANEL DOOR       /     /       ** NOTE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |                                       |
| L DENOTES LOCKS AT DOOR (S) / DRAWER (S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                       |                                       |
| CABINET MEASUREMENTS SHOWN ARE ACTUAL SIZES. BASE CABINET HEIGHTS ALLOW FOR A<br>COUNTERTOP 1 1/2" THICK, CABINET DEPTHS ARE MEASURED FROM THE BACK TO THE FACE OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                       |                                       |
| THE DOOR OR DRAWER FRONT (WHERE APPLICABLE)<br>ALL CABINET INTERIORS, WHETHER CONCEALED BEHIND DOORS OR OPEN, ARE STANDARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                                       |
| MELAMINE LAMINATE AS PER SPECIFICATIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                       |                                       |
| MILLWORK LEGEND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                                       |
| <ol> <li>MILLWORK DIMENSION NUMBERS ARE WIDTH X HEIGHT X DEPTH.</li> <li>ALL MILLWORK DIMENSIONED FROM BASE TO TOP OF IDENTIFIED COUNTERTOP, TYP</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       |                                       |
| 3. CABINET DEPTHES ARE MEASURED FROM THE WALL TO THE FACE OF THE DOOR OR<br>DRAWER FRONT (WHERE APPLICABLE).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                       |                                       |
| <ol> <li>PROVIDE BASE AT ALL CABINET TOE SPACE, UNLESS NOTED OTHERWISE.</li> <li>PROVIDE GROMMET WHERE "G" IS LABELED ON PLANOS OR ELEVATIONS.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | REV                                   | DATE DESCRIPTION                      |
| 6. ALL COUNTERTOPS TO HAVE A 4" BACKSPLASH, UNLESS NOTED OTHERWISE, TO MATCH COUNTERTOP, ON BACK AND SIDE WALLS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                       |
| 7. PROVIDE FILLER PANELS TO SEAL SIDES AND TOPS OF ALL CABINETS PLACED AT AN ANGLE TO ADJACENT WALL(S).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |                                       |
| <ol> <li>ALL MILLWORK TO FINISHED ON ENDS, TYP.</li> <li>CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL CABINETS, COAT RACKS, PENCIL</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                                       |
| SHARPENER BLOCKS, T.V. BRACKETS AND PROJECTION SCREENS AS WELL AS ALL WALL<br>MOUNTED ACCESSORIES, INCLUDING WHITE BOARDS, TACKBOARDS, TOILET AND URINAL<br>PARTITIONS AND TOILET ROOM ACCESSORIES, ETC NOTE: ONLY 2X WOOD BLOCKING IS<br>ACCESPTABLE BEHIND MILLWORK AND TOILET ROOM PARTITIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |                                       |
| C 10. REFER TO SHEET <b>A400</b> FOR FINISH COLORS ON ALL MILLWORK AND CASEWORK.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | VCBO NUMB<br>CLIENT NUM               | ER: 21635.04                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DATE:                                 | 2024 03 08                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                                       |
| 2. TYPICAL COUNTERTOP WORK SURFACE, PER DETAIL D3/A570 & D3/A570                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                       |
| <ol> <li>TYPICAL BASE CABINET WITH DOOR(S), PER DETAIL C2/A570</li> <li>TYPICAL BASE CABINET WITH DRAWER(S), PER DETAIL A3/A570</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                                       |
| 5. TYPICAL BASE CABINET WITH DOOR(S) AND DRAWER, PER DTL A6/A570       —         6. TYPICAL BASE CABINET WITH TWO FILE DRAWERS, PER DTL D5/A570       —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ]                                     |                                       |
| 7. TYPICAL PLAN VIEW BASE CABINETS, PER DETAILS <b>B5/A570</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                       |                                       |
| <ol> <li>TYPICAL UPPER CABINET W/O DOORS, PER DETAIL <b>E1/A570</b></li> <li>TYPICAL UPPER CABINET W/O DOORS, PER DETAIL <b>E1/A570</b></li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                       |                                       |
| <ol> <li>TYPICAL SINK BASE CABINET, PER DETAIL E6/A570</li> <li>TYPICAL TALL CABINET WITH DOOR(S), PER DETAIL A2A571</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                                       |
| 12. TYPICAL TALL CABINET W/O DOOR, PER DETAIL <b>A5/A570</b><br>14. TYPICAL CUBBIES PER DETAIL <b>A1/A571</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                       |                                       |
| В                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NO                                    |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Ē                                     |                                       |
| KEYED NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       |                                       |
| 228.0 EXISTING METAL STUD WALL, PROTECT AS NECESSARY, REPAIR & PAINT AS REQUIRED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A                                     |                                       |
| 607.0MILLWORK, FILLER PANEL616.0COUNTERTOP, PLASTIC LAMINATE800.0DOOR AND FRAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Σ                                     |                                       |
| 802.0ALUMINUM STOREFRONT—814.0HOLLOW METAL SYSTEM904.05/8" GYPSUM BOARD PAINTED WHERE EXPOSED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                       |                                       |
| 912.0SCHEDULED BASE914.0TACKABLE WALL SYSTEM923.0SCHEDULED WALL TILE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ш                                     | 2008<br>198                           |
| <ul> <li>1002.0 192"X48" WALL MOUNTED MARKER BOARD</li> <li>1002.1 96"X48" WALL MOUNTED MARKER BOARD</li> <li>1005.0 GRAB BAR</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | DE                                    | JISTF<br>T 840<br>TS                  |
| 1005.1MIRROR, 24x361006.1DISPENSER, SOAP, OWNER PROVIDED, CONTRACTOR INSTALLED1006.2DISPENSER, PAPER TOWELS OWNER PROVIDED, CONTRACTOR INSTALLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | S                                     | Jol I<br>Jity, U<br>JMEN              |
| 1006.4 DISPOSAL, SANITARY NAPKINS, OWNER PROVIDED, CONTRACTOR INSTALLED<br>1006.5 DISPENSER, TOILET PAPER, OWNER PROVIDED, CONTRACTOR INSTALLED<br>1105.0 PROJECTOR CEILING MOUNTED WITH MOUNT OWNER PROVIDED CONTRACTOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | AII                                   | SCH <sup>I</sup><br>Sark C<br>DOCL    |
| 1200.0       MANUAL ROLLER SHADES       A         2200.0       SINK + FALICET       A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TR                                    | CITY<br>⇒ Dr, F<br>'ION I             |
| 2206.1 TOILET, FLOOR MOUNT<br>2209.2 BUBBLER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Ő                                     | ∕ARK<br>ailsid∉<br>RUCT               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | S                                     | SSD F<br>00 Tr<br>NST                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       | 57<br>CC                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ENLARG<br>ELEVATI                     | ED PLANS +<br>ONS                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24 11:51:04 PM                        |                                       |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3/20:                                 |                                       |



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|---|---------|--|
|   | EQ      |  |
|   |         |  |
|   | 4' - 0" |  |

# ARCHITECTURAL MILLWORK KEY



F DENOTES FILE DRAWER (S) CABINET MEASUREMENTS SHOWN ARE ACTUAL SIZES. BASE CABINET HEIGHTS ALLOW FOR A COUNTERTOP 1 1/2" THICK. CABINET DEPTHS ARE MEASURED FROM THE BACK TO THE FACE OF THE DOOR OR DRAWER FRONT (WHERE APPLICABLE)

ALL CABINET INTERIORS, WHETHER CONCEALED BEHIND DOORS OR OPEN, ARE STANDARD MELAMINE LAMINATE AS PER SPECIFICATIONS.

# MILLWORK LEGEND

- 1. MILLWORK DIMENSION NUMBERS ARE WIDTH X HEIGHT X DEPTH.
- 2. ALL MILLWORK DIMENSIONED FROM BASE TO TOP OF IDENTIFIED COUNTERTOP, TYP 3. CABINET DEPTHES ARE MEASURED FROM THE WALL TO THE FACE OF THE DOOR OR
- DRAWER FRONT (WHERE APPLICABLE). 4. PROVIDE BASE AT ALL CABINET TOE SPACE, UNLESS NOTED OTHERWISE.
- 5. PROVIDE GROMMET WHERE "G" IS LABELED ON PLANOS OR ELEVATIONS.
- 6. ALL COUNTERTOPS TO HAVE A 4" BACKSPLASH, UNLESS NOTED OTHERWISE, TO MATCH
- COUNTERTOP, ON BACK AND SIDE WALLS. 7. PROVIDE FILLER PANELS TO SEAL SIDES AND TOPS OF ALL CABINETS PLACED AT AN ANGLE TO ADJACENT WALL(S).
- 8. ALL MILLWORK TO FINISHED ON ENDS, TYP.
- 9. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL CABINETS, COAT RACKS, PENCIL SHARPENER BLOCKS, T.V. BRACKETS AND PROJECTION SCREENS AS WELL AS ALL WALL MOUNTED ACCESSORIES, INCLUDING WHITE BOARDS, TACKBOARDS, TOILET AND URINAL PARTITIONS AND TOILET ROOM ACCESSORIES, ETC .... NOTE: ONLY 2X WOOD BLOCKING IS ACCESPTABLE BEHIND MILLWORK AND TOILET ROOM PARTITIONS.
- 10. REFER TO SHEET A400 FOR FINISH COLORS ON ALL MILLWORK AND CASEWORK.

# TYPICAL MILLWORK DETAILS

- 1. TYPICAL MILLWORK ANCHORING DETAILS, PER DETAIL E6/A570
- 2. TYPICAL COUNTERTOP WORK SURFACE, PER DETAIL D3/A570 & D3/A570
- 3. TYPICAL BASE CABINET WITH DOOR(S), PER DETAIL C2/A570
- 4. TYPICAL BASE CABINET WITH DRAWER(S), PER DETAIL A3/A570
- 5. TYPICAL BASE CABINET WITH DOOR(S) AND DRAWER, PER DTL A6/A570
- 6. TYPICAL BASE CABINET WITH TWO FILE DRAWERS, PER DTL D5/A570
- 7. TYPICAL PLAN VIEW BASE CABINETS, PER DETAILS B5/A570
- 8. TYPICAL UPPER CABINET WITH DOORS, PER DETAIL B3/A570
- 9. TYPICAL UPPER CABINET W/O DOORS, PER DETAIL E1/A570
- 10. TYPICAL SINK BASE CABINET, PER DETAIL E6/A570
- 11. TYPICAL TALL CABINET WITH DOOR(S), PER DETAIL A2A571 12. TYPICAL TALL CABINET W/O DOOR, PER DETAIL A5/A570
- 14. TYPICAL CUBBIES, PER DETAIL A1/A571

# **KEYED NOTES**

| 607.0  | MILLWORK, FILLER PANEL                       |
|--------|----------------------------------------------|
| 616.0  | COUNTERTOP, PLASTIC LAMINATE                 |
| 621.0  | 24" ADJUSTABLE SHELVING, 3SHELVES, U.N.O     |
| 800.0  | DOOR AND FRAME                               |
| 802.0  | ALUMINUM STOREFRONT                          |
| 814.0  | HOLLOW METAL SYSTEM                          |
| 904.0  | 5/8" GYPSUM BOARD PAINTED WHERE EXPOSED      |
| 912.0  | SCHEDULED BASE                               |
| 914.0  | TACKABLE WALL SYSTEM                         |
| 1001.0 | SIGNAGE, SEE SCHEDULE                        |
| 1002.0 | 192"X48" WALL MOUNTED MARKER BOARD           |
| 1105.0 | PROJECTOR, CEILING MOUNTED, WITH MOUNT, OWNE |

- INSTALLED MANUAL ROLLER SHADES SINK + FAUCET BUBBLER
- 1200.0 2200.0 2209.2





| 28.0 914.0 1002.0 TYP | (1105.0) |  |
|-----------------------|----------|--|
|                       |          |  |
| 4' - 0"<br>TYP.       |          |  |







| ARCHITECTURAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6<br>MILLWORK KEY                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                          |                                                          |                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| EXAMPLE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | B 1 1 1 **                                                                                                                                                                                                                                                                                                                                                                                   | ACCESSORY (IF NOTED)<br>ONE ADJUSTABLE SHELF<br>ONE DOOR<br>ONE DRAWER<br>BASE CABINET *                                                                                 | ARCHIT<br>524 SOUTH 600 EAST<br>SALT LAKE CITY, UT 84102 | BO<br>ECTURE<br>801.575.880<br>VCBO.COM                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | .W 0 2 1 **                                                                                                                                                                                                                                                                                                                                                                                  | ACCESSORY (IF NOTED)<br>ONE ADJUSTABLE SHELF<br>TWO DOORS<br>ZERO DRAWERS<br>WALL CABINET *                                                                              | E STATE                                                  | OF UTAUF                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T 0 2 5 L<br><br><br>* NOTE:<br><br>SB DENOTES SINK                                                                                                                                                                                                                                                                                                                                          | <ul> <li>ACCESSORY (IF NOTED)</li> <li>FIVE ADJUSTABLE SHELVES</li> <li>TWO DOORS</li> <li>ZERO DRAWERS</li> <li>TALL CABINET *</li> </ul>                               |                                                          | ARCHITES                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TW DENOTES TALL<br>FMD DENOTES FRA<br>PANEL DOOR<br>FGD DENOTES FRA<br>** NOTE:<br>L DENOTES LOC<br>F DENOTES FILE                                                                                                                                                                                                                                                                           | - WARDROBE CABINET<br>MED PERFORATED METAL<br>MED GLASS PANEL DOOR<br>KS AT DOOR (S) / DRAWER (S)<br>DRAWER (S)                                                          |                                                          |                                                                                                   |
| ABINET MEASUREMENTS SHOWN<br>OUNTERTOP 1 1/2" THICK. CABINE<br>HE DOOR OR DRAWER FRONT (W<br>LL CABINET INTERIORS, WHETHE<br>IELAMINE LAMINATE AS PER SPEC                                                                                                                                                                                                                                                                                                                                    | ARE ACTUAL SIZES. BASE CABINE<br>T DEPTHS ARE MEASURED FROM<br>HERE APPLICABLE)<br>R CONCEALED BEHIND DOORS OF<br>DIFICATIONS.                                                                                                                                                                                                                                                               | ET HEIGHTS ALLOW FOR A<br>I THE BACK TO THE FACE OF<br>R OPEN, ARE STANDARD                                                                                              |                                                          |                                                                                                   |
| <ul> <li>MILL VVORK LEGEN</li> <li>MILLWORK DIMENSION NUMBER</li> <li>ALL MILLWORK DIMENSIONED</li> <li>CABINET DEPTHES ARE MEAS<br/>DRAWER FRONT (WHERE APP</li> <li>PROVIDE BASE AT ALL CABINE</li> <li>PROVIDE GROMMET WHERE "</li> <li>ALL COUNTERTOPS TO HAVE<br/>COUNTERTOP, ON BACK AND</li> <li>PROVIDE FILLER PANELS TO S<br/>ANGLE TO ADJACENT WALL(S)</li> <li>ALL MILLWORK TO FINISHED (C)</li> <li>CONTRACTOR TO PROVIDE BI<br/>SHARPENER BLOCKS, T.V. BR</li> </ul>             | IC<br>IRS ARE WIDTH X HEIGHT X DEPTI<br>FROM BASE TO TOP OF IDENTIFIE<br>JRED FROM THE WALL TO THE FA-<br>ICABLE).<br>T TOE SPACE, UNLESS NOTED OT<br>S" IS LABELED ON PLANOS OR ELE<br>A 4" BACKSPLASH, UNLESS NOTEE<br>SIDE WALLS.<br>EAL SIDES AND TOPS OF ALL CAE<br>N ENDS, TYP.<br>OCKING BEHIND ALL CABINETS, CA<br>ACKETS AND PROJECTION SCREE                                       | H.<br>ED COUNTERTOP, TYP<br>ACE OF THE DOOR OR<br>THERWISE.<br>EVATIONS.<br>D OTHERWISE, TO MATCH<br>BINETS PLACED AT AN<br>COAT RACKS, PENCIL<br>NS AS WELL AS ALL WALL | REV DAT                                                  | TE DESCRIPTION                                                                                    |
| <ul> <li>REFER TO SHEET A400 FOR F</li> <li>TYPICAL MILLWORK ANCHORI<br/>TYPICAL MILLWORK ANCHORI<br/>TYPICAL COUNTERTOP WORK<br/>TYPICAL BASE CABINET WITH<br/>TYPICAL BASE CABINET WITH<br/>TYPICAL BASE CABINET WITH</li> <li>TYPICAL BASE CABINET WITH</li> <li>TYPICAL BASE CABINET WITH</li> <li>TYPICAL PLAN VIEW BASE CAI</li> <li>TYPICAL UPPER CABINET WIT</li> <li>TYPICAL UPPER CABINET WIT</li> <li>TYPICAL SINK BASE CABINET,</li> </ul>                                        | NISH COLORS ON ALL MILLWORK<br>RK DETAILS<br>NG DETAILS, PER DETAIL E6/A570<br>SURFACE, PER DETAIL D3/A570 &<br>DOOR(S), PER DETAIL C2/A570<br>DRAWER(S), PER DETAIL C2/A570<br>DOOR(S) AND DRAWER, PER DTL A<br>TWO FILE DRAWERS, PER DTL D5/<br>SINETS, PER DETAILS B5/A570<br>H DOORS, PER DETAIL B3/A570<br>DOORS, PER DETAIL B3/A570<br>DOORS, PER DETAIL E1/A570<br>PER DETAIL E6/A570 | AND CASEWORK.<br>D3/A570<br>A6/A570<br>/A570                                                                                                                             | C VCBO NUMBER:<br>CLIENT NUMBER:<br>DATE:                | 21635.0                                                                                           |
| 2. TYPICAL TALL CABINET W/O D<br>4. TYPICAL CUBBIES, PER DETAI                                                                                                                                                                                                                                                                                                                                                                                                                                | DOR, PER DETAIL <b>A5/A570</b>                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                          | BDITION                                                  |                                                                                                   |
| 218.0EXISTING DOOR/WIN228.0EXISTING METAL STI207.0MILLWORK, FILLER F316.0COUNTERTOP, PLASE316.1COUNTERTOP, SOLID300.0DOOR AND FRAME302.0ALUMINUM STOREFF314.0HOLLOW METAL SYSE304.05/8" GYPSUM BOARD312.0SCHEDULED BASE314.0TACKABLE WALL SYSE314.0TACKABLE WALL SYSE314.0TACKABLE WALL SYSE314.0TACKABLE WALL SYSE314.0TACKABLE WALL SYSE314.0TACKABLE WALL SYSE314.0SIGNAGE, SEE SCHEE1002.0192"X48" WALL MOUND1105.0PROJECTOR, CEILININSTALLEDINSTALLED1200.0MANUAL ROLLER SH2209.2BUBBLER | Dow, Protect as Necessary, F<br>JD Wall, Protect as Necessar<br>Anel<br>Tic Laminate<br>D Surface<br>Cont<br>Tem<br>Painted Where Exposed<br>Stem<br>Dule<br>Ited Marker Board<br>3 Mounted, with Mount, owner<br>Ades                                                                                                                                                                       | REPAIR AS REQUIRED<br>Y, REPAIR & PAINT AS REQUIRED                                                                                                                      | PCSD TRAILSIDE ELEM. A                                   | PCSD PARK CITY SCHOOL DISTRICT<br>5700 Trailside Dr, Park City, UT 84098<br>CONSTRETENT DOCUMENTS |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                          | ENLARGED PI<br>ELEVATIONS                                | ANS +                                                                                             |



# ARCHITECTURAL MILLWORK KEY

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801.575.8800 VCBO.COM

21635.04

2024 03 08

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\* NOTE:

SB DENOTES SINK BASE CABINET TW DENOTES TALL WARDROBE CABINET FMD DENOTES FRAMED PERFORATED METAL PANEL DOOR FGD DENOTES FRAMED GLASS PANEL DOOR \*\* NOTE:

F DENOTES FILE DRAWER (S)

## CABINET MEASUREMENTS SHOWN ARE ACTUAL SIZES. BASE CABINET HEIGHTS ALLOW FOR A COUNTERTOP 1 1/2" THICK. CABINET DEPTHS ARE MEASURED FROM THE BACK TO THE FACE OF THE DOOR OR DRAWER FRONT (WHERE APPLICABLE)

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- 8. ALL MILLWORK TO FINISHED ON ENDS, TYP.
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- 6. TYPICAL BASE CABINET WITH TWO FILE DRAWERS, PER DTL D5/A570
- 7. TYPICAL PLAN VIEW BASE CABINETS, PER DETAILS B5/A570
- 8. TYPICAL UPPER CABINET WITH DOORS, PER DETAIL B3/A570
- 9. TYPICAL UPPER CABINET W/O DOORS, PER DETAIL E1/A570
- 10. TYPICAL SINK BASE CABINET, PER DETAIL E6/A570
- 11. TYPICAL TALL CABINET WITH DOOR(S), PER DETAIL A2A571
- 12. TYPICAL TALL CABINET W/O DOOR, PER DETAIL A5/A570
- 14. TYPICAL CUBBIES, PER DETAIL A1/A571

# **KEYED NOTES**

| 800.0  | DOOR AND FRAME             |
|--------|----------------------------|
| 814.0  | HOLLOW METAL SYSTEM        |
| 923.0  | SCHEDULED WALL TILE        |
| 1001.0 | SIGNAGE, SEE SCHEDULE      |
| 1022.0 | MAGNETIC TACK STRIPS       |
| 2609.0 | ADA DOOR ACTUATOR          |
| 2803.0 | SECURITY ACCESS CARD READE |
|        |                            |



| MAXIMUM SPAN | HEADER          | FY     |
|--------------|-----------------|--------|
| ۸' O"        | (2) 4005137.43  | 22 kai |
| 4-0          | (2) 4003 137-45 | 53 KSI |
| 6'-0"        | (2) 600S162-43  | 33 ksi |
| 8'-0"        | (2) 800S162-43  | 33 ksi |
|              | TE0.            |        |

METAL STUD HEADER NOTES:

1. SCHEDULE TO BE USED FOR NON-BEARING WALLS.

2. HEADERS TO BE CONSTRUCTED AS BOX HEADERS PER SSMA STANDARDS.

3. SEE TYPICAL DETAIL FOR MORE INFORMATION.

# NON-BEARING METAL STUD GAUGE SIZING



1. STEEL STUDS SHALL MEET ICC REPORT ER-4943P AND THE SSMA STANDARDS. HEIGHT BASED ON SSMA 2001 CATALOG AND PROJECT REQUIREMENTS.

2. SEE SCHEDULE FOR STUD SPACING AND GAUGE. ALL STUDS AND BRACES SHALL BE 33 13. KSI UNLESS NOTED OTHERWISE IN THESE DRAWINGS.

3. AT ALL DOORS PROVIDE TWO TABBED 18 GAUGE STUDS AT BOTH SIDES OF JAMB.

| <text></text>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PARTITION + FRAMING GENERAL NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------|----------------|
| <text></text>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | AMED WALL PARTITIONS<br>PARTITION TYPE INDICATIONS <u>ARE INDEPENDENT</u> OF APPLIED FINISHES. SEE FINISH SHEETS AND<br>INTERIOR ELEVATIONS FOR WALL FINISHES INCLUDING TILE COURSING AND LAYOUT AND/OR THE<br>DESIGNATIONS ON THE PLANS FOR ADDITIONAL INFORMATION REGARDING APPLIED FINISHES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | VC                                             | BC                             | )              |
| <text></text>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | WHERE PARTITION TYPE DESIGNATION ON FLOOR PLANS IS INTERRUPTED BY DOOR OPENING,<br>GLAZED PARTITION, ETC., CONSTRUCTION ABOVE INTERRUPTION (AND WHERE APPLICABLE BELOW)<br>IS TO BE THE SAME AS THAT DESIGNATED FOR THE PARTITION IN WHICH THE INTERRUPTION<br>OCCURRED.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 524 SOUTH 600 EAST<br>SALT LAKE CITY, UT 84102 | ECTUR<br>801.575.86<br>VCBO.C4 | Е<br>800<br>ОМ |
| <text></text>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | THE MINIMUM REQUIREMENTS FOR CONSTRUCTION OF EACH PARTITION TYPE AS EXPRESSED BY<br>THE INDICATED REFERENCE ARE INCORPORATED BY REFERENCE AND ARE APPLICABLE TO THE<br>WORK OF THIS PROJECT. HOWEVER, ADDITIONAL AND/OR MORE RESTRICTIVE REQUIREMENTS MAY<br>BE INDICATED BY THE SPECIFICATIONS AND DRAWINGS. SUCH REQUIREMENTS ALSO APPLY AND<br>SHALL GOVERN. SUCH REQUIREMENTS INCLUDE BUT ARE NOT LIMITED TO:                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                | -              |
| Here and the second and the                                                                                                          | <ul> <li>a. USE 5/8" THICK GYPSUM BOARD THROUGHOUT UNLESS NOTED OTHERWISE.</li> <li>b. USE 16" OC MAX STUD SPACING UNLESS NOTED OTHERWISE IN THESE DOCUMENTS. THE SPACING STATED BY THE REFERENCED APPROVAL OR EST REPORT IS THE MAX SPACING IF ALLOWED IN THESE DOCUMENTS.</li> <li>c. USE STUDS OF GAUGE INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS. THE GAUGE STATED BY THE REFERENCED APPROVAL OR TEST REPORT IS THE MINIMUM GAUGE TESTED, 20 GA (30 MILS) IS THE MINIMUM ALLOWED IN THESE DOCUMENTS.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   | STATE O                                        | TTTTT                          |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | USE STUDS OF DEPTH INDICATED BY THIS SET OF DOCUMENTS. THE DEPTH STATED BY THE<br>REFERENCED APPROVAL OR TEST REPORT IS THE MINIMUM DEPTH TESTED DEPTH ALLOWED IN<br>THESE DOCUMENTS. SEE STRUCTURAL DOCUMENTS FOR ADDITIONAL INFORMATION PERTAINING<br>TO THE CONSTRUCTION OF CONCRETE, MASONRY AND STUD WALLS<br>PROVIDE FIRE RATED CONSTRUCTION ASSEMBLIES WHERE INDICATED ON SHEETS G100'S AND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CENSED                                         | RCHITES                        |                |
| <ul> <li>A. C. C. LICHARDING &amp; C. C. COURTER AND LOCATION AND ALL DE SECURAL DE LANGE AND ALL DE SECURAL DE LANGE AND ALL DE LANGE AND ALL</li></ul>                                                                                       | ALL DIMENSIONS ARE CENTER OF STUD OR FACE OF CONCRETE, MASONRY OR ROUGH OPENING<br>UNLESS NOTED OTHERWISE. FACE OF FINISHED WALL WILL BE NOTED AS FOW.<br>AT ALL INTERIOR WALLS, STUDS, INSULATION AND GYPSUM BOARD ARE TO EXTEND TO THE DECK<br>ABOVE. UNLESS NOTED OTHERWISE.<br>WALL TYPES NOT NOTED ARE ASSUMED TO MATCH ADJACENT ROOMS. SEE SHEETS FOR FINISHES,<br>NOTIFY ARCHITECT OF ANY DISCREPANCIES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                |                |
| The network with number of the control of the co                                                                                                    | ALL METAL STUD PARTITIONS ARE CONSIDERED ACOUSTIC PARTITIONS AND ARE TO RECEIVE A<br>TYPE 1 SOUND ATTENUATION BLANKET. THICKNESS TO MATCH STUD DEPTH, UNLESS NOTED<br>OTHERWISE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                |                                |                |
| <pre>Status of the status of t</pre>                                                                                           | REFER TO SHEET <u>A520</u> FOR TYPICAL INTERIOR WALL CONDITIONS ASSOCIATED WITH ALL METAL<br>STUD PARTITIONS.<br>PROVIDE CONTROL JOINTS IN METAL FRAMED WALLS AT APPROXIMATELY 30 FEET ON CENTER.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                |                |
| Control of the Same Additional control of the Machine Instanting in the Cale of the Additional Control of the Same A                                                                                                         | LOCATE AT CORNER ABOVE DOORS OR INSIDE CORNER OF PLASTERS OR OTHER INCONSPICIOUS<br>LOCATION WHERE POSSIBLE. CONSULT WITH ARCHITECT PRIOR TO COMMENCING FRAMING.<br>INSTALL PER DETAILS <u>C2/A520</u> FOR CONTROL JOINTS.<br>AT WALL OPENINGS FOR PENETRATION OF PIPES, DUCTS, DEVICES, ETC., GYPSUM BOARD IS TO BE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                |                |
| ENDERGY CANNEL REACTION OF A MAIL AND USED CONFECT AND THE ADDRESS ON THE ADDRESS OF                                                                                                     | CUT TO MATCH THE SHAPE AND DIMENSION OF THE PENETRATING OBJECT AND THE GAP BETWEEN<br>THE OBJECT AND THE WALL IS TO BE SEALED W/ ACOUSTICAL OR FIRE SEALANT ON ALL SIDES WITH<br>A 3/4" JOINT AT ALL SIDES, MAXIMUM. THE OPENING FOR DUCTS OR LARGE PENETRATIONS SHALL BE<br>FRAMED WITH A HEADER, ADD AN ANGLED CORNER BRACE IF THE GAP EXCEEDS 3" FROM FRAMING<br>TO THE OPENING.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |                                |                |
| NUMBER 1000000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | PROVIDE BLOCKING / BACKING FOR ALL WALL MOUNTED EQUIPMENT. SEE FLOOR PLANS AND<br>INTERIOR ELEVATIONS FOR CABINETS, GRAB BARS ETC. INSTALL BLOCKING AS DETAILED OR AS<br>REQUIRED TO MOUNT SUCH DEVICES. ALL BLOCKING IS TO BE FIRE RETARDANT TREATED. INSTALL<br>PER SHEET <u>A520</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                |                                |                |
| Municipal Control of Contro of Control of Control of Control of Control of Control of Control                                                                                                       | WHERE THERE IS LIMITED WATER EXPOSURE: INSTALL ONE LAYER OF 5/8" TYPE X WATER<br>RESISTANT GYPSUM BOARD PER ASTM C1396 (WHERE GYPSUM BOARD OCCURS) OF BASIC<br>PARTITION AT THE FOLLOWING LOCATIONS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                |                |
| Construction                                                                                                            | <ul> <li>a. WITHIN 2 FEET HORIZONTALLY AND 4 FEET VERTICALLY OF JANITORS SINKS</li> <li>b. AT OTHER LOCATIONS, I.E. TOILET ROOMS AND KITCHENS, AND AS INDICATED ON THE ARCHITECTURAL FINISH PLANS AND ELEVATIONS.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | REV DATE                                       | DESCRIPTIO                     | N              |
| AT WHICH CORRECT UNLIGHTS AND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | INSTALL ONE LAYER OF 5/8" GLASS MAT TILE BACKER BOARD IN LIEU OF GYPSUM BOARD (WHERE GYPSUM BOARD OCCURS) OF BASIC PARTITION WHERE THERE IS NO FIRE RATING AND OVER GYPSUM BOARD FACE LAYER AT FIRE RATED PARTITIONS AT THE FOLLOWING LOCATIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                |                                |                |
| <ul> <li>A TORNED CONTROL OF A PRIVATE AND FUEL ADDITIONAL CHARGE PLANS AND ELEVATIONS.<br/>HERE NEW YALLS OF A DEPENDENCE OF DEPENDENCIONAL OF CPC APARETINA WALL<br/>THE NEW YALLS SHALL BE STRACHT AND FLANG RECERPTS OF THE CONTROL OF CPC APARETINA WALL<br/>THE NEW YALLS SHALL BE STRACHT AND FLANG RECERPTS OF THE CONTROL OF CPC APARETINA WALL<br/>THE NEW YALLS SHALL BE STRACHT AND FLANG RECERPTS OF THE CONTROL OF CPC APARETINA WALL<br/>THE NEW YALLS SHALL BE STRACHT AND FLANG RECERPTS OF THE CONTROL OF THE EXEMPTIONS<br/>SEPTEMBER ADDITIONAL TO THANK CONTROLOG NEW ALLS ALL FREE PRIVATIONS<br/>SEPTEMBER ADDITIONAL CONCEPT AND ALLWING DAMA DE DOG OPENNESS.<br/>SEPTEMBER ADDITIONAL CONCEPT AND ALLWING DAMA DE SEPTEMBER<br/>SEPTEMBER ADDITIONAL CONCEPT AND ALLWING DAMA DE SEPTEMBER<br/>SEPTEMBER ADDITIONAL CONCEPT AND ALLWING DAMA DE SEPTEMBER<br/>SEPTEMBER ADDITIONAL CONCEPT AND ALLWING SEPTEMBER ADDITIONAL PRESERVATIONAL SEPTEMBER<br/>SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL CONCEPT AND ALLWING SEPTEMBER<br/>SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL CONCEPT ADDITIONAL SEPTEMBER<br/>SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL CONCEPT ADDITIONAL SEPTEMBER<br/>SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL SEPTEMBER<br/>SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL SEPTEMBER<br/>SEPTEMBER ADDITIONAL SEPTEMBER ADDITIONAL SEPTEMBER<br/>SEPTEMBER AD</li></ul> | AT WET LOCATIONS, SUCH AS SHOWER STALLS AND TUB SURROUNDS.<br>a. WHERE CERAMIC TILE FINISHES ARE INDICATED PER THE FINISH PLANS<br>AND/OR INTERIOR ELEVATIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |                                |                |
| <ul> <li>ADDITION OF THE ADDITION OF THE ADDITION ADDITICADADITION ADDITICADADITICADADITICADADITIC</li></ul>                                                                                           | <ul> <li>AT OTHER LOCATIONS AS INDICATED BY THE ARCHITECTURAL FINISH PLANS AND ELEVATIONS.</li> <li>WHERE NEW WALLS OR FURRING ARE INDICATED TO BE DIMENSIONED OFF OF AN EXISTING WALL,<br/>THE NEW WALL SHALL BE STRAIGHT AND PLUMB REGARDLESS OF THE CONDITION OF THE EXISTING<br/>WALL.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                |                                |                |
| The control of the c                                                                                                  | C<br>ALL EXTERIOR STUD WALLS TO HAVE CONTINUOUS INSULATION, VAPOR BARRIER AND AIR<br>INFILTRATION BARRIER FOR THE FULL HEIGHT AND LENGTH OF THE WALL,SEAL ALL PENETRATIONS.<br>SEE DETAILS ON SHEET <b>A520</b> FOR TYPICAL TOP OF WALL CONDITION<br>THE AIR INFIL TRATION BARRIER IS TO WRAP INTO ALL WINDOW AND DOOR OPENINGS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | VCBO NUMBER:<br>CLIENT NUMBER:<br>DATE:        | 21635.<br>2024 03              | 04<br>08       |
| SUBJECT ON CONCERTE WALLS SET ETRADE CRASH FOR ADDITIONAL CONCERTE AND MASCINEY WALL INFORMATION. SET ETRADE RELAXION SPOR CONCERNING, MASCINEY TYPES AND MELTA INFORMATION. SET ETRADE RELAXION SPOR CONCERNING, MASCINEY TYPES AND MELTA INFORMATION. SET ETRADE RELAXION SPOR CONCERNING, MASCINEY TYPES AND MELTA INFORMATION. ALL MASS MARTIN MALLS ARE TO BE REINFORCED TO THE THE OTHER TO THE MARTIN MASS SET ETHING TO THE THE OTHER TO THE THE OTHER TO THE THE OTHER TO THE THE OTHER TO THE OTHER OTHER TO THE OTHER OTHER TO THE OTHER TO THE OTHER TO THE                                                                                                 | SEE DETAIL <b>D3</b> AND <b>D4</b> ON SHEET <b>A520</b> FOR TYPICAL FIRE EXTINGUISHER CABINET INSTALLATION<br>DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                |                                |                |
| <ul> <li>TO EVENT TO BE REPORTED TO BE REPORTED UNIT. THEY ARE TO BE SET ON ADDITATION STORED FORMULAR STATE OF A DIAL STORE ADDITATION STORED STORED ADDITATION ADDITATION STORED ADDITATION ADDITATION STORED ADDITATION ADDITATIONAL ADDITATION ADDITATIONAL ADDI</li></ul>                                                                                           | SONRY OR CONCRETE WALLS<br>SEE STRUCTURAL PLANS FOR ADDITIONAL CONCRETE AND MASONRY WALL INFORMATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                |                                |                |
| THE EXPENSIVE LEVATIONS BEFETS FOR ICOCTION OF CONTROL JOINTS, WHERE NOT NOTES, MARKEN MARKEN AND AND AND AND AND AND AND AND AND AN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SEE EXTERIOR ELEVATIONS FOR COURSING, MASONRY TYPES AND METAL PANEL ORIENTATION PER<br>EXTERIOR ELEVATION SHEETS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                |                |
| SEE BE 2020, CUMPTER 1 FOR THE RESISTIVE REQUIREMENTS ON NEW CONCRETE AND CONCRETE                                                                                                  | THE <b>EXTERIOR</b> ELEVATION SHEETS FOR LOCATION OF CONTROL JOINTS. WHERE NOT NOTED,<br>CONTROL JOINTS TO BE LOCATED AS PER THE REQUIREMENTS FOUND IN THE STRUCTURAL<br>DOCUMENTS BUT ARE NOT TO EXCEED 30' OC. SEE THE STRUCTURAL DRAWINGS FOR REINFORCING<br>AND OTHER DETAILS PERTAINING TO MASONRY WALLS. IF NOT OTHERWISE NOTED, LOCATE<br>CONTROL JOINTS AT CORNER ABOVE DOORS, INSIDE CORNER OF PILASTERS OR OTHER<br>INCONSPICUOUS LOCATION WHERE POSSIBLE. CONSULT WITH ARCHITECT PRIOR TO INSTALLING<br>PER DETAIL <u>XX/ AXXX</u> .                                                                                                                                                                                                                                                                                                                                                |                                                |                                |                |
| REFER TO DETAL SHEET AXXX FOR TYPICAL WALL CONDITIONS ASSOCIATED WITH ALL AND         AT WALL OPENNESS FOR PENETRATINO OF JPESS, DEVICES, ETC., MASONRY IS TO BE CUT TO<br>ARICH THE SHARE AND DIMENSION OF THE PENETRATINO OBJECT AND THE CAP BETWEEN THE<br>OBJECT AND THE WALL IS DESS. MARINAM         PROTECTION OF MASONRY: DURING CONSTRUCTION, COVER TOPS OF WALLS PROJECTIONS, ARD<br>SULLS WITH MARIENDO SHEETEN TO THE SEALANT ON ALL SIDES WITH ALL AND<br>USLS WITH MARIENDO SHEETEN TO THE APPENDANCE ON OPECAL TARD THE CAP BETWEEN THE<br>DEVICE TOP OF MASONRY: DURING CONSTRUCTION, COVER TOPS OF WALLS PROJECTIONS AND<br>SULLS WITH MARIENDO SHEETEN TO THE APPENDANCE AND PRECIPITATION IS FORCEAST FOR<br>MOST DURING CONSTRUCTION, COVER TARTINUT CONSTRUCTION, SACE<br>THE ROPORNY REPROSE SHEETEN TO REMAIN ABOVE ESD EGE FAND OP RECIPITATION IS FORCEAST FOR<br>MOST DURING CONSTRUCTION OF WALLS PROJECTION OF WALLS<br>MOST DURING CONSTRUCTION OF REVENT CONSTRUCTION IS FORCEAST FOR<br>MOST DURING CONSTRUCTION OF REVENT CONSTRUCTION IS FORCEAST FOR<br>MOST DURING CONSTRUCTION OF REVENT CONSTRUCTION OF RALL SACE<br>DEVICATION PROGRAM PROVED SHEETING DURING CONTRETOR THE COMPOSIDE<br>DURING HARS AND COLOR COVER THE CAP PLATE. THE CONFERMANENTLY PROJECTION OF WALLS<br>PROVIDE AGAY COLOR COVER DURING CONTENT OF ROM DE BANG ALTINUT OF ECONSDERING<br>DURING HARS AND COLOR COULD FILL ON INTEGRAL COLOR COLOR DURING NOTING SOF WALLS<br>PROVIDE AGAY COLUMNED AND INTEGRAL COLOR COLUMN FILE PROVIDE AND<br>DECONSTRUCTED OF INTEGRAL COLOR COLUMN FILE DOTIONS OF WALLS AND LOCKERS.         AT ALL SPECIE TO TOR REMAINS AND COLOR COLUMN THE ADD LOCKERS.       A MARIENT SOCIAL COLOR COLUMN FILE DATIONS OF WALLS AND LOCKERS.       A MARINE SA DE COLOR THE HORIZONTAL AND VERTICAL MORTAR JOINTS ARE TO BE<br>CONSTRUCTED OF INTEGRAL COLOR COLUMN FILE DATIONS OF WALLS AND LOCKERS.       A MARINE SA DE COLOR THE HORIZONTAL MORTAR JOINT IS TO BE A WEATHERED JOINT AND ALI VERTI                                                                                                                                                                                 | <ul> <li>SEE IBC 2009, CHAPTER 7 FOR FIRE RESISTIVE REQUIREMENTS ON NEW CONCRETE AND CONCRETE MASONRY UNIT WALLS.</li> <li>CMU WALLS (IBC TABLE 720.1(2), ITEM 3)</li> <li>CAST IN PLACE CONCRETE WALLS (IBC TABLE 721.2.1.2(1))</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                |                                |                |
| AT WALL OPENNOS FOR PENETRATION OF PIPES, DUCTS, DEVICES, ETC., MASONRY IS TO BE CUIT TO<br>WATCH THE SHARE AND DIMENSION OF THE EPENETATING OBJECT AND THE GAP PENEWEN THE<br>OBJECT AND THE WALL IS TO BE SEALED WACOUSTICAL OR FIRE SEALANT ON ALL SIDES WITHAN<br>STUTH WATERPROOPS SHETING AT END OF EACH DAY'S WORK, EXCEPT WHEN THE AMBIENT<br>THE NEXT 24 HOURS, (THIS IS TO PREVENT CONDENSATION FROM COVERED WALLS CAUSING A<br>MOISTURE PRODES SHETING AT END OF EACH DAY'S WORK, EXCEPT WHEN THE AMBIENT<br>THE NEXT 24 HOURS, (THIS IS TO PREVENT CONDENSATION FROM COVERED WALLS CAUSING A<br>MOISTURE PRODES SHETING AT END OF EACH DAY'S WORK, EXCEPT WHEN THE AMBIENT<br>THE ROOFING MEMBANAE OVER THE COMPLICATE. THE ARE PERMAMENTLY PROTECTED BY<br>THE ROOFING MEMBANAE OVER THE COMPLICATE ON ASONRY ACH DAY THAT CONSTRUCTION IS<br>NOT IN PROGRESS. WALLS ARE TO BE PROTECTED UNTIL. THEY ARE PERMAMENTLY PROTECTED BY<br>THE ROOFING MEMBANAE OVER THE COMPLICATE. THE SECOND ON FRACTION IS TO ROVIDE<br>TEMPORAME PROTECTION IMMEDIATELY COLOR THE OWNED AND THAT CORE NOT NOT<br>MOISTURE PROTECTION IMMEDIATELY COLOR THE OWNED AND THE CAN SOLVEN THE DAY<br>MEMBANAE. OVER THE COP PLACE THE OWNED AND THE CAN DECIDENCE ON<br>DEVIDENT ON CONSTRUCTION MEMBANEL OUTLE AND DEAD THE CONSIDERED<br>ADEQUATE PROTECTION FOR THE WALL.       IT ALL SPLIT FACE AND PAINTED CAU CLORE CMU IF HOR CONING OF WALLS<br>AT ALL SPLIT FACE AND PAINTED CAU CLORE CMU IF THE DOCUMENTS SOLVEN THE EXPENSION OF AFT TO<br>BE CONSTRUCTIVE COLOR OWNED THE DOCUMENTS SOLVEN THE EXPENSION OF AFT TO<br>BE CONSTRUCTIVE CLORE CAUCONG MINITED TO THE TOP OF A PARAPET, PROVIDE AN<br>MITTEGRA CAUSARY UNTEL CAUCONG MISTING A SMOOTH FINISH THAT ARE<br>AT ALL SPLIT FACE AND PROVIDE SMOOTH HASONRY AT ALL FLASHING, REGULETS,<br>CUTTERS, EDGES OF CELLING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE<br>HODON.       A       A       AULL TYPES + GENERAL<br>CONSTRUCTIVE COORDING THE TOP COLORES FOOL AND CORPUSE FOR ALL<br>ALL TYPES & CONSTRUCTIVE TO COORDING TO THE TOP OF A PARAPET, PR                                                                                          | REFER TO DETAIL SHEET <b>AXXX</b> FOR TYPICAL WALL CONDITIONS ASSOCIATED WITH ALL AND MASONRY PARTITIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |                                |                |
| SQLODE       DURING CONSTRUCTION. COURT MUCTION. COVER TOPS OF WALLS. PROJECTIONS AND<br>SULTAINED AND OF EACH DAYS WORK, EXCEPT WHEN THE ANBIENT<br>THE PREVATURE IS EXPECTED TO REMAIN ABOUGE 65 DEG F AND NO PRECIPITATION IS TORECAST FOR<br>NUMERICAL MOUNS. (IT IN IS TO PREVATE COMBENSATION FROM COVERED WALLS CAUSING A<br>MEMORANCE SULTAINED AND THE CAP PLATE. THE GARREN CONSTRUCTION IS TORECAST FOR<br>NUMERICAL MOUNS. (IT IN IS TO PREVATE COMBENSATION FROM COVERED WALLS CAUSING A<br>MEMORANCE SUBJECT COMMENSATION FROM COVERED WALLS CAUSING A<br>MEMORANCE SUBJECT AND ADDITION TO PROVIDE SAME TO PROVIDE THE CAP PLATE. THE GARREN CONSTRUCTION OF WALL<br>PROVIDE AND ADDITION TO POOR BEAM STALL NO PERCIDENT<br>SUBJECT AND ADDITION TO POOR BEAM STALL NO PERCIDENT<br>ADDITION FOR THE CAP PLATE. THE GARREN CONTINUE OF CONSIDERED<br>ADDITION THE ADDITION TO POOR BEAM STALL NO PERCIDENCE<br>ADDITION TO POOR DEAM STALL NO PERCIDENCE<br>ADDITION TO POOR BEAM STALL NO PERCIDENCE<br>ADDITION THE ADDITION TO POOR BEAM STALL NO PERCIDENCE<br>ADDITION TO POOR DEAM STALL NO PERCIDENCE<br>ADDITION TO POOR DEAM STALL NO PERCIDENCE<br>ADDITION TO POOR DEAM STALL NO PERCIDENCE<br>ADDITION THE ADDITION TO POOR DEAM STALL NO PERCIDENCE<br>ADDITION TO POOR DEAM STALL NO PERCIDENCE<br>ADDITION TO POOR DEAM STALL NO PERCIDENCE<br>ADDITION THE ADDITION TO THE ADDITION TO THE ADDITION TO THE ADDITION THE ADDITION TO THE ADDITION TO THE ADDITION THAT THE ADDITION TO THE ADDITION TO THE ADDITION THE ADDITION THE ADDITION THE ADDITION THE ADDITION THAT THE ADDITION THE ADDIT ADDITION TO ADDIT ADDITION ADDITION THAN ADDITION THE ADDITION                                                                           | AT WALL OPENINGS FOR PENETRATION OF PIPES, DUCTS, DEVICES, ETC., MASONRY IS TO BE CUT TO<br>MATCH THE SHAPE AND DIMENSION OF THE PENETRATING OBJECT AND THE GAP BETWEEN THE<br>OBJECT AND THE WALL IS TO BE SEALED W/ ACOUSTICAL OR FIRE SEALANT ON ALL SIDES WITH A<br>3/4" JOINT AT ALL SIDES, MAXIMUM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |                                |                |
| IT IS ACCEPTABLE TO PLACE NON-INTEGRAL COLORED CMU IN PORTIONS OF WALLS INDICATED TO<br>BE CONSTRUCTED OF INTEGRAL COLOR CMU IF THE DOCUMENTS SHOW THESE PORTIONS OF WALL<br>PAINTED OR COVERED WITH THE, STUD PURRING, ABOVE CELINGS ON UNDER ROOFING<br>MEMBRANE. IT IS NOT ACCEPTABLE TO UTILIZE NON INTEGRAL COLORED CAU BEHIND CABINETS,<br>FURNISHINGS AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CLIMBING WALLS AND LOCKERS.<br>AT ALL SPLIT FACE AND PAINTED CMU THE HORIZONTAL AND VERTICAL MORTAR JOINTS ARE TO BE<br>CONCAVE. AT ALL HONED BLOCK THE HORIZONTAL MORTAR JOINT SO BE A WEATHERED JOINT<br>AND ALL VERTICAL JOINTS ARE TO BE RAKED.<br>PROVIDE A 58° CHAMFER ALL INTERIOR EXPOSED VERTICAL MASONRY CORNERS FROM 8" AFT TO<br>BOTTOM OF MASONRY UNTEL OR IF NO LIMITEL EXISTS, STOP CHAMFER @ FIRST MASONRY JOINT<br>BELOW CELLING. NOTE THAT THIS CHAMFER IS NOT TO BE PROVIDED AT CORNERS SHOWN IN THESE<br>DOCUMENTS AS COVERED WITH WALL TILE. SEE DETAIL<br>PROVIDE SPECIAL SHAPES, SUCH AS "U" SHAPED CHANNEL FOR LINTELS OR HEADERS AND CAPPING<br>UNITS FOR SASH AND OTHER SPECIAL CONDITIONS.<br>WHERE SPLIT FACE BLOCK IS SHOWN EXTENDING TO THE TOP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP COURSE TO ALLOW THE CAP FLASHING TO FIT<br>TICHT AGAINST THE WALL.<br>CONTRACTOR TO COORDINATE AND PROVIDE SMOOTH MASONRY AT ALL FLASHING, REGLETS,<br>GUTTERS, EDGES OF CELLING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE<br>HIDDEN.<br>A MERE SPLIT FACE BLOCK IS SHOWN EXTENDING TO HEAT OP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP COURSE TO ALLOW THE CAP FLASHING TO FIT<br>TICHT AGAINST THE WALL.<br>CONTRACTOR TO COORDINATE AND PROVIDE SMOOTH MASONRY AT ALL FLASHING, REGLETS,<br>GUTTERS, EDGES OF CELLING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE<br>HIDDEN.<br>A MERE SPLIT FACE BLOCK IS SHOWN EXTENDING TO HEAT OP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP OF A PARAPET, PROVIDE          | <b>PROTECTION OF MASONRY:</b> DURING CONSTRUCTION, COVER TOPS OF WALLS, PROJECTIONS, AND SILLS WITH WATERPROOF SHEETING AT END OF EACH DAY'S WORK, EXCEPT WHEN THE AMBIENT TEMPERATURE IS EXPECTED TO REMAIN ABOVE 65 DEG F AND NO PRECIPITATION IS FORECAST FOR THE NEXT 24 HOURS. (THIS IS TO PREVENT CONDENSATION FROM COVERED WALLS CAUSING A MOISTURE PROBLEM.) COVER PARTIALLY COMPLETED MASONRY EACH DAY THAT CONSTRUCTION IS NOT IN PROGRESS. WALLS ARE TO BE PROTECTED UNTIL THEY ARE PERMANENTLY PROTECTED BY THE ROOFING MEMBRANE OVER THE CAP PLATE. THE GENERAL CONTRACTOR IS TO PROVIDE TEMPORARY PROTECTION IMMEDIATELY FOLLOWING THE TOPPING OUT OF EACH SECTION OF WALL BY INSTALLING WATERPROOF SHEETING OVER A CONTINUOUS CAP PLATE UNTIL THE ROOFING MEMBRANE IS INSTALLED. <u>A SOLID GROUTED TOP BOND BEAM SHALL NOT BE CONSIDERED ADEQUATE PROTECTION FOR THE WALL.</u> | <b>NDITION</b>                                 |                                |                |
| AT ALL SPLIT FACE AND PAINTED CMU THE HORIZONTAL AND VERTICAL MORTAR JOINTS ARE TO BE<br>CONCAVE. AT ALL HONED BLOCK THE HORIZONTAL MORTAR JOINT IS TO BE A WEATHERED JOINT<br>AND ALL VERTICAL JOINTS ARE TO BE RAKED.<br>PROVIDE A 50° CHAMFER ALL INTERIOR EXPOSED VERTICAL MASONRY CORNERS FROM 8° AFF TO<br>BOTTOM OF MASONRY LINTEL OR IF NO LINTEL EXISTS, STOP CHAMFER @ FIRST MASONRY JOINT<br>BELOW CELLING. NOTE THAT THIS CHAMFER IS NOT TO BE PROVIDED AT CORNERS SHOWN IN THESE<br>DOCUMENTS AS COVERED WITH WALL TILE. SEE DETAIL.<br>PROVIDE SPECIAL SHAPES, SUCH AS "U" SHAPED CHANNEL FOR LINTELS OR HEADERS AND CAPPING<br>UNITS FOR SAGH AND OTHER SPECIAL CONDITIONS.<br>WHERE SPLIT FACE BLOCK IS SHOWN EXTENDING TO THE TOP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP COURSE TO ALLOW THE CAP FLASHING TO FIT<br>TIGHT ACAINST THE WALL.<br>CONTRACTOR TO COORDINATE AND PROVIDE SMOOTH MASONRY AT ALL FLASHING, REGLETS,<br>GUTTERS, EDGES OF CEILING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE<br>HIDDEN.<br>A<br>MULTYPES + GENERAL<br>MULTYPES + GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | IT IS ACCEPTABLE TO PLACE NON-INTEGRAL COLORED CMU IN PORTIONS OF WALLS INDICATED TO<br>BE CONSTRUCTED OF INTEGRAL COLOR CMU IF THE DOCUMENTS SHOW THESE PORTIONS OF WALL<br>PAINTED OR COVERED WITH TILE, STUD FURRING, ABOVE CEILINGS OR UNDER ROOFING<br>MEMBRANE. IT IS NOT ACCEPTABLE TO UTILIZE NON INTEGRAL COLORED CMU BEHIND CABINETS,<br>FURNISHINGS AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CLIMBING WALLS AND LOCKERS.                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N<br>N<br>N                                    |                                |                |
| PROVIDE A 5/8" CHAMFER ALL INTERIOR EXPOSED VERTICAL MASONRY CORNERS FROM 8" AFF TO<br>BOTTOM OF MASONRY LINTEL OR IF NO LINTEL EXISTS, STOP CHAMFER @ FIRST MASONRY JOINT<br>BELOW CEILING. NOTE THAT THIS CHAMFER IS NOT TO BE PROVIDED AT CORNERS SHOWN IN THESE<br>DOCUMENTS AS COVERED WITH WALL TILE. SEE DETAIL.<br>PROVIDE SPECIAL SHAPES, SUCH AS "U" SHAPED CHANNEL FOR LINTELS OR HEADERS AND CAPPING<br>UNITS FOR SASH AND OTHER SPECIAL CONDITIONS.<br>WHERE SPLIT FACE BLOCK IS SHOWN EXTENDING TO THE TOP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP COURSE TO ALLOW THE CAP FLASHING TO FIT<br>TIGHT AGAINST THE WALL.<br>CONTRACTOR TO COORDINATE AND PROVIDE SMOOTH MASONRY AT ALL FLASHING, REGLETS,<br>GUTTERS, EDGES OF CEILING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE<br>HIDDEN.<br>A<br>MULTYPES + GENERAL<br>WALL TYPES + GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | AT ALL SPLIT FACE AND PAINTED CMU THE HORIZONTAL AND VERTICAL MORTAR JOINTS ARE TO BE CONCAVE. AT ALL HONED BLOCK THE HORIZONTAL MORTAR JOINT IS TO BE A WEATHERED JOINT AND ALL VERTICAL JOINTS ARE TO BE RAKED.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                |                |
| PROVIDE SPECIAL SHAPES, SUCH AS "U" SHAPED CHANNEL FOR LINTELS OR HEADERS AND CAPPING<br>UNITS FOR SASH AND OTHER SPECIAL CONDITIONS.       Image: Condition of the condi                                                                                                                                          | PROVIDE A 5/8" CHAMFER ALL INTERIOR EXPOSED VERTICAL MASONRY CORNERS FROM 8" AFF TO<br>BOTTOM OF MASONRY LINTEL OR IF NO LINTEL EXISTS, STOP CHAMFER @ FIRST MASONRY JOINT<br>BELOW CEILING. NOTE THAT THIS CHAMFER IS NOT TO BE PROVIDED AT CORNERS SHOWN IN THESE<br>DOCUMENTS AS COVERED WITH WALL TILE. SEE DETAIL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                | שוא ואוע ו<br>JT 84098<br>ידי  | 0-7            |
| TIGHT AGAINST THE WALL.<br>CONTRACTOR TO COORDINATE AND PROVIDE SMOOTH MASONRY AT ALL FLASHING, REGLETS,<br>GUTTERS, EDGES OF CEILING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE<br>HIDDEN.<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | WHERE SPLIT FACE BLOCK IS SHOWN EXTENDING TO THE TOP OF A PARAPET, PROVIDE AN<br>INTEGRAL COLOR SMOOTH FACE BLOCK AT THE TOP COURSE TO ALLOW THE CAP FLASHING TO FIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>ILS</b>                                     | K City, L                      |                |
| Inductive       A       C       O I J J J J J J J J J J J J J J J J J J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TIGHT AGAINST THE WALL.<br>CONTRACTOR TO COORDINATE AND PROVIDE SMOOTH MASONRY AT ALL FLASHING, REGLETS,<br>GUTTERS, EDGES OF CEILING AND BASE AND OTHER ITEMS REQUIRING A SMOOTH FINISH THAT ARE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                | Dr, Par                        |                |
| WALL TYPES + GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                | אאא<br>ailside                 |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SO                                             | 700 Tr                         |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WALL TYPES +                                   | ר וה כ<br>GENERAL              |                |





![](_page_43_Figure_0.jpeg)

![](_page_44_Figure_0.jpeg)

![](_page_44_Figure_4.jpeg)

| ROOFING M<br>& DO\    |
|-----------------------|
| 3/4" TREA<br>RIGID IN |
| ME<br>O.(<br>(2       |
| EXISTING F            |
|                       |
| EXIST S<br>EXIST MA   |
| STANDING :<br>F       |
| RIGID INSULAT         |
| Beam, painted —       |
|                       |
| B3 F                  |
|                       |
|                       |
|                       |
|                       |

![](_page_45_Figure_2.jpeg)

![](_page_45_Picture_3.jpeg)

**A540** 

![](_page_46_Figure_0.jpeg)

![](_page_47_Figure_0.jpeg)

![](_page_48_Figure_0.jpeg)

- /- -- --

1. 1

![](_page_49_Figure_1.jpeg)

5/8" GYP BOARD, PAINTED WHERE EXPOSED

![](_page_49_Figure_2.jpeg)

![](_page_50_Figure_0.jpeg)

![](_page_51_Figure_0.jpeg)

1

![](_page_51_Figure_3.jpeg)

2

- WALL, SEE PLANS FOR TYPE , PRIMED BEHIND CABINET WHERE EXPOSED, & 3 MM EDGE BANDING - 3/4" INTEGRAL NAILER, TYP

— CONT IN WALL 2x6 WOOD BLOCKING OR 6"x16 GA METAL BACKING - INTERIOR/SIDE PANELS - MELAMINE OVER 1" SUBSTRATE - MELAMINE OVER 1/2" THICK HARDBOARD BACK - DADO INTO BOTTOM & SIDES

- FIXED SHELVES, SEE ELEVATIONS FOR QTY -1" SUBSTRATE W/MELAMINE BOTH SIDES & 3 MM EDGE BANDING

BOTTOM - 1" SUBSTRATE W/ MELAMINE & 3 MM EDGE BANDING - SCHEDULED BASE

![](_page_51_Figure_8.jpeg)

 MELAMINE OVER 1/2" THICK HARDBOARD BACK - DADO INTO **BOTTOM & SIDES** MILLWORK BODY - MELAMINE ON 3/4" SUSBTATE

EDGE TRIM

WOOD EDGE TRIM

4

A2 CUBBIES

SCALE: 1 1/2" = 1'-0"

A3 CUBBIES-PLAN SCALE: 1 1/2" = 1'-0"

3

![](_page_51_Figure_15.jpeg)

FIXED SHELVES - MELAMINE ON 3/4" SUBSTRATE W/ SOLID WOOD

![](_page_51_Figure_18.jpeg)

4

6

![](_page_51_Figure_19.jpeg)

![](_page_51_Figure_20.jpeg)

![](_page_52_Figure_0.jpeg)

|      | ]                                                                                         | 5              | 5 6                       |              |        |               |              |                   |               |              |                  |           |                                                                                                       |   |
|------|-------------------------------------------------------------------------------------------|----------------|---------------------------|--------------|--------|---------------|--------------|-------------------|---------------|--------------|------------------|-----------|-------------------------------------------------------------------------------------------------------|---|
|      |                                                                                           |                | SCHEDULE - DOOR AND FRAME |              |        |               |              |                   |               |              |                  |           |                                                                                                       |   |
| DO   | OR & FRAME NUTES                                                                          |                |                           |              | DC     | OOR           |              |                   |               | FRAME        |                  |           |                                                                                                       |   |
|      |                                                                                           |                |                           | SIZE         |        | _             |              |                   |               |              | FINIS            | HARD      |                                                                                                       |   |
| 1. M | ATERIAL ABBREVIATIONS:<br>WD = WOOD<br>AL = ALUMINUM<br>HM = HOLLOW METAL                 | DOOR<br>NUMBER | WIDTH                     | HEIGH<br>I T | THICK  | ELEV.<br>TYPE | MATE<br>RIAL | FINISH/<br>Facing | ELEV.<br>TYPE | MATER<br>IAL | H/<br>FACIN<br>G | GROU<br>P | I AZI<br>NG<br>TYPE NOTES                                                                             |   |
| 0    |                                                                                           | 1300A          | 3' - 0"                   | 7' - 0"      | 2"     | F             | AL           | ANOD              | AL3           | AL           | ANOD             | AL03      |                                                                                                       |   |
| 2. S | EE SPECIFICATION FOR HARDWARE GROUP DEFINITION                                            | 1300B          | 3' - 0"                   | 7' - 0"      | 2"     | F             | AL           | ANOD              | AL3           | AL           | ANOD             | AL04      |                                                                                                       |   |
| 3 A  | I HOLLOW METAL FRAMES OPENING TO THE EXTERIOR ARE TO BE GAI VANIZED                       | 1301           | 3' - 0"                   | 7' - 0"      | 1 3/4" | I             | WD           | CL                | 3             | HM           | PNT              | 04        |                                                                                                       |   |
| 0. 7 |                                                                                           | 1302           | 3' - 0"                   | 7' - 0"      | 1 3/4" | J             | WD           | CL                | 4             | HM           | PNT              | 04        |                                                                                                       |   |
| 4. A | LL HOLLOW METAL DOORS OPENING TO THE EXTERIOR ARE TO BE INSULATED AND                     | 1302A          | 3' - 0"                   | 7' - 0"      | 1 3/4" | Н             | HM           | PNT               | 2             | HM           | PNT              | 03        |                                                                                                       |   |
| G    | ALVANIZED                                                                                 | 1303           | 3' - 0"                   | 7' - 0"      | 1 3/4" | Е             | HM           | PNT               | 1             | HM           | PNT              | 06        |                                                                                                       |   |
| - 0  |                                                                                           | 1304           | 3' - 0"                   | 7' - 0"      | 1 3/4" | K             | WD           | CL                | 4             | HM           | PNT              | 04        |                                                                                                       |   |
| 5. U | VERALL ALUMINUM FRAME DIMENSIONS ARE GIVEN FOR REFERENCE, REFER TO                        | 1304A          | 3' - 0"                   | 7' - 0"      | 1 3/4" | Н             | HM           | PNT               | 2             | HM           | PNT              | 04        |                                                                                                       |   |
|      | ERIFIED.                                                                                  | 1305           | 3' - 0"                   | 7' - 0"      | 1 3/4" | EX            |              |                   | EX            |              |                  | -         | EXISTING DOOR AND FRAME, PAINT TO<br>MATCH SURROUNDING WALL. PATCH<br>AND REPAIR DOOR AS NEEDED       |   |
| U. U | ECURITY SYSTEM INSTALLER                                                                  | 1306           | 3' - 0"                   | 7' - 0"      | 1 3/4" | В             | WD           | CL                | 2             | HM           | PNT              | 02        |                                                                                                       |   |
| -    |                                                                                           | 1307           | 3' - 0"                   | 7' - 0"      | 1 3/4" | J             | WD           | CL                | 4             | HM           | PNT              | 04        |                                                                                                       |   |
| 7. W | HERE A DOOR IS SHOWN ON THE FLOORS PLANS BUT IS NOT NUMBERED AND/OR DOES                  | 1307A          | 3' - 0"                   | 7' - 0"      | 1 3/4" | В             | WD           | CL                | 2             | HM           | PNT              | 05        |                                                                                                       |   |
| N    | OT APPEAR IN THE DOOR SCHEDULE, THE FOLLOWING DOOR, FRAME AND HARDWARE                    | 1307B          | 3' - 0"                   | 7' - 0"      | 1 3/4" | J             | WD           | CL                | 7             | HM           | PNT              | 04        |                                                                                                       |   |
| A    | RE TO BE BID FOR THIS OPENING: DOOR TYPES <b>X</b> , FRAME TYPE <b>XX</b> , HARDWARE TYPE | 1308           | 3' - 0"                   | 7' - 0"      | 1 3/4" | А             | WD           | CL                | 1             | HM           | PNT              | 07        |                                                                                                       |   |
| •    | Λ.                                                                                        | 1309           | 3' - 0"                   | 7' - 0"      | 1 3/4" | A             | WD           | CL                | 1             | HM           | PNT              | 07        |                                                                                                       |   |
|      |                                                                                           | 1310           | 2' - 8"                   | 7' - 0"      | 1 3/4" | D             | HM           | PNT               | 1             | HM           | PNT              | 05        |                                                                                                       |   |
|      |                                                                                           | 1311           | 3' - 0"                   | 7' - 0"      | 1 3/4" | J             | WD           | CL                | 5             | HM           | PNT              | 04        |                                                                                                       |   |
|      |                                                                                           | 1311A          | 3' - 0"                   | 7' - 0"      | 1 3/4" | Н             | HM           | PNT               | 2             | HM           | PNT              | 03        |                                                                                                       | _ |
|      |                                                                                           | 1312           | 3' - 0"                   | 7' - 0"      | 1 3/4" | E             | HM           | PNT               | 1             | HM           | PNT              | 06        |                                                                                                       | - |
| ~ .  |                                                                                           | 1313           | 3' - 0"                   | 7' - 0"      | 1 3/4" | К             | WD           | CL                | 6             | НМ           | PNT              | 04        |                                                                                                       | _ |
| GL/  | AZING TYPE LEGEND                                                                         | 1313A          | 3' - 0"                   | 7' - 0"      | 1 3/4" | Н             | HM           | PNT               | 2             | НМ           | PNT              | 03        |                                                                                                       |   |
| MARK | C DESCRIPTION                                                                             | 1314           | 3' - 0"                   | 7' - 0"      | 1 3/4" | EX            |              |                   | EX            |              |                  | -         | EXISTING DOOR AND FRAME, PAINT<br>FRAME TO MATCH SURROUNDING WALL.<br>PATCH AND REPAIR DOOR AS NEEDED |   |
|      |                                                                                           | 1314A          | 3' - 0"                   | 7' - 0"      | 1 3/4" | А             | WD           | CL                | 2             | HM           | PNT              | 01        |                                                                                                       |   |
| Â    | 1" GRAY TINTED INSULATED, LOW E SOLAR BAN 60                                              | 1314B          | 3' - 0"                   | 7' - 0"      | 1 3/4" | EX            |              |                   | EX            |              |                  | -         | EXISTING DOOR AND FRAME, PAINT TO<br>MATCH SURROUNDING WALL. PATCH<br>AND REPAIR DOOR AS NEEDED       |   |
| B    | 1/2" CLEAR LAMINATED GLASS                                                                | 1315           | 3' - 0"                   | 7' - 0"      | 1 3/4" | EX            |              |                   | EX            |              |                  | -         | EXISTING DOOR AND FRAME, PAINT TO<br>MATCH SURROUNDING WALL. PATCH<br>AND REPAIR DOOR AS NEEDED       |   |
| #    | T 'T' INDICATES TEMPERED GLASS                                                            | 1316           | 3' - 0"                   | 7' - 0"      | 1 3/4" | EX            |              |                   | EX            |              |                  | -         | EXISTING DOOR AND FRAME, PAINT TO<br>MATCH SURROUNDING WALL. PATCH<br>AND REPAIR DOOR AS NEEDED       |   |
| (#)  | A 'IA' INDICATES IMPACT FILM, TYPE 'A'                                                    | 1316A          | 3' - 0"                   | 7' - 0"      | 1 3/4" | Α             | WD           | CI                | 2             | НМ           | PNT              | 01        |                                                                                                       |   |
|      |                                                                                           | 1316B          | 3' - 0"                   | 7' - 0"      | 1 3/4" | EX            |              |                   | EX            |              |                  | -         | EXISTING DOOR AND FRAME, PAINT TO<br>MATCH SURROUNDING WALL. PATCH<br>AND REPAIR DOOR AS NEEDED       |   |

3' - 0" 7' - 0" 1 3/4" B

3' - 0" 7' - 0" 1 3/4" B

WD

WD CL

PNT

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(11)

(D4) (A561)

D4 A561

9

NOTE: WINDOW TYPE QUANTITIES PROVIDED FOR CONVENIENCE, THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE QUANTITIES OF EACH WINDOW TYPE.

1317A 
 1319A
 3' - 0"
 7' - 0"
 2"
 F
 AL
 ANOD
 AL2
 AL
 ANOD
 AL01

 1319B
 3' - 0"
 7' - 0"
 2"
 F
 AL
 ANOD
 AL2
 AL
 ANOD
 AL01

 1319B
 3' - 0"
 7' - 0"
 2"
 F
 AL
 ANOD
 AL2
 AL
 ANOD
 AL01

 1319C
 3' - 0"
 7' - 0"
 2"
 F
 AL
 ANOD
 AL2
 AL
 ANOD
 AL01
 1319D 3' - 0" 7' - 0" 2" F AL ANOD AL2 AL ANOD AL02

> D4 A561 D4 SIM FOLLOW ROOF SLOPE - FOLLOW ROOF SLOPE FOLLOW ROOF SLOPE A561 D4 A561 D4 \ A561

![](_page_52_Figure_8.jpeg)

|         | SIGNAGE SCHEDULE |                        |              |         |            |  |  |
|---------|------------------|------------------------|--------------|---------|------------|--|--|
| Mark    | Type<br>Mark     | Sign<br>Room<br>Number | Sign Text    | Detail  | Sign Notes |  |  |
| 1300A-F | FXIT             | -                      | FXIT         | C5/A700 |            |  |  |
| 1301    | INS              | 1301                   | INTERVENTION | D5/A700 |            |  |  |
| 1302    | INS              | 1302                   | CLASSROOM    | D5/A700 |            |  |  |
| 1302A-1 | RM               | 1303                   | COATS        | D4/A700 |            |  |  |
| 1302A-2 | RM               | 1302                   | CLASSROOM    | D4/A700 |            |  |  |
| 1304    | INS              | 1304                   | CLASSROOM    | D5/A700 |            |  |  |
| 1304A-1 | RM               | 1303                   | COATS        | D4/A700 |            |  |  |
| 1304A-2 | RM               | 1304                   | CLASSROOM    | D4/A700 |            |  |  |
| 1305    | INS              | 1305                   | PACE         | D5/A700 |            |  |  |
| 1306    | INS              | 1306                   | TECH OFFICE  | D5/A700 |            |  |  |
| 1307    | INS              | 1307                   | STEM ROOM    | D5/A700 |            |  |  |
| 1307    | INS              | 1307                   | STEM ROOM    | D5/A700 |            |  |  |
| 1307A   | RM               | 1307A                  | STORAGE      | D4/A700 |            |  |  |
| 1308    | UNI              | 1308                   | RESTROOM     | C4/A700 |            |  |  |
| 1309    | UNI              | 1309                   | RESTROOM     | C4/A700 |            |  |  |
| 1310    | RM               | 1310                   | STORAGE      | D4/A700 |            |  |  |
| 1311    | INS              | 1311                   | CLASSROOM    | D5/A700 |            |  |  |
| 1311-2  | RM               | 1311                   | CLASSROOM    | D4/A700 |            |  |  |
| 1312-1  | RM               | 1312                   | COATS        | D4/A700 |            |  |  |
| 1312-2  | RM               | 1312                   | COATS        | D4/A700 |            |  |  |
| 1313    | INS              | 1313                   | CLASSROOM    | D5/A700 |            |  |  |
| 1313-2  | RM               | 1313                   | CLASSROOM    | D4/A700 |            |  |  |
| 1314    | INS              | 1314                   | CLASSROOM    | D5/A700 |            |  |  |

|        | SIGNAGE SCHEDULE |                        |           |         |         |  |  |  |
|--------|------------------|------------------------|-----------|---------|---------|--|--|--|
| Mark   | Type<br>Mark     | Sign<br>Room<br>Number | Sign Text | Detail  | Sign No |  |  |  |
| 1314-2 | RM               | 1314                   | CLASSROOM | D4/A700 |         |  |  |  |
| 1314A  | UNI              | 1314A                  | RESTROOM  | C4/A700 |         |  |  |  |
| 1315   | INS              | 1315                   | CLASSROOM | D5/A700 |         |  |  |  |
| 1315-1 | RM               | 1315                   | COATS     | D4/A700 |         |  |  |  |
| 1316-2 | RM               | 1316                   | CLASSROOM | D4/A700 |         |  |  |  |
| 1316A  | UNI              | 1316A                  | RESTROOM  | C4/A700 |         |  |  |  |
| 1317-1 | RM               | 1317                   | STORAGE   | D4/A700 |         |  |  |  |
| 1317-2 | RM               | 1317                   | STORAGE   | D4/A700 |         |  |  |  |
| 1317-3 | RM               | 1314                   | CLASSROOM | D4/A700 |         |  |  |  |
| 1317-4 | RM               | 1316                   | CLASSROOM | D4/A700 |         |  |  |  |
| 1319-2 | RM               | 1319                   | COATS     | D4/A700 |         |  |  |  |
| 1320-E | EXIT             | -                      | EXIT      | C5/A700 |         |  |  |  |

![](_page_53_Figure_2.jpeg)

![](_page_53_Figure_3.jpeg)

![](_page_53_Figure_4.jpeg)

|          |                                                                  | Ŭ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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C</li> <li>All other</li> <li>Diagona</li> <li>proofing</li> </ul> ork <ul> <li>clay, to</li> <li>n below proofing</li> </ul> ork <ul> <li>a clay, to</li> <li>n below proofing</li> </ul> ork <ul> <li>concret</li> </ul> terials shilding Co <ul> <li>Concret</li> <li>Location</li> <li>Footing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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C</li> <li>All other</li> <li>base of</li> <li>or concret</li> <li>mpacted</li> <li>walls</li> <li>the Quation</li> <li>base of</li> <li>concret</li> <li>concret</li> <li>Location</li> <li>Exterion</li> <li>Concret</li> <li>All other</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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fil<br>undisturbed<br>shall be a market<br>boratory del<br>ality Assurant<br>e responsib<br>hall comply<br>be Require<br><u>e mix desig</u><br>on<br><u>slabs on Gr</u><br>r Walls<br><u>e resite cast co</u><br>classes are p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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It shall b         01557. All fill         and shore e:         in American         wws:         Max       Ai         W/C       Cont         Ratio       (%         0.45       6         0.45       6         ore F, S and C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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                                                                                                 | are supplications as t conc<br>crete un<br>s.<br>strained.<br>econdar<br>aterials s<br>aterials s<br>aterials s<br>aterials s<br>aterials s<br>aterials s<br>cons as re<br>ete Insti<br>Max<br>ggregate<br>Size<br>1"<br>1"<br>34"<br>34"<br>34"<br>34"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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All<br>inches and<br>recent of the<br>becifications<br>CI) 318-14,<br>Osure<br>sses*<br>SC<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.               | B.<br>C.<br>The<br>from<br>The<br>fill c<br>Cor<br>dow<br>fill r<br>with<br>max<br>and<br>It sh<br><b>Cre</b><br>Mat<br>"Bu<br>A.<br>* E:<br>B.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul> <li>a. S</li> <li>b. C</li> <li>c. C</li> <li>3. Interial</li> <li>3. Interial</li> <li>b. C</li> <li>c. C</li> <li>3. Interial</li> <li>b. C</li> <li>All other</li> <li>Diagonal</li> <li>proofing</li> </ul> <b>ork</b> <ul> <li>clay, to</li> <li>n below proofing</li> </ul> <b>ork</b> <ul> <li>clay, to</li> <li>material shift</li> <li>brother</li> <li>clay, to</li> <li>material shift</li> <li>the Quality</li> <li>th</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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See to<br>on-expansive green<br>percent passing<br>nsity as determinance section of the<br>bility of the Contrel<br>with the Standar<br>ments for Struct<br>n requirements section<br>oncrete<br>per ACI 318, Section<br>and corrosion pro-<br>rials:<br>t (ASTM C150):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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t<br>ctural fi<br>L FILL I<br>than 4<br>95 per<br>See Sp<br>equired.<br>tute (Ad<br>Exp<br>Class<br>F<br>F0 S<br>F0 S<br>F0 S<br>F1 S<br>F1 S<br>F1 S<br>F1 S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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extending<br>DETAIL. All<br>inches and<br>rcent of the<br>becifications<br>CI) 318-14,<br>OSURE<br>SS C<br>SO CO<br>SO CO<br>SO C1<br>SO C1<br>SO C1<br>SO C1<br>SO C1<br>SO C1<br>SO C1<br>SO C1<br>SO C1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.               | B.<br>C.<br>The<br>from<br>The<br>fill c<br>Cor<br>dow<br>fill r<br>with<br>max<br>and<br>It st<br><b>Dcre</b><br>Mat<br>"Bu<br>A.<br>* E:<br>B.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul> <li>a. S</li> <li>b. C</li> <li>c. C</li> <li>3. Interial</li> <li>a. S</li> <li>b. C</li> <li>c. C</li> <li>3. Interial</li> <li>b. C</li> <li>All other</li> <li>Diagona</li> <li>proofing</li> </ul> ork <ul> <li>clay, to</li> <li>n below proof</li> <li>chase of</li> <li>or concret</li> </ul> material s <ul> <li>a. not modivide the Quality</li> <li>b. C</li> <li>clay, to the material s</li> <li>a. not modivide the Quality</li> <li>b. C</li> <li>concret</li> &lt;</ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | le span and<br>teel beams<br>pen web ste<br>oncrete slal<br>ior spans of<br>teel beams<br>pen web ste<br>steel floor<br>al members<br>protection.<br>psoil, unsui<br>proposed fo<br>footing exc<br>te placemen<br>structural fil<br>undisturbed<br>shall be a n<br>re than 35 p<br>boratory det<br>ality Assurar<br>e responsib<br>nall comply<br>ode Require<br><u>e mix desig</u><br>on<br><u>slabs on Gr</u><br>r Walls<br><u>er site cast or</u><br>classes are p<br>ving, sulfate,<br>and Cemen<br>ype I or II fo<br>sh (ASTM (                                                                                                                                                                                                                                                                                                                                                                                                            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C</li> <li>All other</li> <li>proofing</li> <li>ork</li> <li>a. clay, to</li> <li>base of</li> <li>or concret</li> <li>material s</li> <li>base of</li> <li>or concret</li> <li>material s</li> <li>a. not modified the Quality</li> <li>base of concret</li> <li>concret</li> <li>Locatic</li> <li>Footing</li> <li>Interior</li> <li>Exterior</li> <li>Walls</li> <li>All other</li> <li>concret</li> <li>Norm</li> <li>shall</li> <li>Steel Re</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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Assurar<br>e responsib<br>mall comply<br>ode Require<br><u>e mix desig</u><br>on<br><u>s</u><br><u>Slabs on Gr</u><br>r Walls<br><u>er site cast co</u><br>classes are p<br>ving, sulfate,<br>itious Mater<br>and Cemen<br>ype I or II fo<br>sh (ASTM C<br>mentitious n<br>e Density (M<br>nal weight c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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S<td>le span and<br/>teel beams<br/>pen web ste<br/>oncrete slal<br/>ior spans of<br/>teel beams<br/>pen web ste<br/>steel floor<br/>al members<br/>protection.<br/>psoil, unsui<br/>proposed fo<br/>footing exc<br/>te placemen<br/>structural fil<br/>undisturbed<br/>shall be a n<br/>re than 35 p<br/>boratory de<br/>ality Assurar<br/>e responsib<br/>nall comply<br/>ode Require<br/><u>e mix desig</u><br/>on<br/><u>state cast co</u><br/>classes are p<br/>ving, sulfate,<br/>itious Mater<br/>and Cemen<br/>ype I or II for<br/>sh (ASTM C<br/>e Density (N<br/>nal weight c<br/>be ASTM C<br/>e inforcemen<br/>yea 10 cm<br/>structural fil<br/>undisturbed<br/>shall be a n<br/>re than 35 p<br/>boratory del<br/>shall comply<br/>of<br/><u>structural fil</u><br/>undisturbed<br/>shall comply<br/>of<br/><u>structural fil</u><br/>undisturbed<br/><u>shall comply</u><br/>of<br/><u>structural fil</u><br/>undisturbed<br/><u>shall comply</u><br/><u>structural fil</u><br/>undisturbed<br/><u>shall comply</u><br/><u>structural fil</u><br/>undisturbed<br/><u>shall comply</u><br/><u>structural fil</u><br/><u>structural fil</u><br/><u>structura</u></td><td>simply supporting concelligists supporting concelligists support bs, precast concomposition of the support of multiple bays supporting metale eeligists support and roof framing in vertical brace table fill, organic oundation areas. 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C.<br>thw<br>The<br>from<br>The<br>fill c<br>Corv<br>down<br>fill r<br>Mat<br>"Bu<br>A.<br>* E:<br>B.<br>C.<br>E.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul> <li>a. 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meta<br>eel joists support<br>and roof framing<br>in vertical brace<br>table fill, organic<br>oundation areas.<br>cavations should<br>nt.<br>II: Footings may<br>d bedrock. 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Whe<br>nishing proce<br>crete Floor a<br>d water reduce<br>containing calc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | netal decking,         of multiple bas         ital decking,         islabs or precented decking         netal decking         paring walls:         recast concrepted         oncrete units         all be considered         be considered         other deleteri         loose or dele         disturbed bee         OMPACTEE         il with a max         ve. It shall b         O1557. All fill         and shore e:         in American         ows:         Max       Cont         0.45       -         0.45       -         0.45       -         ofly ash conted       (%         ofly ash conted       (%         ofly ash conted       -         and shore e:       -         in American       -         ows:       -         Max       Cont         ofly ash conted       -         afly ash conted       -         ofly ash conted       -         ofly ash conted       -         ofly ash conted       -         and Slab       - <td>g.<br/>ys that<br/>or prec<br/>ast com<br/>g.<br/>ete unit<br/>ered res<br/>ed as s<br/>ous ma<br/>eterious<br/>drock o<br/>STRL<br/>imum s<br/>e comp<br/>shall be<br/>xcavati<br/>Concr<br/>r<br/>cent Ag<br/>)<br/>are ex<br/>ectively.<br/>are ex<br/>ectively.<br/>are ex<br/>ectively.<br/>are ex<br/>ectively.<br/>are ex<br/>ectively.<br/>are not as a<br/>pounds<br/>herwise<br/>used).<br/>3%, tho<br/>minimi<br/>onstruct<br/>I, but not<br/>shall not</td> <td>are supplications as recently ast conclusions as recently ast conclusions as recently aterials as a material of the spericulation of the required of the spericulation of the specification of the spe</td> <td>borted for<br/>rete unitis.<br/>y memb<br/>hould for<br/>a prior t<br/>ctural fi<br/>L FILL I<br/>than 4<br/>95 per<br/>See Sp<br/>equired.<br/>tute (Ad<br/>Exp<br/>Class<br/>F<br/>F<br/>F<br/>See Sp<br/>equired.<br/>tute (Ad<br/>Exp<br/>Class<br/>F<br/>F<br/>See Sp<br/>equired.<br/>tute (Ad<br/>Exp<br/>Class<br/>F<br/>See Sp<br/>equired.<br/>a class<br/>F<br/>See Sp<br/>equired.<br/>Class<br/>F<br/>See Sp<br/>equired.<br/>a class<br/>F<br/>See Sp<br/>equired.<br/>F<br/>See Sp<br/>equired.<br/>F<br/>See Sp<br/>F<br/>See Sp<br/>See Sp<br/>F<br/>See Sp<br/>F<br/>See Sp<br/>F<br/>See Sp<br/>F<br/>See Sp<br/>See</td> <td>by bearing<br/>its.<br/>Ders for fire<br/>Ders for fire<br/>Deremoved<br/>to structural<br/>Il extending<br/>DETAIL. 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318-14,<br/>OSURE<br/>SSES*<br/>SC<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>CO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO<br/>SO</td> 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| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.               | B. C.<br>thw<br>from<br>The<br>fill c<br>Cow<br>fill r<br>with<br>and<br>It sh<br><b>Cre</b><br>Mat<br>"Bu<br>A.<br>E.<br>F.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2. Only walls<br>a. S<br>b. C<br>c. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>All other<br>Diagona<br>proofing<br><b>ork</b><br>clay, to<br>n below (<br>base of<br>or concret<br>material s<br>not mot<br>ximum la<br>the Qua<br>hall be th<br>terials sh<br>ilding Co<br>Concret<br>Locatic<br>Footing<br>Interior<br>Exterio<br>Walls<br>All other<br>concret<br>Locatic<br>Footing<br>Interior<br>Exterio<br>Walls<br>All other<br>concret<br>Locatic<br>Footing<br>Interior<br>Exterio<br>Walls<br>All other<br>shall<br>Steel Ref<br>1. ASTI<br>Admixtu<br>1. Air-e<br>a. T<br>b. W<br>di<br>g<br>2. The<br>3. Calci<br>mix.<br>Chloride<br>Concret                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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C<br>mentitious n<br>e Density (N<br>nal weight c<br>be ASTM C<br>en forcemen<br>M A615 Gra<br>ntraining ad<br>olitan con<br>e Ion: Maxim<br>n 28 and<br>tious and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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See to<br>on-expansive gr<br>percent passing<br>nsity as determinance section of th<br>pility of the Contr<br>with the Standar<br>ments for Struct<br>n requirements of<br>cade<br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>cade</u><br><u>concrete</u><br><u>cals</u> :<br>t (ASTM C150):<br>or exposure class<br><u>cals</u> :<br>t (astruction pro-<br>ticals):<br>t (astruction pro-<br>ticals):<br>t (astruction pro-<br>cals):<br>t (astruct | rs supporting r<br>ed end spans of<br>crete slabs, me<br>ting concrete s<br>crete units, or r<br>upported by be<br>al decking or pu<br>ting precast co<br>g members shall<br>d frames shall<br>be cleared of<br>bear on the un<br>he TYPICAL C<br>canular materia<br>a No. 200 sie<br>hed by ASTM E<br>e GSN).<br>ractor to brace<br>ards specified<br>ural Concrete.<br>shall be as foll<br>fc at<br>28 days<br>(psi)<br>3000<br>4500<br>4000<br>4500<br>0 psi min. un<br>ly with ASTM C<br>e approximately<br>00 psi min. un<br>ly with ASTM C<br>e approximately<br>00 psi min. un<br>ly with ASTM C<br>e approximately<br>00 psi min. un<br>ly with ASTM C<br>crete Floor a<br>d water reduce<br>containing calc<br>ble chloride ion<br>buted from th                                                                                                                                                                                                                                                                                                                            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be<br>xcavati<br>Concr<br>r<br>cent Ag<br>)<br>are ex<br>ectively.<br>ent as a<br>pounds<br>therwise<br>used).<br>3%, tho<br>minimionstruct<br>therwise<br>used).<br>3%, tho<br>minimionstruct<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise<br>therwise 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All<br>inches and<br>reent of the<br>becifications<br>CI) 318-14,<br>OSURE = SES + S - C - SO - CO -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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bs, precast concerns, precast concerns, precast concerns, supporting metales and roof framing in vertical brace table fill, organic precision of framing in vertical brace table fill, organic precision should nt.<br>It: Footings may bedrock. 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See to on-expansive gropercent passing in the Standar ments for Struct nequirements of the control of the Control with the Standar ments for Struct nequirements shall be concrete ber ACI 318, Section and corrosion provials: It (ASTM C150): or exposure class C618, Class C or materials shall be concrete shall                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | rs supporting r<br>ed end spans of<br>crete slabs, me<br>ting concrete s<br>crete units, or r<br>upported by be<br>al decking or pu-<br>ting precast co<br>g members shall<br>d frames shall<br>be cleared of<br>bear on the un-<br>he TYPICAL C<br>anular materia<br>a No. 200 sie<br>ned by ASTM D<br>e GSN).<br>ractor to brace<br>ards specified<br>ural Concrete.<br>shall be as follor<br>fc at<br>28 days<br>(psi)<br>3000<br>4500<br>4000<br>4500<br>4000<br>5 SO.<br>r F): maximum<br>e 25 percent.<br>g Weight):<br>approximately<br>00 psi min. un<br>ly with ASTM O<br>lelivered shall<br>finished floor s<br>to occur. Whe<br>nishing proced<br>crete Floor a<br>d water reduced<br>containing calc<br>ble chloride io<br>buted from th<br>ures shall not<br>class C0, 0.300<br>2, and 0.06% fr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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oncrete units         all be consider         other deleteri         loose or delet         disturbed besenter         ioose or delet         disturbed besenter         ioose or delet         disturbed besenter         iomage of the shall be         ion American         'ows:         in American         'ows:         Max       Ai         W/C       Contenter         'ows:       Ai         Max       Ai         'y 145 to 155         less noted of         C 260 (when         be +/- 1.5%         and Slab Contenter         and Slab Con                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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a<br>pounds<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>inclusion<br>i 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simply supporting conceel joists supporting conceel joists supporting metael joists support and roof framing in vertical brace<br>table fill, organic joint and conformation areas.<br>cavations should nt.<br>It: Footings may dibedrock. 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It shall b         o1557. All fill         and shore e:         in American         ows:         Max       Ai         v/C       Cont         Ratio       (%         0.45       6         0.45       6         offy ash conter       (%         olass noted of       C 260 (when         be +/- 1.5%.       (%         slab exceeds       (%         n this sit help       (%         ord Slab C       (%         ers is allowed       (%         ord concentrat       (%         n concentrat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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All<br>inches and<br>reent of the<br>secifications<br>CI) 318-14,<br>OSURE<br>SSES*<br>SC<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>CO<br>SO<br>SO<br>CO<br>SO<br>SO<br>SO<br>SO<br>CO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>S                                                                                                                                                                                                                                                                                                                                                                                               |
| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.               | B. C.<br>the work of the fill of | 2. Only walls<br>a. S<br>b. C<br>c. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>4. Interia<br>proofing<br>ork<br>content<br>base of<br>or concre<br>mpacted<br>winto the<br>material s<br>for concre<br>mpacted<br>winto the<br>material s<br>for concre<br>mpacted<br>winto the<br>material s<br>for concre<br>mpacted<br>winto the<br>material s<br>for concre<br>later<br>ilding Co<br>Concret<br>Locatic<br>Footing<br>Interior<br>Exterior<br>Walls<br>All other<br>concret<br>1. Norn<br>shall<br>Steel Ref<br>1. ASTI<br>Admixtu<br>1. Air-e<br>a. T<br>b. W<br>g<br>g<br>2. The<br>3. Calci<br>mix.<br>Chloride<br>between<br>cementi<br>1.00% for<br>for conc<br>Slump L<br>reducing<br>the subr<br>Shrinkag<br>in accor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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Density (N<br>nal weight c<br>be ASTM C<br>en forcemen<br>ype I or II for<br>sh (ASTM C<br>mentitious n<br>e Density (N<br>nal weight c<br>be ASTM C<br>en forcemen<br>ype I or II for<br>sh (ASTM C<br>en forcemen<br>point of supe<br>ium chloride<br>e Ion: Maxim<br>n 28 and<br>tious mater<br>or concrete<br>rete with ex-<br>ja dmixtures<br>mitted mix d<br>ge Limit: 1 for<br>dance with b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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See to<br>on-expansive gr<br>percent passing<br>nsity as determinance section of th<br>oility of the Contre<br>with the Standar<br>ments for Struct<br>n requirements of<br>cade<br>concrete<br>per ACI 318, Section<br>and corrosion pro-<br>rials:<br>t (ASTM C150):<br>or exposure class<br>C618, Class C of<br>materials shall b<br>Maximum Air Dry<br>concrete shall be<br>C33.<br>nt:<br>ade 60, fy = 60,0<br>f mixtures, complet<br>attract of a trover<br>stand bilistering<br>attraction to the fil<br>Guide for Con<br>materials shall b<br>Maximum Air Dry<br>concrete shall be<br>C33.<br>nt:<br>ade 60, fy = 60,0<br>f mixtures, complet<br>attraction to the fil<br>Guide for Con<br>attraction for for<br>attraction for<br>attr                                                                                                                                                                                                                                                                                                                                                                               | rs supporting r<br>ed end spans of<br>crete slabs, me<br>ting concrete s<br>crete units, or r<br>upported by be<br>al decking or pu<br>ting precast co<br>g members shall<br>d frames shall<br>d frames shall<br>be cleared of<br>bear on the un<br>he TYPICAL C<br>canular materia<br>a No. 200 sie<br>ned by ASTM E<br>e GSN).<br>ractor to brace<br>ards specified<br>ural Concrete.<br>shall be as foll<br>fc at<br>28 days<br>(psi)<br>3000<br>4500<br>4000<br>4500<br>0 psi min. un<br>ly with ASTM C<br>e approximately<br>00 psi min. un<br>ly with ASTM C<br>e approximately<br>00 psi min. un<br>ly with ASTM C<br>crete Floor a<br>d water reduce<br>containing calc<br>ble chloride ion<br>buted from th<br>cues shall not<br>class C0, 0.30°<br>c, and 0.06% fo<br>or all concrete<br>supplier shall i<br>ade shall have                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | netal decking,         of multiple base         ital decking,         other deleteri         loose or dele         disturbed bee,         ital with a max         ve. It shall b         0.1557. All fill.         and shore e:         in American         ows:         Max       Ai         W/C       Cont         0.45       6         ore F, S and C         ore sis allowed         in this situation         in this situation         in concentrat         he ingred                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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(Ad<br>Exp<br>Class<br>F<br>F<br>F<br>F<br>F<br>S<br>F<br>F<br>F<br>C<br>S<br>F<br>F<br>F<br>C<br>S<br>F<br>F<br>C<br>S<br>F<br>F<br>C<br>S<br>S<br>F<br>C<br>S<br>S<br>S<br>S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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All<br>inches and<br>reent of the<br>pecifications<br>CI) 318-14,<br>$\overline{OSURE}_{SSES*} = C SO CO SO CO SO C1 SO C0 SO C1 SO C1 SO C0 SO C1 SO C1 SO C0 SO C1 SO C0 SO C1 SO C0 SO C1 SO C1 SO C0 SO C1 SO S$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2.       | Ear<br>2.1.<br>2.3.<br>2.4.<br>Cor<br>3.1.                       | B.C.<br>the Mathematical Structures of Structu | <ul> <li>a. Signification</li> <li>b. C</li> <li>c. C</li> <li>a. Signification</li> <li>b. C</li> <li>c. C</li> <li>c. C</li> <li>a. Signification</li> <li>b. C</li> <li>c. C</li> <li>a. Signification</li> <li>b. C</li> <li>c. C</li> <li>a. Signification</li> <li>c. C</li> <li>a. Signification</li> <li>c. 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mater<br>or concrete<br>rete with ex<br>jated mix d<br>g admixtures<br>mited mix d<br>g admixtures<br>mi                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | simply supported<br>supporting conceel joists suppor<br>bs, precast concer-<br>f multiple bays susporting meta-<br>eel joists suppor<br>and roof framing<br>in vertical brace<br>table fill, organic<br>oundation areas.<br>cavations should<br>nt.<br>II: Footings may<br>d bedrock. See to<br>on-expansive gre-<br>percent passing<br>nsity as determinance section of the<br>bility of the Contre-<br>with the Standar<br>ments for Struct<br>n requirements section<br>of the Contre-<br>with the Standar<br>ments for Struct<br>n requirements section<br>of the Contre-<br>with the Standar<br>ments for Struct<br>n requirements section<br>of the Contre-<br>section of the Contre-<br>section of the<br>bility of the Contre-<br>section of the<br>concrete shall be<br>concrete                                                                                                                                                                                                                                                                                                                                                                                                              | rs supporting r<br>ed end spans of<br>crete slabs, me<br>ting concrete s<br>crete units, or r<br>upported by be<br>al decking or pu-<br>ting precast co<br>g members shall<br>d frames shall<br>be cleared of<br>bear on the un-<br>he TYPICAL C<br>anular materia<br>a No. 200 sie<br>ned by ASTM D<br>e GSN).<br>ractor to brace<br>ards specified<br>ural Concrete.<br>shall be as follor<br>fc at<br>28 days<br>(psi)<br>3000<br>4500<br>4000<br>4500<br>4000<br>5 SO.<br>r F): maximum<br>e 25 percent.<br>g Weight):<br>approximately<br>00 psi min. un<br>ly with ASTM O<br>lelivered shall<br>finished floor s<br>to occur. Whe<br>nishing proced<br>crete Floor a<br>d water reduced<br>containing calc<br>ble chloride io<br>buted from th<br>ures shall not<br>class C0, 0.300<br>2, and 0.06% fo<br>or all concrete<br>supplier shall i<br>ade shall have<br>rig shrinkage s<br>shall be poure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | netal decking,         of multiple base         ital decking,         ital decking,         islabs or precenter         netal decking,         islabs or precenter         islabs or precenter         oncrete units         all be consider         other deleteri         loose or delet         disturbed best         OMPACTED         i with a max         ve. It shall b         D1557. All fill         and shore et         in American         ows:         Max       Ai         V/C       Content         Ratio       (%         0.45       6         0.45       6         offy ash content       (%         0.45       6         offy ash content       (%         10 stab consider       (%         offy ash content       (%         offy ash                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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are supplications as concordent on structure of a secondary of a s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | borted I<br>rete unit<br>its.<br>y memb<br>hould I<br>l prior t<br>ctural fi<br>L FILL I<br>than 4<br>95 per<br>See Sp<br>equired<br>tute (Au<br>Exp<br>Class<br>F0 S<br>F0 S<br>F0 S<br>F0 S<br>F0 S<br>F0 S<br>F0 S<br>F0 S                                                                                                                                                            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| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.<br>3.2.       | B.C.<br>the The form The fill C Cover fill of C C C C C C C C C C C C C C C C C C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | All other<br>Diagona<br>proofing     Ork     a. 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All<br/>inches and<br/>reent of the<br/>secifications<br/>CI) 318-14,<br/>OSUIE = SEC = SO = CO = SO = S</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.<br>3.2.       | B.C.<br>the Materian Structure of | 2. Only walls<br>a. S<br>b. C<br>c. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>3. Interia<br>a. S<br>b. C<br>4. C<br>4. C<br>4. C<br>5. C<br>5. C<br>3. Interia<br>a. S<br>b. C<br>4. C<br>5. C<br>5. C<br>5. C<br>5. C<br>5. C<br>5. C<br>5. 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exc<br>te placement<br>structural fil<br>undisturbed<br>shall be an<br>re than 35 p<br>boratory del<br>ality Assurar<br>e responsib<br>mall comply<br>de Require<br>e mix desig<br>on<br><u>s</u><br><u>s</u> Slabs on Gr<br>r Walls<br><u>er site cast co</u><br>lasses are p<br>ving, sulfate,<br>itious Mater,<br>and Cemen<br>ype I or II for<br>sh (ASTM C<br>mentitious n<br>e Density (N<br>nal weight c<br>be ASTM C<br>entraining ad<br>outper l or II for<br>sh (ASTM C<br>mentitious n<br>te concerte<br>to and cemen<br>ype I or II for<br>sh (ASTM C<br>mentitious n<br>te concerte<br>to an are con-<br>con-<br>al stabs on Gr<br>r Walls<br><u>er site cast co</u><br>lasses are p<br>ving, sulfate,<br>itious mater<br>or concerte<br>rete with ex-<br>intraining ad<br>outper l or II for<br>sh (ASTM C<br>mentitious n<br>te n are con-<br>con-<br>al stab<br>and termen<br>pathet n are con-<br>tious mater<br>or concrete<br>rete with ex-<br>intited mix d<br>ge Limit: 1 inte<br>dance with A<br>e grade or t<br>shall comply<br>hall be resp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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See to<br>on-expansive gr<br>percent passing<br>nsity as determinance section of th<br>oility of the Contr<br>with the Standar<br>ments for Struct<br>n requirements of<br>cade<br>concrete<br>per ACI 318, Section<br>and corrosion pro-<br>rials:<br>t (ASTM C150):<br>or exposure class<br>C618, Class C o<br>materials shall b<br>Maximum Air Dry<br>concrete shall be<br>C33.<br>nt:<br>ade 60, fy = 60,0<br>dimixtures, comple<br>attront of the fil<br>Guide for Con<br>materials shall b<br>Maximum Air Dry<br>concrete shall be<br>C33.<br>nt:<br>ade 60, fy = 60,0<br>dimixtures, comple<br>attront of the fil<br>Guide for Con<br>materials shall b<br>Maximum Air Dry<br>concrete shall be<br>C33.<br>nt:<br>ade 60, fy = 60,0<br>dimixtures, comple<br>attront of the fil<br>Guide for Con<br>materials shall b<br>Maximum Air Dry<br>concrete shall be<br>C33.<br>nt:<br>ade 60, fy = 60,0<br>dimixtures comple<br>attront of the fil<br>Guide for Con<br>and screeds with<br>n, unless noted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | rs supporting r<br>ed end spans of<br>crete slabs, me<br>ting concrete s<br>crete units, or r<br>upported by be<br>al decking or pu<br>ting precast co<br>g members shall<br>d frames shall<br>d frames shall<br>be cleared of<br>bear on the un<br>he TYPICAL C<br>canular materia<br>a No. 200 sie<br>ned by ASTM E<br>e GSN).<br>ractor to brace<br>ards specified<br>ural Concrete.<br>shall be as follow<br>fc at<br>28 days<br>(psi)<br>3000<br>4500<br>4000<br>4500<br>00 psi min. un<br>ly with ASTM C<br>e approximately<br>00 psi min. un<br>ly with ASTM C<br>e approximately<br>00 psi min. un<br>ly with ASTM C<br>crete Floor a<br>d water reduce<br>containing calc<br>ble chloride ion<br>buted from th<br>ures shall not<br>class C0, 0.30°<br>c, and 0.06% fo<br>or all concrete<br>supplier shall i<br>ade shall have<br>ring shrinkage f<br>shall be poure<br>adards Publica<br>e a camber of f<br>otherwise. Poor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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be<br>xcavati<br>Concr<br>r<br>cent Ag<br>)<br>are ex<br>eterious<br>drock o<br>STRL<br>imum s<br>e comp<br>shall be<br>xcavati<br>concr<br>r<br>cent Ag<br>)<br>are ex<br>eterious<br>drock o<br>STRL<br>imum s<br>e comp<br>shall be<br>care ex<br>eterious<br>are ex<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious<br>eterious | are supplications as concident of the condary of span term of span ter                                                                                                                                                                                                                                                                                                     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All<br>inches and<br>reent of the<br>becifications<br>CI) 318-14,<br>$\overline{OSURE}_{SSES*} \\ S \\ C \\ SO \\ CO \\ SO \\ C1 \\ SO \\ SO \\ C1 \\ SO \\ SO \\ C1 \\ SO \\ SO \\ SO \\ C1 \\ SO \\ SO \\ SO \\ C1 \\ SO \\ S$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.<br>3.2.       | B.C.<br>the The Control of the Control | <ul> <li>a. Signification</li> <li>b. Circletion</li> <li>c. Circletion</li> <li>a. Signification</li> <li>b. Circletion</li> <li>c. Circletion</li> <lic. circletion<="" li=""> <li>c. Circl</li></lic.></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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comply<br>hal be resp<br>ad deflection<br>formwork to<br>use of supe<br>ad deflection<br>formwork to<br>use of supe<br>and to presp<br>ad deflection<br>formwork to<br>use of supe<br>ad deflection<br>formwork to<br>use of use<br>ad deflection<br>formwork to<br>ad deflection<br>formwork to<br>ad deflection<br>formwork to<br>ad deflection<br>formwork to<br>ad deflection<br>formwork to<br>ad deflection<br>formwork to<br>ad deflection<br>formwork t                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | simply supported<br>supporting conce<br>eel joists suppor<br>bs, precast conc<br>f multiple bays sus<br>supporting meta<br>eel joists suppor<br>and roof framing<br>in vertical brace<br>table fill, organic<br>undation areas.<br>cavations should<br>nt.<br>II: Footings may<br>d bedrock. See to<br>on-expansive gr<br>percent passing<br>nsity as determinance section of the<br>bility of the Contre<br>with the Standa<br>ments for Struct<br>n requirements section<br>of all struct<br>n requirements section<br>of a corrosion pro-<br>ials:<br>t (ASTM C150):<br>or exposure class<br>C618, Class C o<br>materials shall b<br>Maximum Air Dry<br>concrete shall be<br>C33.<br>t:<br>ade 60, fy = 60,0<br>finixtures, comple<br>attention to the find<br>Guide for Con<br>r plasticizers and<br>e or admixtures of<br>the stand at struct<br>and screeds with<br>n, unless noted<br>be pre-cambered<br>and screeds with<br>n, unless noted<br>be pre-cambered                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | rs supporting r<br>ed end spans of<br>crete slabs, me<br>ting concrete s<br>crete units, or r<br>upported by be<br>al decking or pu-<br>ting precast co<br>g members shall<br>d frames shall<br>be cleared of<br>bear on the un-<br>he TYPICAL C<br>anular materia<br>a No. 200 sie<br>ned by ASTM D<br>e GSN).<br>ractor to brace<br>ards specified<br>ural Concrete.<br>shall be as follor<br>fc at<br>28 days<br>(psi)<br>3000<br>4500<br>4500<br>4000<br>55 SO.<br>r F): maximum<br>e 25 percent.<br>g Weight):<br>approximately<br>00 psi min. un<br>ly with ASTM C<br>lelivered shall<br>finished floor s<br>to occur. Whe<br>nishing proced<br>crete Floor a<br>d water reduced<br>containing calc<br>ble chloride ion<br>buted from th<br>ures shall not<br>class CO, 0.300<br>2, and 0.06% fo<br>or all concrete<br>supplier shall in<br>ade shall have<br>ring shrinkager<br>shall be poure<br>dards Publica<br>esign, detailing<br>a camber of fo<br>otherwise. Pos                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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deleteri         loose or deleteri         disturbed begonsider         officer deleteri         and shore estimation         in American         ows:         Max       Ai         W/C       Cont         rement, response         fly ash conte         v 145 to 155         less noted of         C 260 (when be +/- 1.5%, slab exceeds         n this situation         and shore estimation         officer f, S and C         ers is allowed         in concentrat         he ingredier         exceed a m         % for concre         prior to the         ndicate the                                                                                                                                                                                                                                                                                                                                                                                                                                                           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struct<br>inclassing<br>therwise<br>used).<br>3%, th<br>on struct<br>inclassing<br>therwise<br>used).<br>3%, th<br>on struct<br>inclassing<br>therwise<br>used).<br>3%, th<br>on struct<br>inclassing<br>therwise<br>used).<br>3%, th<br>on struct<br>inclassing<br>therwise<br>used).<br>3%, th<br>on struct<br>inclassing<br>therwise<br>used).<br>1, but ne<br>shall be<br>at any<br>d the part<br>on cr<br>at any<br>d the canon<br>at any<br>d the cano             | are supplications as concentre un ast concentre un s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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                          | by bearing<br>its.<br>Ders for fire<br>or removed<br>to structural<br>Il extending<br>DETAIL. All<br>inches and<br>reent of the<br>ecifications<br>CI) 318-14,<br>$\overline{OSURE}_{SSES*}$<br>SC<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>CO<br>SO<br>SO<br>SO<br>CO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO<br>SO                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2.       | Ear<br>2.1.<br>2.2.<br>2.3.<br>2.4.<br>Cor<br>3.1.<br>3.2.       | B.C.<br>the Mathematical Structures of the Mathematical Structur | All other<br>Diagonal<br>proofing     Ork     a. S     b. C     c. C     c. C     a. S     b. C     c.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | le span and<br>teel beams<br>pen web ste<br>oncrete slal<br>ior spans of<br>teel beams<br>pen web ste<br>or spans of<br>teel beams<br>pen web ste<br>steel floor<br>al members<br>protection.<br>psoil, unsui<br>proposed fo<br>footing exc<br>te placemen<br>structural fil<br>undisturbed<br>shall be a n<br>re than 35 p<br>boratory del<br>ality Assurar<br>e responsib<br>mall comply<br>de Require<br><u>e mix desig</u><br>on<br><u>s</u><br><u>Slabs on Gr</u><br><u>r Walls</u><br><u>e cast oc</u><br>classes are p<br>ving, sulfate,<br>itious Mater<br>and Cemen<br>ype I or II for<br>sh (ASTM C<br>e Density (N<br>nal weight c<br>be ASTM C<br>inforcemen<br>ype I or II for<br>sh (ASTM C<br>e Density (N<br>nal weight c<br>be ASTM C<br>inforcemen<br>yea of supe<br>ium chloride<br>e Ion: Maxim<br>to za and<br>tious mater<br>or concrete<br>rete with ex<br>uidelines.<br>use of supe<br>ium chloride<br>e Ion: Maxim<br>h 28 and<br>tious mater<br>or concrete<br>rete with ex<br>mater or concrete<br>rete with ex<br>mater o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | simply supporting concellisits supporting concellisits supports supporting metaleeligists support and roof framing in vertical brace from the support of the content of framing in vertical brace from the standard from the standar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | rs supporting r<br>ed end spans of<br>crete slabs, me<br>ting concrete s<br>prete units, or r<br>upported by be<br>al decking or pu-<br>ting precast co<br>g members shall<br>d frames shall<br>be cleared of<br>bear on the un-<br>he TYPICAL C<br>anular materia<br>a No. 200 sie<br>ned by ASTM D<br>e GSN).<br>ractor to brace<br>ards specified<br>ural Concrete.<br>shall be as follor<br>frc at<br>28 days<br>(psi)<br>3000<br>4500<br>4000<br>4500<br>4000<br>500<br>500<br>500<br>500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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ma<br/>eterious<br/>drock o<br/>STRL<br/>imum s<br/>e comp<br/>shall be<br/>xcavati<br/>Concr<br/>r<br/>r<br/>ent Ag<br/>imum s<br/>e comp<br/>shall be<br/>care ex<br/>ectively.<br/>are ex<br/>ectively.<br/>are ex<br/>ectively.<br/>ent as a<br/>pounds<br/>indians in<br/>tasinch<br/>attan of<br/>attan of<br/>pounds<br/>indians in<br/>tasinch<br/>attan of<br/>attan of<br/>a</td><td>are supplications as t conc<br/>crete un<br/>s.<br/>strained.<br/>econdar<br/>aterials s<br/>aterials s<br/>aterials</td><td>borted h<br/>rete unit<br/>its.<br/>y memb<br/>hould h<br/>l prior t<br/>ctural fi<br/>L FILL I<br/>than 4<br/>95 per<br/>See Sp<br/>equired<br/>tute (Au<br/>Exp<br/>See Sp<br/>equired<br/>tute (Au<br/>Exp<br/>Sec Sp<br/>equired<br/>tute (Au<br/>Exp<br/>equired<br/>tute (Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>tute<br/>(Au<br/>Exp<br/>equired<br/>(Au<br/>Exp<br/>equired<br/>(Au<br/>Exp<br/>equir</td><td>by bearing<br/>its.<br/>Ders for fire<br/>oe removed<br/>to structural<br/>ll extending<br/>DETAIL. 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All<br>inches and<br>reent of the<br>ecifications<br>CI) 318-14,<br>OSURE<br>SES C<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO<br>CO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|      | A. C                   | 3<br>Cast-in-place Concrete: Specified Cover<br>1. Cast against and permanently exposed to earth:                                                                                                                                                                                                                                               | I              | F. [                     | 4<br>Dowels: All vertical reir<br>and to the structure ab                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | nforcing shall be doweled                                                                                              | to the foundation<br>dowel, spacing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 2<br>#6<br>#5          | <ol> <li>Formed concrete exposed to earth or weather:</li> <li>thru #18 bars</li></ol>                                                                                                                                                                                                                                                          |                | G. \                     | vertical wall reinforcing<br>Wall Openings 24" wi<br>Schedule over the top o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | unless noted otherwise.<br>de and wider: Provide n<br>of, and 2 - #5 bars, in grou                                     | einforced maso<br>uted spaces, on<br>Bars for all open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      | Sla<br>Be              | abs, Walls, Joists; #11 bars and smaller                                                                                                                                                                                                                                                                                                        |                | 1                        | 24" beyond the corners<br>floor, or roof, level abov<br>opening as possible and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | the opening. Vertical<br>ve. Where a 24" extension<br>d terminate them with a 90                                       | bars shall extern<br>is not possible<br>degree standa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 3.4. | Minin<br>A. F<br>g     | num Spacing of Reinforcement<br>For parallel reinforcing bars in a horizontal layer, clear spacing between bars shall be at least the<br>greatest of 1 inch, nominal diameter of the bars considered, and (4/3) times the nominal maximum                                                                                                       |                | H. I                     | Horizontal wall reinforc<br>columns, and pilasters.<br>wall reinforcing shall be                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ing shall be continuous t<br>Provide a key between<br>placed inside the column                                         | hrough joining o<br>the wall and the<br>vertical reinforc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      | s<br>B.F<br>s          | size of coarse aggregate in the concrete.<br>For longitudinal bars in columns, pedestals, struts and boundary elements in walls, clear spacing<br>shall be at least the greatest of 1.5 inches, 1.5 times the diameter of the bars considered and                                                                                               |                | I. 7<br>9                | Anchor bolts and heade<br>stud anchors shall have<br>with the face or top of th                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ed stud anchors shall be s<br>e 1" grout surrounding the<br>ne masonry.                                                | set in a grouted<br>e shank at its pe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2 5  | C. I                   | 4/3) times the nominal maximum size of coarse aggregate in the concrete.<br>f scheduled reinforcing cannot meet these provisions, notify structural engineer.                                                                                                                                                                                   |                | J. /<br>(<br>K.          | All masonry column ties<br>(4" minimum).<br>The exposed face of all                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | s shall terminate with 135<br>embed plates shall be se                                                                 | degree hooks p<br>t flush with the f                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 5.5. | A. F<br>k              | Provide a surface intentionally roughened to ¼" amplitude in all wall footings. A continuous<br>keyway shall not be used for concrete shear wall to footing connections, unless specifically<br>ndicated. Refer to project plans, schedules and details for the shear wall to footing connection                                                | 4.4.           | Minii<br>All<br>Reir     | mum Reinforcing:<br>masonry walls shall b<br>nfo <u>rcing shall be placed</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | pe reinforced as follows<br>in grouted cells.                                                                          | , unless showr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      | n<br>B. A<br>a<br>C. F | requirements.<br>All horizontal and vertical construction joints shall have a surface intentionally roughened to ¼"<br>amplitude. A continuous 2 X 4 keyway may be used on elements other than shear walls.<br>Provide reinforcement dowels to match the member reinforcement across the joint, unless noted                                    |                |                          | Wall Thickness<br>6"<br>8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Horizontal Reinforcing<br>#4 @ 48" o.c.<br>#5 @ 48" o.c.<br>#6 @ 48" o.c                                               | Vertical<br>#5 @<br>#5 @                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      | 0. r<br>0<br>V<br>D. S | otherwise. For dowels across construction joints and wall to footing connections of concrete shear<br>walls, refer to specific project plans, schedules, and details.<br>Slabs on grade shall have construction or control joints spaced not to exceed 30 times the slab                                                                        |                |                          | 12"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2 - #5 @ 48" o.c.                                                                                                      | #0 @<br>#6 @                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|      | tl<br>E. C<br>tl       | hickness in any direction.<br>Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more<br>han 1.25:1. Control joints shall be completed within 12 hours of concrete placement. See typical                                                                                                       | <b>5. Stru</b> | u <b>ctur</b><br>Mate    | r <b>al Steel</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      | d<br>F. C<br>a         | details for joint configuration.<br>Control joints in visually exposed walls, unless noted otherwise: (Joints shall line up with masonry<br>and architectural joints, see drawings.)                                                                                                                                                            |                | A. N<br>B. /<br>C. I     | W-Shapes: ASTM A992<br>All Other Shapes and P<br>Rectangular and Squar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2, (F <sub>y</sub> = 50 ksi), except as<br>Plates: ASTM A36 (Fy = 36<br>e Hollow Structural Sectio                     | noted otherwise<br>5 ksi), except as<br>ns (HSS): ASTN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      | 2                      | <ol> <li>vertical control joints at 10-0° on center.</li> <li>Reinforcing shall be continuous through control and construction joints, unless noted otherwise.</li> <li>Control joints in concrete foundation walls shall line up with masonry control joints.</li> </ol>                                                                       |                | D. \$                    | Steel Deck:<br>1. Galvanized Steel Sh<br>2. Ungalvanized Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | neet: ASTM A653 or A106<br>Sheet: ASTM A1008 or A                                                                      | 3, Grade 50 with<br>1039, Grade 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 3.6. | Detai<br>comp          | iling: All reinforcing, including welded wire fabric, shall be detailed, bolstered & supported to oly with ACI 315, "Details and Detailing of Concrete Reinforcement" and the Concrete Reinforcing                                                                                                                                              |                | E. I                     | High-Strength Bolts:<br>1. Group A: ASTM F31<br>2. Group B: ASTM F31<br>2. Group C: ASTM F32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 25 Grades A325 & F1852<br>25 Grades A490 & F2280                                                                       | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      | Steel<br>show<br>A. A  | I Institute (CRSI) recommendations. Reinforcing bars shall not be welded unless specifically<br>on on drawings.<br>All reinforcing shall be developed in compliance with the CONCRETE REINFORCING BAR                                                                                                                                           |                | F. I<br>G. I<br>H        | Deformed Bar Anchors<br>Headed Stud Anchors (<br>Anchor Rods: ASTM E1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (DBA): ASTM F3111<br>(DBA): ASTM A496 or AS<br>(HSA): ASTM A108, with c<br>554, Grade 36, unless po                    | STMA1064, 70 k<br>limensions com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                        | DEVELOPMENT AND LAP SPLICE SCHEDULE. As indicated in the drawings or upon approval<br>of the Engineer of Record, standard tension hooks or headed bars described by the TENSION<br>HOOK DEVELOPMENT SCHEDULE or the TENSION HEADED BAR DEVELOPMENT                                                                                              | 5.2            | Fabr                     | and ASTM F436 harder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | n shall comply with the fol                                                                                            | lowing Codes ar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      | B. A<br>c              | All mechanical splices shall have the capacity to develop at least 1.25fy of the bar in tension or compression. Type 2 couplers have the capacity to develop the full tension capacity of the bar.                                                                                                                                              | 0.2.           | A. /                     | American Institute of St<br>1. AISC 360-16, "Spec<br>2. AISC 303-16, "Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | eel Construction (AISC)<br>ification for Structural Stee<br>of Standard Practice for                                   | el Buildings"<br>Steel Buildings a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|      | s<br>"                 | splices shall have a current ICC or IAPMO code evaluation report; "Lenton" (IAPMO No. 0129),<br>Taper-Lock" (IAPMO No. 0319) or "SAS Stressteel" (ICC ESR-1163), "Bar-Lock" (ICC ESR-<br>2495) or approved equivalent may be used. Mechanical couplers on adjacent bars shall be                                                                |                |                          | a. The structural d<br>Detailing and sh<br>(including dimen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | rawings shall be used in<br>op drawing production for<br>sions) contained in arch                                      | n conjunction w<br>or structural ele<br>itectural, structu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      | C. A                   | staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars.<br>All embedded elements and dowels shall be securely tied to formwork or to adjacent reinforcing<br>prior to the placement of concrete.                                                                                                                  |                | B. I<br>I                | drawings. Refer t<br>Research Council on S<br>High-Strength Bolts," A<br>American Welding Soci                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | to the Special Instructions<br>tructural Connections (RC<br>ugust 1, 2014.<br>etv. (AWS)                               | Section of the g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|      | D. U<br>a<br>s         | Use chairs or other support devices recommended by CRSI to support and the reinforcement bars<br>and welded wire fabric prior to placing concrete. Welded wire fabric shall be continuously<br>supported at 36" o.c. maximum.                                                                                                                   |                | 0. ,                     | 1. AWS D1.1—2015: "<br>conflict with the AIS<br>2. AWS D1.8—2016: "                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Structural Welding Code -<br>C requirements)<br>Structural Welding Code                                                | – Steel" (specific<br>– Seismic Supp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|      | E. 3<br>6<br>F. 5      | and suspended slab openings, vertical wall dowels, concrete column ties and splices in vertical column reinforcing.<br>See typical details for column cross-ties. The 90-degree hooks of two successive crossties                                                                                                                               |                | D. \$                    | apply when they con<br>Steel Joist Institute (SJI<br>1. SJI 100-20, "45 <sup>th</sup> E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | nflict with the AISC require<br>)<br>dition Standard Specifica                                                         | ments)<br>tions, Load Tat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      | G. V                   | engaging the same longitudinal bars shall be alternated end for end.<br>Where required, reinforcement is to be terminated in a standard hook or headed bar anchor. Refer<br>o the TENSION HOOK DEVELOPMENT SCHEDULE, the TENSION HEADED BAR                                                                                                     |                |                          | Series, LH-Series, D<br>2. SJI 200-15, "2 <sup>nd</sup> Edi<br>Series Composite Si                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | OHL-Series, and Joist Gird<br>ition Standard Specification<br>teel Joists"                                             | ers"<br>on, Weight Table                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      | E<br>a<br>s            | DEVELOPMENT SCHEDULE and the REINFORCEMENT END HOOK SCHEDULE as appropriate. Unless otherwise noted, a standard hook or headed bar are equivalent and may be substituted at the Contractor's option.                                                                                                                                            | 5.3.           | Strue<br>splic           | ctural shapes and plate<br>ces, unless specifically n                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | s shall be fabricated from<br>noted otherwise on the stru                                                              | newly rolled (mil<br>ctural drawings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      | H. C<br>ir<br>I. A     | Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts,<br>nserts and other embedded items prior to concrete placement.<br>All reinforcement shall be bent cold, and shall be bent only once at the same location. All<br>reinforcement shall be shon bent, unless otherwise permitted by the Engineer. | 5.4.           | Welc                     | ding:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | teel erection contractor ar                                                                                            | nd steel fabricato                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 3.7. | Minin                  | num Reinforcing: Wall reinforcing shall be as follows, unless noted otherwise:                                                                                                                                                                                                                                                                  |                | , (, , , ,<br>, ,<br>, , | Agency prior to beginn<br>should be worked out b<br>will be made from the b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ing any welds. A program<br>etween the two parties be<br>eginning.                                                     | n of joint prepa<br>fore the welding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|      |                        | 6"         #4 @ 13" o.c.         #4 @ 18" o.c.           8"         #5 @ 15" o.c.         #4 @ 16" o.c.           10"         #5 @ 12" o.c.         #4 @ 13" o.c.                                                                                                                                                                               |                | B. (<br>\<br>(           | Certification of Welders<br>who have been specific<br>certification will be cons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | : All shop and field weldin<br>cally certified for the proc<br>sidered as being current u                              | ng shall be exec<br>ess of welding<br>nless the welde                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Sp   | acing s                | 12"       #4 @ 13" o.c. Each Face       #4 @ 18" o.c. Each Face         Others       0.25% of Wall Area       0.15% of Wall Area         shall exceed neither three times the wall thickness nor 18". In addition to the above reinforcing, 2                                                                                                   |                |                          | of weiding being perior<br>question a welder's abil<br>Standards. Certificatior<br>beginning work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ity as required by AWS. C<br>and appropriate record                                                                    | certification and some size the second s |
| 38   | each                   | floor level, at the roof level and at the top of wall.                                                                                                                                                                                                                                                                                          |                | C. I<br>0<br>D. I        | Electrodes: E-70 XX or<br>decks.<br>Minimum Welds: All int                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | as noted otherwise. E60 3<br>ersecting steel shapes th                                                                 | XX may be used<br>at are not bolted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3.9. | be er<br>Unles         | mbedded in concrete.<br>ss otherwise noted, all slabs on grade shall be 4" thick.                                                                                                                                                                                                                                                               |                | t<br>E                   | weld all around, unless<br>than the thinnest of the<br>less than 1/4" shall be c<br>Reinforcing Bars: Do po                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | noted otherwise. Fillet we<br>e connected parts for thic<br>of the same size as the thi<br>it weld rehar except as spe | eld sizes that are<br>knesses 1/4" an<br>nnest of the con                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Ma   | sonry                  | /                                                                                                                                                                                                                                                                                                                                               |                | с. і<br>г<br>F. І        | use only AWS standard<br>machine bolts, or heade<br>Bolts: Do not apply any                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ds. Do not substitute reint<br>ed stud anchors (HSAs).<br>v welds, including "tack" w                                  | forcing bars for velds to bolts, inc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4.1. | Mate<br>Requ<br>∧ N    | erials shall comply with the Standards specified in TMS 402-16 and TMS 602-16, "Building Code<br>uirements and Specification for Masonry Structures."<br>Materials, unless noted otherwise:                                                                                                                                                     |                | G. I<br>t                | specifically detailed in the Headed Stud Anchor (Fithe manufacturer's specifically specified and the manufacturer's specification of the m | he drawings.<br>HSA) welding and Deform<br>cifications. Welding shall (                                                | ed Bar Anchor<br>comply with AW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      | 1                      | <ol> <li>Concrete Masonry Units: ASTM C 90, Medium Weight.</li> <li>Material Strength: The Prism Test Method or the Unit Strength Method according to TMS 602-<br/>16 Section 1.4B may be used to determine the compressive strength of masonry assemblies.</li> </ol>                                                                          | 5.5.           | Bolte                    | and Annex G.<br>ed Connections:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | d ising with Oracle A (4                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                        | The contractor shall select the desired method and meet the required material strengths as follows:<br>a. Prism Test Method, TMS 602-16 Section 1.4B.3:                                                                                                                                                                                         |                | A. 1<br>(                | connections, unless no<br>simple span framing and<br>that exists when all of th                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ted otherwise. Snug tight<br>beam (or girder) to beari<br>the plies in a connection has                                | itened joints sha<br>ng plate connect<br>ave been pulled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                        | <ul> <li>b. Unit Strength Method, TMS 602-16 Section 1.4B.2:</li> <li>1) Concrete Masonry Units, minimum unit strength of 2000 psi average or better. (fm = 2000 psi)</li> </ul>                                                                                                                                                                |                | t<br>t<br>1              | the joint and all of the b<br>the nuts without the us<br>few impacts of an impac                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | olts in the joint have been<br>e of a wrench. The snug<br>ct wrench, application of a                                  | tightened suffic<br>tightened condit<br>n electric torque                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      | 3<br>4                 | <ol> <li>Mortar: Use Type "S" according to ASTM C270, proportion specification. Admixtures shall not be added to the mortar mix.</li> <li>Grout: For masonry assemblies with f'm = 2,000 psi or less conform to ASTM C476, proportion</li> </ol>                                                                                                |                | B. I                     | to slow, or the full effort<br>Provide hardened wash<br>beveled washers, to co                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | of a worker on an ordinar<br>hers beneath the turned o<br>mpensate for the lack of<br>tor than one in twenty wit       | y spud wrench.<br>element of all b<br>parallelism, whe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                        | specification. Grout that does not meet the requirements of ASTM C476 proportion specification or that is used in masonry assemblies with $f'm > 2,000$ psi shall meet the following requirements: Meet the material requirements of ASTM C476, obtain a minimum compressive                                                                    |                | t<br>t                   | Hardened washers or p<br>thick and shall conform<br>sufficient to completely                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | lates installed over oversize<br>to ASTM F436. Plates or<br>cover the slot after installa                              | zed holes or slot<br>bars installed at<br>ation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                        | <ul> <li>and a slump of 8 in. to 11 in. as determined by ASTM C143.</li> <li>a. Self-Consolidating Grout: Conform to the material requirements of ASTM C476, obtain a minimum compressive strength of fm or 2 000 psi, whichever is larger, at 28 days tested</li> </ul>                                                                        |                | C. \<br>1                | Where a steel to steel b<br>framed connection with<br>given shape for the spa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | beam connection is not de<br>the capacity to support o<br>n and for the steel specifie                                 | tailed in the drav<br>ne half of the to<br>ed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                        | according to ASTM C1019, obtain a slump flow of 24 in. to 30 in. as determined by ASTM C1611, and shall have a Visual Stability Index less than or equal to 1 as determined in accordance with ASTM C1611 Appendix X.1. Field addition of admixtures is not permitted.                                                                          | 5.6.           | D. I<br>Bear             | Bolts, nuts and washers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | s shall not be reused.                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      | 5                      | <ol> <li>Reinforcing: Grade 60 reinforcing steel shall comply with ASTM A615. Wire joint reinforcing shall comply with ASTM A951.</li> <li>Deformed Bar Anchors (DBA): All DBAs shall comply with ASTM A496.</li> </ol>                                                                                                                         | 5.7            |                          | noted otherwise, stiffene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | er plates shall be the thick                                                                                           | ness indicated in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      | 8                      | <ul> <li>Grade A, unless noted otherwise.</li> <li>Headed Stud Anchors (HSA): Manufacture all HSAs in conformance with ASTM A108 with dimensions complying with AISC specifications.</li> </ul>                                                                                                                                                 | 5.7.           | A.                       | The steel joist supplier s<br>Joists or girders with slittle load capacities, liste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | shall be responsible for the<br>opes greater than 1/2 incl<br>d in the SJI load tables, of                             | e design of all op<br>h per foot shall l<br>the joist or girde                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4.2. | Cons<br>A. N           | struction Requirements:<br>Mortar Joints: Joints shall be "concave", "V-joint" or "weathered raked" for structural members                                                                                                                                                                                                                      |                | B. (                     | plan, as if the joists or g<br>Open web joists and gi<br>L/360 for live load, whe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | irders were installed level<br>irders shall be designed v<br>re L is the joist span.                                   | vith deflection li                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|      | B. N                   | unless noted otherwise on architectural drawings.<br>Masonry walls, beams and columns shall be constructed with running bond, unless noted<br>otherwise.<br>Prouting Requirements: Comply with IRC Section 2404 and TMS 600 Section 2.5. Count shall                                                                                            |                | ל. \<br>t<br>י ח         | vvnere uplift loads due the first bottom chord pa<br>on the framing plans.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | to wind are indicated, row<br>anel points per SJI Specific                                                             | s of bottom cho<br>cations. This is in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      | U. U<br>b<br>3         | be mechanically consolidated and mechanically reconsolidated according to TMS 602 Section 3.5. Grout shall<br>be mechanically consolidated and mechanically reconsolidated according to TMS 602 Section<br>3.5 E.<br>1. Grout Pour Heights that exceed 4 feet shall meet the following requirements:                                            |                | E. (                     | bearing conditions.<br>Camber: All joists sha<br>otherwise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | all be cambered as spec                                                                                                | cified in the SJ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                        | <ul> <li>a. Provide cleanouts in the bottom course of masonry for each grout pour in accordance with TMS 602 Section 3.2 F.</li> <li>b. For grout other than Self Consolidating Grout a demonstration panel representative of the</li> </ul>                                                                                                    |                | F. I<br>G. S             | Field Modifications: Do<br>chords, without the writt<br>Shop Drawings and De                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | not modify any joist or gin<br>ten consent and direction<br>esign Calculations: Shop                                   | der, including ho<br>from the manufa<br>drawings for all                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                        | proposed wall construction and construction procedures shall be provided and approved<br>by the Architect. The demonstration panel may be a part of the completed construction as<br>approved by the Architect.                                                                                                                                 |                |                          | project shall be submitt<br>steel joist and girder ma<br>direct supervision of a F<br>submitted for rovious for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ed for review. Prior to the<br>anufacturer shall prepare of<br>Professional Engineer lice                              | rabrication of jo<br>complete joist ai<br>nsed in the Stat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      | 2                      | <ul> <li>in lifts not exceeding the Maximum Grout Pour Height in listed in TMS 602 Section 3.5C.</li> <li>When grouting, form grout keys between grout pours. Form grout keys between grout lifts when the first lift is permitted to set prior to placement of the subsequent lift.</li> </ul>                                                 |                | е<br>(<br>Н. 1           | girders with axial loads<br>calculations shall bear t<br>Stabilizer Plates: Provid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | or additional concentrate<br>he seal of a Professional<br>le steel joist and joist girde                               | d loads (as orec<br>Engineer license<br>er stabilizer plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

- a. Form a grout key by terminating the grout a minimum of 1.1/2 in. below a mortar joint. b. Do not form grout keys within beams. c. At beams or lintels laid with closed bottom units, terminate the grout pour at the bottom of the beam or lintel without forming a grout key.
- D. Reinforcing Bars shall not be welded unless specifically shown on drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for DBAs or HSAs. E. Control Joints: Spacing shall not exceed 40'-0" or 2.5 times the wall height, whichever is less.
- Joints shall not be located over masonry openings, and shall be a minimum of the schedule masonry column width away from masonry openings. See architectural drawings for locations. F. Grout all beam and joist pockets solid after installation of beams and joists.
- 4.3. Detailing Requirements:
- A. Standards: Reinforcing detailing shall comply with American Concrete Institute (ACI) Standard 315, "Details and Detailing of Concrete Reinforcement." B. Reinforcement Protection (cover):
- 1. Joint reinforcement shall have not less than 5/8" mortar coverage from the exposed face. 2. Other reinforcement shall have a minimum coverage of one bar diameter over all the bars, but not less than 3/4". When masonry is exposed to soil, minimum coverage shall be 1.5". C. Vertical steel reinforcement shall be placed and secured against displacement prior to grouting by wire positioners or other suitable devices: at intervals not exceeding the least dimension of the grout lift height, or bar splice locations, or 64". Vertical reinforcing shall be located at the center of the wall, unless noted otherwise.
- D. Lap Splice Lengths: Lap all masonry reinforcing bars per the "Masonry Reinforcing Bar Lap Splice Schedule." Joint reinforcement shall lap a minimum of 6". E. Corner Bars: Horizontal reinforcement shall be continuous at all corners and at intersecting walls. Provide corner bars with the required lap splice length.

in accordance with IBC Section 2207.5.

Contractor

## veled to the foundation wall, footing (structure below) size dowel, spacing (and in the same core) as the

vide reinforced masonry lintels per Masonry Lintel n grouted spaces, on all sides and adjacent to every ise. Bars for all openings shall extend a minimum of ertical bars shall extend from floor level below to the ension is not possible, extend bars as far beyond the h a 90 degree standard ACI hook. ious through joining concrete walls, masonry walls, veen the wall and the column or pilaster. Horizontal olumn vertical reinforcing. Il be set in a grouted cell. Anchor bolts and headed ng the shank at its penetration. Grout shall be flush

h 135 degree hooks plus a 6 bar diameter extension be set flush with the face of masonry wall or column.

pllows, unless shown otherwise on the drawings.

| ing | Vertical Reinforcing  |
|-----|-----------------------|
|     | <b>#5 @ 32</b> " o.c. |
|     | <b>#5 @ 32</b> " o.c. |
|     | <b>#6 @ 32</b> " o.c. |
|     | <b>#6 @ 32</b> " o.c. |

## pt as noted otherwise y = 36 ksi), except as noted otherwise

Sections (HSS): ASTM A500, Grade C (Fy = 50 ksi) A1063, Grade 50 with G60 galvanized coating. 3 or A1039, Grade 50

## F1852 F2280

or ASTMA1064, 70 ksi minimum yield strength. with dimensions complying with AISC specifications ess noted otherwise, with ASTM A563 heavy hex nuts

he following Codes and Standards:

## I Steel Buildings"

e for Steel Buildings and Bridges" sed in conjunction with the architectural drawings. tion for structural elements will require information architectural, structural, and/or other consultants' ctions section of the general notes, below. ns (RCSC), "Specification for Structural Joints Using

Code – Steel" (specific items do not apply when they Code – Seismic Supplement" (specific items do not equirements)

ecifications, Load Tables and Weight Tables for Kification, Weight Tables and Bridging Tables for CJ-

from newly rolled (milled) one-piece sections without e structural drawings. Connections for structural steel s written approval is given by the Structural Engineer.

ctor and steel fabricator contact the Quality Assurance rogram of joint preparation and welding procedures es before the welding is started so that correct welds

welding shall be executed by AWS certified welders e process of welding being performed. The welder's rent unless the welder is not engaged in the process ceeding six months or there is a specific reason to WS. Certification and records must comply with AWS records must be provided to the Architect prior to

E60 XX may be used for welding steel floor and roof bes that are not bolted shall be connected by a fillet llet weld sizes that are not shown shall be 1/16" less or thicknesses 1/4" and larger. Fillet welds on plates he thinnest of the connected parts. as specifically detailed in the drawings. In such cases,

e reinforcing bars for deformed bar anchors (DBAs), ack" welds to bolts, including anchor bolts, except as

eformed Bar Anchor (DBA) welding shall conform to shall comply with AWS D1.1 Section 7.6 through 7.9

A (threads not excluded) bolts for steel to steel tightened joints shall be used in connections for bearing plate connections. Snug tight is the condition tion have been pulled into firm contact by the bolts in been tightened sufficiently to prevent the removal of snug tightened condition is typically achieved with a n of an electric torque wrench until the wrench begins

rned element of all bolts or nuts. Provide hardened ck of parallelism, where the outer face of the bolted ity with respect to the plane normal to the bolt axis. oversized holes or slotted holes shall be at least 5/16" tes or bars installed at slotted holes shall have a size nstallation not detailed in the drawings, provide a standard AISC

port one half of the total uniform load capacity of the

ich side of all beams above all bearing points. Unless thickness indicated in the typical stiffener plate detail.

for the design of all open web steel joists and girders. /2 inch per foot shall be designed to meet or exceed les, of the joist or girder sizes indicated on the framing

ned with deflection limits of L/240 for total load and d, rows of bottom chord bridging shall be provided at pecifications. This is in addition to the bridging shown

ate slopes from sloped joists, sloped girders or sloped

specified in the SJI specifications, unless noted

or girder, including holes through the top and bottom ction from the manufacturer. Shop drawings for all joists and girders used in the

to the fabrication of joists and girders, the open web pare complete joist and girder calculations under the er licensed in the State of Utah. Calculations shall be designated as SPECIAL or SP and for all joists or ntrated loads (as noted on the drawings). Submitted ional Engineer licensed in the State of Utah.

t girder stabilizer plates as indicated. Stabilizer plates shall be 6" x 6" with a 13/16" diameter hole with 1.1/2" minimum edge distance, and shall extend 3" minimum below the bottom chord of the joist or girder. Plate thickness shall be equal to the chord gap minus 1/4", or 3/4", whichever is less. I. Verify size, weight, location and configuration of all roof top equipment with Architect and

mechanical Engineer. Provide steel frames for support of roof top equipment as indicated on structural details in the structural drawings. Coordinate openings with the Mechanical and General

J. All concentrated loads greater than 100 pounds supported by open web steel joists and girders shall be located within 6 inches of joist or girder panel points or the joist or girder shall be reinforced with an additional web member. Refer to the "TYPICAL DETAIL AT ADDITIONAL CONCENTRATED POINT LOAD" in the structural drawings.

K. Concentrated point loads, single or multiple, totaling 100 pounds or less can be located at any point along the top or bottom chord of an open web steel joist or girder between adjacent panel points without meeting the requirements above. A limit of four concentrated 100# maximum point loads per joist or girder will be permitted on spans of 12' or greater, one concentrated 100# max. load on spans less than 12', unless specifically noted otherwise on the structural drawings. L. Joist bridging shall never be used to support hanging loads.

M. Bracing of miscellaneous items (mechanical, electrical, plumbing, etc.) to the bottom chord of joists or girders will not be allowed in any instance. All lateral braces must connect to the top flange/top chord of the framing member above unless noted otherwise on the structural drawings. N. A certificate of compliance must be submitted to the building official upon completion of fabrication

## 6. Cold-Formed Steel

## 6.1. Material:

- A. Studs: 1. Base metal thickness of less than 54 mil: ASTM A1003 or A653, Fy = 33 ksi. 2. Base metal thickness of 54 mil or greater: ASTM A1003 or A653, Fy = 50 ksi.
- B. Track, Connection Clips, and Miscellaneous Shapes: 1. Base metal thickness of less than 54 mil: A1003 or A653, Fy = 33 ksi.
- 2. Base metal thickness of 54 mil or greater: A1003 or A653, Fy = 50 ksi
- 6.2. Design, fabrication and construction shall comply with the following Codes and Standards from the American Iron and Steel Institute (AISI): A. AISI S100-16(2020) w/s2-20: "North American Specification for the Design of Cold-Formed Steel Structural Members" 2016 Edition (Reaffirmed 2020), with Supplement 2, 2020 Edition
- B. AISI S202-20: "Code of Standard Practice for Cold-formed Steel Framing," 2020 C. AISI S220-20, "North American Standard for Cold-Formed Steel Nonstructural Framing," 2020
- D. AISI S240-20: "North American Standard for Cold-Formed Steel Structural Framing," 2020 E. AISI S400-20: "North American Standard for Seismic Design of Cold-formed Steel Structural Systems," 2020
- 6.3. Non-Load-Bearing Exterior Cold-Formed Steel Framing: A. All non-load bearing exterior cold-formed steel (and/or) joist framing members along with all
  - runner, bridging, and end track shall be of the designation shown on the plans, schedules, and details. The framing member designators used in the plans, schedules, and details follow the convention established by the Steel Stud Manufacturers' Association (SSMA) and the North American Steel Framing Alliance (NASFA). Framing members provided shall comply with the designations according to this convention. See Steel Stud Manufacturers Association-Nomenclature for an explanation of the stud or track designations.
- B. All components shall be galvanized. C. Where not noted in the drawings, all framing members shall have a base metal thickness of 33 mil or greater. D. All jamb, header, and sill components shall be continuous without splices unless noted otherwise.
- Jambs shall extend continuous from floor to floor, roof, or wind girt. Web punchouts in header stud members shall not be located within 12 inches of the support. F. Fasteners for steel stud construction shall be self-drilling and self-tapping meeting ASTM C1513.
- Screw-type fasteners shall penetrate the joined materials with a minimum of three threads exposed. Furnish, install, and tighten screws per the manufacturer's recommendations and per the sizes indicated in the details. The minimum screw-type fastener size shall be #10 for any connection, unless noted otherwise, or the manufacturers' minimum recommended size for framing clips and bridging. Screws shall have a center-to-center spacing of at least 3 times the nominal diameter of the screw unless noted otherwise. Screws shall have center-of-screw to edge-of-steel dimensions of at least 1.5 times the nominal diameter of the screw unless noted otherwise.
- G. See the Typical Steel Stud Wall Bridging Detail for wall stud bridging requirements. Proprietary bridging systems may be used upon submission, review, and approval by the Architect/Engineer. Cold-rolled channel (or steel angle) bridging shall not be used without suitable full-depth angle clips fastened to the studs and channel or angle to prevent stud roll-over.
- H. Wall to floor or roof connections shall use deflection tracks or steel clips designed to accommodate vertical deflection of the floor or roof structure. See specific details for further information. Vertical deflection assemblies shall accommodate 3/4" min of vertical deflection unless noted otherwise. Do not attach screws through sheathing into top track of deflection assembly. Top screw through sheathing shall be 1" below track.
- Connection clips as specified in the schedules and details use The Steel Network (TSN) products as the basis of design. Other manufacturer's connection clips, must be submitted for review and approved by the Architect/Engineer prior to use, and shall clearly indicate all ICC/IAPMO code reports, load capacities and engineering associated with their use. Follow all manufacturers' recommendations for the use of these products. Follow required screw patterns as required by the manufacturer based on the number of screws indicated.
- Proprietary headers, jamb studs, and other miscellaneous framing may be substituted for framing as shown in the NON-LOAD-BEARING EXTERIOR STEEL STUD FRAMING SCHEDULE but must be submitted to the Engineer & reviewed prior to ordering material or fabricating & installing such components. Submittals for substitution of such components must clearly state what is being substituted and show equivalence to the components being replaced.

# 6.4. Welding:

- A. The steel stud contractor shall contact the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning. B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders who have been specifically certified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the Architect prior to beginning work.
- C. Unless noted otherwise, all welded connections shall be done using 1/8" AWS type 6013 or 7014 rod with a welding heat of 60-110 amperes depending on the gauge of material and the fit of the parts. Wire tying of framing components shall not be permitted. Welds and damaged coatings on studs shall be repaired with zinc galvanizing repair paint.
- 6.5. Submittals with Prefabricated Systems or systems intended to replace conventional framing herein shall have complete shop drawings and calculations of all elements for review and bear the stamp of a Professional Engineer registered in the State of Utah.

## 7. Miscellaneous

- 7.1. Post-Installed Anchors in Concrete and Masonry A. Anchorage to hardened concrete and grout-filled masonry shall include all mechanical and
- adhesive anchors and epoxy doweled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings. Additional anchors shall not be used without approval from the Engineer prior to installation.
- B. Special inspection is required during the installation of all post-installed anchors. Refer to applicable code evaluation reports and the Quality Assurance and Statement of Special Inspections sections of the General Structural Notes. C. Anchorage to Concrete:
- 1. All post-installed anchors into hardened concrete shall be selected from the following preapproved products, unless noted otherwise: Steel Screw Anchor Evaluation Report

| Hilti Kwik HU     | JS-EZ       | ICC ESR-3027      |
|-------------------|-------------|-------------------|
| DeWalt Screv      | v-Bolt+     | ICC ESR-3889      |
| Simpson Tite      | en HD       | ICC ESR-2713      |
| Steel Expansion/W | edge Anchor | Evaluation Report |
| Hilti Kwik Bo     | lt TZ2      | ICC ESR-4266      |
| DeWalt Power-S    | tud+ SD2    | ICC ESR-2502      |
| Simpson Stron     | g-Bolt 2    | ICC ESR-3037      |
| Adhesive Ancho    | or System   | Evaluation Report |
| Hilti HIT-HY      | 200         | ICC ESR-3187      |
| Hilti HIT-RE 5    | 500 V3      | ICC ESR-3814      |
| DeWalt AC         | 200+        | ICC ESR-4027      |
| DeWalt Pure       | 110+        | ICC ESR-3298      |
| Simpson SE        | T-3G        | ICC ESR-4057      |

- 2. Adhesive anchors shall be installed into concrete having a minimum age of 21 days. For installations sooner than 21 days, consult the adhesive manufacturer. D. Anchorage to Masonry: 1. All post-installed anchors into grout-filled masonry shall be selected from the following pre-
- approved products, unless noted otherwise: Evolution Por Ctool Corous Anohor

| Evaluation Report |
|-------------------|
| ICC ESR-3056      |
| ICC ESR-4042      |
| ICC ESR-1056      |
| Evaluation Report |
| ICC ESR-4561      |
| ICC ESR-2966      |
| ICC ESR-1396      |
| Evaluation Report |
| ICC ESR-4143      |
| ICC ESR-3200      |
|                   |

- E. Alternate anchors or adhesives are permitted with approval of the Engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor is equivalent to or exceeds the capacity of the specified anchor. F. Installation of adhesive anchors horizontally or upwardly inclined to support sustained tension
- loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall be submitted to the Engineer for approval prior to commencement of installation.
- G. Anchors shall be installed according to the Manufacturer's Printed Installation Instructions and applicable code evaluation reports including: 1. Hole diameter, depth, and cleaning procedure
- 2. Adhesive mixing, preparation, and placement 3. Installation torque
- H. Locate all existing reinforcement and embedded items prior to drilling into concrete or masonry elements. Do not damage rebar or embeds while drilling or installing anchors. Grout all defective or abandoned holes with non-shrink grout or an injectable epoxy adhesive matching the surrounding concrete compressive strength. Consult the Architect for additional
- requirements at architecturally exposed concrete. J. Carbon steel anchors are limited to use in dry, interior locations.
- K. Holes for post-installed anchors may not be core drilled unless specifically allowed by the manufacturer's installation instructions and the code evaluation report.

# 8. Special Instructions

- 8.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical
- 8.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the Owner. Any work done by the Contractor after discovery of such discrepancy shall be done at the Contractor's risk.

![](_page_54_Figure_86.jpeg)

- 8.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.
- 8.4. Shoring and Bracing Requirements:
  A. Floor and Roof Structures -- The General Contractor is responsible for the method and sequence of all structural erection. The Contractor shall provide temporary shoring and bracing as the method of erection requires to provide adequate vertical and lateral support. Shoring and bracing shall remain in place as the chosen method requires until all permanent members are in place and all final connections are completed, including all roof and floor attachments. The building shall not be considered stable until all connections are complete.
- B. Foundation walls must be braced until the complete floor or roof systems is completed. Do not backfill until floor or roof systems are in place.C. Walls above grade shall be braced until the structural system is complete. Walls shall not be considered to be self-supporting.
- 8.5. All expansion joints (E.J.) shown in the structural drawings shall be considered seismic separation joints, unless noted otherwise. The width dimensioned shall be provided with a tolerance of (+1"/-0") regardless of the tolerances stated in material reference standards.
- 8.6. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the Contractor of the responsibility of completing the project according to the contract documents. The General Contractor shall review and mark all shop drawings prior to submitting them to the Architect ft
- 8.7. Project Coordination: It shall be the responsibility of the General Contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the General Contractor and shall be coordinated with the Architect/Engineers. The order of construction is the responsibility of the General Contractor. It is the Contractor's obligation to provide all items necessary for the chosen procedure.
- 8.8. Contractor shall field verify all dimensions, and conditions. If the contract drawings do not represent actual conditions, Contractor shall notify Architect/Engineer prior to fabrication or construction within that area.
- 8.9. Notice of Copyright: The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers. Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers' reserved rights. The documents defining the structure are instruments of service prepared by Reaveley Engineers for one use only. Furthermore, these documents shall not be reproduced, or copied, in whole or in part by the Contractor or subcontractors for preparation of shop drawings or other submittals.

# 9. Quality Assurance

- 9.1. Quality Assurance Agency Requirements:
- A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements.
  1. The QAA shall be objective, competent and independent from the Contractor responsible for the work being inspected. The agency shall disclose to the building official and the registered design professional in responsible charge possible conflicts of interest so that objectivity can be confirmed.
- The QAA shall have adequate equipment to perform required tests. The equipment shall be periodically calibrated.
   The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and special inspections. Experience or training shall be considered relevant
- where the documented experience or training is related in complexity to the same type of special inspection or testing activities for projects of similar complexity and material qualities.
  4. The QAA shall send copies of all inspection and testing reports to the building official, Owner, Architect, Engineer and Contractor. Reports shall indicate that the work inspected was or was not completed in conformance to the approved construction documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If they are not corrected,
- the discrepancies shall be brought to the attention of the, Architect and Engineer.
   The QAA shall submit a final report documenting required special inspections and tests, and correction of any discrepancies noted in the inspections or tests. The final report shall be distributed to the building official, Owner, Architect and Engineer in a timely manner prior to the completion of the project.

# 9.2. Contractor Responsibilities:

- A. The Contractor shall submit a written statement of responsibility to the building official and the Owner or the owner's authorized agent prior to the commencement of work on the systems or components listed in the statement of special inspections. The Contractor's statement of responsibility shall contain acknowledgement or awareness of the special requirements contained in the statement of special inspections.
  B. Notification of QAA: The Contractor shall notify the QAA in a timely manner so that inspection
- and testing may be performed as outlined in the statement of special inspections. 9.3. Structural Observations by the Engineer of Record.
- A. The Engineer of Record will perform structural observations at critical phases of the project as listed below. Observations will be made on a periodic basis throughout the construction of the structural system. During this timeframe, site visits will be made approximately every two weeks. Copies of the Engineer's report will be distributed to the Architect, Contractor, Owner, and QAA.
  B. The contractor shall notify the Structural Engineer at least 24 hours in advance before any of the following actions.
- 1. Placing concrete in any footing or pier.
- Closing any wall forms.
   Grouting any masonry.
- 4. Completing the structural steel framing.
- 5. Completing the welding of major sections of steel decking.C. Observation visits to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.

## **10. Statement of Special Inspections**

- 10.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC).
- 10.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task. Frequency marked with (E) designates periodic inspections that must be performed prior to or upon completion of every task.

Steel Roof Decks per IBC Section 1705.2.2 and SDI QA/QC - 2017

| ltem                                                          | Frequency          | Detailed Instructions                                                                                                                                                                                                  |
|---------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                               |                    |                                                                                                                                                                                                                        |
| Steel Roof Decks Prior to Placement (                         | IBC 1705.2.2 and I | Table 1.1, SDI QA/QC 2017):                                                                                                                                                                                            |
| Materials                                                     | Periodic (E)       | Verify compliance of deck and all deck<br>accessories with approved construction<br>documents, including profiles, material<br>properties, and base metal thickness.                                                   |
| Documentation                                                 | Periodic (E)       | Document acceptance or rejection of deck and deck accessories                                                                                                                                                          |
| Steel Roof Decks After Placement (IB                          | C 1705.2.2 and Tat | ple 1.2, SDI QA/QC 2017):                                                                                                                                                                                              |
| Compliance with construction documents                        | Periodic (E)       | Verify compliance of deck and all deck<br>accessories installation with construction<br>documents. Verify deck materials are<br>represented by the mill certifications that comply<br>with the construction documents. |
| Document acceptance or rejection of deck and deck accessories | Periodic (E)       |                                                                                                                                                                                                                        |
| Steel Roof Decks Prior to Welding (IB                         | C 1705.2.2 and Tal | ple 1.3, SDI QA/QC 2017):                                                                                                                                                                                              |
| Welding procedure specifications<br>available                 | Periodic           | Verify that WPS is available.                                                                                                                                                                                          |
| Certifications of welding consumables                         | Periodic           | Verify that manufacturer certifications for welding consumables are available.                                                                                                                                         |
| Material identification                                       | Periodic           | Verify type and grade of materials to be welded                                                                                                                                                                        |
| Welding equipment                                             | Periodic           |                                                                                                                                                                                                                        |
| Steel Roof Decks During Welding (IBC                          | ; 1705.2.2 and Tab | le 1.4, SDI QA/QC 2017):                                                                                                                                                                                               |
| Use of qualified welders                                      | Periodic           | Verify that welders are appropriately qualified.                                                                                                                                                                       |
| Control and handling of welding consumables                   | Periodic           | Verify packaging and exposure control.                                                                                                                                                                                 |
| Environmental conditions                                      | Periodic           | Verify wind speed is within limits as well as precipitation and temperature.                                                                                                                                           |
| WPS followed                                                  | Periodic           | Verify items such as settings on welding<br>equipment, travel speed, welding materials,<br>shielding gas type/flow rate, preheat applied,<br>interpass temperature maintained, and proper<br>position.                 |
| Steel Roof Decks After Welding (IBC 1                         | 1705.2.2 and Table | 1.5, SDI QA/QC 2017):                                                                                                                                                                                                  |
| Size, length, and location of welds                           | Periodic           | Verify size and location of welds, including support, sidelap, and perimeter welds.                                                                                                                                    |
| Welds meet visual acceptance criteria                         | Periodic (E)       | Verify weld meets visual acceptance criteria<br>based upon weld/base-metal fusion, weld<br>profiles, weld size, undercut, and porosity.                                                                                |
| Repair activities                                             | Periodic (E)       | Verify that repair activities are acceptable.                                                                                                                                                                          |
| Document acceptance or rejection of welds                     | Periodic (E)       |                                                                                                                                                                                                                        |
| Steel Roof and Floor Decks Prior to M                         | echanical Fastenin | g (IBC 1705.2.2 and Table 1.6, SDI QA/QC 2017):                                                                                                                                                                        |

## Item Pre-installation verification

# Steel Roof Decks During Mechanica Fastener Placement

Steel Roof Decks After Mechanical Spacing, type and installation of fasteners

Repair activities
Document acceptance or rejection of

Open-web Steel Joists and Joist Gi

Item End connections – welded or bolted

Bridging – horizontal or diagonal

Item Reinforcing steel

**Concrete Construction per IBC Sec** 

Welding of reinforcing steel

Cast-in bolts & embeds

Post-installed adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads Post-installed mechanical anchors and adhesive anchors not defined above Use of required mix design

Concrete sampling for strength tests, slump, air content, and

temperature

Concrete placement

Curing temperature and techniques

In-situ strength verification

Formwork

Reinforcement in special moment frames, special structural walls, and all components of special structural walls including coupling beams and wall piers

Welding of Reinforcing Steel (IBC 7 Verification of weldability

Other reinforcing steel Single-pass fillet welds, 5/16" max All other welds

Masonry Construction per IBC Sect

Prior to Construction (Table 3, TMS Review material certificates, mix designs, test results and construction procedures

Verify f'm prior to construction

As Masonry Construction Begins ( Proportions of site-prepared mortar

Reinforcement, connectors, and anchorages

Sample panel

|           |                       |                                                                                                      |                                                                   |                     | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |                       |                                                                                                      | Construction of mortor igints                                     | Doriodio            | Vorify that marter joints comply with                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|           | Frequency<br>Periodic | Detailed Instructions           Verify manufacturer installation instructions are                    | Construction of mortar joints                                     | Periodic            | B of TMS-602/ACI 530.1-13.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|           |                       | available for mechanical fasteners as well as the proper tools and storage for the fasteners.        | specimens, mortar specimens                                       | Periodic            | three prisms shall be constructed in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| al I      | Fastening (IBC 170    | 05.2.2 and Table 1.7, SDI QA/QC 2017):                                                               | and/or prisms shall be observed                                   |                     | accordance with ASTM C1314. If the strength method is selected the con                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|           | Periodic              | and installed in accordance with the                                                                 |                                                                   |                     | ASTM C1019 (not required if grout of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Fa        | stening (IBC 1705.    | 2.2 and Table 1.8, SDI QA/QC 2017):                                                                  |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Periodic (E)          | Verify the spacing, type and installation of support, sidelap and perimeter fasteners.               | Prior to Grouting (Table 4, TMS-60<br>Grout space                 | 02-16):<br>Periodic | Verify that grout space is free of mo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|           | Periodic (E)          | Verify that repair activities are acceptable.                                                        |                                                                   |                     | droppings, debris, loose aggregate, deleterious materials and that clean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| of        | Periodic (E)          |                                                                                                      |                                                                   |                     | provided per Article 3.2 D and 3.2 F 602-16.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| rde       | ers per IBC 1705.2    | 2.3                                                                                                  | Grade, type, and size of reinforcement and anchor bolts           | Periodic            | Verify that reinforcement, joint reinfo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|           | Frequency             | Detailed Instructions                                                                                |                                                                   |                     | comply with the approved construct                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| k         | Periodic              | Visual inspection to confirm that end connections conform to the approved                            | Discoment of reinforcement and                                    | Doriodio            | 530-13.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| _         | Periodic              | Construction documents.           Visual inspection to confirm that bridging is                      | connectors and anchor bolts                                       | Periodic            | wall ties, anchor bolts and veneer a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|           |                       | provided per the approved construction documents.                                                    |                                                                   |                     | construction documents and Articles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| tio       | ns 1705.3 & 1705.     | .12                                                                                                  | Proportions of site-prepared grout                                | Periodic            | 3.4 of TMS-602-16.<br>Verify that grout is proportioned per                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|           | Frequency             | Detailed Instructions                                                                                |                                                                   |                     | 476 and has a slump between 8-11<br>Self-consolidated grout shall not be                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|           | Periodic              | Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is   |                                                                   |                     | proportioned onsite. (see Articles 2.<br>G.1.b of TMS-602-16.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|           |                       | free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties,         | Placement of masonry units and<br>construction of mortar joints   | Periodic            | Verify that face shells and head join mortared and that vertical cells are a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|           |                       | stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and          | ,                                                                 |                     | unobstructed openings for grout are<br>All units are to be clean and placed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|           |                       | offsets are provided; that minimum clear spacing between bars at lap splices are                     |                                                                   |                     | mortar is soft and plastic. Verify that ioints are placed in accordance with                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|           |                       | maintained; and that all mechanical<br>connections are installed per the                             |                                                                   |                     | B of TMS 602/ACI 530.1-13.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|           |                       | manufacturer's instructions and/or evaluation report.                                                | During Masonry Construction (Tak                                  | ole 4, TMS-602-16): |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Periodic              | Visually inspect all welds and also verify weldability of reinforcing steel based upon               | Materials and procedures                                          | Periodic            | Ensure that materials and procedure<br>to the approved construction docum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|           |                       | carbon equivalent and in accordance with AWS                                                         | Placement of masonry units and                                    | Periodic            | Article 1.5 of TMS-602-16.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|           | Periodic              | Inspection of anchors or embeds cast in                                                              | mortar joint construction                                         |                     | and that mortar joint construction co<br>Article 3.3 B of TMS-602-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|           |                       | concrete is required when allowable loads have<br>been increased or where strength design is         | Size and location of structural                                   | Periodic            | Verify the locations of structural elements to the approximation of the second structural elements of the second structural structurad structural structur |
| _         | Continuous            | All post-installed anchors/dowels shall be                                                           | elements                                                          |                     | tolerances meet the requirements o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|           |                       | specially inspected as required by the<br>approved ICC-ES report. Horizontally or                    | Type, size, and location of                                       | Periodic            | Verify that correct anchorages and o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| _         | Periodic              | upwardly inclined anchors that resist sustained tension loads require continuous inspection          | anchors, including other details of<br>anchorage of masonry to    |                     | are provided per the approved plans<br>Sections 1.2.1, 6.2.1 and 6.3.1 of TI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|           | 1 chould              | and approved installers.                                                                             | structural members, frames, or other construction.                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Periodic              | Verify that all mixes used comply with the                                                           | Welding of reinforcement                                          | Continuous          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | approved construction documents; ACI 318:<br>Ch. 19, 26.4.3-26.4.4; and IBC 1904.1, 1908.2,          | Preparation, construction, and protection of masonry during cold  | Periodic            | Verify that cold-weather construction<br>performed in accordance with Article                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|           | Continuous            | 1908.3.<br>Samples for strength tests shall be taken in                                              | weather (<40°F) or hot weather (>90°F).                           |                     | TMS-602-16 and hot weather const<br>Article 1.8 D of TMS-602-16.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|           |                       | accordance with ASTM C172, cured per ASTM C31 and tested in accordance with ASTM C39                 | Placement of grout is in<br>compliance                            | Continuous          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | by a testing agency complying with ASTM C1077, Acceptance criteria for strength tests                | Observation of grout specimens,                                   | Periodic            | Confirm that specimens/prisms are                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|           |                       | shall be per ACI 318 Section 26.12.3. For each mix placed, samples shall be taken not less           | Self-consolidating grout                                          | Continuous          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | than once a day, nor less than once for each 150 vd <sup>3</sup> of concrete, nor less than once for | Minimum Testing:                                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | each 5000 ft <sup>2</sup> of surface area for slabs or walls.                                        | Verification of Slump Flow and                                    | Periodic            | Compressive strength tests should                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|           |                       | fabricate specimens for strength tests, perform                                                      | self-consolidating grout                                          | De la lla           | for slump flow and ASTM C 1611 fo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|           | Continuouo            | temperature of the concrete.                                                                         |                                                                   | Periodic            | wythe by the "unit strength method"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|           | Fraguanau             | Detailed Instructions                                                                                |                                                                   |                     | of TMS 602-16 prior to construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ;         | Periodic              | Verify that the ambient temperature for                                                              |                                                                   |                     | every 5,000ft <sup>2</sup> of construction.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|           |                       | concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete         | Verification of proportions of<br>materials in premixed or pre-   | Periodic            | Verify that proportions for mortar me<br>270 and proportions for grout meet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|           |                       | shall be kept at > 50°F for at least 3 days.<br>Accelerated curing methods may be used (see          | blended mortar and grout<br>Post-installed anchors or dowels      |                     | 476.<br>All post-installed anchors/dowels sh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|           |                       | ACI 318: 26.4.7-26.4.9). The ambient temperature for shotcrete shall be > 40°F for                   |                                                                   |                     | specially inspected as required by the approved ICC-ES report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|           |                       | the same period of time as noted for concrete.<br>Shotcrete shall be kept continuously moist for     | Soils per IBC Section 1705 6                                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and      | Item                                                              | Frequency           | Detailed Instructions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|           |                       | ground shall be free from frost. In hot weather conditions ensure that appropriate measures          | Verify subgrade is adequate to<br>achieve design bearing capacity | Periodic            | Prior to placement of concrete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not       | Verify excavations extend to prope<br>depth and material          | er Periodic         | Prior to placement of compacted fill or o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| +         | Periodic              | exceeded.<br>Verify that adequate strength has been                                                  | Verify that subgrade has been                                     | Periodic            | Prior to placement of compacted fill.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|           |                       | achieved prior to the removal of shores and forms or the stressing of post-tensioned                 | placing compacted fill                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Periodic              | tendons.                                                                                             | Perform classification and testing compacted fill materials       | ot Periodic         | All materials shall be checked at each li<br>classifications and gradations not less t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|           |                       | conform to the shapes, lines, and dimensions                                                         | Verify proper materials, densities a                              | and Continuous      | tor each 10,000ft <sup>2</sup> of surface area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Continue              | construction documents.                                                                              | lift thicknesses during placement a compaction.                   | Ind                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| k         | Continuous            | in these areas complies with ACI 318: 20.2.2.5                                                       | Aggregate Piers                                                   | Continuous          | Confirm installation meets design requi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| I         |                       | reinforcing steel is to be welded chemical tests                                                     |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | D1.4.                                                                                                |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Tab       | Deriodic              | Verify weldability of reinforcing steel other than                                                   |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | A706 based upon carbon equivalent and in accordance with AWS D1 4. Continuous                        |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | inspection is required for welding of reinforcing                                                    |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | moment frames, boundary elements of special structural walls or shear reinforcement                  |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Periodic              | Visually inspect all welds in accordance with                                                        |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| -         | Periodic              | AVVS D'1.4.                                                                                          |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Continuous            |                                                                                                      |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| -         |                       |                                                                                                      |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| tioi<br>F | n 1705.4<br>Frequency | Detailed Instructions                                                                                |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| -<br>     | 02-16)·               |                                                                                                      |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 00<br>F   | Periodic              | Verify that materials conform to the approved                                                        |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | construction documents. Mix design, test results, material certificates, and construction            |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | procedures should be submitted to inspector<br>for review. Mortar mix designs shall conform to       |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | ASTM C 270 while grout shall conform to ASTM C 476. Material certificates shall be                   |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | provided for reinforcement; anchors, ties, fasteners, and metal accessories; masonry                 |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           |                       | units; mortar and grout materials. Construction procedures for cold-weather or hot-weather           |                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|   |                      | construction shall be reviewed.                                                                                                                                                                                 |
|---|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | Periodic             | Determine the compressive strength for each<br>wythe by the "unit strength method" or by the<br>"prism test method" as specified in Section<br>1.4B of ACI 530.1-13 prior to construction.                      |
| Γ | able 4, TMS-602-16): |                                                                                                                                                                                                                 |
|   | Periodic             | Verify that mortar is of the type and color<br>specified on the construction documents, that it<br>conforms to ASTM C 270, and that it is mixed<br>in accordance with Article 2.6 A of TMS-602-<br>16.          |
|   | Periodic             | Verify that reinforcement, connectors, and<br>anchorages are of the proper grade, type and<br>size in accordance with Article 3.4 of TMS-602-<br>16. Prestressing tendons shall be placed per<br>Article 3.6 A. |
|   | Periodic             | Verify that sample panels are properly<br>constructed and that subsequent work<br>conforms per Article 1.6 D of TMS-602-16. (If<br>Risk Category IV this should be performed on a                               |

continuous basis.)

![](_page_55_Picture_56.jpeg)

![](_page_56_Figure_1.jpeg)

4

|                                    |                                                        | PLAN LEGEND                          |        |
|------------------------------------|--------------------------------------------------------|--------------------------------------|--------|
| တ— FOOTI                           | ING STEP                                               | CONCRETE WALL                        |        |
|                                    | ING - CONTINUOUS                                       | CONCRETE WALL - RECESSED (FDTN PLAN) |        |
|                                    | ING - THICKENED SLAB                                   | CONCRETE LINTEL (FRAMING PLAN)       |        |
| 「 ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ FOOTI<br>│ | ING - SQUARE FOOTING -<br>ANGULAR FOOTING - MAT<br>ING | CONCRETE PIER IN CONCRETE WALL.      |        |
| 0" CHAN                            | GE IN ELEVATION                                        | CONCRETE COLUMN                      |        |
|                                    |                                                        | MASONRY WALL                         | 4 -    |
|                                    | BLOCK-OUT AT COLUMN                                    | MASONRY LINTEL                       |        |
| Ť                                  |                                                        | MASONRY COLUMN IN MASONRY WALL       |        |
| SLAB                               | CONTROL/CONSTRUCTION JOINT                             | <br>STEEL BEAM OR GIRDER             |        |
| 3                                  |                                                        | <br>STEEL JOIST OR PURLIN            | 1.1.1  |
| RECE                               | SSED/DEPRESSED SLAB                                    | STEEL COLUMN - TUBE (HSS)            |        |
| OPEN                               | ING                                                    |                                      |        |
| CONC                               | RETE HOUSEKEEPING PAD                                  |                                      |        |
| STEE                               | EL DECK                                                |                                      |        |
|                                    |                                                        |                                      |        |
|                                    |                                                        |                                      | $\sim$ |
|                                    |                                                        |                                      |        |
|                                    |                                                        |                                      | (      |
|                                    |                                                        |                                      |        |
|                                    |                                                        |                                      | _      |
|                                    |                                                        |                                      |        |
|                                    |                                                        |                                      |        |
|                                    |                                                        |                                      | _      |
|                                    |                                                        |                                      |        |
|                                    |                                                        |                                      |        |

3

| MEMBER D                                                                                | ESIGNATION<br>S ADDITIONAL REQUIREMENTS<br>SPECIFIED CONNECTION:<br>TICAL BOLTS<br>TICAL BOLTS<br>TED HOLES<br>DTTED HOLES<br>DTTED HOLES<br>EEL JOIST, BEAM OR GIRDER SIZE<br>MBER IS PART OF LFRS<br>EADED STUDS ON BEAM<br>JPWARD CAMBER AT MIDSPAN |   |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| ON PLAN (TOS<br>SEE ARCH FOI<br>SLOPED ROOF<br>CONNECTION<br>CONNECTION<br>TYPICAL SING | T).<br>R DECK BEARING ELEVATIONS AT<br>FRAMING.<br>TYPE. SEE FRAMING<br>LEGEND. IF ABSENT, PROVIDE<br>LE PLATE CONNECTION.                                                                                                                             |   |
| CONNECTI                                                                                | ON LEGEND                                                                                                                                                                                                                                              |   |
| CTION C1/SF                                                                             | 601                                                                                                                                                                                                                                                    |   |
|                                                                                         |                                                                                                                                                                                                                                                        |   |
|                                                                                         |                                                                                                                                                                                                                                                        |   |
|                                                                                         | EXISTING FOOTING - CONTINUOUS<br>EXISTING FOOTING - THICKENED SLAB                                                                                                                                                                                     |   |
|                                                                                         | EXISTING FOOTING - SQUARE,<br>RECTANGULAR, OR MAT                                                                                                                                                                                                      |   |
|                                                                                         | EXISTING CONCRETE SHEAR WALL,                                                                                                                                                                                                                          |   |
| a                                                                                       | EXISTING OPENING THROUGH<br>CONCRETE WALL                                                                                                                                                                                                              |   |
|                                                                                         | EXISTING CONCRETE PIER IN CONCRETE<br>WALL. PIER RECESSED BELOW SLAB.                                                                                                                                                                                  | - |
| 1984)<br>1994 -                                                                         | EXISTING CONCRETE COLUMN                                                                                                                                                                                                                               |   |
|                                                                                         | NEW OPENING THROUGH<br>EXISTING CONCRETE WALL                                                                                                                                                                                                          |   |
|                                                                                         | EXISTING MASONRY WALL<br>EXISTING OPENING THROUGH                                                                                                                                                                                                      |   |
|                                                                                         | MASONRY WALL<br>NEW OPENING THROUGH EXISTING<br>MASONRY WALL                                                                                                                                                                                           |   |
|                                                                                         | EXISTING MASONRY COLUMN IN<br>MASONRY WALL                                                                                                                                                                                                             |   |
|                                                                                         | EXISTING STEEL COLUMN - TUBE                                                                                                                                                                                                                           |   |
| Ţ                                                                                       | EXISTING STEEL COLUMN - WIDE FLANGE                                                                                                                                                                                                                    | Ξ |
| 0<br>                                                                                   | EXISTING STEEL COLUMN - PIPE<br>EXISTING STEEL BRACED FRAME                                                                                                                                                                                            |   |
| $\rightarrow$                                                                           | EXISTING SLAB BLOCK-OUT AT COLUMN                                                                                                                                                                                                                      |   |
| CJ<br>CJ                                                                                | EXISTING SLAB<br>CONTROL/CONSTRUCTION JOINT                                                                                                                                                                                                            |   |
|                                                                                         | EXISTING STEEL BEAM OR GIRDER                                                                                                                                                                                                                          |   |
|                                                                                         | EXISTING CROSS BRIDGING                                                                                                                                                                                                                                |   |
|                                                                                         | EXISTING HORIZONTAL BRIDGING                                                                                                                                                                                                                           |   |
|                                                                                         | EXISTING TO BE REMOVED                                                                                                                                                                                                                                 |   |
|                                                                                         |                                                                                                                                                                                                                                                        |   |

|                     | ABBREVIATIONS                                  |
|---------------------|------------------------------------------------|
| @                   | AT                                             |
| AB<br>ABV           | ANCHOR BOLT (S)                                |
| ALT                 | ALTERNATE                                      |
| APPROX              | APPROXIMATE                                    |
| ARCH                | ARCHITECT(URAL)                                |
| BLDG                | BUILDING                                       |
| BLW                 | BELOW                                          |
| BOT                 | BOTTOM                                         |
| BRG                 | BEARING                                        |
| BTWN                | BETWEEN                                        |
| CJ                  | CONSTRUCTION JOINT OR CONTROL                  |
| CJP                 | COMPLETE JOINT PENETRATION                     |
| CMU                 | CONCRETE MASONRY UNIT                          |
| COL                 | COLUMN                                         |
| CONC                | CONCRETE                                       |
| CONT                | CONTINUOUS                                     |
| CONTR               | CONTRACTOR                                     |
|                     |                                                |
| db                  | DIAMETER OF REINFORCING BAR                    |
| DBA                 | DEFORMED BAR ANCHORS                           |
| DBL                 | DOUBLE                                         |
|                     |                                                |
| DIA (OR Ø)<br>DIAG  | DIAGONAL                                       |
| DIM                 | DIMENSION                                      |
| DK                  | DECK                                           |
|                     |                                                |
| DWL                 | DOWEL                                          |
| E.F.                | EACH FACE                                      |
| E.J.                | EXPANSION JOINT (SEISMIC<br>SEPARATION JOINT)  |
| E.W.                | EACH WAY                                       |
| EA                  | EACH                                           |
|                     | ELEVATION                                      |
|                     | ELEVITION                                      |
| ENG                 | ENGINEER                                       |
| EQ                  | EQUAL                                          |
|                     | EQUIPMENT                                      |
| EXP                 | EXPANSION / EXPOSED                            |
| EXT                 | EXTERIOR                                       |
| F.D.                |                                                |
| F.F.<br>F V         | FINISH FLOOR<br>FIFI D VFRIFY                  |
| FDTN                | FOUNDATION                                     |
| FIN                 | FINISH                                         |
| FT                  | FLOOR                                          |
| FTG                 | FOOTING                                        |
| GA                  | GAUGE                                          |
| GALV                | GALVANIZED                                     |
| GR                  | GRADE                                          |
| GSN                 | GENERAL STRUCTURAL NOTES                       |
| HB                  | HORIZONTAL BRIDGING                            |
| HSA                 | HEADED STUD ANCHORS                            |
| HSS                 | HOLLOW STRUCTURAL STEEL                        |
| HT<br>LE            | HEIGHT<br>INSIDE EACE                          |
| IBC                 | INTERNATIONAL BUILDING CODE                    |
| ICC                 | INTERNATIONAL CODE COUNCIL                     |
|                     |                                                |
| INT                 | INTERIOR                                       |
| JST                 | JOIST                                          |
| JT                  |                                                |
| KLF                 | KIPS - 1,000 POUNDS<br>KIPS PER LINEAL FOOT    |
| KSF                 | KIPS PER SQUARE FOOT                           |
| KSI                 | KIPS PER SQUARE INCH                           |
| LBS<br>Ld. Lt. I sh | YOUNDS<br>SEE CONCRETE RFINFORCING BAR         |
| Lsbt, Ldc, Lsc      | DEVELOPMENT AND LAP LENGTH                     |
| I F                 | SUHEDULE<br>LINEAL FOOT                        |
| LFRS                | LATERAL FORCE RESISTING SYSTEM                 |
| <b> </b>            | (SFRS & WFRS)                                  |
|                     | LONG LEG HORIZON FAL                           |
| LSH                 | LONG SIDE HORIZONTAL                           |
| LSV                 | LONG SIDE VERTICAL                             |
| MAX                 | MAXIMUM                                        |
| MCJ                 | MASONRY CONTROL JOINT                          |
| MECH                | MECHANICAL                                     |
| MIN                 | MINIMUM                                        |
| MISC                | MISCELLANEOUS                                  |
|                     |                                                |
| NTS                 | NOTIVIAL<br>NOT TO SCALE                       |
| O.C.                | ON CENTER                                      |
| O.F.                | OUTSIDE FACE                                   |
| OPNG<br>OPP         | OPENING<br>OPPOSITF                            |
| OWSJ                | OPEN WEB STEEL JOIST                           |
| P.T.                | POST-TENSIONED                                 |
| PUF<br>PJP          | POUNDS/CUBIC FOOT<br>PARTIAL JOINT PENETRATION |
| PL                  | PLATE                                          |
| PLF                 | POUNDS/LINEAL FOOT                             |
| PSF                 | PANEL<br>POUNDS/SQ FOOT                        |
| PSI                 | POUNDS/SQ INCH                                 |
| חם                  | ROOF DRAIN                                     |
|                     |                                                |

5

0.C. 0.F.

|                      | ABBREVIATIONS                       |
|----------------------|-------------------------------------|
| REQD                 | REQUIRED                            |
| SFRS                 | SEISMIC FORCE RESISTING SYSTEM      |
| SHI                  | SHEET                               |
| SIM                  | SIMILAR                             |
| SOG                  | SLAB ON GRADE                       |
| SQ                   | SQUARE                              |
| STAG                 | STAGGERED                           |
| STIFF                | STIFFENER                           |
| STL                  | STEEL                               |
| STRUCT               | STRUCTURAL                          |
| T&B                  | TOP AND BOTTOM                      |
| I.U.<br>TEMP         | TOP OF<br>TEMPERATURE               |
| THDS                 | THREADS                             |
| TOC                  | TOP OF CONCRETE                     |
| TOCP                 | TOP OF CONCRETE PIER                |
| TOF                  | TOP OF FOOTING                      |
| TOST                 | TOP OF SLAD                         |
| TOW                  | TOP OF WALL                         |
| TYP                  | TYPICAL                             |
| UNO                  | UNLESS NOTED OTHERWISE              |
| VERT<br>M P          | VERTICAL<br>WORK POINT              |
| W/                   | WITH                                |
| WF                   | WIDE FLANGE                         |
| WFRS                 | WIND FORCE RESISTING SYSTEM         |
| NT<br>AAA/E          |                                     |
| VVVF<br>YD           | YARD                                |
|                      |                                     |
|                      |                                     |
|                      | PLAN MARKS                          |
| BF-#                 | BRACED FRAME                        |
| CB-#                 | CONCRETE BEAM                       |
| CC-#<br>CCSS #       | CONCRETE COLUMN                     |
| 0000-#               | SLAB                                |
| CDP-#                | CONCRETE DRILLED PIER               |
| CFW-#                | CONCRETE FOUNDATION WALL            |
| CGB-#<br>≏ L#        | CONCRETE GRADE BEAM                 |
| CJC-#                | CONCRETE JAMB COLUMN                |
| CL-#                 | CONCRETE LINTEL                     |
| CP-#                 | CONCRETE PIER                       |
| CRW-#                | CONCRETE RETAINING WALL             |
| CSH-#                | CONCRETE SHEAR HEAD                 |
| CSS-#                | CONCRETE SUSPENDED SLAB             |
| CSW-#                | CONCRETE SHEAR WALL                 |
| CW-#                 | CONCRETE WALL                       |
| -C#<br>FM#           | MAT FOOTING                         |
| FR#                  | RECTANGULAR FOOTING                 |
| FS#                  | SQUARE FOOTING                      |
| FTS#                 | THICKENED SLAB FOOTING              |
| п <i>D-#</i><br>МС-# | MASONRY COLUMN                      |
| MF-#                 | MOMENT FRAME                        |
| ML-#                 | MASONRY LINTEL                      |
| MP-#                 | MASONRY PIER                        |
| VIVV-#<br>PTR-#      | MASONRY WALL                        |
| SBP-#                | STEEL BASE PLATE                    |
| SC-#                 | STEEL COLUMN                        |
| SCP-#                | STEEL CAP PLATE                     |
| SD-#<br>SDA_#        | STEEL DECK<br>STEEL DECK ATTACHMENT |
| SDA-#<br>SG-#        | STEEL GIRDER                        |
| SJ-#                 | STEEL JOIST                         |
| SND-#                | SNOW DRIFT                          |
| WB-#<br>MB\M #       |                                     |
| WC-#                 | WOOD COLUMN                         |
| WD-#                 | WOOD DIAPHRAGM                      |
| NJ-#                 | WOOD JOIST                          |
| WSW-#                | WOOD SHEAR WALL                     |
| 0.7                  |                                     |
|                      |                                     |
| SHI NO.              |                                     |
|                      |                                     |

| S       | STRUCTURAL DRAWING LIST              |  |  |  |  |  |  |  |  |  |  |
|---------|--------------------------------------|--|--|--|--|--|--|--|--|--|--|
| SHT NO. | SHT NAME                             |  |  |  |  |  |  |  |  |  |  |
| SE001   | GENERAL STRUCTURAL NOTES             |  |  |  |  |  |  |  |  |  |  |
| SE002   | GENERAL STRUCTURAL NOTES             |  |  |  |  |  |  |  |  |  |  |
| SE003   | LEGENDS & ABBREVIATIONS              |  |  |  |  |  |  |  |  |  |  |
| SB101   | FOOTING & FOUNDATION PLAN - ADDITION |  |  |  |  |  |  |  |  |  |  |
| SB501   | TYPICAL FOOTING & FOUNDATION DETAILS |  |  |  |  |  |  |  |  |  |  |
| SB502   | TYPICAL FOOTING & FOUNDATION DETAILS |  |  |  |  |  |  |  |  |  |  |
| SB601   | CONCRETE SCHEDULES                   |  |  |  |  |  |  |  |  |  |  |
| SB602   | REINFORCING SCHEDULES                |  |  |  |  |  |  |  |  |  |  |
| SB611   | MASONRY SCHEDULES                    |  |  |  |  |  |  |  |  |  |  |
| SF101   | ROOF FRAMING PLAN - ADDITION         |  |  |  |  |  |  |  |  |  |  |
| SF501   | ROOF FRAMING DETAILS                 |  |  |  |  |  |  |  |  |  |  |
| SF502   | ROOF FRAMING DETIALS                 |  |  |  |  |  |  |  |  |  |  |
| SF601   | TYPICAL STEEL FRAMING SCHEDULES      |  |  |  |  |  |  |  |  |  |  |
| SF602   | STEEL COLUMN SCHEDULE AND DETAILS    |  |  |  |  |  |  |  |  |  |  |
| SF603   | STEEL DECK SCHEDULES                 |  |  |  |  |  |  |  |  |  |  |
| SW501   | STEEL STUD DETAILS & SCHEDULES       |  |  |  |  |  |  |  |  |  |  |

![](_page_56_Figure_7.jpeg)

![](_page_57_Figure_0.jpeg)

# EXISTING BUILDING NOTES

6

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DETAILING, FABRICATING, ERECTING OR INSTALLING ANY STRUCTURAL ELEMENT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM IN A TIMELY MANNER SUCH THAT WORK WILL NOT BE DELAYED.

2. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING OF EXISTING STRUCTURE DURING CONSTRUCTION.

## MASONRY WALL NOTES

1. TERMINATE HORIZONTAL REINFORCEMENT AT CONTROL JOINTS IN MASONRY WALLS PER DETAIL A1/SB611.

2. PROVIDE ADDITIONAL HORIZONTAL AND VERTICAL REINFORCING AT WALL CORNERS, EDGES OF OPENINGS, WALL ENDS, AND WALL INTERSECTIONS PER D1/SB611

3. SEE A2/SB611 FOR TYPICAL REINFORCING AROUND MISCELLANEOUS OR RECESSED MASONRY WALL OPENINGS.

4. SEE B1/SB611 FOR REQUIRED ADDITIONAL DUCTILITY REINFORCING IN LOAD BEARING MASONRY WALLS.

| SLAB ON GRADE PLAN NOTES |
|--------------------------|
|                          |

1. ALL SLABS ON GRADE SHALL BE 4 INCHES THICK, UNLESS NOTED OTHERWISE. SEE TYPICAL CONCRETE SLAB ON GRADE PROFILE DETAIL B5/SB501 FOR SUBGRADE REQUIREMENTS.

2. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.

3. SEE ARCHITECTURAL DRAWINGS AND FINISH SCHEDULE FOR SLAB DEPRESSIONS, SLOPES TO DRAINS AND SLAB AREAS TO RECEIVE FLOOR TILE.

4. SEE TYPICAL CONCRETE SLAB ON GRADE DETAILS FOR CONSTRUCTION JOINTS, CONTROL JOINTS AND ADDITIONAL SLAB REINFORCING C2/SB501 .

5. SUBMIT SLAB ON GRADE CONTROL JOINT PLAN FOR REVIEW.

6. PROVIDE HOUSEKEEPING PADS AND CURBS PER DETAIL C4/SB501 . VERIFY DIMENSIONS AND LOCATIONS OF CURBS AND PADS WITH MECHANICAL AND EQUIPMENT SUPPLIER.

FOOTING & FOUNDATION PLAN NOTES

1. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE RETAINING AND / OR SITE WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

2. SEE TYPICAL STEP DETAIL AT CONTINUOUS FOOTING FOR REINFORCING REQUIREMENT D3/SB502.

3. PROVIDE REINFORCEMENT AT WALL ENDS, INTERSECTIONS AND OPENINGS PER TYPICAL DETAILS D2/SB601, C2/SB601 AND C4/SB601.

4. DOWEL ALL CONCRETE WALLS TO FOOTING PER TYPICAL DETAIL D2/SB501.

5. PROVIDE COMPACTED STRUCTURAL FILL UNDER ALL CONCRETE FOOTINGS PER TYPICAL DETAIL B4/SB501 .

![](_page_57_Picture_22.jpeg)

![](_page_58_Figure_0.jpeg)

![](_page_58_Figure_2.jpeg)

![](_page_59_Figure_0.jpeg)

![](_page_59_Figure_2.jpeg)

![](_page_59_Figure_3.jpeg)

![](_page_59_Figure_4.jpeg)

![](_page_60_Figure_0.jpeg)

4

![](_page_60_Figure_1.jpeg)

- - -

I╋╾╺╾╺┿╢╸

6<sup>°</sup>-0" x 6'-0" MAX ORENING

LARGE OPENING

|            |             |           |            |           |           |        | CONCRE          | TE RE  | ETAINING | G WAL   | L SCHED   | DULE   |       |      |       |       |         |       |         |
|------------|-------------|-----------|------------|-----------|-----------|--------|-----------------|--------|----------|---------|-----------|--------|-------|------|-------|-------|---------|-------|---------|
|            | "HT'        |           |            |           |           | 'V'    | BARS            | 'H'    | BARS     | 'V2'    | BARS      | 'H2'   | BARS  | 'T'  | BARS  | 'C TO | P' BARS | 'C BO | T' BARS |
| MARK       | MAX         | 'A'       | 'B'        | 'TW'      | 'TF'      | SIZE   | SPACE           | SIZE   | SPACE    | SIZE    | SPACE     | SIZE   | SPACE | SIZE | SPACE | SIZE  | SPACE   | SIZE  | SPACE   |
| -          | 5' - 0"     | 1' - 0"   | 2' - 4"    | 8"        | 1' - 4"   | #5     | 10.0"           | #4     | 12.0"    |         |           |        |       | #5   | 10.0" | 5-#5  | 10.5"   | 2-#5  | 14.0"   |
|            | 7' - 0"     | 1' - 0"   | 4' - 4"    | 8"        | 1' - 4"   | #5     | 8.0"            | #4     | 12.0"    |         |           |        |       | #5   | 8.0"  | 8-#5  | 9.4"    | 2-#5  | 14.0"   |
|            | 9' - 0"     | 1' - 0"   | 5' - 10"   | 8"        | 1' - 4"   | #6     | 5.0"*           | #4     | 12.0"    |         |           |        |       | #5   | 10.0" | 9-#5  | 10.5"   | 2-#5  | 14.0"   |
| 1. 'V' BAR | RS SHALL NO | OT BE SPL | ICED BEL   | OW MID-I  | HEIGHT O  | F WALL |                 |        |          |         |           |        |       |      |       |       |         |       |         |
| 2. FOR W   | ALLS INDIC  | ATED BY ( | (*), ONE H | IALF OF 1 | HE 'V' BA | RS CAN | <b>BE DISCO</b> | NTINUE | D FROM M | 11D-HEI | GHT TO TO | P OF W | ALL.  |      |       |       |         |       |         |

A1 TYPICAL CONCRETE RETAINING WALL SCHEDULE AND DETAIL

SEE -6

Sched - Conc-Wall-Opening

SB601 NO SCALE

SB601 NO SCALE

1 | |

1

![](_page_60_Figure_6.jpeg)

|   | CONCRETE FOOTING SCHEDULE                                                                                                                            |           |                         |           |                       |          |              |            |          |             |            |           |               |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------|-----------|-----------------------|----------|--------------|------------|----------|-------------|------------|-----------|---------------|
| ſ |                                                                                                                                                      |           |                         |           | CROSSWISE REINFORCING |          |              |            | LENC     | STHWISE     | RCING      |           |               |
|   | MARK                                                                                                                                                 | WIDTH     | LENGTH                  | THICK     | NO.                   | SIZE     | LENGTH       | SPACE      | NO.      | SIZE        | LENGTH     | SPACE     | REMARKS       |
|   | FC2.0                                                                                                                                                | 2' - 0"   | CONT.                   | 1' - 0"   |                       | NONE     | REQ'D        |            | 3        | #4          | CONT.      | 9"        |               |
|   | FS3.0                                                                                                                                                | 3' - 0"   | 3' - 0"                 | 1' - 0"   | 3                     | #5       | 2' - 6"      | 15"        | 3        | #5          | 2' - 6"    | 15"       |               |
|   | FS4.0                                                                                                                                                | 4' - 0"   | 4' - 0"                 | 1' - 0"   | 4                     | #4       | 3' - 6"      | 14"        | 4        | #4          | 3' - 6"    | 14"       |               |
| ſ | 1. PLAC                                                                                                                                              | E ALL FOO | TING REINF              | ORCING IN | BOTTOM                | of footi | NG WITH 3" ( | CLEAR CON  | ICRETE C | OVER UNL    | ESS NOTED  | OTHERWIS  | SE.           |
|   | 2. TOP I                                                                                                                                             | REINFORC  | ING, WHERE              | SPECIFIED | ), SHALL E            | E PLACE  | D IN THE TOP | P OF THE F | OOTING V | VITH 2" CLE | AR CONCRE  | ETE COVER | २.            |
|   | <ol> <li>SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS, UNLESS NOTED<br/>OTHERWISE.</li> </ol> |           |                         |           |                       |          |              |            |          |             |            |           |               |
|   | 4. ALL F<br>STRU                                                                                                                                     | OOTINGS   | Shall be fo<br>Ngineer. | ORMED. FO | OTINGS S              | HALL NOT | BE EARTH I   | Formed oi  | R OVERSI | ZED WITHO   | OUT WRITTE | N PERMISS | SION FROM THE |

SB601 NO SCALE

![](_page_60_Figure_8.jpeg)

A3 PIPES PENETRATING & ADJACENT TO FOOTINGS OR GRADE BEAMS SB601 NO SCALE

![](_page_60_Figure_12.jpeg)

5

NOTÉ 3

OPENING THROUGH CONCRETE WALL DETAIL WHERE THIS OCCURS.

3. MULTIPLE SLEEVED **OPENINGS WITHIN 1.5D OF** EACH OTHER SHALL BE TREATED AS ONE OPENING.

4. WHERE SLEEVE EXCEEDS DIMENSIONAL **REQUIREMENTS OF THIS** DETAIL, USE THE TYPICAL OPENING THROUGH CONCRETE WALL DETAIL

5. CONTRACTOR SHALL COORDINATE WITH ARCH THAT SLEEVE MATERIAL IS CONSISTANT WITH FIRE RESISTANCE REQUIREMENTS

![](_page_60_Figure_22.jpeg)

![](_page_61_Figure_0.jpeg)

8"

11.3/4"

6"

---

10.1/2"

--

--

--

--

--

--

--

--

--

--

--

2

1

| #10              | 10.3/4" | 22" | 13.1/4" |  |
|------------------|---------|-----|---------|--|
| #11              | 12"     | 24" | 14.3/4" |  |
| #14              | 18.1/4" | 31" | 21.3/4" |  |
| #18              | 24"     | 41" | 28.1/2" |  |
| Sched – End-Hook |         |     |         |  |
|                  |         |     |         |  |

16"

19"

D1 REINFORCEMENT END HOOK SCHEDULE SB602 NO SCALE

#8

#9

6"

9.1/2"

![](_page_61_Figure_3.jpeg)

I dh MIN CONSTRUCTION JOINT OR FACE OF SUPPORT

- 3

| TENSION                                                            | TENSION HOOK DEVELOPMENT LENGTH (Ldh)                                                               |           |             |            |         |  |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------|-------------|------------|---------|--|--|--|--|--|--|
|                                                                    | NORM                                                                                                | IAL WEIG  | HT CONO     | CRETE, f'  | c = PSI |  |  |  |  |  |  |
| DAR SIZE                                                           | 3,000                                                                                               | 4,000     | 4,500       | 5,000      | 6,000   |  |  |  |  |  |  |
| #3                                                                 | 6"                                                                                                  | 6"        | 6"          | 6"         | 6"      |  |  |  |  |  |  |
| #4                                                                 | 8"                                                                                                  | 7"        | 7"          | 7"         | 7"      |  |  |  |  |  |  |
| #5                                                                 | 10"                                                                                                 | 9"        | 8"          | 8"         | 7"      |  |  |  |  |  |  |
| #6                                                                 | 12"                                                                                                 | 10"       | 10"         | 9"         | 8"      |  |  |  |  |  |  |
| #7                                                                 | 14"                                                                                                 | 12"       | 11"         | 11"        | 10"     |  |  |  |  |  |  |
| #8                                                                 | 16"                                                                                                 | 14"       | 13"         | 12"        | 11"     |  |  |  |  |  |  |
| #9                                                                 | 18"                                                                                                 | 15"       | 14"         | 14"        | 13"     |  |  |  |  |  |  |
| #10                                                                | 20"                                                                                                 | 17"       | 16"         | 15"        | 14"     |  |  |  |  |  |  |
| #11                                                                | 22"                                                                                                 | 19"       | 18"         | 17"        | 16"     |  |  |  |  |  |  |
| #14                                                                | 37"                                                                                                 | 32"       | 31"         | 29"        | 27"     |  |  |  |  |  |  |
| #18                                                                | 50"                                                                                                 | 43"       | 41"         | 39"        | 35"     |  |  |  |  |  |  |
| NOTES:<br>1. VALUES HERE<br>SIDE COV<br>END COV                    | NOTES:<br>1. VALUES HERE VALID FOR ALL CASES IF:<br>SIDE COVER $\ge 2.1/2$ "<br>END COVER $\ge 2$ " |           |             |            |         |  |  |  |  |  |  |
| 2. MULTIPLY VALUES IN SCHEDULE BY 1.33 FOR LIGHTWEIGHT<br>CONCRETE |                                                                                                     |           |             |            |         |  |  |  |  |  |  |
| 3. MULTIPLY VAL<br>COATED REBAR                                    | UES IN SC                                                                                           | HEDULE B' | Y 1.2 FOR L | JSE WITH E | POXY    |  |  |  |  |  |  |

D2 TENSION HOOK DEVELOPMENT SCHEDULE

SB602 NO SCALE

l dt MIN CONSTRUCTION JOINT OR FACE OF SUPPORT

4

| TENSION HEADED BAR DEVELOPMENT LENGTH (Ldt) |                                   |       |       |       |       |  |  |  |  |  |  |
|---------------------------------------------|-----------------------------------|-------|-------|-------|-------|--|--|--|--|--|--|
|                                             | NORMAL WEIGHT CONCRETE, f'c = PSI |       |       |       |       |  |  |  |  |  |  |
| BAR SIZE                                    | 3,000                             | 4,000 | 4,500 | 5,000 | 6,000 |  |  |  |  |  |  |
| #3                                          | 7"                                | 6"    | 6"    | 6"    | 6"    |  |  |  |  |  |  |
| #4                                          | 9"                                | 8"    | 8"    | 7"    | 7"    |  |  |  |  |  |  |
| #5                                          | 11"                               | 10"   | 9"    | 9"    | 8"    |  |  |  |  |  |  |
| #6                                          | 14"                               | 12"   | 11"   | 11"   | 10"   |  |  |  |  |  |  |
| #7                                          | 16"                               | 14"   | 13"   | 12"   | 11"   |  |  |  |  |  |  |
| #8                                          | 18"                               | 16"   | 15"   | 14"   | 13"   |  |  |  |  |  |  |
| #9                                          | 20"                               | 18"   | 17"   | 16"   | 14"   |  |  |  |  |  |  |
| #10                                         | 23"                               | 20"   | 19"   | 18"   | 16"   |  |  |  |  |  |  |
| #11                                         | 25"                               | 22"   | 21"   | 20"   | 18"   |  |  |  |  |  |  |
|                                             |                                   |       |       |       |       |  |  |  |  |  |  |
| NOTES:                                      |                                   |       |       |       |       |  |  |  |  |  |  |

1. VALUES HERE VALID FOR ALL CASES IF: A. CLEAR COVER OF BAR ≥ 2\*db. WHERE db IS BAR DIAMETER

- IN INCHES B. CLEAR SPACING BETWEEN BARS  $\geq$  4\*db
- C. NET BEARING AREA OF HEAD Abrg  $\geq$  4\*Ab, WHERE Ab IS AREA OF BAR

2. MULTIPLY VALUES IN SCHEDULE BY 1.2 FOR USE WITH EPOXY COATED REBAR.

3. FOR GRADE 60 REINFORCING ONLY.

D3 TENSION HEADED BAR DEVELOPMENT SCHEDULE SB602 NO SCALE

|                                                                                                                                                                                  |                                                                                                                                                                                                                       | ADHESIVE ANCHORS IN CO                                                                                                                                            | ONCRETE SCHEDU                                                                                           | ILE                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|                                                                                                                                                                                  | REINFOR                                                                                                                                                                                                               | CING BAR                                                                                                                                                          | THRE                                                                                                     | ADED ROD                                                                      |
|                                                                                                                                                                                  | DOWEL SIZE                                                                                                                                                                                                            | EMBEDMENT LENGTH<br>(SEE NOTE #2)                                                                                                                                 | SIZE                                                                                                     | EMBEDMENT LENGTH<br>(SEE NOTE #2)                                             |
|                                                                                                                                                                                  | #3                                                                                                                                                                                                                    | 4"                                                                                                                                                                | 3/8"Ø                                                                                                    | 4.1/2"                                                                        |
|                                                                                                                                                                                  | #4                                                                                                                                                                                                                    | 6"                                                                                                                                                                | 1/2"Ø                                                                                                    | 6"                                                                            |
|                                                                                                                                                                                  | #5                                                                                                                                                                                                                    | 9"                                                                                                                                                                | 5/8"Ø                                                                                                    | 7.1/2"                                                                        |
|                                                                                                                                                                                  | #6                                                                                                                                                                                                                    | 10"                                                                                                                                                               | 3/4"Ø                                                                                                    | 9"                                                                            |
|                                                                                                                                                                                  | #7                                                                                                                                                                                                                    | 12.1/2"                                                                                                                                                           | 7/8"Ø                                                                                                    | 10.1/2"                                                                       |
|                                                                                                                                                                                  | #8                                                                                                                                                                                                                    | 13"                                                                                                                                                               | 1"Ø                                                                                                      | 12"                                                                           |
|                                                                                                                                                                                  | #9                                                                                                                                                                                                                    | 14"                                                                                                                                                               | 1.1/4"Ø                                                                                                  | 15"                                                                           |
|                                                                                                                                                                                  | #10                                                                                                                                                                                                                   | 18"                                                                                                                                                               |                                                                                                          |                                                                               |
| HREADED ROD                                                                                                                                                                      | #11                                                                                                                                                                                                                   | 19"                                                                                                                                                               |                                                                                                          |                                                                               |
| EBAR DOWEL<br>CR REBAR OR THREADED<br>ADHESIVE FILLED HOLE.<br>PROVED ADHESIVE AND<br>WALL MANUFACTURERS<br>MMENDATIONS PER THE<br>EVALUATION REPORT<br>SENERAL STRUCTURAL<br>S) | <ul> <li>NOTES:</li> <li>1. THIS SCHEDULE SHALL<br/>AND AT OTHER LOCATI</li> <li>2. EMBEDMENT LENGTHS<br/>LENGTHS IN THIS SCHE</li> <li>3. WHERE THE THICKNES<br/>SCHEDULED EMBEDME<br/>STRUCTURAL ENGINEE</li> </ul> | BE USED ONLY WHERE SPECIF<br>ONS WITH APPROVAL OF THE S<br>SPECIFIED ON PLANS OR DETA<br>DULE.<br>S OF THE EXISTING CONCRETE<br>NT AND SPECIFIED CLEAR COVI<br>R. | ICALLY REFERENCED<br>TRUCTURAL ENGINEE<br>ILS TAKE PRECEDENC<br>MEMBER IS NOT SUFF<br>ER FOR THE ANCHOR, | ON THE DRAWINGS<br>R.<br>E OVER EMBEDMENT<br>ICIENT TO ACHIEVE<br>CONTACT THE |
| ING CONCRETE                                                                                                                                                                     | 4. SEE GENERAL STRUCT<br>REQUIREMENTS FOR A                                                                                                                                                                           | URAL NOTES FOR LIST OF APPR<br>DHESIVE ANCHORING                                                                                                                  | OVED ADHESIVES AN                                                                                        | DOTHER                                                                        |

3

![](_page_61_Picture_16.jpeg)

SB602 NO SCALE

H min

# 

|                    |      |                | (    | JONC | REIE | REINF | URUI          | NG BA | K DEV | /ELOP |               | AND  | LAP 5 | PLICE |                | 1120 |     | JLE  |     |      |     |     |
|--------------------|------|----------------|------|------|------|-------|---------------|-------|-------|-------|---------------|------|-------|-------|----------------|------|-----|------|-----|------|-----|-----|
| BAR f'c = 3000 PSI |      | f'c = 4000 PSI |      |      |      |       | fc = 4500 PSI |       |       |       | ťc = 5000 PSI |      |       |       | f'c = 6000 PSI |      |     |      | ALL |      |     |     |
| SIZE               | Ld   | Lt             | Lsb  | Lsbt | Ld   | Lt    | Lsb           | Lsbt  | Ld    | Lt    | Lsb           | Lsbt | Ld    | Lt    | Lsb            | Lsbt | Ld  | Lt   | Lsb | Lsbt | Ldc | Lsc |
| #3                 | 17"  | 22"            | 22"  | 28"  | 15"  | 19"   | 19"           | 25"   | 14"   | 18"   | 18"           | 23"  | 13"   | 17"   | 17"            | 22"  | 12" | 16"  | 16" | 20"  | 8"  | 12" |
| #4                 | 22"  | 29"            | 29"  | 38"  | 19"  | 25"   | 25"           | 33"   | 18"   | 24"   | 24"           | 31"  | 17"   | 23"   | 23"            | 29"  | 16" | 21"  | 21" | 27"  | 10" | 15" |
| #5                 | 28"  | 36"            | 36"  | 47"  | 24"  | 31"   | 31"           | 41"   | 23"   | 30"   | 30"           | 38"  | 22"   | 28"   | 28"            | 36"  | 20" | 26"  | 26" | 33"  | 12" | 19" |
| #6                 | 33"  | 43"            | 43"  | 56"  | 29"  | 37"   | 37"           | 49"   | 27"   | 35"   | 35"           | 46"  | 26"   | 34"   | 34"            | 44"  | 24" | 31"  | 31" | 40"  | 15" | 23" |
| #7                 | 48"  | 63"            | 63"  | 81"  | 42"  | 54"   | 54"           | 71"   | 40"   | 51"   | 51"           | 67"  | 38"   | 49"   | 49"            | 63"  | 34" | 45"  | 45" | 58"  | 17" | 27" |
| #8                 | 55"  | 72"            | 72"  | 93"  | 48"  | 62"   | 62"           | 81"   | 45"   | 59"   | 59"           | 76"  | 43"   | 56"   | 56"            | 72"  | 39" | 51"  | 51" | 66"  | 19" | 30" |
| #9                 | 62"  | 81"            | 81"  | 105" | 54"  | 70"   | 70"           | 91"   | 51"   | 66"   | 66"           | 86"  | 48"   | 63"   | 63"            | 81"  | 44" | 57"  | 57" | 74"  | 22" | 34" |
| #10                | 70"  | 91"            | 91"  | 118" | 61"  | 79"   | 79"           | 102"  | 57"   | 74"   | 74"           | 96"  | 54"   | 71"   | 71"            | 92"  | 50" | 64"  | 64" | 84"  | 24" | 39" |
| #11                | 78"  | 101"           | 101" | 131" | 67"  | 87"   | 87"           | 114"  | 64"   | 82"   | 82"           | 107" | 60"   | 78"   | 78"            | 102" | 55" | 71"  | 71" | 93"  | 27" | 43" |
| #14                | 93"  | 121"           | NA   | NA   | 81"  | 105"  | NA            | NA    | 76"   | 99"   | NA            | NA   | 72"   | 94"   | NA             | NA   | 66" | 86"  | NA  | NA   | 33" | NA  |
| #18                | 124" | 161"           | NA   | NA   | 108" | 140"  | NA            | NA    | 101"  | 132"  | NA            | NA   | 96"   | 125"  | NA             | NA   | 88" | 114" | NA  | NA   | 43" | NA  |
| OTES:              | -    |                |      |      | -    |       |               |       | -     |       |               |      |       |       |                |      |     |      |     |      |     |     |

## 1. DEFINITIONS:

Ld: TENSION DEVELOPMENT LENGTH FOR REINFORCEMENT SATISFYING THE FOLLOWING CONDITIONS:

5

SLABS AND WALLS: CLEAR SPACING > 2db AND CONCRETE CLEAR COVER > db BEAMS AND COLUMNS: CLEAR COVER SPACING > db AND CONCRETE CLEAR COVER > db

Lt: DEVELOPMENT LENGTH FOR TOP BARS IN TENSION

Lsb: TENSION LAP SPLICE LENGTH FOR OTHER THAN TOP BARS (CLASS B)

Lsbt: TENSION LAP SPLICE LENGTH OF TOP BARS.

Ldc: DEVELOPMENT LENGTH FOR BARS IN COMPRESSION Lsc: TIED COLUMN LAP SPLICE IN COMPRESSION

db: NOMINAL BAR DIAMETER (INCHES)

TOP BARS: HORIZONTAL BEAM REINFORCEMENT WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW

2. MULTIPLY VALUES IN SCHEDULE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET REQUIREMENTS FOR Ld IN NOTE 1.

3. MULTIPLY VALUES IN SCHEDULE BY 1.3 FOR USE IN LIGHTWEIGHT AGGREGATE CONCRETE.

4. FOR EPOXY COATED BAR: MULTIPLY VALUES IN SCHEDULE BY 1.5 FOR BARS WITH CLEAR COVER < 3db OR CLEAR SPACING < 6db. OTHERWISE MULTIPLY VALUES BY 1.2.

5. a. FOR BUNDLED BARS OF THREE OR LESS MULTIPLY LENGTHS BY 1.2.

b. FOR BUNDLED BARS OF FOUR OR MORE MULTIPLY LENGTHS BY 1.33. c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.

6. SCHEDULE LENGTHS ARE FOR fy=60ksi REINFORCING, MULTIPLY LENGTHS BY 1.53 FOR fy=80ksi, 2.17 FOR fy=100ksi REINFORCING.

7. LAP SPLICES ARE NOT PERMITTED FOR #14 & #18 BARS. USE BAR COUPLERS PER G.S.N.

8. MINIMUM CLEAR SPACING BETWEEN THE CONTACT LAP SPLICES SHOWN IN THIS SCHEDULE AND ADJACENT SPLICES OR BARS SHALL BE IN ACCORDANCE WITH THE DETAILING PROVISIONS OF GENERAL STRUCTURAL NOTES.

|                                                                                                                                                                                                                              | EXPANSION AN                                                                                                                                                                                                                                          | ICHORS IN CONCRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ETE SCHEDULE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANCHOR SIZE                                                                                                                                                                                                                  | MINIMUM EDGE<br>DISTANCE (Cac)                                                                                                                                                                                                                        | EMBEDMENT LENGTH<br>(H nom)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MINIMUM CONCRETE<br>THICKNESS (H min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MINIMUM ANCHOR<br>SPACING (S min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3/8"Ø                                                                                                                                                                                                                        | 6.1/2"                                                                                                                                                                                                                                                | 2.7/8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4.1/2"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3.3/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1/2"Ø                                                                                                                                                                                                                        | 10"                                                                                                                                                                                                                                                   | 3.7/8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5/8"Ø                                                                                                                                                                                                                        | 10"                                                                                                                                                                                                                                                   | 5.1/8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3/4"Ø                                                                                                                                                                                                                        | 16"                                                                                                                                                                                                                                                   | 5.3/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul> <li>NOTES:</li> <li>1. THIS SCHEDULE SHANCHORS AT OTHE</li> <li>2. EDGE DISTANCE, COR DETAILS TAKE F</li> <li>3. ANCHORS LOCATED REQUIRED MINIMULTO INSTALLATION.</li> <li>4. SEE GENERAL STRUSING EXPANSION</li> </ul> | ALL BE USED ONLY WER LOCATIONS MUST F<br>ac, AND EMBEDMENT<br>PRECEDENCE OVER V<br>D WHERE THE THICKN<br>M CONCRETE THICKN<br>UCTURAL NOTES FOR<br>ANCHORS.                                                                                           | /HERE SPECIFICALLY RE<br>BE APPROVED BY THE E<br>LENGTHS, H nom, AND A<br>ALUES IN THIS SCHEDU<br>IESS OF THE EXISTING (<br>ESS MUST BE APPROVE<br>& LIST OF APPROVED AN                                                                                                                                                                                                                                                                                                                                                                         | EFERENCED ON THE DI<br>INGINEER PRIOR TO IN<br>ANCHOR SPACING SPEC<br>LE.<br>CONCRETE MEMBER DO<br>D BY THE STRUCTURA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RAWINGS.<br>STALLATION.<br>CIFIED ON PLANS<br>OES NOT MEET THE<br>L ENGINEER PRIOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                              | ANCHOR SIZE<br>3/8"Ø<br>1/2"Ø<br>5/8"Ø<br>3/4"Ø<br>NOTES:<br>1. THIS SCHEDULE SH<br>ANCHORS AT OTHE<br>2. EDGE DISTANCE, C<br>OR DETAILS TAKE F<br>3. ANCHORS LOCATE<br>REQUIRED MINIMUL<br>TO INSTALLATION.<br>4. SEE GENERAL STR<br>USING EXPANSION | EXPANSION AN         ANCHOR SIZE       MINIMUM EDGE<br>DISTANCE (Cac)         3/8"Ø       6.1/2"         1/2"Ø       10"         5/8"Ø       10"         3/4"Ø       16"         NOTES:       1         1. THIS SCHEDULE SHALL BE USED ONLY W<br>ANCHORS AT OTHER LOCATIONS MUST E         2. EDGE DISTANCE, Cac, AND EMBEDMENT<br>OR DETAILS TAKE PRECEDENCE OVER V         3. ANCHORS LOCATED WHERE THE THICKN<br>REQUIRED MINIMUM CONCRETE THICKN<br>TO INSTALLATION.         4. SEE GENERAL STRUCTURAL NOTES FOR<br>USING EXPANSION ANCHORS. | EXPANSION ANCHORS IN CONCRE         ANCHOR SIZE       MINIMUM EDGE<br>DISTANCE (Cac)       EMBEDMENT LENGTH<br>(H nom)         3/8"Ø       6.1/2"       2.7/8"         1/2"Ø       10"       3.7/8"         5/8"Ø       10"       5.1/8"         3/4"Ø       16"       5.3/4"         NOTES:       1       THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY RI<br>ANCHORS AT OTHER LOCATIONS MUST BE APPROVED BY THE E         2. EDGE DISTANCE, Cac, AND EMBEDMENT LENGTHS, H nom, AND A<br>OR DETAILS TAKE PRECEDENCE OVER VALUES IN THIS SCHEDU         3. ANCHORS LOCATED WHERE THE THICKNESS OF THE EXISTING OR<br>REQUIRED MINIMUM CONCRETE THICKNESS MUST BE APPROVE<br>TO INSTALLATION.         4. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED AN<br>USING EXPANSION ANCHORS. | EXPANSION ANCHORS IN CONCRETE SCHEDULE           ANCHOR SIZE         MINIMUM EDGE<br>DISTANCE (Cac)         EMBEDMENT LENGTH<br>(H nom)         MINIMUM CONCRETE<br>THICKNESS (H min)           3/8"Ø         6.1/2"         2.7/8"         4.1/2"           1/2"Ø         10"         3.7/8"         6"           5/8"Ø         10"         5.1/8"         8"           3/4"Ø         16"         5.3/4"         10"           NOTES:         1         THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DI<br>ANCHORS AT OTHER LOCATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO INST<br>OR DETAILS TAKE PRECEDENCE OVER VALUES IN THIS SCHEDULE.           2. EDGE DISTANCE, Cac, AND EMBEDMENT LENGTHS, H nom, AND ANCHOR SPACING SPEC<br>OR DETAILS TAKE PRECEDENCE OVER VALUES IN THIS SCHEDULE.           3. ANCHORS LOCATED WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER DO<br>REQUIRED MINIMUM CONCRETE THICKNESS MUST BE APPROVED BY THE STRUCTURA<br>TO INSTALLATION.           4. SEE GENERAL STRUCTURAL NOTES FOR LIST OF APPROVED ANCHORS AND OTHER RE<br>USING EXPANSION ANCHORS. |

# B4 EXPANSION ANCHORS IN CONCRETE SCHEDULE

|                   |                                                                                                                                                                                                                                             | SCREW ANC                                                                                                                                            | HORS IN CONCRE                                                                                                                          | TE SCHEDULE                                                                                                                                      |                                                                                                            |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
|                   | ANCHOR SIZE                                                                                                                                                                                                                                 | MINIMUM EDGE<br>DISTANCE (Cac)                                                                                                                       | EMBEDMENT LENGTH<br>(H nom)                                                                                                             | H MINIMUM CONCRETE<br>THICKNESS (H min)                                                                                                          | MINIMUM ANCHOF<br>SPACING (S min)                                                                          |
|                   | 3/8"Ø                                                                                                                                                                                                                                       | 3.3/4"                                                                                                                                               | 3.1/4"                                                                                                                                  | 5"                                                                                                                                               | 3"                                                                                                         |
| L                 | 1/2"Ø                                                                                                                                                                                                                                       | 4.1/2"                                                                                                                                               | 4"                                                                                                                                      | 6.1/4"                                                                                                                                           | 3.1/2"                                                                                                     |
|                   | 5/8"Ø                                                                                                                                                                                                                                       | 6.3/8"                                                                                                                                               | 5.1/2"                                                                                                                                  | 8.1/2"                                                                                                                                           | 3.3/4"                                                                                                     |
| _                 | 3/4"Ø                                                                                                                                                                                                                                       | 7.5/16"                                                                                                                                              | 6.1/4"                                                                                                                                  | 10"                                                                                                                                              | 4.1/2"                                                                                                     |
|                   | NOTES:                                                                                                                                                                                                                                      |                                                                                                                                                      |                                                                                                                                         |                                                                                                                                                  |                                                                                                            |
|                   | <ol> <li>THIS SCHEDULE SE<br/>OTHER LOCATIONS</li> <li>EDGE DISTANCE, C<br/>DETAILS TAKE PRE</li> <li>ANCHORS LOCATE<br/>REQUIRED MINIMUL<br/>TO INSTALLATION</li> <li>SPECIAL INSPECTION<br/>EVALUATION REPO<br/>STRUCTURAL NOT</li> </ol> | ALL BE USED ONLY V<br>SWITH APPROVAL OF<br>CEDENCE OVER VALL<br>DWHERE THE THICKN<br>M CONCRETE THICKN<br>ON IS REQUIRED DURI<br>OR IS REQUIRED DURI | VHERE SPECIFICALLY F<br>THE STRUCTURAL ENC<br>LENGTHS, H nom, AND<br>JES IN THIS SCHEDULE<br>NESS OF THE EXISTING<br>ESS MUST BE APPROV | REFERENCED ON THE D<br>GINEER.<br>ANCHOR SPACING SPEC<br>CONCRETE MEMBER D<br>ED BY THE STRUCTURA<br>ALL SCREW ANCHORS P<br>SURANCE SECTION OF T | RAWINGS AND AT<br>CIFIED ON PLANS C<br>OES NOT MEET THE<br>L ENGINEER PRIOR<br>PER THE CODE<br>THE GENERAL |
| EXISTING CONCRETE | 5. SEE GENERAL STR<br>USING SCREW AND                                                                                                                                                                                                       | UCTURAL NOTES FOR<br>CHORS.                                                                                                                          | R LIST OF APPROVED A                                                                                                                    | NCHORS AND OTHER R                                                                                                                               | EQUIREMENTS FOF                                                                                            |

![](_page_61_Figure_39.jpeg)

![](_page_62_Figure_0.jpeg)

|          |                               |                                                                        | MAS                                   | SONRY WALL SO                         | CHEDULE                                    |                              |                      |
|----------|-------------------------------|------------------------------------------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------------|------------------------------|----------------------|
|          |                               |                                                                        |                                       | F                                     | REINFORCING                                |                              |                      |
| M        | ARK                           | THICK                                                                  | MATERIAL                              | VERTICAL                              | HORIZONTAL                                 | TYPE                         | REMARKS              |
| Μ        | W-1                           | 8"                                                                     | CMU                                   | #5 @ 24" O.C.                         | 1 - #5 @ 48" O.C.                          | TYPE 1                       |                      |
| Μ        | W-2                           | 8"                                                                     | CMU                                   | #5 @ 16" O.C.                         | 1 - #5 @ 16" O.C.                          | TYPE 1                       |                      |
| 1.<br>2. | GROU<br>GROU<br>ETC.)<br>STRU | JIREMENTS.<br>JIREMENTS.<br>JT SOLID ALL<br>, AND CELLS<br>JCTURAL NOT | CELLS BELOW C<br>CONTAINING RE<br>ES. | GRADE, CELLS CON                      | TAINING EMBEDS (HSA<br>DLIDATE GROUT AS PE | A'S, DBA'S, AN<br>R THE GENE | NCHOR BOLTS<br>RAL   |
|          | HORI                          | ZONTAL WAL                                                             |                                       | SHALL CONTINUE 1<br>AND LINTEL REINFO | THROUGH MASONRY LI                         | INTELS. WHE<br>E SAME COU    | ERE BOTH<br>RSF. THF |

| Ŭ<br>U<br>U |               | I |
|-------------|---------------|---|
|             |               |   |
| Ğ           | <u>TYPE 1</u> |   |

C3 TYPICAL MASONRY WALL TYPES - PLAN VIEW SB611/ NO SCALE

|                   | MAXIMUM SPACING C<br>AND HORIZONTA | OF VERTICAL<br>L BARS | FLOC |
|-------------------|------------------------------------|-----------------------|------|
|                   | HEIGHT-WIDTH                       | SPACING               |      |
|                   | (H or L)<4'-0"                     | 8" O.C.               |      |
| CING LEGEND       | 4'-0"≤(H or L)<6'-0"               | 16" O.C.              |      |
|                   | 6'-0"≤(H or L)<8'-0"               | 24" O.C.              |      |
| D WALL REINF      | 8'-0"≤(H or L)<10'-0"              | 32" O.C.              |      |
| D OPENING REINE   | 10'-0"≤(H or L)<12'-0"             | 40" O.C.              |      |
|                   | 12'-0"≤(H or L)                    | 48" O.C.              |      |
| INF FOR DUCTILITY |                                    |                       |      |
|                   |                                    |                       |      |

![](_page_62_Figure_7.jpeg)

| 5 |  |  |
|---|--|--|
|   |  |  |
|   |  |  |
|   |  |  |

|      | MASONRY REINFORCING BAR LAP SPLICE SCHEDULE |       |            |       |     |       |     |          |       |      |  |
|------|---------------------------------------------|-------|------------|-------|-----|-------|-----|----------|-------|------|--|
|      |                                             | f'm = | = 2500 psi |       |     |       |     |          |       |      |  |
| BAR  | 6" CMU                                      | 8" 0  | CMU        | 10" ( | CMU | 12" ( | CMU | 6" BRICK | 8" BF | RICK |  |
| SIZE | CLASS                                       | CL/   | ASS        | CLA   | ASS | CLA   | ASS | CLASS    | CLA   | ASS  |  |
|      | А                                           | A     | В          | A     | В   | A     | В   | А        | A     | В    |  |
| #3   | 12"                                         | 12"   | 12"        | 12"   | 12" | 12"   | 12" | 12"      | 12"   | 12"  |  |
| #4   | 18"                                         | 13"   | 21"        | 12"   | 20" | 12"   | 20" | 16"      | 12"   | 20"  |  |
| #5   | 28"                                         | 20"   | 35"        | 16"   | 32" | 13"   | 32" | 25"      | 18"   | 33"  |  |
| #6   | **                                          | 38"   | 54"        | 29"   | 54" | 24"   | 54" | **       | 34"   | 54"  |  |
| #7   | -                                           | 52"   | **         | 40"   | **  | 33"   | 63" | -        | 47"   | -    |  |
| #8   | -                                           | **    | -          | 61"   | **  | 50"   | **  | -        | **    | -    |  |
| #9   | -                                           | -     | -          | 79"   | -   | 64"   | -   | -        | -     | -    |  |
|      |                                             |       |            |       |     |       |     |          |       |      |  |
|      |                                             |       |            |       |     |       |     |          |       |      |  |

1. CLASS A SPLICES MAY BE USED WHEN ONLY ONE BAR IS CONTINUOUS IN THE MASONRY CELL OR COURSE.

2. CLASS B SPLICES SHALL BE USED WHEN TWO BARS ARE CONTINUOUS IN THE MASONRY CELL OR COURSE 3. \*\* INDICATES THAT A LAP SPLICE IS NOT ALLOWED AND MECHANICAL BAR COUPLERS ARE REQUIRED FOR THE BAR SPLICES. SPLICES SHALL BE OFFSET 2'-0" TO AVOID CONGESTION.

4. WHERE VERTICAL BARS HAVE A REQUIRED LAP SPLICE GREATER THAN THE HEIGHT OF THE GROUT POUR, THE BAR SPLICE SHALL BE MADE WITH A MECHANICAL BAR COUPLER. WHERE THE HEIGHT OF THE GROUT POUR EXCEEDS 60 INCHES, HIGH LIFT GROUTING PROCEDURES SHALL BE FOLLOWED.

5. WHERE MECHANICAL BAR COUPLERS ARE USED, THE CONNECTOR SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION AND COMPRESSION.

|      | MASONRY LINTEL SCHEDULE |       |                             |              |         |           |  |  |  |  |  |
|------|-------------------------|-------|-----------------------------|--------------|---------|-----------|--|--|--|--|--|
|      | DIMEN                   | SIONS | REINFO                      | RCING        | MAXIMUM |           |  |  |  |  |  |
|      | DEPTH                   | WIDTH | HORIZONTAL                  | STIRRUPS     | SPAN    | REIVIARNO |  |  |  |  |  |
| ML-1 | 8"                      | 8"    | 1- #4 CONT.                 |              | 3'-4"   |           |  |  |  |  |  |
| ML-2 | 16"                     | 8"    | 1- #6 CONT.<br>TOP & BOTTOM | #3 @ 6" O.C. | 3'-4"   |           |  |  |  |  |  |
| ML-3 | 24"                     | 8"    | 1- #7 CONT.<br>TOP & BOTTOM | #3 @ 8" O.C. | 8'-0"   |           |  |  |  |  |  |
|      |                         |       |                             |              |         |           |  |  |  |  |  |
|      |                         |       |                             |              |         |           |  |  |  |  |  |
|      |                         |       |                             |              |         |           |  |  |  |  |  |
|      |                         |       |                             |              |         |           |  |  |  |  |  |
|      |                         |       |                             |              |         |           |  |  |  |  |  |

NOTES:

1. MASONRY LINTELS ML-1 THROUGH ML-4 SHALL BE USED OVER OPENINGS IN MASONRY WALLS WHEN A SPECIFIC MASONRY LINTEL IS NOT OTHERWISE SPECIFIED. THE MASONRY LINTEL TO BE USED SHALL BE DETERMINED BY THE MAXIMUM SPAN AS SPECIFIED IN THIS SCHEDULE. WHEN A SPECIFIC MASONRY LINTEL IS CALLED OUT ON THE PLAN, THE MAXIMUM SPAN AS NOTED IN THIS SCHEDULE SHALL NOT APPLY

2. MASONRY LINTELS ML-1 THROUGH ML-4 SHALL NOT BE LOCATED BELOW ANY FLOOR, OR ROOF BEAM, OR GIRDER, OR ANY OTHER CONCENTRATED LOAD UNLESS SHOWN SPECIFICALLY ON THE PLAN SHEET. JOISTS SHALL NOT BEAR ON ANY LINTEL LESS THAN 16" DEEP.

3. FOR MASONRY LINTELS NOT SHOWN ON THE DRAWINGS THAT CARRY ANY FLOOR, OR ROOF BEAM, OR GIRDER, OR ANY OTHER CONCENTRATED LOAD, OR THAT SPAN GREATER THAN 10'-0" CONSULT THE STRUCTURAL ENGINEER.

4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING, PROVIDE 90 DEGREE STANDARD HOOK.

5. GROUT MASONRY LINTELS MONOLITHICALLY WITH THE SUPPORT WALL OR COLUMN AT EACH END.

6. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.

7. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.

8. FOR WALL ABOVE LINTEL, DOWEL VERTICAL REINFORCING INTO FULL DEPTH OF THE LINTEL OR 48 BAR DIAMETERS, WHICHEVER IS LESS.

9. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS

![](_page_62_Figure_28.jpeg)

TYPE REMARKS

![](_page_62_Figure_34.jpeg)

![](_page_63_Figure_0.jpeg)

4

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2

1

A2 ROOF FRAMING PLAN - ADDITION - AREA A

SF101 SCALE: 1/8" = 1'-0"

# EXISTING BUILDING NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DETAILING, FABRICATING, ERECTING OR INSTALLING ANY STRUCTURAL ELEMENT. ALL DISCREPANCIES BE BROUGHT TO THE ATTENTION OF THE DES TEAM IN A TIMELY MANNER SUCH THAT WORK NOT BE DELAYED.

6

5

2. THE CONTRACTOR SHALL PROVIDE ADEQUA SHORING OF EXISTING STRUCTURE DURING CONSTRUCTION.

## MASONRY WALL NOTES

1. TERMINATE HORIZONTAL REINFORCEMENT CONTROL JOINTS IN MASONRY WALLS PER DE A1/SB611.

2. PROVIDE ADDITIONAL HORIZONTAL AND VERTICAL REINFORCING AT WALL CORNERS, OF OPENINGS, WALL ENDS, AND WALL INTERSECTIONS PER D1/SB611

3. SEE A2/SB611 FOR TYPICAL REINFORCIN AROUND MISCELLANEOUS OR RECESSED MAS WALL OPENINGS.

4. SEE B1/SB611 FOR REQUIRED ADDITION DUCTILITY REINFORCING IN LOAD BEARING MASONRY WALLS.

ROOF FRAMING PLAN NOTES

1. SEE ARCHITECTURAL FOR ROOF SLOPES AN DRAINS. PROVIDE STEEL FRAMES OR REINFOR OPENINGS PER DETAIL C4/SF501 AT STEEL D

OPEN WEB JOIST FRAMING PLAN NC

1. OPEN WEB STEEL JOISTS AND JOIST GIRDER SHALL BE DESIGNED BY THE MANUFACTURER SUPPORT THE MECHANICAL AND LATERAL LOA SHOWN ON THE ROOF FRAMING PLANS IN ADDI TO THE UNIFORM AND POINT LOADS SHOWN. L SHOWN ARE ASD UNO

2. ±#.##k – INDICATES POINT LOAD ON STEEL JO ADDITION TO UNIFORM LOADING SHOWN. + IND DOWNWARD AND - INDICATES UPWARD LOADS LOADS SHOWN ARE UNFACTORED, UNO.

3. T/C X.XXK INDICATES ADDITIONAL TOP CHOR AXIAL FORCE ON STEEL JOIST OR GIRDER. THIS FORCE IS A FACTORED SEISMIC LOAD THAT SH CONSIDERED IN BOTH TENSION AND COMPRES AND INCLUDES APPLICABLE OVERSTRENGTH FACTORS PER THE GOVERNING BUILDING COD

4. ALL LOADS SUPPORTED BY OPEN WEB STEEL JOISTS AND GIRDERS SHALL BE LOCATED WITH OF JOIST OR GIRDER PANEL POINT OR THE JOIS GIRDER SHALL BE REINFORCED PER DETAIL

5. HORIZONTAL CROSS BRIDGING SHALL BE SIZ AND SUPPLIED BY THE JOIST MANUFACTURER. CONNECT TO WALLS AS INDICATED ON DETAILS C3/SF501.

6. WHERE SKYLIGHTS OR MECHANICAL UNITS INTERRUPT HORIZONTAL BRIDGING, PROVIDE O BRIDGING AT JOIST SPACES ON EACH SIDE, TYL

7. OPEN WEB STEEL JOISTS BEARING AT MASO WALLS SHALL BE DESIGNED FOR A SEISMIC AX LOAD TO BE RANSFERRED THROUGH THE JOIS BEARING SEAT. MINIMUM UNFACTORED LOAD S BE 2.4K AT K JOISTS. UNO.

8. ALL OPEN WEB STEEL JOISTS WITH A SLOPE PER FOOT OR LARGER SHALL HAVE SLOPED BE SEATS.

9. OPEN WEB STEEL JOISTS AT ROOF AREAS SH BE DESIGNED FOR THE FOLLOWING WIND ASD UPLIFT LOADS: 60 PSF WITHIN 10.1 FT 'L' SHAPE BUILDING CORNER, 44 PSF WITHIN 10.1 FT OF BUILDING EDGE, 33 PSF WITHIN 20.2 FT OF BUIL EDGE AND 16 PSF AT ALL OTHER AREAS

NON-COMPOSITE FRAMING PLAN NO

1. SEE STEEL DECK SCHEDULE ON SHEET SF60 DECK PROFILE AND DECK ATTACHMENT REQUIREMENTS.

2. PROVIDE FRAMING AT OPENINGS THROUGH DECK PER DETAIL D2/SF501. FOR ROUND OPEN LESS THAN 12 INCHES IN DIAMETER SEE DETAI D4/SF501.

3. VERIFY SIZE WEIGHT, LOCATION AND CONFIGURATION OF ALL ROOF TOP EQUIPMEN WITH ARCHITECT AND MECHANICAL ENGINEER PROVIDE STEEL FRAMES FOR SUPPORT OF RC TOP EQUIPMENT PER DETAIL D3/SF501. COORE OPENINGS WITH MECHANICAL & ELECTRICAL.

4. SEE DETAIL D1/SF501 FOR SUPPORT OF HAN MECHANICAL UNITS.

# STEEL STUD NOTES

1. SEE SW501 FOR STEEL STUD DETAILS AND SCHEDULE.

![](_page_64_Figure_0.jpeg)

![](_page_64_Figure_6.jpeg)

![](_page_65_Figure_0.jpeg)

![](_page_65_Figure_5.jpeg)

![](_page_66_Figure_0.jpeg)

![](_page_66_Figure_7.jpeg)

| COLUMN SCHEDULE |                   |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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|-----------------|-------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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|                 |                   |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | T.O. Masonry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |
|                 |                   | _                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -                                                                                                                                                           | Γ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 113' - 4"<br>Roof                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |
| SS5x5x1/4       |                   | SS5x5x1/4                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ISS5x5x1/4                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 109' - 4"<br>Level 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |
| Ĥ               |                   | H                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | - H                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | footing &<br>Foundation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |
| SBI             | D-2               | SBI                                           | L<br>SBP-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                             | L<br>P-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 95' - 4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |
| R(4")·          | -2(4")            | R(6' -<br>11")-2.2(-4")                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T-2.2(-4")                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
|                 | HSS5x5x1/4<br>BBI | CO<br>+/LX5X5X5X<br>H<br>SBP-2<br>R(4")-2(4") | COLUMN S<br>PL<br>SBP-2<br>R(4")-2(4")<br>COLUMN S<br>PL<br>SBP-2<br>SBP<br>R(4")-2(4")<br>COLUMN S<br>PL<br>SBP-2<br>SBP<br>R(4")-2(4")<br>COLUMN S<br>COLUMN S<br>COLU | COLUMN SCHEDU         tit       tit         tit       tit         tit       tit         SBP-2       SBP-1         R(4")-2(4")       R(6' -<br>11")-2.2(-4") | COLUMN SCHEDULE         COLUMN SCHEDULE         Image: Column schedule | COLUMN SCHEDULE         End of the second sec |  |  |  |

STEEL COLUMN SCHEDULE NOTES SEE GRAVITY COLUMN STEEL BASE PLATE SCHEDULE FOR MINIMUM ANCHOR BOLT REQUIREMENTS 2 PROVIDE CAP PLATE PER TYPICAL GRAVITY COLUMN CAP PLATE DETAILS. CAP PLATE THICKNESS SHALL BE 3/4" THICK TYP. UNO

2

| STEEL BASE PLATE SCHEDULE                                                                                                                                                             |                                                                               |                                                                 |                                                                 |                                                                 |                                                                   |                                                                                        |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------|--|--|--|
| BASE PLATE MARK                                                                                                                                                                       | N                                                                             | В                                                               | THICK-<br>NESS                                                  | С                                                               | TYPE                                                              | REMARKS                                                                                |  |  |  |
| SBP-1                                                                                                                                                                                 | 11"                                                                           | 6"                                                              | 3/4"                                                            |                                                                 | Т3                                                                |                                                                                        |  |  |  |
| SBP-2                                                                                                                                                                                 | 11"                                                                           | 11"                                                             | 3/4"                                                            |                                                                 | T2                                                                |                                                                                        |  |  |  |
|                                                                                                                                                                                       |                                                                               |                                                                 |                                                                 |                                                                 |                                                                   |                                                                                        |  |  |  |
|                                                                                                                                                                                       |                                                                               |                                                                 |                                                                 |                                                                 |                                                                   |                                                                                        |  |  |  |
|                                                                                                                                                                                       |                                                                               |                                                                 |                                                                 |                                                                 |                                                                   |                                                                                        |  |  |  |
|                                                                                                                                                                                       |                                                                               |                                                                 |                                                                 |                                                                 |                                                                   |                                                                                        |  |  |  |
|                                                                                                                                                                                       |                                                                               |                                                                 |                                                                 |                                                                 |                                                                   |                                                                                        |  |  |  |
|                                                                                                                                                                                       |                                                                               |                                                                 |                                                                 |                                                                 |                                                                   |                                                                                        |  |  |  |
| NOTES:<br>1. BASE PLATES BEARING<br>PROJECT ANCHOR RODS<br>INSTALLED W/ HARDENE<br>DIAMETER PLUS 5/16" SH<br>WASHERS.<br>2. BASE PLATES BEARING<br>OTHERWISE.<br>3. DO NOT WELD ANCHO | G ON CONC<br>S 3" (MIN.) A<br>D WASHER<br>IALL HAVE S<br>G ON STEEI<br>R RODS | RETE SHAI<br>BOVE THE<br>S BENEATH<br>5/16" PLATE<br>_ SHALL BE | LL BE INSTA<br>TOP OF THI<br>I THE NUT.<br>WASHERS<br>INSTALLEE | ALLED W/ 4-<br>E BASE PLA<br>ANY BOLT<br>INSTALLEE<br>W/4-7/8"Ø | 3/4"Ø ANCH<br>\TE. ALL BO<br>HOLES LAR<br>D BENEATH<br>A325 BOLT: | IOR RODS UNO.<br>DLTS SHALL BE<br>GER THAN THE BOLT<br>THE HARDENED<br>S, UNLESS NOTED |  |  |  |

![](_page_67_Figure_3.jpeg)

B1 TYPICAL STEEL BASE PLATE SCHEDULE & DETAILS FOR GRAVITY COLUMNS

SF602 NO SCALE

1

![](_page_67_Figure_7.jpeg)

3

D

- O

+0

0

G

4

5

D 01 11 11  $\mathbf{H}$ ----o  $\mathbf{N}$ G TUBE COLUMN

TYPE SCP-2

1. ALL BOLTS IN CAP PLATES SHALL

5

BE 7/8"Ø A325N IN STANDARD

HOLES TYPICAL UNO.

NOTES:

![](_page_67_Figure_14.jpeg)

|        | STEEL DECK SCHEDULE           |                |                |                  |               |               |               |            |                  |       |  |
|--------|-------------------------------|----------------|----------------|------------------|---------------|---------------|---------------|------------|------------------|-------|--|
|        |                               | STEEI          | L DECK         |                  |               | CONCRETE FILL |               | STEEL DECK | MIN. ALLOWABLE   | NOTES |  |
| MARN   | PROFILE                       | MIN I (in⁴/ft) | MIN S (in³/ft) | FINISH           | THICKNESS (t) | TYPE          | REINFORCEMENT | ATTACHMENT | SHEAR CAPACITY   | NOTES |  |
| SD-1   | TYPE B<br>1.1/2" DEEP x 20 GA | 0.219          | 0.230          | GALVANIZED (G60) | -             | -             | -             | SDA-1      | 1232 PLF @ 5'-0" | -     |  |
|        |                               |                |                |                  |               |               |               |            |                  |       |  |
|        |                               |                |                |                  |               |               |               |            |                  |       |  |
|        |                               |                |                |                  |               |               |               |            |                  |       |  |
|        |                               |                |                |                  |               |               |               |            |                  |       |  |
|        |                               |                |                |                  |               |               |               |            |                  |       |  |
|        |                               |                |                |                  |               |               |               |            |                  |       |  |
| NOTES: |                               |                |                |                  |               |               |               |            |                  |       |  |

1. STEEL DECK SHALL COMPLY WITH LATEST REQUIREMENTS OF THE STEEL DECK INSTITUTE (SDI).

2

1

2. SUBMIT CURRENT CODE EVALUATION REPORT (ICC OR IAPMO) WITH LOAD AND LATERAL SHEAR CAPACITIES WITH SHOP DRAWINGS.

3. ALL DECK SHALL BE 3-SPAN CONTINUOUS MINIMUM WHERE POSSIBLE. IN AREAS WHERE 3-SPAN CONDITIONS ARE NOT POSSIBLE THE CONTRACTOR SHALL VERIFY UN-SHORED DECK IS PERMITTED BY THE DECK MANUFACTURER FOR THE SPAN CONDITION, SPAN LENGTH, AND DECK GAUGE. WHERE DECK DOES NOT MEET THE REQUIREMENTS FOR UN-SHORED DECK, THE CONTRACTOR SHALL EITHER PROVIDE HEAVIER GAUGE DECK TO ALLOW FOR UN-SHORED DECK OR PROVIDE SHORING.

4

 STEEL DECK WITHOUT CONCRETE FILL SHALL NOT BE USED TO SUPPORT LOADS FROM PLUMBING, HVAC DUCTS, LIGHT FIXTURES, ARCHITECTURAL ELEMENTS OR EQUIPMENT OF ANY KIND, UNLESS SPECIFICALLY NOTED OTHERWISE. LIGHTWEIGHT SUSPENDED ACOUSTICAL CEILINGS WITH A TOTAL WEIGHT PER WIRE NOT EXCEEDING 50# MAY BE HUNG FROM THE STEEL ROOF DECK. THE HANGERS SHOULD BE STAGGERED TO DISTRIBUTE THE LOAD OVER MULTIPLE DECK FLUTES.
 DECK SHALL HAVE 2" MINIMUM BEARING ON ALL SUPPORTING MEMBERS (MEMBERS PERPENDICULAR TO DECK) UNO. DECKS SHALL HAVE 1.1/2" MINIMUM BEARING AT PARALLEL MEMBERS.

6. SEE TYPICAL DETAILS FOR REINFORCEMENT REQUIRED AT OPENINGS THROUGH STEEL DECK. OPENING REINFORCING SHALL BE INSTALLED PRIOR TO SAW CUTTING OPENINGS.

|                                                                                                       |                                                                                                                           | STEE                                                                                                   | EL DECK ATTACHMENT                                                                                                                                        | SCHEDULE                                                                                       |                                                                      | STEEL DECK ATTACHMENT SCHEDULE                           |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------|
|                                                                                                       |                                                                                                                           | MECHANICAL                                                                                             |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |
| MARK                                                                                                  | SUPPORTS                                                                                                                  | PARALLEL                                                                                               | SIDE LAP                                                                                                                                                  | SUPPORTS                                                                                       | PARALLEL                                                             | SIDE LAP                                                 |
| SDA-1                                                                                                 | PW @ 36/7                                                                                                                 | PW @ 12" O.C.                                                                                          | 1.1/2" TSW @ 18" O.C.                                                                                                                                     | PAF @ 36/7                                                                                     | PSC @ 12" O.C.                                                       |                                                          |
|                                                                                                       |                                                                                                                           |                                                                                                        |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |
|                                                                                                       |                                                                                                                           |                                                                                                        |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |
|                                                                                                       |                                                                                                                           |                                                                                                        |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |
|                                                                                                       |                                                                                                                           |                                                                                                        |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |
|                                                                                                       |                                                                                                                           |                                                                                                        |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |
|                                                                                                       |                                                                                                                           |                                                                                                        |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |
| INTERLOCKI<br>3. BP = BUT<br>INTERLOCKI<br>4. PAF = PO<br>HILTI X-HS<br>HILTI X-EN                    | NG SEAMS.<br>FON PUNCH - 3/16" BI<br>NG SEAMS.<br>NDER ACTUATED FA<br>SN 24 AT SUPPORTS<br>NP-19 L15 AT SUPPOI            | UTTON PUNCH BETWE<br>STENER -<br>3/16" THROUGH 3/8" TI<br>RTS 1/4" THICK AND GF                        | EN ADJACENT PIECES OF DI<br>HICK PNEUTEK<br>REATER PNEUTEK<br>PNEUTEK                                                                                     | ECK. CRIMP SEAMS I<br>SDK61075 AT SUPPO<br>SDK63075 AT SUPPO<br>K64062 AT SUPPORT              | DRTS 0.113" THROUGH<br>DRTS 0.155" THROUGH<br>DRTS 0.187" THROUGH 0. | ICHING<br>1 0.155" THICK<br>1 0.250" THICK<br>312" THICK |
| 5 SDS = SFI                                                                                           | F DRILLING SCREW                                                                                                          | WHERE SIDELAPS H                                                                                       |                                                                                                                                                           | K66062 OR K66075 A<br>THE DECK PROVIDI                                                         | T SUPPORTS 0.281" T<br>ED SHALL HAVE A SCI                           | HICK AND GREATER<br>REWARI E SIDE                        |
| SEAM, UNO.<br>6. PSC = PR                                                                             | OPRIETARY SIDELAF                                                                                                         | CONNECTION - VERC                                                                                      | O SIDELAP CONNECTION 2 F                                                                                                                                  |                                                                                                | DK II SYSTEM, ASC DE                                                 | LTA GRIP FOR ASC                                         |
| DECKS.<br>7. SPACING<br>DECK SHEET                                                                    | AT SUPPORTS IS NC                                                                                                         | TED AS (DECK PANEL                                                                                     | WIDTH)/(ATTACHMENTS PER<br>RT.                                                                                                                            | R PANEL). FOR EXAM                                                                             | PLE: PW @ 36/4 INDIC                                                 | ATES A 36" WIDE                                          |
| 8. SEE PLAN<br>DENOTED A<br>9 ALL WELF                                                                | S AND SERS SHEETS<br>PROTECTED ZONE                                                                                       | S FOR ADDITIONAL FAU<br>S IN SFRS.<br>I BE DRY BEFORE WE                                               |                                                                                                                                                           | MBERS DENUTED AS                                                                               | SFRS. UMITATTAUHI                                                    | MENTS WHERE                                              |
| 9. ALL WELL<br>10. ALIGN AI<br>11. ALTERN/<br>PROPOSED /<br>SPECIFIED D<br>DECK TYPE /<br>12. PROVIDE | VD SECURE DECK IN<br>ATE MEANS OF DECK<br>ATTACHMENT SYSTE<br>ECK SHEAR. IF THE<br>AND PROFILE IS CON<br>LAPPED DECK SHEF | POSITION BEFORE WE<br>ATTACHMENT ARE PI<br>AND THE CODE EV<br>ALTERNATE METHOD<br>IPATIBLE WITH THE FA | ELDING DECK OK STODS TO<br>ELDING OR INSTALLING FAS<br>ERMITTED WITH APPROVAL<br>ALUATION REPORT DEMONS<br>IS APPROVED, IT IS THE RES<br>ASTENING SYSTEM. | SUPPORTS.<br>TENERS OR STUDS.<br>OF THE ENGINEER. T<br>TRATING THE SYSTE<br>PONSIBILITY OF THE | HE CONTRACTOR SH<br>M HAS THE STRENGT<br>CONTRACTOR TO EN            | ALL SUBMIT THE<br>H TO MEET THE<br>ISURE THAT THE        |
|                                                                                                       | 3 DECK 36/7 🦉                                                                                                             |                                                                                                        |                                                                                                                                                           |                                                                                                |                                                                      |                                                          |

6

![](_page_68_Figure_8.jpeg)

![](_page_69_Figure_0.jpeg)

| D1              | TYPICAL STEEL STUD WALL BRIDGING DETAIL |
|-----------------|-----------------------------------------|
| <u>\SW501</u> / | NO SCALE                                |

| STEEL STUD WALL SCHEDULE                                                               |                                                                                                                                           |                                                                                                           |                                                                                                                                     |                                                                                                                          |                                                                                                                                                    |                                                                                         |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|                                                                                        |                                                                                                                                           | WALL FRAMING                                                                                              |                                                                                                                                     |                                                                                                                          | STUD BRACING                                                                                                                                       |                                                                                         |
| MARK                                                                                   | STUDS                                                                                                                                     | SPACING                                                                                                   | BOTTOM<br>PLATE                                                                                                                     | TOP PLATE                                                                                                                | REQUIRED                                                                                                                                           | REMARKS                                                                                 |
| SSW-1                                                                                  | 600S162-33                                                                                                                                | 16"                                                                                                       | 600T125-54                                                                                                                          | 600T125-54                                                                                                               | FULLY BLOCKED                                                                                                                                      |                                                                                         |
|                                                                                        |                                                                                                                                           |                                                                                                           |                                                                                                                                     |                                                                                                                          |                                                                                                                                                    |                                                                                         |
| NOTES<br>1. TOP<br>2. FILL<br>STRUC<br>GAUGE<br>3. STITE<br>DRILLIN<br>SUBMIT<br>SUBST | :<br>AND BOTTOM P<br>ALL HOLES IN C<br>TURAL CONCRE<br>STEEL, OR EN<br>CH WELDING OF<br>NG SCREWS IS I<br>ITED FOR REVII<br>ITUTE WELDING | CLATE SHAL<br>CONNECTIO<br>ETE, HILTI X<br>GINEER APF<br>SILL TRAC<br>POSSIBLE E<br>EW. CHANG<br>FOR SELF | L BE CONNECTE<br>N HARDWARE W<br>-U 15 FASTENEF<br>PROVED EQUIVA<br>KS AND STUDS<br>UT THE WELD P<br>E ORDER REQU<br>-DRILLING SCRE | ED TO STUDS WI<br>/ITH: HILTI X-U F,<br>RS TO STRUCTU<br>ALENT, UNO.<br>TOGETHER IN L<br>PATTERN AND LO<br>ESTS BASED ON | ITH #8 SCREWS EA. S<br>ASTENERS W/ 1.1/2" E<br>RAL STEEL, AND #12<br>IEU OF FASTENING U<br>DCATIONS OF WELDIN<br>N THE CONTRACTOR'S<br>E ACCEPTED. | IDE UNO.<br>IMBEDMENT TO<br>SCREWS TO LIGHT<br>SING SELF-<br>IG MUCH BE<br>S REQUEST TO |

![](_page_69_Figure_3.jpeg)

# DUCTWORK/GRILLES

1

|                                      | POSITIVE PRESSURE DUCT - DROP                                                                                                                 |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | NEGATIVE PRESSURE DUCT - RISE                                                                                                                 |
|                                      | NEGATIVE PRESSURE DUCT - DROP                                                                                                                 |
|                                      | NEGATIVE PRESSURE DUCT - RISE                                                                                                                 |
|                                      | NEGATIVE PRESSURE DUCT - DROP                                                                                                                 |
| 2                                    | ROUND DUCT - RISE                                                                                                                             |
|                                      |                                                                                                                                               |
|                                      |                                                                                                                                               |
|                                      | UNDER FLOOR DUCT                                                                                                                              |
|                                      | TURNING VANES                                                                                                                                 |
|                                      | FRESH AIR LOUVER                                                                                                                              |
|                                      | RELIEF AIR OR EXHAUST AIR LOUVER                                                                                                              |
| 12X12<br>(2) 200                     | CEILING SUPPLY DIFFUSER                                                                                                                       |
|                                      | CEILING RETURN REGISTER                                                                                                                       |
| (2) 200<br>/ 12X12                   | CEILING EXHAUST REGISTER,                                                                                                                     |
|                                      | (BALANCE TO MATCH SUPPLY IF<br>RETURN CFM IS NOT SHOWN)<br>TOP FIGURES INDICATE:                                                              |
|                                      | SIDEWALL SUPPLY       NECK SIZE AND TYPE         REGISTER       BOTTOME FIGURE INDICATES:                                                     |
| 24X10<br>(2) 200                     | SIDEWALL EXHAUST ORQUANTITY AND CFM (IF MORE THANRETURN REGISTERONE OF SIMILAR CFM)                                                           |
| 12X12<br>(2) 200                     | CEILING SUPPLY DIFFUSER<br>WITH FLEXIBLE DUCT                                                                                                 |
| 12X12<br>(2) 200                     | CEILING AIR GRILLE WITH<br>FLEXIBLE DUCT                                                                                                      |
|                                      | CEILING RETURN AIR GRILE<br>W/ SOUND BOOT                                                                                                     |
|                                      | LINEAR DIFFUSER                                                                                                                               |
|                                      | TOP FIGURE: CONNECTION SIZE, ACTIVE LENGTH, SLOT (QUANTITY) - WIDTH<br>BOTTOM FIGURE: AIR FLOW AND QUANTITY (IF MORE THAN ONE OF SIMILAR CFM) |
|                                      | FLEXIBLE DUCT CONNECTION                                                                                                                      |
|                                      | FLEXIBLE DUCT                                                                                                                                 |
| <b>2</b> 12/8 FO                     | FLAT OVAL DUCT WITH NET INSIDE<br>DIMENSIONS SHOWN IN INCHES.                                                                                 |
|                                      | RECTANGULAR DUCT WITH NET INSIDE<br>DIMENSIONS SHOWN IN INCHES.                                                                               |
| <b>2</b> 12ø                         | ROUND DUCT WITH NET INSIDE DIMENSIONS<br>SHOWN IN INCHES.                                                                                     |
|                                      | INCLINED RISE WITH RESPECT TO AIR FLOW 15°                                                                                                    |
|                                      | INCLINED DROP                                                                                                                                 |
|                                      | R/W=1 ROUND DUCT SIMILAR TO RECTANGULAR                                                                                                       |
|                                      | RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND                                                                                                  |
|                                      | EXCEPT WHERE SHOWN OTHERWISE.                                                                                                                 |
| F 12/12 12ø                          | RECTANGULAR TO ROUND DUCT TRANSFORMATION                                                                                                      |
|                                      | R=WIDTH OF BRANCH DUCT DOWNSTREAM.<br>ELBOW TURNING VANE OPTIONAL.                                                                            |
|                                      | TAP ENTRY AREA EQUALS 150% OF BRANCH AREA                                                                                                     |
|                                      | HIGH EFFICIENCY FITTING                                                                                                                       |
|                                      | MANUAL VOLUME DAMPER                                                                                                                          |
| FD / /                               | FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD.                                                                                                    |
| , <u>⊢ ⊢ ⊢ ⊢</u> /<br>, <u>FSD</u> , | COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL                                                                                                 |
|                                      |                                                                                                                                               |
| <u> </u>                             | SMOKE DAMPER W/ ACCESS PANEL                                                                                                                  |
|                                      | BACK DRAFT DAMPER                                                                                                                             |
|                                      | ATC DAMPER                                                                                                                                    |
|                                      | ACCESS PANEL IN DUCT OR PLENUM                                                                                                                |
|                                      | HEATING OR COOLING COIL IN DUCT                                                                                                               |
|                                      | SINGLE DUCT AIR TERMINAL BOX VARIABLE OR<br>CONSTANT VOLUME. MIN. 1-1/2 TERMINAL INLET<br>SIZE STRAIGHT DUCT AT TERMINAL INLET.               |
|                                      | 4-WAY BLOW                                                                                                                                    |
|                                      | 3-WAY BLOW                                                                                                                                    |
|                                      | PATTERN<br>2-WAY BLOW                                                                                                                         |
|                                      | PATTERN                                                                                                                                       |
|                                      | 2-WAY BLOW<br>PATTERN                                                                                                                         |
|                                      | 1-WAY BLOW PATTERN                                                                                                                            |
| SD                                   | DUCT SMOKE DETECTOR                                                                                                                           |
|                                      |                                                                                                                                               |

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# LEGEND OF MECHANICAL SYMBOLS AND ABBREVIATIONS

3

# <u>PIPING</u>

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|         | - 0R -     |                                                                                  |
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|         | RPBP       | <u> </u>                                                                         |
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| SHUT OFF VALVE                                                                                          |        |
|---------------------------------------------------------------------------------------------------------|--------|
| BALL VALVE                                                                                              |        |
| BUTTERFLY VALVE                                                                                         |        |
| MOTOR OPERATED BUTTERFLY VALVE                                                                          |        |
| GATE VALVE                                                                                              |        |
| GATE VALVE - NON RISING STEM                                                                            |        |
| ANGLE VALVE                                                                                             |        |
| GLOBE VALVE                                                                                             |        |
| PLUG VALVE                                                                                              |        |
| SHUT OFF PLUG VALVE FOR                                                                                 |        |
| CHECK VALVE                                                                                             |        |
| LATERAL STRAINER WITH BLOW-OFF VALVE,<br>PROVIDE HOSE END WITH CAP WHERE DISCH<br>IS NOT PIPED TO DRAIN | HARGE  |
| F&T=FLOAT & THERMOSTATIC                                                                                |        |
| REDUCED PRESSURE BACKFLOW<br>PREVENTOR W/ DRAIN PAN                                                     |        |
| PRESSURE REDUCING VALVE EXTERNAL PRE                                                                    | ESSURE |
| PRESSURE REDUCING VALVE SELF CONTAIN                                                                    | ED     |
| ATC - 2 WAY VALVE                                                                                       |        |
| ATC - 3 WAY VALVE                                                                                       |        |
| SOLENOID VALVE                                                                                          |        |
| CALIBRATED BALANCING<br>VALVE WITH GPM INDICATED                                                        |        |
| VENTURI FLOW METER                                                                                      |        |
| FLOW METER ORIFICE                                                                                      |        |
| RELIEF VALVE                                                                                            |        |
| AIR VENT-MANUAL                                                                                         |        |
| AIR VENT-AUTO                                                                                           |        |
| FLOW SWITCH                                                                                             |        |
| PRESSURE SWITCH                                                                                         |        |
| TEMPERATURE AND PRESSURE<br>TEST PORT                                                                   |        |
| THERMOMETER WELL                                                                                        |        |
| THERMOMETER - TEMP RANGE AS INDICATED                                                                   | D      |
| PRESSURE GAUGE WITH<br>SHUT OFF PLUG VALVE                                                              |        |
| PRESSURE GAUGE WITH PIGTAIL                                                                             |        |
| UNION                                                                                                   |        |
| FLANGE                                                                                                  |        |
| FLEXIBLE EXPANSION JOINT                                                                                |        |
| REDUCER                                                                                                 |        |
| ECCENTRIC REDUCER                                                                                       |        |
| BRANCH - BOTTOM CONNECTION                                                                              |        |
| BRANCH - TOP CONNECTION                                                                                 |        |
| BRANCH - SIDE CONNECTION                                                                                |        |
| RISE OR DROP                                                                                            |        |
| RISER - DOWN (ELBOW)                                                                                    |        |
| RISER - UP (ELBOW)                                                                                      |        |
| PIPE CAP                                                                                                |        |
| ARROW INDICATES DIRECTION OF FLOW IN                                                                    |        |
| LEADER INDICATES DOWNWORD SLOPE                                                                         |        |
| VALVE IN RISE                                                                                           |        |
| 90° ELBOW                                                                                               |        |
| 45° ELBOW                                                                                               |        |

| <u>PLUMBING</u> |                                          |
|-----------------|------------------------------------------|
|                 | THERMOSTATIC MIXING VALVE                |
| ə×              | HOSE BIBB                                |
|                 | FLOOR SINK                               |
| 0               | FLOOR DRAIN                              |
|                 | FLOOR CLEAN-OUT<br>OR CLEAN-OUT TO GRADE |
| Ø               | ROOF DRAIN                               |
| Î               | DOWNSPOUT NOZZLE                         |
| OVTR            | VENT THRU ROOF                           |
| <b>P</b>        | WATER HAMMER ARRESTOR                    |
|                 | CLEAN-OUT                                |
| ۲<br>8۱         | FILL PORT                                |
|                 | DRAIN PAN AND P-TRAP                     |
| (NAME) O        | FIXTURE FROM LEVEL ABOVE                 |
| XX              | DEMOLITION                               |
|                 |                                          |

|                                   | HOSE BIBB                  |
|-----------------------------------|----------------------------|
|                                   | FLOOR SINK                 |
|                                   | FLOOR DRAIN                |
| – <b>φ</b> <sup>FCO</sup><br>COTG | FLOOR CLEAN<br>OR CLEAN-OU |
|                                   | ROOF DRAIN                 |
|                                   | DOWNSPOUT                  |
| /TR                               | VENT THRU RO               |
|                                   | WATER HAMM                 |
| -11                               | CLEAN-OUT                  |
|                                   | FILL PORT                  |
| /                                 | DRAIN PAN AN               |
|                                   |                            |

| OOR DRAIN                             |
|---------------------------------------|
| OOR CLEAN-OUT<br>R CLEAN-OUT TO GRADE |
| DOF DRAIN                             |
| OWNSPOUT NOZZLE                       |
| ENT THRU ROOF                         |
| ATER HAMMER ARRESTOR                  |

| CHWR                                   |
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| E(NAME)                                |
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| HWR                                    |
| HWS                                    |
| RD                                     |
| RDO                                    |
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# <u>EQUIPMENT</u>

| UNIT HEATER |
|-------------|
| INLINE PUMP |
| INLINE PUMP |
| <br>FAN     |

# <u>FIRE</u>

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HOSE VALVE /ITH TER

# ANNOTATIONS

| <u>P-1</u>                                                        |
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| A<br>M-101                                                        |
| A<br>M101                                                         |
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| VALVL                              |
|------------------------------------|
| NRS GATE VALVE WITH<br>SUPERVISION |
| FLOW SWITCH                        |
| FIRE RISER                         |
| SPRINKLER HEAD                     |
| FIRE SPRINKLER WATE                |
|                                    |

PLUMBING FIXTURES POINT OF CONNECTION

SECTION TAG TOP FIGURE: SECTION NUMBER BOTTOM FIGURE: SHEET NUMBER

<u>DETAIL TAG</u> TOP FIGURE: DETAIL NUMBER BOTTOM FIGURE: SHEET NUMBER

<u>DETAIL TAG</u> TOP FIGURE: EQUIPMENT TYPE BOTTOM FIGURE: UNIT NUMBER

EQUIPMENT IDENTIFICATON TOP FIGURE: EQUIPMENT TYPE AND NUMBER BOTTOM FIGURE: UNIT SIZE

KEYED NOTE IDENTIFICATION

SWITCH

SENSOR

THERMOSTAT

NIGHT THERMOSTAT

ALIGNMENT GUIDE

ANCHOR

4

# <u>LINETYPES</u> \_\_\_\_\_

| CHWS    | CHILLED W             |
|---------|-----------------------|
| CHWR    | CHILLED V             |
|         | DOMESTIC              |
|         | DOMESTIC              |
|         | DOMESTIC<br>(DHWR)    |
| E(NAME) | EXISTING I            |
|         | EXISTING I<br>REMOVED |
| G       | NATURAL               |
| HWR     | HEATING H             |
| HWS     | HEATING H             |
| RD      | ROOF DRA              |
| RDO     | ROOF DRA              |
|         | WASTE (BI             |
| W       | WASTE (AI             |
|         | VENT (WA              |

CHILLED WATER SUPPLY CHILLED WATER RETURN DOMESTIC COLD WATER (DCW) DOMESTIC HOT WATER (DHW) DOMESTIC HOT WATER RETURN 5

EXISTING PIPING

EXISTING PIPING TO BE REMOVED NATURAL GAS

HEATING HOT WATER RETURN

HEATING HOT WATER SUPPLY

ROOF DRAIN

ROOF DRAIN OVERFLOW

WASTE (BELOW GRADE)

WASTE (ABOVE GRADE)

VENT (WASTE)

| SHEET INDEX - MECHANICAL |                                    |  |  |  |  |  |
|--------------------------|------------------------------------|--|--|--|--|--|
| SHEET NUMBER             | SHEET TITLE                        |  |  |  |  |  |
| DEMOLITION               |                                    |  |  |  |  |  |
| MD111.1                  | MECHANICAL DEMOLITION PLANS        |  |  |  |  |  |
| MPD111.1                 | MECHANICAL PIPING DEMOLITION PLANS |  |  |  |  |  |
| MECHANICAL               |                                    |  |  |  |  |  |
| M001                     | MECHANICAL SYMBOLS AND LEGEND      |  |  |  |  |  |
| M002                     | MECHANICAL GENERAL NOTES           |  |  |  |  |  |
| M111.1                   | MECHANICAL FLOOR PLANS             |  |  |  |  |  |
| M121.1                   | ROOF MECHANICAL PLANS              |  |  |  |  |  |
| M801                     | MECHANICAL ZONE PLANS              |  |  |  |  |  |
| M501                     | MECHANICAL DETAILS                 |  |  |  |  |  |
| M502                     | MECHANICAL DETAILS                 |  |  |  |  |  |
| M601                     | MECHANICAL SCHEDULES               |  |  |  |  |  |
| MP111.1                  | MECHANICAL PIPING FLOOR PLANS      |  |  |  |  |  |
| DEMOLITION               | DEMOLITION                         |  |  |  |  |  |
| PD111.1                  | PLUMBING DEMOLITION PLANS          |  |  |  |  |  |
| PLUMBING                 | •                                  |  |  |  |  |  |
| P111.1                   | PLUMBING FLOOR PLANS               |  |  |  |  |  |
| P401                     | ENLARGED PLUMBING PLANS            |  |  |  |  |  |
| P501                     | PLUMBING DETAILS AND SCHEDULES     |  |  |  |  |  |

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![](_page_70_Picture_50.jpeg)

# FIRE PROTECTION GENERA

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- NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTA COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWOR AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PRO FAILURE TO COMPLY WILL RESULT IN THE FIRE PROTECTION REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS
- ALL WORK DONE SHALL BE PERFORMED WITH WATER COM 2 CONTAINMENT OF WATER IS NECESSARY TO PREVENT WA SURROUNDING AREA.
- COORDINATE EXACT LOCATION OF PIPING WITH STRUCTUR REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL COI MECHANICAL AND PLUMBING PIPING, AND ALL OTHER TRAD CONDITIONS.
- FIRE SUPPRESSION CONTRACTOR SHALL BE RESPONSIBLE 4. REROUTE ANY AND ALL FIRE PROTECTION PIPING, VALVING SYSTEMS, OTHERWISE WITHIN THE FIRE SUPPRESSION DI OF WHO INSTALLED THEM OR WHEN THEY WERE INSTALLE ACCOMMODATE MECHANICAL, PLUMBING, ELECTRICAL OR COORDINATE WORK WITH MECHANICAL, ELECTRICAL, PLU

| IRE PROTECTION GENERAL NOTES                                                                                                                                                                                                                                                                                                                                                                                                         | PLUMBING GENERAL NOTES |                                                                                                                                                                                                                                                     |     | MECHANICAL PIPINO                                                                                        |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------|--|
| NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE<br>COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING<br>AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION PIPING.<br>FAILURE TO COMPLY WILL RESULT IN THE FIRE PROTECTION REMOVAL AND                                                                                                                                                 | 1.                     | UNLESS OTHERWISE NOTED, SLOPE PIPE AS FOLLOWS: WASTE BRANCHES: 1/4"<br>PER FOOT; WASTE MAINS: 1/4" PER FOOT; ROOF DRAIN/ROOF DRAIN OVERFLOW:<br>1/8" PER FOOT.                                                                                      | 1.  | PROVIDE ALL MATERIALS AND EQUIPM<br>TO INSTALL COMPLETE AND OPERABL<br>DRAWINGS, AS SPECIFIED AND AS REC |  |
| REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.<br>ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND.                                                                                                                                                                                                                                                                                                           | 2.                     | ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND.<br>CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING<br>AREAS ON FLOORS BELOW.                                                                                          | 2.  | UNLESS OTHERWISE NOTED: ALL MEC<br>ABOVE DUCTWORK AND TIGHT TO UNI                                       |  |
| SURROUNDING AREA.                                                                                                                                                                                                                                                                                                                                                                                                                    | 3.                     | PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE                                                                                                                                                                                  | 3.  | WHERE VALVING OR EQUIPMENT IS LC<br>ACCESS DOOR IN CEILING. MINIMUM A                                    |  |
| DRDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS,<br>LECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK,<br>CHANICAL AND PLUMBING PIPING, AND ALL OTHER TRADES AND ALL EXISTING<br>IDITIONS.<br>E SUPPRESSION CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND/OR<br>ROUTE ANY AND ALL FIRE PROTECTION PIPING, VALVING, SUPPORTS OR<br>TEMS, OTHERWISE WITHIN THE FIRE SUPPRESSION DISCIPLINE REGARDI ESS | 4.                     | ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE                                                                                                                                                                                | 4.  | NO PIPING TO RUN OVER ELECTRICAL<br>EQUIPMENT WITH A 42" DEEP ZONE IN                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5.                     | NO PIPING TO RUN OVER ELECTRICAL PANELS, VED'S OR MCC'S, PROTECT                                                                                                                                                                                    | 5.  | SLEEVE PIPING THRU WALLS/FOUNDA                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.                     | EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.                                                                                                                                                                                | 6.  | INSTALL PIPING SO THAT ALL VALVES,<br>OTHER APPURTENANCES REQUIRING                                      |  |
| OF WHO INSTALLED THEM OR WHEN THEY WERE INSTALLED, IN ORDER TO<br>ACCOMMODATE MECHANICAL, PLUMBING, ELECTRICAL OR OTHER SYSTEMS.                                                                                                                                                                                                                                                                                                     | 6.                     | COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL, EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS.                                                                                                                        | 7.  | ALL VALVES SHALL BE INSTALLED SO T<br>EQUIPMENT OR PIPING ON EQUIPMENT                                   |  |
| COORDINATE WORK WITH MECHANICAL, ELECTRICAL, PLUMBING OR OTHER<br>CONTRACTORS UNTIL SUBSTANTIAL COMPLETION OF PROJECT.                                                                                                                                                                                                                                                                                                               | 7.                     | CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.                                                                                                                                              | 8.  | PROVIDE AN AIR VENT AT THE HIGH PO<br>CHILLED WATER PIPING SYSTEM.                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8.                     | PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING, IS<br>APPROXIMATE. IT IS UP TO THE CONTRACTOR TO FIELD VERIFY THE EXACT                                                                                                            | 9.  | INSTALL ALL PIPING WITHOUT FORCING                                                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 9.                     | REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS,                                                                                                                                                                                       | 10. | ALL VALVES SHALL BE ADJUSTED FOR                                                                         |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10                     | DIMENSIONS, AND OTHER REQUIREMENTS.                                                                                                                                                                                                                 | 11. | PROVIDE ISOLATION VALVES AT EACH<br>NOT SHOWN.                                                           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10.                    | ACCORDINGLY. INSTALL FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.                                                                                                                                                                             | 12. | ALL PIPE AND DUCT SIZES SHALL REM<br>DIRECTION OF FLOW, UNTIL SHOWN O                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 11.                    | LOCATE ALL VENTS MINIMUM 10' AWAY FROM AIR INTAKES.                                                                                                                                                                                                 | 13. | COORDINATE LOCATION OF THERMOS<br>PLANS, MOUNT THERMOSTAT AT HEIG                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 12.                    | INSTALL ALE DOMESTIC WATER LINES BELOW DUCTWORK.<br>INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING<br>VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD<br>CEILINGS.                                                | 14. | CONTRACTOR TO PROVIDE VALVE IDE<br>TILES WHERE VALVES ARE LOCATED.                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 14.                    | MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC.<br>NEAR CEILING HEIGHT FOR ACCESSIBILITY.                                                                                                                                        |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 15.                    | INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER<br>MANUFACTURERS RECOMMENDATION.                                                                                                                                                |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 16.                    | COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS NECESSARY.                                                                                                                                                                 |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 17.                    | COORDINATE EXACT LOCATION OF PLUMBING WITH STRUCTURAL MEMBERS,<br>LIGHTS, REFLECTED CEILING, CABLE TRAY, DUCTWORK, MECHANICAL PIPING, FIRE<br>PROTECTION AND OTHER TRADES, TYPICAL.                                                                 |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 18.                    | COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR<br>SINK WITH ARCHITECTURAL AND STRUCTURAL, TYPICAL.                                                                                                                              |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19.                    | ACCESS DOORS SHALL BE PROVIDED TO ALL WATER HAMMER ARRESTORS IN WALLS OR ABOVE CEILINGS.                                                                                                                                                            |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20.                    | SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER TO/FROM SINGLE FIXTURE.                                                                                                                                              |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 21.                    | HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER THE LAVATORY.                                                                                                                                                      |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 22.                    | COORDINATE EXACT LOCATION OF PLUMBING PIPING WITH STRUCTURAL<br>MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY,<br>ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND FIRE PROTECTION PIPING,<br>AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS. |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 23.                    | LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN<br>ACCESSIBLE LOCATIONS. PROVIDE 24"X24" ACCESS PANEL WHERE ITEM IS<br>LOCATED ABOVE A HARD CEILING.                                                                                |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 24.                    | ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.                                                                                                                                          |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      | 25.                    | INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO THE FOLLOWING.                                                                                                                                                |     |                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | a) SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS. USE 4" NPS FOR LARGER.<br>DRAINAGE PIPING UNLESS LARGER CLEANOUT IS INDICATED.                                                                                                                        |     |                                                                                                          |  |

3

b) LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR LARGER PIPING.

c) LOCATE AT THE BASE OF EACH VERTICAL STACK.

| GENERAL NOTES                                                                            |
|------------------------------------------------------------------------------------------|
| IT AND PERFORM ALL LABOR REQUIRED<br>PIPING SYSTEMS AS INDICATED ON THE<br>IRED BY CODE. |
| NICAL PIPING IS OVERHEAD TO RUN<br>RSIDE OF STRUCTURE.                                   |
| ATED ABOVE HARD CEILINGS PROVIDE AN<br>CESS DOOR SIZE OF 24"X24".                        |
| NELS, VFD'S OR MCC'S. PROTECT<br>CONT OF PANELS, VFD'S, AND MCC'S.                       |
| INS WHERE REQUIRED.                                                                      |
| RAINERS, UNIONS, TRAPS, FLANGES, AND<br>CESS ARE ACCESSIBLE.                             |
| AT VALVE REMAINS IN SERVICE WHEN<br>IDE OF VALVE IS REMOVED.                             |
| T OF EACH DROP IN THE HEATING AND                                                        |
| DR SPRINGING.                                                                            |
| NOOTH AND EASY OPERATION.                                                                |
| (IT/ENTRANCE INTO SHAFT WHETHER OR                                                       |
| I THE SAME SIZE SHOWN, IN THE<br>ERWISE.                                                 |
| T WITH ARCHITECTURAL FURNISHING<br>AS SPECIFIED ON ARCHITECTURAL.                        |
| IFICATION AND LOCATION ON ALL CEILING                                                    |

4

# MECHANICAL GENERAL NOTES

| COORDINATE EXACT PLACEMENT OF DIFFUSERS, GRILLES, AND REGISTERS WITH ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL. |
|---------------------------------------------------------------------------------------------------------------------|
|                                                                                                                     |

- 2. SEE DETAIL FOR DIFFUSER CONNECTIONS TO DUCTWORK, TYPICAL. BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE NECK INLET SIZE OF THE
- DIFFUSERS, REGISTER OR GRILLE IT SERVES UNLESS NOTED OTHERWISE, TYPICAL.
- 4. COORDINATE EXACT MOUNTING LOCATION OF ALL THERMOSTATS WITH LATEST REVISION OF ARCHITECTURAL ELEVATION AND FURNISHINGS PLANS, TYPICAL.
- 5. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS. SEE SPECIFICATION, TYPICAL.
- THE MECHANICAL CONTRACTOR SHALL PROVIDE FIRE, SMOKE OR COMBINATION 6. FIRE/SMOKE DAMPERS AT ALL LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS AND AS REQUIRED TO MEET THE INTEGRITY OF ALL SMOKE AND FIRE PARTITIONS. THE CONTRACTOR SHALL REFER TO THE LATEST ARCHITECTURAL LIFE SAFETY PLANS FOR ALL FIRE AND SMOKE PARTITION LOCATIONS. DAMPERS ARE TO BE PROVIDED WITH SHUTOFF/TEST SWITCH AT EACH LOCATION.
- 7. PROVIDE AND INSTALL TURNING VANES IN ALL SQUARE LOW PRESSURE DUCTWORK AT ELBOWS OR TEES, TYPICAL.
- INSTALL ALL TERMINAL BOXES IN EASILY ACCESSIBLE AND SERVICEABLE LOCATIONS, MEETING ALL MANUFACTURERS REQUIRED CLEARANCES ON EACH SIDE, SEE DETAILS, TYPICAL.
- 9. CONTRACTOR SHALL OFF-SET, TRANSITION AND PROVIDE CHANGES AS REQUIRED FOR COORDINATION WITH OTHER TRADES, TYPICAL.
- 10. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. REFER TO MECHANICAL SPECIFICATIONS FOR EXTENT OF DUCT INSULATION AND LINER.
- 11. PROVIDE AND INSTALL REMOTE DAMPER OPERATORS FOR ALL DAMPERS INSTALLED ABOVE INACCESSIBLE CEILINGS, SEE MECHANICAL SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS, TYPICAL.
- 12. PROVIDE AND INSTALL HIGH EFFICIENCY TAKE-OFF FITTINGS AND BALANCING DAMPER AT ALL BRANCH CONNECTIONS TO LOW PRESSURE DUCTWORK.
- 13. PROVIDE AND INSTALL HIGH EFFICIENCY OR CONICAL TAKE-OFFS AT ALL BRANCH CONNECTIONS TO MEDIUM PRESSURE DUCTWORK.
- 14. WHERE DUCTWORK CROSSES, SUPPLY DUCTWORK IS USUALLY BELOW RETURN AND EXHAUST DUCT. RETURN DUCTWORK IS USUALLY BELOW EXHAUST DUCTS.
- 15. AT LOCATIONS WHERE DIFFUSERS OR GRILLES ARE UNDER DUCTWORK, CONTRACTOR TO FABRICATE TRANSITION BOOT FROM FLEX CONNECTION TO DIFFUSER OR GRILLE WITH BALANCING DAMPER, TYPICAL.
- 16. THE MECHANICAL CONTRACTOR SHALL PROVIDE CEILING MOUNTED ACCESS DOORS FOR ALL FIRE, SMOKE AND COMBINATION FIRE/SMOKE DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING. FIELD VERIFY EXACT INSTALLATION LOCATIONS PRIOR TO COMMENCING WORK AND COORDINATE INSTALLATIONS WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS.
- 17. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.
- 18. ALL VAV BOXES TO HAVE REHEAT COILS, EXCEPT AS NOTED. PROVIDE A MINIMUM OF TWO DUCT DIAMETERS OF STRAIGHT ROUND DUCT TO INLET OF VAV BOX. BOX SHALL BE HARD CONNECTED (CONICAL) TO MEDIUM PRESSURE DUCT, TYPICAL.
- 19. PROVIDE ACCESS DOORS TO ACCESS VAV BOX CONTROLS ABOVE HARD CEILINGS. PROVIDE MIN. 24" X 24".
- 20. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.
- 21. ALL DUCTWORK ABOVE HARD CEILINGS SHALL BE EXTENDED ALL THE WAY TO THE SUPPLY DIFFUSERS, RETURN GRILLS OR EXHAUST GRILLS WHETHER OR NOT HARD DUCT OR FLEX DUCT IS SHOWN ON PLANS. FLEX DUCT WILL NOT BE ALLOWED TO DIFFUSERS OR GRILLS ABOVE HARD CEILINGS. FLEX DUCT WILL BE REQUIRED IN AREAS ABOVE T-BAR CEILINGS.
- 22. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, ALL OTHER TRADES AND ALL OTHER EXISTING CONDITIONS.
- 23. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- 24. PROVIDE ACCESS TO ALL TEMPERATURE CONTROLS ABOVE CEILING. LOCATE IN ACCESSIBLE LOCATION. WHERE THERE ARE HARD CEILINGS THE CONTRACTOR SHALL PROVIDE 24"X24" ACCESS DOOR.

![](_page_71_Figure_35.jpeg)


# (#)KEYED NOTES

1. DEMOLISH EXISTING MEDIUM PRESSURE DUCT TO THIS APPROXIMATE LOCATION AND CAP AIRTIGHT.

6

- 2. DEMOLISH EXISTING VF FAN AND ALL ASSOCIATED DUCTING, GRILLES AND CONTROLS.
- 3. DEMOLISH EXISTING VAV BOX AND ALL ASSOCIATED
- DUCTING, GRILLES.4. DEMOLISH EXISTING RETURN GRILLES AND DUCTING AS
- REQUIRED. TYPICAL.
- 5. DEMOLISH EXISTING FP UNIT AND ALL ASSOCIATED DUCTING, GRILLES AND CONTROLS.
- DEMOLISH EXISTING CEILING CASSETTE, LINE SET, ASSOCIATED CONDENSING UNIT ON ROOF AND CONTROLS.
- 7. EXISTING VF FAN SYSTEM TO REMAIN INTACT.
- EXISTING RETURN GRILLE AND DUCTING TO REMAIN INTACT.
   DEMOLISH EXISTING TOE KICK GRILLE AND GRILLE ON TOP OF CABINET ASSOCIATED TO FINNED TUBE LOCATED IN CABINET.

10. DEMOLISH EXISTING TRANSFER DUCT.





# **KEYED NOTES (#**)

1. DEMOLISH EXISTING FINNED TUBE AND ALL ASSOCIATED PIPING AND CONTROLS.

- DEMOLISH EXISTING HOT WATER SUPPLY / RETURN PIPING TO THIS APPROXIMATE LOCATION AND CAP.

- 4. DEMOLISH EXISTING CONTROLS.
- 5. REMOVE EXISING CONTROL AT THIS APPROXIMATE LOCATION TO REMAIN INTACT.





# **KEYED NOTES**

- OFFSETS AS REQUIRED TO CONNECT TO RETURN PLENUM
- 5. DUCTING TO BE ROUTED IN OPEN SPACE BETWEEN JOISTS.





# **KEYED NOTES**

1. PROVIDE 3-WAY VALVE AT MAU-1.







HOSE END AND CHAINED



SUPPORT SOUND BOOT







1

# 7 PIPING RESTRAINT DETAIL



# 6 PIPE SUPPORT DETAIL NOT TO SCALE

END VIEW

ANGLE BRACKET-HANGER ROD

PIPE SLEEVE WITH----I.D. 1/4" LARGER THAN BOLT





-STEEL OFFSET

WALL BRACKET

WELDED STEEL WALL BRACKET

-U-BOLTS

CINCH ANCHORS



4

TURNBUCKLE

ANGI F-

THRU-BOL1

CABLE RESTRAINT-

-BOLT TO ANGLE WELD TO PIPE HANGER

ALL HANGERS

AND SUPPORTS.

ANGLE-----

I-BEAM

CLAMPS

-EYE BOLTS

TURNBUCKLE-

 $\mathbb{D}$ 

-ANGLE

END VIEW

BRACKET

d F@m

-WOOD JOIST

4, 4.





# **GRILLES, REGISTERS AND DIFFUSERS**

2

| ID           | MANUFACTURER | MODEL |                                                                                                                                                                                                                                                 | DESCRIPTIO                               | N                                                    |
|--------------|--------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------|
| CD-1         | PRICE        | SPD   | FACE STYLE: SQUARE PLAQUE DIFFUSER<br>FACE SIZE: 24" x 24", 20" x 20" OR 12" x 12"<br>AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE<br>APPLICATION: ENGINEERED VAV SYSTEMS<br>MATERIAL: STEEL<br>FINISH: COORDINATE COLOR WITH ARCHITECT      | MC<br>(C/<br>DA<br>VEI<br>MA<br>DA<br>RE | )UN<br>W (<br>.TTE<br>.MP<br>.LO(<br>.X N<br>.MP<br> |
| RG-1<br>EG-1 | PRICE        | PDDR  | FACE STYLE: PERFORATED RETURN AIR UNIT<br>FACE SIZE: 24" x 24", 24" x 12", 16" x 16", OR 12" x 12"<br>AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE.<br>APPLICATION: AIR RETURN<br>MATERIAL: STEEL<br>FINISH: COORDINATE COLOR WITH ARCHITECT | MC<br>(C/<br>DA<br>VE<br>MA<br>RE        | )UN<br>W (<br>MP<br>LO(<br>X N                       |

NOTE:

1

1

1. UNLESS NOTED OTHERWISE CD-1 TYPICAL SQUARE DIFFUSER; RG-1 TYPICAL SQUARE RETURN AIR GRILLE; EG-1 TYPICAL EXHAUST AIR GRILLE. 2. UNLESS NOTED OTHERWISE RUNOUTS TO DIFFUSER ARE TO BE SAME SIZE AS NECK SIZE.

UNTING-FRAME: SURFACE OR LAY-IN, W CEILING TYPE.)

TTERN: 360° RADIAL HORIZONTAL AIR PATTERN

MPER: OPPOSED BLADE LOCITY: 500 FPM MAX

X NC - 30

MPER: NONE

MOVABLE FACE

UNTING-FRAME: SURFACE OR LAY-IN,

V CEILING TYPE.) MPER: NONE

LOCITY: 500 FPM MAX

X NC - 30

MOVABLE FACE & CORE

|         |                           |          |          |          |           |         |       | MAKE-UF    | P AIR HANDL | ER UNIT SCI | IEDULE |        |            |        |       |      |      |         |                         |        |    |
|---------|---------------------------|----------|----------|----------|-----------|---------|-------|------------|-------------|-------------|--------|--------|------------|--------|-------|------|------|---------|-------------------------|--------|----|
|         |                           |          |          |          |           | HEATING |       |            |             |             |        |        | ELECTRICAL |        |       |      |      |         | PHYSICAL                |        |    |
|         |                           |          |          | EXTERNAL |           |         |       | ENTER/     |             |             |        |        |            |        |       |      |      |         |                         |        |    |
|         |                           |          | OUTSIDE  | STATIC   |           | HEATING |       | LEAVING    |             |             |        |        | SUPPLY     | SUPPLY |       |      |      |         | HEIGHT /                |        |    |
|         | MANUF.                    |          | AIR FLOW | PRESSURE |           | MINIMUM |       | AIR TEMP.  |             |             | HEAD   |        | MOTOR      | MOTOR  |       |      |      |         | WIDTH /                 |        |    |
|         | AND                       |          | RATE     | DROP     |           | SUPPLY  | LOAD  | DB         | EWT / LWT   | FLOW RATE   | LOSS   |        | SIZE       | SIZE   | MOTOR |      |      |         | LENGTH                  | WEIGHT |    |
| ID      | MODEL NO.                 | LOCATION | (CFM)    | (IN H20) | FILTER    | (CFM)   | (MBH) | (DEG. F)   | (°F)        | (GPM)       | (FT)   | FLUID  | (HP)       | (BHP)  | RPM   | MCA  | MOCP | V/PH    | (IN)                    | (LBS)  | NO |
| MAU-1 ( | GREENHECK MSX-P122-H22-MF | OUTSIDE  | 5,240    | 0.75     | 2" MERV 8 | 2100    | 185.3 | -20 / 85.7 | 180 / 151   | 14          | 0.45   | 50% PG | 3          | 1.24   | 1180  | 23.8 | 40   | 208 / 1 | 45.02 / 44.05 / 108.201 | 1480   | 1. |
|         |                           |          |          |          |           |         |       |            |             |             |        |        |            |        |       |      |      |         |                         |        |    |

1. PERFORMANCE LISTED AT 7,000 ASL.

3

2. DOUBLE WALL, WALL INSULATION 1" FIBERGLASS, ACCESS AND CONNECTIONS, HINGED ACCESS DOORS, DIRECT DRIVE, MIXED FLOW PLENUM, NEOPRENE SUPPLY FAN VIRBRATION ISOLATION. UNIT CONTROLS - TERMINAL STRIP, DIRTY FILTER SWITCH, FACTORY MOUNTED AND WIRED SERVICE LIGHTS, SERVICE OUTLET (SEPERATE 120V POWER CONNECTION).

3. PROVIDE WITH WEATHERHOOD - LOUVER WITH ALUMINUM MESH. 4. PROVIDE WITH PRE-WIRED DISCONNECT.



4

MANUFACTURER AND MODEL NUMBER LOCATION ID EF-1.1 GREENHECK G-097-VG ROOF EF-1.2 GREENHECK G-097-VG ROOF EF-1.3 GREENHECK G-097-VG ROOF EF-1.4 GREENHECK G-097-VG ROOF RF-1.1 GREENHECK G-240-VG ROOF VF-1.1 GREENHECK G-100-VG SEE PLANS VF-1.2 GREENHECK G-100-VG SEE PLANS

1. AIRFLOWS AT DESIGN ELEVATION OF 7,000'.

4

2. PROVIDE EC MOTOR (DIAL), SUB-HINGED BASE, 16" TALL ROOF CURB.

3. PROVIDE WITH DISCONNECT, INSTALLED BY DIV. 26.

4. PROVIDE EC MOTOR (0-10VDC INPUT), SUB-HINGED BASE, 16" TALL ROOF CURB.

6. FAN TO MODULATE TO CONTROL BUILDING STATIC TO +/ - 0.05"

5

|   |              |              |        |                     |         |         | CABIN   | ET UNIT  | HEATE   | R SC  | HEDULE    |         |      |           |       |          |          |         |                |        |   |
|---|--------------|--------------|--------|---------------------|---------|---------|---------|----------|---------|-------|-----------|---------|------|-----------|-------|----------|----------|---------|----------------|--------|---|
|   |              |              |        |                     |         | AIR     |         |          |         | FLUID |           |         |      | ELECTRICA | L     |          | PHYSICAL |         |                |        | Τ |
|   |              |              |        |                     |         |         |         |          |         |       |           |         |      |           |       |          | MINIMUM  |         |                |        |   |
|   |              |              |        |                     |         |         |         | ENTERING | LEAVING |       | ENTERING/ |         |      |           |       |          | NO.      | MINIMUM | LENGTH /       |        |   |
|   |              |              |        |                     |         | AIRFLOW |         | TEMP.    | TEMP.   | FLOW  | LEAVING   |         | HEAD | MOTOR     | MOTOR | VOLT/    | ROWS/    | PIPE    | WIDTH /        |        |   |
|   |              |              | AREA   |                     | USE     | RATE    | LOAD    | DB       | DB      | RATE  | TEMP.     | WORKING | LOSS | SIZE      | SPEED | PH/      | FINS PER | SIZE    | HEIGHT         | WEIGHT |   |
|   | MANUFACTURER | MODEL NUMBER | SERVED | CONFIGURATION       | TYPE    | (CFM)   | (BTU/H) | (°F)     | (°F)    | (GPM) | (°F)      | FLUID   | (FT) | (HP)      | (RPM) | HZ       | INCH     | (IN)    | (IN)           | (LBS)  | N |
| 1 | RITTLING     | RFRC-420-02  | AREA A | HORIZONTAL, CEILING | HEATING | 220     | 7300    | 60       | 99.1    | 0.8   | 180 / 160 | 50% PG  | 0.1  | 1/30      | 1550  | 120/1/60 | 1 / 12   | 3/4     | 38.2 / 10 / 24 | 100    |   |
| 2 | RITTLING     | RFRC-420-02  | AREA A | HORIZONTAL, CEILING | HEATING | 220     | 7300    | 60       | 99.1    | 0.8   | 180 / 160 | 50% PG  | 0.1  | 1/30      | 1550  | 120/1/60 | 1 / 12   | 3/4     | 38.2 / 10 / 24 | 100    |   |
|   |              |              |        |                     |         |         |         |          |         |       |           |         |      |           |       |          |          |         |                |        |   |

1. ALL CAPACITIES AT 7,000 FEET ELEVATION.

2. PROVIDE INTEGRATED T-STAT.

3. PROVIDE WITH DISCONNECT, INSTALLED BY DIV. 26.

|        |              |       |         |         |         |         |           | VAV B     | OX SCH    | IEDUL  | E        |       |          |          |         |          |      |      |           |     |
|--------|--------------|-------|---------|---------|---------|---------|-----------|-----------|-----------|--------|----------|-------|----------|----------|---------|----------|------|------|-----------|-----|
|        |              |       | AIR     |         |         |         |           |           |           |        | FLUID (2 | ?)    |          |          |         |          | COIL |      |           |     |
|        |              |       | COOLING | HEATING | UPPER   | LOWER   | ENTERING  | LEAVING   | S.P. LOSS | NC AT  |          | TOTAL | ENT.     | LEAVING  |         | FLUID    |      |      | BALANCING |     |
|        | MANUFACTURER | INLET | MAXIMUM | MAXIMUM | MINIMUM | MINIMUM | AIR TEMP. | AIR TEMP. | AT MAX    | 1" H2O | HEAT     | FLUID | FLUID    | FLUID    |         | PRESSURE | MIN. | PIPE | VALVE     |     |
|        | AND          | SIZE  | AIR     | AIR     | AIR     | AIR     | DB        | DB        | CFM (2)   | (1)    | LOAD     | FLOW  | TEMP     | TEMP     | WORKING | DROP     | COIL | SIZE | SIZE      |     |
| ID     | MODEL NUMBER | (IN)  | (CFM)   | (CFM)   | (CFM)   | (CFM)   | (DEG. F)  | (DEG. F)  | (IN H20)  | S.P.   | (MB)     | (GPM) | (DEG. F) | (DEG. F) | FLUID   | (FT)     | ROWS | (IN) | (IN)      | REM |
| VR-1.1 | PRICE SDV    | 12    | 800     | 520     | 95      | 95      | 55        | 104       | 0.40      | -      | 21.8     | 1.7   | 180      | 150      | 50% PG  | 1.1      | 2    | 3/4  | 3/4       | 1,2 |
| VR-1.2 | PRICE SDV    | 10    | 480     | 250     | 90      | 90      | 55        | 95        | 0.40      | -      | 8.6      | 2.4   | 180      | 172      | 50% PG  | 0.9      | 1    | 3/4  | 3/4       | 1,2 |
| VR-1.3 | PRICE SDV    | 14    | 1140    | 580     | 110     | 110     | 55        | 110       | 0.40      | -      | 27.3     | 2.1   | 180      | 150      | 50% PG  | 0.7      | 2    | 3/4  | 3/4       | 1,2 |
| VR-1.4 | PRICE SDV    | 14    | 1245    | 665     | 135     | 135     | 55        | 108       | 0.40      | -      | 29.8     | 2.3   | 180      | 150      | 50% PG  | 0.9      | 2    | 3/4  | 3/4       | 1,2 |
|        |              |       |         |         |         |         |           |           |           |        |          |       |          |          |         |          |      |      |           |     |

1. MAXIMUM DISCHARGE NC AT BOX DIFFERENTIAL PRESSURE BASED ON ARI STANDARD 880-89.

2. COIL HEATING CAPACITY BASED ON HEATING MAIXIMUM AIR FLOW.

3. MINIMUM AIR FLOW LIMIT FOR DIGITAL CONTROLS IS BASED ON MIN. 0.02 IN W.G. DIFFERNTIAL PRESSURE SIGNAL FROM AIRFLOW SENSOR.

4. MAXIMUM STATIC PRSSURE DROP PERMISSABLE ACROSS BOX AND COIL AT MAXIMUM COOLING CFM. 5. BOX COOLING MAXIMUM IS THE SUM OF DIFFUSERS CFM VALUES AS SHOWN IN THE DRAWINGS. TYPICAL UNLESS OTHERWISE NOTED.

6. PRESSURE INDEPENDENT TYPE BOX.

|                          |          |         |             |       |           | FAN   | N SCHE | DULE         |       |              |        |                                                       |                       |     |
|--------------------------|----------|---------|-------------|-------|-----------|-------|--------|--------------|-------|--------------|--------|-------------------------------------------------------|-----------------------|-----|
|                          |          | AIR     |             |       | ELECTRICA | ۸L    |        |              |       | PHYSICAL     |        |                                                       |                       |     |
|                          |          | MAXIMUM |             |       |           |       |        |              |       | LENGTH/      |        |                                                       |                       |     |
|                          |          | AIRFLOW | STATIC      | FAN   | MOTOR     | MOTOR | MOTOR  |              |       | WIDTH/       |        |                                                       |                       |     |
|                          | AIR      | RATE    | PRESSURE    | SPEED | SIZE      | BHP   | SPEED  |              |       | HEIGHT       | WEIGHT |                                                       |                       |     |
| TYPE                     | TYPE     | (CFM)   | (IN. WATER) | (RPM) | (HP)      | (HP)  | (RPM)  | VOLT/PH/HZ   | SONES | (IN)         | (LBS)  | DAMPER                                                | CONTROLS              | NC  |
| DIRECT DRIVE, DOWN BLAST | EXHAUST  | 205     | 0.5         | 1514  | 0.25      | 0.07  | 1725   | 115 / 1 / 60 | 7.8   | 24.4ø / 39.7 | 85     | 120V DAMPER, REQUIRES SEPARATE ELECTRICAL CONNECTION  | BMS                   | 1,  |
| DIRECT DRIVE, DOWN BLAST | EXHAUST  | 205     | 0.5         | 1514  | 0.25      | 0.07  | 1725   | 115 / 1 / 60 | 7.8   | 24.4ø / 39.7 | 85     | 120V DAMPER, REQUIRES SEPARATE ELECTRICAL CONNECTION  | BMS                   | 1,  |
| DIRECT DRIVE, DOWN BLAST | EXHAUST  | 115     | 0.5         | 1278  | 0.25      | 0.03  | 1725   | 115 / 1 / 60 | 5.8   | 24.4ø / 39.7 | 85     | 120V DAMPER, REQUIRES SEPARATE ELECTRICAL CONNECTION  | BMS                   | 1,  |
| DIRECT DRIVE, DOWN BLAST | EXHAUST  | 115     | 0.5         | 1278  | 0.25      | 0.03  | 1725   | 115 / 1 / 60 | 5.8   | 24.4ø / 39.7 | 85     | 120V DAMPER, REQUIRES SEPARATE ELECTRICAL CONNECTION  | BMS                   | 1,  |
|                          |          |         |             |       |           |       |        |              |       |              |        |                                                       |                       |     |
| DIRECT DRIVE, DOWN BLAST | RELIEF   | 5,240   | 0.5         | 749   | 2         | 0.9   | 1725   | 208 / 1 / 60 | 13.9  | 42.8ø / 47.5 | 350    | 120V DAMPER, REQUIRES SEPARATE ELECTRICAL CONNECTION. | BMS                   | 1,3 |
|                          |          |         |             |       |           |       |        |              |       |              |        |                                                       |                       |     |
| DIRECT DRIVE, INLINE     | TRANSFER | 750     | 0.3         | 1222  | 0.25      | 0.07  | 1725   | 115 / 1 / 60 | 3     | 22 / 17 / 17 | 60     | NONE                                                  | INLINE VOLTAGE T-STAT | 1,  |
| DIRECT DRIVE, INLINE     | TRANSFER | 750     | 0.3         | 1222  | 0.25      | 0.07  | 1725   | 115 / 1 / 60 | 3     | 22 / 17 / 17 | 60     | NONE                                                  | INLINE VOLTAGE T-STAT | 1,  |
|                          |          |         |             |       |           |       |        |              |       |              |        |                                                       |                       |     |

5. PROVIDE EC MOTOR (DIAL), SPRING ISOLATORS, 1" THICK INSULATED HOUSING, SONES LISTED ARE RADIATED VALUES.

|      |                   |            |         |             |             |         | F         | AN C  | OIL SC    | HED  | ULE    |           |     |      |              |        |           |                         |        |   |
|------|-------------------|------------|---------|-------------|-------------|---------|-----------|-------|-----------|------|--------|-----------|-----|------|--------------|--------|-----------|-------------------------|--------|---|
|      |                   |            | AIR     |             |             | HEATING |           |       |           |      |        | ELECTRICA | AL  |      |              |        |           | PHYSICAL                |        | Τ |
|      |                   |            | MAXIMUM | MINIMUM     | EXTERNAL    |         |           |       |           |      |        |           |     |      |              |        |           | LENGTH/                 |        |   |
|      | MANUFACTURER      |            | AIRFLOW | VENTILATION | STATIC      |         | EAT /     |       | EWT /     | HEAD |        | MOTOR     |     |      |              | PIPING |           | WIDTH/                  |        |   |
|      | AND               |            | RATE    | AIR         | PRESSURE    | LOAD    | LAT       | FLOW  | LWT       | LOSS |        | SIZE      |     |      |              | SIZE   |           | HEIGHT                  | WEIGHT |   |
| ID   | MODEL NUMBER      | TYPE       | (CFM)   | (CFM)       | (IN. WATER) | (BTUH)  | (°F)      | (GPM) | (°F)      | (FT) | FLUID  | (HP)      | MCA | MCOP | VOLT/PH/HZ   | (IN)   | FILTER    | (IN)                    | (LB)   | Ν |
| FC-1 | ENVIRO-TEC HPP-10 | HORIZONTAL | 840     | 390         | 0.5         | 14,829  | 72 / 91.5 | 1     | 180 / 150 | 0.3  | 50% PG | 0.33      | 6   | 15   | 115 / 1 / 60 | 3/4    | 1" MERV 8 | 33.125 / 34.875 / 16.75 | 120    |   |
| FC-2 | ENVIRO-TEC HPP-10 | HORIZONTAL | 580     | 140         | 0.5         | 18,309  | 72 / 109  | 1.3   | 180 / 150 | 1.7  | 50% PG | 0.33      | 6   | 15   | 115 / 1 / 60 | 3/4    | 1" MERV 8 | 33.125 / 43.875 / 16.75 | 120    |   |
| FC-3 | ENVIRO-TEC HPP-08 | HORIZONTAL | 700     | 335         | 0.5         | 13,101  | 72/93     | 0.9   | 180 / 150 | 0.2  | 50% PG | 0.33      | 6   | 15   | 115 / 1 / 60 | 3/4    | 1" MERV 8 | 33.125 / 39.875 / 16.75 | 120    |   |
| FC-4 | ENVIRO-TEC HPP-14 | HORIZONTAL | 1450    | 455         | 0.5         | 28,641  | 72/94     | 2     | 180 / 150 | 1.3  | 50% PG | (2) 0.33  | 10  | 15   | 115 / 1 / 60 | 3/4    | 1" MERV 8 | 33.125 / 34.875 / 16.75 | 120    |   |
| FC-5 | ENVIRO-TEC HPP-10 | HORIZONTAL | 840     | 390         | 0.5         | 23,709  | 72 / 104  | 1.7   | 180 / 150 | 2.9  | 50% PG | 0.33      | 6   | 15   | 115 / 1 / 60 | 3/4    | 1" MERV 8 | 33.125 / 43.875 / 16.75 | 120    |   |
| FC-6 | ENVIRO-TEC HPP-10 | HORIZONTAL | 830     | 390         | 0.5         | 14,799  | 72/92     | 1     | 180 / 150 | 0.3  | 50% PG | 0.33      | 6   | 15   | 115 / 1 / 60 | 3/4    | 1" MERV 8 | 33.125 / 34.875 / 16.75 | 120    |   |
|      |                   |            |         |             |             |         |           |       |           |      |        |           |     |      |              |        |           |                         |        |   |

1. PERFORMANCE LIST AT 7,000 FT ELEVATION.

2. MULTISPEED EC MOTOR, BC02 24V, UNIT S/S RELAY / FAN OP. RELAY & TRANSFORMER, ELASTOMERIC CLOSED CELL FOAM INSULATION, FIELD PROVIDED PIPING PACKAGE SIZE.

3. PROVIDE WITH PRE-WIRED DISCONNECT.

|       |                                   |                           |        | PU    | MP SCH  | EDU  | LE         |          |              |           |       |       |              |
|-------|-----------------------------------|---------------------------|--------|-------|---------|------|------------|----------|--------------|-----------|-------|-------|--------------|
|       |                                   |                           |        | FLUID |         |      | PUMP       |          |              | ELECTRICA | L     |       |              |
|       | MANUFACTURER                      |                           |        | FLOW  |         | HEAD |            | IMPELLER |              | MOTOR     | MOTOR | MOTOR |              |
|       | AND                               | SYSTEM                    |        | RATE  | WORKING | LOSS | EFFICIENCY | SIZE     |              | SIZE      | BHP   | SPEED |              |
| ID    | MODEL NUMBER                      | SERVED                    | TYPE   | (GPM) | FLUID   | (FT) | (%)        | (IN)     | CONSTRUCTION | (HP)      | (HP)  | (RPM) | VOLT/PH/HZ   |
| P-1.1 | BELL AND GOSSETT SERIES E-90 1AAB | TERTIARY HOT WATER SYSTEM | INLINE | 22    | 50% PG  | 25   | 55.7       | 5.125    | CAST IRON    | 0.5       | 0.26  | 1725  | 120 / 1 / 60 |
|       |                                   |                           |        |       |         |      |            |          |              |           |       |       |              |

1. DISCONNECT PROVIDED AND INSTALLED BY DIV. 26.





**KEYED NOTES** 







- 1. CONNECT NEW HEATING WATER SUPPLY / RETURN PIPING TO EXISTING MAIN(S) AS REQUIRED. COORDINATE ROUTE
- 2. ROUTE NEW HEATING WATER RETURN PIPING BACK TO THIS APROXIMATE LOCATION. NEW HEATING WATER RETURN PIPING TO CONNECT TO AN EXISTING 2" OR LARGER PIPE. COORINDATE PIPE ROUTING AND PIPE CONNECTION WITH
- 3. REFERENCE MECHANICAL SCHEDULE SHEET FOR PIPE RUNOUT SIZE(S) TO MECHANICAL EQUIPMENT. TYPICAL.



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4

1 PLUMBING DEMOLTION FLOOR PLAN - AREA A SCALE: 1/8" = 1'-0"

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3

# (#) KEYED NOTES

1. REMOVE EXISTING PIPING.

5

2. EXISTING PIPING TO REMAIN.

- REMOVE EXISTING FIXTURE AND RELATED PIPING BACK TO ACTIVE MAIN AND CAP.
- 4. EXISTING FIXTURE AND RELATED PIPING TO REMAIN.
- 5. REMOVE EXISTING ROOF DRAIN AND RELATED PIPING BACK TO ACTIVE MAIN AND CAP.
- REMOVE EXISTING ROOF DRAIN OVERFLOW AND RELATED PIPING BACK TO ACTIVE MAIN AND CAP.
- 7. REMOVE EXISTING DOWNSPOUT NOZZLE AND RELATED PIPING BACK TO ACTIVE MAIN AND CAP.
- 8. EXISTING ROOF DRAIN AND RELATED PIPING TO REMAIN.
- 9. EXISTING ROOF DRAIN OVERFLOW AND RELATED PIPING TO REMAIN.







4

0 4' - 0" 8' - 0" 16' - 0"

(K.5)

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2 PLUMBING FLOOR PLAN - AREA B SCALE: 1/8" = 1'-0"

2

1



# (#) **KEYED NOTES**

- 1. SEE SITE UTILITY DRAWINGS FOR CONTIUATION.
- 2. EXISTING PIPING TO REMAIN.

5

- 3. EXISTING ROOF DRAIN TO REMAIN.
- 4. EXISTING ROOF DRAIN OVERFLOW TO REMAIN.
- 5. EXISTING FIXTURE AND RELATED PIPING TO REMAIN.
   6. 1 1/2" VENT UP TO STRUCTURE, TERMINATE 3" VENT
- THROUGH ROOF.
- CONNECT NEW 2" DCW LINE TO EXISTING 3" DCW LINE. FIELD VERIFY EXACT SIZE, LOCATION AND SYSTEM PRIOR TO STARTING ANY NEW WORK.
   CONNECT NEW 5" RD LINE TO EXISTING STREET TO EXISTING AND STREET TO EXISTING AND STREET TO EXIST AND STREET TO EXIST.
- 9. CONNECT NEW 5" RD LINE TO EXISTING 5" RD LINE. FIELD VERIFY EXACT SIZE, LOCATION, ELEVATION AND SYSTEM PRIOR TO STARTING ANY NEW WORK.
   10. CONNECT NEW 1/2" DCW AND DHW LINES TO EXISTING 1/2"
- DCW AND DHW LINES. FIELD VERIFY EXACT SIZE, LOCATION AND SYSTEM PRIOR TO STARTING ANY NEW WORK.
  11. CONNECT NEW 1 1/2" DHW LINE TO EXISTING 1 1/2" DHW LINE. FIELD VERIFY EXACT SIZE, LOCATION AND SYSTEM PRIOR TO
- STARTING ANY NEW WORK.
  12. CONNECT NEW 2" DCW LINE TO EXISTING 2" DCW LINE. FIELD VERIFY EXACT SIZE, LOCATION AND SYSTEM PRIOR TO STARTING ANY MUNOPIC
- STARTING ANY NEW WORK. 13. CONNECT NEW 4" WASTE LINE TO EXISTING 4" WASTE LINE. FIELD VERIFY EXACT SIZE, LOCATION, ELEVATION AND SYSTEM PRIOR TO STARTING ANY NEW WORK.
- 14. CONNECT NEW 3" VENT LINE TO EXISTING 3" VTR. FIELD VERIFY EXACT SIZE, LOCATION AND SYSTEM PRIOR TO STARTING ANY NEW WORK.
- CONNECT NEW 4" RD LINE TO EXISTING 4" RD LINE. FIELD VERIFY EXACT SIZE, LOCATION, ELEVATION AND SYSTEM PRIOR TO STARTING ANY NEW WORK.



1 1







**KEYED NOTES**  $\langle \# \rangle$ 1. PROVIDE WATER HAMMER ARRESTOR IN ACCESSIBLE LOCATION.



|       |                                    |      |      |       | P     | LUME | BING I | FIXTURE S | CHEDULE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------|------------------------------------|------|------|-------|-------|------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                                    | CW   | HW   | W     | V     | G    | A      |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ID    | FIXTURE                            | (IN) | (IN) | (IN)  | (IN)  | (IN) | (IN)   | NOTES     | SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| FD-1  | FLOOR DRAIN                        |      |      | 2     | 1 1/2 |      |        |           | FLOOR DRAIN (RESTROOM): SMITH FIGURE 2005Y FLOOR DRAIN WITH CAST IRON BODY AND FLASHING COLLAR WITH 6" ROUND NICKEL<br>BRONZE ADJUSTABLE HEAD WITH SECURED GRATE, DEEP SEAL P-TRAP AND TRAP GUARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| L-1   | LAVATORY                           | 1/2  | 1/2  | 1 1/2 | 1 1/2 |      |        |           | LAVATORY (WALL HUNG): KOHLER K-2032 GREENWICH 20" X 18", "D" SHAPED BOWL, VITREOUS CHINA, WALL-MOUNT LAVATORY WITH DU,<br>FRONT OVERFLOW, 4" FAUCET CENTERS; OPEN GRID STRAINER; DELTA 523 SINGLE LEVER MANUAL FAUCET. PROVIDE LOOSE KEY ANGL<br>STOPS AND CHROME PLATED COPPER SUPPLIES AND 17 GA. CAST BRASS, CHROME PLATED P-TRAP. COVER ALL EXPOSED PIPING WITH<br>WHITE "HANDI-LAV GUARD" PROTECTOR TO MEET ADA REQUIREMENTS. PROVIDE POWERS SERIES LFe480 (TMV-1) THERMOSTATIC MIXI<br>VALVE WITH CHECK VALVES ON INLETS.                                                                                                                                   |
| S-1   | CLASSROOM SINK                     | 1/2  | 1/2  | 2     | 1 1/2 |      |        | (2)       | CLASSROOM SINK: ELKAY DRKAD251765 18-GAUGE, TYPE 304 STAINLESS STEEL, SINGLE 25" X 17" X 6-1/2" DEEP BOWL DROP IN SINK, TWO<br>HOLES FOR FAUCET AND 1 FRONT RIGHT HOLE DRILLING FOR BUBBLER. ELKAY LKD2439C FAUCET, LEVER HANDLES, ARC SPOUT WITH 1<br>GPM FC LAMINAR FLOW CONTROL AND PLAIN END SPOUT RING. ELKAY LK1141A BUBBLER WITH ANTI-MICROBACTERIAL FLEXIBLE HEAD,<br>PUSH-BUTTON AND 0.7 GPM FLOW CONTROL. FLEXIBLE STAINLESS STEEL SUPPLIES WITH LOOSE KEY ANGLE STOPS; JUST J-35 STAINLE<br>STEEL CUP STRAINER AND CAST BRASS P-TRAP WITH CLEAN-OUT PLUG. PROVIDE POWERS SERIES LFe480 (TMV-1) THERMOSTATIC MIXI<br>VALVE WITH CHECK VALVES ON INLETS. |
| WC-1  | (ADA) WATER CLOSET (FLOOR MOUNTED) | 1    |      | 3     | 2     |      |        |           | WATER CLOSET: KOHLER HIGHCLIFF K-96057 VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL, ADA TOILET; SLOAN REGAL SFSM<br>SENSOR BATTERY OPERATED 1.6 GALLON FLUSH VALVE. INSTALL ACTUATOR ON WIDE SIDE OF STALL. MAXIMUM OF 25 PSI ON MINIMUM<br>REQUIRED PRESSURE TO FIXTURE.                                                                                                                                                                                                                                                                                                                                                                                       |
| RD-1  | ROOF DRAIN                         |      |      |       |       |      |        | SEE PLANS | ROOF DRAIN: SMITH FIGURE 1010-ERC CAST IRON BODY WITH COMBINED FLASHING CLAMP AND CAST IRON GRAVEL STOP, CAST IRON DOME, EXTENSION, SUMP RECEIVER AND UNDERDECK CLAMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| RDO-1 | OVERFLOW DRAIN                     |      |      |       |       |      |        | SEE PLANS | OVERFLOW ROOF DRAIN: SMITH FIGURE 1080-ERC CAST IRON BODY WITH FLASHING CLAMP, GRAVEL STOP, CAST IRON DOME, 2" HIGH WATER COLLAR, EXTENSION, SUMP RECEIVER AND UNDERDECK CLAMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| DSN-1 | DOWNSPOUT NOZZLE                   |      |      |       |       |      |        | SEE PLANS | DOWNSPOUT NOZZLE: SMITH FIGURE 1770 DOWNSPOUT NOZZLE; CAST BRONZE BODY AND FLANGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| HB-1  | HOSE BIB                           | 3/4  |      |       |       |      |        |           | HOSE BIBB: ACORN 8151 RECESSED 18 GA. 304 STAINLESS STEEL HOSE BOX WITH 16 GA. FLANGE; VANDAL RESISTANT COVER; HOSE VA<br>WITH VACUUM BREAKER, 3/4" MALE HOSE THREAD AND LOOSE KEY HANDLE. 16 GA. DOOR WITH REMOVABLE HINGE AND CYLINDER LOO                                                                                                                                                                                                                                                                                                                                                                                                                      |
| NFH-1 | NON-FREEZE HYDRANT                 | 3/4  |      |       |       |      |        |           | NON-FREEZE HYDRANT: SMITH 5509QT NON-FREEZE WALL HYDRANT IN RECESSED STAINLESS STEEL BOX WITH COVER , WALL THICKNE<br>SHOWN ON PLAN. BRONZE HYDRANT, 3/4-INCH CONNECTION WITH BRASS CASING, INTEGRAL SELF-DRAINING VACUUM BREAKER, AND<br>LOOSE KEY.                                                                                                                                                                                                                                                                                                                                                                                                              |

2. COORDINATE SINK INSTALLATION WITH MILLWORK SHOP DRAWINGS PRIOR TO ORDERING SINKS.

|               | MANUFACTURER               |                   |
|---------------|----------------------------|-------------------|
|               | AND                        |                   |
| ID            | MODEL NUMBER               | FIXTURE SEF       |
| TMV-1         | POWERS LFe480              | LAVATORIES/       |
|               |                            |                   |
| 1. PROVIDE A  | ND INSTALL CHECK VALVES IN | CW AND HW INLETS. |
| 2. INSTALL TI | GHTLY BENEATH SINK.        |                   |

| THER             | MOSTA | TIC MIXING VALV | E SCHED   | JLE       |       |      |            |        |
|------------------|-------|-----------------|-----------|-----------|-------|------|------------|--------|
|                  |       |                 |           |           | FLUID |      | ELECTRICAL |        |
|                  |       |                 |           |           | FLOW  | HEAD |            |        |
|                  |       | BODY            | INLET     | OUTLET    | RATE  | LOSS |            |        |
| FIXTURE SERVED   | TYPE  | CONSTRUCTION    | SIZE (IN) | SIZE (IN) | (GPM) | (FT) | VOLT/PH    | NOTES  |
| LAVATORIES/SINKS |       | BRASS           | 1/2       | 1/2       | 1     | 3.0  | N/A        | (1)(2) |
|                  |       |                 |           |           |       |      |            |        |



# 1 DOUBLE CLEANOUT TO GRADE DETAIL (COTG) NOT TO SCALE



# 2 THERMOSTATIC MIXING VALVE DETAIL



|                                          | LIGHTING SYMB                                                                                                                                              | OLS 2                                                                     |                                                                                |                        | WIRING DEVICE SYI                                    | MBOLS                       |                                                                    |                                                              | 4<br>GENE                                                                                                                                                                                                   |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------|------------------------------------------------------|-----------------------------|--------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. LIGHT<br>REFEF                        | FIXTURE SYMBOLS ARE GENERAL IN NATURE AND MAY BE SHOWN ON R TO THE LIGHT FIXTURE SCHEDULE FOR SPECIFICATION INFORMATION                                    | THE DRAWINGS IN VAI<br>I.                                                 | RIOUS SIZES AND SHAPES.                                                        |                        | 1                                                    | 1                           |                                                                    | SYMBOL                                                       |                                                                                                                                                                                                             |
| 2. ARRO                                  | WS INDICATE AIMING DIRECTION.                                                                                                                              |                                                                           |                                                                                | SYMBOL                 |                                                      | MOUNTING                    | REMARKS                                                            | (XX)                                                         | KEYED NOTE                                                                                                                                                                                                  |
| SYMBOL                                   | DESCRIPTION                                                                                                                                                | MOUNTING                                                                  | REMARKS                                                                        | $- \bigcirc$           | SPLIT-WIRED DUPLEX RECEPTACLE                        | +18"<br>+18"                |                                                                    |                                                              | DETAIL REFERENCE                                                                                                                                                                                            |
| <u>о-</u>                                | ARM-MOUNTED SINGLE-HEAD LIGHT FIXTURE AND POLE                                                                                                             | AS SPECIFIED                                                              |                                                                                | ÷                      | DUPLEX RECEPTACLE                                    | +18"                        |                                                                    | $\left(\begin{array}{c} 1\\ \hline E-1\end{array}\right)$    |                                                                                                                                                                                                             |
| <u>∽−</u> ○                              |                                                                                                                                                            | OR DETAILED                                                               |                                                                                | <b>+</b>               | FOURPLEX RECEPTACLE                                  | +18"                        |                                                                    |                                                              |                                                                                                                                                                                                             |
|                                          | ARM-MOUNTED DOUBLE-HEAD LIGHT FIXTURE AND POLE                                                                                                             | AS SPECIFIED<br>OR DETAILED                                               |                                                                                | ŧ                      | 125/250V RECEPTACLE                                  | +18"                        | RANGE NEMA 14-50R<br>DRYER NEMA 14-30R                             |                                                              | ELEVATION REFERENCE                                                                                                                                                                                         |
|                                          | POST-TOP SINGLE-HEAD LIGHT FIXTURE AND POLE                                                                                                                | AS SPECIFIED                                                              |                                                                                | e                      | GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE   | +18"                        |                                                                    | E-2                                                          |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            | OR DETAILED<br>AS SPECIFIED                                               | REFER TO ARCHITECTURAL EXTERIOR                                                |                        | GROUND FAULT CIRCUIT INTERRUPTER FOURPLEX RECEPTACLE | +18"                        |                                                                    |                                                              |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            | OR DETAILED                                                               | ELEVATIONS FOR MOUNTING HEIGHT                                                 |                        | EMERGENCY DUPLEX RECEPTACLE                          | +18"                        |                                                                    | 3                                                            | SECTION REFERENCE                                                                                                                                                                                           |
| 0 0                                      |                                                                                                                                                            |                                                                           |                                                                                |                        | DUPLEX RECEPTACLE W/(2) 3.1A, 5VDC USB PORTS         | +18"                        |                                                                    | E-2                                                          |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            |                                                                           |                                                                                | J                      | MULTI-OUTLET ASSEMBLY                                | 4" ABOVE<br>BACKSPLASH      |                                                                    |                                                              |                                                                                                                                                                                                             |
| ·                                        |                                                                                                                                                            | OR DETAILED                                                               | ELEVATIONS FOR MOUNTING HEIGHT                                                 |                        | POWER / TELEPHONE POLE                               | FLOOR/CEILING               |                                                                    | 100                                                          |                                                                                                                                                                                                             |
| •                                        | LIGHT FIXTURES                                                                                                                                             | AS SPECIFIED<br>OR DETAILED                                               |                                                                                |                        | CORD DROP                                            | REFER TO FLOOR              |                                                                    | AHU                                                          | EQUIPMENT NAME / NUMBER                                                                                                                                                                                     |
| •                                        |                                                                                                                                                            |                                                                           |                                                                                |                        |                                                      | F LAINS                     |                                                                    | $\langle 1 \rangle$                                          |                                                                                                                                                                                                             |
| •                                        |                                                                                                                                                            |                                                                           |                                                                                | (4-PLEX)               | CORD REEL                                            | REFER TO FLOOR<br>PLANS     | REFER TO DETAIL.<br>REFER TO PLANS.                                |                                                              | REVISION NUMBER                                                                                                                                                                                             |
|                                          | WALL-MOUNTED LINEAR LIGHT FIXTURE                                                                                                                          | AS SPECIFIED<br>OR DETAILED                                               |                                                                                |                        | SPECIAL PURPOSE OUTLET                               | +18"                        | SUBSCRIPT IN PARENTHESIS INDICATES                                 | $ \land 1 $                                                  |                                                                                                                                                                                                             |
| I I                                      | LINEAR WALL WASHER                                                                                                                                         | AS SPECIFIED                                                              |                                                                                | • (5-20R)              |                                                      |                             | NEMA CONFIGURATION IF SHOWN. REFER<br>TO DRAWINGS AND/OR EQUIPMENT |                                                              |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            | OR DETAILED<br>AS SPECIFIED                                               |                                                                                |                        |                                                      |                             | SCHEDULES. CONFIRM EXACT<br>CONFIGURATION WITH OWNER PRIOR TO      | $\left\langle \begin{array}{c} \\ \end{array} \right\rangle$ | REVISION CLOUD                                                                                                                                                                                              |
|                                          |                                                                                                                                                            | OR DETAILED                                                               |                                                                                |                        |                                                      |                             | INSTALLATION.                                                      |                                                              |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            |                                                                           |                                                                                |                        |                                                      | Rols                        | 1                                                                  |                                                              | BREAKLINE                                                                                                                                                                                                   |
| $(\cdot)$                                | SURFACE OR PENDANT-MOUNTED LIGHT FIXTURE                                                                                                                   |                                                                           |                                                                                | SYMBOL                 | DESCRIPTION                                          | MOUNTING                    | REMARKS                                                            |                                                              |                                                                                                                                                                                                             |
| $\triangleleft$                          | TRACK OR MONO-POINT LIGHT FIXTURE                                                                                                                          | OR DETAILED                                                               |                                                                                | \$                     | SINGLE-POLE TOGGLE SWITCH                            | +48"                        |                                                                    | LCD-###                                                      | LIGHTING CONTROL WIRING DIAGRAM CALLOUT                                                                                                                                                                     |
| Þ                                        | WALL SCONCE                                                                                                                                                | OR DETAILED                                                               |                                                                                | \$ <sup>a</sup>        | SINGLE-POLE TOGGLE SWITCH                            | +48"                        | SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.                      |                                                              | BRANCH CI                                                                                                                                                                                                   |
| •                                        | LINEAR PENDANT LIGHT FIXTURE                                                                                                                               | CEILING                                                                   |                                                                                | \$ <sub>2</sub>        | DOUBLE-POLE TOGGLE SWITCH                            | +48"                        |                                                                    | SYMBOL                                                       | DESCRIPTION                                                                                                                                                                                                 |
|                                          | EGRESS LIGHT FIXTURE                                                                                                                                       | AS SPECIFIED<br>OR DETAILED                                               | THIS IS AN <u>EXAMPLE</u> OF AN EGRESS<br>LIGHT FIXTURE. EGRESS LIGHT FIXTURES | \$3                    | THREE-WAY TOGGLE SWITCH                              | +48"                        |                                                                    | _                                                            | BRANCH CIRCUIT HOME RUN TO PANEL                                                                                                                                                                            |
|                                          | EMERGENCY (NON-EGRESS) LIGHT FIXTURE                                                                                                                       | AS SPECIFIED                                                              | ARE HALF-SHADED DIAGONALLY                                                     | \$4<br>¢               |                                                      | +48"                        |                                                                    |                                                              |                                                                                                                                                                                                             |
| •                                        |                                                                                                                                                            | OR DETAILED                                                               | (NON-EGRESS) LIGHT FIXTURE.<br>EMERGENCY FIXTURES ARF FULLY-                   | ⇒К<br>\$⊾              | SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT           | +48"                        |                                                                    |                                                              | BRANCH CIRCUITING (U.N.O.) CONTINUATION                                                                                                                                                                     |
|                                          |                                                                                                                                                            |                                                                           | SHADED.                                                                        | ФР<br>\$рим            | DIMMER SWITCH                                        | +48"                        | RATE DIMMER SWITCH FOR MAXIMUM                                     | ]                                                            |                                                                                                                                                                                                             |
| $\otimes$                                | CEILING MOUNTED EXIT SIGN                                                                                                                                  | CEILING                                                                   | DARKENED PORTION OF SIGN<br>INDICATES                                          | + DIM<br>\$тім         | TIMER SWITCH                                         | +48"                        | POSSIBLE WATTAGE                                                   |                                                              |                                                                                                                                                                                                             |
| ΗØ                                       | WALL-MOUNTED EXIT SIGN                                                                                                                                     | WALL ABOVE<br>DOOR                                                        | FACE(S); ARROW(S) INDICATE<br>CHEVRON                                          | \$x                    | OCCUPANCY SENSOR                                     | +48"                        | REFER TO OCCUPANCY SENSOR                                          |                                                              | JUNCTION BOX                                                                                                                                                                                                |
| $\widehat{\mathbb{R}}$                   | WALL-MOUNTED EXIT SIGN W/ EMERGENCY LIGHT FIXTURE                                                                                                          | WALL ABOVE                                                                | DIRECTION(S)                                                                   | <sup>⊕</sup> ÔS        |                                                      |                             | "#" SPECIFIES TYPE                                                 |                                                              |                                                                                                                                                                                                             |
| 7                                        |                                                                                                                                                            |                                                                           |                                                                                | \$\$                   | (2) SINGLE-POLE TOGGLE SWITCH                        | +48"                        | DUAL LEVEL SWITCH OUTBOARD LAMPS<br>SEPARATELY FROM INBOARD LAMPS. | 0                                                            | BRANCH CIRCUITING (U.N.O.) TURNED UP OR TOWARD<br>OBSERVER.                                                                                                                                                 |
| <sup>⊗</sup> IN                          |                                                                                                                                                            | WALL ABOVE                                                                |                                                                                |                        | LOW VOLTAGE SWITCH                                   | +48"                        | REFER TO LOW VOLTAGE SWITCH                                        | 0                                                            | BRANCH CIRCUITING (U.N.O.) TURNED DOWN OR AWA                                                                                                                                                               |
| <sup>⊢⊗</sup> IN                         | WALL-MOUNTED IN USE SIGN                                                                                                                                   | DOOR                                                                      |                                                                                | \$ <u>"</u> LV         |                                                      |                             | SCHEDULE FOR MORE INFORMATION                                      |                                                              |                                                                                                                                                                                                             |
| TC                                       |                                                                                                                                                            |                                                                           |                                                                                |                        | 3-POSITION MOMENTARY CONTACT SWITCH                  | +48"                        | REFER TO DETAIL UP-ON;                                             |                                                              |                                                                                                                                                                                                             |
| Ç                                        | EMERGENCY LIGHT FIXTURE                                                                                                                                    | AS NOTED                                                                  |                                                                                | <sup>⊕</sup> 3PM       |                                                      |                             | CENTER-NEUTRAL; DOWN-OFF                                           |                                                              | 3 CIRCUIT, 4 WIRE BRANCH CIRCUIT HOME RUN TO PA                                                                                                                                                             |
| (P)                                      | ELECTRIC PHOTOCELL                                                                                                                                         | N/A                                                                       | MOUNT ON ROOF FACING NORTH SKY                                                 | -<br>\$ <sub>3РN</sub> | 3-POSITION MAINTAINED CONTACT SWITCH                 | +48"                        | UP-ON; CENTER-OFF; DOWN-ON                                         |                                                              |                                                                                                                                                                                                             |
|                                          | LIGHT FIXTURE CALLOUT (LETTER DENOTES FIXTURE TYPE)                                                                                                        |                                                                           |                                                                                |                        | OCCUPANCY SENSOR                                     | CEILING                     | "a" LOWER CASE SPECIFIES ZONE                                      |                                                              | EQUIPMENT AN                                                                                                                                                                                                |
|                                          | ΓΙΠΕ ΔΙ ΔRM SYM                                                                                                                                            | I<br>BOLS                                                                 |                                                                                | • • • #                |                                                      |                             | "#" SPECIFIES TYPE                                                 | SYMBOL                                                       | DESCRIPTION                                                                                                                                                                                                 |
|                                          |                                                                                                                                                            |                                                                           |                                                                                |                        | DIGITAL DAYLIGHT SENSOR                              | CEILING                     | "a" LOWER CASE LETTER SPECIFIES ZONE                               | \$T                                                          | MANUAL STARTER WITH THERMAL OVERLOAD(S)                                                                                                                                                                     |
|                                          | 1                                                                                                                                                          | [                                                                         |                                                                                | <b>↓ ↓ ↓ ↓</b>         |                                                      |                             | "#" SPECIFIES THE FOOTCANDLE SETTING<br>THE SENSOR SHALL BE SET TO | 6                                                            | ELECTRIC MOTOR                                                                                                                                                                                              |
| SYMBOL                                   |                                                                                                                                                            | MOUNTING                                                                  | REMARKS                                                                        | TP                     | WALL MOUNT GRAPHIC TOUCH PAD CONTROLLER              | +48"                        |                                                                    |                                                              | NON-FUSED DISCONNECT SWITCH                                                                                                                                                                                 |
| ∑T                                       | BEAM DETECTOR - TRANSMITTER                                                                                                                                | CEILING TO TOP                                                            |                                                                                | EC                     | EMERENCY CONTROLLER                                  | ACCESSIBLE<br>ABOVE CEILING |                                                                    |                                                              | FUSED DISCONNECT SWITCH                                                                                                                                                                                     |
|                                          | BEAM DETECTOR - RECEIVER                                                                                                                                   | 4" BELOW                                                                  |                                                                                | LC                     | LOAD CONTROLLER                                      | ACCESSIBLE<br>ABOVE CEILING |                                                                    |                                                              | MAGNETIC STARTER                                                                                                                                                                                            |
| R                                        |                                                                                                                                                            | OF DETECTOR                                                               |                                                                                | PP                     | POWER PACK                                           | ACCESSIBLE<br>ABOVE CEILING |                                                                    |                                                              | COMBINATION MAGNETIC STARTER / FUSED DISCONN                                                                                                                                                                |
| EOL                                      | END OF LINE RESISTOR                                                                                                                                       | PER MANUF.<br>REC.                                                        |                                                                                | RC                     | ROOM CONTROLLER                                      | ACCESSIBLE<br>ABOVE CEILING |                                                                    | Ľ                                                            | COMBINATION MAGNETIC STARTER / NON-FUSED DISC                                                                                                                                                               |
| T                                        | TAMPER SWITCH                                                                                                                                              | AT VALVE                                                                  |                                                                                |                        | ACCESS CONTROL S                                     | YMBOLS                      |                                                                    | ⊠L                                                           | COMBINATION MAGNETIC STARTER / MOTOR CIRCUIT<br>PROTECTOR (MCP)                                                                                                                                             |
| ESD.                                     |                                                                                                                                                            | ON FIRE RISER                                                             |                                                                                |                        |                                                      |                             |                                                                    |                                                              | COMBINATION VARIABLE FREQUENCY DRIVE / MOTOR                                                                                                                                                                |
|                                          | HEAT DETECTOR                                                                                                                                              | CEILING                                                                   | SUBSCRIPT INDICATES SPECIFIC                                                   | SYMBOL                 | DESCRIPTION                                          | MOUNTING                    | REMARKS                                                            | VFD                                                          | PROTECTOR (MCP)                                                                                                                                                                                             |
| CΟ <sub>X</sub>                          | CARBON MONOXIDE DETECTOR                                                                                                                                   | ]                                                                         | REQUIREMENTS/OPTIONS:                                                          | REX                    | REQUEST-TO-EXIT MOTION DETECTOR                      | CEILING                     |                                                                    | -                                                            | LOAD CENTER (SURFACE-MOUNTED)                                                                                                                                                                               |
| <u>x</u>                                 | SMOKE DETECTOR                                                                                                                                             |                                                                           | 'SB' DEVICE WITH SOUNDER BASE                                                  | <u> </u>               | ELECTROMAGNETIC DOOR STRIKE                          | DOOR                        |                                                                    |                                                              | LOAD CENTER (FLUSH-MOUNTED)                                                                                                                                                                                 |
| <u> </u>                                 |                                                                                                                                                            | WALL MOUNTED:<br>MAX 12" FROM                                             |                                                                                | SS                     | SEISMIC SENSOR                                       | DOOR                        |                                                                    |                                                              | LIGHTING AND APPLIANCE PANELBOARD (FLUSH-MOU                                                                                                                                                                |
| <u> </u>                                 | CARBON MONOXIDE DETECTOR                                                                                                                                   | BOTTOM OF CEILING                                                         | W/BATTERY BACKUP                                                               |                        | MAGNETIC DOOR CONTACT SWITCH                         | DOOR                        |                                                                    |                                                              | POWER DISTRIBUTION PANELBOARD                                                                                                                                                                               |
| <u>x</u> ⊉                               | SMOKE DETECTOR                                                                                                                                             |                                                                           |                                                                                | OHS                    | OVERHEAD SECURITY                                    | DOOR                        |                                                                    |                                                              |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            | SIDE OF DUCT                                                              |                                                                                | OHD                    | OVERHEAD DOOR CONTACT                                | DOOR                        |                                                                    |                                                              | SWITCHBOARD                                                                                                                                                                                                 |
| 7                                        |                                                                                                                                                            | AT DEVICE(S) TO BE                                                        |                                                                                |                        |                                                      | DOOR                        |                                                                    |                                                              |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            | CONTROLLED<br>AT DEVICE(S)                                                |                                                                                |                        |                                                      | DOOR                        |                                                                    | T-#                                                          | WET TYPE TRANSFORMER                                                                                                                                                                                        |
|                                          |                                                                                                                                                            | TO MONITOR<br>AT CONTROL                                                  |                                                                                |                        | GLASS BREAK HARDWARE                                 | CEILING/WALL                |                                                                    |                                                              | +                                                                                                                                                                                                           |
| ĸ                                        |                                                                                                                                                            |                                                                           |                                                                                | PS                     | POWER SUPPLY                                         | CEILING/WALL                |                                                                    | <b>T-#</b>                                                   | DRY TYPE TRANSFORMER                                                                                                                                                                                        |
| $\bigcirc$                               |                                                                                                                                                            | WITH DOOR<br>INSTALLER                                                    | SUBSCRIPT 'F' INDICATES TO MOUNT<br>AT FLOOR I FVFI                            |                        |                                                      | +46"                        |                                                                    | T_#                                                          | DRY TYPE TRANSFORMER                                                                                                                                                                                        |
| WF                                       | WATER FLOOD CONTROL                                                                                                                                        | FLOOR                                                                     |                                                                                |                        |                                                      | +46"                        |                                                                    | <br>                                                         |                                                                                                                                                                                                             |
| H                                        |                                                                                                                                                            | INDOOR - 96"<br>FROM FINISH                                               | SUBSCRIPT 'WP' INDICATES THAT A<br>WEATHER PROOF BACK BOX IS REQ               | KP                     | KEYPAD                                               | +48"                        |                                                                    |                                                              | PULL BOX                                                                                                                                                                                                    |
|                                          | FIRE ALARM VISUAL STROBE                                                                                                                                   | FLOOR TO TOP<br>OF DEVICE                                                 | NUMERIC SUBSCRIPT INDICATES                                                    | СК                     | CARD READER / KEYPAD                                 | +48"                        |                                                                    | <u> </u>                                                     |                                                                                                                                                                                                             |
|                                          | FIRE ALARM AUDIO/VISUAL HORN/STROBE                                                                                                                        | OUTDOOR - 120"<br>FROM FINISH                                             | CANDELA RATING OF STROBE<br>(I.E 15, 75, 110)                                  | MK                     | MAGNETIC STRIP CARD READER / KEYPAD                  | +48"                        |                                                                    | 6                                                            |                                                                                                                                                                                                             |
|                                          | CONCEAL FIRE ALARM AUDIO/VISUAL HORN/STROBE                                                                                                                | FLOOR TO TOP<br>OF DEVICE.                                                |                                                                                |                        | CARD READER                                          | +48"                        |                                                                    | •                                                            | OPEN - STOP - CLOSE SWITCH                                                                                                                                                                                  |
|                                          | CEILING MOUNTED FIRE ALARM AUDIO/VISUAL HORN/STROBE                                                                                                        |                                                                           |                                                                                | AUTO                   | AUTOMATIC SLIDING DOOR                               | DOOR                        |                                                                    |                                                              |                                                                                                                                                                                                             |
| <u>IS</u>                                |                                                                                                                                                            | -                                                                         |                                                                                |                        | TELEPHONE / DATA S                                   | SYMBOLS                     |                                                                    | (T)                                                          | HVAC THERMOSTAT                                                                                                                                                                                             |
| <u></u>                                  | FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE                                                                                                                     | 1                                                                         |                                                                                |                        |                                                      |                             |                                                                    | $\bigcirc$                                                   | HAND - OFF - AUTO SWITCH                                                                                                                                                                                    |
|                                          | CONCEAL FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE                                                                                                             |                                                                           |                                                                                | SYMBOI                 | DESCRIPTION                                          | MOUNTING                    | REMARKS                                                            | GF                                                           | GROUND FAULT PROTECTION                                                                                                                                                                                     |
|                                          | CEILING MOUNTED FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE                                                                                                     |                                                                           |                                                                                |                        |                                                      | +18"                        |                                                                    | LEL<br>L                                                     | ELECTRIC VEHICLE CAR CHARGING STATION                                                                                                                                                                       |
| $\nabla_{F}$                             |                                                                                                                                                            | +48"                                                                      |                                                                                |                        | DATA OUTLET                                          | +18"                        |                                                                    | S                                                            | PAD MOUNTED UTLITY SWITCHGEAR                                                                                                                                                                               |
|                                          | FIRE PROTECTION SPRINKLER RISER BELL                                                                                                                       | +90"                                                                      | FURNISHED BY FIRE PROTECTION<br>CONTRACTOR AND INSTALLED AND                   | $\triangleright$       | COMBINATION TELEPHONE/DATA OUTLET                    | +18"                        |                                                                    | SE                                                           | PAD MOUNTED UTILITY SECTIONALIZER                                                                                                                                                                           |
| FACP                                     |                                                                                                                                                            |                                                                           | CONNECTED BY DIV. 26                                                           |                        | TELEPHONE TERMINAL BOARD                             | TOP AT 72"                  |                                                                    |                                                              | CLOSED CIRCUI                                                                                                                                                                                               |
| ASD                                      |                                                                                                                                                            |                                                                           |                                                                                | <b></b>                |                                                      |                             |                                                                    |                                                              |                                                                                                                                                                                                             |
|                                          | FIRE ALARM CONTROL PANEL                                                                                                                                   | 1                                                                         |                                                                                | Ĩ <b>€</b> Ŵ           |                                                      |                             |                                                                    | SYMBOL                                                       | DESCRIPTION                                                                                                                                                                                                 |
|                                          |                                                                                                                                                            | N SYMBOLS                                                                 |                                                                                | 1 1.4.1                |                                                      | SEE PLANS                   |                                                                    |                                                              |                                                                                                                                                                                                             |
|                                          |                                                                                                                                                            | N SYMBOLS                                                                 |                                                                                |                        |                                                      |                             | •                                                                  |                                                              | BULLET STITLE GLOSED GIRGUIT TELEVISION GAWERA                                                                                                                                                              |
|                                          |                                                                                                                                                            | N SYMBOLS                                                                 | DEMADVO                                                                        |                        | I                                                    |                             |                                                                    |                                                              | BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA                                                                                                                                                               |
| SYMBOL                                   | INTRUSION DETECTION DESCRIPTION MOTION DETECTOR                                                                                                            | MOUNTING<br>CEILING                                                       | REMARKS<br>SUBSCRIPT DENOTES DEGREES OF                                        |                        |                                                      |                             |                                                                    | A A A A A A A A A A A A A A A A A A A                        | BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA                                                                                                                                                               |
| SYMBOL<br>MD                             | INTRUSION DETECTION DESCRIPTION DURESS PUSH-BUTTON                                                                                                         | MOUNTING<br>CEILING                                                       | REMARKS<br>SUBSCRIPT DENOTES DEGREES OF<br>MONITORED AREA                      |                        |                                                      |                             |                                                                    | S R                                                          | BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA<br>DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA<br>DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA                                                                 |
| SYMBOL<br>MD<br>D                        | INTRUSION DETECTION DESCRIPTION MOTION DETECTOR DURESS PUSH-BUTTON OVERHEAD MAGNETIC CONTACT DOOD SWITCH                                                   | MOUNTING<br>CEILING<br>BELOW DESK                                         | REMARKS<br>SUBSCRIPT DENOTES DEGREES OF<br>MONITORED AREA                      |                        |                                                      |                             |                                                                    |                                                              | BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA   |
| SYMBOL<br>MD<br>© D<br>OHS<br>~          | INTRUSION DETECTION DESCRIPTION MOTION DETECTOR DURESS PUSH-BUTTON OVERHEAD MAGNETIC CONTACT DOOR SWITCH                                                   | N SYMBOLS<br>MOUNTING<br>CEILING<br>BELOW DESK<br>DOOR                    | REMARKS<br>SUBSCRIPT DENOTES DEGREES OF<br>MONITORED AREA                      |                        |                                                      |                             |                                                                    |                                                              | BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA         BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA |
| SYMBOL<br>MD<br>© D<br>OHS<br>$\bigcirc$ | INTRUSION DETECTION DESCRIPTION MOTION DETECTOR DURESS PUSH-BUTTON OVERHEAD MAGNETIC CONTACT DOOR SWITCH MAGNETIC CONTACT DOOR SWITCH                      | N SYMBOLS<br>MOUNTING<br>CEILING<br>BELOW DESK<br>DOOR<br>DOOR            | REMARKS<br>SUBSCRIPT DENOTES DEGREES OF<br>MONITORED AREA                      |                        |                                                      |                             |                                                                    |                                                              | BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA         BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA |
| SYMBOL<br>MD<br>© D<br>OHS<br>OHS<br>©   | INTRUSION DETECTION DESCRIPTION MOTION DETECTOR DURESS PUSH-BUTTON OVERHEAD MAGNETIC CONTACT DOOR SWITCH MAGNETIC CONTACT DOOR SWITCH GLASS BREAK DETECTOR | N SYMBOLS<br>MOUNTING<br>CEILING<br>BELOW DESK<br>DOOR<br>DOOR<br>CEILING | REMARKS SUBSCRIPT DENOTES DEGREES OF MONITORED AREA                            |                        |                                                      |                             | ·                                                                  |                                                              | BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA         BULLET STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA         DOME STYLE CLOSED CIRCUIT TELEVISION CAMERA |

4

1

REQUEST FOR EXIT

1

DOOR

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|               |                                                                                                     | 5                                                                                                                              |                             |                                                                                                                                                                                                                       |                                   | 6                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| ENERAL SYM    | BOLS                                                                                                |                                                                                                                                |                             | ELECTRICAL SYMBOL SC                                                                                                                                                                                                  | HEDU                              | LE GENERAL NOTES                                                                                                                              |
|               |                                                                                                     | REMARKS                                                                                                                        | – 1. N                      | IOUNT ALL OUTLETS, DEVICES, AND EQUIPMENT AT HEIGHTS INDIC<br>INLESS NOTED OTHERWISE, HEIGHTS ARE GIVEN FROM FINISHED F                                                                                               | ATED BE                           | LOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS.<br>) CENTER OF OUTLET BOX.                                                                       |
|               | TOP NUMBER INDICA<br>LETTER-NUMBER IND<br>DETAIL IS SHOWN; W<br>DETAIL IS GENERAL II<br>APPLICABLE. | TES DETAIL NUMBER; BOTTOM<br>ICATES DRAWING SHEET WHERE<br>HERE NOT SPECIFICALLY REFERENCED,<br>N NATURE AND SHALL APPLY WHERE | 2. V<br>F<br>3. V<br>B<br>C | VHERE OUTLETS, DEVICES, AND EQUIPMENT ARE NOTED BY SUBS(<br>EQUIREMENTS.<br>VHERE OUTLETS, DEVICES AND EQUIPMENT ARE NOTED BY THE SU<br>ACK SPLASH, MOUNT AT 4" ABOVE BACK SPLASH. REFER TO ARCH<br>ASEWORK SUPPLIER. | CRIPTS, R<br>JBSCRIPT<br>IITECTUR | EFER TO ABBREVIATION SCHEDULE FOR DEFINED<br>''A', MOUNT AT 4" ABOVE COUNTER. IF COUNTER HAS A<br>'AL INTERIOR ELEVATIONS AND COORDINATE WITH |
|               | TOP NUMBER INDICA<br>LETTER-NUMBER IND                                                              | TES ELEVATION NUMBER; BOTTOM<br>ICATES WHERE ELEVATION IS SHOWN.                                                               | 4. N                        | IOT ALL ELECTRICAL SYMBOLS MAY BE USED.                                                                                                                                                                               |                                   |                                                                                                                                               |
|               |                                                                                                     |                                                                                                                                |                             | ABBREVIATIO                                                                                                                                                                                                           | ON SCI                            | HEDULE                                                                                                                                        |
|               | TOP NUMBER INDICA<br>LETTER-NUMBER IND                                                              | TES ELEVATION NUMBER; BOTTOM<br>ICATES WHERE ELEVATION IS SHOWN.                                                               | A A                         | NOTE: NOT ALL ABBRE<br>ABOVE COUNTER<br>AMP OR AMPS                                                                                                                                                                   | EVIATIONS                         | S MAY BE USED.<br>LONG-TIME, SHORT-TIME INSTANTANEOUS                                                                                         |
|               |                                                                                                     |                                                                                                                                | ACC<br>ADJ<br>AFF<br>AHJ    | ACCESS CONTROL<br>ADJACENT<br>ABOVE FINISHED FLOOR<br>AUTHORITY HAVING JURISDICTION                                                                                                                                   | LTG<br>MBJ<br>MCA<br>MCB          | LIGHTING<br>MAIN BONDING JUMPER<br>MINIMUM CIRCUIT AMPS<br>MAIN CIRCUIT BREAKER                                                               |
|               | TOP NUMBER ABBRE<br>BOTTOM NUMBER INI                                                               | VIATES EQUIPMENT NAME OR TYPE;<br>DICATES EQUIPMENT NUMBER. REFER                                                              | AL<br>ATS<br>AUX            | ALUMINUM<br>AUTOMATIC TRANSFER SWITCH<br>AUXILIARY                                                                                                                                                                    | MLO<br>MV<br>MW                   | MAIN LUGS ONLY<br>MEDIUM VOLTAGE<br>MICROWAVE                                                                                                 |
|               | TO EQUIPMENT SCHE                                                                                   | DULE.                                                                                                                          | AWG<br>BAS<br>BLDG          | AMERICAN WIRE GAUGE<br>BUILDING AUTOMATION SYSTEM<br>BUILDING<br>CONDUIT                                                                                                                                              | NC<br>NEC<br>NIC<br>NI            | NORMALLY CLOSED<br>NATIONAL ELECTRIC CODE<br>NOT IN CONTRACT<br>NIGHT LIGHT                                                                   |
|               | OR DURING CONSTRU<br>DRAWING CHANGES.                                                               | JCTION AND TO DENOTE RECORD                                                                                                    | CB<br>CKT<br>CLG            |                                                                                                                                                                                                                       | NO<br>OC<br>OCP                   | NORMALLY OPEN<br>ON CENTER(S)<br>OVER CURRENT PROTECTION                                                                                      |
|               | USED TO DENOTE AR<br>AFFECTED BY THE RE                                                             | EAS, DEVICES, EQUIPMENT DETAILS, ETC.<br>EVISION.                                                                              | COMM<br>CU<br>DAS           | CONVENIENCE OUTLETS<br>COMMUNICATIONS<br>COPPER<br>DISTRIBUTED ANTENNA SYSTEM                                                                                                                                         | PA<br>PH<br>PV                    | PUBLIC ADDRESS<br>PHASE<br>PHOTOVOLTAIC                                                                                                       |
|               | USED TO BREAK DRA                                                                                   | WINGS.                                                                                                                         | EA<br>EG<br>EG              | EXISTING<br>EACH<br>EQUIPMENT GROUND<br>EQUIPMENT GROUNDING CONDUCTOR                                                                                                                                                 | PWR<br>QTY<br>R<br>REF            | POWER<br>QUANTITY<br>REMOVE<br>REFRIGERATOR                                                                                                   |
| Т             |                                                                                                     |                                                                                                                                | ELEC<br>EM<br>EMT           | ELECTRICAL<br>EMERGENCY<br>ELECTRIC METALLIC TUBING                                                                                                                                                                   | REQ<br>RGC<br>RMC                 | REQUIREMENTS<br>RIGID GALVANIZED METALLIC CONDUIT<br>RIGID METAL CONDUIT                                                                      |
|               | SYMBOLS                                                                                             | REMARKS                                                                                                                        | ENI<br>EQUIP<br>EWC<br>EXP  | ELECTRIC NONMETALLIC TUBING<br>EQUIPMENT<br>ELECTRIC WATER COOLER<br>EXPLOSION PROOF                                                                                                                                  | RMP<br>RNC<br>RR<br>S             | ROCKY MOUNTAIN POWER<br>RIGID NONMETALLIC CONDUIT<br>REMOVE AND RELOCATE<br>SURFACE MOUNTED                                                   |
|               | ARROWS:<br>NUMBER OF ARROWS                                                                         | S INDICATES NUMBER OF CIRCUITS                                                                                                 | FA<br>FACP<br>FLA           | FIRE ALARM<br>FIRE ALARM CONTROL PANEL<br>FULL LOAD AMPS                                                                                                                                                              | SBJ<br>SCP<br>SFL                 | SYSTEM BONDING JUMPER<br>SECURITY CONTROL PANEL<br>SUB-FEED LUGS                                                                              |
|               | CAP AND MARK                                                                                        |                                                                                                                                | FMC<br>FO<br>FOB<br>FTL     | FIBER OPTIC<br>FREIGHT ON BOARD<br>FEED-THROUGH LUGS                                                                                                                                                                  | SPD<br>SS<br>SSBJ<br>TGB          | SURGE PROTECTIVE DEVICE<br>SURGE SUPPRESSION<br>SUPPLY SIDE BONDING JUMPER<br>TELECOMMUNICATION GROUNDING BUS BAR                             |
|               |                                                                                                     |                                                                                                                                | GEC<br>GND<br>H             | GROUNDING ELECTRODE CONDUCTOR<br>GROUND CONDUCTOR<br>HOSPITAL GRADE                                                                                                                                                   | TMGB<br>TR<br>TTB                 | TELECOMMUNICATION MAIN GROUNDING BUS BAR<br>TAMPER RESISTANT<br>TELEPHONE TERMINAL BOARD                                                      |
|               | MOUNT AS NOTED. S<br>FLOOR BOX WITH BL                                                              | UBSCRIPT 'F' INDICATES TO PROVIDE A<br>ANK COVERPLATE.                                                                         | HOA<br>HP<br>HZ<br>IBT      | HAND-OFF-AUTO<br>HORSE POWER<br>HORIZONTALLY MOUNTED<br>NTERSYSTEM BONDING TERMINATION BAR                                                                                                                            | UF<br>UG<br>UNO                   | UNDER FLOOR<br>UNDERGROUND<br>UNLESS NOTED OTHERWISE                                                                                          |
| R AWAY FROM   |                                                                                                     |                                                                                                                                | ID<br>IG<br>IMC             | NTRUSION DETECTION<br>SOLATED GROUND<br>NTERMEDIATE METAL CONDUIT                                                                                                                                                     | USB<br>VSS<br>W/                  | UNIVERSAL SERIAL BUS<br>VIDEO SURVEILLANCE SYSTEM<br>WITH                                                                                     |
| NEL           | ARROWS:<br>NUMBER OF ARROWS                                                                         | S INDICATES NUMBER OF CIRCUITS                                                                                                 | ISO<br>KCMIL<br>KVA         | SOLATED<br>KILO CIRCULAR MIL<br>KILO VOLT AMPERES                                                                                                                                                                     | WP<br>WR<br>XFMR                  | WEATHER PROOF<br>WEATHER RESISTANT<br>TRANSFORMER                                                                                             |
| TO PANEL      | REQUIRED.                                                                                           | S INDICATES NUMBER OF CIRCUITS                                                                                                 | KW<br>LFNC L<br>LS L        | KILOWATTS<br>LIQUID-TIGHT NONMETAL CONDUIT<br>LONG-TIME, SHORT-TIME                                                                                                                                                   |                                   |                                                                                                                                               |
|               |                                                                                                     |                                                                                                                                |                             | SHEET INDEX                                                                                                                                                                                                           |                                   |                                                                                                                                               |
|               |                                                                                                     | REMARKS                                                                                                                        | EG00 <sup>2</sup>           | GENERAL NOTES AND SYMBOLS LISTS                                                                                                                                                                                       |                                   |                                                                                                                                               |
| S)            | AT EQUIPMENT                                                                                        |                                                                                                                                | ED101                       | LEVEL 01 - LIGHTING DEMOLITION PLAN                                                                                                                                                                                   |                                   |                                                                                                                                               |
|               | +60"                                                                                                |                                                                                                                                | ED102                       | <ul> <li>LEVEL 01 - POWER AND SYSTEMS DEMOLITIO</li> <li>PLAN</li> <li>LEVEL 01 - AUDIO VISUAL DEMOLITION PLAN</li> </ul>                                                                                             | N                                 |                                                                                                                                               |
|               | +60"<br>+60"                                                                                        |                                                                                                                                | EL101                       | LEVEL 01 - LIGHTING PLAN<br>LIGHTING DETAILS AND LIGHT FIXTURE                                                                                                                                                        |                                   |                                                                                                                                               |
| SCONNECT      | +60"<br>+60"                                                                                        |                                                                                                                                | – EP101                     | SCHEDULE<br>LEVEL 01 - POWER PLAN                                                                                                                                                                                     |                                   |                                                                                                                                               |
| ED DISCONNECT | +60"<br>+60"                                                                                        |                                                                                                                                | EP601<br>EP602<br>EP701     | DATA DETAILS<br>CABLE TRAY DETAILS<br>ONE-LINE DIAGRAM AND SCHEDULES                                                                                                                                                  |                                   |                                                                                                                                               |
| IOTOR CIRCUIT | FLOOR OR WALL<br>AS SPECIFIED                                                                       | TOP AT +72" IF WALL MOUNTED                                                                                                    | EY101<br>EY701              | LEVEL 01 - SYSTEMS PLAN<br>SYSTEMS RISERS AND DETAILS                                                                                                                                                                 |                                   |                                                                                                                                               |
|               | TOP AT +72"<br>TOP AT +72"                                                                          | 14"W X 3"D<br>14"W X 3"D                                                                                                       | EY702                       | ACCESS CONTROL DOOR DETAILS<br>ACCESS CONTROL DOOR DETAILS                                                                                                                                                            |                                   |                                                                                                                                               |
| ACE-MOUNTED)  | TOP AT +72"<br>TOP AT +72"                                                                          | 20"W X 6"D<br>20"W X 6"D                                                                                                       | EA101<br>EA301              | LEVEL 1 - AUDIO VIUSAL<br>AUDIO VISUAL SECTIONS AND ELEVATIONS                                                                                                                                                        |                                   |                                                                                                                                               |
| ·             | WALL                                                                                                | THESE SYMBOLS ARE GENERAL IN<br>NATURE AND MAY VARY IN SIZE AND<br>SHAPE TO SUIT APPLICATION. CROSS                            | EI101<br>EI701              | LEVEL 1 - INTERCOM<br>AUDIO VISUAL RISER AND EQUIPMENT LIST                                                                                                                                                           |                                   |                                                                                                                                               |
|               | FLOOR                                                                                               | PANELBOARD OR SWITCHBOARD" NAME<br>IS INDICATED IN SEMI-QUOTES (I.E. 'L2A',<br>'MDP')                                          |                             |                                                                                                                                                                                                                       |                                   |                                                                                                                                               |
|               | PAD MOUNT                                                                                           |                                                                                                                                | <u>G</u> E                  | ENERAL PROJECT NOTES:<br>DIVISION 26 CONTRACTOR IS RESPONSIBLE FOR READING AND<br>IS IN THE SPECIFICATIONS TO THIS PROJECT. ANYTHING THAT                                                                             |                                   | G WHAT                                                                                                                                        |
|               | PAD MOUNT                                                                                           |                                                                                                                                |                             | ON THE PROJECT THAT IS CALLED OUT IN THE SPECIFICATION S<br>ON THE SUBSTANTIAL COMPLETION PUNCHLIST. THE CONTRAC<br>REQUIRED TO REMEDY THESE DEFICIENCIES. THERE WILL BE N                                            | SHALL BE<br>CTOR WIL              | LISTED<br>L BE<br>PTIONS.                                                                                                                     |
|               | WALL MOUNT                                                                                          |                                                                                                                                | 2.                          | THE CONTRACTOR MAY SCHEDULE A PRE-CONSTRUCTION MEE<br>DISCRETION WITH THE ELECTRICAL ENGINEER AND REVIEW TH<br>SPECIFICATIONS. THE MEETING SHALL BE A MAXIMUM OF ONE                                                  | eting , at<br>e drawii<br>hour an | THEIR<br>NGS AND<br>ID SHALL                                                                                                                  |
|               | TOP AT +72                                                                                          |                                                                                                                                | 3.                          | TAKE PLACE AT THE ENGINEER'S OFFICE.<br>THE FOLLOWING ITEMS ARE SOME OF THE REQUIREMENTS TH/<br>THE SPECIFICATIONS THESE ITEMS DO NOT REPRESENT ALL IT                                                                | AT ARE LI                         | STED IN                                                                                                                                       |
|               | +60"                                                                                                |                                                                                                                                |                             | CONTRACTOR IS RESPONSIBLE FOR MEETING ALL REQUIREMENTS SPECIFICATIONS:                                                                                                                                                | NTS OF T                          | HE                                                                                                                                            |
|               |                                                                                                     | ANOTHER DIVISION. INSTALL AND<br>CONNECT COMPLETE. REFER TO<br>RELATED SPECIFICATION SECTIONS.                                 |                             | A. INSULATED THROAT CONNECTORS OR PLASTIC BUSHIN<br>UTILIZED FOR ALL CONDUIT SIZES USED ON THIS PROJE     A DEDICATED NEUTRAL CONDUCTOR WILL BE PROVIDE                                                               | GS SHALI<br>CT.                   | LBE                                                                                                                                           |
|               | +60"                                                                                                | PROVIDED BY DIVISION 23                                                                                                        | -                           | <ul> <li>C. THE CONTRACTOR SHALL LABEL ALL FLECTRICAL FOUND</li> </ul>                                                                                                                                                |                                   | -<br>S IT IS                                                                                                                                  |
|               |                                                                                                     |                                                                                                                                | -                           | CALLED OUT IN THE SPECIFICATIONS.<br>D. THE CONTRACTOR SHALL PROVIDE SEISMIC SUPPORT /                                                                                                                                |                                   |                                                                                                                                               |
|               | FLOOR                                                                                               |                                                                                                                                | 4                           | ALL ELECTRICAL EQUIPMENT AS REQUIRED BY LOCAL A<br>CODE.<br>THE CONTRACTOR SHALL FOLLOW THE PANFI BOARD SCHEDU                                                                                                        | ND NATIC                          | DICATED                                                                                                                                       |
| RCUIT TELEVI  | SION SYMBOLS                                                                                        |                                                                                                                                |                             | IN THE DRAWINGS. EACH CIRCUIT BREAKER HAS BEEN ASSIGN<br>AREA OF THE BUILDING. NO DEVIATION WILL BE ALLOWED WITH<br>APPROVAL FROM THE ELECTRICAL ENGINEER.                                                            | ed a spe<br>Hout the              | ICIFIC<br>E                                                                                                                                   |
|               |                                                                                                     |                                                                                                                                | 5.                          | THE CONTRACTOR SHALL INSTALL THE WIRE SIZES AS CALLED<br>LINE DIAGRAM, EQUIPMENT SCHEDULES, VOLTAGE DROP TABL<br>ELECTRICAL SPECIFICATIONS. HOWEVER, THE CONTRACTOR IS                                                | OUT ON 1<br>ES, AND<br>RESPON     | THE ONE-                                                                                                                                      |
| AMERA         | MOUNTING<br>SEE PLANS                                                                               | REMARKS<br>SUBSCRIPT DENOTES DEGREES OF<br>MONITORED AREA                                                                      | 6.                          | TO ENSURE THE WIRE IS SIZED LARGE ENOUGH TO ALLOW FOR<br>THE CONTRACTOR SHALL VERIFY ALL MECHANICAL OVERCURE                                                                                                          |                                   | E DROP.<br>ICES                                                                                                                               |
|               | WALL                                                                                                |                                                                                                                                |                             | FOR THE ACTUAL MECHANICAL EQUIPMENT SUPPLIED ON THE<br>RELEASE OF ANY ELECTRICAL DISTRIBUTION EQUIPMENT. CON<br>ELECTRICAL ENGINEER WITH ANY DISCREPANCIES.                                                           | јов, PRIC<br>ITACT TH             | Ε                                                                                                                                             |
| /IERA         | SEE PLANS                                                                                           |                                                                                                                                | 7                           |                                                                                                                                                                                                                       | חום דווב                          | ΔΝΠ                                                                                                                                           |

THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING THE BID, AND SHALL EXAMINE ALL PHYSICAL CONDITIONS WHICH MAY BE MATERIAL TO THE PERFORMANCE OF HIS WORK. <u>NO EXTRA PAYMENTS WILL BE ALLOWED TO THE CONTRACTOR AS A RESULT OF EXTRA WORK MADE NECESSARY BY HIS FAILURE TO DO SO.</u> ANY CASE OF DISCREPANCY OR LACK OF CLARITY SHALL BE PROMPTLY IDENTIFIED TO THE OWNER'S REPRESENTATIVE AND THE ENGINEER FOR CLARIFICATION.

WALL

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- 8. THE CONTRACTOR SHALL MAKE SURE THAT ALL BRANCH CIRCUITS THAT ARE AFFECTED BY THIS PROJECT ARE NOT OVERLOADED. PROVIDE ADDITIONAL BRANCH CIRCUITS FROM ELECTRICAL PANELS AS NECESSARY TO COMPLY WITH THE BRANCH CIRCUIT LOADING REQUIREMENTS. PROVIDE ALL MATERIAL AND LABOR AS NECESSARY FOR A COMPETE AND OPERATING SYSTEM.
- PROVIDE UPDATED, TYPED PANELBOARD SCHEDULE(S) TO REFLECT ALL THE CHANGES MADE INCLUDING EXISTING LOADS. THE EXISTING LOADS SHALL BE NAMED THE SAME AS LISTED ON THE EXISTING PANELBOARD SCHEDULE.





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| <u>GE</u>  | NERAL                                                                                  | <u>_ DEMOLITION NOTES:</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.         | UNLES<br>ITEMS<br>ARE TO<br>DESCF<br>INCLUS<br>FOLLC                                   | S SPECIFICALLY NOTED OTHERWISE, REMOVE ALL EN<br>SHOWN IN DARK AND DASHED LINES. LIGHT AND SON<br>O REMAIN. DEMOLITION ITEMS ARE SHOWN TO GIVE A<br>RIPTION OF THE EXTENT OF DEMOLITION WORK, BUT I<br>SIVE. PROVIDE DEMOLITION WORK IN ACCORDANCE<br>WING REQUIREMENTS:                                                                                                                                                                                                          |
|            | A.                                                                                     | DISCONNECT AND REMOVE ANY/ALL FIXTURES, DEV<br>EQUIPMENT, ETC. REQUIRED FOR PROPER COMPLE<br>WORK WHETHER SHOWN OR NOT.                                                                                                                                                                                                                                                                                                                                                           |
|            | В.                                                                                     | RELOCATE, REWIRE, AND/OR RECONNECT ANY/ALL<br>DEVICES, EQUIPMENT, ETC. THAT FOR ANY REASON<br>CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                                       |
|            | C.                                                                                     | LEAVE ALL EXISTING FIXTURES, DEVICES, EQUIPMEN<br>PORTIONS OF THE BUILDING NOT BEING REMODELE<br>WORKING CONDITION. RESTORE ALL INTERRUPTED<br>CIRCUITS, FEEDERS, ETC.                                                                                                                                                                                                                                                                                                            |
|            | D.                                                                                     | REMOVE AND DISPOSE OF ALL RACEWAYS, CONDUC<br>BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT<br>REUSED. TERMINATE AT ACCESSIBLE JUNCTION BC<br>PROVIDING PROPER KNOCK-OUT CLOSURE, TAPE<br>CONDUCTORS, LABEL AS "SPARE" WITH CIRCUIT NO<br>OR OTHER CHARACTERISTIC IDENTIFYING SOURCE.                                                                                                                                                                                              |
|            | E.                                                                                     | EXISTING RACEWAYS MAY BE REUSED, IF IN PLACE,<br>POSSIBLE, AND WHERE IN COMPLIANCE WITH THE<br>SPECIFICATIONS AND THE INTENT OF THE CONTRAC<br>DOCUMENTS. UPGRADE AND OR PROVIDE NEW CO<br>SUPPORTS WHERE NECESSARY FOR ALL RACEWAY<br>REUSED. ENSURE INTEGRITY OF EXISTING RACEWA<br>REUSE.                                                                                                                                                                                      |
|            | F.                                                                                     | CONCEAL ALL RACEWAY AND WIRING IN EXISTING W<br>CEILINGS, FLOORS, ETC. THE USE OF WIREMOLD IS<br>ONLY WHERE SPECIFICALLY NOTED ON DRAWING.                                                                                                                                                                                                                                                                                                                                        |
|            | G.                                                                                     | DO NOT PENETRATE STRUCTURAL ELEMENTS OF FL<br>WALLS, CEILINGS, ROOFS, ETC.                                                                                                                                                                                                                                                                                                                                                                                                        |
|            | H.                                                                                     | COORDINATE WITH OWNER WHAT EQUIPMENT SHOUD DISPOSED OF AND WHAT EQUIPMENT IS TO BE RETUOWNER.                                                                                                                                                                                                                                                                                                                                                                                     |
|            | I.                                                                                     | FIRE ALARM SYSTEM MUST REMAIN OPERATIONAL E PHASES OF CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                                                                               |
| <u>GE</u>  | NERAI                                                                                  | <u>NOTES:</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.         | REMO<br>COMP                                                                           | VE ANY UNUSED BRANCH CIRCUITS BACK TO THE SOULETELY. TURN OFF BREAKER AND LABEL "SPARE                                                                                                                                                                                                                                                                                                                                                                                            |
| 2.         | BRANO<br>DRAW<br>CIRCU                                                                 | CH CIRCUITS, IF SHOWN WERE TAKEN FROM EXISTING<br>INGS AND PANEL SCHEDULES. CONTRACTOR TO TRA<br>ITS PRIOR TO ANY DEMOLITION.                                                                                                                                                                                                                                                                                                                                                     |
| 3.         | ANY E<br>AFFEC<br>AS NE                                                                | XISTING CONDUITS, BOXES, ETC THAT ARE LOCATED<br>TED CONSTRUCTION AREA SHALL BE RELOCATED OF<br>CESSARY.                                                                                                                                                                                                                                                                                                                                                                          |
| 4.         | THE C                                                                                  | ONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AI<br>EVICES ON THE CIRCUIT PRIOR TO ANY DEMOLITION.                                                                                                                                                                                                                                                                                                                                                                                  |
| 5.         | THIS A<br>BE ALL<br>WORK<br>SHOW<br>PERFC<br>CONTH<br>DETEF<br>PORTI<br>ALL DE<br>SHOW | ND ANY OTHER DEMOLITION DRAWINGS ARE NOT INT<br>INCLUSIVE, NOR TO DEFINE THE SCOPE OF ALL DEM<br>REQUIRED FOR THIS PROJECT.DEMOLITION DRAWIN<br>N ONLY TO AID THE CONTRACTOR IN PREPARING THE<br>DRMING THE WORK. CONTRACTOR SHALL EXAMINE AL<br>RACT DOCUMENTS AND VISIT THE SITE DURING BIDDII<br>RMINE THE TOTAL EXTENT AND SCOPE OF THE DEMOL<br>ON OF THIS WORK. CONTRACTOR SHALL BE RESPON<br>EMOOLITION WORK REQUIRED TO CARRY OUT THE WOR<br>N IN THE CONTRACT DOCUMENTS. |
| <u>KEY</u> | ED NC                                                                                  | DTES (#)                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| D1         | DISCONI<br>BRANCH<br>FIXTURE<br>TO TRAC<br>LIGHTS A<br>OF THE I                        | NECT, REMOVE AND DISPOSE OF EXISTING LIGHT FIXTU<br>CIRCUIT TO REMAIN IN PLACE FOR REUSE. REWIRE EX<br>S ON THE CIRCUIT SO THEY REMAIN OPERATIONAL. CO<br>E OUT CIRCUIT TO DETERMINE ACTUAL CIRCUIT FEED<br>AND ALL LIGHTS CONNECTED TO THE CIRCUIT PRIOR T<br>DEMOLITION.                                                                                                                                                                                                        |
| D2         | DISCON                                                                                 | NECT, REMOVE AND DISPOSE OF EXISTING LIGHTING C                                                                                                                                                                                                                                                                                                                                                                                                                                   |

TO THE START OF THE DEMOLITION.

6



<sup>1</sup> LEVEL 01 - LIGHTING DEMOLITION PLAN AREA A SCALE: 1/8" = 1'-0"





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SCALE: 1/8" = 1'-0"

|                                                                            | DESC<br>INCLU<br>FOLLO<br>A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | IN TION OF THE EXTENT OF DEMOLITION WORK, BUT N<br>JSIVE. PROVIDE DEMOLITION WORK IN ACCORDANCE V<br>OWING REQUIREMENTS:<br>DISCONNECT AND REMOVE ANY/ALL FIXTURES, DEVI<br>EQUIPMENT FTC. REQUIRED FOR PROPER COMPLET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|                                                                            | В.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | WORK WHETHER SHOWN OR NOT.<br>RELOCATE, REWIRE, AND/OR RECONNECT ANY/ALL F<br>DEVICES, EQUIPMENT, ETC. THAT FOR ANY REASON<br>CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                            | C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | LEAVE ALL EXISTING FIXTURES, DEVICES, EQUIPMEN<br>PORTIONS OF THE BUILDING NOT BEING REMODELEI<br>WORKING CONDITION. RESTORE ALL INTERRUPTED<br>CIRCUITS, FEEDERS, ETC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                            | D.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | REMOVE AND DISPOSE OF ALL RACEWAYS, CONDUC<br>BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT T<br>REUSED. TERMINATE AT ACCESSIBLE JUNCTION BO<br>PROVIDING PROPER KNOCK-OUT CLOSURE, TAPE<br>CONDUCTORS, LABEL AS "SPARE" WITH CIRCUIT NO.<br>OR OTHER CHARACTERISTIC IDENTIFYING SOURCE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                            | E.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EXISTING RACEWAYS MAY BE REUSED, IF IN PLACE,<br>POSSIBLE, AND WHERE IN COMPLIANCE WITH THE<br>SPECIFICATIONS AND THE INTENT OF THE CONTRAC<br>DOCUMENTS. UPGRADE AND OR PROVIDE NEW COM<br>SUPPORTS WHERE NECESSARY FOR ALL RACEWAY<br>REUSED. ENSURE INTEGRITY OF EXISTING RACEWA<br>REUSE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                            | F.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | CONCEAL ALL RACEWAY AND WIRING IN EXISTING W<br>CEILINGS, FLOORS, ETC. THE USE OF WIREMOLD IS F<br>ONLY WHERE SPECIFICALLY NOTED ON DRAWING.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                            | G.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DO NOT PENETRATE STRUCTURAL ELEMENTS OF FL<br>WALLS, CEILINGS, ROOFS, ETC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                            | п.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DISPOSED OF AND WHAT EQUIPMENT IS TO BE RETUOWNER.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                            | I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | FIRE ALARM SYSTEM MUST REMAIN OPERATIONAL D<br>PHASES OF CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <u>GE</u><br>1.                                                            | NERA<br>REMO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <u>L NOTES:</u><br>DVE ANY UNUSED BRANCH CIRCUITS BACK TO THE SOL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2.                                                                         | COMI<br>BRAN<br>DRAV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | PLETELY. TURN OFF BREAKER AND LABEL "SPARE<br>ICH CIRCUITS, IF SHOWN WERE TAKEN FROM EXISTING<br>VINGS AND PANEL SCHEDULES. CONTRACTOR TO TRAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3.                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | JITS PRIOR TO ANY DEMOLITION.<br>EXISTING CONDUITS, BOXES, ETC THAT ARE LOCATED<br>CTED CONSTRUCTION AREA SHALL BE RELOCATED OR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 4.                                                                         | AS NE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ECESSARY.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5.                                                                         | THIS J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EVICES ON THE CIRCUIT PRIOR TO ANY DEMOLITION.<br>AND ANY OTHER DEMOLITION DRAWINGS ARE NOT INT<br>LL-INCLUSIVE, NOR TO DEFINE THE SCOPE OF ALL DEMI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                            | WORI<br>SHOV<br>PERF<br>CONI<br>DETE<br>PORT<br>ALL D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | K REQUIRED FOR THIS PROJECT.DEMOLITION DRAWING<br>VN ONLY TO AID THE CONTRACTOR IN PREPARING THE<br>ORMING THE WORK. CONTRACTOR SHALL EXAMINE AL<br>RACT DOCUMENTS AND VISIT THE SITE DURING BIDDIN<br>RMINE THE TOTAL EXTENT AND SCOPE OF THE DEMOL<br>ION OF THIS WORK. CONTRACTOR SHALL BE RESPONS<br>DEMOOLITION WORK REQUIRED TO CARRY OUT THE WO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| KEY                                                                        | SHOV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N IN THE CONTRACT DOCUMENTS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| D3                                                                         | DISC<br>EXIS<br>EXIS<br>CON<br>FEED<br>PRIO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ONNECT, REMOVE AND DISPOSE OF EXISTING RECEPTA<br>TING BRANCH CIRCUIT TO REMAIN IN PLACE FOR REUSE<br>TING DEVICES ON THE CIRCUIT SO THEY REMAIN OPERA<br>TRACTOR TO TRACE OUT CIRCUIT TO DETERMINE ACTU<br>DING THE DEVICES AND ALL DEVICES CONNECTED TO TH<br>DING THE START OF THE DEMOLITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                            | 11110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| D4                                                                         | DISC<br>EXIS<br>OTHE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>IE MECHANICAL MEZZANINE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| D4<br>D5                                                                   | DISC<br>EXIS<br>OTHI<br>IN TH<br>DISC<br>OWN<br>THE<br>OWN<br>MEZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>IE MECHANICAL MEZZANINE.<br>ONNECT, REMOVE AND RETURN EXISTING WIFI ANTENN<br>IER IN WORKING CONDITION. REMOVE EXISTING CABLIN<br>SOURCE COMPLETELY, UNLESS OTHERWISE DIRECTED<br>IER. EXISTING DATA RACK IS LOCATED IN THE MECHANIC<br>ZANINE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| D4<br>D5<br>D6                                                             | DISC<br>EXIS<br>OTHI<br>IN TH<br>DISC<br>OWN<br>THE<br>OWN<br>MEZZ<br>DISC<br>NOTI<br>THE<br>CONS<br>SYST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>IE MECHANICAL MEZZANINE.<br>ONNECT, REMOVE AND RETURN EXISTING WIFI ANTENN<br>IER IN WORKING CONDITION. REMOVE EXISTING CABLING<br>SOURCE COMPLETELY, UNLESS OTHERWISE DIRECTED<br>IER. EXISTING DATA RACK IS LOCATED IN THE MECHANIC<br>ZANINE.<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>FICATION APPLIANCE FOR REUSE. REWIRE EXISTING AP<br>CIRCUIT SO THEY REMAIN OPERATIONAL DURING ALL PH<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| D4<br>D5<br>D6<br>D7                                                       | DISC<br>EXIS<br>OTHI<br>IN TH<br>DISC<br>OWN<br>THE<br>OWN<br>MEZZ<br>DISC<br>NOTI<br>THE<br>CONS<br>SYST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>TE MECHANICAL MEZZANINE.<br>ONNECT, REMOVE AND RETURN EXISTING WIFI ANTENN<br>IER IN WORKING CONDITION. REMOVE EXISTING CABLIN<br>SOURCE COMPLETELY, UNLESS OTHERWISE DIRECTED<br>IER. EXISTING DATA RACK IS LOCATED IN THE MECHANIC<br>ZANINE.<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>FICATION APPLIANCE FOR REUSE. REWIRE EXISTING AF<br>CIRCUIT SO THEY REMAIN OPERATIONAL DURING ALL PH<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>MENT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>THE SUPPLIER PRIOR TO THE START OF THE DEMOLITIO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| D4<br>D5<br>D6<br>D7<br>D8                                                 | DISC<br>EXIS<br>OTHE<br>IN THE<br>DISC<br>OWN<br>THE<br>OWN<br>MEZZ<br>DISC<br>NOTI<br>THE<br>CON:<br>SYST<br>DISC<br>INITI,<br>SO T<br>CON:<br>SYST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>THE MECHANICAL MEZZANINE.<br>CONNECT, REMOVE AND RETURN EXISTING WIFI ANTENN<br>IER IN WORKING CONDITION. REMOVE EXISTING CABLIN<br>SOURCE COMPLETELY, UNLESS OTHERWISE DIRECTED<br>IER. EXISTING DATA RACK IS LOCATED IN THE MECHANIC<br>ZANINE.<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM S'<br>FICATION APPLIANCE FOR REUSE. REWIRE EXISTING AF<br>CIRCUIT SO THEY REMAIN OPERATIONAL DURING ALL PH<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM S'<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM S'<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM S'<br>DER FOR REUSE. REWIRE EXISTING DOOR HOLDERS ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| D4<br>D5<br>D6<br>D7<br>D8<br>D9                                           | DISC<br>EXIS<br>OTHE<br>IN THE<br>OWN<br>THE<br>OWN<br>MEZZ<br>DISC<br>NOTH<br>THE<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | CONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>THE MECHANICAL MEZZANINE.<br>CONNECT, REMOVE AND RETURN EXISTING WIFI ANTENN<br>THE IN WORKING CONDITION. REMOVE EXISTING CABLIN<br>SOURCE COMPLETELY, UNLESS OTHERWISE DIRECTED<br>THE. EXISTING DATA RACK IS LOCATED IN THE MECHANIC<br>ZANINE.<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>FICATION APPLIANCE FOR REUSE. REWIRE EXISTING AF<br>CIRCUIT SO THEY REMAIN OPERATIONAL DURING ALL PT<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES O<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>DER FOR REUSE. REWIRE EXISTING DOOR HOLDERS ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND RETURN EXISTING CAMERA TO T<br>SKING CONDITION. REMOVE EXISTING CAMERA TO T<br>SKING CONDITION. REMOVE EXISTING CABLING BACK TO<br>PLETELY, UNLESS OTHERWISE DIRECTED BY THE OWNE                                                                                                                                                                                                                                                                                                                              |
| D4<br>D5<br>D6<br>D7<br>D8<br>D9<br>D10                                    | DISC<br>EXIS<br>OTHE<br>IN THE<br>DISC<br>OWN<br>THE<br>OWN<br>MEZZ<br>DISC<br>NOTI<br>THE<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>HE MECHANICAL MEZZANINE.<br>ONNECT, REMOVE AND RETURN EXISTING WIFI ANTENN<br>IER IN WORKING CONDITION. REMOVE EXISTING CABLIN<br>SOURCE COMPLETELY, UNLESS OTHERWISE DIRECTED<br>IER. EXISTING DATA RACK IS LOCATED IN THE MECHANIC<br>ZANINE.<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>FICATION APPLIANCE FOR REUSE. REWIRE EXISTING AF<br>CIRCUIT SO THEY REMAIN OPERATIONAL DURING ALL PH<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THIS<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THIS<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM SY<br>DER FOR REUSE. REWIRE EXISTING DOOR HOLDERS ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF THIS<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING CAMERA TO T<br>VING CONDITION. REMOVE EXISTING CAMERA TO T<br>CONNECT, REMOVE AND RETURN EXISTING CAMERA TO T<br>WING CONDITION. REMOVE EXISTING CAMERA TO T<br>ONNECT, REMOVE AND RETURN EXISTING CAMERA TO T<br>USTING CONDITION. REMOVE EXISTING CAMERA TO T<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND RETURN EXISTING CAMERA TO T<br>TING CONDITION. REMOVE EXISTING CAMERA TO T<br>TING CONDITION. REMOVE EXISTING CAMERA TO T<br>TIND SUPPLIER PRIOR TO THE START OF THE DEMOLITION<br>INTRUSION DETECTION SYSTEM SUPPLIER. COORDINAT<br>JIREMENTS WITH THE INTRUSION DETECTION SYSTEM S<br>TO THE START OF THE DEMOLITION.                            |
| D4<br>D5<br>D6<br>D7<br>D8<br>D9<br>D10<br>D11                             | DISC<br>EXIS<br>OTHE<br>IN THE<br>OWN<br>THE<br>OWN<br>MEZZ<br>DISC<br>NOTI<br>THE<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST<br>DISC<br>HOLL<br>SO T<br>CONS<br>SYST<br>DISC<br>WOR<br>COM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ONNECT, REMOVE AND DISPOSE OF EXISTING DATA JAC<br>TING CABLING BACK TO THE SOURCE COMPLETELY, UNI<br>ERWISE DIRECTED BY THE OWNER. EXISTING DATA RAC<br>HE MECHANICAL MEZZANINE.<br>ONNECT, REMOVE AND RETURN EXISTING WIFI ANTENN<br>IER IN WORKING CONDITION. REMOVE EXISTING CABLIN<br>SOURCE COMPLETELY, UNLESS OTHERWISE DIRECTED<br>IER. EXISTING DATA RACK IS LOCATED IN THE MECHANIC<br>ZANINE.<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM S'<br>FICATION APPLIANCE FOR REUSE. REWIRE EXISTING AF<br>CIRCUIT SO THEY REMAIN OPERATIONAL DURING ALL PI<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM S'<br>ATING DEVICE FOR REUSE. REWIRE EXISTING DEVICES OF<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF TH<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING FIRE ALARM S'<br>DER FOR REUSE. REWIRE EXISTING DOOR HOLDERS ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF TH<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND STORE EXISTING DOOR HOLDERS ON<br>HEY REMAIN OPERATIONAL DURING ALL PHASES OF TH<br>STRUCTION. COORDINATE ALL REQUIREMENTS WITH TH<br>TEM SUPPLIER PRIOR TO THE START OF THE DEMOLITIO<br>ONNECT, REMOVE AND RETURN EXISTING CAMERA TO T<br>'KING CONDITION. REMOVE EXISTING CABLING BACK TO<br>PLETELY, UNLESS OTHERWISE DIRECTED BY THE OWNE<br>ONNECT EXISTING DEVICE FROM THE INTRUSION DETECT<br>TO NUESS OTHERWISE DIRECTED BY THE OWNE<br>ONNECT EXISTING DEVICE FROM THE INTRUSION DETECT<br>SO ON THE START OF THE DEMOLITION.<br>ONNECT EXISTING DEVICES FROM THE ACCESS CONTR<br>JIREMENTS WITH THE INTRUSION DETECTION SYSTEM SUPPLIER. COORDINAT<br>SR TO THE START OF THE DEMOLITION.<br>ONNECT EXISTING DEVICES FROM THE ACCESS CONTR<br>OVE CABLING BACK TO THE SOURCE OR AS DIRECTED B<br>SS CONTROL SYSTEM SUPPLIER. RETURN ALL ELECTR<br>KES, REQUEST TO EXIT DEVICE AND CARD READER TO T<br>USION DETECTION SYSTEM SUPPLIER PRIOR TO THE ST<br>OLITION.                                                          |
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| <u>GEI</u> | NERA                                  | L DEMOLITION NOTES:                                                                                                                                                                                                                                                                                                |
|------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.         | UNLE<br>ITEMS<br>ARE<br>DESC<br>INCLU | SS SPECIFICALLY NOTED OTHERWISE, REMOVE ALL ELECTR<br>S SHOWN IN DARK AND DASHED LINES. LIGHT AND SOLID ITE<br>TO REMAIN. DEMOLITION ITEMS ARE SHOWN TO GIVE A BAS<br>RIPTION OF THE EXTENT OF DEMOLITION WORK, BUT MAY N<br>JSIVE. PROVIDE DEMOLITION WORK IN ACCORDANCE WITH<br>OWING REQUIREMENTS:              |
|            | A.                                    | REMOVE AND DISPOSE OF ALL RACEWAYS, CONDUCTORS<br>BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT TO BE<br>REUSED. TERMINATE AT ACCESSIBLE JUNCTION BOX BY<br>PROVIDING PROPER KNOCK-OUT CLOSURE, TAPE<br>CONDUCTORS, LABEL AS "SPARE" WITH CIRCUIT NO., ZON<br>OR OTHER CHARACTERISTIC IDENTIFYING SOURCE.           |
|            | B.                                    | EXISTING RACEWAYS MAY BE REUSED, IF IN PLACE, WHEF<br>POSSIBLE, AND WHERE IN COMPLIANCE WITH THE<br>SPECIFICATIONS AND THE INTENT OF THE CONTRACT<br>DOCUMENTS. UPGRADE AND OR PROVIDE NEW CONDUIT<br>SUPPORTS WHERE NECESSARY FOR ALL RACEWAYS BEIN<br>REUSED. ENSURE INTEGRITY OF EXISTING RACEWAYS BE<br>REUSE. |
|            | C.                                    | CONCEAL ALL RACEWAY AND WIRING IN EXISTING WALLS,<br>CEILINGS, FLOORS, ETC. THE USE OF WIREMOLD IS PERM<br>ONLY WHERE SPECIFICALLY NOTED ON DRAWING.                                                                                                                                                               |
|            | D.                                    | DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS<br>WALLS, CEILINGS, ROOFS, ETC.                                                                                                                                                                                                                                     |
|            | E.                                    | COORDINATE WITH OWNER WHAT EQUIPMENT SHOULD B<br>DISPOSED OF AND WHAT EQUIPMENT IS TO BE RETURNED<br>OWNER.                                                                                                                                                                                                        |
| <u>KEY</u> | ED N                                  | <u>DTES</u> (#)                                                                                                                                                                                                                                                                                                    |
| D13        | DISC<br>CABI                          | ONNECT ALL AV EXISTING DEVICES FROM THE AV SYSTEM, R<br>ING BACK TO THE SOURCES AND RETURN THEM TO THE OWN                                                                                                                                                                                                         |

| THE R        | ISER AND EQUIPMENT LIST<br>APPLY TO |
|--------------|-------------------------------------|
| •            | INTERCOM SPEAKER, ON CEILING        |
| (§)          | SPEAKER, ON CEILING                 |
| fe           | SHORT THROW, ON WALL                |
|              | PROJECTOR, ON CEILING               |
|              | PROJECTOR, ON WALL                  |
|              | CLOCK, ON WALL                      |
|              | AMP ON WALL                         |
| IAMP]        | AMP INSIDE THE DESK                 |
|              | IR SENSOR                           |
| Ð            | HDMI                                |
| <u>[V]</u>   | VGA                                 |
| IDVD]        | DVD PLAYER                          |
| <b>VIDEO</b> | VIDEO PLAYER                        |
| DOC          | DOC CAMERA                          |





SCALE: 1/8" = 1'-0"



- TO INSTALLATION.

ROUGH-IN.





| THE SYSTEMS SHALL INCLUDE. BUT IS NO                                                                                                                    |                                                                                                                                                                                        | PROVIDE DIVINING LEADS TO ALL FIX TURES THAT HAVE THE FOULDWING.                                                                                                                                                                                                                                                                                                                              |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| SENSORS, LIGHT LEVELS SENSORS, LOW<br>PACKS, LOW VOLTAGE CABLES, PROGRAM                                                                                | DT LIMITED TO CEILING-MOUNTED OCCUPANCY<br>VOLTAGE CONTROL WALL SWITCHES, POWER<br>MMING, ETC.                                                                                         | <ol> <li>NETWORK LOW-VOLTAGE LIGHTING CONTROL SYSTEMS.</li> <li>STAND ALONE LOW-VOLTAGE LIGHTING CONTROL SYSTEMS.</li> <li>ALL EXTERIOR BUILDING AND PARKING LOT LIGHTING.</li> <li>ANYWHERE TASK TUNING IS REQUIRED</li> </ol>                                                                                                                                                               |  |  |  |  |
| PROVIDE POWER PACKS IN TYPES AND RA<br>FULLY FUNCTIONAL SYSTEM WHETHER SI<br>PACKS ARE SERVING LOADS IN HIGH CEIL<br>ELECTRICAL ROOM WHERE LINE VOLTAGE | ATINGS AS MAY BE REQUIRED FOR A COMPLETE AND<br>HOWN ON THE DRAWINGS OR NOT. WHERE POWER<br>LING AREAS, LOCATE POWER PACKS IN THE<br>E WIRING IS ORIGINATING FROM.                     | EMERGENCY OPERATION: PROVIDE A UL 924 LISTED METHOD FOR OPERA<br>FIXTURES. FOR THE NLIGHT SYSTEM, THIS SHALL INCLUDE "FOR USE WTH<br>SUPPLY EM POWER" OPTION FOR EACH EGRESS LIGHT FIXTURE OR A UL 9<br>PACKS FOR GROUPS OF LIGHT FIXTURES. FOR OTHER LIGHTING CONTROL                                                                                                                        |  |  |  |  |
| OCCUPANCY SENSORS SHALL BE SET FO<br>IN THE FOLLOWING SPACES:<br>TECH OFFICE<br>CLASSROOMS                                                              | R "MANUAL ON – AUTO OFF" WITH A 10 MINUTE DELAY                                                                                                                                        | NOT HAVE A "FOR USE WITH GENERATOR SUPPLY EM POWER" OPTION FOR<br>EGRESS LIGHT FIXTURES, PROVIDE A GENERATOR TRANSFER DEVICES EG<br>BODINE GTD OR ITOA ETS FOR EACH INDIVIDUAL OR GROUPS OF LIGHT FIX<br>UPON THE APPLICATION. REFER TO DRAWINGS AND LIGHT FIXTURES SCHE<br>LIGHT FIXTURES SHALL BE SWITCHED OFF WITH OTHER NORMAL-POWERE                                                     |  |  |  |  |
| OCCUPANCY SENSORS SHALL BE SET FO                                                                                                                       | R "AUTO ON – AUTO OFF" WITH A 10 MINUTE DELAY IN                                                                                                                                       | DURING NORMAL OPERATION, BUT POWERED "FULL ON" DURING AN EMER                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |
| COATS<br>CORRIDORS<br>VESTIBULES<br>STORAGE ROOMS                                                                                                       |                                                                                                                                                                                        | LOW VOLTAGE CABLES: PROVIDE CABLES IN TYPES AND SIZES IN ACCORT<br>MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS. ALL<br>PLENUM RATED. PROVIDE J-HOOKS WITH ROD/WIRE CLIPS (CADDY 124Z34<br>EQUIVALENT) ATTACHED TO LIGHT FIXTURE SEISMIC SUPPORT WIRES IN C                                                                                                                        |  |  |  |  |
| ALL CEILING-MOUNTED OCCUPANCY SENSIONTACT FOR HVAC CONTROL.                                                                                             | SORS SHALL BE PROVIDED WITH AN AUXILIARY                                                                                                                                               | DETAIL 1/EL111.1. INSTALL SUPPORTS AND CLIPS 12" ABOVE RECESSED LA<br>FIXTURES. SECURE CABLES AT A SPACING OF NOT MORE THAN 60" ON CEI<br>ADDITIONAL DROP WIRES WITH DROP WIRE SUPPORTS OR J-HOOKS AS M/                                                                                                                                                                                      |  |  |  |  |
| SILKSCREENED ONTO THE FRONT OF THE                                                                                                                      | E SWITCH IN BLACK LETTERS.                                                                                                                                                             | NEC 300.11. ALL CABLES SHALL BE ROUTED IN A NEAT WORKMANLIKE MAN<br>AND/OR PERPENDICULAR TO CEILING GRIDS.                                                                                                                                                                                                                                                                                    |  |  |  |  |
| REFER TO LOW VOLTAGE LIGHTING CONT<br>PROGRAMMING SCENCES, TASK TUNING,<br>PROGRAMMED TO REVERT BACK TO ITS N                                           | IROL SCHEDULES FOR A COMPLETE DESCRIPTION ON<br>ETC. EACH STANDALONE SYSTEM SHALL BE                                                                                                   | SHOP DRAWINGS AND PRODUCT DATA:                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
| A SCENE OR RAISING OR LOWERING A LIG                                                                                                                    | GHTING ZONE.                                                                                                                                                                           | PRODUCT DATA: PROVIDE PRODUCT DATA FOR ALL SYSTEM COMPONENTS<br>DELINEATING THE DEVICES WHICH ARE TO BE PROVIDED.                                                                                                                                                                                                                                                                             |  |  |  |  |
| INE-VOLTAGE LIGHTING CONTROL SYSTE<br>SYSTEMS IN THE FOLLOWING ROOMS/ARE<br>WALL BOX OCCUPANCY SENSORS                                                  | EM: PROVIDE LINE-VOLTAGE LIGHTING CONTROL<br>EAS:<br><u>}:</u>                                                                                                                         | SHOP DRAWINGS: PROVIDE 1/8" SCALED 30" X 42" REVIT DRAWINGS SHO<br>CONTROL SYSTEM DEVICES PLACED ON THE CEILING AND FLOOR PLAN<br>MODEL FROM THE ARCHITECT. DRAWINGS SHALL INCLUDE COMPLETE I<br>INTERCONNECTION REQUIREMENTS. PROVIDE SEPARATE LINE AND LOV<br>AS MAY BE REQUIRED FOR CLARITY. LOW VOLTAGE DRAWING SHALL IN<br>ALL CABLES. INCLUDE COMPLETE WIRING DIAGRAMS, ONE-LINE DIAGRA |  |  |  |  |
| SMALL TOILET ROOMS                                                                                                                                      |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
| SET OCCUPANCY SENSOR TO HAV                                                                                                                             | /E A 10 MINUTE DELAY                                                                                                                                                                   | PROGRAMMING SCHEDULES: PROVIDE COMPLETE SEQUENCING AND PRO                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |
| OCCUPANCY SENSORS: PLEASE NOTE TH<br>OCCUPANCY SENSORS IN APPROXIMATE<br>SENSORS IN LOCATIONS, QUANTITIES, AN<br>PROVIDE COMPLETE PRODUCT DATA ANE      | IAT ELECTRICAL DRAWINGS INDICATE LOCATIONS OF<br>LOCATIONS AND QUANTITIES. PROVIDE OCCUPANCY<br>ND TYPES AS RECOMMENDED BY THE MANUFACTURE.<br>D SHOP DRAWINGS INDICATING THE PROPOSED | RECORD DRAWINGS: AT THE COMPLETION OF THE PROJECT, PROVIDE UPI<br>DRAWINGS INCLUDING ALL CHANGES MADE DURING CONSTRUCTION. INDI<br>LOCATION BY DIMENSION OF ALL POWER PACKS AND OTHER DEVICES MOI<br>ACCESSIBLE CELLINGS, PROVIDE A COMPLETE REVIT MODEL IN ELECTRON                                                                                                                          |  |  |  |  |
| TYPES, COVERAGE PATTERNS, LOCATION<br>ALL DEVICES WITH CEILING GRIDS, LIGHT<br>ETC.                                                                     | IS, AND QUANTITIES. COORDINATE THE LOCATION OF<br>FIXTURES, CEILING DIFFUSERS, SPRINKLER HEADS,                                                                                        | WARRANTY: WARRANTY ALL WORK INCLUDING PARTS AND LABOR FOR A F<br>YEAR.                                                                                                                                                                                                                                                                                                                        |  |  |  |  |
| <u>TASK TUNING:</u><br>SET THE DEFAULT (MAXIMUM) LIGHT LEVE<br>WORKSPACE AS FOLLOWS:                                                                    | ELS TO SUIT THE PARTICULAR TASK OR USE OF A                                                                                                                                            | <u>COMMISSIONING:</u> COMMISSION EACH PORTION OF THE LIGHTING CONTROC<br>COMPLETION OF THE PROJECT TO VERIFY THAT THE SYSTEM PERFROMS<br>COORDINATE COMMISSION SERVICES WITH COMMISSIONING AGENT. ASSI<br>SCHOOL DISTRICT IN PROGRAMMING AND MAPPING THE SYSTEM FOR INTE                                                                                                                      |  |  |  |  |
| FUNCTION / SPACE                                                                                                                                        | ILUMINANCE (AVG. FOOTCANDLES)                                                                                                                                                          | BACNET BUILDING MANAGEMENT SYSTEM TO THEIR SATISFACTION.                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| CLASSROOMS<br>VESTIBULES<br>OFFICES<br>STORAGE ROOMS<br>CORRIDORS                                                                                       | 35 FC<br>10 FC<br>35 FC<br>10 FC<br>10 FC                                                                                                                                              | RETRO-COMMISSIONING: DURING THE ONE YEAR WARRANTY PERIOD, PRO<br>COMMISSIONING SERVICES AT THREE MONTH, SIX MONTH, NINE MONTH, A<br>MARKS. PROVIDE AT LEAST 8 HOURS OF COMMISSIONING SERVICE FOR EA<br>RETRO-COMMISSIONING PERIODS. THIS WILL INCLUDE MEETING WITH THE<br>DISTRICT TO RECEVIE FEEDBACK ON THE SYSTEM AND MAKING CHANGES                                                       |  |  |  |  |
| COATS<br>SMALL TOILET ROOMS:                                                                                                                            | 10 FC<br>15 FC                                                                                                                                                                         | INCLUDING PROGRAMMING, TASK TUNING, ETC.                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| VALUES INDICATED ABOVE ARE AVERAGE                                                                                                                      | E FOOTCANDLE LEVELS ON THE TASK SURFACE.                                                                                                                                               | TRAINING: PROVIDE EIGHT HOURS OF TRAINING FROM A FACTORY TRAINE<br>TECHNICIAN AT THE COMPLETION OF THE PROJECT. SCHEDULE TRAING V<br>SCHOOL DISTRICT.                                                                                                                                                                                                                                         |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        | BIDDING REQUIREMENTS: BIDDERS SHALL BREAK OUT THE LIGHT FIXTURE<br>FROM THE LIGHTING CONTROL SYSTEM. ALL SPECIAL FEATURES PERTAINI<br>CONTROLS ASSOCIATED WITH THE LIGHT FIXTURES SHALL BE CONSIDERE<br>CONTROLS. BIDDERS WHO DO NOT CONFORM TO THIS REQUIREMENT MAY                                                                                                                          |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
|                                                                                                                                                         |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |

- 1. THE LIGHTING CONTROLS AS SHOW ARE ILIGHT LIGHTING CONTROLS (BASE BID). WATTSTOPPER IS AN APPROVED ALTERNATE. NO OTHERS WILL BE ALLOWED. SEE SPECIFICATIONS.
- 2. COORDINATE ALL REQUIREMENTS, CONNECTIONS AND CABLE TYPE WITH THE SUPPLIER PRIOR TO ANY INSTALLATION.
- 3. THE LIGHTING CONTROLS SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE LIGHTING CONTROL SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS, CONDUIT SIZE AND ROUTING AND ALL CONDUCTOR SIZES. TYPICAL RISERS AND COPYING AND SUBMITTING THE CONTRACT DOCUMENTS WILL NOT BE ACCEPTED.
- PROVIDE CABLE SUPPORTS FROM DROP WIRE SUPPORTS (CADDY PCS2 4. OR APPROVED EQUIVALENT) AND SECURING CLIPS IN QUANTITIES AS MAY BE REQUIRED FOR ROUTING OF LOW VOLTAGE LIGHTING CONTROL CABLES. INSTALL SUPPORTS ABOVE LIGHT FIXTURES. SECURE CABLES AT A SPACING OF NOT MORE THAN 60" ON CENTERS. SUPPLEMENT WITH J-HOOKS SUSPENDED BY ALL-THREAD AS MAY BE REQUIRED TO MEET SPACE CRITERIA. INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE NEC 300.11. ALL CABLES SHALL BE ROUTED IN A NEAT WORKMANLIKE MANNER PARALLEL AND PERPENDICULAR TO STRUCTURE.
- 5. NOT ALL SPACES SHOWN. LIGHTING CONTROL SUPPLIER TO PROVIDE INSTALLATION DRAWINGS INDICATING ALL REQUIRED WIRING FOR ALL SPACES CONTROLLED.

CONTRACTOR SHALL PROVIDE DIMMING LEADS AND CONTROL MODULES FOR ALL LED LIGHT FIXTURES SHOWN OR NOT FOR TASK TUNING OF FIXTURES. SEE THIS SHEET FOR LIGHT LEVEL REQUIREMENTS.

LIGHTING CONTROLS DIAGRAMS AS SHOWN ARE FOR BASIC CONCEPT AND LAYOUT. LIGHTING CONTROLS SYSTEM SUPPLIER TO PROVIDE INSTALLATION DRAWINGS THAT REFLECT THE ACTUAL INSTALLATION REQUIREMENTS, WIRING AND ALL REQUIRED DEVICES. SEE THIS SHEET AND LIGHTING PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

1

θ ENTRY STATION

2



TYPICAL CLASSROOM LIGHTING CONTROLS SCALE: NONE

|                                                                                                                                                                                      | 5                                                                                                                                                                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                  |                    |       | 6    |     |                                |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|--------------------|-------|------|-----|--------------------------------|--|
|                                                                                                                                                                                      |                                                                                                                                                                                         | LIGHT FI                                  | XTURE SO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CHEDULE       |                  |                    |       |      |     |                                |  |
| SERIES                                                                                                                                                                               | DESCRIPTION                                                                                                                                                                             | VOL TAGE                                  | LOAD (VA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MOUNTING      |                  | LAMPS<br>TYPE      | WATTS |      | CRI | RF                             |  |
| MRW-LED                                                                                                                                                                              | EXTERIOR WALL SCONCE<br>TYPE III DISTRIBUTION<br>3,000 LUMENS / 0-10V DIMMING<br>MOTION / AMBIENT SENSOR<br>CUSTOM COLOR BY ARCHITECT                                                   | 277                                       | 29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | WALL          | A/R              | LED                | 29    | 3000 | 80  | CONFIRM M<br>WITH /            |  |
| LDN6                                                                                                                                                                                 | 6" OPEN REFLECTOR DOWNLIGHT<br>SEMI-SPECULAR CLEAR SELF TRIMMING REFLECTOR<br>0-10 VOLT DIMMING - 1% / 1000 LUMENS                                                                      | 277                                       | 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RECESSED      | A/R              | LED                | 11    | 4000 | 80  |                                |  |
| TL                                                                                                                                                                                   | 1'X4' RECESSED ACRYLIC<br>.125" THICK PATTERN #12 ACRYLIC LENS<br>0-10 VOLT DIMMING - 10% / 4000 LUMENS                                                                                 | 277                                       | 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | FLANGED       | A/R              | LED                | 39    | 4000 | 80  |                                |  |
| CPX                                                                                                                                                                                  | 2'x4' TROFFER<br>EDGE-LIT FLAT PANEL<br>0-10 VOLT DIMMING - 1% / 3000 LUMENS                                                                                                            | 277                                       | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | LAY-IN        | A/R              | LED                | 25    | 4000 | 80  |                                |  |
| CPX                                                                                                                                                                                  | 2'x2' TROFFER<br>EDGE-LIT FLAT PANEL<br>0-10 VOLT DIMMING - 1% / 2000 LUMENS                                                                                                            | 277                                       | 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | LAY-IN        | A/R              | LED                | 16    | 4000 | 80  |                                |  |
| STL4                                                                                                                                                                                 | 1X4 ACRYLIC WRAP AROUND<br>RIGID PENDANT MOUNT<br>0-10 VOLT DIMMING TO 10% / 4,000 LUMENS                                                                                               | 277                                       | 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PENDANT       | A/R              | LED                | 39    | 4000 | 85  | Confirm Pi<br>With th<br>Prior |  |
| LE                                                                                                                                                                                   | DIE-CAST ALUMINUM EXIT SIGN<br>SINGLE FACE / GREEN LETTERS<br>AC ONLY / SELF-DIAGNOSTICS<br>STANDARD COLOR BY ARCHITECT                                                                 | 277                                       | 3.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | UNIVERSAL     | A/R              | LED                | 3.8   | N/A  | N/A |                                |  |
| ABB<br>NOTE: NOT ALL<br>SHED FLOOR<br>IT AT CORNER OF WALL<br>INTED COLOR AS SELE<br>PAINTED COLOR AS SELE<br>NISH AS SELECTED BY T<br>FINISH AS SELECTED BY<br>ANDARD LIGHT FIXTURE | ABBREVIATION SCHEDULE<br>ABBREVIATIONS WILL NECESSARILY BE USED.<br>AND CEILING<br>CTED BY THE ARCHITECT<br>LECTED BY THE ARCHITECT<br>THE ARCHITECT<br>Y THE ARCHITECT<br>AS INDICATED | 1. R<br>2. R<br>3. R<br>4. R<br>5. C<br>8 | LIGHT FIXTURE<br>GENERAL NOTES           1.         REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREP.<br>OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING           2.         REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL<br>DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.           3.         REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, BALLAST, AND LAMP REQUIREMENTS AND ACCEPTABLE<br>MANUFACTURERS.           4.         REFER TO ARCHITECTURAL DRAWINGS FOR LOUVER REQUIREMENTS (IF ANY).           5.         CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAW<br>BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO |               |                  |                    |       |      |     |                                |  |
|                                                                                                                                                                                      |                                                                                                                                                                                         | BIDDING F                                 | REQUIREN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>MENTS</b>  |                  |                    |       |      |     |                                |  |
| AT ARE SPECIFIED OR /<br>KTURES WITH OTHER S                                                                                                                                         | APPROVED BY ADDENDUM.<br><u>YSTEMS IS NOT ALLOWED.</u>                                                                                                                                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                  |                    |       |      |     |                                |  |
| ICT IS APPROVED FOR I<br>N EXISTS BETWEEN A S                                                                                                                                        | BIDDING, THE PRICE FOR THAT ITEM SHALL BE BROKEN OUT SEP<br>PECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPT                                                                      | ARATELY WHEN SU                           | JBMITTING PRIC<br>N.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ING TO VARIOU | S DISTRIBUTORS A | ND/OR CONTRACTORS. |       |      |     |                                |  |
|                                                                                                                                                                                      |                                                                                                                                                                                         |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                  |                    |       |      |     |                                |  |

# LIGHT FIXTURE PRIOR APPROVAL REQUIREMENTS

GIVEN.

PRIOR APPROVALS SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) EIGHT WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.

PRIOR APPROVALS SHALL BE SIGNED BY A PRINCIPAL OF THE SUBMITTING ORGANIZATION STATING THAT THEY HAVE PREPARED AND/OR REVIEWED THE SUBMITTAL AND THAT THE PRODUCTS PROPOSED ARE EQUIVALENT TO THOSE SPECIFIED.

I. ITEMS THAT ARE SUBMITTED AND HAVE BEEN APPROVED WILL BE LISTED IN THE ADDENDUM(S). VERBAL APPROVAL WILL NOT

6. PRIOR APPROVALS SHALL CONSIST OF TWO SETS OF CUT SHEETS DESCRIBING THE PRODUCTS BEING SUBMITTED AS EQUIVALENTS. FAXES ARE NOT ACCEPTABLE. ALL SPECIFICATION INFORMATION SHALL BE CLEARLY MARKED, WITH NON-APPLICABLE INFORMATION CROSSED OUT. COMPLETE PHOTOMETRIC DATA SHALL BE PROVIDED. PRODUCTS WITHOUT PHOTOMETRIC DATA WILL BE NOT BE APPROVED.

5. IT IS NOT THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER TO NOTIFY THE SUBMITTING PARTY OF ERRORS IN THE







| POW  | <u>'ER GENERAL NOTES:</u>                                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.   | ALL 120V, 20AMP OUTLETS THAT ARE WITHIN 6' OF ANY SINK<br>GFCI.                                                                                                                                                                                                                       |
| 2.   | THE DIVISION 26 CONTRACTOR SHALL DETERMINE THE EXAC<br>OF ALL CONDUITS IN THE FIELD. THIS PLAN REPRESENTS A S<br>REPRESENTATION OF DEVICE LOCATIONS.                                                                                                                                  |
| 3.   | PROVIDE A MINIMUM OF 12" SEPARATION BETWEEN POWER<br>COMMUNICATIONS CONDUITS.                                                                                                                                                                                                         |
| 4.   | CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND JUNCTION<br>FOR HVAC CONTROLS, THERMOSTATS, ETC. REFER TO THE<br>MECHANICAL DRAWINGS AND COORDINATE WORK WITH THE<br>MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.                                                                               |
| 5.   | CONTRACTOR SHALL COORDINATE ALL WALL MOUNTED DEV<br>FIXTURE AND EQUIPMENT HEIGHTS AND LOCATIONS WITH T<br>ARCHITECT PRIOR TO ANY ROUGH-IN.                                                                                                                                            |
| 6.   | CONTRACTOR TO COORDINATE ALL DATA/COMM. REQUIREN<br>WORK WITH PARK CITY SCHOOL DISTRICT PRIOR TO ROUGH                                                                                                                                                                                |
| KEYE | DNOTES (#)                                                                                                                                                                                                                                                                            |
| P1   | WIRELESS ACCESS POINT IS FURNISHED BY THE OWNER AND<br>AND CONNECTED BY THE ELECTRICAL CONTRACTOR.                                                                                                                                                                                    |
| P2   | DATA FOR WIRELESS ACCESS POINT. CONFIRM EXACT MOUN<br>LOCATIONS WITH THE OWNER PRIOR TO ANY ROUGH-IN. WH<br>INSTALLED ABOVE A LAY-IN CEILING, PROVIDE LABEL ON T-B.<br>JACK LOCATION WITH CABLE LABEL. PROVIDE A 30' COIL OF O<br>CEILING.                                            |
| P3   | POWER AND DATA FOR CEILING MOUNTED PROJECTOR. MOUNTED PROJECTOR. MOUNTING TILE. SEE EA SHEETS FOR EXACT MOUNTING LOCAT<br>COORDINATE MOUNTING LOCATION OF RECEPTACLE AND DA<br>AV SYSTEM INSTALLER PRIOR TO ANY ROUGH-IN. PROVIDE 1<br>COIL AND DATA COIL ABOVE CEILING.              |
| P4   | ADA DOOR. CONTRACTOR TO WIRE ALL ACTUATOR BUTTONS<br>COMPLETELY AND PROVIDE ALL REQUIRED POWER CONNEC<br>COORDINATE ALL WORK WITH THE ARCHITECT AND DOOR IN<br>PRIOR TO ANY ROUGH-IN.                                                                                                 |
| P5   | CONTRACTOR TO CONFIRM EXACT MOUNTING IN THE FIELD.<br>AND TRANSFORMER TO BE MOUNTED IN LOCATION WERE AL<br>WORKING AND CLEAR SPACE REQUIREMENTS ARE MAINTAIN<br>EQUIPMENT IS MOUNTED INCORRECTLY AND VIOLATES NEC<br>REQUIREMENTS THE EQUIPMENT WILL BE RELOCATED AT NO<br>THE OWNER. |
| P6   | INSTALL NEW RECEPTACLE IN EXISTING LOCATION. CIRCUIT                                                                                                                                                                                                                                  |
| P7   | PROVIDE 120 VOLT BRANCH CIRCUIT, ABOVE CEILING FOR V/<br>CONTROL. CONFIRM EXACT LOCATION WITH THE MECHANIC/<br>CONTRACTOR PRIOR TO ANY ROUGH-IN.                                                                                                                                      |
| P8   | EXTEND EXISTING CABLE TRAY INTO THE NEW ADDITION AS PROVIDE LADDER TYPE TRAY WITH SOLID BOTTOM. CABLE T ESTIMATED TO BE 12" WIDE X 6" HIGH. CONTRACTOR TO FIEL ACTUAL CABLE TRAY TYPE, SIZE AND ALL REQUIREMENTS P BID.                                                               |
| P9   | RECEPTACLE IS PROVIDED WITH THE UNIT. CIRCUIT AS SHOW                                                                                                                                                                                                                                 |
| P10  | RECEPTACLE FOR INTERCOM RACK. CONFIRM EXACT MOUN<br>LOCATION AND HEIGHT WITH THE INTERCOM INTEGRATOR P<br>ROUGH-IN.                                                                                                                                                                   |
| P11  | POWER TO 120V DAMPERS. COORDINATE ALL CONNECTION<br>REQUIREMENTS AND LOCATIONS WITH THE MECHANICAL CO<br>PRIOR TO ANY ROUGH-IN.                                                                                                                                                       |
| P12  | PROVIDE A NEW 20A, 1 POLE CIRCUIT BREAKER IN SPACE INI<br>PANEL AS CALLED OUT. NEW CIRCUIT BREAKER TO BE OF TH<br>MANUFACTURE (SIEMENS) AND INTERRUPTING CURRENT AS<br>INSTALLED. CONTRACTOR TO FIELD VERIFY ALL REQUIREME<br>ORDERING THE BREAKER.                                   |
| P13  | MECHANICAL ATC PANEL. CONFIRM EXACT MOUNTING LOCATINE MECHANICAL CONTRACTOR PRIOR TO ANY ROUGH-IN.                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                       |

# DATA GENERAL NOTES:

1

- 1. CONTRACTOR TO VERIFY ALL COMMUNICATIONS AND DATA REQUIREMENTS WITH PARK CITY SCHOOL DISTRICT.
- 2. CONTRACTOR TO PROVIDE ALL RACKS, PATCH PANELS AND PATCH CABLES AS REQUIRED FOR A COMPLETE INSTALLATION.
- CONTRACTOR TO PROVIDE FIBER BREAK OUT BOXES AS DIRECTED BY PARK CITY SCHOOL DISTRICT. MOUNT 3. IN LOCATION AS DIRECTED BY PARK CITY SCHOOL DISTRICT. CONTRACTOR TO TERMINATE ALL FIBERS IN THE BREAKOUT BOX IN THE MDF AND IDF ROOMS.
- 4. CONTRACTOR IS RESPONSIBLE FOR TESTING ALL CABLES AND CONNECTIONS TO ENSURE EIA/TIA STANDARDS ARE MET. PROVIDE A WRITTEN REPORT TO PARK CITY SCHOOL DISTRICT FOR EACH CABLE TESTED.
- CONTRACTOR TO PROVIDE PATCH CABLES AS FOLLOWS: 5.
  - VLAN (ORANGE) 6"
  - ROUTER TO SWITCH, SWITCH TO SWITCH (YELLOW) 6" TELEPHONES TO PORT, POE PORT TO PUNCH DOWN (GREEN) 7'
  - TEACHER MACHINE TO PORT (BLUE) 7'
  - CCTV CAMERAS (PURPLE/VILOT) 6" STUDENT MACHINE TO PORT (BLACK) 7'
  - SERVER TO SWITCH (WHITE) 7' LCD OR PROJECTOR (BROWN) 7'
  - CONTRACTOR TO PROVIDE 1 PATCH CABLE, AS NOTED ABOVE, PER JACK +10% SPARE COORDINATE ALL REQUIREMENTS WITH PARK CITY SCHOOL DISTRICT.
- THE DATA/COMM. SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE 6. ENTIRE DATA/COMM. SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS, CONDUIT SIZE AND ROUTING AND ALL CABLE TYPES. TYPICAL RISERS WILL NOT BE ACCEPTED.
- 7. CABLE LABELING SHALL BE AS FOLLOWS:
  - D = DATA W = WIFI
  - C = CCTV (e.g. D01, W05, C07)
- CONFIRM ALL LABELING WITH PARK CITY SCHOOL DISTRICT PRIOR TO PULLING AND LABELING CABLES.
- ALL DATA AND COMMUNICATION CABLES SHALL BE TERMINATED AND LABELED AT BOTH ENDS. PROVIDE 8. LABELING AS DIRECTED BY PARK CITY SCHOOL DISTRICT.
- 9. ALL CABLING THAT IS NOT IN CONDUIT OR CABLE TRAY SHALL BE A MINIMUM OF 5' FROM ANY LIGHT FIXTURE.
- 10. INSTALL WIRING IN RACEWAYS AND CABLE TRAYS EXCEPT WITHIN CONSOLES, CABINETS, DESK, AND COUNTERS AND ACCESSIBLE SUSPENDED CEILING SPACES. WHERE CABLES ARE ROUTED IN ACCESSIBLE SUSPENDED CEILINGS, SECURE AND SUPPORT CABLES WITH J-HOOKS AT INTERVALS NOT EXCEEDING 30 INCHES (760 MM). INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OR EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS. USE UL-LISTED PLENUM CABLE THROUGHOUT THE ENTIRE SYSTEM.
- 11. ALL CABLES SHALL BE PLENUM RATED.
- 12. THE DATA/COMM. SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE DATA/COMM. SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS, CONDUIT SIZE AND ROUTING AND ALL CABLE TYPES. TYPICAL RISERS WILL NOT BE ACCEPTED.
- 13. ALL PATCH PANELS SHALL BE FULLY POPULATED, EMPTY SPACES IN PATCH PANELS WILL NOT BE ACCEPTED.

# NOTE:

- 1. CONTRACTOR SHALL SCHEDULE A PRE-INSTALL MEETING WITH THE SCHOOL DISTRICT AND ENGINEER FOR REVIEW OF THE INSTALLATION OF THE SYSTEM PRIOR TO ANY ROUGH-IN AND PRIOR TO SUBMITTAL SUBMISSION. IF THE CONTRACTOR DOES NOT SCHEDULE A PRE-INSTALL MEETING, THE CONTRACTOR SHALL MAKE ANY AND ALL CHANGES TO THE SYSTEM AS DIRECTED BY THE SCHOOL DISTRICT AT NO ADDITIONAL COST TO THE DISTRICT.
- 2. RACK LAYOUT ARE FOR BASIC CONCEPT AND LAYOUT. DATA SYSTEM INSTALLER SHALL PROVIDE ALL EQUIPMENT AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM TO COMPLY WITH THE SPECIFICATIONS AND OWNER REQUIREMENTS.
- 3. DATA CONTRACTOR SHALL LAYOUT RACKS AS DIRECTED BY THE OWNER. PROVIDE SPACE FOR OWNER PROVIDED ACTIVE EQUIPMENT.
- 4. DATA CONTRACTOR SHALL PROVIDE ALL REQUIRED PATCH PANELS AND WIRE MANAGEMENT FOR AV SYSTEM. COORDINATE ALL WORK AND REQUIREMENTS WITH THE AV INSTALLER.



3 LEVEL 01 - TECH OFFICE ENLARGED SCALE: 3/4" = 1'-0"

1

KEYED NOTES: (#)

2

1. 48 PORT CAT. 6 PATCH PANEL FOR DATA. CONTRACTOR TO VERIFY AND PROVIDE EXACT QUANTITY OF PATCH PANELS REQUIRED FOR A COMPLETE INSTALLATION.

3

2. 48 PORT CAT. 6 PATCH PANEL FOR WIFI. CONTRACTOR TO VERIFY AND PROVIDE EXACT QUANTITY OF PATCH PANELS REQUIRED FOR A COMPLETE INSTALLATION.

3. 24 PORT CAT. 6 PATCH PANEL FOR CCTV. CONTRACTOR TO VERIFY AND PROVIDE EXACT QUANTITY OF PATCH PANELS REQUIRED FOR A COMPLETE INSTALLATION. 4. OWNER PROVIDED EQUIPMENT.



4

PATCH CABLE COLORS:

WIRELESS ACCESS POINT - GREEN CCTV - GREEN INTERCOM - PURPLE DATA - BLUE

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. CONFIRM ALL LENGTHS WITH THE DISTRICT PRIOR ORDERING.



5

CABLE JACKET / JACK COLORS:

WIRELESS ACCESS POINT - GREEN LIGHTING CONTROLS - WHITE CCTV - GREEN INTERCOM / AV - PURPLE DATA - BLUE

JACK COLORS APPLY TO PATCH PANEL AND FIELD JACKS ALL JACK COLORS SHALL BE APPROVED BY THE OWNER PRIOR TO ORDERING. SEE SPECIFICATION FOR SAMPLE REQUIREMENTS.

RACK LAYOUT ARE FOR BASIC CONCEPT AND LAYOUT. DATA SYSTEM INSTALLER SHALL PROVIDE ALL EQUIPMENT AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM TO COMPLY WITH THE SPECIFICATIONS AND OWNER REQUIREMENTS.

6

THE DATA SYSTEM INTEGRATOR AND ELECTRICAL CONTRACTOR SHALL DETERMINE THE BEST ROUTING AND MDF/IDF ROOM TO EXTEND THE UTP CABLING TO. ALL UTP CABLING SHALL MEET THE LENGTH REQUIREMENTS AS REQUIRED BY BICSI AND MANUFACTURE. SEE GENERAL NOTE #6.







# NOTES:

3

- 1. PROVIDE SEISMIC CONTROLS FOR CABLE TRAY PER SPECIFICATION SECTION 260548 AND MANUFACTURER RECOMMENDATIONS. THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- 2. SEE SPECIFICATIONS FOR APPROVED FITTINGS FOR ATTACHMENT TO STRUCTURE.

4

- 3. COORDINATE ROUTING OF CABLE TRAYS AND SUPPORT SYSTEM WITH ALL DIVISIONS.
- 4. DO NOT SUPPORT FROM BOTTOM OF CORD OF TRUSSES.
- WHERE CABLE TRAYS ARE ROUTED ABOVE SUSPENDED CEILINGS, INSTALL TRAY NO MORE THAN
   6" FROM CEILING TO BOTTOM OF TRAY.





5

6

# NOTES:

- 1. ALL CABLE TRAY SHALL BE INSTALLED WITH A CONTINUOUS COPPER GROUND SIZED AND SECURED TO THE OUTSIDE OF THE CABLE TRAY IN ACCORDANCE WITH THE DETAIL SHOWN BELOW.
- 2. EXTEND BONDING CONDUCTOR BACK TO NEAREST 'TMGB' AND/OR 'TGB' INSIDE TELECOM ROOMS.

4

3. SEE SPECIFICATION SECTION 260526, 270526, AND 270536 FOR DETAILS.



3 CABLE TRAY GROUNDING DETAIL SCALE: NONE



|      |                                                                                |            |        |         | PA            | NE                          | LBC                 | DAR     | DS      | CHE                    | EDU                                       | LE                    |       |        |         |                                                                           |      |
|------|--------------------------------------------------------------------------------|------------|--------|---------|---------------|-----------------------------|---------------------|---------|---------|------------------------|-------------------------------------------|-----------------------|-------|--------|---------|---------------------------------------------------------------------------|------|
|      | PANEL NAN<br>MOUNTING: RECESSED<br>ENCLOSURE: NEMA 1<br>DOOR TYPE: DOOR-IN-DOO | <b>/E:</b> | BL     | .4      | V             | DLTAGE:<br>PHASE:<br>WIRES: | 120/208 V<br>3<br>4 | Vye     |         | LO<br>MA<br>BUS<br>MCB | CATION:<br>IN TYPE:<br>RATING:<br>RATING: | MCB<br>225 A<br>175 A |       |        |         | FEED FROM:<br>SPD: CAT A<br>NEUTRAL RATING: 100%<br>ISOLATED GROUND: NONE |      |
|      |                                                                                |            |        | Min.    | A.I.C.        | RATING:                     | 10K                 |         |         |                        | IERIAL:                                   | ALUMI                 | NUM   |        |         |                                                                           |      |
|      | 1                                                                              |            |        |         |               |                             | BR                  | ANCHE   | SKEAK   | ERS                    |                                           |                       |       |        |         |                                                                           |      |
|      |                                                                                |            |        |         |               |                             | ^                   |         |         |                        | ~                                         |                       | Load  |        |         |                                                                           | KEYE |
| NOTE |                                                                                |            | POLE   |         | #<br>1        |                             |                     |         | 3       |                        |                                           | #<br>2                |       | POLE   |         |                                                                           | NOT  |
|      | 151 1303 MIDDLE C.O.                                                           | 20 A       | 1      | R       | 1             | 900 VA                      | 900 VA              | 720.1/4 | 700 \/A |                        |                                           | 2                     |       | 1      | 20 A    | KINDER 1310 MIDDLE C.O.                                                   |      |
|      |                                                                                | 20 A       |        | R       | 5             |                             |                     | 720 VA  | 720 VA  | 2001/4                 | <b>540</b> \/A                            | 4                     | R     | 1      | 20 A    | KINDER 1310 NORTH C.O.                                                    |      |
|      |                                                                                | 20 A       | 1      | R       | 5             | 5401/4                      | 0001/4              |         |         | 360 VA                 | 540 VA                                    | 6                     | R     | 1      | 20 A    | KINDER 1310 SOUTH C.O.                                                    |      |
|      | INTERVENTION MIDDLE C.O.                                                       | 20 A       | 1      | R       | 1             | 540 VA                      | 900 VA              |         |         |                        |                                           | 8                     | R     | 1      | 20 A    | KINDER 1312 MIDDLE C.O.                                                   |      |
|      | INTERVENTION SOUTH C.O.                                                        | 20 A       | 1      | R       | 9             |                             |                     | 540 VA  | 720 VA  |                        |                                           | 10                    | R     | 1      | 20 A    | KINDER 1312 NORTH C.O.                                                    |      |
|      | INTERVENTION NORTH C.O.                                                        | 20 A       | 1      | R       | 11            |                             |                     |         |         | 360 VA                 | 360 VA                                    | 12                    | R     | 1      | 20 A    | KINDER 1312 SOUTH C.O.                                                    |      |
|      | STEM ROOM MIDDLE C.O.                                                          | 20 A       | 1      | R       | 13            | 540 VA                      | 600 VA              |         |         |                        |                                           | 14                    | E     | 1      | 20 A    | MECHANICAL CONTROLS                                                       |      |
|      | STEM ROOM C.O.                                                                 | 20 A       | 1      | R       | 15            |                             |                     | 540 VA  | 600 VA  |                        |                                           | 16                    | E     | 1      | 20 A    | MECHANICAL CONTROLS                                                       |      |
|      | STEM ROOM SOUTH EAST C.O.                                                      | 20 A       | 1      | R       | 17            |                             |                     |         |         | 360 VA                 | 480 VA                                    | 18                    | M     | 1      | 20 A    | CABINET UNIT HEATER CUH-1,2                                               |      |
|      | STEM ROOM NORTH EAST C.O.                                                      | 20 A       | 1      | R       | 19            | 360 VA                      | 720 VA              |         |         |                        |                                           | 20                    | М     | 1      | 20 A    | EXHAUST FAN EF-1.1                                                        |      |
|      | RM 1457-1458, HALL 1320 C.O.                                                   | 20 A       | 1      | R       | 21            |                             |                     | 1260 VA | 720 VA  |                        |                                           | 22                    | M     | 1      | 20 A    | EXHAUST FAN EF-1.2                                                        |      |
|      | TECH OFFICE C.O.                                                               | 20 A       | 1      | R       | 23            |                             |                     |         |         | 900 VA                 | 720 VA                                    | 24                    | М     | 1      | 20 A    | INLINE FAN VF-1.1                                                         |      |
|      | TECH OFFICE C.O.                                                               | 20 A       | 1      | R       | 25            | 720 VA                      | 720 VA              |         |         | -                      |                                           | 26                    | М     | 1      | 20 A    | INLINE FAN VF-1.2                                                         |      |
|      | TECH OFFICE C O                                                                | 20 A       | 1      | R       | 27            |                             |                     | 720 VA  | 720 VA  |                        |                                           | 28                    | M     | 1      | 20 A    | FF-DAMPERS                                                                |      |
|      |                                                                                | 20 A       | 1      | R       | 29            |                             |                     | 120 111 | 120 111 | 360 \/A                | 720 \/A                                   | 30                    | M     | 1      | 15 A    | EAN COIL LINIT EC-1                                                       |      |
|      |                                                                                | 20 A       | 1      | R       | 20            | 720 \/A                     | 720 \/A             |         |         | 000 1/1                | 120 11                                    | 32                    | M     | 1      | 15 A    |                                                                           |      |
|      |                                                                                | 20 A       | 1      |         | 22            | 120 VA                      | 720 VA              | 260.1/4 | 720 \/A |                        |                                           | 24                    |       | 1      | 15 A    |                                                                           |      |
|      | TECH LOWER SHELF C.O.                                                          | 20 A       | 1      |         | 25            |                             |                     | 300 VA  | 720 VA  | 260.1/4                | 1200.1/4                                  | 26                    |       | 1      | 15 A    | FAN COIL UNIT FC 4                                                        |      |
|      |                                                                                | 20 A       | 1      | R       | 35            | 0001/4                      | 700 \ / A           |         |         | 360 VA                 | 1200 VA                                   | 30                    |       | 1      | 15 A    | FAN COIL UNIT FC-4                                                        |      |
|      | TECH UPPER SHEFL C.O.                                                          | 20 A       | 1      | R       | 37            | 360 VA                      | 720 VA              |         |         |                        |                                           | 38                    | M     | 1      | 15 A    | FAN COIL UNIT FC-5                                                        |      |
|      | INTERCOM RACK C.O.                                                             | 20 A       | 1      | R       | 39            |                             |                     | 180 VA  | 720 VA  |                        |                                           | 40                    | M     | 1      | 15 A    | FAN COIL UNIT FC-6                                                        |      |
|      | FIRE ALARM 'NAC' PANEL                                                         | 20 A       | 1      | E       | 41            |                             |                     |         |         | 960 VA                 | 1248 VA                                   | 42                    | M     | 2      | 25 A    | RELIEF FAN RF-1.1                                                         |      |
|      | ACCESS CONTROL 'ACC' PANEL                                                     | 20 A       | 1      | E       | 43            | 960 VA                      | 1248 VA             |         |         |                        |                                           | 44                    |       |        |         |                                                                           |      |
|      | MECHANICAL ATC PANEL                                                           | 20 A       | 1      | E       | 45            |                             |                     | 960 VA  | 2496 VA |                        |                                           | 46                    | M     | 2      | 40 A    | MAKE UP AREA UNIT MAU-1                                                   |      |
|      | -SPARE-                                                                        | 20 A       | 1      |         | 47            |                             |                     |         |         | 0 VA                   | 2496 VA                                   | 48                    |       |        |         |                                                                           |      |
|      | -SPARE-                                                                        | 20 A       | 1      |         | 49            | 0 VA                        | 1200 VA             |         |         |                        |                                           | 50                    | М     | 1      | 20 A    | PUMP P-1.1                                                                |      |
|      | -SPARE-                                                                        | 20 A       | 1      |         | 51            |                             |                     | 0 VA    | 360 VA  |                        |                                           | 52                    | R     | 1      | 20 A    | ROOF TOP C.O.                                                             |      |
|      | -SPARE-                                                                        | 20 A       | 1      |         | 53            |                             |                     |         |         | 0 VA                   | 0 VA                                      | 54                    |       | 1      | 20 A    | -SPARE-                                                                   |      |
|      | -SPARE-                                                                        | 20 A       | 1      |         | 55            | 0 VA                        | 0 VA                |         |         | -                      |                                           | 56                    |       | 1      | 20 A    | -SPARE-                                                                   |      |
|      | -SPARE-                                                                        | 20 A       | 1      |         | 57            | -                           | -                   | 0 VA    | 0 VA    |                        |                                           | 58                    |       | 1      | 20 A    | -SPARF-                                                                   |      |
|      | -SPARE-                                                                        | 20 A       | 1      |         | 59            |                             |                     |         | 0 1/1   | 0.VA                   | 0.VA                                      | 60                    |       | 1      | 20 A    | -SPARE-                                                                   |      |
|      |                                                                                | 207        | 1      |         | 61            |                             |                     |         |         | 0 1/1                  | 0 1/1                                     | 62                    |       | 1      | 2077    |                                                                           |      |
|      |                                                                                |            | 1      |         | 63            |                             |                     | -       |         |                        |                                           | 64                    |       | 1      |         |                                                                           |      |
|      |                                                                                |            | 1      |         | 65            |                             |                     |         |         |                        |                                           | 66                    |       | 1      |         |                                                                           |      |
|      |                                                                                |            | 1      |         | 05            |                             |                     |         |         |                        |                                           | 00                    |       | 1      |         |                                                                           |      |
|      |                                                                                |            | 1      |         | 67            |                             |                     | -       |         |                        |                                           | 08                    |       | 1      |         |                                                                           |      |
|      | -SPACE ONLY-                                                                   |            | 1      |         | 69            |                             |                     |         |         | -                      |                                           | 70                    |       | 1      |         | -SPACE ONLY-                                                              |      |
|      | -SPACE ONLY-                                                                   |            | 1      |         | 71            |                             |                     |         |         |                        |                                           | 72                    |       | 1      |         | -SPACE ONLY-                                                              |      |
|      | TOTAL CONNECTED                                                                | D LOA      | D PER  | PHAS    | E (VA)        | 1282                        | 28 VA               | 1305    | 56 VA   | 1142                   | 24 VA                                     |                       |       |        |         |                                                                           |      |
|      | TOTAL CONNECTED CURR                                                           | RENT P     | PER PH | IASE (/ | AMPS)         | 10                          | 9 A                 | 11      | 1 A     | 95                     | δA                                        |                       |       |        |         |                                                                           |      |
| TYPE | LOAD CLASSIFICATION                                                            |            |        | CC      | ONNEC         | TED LOA                     | D DE                | MAND FA | CTOR    | ESTIMATE               | ED DEMAN                                  | ND                    |       |        |         | PANEL TOTALS                                                              |      |
| Р    | Panel                                                                          |            |        |         | 0             | VA                          |                     | 0.00%   |         | 0                      | VA                                        |                       |       |        |         |                                                                           |      |
| R    | Receptacle                                                                     |            |        |         | 156           | 60 VA                       |                     | 81.93%  |         | 128                    | 30 VA                                     |                       |       | То     | otal Co | nn. Load: 37308 VA                                                        |      |
| L    | Lighting                                                                       |            |        |         | 0             | VA                          |                     | 0.00%   |         | 0                      | VA                                        |                       | 25%   |        | RGEST   | MOTOR:                                                                    |      |
| С    | Continuous                                                                     |            |        |         | 0             | VA                          |                     | 0.00%   |         | 0                      | VA                                        |                       |       | Tot    | al Est  | Demand: 35726 VA                                                          |      |
| F    | Equipment                                                                      |            |        |         | 408           | 30 VA                       |                     | 100.00% |         | 0                      | 30 VA                                     |                       |       | Total  | l Conn  | . Current: 104 A                                                          |      |
|      | Motor                                                                          |            |        |         | 175           | 68 \/A                      |                     | 107 10% |         | 188                    | 16 V/A                                    |                       | Total | Fet D  | emand   | I Current: 99 A                                                           |      |
| ĸ    | Kitchen                                                                        |            |        |         | . <i>.</i> ,0 | VA                          |                     | 0 00%   | -       | ۰۰۰<br>۱۰۰             | VA                                        |                       |       | _01. D | un      |                                                                           |      |
|      | Other                                                                          |            |        |         | 0             |                             |                     | 0.00%   |         | 0                      |                                           |                       |       |        |         |                                                                           |      |

1

PANELBOARD SCHEDULE NOTES:

CONTRACTOR SHALL USE THE ROOM NAMES LISTED ON THE ARCHITECTURAL SIGNAGE PLAN FOR ALL ROOM NAMES ON THE FINAL PANEL SCHEDULE CIRCUIT DESCRIPTIONS. IF IT IS FOUND THAT THE ARCHITECTURAL FLOOR PLAN ROOM NAMES HAVE BEEN USED THE SCHEDULES WILL BE UPDATED TO FOR THE CORRECT ROOM NAMES AT NO ADDITIONAL COST TO THE OWNER.

|                                  |                            |                                                                                  |                                                  |                                  |                                               |                            |                        | MECH                                 |
|----------------------------------|----------------------------|----------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------|-----------------------------------------------|----------------------------|------------------------|--------------------------------------|
|                                  |                            |                                                                                  |                                                  |                                  |                                               |                            |                        |                                      |
| UNIT<br>TYPE NO.                 |                            | DESCRIPTION                                                                      | LOAD                                             | TYPE                             | VOLTAGE                                       | PHASE                      | AMPERAGE               | QTY                                  |
| CUH                              | 1                          | CABINET UNIT HEATER                                                              | 1/30                                             | HP                               | 120                                           | 1                          | 2                      | 1                                    |
| CUH                              | 2                          | CABINET UNIT HEATER                                                              | 1/30                                             | HP                               | 120                                           | 1                          | 2                      | 1                                    |
| EF                               | 1.1                        | EXHAUST FAN                                                                      | .25                                              | HP                               | 120                                           | 1                          | 5.8                    | 1                                    |
| EF                               | 1.2                        | EXHAUST FAN                                                                      | .25                                              | HP                               | 120                                           | 1                          | 5.8                    | 1                                    |
| EF                               | 1.3                        | EXHAUST FAN                                                                      | .25                                              | HP                               | 120                                           | 1                          | 5.8                    | 1                                    |
| EF                               | 1.4                        | EXHAUST FAN                                                                      | .25                                              | HP                               | 120                                           | 1                          | 5.8                    | 1                                    |
| FC<br>FC<br>FC<br>FC<br>FC<br>FC | 1<br>2<br>3<br>4<br>5<br>6 | FAN COIL<br>FAN COIL<br>FAN COIL<br>FAN COIL<br>FAN COIL<br>FAN COIL<br>FAN COIL | .33<br>.33<br>.33<br>(2).33<br>.33<br>.33<br>.33 | HP<br>HP<br>HP<br>HP<br>HP<br>HP | 120<br>120<br>120<br>120<br>120<br>120<br>120 | 1<br>1<br>1<br>1<br>1<br>1 | 6<br>6<br>10<br>6<br>6 | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| MAU                              | 1                          | MAKE-UP AIR UNIT                                                                 | 3                                                | HP                               | 208                                           | 1                          | 23.8                   | 1                                    |
| Р                                | 1.1                        | PUMP                                                                             | .5                                               | HP                               | 120                                           | 1                          | 9.8                    | 1                                    |
| RF                               | 1.1                        | RELIEF FAN                                                                       | 2                                                | HP                               | 208                                           | 1                          | 12                     | 1                                    |
| VF                               | 1.1                        | INLINE FAN                                                                       | .25                                              | HP                               | 120                                           | 1                          | 5.8                    | 1                                    |
| VF                               | 1.2                        | INLINE FAN                                                                       | .25                                              | HP                               | 120                                           | 1                          | 5.8                    | 1                                    |

STARTER / DISCONNECT NOTES:

MANUAL STARTER WITH THERMAL OVERLOAD
 MANUAL STARTER WITH THERMAL OVERLOAD PROTECTION & LOW VOLTAGE RELAY / CONTACTOR FOR ATC CONTROL
 COMBINATION MAGNETIC STARTER / FUSED DISCONNECT

COMBINATION MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP)
 COMBINATION VARIABLE FREQUENCY DRIVE / MOTOR CIRCUIT PROTECTOR (MCP)

REDUCED VOLTAGE STARTER
 COMBINATION TWO-SPEED STARTER / FUSED DISCONNECT

 COMBINATION TWO-SPEED STARTER / MOTOR CIRCUIT PROTECTOR (MCP)
 NON-FUSED DISCONNECT SWITCH 10. FUSED DISCONNECT SWITCH

GENERAL NOTES:

1

1. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND SIZE FEEDER, STARTER, DISCONNECT AND OVERCURRENT PROTECTION IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OF ACTUAL EQUIPMENT SUPPLIED. 2. ALL CONDUCTORS USED SHALL BE COPPER. ELECTRICAL CONTRACTOR SHALL REVIEW MECHANICAL DRAWINGS FOR ANY ADDITIONAL REQUIREMENTS PRIOR TO BID.
 ELECTRICAL CONTRACTOR SHALL REVIEW OTHER TRADE SUBMITTALS FOR ANY EQUIPMENT REQUIRING CONNECTION BY ELECTRICAL CONTRACTOR AND COORDINATE ALL REQUIREMENTS PRIOR TO ROUGH-IN. 5. SIZE ALL FUSES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

2

3

PANELBOARD SCHEDULE GENERAL NOTES:

1. PROVIDE DEDICATED NEUTRALS FOR ALL BRANCH CIRCUIT PER NEC AND THE SPECIFICATIONS.

2. CONTRACTOR SHALL UPSIZE ALL BRANCH CIRCUITS AS NECESSARY FOR VOLTAGE DROP WHETHER

SHOWN OR NOT.

PANELBOARD SCHEDULE KEYED NOTES:

1. PROVIDE CLASS A GROUND FAULT INTERRUPTER TYPE CIRCUIT BREAKER.

3. PROVIDE 30 MILLIAMPERE EQUIPMENT GROUND FAULT PROTECTOR TYPE CIRCUIT BREAKER.

PROVIDE ARC FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER.

4. PROVIDE SHUNT-TRIP TYPE CIRCUIT BREAKER WITH 120V COIL.

5. PROVIDE HACR RATED CIRCUIT BREAKER. 6. PROVIDE HANDLE CLAMP FOR HOLDING CIRCUIT BREAKER IN THE "ON" OR "OFF" POSITION.

7. PROVIDE SWITCHING RATED CIRCUIT BREAKER.

8. PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANELBOARD (WHERE PANEL IS INDICATED AS

EXISTING) OF SAME MANUFACTURER AND A.I.C. RATING AS EXISTING.

9. EXISTING LOAD.

| NICAL EQUIPMENT SCHE | DULE |
|----------------------|------|
| FEEDER               | STA  |



INSTALLATION NOTES:

A. FURNISHED, INSTALLED, & CONNECTED UNDER DIVISION 26.
 B. FURNISHED & INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTIONS UNDER DIVISION 26.

AND CONNECTED UNDER DIVISION 26. D. FURNISHED, INSTALLED, & CONNECTED UNDER ANOTHER DIVISION

E. FURNISHED BY OWNER, INSTALLED & CONNECTED BY DIVISION 26

C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED

AND INSTALLED AND CONNECTED BY

ELECTRICAL

4

5

EXIST PANEL 'BHM' 3/4" C 1 #4 1 #4 3/4" C 1 #4 3/4" C 1 #4 3/4" C 3/4" C 480/120-208V, 3 PHASE 45KVA, K-1 RATED NEW PANEL 'BL4'

4

5



-

3

19. NON-FUSED DISCONNECT WITH LATE-MAKE EARLY-BREAK CONTACT

11. BREAKER AND ENCLOSURE

14. SPECIAL PURPOSE OUTLET

17. MAGNETIC STARTER

12. DIRECT CONNECTION 13. DUPLEX RECEPTACLE OUTLET

15. SHUNT-TRIP BREAKER AND ENCLOSURE 16. TOGGLE SWITCH

18. BUSSMAN FUSED ELEVATOR POWER MODULE

|          | <u>GENERAL NOTES:</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                            | # |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---|
| 1.       | THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT<br>CURRENT WITH THE ROCKY MOUNTAIN POWER PRIOR TO BIDDING AND<br>PROVIDE EQUIPMENT RATED ACCORDINGLY. SUBMIT FAULT CURRENT                                                                                                                                                                                                                                                                                                                                                                                                    | FEEDER<br>C25.3S<br>C30.3S                                                                                 |   |
| 2.       | CALCULATIONS WITH SHOP DRAWINGS SUBMITTAL.<br>PROVIDE FULL LENGTH VERTICAL BUSSING IN ALL SWITCHBOARDS,<br>DISTRIBUTION PANELBOARDS AND PANELBOARDS.                                                                                                                                                                                                                                                                                                                                                                                                                                     | C30.4S<br>C50.3S<br>C50.4S                                                                                 |   |
| 3.       | COORDINATE SPACE WITH ALL OTHER TRADES TO MAINTAIN ALL CODE-REQUIRED CLEARANCES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | C50.4T<br>C50.VD1<br>C50.VD2                                                                               |   |
| 4.<br>5. | ADJUST THE VERTICAL ALIGNMENT (UP TO 5' DOWNWARD) AND HORIZONTAL<br>ALIGNMENT (UP TO 10' IN EITHER DIRECTION) ALONG NEW DUCTBANK ROUTES<br>TO AVOID EXISTING UTILITIES AT NO ADDITIONAL COST TO THE OWNER.<br>CONTRACTOR SHALL UPSIZE ALL FEEDER FOR VOLTAGE DROP PER NEC<br>REQUIREMENTS WETHER SHOWN OR NOT.                                                                                                                                                                                                                                                                           | C60.4T<br>C60.4S<br>C60.VD1<br>C70.3S<br>C70.4S<br>C70.VD1                                                 |   |
| 6.       | ALL OVERCURRENT PROTECTIVE DEVICES SHALL BE THE SAME FAULT<br>CURRENT RATING AS THE RATING OF THE PANEL OR SWITCHBOARD THEY ARE<br>LOCATED IN.                                                                                                                                                                                                                                                                                                                                                                                                                                           | C100.4S<br>A100.3S<br>A100.4S<br>A100.4H                                                                   |   |
| 7.       | THE ELECTRICAL CONTRACTOR SHALL PROVIDE A LABEL ON ALL<br>PANELBOARDS, DISTRIBUTION PANELS, SWITCHBOADS AND TRANSFORMERS<br>INDICATING THE ARC-FLASH HAZARD. LABEL SHALL MEET THE REQUIREMENTS<br>OF NEC 110.16. LABELS ARE PROVIDED BY THE GEAR MANUFACTURE AND ARE<br>BASED ON THE OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY.<br>LABELS ARE INSTALLED IN THE FIELD BY THE CONTRACTOR.                                                                                                                                                                                           | A100.4HT<br>A100.4T<br>A100.VD1<br>A100.VD2<br>A110.4T<br>A110.4HT                                         |   |
| 8.       | THE ELECTRICAL CONTRACTOR SHALL PROVIDE A LAMINATE LABEL ON PANEL<br>CTM INDICATING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE PANEL.<br>THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED CALCULATIONS<br>BASED ON THE EXACT UTILITY TRANSFORMER USED ON THE PROJECT. THE<br>LABEL SHALL INCLUDE THE DATE THE CALCULATIONS WHERE COMPLETED,<br>THE MAXIMUM AVAILABLE FAULT CURRENT AND OTHER INFORMATION AS<br>REQUIRED BY NEC 110.24. THE CALCULATION SHALL BE DOCUMENTED AND<br>MADE AVAILABLE TO THOSE AUTHORIZED TO DESIGN, INSTALL, INSPECT,<br>MAINTAIN OR OPERATE THE SYSTEM. | A125.3S<br>A150.3S<br>A150.4S<br>A150.4H<br>A150.3T<br>A150.4T<br>A175.3S<br>A175.4S<br>A175.4H<br>A175.4H |   |
| 9.       | CONTRACTOR SHALL TEST THE GROUND FAULT FUNCTION OF THE MAIN<br>BUILDING DISCONNECT AND SET TO CORRECT SETTING. ALL TEST RESULTS<br>SHALL BE SUBMITTED TO THE AHJ AND OWNER PRIOR TO POWER TO PANEL<br>INSPECTION AND OR METER RELEASE.                                                                                                                                                                                                                                                                                                                                                   | A175.4T<br>A200.3S<br>A200.4S<br>A200.4H<br>A200.4H                                                        |   |
| 10.      | ALL SYSTEM BONDING JUMPER CONDUCTORS SHOWN ARE TO BE RUN IN EACH PARALLEL FEEDER SET.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A200.VD1                                                                                                   |   |
| 11.      | CONTRACTOR SHALL REVIEW ONE-LINE DIAGRAM AND CONFIRM FEEDER WIRE<br>SIZES. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO<br>BID. IF DISCREPANCIES EXIST, CONTRACTOR SHALL PROVIDE CORRECT WIRE<br>SIZE BASED ON ACTUAL BREAKER SIZE AND ANY VOLTAGE DROP<br>ADJUSTMENTS. SEE NEC 210.19, 215.2, 250.112, AND 310,15.                                                                                                                                                                                                                                                      | A225.4S<br>A225.4H<br>A225.4H<br>A225.4T<br>A225.VD1<br>A250.3S                                            |   |
| 12.      | ALL GROUNDING WIRES SHOWN IN FEEDER SCHEDULE ARE COPPER WIRES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A250.45<br>A250.4H<br>A250.VD1<br>A250.VD2<br>A250.VD1H                                                    |   |
|          | KEYED NOTES: (#)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A300.3S<br>A300.4S<br>A300.4H                                                                              |   |
| 1        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A300.4HT<br>A300.4T                                                                                        |   |
| .        | JUMPERS SHALL BE COPPER.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A350.3S<br>A350.4S<br>A350.4H                                                                              |   |
| 2.       | PROVIDE NEW 70A, 3 POLE BREAKER IN EXISTING PANEL 'BHM'. NEW<br>BREAKER SHALL BE OF THE SAME MANUFACTURE (SIEMENS) AND<br>INTERRUPTING CURRENT AS THE EXISTING INSTALLED. CONTRACTOR<br>TO FIELD VERIFY ALL REQUIREMENTS PRIOR TO ORDERING THE<br>BREAKER.                                                                                                                                                                                                                                                                                                                               | A400.3S<br>A400.4S<br>A400.4H<br>A400.4HT<br>A400.4T<br>A400.VD1<br>A400.VD2                               |   |
|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A500.3S<br>A500.4S<br>A500.4H<br>A500.VD1                                                                  |   |

|                                |              | FE                  | EDE                                     | R SCHEDUL         | E                 | -                  | -                    |
|--------------------------------|--------------|---------------------|-----------------------------------------|-------------------|-------------------|--------------------|----------------------|
| FEEDER                         | # OF<br>SETS | Conduit<br>Diameter | CC<br>#                                 | NDUCTOR           | EQ GND<br>COND    | ISOLATED<br>GROUND | SYST<br>BOND<br>JUMP |
| C25.3S                         | 1            | 0.75                | 3                                       | 10                | 10                | -                  | -                    |
| C30.4S                         | 1            | 0.75                | 4                                       | 10                | 10                | -                  | -                    |
| C50.3S<br>C50.4S               | 1            | 1                   | 3                                       | 6<br>6            | 10<br>10          | -                  | -                    |
| C50.41<br>C50.VD1<br>C50.VD2   | 1            | 1<br>1.25<br>1.5    | 433                                     | 6<br>4<br>2       | -<br>8<br>4       | -<br>-<br>-        | 8<br>-<br>-          |
| C60.4T                         | 1            | 1.25                | 4                                       | 4                 | -                 | -                  | 8                    |
| C60.4S<br>C60.VD1              | 1            | 1.25<br>3           | 4                                       | 4<br>4/0          | 10<br>3           | -                  | -                    |
| C70.3S                         | 1            | 1.25                | 3                                       | 4                 | 8                 | •                  | -                    |
| C70.VD1                        | 1            | 1.25                | 3                                       | 3                 | 6                 | -                  | -                    |
| C100.4S<br>A100.3S             | 1            | 1.5<br>1.5          | 4                                       | 2<br>1/0          | 8<br>8            | -                  | -                    |
| A100.45<br>A100.4H<br>A100.4HT | 1            | 2                   | 4 5                                     | 1/0<br>1/0<br>1/0 | 8<br>8<br>-       | -<br>-<br>-        | -<br>-<br>6          |
| A100.4T<br>A100.VD1            | 1            | 2                   | 5<br>4                                  | 1/0<br>3/0        | - 4               | -                  | 6<br>-               |
| A100.VD2                       | 1            | 2.5                 | 4                                       | 3/0               | 4                 | -                  | -                    |
| A110.4T<br>A110.4HT            | 1            | 1.5                 | 4<br>5                                  | 2 1/0             | -                 | -                  | 6<br>6               |
| A125.3S                        | 1            | 2                   | 3                                       | 2/0               | 6                 | -                  | -                    |
| A150.3S<br>A150.4S             | 1            | 2<br>2.5            | 3<br>4                                  | 3/0<br>3/0        | 6<br>6            | -                  | -                    |
| A150.4H<br>A150.3T             | 1            | 2.5<br>2.5          | 5                                       | 4/0<br>4/0        | 4<br>-            | -                  | -<br>2               |
| A150.41                        | 1            | 2.5                 | 4                                       | 4/0               | -                 | -                  | 4                    |
| A175.4S<br>A175.4H             | 1            | 2.5                 | 4                                       | 4/0<br>4/0<br>250 | 6<br>4            | -<br>-<br>-        | -<br>-               |
| A175.4HT<br>A175.4T            | 1            | 3                   | 5<br>4                                  | 250<br>2/0        | -                 | -                  | 4<br>4               |
| A200.3S                        | 1            | 2.5                 | 3                                       | 250               | 6                 | -                  | -                    |
| A200.4S<br>A200.4H             | 1            | 2.5                 | 455                                     | 250<br>300<br>300 | 6<br>4            | -                  | -<br>-<br>2          |
| A200.4H1<br>A200.VD1           | 1            | 3                   | 4                                       | 350               | 4                 | -                  | -                    |
| A225.3S                        | 1            | 2.5                 | 3                                       | 300               | 4                 | -                  | -                    |
| A225.4S<br>A225.4H             | 1            | 3                   | 4                                       | 300<br>350        | 4<br>3            | -                  | -                    |
| A225.41<br>A225.VD1            | 1            | 3                   | 4                                       | 350               | -<br>3            | -                  | -                    |
| A250.3S<br>A250.4S             | 1            | 2.5                 | 3                                       | 350<br>350        | 4                 | -                  | -                    |
| A250.4H<br>A250.VD1            | 1            | 3.5<br>3            | 5<br>4                                  | 400<br>400        | 3<br>3            | -                  | -                    |
| A250.VD2<br>A250.VD1H          | 1            | 3<br>3.5            | 4<br>5                                  | 400<br>500        | 3<br>2            | -                  | -                    |
| A300.3S                        | 1            | 3                   | 3                                       | 500               | 4                 | -                  | -                    |
| A300.4H<br>A300.4H             | 1            | 4                   | 5                                       | 600<br>600        | 3                 | -                  | -<br>-<br>1/0        |
| A300.4T                        | 2            | 2.5                 | 4                                       | 3/0               | -                 | -                  | 2                    |
| A350.3S<br>A350.4S             | 2            | 2.5                 | 3                                       | 250<br>250<br>300 | 3<br>3            | -                  | -                    |
| A400.3S                        | 2            | 2.5                 | 3                                       | 250               | 3                 | -                  | -                    |
| A400.4S<br>A400.4H             | 2            | 2.5                 | 4                                       | 250<br>300        | 3                 | -                  | -                    |
| A400.4HT<br>A400.4T            | 2            | 3                   | 5                                       | 300<br>300        | -                 | -                  | 1/0<br>1/0           |
| A400.VD1<br>A400.VD2           | 3            | 3.5                 | 4                                       | 350               | 1                 | -                  | -                    |
| A500.3S<br>A500.4S             | 2            | 2.5<br>3            | 3<br>4                                  | 350<br>350        | 2<br>2            | -                  | -                    |
| A500.4H<br>A500.VD1            | 2<br>2       | 3.5<br>4            | 5<br>4                                  | 400<br>750        | 1<br>3/0          | -                  | -                    |
| 1600 35                        | 3            | 2.5                 | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 250               | 1                 |                    |                      |
| A600.4S<br>A600.4H             | 3            | 2.5                 | 4                                       | 250<br>250<br>300 | 1                 | -<br>-<br>-        | -<br>-               |
| A600.4T<br>A600.4TIG           | 3            | 3                   | 4                                       | 300<br>300        | -                 | -<br>2/0           | 2/0<br>2/0           |
| A600.4H1                       | 3            | 3                   | 5                                       | 300               | -                 | -                  | 2/0                  |
| A800.35<br>A800.4S<br>A800.4H  | 4            | 2.5                 | 3<br>4<br>5                             | 250<br>250<br>300 | 1/0<br>1/0<br>2/0 | -<br>-<br>-        | -                    |
| A800.4HT<br>A800.4T            | 4            | 3                   | 5<br>4                                  | 300<br>300        | -                 | -                  | 3/0<br>3/0           |
| A1000.3S                       | 4            | 3                   | 3                                       | 350               | 2/0               | -                  | -                    |
| A1000.4S<br>A1000.4H           | 4            | 3<br>3.5            | 4<br>5                                  | 350<br>400        | 2/0<br>4/0        | -                  | -                    |
| A1200.4S<br>A1200.4H           | 4            | 3.5                 | 4                                       | 500<br>600        | 3/0<br>4/0        | -                  | -                    |
| A1200.4T<br>A1200.4HT          | 4            | 4                   | 4                                       | 600<br>600        | -                 | -                  | 4/0<br>4/0           |
| A1600.4S                       | 6            | 4                   | 4                                       | 500               | 4/0               | -                  | -                    |
| A 1000.4H<br>A1600.4T          | 6<br>5       | 4                   | 5<br>4                                  | 600               | -<br>-            | -                  | -<br>4/0             |
| A2000.4S<br>A2000.4H           | 8            | 3<br>3.5            | 4                                       | 350<br>400        | 250<br>350        | -                  | -                    |
| A2500.4S                       | 8            | 4                   | _4                                      | 600               | 350               | •                  | -                    |
| A2500.4H                       | 9            | 4                   | 5                                       | 500               | 400               | -                  | -                    |
| A3000.45<br>A3000.4H           | 10           | 3.5                 | 4<br>5                                  | 500               | 500               | -                  | -                    |
| A4000.4S<br>A4000.4H           | 12<br>14     | 4<br>NA             | 4                                       | 600<br>600        | 500<br>600        | -                  | -                    |
|                                | т,<br>       | 11/1                |                                         | •                 |                   |                    |                      |







| <u>SY</u> : | STEMS GENERAL NOTES:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.          | ALL FIRE ALARM CABLING SHALL BE RAN IN RED CONDUIT. REI<br>SHEET EY701 FOR ADDITIONAL INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.          | REFER TO SHEET EY701 FOR ADDITIONAL REQUIREMENTS FOR CONTROL, SECURITY, AND CCTV SYSTEMS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3.          | CONTRACTOR TO COORDINATE ALL DATA/COMM. REQUIREME<br>WORK WITH PARK CITY SCHOOL DISTRICT PRIOR TO ROUGH-I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4.          | ALL CABLING THAT IS NOT IN CONDUIT OR CABLE TRAY SHALL<br>MINIMUM OF 5' FROM ANT LIGHT FIXTURE OR EMI SOURCE. SE<br>SPECIFICATIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5.          | WHEN ROUTING CABLE ON CABLE TRAY THE CONTRACTOR SH<br>BUNDLE ONLY CABLE OF THE SMAE SYSTEM TOGETHER. DO N<br>SYSTEMS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| δ.          | INSTALL WIRING IN RACEWAYS AND CABLE TRAYS EXCEPT WI<br>CONSOLES, CABINETS, DESK, AND COUNTERS AND ACCESSIB<br>SUSPENDED CEILING SPACES. WHERE CABLES ARE ROUTED I<br>ACCESSIBLE SUSPENDED CEILING, SECURE AND SUPPORT CA<br>WITH J-HOOK AT INTERVALS NOT EXCEEDING 30 INCHES (760 I<br>INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR T<br>SURFACES OR EXPOSED STRUCTURAL MEMBERS, AND FOLLC<br>SURFACE CONTOURS. USE UL-LISTED PLENUM CABLE THROU<br>THE ENTIRE SYSTEM.                                                                                                                                                                                                                                                                                             |
| 7.          | DO NOT LOCATE ANY FIRE ALARM DEVICES BEHIND DOORS OI<br>SHELVING. REFER TO THE ARCHITECTURAL DRAWINGS FOR S<br>LOCATIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3.          | THE DIVISION 28 CONTRACTOR SHALL DETERMINE THE EXACT OF ALL CONDUITS IN THE FIELD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 9.          | ALL CONDUITS THAT TERMINATE ABOVE THE CEILING SHALL T<br>WITH NYLON BUSHING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 10.         | CONTRACTOR SHALL COORDINATE ALL CEILING MOUNTED DE<br>WITH THE LIGHTING PLAN. RELOCATED DEVICES AS NECESSA<br>RELOCATED DEVICES SHALL COMPLY WITH ALL NFPA SPACING<br>REQUIREMENTS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 11.         | ALL FIRE ALARM DEVICE LOCATIONS, EQUIPMENT LOCATIONS<br>DIAGRAM, ETC ARE SCHEMATIC IN NATURE AND ARE SHOWN<br>PROVIDE INTENT OF THE FIRE ALARM SYSTEM TO BE PROVIDE<br>ALARM SYSTEM SUPPLIER SHALL PROVIDE BID AND SHOP DRA<br>THAT INCLUDE A <u>FULL CODE COMPIANT DESIGN</u> INCLUDING AI<br>NOTIFAICATIONS AND INITIATION DEVICES REQUIRED PER THE<br>ADOPTED EDITION OF ALL APPLICABLE CODES (IFC, IBC, IMC, N<br>EFFECT FOR THE CODE ENFORCEMENT DEPARTMENT<br>HAVINGJURISDICTION WHETHER SHOWN OR NOT. THE FIRE AI<br>SYSTEM SHALL MEET ALL OWNER AND ENGINEERS REQUIREM<br>THAT MAY REQUIRE A SYSTEM THAT EXCEEDS MINIMUM CODE<br>REQUIREMENTS. ANY AND ALL DEVICES THAT ARE ADDED DUI<br>REVIEW AND AHJ INSPECTION WILL BE ADDED AT NO ADDITION<br>TO THE OWNER. |
| 12.         | CONTRACTOR SHALL COORDINATE ALL WALL MOUNTED DEVIC<br>FIXTURE AND EQUIPMENT HEIGHTS AND LOCATIONS WITH THE<br>ARCHITECT PRIOR TO ANY ROUGH-IN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <u>(EY</u>  | ED NOTES (#)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1           | DOOR(S) TO RELEASE AND LOCK ON LOCK DOWN ACTIVATION. DO<br>HOLDER TO BE POWERED AND CONTROLLED THROUGH THE ACC<br>CONTROL SYSTEM. DO NOT CONNECT TO THE FIRE ALARM SYSTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2           | REINSTALL EXISTING FIRE ALARM SYSTEM NOTIFICATION APPLIA<br>WAS REMOVED AS PART OF THE DEMOLITION. CONNECT TO THE<br>NOTIFICATION APPLIANCE CIRCUIT OR AS DIRECTED BY THE FIRE<br>SYSTEM SUPPLIER. CONFIRM ALL REQUIREMENTS WITH THE FIRE<br>SYSTEM SUPPLIER PRIOR TO ANY ROUGH-IN. NEW CABLING SHAL<br>CONTINUOUS FROM DEVICE TO DEVICE, DO NOT SPLICE CABLING                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3           | REINSTALL EXISTING FIRE ALARM SYSTEM INITIATING DEVICE THAT REMOVED AS PART OF THE DEMOLITION. CONNECT TO THE EXIST ADDRESSABLE LOOP AS DIRECTED BY THE FIRE ALARM SYSTEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

REINSTALL EXISTING FIRE ALARM SYSTEM DOOR HOLDER THAT WAS REMOVED AS PART OF THE DEMOLITION. CONNECT TO THE EXISTING FIRE ALARM SYSTEM AS DIRECTED BY THE FIRE ALARM SYSTEM SUPPLIER. CONFIRM ALL REQUIREMENTS WITH THE FIRE ALARM SYSTEM SUPPLIER PRIOR TO ANY ROUGH-IN. NEW CABLING SHALL BE CONTINUOUS FROM DEVICE TO DEVICE, DO NOT SPLICE CABLING.

PROVIDE ALL NECESSARY RELAYS, CONTROLS AND PROGRAMMING AS NECESSARY TO DISABLE POWER TO THE ADA DOOR WHEN THE DOOR IS LOCKED. COORDINATE ALL REQUIREMENTS AND CONNECTIONS WITH THE DOOR HARDWARE SUPPLIER PRIOR TO ANY ROUGH-IN. COORDINATE PROGRAMMING WITH THE OWNER.





KEYED NOTES: (F#)

# NOTIFICATION DEVICE LOOP

# NOTIFICATION DEVICE LOOP

- EXTEND 3/4" CONDUIT WITH POWER CONDUCTORS TO FIRE ALARM HORN/STROBES, HORNS, AND STROBES. REFER TO THE SYSTEMS PLANS FOR QUANTITIES, DEVICE TYPES AND LOCATIONS. PROVIDE SYNC MODULES FOR STROBES AS REQUIRED TO COMPLY WITH ALL APPLICABLE ADA CODES. CIRCUIT HORNS AND STROBES PER ALL MANUFACTURERS RECOMMENDATIONS.
- 2. EXTEND A 3/4" CONDUIT WITH INITIATING DEVICE CABLE TO ADDRESSABLE FIRE ALARM DEVICES INCLUDING SMOKE DETECTORS, DUCT SMOKE DETECTORS, HEAT DETECTORS, PULL STATIONS, MONITOR MODULES, AND CONTROL MODULES. REFER TO SYSTEMS PLANS FOR QUANTITIES AND DEVICE TYPES. INCLUDE POWER WIRING AS REQUIRED FOR CONTROL MODULES AND DUCT SMOKE DETECTORS.
- 3. EXTEND A 1" CONDUIT WITH MANUFACTURES RECOMMENDED CABLING.

# FIRE ALARM SYSTEM GENERAL NOTES:

- 1. EXISTING POTTER IPA-60 ADDRESSABLE FIRE ALARM SYSTEM .
- 2. THE SYSTEM SHALL BE PROGRAMMED SO THAT IF ANY INITIATION DEVICE IS ACTUATED, AN ALARM SIGNAL WHICH IS AUDIBLE THROUGHOUT THE BUILDING WILL BE ACTIVATED.
- 3. WIRING SHALL BE CONTINUOUS FROM ONE DEVICE TO ANOTHER. NO SPLICING IS ALLOWED. 4. PROVIDE FIRE ALARM MAP OF THE BUILDING SHOWING ALL FIRE ALARM SYSTEM DEVICES.
- MAP TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING :
- A. EXACT LOCATIONS OF ALL DEVICES, FIRE ALARM CONTROL PANEL AND NAC PANELS. B. EXACT LOCATIONS OF ALL MONITOR AND CONTROL MODULES. WHERE MODULES ARE LOCATED ABOVE THE CEILING, PROVIDE CLEAR DESIGNATION OR NOTE. C. ROOM NAMES. D. ALL DEVICE ADDRESS SHALL BE INDICATED ON THE DRAWINGS.
- E. ALL MAPS SHALL BE 11"X17" . PROVIDE ONE SET IN A SLEEVED 3 RING BINDER AND ONE SET LAMINATED AND MOUNTED NEXT TO FACP. DELIVER 3 RING BINDER WITH MAPS TO THE ELECTRICAL ENGINEER FOR REVIEW AND APPROVAL AS PART OF THE CLOSE OUT DOCUMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION. MOUNT LAMENTED MAPS AT THE FACP IN LOCATION AS DIRECTED BY THE OWNER.
- 5. THE FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE COMPUTER DRAFTED SHOP DRAWINGS OF THE ENTIRE FIRE ALARM SYSTEM USING FLOOR PLANS PROVIDED BY THE ENGINEER. SHOP DRAWINGS TO INCLUDE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, PLANS, SECTIONS, ELEVATIONS, FINAL DEVICE LOCATIONS AND ADDRESS, CONDUIT SIZE AND ROUTING AND ALL CONDUCTOR SIZES. TYPICAL RISERS AND CALCULATIONS WILL NOT BE ACCEPTED. ALL SHOP DRAWINGS SHALL BE PREPARED AND APPROVED BY A NICET CERTIFIED FIRE ALARM TECHNICIAN, LEVEL III OR GREATER.
- 6. ALL NOTIFICATION DEVICE CIRCUIT VOLTAGE DROP CALCULATIONS SHALL BE DONE IN COMPLIANCE WITH NFPA 72. THE FIRE ALARM SYSTEM SUPPLIER TO DETERMINE THE AMOUNT NOTIFICATION DEVICE CIRCUITS THAT ARE REQUIRED BASED ON THE NUMBER OF NOTIFICATION DEVICES SHOWN ON THE DRAWINGS. THE FIRE ALARM SUPPLIER SHALL DETERMINE THE AMOUNT OF 'NAC' PANELS THAT WILL BE REQUIRED BASES ON THE QUANTITY OF NOTIFICATION DEVICE CIRCUITS.
- 7. AUDIBLE ANNUNCIATION DEVICES SHALL BE SILENCED VIA THE FACP FRONT PANEL OR REMOTE ANNUNCIATOR WHILE ALLOWING VISUAL ANNUNCIATION DEVICES TO REMAIN IN ALARM.
- 8. THE FIRE ALARM SYSTEM SUPPLIER SHALL SUBMIT THE FIRE ALARM SHOP DRAWINGS AND MANUFACTURERS CUTSHEETS TO THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR REVIEW AND APPROVAL PRIOR TO THE ROUGH-IN OF THE SYSTEM. PROVIDE A MINIMUM OF TWO (2) SETS OF DRAWINGS, CUTSHEETS, AND CALCULATIONS TO AHJ. 9. VERIFY AND COMPLY WITH ALL CURRENT STATE, LOCAL AND NATIONAL CODES. COMPLY WITH ALL CURRENT NEC, NFPA, FIRE MARSHAL AND OWNERS STANDARDS AND REQUIREMENTS.
- 10. UPON CLOSE OUT OF THE PROJECT THE FIRE ALARM SYSTEM SUPPLIER TO PROVIDE A CD(S) WITH CAD AND PDF DRAWINGS OF THE BUILDING FIRE ALARM MAP, CAD AND PDF AS-BUILT DRAWINGS, GENERAL PROGRAMMING, SITE SPECIFIC PROGRAMMING, PDF O&M MANUALS AND APPROVED SHOP DRAWINGS . REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 11. LABEL ALL DETECTOR BASES, MANUAL STATIONS AND MODULE COVERS WITH 1/2" LETTERS WITH DEVICE ADDRESS NUMBER. HANDWRITTEN LABELS WILL NOT BE ACCEPTED.
- 12. FOR ALL DEVICES LOCATED ABOVE A LAY-IN TILE CEILING PROVIDE LABEL WITH 1/2" LETTERS WITH DEVICE ADDRESS NUMBER ON THE CEILING GRID BELOW THE DEVICE. HANDWRITTEN LABELS WILL NOT BE ACCEPTED.
- 13. ALL FIRE ALARM CABLING SHALL BE RAN IN CONDUIT ONLY. MINIMUM CONDUIT SIZE SHALL BE 3/4". CONTRACTOR SHALL SPRAY PAINT ALL JUNCTION BOXES AND FITTINGS ASSOCIATED WITH THE FIRE ALARM SYSTEM RED.



- CONFIRM ALL MOUNTING LOCATIONS AND HEIGHTS WITH THE OWNER PRIOR TO ANY ROUGH-IN
- 2. CONTRACTOR TO INSTALL ALL CABLING AS CALLED OUT.
- ALL CABLING SHALL BE CAT 6A, PLENUM, YELLOW JACKET UNLESS NOTED OTHERWISE.
- 4. CONTRACTOR TO INSTALL OWNER FURNISHED EQUIPMENT.
- 5. SEE POWER AND SYSTEMS PLANS FOR ADDITIONAL REQUIREMENTS.
- 6. CONTRACTOR SHALL INSTALL CCTV NVR AND SOFTWARE AND PROGRAM PER



DISTRICT.

| <u>SYSTEMS INSTAL</u>                                             |
|-------------------------------------------------------------------|
| ACCESS CONTROL SYSTE<br>CONVERGINT TECHNOLOG<br>801.977.8705      |
| <u>SECURITY SYSTEM:</u><br>PEAK ALARM - GREG JACC<br>801.486.7231 |
| FIRE ALARM SYSTEM<br>NELSON FIRE - BEN NELSO<br>801.468.8300      |
| CELLULAR DAS                                                      |

| AYS. WHERE RACEWAYS<br>YS TO MATCH THE COLOR                                                | THE OWNERS DIRECTION.                                                                  |                                                                                                                                                      |                                        |                             |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------|
| SER DIAGRAM SHALL BE                                                                        | CCTV MOUNTING DIAGRAMS AS SHO<br>FOR BASIC CONCEPT AND LAYOUT.                         | OWN ARE                                                                                                                                              | EXISTING<br>SECURITY<br>PANEL<br>'SEC' |                             |
| CK TO DATA ROOM.                                                                            | ROUGH-IN REQUIREMENTS WITH THE<br>OWNER PRIOR TO ANY ROUGH-IN.                         |                                                                                                                                                      | PEAK ALARM                             |                             |
| INCLUDING ALL CAMERA<br>ND DATA RACK<br>ION TYPES WITH THE<br>ONFIRM ALL<br>TERMINATING ANY |                                                                                        |                                                                                                                                                      |                                        |                             |
|                                                                                             | ΤΟ DATA RACK                                                                           |                                                                                                                                                      |                                        |                             |
| KIS POE<br>#T8129 FOR ALL<br>2 300' IN LENGTH.                                              | 3/4" CONDUIT<br>1 CAT 6 CABLE<br>YELLOW JACKET                                         | PROVIDE AXIS POE<br>EXTENDER #T8129 FOR ALL<br>RUNS OVER 300' IN LENGTH.<br>PROVIDE AXIS 30 WATT<br>MIDSPAN.<br>20V POWER BY ELECTRICAL<br>DNTRACTOR |                                        |                             |
| T<br>LE - YELLOW JACKET                                                                     | 4" SQUARE JUNCTION BOX                                                                 | 3/4" CONDUIT<br>1 CAT 6 CABLE - YELLOW JACKET                                                                                                        |                                        |                             |
| RA (LESS THAN TWELVE (12) WATTS)                                                            |                                                                                        | CCTV CAMERA (GREATER THAN TWELVE (12) WATTS)                                                                                                         |                                        |                             |
| RA AND MOUNT IS FURNISHED BY<br>AND INSTALLED AND CONNECTED<br>TRACTOR.                     | REFER TO MOUNTING<br>DETAILS (THIS SHEET) FOR<br>MOUNTING AND CONDUIT<br>REQUIREMENTS. | CCTV CAMERA AND MOUNT IS FURNISHED BY<br>THE OWNER AND INSTALLED AND CONNECTED<br>BY THE CONTRACTOR.                                                 | BATT                                   | - 120V POWER                |
| DETAIL                                                                                      |                                                                                        |                                                                                                                                                      |                                        | VTRUSION DET<br>SCALE: NONE |
|                                                                                             |                                                                                        |                                                                                                                                                      |                                        |                             |







- CCTV EQUIPMENT GENERAL NOTES:



# CODE REFERENCES AND REQUIREMENTS: 2016 NFPA 101 - LIFE SAFETY CODE

7.2.1.5.6(5) REQUIRES THAT LOSS OF POWER WILL UNLOCK THE ELECTRICALLY CONTROLLED DOOR HARDWARE. 7.2.1.6.2.(4) REQUIRES THAT ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM UNLOCK ALL DOORS LOCATED IN THE PATH OF EGRESS. 2016 NFPA 80 - FIRE DOORS AND OTHER OPENING PROTECTIVES

# 2016 NFPA 60 - FIRE DOORS AND OTHER OPENING PROTECTIVES 6.1.3.4 REQUIRES THAT POWER OPERATED FIRE DOORS HAVE A RELEASING DEVICE TO AUTOMATICALLY RELEASE POWER UPON FIRE ALARM.

6.4.4.3.3 REQUIRES THAT FIRE RATED DOORS BE POSITIVELY LATCHED TO MAINTAIN THE FIRE RATING, ALL ELECTRIC STRIKES USED IN FIRE RATED DOORS MUST BE FAIL SECURE.

ALL MAGNETIC LOCKS SHALL BE UNLOCKED DURING A GENERAL FIRE ALARM. THIS ACTION IS NOT REQUIRED IF SYSTEM IS IN ALARM BY MEANS OF A MANUAL PULL STATION. AUTOMATIC DETECTION DEVICES SUCH AS SMOKE DETECTORS OR SPRINKLER FLOW REQUIRE UNLOCKING AND THE DOOR

MUST REMAIN UNLOCKED UNTIL FIRE ALARM SYSTEM RESET. CONTRACTOR SHALL INCLUDE ALL FIRE ALARM INTERFACE EQUIPMENT SUCH AS ADDRESSABLE CONTROL MODULES OR BY CONTACT CLOSURE SIGNALING TO THE ACCESS CONTROL PANELS AS NECESSARY TO MEET THE CODE

\*\*\*TO ENSURE A COMPLETE AND OPERATING ACCESS CONTROL SYSTEM AND TO ELIMINATE DELAYS, INSUFFICIENT OR UNNECESSARY WORK BY ALL OF THE ENTITIES INVOLVED, THE FOLLOWING STEPS SHALL BE COMPLETED. THE FAILURE TO DO SO RESULTING IN ADDED COSTS AND LOST TIME WILL BE BORN SOLELY BY THE CONTRACTOR. NO ADDITIONAL PAYMENTS WILL BE MADE BY THE OWNER TO COVER WORK DESCRIBED BELOW.\*\*\*

THE ELECTRICAL CONTRACTOR SHALL REVIEW THE FLOORPLAN DRAWINGS AND DETAILS ON THIS SHEET. THE FLOORPLANS WILL INDICATE WHICH DOORS HAVE ACCESS CONTROL EQUIPMENT REQUIRING ROUGH-IN. DEVICE LOCATIONS REQUIRING JUNCTION BOXES WILL BE SHOWN ON THE FLOORPLANS, BUT ALL CONDUIT AND HARDWARE REQUIREMENTS CAN ONLY BE DETERMINED BY REFERRING TO THE SPECIFIC DOOR ROUGH-IN DETAILS AND THE ARCHITECTURAL DOOR HARDWARE SPECIFICATION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF

THE ELECTRICAL CONTRACTOR SHALL VERIFY WHICH DOORS USING AN ELECTRIFIED EXIT DEVICE WILL REQUIRE 120V AT THE DOOR. THIS IS MANUFACTURER SPECIFIC AND MUST BE CONFIRMED WITH THE GENERAL CONTRACTOR ACCORDING TO WHICH HARDWARE SUPPLIER BEING USED.

DURING THE SUBMITTAL PROCESS, THE ELECTRICAL CONTRACTOR SHALL REVIEW THE APPROVED DOOR HARDWARE SUBMITTAL TO CONFIRM THE FINAL HARDWARE SETS PRIOR TO ANY ROUGH-IN. ANY QUESTIONS SHALL BE ISSUED BY FORMAL RFI. MEET WITH THE ACCESS CONTROL VENDOR TO REVIEW ALL FINAL INTEGRATION AND ROUGH-IN REQUIREMENTS. ONLY AFTER CONFIRMING THE FINAL DOOR HARDWARE AND ACCESS CONTROL SYSTEM REQUIREMENTS SHALL ANY ROUGH-IN WORK BEGIN.

# CONDUIT EXTENDING TO JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR DOOR ACCESS CONTROL PANEL FROM MAGNET MOUNTING JUNCTION BOX

- ROUGH-IN 3/4" CONDUIT FROM EPT MORTAR BOX, VERIFY SIZE WITH DOOR HARDWARE SUPPLIER EXTENDING TO JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR DOOR ACCESS CONTROL PANEL. ELECTRIC PASS-THRU JUNCTION BOX IS TO BE

# WELDED IN FRAME CENTERED 3" FROM LATCH SIDE OF FRAME ABOVE

MOUNTED AT 46" CENTER A.F.F. ADJACENT TO EXTERIOR LATCH SIDE EXTENDING TO JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR DOOR





TYPICAL MAGNETIC DOOR HOLD OPEN DEVICE ROUGH-IN DETAIL

- 1" CONDUIT TO ACCESSIBLE CEILING SPACE OR LOCAL COMMUNICATIONS ROOM. REFER TO SPECIFICATIONS.





SCALE: NTS

10

SCALE: NTS











| SYMBOL         | DESCRIPTION                            |
|----------------|----------------------------------------|
|                | RF WIRELESS RECEIVING SYSTEM           |
|                | INCLUDES:                              |
|                | 975 ACCESS STATION WITH POWER SUPPLY * |
|                | TEACHER'S MICROPHONE FLEXMIKE          |
|                | RECHARGEABLE BATTERY                   |
|                | LANYARD, AND CABLE                     |
|                | STUDENT MICROPHONE SHARE MIKE          |
| 0              | SPEAKER CABLES                         |
| 6              | SPEAKER DRQ (4)                        |
| П              | HDMI INPUT, 18" AFF                    |
|                |                                        |
| _              | PROJECTOR                              |
|                | SUPPLIED BY OWNER                      |
|                | INSTALLED BY INTEGRATOR                |
|                | PROJECTOR MOUNT ADAPTER                |
|                | PIPE                                   |
|                | CEILING ADAPTER                        |
| Η <sup>ο</sup> | HDMI OUTPUT                            |
|                | SCREEN MANUAL, MODEL C WITH CSR, 16:9, |
|                | 65"X116" MATT WHITE                    |
| (5)            | ADDITIONAL SPEAKER                     |

| <u>AU</u> | DIO VISUAL GENERAL NUTES:                                                                                                                                                                                                                                                                |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.        | SEPARATE 110V, 60A OR LESS POWER CABLES FROM THE AV CABLES<br>INCLUDING MICROPHONE CABLES, LINE LEVEL AUDIO CABLES,<br>WIRELESS MICROPHONE ANTENNA CABLES, SPEAKER CABLES, VIDEC<br>CABLES, CONTROL CABLES, AND DATA CABLES BY AT LEAST 24" IF TH<br>ARE RUN IN PARALLEL.                |
| 2.        | SEPAREATE MICRPHONE CABLES FROM LINE LEVEL CABLES BY AT<br>LEAST 6", AND FROM OTHER AV CABLES, INCLUDING WIRELESS<br>MICROPHONE ANTENNA CABLES, TV DISTRIBUTION CABLES, SPEAKEF<br>CABLES, VIDEO CABLES, CONTROL CABLES, AND DATA CABLES BY AT<br>LEAST 12" IF THEY ARE RUN IN PARALLEL. |
| 3.        | NO CHANGES SHALL BE MADE WITHOUT THE AV CONSULTANT'S WRITTEN CONSENT.                                                                                                                                                                                                                    |
| 4.        | PROVIDE #6 AWG THHN WIRE WITH GREEN INSULATION FROM EACH A EQUIPMENT CABINET TO THE MAIN BUILDING ELECTRICAL PANEL.                                                                                                                                                                      |
| 5.        | COLORS OF ALL SOUND DEVICES THAT ARE EXPOSED, INCLUDINGI N<br>PUT AND OUTPUT PLATES, VOLUME CONTROLES, SWITCHES,<br>SPEAKERS, SPEAKER ENCLOSURES, SPEAKER MOUNTING HARDWARI<br>ETC. SHALL BE REVIEWED AND APPROVED BY OWNER PRIOR TO<br>ORDERING.                                        |
| 6.        | CABLE ROUTES SHOWN ON DRAWINGS DO NOT ACTUALLY REFLECT<br>THE EXISTING OR NEW RACEWAYS. THE EXISTING RACEWAYS AND AI<br>NEW REQUIRED RACEWAYS SHALL BE DETERMINED IN THE FIELD.                                                                                                          |
| 7.        | VERIFY AVAILABLE WIRELESS MICROPHONE FREQUENCIES BEFORE<br>ORDERING ANY WIRELESS RECEIVERS AND TRANSMITTERS.                                                                                                                                                                             |
| 8.        | TO MEET OSHA REQUIREMENTS, PROJECTORS MUST BE MOUNTED A<br>LEAST 84" FROM THE FINISHED FLOOR TO THE BOTTOM OF THE<br>PROJECTOR.                                                                                                                                                          |
| 9.        | REFER THE RISER DIAGRAMS AND EQUIPMENT LISTS FOR THE TYPES AND NUMBERS OF WIRES REQUIRED FOR EACH AV DEVICE.                                                                                                                                                                             |

A3

| AV EQUIPMENT LIST (CLASSROOMS) |            |                       |                                     |                     |  |  |  |
|--------------------------------|------------|-----------------------|-------------------------------------|---------------------|--|--|--|
| QTY/ROOM                       | SUPPLIER   | MODEL                 | ROUGH-IN                            | CABLE               |  |  |  |
| A/R                            | LIGHTSPEED | 975-FSD               |                                     |                     |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |
|                                |            |                       |                                     | WEST PENN 25227B    |  |  |  |
|                                |            |                       |                                     | WEST PENN 25510B    |  |  |  |
| 2                              | CRESTRON   | HD-TX-101-1C-1G-E-W-T | 1-GANG BOX                          | CRESTRON HDMI CABLE |  |  |  |
|                                |            |                       | 3/4" C. TO ACCESSIBLE CEILING SPACE | WEST PENN 254246A   |  |  |  |
| 1                              | OWNER      |                       |                                     | CRESTRON HDMI CABLE |  |  |  |
|                                |            |                       |                                     | WEST PENN 254246    |  |  |  |
|                                |            |                       |                                     | WEST PENN 25510B    |  |  |  |
|                                |            |                       |                                     | WEST PENN 25291B    |  |  |  |
| 1                              | CUSTOM     |                       |                                     |                     |  |  |  |
| 1                              | CUSTOM     |                       |                                     |                     |  |  |  |
| 1                              | CUSIOM     |                       |                                     |                     |  |  |  |
| 2                              | CRESTRON   | HD-RX-101-C-1G-E      | 1-GANG BOX (CEILING)                |                     |  |  |  |
|                                |            | 70000                 | WITH PLATE + (2) RJ45               | WEST PENN 254246A   |  |  |  |
| 1                              | DA-LITE    | 19886                 |                                     |                     |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |
| 1                              | LIGHISPEED |                       |                                     | WEST PENN 2522/B    |  |  |  |
|                                |            |                       |                                     |                     |  |  |  |

| A/R | LIGHTSPEED | 975-FSD               |                                     |                     |
|-----|------------|-----------------------|-------------------------------------|---------------------|
|     |            |                       |                                     |                     |
|     |            |                       |                                     |                     |
|     |            |                       |                                     |                     |
|     |            |                       |                                     |                     |
|     |            |                       |                                     |                     |
|     |            |                       |                                     |                     |
|     |            |                       |                                     |                     |
|     |            |                       |                                     | WEST PENN 25227B    |
|     |            |                       |                                     | WEST PENN 25510B    |
| 2   | CRESTRON   | HD-TX-101-1C-1G-E-W-T | 1-GANG BOX                          | CRESTRON HDMI CABLE |
|     |            |                       | 3/4" C. TO ACCESSIBLE CEILING SPACE | WEST PENN 254246A   |
| 1   | OWNER      |                       |                                     | CRESTRON HDMI CABLE |
|     |            |                       |                                     | WEST PENN 254246    |
|     |            |                       |                                     | WEST PENN 25510B    |
|     |            |                       |                                     | WEST PENN 25291B    |
| 1   | CUSTOM     |                       |                                     |                     |
| 1   | CUSTOM     |                       |                                     |                     |
| 1   | CUSTOM     |                       |                                     |                     |
| 2   | CRESTRON   | HD-RX-101-C-1G-E      | 1-GANG BOX (CEILING)                | CRESTRON HDMI CABLE |
|     |            |                       | WITH PLATE + (2) RJ45               | WEST PENN 254246A   |
| 1   | DA-LITE    | 79886                 |                                     |                     |
|     |            |                       |                                     |                     |
| 1   | LIGHTSPEED | DRQ 4                 |                                     | WEST PENN 25227B    |
|     |            |                       |                                     |                     |
|     |            |                       |                                     |                     |





3 ENLARGED PR-K 1310 SECTION 1 SCALE: 1/4" = 1'-0"

1



5

2 ENLARGED TYPICAL CLASSROOM SECTION SCALE: 1/4" = 1'-0"

4





5 ENLARGED COATS 1311 SECTION SCALE: 1/4" = 1'-0"

3



6

4 ENLARGED PR-K 1310 SECTION 2 SCALE: 1/4" = 1'-0"







3 LEVEL 01 - AUDIO VISUAL BUILDING PLAN SCALE: 1/16" = 1'-0"

# **INTERCOM GENERAL NOTES:**

- VOLUME CONTROL CONTROLS ONE SPEAKER ONLY.
- PROGRAM OWNER FINISHED DIGITAL PHONES TO BE USED AS INTERCOM CONSOLES.

6

KEYED NOTES (#)

- TO THE ANALOG STATION BRIDGE IN THE WALL MOUNTED EQUIPMENT CABINET #1. SEE SHEET 4/EI101.
- TO THE AMPLIFIER #2 IN THE WALL MOUNTED EQUIPMENT CABINET #1. SEE SHEET 4/EI101.
- TO THE AMPLIFIER #1 IN THE WALL MOUNTED EQUIPMENT CABINET #1. SEE SHEET 4/EI101.

4



# 4 LEVEL 02 - MECHANICAL MEZZANINE AV EQUIPMENT SCALE: 1/8" = 1'-0"



|                         |                                           |     | SCHOOL IN       | TERCOM EQUIPMENT         | LIST                                |                   |
|-------------------------|-------------------------------------------|-----|-----------------|--------------------------|-------------------------------------|-------------------|
| SYMBOL                  | DESCRIPTION                               | QTY | SUPPLIER        | MODEL                    | ROUGH-IN                            | CABLE             |
|                         | WALL INTERCOM EQUIPMENT, 16 RU            | 1   | MIDDLE ATLANTIC | DWR-16-22PD              | CONDUITS IN SIZES AS REQUIRED       |                   |
|                         |                                           |     |                 |                          |                                     |                   |
|                         | UNINTERRUPTIBLE POWER SYPPLY 900W         | 1   | APC             | SMART-UPS 1500 VA LCD 12 | 0V                                  |                   |
|                         | CLOCK TRANSCEIVER                         |     |                 |                          |                                     |                   |
|                         | BLANK RACK PANEL                          | A/R | MIDDLE ATLANTIC | 1RU, 2RU, 3RU            |                                     |                   |
|                         | VOLUME CONTROL SWITCH                     | A/R | BOGEN           | ATP10                    | 1 GANG 3" DEEP                      |                   |
|                         | SWITCH HEIGHT                             |     |                 |                          | 3/4" C. TO ACCESSIBLE CEILING       | WEST PENN 25225B  |
| CS                      | CALL SWITCH                               | A/R | BOGEN           | CA15C                    | 1 GANG, 3" DEEP                     | WEST PENN 25357   |
|                         |                                           |     |                 |                          | 3/4" C. TO ACCESSIBLE CEILING       |                   |
|                         | RECESSED INTERIOR CEILING SPEAKER:        |     |                 |                          |                                     |                   |
|                         | ROUND BACK BOX                            | A/R | ATLAS           | CS95-8                   | 3/4" C. TO ACCESSIBLE CEILING       |                   |
|                         | SPEAKER/GRILLE ASSEMBLY, 25/70V           | A/R | ATLAS           | SD72W                    | PAINT GRILL IN COLOR AS SELECTED BY | WEST PENN 25225B  |
|                         | TILE SUPPORT                              | A/R | ATLAS           | 81-8R                    | ARCHITECT                           |                   |
|                         | HORN AND GRILL WITH WEATHERPROOF BACK BOX | A/R | ATLAS SOUND     | VT-152UCN                | 2-GANG BOX                          |                   |
| F <b>●</b> <sub>H</sub> | RECESS MOUNT                              | A/R | ATLAS SOUND     | A-R ADAPTER              |                                     | WEST PENN 25225B  |
|                         | 10' ABOVE THE GROUND LEVEL                |     |                 |                          |                                     |                   |
| WP                      |                                           |     |                 |                          | 3/4" C. THROUGHOUT                  |                   |
|                         |                                           |     |                 |                          | PAINT GRILL IN COLOR AS SELECTED BY |                   |
|                         |                                           |     |                 |                          | ARCHITECT                           |                   |
|                         | POWER AMPLIFIER #1                        | 2   | BOGEN           | HTA125A                  |                                     |                   |
|                         | 1 CHANNEL, 125W, 25V                      |     |                 |                          |                                     |                   |
|                         | POWER AMPLIFIER #2                        | 3   | BOGEN           | HTA 250A                 |                                     |                   |
|                         | 1 CHANNEL, 250W, 25V                      |     |                 |                          |                                     |                   |
|                         | PATCH PANELS                              | A/R |                 | PATCH PANEL IS PROVIDED  | AND                                 |                   |
|                         |                                           |     |                 | INSTALLED BY DIVISION 27 |                                     |                   |
|                         |                                           |     |                 | (DATA INTEGRATOR) AND    |                                     |                   |
|                         |                                           |     |                 | CONNECTED BY DIVISION 27 | 7                                   |                   |
|                         | RECESSED ENCLOSURE                        | A/R | ATLAS           | CS95-8                   |                                     | WEST PENN 252215B |
| C                       | SPEAKER                                   | A/R |                 | SD-72W                   |                                     |                   |
|                         | RECESSED INTERIOR WALL SPEAKER:           |     |                 |                          |                                     |                   |
|                         | SQUARE BACK BOX                           | A/R | LOWELL          | P875X-4                  | 3/4" C. TO ACCESSIBLE CEILING       |                   |
|                         | SPEAKER, 25/70V                           | A/R | ATLAS SOUND     | SD72                     | PAINT GRILL IN COLOR AS SELECTED BY | WEST PENN 25225B  |
|                         | GRILL, WHITE                              | A/R | LOWELL          | JG8X                     | ARCHITECT                           |                   |
|                         |                                           |     |                 |                          |                                     |                   |
| ASB                     | ANALOG STATION BRIDGE 3 RU, 6" DEEP       | 1   | BOGEN           |                          |                                     | WEST PENN 25357   |
|                         | 24 PORTS                                  |     |                 |                          |                                     |                   |
|                         | NETWORK SWITCHER                          | A/R |                 | SUPPLIED AND INSTALLED   |                                     |                   |
|                         |                                           |     |                 | BY THE OWNER             |                                     |                   |
|                         | RELEY MODULE                              | 1   | NQ-E7010        |                          |                                     | WEST PENN 25255B  |
|                         |                                           |     |                 |                          |                                     |                   |
|                         | POWER SUPPLY 9V-30V DC, 1A                | 2   | CUSTOM          |                          |                                     |                   |
|                         |                                           |     |                 |                          |                                     |                   |
| ∫ (S) <sup>P</sup>      | PENDANT SPEAKER                           | 2   | BIAMP           | DP6                      | 1-GANG BOX                          | WEST PENN 25225B  |
|                         |                                           |     |                 |                          | 3/4" C. THROUGHOUT                  |                   |
|                         | EXISTING DATA RACK                        |     |                 |                          |                                     |                   |
|                         |                                           |     |                 |                          |                                     |                   |
|                         |                                           |     |                 |                          |                                     |                   |
| A/R = AS REQUIRED       |                                           |     |                 |                          |                                     |                   |





