DESIGN CRITERIA

APPLICABLE CODES

ACCESSIBILITY CODE	ICC/ANSI A117.1-2009
INTERNATIONAL BUILDING CODE	2015 EDITION
ANSI/ASHRAE/IES Standard 90.1	ASHRAE 90.1
INTERNATIONAL FIRE CODE	2015 EDITION
INTERNATIONAL MECHANICAL CODE	2015 EDITION
INTERNATIONAL PLUMBING CODE	2015 EDITION
NATIONAL ELECTRICAL CODE	2014 EDITION
ZONING ORDINANCE: PARK CITY MUNICIPAL CODE	CURRENT EDITION

OTHER CRITERIA

DEFERRED SUBMITTALS

FIRE SPRINKLERS

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National Ability Center
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Park City, UT 84060
CONTACT: Kevin Stickelman E-MAIL: kevins@discovernac.com
PHONE: 435.649.3991 INTERNET: http://www.discovernac.org

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PHONE: 801.532.2196 INTERNET:

NATIONAL ABILITY CENTER

RECREATION CENTER

1000 Ability Way, Park City, UT 84060

VICINITY MAP

Nexus Project #: 18065

Owner Project #: N/A

08.09.18

CONSTRUCTION DOCUMENTS

APPROVALS

Signer 1 Date

Signer 2 Date

Signer 3 Date

Signer 4 Date

#	Date	Revision

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STATE OF UTAH
JULIE ANN BERRETH
5000975-0301
LICENSED ARCHITECT
08.09.18

NATIONAL ABILITY CENTER
RECREATION CENTER
1000 Ability Way, Park City, UT 84060

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CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
CHECKED BY: KH
DRAWN BY: TB
DATE: 08.09.18

COVER SHEET

G001

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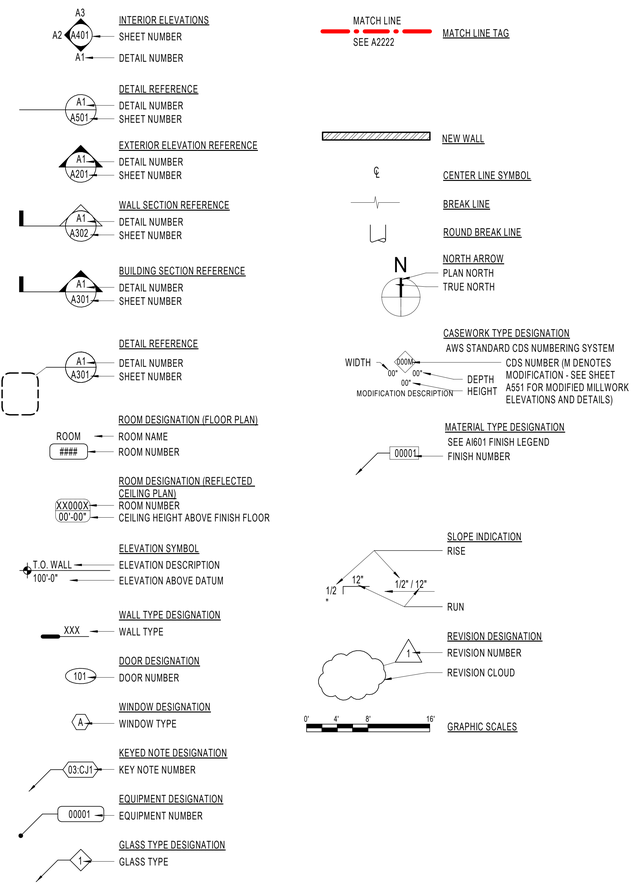
LIST OF ABBREVIATIONS

A		**G**		**R**	
A/C	AIR CONDITIONING	GA	GAUGE	R	RISER OR RADIUS
AD	AREA DRAIN	GALV	GALVANIZED	RAD	RADIUS
AFC	ABOVE FINISHED CEILING	GFRC	GLASS-FIBER-REINFORCED CONCRETE	RCP	REFLECTED CEILING PLAN
AFF	ABOVE FINISHED FLOOR	GFRG	GLASS-FIBER-REINFORCED GYPSUM	RD	ROOF DRAIN
AHU	AIR HANDLING UNIT	GL	GLASS	REF	REFRIDGERATOR
ALUM	ALUMINUM	GWB	GYPSUM WALL BOARD	REQD	REQUIRED
ANOD	ANODIZED	GYP	GYPSUM	REV	REVISION
ARCH	ARCHITECT			RH	RELATIVE HUMIDITY
@	AT	**H**		RM	ROOM
		H	HIGH	RO	ROUGH OPENING
B		HB	HOSE BIBB	RTU	ROOF TOP UNIT
BD	BOARD	HDR	HEADER	RWL	RAIN WATER LEADER
BLDG	BUILDING	HM	HOLLOW METAL		
BO	BOTTOM OF	HPT	HIGH POINT	**S**	
		HR	HOUR	S	SMOKE DETECTOR
C		HT	HEIGHT	SAM	SELF ADHESIVE MEMBRANE
C	CELSIUS			SCHED	SCHEDULE
CH	COAT HOOK	**I**		SECT	SECTION
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	ID	INSIDE DIAMETER; INSIDE DIMENSION	SIM	SIMILAR
		IN	INCH	SPEC	SPECIFICATION
CG	CORNER GUARD	INFO	INFORMATION	SS	STAINLESS STEEL
CI	CONTINUOUS INSULATION	INT	INTERIOR	STD	STANDARD
CJ	CONTROL JOINT			STRUCT	STRUCTURAL
CL	CENTERLINE	**J**			
CLG	CEILING	JAN	JANITOR	**T**	
CLO	CLOSET			T	TREAD
CLR	CLEAR	**K**	(NOT USED)	TEL	TELEPHONE
CMU	CONCRETE MASONRY UNIT			TEMP	TEMPORARY
COL	COLUMN	**L**		THK	THICK
CONC	CONCRETE	LAB	LABORATORY	TOC	TOP OF CONCRETE
CONT	CONTINUOUS	LAV	LAVATORY	TOM	TOP OF MASONRY
CORR	CORRIDOR	LBS	POUNDS	TOP	TOP OF PARAPET
CT	CERAMIC TILE	LLH	LONG LEG HORIZONTAL	TOS	TOP OF SLAB; TOP OF STEEL
CTJ	CONSTRUCTION JOINT	LLV	LONG LEG VERTICAL	TOW	TOP OF WALL
CUH	CABINET UNIT HEATER	LPT	LOW POINT	TYP	TYPICAL
				TO	TOP OF
D		**M**			
D	DEEP	MACH RM	MACHINE ROOM	**U**	
DEG	DEGREE	MAINT	MAINTENANCE	UL	UNDERWRITER'S LABORATORIES
DEMO	DEMOLITION	MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
DF	DRINKING FOUNTAIN	MFR	MANUFACTURER		
DIA	DIAMETER	MECH	MECHANICAL	**V**	
DIM	DIMENSION	MEZZ	MEZZANINE	VCT	VINYL COMPOSITE TILE
DN	DOWN	MIN	MINIMUM	VERT	VERTICAL
DS	DOWNSPOUT	MO	MASONRY OPENING	VEST	VESTIBULE
DWGS	DRAWINGS			VIF	VERIFY IN FIELD
		N			
E		N/A	NOT APPLICABLE	**W**	
EA	EACH	NIC	NOT IN CONTRACT	W/	WITH
EJ	EXPANSION JOINT	NOM	NOMINAL	W/O	WITHOUT
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	NTS	NOT TO SCALE	WD	WOOD
				WH	WALL HYDRANT
EL	ELEVATION	**O**		WP	WORKING POINT
ELEC	ELECTRICAL	OC	ON CENTER	WRB	WEATHER RESISTIVE BARRIER
ELEV	ELEVATOR	OD	OUTSIDE DIAMETER; OUTSIDE DIMENSION		
EOS	EDGE OF SLAB			**X,Y,Z**	(NOT USED)
ERD	EXISTING ROOF DRAIN	OFD	OVERFLOW DRAIN		
EQ	EQUAL	OFOI	OWNER FURNISHED, OWNER INSTALLED		
EQUIP	EQUIPMENT	OH DR	OVERHEAD DOOR		
EWC	ELECTRIC WATER COOLER	OPH	OPPOSITE HAND		
EXIST	EXISTING	OPP	OPPOSITE		
EXP	EXPOSED	ORIG	ORIGINAL		
EXT	EXTERIOR				
		P			
F		P LAM	PLASTIC LAMINATE		
F	FAHRENHEIT	PLAS	PLASTER		
FA	FIRE ALARM	PLUMB	PLUMBING		
FACP	FIRE ALARM CONTROL PANEL	PR	PAIR		
FDC	FIRE DEPARTMENT CONNECTION	PSI	POUNDS PER SQUARE INCH		
FD	FLOOR DRAIN	PSF	POUNDS PER SQUARE FOOT		
FDN	FOUNDATION	PVC	POLYVINYL CHLORIDE		
FEC	FIRE EXTINGUISHER CABINET				
FE	FIRE EXTINGUISHER	**Q**			
FE	FINISHED EDGE	QT	QUARRY TILE		
FG	FINISH GRADE				
FHC	FIRE HOSE CABINET				
FIN	FINISH				
FLR	FLOOR				
FND	FOUNDATION				
FO	FINISHED OPENING				
FOC	FACE OF CONCRETE				
FOM	FACE OF MASONRY				
FOS	FACE OF STUD				
FOW	FACE OF WALL				
FRG	FIBER REINFORCED GYPSUM				
FSP	FIRE STANDPIPE				
FT	FEET				
FV	FIELD VERIFY				

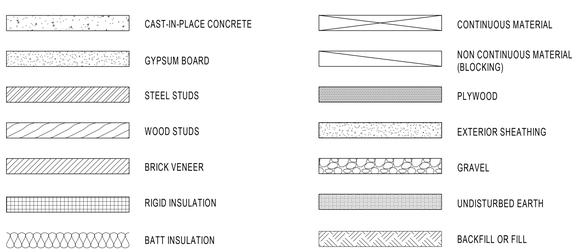
THE PRECEDING LIST OF ABBREVIATIONS IS PRESENTED AS A GENERAL GUIDE AND DOES NOT NECESSARILY SHOW ALL ABBREVIATIONS USED. OTHER GENERALLY ACCEPTED ABBREVIATIONS MAY BE FOUND AMONG THE DRAWINGS - SOME ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED WITHIN THIS DRAWING SET.

DRAWING SYMBOL LEGEND



HATCH LEGEND

NOTE: HATCHING ANGLES MAY VARY DUE TO ANGLE OF WALL DRAWN, WHILE HATCHING PATTERN REMAINS SIMILAR.



SHEET INDEX

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STATE OF UTAH
JULIE ANN WORTH
REGISTERED
5000975-0301
08.09.18
LICENSED ARCHITECT

NATIONAL ABILITY CENTER
RECREATION CENTER
1000 Ability Way, Park City, UT 84060

#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
CHECKED BY: Checker
DRAWN BY: Author
DATE: 08.09.18

GENERAL INFORMATION

G002

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OCCUPANT LOAD/SPACE SCHEDULE

Number	Room Name	Floor Area	S.F.PerPerson	Occupant Load
LEVEL 01				
101	CONFERENCE ROOM	463 SF	15	31
102	WARMING	143 SF	200	1
104	J.C.	28 SF	300	1
110	RISER ROOM	30 SF	300	1
111	ACTIVITY ROOM	5,317 SF	7	760
111A	MAINT. ACCESS	164 SF	300	1
112	STORAGE	88 SF	300	1
113	MECH.	365 SF	300	2
115	ELEC./A.V.	41 SF	300	1
LEVEL 01: 9				799

PROJECT NAME	NAC Recreation Center
PROJECT NO:	17135

BUILDING DATA & CODE SUMMARY

OCCUPANCY CLASSIFICATION (Chapter 3)

[X] SINGLE OCCUPANCY

OCCUPANCY CLASSIFICATION(S): **A-3**

USE(S): **Recreation Center and Conference Room**

CONSTRUCTION CLASSIFICATION (Chapter 6) **VB**

AUTOMATIC SPRINKLER SYSTEM PROVIDED: [X] YES [ ] NO

NFPA STANDARD: [X] 13 [ ] 13R [ ] 13D

HEIGHT & AREA – ACTUAL

BUILDING HEIGHT	HEIGHT IN FEET	HEIGHT IN STORIES
	27' – 5" ft	1

BUILDING AREA SUMMARY	BUILDING AREA
TOTAL	8,355 sf

HEIGHT & AREA – ALLOWABLE (Chapter 5)

ALLOWABLE AREA
- A-3 OCCUPANCY CLASS.
- S SPRIKLER SYSTEM N or S
- 1 STORIES 1 or M

ALLOWABLE AREA = 24,000 sf

ALLOWABLE HEIGHT
- A-3 OCCUPANCY CLASS.
- S SPRIKLER SYSTEM N or S
- 1 STORIES 1 or M

ALLOWABLE HEIGHT = 60'
ALLOWABLE STORIES. = 2

MEANS OF EGRESS - (Chapter 10)

DESIGN OCCUPANT LOAD SUMMARY – TABLE 1004.1.2

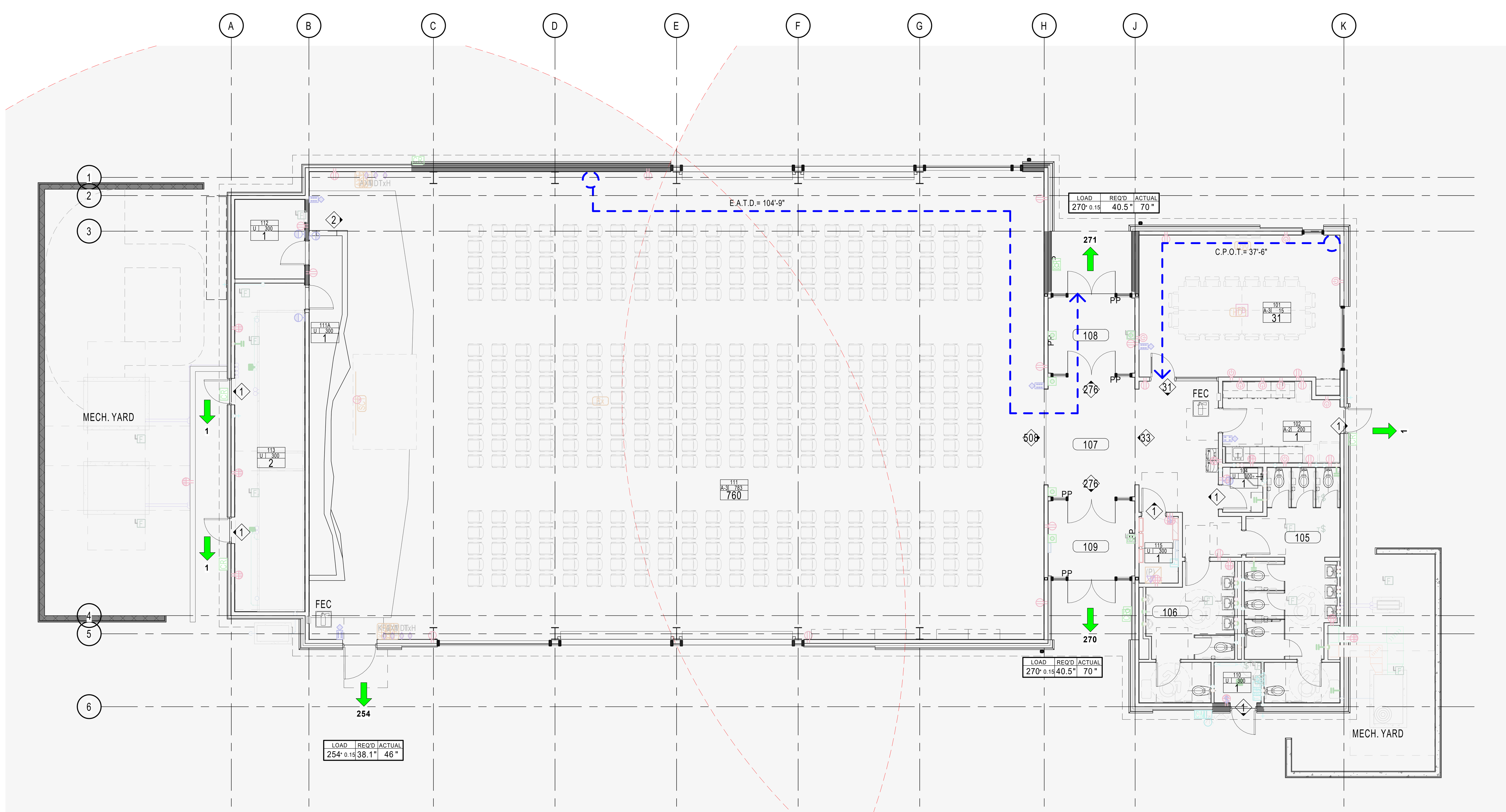
FLOOR LEVEL	DESIGN OCCUPANT LOAD
TOTAL	799

MEANS OF EGRESS ELEMENT	REQUIRED	PROVIDED	SECTION
NUMBER OF EXITS	3	6	(Table 1006.3.1)
EXIT ACCESS TRAVEL DISTANCE	250' MAX	104' - 9"	(1017)
DEAD-END LIMIT	20' MAX	9'	(1020.4)
COMMON PATH OF TRAVEL LIMIT	75' MAX	37'-6"	(Table 1006.3.2(2)
EXIT WIDTH	159.8"	186"	(1005.3)
50% EGRESS WIDTH / MAIN ENTRY	76" (at entry to activity space)	144"	(1029.2)

PLUMBING FIXTURE REQUIREMENTS - (Chapter 29)

OCCUPANCY CLASSIFICATION	OCCUPANT LOAD	WATER CLOSETS MEN Required	WATER CLOSETS MEN Provided	WATER CLOSETS WOMEN Required	WATER CLOSETS WOMEN Provided	URINALS Required	URINALS Provided	D.F. Required	D.F. Provided	LAVATORIES MEN Required	LAVATORIES MEN Provided	LAVATORIES WOMEN Required	LAVATORIES WOMEN Provided
A-3	799	2	2	7	7	2	2	2	2	2	3	2	3

OTHER PLUMBING FIXTURE REQUIREMENTS? **1 SERVICE SINK REQD. AND PROVIDED**



A2 LEVEL 01 - EXITING AND OCCUPANCY
G101 1/8" = 1'-0"

N

SYMBOL LEGEND

- EXIT
- EXIT SIGN. SEE ELECTRICAL PLANS
- FEC — FIRE EXTINGUISHER & CABINET
- FE — FIRE EXTINGUISHER
- OCCUPANT LOAD PER ROOM
- OCCUPANT LOAD, EGRESS DIRECTION
- OCCUPANT LOAD, EGRESS WIDTH
- C.P.O.T. = 37'-6" — COMMON PATH OF TRAVEL LENGTH
- E.A.T.D. = 104'-9" — EXIT ACCESS TRAVEL DISTANCE

EXITING AND OCCUPANCY LEGEND

FLOOR
NO FIRE RATING

ROOF
NO FIRE RATING

WALL
NO FIRE RATING
1 HOUR RATING

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#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
CHECKED BY: Checker
DRAWN BY: Author
DATE: 08.09.18

EXITING AND OCCUPANCY PLANS

G101

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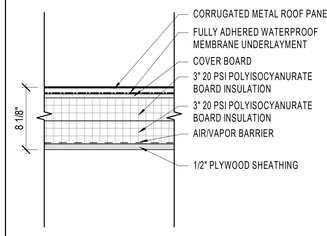
ROOF TYPE: RW00.31	FIRE RATING: NONE
	FIRE TEST:
	SOUND RATING:
	SOUND TEST:



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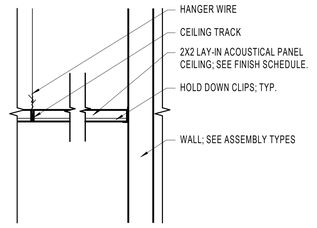
	FIRE TEST:
	SOUND RATING:
	SOUND TEST:



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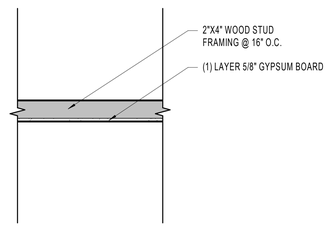
	FIRE TEST:
	SOUND RATING:
	SOUND TEST:



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	FIRE TEST:
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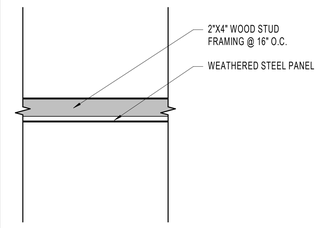
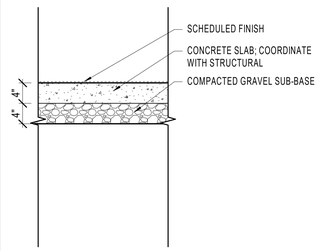
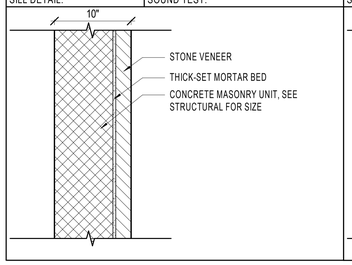


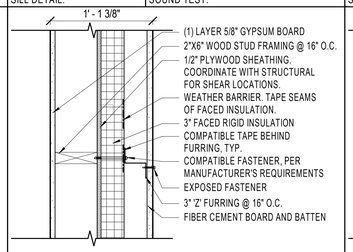
FLOOR TYPE: FG40.01	FIRE RATING: NONE
	FIRE TEST:
	SOUND RATING:
	SOUND TEST:



WALL TYPE: XM80.41	FIRE RATING: NONE
	FIRE TEST:
HEIGHT:	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



WALL TYPE: XW60.11	FIRE RATING: NONE
	FIRE TEST:
HEIGHT:	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



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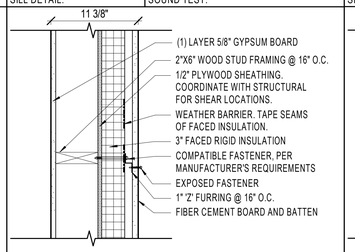
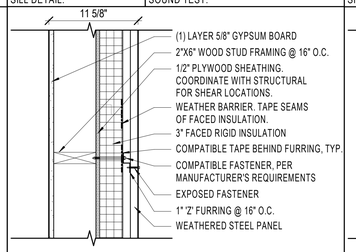
	FIRE TEST:
HEIGHT:	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



WALL TYPE: XW60.21	FIRE RATING: NONE
	FIRE TEST:
HEIGHT:	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



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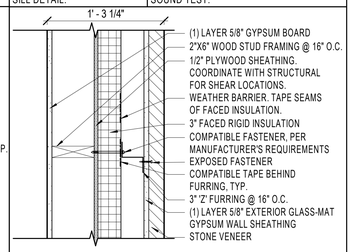
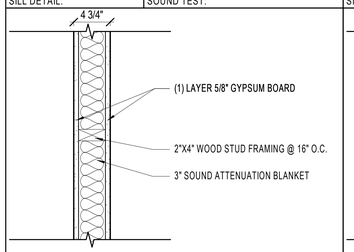
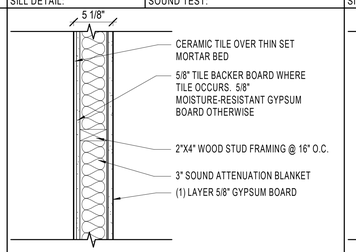
	FIRE TEST:
HEIGHT:	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



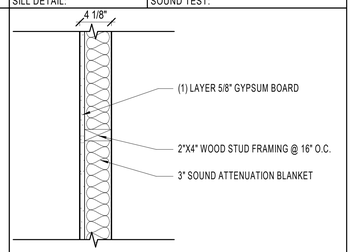
WALL TYPE: W46	FIRE RATING: NONE
	FIRE TEST: N/A
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



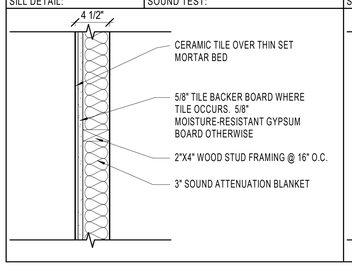
WALL TYPE: W46T	FIRE RATING: NONE
	FIRE TEST: N/A
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



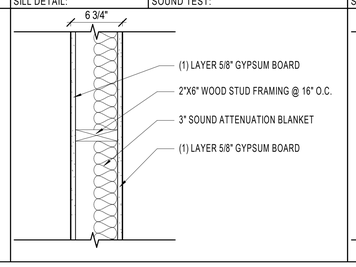
WALL TYPE: W48	FIRE RATING: NONE
	FIRE TEST: N/A
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



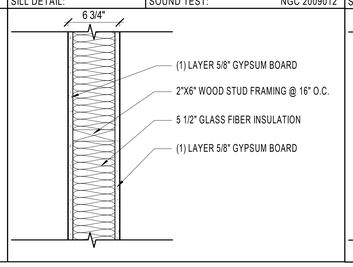
WALL TYPE: W48T	FIRE RATING: NONE
	FIRE TEST: N/A
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



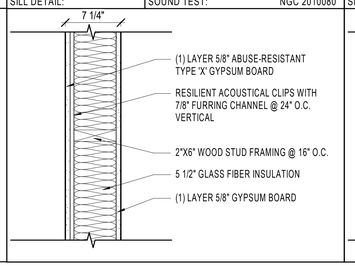
WALL TYPE: W66	FIRE RATING: NONE
	FIRE TEST: N/A
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



WALL TYPE: W66A	FIRE RATING:
	FIRE TEST:
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING: STC 44
SILL DETAIL:	SOUND TEST: NGC 2009012



WALL TYPE: W66C	FIRE RATING: NONE
	FIRE TEST: N/A
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING: 58
SILL DETAIL:	SOUND TEST: NGC 2010080



WALL TYPE: W66TA	FIRE RATING: NONE
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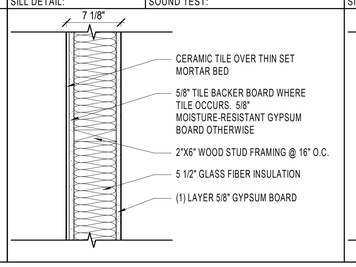
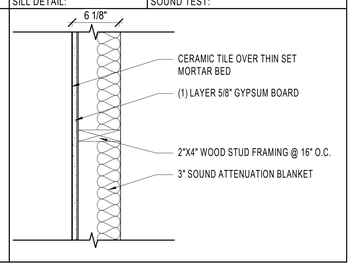
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



WALL TYPE: W68	FIRE RATING: NONE
	FIRE TEST: N/A
HEIGHT: TO DECK ABOVE	
HEAD DETAIL:	SOUND RATING:
SILL DETAIL:	SOUND TEST:



GENERAL NOTE - ASSEMBLY TYPES

A. WALL TYPES DESCRIBED ON THIS SHEET DO NOT ACCOUNT FOR REQUIRED BACKING AND/OR SUPPORT FOR WALL MOUNTED FIXTURES, EQUIPMENT, CASEWORK AND/OR SYSTEMS FURNITURE. COORDINATE WITH FLOOR PLANS, INTERIOR ELEVATIONS AND EQUIPMENT PLANS PRIOR TO COVERING OF STUD FRAMING. REFER TO MANUFACTURERS'S RECOMMENDATIONS AND DETAILS ON SHEET A701 WHERE APPLICABLE.

B. ASSEMBLY THICKNESS DESCRIBED ON THIS SHEET ARE SHAWN AT ACTUAL SIZE IN PLAN/SECTION REPRESENTATIONS. DIMENSIONS ARE TO FACE OF STUD/STRUCTURE OR GRID. "CLEAR" DIMENSIONS ARE TO FACE OF FINISH

C. BATT INSULATION IS SHOWN WEHRE REQUIRED FOR ACOUSTIC SEPARATION AND/OR FOR REQUIRED UL RATING. DO NOT PROVIDE BATT INSULATION IN WALL TYPES THAT ARE PART OF THE EXTERIOR ENVELOPE.

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JULIE ANN WORTH
5000975-0301
08.09.18
LICENSED ARCHITECT

NATIONAL ABILITY CENTER
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#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
CHECKED BY: KH
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ASSEMBLY TYPES

G501

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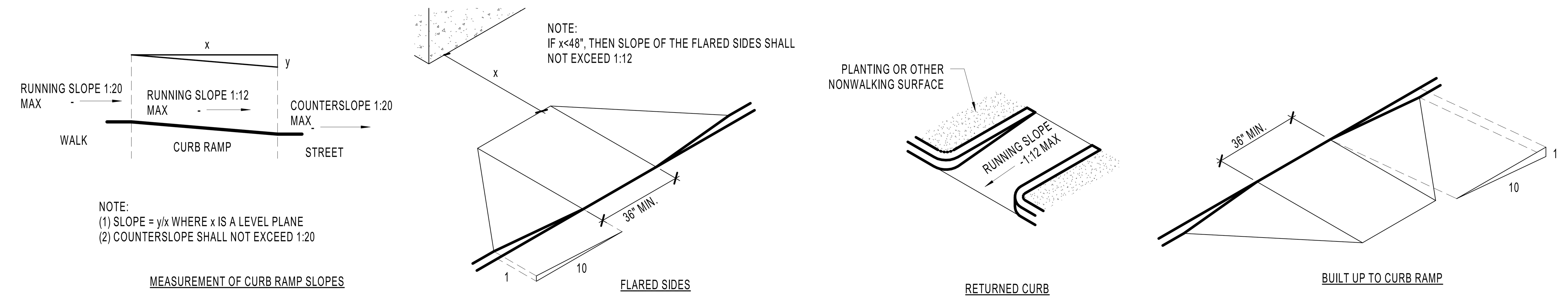
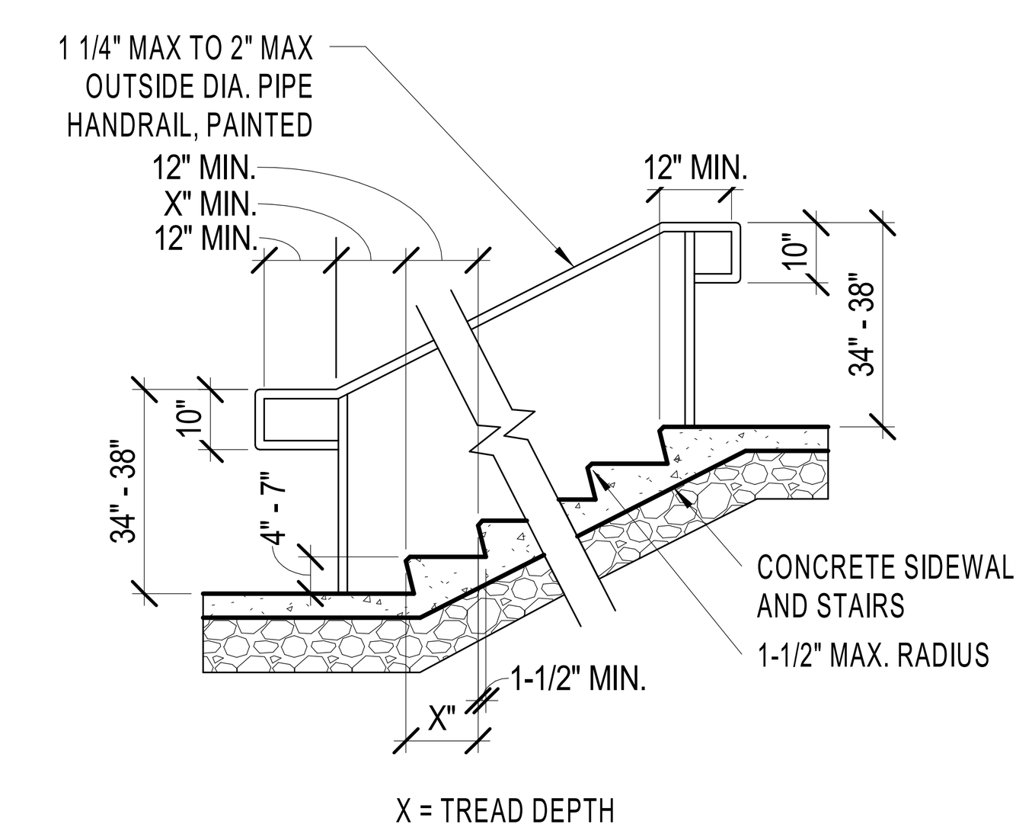
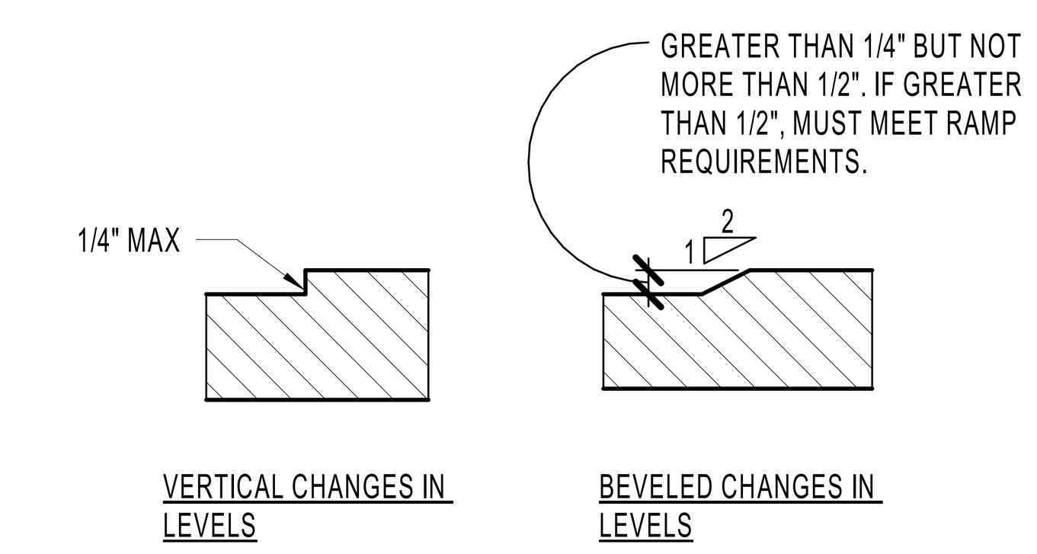


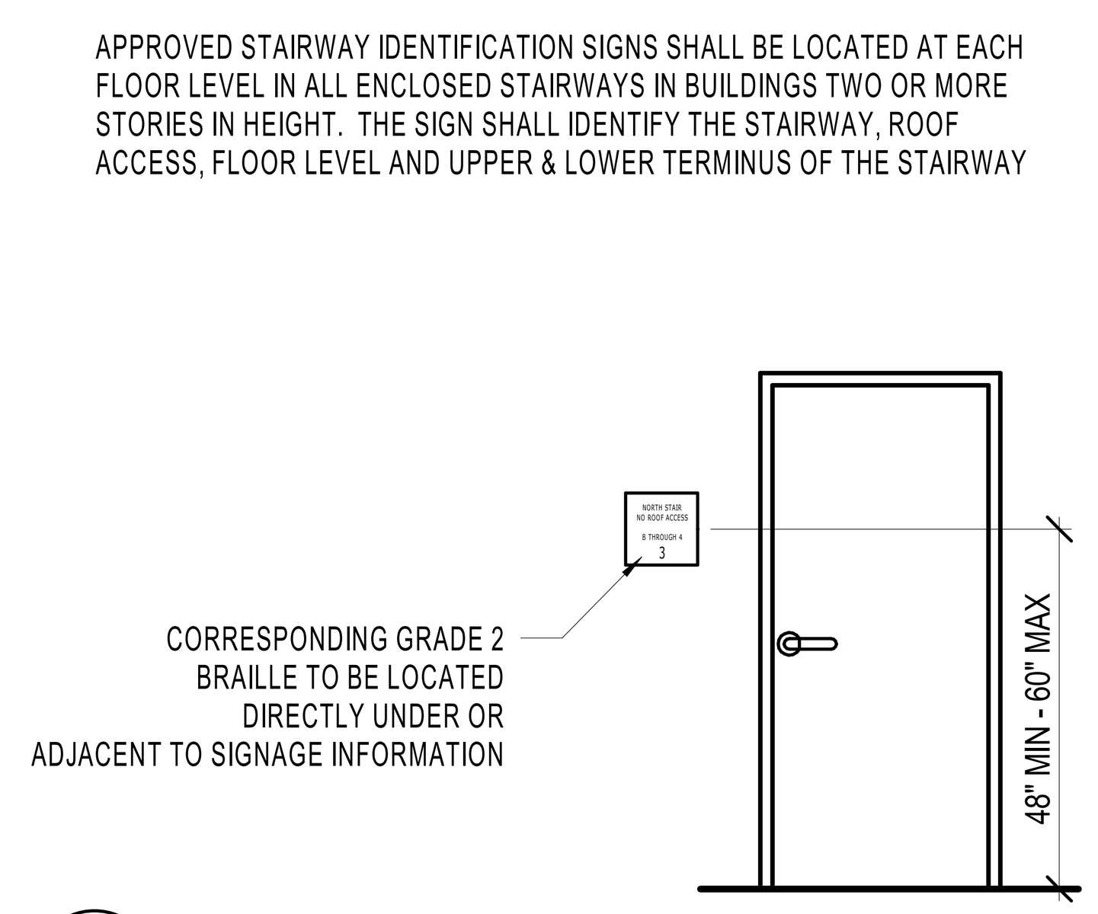
D1 CURB RAMPS
G701 3/8" = 1'-0"



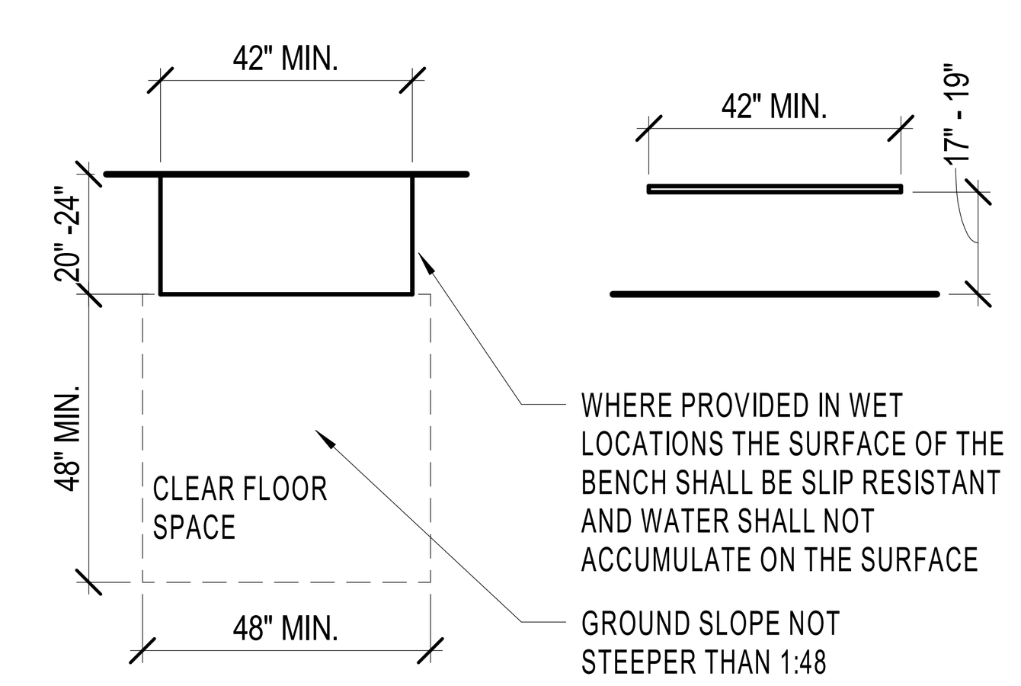
D5 EXTERIOR STAIR RAILING
G701 3/8" = 1'-0"



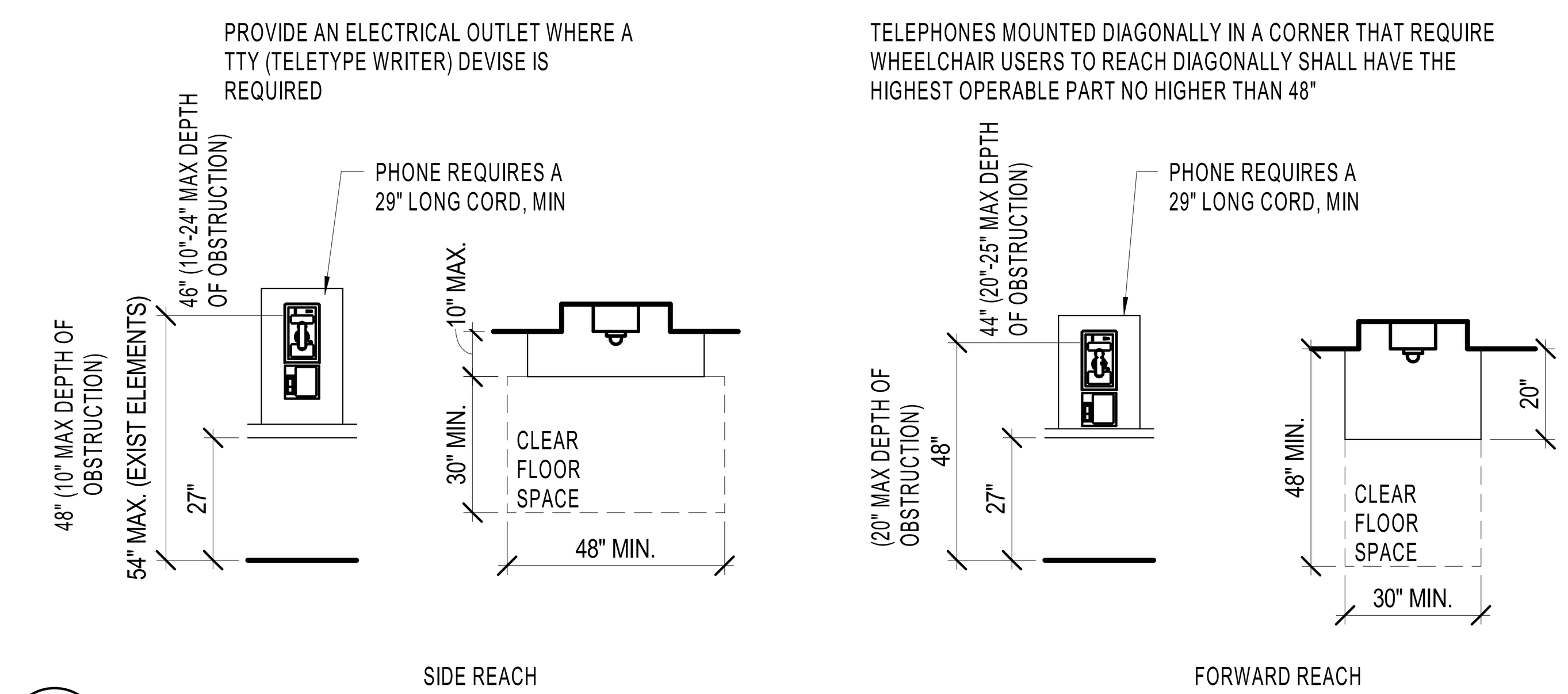
D6 CHANGE IN LEVELS
G701 6" = 1'-0"



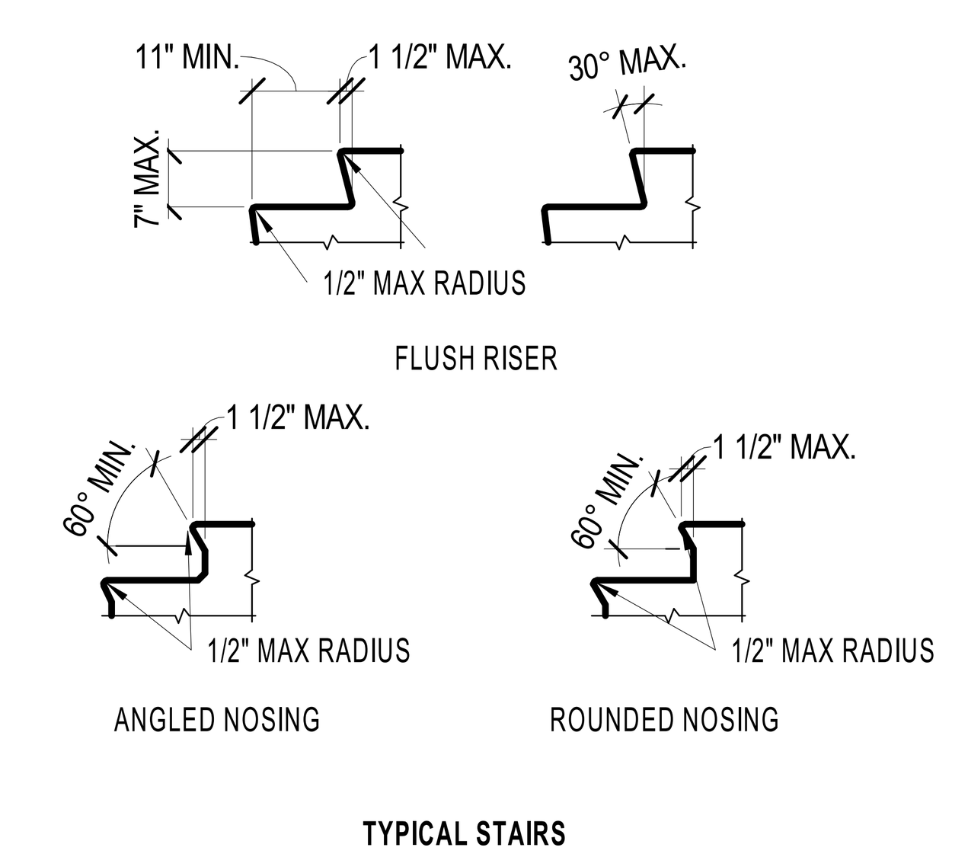
C1 STAIRWAY SIGNAGE
G701 3/8" = 1'-0"



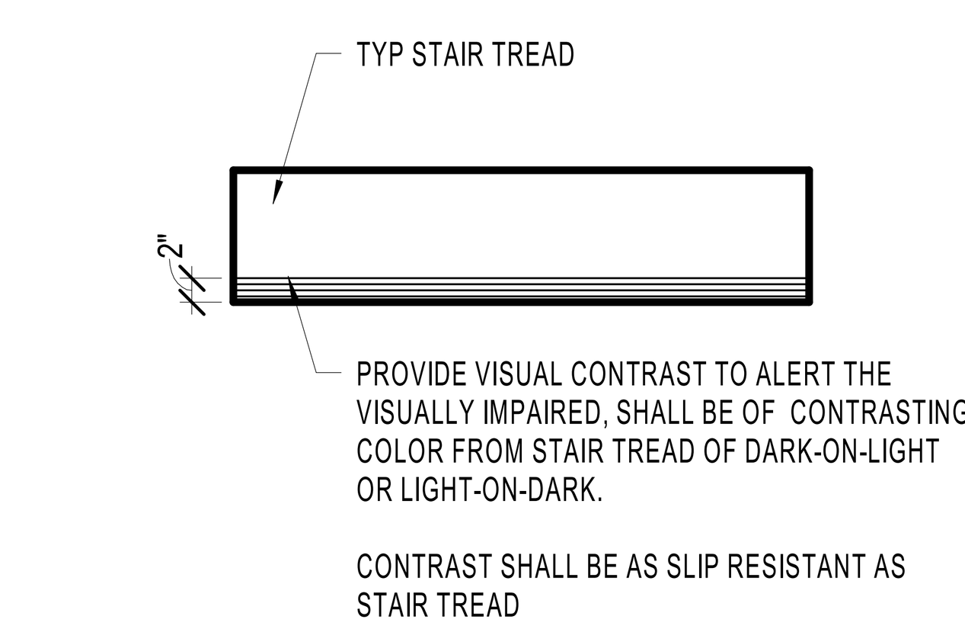
C2 ACCESSIBLE BENCH
G701 3/8" = 1'-0"



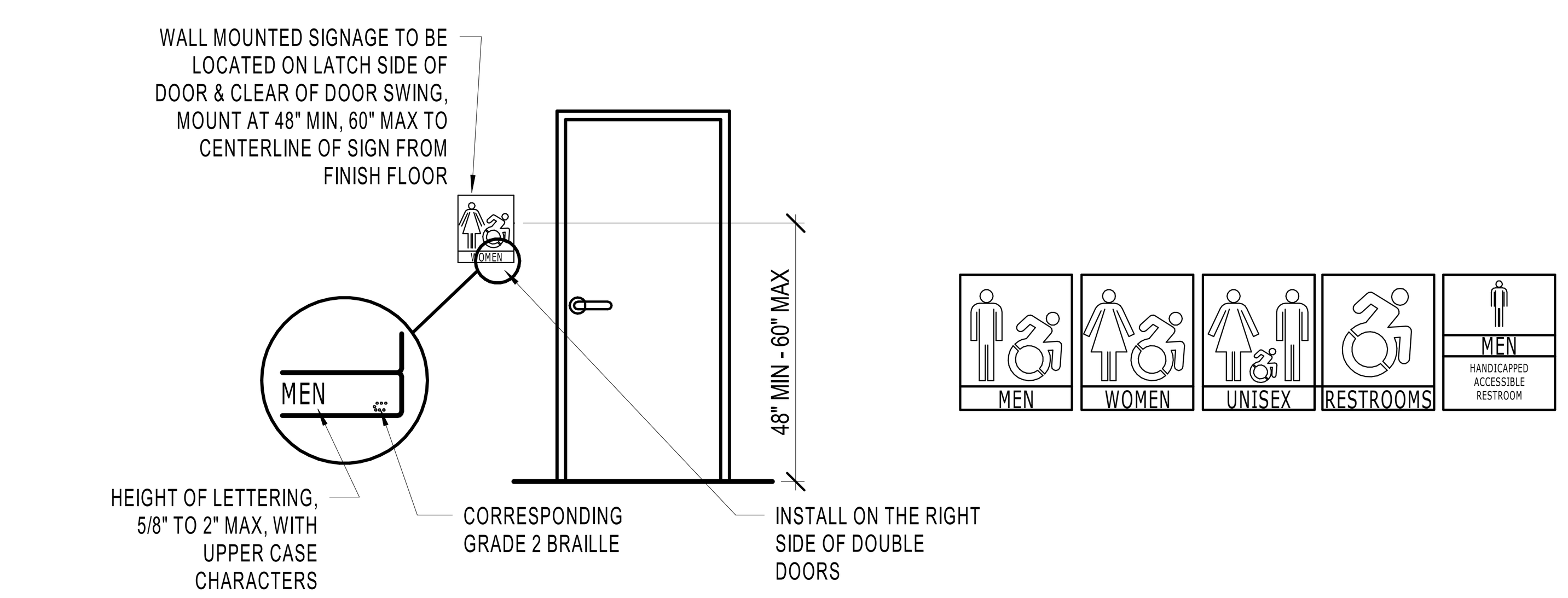
C3 TELEPHONE DETAILS
G701 3/8" = 1'-0"



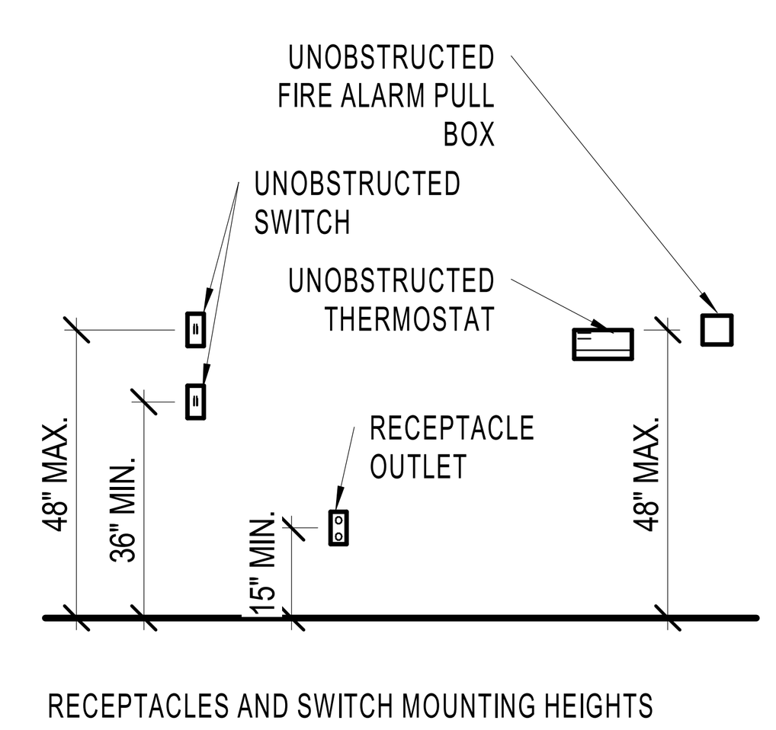
C5 TYPICAL STAIR TREAD
G701 1/2" = 1'-0"



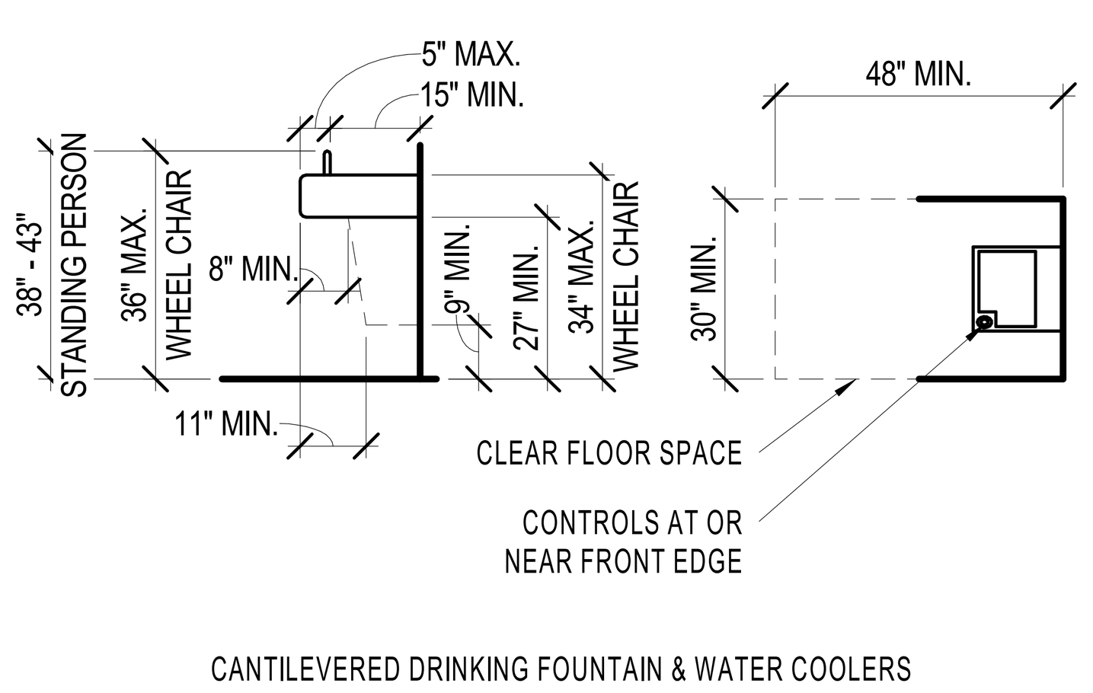
C6 TYPICAL STAIR TREAD
G701 3/4" = 1'-0"



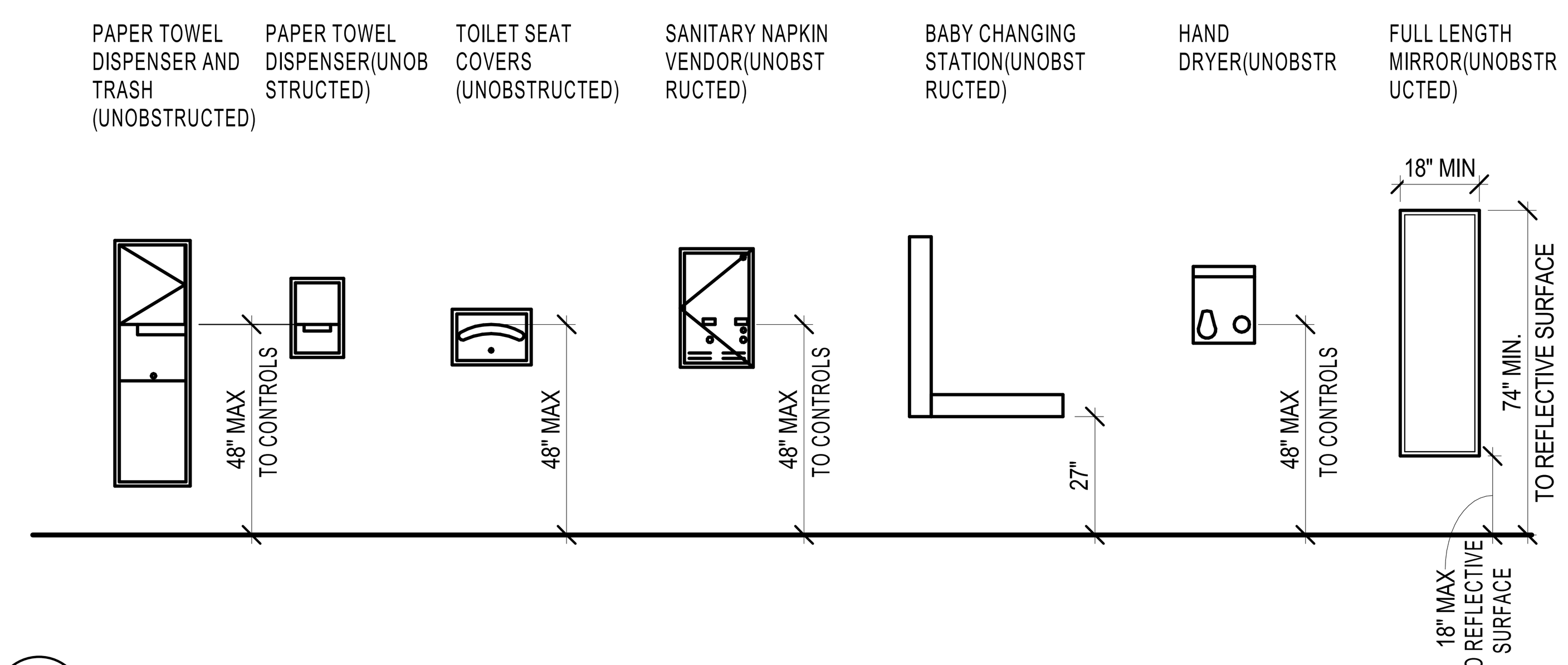
B1 RESTROOM SIGNAGE
G701 3/8" = 1'-0"



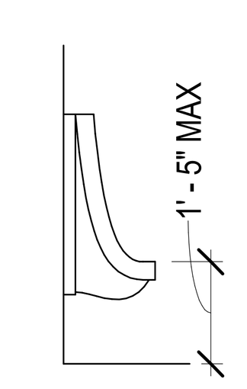
B3 MISC. MOUNTING HEIGHTS
G701 3/8" = 1'-0"



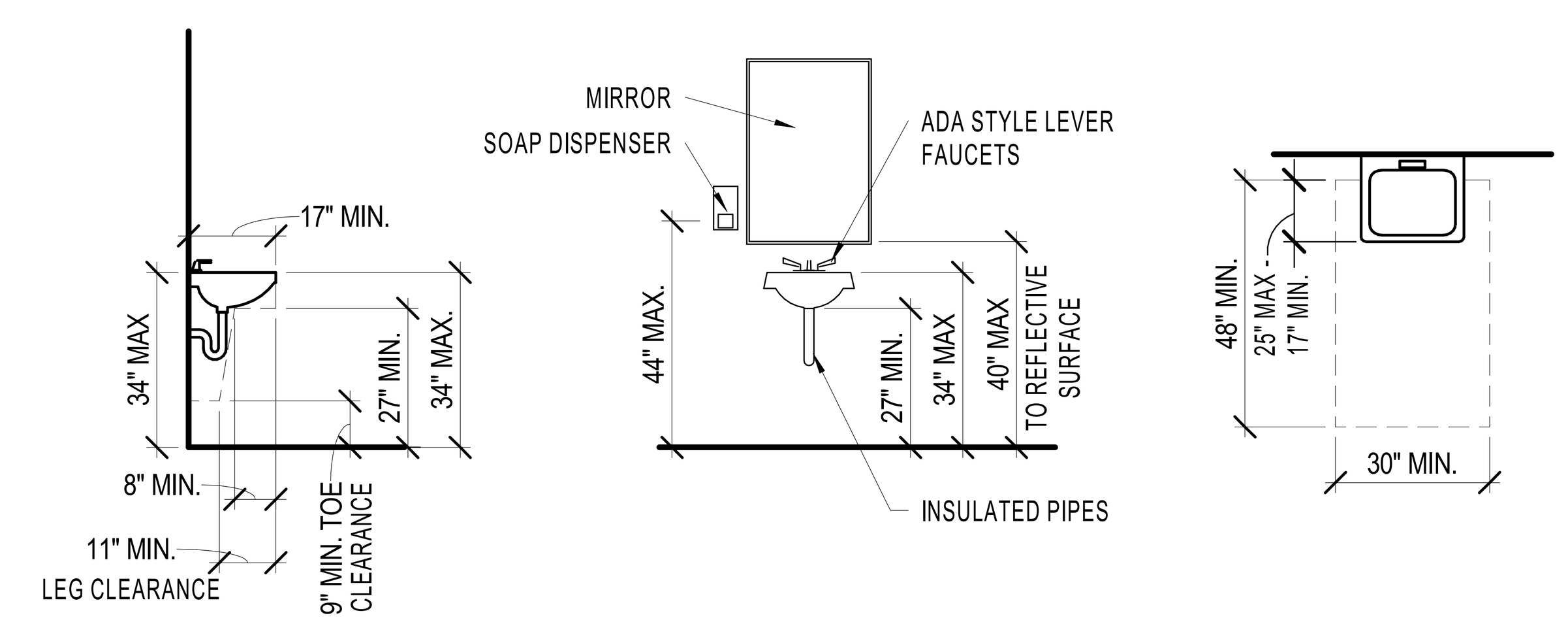
B4 DRINKING FOUNTAIN DETAIL
G701 3/8" = 1'-0"



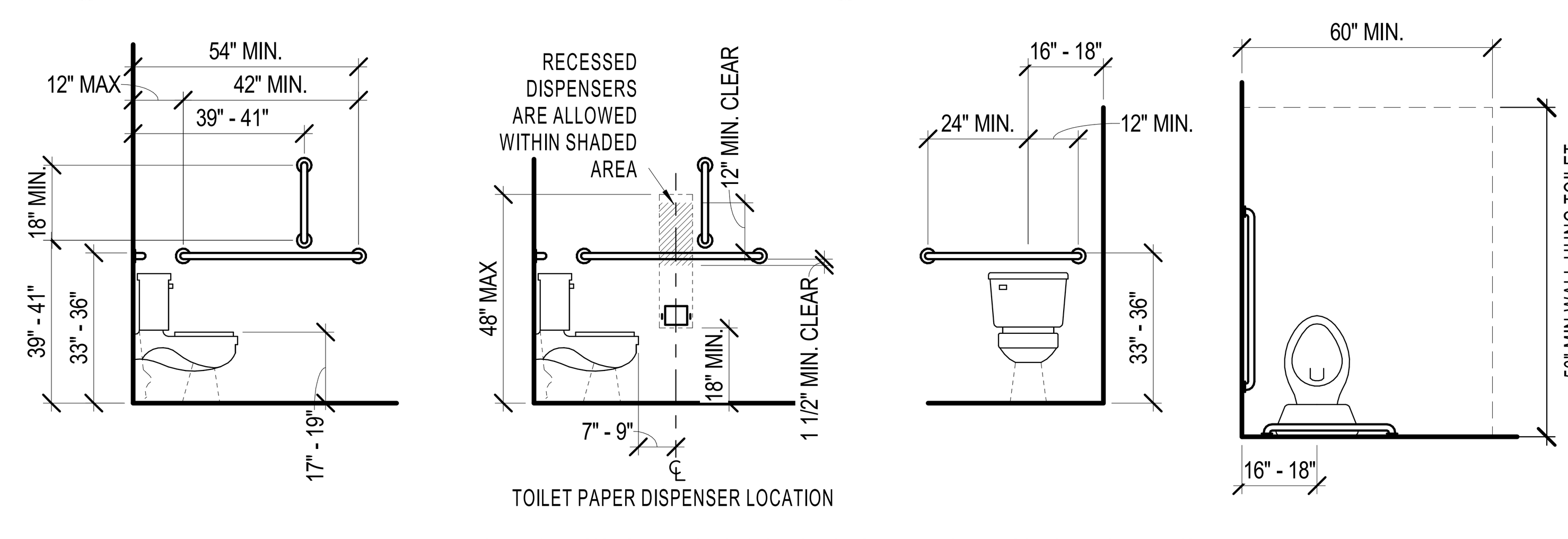
B5 RESTROOM MOUNTING HEIGHTS
G701 3/8" = 1'-0"



A1 URINAL MOUNTING HEIGHT
G701 3/8" = 1'-0"



A2 ACCESSIBLE SINK DETAIL
G701 3/8" = 1'-0"



A4 ACCESSIBLE WALL / FLOOR MOUNTED TOILET DETAIL
G701 3/8" = 1'-0"

GENERAL NOTE - ACCESSIBILITY

A. THESE DETAILS ARE SHOWN FOR MINIMUM ACCESSIBILITY REQUIREMENTS. SEE PROJECT SPECIFIC DETAILS FOR ADDITIONAL INFORMATION. VERIFY WITH ARCHITECT ANY DIFFERENCES BEFORE PROCEEDING WITH CONSTRUCTION.

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CONSTRUCTION DOCUMENTS

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CHECKED BY:	KH
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DATE:	08.09.18

ACCESSIBILITY COMPLIANCE

G701

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LEGEND

ESS	EXISTING SEWER	SS	PROPOSED SEWER
EW	EXISTING WATER	W	PROPOSED WATER
ESD	EXISTING STORM DRAIN	SD	PROPOSED STORM DRAIN
EG	EXISTING GAS	G	PROPOSED GAS
ET	EXISTING TELECOMM	T	PROPOSED TELECOMM
EP	EXISTING POWER	P	POWER

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OVERALL & EXISTING CONDITIONS

C1

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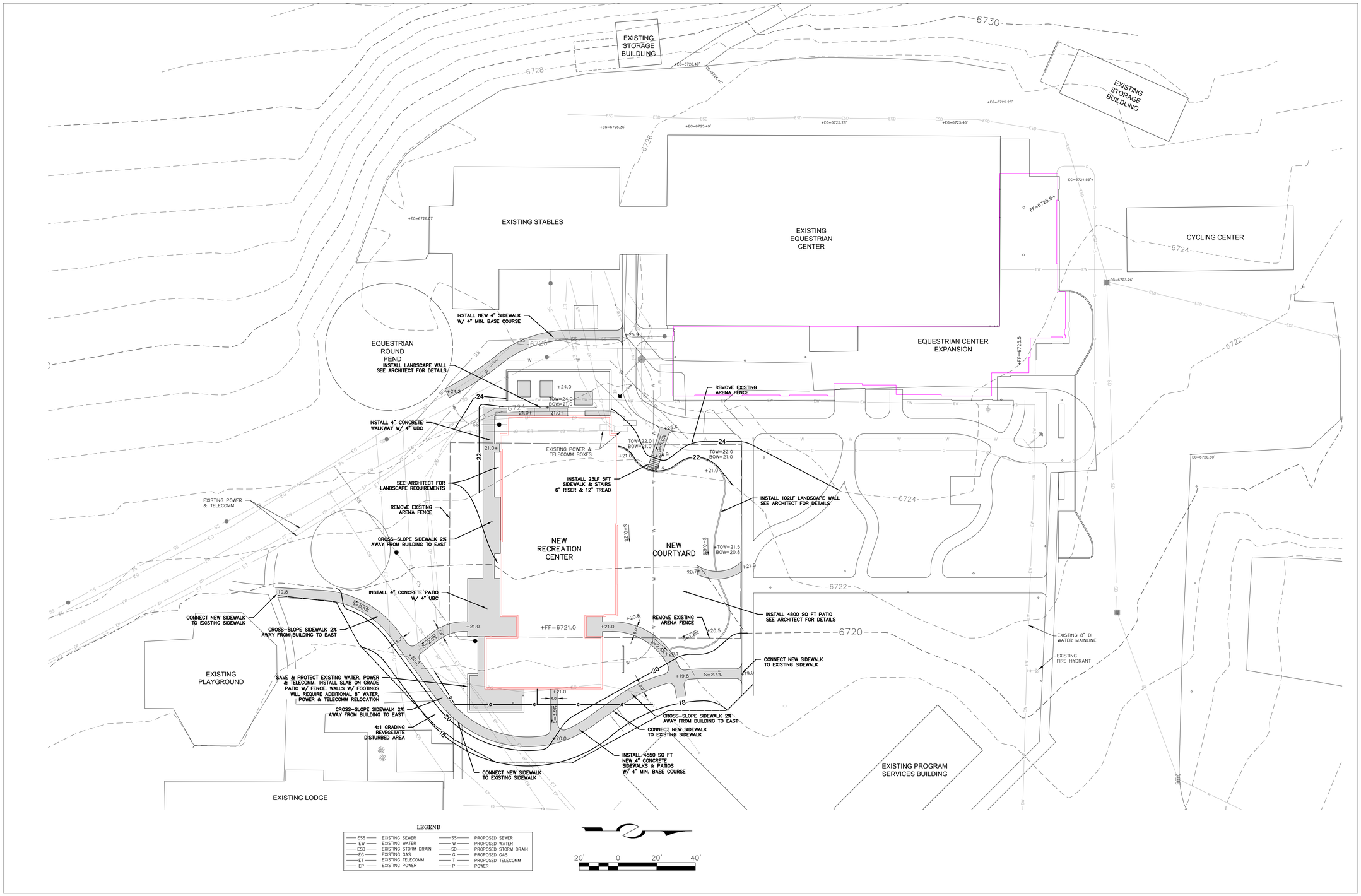

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SITE & GRADING PLAN

C2

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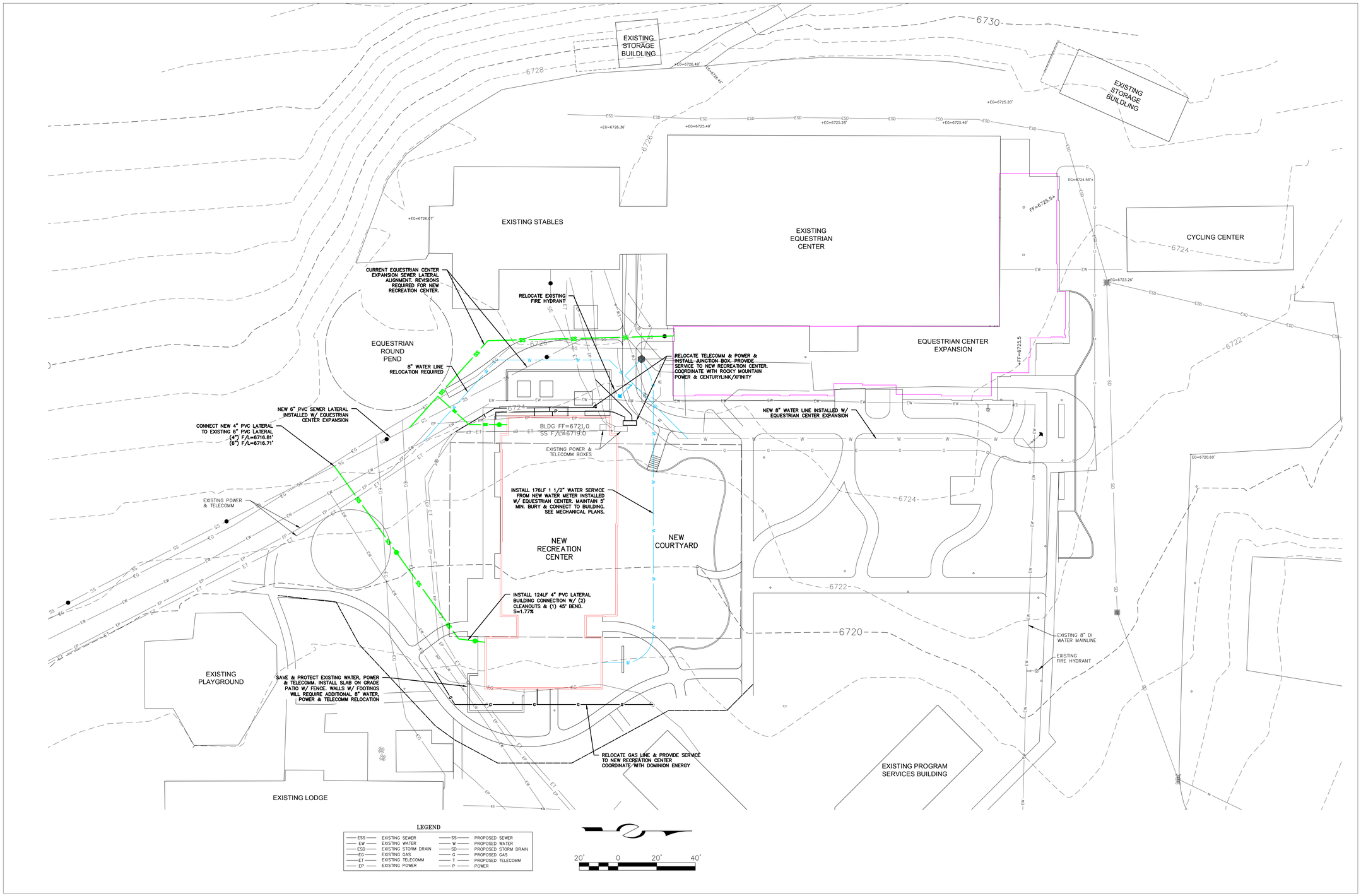

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UTILITY PLAN

C3

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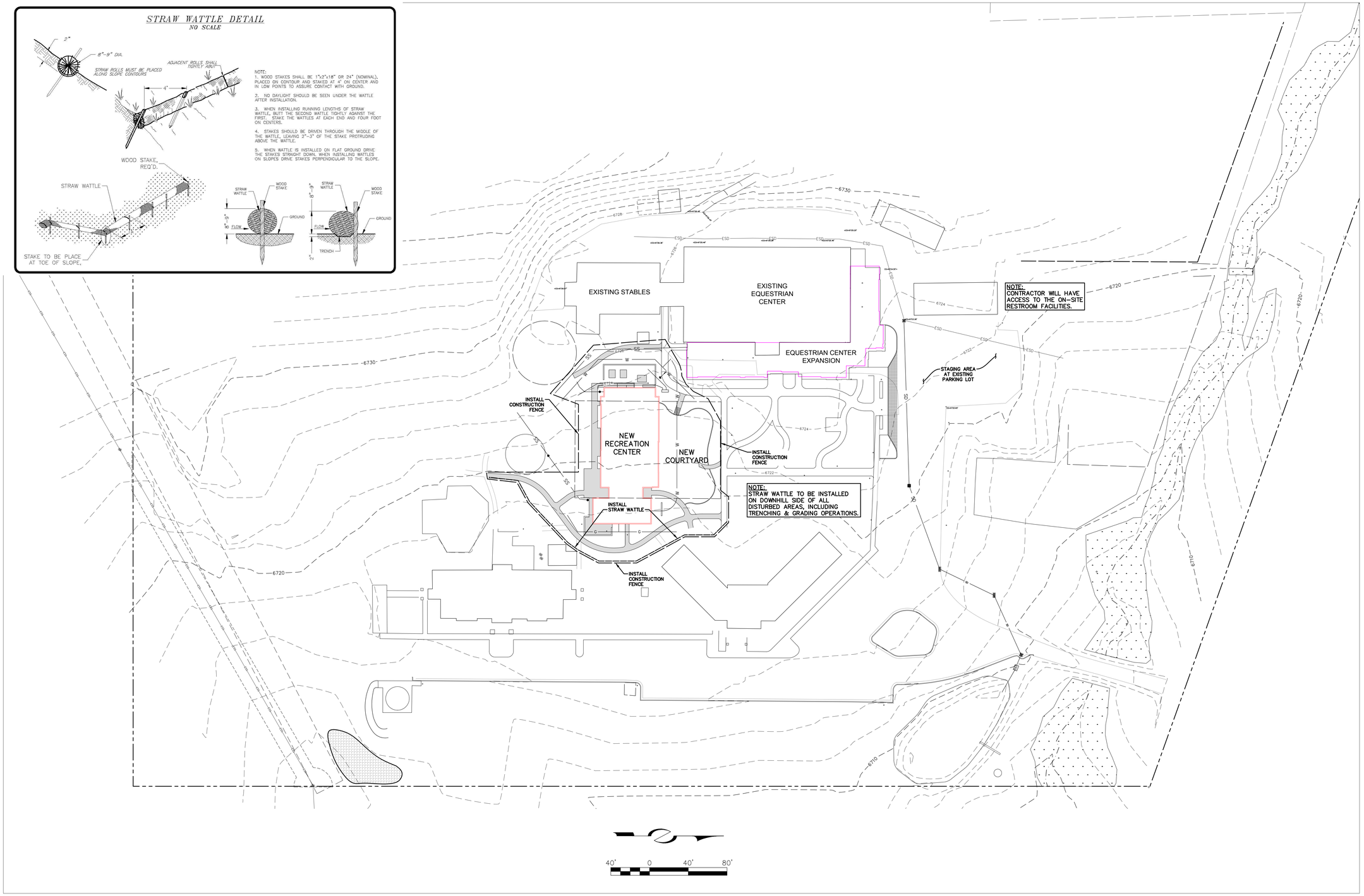

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CONSTRUCTION MITIGATION PLAN

C4

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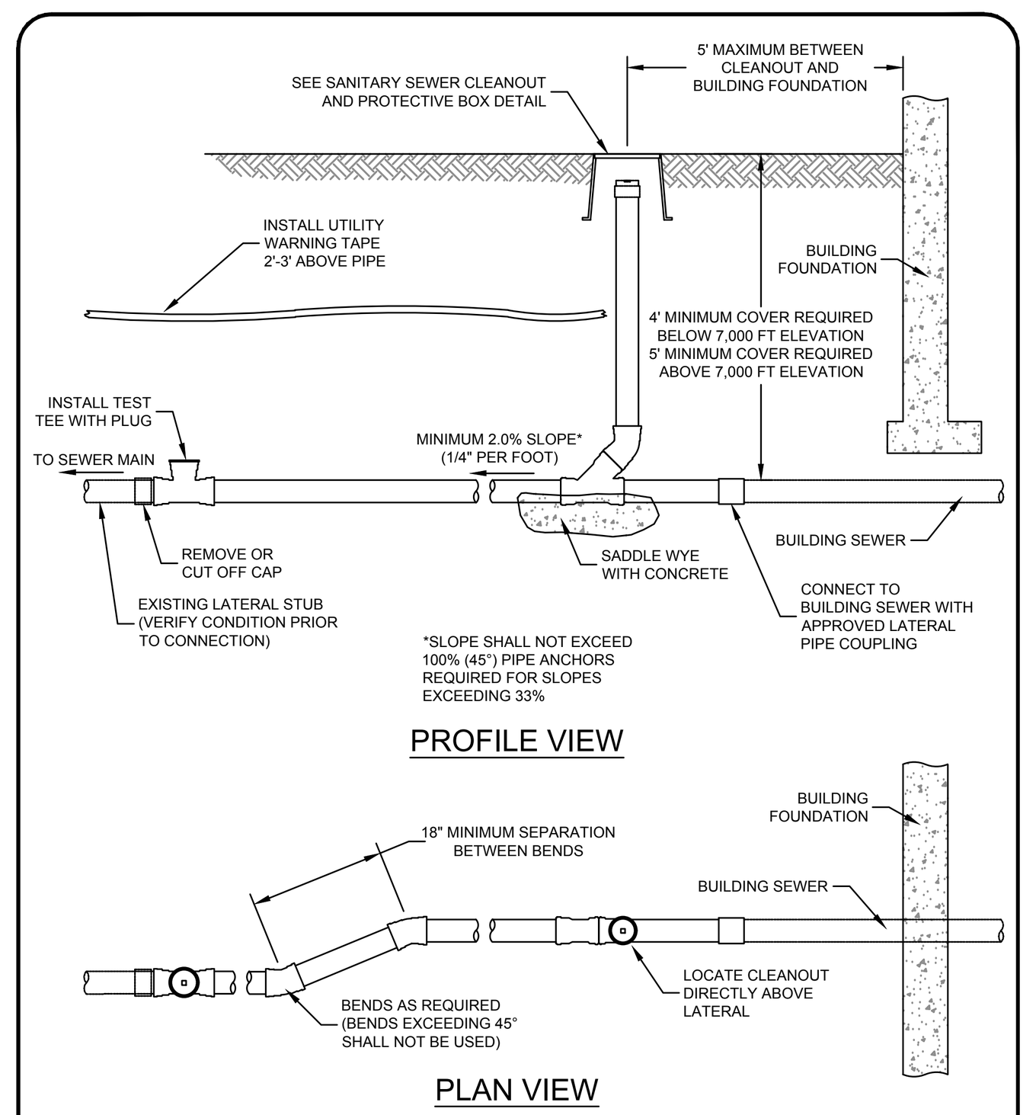
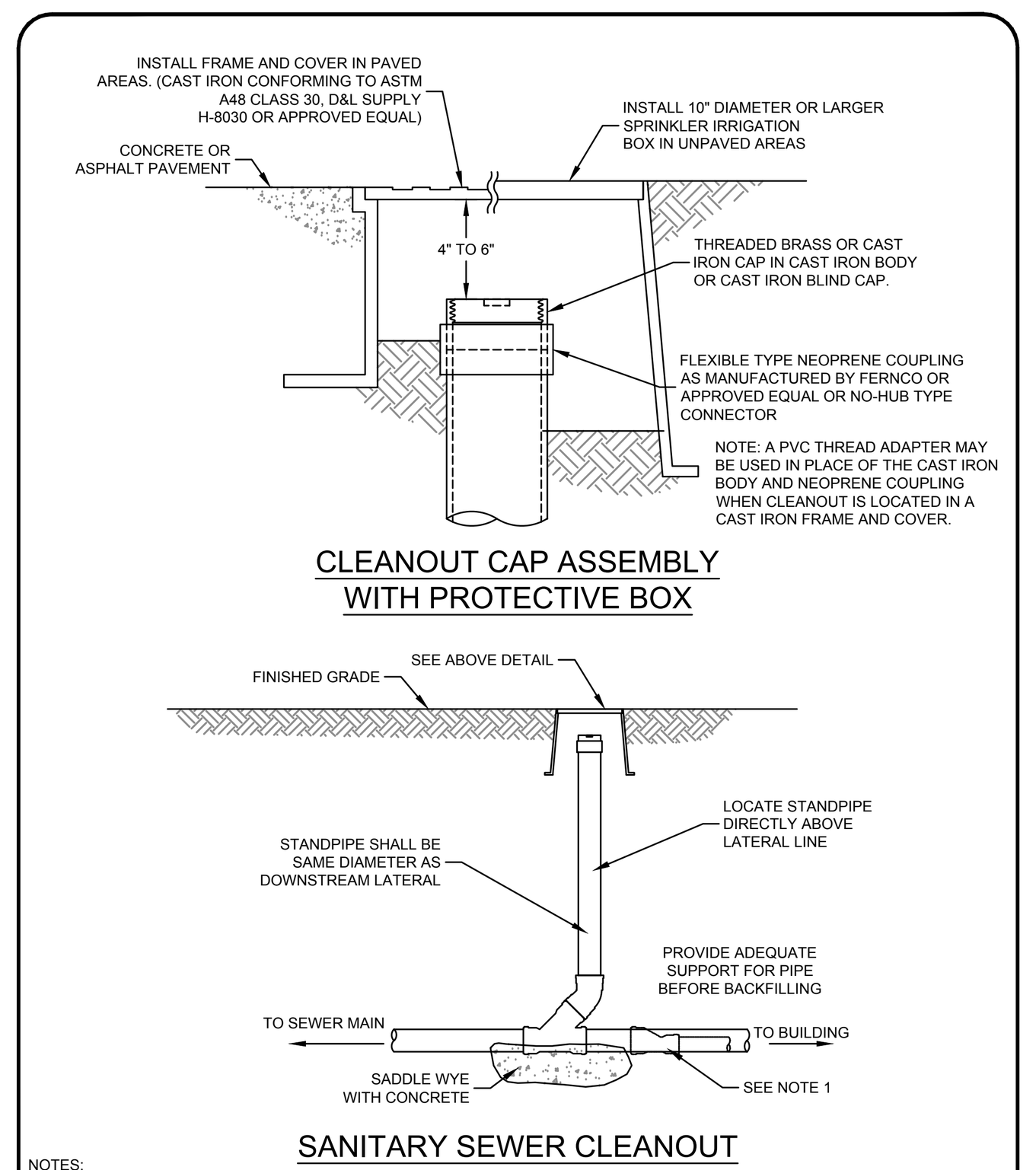


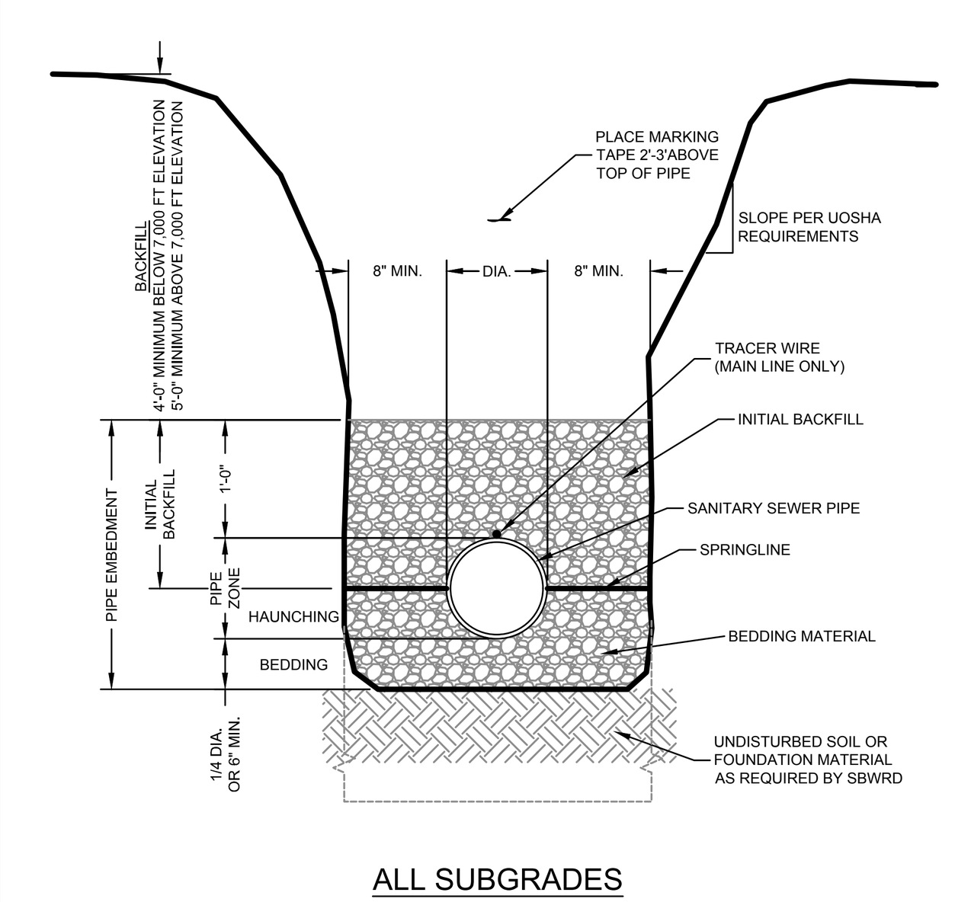
NOTES:
1. CLEANOUTS ARE REQUIRED ON PRIVATE LATERALS AT THE FOLLOWING LOCATIONS:
   A: WITHIN 5 FEET OF THE BUILDING FOUNDATION
   B: AT NO MORE THAN 100 FEET APART, MEASURED FROM THE UPSTREAM ENTRACE OF THE CLEANOUT
   C: AT 40 FOOT SPACING WHEN MORE THAN 1 CHANGE OF DIRECTION OCCURS IN A RUN OF PIPE
2. BENDS EXCEDING 45° SHALL NOT BE USED

Snyderville Basin Water Reclamation District | GRAVITY LATERAL STUB TO GRAVITY BUILDING CONNECTION | STANDARD DETAIL LAT-05, Revision Date: 2/22/16



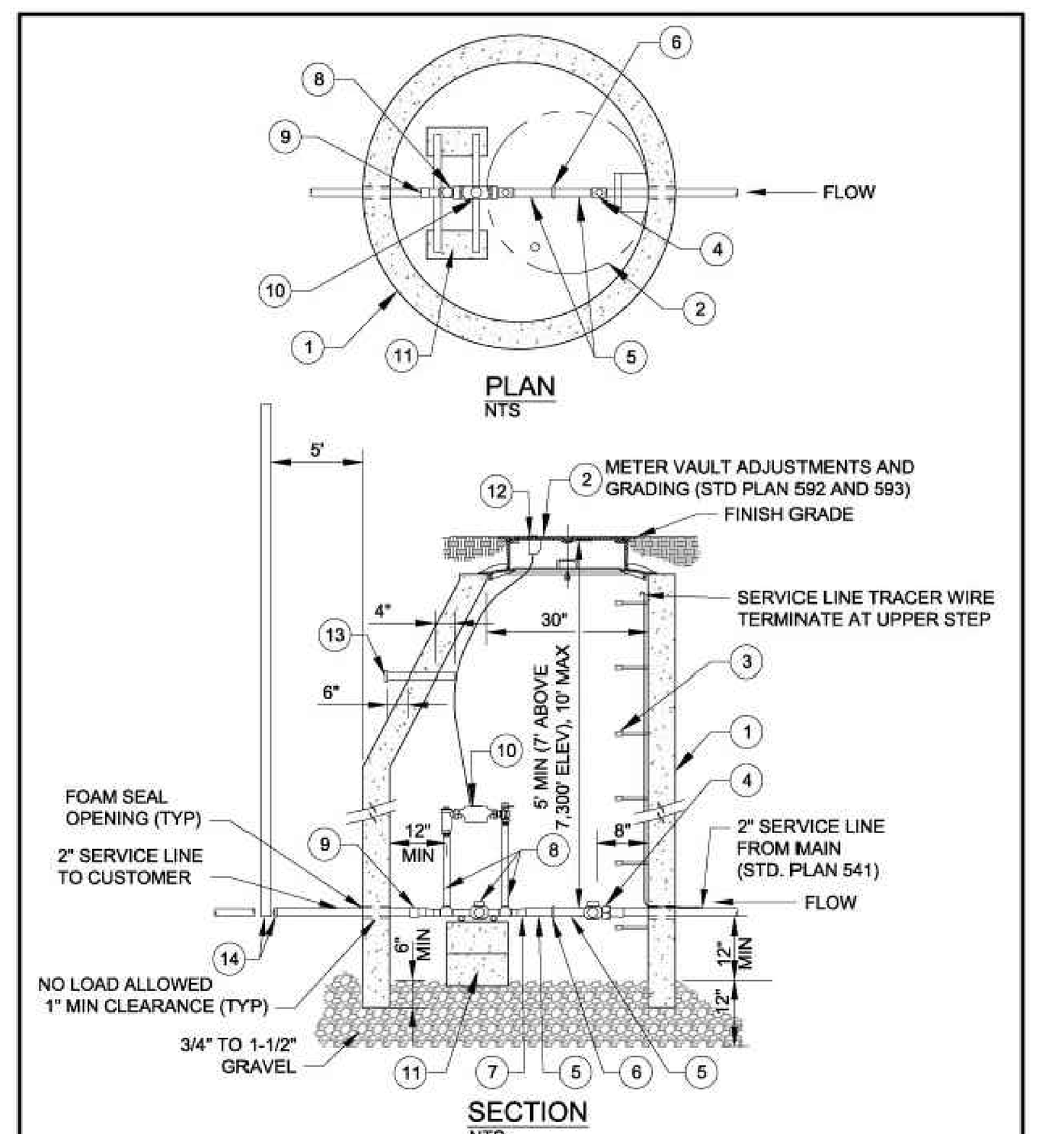
NOTES:
1. FOR TRANSITION FROM 4" (UPSTREAM) TO 6" (DOWNSTREAM) LATERALS, TRANSITION SHALL OCCUR AT A CLEANOUT AND SHALL BE ACCOMPLISHED WITH AN ECCENTRIC REDUCER ON THE UPSTREAM SIDE OF THE WYE
2. FOR LATERALS USING HDPE PIPE:
   45° BEND SHALL BE 3 SEGMENT HDPE BEND
   WYE SHALL BE PREFABRICATED (NOT MOLDED) WYE
   ALL JOINTS SHALL BE FUSION WELDED

Snyderville Basin Water Reclamation District | SANITARY SEWER CLEANOUT AND PROTECTIVE BOX | STANDARD DETAIL LAT-07, Revision Date: 2/22/16



NOTES:
1. BACKFILL IN ROADS, STREETS OR RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH APPLICABLE CITY, COUNTY OR STATE STANDARDS.
2. BACKFILL IN OFF-ROAD AREAS SHALL BE IN ACCORDANCE WITH OFF ROAD SEWER LINE TRENCH DETAIL.
3. ATTACH TRACER WIRE TO TOP OF PIPE AT MAXIMUM 5' SPACING WITH DUCT TAPE OR ZIP TIES.

Snyderville Basin Water Reclamation District | PIPE TRENCH | STANDARD DETAIL PI-01, Revision Date: 2/22/16



NOTES:
1. REFER TO STD. PLAN 520 FOR GENERAL REQUIREMENTS - METER, METER VAULT, AND SERVICE LINE.
2. REFER TO STD. PLAN 521 S FOR LEGEND ITEMS, APPROVED PARTS LIST, AND DETAIL NOTES.

PARK CITY MUNICIPAL CORPORATION WATER | DATE 03/2014 | REV. 0 | 1-1/2" AND 2" SINGLE METER OUTSIDE SETTING | STD. PLAN 524

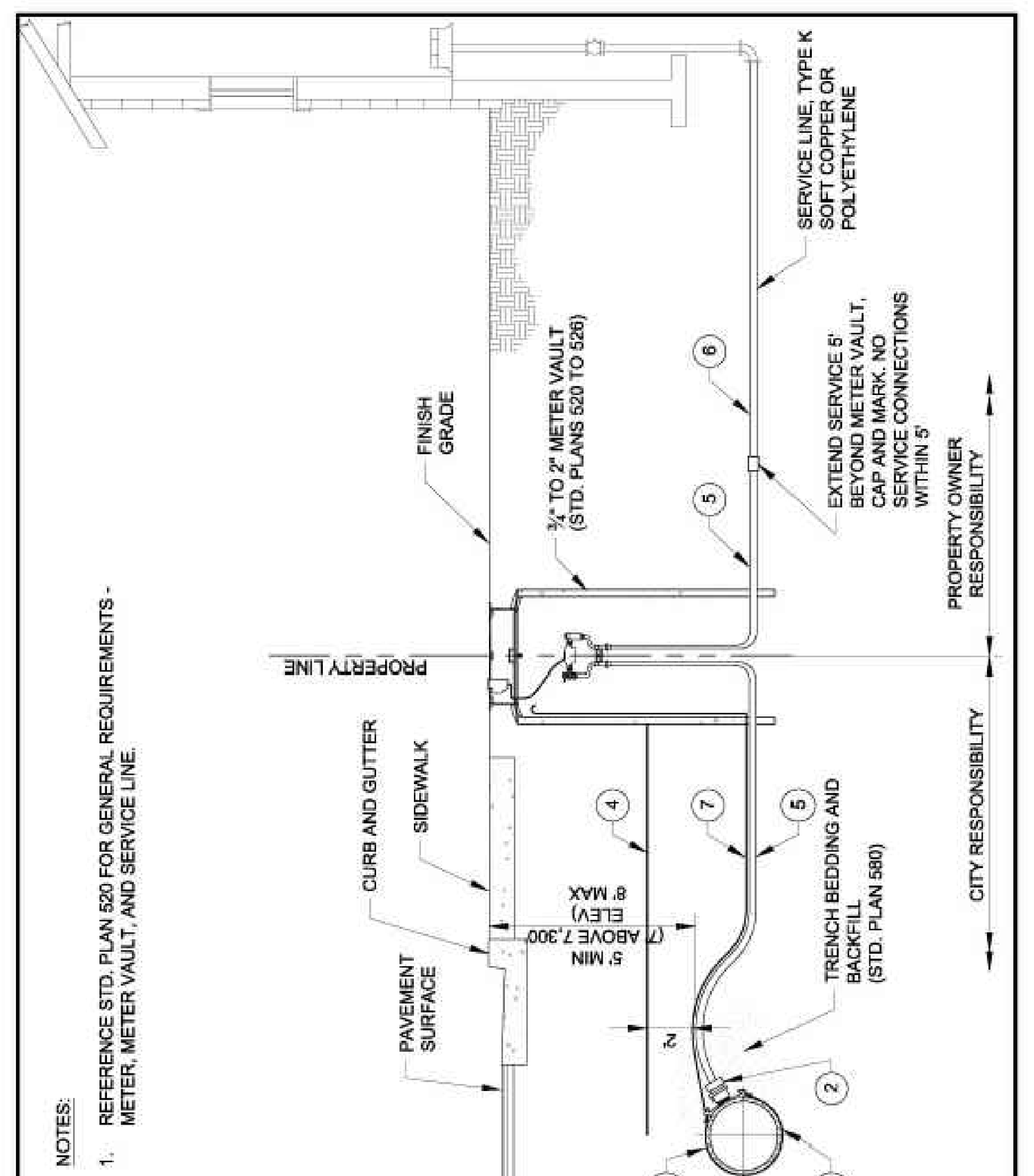
LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
1	5' DIA. MANHOLE, PRECAST CONCRETE ECCENTRIC CONE AND WALL SECTIONS		ASTM C 478
2	METER VAULT FRAME AND COVER (STD. PLAN 529)		
3	POLYPROPYLENE ENCASED GRADE 60 STEEL STEPS AT 13" C-C, 13-1/2" TREAD WIDTH	M.A. INDUSTRIES OR APPV'D EQ.	PS2-PFDF
4	2" CURB VALVE, F.I.P. x CTS	MUELLER	B-25172N
5	2" DIA. BRASS NIPPLE x 4" LENGTH, M.I.P.		
6	2" BRONZE UNION, F.I.P., THREADED		
7	1-1/2" BRASS NIPPLE x 4" LENGTH, 2" x 1-1/2" BRONZE BELL REDUCER, AND 1-1/2" CLOSE BRASS NIPPLE (1-1/2" YOKE ONLY)		
8	1-1/2" METER YOKE COMMERCIAL SERVICE: WITH BYPASS RESIDENTIAL SERVICE: WITHOUT BYPASS IRRIGATION SERVICE: WITHOUT BYPASS	MUELLER	1-1/2"x15" B2423-2-01N (WITH BYPASS) 1-1/2"x15" B2422-2N (WITHOUT BYPASS)
		FORD	1-1/2" VBHH76-15B-11-66-NL (WITH BYPASS) 1-1/2" VBHH76-15-11-66-NL (WITHOUT BYPASS)
	2" METER YOKE COMMERCIAL SERVICE: WITH BYPASS RESIDENTIAL SERVICE: WITHOUT BYPASS IRRIGATION SERVICE: WITHOUT BYPASS	MUELLER	2"x15" B2423-2-01N (WITH BYPASS) 2"x15" B2422-2N (WITHOUT BYPASS)
		FORD	2" VBHH77-15B-11-77-NL (WITH BYPASS) 2" VBHH77-15-11-77-NL (WITHOUT BYPASS)
9	2" CONNECTION, F.I.P. x CTS AND 2" BRASS NIPPLE x 4" LENGTH (OUTLET); 1-1/2" YOKE ONLY: ADD 2"x1-1/2" BRONZE BELL REDUCER AND 1-1/2" CLOSE BRASS NIPPLE	MUELLER	H-15451N
		FORD	C-14-66-G-NL
10	METER, SUPPLIED AND INSTALLED BY PCMC		
11	PIPE SUPPORTS (4) 16"x8"x8" CMU BLOCK, (2) METER SUPPORT RODS, GALVANIZED		
12	MXU AND WIRING, SUPPLIED AND INSTALLED BY PCMC		
13	MXU REMOTE LOCATION CONDUIT WITH END CAPS, SCH 40 PVC (STD. PLAN 531)		
14	END CAP AND MARKER, CTS x F.I.P. (OUTLET)		H-15451N AND H-10035N

DETAIL NOTES

1. LOCATE METER VAULT PER APPROVED PLANS AND SET METER BOX PLUMB
2. SST INSERT STIFFENERS REQUIRED ON ALL CTS TUBING CONNECTIONS

PARK CITY MUNICIPAL CORPORATION WATER | DATE 3/2014 | REV. | 1-1/2" and 2" SINGLE METER OUTSIDE SETTING | STD. PLAN 524 S



NOTES:
1. REFERENCE STD. PLAN 520 FOR GENERAL REQUIREMENTS - METER, METER VAULT, AND SERVICE LINE.

PARK CITY MUNICIPAL CORPORATION WATER | DATE 2/2014 | REV. 0 | WATER SERVICE LINE 3/4" TO 2" METERS | STD. PLAN 541

LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
1	BRONZE SERVICE SADDLE: DI & AC PIPE; DOUBLE STRAP PVC PIPE; TWO-PIECE BOLTED	MUELLER	DI & AC PIPE: BR2B SERIES, 1-1/2" SERVICE, CC THDS; 2" SERVICE FIP THDS PVC PIPE: H-13000 SERIES, 1-1/2" SERVICE, CC THDS; 2" SERVICE FIP THDS
		FORD	DI & AC PIPE: STYLE 202B 1-1/2" SERVICE, CC THDS; 2" SERVICE, FIP THDS PVC PIPE: 1-1/2" SERVICE, STYLE S902, CC THDS; 2" SERVICE, STYLE S912, FIP THDS
2	BRASS CORPORATION STOP, INLET CC THREAD, OUTLET CTS COMPRESSION	MUELLER	B-25008N
		FORD	FB1100-(SERVICE SIZE)-G-NL
3	POLYETHYLENE ENCASEMENT, HIGH DENSITY CROSS LAMINATED (HDCL) POLYETHYLENE FILM, AWWA C105 & AWWA C703E METHOD C	CHRISTY'S OR APPROVED EQUAL	AWWA C703E METHOD C (4 MIL)
4	DETECTABLE UNDERGROUND WARNING TAPE, 5-MIL MINIMUM, ALUMINUM BACKING BLUE BACKGROUND, 6" WIDE	SETON OR APPV'D EQUAL	85525
5	WATER SERVICE LINE: HIGH-DENSITY POLYETHYLENE TUBING (CTS), SDR 9, AWWA C901 1-1/2" DIA. SERVICE: 3/4" AND 1" SINGLE METER 1-1/2" DIA. SERVICE: 3/4" AND 1" DUAL METERS 2" DIA. SERVICE: 1-1/2" AND 2" SINGLE METER 2" DIA. SERVICE: 1-1/2" DUAL METERS	ADS OR APPV'D EQUAL	
6	WATER SERVICE LINE: HIGH-DENSITY POLYETHYLENE TUBING (CTS), SDR 9, AWWA C901; OR, TYPE K COPPER, SOFT, AWWA C800	ADS OR APPV'D EQUAL	
7	TRACER WIRE: 12 GA. SOLID, BLUE PVC INSULATION; WIRE-WIRE CONNECTORS SILICONE-FILLED WIRE NUTS	IDEAL INDUSTRIES	TWISTER DB PLUS OR APP'D EQUAL

DETAIL NOTES

1. COORDINATE SERVICE SIZE WITH CITY PRIOR TO ORDERING MATERIALS
2. LOCATE SERVICE PER APPROVED PLANS
3. NO SERVICE LINE FITTINGS BETWEEN CORPORATION STOP AND METER VAULT CURB STOP VALVE
4. APPLY WAX TAPE COATING SYSTEM TO SERVICE SADDLE BOLTS AND NUTS, AWWA C217. SYSTEM TO INLCUDE FILLER MATERIAL, TAPE COATING, AND PROTECTIVE OUTERWRAP. DENSO NORTH AMERICA, TRENTON, OR APPROVED EQUAL (STD. PLAN 534)

PARK CITY MUNICIPAL CORPORATION WATER | DATE 2/2014 | REV. | WATER SERVICE LINE 3/4" TO 2" METERS | STD. PLAN 541 S

REGISTERED PROFESSIONAL ENGINEER No. 4857264 MICHAEL DEMKOWICZ 8/9/18 STATE OF UTAH

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NEXUS PROJ. #: 18065
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DATE: 08.09.18

DETAILS

C5

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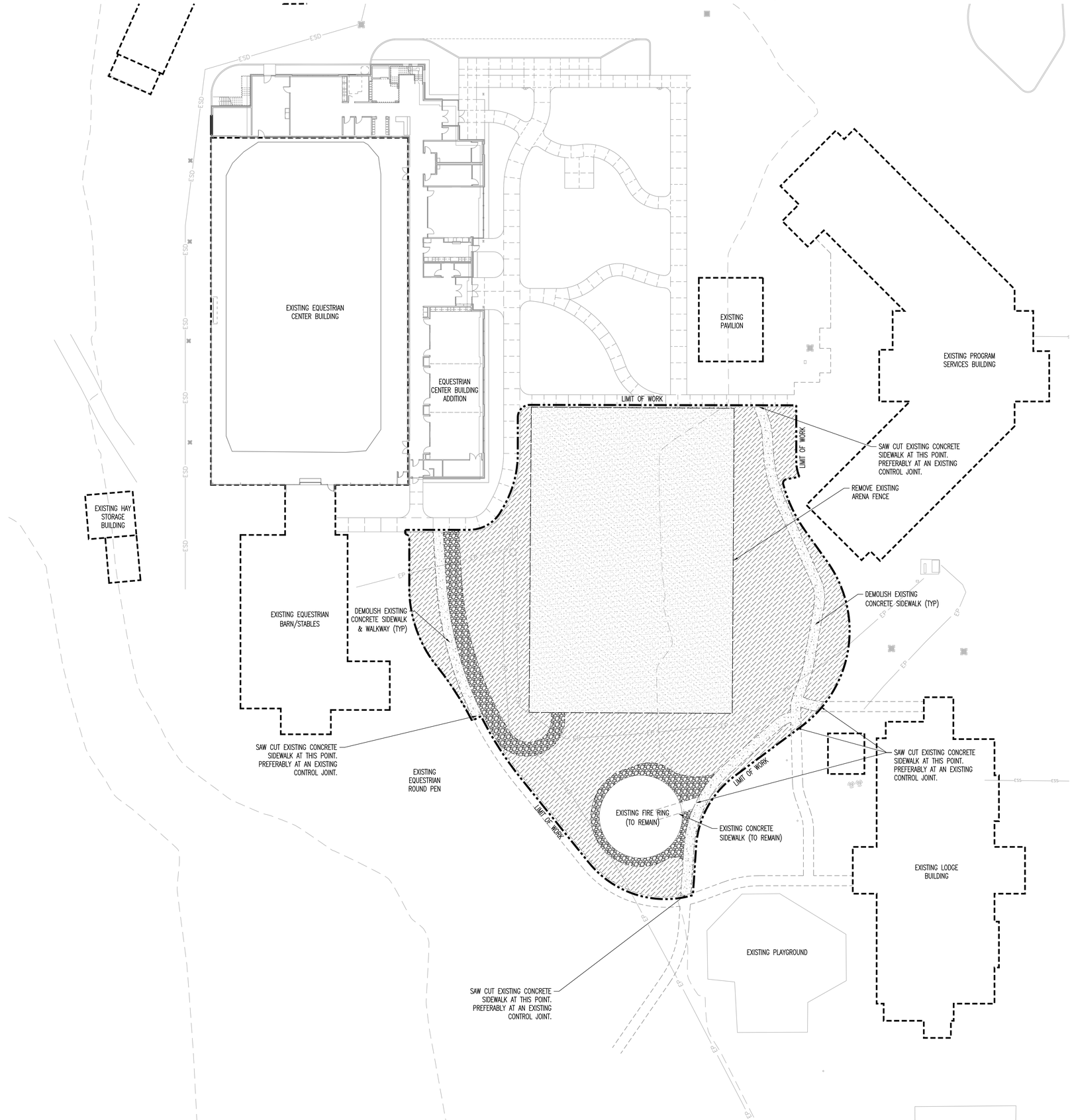

LANDSCAPE DEMOLITION GENERAL NOTES:

A. ANY DAMAGE TO EXISTING LANDSCAPED AREAS INTENDED TO REMAIN IN PLACE ARE TO BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
B. EXISTING TREES INTENDED TO REMAIN IN PLACE SHALL BE PROTECTED ACCORDING TO TREE PRESERVATION SPECIFICATION.
C. EXISTING TREES SCHEDULED FOR DEMOLITION SHALL BE IDENTIFIED WITH FLAGGING TAPE. PAINT SHALL NOT BE USED TO IDENTIFY TREES INTENDED FOR DEMOLITION. TREES FLAGGED FOR DEMOLITION SHALL BE APPROVED BY OWNER AND LANDSCAPE ARCHITECT PRIOR TO ANY DEMOLITION.
D. DEMOLITION OF TREES SHALL INCLUDE CUTTING OF TREE, MULCHING TREE MEMBERS, AND BORING STUMP TO 18" BELOW FINISH GRADE, MULCH SHALL BE DISPOSED OF LEGALLY AND LAWFULLY.

IRRIGATION DEMOLITION GENERAL NOTES:

A. ALL EXISTING IRRIGATION COMPONENTS (INCLUDING BUT NOT LIMITED TO MAIN LINE AND LATERAL LINE PIPING, SHUT OFF VALVES, VALVE BOXES, WIRING, CONTROL VALVES, ROTORS, AND SPRAY HEADS) WITHIN THE LIMIT OF WORK SHALL BE COMPLETELY REMOVED.
B. ALL EXISTING IRRIGATION COMPONENTS THAT ARE OUTSIDE OF THE LIMIT OF WORK SHALL REMAIN IN PLACE AND IN WORKING ORDER.
C. ALL IRRIGATION COMPONENTS REMOVED, OTHER THAN PIPING, THAT ARE IN GOOD WORKING ORDER SHALL BE RETURNED TO THE OWNER.

SITE PLAN GENERAL NOTES:

A. THE CONTRACTOR IS RESPONSIBLE FOR COMPARING THE EXISTING AND NEW SITE CONDITIONS WITH THE DEMOLITION PLAN PRIOR TO BEGINNING WORK AND IMMEDIATELY NOTIFYING THE LANDSCAPE ARCHITECT IN WRITING OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THE DEMOLITION PLAN. IN THE EVENT THE CONTRACTOR FAILS TO COMPARE EXISTING AND NEW SITE CONDITIONS WITH THE DEMOLITION PLAN PRIOR TO BEGINNING WORK, AND/OR FAILS TO NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN WRITING PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REQUIRED ALTERATIONS AND ADDITIONS TO THE DEMOLITION PLAN AT NO ADDITIONAL COST TO THE OWNER.
B. DEMOLITION INFORMATION IS BASED UPON SURVEY INFORMATION BY THE CIVIL ENGINEER. LOCATIONS AND QUANTITIES OF ALL EXISTING SITE ELEMENTS SHALL BE FIELD VERIFIED.
C. QUANTITIES PROVIDED ARE FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING AND VERIFYING TOTAL QUANTITIES NECESSARY TO COMPLETE THE WORK AS INDICATED ON THE PLANS.
D. DEMOLITION INCLUDES COMPLETE REMOVAL OF ALL PARTS, CONNECTIONS, FOUNDATIONS, STUMPS, ETC. ASSOCIATED WITH EACH ITEM TO BE DEMOLISHED, BOTH ABOVE AND BELOW GRADE. DEMOLITION ALSO INCLUDES LEGALLY AND LAWFULLY DISPOSING OF ALL MATERIALS OFF SITE.
E. ANY DAMAGE TO STRUCTURES OR MATERIALS INTENDED TO REMAIN IN PLACE SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
F. SEE ARCHITECTURAL, CIVIL, AND ELECTRICAL DEMOLITION PLANS FOR ADDITIONAL INFORMATION.

SITE DEMOLITION PLAN LEGEND:

- EXISTING CONCRETE PAVING TO BE REMOVED (1,882 SQ.FT.)
- EXISTING LANDSCAPE AREA TO BE REMOVED (14,725 SQ FT*)
- EXISTING RIDING ARENA AREA TO BE REMOVED (15,077 SQ FT*)
- EXISTING GRAVEL EDGE TO BE REMOVED (1,864 SQ FT*)

*INCLUDES EXISTING TURF, PLANTER BED AREAS, AND PLANT MATERIALS

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1000 ABILITY WAY
PARK CITY, UTAH 84060

#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
CHECKED BY: AKC
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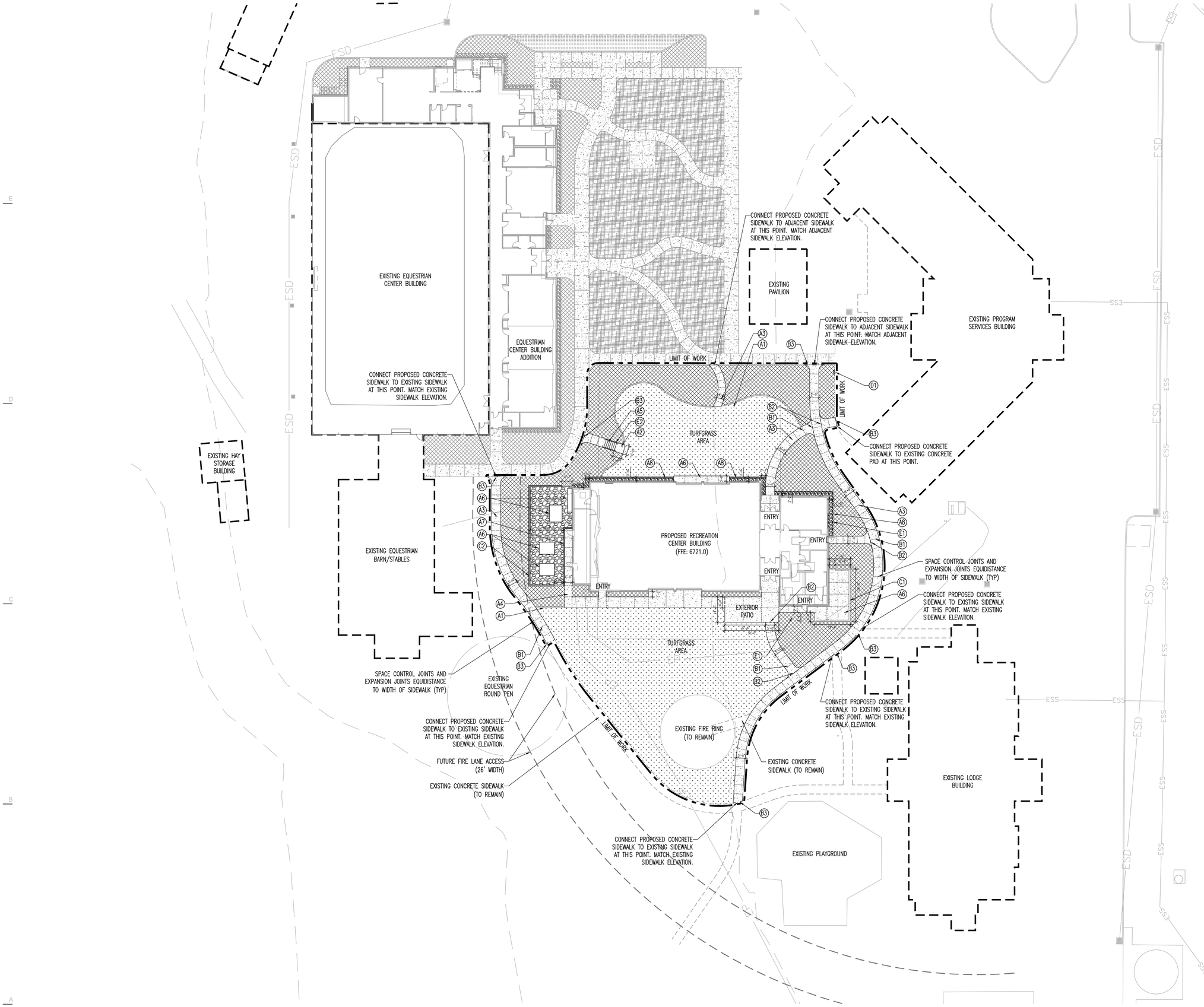
SITE DEMOLITION PLAN

N
0 5 10 20 40
1"=20'

DS101



SITE PLAN GENERAL NOTES:

1. FIELD VERIFY ALL EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE DISCREPANCIES WITH LANDSCAPE ARCHITECT AND/OR CIVIL ENGINEER.
2. COORDINATE ALL UTILITY CROSSING INCLUDING; STORM DRAINS, WATER, AND GAS LINES. COORDINATE DEMO WORK AND SCHEDULING WITH LANDSCAPE ARCHITECT AND CIVIL ENGINEER.
3. PROTECT CONCRETE WALKWAY & SIDEWALK TO REMAIN AS INDICATED IN THE DRAWINGS.
4. SEE CIVIL, ELECTRICAL, AND LANDSCAPE DRAWINGS FOR MORE INFORMATION.

Site Plan Legend	
Symbol	Description
	PROPOSED CONCRETE PAVING (4,618.0 SQ.FT.)
	PROPOSED LANDSCAPE AREA – NATIVE AND WATER-WISE TREES, SHRUBS, GRASSES AND WILDFLOWERS (7,072.0 SQ.FT.)
	PROPOSED TURFGRASS AREA (11,524 SQ.FT.)
	LANDSCAPE DRIP EDGE – 2"-3" DECORATIVE COBBLE ROCK WITH 4" STEEL EDGING (309 SQ.FT.)
	MECHANICAL EQUIPMENT YARD SURFACE 2"-3" DECORATIVE COBBLE ROCK (861 SQ.FT.)

SITE PLAN KEY NOTES:

SECTION A – CAST-IN-PLACE

- A1 CONCRETE MOW CURB (6"X6")
- A2 CONCRETE LANDING
- A3 CONCRETE WALKWAY
- A4 CONCRETE SIDEWALK
- A5 CONCRETE STAIR
- A6 CONCRETE PAD
- A7 CONCRETE RETAINING WALL
- A8 LANDSCAPE DRIP EDGE

SECTION B – CONCRETE JOINTS

- B1 CONTROL JOINT
- B2 EXPANSION JOINT
- B3 EXPANSION JOINT W/ DOWEL

SECTION C – STRUCTURES

- C1 MECHANICAL EQUIPMENT SCREEN WALL

SECTION D – SITE FURNISHINGS

- D1 WAYFINDING SIGNAGE

SECTION E – MISCELLANEOUS

- E1 DOWNSPOUT FRENCH DRAIN
- E2 STEEL HANDRAIL

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ARCHITECTURAL SITE PLAN

N
0 5 10 20 40
1"=20'

AS101

MATERIALS AND FINISH SCHEDULE

SECTION A – CAST-IN-PLACE	MANUFACTURER/SUPPLIER	MODEL#	FINISH	COLOR	DESCRIPTION	CONTACT	DETAIL
A1	AS APPROVED	N/A	MEDIUM BROOM	STANDARD GRAY	6"X6" CONCRETE MOW CURB WITH REBAR REINFORCEMENT AND ROUNDED EDGES		SEE CIVIL
A2	AS APPROVED	N/A	MEDIUM BROOM	STANDARD GRAY	CONCRETE LANDING AT BOTTOM OF STAIRS – 4" FIBER REINFORCED PORTLAND CEMENT WITH SAW CUT JOINTS		A6 AS701
A3	AS APPROVED	N/A	MEDIUM BROOM	STANDARD GRAY	CONCRETE WALKWAY – 4" FIBER REINFORCED PORTLAND CEMENT WITH SAW CUT JOINTS		A6 AS701
A4	AS APPROVED	N/A	MEDIUM BROOM	STANDARD GRAY	CONCRETE SIDEWALK – 4" FIBER REINFORCED PORTLAND CEMENT WITH SAW CUT JOINTS		A6 AS701
A5	AS APPROVED	N/A	MEDIUM BROOM	STANDARD GRAY	CONCRETE STAIRS – REBAR REINFORCED WITH 12" TREADS, 6" RISERS, AND EMBEDDED STAIR NOSINGS		A3, E4 AS701
A6	AS APPROVED	N/A	MEDIUM BROOM	STANDARD GRAY	CONCRETE PAD – REINFORCED PORTLAND CEMENT WITH SAW CUT JOINTS (COORDINATE THICKNESS WITH MECHANICAL AND ELECTRICAL)		SEE MECHANICAL SEE ELECTRICAL
A7	AS APPROVED	N/A	BOARD FORM	STANDARD GRAY	CONCRETE RETAINING WALL – 8" THICK WITH REBAR REINFORCEMENT AND BOARD FORM FINISH		B2 AS701
A8	AS APPROVED	N/A	NATURAL/MILL	AS APPROVED	LANDSCAPE DRIP EDGE – 2"–3" DECORATIVE COBBLE ROCK WITH 4" STEEL EDGING		C6 LP701

SECTION B – CONCRETE JOINTS	MANUFACTURER/SUPPLIER	MODEL#	FINISH	COLOR	DESCRIPTION	CONTACT	DETAIL
B1	AS APPROVED	N/A	N/A	N/A	CONTROL JOINT – SAWCUT		B6 AS701
B2	AS APPROVED	N/A	N/A	N/A	EXPANSION JOINT		C6 AS701
B3	AS APPROVED	N/A	N/A	N/A	EXPANSION JOINT WITH DOWEL		D6 AS701

SECTION C – STRUCTURES	MANUFACTURER/SUPPLIER	MODEL#	FINISH	COLOR	DESCRIPTION	CONTACT	DETAIL
C1	AS APPROVED	N/A	SMOOTH FORM	STANDARD GRAY	MECHANICAL EQUIPMENT SCREEN WALL		SEE ARCHITECTURAL

SECTION D – SITE FURNISHINGS	MANUFACTURER/SUPPLIER	MODEL#	FINISH	COLOR	DESCRIPTION	CONTACT	DETAIL
D1	AS APPROVED	N/A	LIGHT BROOM	STANDARD GRAY	CONCRETE WAYFINDING SIGN APRON (SIGNAGE NOT IN CONTRACT, PROVIDED BY OWNER)		E6 AS701

SECTION E – MISCELLANEOUS	MANUFACTURER/SUPPLIER	MODEL#	FINISH	COLOR	DESCRIPTION	CONTACT	DETAIL
E1	AS APPROVED	N/A	AS APPROVED	AS APPROVED	TRENCH DRAIN – 4" PERFORATED PIPE IN GRAVEL TRENCH (CONNECT TO BUILDING DOWNSPOUTS)		A1 AS701
E2	AS APPROVED	N/A	PAINTED	BLACK	1 1/2" DIA. STEEL HANDRAIL WITH WELDED SKATE DETERRENTS. EMBEDDED MOUNT INTO CONCRETE STAIRS.		A3, E3 AS701

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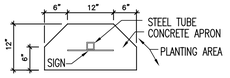
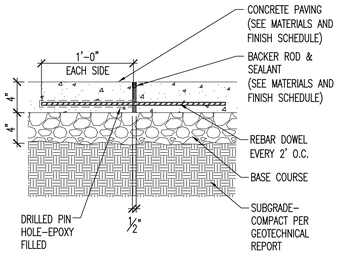
SITE IMPROVEMENTS MATERIALS AND FINISHES SCHEDULE

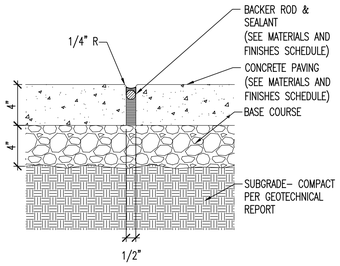
AS601



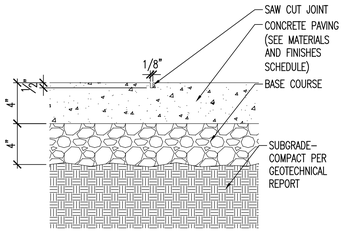
E6 WAYFINDING SIGN APRON
AS701 — SCALE: 3/4" = 1'-0"



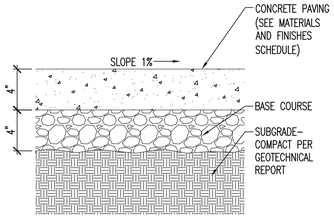
D6 EXPANSION JOINT W/ DOWEL
AS701 — SCALE: 1 1/2" = 1'-0"



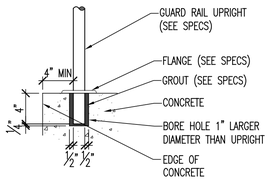
C6 EXPANSION JOINT
AS701 — SCALE: 2" = 1'-0"



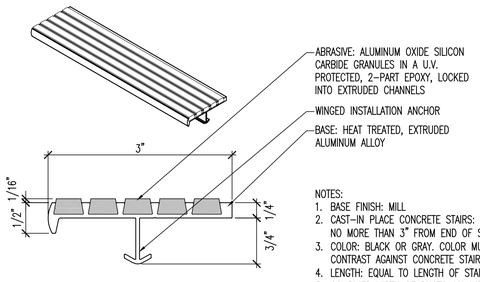
B6 SAW CUT CONTROL JOINT
AS701 — SCALE: 2" = 1'-0"



A6 CONCRETE PAVING
AS701 — SCALE: 2" = 1'-0"

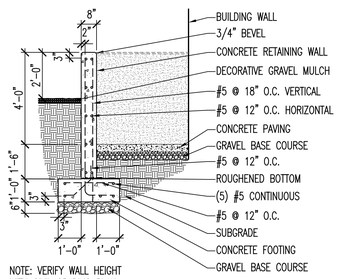


E3 ANCHORING DETAIL
AS702 — SCALE: 1 1/2" = 1'-0"



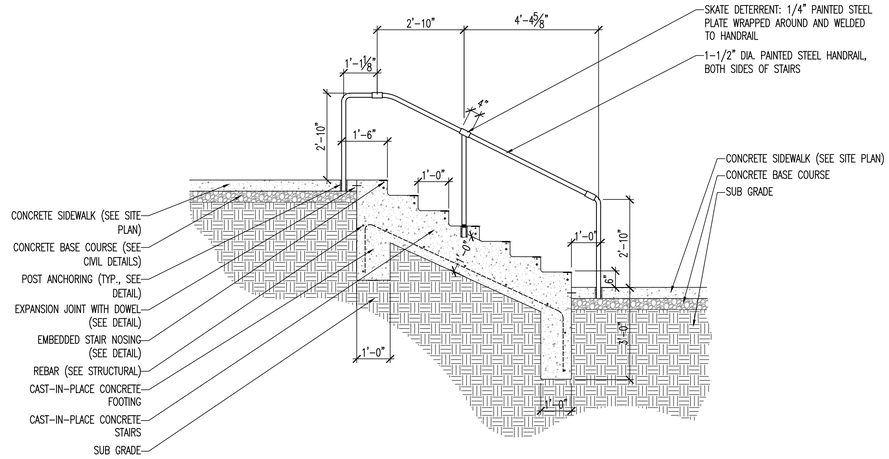
NOTES:
1. BASE FINISH: MILL
2. CAST-IN PLACE CONCRETE STAIRS: NOSING SHALL TERMINATE NO MORE THAN 3" FROM END OF STEPS.
3. COLOR: BLACK OR GRAY. COLOR MUST PROVIDE A 20% CONTRAST AGAINST CONCRETE STAIR COLOR.
4. LENGTH: EQUAL TO LENGTH OF STAIR TREAD, OR 12' MAXIMUM.
5. COMBINED WIDTH OF PHOTO-LUMINESCENT MATERIAL SHALL BE LESS THAN 1".

E4 RIBBED BAR ABRASIVE NOSING
AS702 — SCALE: 1'-0" = 1'-0"

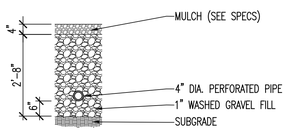


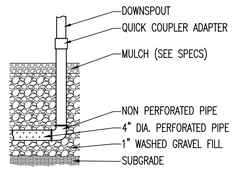
NOTE: VERIFY WALL HEIGHT WITH CIVIL GRADING PLAN.

B2 RETAINING WALL SECTION
AS701 — SCALE: 3/8" = 1'-0"



A3 CONCRETE STAIRS WITH HANDRAIL
AS701 — SCALE: 1/2" = 1'-0"





A1 FRENCH DRAIN & PLANTER
AS701 — SCALE: 1/2" = 1'-0"

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CONSTRUCTION DOCUMENTS

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DRAWN BY: AKC
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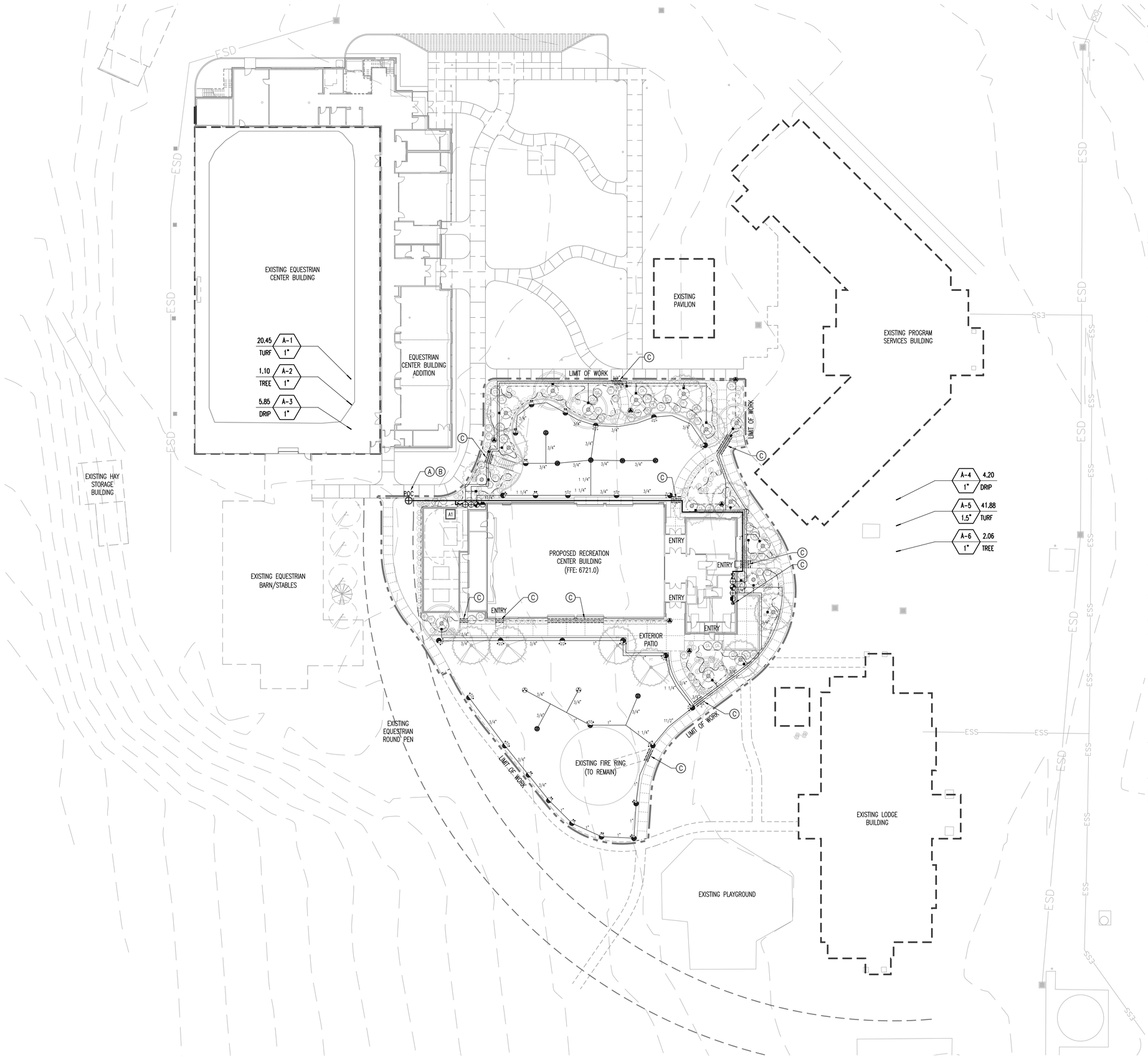
SITE DETAILS

AS701



IRRIGATION CONSTRUCTION NOTES:

- (A) VERIFY THE STATIC WATER PRESSURE AT THE POINT OF CONNECTION LOCATION AND VERIFY PRESSURE IS SUFFICIENT TO MEET NEW IRRIGATION SYSTEM PRESSURE LOSSES.
- (B) AT THE POINT OF CONNECTION INSTALL (1) 2" CURB VALVE, (1) 1 1/2" BACKFLOW PREVENTION DEVICE, (2) 3/4" DRAIN VALVES, (1) 2" NORMALLY OPEN MASTER VALVE, (1) 1" FLOW SENSOR AND (1) 1" QUICK COUPLING VALVE. EXTEND PRESSURE SUPPLY LINE AS INDICATED ON PLAN AND AS SHOWN IN TRENCHING DETAILS.
- (C) COORDINATE LOCATION AND INSTALLATION OF ALL SLEEVES AND CONDUITS AS SHOWN ON THE IRRIGATION PLAN PRIOR TO INSTALLATION OF ASPHALT AND CONCRETE PAVING (SEE TRENCH DETAILS).
- (D) INSTALL MANUAL DRAIN VALVES AT THE ENDS OF MAIN LINE BRANCHES (SEE LEGEND).

IRRIGATION GENERAL NOTES:

1. THIS IRRIGATION SYSTEM HAS BEEN DESIGNED TO ACCOMMODATE A PEAK DEMAND OF 10 GPM, BASED ON HISTORICAL ETo RATES, AND AN ACTUAL HIGH FLOW RATE OF 41.88 GPM. TOTAL SYSTEM PRESSURE LOSSES ARE 73.06 PSI (SEE SHEET LI601).
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE STATIC WATER PRESSURE AT THE POINT OF CONNECTION PRIOR TO BEGINNING WORK AND INFORMING THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE ACTUAL STATIC WATER PRESSURE AT THE POINT OF CONNECTION AND THE TOTAL SYSTEM PRESSURE LOSSES. WATER PRESSURE DISCREPANCIES SHALL BE NOTED ON CONTRACTOR COMPANY LETTERHEAD AND SUBMITTED TO THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK, IN THE EVENT THE CONTRACTOR FAILS TO VERIFY AND CONFIRM STATED VERSUS ACTUAL STATIC WATER PRESSURE PRIOR TO BEGINNING WORK AND DISCREPANCIES DO IN FACT EXIST, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL MODIFICATIONS TO THE IRRIGATION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
3. THE IRRIGATION CONTROLLER SHALL BE LOCATED ON THE UTILITY ENCLOSURE SCREEN WALL ON THE WEST SIDE OF THE BUILDING. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND PROVIDING POWER TO THE CONTROLLER. IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE POWER TO THE CONTROLLER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AN ALL MODIFICATIONS TO CONSTRUCTION WORK AT NO ADDITIONAL COST TO THE OWNER.
4. POINT OF CONNECTION COMPONENTS SHALL BE CONNECTED TO THE AUTOMATIC CONTROLLER IN SEPARATE CONDUITS AND AS INSTRUCTED BY THE MANUFACTURER.
5. IRRIGATION CONTROL VALVES SHALL BE CONNECTED TO THE AUTOMATIC CONTROLLER WITH DIRECT BURIAL, CONVENTIONAL WIRING.
6. ALL PLANTER AREAS SHALL BE IRRIGATED WITH POINT SOURCE DRIP IRRIGATION.
7. IRRIGATION ZONES ARE IDENTIFIED WITH THE FOLLOWING SYMBOL:

STATION NUMBER · GPM · A-XX · XX · 1" · SHB · VALVE SIZE · PLANT MATERIAL

EMITTER SCHEDULE:

PLANT SIZE	EMITTER GPH	QTY. PER PLANT
1 GAL	1	1
5 GAL	5	1
TREE	.26	24

WHERE MORE THAN ONE EMITTER IS REQUIRED FOR PLANT, SPACE EMITTERS EQUIDISTANT AROUND ROOTBALL

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IRRIGATION PLAN

N · 0 5 10 20 40 · 1"=20'

LI101

National Ability Center - Recreation Center

Meter # N/A

Meter Account # N/A

07-Aug-18

Month	Hist Eto *	Cool Season Turf **	Warm Season Turf **	Ornamental Shrubs ***	Ornamental Grasses ***	Native Shrubs ***	Perrenials & Annuals ***	Et Adjust Factor	Projected Water Use In Gallons Based On Eto	Projected Water Use In Acre Feet Based On Eto	Projected Water Use in HCF Based On Eto	Projected Water Use In GPM Based on Eto
		Crop Coefficients Kc										
Jan	0.80	0.61	0.55	0.18	0.18	0.18	0.61	1.0	0.00	0	0	0
Feb	1.20	0.64	0.54	0.19	0.19	0.19	0.64	1.0	0.00	0	0	0
Mar	2.10	0.75	0.78	0.23	0.23	0.23	0.75	1.0	0.00	0	0	0
Apr	3.50	1.04	0.72	0.31	0.31	0.31	1.04	1.0	46244	0.07	62	5
May	4.90	0.95	0.79	0.29	0.29	0.29	0.95	1.0	59139	0.18	79	6
June	6.60	0.88	0.68	0.26	0.26	0.26	0.88	1.0	73787	0.23	99	8
July	7.70	0.94	0.71	0.28	0.28	0.28	0.94	1.0	91954	0.28	123	10
Aug	6.80	0.86	0.71	0.26	0.26	0.26	0.86	1.0	74295	0.23	99	8
Sept	4.80	0.74	0.62	0.22	0.22	0.22	0.74	1.0	45126	0.14	60	5
Oct	2.80	0.75	0.54	0.23	0.23	0.23	0.75	1.0	26679	0.08	36	3
Nov	1.30	0.69	0.58	0.21	0.21	0.21	0.69	1.0		0.00	0	0
Dec	0.70	0.60	0.55	0.18	0.18	0.18	0.60	1.0		0.00	0	0
Annual	**43.20**	**9.45**	**7.77**	**2.84**	**2.84**	**2.84**	**9.45**	**1.0**	**417222**	**1.21**	**558**	**45**

ESTIMATED IRRIGATED LANDSCAPED AREA:			CROP COEFFICIENTS:			ESTIMATED DISTRIBUTION OF UNIFORMITY:	
Cool Season Turfgrass:	11,524	square feet	High Water Use:		.70 to .90	Drip Applications	0.8
Warm Season Turfgrass:	0	square feet	Moderate Water Use:		.40 to .60	Rotor Applications	0.7
Ornamental Shrubs	0	square feet	Low Water Use:		.10 to .30	Spray Applications	0.65
Ornamental Grasses	0	square feet	Very Low Water Use:		.01 to .09		
Native Shrubs	7072	square feet					
Perrenials and Annuals	0	square feet					
	18596		0.43	acres	#REF!	per acre culinary water	

* Reference Eto data obtained from Jordan Valley Water conservancy District
** Crop Coefficients Obtained from University of California Cooperative Extension, California Turfgrass Culture Volume 47, Nos. 3 & 4, 1997
*** Crop Coefficients Obtained from Water Use Classification of Landscape Species III University of California Cooperative Extension, 2000

HYDRAULIC ANALYSIS

FOR
#18065
National Ability Center - Recreation Center

Meter # N/A

Meter Account # N/A

07-Aug-18

**EQUIPMENT:	CLASS:	SIZE:	LOSS:	/100	LENGTH:		****GPM:	PSI LOSS:
SERVICE LINE:	SCH 40	2"	1.32	0.10	10	@	42	0.13
WATER METER:	N/A	N/A	N/A	N/A	N/A	@	42	0
BACKFLOW PREVENTION DEVICE:	N/A	1 1/2"	N/A	N/A	N/A	@	42	13
MASTER VALVE:	N/A	1 1/2"	N/A	N/A	N/A	@	42	1.8
FLOW SENSOR:	N/A	1"	N/A	N/A	N/A	@	42	1.5
PRESSURE SUPPLY LINE:	SCH 40	2"	1.32	2.10	210	@	42	2.77
LATERAL LINE:	SCH 40	2"	1.32	1.03	103	@	42	1.36
LATERAL LINE:	SCH 40	1 1/2"	2.42	0.28	28	@	30	0.68
LATERAL LINE:	SCH 40	1"	3.69	1.01	101	@	12	3.73
LATERAL LINE:	SCH 40	3/4"	4.52	0.70	70	@	7	3.16
ELECTRIC CONTROL VALVE:	N/A	1 1/2"	N/A	N/A	N/A	@	42	3.50
FITTINGS:	N/A	N/A	N/A	N/A	N/A	@	25	3.16
SUBTOTAL:								**34.79**

***ELEVATION:	FEET:
at highest point within point of connection:	6720
at meter:	6724
SUBTOTAL:	**-1.73**

**PSI REQUIRED @ HEAD:	40.00
**TOTAL SYSTEM LOSSES:	73.06
*STATIC WATER PRESSURE:	0.00
10% OF STATIC WATER PRESSURE:	0.00
STATIC WATER PRESSURE AVAILABLE FOR IRRIGATION USE:	0.00
STATIC WATER PRESSURE LESS TOTAL SYSTEM LOSSES:	-73.06

****BOOSTER PUMP REQUIREMENTS None

IRRIGATION LEGEND

SYMBOL	MANUFACTURER	MODEL #	DESCRIPTION	RADIUS	P.S.I.	G.P.H.	DETAIL #
	HUNTER	PROS40, MP2000-90-Q	SPRAY NOZZLE ON 4" POP-UP	13-21'	40	.4	E5 LI703
	HUNTER	PROS40, MP2000-90-H	SPRAY NOZZLE ON 4" POP-UP	13-21'	40	.74	E5 LI703
	HUNTER	PROS40, MP2000-360	SPRAY NOZZLE ON 4" POP-UP	13-21'	40	1.47	E5 LI703
	HUNTER	PROS40, MP3000-90-Q	SPRAY NOZZLE ON 4" POP-UP	22-30'	40	.86	E5 LI703
	HUNTER	PROS40, MP3000-90-H	SPRAY NOZZLE ON 4" POP-UP	22-30'	40	1.82	E5 LI703
	HUNTER	PROS40, MP3000-360	SPRAY NOZZLE ON 4" POP-UP	22-30'	40	3.64	E5 LI703
	HUNTER	PROS40, MP3500-90-Q	SPRAY NOZZLE ON 4" POP-UP	33-35'	40	1.28	E5 LI703
	HUNTER	PROS40, MP3500-90-H	SPRAY NOZZLE ON 4" POP-UP	33-35'	40	2.86	E5 LI703
	NETAFIM	TLCV26-12-XX	TREE RING FOR PROPOSED TREES PRESSURE COMPENSATING DRIP TUBING		25	N/A	E6 LI703
POC			POINT OF CONNECTION				E6 LI701
	MUELLER	MARK II ORISEAL H-10284	2" CURB VALVE (STOP AND WASTE)				A5 LI701
	FEBCO	825YA	1 1/2" BACKFLOW PREVENTION DEVICE				A3 LI701
	STRONGBOX	SBBC-22AL	ALUMINUM BACKFLOW ENCLOSURE				A3 LI701
	STRONGBOX	PBB-15	POLAR BEARIER LOCKING INSULATED COVER				A3 LI701
	GRISWOLD	2160-K	2" NORMALLY OPEN MASTER VALVE WITH SOLENOID (CONNECTION TO CONTROLLER WITH PAIGE SHIELDED WIRE IN SEPERATE CONDUIT)				A1 LI701
FS	CTS	FS-T10-000	1" TEE TYPE PVC FLOW SENSOR				C5 LI701
	HUNTER	HQ-44LRC	QUICK COUPLER VALVE				C1 LI701
	NIBCO	T-FP-600A	BRASS BALL VALVE, LINE SIZE (VALVE MANIFOLD)				C3 LI701
	MUELLER	MARK II ORISEAL	3/4" MANUAL DRAIN BALL VALVE				A5 LI702
A1	RAINBIRD	ESP-12LXMEF	12 STATION EXPANDABLE CONTROLLER WITH FLOW SMART MODULE IN STAINLESS STEEL WALL MOUNT ENCLOSURE				A1 LI703
	RAINBIRD	PEB-PRS-D	PRESSURE REGULATING ELECTRIC CONTROL VALVE				A3, C2 LI703
	RAINBIRD	XCZ-075-PRF	LOW FLOW CONTROL VAVLVE, DRIP KIT				A2, C2, LI702
	NETAFIM	TLSOV	MANUAL SHUT OFF VALVE FOR FLUSH ASSEMBLY				D1 LI702
	SPEARS	PVC SCH 40	3/4" SLIP X SLIP COUPLER OR ELL				
	NETAFIM	TLCVO01	17MM BLANK DRIP TUBING FOR POINT SOURCE EMITTERS				D5 LI703
	NETAFIM	TLXXX	17MM DRIP TUBING FITTINGS				
	RAINBIRD	XB-XXX	BARBED POINT SOURCE EMITTERS (SEE EMITTER SCHEDULE)				A5, C5 LI703
	RAINBIRD	XQ-100	1/4" DISTRIBUTION TUBING				A5, C5 LI703
	RAINBIRD	TS-025	UNIVERSAL 1/4" TUBING STAKE				A5, C5 LI703
	RAINBIRD	DBC-025	DIFFUSER BUG CAP				A5, C5 LI703
	SEE SPECS	SCH 40 PVC	NON-PRESSURE LATERAL LINE				C5, E3, E5 LI702
	SEE SPECS	SCH 40 PVC	PRESSURE SUPPLY LINE				C5, E3, E5 LI702
	SEE SPECS	SCH 40 PVC	IRRIGATION SLEEVE (SEE SPECS FOR SIZE)				C5, E3, E5 LI702
	SEE SPECS	SCH 40 PVC	GREY CONDUIT FOR WIRE (SEE SPECS FOR SIZE)				C5, E3, E5 LI702

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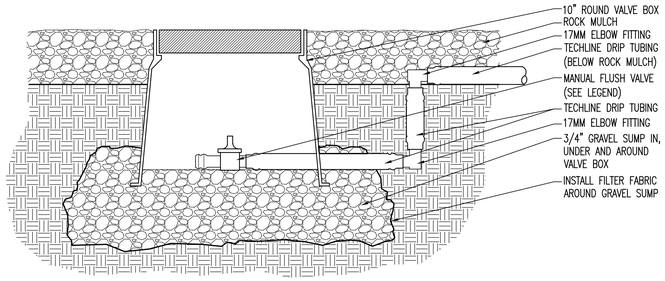
CONSTRUCTION DOCUMENTS

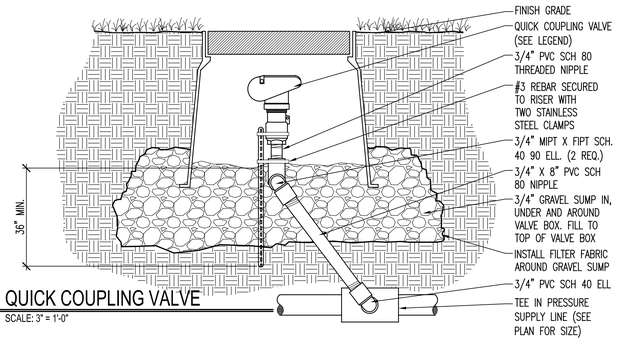
NEXUS PROJ. #: 18065
CHECKED BY: AKC
DRAWN BY: ZYN
DATE: 08.09.18

IRRIGATION LEGEND

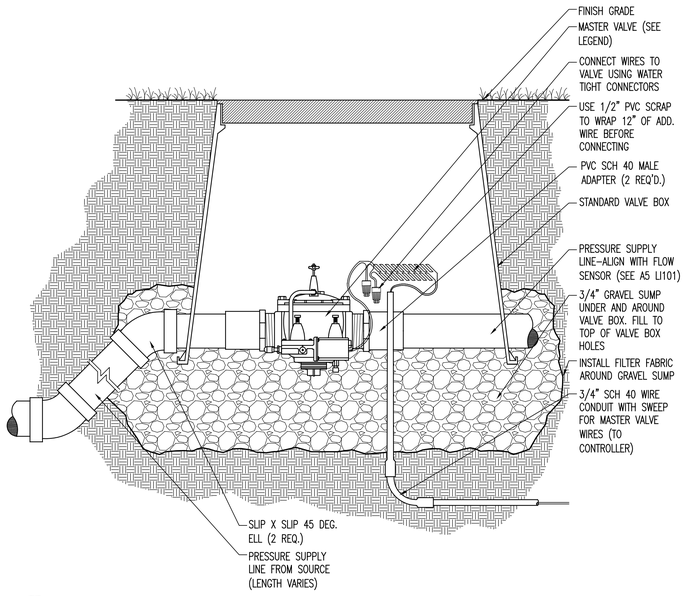
LI601



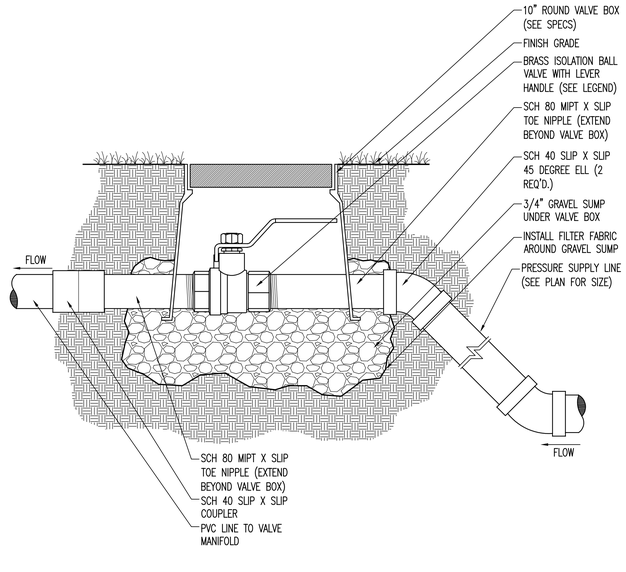
D1 MANUAL FLUSH VALVE
LI701 SCALE: 3" = 1'-0"



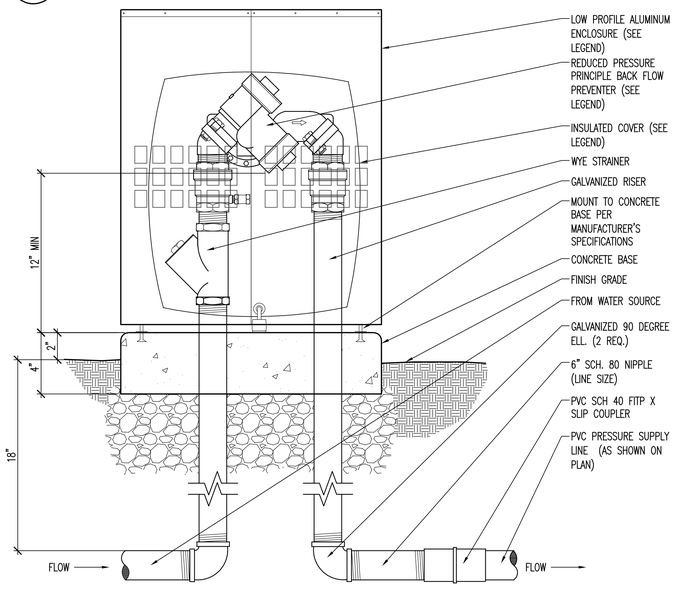
C1 QUICK COUPLING VALVE
LI701 SCALE: 3" = 1'-0"



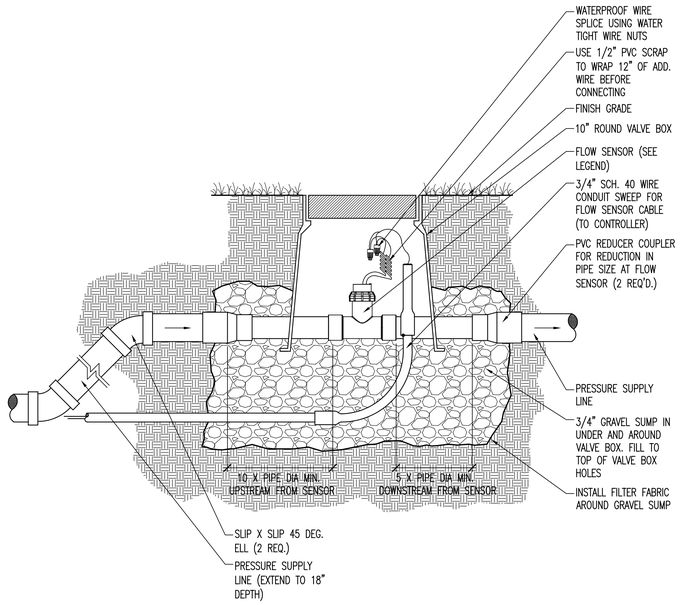
A1 MASTER VALVE
LI701 SCALE: 3" = 1'-0" FOR USE WITH POTABLE WATER



C3 ISOLATION BALL VALVE
LI701 SCALE: 3" = 1'-0" VALVE MANIFOLD

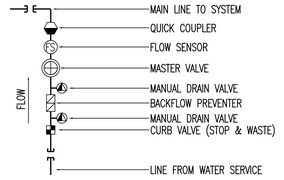


A3 BACK FLOW PREVENTION DEVICE
LI701 SCALE: 3" = 1'-0"

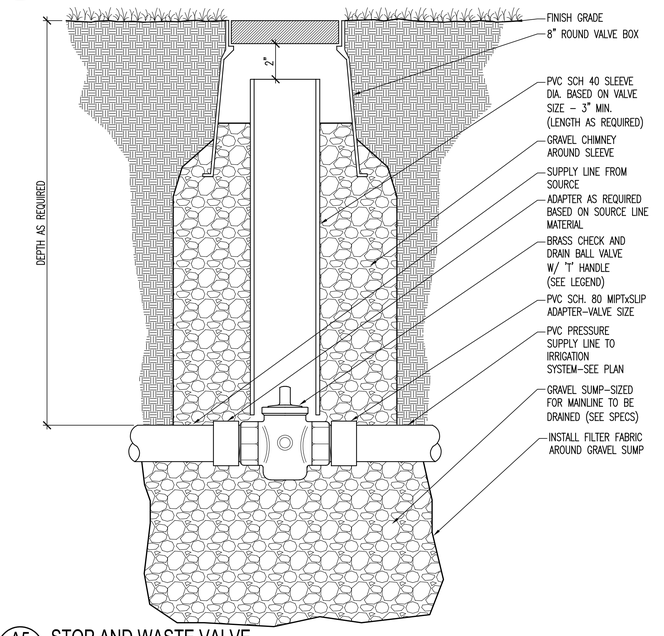


C5 FLOW SENSOR
LI701 SCALE: 3" = 1'-0"

NOTE:
PRIOR TO BLOWING OUT SYSTEM, THE MASTER VALVE MUST BE CLOSED AND THE FLOW SENSOR REMOVED.



E6 POC SCHEMATIC LAYOUT
LI701 SCALE: NTS



A5 STOP AND WASTE VALVE
LI701 SCALE: 3" = 1'-0"

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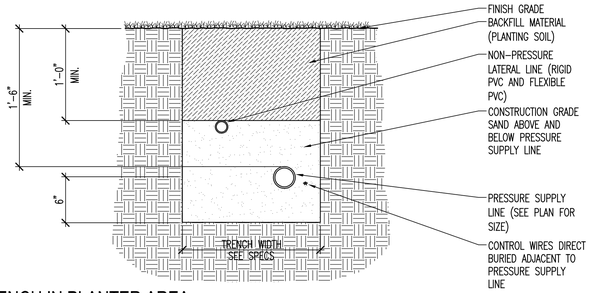
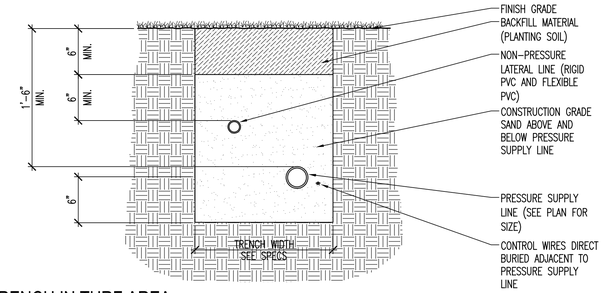
IRRIGATION DETAILS

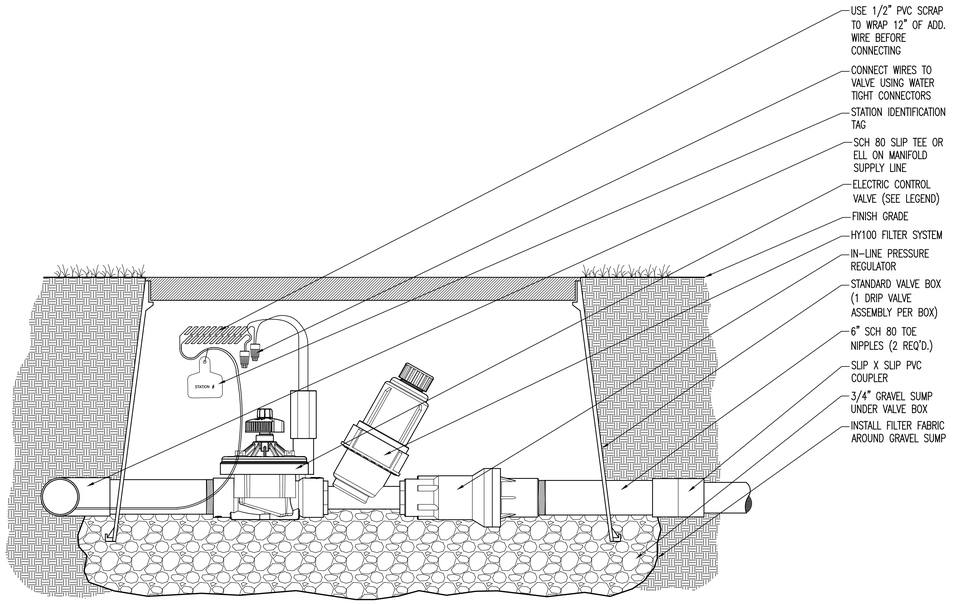
LI701



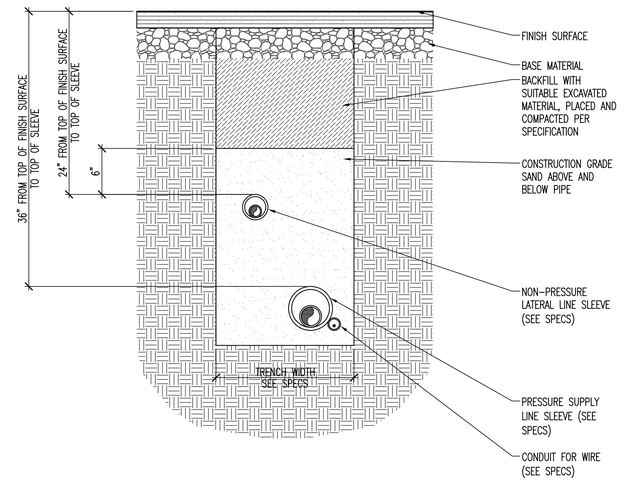
E3 TRENCH IN PLANTER AREA
LI702 SCALE: 1 1/2" = 1'-0"



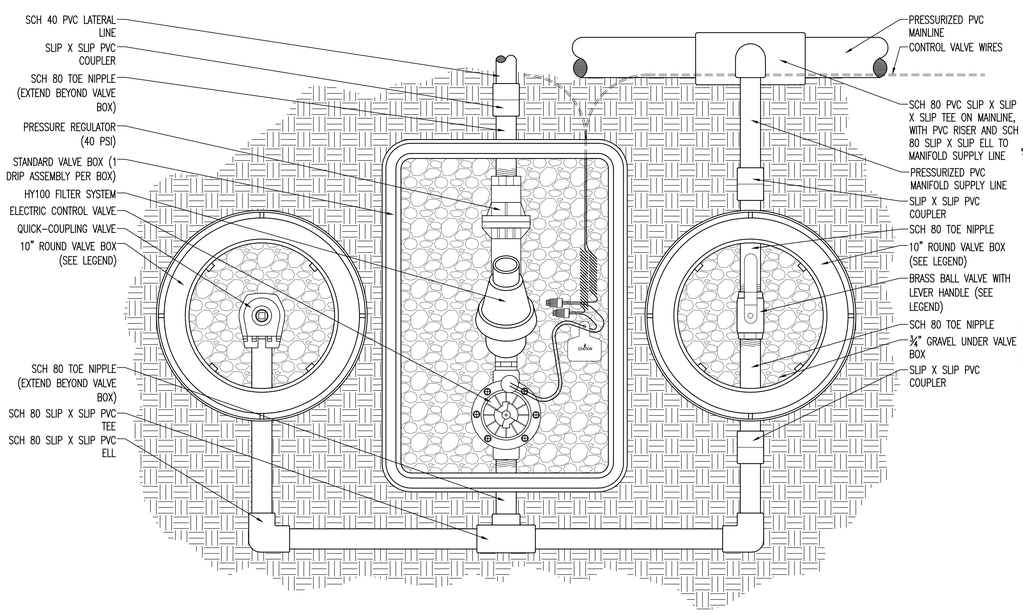
E5 TRENCH IN TURF AREA
LI702 SCALE: 1 1/2" = 1'-0"



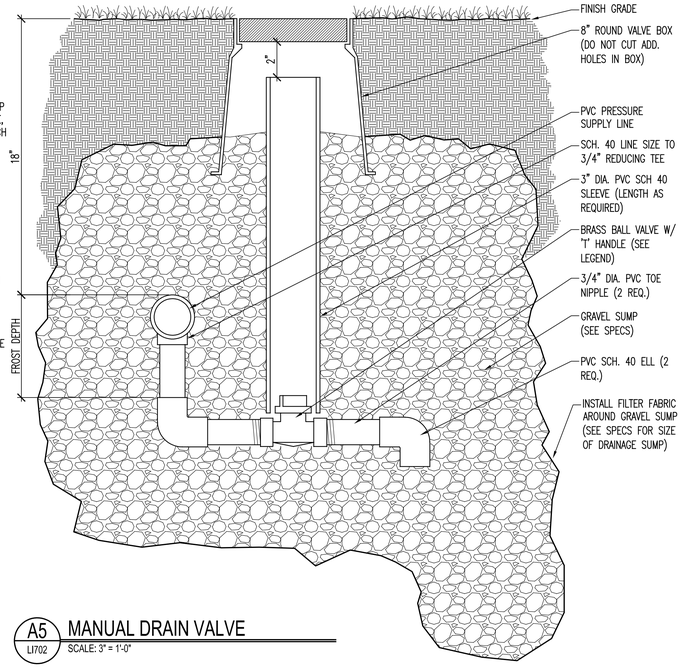
C2 ELECTRIC CONTROL VALVE (DRIP VALVE ASSEMBLY)
LI702 SCALE: 3" = 1'-0"



C5 TRENCH IN HARDSCAPE
LI702 SCALE: 1 1/2" = 1'-0"



A2 VALVE MANIFOLD ASSEMBLY (DRIP ZONES)
LI702 3" = 1' - 0"



A5 MANUAL DRAIN VALVE
LI702 SCALE: 3" = 1'-0"

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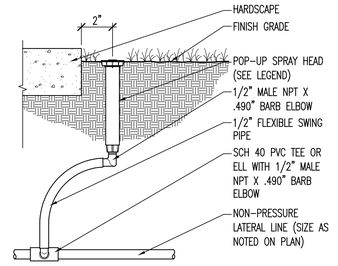
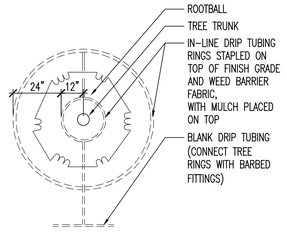
IRRIGATION DETAILS

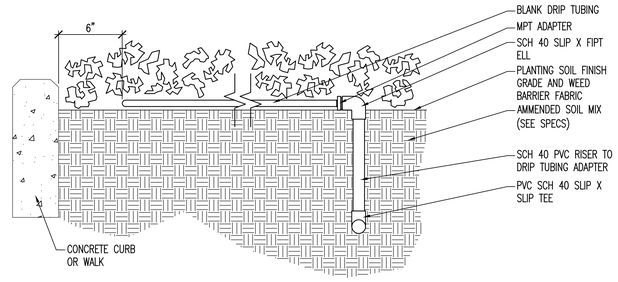
LI702



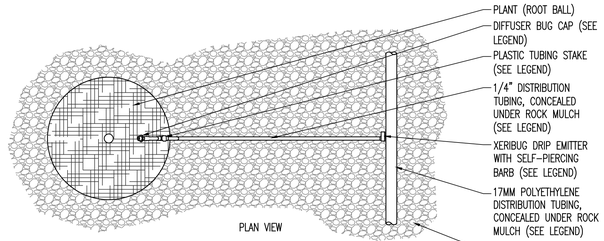
E5 6" POP-UP SPRAY HEAD
LI703 SCALE: 3" = 1'-0" WITH SWING PIPE

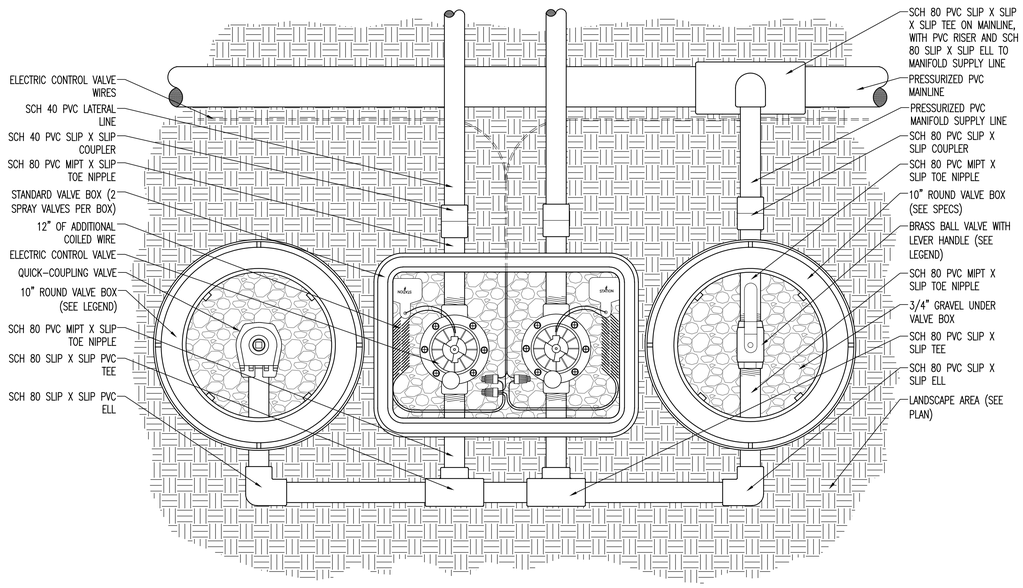


E6 TREE DRIP RING - PLAN VIEW
LI703 SCALE: 1/2" = 1'-0"

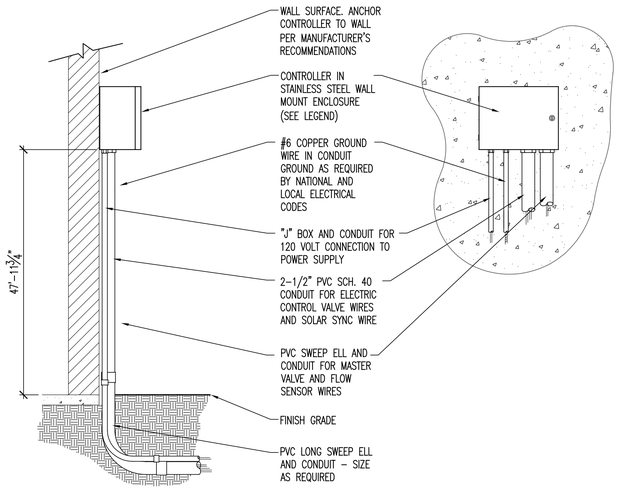


D5 DRIP TUBING ON GRADE
LI703 SCALE: 3" = 1'-0" FOR TREE AND SHRUBS

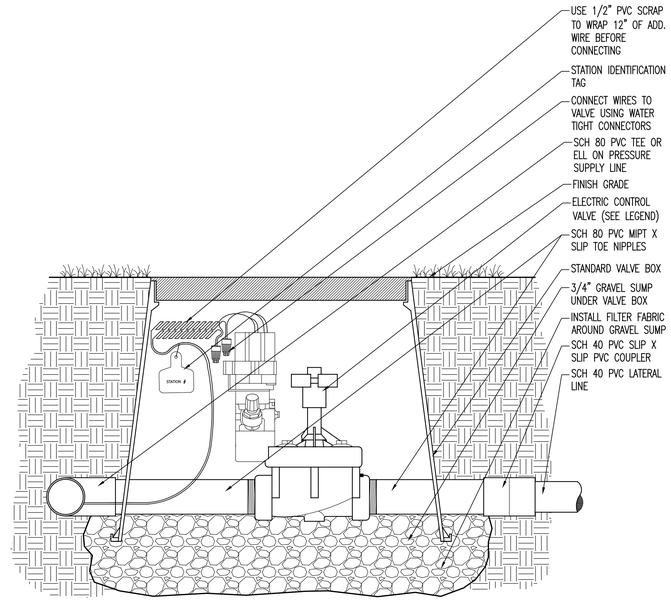




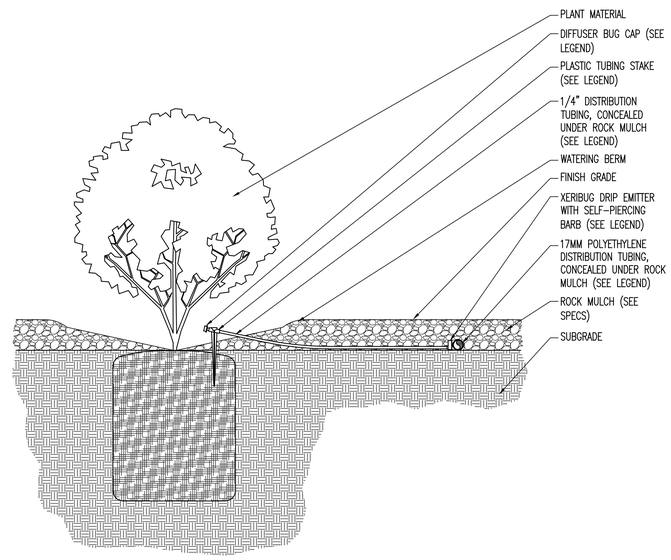
C2 VALVE MANIFOLD ASSEMBLY (SPRAY ZONES)
LI703 SCALE: 3" = 1'-0"



A1 WALL MOUNT CONTROLLER ENCLOSURE
LI703 SCALE: 1" = 1'-0" IN LANDSCAPE



A3 ELECTRIC CONTROL VALVE
LI703 SCALE: 3" = 1'-0"



C5 SHRUB DRIP EMITTER
LI703 SCALE: 3" = 1'-0"

A5 SHRUB DRIP EMITTER
LI703 SCALE: 3" = 1'-0"

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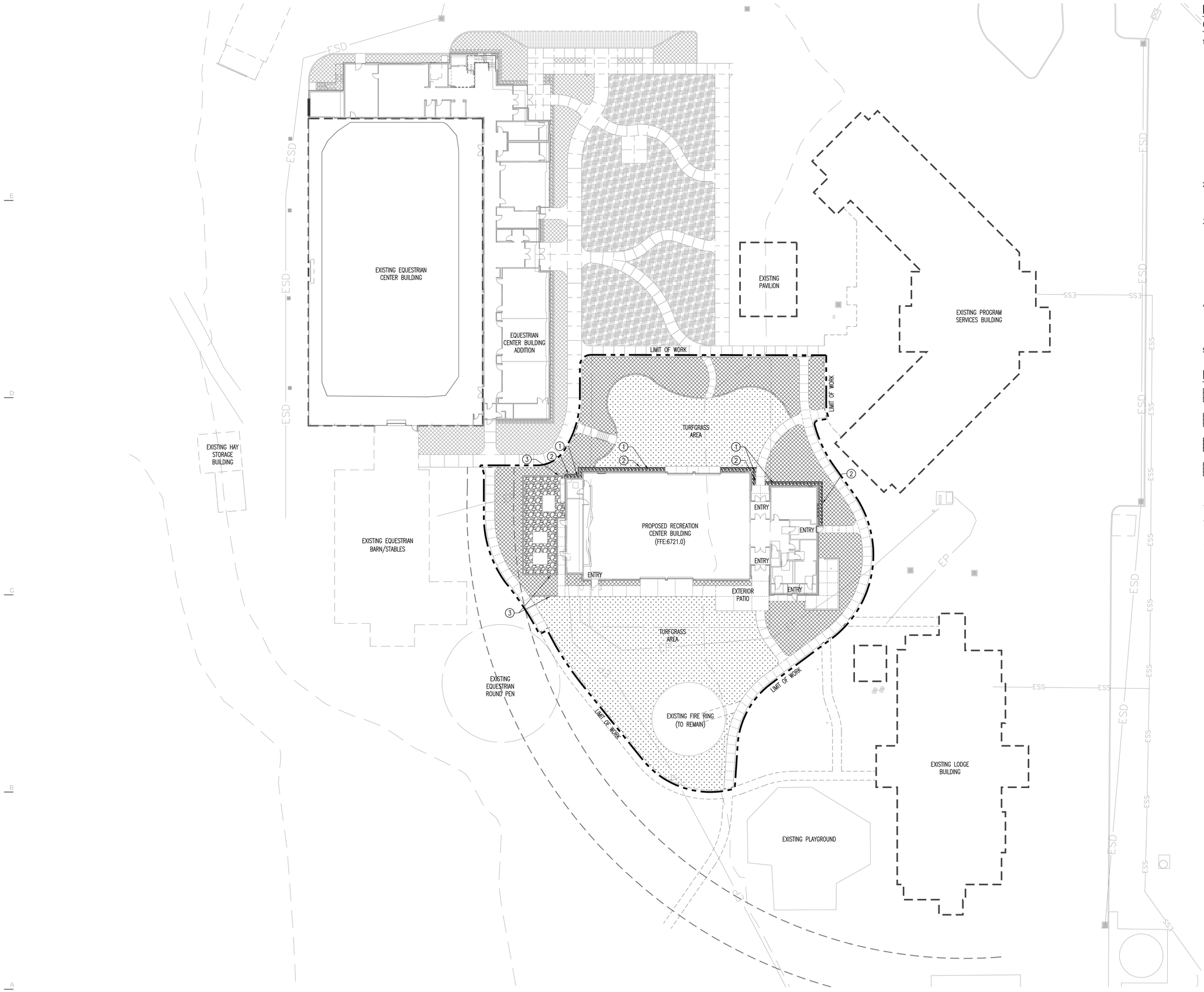
IRRIGATION DETAILS

LI703



PLANTING GROUND PLANE GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR COMPARING THE EXISTING AND NEW SITE CONDITIONS WITH THE GROUND PLANE PLAN PRIOR TO BEGINNING WORK AND IMMEDIATELY NOTIFYING THE LANDSCAPE ARCHITECT IN WRITING OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THE GROUND PLANE PLAN. IN THE EVENT THE CONTRACTOR FAILS TO COMPARE EXISTING AND NEW SITE CONDITIONS WITH THE GROUND PLANE PLAN PRIOR TO BEGINNING WORK, AND/OR FAILS TO NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN WRITING PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REQUIRED ALTERATIONS AND ADDITIONS TO THE GROUND PLANE PLAN, INCLUDING ADDITIONAL MATERIALS, AT NO ADDITIONAL COST TO THE OWNER.
2. QUANTITIES PROVIDED ARE FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING AND VERIFYING TOTAL QUANTITIES NECESSARY TO COMPLETE THE WORK AS INDICATED ON THE PLANS.
3. CONTRACTOR SHALL PLACE ROCK MULCH BY HAND IN ALL LANDSCAPED AREAS ADJACENT TO BUILDINGS IN ORDER TO PROTECT BUILDING SURFACES. DO NOT DUMP ROCK MULCH DIRECTLY AGAINST BUILDING SURFACES OR ON SITE IMPROVEMENTS (SIDEWALKS, DRIVEWAYS, PARKING AREAS, RETAINING WALLS) WITH MACHINES. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR REPAIRING DAMAGE TO BUILDINGS OR SITE IMPROVEMENTS CAUSED BY MACHINE USE.
4. REPAIR ALL EXISTING LANDSCAPED AREAS DISTURBED BY CONSTRUCTION TO MATCH EXISTING CONDITIONS. REPAIR INCLUDES, BUT IS NOT LIMITED TO FINISH GRADING ELEVATIONS, SURFACE MATERIALS, VEGETATION TYPES, AND IRRIGATION METHODS.
5. REFER TO THE PLANTING LEGEND, DETAILS, AND SPECIFICATIONS FOR MORE INFORMATION.

LEGEND:

- PROPOSED TURFGRASS (11,524 SQ.FT)
- PROPOSED LANDSCAPE AREA – ORGANIC BARK MULCH, INSTALLED TO A MINIMUM 3" DEPTH
- LANDSCAPE DRIP EDGE – 2–3" DECORATIVE COBBLE ROCK WITH 4" STEEL EDGING, 6" DEPTH
- DECORATIVE ROCK MULCH – 2"–3" DECORATIVE COBBLE ROCK, 3" DEPTH

PLANTING PLAN GROUND PLANE KEY NOTES: (#)

1. COBBLE DRIP EDGE – 24" WIDTH
2. ALUMINUM EDGING – 4" HEIGHT
3. CONCRETE MOW CURB – 6"X6"

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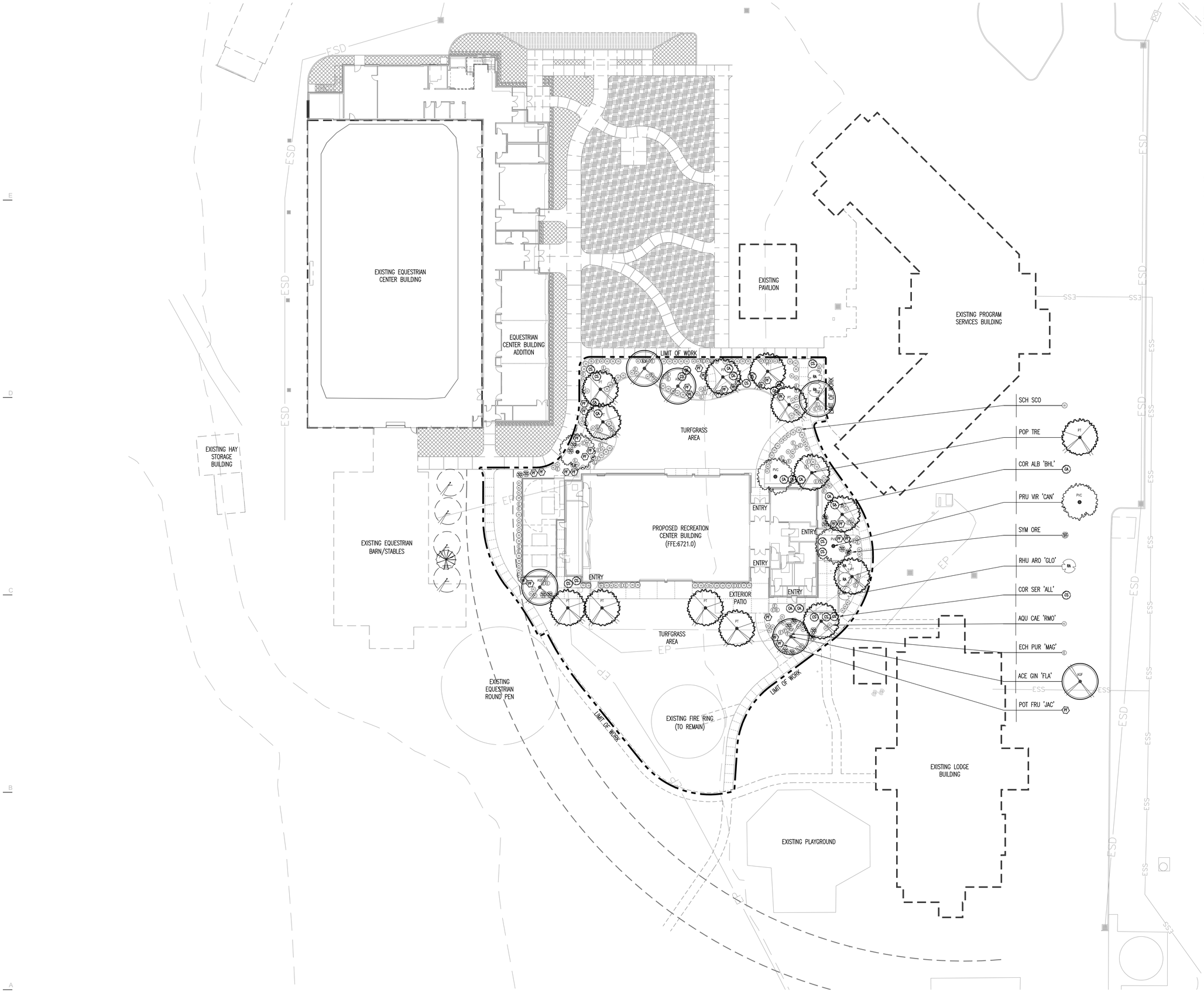
PLANTING PLAN (GROUND PLANE)

N
0 5 10 20 40
1"=20'

LP101



PLANTING PLAN GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR COMPARING THE EXISTING AND NEW SITE CONDITIONS WITH THE PLANTING PLAN PRIOR TO BEGINNING WORK AND IMMEDIATELY NOTIFYING THE LANDSCAPE ARCHITECT IN WRITING OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THE PLANTING PLANS. IN THE EVENT THE CONTRACTOR FAILS TO COMPARE EXISTING AND NEW SITE CONDITIONS WITH THE PLANTING PLANS PRIOR TO BEGINNING WORK, AND/OR FAILS TO NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IN WRITING PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REQUIRED ALTERATIONS AND ADDITIONS TO THE PLANTING PLAN, INCLUDING ADDITIONAL MATERIALS, AT NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL COORDINATE PLANT PLACEMENT WITH NEW IRRIGATION SYSTEM.
3. CONTRACTOR SHALL IMMEDIATELY REPAIR ANY DAMAGES CAUSED BY CONSTRUCTION OPERATIONS ON OR OFF OF THE SITE WITH NO ADDITIONAL COSTS TO THE OWNER.
4. QUANTITIES PROVIDED ARE FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING AND VERIFYING TOTAL QUANTITIES NECESSARY TO COMPLETE THE WORK AS INDICATED ON THE PLANS.
5. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING AND VERIFYING THE TOTAL PLANT QUANTITIES NECESSARY TO MATCH THE SYMBOLS ON PLANS.
6. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING OF ANY PLANT SUBSTITUTIONS OR CHANGES TO PLANT SIZES SPECIFIED. THE LANDSCAPE ARCHITECT SHALL APPROVE SUBSTITUTIONS AND/OR SIZE CHANGES PRIOR TO PLANT INSTALLATION.
7. REFER TO PLANTING LEGEND, DETAILS, AND SPECIFICATIONS FOR MORE INFORMATION.

EXISTING TREES TO REMAIN:

SMALL TO MEDIUM DECIDUOUS

CONIFER

LARGE DECIDUOUS

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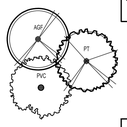
PLANTING PLAN

N
0 5 10 20 40
1"=20'

LP111



TREES

ABBREVIATIONS	BOTANICAL NAME	COMMON NAME	ZONE	TRUNK	MATURE SIZE HEIGHT X WIDTH	INSTALLED SIZE	QUANTITY	NATIVE	WATER WISE	CROP COEFFICIENT (Kc)	DETAIL NUMBER
ACE GIN 'FLA'	Acer ginnala 'Flame'	Flame Amur Maple	2	M	20'x20'	10–12'	6	No	Yes	M	A4 LP701
POP TRE	Populus tremuloides	Quaking Aspen	2	M	40'x20'	#25 gal.	14	Yes	No	M	A4 LP701
PRU VIR 'CAN'	Prunus virginiana 'Canada Red'	Canada Red Chokecherry	2	M	20'x20'	2" cal.	4	No	No	L	A4 LP701

SHRUBS

ABBREVIATIONS	BOTANICAL NAME	COMMON NAME	ZONE	TRUNK	MATURE SIZE HEIGHT X WIDTH	INSTALLED SIZE	QUANTITY	NATIVE	WATER WISE	CROP COEFFICIENT (Kc)	DETAIL NUMBER
COR ALB 'BHL'	Cornus alba 'Bailhalo'	Ivory HaloTM Dogwood	3	–	5'x5'	#5 gal.	13	No	No	M	C5 LP701
COR SER 'ALL'	Cornus sericea 'Alleman's Compact'	Alleman's Compact Red Osier Dogwood	3	–	5'x5'	#5 gal.	14	No	No	M	C5 LP701
POT FRU 'JAC'	Potentilla fruticosa 'Jackmanii'	Jackman Shrubby Cinquefoil	2	–	4'x4'	#2 gal.	29	No	Yes	L	C5 LP701
RHU ARO 'GLO'	Rhus aromatica 'Grow Low'	Grow Low Sumac	4	–	30"x8'	#5 gal.	5	No	Yes	L	C5 LP701
SYM ORE	Symphoricarpos oreophilus	Mountain Snowberry	3	–	4'x4'	#5 gal.	16	Yes	Yes	L	C5 LP701

GRASSES

ABBREVIATIONS	BOTANICAL NAME	COMMON NAME	ZONE	SEASON	COLOR	MATURE SIZE HEIGHT X WIDTH	SIZE	QTY.	NATIVE	WATER WISE	CROP COEFFICIENT (Kc)	DETAIL NUMBER
SCH SCO	Schizachyrium scoparium	Little Bluestem	3	–	–	4'x3'	#1 gal.	66	No	Yes	L	D5 LP701

PERENNIALS

ABBREVIATIONS	BOTANICAL NAME	COMMON NAME	ZONE	SEASON	COLOR	HEIGHT	SIZE	QTY.	NATIVE	WATER WISE	CROP COEFFICIENT (Kc)	DETAIL NUMBER
AQU CAE 'RMO'	Aquilegia caerulea	Rocky Mountain Columbine	3	Spr.	Blue and White	18–20"	#1 gal.	92	No	Yes	M	D5 LP701
ECH PUR 'MAG'	Echinacea purpurea	Magnus Coneflower	3	Sum/Fall	Purple	12–24"	#1 gal.	73	No	Yes	L	D5 LP701

MATERIALS

PRODUCT	MANUFACTURER/SUPPLIER	SIZE	COLOR	QTY.	DESCRIPTION	DETAIL NUMBER
SHREDDED BARK MULCH	APPROVED LOCAL SUPPLIER		CHOCOLATE BROWN	7,072 SQ.FT. 65 CU. YDS.	SHREDDED HARDWOOD BARK MULCH FOR LANDSCAPED AREAS	B6 LP701
DECORATIVE COBBLE ROCK	APPROVED LOCAL SUPPLIER	2"–3"	TANS AND BROWNS	309 SQ.FT. 6 CU. YDS.	ROUNDED COBBLE ROCK MULCH IN A COMBINATION OF CREAM, TAN, AND BROWN WITH SHADES OF RUST AND DARK GRAY (FOR DRIP EDGE)	C6 LP701
DECORATIVE COBBLE ROCK	APPROVED LOCAL SUPPLIER	2"–3"	TANS AND BROWNS	861 SQ.FT. 8 CU. YDS.	ROUNDED COBBLE ROCK MULCH IN A COMBINATION OF CREAM, TAN, AND BROWN WITH SHADES OF RUST AND DARK GRAY (FOR UTILITY ENCLOSURE)	E5 LP701
TURFGRASS SOD	APPROVED LOCAL SUPPLIER			11,524 SQ.FT.	KENTUCKY BLUEGRASS SOD, APPLIED TO MATCH EXISTING	A5 LP701
LANDSCAPE EDGING	PERMALOC	4"X3/16"	MILL	SEE PLAN	4" ALUMINIUM "L" SHAPED PERMASTRIP LANDSCAPE EDGING	C6 LP701
ROOT BARRIER FABRIC	TYPAR (800) 541–5519	24"X100'	YELLOW	FIELD VERIFY	BIOBARRIER ROOT CONTROL SYSTEM FOR ALL TREES PLANTED WITHIN 4' OF HARDSCAPE	D6, E6 LP701
WEED BARRIER FABRIC	DeWITT (800) 541–5519	6'x250'	BLACK	861 SQ.FT.	5 OZ. WOVEN, NEEDLE–PUNCHED POLYPROPYLENE FABRIC	E5 LP701

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8.09.18

NATIONAL ABILITY CENTER RECREATION CENTER

1000 ABILITY WAY
PARK CITY, UTAH 84060

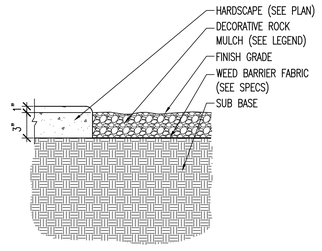
#	Date	Revision

CONSTRUCTION DOCUMENTS

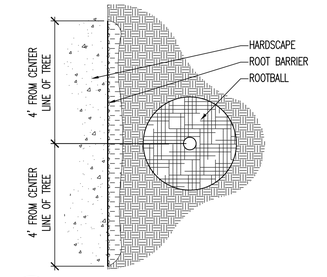
NEXUS PROJ. #: 18065
CHECKED BY: AKC
DRAWN BY: AKC
DATE: 08.09.18

PLANTING LEGEND

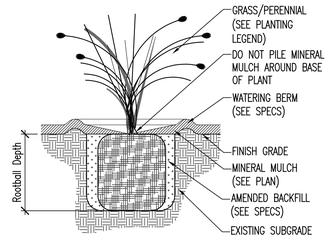
LP601



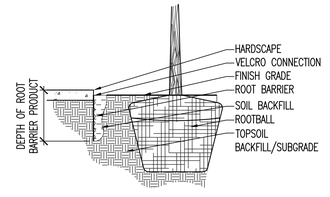
E5 DECORATIVE ROCK MULCH
LP701 SCALE: 1 1/2" = 1'-0" UTILITY ENCLOSURE



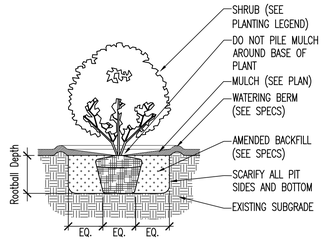
E6 ROOT BARRIER
LP701 SCALE: 1/2" = 1'-0" PLAN VIEW



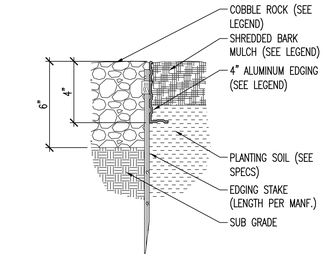
D5 GRASSES / PERENNIALS
LP701 SCALE: 1" = 1'-0"



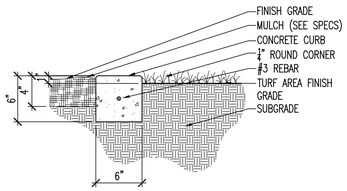
D6 ROOT BARRIER
LP701 SCALE: 1/2" = 1'-0"



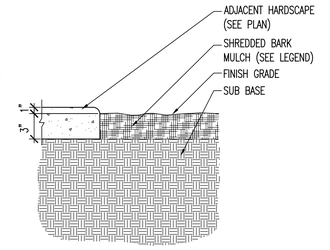
C5 SHRUB ON GRADE
LP701 SCALE: 1/2" = 1'-0"



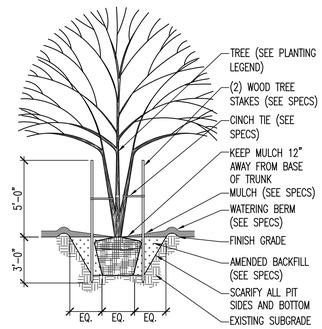
C6 LANDSCAPE DRIP EDGE
LP701 SCALE: 3" = 1'-0"



B5 MOW CURB
LP701 SCALE: 1-1/2" = 1'-0"

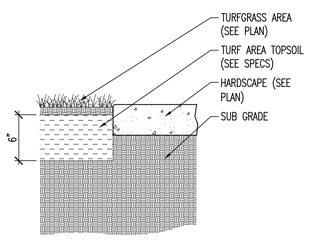


B6 SHREDDED BARK MULCH
LP701 SCALE: 1 1/2" = 1'-0"

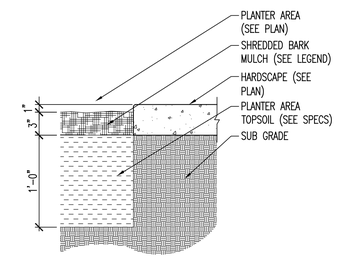


- FOR B&B TREES, UNTIE ROPE AND REMOVE TOP 1/3 OF BURLAP. FOR NON-BIO-DEGRADABLE MATERIAL, REMOVE ALL WRAPPING.
- FOR TREES LOCATED WITHIN 4' OF HARDSCAPE, SEE ROOT BARRIER DETAIL

A4 MULTI-STEM TREE WITH STAKING
LP701 SCALE: 1/4" = 1'-0"



A5 TOPSOIL DEPTH - TURF
LP701 SCALE: 1-1/2" = 1'-0"



B6 TOPSOIL DEPTH - PLANTER
LP701 SCALE: 1-1/2" = 1'-0"

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PLANTING DETAILS

LP701

STRUCTURAL NOTES :

A. GENERAL

1. THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
2. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, SIZES, ETC).
3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED “TYPICAL” OR “SIMILAR” IN THE PLANS AND DOCUMENTS.
11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM; HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE “L”. ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEETS S002 AND S003.
2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR’S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE SUBMITTED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE “L”.

C. BASIS OF DESIGN

1. GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2015
   RISK CATEGORY : II
2. SUSPENDED FLOOR LOADS
   a. LIVE LOAD = 50 PSF (OFFICE), 100 PSF (STAIRS)
   b. DEAD LOAD = 15 PSF
3. ROOF LOADS
   a. FLAT-ROOF SNOW LOAD, P_f : 97 PSF
      1. GROUND SNOW LOAD, P_g : 139 PSF
      2. SNOW EXPOSURE FACTOR, C_e : 1
      3. SNOW LOAD IMPORTANCE FACTOR, I_s : 1
      4. THERMAL FACTOR, C_t : 1
   b. LIVE LOAD = 20 PSF
   c. DEAD LOAD = 15 PSF
4. WIND DESIGN
   a. BASIC WIND SPEED (3 SECOND GUST) : 115 MPH
   b. WIND EXPOSURE : C
   c. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-10.
5. SEISMIC DESIGN :
   a. SEISMIC IMPORTANCE FACTOR, I_E : 1
   b. SITE CLASS : D
   c. MAPPED SPECTRAL RESPONSE ACCELERATIONS : $S_S = 0.624$, $S_1 = 0.209$
   d. SPECTRAL RESPONSE COEFFICIENTS : $S_{DS} = 0.541$, $S_{D1} = 0.276$
   e. SEISMIC DESIGN CATEGORY : D
   f. BASIC SEISMIC-FORCE-RESISTING SYSTEM : LIGHT FRAME WOOD SHEARWALLS WITH PLYWOOD SHEATHING
   g. DESIGN BASE SHEAR : $V_{N\text{-}S} = C_S \times W$, $V_{E\text{-}W} = C_S \times W$
   h. SEISMIC RESPONSE COEFFICIENT, C_S : 0.083
   i. RESPONSE MODIFICATION FACTOR, R : 6.5
   j. ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE

D. FOUNDATION

1. DESIGN SOIL PRESSURE : 1800 PSF (800 PSF MIN)
2. SOILS REPORT BY : IGES
   REPORT # : 02763-001
   DATED : March 29, 2018
3. SOIL PREPARATION UNDER FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE SOILS REPORT.
4. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON PRELIMINARY GRADING INFORMATION AND MUST BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ALL EXTERIOR FOOTINGS MUST BEAR A MINIMUM OF 42 INCHES BELOW LOWEST ADJACENT FINAL GRADE.
5. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
6. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS TO BE CENTERED BELOW COLUMNS.
7. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED “SOIL” FORMS PROVIDED THAT THE DIMENSIONS ARE INCREASED 3” ON EACH SIDE.

E. CONCRETE

1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW :
   a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS :
      1. WHERE THE TOP OF THE ELEMENT IS EXPOSED (EXPOSURE CATEGORY F1) :
         a. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
         b. MAXIMUM W/C RATIO : 0.45
         c. MAXIMUM AGGREGATE SIZE : 1”
         d. AIR CONTENT : 4.5% +/- 1.5%
      2. WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED (EXPOSURE CATEGORY F0) :
         a. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   b. RETAINING WALLS (EXPOSURE CATGEORY F1) :
      1. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
      2. MAXIMUM W/C RATIO : 0.45
      3. MAXIMUM AGGREGATE SIZE : 1"
      4. AIR CONTENT : 4.5% +/- 1.5%
   c. INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :
      1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   d. INTERIOR SUSPENDED SLABS (EXPOSURE CATEGORY F0) :
      1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   e. EXTERIOR SLABS (DOCKS, ETC.) (EXPOSURE CATEGORY F1) :
      1. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
      2. MAXIMUM W/C RATIO : 0.45
      3. MAXIMUM AGGREGATE SIZE : 1”
      4. MINIMUM AIR CONTENT : 4.5% +/- 1.5%
2. WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
3. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.
5. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING IN ALL CONCRETE FOUNDATION WALLS SHALL BE AS FOLLOWS:

THICKNESS	TOP & BOTTOM BARS	VERTICAL	HORIZONTAL
6”	(1) #5	#4 AT 18”O.C.	#4 AT 16”O.C.
8”	(2) #5	#4 AT 18”O.C.	#4 AT 12”O.C.
10”	(2) #5	#4 AT 12”O.C.	#5 AT 12”O.C.
12”	(2) #5	#4 AT 18”O.C. EA FACE	#4 AT 16”O.C. EA FACE

6. UNLESS NOTED OTHERWISE, CONCRETE SLABS ON EARTH SHALL BE REINFORCED AS FOLLOWS:
   4” THICK - #3 AT 18”O.C. EACH WAY
   6” THICK - #4 AT 18”O.C. EACH WAY
   REINFORCING SHALL BE CONTINUOUSLY SUPPORTED AT 36”O.C. MAXIMUM SPACING.
7. UNLESS NOTED OTHERWISE, FOR NON-DETAILED OPENINGS IN CONCRETE WALLS LARGER THAN 12” AND SMALLER THAN 24” IN ANY DIRECTION ADD (2) #5 BARS ON ALL SIDES IN ADDITION TO REGULAR WALL REINFORCING AND EXTEND 24” EACH WAY BEYOND OPENING. IF 24” IS NOT AVAILABLE ON EVERY SIDE, NOTIFY STRUCTURAL ENGINEER FOR FURTHER DIRECTION. OPENINGS SHALL HAVE A MINIMUM OF 12" OF CONCRET ABOVE THE OPENING, TYP.
8. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 2 X 4 (SHAPED) KEYWAY IN ALL VERTICAL AND HORIZONTAL JOINTS UNLESS NOTED OR DETAILED OTHERWISE. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR COLD/CONSTRUCTION JOINTS FOR SLABS ON GRADE.
9. WHERE NEW CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE JOINT SHALL BE CLEAN AND FREE OF LAITANCE. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PREWETTED AND STANDING WATER REMOVED.

F. ANCHOR BOLTS/EMBEDDED BOLTS

1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING :
   a. AT WOOD STUD WALLS - ASTM A-307 GRADE HEADED BOLTS. ANCHOR BOLTS IN TREATED LUMBER SHALL BE GALVANIZED OR STAINLESS STEEL. SEE TIMBER NOTES FOR MORE INFORMATION.
   b. AT ALL OTHER ANCHOR BOLTS (UNLESS NOTED OTHERWISE) - ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
2. SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
3. FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO PLACING CONCRETE AND/OR GROUT.
4. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.
5. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

G. ADHESIVE/MECHANICAL ANCHORS

1. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER’S PRINTED INSTALLATION INSTRUCTIONS (MPII).
2. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
3. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 24 HOURS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN WET OR DAMP HOLES.
4. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) RELATIVE TO SUBSTRATE TEMPERATURE.
5. 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 IN ACCORDANCE WITH ACI 318-11 D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS.
6. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE:
   a. HILTI HIT-RE 500V3 (ESR-3814), OR HILTI HIT-HY 200 (ESR-3187).
   b. SIMPSON SET-XP (ESR-2508), OR AT-XP (ER-0263).
   c. DEWALT PURE 100+ (ESR-2322), OR AC100+ GOLD (ESR-2592-COLD WEATHER).
7. UNLESS NOTED OTHER WISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE:
   a. HILTI KWIK BOLT TZ (ESR-1917).
   b. DEWALT POWER STUD+ SD2 (ESR-2502).
   c. SIMPSON STRONG-BOLT 2 (ESR-3037).
8. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE:
   a. SIMPSON TITEN HD (ESR-2713).
   b. DEWALT SCREWBOLT+ (ESR-2526).
   c. HILTI KWIK HUS-EZ (ESR-3027).
9. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
10. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 1 INCH, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
11. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
12. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC ESR OR IAPMO REPORTAND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT.

H. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS:
   a. ALL REINFORCING BARS, SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.
2. STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100.
3. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
4. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :
   a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ….. 3”
   b. EXPOSED TO EARTH OR WEATHER :
      1. #6 & LARGER ….. 2”
      2. #5 & SMALLER …..1-1/2”
   c. NOT EXPOSED TO WEATHER OR EARTH :
      1. SLABS, WALLS, JOISTS, #11 & SMALLER ….. 3/4”
      2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES ….. 1-1/2”
   d. SLAB ON GRADE :
      1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
5. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.
6. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
7. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHING DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4” OF THE BOTTOM OF THE FOOTING, BUT NEED NOT EXTEND MORE THAN 20” INTO FOOTING.
8. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE ASTM A-706 REINFORCING.
9. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.
10. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
11. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

I. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:
   a. ANSI/AISC 360-10 “SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS”, WITH “COMMENTARY” AND “SUPPLEMENTS” AS REQUIRED BY BUILDING CODE.
   b. AISC 303-10 “CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES” EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, AND 4.4.2.
   c. AISI “SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS”.
   d. AISC “SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS”.
   e. AWS D1.1 AND 1.3, “STRUCTURAL WELDING CODE” (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY CONFLICT WITH AISC).
   f. ANSI/AISC 341-10 “SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS”.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:
   a. WIDE FLANGE SHAPES AND WT SHAPES - ASTM A992
   b. OTHER SHAPES AND PLATES - ASTM A-36 (UNO)
   c. TUBES (TS) AND HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A-500, GRADE B (SQUARE AND RECTANGULAR SHAPES FY = 46 KSI AND ROUND SHAPES FY = 42 KSI)
   d. PIPE COLUMNS - ASTM A-53, GRADE B TYPE E OR S
   e. DEFORMED BAR ANCHORS (DBA) - ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1
   f. HEADED STUD ANCHORS (HSA) - ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE WITH AWS D1.1 FOR TYPE “B”. USE 3/4” DIAMETER STUDS, UNLESS NOTED OTHERWISE.
   g. THREADED ROD - ASTM A-449.
   h. NON-SHRINK GROUT - ASTM C110. NON-SHRINK GROUT SHALL BE PRE-PACKAGED, NON-METALLIC, WITH A 28-DAY COMPRESSIVE STRENGTH OF 6,000 PSI.
3. CONNECTIONS SHALL COMPLY WITH THE STRUCTURAL DRAWINGS UNLESS WRITTEN APPROVAL TO CHANGE IS GIVEN BY THE STRUCTURAL ENGINEER.
4. ALL SHOP FABRICATIONS SHALL BE PERFORMED BY AN APPROVED FABRICATOR IN ACCORDANCE WITH SECTIONS 1702 AND 1704 OF THE IBC OR WITH SHOP INSPECTION BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH SECTION 1704.2.5 OF THE IBC.
5. WELDING
   a. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN ACCORDANCE WITH ANSI/AWS D1.1 (LATEST EDITION).
   b. USE E-70XX ELECTRODES UNLESS NOTED OTHERWISE. E-60XX MAY BE USED FOR WELDING STEEL DECKS.
   c. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT CONNECTED WITH BOLTS SHALL BE WELDED TOGETHER WITH A FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE. WHERE WELD SIZES ARE NOT SHOWN USE THE FOLLOWING:
      1. WHERE ALL CONNECTED PARTS ARE THICKER THAN 1/4”, WELD IS 1/16” LESS THAN THE THICKNESS OF THE THINNEST PART.
      2. WHERE ANY OF THE CONNECTED PARTS IS LESS THAN 1/4” THICK, WELD IS SAME AS THICKNESS OF THE THINNEST PART.
   d. WELDING OF HSA’S AND DBA’S SHALL CONFORM TO THE MANUFACTURER’S SPECIFICATIONS.
   e. WHEREVER POSSIBLE, WELDS SHALL BE SHOP WELDS. SPECIAL CONSIDERATIONS, SUCH AS ITEMS WHICH MAY NEED ADJUSTMENT AT THE SITE, REQUIRE THAT SOME WELDS BE FIELD WELDS. WHERE QUESTIONS OR DISCREPANCIES OCCUR THE CONTRACTOR SHALL COORDINATE THE WORK BETWEEN THE SHOP FABRICATOR AND THE STEEL ERECTOR.
6. BOLTING
   a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL TO STEEL CONNECTIONS SHALL USE HIGH STRENGTH BOLTS CONFORMING TO ASTM A-325.
   b. UNLESS NOTED OTHERWISE, ALL BOLTING IS CLASSIFIED AS NON-SLIP CRITICAL BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS TO A SNUG TIGHT CONDITION, WITH ALL PLIES OF THE JOINT IN FIRM CONTACT.
   c. WHERE OVERSIZED OR SLOTTED HOLES OCCUR IN THE OUTER PLY, AN ASTM F436 WASHER OR 5/16” THICK COMMON PLATE WASHER SHALL BE USED AS REQUIRED TO COMPLETELY COVER THE HOLE.
   d. BOLTS SHALL BE CENTERED IN SLOTTED HOLES, UNLESS NOTED OTHERWISE.
   e. WHERE A STEEL BEAM TO BEAM CONNECTION IS NOT SHOWN, PROVIDE AN AISC STANDARD FRAMED CONNECTION SIZED FOR 1/2 OF THE TOTAL LOAD CAPACITY OF THE BEAM FOR THE SPAN AND STEEL SPECIFIED.
7. UNLESS NOTED OTHERWISE, WHERE STEEL BEAMS SUPPORT WOOD FRAMING OR WOOD SHEATHING, PROVIDE A CONTINUOUS DOUBLE 2x OR SINGLE 3x NAILER PLATE ON THE TOP OF THE BEAM THAT EXTENDS AT LEAST THE FULL WIDTH OF THE BEAM FLANGE. ATTACH NAILER PLATES TO WIDE-FLANGE BEAMS WITH 1/2” DIAMETER THRU BOLTS AT 24”O.C. - STAGGERED. COUNTER-SINK HEAD OF BOLTS INTO TOP OF NAILER PLATE TO PROVIDE A FLUSH BEARING SURFACE.
8. ALL COLUMNS ADJACENT TO OR EMBEDDED IN WOOD STUD WALLS SHALL HAVE (1) 1/2” DIAMETER X 3-1/2” THREADED STEEL ROD SHOP-WELDED TO THE FACE OF THE COLUMN AT 24”O.C. AND EXTENDING EACH WAY INTO THE ADJACENT STUD WALLS. ATTACH ADJACENT WOOD WALL STUDS TO STEEL COLUMN WITH STANDARD NUT AND WASHER AS REQUIRED.
9. PROVIDE FULL DEPTH WEB STIFFENER PLATES AT EACH SIDE OF STEEL BEAMS AT ALL BEARING (EXCEPT SECONDARY FRAMING) POINTS. STIFFENER PLATES SHALL BE THICKNESS SHOWN UNLESS NOTED OTHERWISE AND SHALL BE WELDED BOTH SIDES WITH FILLET WELDS ALL AROUND.

FLANGE WIDTH	STIFFENER THICKNESS	WELD THICKNESS
< 8 1/4”	1/4”	3/16”
8 1/4” < BF < 12 1/2”	3/8”	1/4”
12 1/2” < BF < 18”	1/2”	5/16”

10. FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS.
11. WHEN DETERMINING THE FIRE RESISTANCE OF ASSEMBLIES, USE THE FOLLOWING: STEEL ROOF MEMBERS ARE CONSIDERED UN-RESTRAINED AND STEEL FLOOR FRAMING MEMBERS ARE CONSIDERED RESTRAINED.
12. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE ERECTED WITH THE NATURAL CROWN UP.
13. UNLESS OTHERWISE SHOWN OR DETAILED IN THE PLANS, ALL STEEL COLUMNS, BEAMS, BRACES, STRUTS, ETC. SHALL BE CONTINUOUS BETWEEN CONNECTIONS OR SUPPORTS. SPLICES IN MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD.

J. TIMBER

1. WOOD GRADES (UNLESS NOTED OTHERWISE)
   a. ALL FRAMING LUMBER SHALL BE DOUGLAS FIR/LARCH CLEARLY MARKED WITH A STAMP BY WWPA APPROVED AGENCY AND SHALL BE GRADED AS FOLLOWS:
      1. HORIZONTAL MEMBERS: JOISTS & RAFTERS: NO. 2, BEAMS & STRINGERS: NO. 2.
      2. VERTICAL MEMBERS: POST & TRIMMERS: NO. 1, STUDS: NO. 2.
   b. ALL FRAMING IN CONTACT WITH FOOTINGS, FOUNDATIONS OR SLABS ON GRADE SHALL BE PRESSURE TREATED OR TIMBERSTRAND LSL TREATED LUMBER WITH EQUIVALENT STRESS GRADES TO TYPICAL FRAMING MEMBERS.
   c. GLU-LAMINATED BEAMS SHALL BE DOUGLAS-FIR ARCHITECTURAL APPEARANCE GRADE WITH A COMBINATION NUMBER 24F-V4 EXCEPT CANTILEVERED AND CONTINUOUS BEAMS SHALL BE COMBINATION NUMBER 24F-V8.
   d. UNLESS NOTED OTHERWISE, ALL ENGINEERED LUMBER SHALL BE FURNISHED BY TRUS-JOIST CORPORATION OR APPROVED EQUAL AND SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES :

	MODULUS OF ELASTICITY	FLEXURAL STRESS RATING
LVL :	1,900,000 PSI	2,600 PSI
PSL :	2,000,000 PSI	2,900 PSI
LSL :	1,500,000 PSI	2,250 PSI

   e. ALL WOOD “I” JOISTS AND BRIDGING SHALL BE FURNISHED BY TRUS-JOIST CORPORATION OR APPROVED EQUAL.
2. SHEATHING SHALL BE APA RATED SHEATHING, EXPOSURE I, EXTERIOR GLUE AND PANEL INDEX RATING AS NOTED BELOW UNLESS NOTED OTHERWISE :

LOCATION	THICKNESS	PANEL INDEX
WALLS :	15/32”	24/0
FLOORS :	23/32”	48/24
ROOFS :	19/32”	40/20

3. INDIVIDUAL PIECES OF SHEATHING AT ROOF, FLOOR, AND SHEAR WALLS SHALL NOT BE SMALLER THAN 24” IN EITHER DIRECTION AND SHALL SPAN A MINIMUM OF TWO FRAMING SPACES, UNO.
4. ALL 23/32” FLOOR SHEATHING SHALL BE TONGUE AND GROOVE UNLESS NOTED OTHERWISE.
5. CONNECTIONS, FASTENERS, AND ADHESIVE
   a. ALL BOLTS THRU WOOD SHALL BE ASTM A307 AND SHALL HAVE HARDENED WASHERS UNDER ASTM A563 HEAVY HEX NUT AND BOLT HEADS.
   b. UNLESS NOTED OTHERWISE, 10d COMMON NAILS SHALL BE USED TO FASTEN ALL PLYWOOD SHEATHING TO SUPPORTING TRUSSES, JOISTS, LEDGERS OR BLOCKING AS FOLLOWS:
      1. BOUNDARY NAILING “BN”: 6” O.C. AT ALL ROOF AND FLOOR SHEATHING INTO BEARING WALLS, SHEAR WALLS, AND BLOCKING.
      2. PANEL EDGE NAILING “EN”: 6” O.C. AT ALL OTHER PLYWOOD PANEL EDGES.
      3. PANEL FIELD NAILING “FN”: 12” O.C. AT INTERIOR SUPPORTS IN FIELD OF PANEL.
      4. NAILS SHALL BE GALVANIZED OR STAINLESS STEEL AT EXPOSED LOCATIONS OR IN TREATED WOOD (SEE NOTE BELOW FOR FASTENERS CONNECTED TO OR IN CONTACT WITH TREATED WOOD). THE HEAD OF ALL NAILS SHALL BE DRIVEN FLUSH WITH THE SURFACE OF THE SHEATHING.
      5. ALL WALL SHEATHING SHALL BE FASTENED TO THE WALL FRAMING PER THE WOOD SHEAR WALL SCHEDULE ON SHEET S301.
   c. ALL NAILS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES :

COMMON NAIL SIZE	SHANK DIAMETER	MIN. PENETRATION INTO SUPPORT MEMBER
6d	0.113”	1.25”
8d	0.131”	1.375”
10d	0.148”	1.50”
12d	0.148”	1.50”
16d	0.162”	1.62”

   d. A CONTINUOUS BEAD OF PERMANENT BOND TIMBER/WOOD ADHESIVE COMPOUND SHALL BE USED TO FASTEN ALL PLYWOOD FLOOR SHEATHING TO FLOOR JOISTS IN ACCORDANCE WITH MANUFACTURERS’ SPECIFICATIONS.
   e. ALL FRAMING ANCHORS, POST CAPS, HOLD DOWNS, COLUMN BASES ETC. TO BE PROVIDED BY SIMPSON OR APPROVED EQUAL AND SHALL BE ATTACHED IN ACCORDANCE WITH MANUFACTURER’S PUBLISHED DATA, UNLESS NOTED OTHERWISE.
   f. UNLESS NOTED OTHERWISE, ALL WALL BOTTOM PLATES TO BE ANCHORED TO FOUNDATIONS OR FOOTINGS WITH 3/4” DIAMETER ANCHOR BOLTS AT 32”O.C. WITH 8” MINIMUM EMBEDMENT. THERE SHALL BE A MINIMUM OF (2) ANCHOR BOLTS PER PLATE WITH ONE BOLT LOCATED NOT MORE THAN 12” AND NOT LESS THAN 4” FROM EACH END OF EACH PIECE.
   g. WALL BOTTOM PLATES AT SHEAR WALLS SHALL INCLUDE 1/4” x 3” x 3” STEEL PLATE WASHERS BETWEEN THE SILL PLATE AND NUT OF THE ANCHOR BOLT. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH UP TO 3/16” LARGER THAN THE BOLT DIAMETER AND SLOT LENGTH NOT TO EXCEED 1-3/4”, PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN ½” OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE.
   h. FASTENERS CONNECTED TO OR IN CONTACT WITH PRESERVATIVE-TREATED AND/OR FIRE-RETARDANT-TREATED WOOD (EXCEPT FOR TIMBERSTRAND LSL TREATED LUMBER AND BORATE BASED TREATMENTS) SHALL BE OF G-185 HOT-DIP GALVANIZED STEEL OR 304 OR 316 STAINLESS STEEL. STAINLESS STEEL AND GALVANIZED STEEL SHALL NEVER BE USED IN CONTACT WITH EACH OTHER.
6. ALL WOOD TRUSSED RAFTERS SHALL BE FABRICATED IN COMPLIANCE WITH THE RESEARCH COMMITTEE RECOMMENDATIONS OF THE ICC FOR THE CONNECTOR PLATES USED. SUBMIT DESIGN CALCULATIONS WITH ENGINEERS SEAL FOR REVIEW WITH SHOP DRAWINGS. PROVIDE CALCULATIONS AND DETAILS FOR ALL TRUSS TO TRUSS CONNECTIONS INCLUDING CONNECTION HARDWARE. ALL NECESSARY TRUSS BRIDGING AND CONNECTION DESIGN OF TRUSS BRIDGING SHALL BE PROVIDED BY THE TRUSS DESIGNER AND SHALL BE INCLUDED IN THE DESIGN CALCULATIONS FOR REVIEW.
7. INSTALLATION OF ALL METAL-PLATE-CONNECTED WOOD TRUSSES SHALL COMPLY WITH THE FOLLOWING STANDARDS:
   a. ANSI/TPI 1 “NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSSES”.
   b. TPI HIB “COMMMENTARY AND RECOMMENDATIONS FOR HANDLING INSTALLING & BRACING METAL-PLATE-CONNECTED WOOD TRUSSES”.
   c. TPI DSB “RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL-PLATE-CONNECTED WOOD TRUSSES”.
8. UNLESS NOTED OTHERWISE, ALL ROOF SHEATHING AND WALL SHEATHING AT SHEAR WALLS SHALL HAVE SOLID BLOCKING AT ALL PANEL EDGES.
9. PROVIDE DOUBLE JOIST UNDER PARALLEL NONBEARING WALLS AND SOLID BLOCKING UNDER PERPENDICULAR NONBEARING WALLS.
10. AT ALL OVERBUILD LOCATIONS, ROOF SHEATHING SHALL BE COMPLETE BELOW OVERBUILDS PRIOR TO OVERBUILD CONSTRUCTION.
11. PROVIDE SOLID 2” (NOMINAL) FULL DEPTH BLOCKING AT ENDS AND SUPPORT LOCATIONS FOR ALL JOISTS AND RAFTERS. BLOCKING SHALL BE ATTACHED TO SUPPORT FRAMING WITH A MINIMUM OF (1) SIMPSON A35 FRAMING ANCHOR BETWEEN JOISTS UNLESS NOTED OTHERWISE.
12. UNLESS NOTED OTHERWISE, ALL BEARING WALLS SHALL BE 2x6 SPACED AT 16“ O.C. BLOCK ALL NON-SHEATHED BEARING WALLS AT 4’-0”O.C.
13. VERIFY THE STUD SPACING WITH THE ANCHOR BOLT LAY-OUT. WHERE STUDS INTERFERE WITH ANCHOR BOLTS, PROVIDE AN ADDITIONAL FULL-HEIGHT STUD TO ENSURE THAT THE FULL CROSS-SECTIONAL AREA OF THE STUD IS IN CONTACT WITH THE SILL PLATE.
14. UNLESS NOTED OTHERWISE, ALL EXTERIOR WALLS AND SHEAR WALLS SHALL HAVE DOUBLE 2X TOP PLATES THAT ARE SPLICED TOGETHER WITH A MINIMUM OF 36" OF OVERLAP AND SHALL BE CONNECTED TOGETHER WITH A MINIMUM OF (28) 10d COMMON NAILS EACH SIDE OF THE SPLICE. OUTSIDE OF THESE SPLICE LOCATIONS, TOP PLATES SHALL BE NAILED TOGETHER WITH 10d NAILS AT 12” O.C.
15. EXCEPT WHERE NOTED OTHERWISE, THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THAT SET FORTH IN IBC TABLE 2304.10.1. CONNECTIONS FOR MULTIPLE PIECES OF ENGINEERED LUMBER PIECES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
16. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE INSTALLED WITH THE NATURAL CROWN UP.
17. GLULAM MEMBERS
   a. GLULAM MEMBERS SHALL BE PROTECTED FROM EXTREMES IN TEMPERATURE AND HUMIDITY DURING TRANSPORTATION, STORAGE AND INSTALLATION WITH GOOD STORAGE AND INSTALLATION PRACTICES THAT MINIMIZE DIRECT EXPOSURE TO THE ELEMENTS.
   b. DURING AND AFTER INSTALLATION, GLULAM MEMBERS SHALL NOT BE EXPOSED TO RAPID MOVEMENT OF AIR OR TO CONCENTRATED HEATING AND COOLING SOURCES.
   c. GLULAM MEMBERS SHALL BE ALLOWED TO ADJUST SLOWLY TO THE AMBIENT TEMPERATURE AND HUMIDITY OF THE BUILDING BY AVOIDING RAPID LOWERING OF THE HUMIDITY AND/OR EXPOSURE TO HIGH TEMPERATURES.
   d. GLULAM MEMBERS SHALL BE PROTECTED AS INDICATED IN THESE NOTES UNLESS OTHERWISE NOTED BY THE GLULAM MANUFACTURER.

K. DEFERRED SUBMITTALS

1. DEFERRED SUBMITTALS ARE COMPLETE PACKAGES TO BE SUBMITTED FOR REVIEW THAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL ELEMENTS AND CONNECTIONS OF ITEMS LISTED BELOW. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
2. DEFERRED SUBMITTAL COMPONENTS SHALL NOT BE INSTALLED UNTIL APPROVED BY THE BUILDING OFFICIAL.
3. DEFERRED SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO:
   a. PRE-MANUFACTURED WOOD TRUSSES, BLOCKING, BRIDGING, BRIDGING CONNECTIONS, TRUSS HANGERS, AND RELATED COMPONENTS.
   b. STRUCTURAL STEEL STAIRS.
   c. SEISMIC BRACING OF ALL ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS WHERE REQUIRED BY ASCE 7-10 AND THE PROJECT CONTRACT DOCUMENTS.

Structural Sheet Index

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S103	ROOF FRAMING PLANS
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S202	DETAILS
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S204	DETAILS
S301	DETAILS
S401	SCHEMATIC REFERENCE

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08/09/18

#	Date	Revision

CONSTRUCTION DOCUMENTS

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ARW PROJ. #: 18121
CHECKED BY: T. Dye
DRAWN BY: D.Bartelson
DATE: 08.09.18

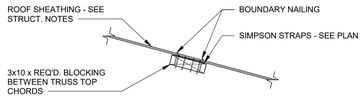
STRUCTURAL NOTES

S001

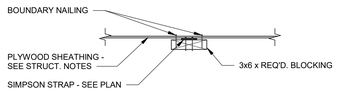
COIL STRAP LAP SPLICE SCHEDULE

ITEM #	LAP SPLICE: MIN. # FASTENER PER SPLICE	MIN. LAP SPLICE LENGTH: STACKED	MIN. LAP SPLICE LENGTH: SIDE-BY-SIDE	COMMENTS
CMST 12	25-16d	22"	33"	
	30-10d	27"	39"	
CMST 14	18-16d	16"	26"	
	21-10d	19"	30"	
CMSTC 16	13-16d	11"	20"	
	15-10d	12"	20"	
CS 14	26-10d	--	15"	
	30-8d	--	16"	
CS 16	20-10d	--	11"	
	22-8d	--	13"	
CS 18	16-10d	--	9"	
	18-8d	--	11"	
CS 20	12-10d	--	6"	
	14-8d	--	9"	
CS 22	10-10d	--	7"	
	12-8d	--	6"	

NOTES:
1. NO STRAP MODIFICATION IS ALLOWED.
2. SPLICE MUST MEET BOTH THE MINIMUM NUMBER OF FASTENERS AND THE MINIMUM SPLICE LENGTH.
3. ALL NAIL SIZES LISTED ARE COMMON NAILS.
4. 10d COMMON MAY BE REPLACED BY 16d SINKERS. NO OTHER NAIL SUBSTITUTION IS ALLOWED FOR LAP SPLICES.
5. IF WOOD SPLITTING OCCURS, USE EVERY OTHER NAIL HOLE AND LENGTHEN SPLICE TO ACCOMMODATE THE REQUIRED NUMBER OF NAILS.
6. ALL STRAPS TO BE INSTALLED UNDER SHEATHING.
7. TWO OPTIONS EXIST. FOR COIL STRAP LAPPING.
   a. LAP ONE STRAP STACKED ON TOP OF THE OTHER STRAP
   b. INSTALL STRAPS SIDE BY SIDE - TO DO THIS A LARGER BLOCK MUST BE USED. THE BLOCK MUST BE ON SOLID PIECE.
8. STRAP TO BE INSTALLED TIGHT.



SIDE-BY-SIDE LAP



STACKED LAP

TABLE OF EQUIVALENT FASTENERS

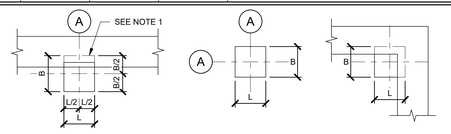
STAPLES, NAILS AND T-NAILS (VALID FOR LATERAL LOADS ONLY)

COMMON NAIL SPACING		EQUIV. SPACING OF APPROVED FASTENERS: STAPLES			NAILS & T-NAILS	
GAUGE		16	15	14	.113	.131
PENETRATION		1"	1"	1"	1 1/4"	1 1/2"
6d AT:	4"	3 1/2"	4"	5"	4"	5"
	6"	5"	6"	7"	6"	7 1/2"
	8"	6 1/2"	8"	9 1/2"	8"	10"
	10"	8 1/2"	10"	12"	10"	12"
	12"	10"	12"	14 1/2"	12"	14 1/2"
8d AT:	4"	2 1/2"	3 1/2"	4"	3 1/2"	4"
	6"	4"	5"	6"	5"	6"
	8"	5 1/2"	6 1/2"	8"	6 1/2"	8"
	10"	6 1/2"	8"	10"	8"	10"
	12"	8"	10"	12"	9 1/2"	12"
10d AT:	4"	2"	2 1/2"	3"	2 1/2"	3 1/2"
	6"	3 1/2"	4"	5"	4"	5"
	8"	4 1/2"	5 1/2"	6 1/2"	5 1/2"	7"
	10"	5 1/2"	7"	8"	6 1/2"	8 1/2"
	12"	6 1/2"	8"	9 1/2"	8"	10"

NOTES:
PENETRATION IS THE DEPTH OF EMBEDMENT OF THE STAPLE OR NAIL INTO THE MAIN MEMBER REQ'D TO ATTAIN ITS FULL CAPACITY (SHEAR VALUE) FOR LATERAL LOADING.

CONCRETE PIER SCHEDULE

MARK	SIZE (B x L)	VERT REINF. (NOTE 2)	TIES	COMMENTS
CP1824	24" x 18"	(10) #6	#3 @ 8"o.c.	(3) TIES IN TOP 5"
				(3) TIES IN TOP 5"

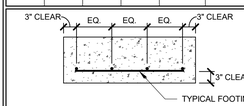


PIER AT WALL | ISOLATED PIER | PIER AT CORNER

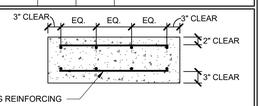
NOTES:
1. WHERE T.O. PIER IS LOWER THAN T.O. FOUND. WALL, BLOCK OUT FOUND. WALL AS REQ'D FOR BASE PLATE CLEARANCE.
2. VERTICAL PIER REINFORCING TO BE UNIFORMLY SPACED AROUND PERIMETER. 3" CLEAR FROM OUTSIDE OF PIER
3. TOP OF PIER ELEVATION IS 99'-0" EXCEPT WHERE OTHERWISE NOTED ON PLANS THUSLY.

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	LENGTHWISE REINF. NO.	LENGTHWISE REINF. SIZE	CROSSWISE REINF. NO.	CROSSWISE REINF. SIZE	CROSSWISE REINF. SPA.	REMARKS
FC2	2'-0"	CONT.	12"	(2)	#5	--	--	--	
FC2.5	2'-6"	CONT.	12"	(3)	#5	--	--	--	
FS5	5'-0"	5'-0"	24"	(5)	#5	(5)	#5	--	TOP & BOTTOM
F6	6'-0"	6'-0"	12"	(6)	#5	(6)	#5	--	



TYP. FOOTING SECTION



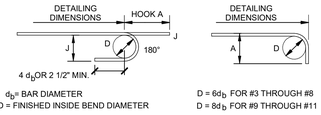
TYP. FOOTING SECTION W/ TOP & BOTTOM REINF.

LEGEND OF SYMBOLS AND ABBREVIATIONS

AB	=	ANCHOR BOLT
ABV	=	ABOVE
ARCH	=	ARCHITECT
BLW	=	BELOW
BN	=	BOUNDRY NAILING
BRB	=	BUCKLING RESTRAINED BRACE
BRBF	=	BUCKLING RESTRAINED BRACE FRAME
CJP	=	COMPLETE JOINT PENETRATION
CL	=	CENTERLINE
CMU	=	CONCRETE MASONRY UNIT
COL	=	COLUMN
CONC	=	CONCRETE
CP	=	CONCRETE PIER
DC	=	DEMAND CRITICAL
DIA / Ø	=	DIAMETER
DBA	=	DEFORMED BAR ANCHOR
DBE	=	DECK BEARING ELEVATION
ELEV	=	ELEVATION
EN	=	EDGE NAILING
EOD	=	EDGE OF DECK
FDN	=	FOUNDATION
FTG	=	FOOTING
FFE	=	FINISHED FLOOR ELEVATION
GB	=	CONCRETE GRADE BEAM
HSA	=	HEADED STUD ANCHOR
JBE	=	JOIST BEARING ELEVATION
KB	=	KICKER BRACE
MAX	=	MAXIMUM
MB	=	MASONRY BEAM
MC	=	MASONRY COLUMN
MECH	=	MECHANICAL
MEZZ	=	MEZZANINE
MIN	=	MINIMUM
MJ	=	MASONRY JAMB
MW	=	MASONRY WALL
NS, FS	=	NEAR SIDE, FAR SIDE
OAE	=	OR APPROVED EQUAL
OPP	=	OPPOSITE
PAF	=	POWDER ACTUATED FASTENER
PL	=	PLATE
REINF	=	REINFORCING
REQ'D	=	REQUIRED
SIM	=	SIMILAR
SSH	=	STEEL STUD HEADER
SSJ	=	STEEL STUD JAMB
SSS	=	STEEL STUD SILL
SSW	=	STEEL STUD WALL
TOB	=	TOP OF BEAM ELEVATION
TOC	=	TOP OF CONCRETE SLAB
TOF	=	TOP OF FOOTING
TOG	=	TOP OF GIRDER ELEVATION
TOM	=	TOP OF MASONRY
TOS	=	TOP OF STEEL ELEVATION
TYP	=	TYPICAL
UNO	=	UNLESS NOTED OTHERWISE

FOOTING MARK
TOP OF FOOTING ELEV.
SECTION MARK
SHEET NUMBER
TOP OF FOUNDATION WALL OR COLUMN PIER ELEV.
SHEAR WALL - SEE SCHEDULE
MIN. LENGTH OF SHEAR WALL
S S FOOTING STEP
DEPRESS FDN./WALL AND POUR FLOOR SLAB OVER AT CONCRETE FOUNDATION WALL
CONCRETE BEAM
HD POST 2x
HD - SIMPSON HOLD DOWN SIZE POST - SIZE OF END POST CONNECTED TO HOLD DOWN "A" - PLAN CONFIGURATION AT HOLDOWN AT FOUNDATION
ELEVATION
L FRAMING ANGLE SEE TYPICAL DETAIL
C FRAMING CHANNEL SEE TYPICAL DETAIL
L ITEMS, DETAILS, & SYSTEMS WHICH ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.
MOMENT RESISTING CONNECTIONS - SEE DETAIL
MOMENT RESISTING CANTILEVER CONNECTIONS - SEE DETAIL
KB KICKER BRACE

STANDARD HOOK & BEND SCHEDULE



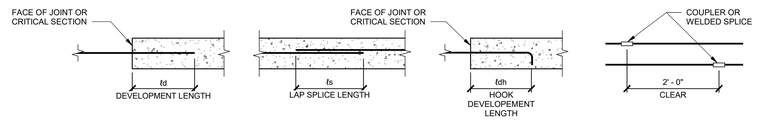
d_b= BAR DIAMETER
D = FINISHED INSIDE BEND DIAMETER

D = $6d_b$ FOR #3 THROUGH #8
D = $8d_b$ FOR #9 THROUGH #11

BAR SIZE	DIMENSION OF STANDARD 180-DEG HOOKS, ALL GRADES: A	J	D	DIMENSION OF STANDARD 90-DEG HOOKS, ALL GRADES: A	D
#3	5"	3"	2 1/4"	6"	2 1/4"
#4	6"	4"	3"	8"	3"
#5	7"	5"	3 3/4"	10"	3 3/4"
#6	8"	6"	4 1/2"	1'-0"	4 1/2"
#7	10"	7"	5 1/4"	1'-2"	5 1/4"
#8	11"	8"	6"	1'-4"	6"
#9	1'-3"	11 3/4"	9 1/2"	1'-7"	9 1/2"
#10	1'-5"	1'-1 1/4"	10 3/4"	1'-10"	10 3/4"
#11	1'-7"	1'-2 3/4"	12"	2'-0"	12"

2015 IBC CONC. REBAR LAP SPLICE SCHEDULE

FOR CONCRETE APPLICATIONS (ACI 318 - 14)



BAR LOCATION	CONCRETE: TYPE	CONCRETE: STRENGTH	CONCRETE REINFORCING & SPLICE LENGTHS (IN): BAR SIZE	#3			#4			#5			#6			#7			#8			#9		#10		#11		COMMENTS
				ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_{dh}	ℓ_d	ℓ_{dh}	ℓ_d	ℓ_{dh}	
VERT. WALL BARS, FILL ON METAL DECK	NWC	3000 PSI		17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	3000 PSI		17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30	
BEAM BOTTOM BARS, COLUMN BARS	NWC	3000 PSI		17	22	8	22	29	11	28	36	14	33	43	16	48	62	19	55	72	22	62	25	69	27	76	30	
FOOTING BOTTOM BARS	NWC	3000 PSI		12	16	8	14	18	8	17	22	10	20	26	12	29	38	13	33	43	15	37	17	42	19	46	30	
BEAM TOP BARS	NWC	3000 PSI		22	29	8	29	38	11	36	47	14	43	56	16	63	82	19	72	94	22	81	25	90	27	98	30	
SLAB ON GRADE	NWC	3000 PSI		12	16	8	14	18	8	17	22	10	20	26	12	32	42	13	42	55	15	53	17	69	19	76	30	

BAR LOCATION	CONCRETE: TYPE	CONCRETE: STRENGTH	CONCRETE REINFORCING & SPLICE LENGTHS (IN): BAR SIZE	#3			#4			#5			#6			#7			#8			#9		#10		#11		COMMENTS
				ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_s	ℓ_{dh}	ℓ_d	ℓ_{dh}	ℓ_d	ℓ_{dh}	ℓ_d	ℓ_{dh}	
VERT. WALL BARS, FILL ON METAL DECK	NWC	4500 PSI		14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	14	56	16	62	25	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4500 PSI		14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	14	56	16	62	25	
BEAM BOTTOM BARS, COLUMN BARS	NWC	4500 PSI		14	18	7	18	23	9	23	30	11	27	35	13	40	52	16	45	59	18	51	20	56	22	62	25	
FOOTING BOTTOM BARS	NWC	4500 PSI		12	16	7	12	16	6	14	18	8	17	22	9	24	31	11	27	35	13	31	14	34	16	37	25	
BEAM TOP BARS	NWC	4500 PSI		18	23	7	24	31	9	30	39	11	35	46	13	51	66	16	59	77	18	66	20	73	22	80	25	
SLAB ON GRADE	NWC	4500 PSI		12	16	7	12	16	6	14	18	8	17	22	9	27	35	11	34	44	13	44	14	56	16	62	25	

NOTES :
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS INDICATED ABOVE.
2. DEVELOPMENT LENGTHS SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.
3. WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.
4. SPLICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.

SPECIAL INSPECTION SCHEDULE [1, 2]

ESTABLISHED PER 2015 IBC SECTION 110 AND CHAPTER 17

ITEM	CONTINUOUS[3]	PERIODIC[3]	REFERENCE	COMMENTS
PRE-FAB CONSTRUCTION (IBC 1704.2)			REFERENCE NOTES P1 & P2	P1. SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION, PROVIDED THE FABRICATOR COMPLIES WITH IBC. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. SPECIAL INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. (SEE NOTE 2). P2.
CONCRETE CONSTRUCTION (IBC 1705.3)			SEE IBC TABLE 1705.3 - REF. NOTE C1	C1. SPECIAL INSPECTION IS NOT REQUIRED FOR CONC. ISOLATED SPREAD FOOTINGS, CONTINUOUS FOOTINGS, NON-STRUCTURAL SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS, AND SIDEWALKS PROVIDED THE REQUIREMENTS OF IBC 1705.3 ARE MET. C2. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. C3. PERFORM AIR, SLUMP AND TEMP. TESTS WHEN CONCRETE SAMPLES ARE CAST. C4. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR VERIFICATION OF IN-SITU CONCRETE STRENGTH FOR POST-TENSIONED CONCRETE PRIOR TO TENSIONING TENDONS OR REMOVING SHORING OR FORMS. C5. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT. AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
REINFORCING STEEL PLACEMENT		●		
WELDING OF REINFORCING STEEL	●	●	REFERENCE NOTE C2	
EMBEDDED BOLTS & PLATES	●			
VERIFYING REQUIRED DESIGN MIX		●		
CONCRETE PLACEMENT / SAMPLING	●		REFERENCE NOTE C3	
CURING TEMPERATURE / TECHNIQUES		●		
VERIFICATION OF IN-SITU STRENGTH		●	REFERENCE NOTE C4	
EPOXY / EXPANSION ANCHOR PLACEMENT	●	●	REFERENCE NOTE C5	
WOOD (IBC 1705.5)				W.1. WOOD STRUCTURAL PANEL SHEATHING SHALL BE INSPECTED TO ASCERTAIN THAT GRADE AND THICKNESS ARE IN COMPLIANCE WITH APPROVED BUILDING PLANS. NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES, AND SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS SHALL ALSO BE INSPECTED AND VERIFIED FOR COMPLIANCE WITH APPROVED BUILDING PLANS. W.2. SPECIAL INSPECTION IS NOT REQUIRED FOR WOOD SHEAR WALLS, WOOD DIAPHRAGMS, INCLUDING NAILING, & BOLTING, AND OTHER FASTENING TO OTHER COMPONENTS WHERE THE SPACING OF THE SHEATHING FASTENERS IS GREATER THAN 4"o.c.
HIGH LOAD DIAPHRAGMS (ROOF / FLOOR)		●	REFERENCE NOTE W1	
SITE-BUILT ASSEMBLIES		●		
SHEAR WALL & DIAPHRAGM NAILING		●	REFERENCE NOTE W2	
DRAG STRUTS		●		
BRACES & SHEAR PANELS		●		
HOLD-DOWNS		●		
GLUING OPERATIONS	●			
SOILS (IBC 1705.6)			REFERENCE NOTE F1	F1. SPECIAL INSPECTION OF SOILS SHALL REFERENCE THE APPROVED SOILS REPORT TO DETERMINE COMPLIANCE. F2. WHERE SOILS REPORT IS NOT PROVIDED SPECIAL INSPECTIONS ARE REQUIRED TO VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D 1557.
VERIFY ADEQUATE MATERIALS BELOW FOOTINGS		●	REFERENCE NOTE F1	
EXCAVATIONS EXTEND TO PROPER DEPTH AND REACH PROPER MATERIAL		●	REFERENCE NOTE F2	
CLASSIFY & TEST CONTROLLED FILL MATERIALS		●	REFERENCE NOTE F2	
PERFORM MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	●		REFERENCE NOTE F1	
PROPERLY PREPARED SITE AND SUB-GRADE PRIOR TO FILL.		●	REFERENCE NOTE F1	

GENERAL SPECIAL INSPECTION NOTES :

1. THE ITEMS MARKED WITH A "●" IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER PRIOR TO COMPLETION OF THAT PHASE OF WORK. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT.
3. CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK. (IBC SECTION 1702)

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NATIONAL ABILITY CENTER
RECREATION CENTER
1000 Ability Way, Park City, UT 84060

No. 374996 Troy M. Dye STATE OF UTAH 08/09/18

#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 00000.00
ARW PROJ. #: 18121
CHECKED BY: T. Dye
DRAWN BY: D.Bartelson
DATE: 08.09.18

SCHEDULES

S002

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STRUCTURAL STEEL SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2015 IBC SECTION 1705.2.1

INSPECTION TASKS PRIOR TO WELDING (TABLE N5.4-1)	FABRICATOR QUALITY CONTROL		SPECIAL INSPECTOR QUALITY ASSURANCE	
	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	●		●	
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	●		●	
MATERIAL IDENTIFICATION (TYPE / GRADE)		●		●
WELDER IDENTIFICATION SYSTEM [1]		●		●
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) * JOINT PREPARATION * DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) * CLEANLINESS (CONDITION OF STEEL SURFACES) * TACKING (TACK WELD QUALITY AND LOCATION) * BACKING TYPE AND FIT (IF APPLICABLE)		●		●
CONFIGURATION AND FINISH OF ACCESS HOLES		●		●
FIT-UP OF FILLET WELDS * DIMENSIONS (ALIGNMENT, GAPS AT ROOT) * CLEANLINESS (CONDITION OF STEEL SURFACES) * TACKING (TACK WELD QUALITY AND LOCATION)		●		●
CHECK WELDING EQUIPMENT		●		

[1] *THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.*

INSPECTION TASKS DURING WELDING (TABLE N5.4-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
USE OF QUALIFIED WELDERS		●		●
CONTROL AND HANDLING OF WELDING CONSUMABLES * PACKAGING * EXPOSURE CONTROL		●		●
NO WELDING OVER CRACKED TACK WELDS		●		●
ENVIRONMENTAL CONDITIONS * WIND SPEED WITHIN LIMITS * PRECIPITATION AND TEMPERATURE		●		●
WPS FOLLOWED * SETTINGS ON WELDING EQUIPMENT * TRAVEL SPEED * SELECTED WELDING MATERIALS * SHIELDING GAS TYPE / FLOW RATE * PREHEAT APPLIED * INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX) * PROPER POSITION (F, V, H, OH)		●		●
WELDING TECHNIQUES * INTERPASS AND FINAL CLEANING * EACH PASS WITHIN PROFILE LIMITATIONS * EACH PASS MEETS QUALITY REQUIREMENTS		●		●

INSPECTION TASKS AFTER WELDING (TABLE N5.4-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDS CLEANED		●		●
SIZE, LENGTH AND LOCATION OF WELDS	●		●	
WELDS MEET VISUAL ACCEPTANCE CRITERIA * CRACK PROHIBITION * WELD / BASE-METAL FUSION * CRATER CROSS SECTION * WELD PROFILES * WELD SIZE * UNDERCUT * POROSITY	●		●	
ARC STRIKES	●		●	
K-AREA [1]	●		●	
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	●		●	
REPAIR ACTIVITIES	●		●	
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	●		●	

[1] *WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75mm) OF THE WELD)*

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. QC AND QA INSPECTORS SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-10 CHAPTER N4.
6. NONDESTRUCTIVE TESTING PERSONNEL SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-10 CHAPTER N4.3.
7. NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL COMPLY WITH AISC 360-10 CHAPTER N5a AND b.
8. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. FOR STRUCTURAL STEEL, ALL PROVISIONS OF AWS D1.1 / D1.1M STRUCTURAL WELDING CODE - STEEL FOR STATICALLY LOADED STRUCTURES SHALL APPLY.
9. THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED BY QA USING MT OR PT, WHEN THE FLANGE THICKNESS EXCEEDS 2 IN. (50mm) FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 2 IN. (50mm) FOR BUILT-UP SHAPES. ANY CRACK SHALL BE DEEMED UNACCEPTABLE REGARDLESS OF SIZE OR LOCATION.
10. WHEN REQUIRED BY APPENDIX 3, TABLE A-3.1, WELDED JOINTS REQUIRING WELD SOUNDNESS TO BE ESTABLISHED BY RADIOGRAPHICS OR ULTRASONIC INSPECTION SHALL BE TESTED BY QA AS PRESCRIBED. REDUCTION IN THE RATE OF UT IS PROHIBITED.
11. REDUCTION OF RATE OF ULTRASONIC TESTING - THE RATE OF UT IS ONLY PERMITTED TO BE REDUCED IF APPROVED BY THE EOR AND THE AHJ PER AISC 360-10 CHAPTER N5e.
12. FOR STRUCTURES IN RISK CATEGORY II, WHERE THE INITIAL RATE FOR UT IS 10%, THE NDT RATE FOR AN INDIVIDUAL WELDER OR WELDING OPERATOR SHALL BE INCREASED TO 100% SHOULD THE REJECT RATE, THE NUMBER OF WELDS CONTAINING UNACCEPTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED, EXCEEDS 5% OF THE WELDS TESTED FOR THE WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEAST 20 COMPLETED WELDS FOR A JOB SHALL BE MADE PRIOR TO IMPLEMENTING SUCH AN INCREASE. WHEN THE REJECT RATE FOR THE WELDER OR WELDING OPERATOR, AFTER A SAMPLING OF AT LEAST 40 COMPLETED WELDS, HAS FALLEN TO 5% OR LESS, THE RATE OF UT SHALL BE RETURNED TO 10%. FOR EVALUATING THE REJECT RATE OF CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS 1 IN. (25mm) OR LESS, EACH 12 IN. (300mm) INCREMENT OR FRACTION THEREOF SHALL BE CONSIDERED AS ONE WELD. FOR EVALUATING THE REJECT RATE ON CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS GREATER THAN 1 IN. (25mm), EACH 6 IN. (150mm) OF LENGTH OR FRACTION THEREOF SHALL BE CONSIDERED ON WELD.
13. ALL NDT PERFORMED SHALL BE DOCUMENTED. FOR SHOP FABRICATION, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR FIELD WORK, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY LOCATION IN THE STRUCTURE, PIECE MARK, AND LOCATION IN THE PIECE. WHEN A WELD IS REJECTED ON THE BASIS OF NDT, THE NDT RECORD SHALL INDICATE THE LOCATION OF THE DEFECT AND THE BASIS OF REJECTION
14. DEMAND CRITICAL WELDS SHALL MEET THE PROVISION FOUND IN AISC 341-10 AND WELDING METHODS, PROCEDURES AND QUALITY CONTROL SHALL COMPLY WITH AWS D1.1 AND THE FOLLOWING:
    a. ARC STRIKES, GOUGES AND OTHER IMPERFECTIONS WITHIN OR ADJACENT TO THE JOINT, SHALL BE REPAIRED OR REMOVED.
    b. PREHEAT AND INTER-PASS REQUIREMENTS AS OUTLINED IN SECTION 3.5.
    c. UNREPAIRED CRACKS, GOUGES, AND NOTCHES WILL NOT BE PERMITTED IN THE JOINT AREA.
    d. USE ELECTRODES WITH CHARPY V-NOTCH ABSORBED ENERGY EQUAL TO OR GREATER THAN 20 FT-LBS AT 20 DEGREES FAHRENHEIT UNDER AWS A5 CLASSIFICATION TEST METHODS, AND 40 FT-LBS AT 70 DEGREES FAHRENHEIT USING TEST PROCEDURES PRESCRIBED IN APPENDIX X OF AISC 358. ACCEPTABLE ELECTRODES INCLUDE E70TG-K2, E71 T-1.

INSPECTION TASKS PRIOR TO BOLTING (TABLE N5.6-1)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		●	●	
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		●		●
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		●		●
PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL		●		●
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		●		●
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	●			●
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		●		●

INSPECTION TASKS DURING BOLTING (TABLE N5.6-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		●		●
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		●		●
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		●		●
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		●		●

INSPECTION TASKS AFTER BOLTING (TABLE N5.6-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	●		●	

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. FOR SNUG-TIGHT JOINTS, PRE-INSTALLATION VERIFICATION TESTING AS SPECIFIED IN TABLE N5.6-1 AND MONITORING OF THE INSTALLATION PROCEDURES AS SPECIFIED IN TABLE N5.6-2 ARE NOT APPLICABLE. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS IN SNUG-TIGHT JOINTS.
6. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT METHOD, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
7. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE CALIBRATED WRENCH METHOD OR THE TURN-OF-NUT METHOD WITHOUT MATCHMARKING, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI SHALL BE ENGAGED IN THEIR ASSIGNED INSPECTION DUTIES DURING INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
8. OBSERVATION OF BOLTING OPERATIONS SHALL BE THE PRIMARY METHOD USED TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP INCORPORATED IN CONSTRUCTION ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE PROVISIONS OF THE RCSC SPECIFICATION.

INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT (TABLE N6.1)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
PLACEMENT AND INSTALLATION OF STEEL DECK	●		●	
PLACEMENT AND INSTALLATION OF STEEL STUD ANCHORS	●		●	
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	●		●	

NOTES

1. O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. P - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. FOR THOSE ITEMS FOR QUALITY CONTROL (QC) THAT CONTAIN AN OBSERVE DESIGNATION, THE QC INSPECTION SHALL BE PERFORMED BY THE ERECTOR'S QUALITY CONTROL INSPECTOR (QCI).
6. FOR WELDING OF STEEL HEADED STUD ANCHORS, THE PROVISIONS OF AWS D1.1 / D1.1M, APPLY.
7. FOR WELDING OF STEEL DECK, OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. ALL APPLICABLE PROVISIONS OF AWS D1.3 / D1.3M, STRUCTURAL WELDING CODE - SHEET STEEL, SHALL APPLY. DECK WELDING INSPECTION SHALL INCLUDE VERIFICATION OF THE WELDING CONSUMABLES, WELDING PROCEDURE SPECIFICATIONS AND QUALIFICATIONS OF WELDING PERSONNEL PRIOR TO THE START OF THE WORK, OBSERVATIONS OF THE WORK IN PROGRESS, AND A VISUAL INSPECTION OF ALL COMPLETED WELDS. FOR STEEL DECK ATTACHED BY FASTENING SYSTEMS OTHER THAN WELDING, INSPECTION SHALL INCLUDE VERIFICATION OF THE FASTENERS TO BE USED PRIOR TO THE START OF THE WORK, OBSERVATIONS OF THE WORK IN PROGRESS TO CONFIRM INSTALLATION IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND A VISUAL INSPECTION OF THE COMPLETED INSTALLATION.

GENERAL STEEL SPECIAL INSPECTION NOTES :

1. QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT. THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE FABRICATOR.
2. QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE. THE QAI SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE ERECTOR.
3. WHERE A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA, IT IS PERMITTED TO COORDINATE THE INSPECTION FUNCTION BETWEEN THE QCI AND QAI SO THAT THE INSPECTION FUNCTIONS ARE PERFORMED BY ONLY ONE PARTY. WHERE QA RELIES UPON INSPECTION FUNCTIONS PERFORMED BY QC, THE APPROVAL OF THE ENGINEER OF RECORD AND THE AUTHORITY HAVING JURISDICTION IS REQUIRED.
4. THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS, SUCH AS PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE ERECTION DRAWINGS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
5. THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF THE CONCRETE.
6. THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
7. QUALITY ASSURANCE (QA) INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING (NDT), MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA. NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP MAY BE PERFORMED BY THAT FABRICATOR WHEN APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AGENCY SHALL REVIEW THE FABRICATOR'S NDT REPORTS.
8. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE FABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AT COMPLETION OF ERECTION, THE APPROVED ERECTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
9. IDENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, SHALL BE PERMITTED AT ANY TIME DURING THE PROGRESS OF THE WORK. HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE INSPECTOR OF THE OBLIGATION FOR TIMELY, IN-SEQUENCE INSPECTIONS. NONCONFORMING MATERIAL AND WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FABRICATOR OR ERECTOR, AS APPLICABLE.
10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINED BY THE ENGINEER OF RECORD.
11. CONCURRENT WITH THE SUBMITTAL OF SUCH REPORTS TO THE AHJ, EOR OR OWNER, THE QA AGENCY SHALL SUBMIT TO THE FABRICATOR AND ERECTOR:
    (1) NONCONFORMANCE REPORTS
    (2) REPORTS OF REPAIR, REPLACEMENT OR ACCEPTANCE OF NONCONFORMING ITEMS.

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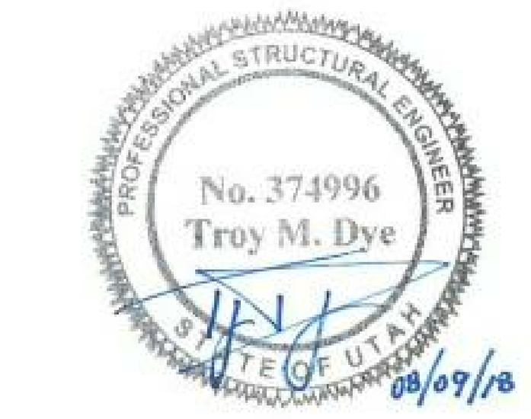


#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 00000.00
ARW PROJ. #: 18121
CHECKED BY: T. Dye
DRAWN BY: D.Bartelson
DATE: 08.09.18

SCHEDULES

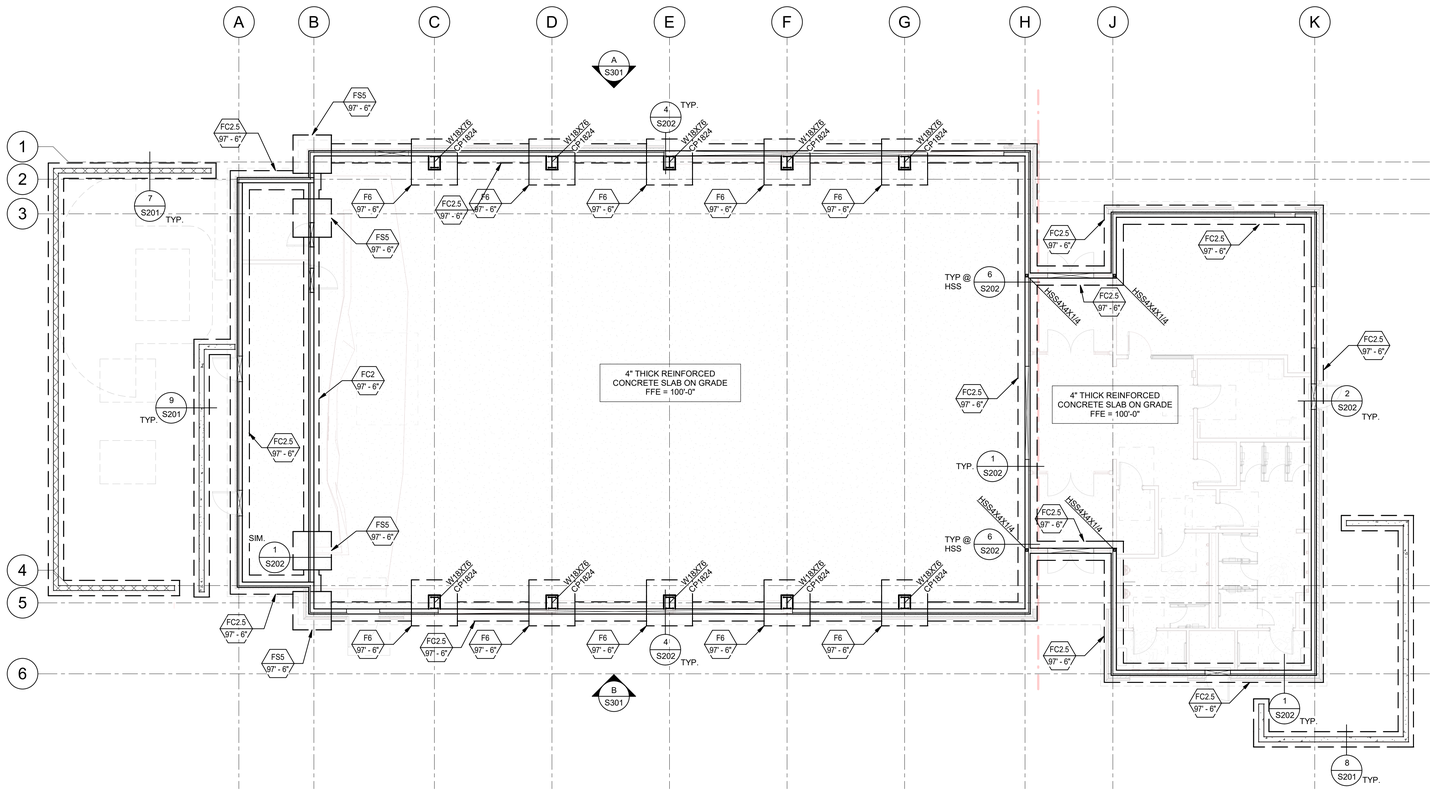
S003

FOOTING & FOUNDATION NOTES :

1. SEE SHEET S001 FOR GENERAL STRUCTURAL NOTES.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL WHICH HAS BEEN PREPARED FOR THE BEARING PRESSURE SHOWN IN THE STRUCTURAL NOTES.
3. VERIFY ALL DIMENSIONS WITH DRAWINGS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOUND.
4. SEE SHEET S001 FOR FOOTING SCHEDULE.
5. PROVIDE DOWELS IN FOOTINGS / FOUNDATIONS TO MATCH VERTICAL WALL REINFORCING U.N.O.
6. SEE SHEET S201 FOR TYPICAL FOOTING AND FOUNDATION DETAILS.
7. ALL EXTERIOR WALL FOOTINGS TO BEAR A MINIMUM DIMENSION BELOW EXTERIOR GRADE AS NOTED IN GENERAL STRUCTURAL NOTES.
8. FOUNDATION WALLS ARE DESIGNED AND DETAILED FOR THE COMPLETED CONDITION. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. BACKFILLED WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION AND BACKFILLING TO PRODUCE PLUMB AND TRUE FINISHED WALLS.
9. ALL ANCHORS, HOLD-DOWNS, ANCHOR BOLTS, DOWELS, EMBEDDED ITEMS, ETC. SHALL BE HELD IN PLACE PRIOR TO AND DURING CONCRETE AND/OR GROUT PLACEMENT.
10. COORDINATE ALL FOOTING DEPTHS (INTERIOR AND EXTERIOR) WITH DRAINS, CONDUITS, ETC. THAT MAY INTERFERE WITH FOOTINGS.

CONCRETE SLAB NOTES :

1. SLAB ON GRADE SHALL BE 4" THICK CONCRETE U.N.O. SLAB SHALL BE UNDERLAIN BY FREE DRAINING MATERIAL AS PRESCRIBED IN THE SOILS REPORT.
2. SEE SHEET S201 FOR CONTROL AND CONSTRUCTION JOINT INFORMATION.



FOOTING AND FOUNDATION PLAN
SCALE : 1/8" = 1'-0"

A S101 NORTH

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DATE: 08.09.18

FOOTING AND FOUNDATION PLAN

S101

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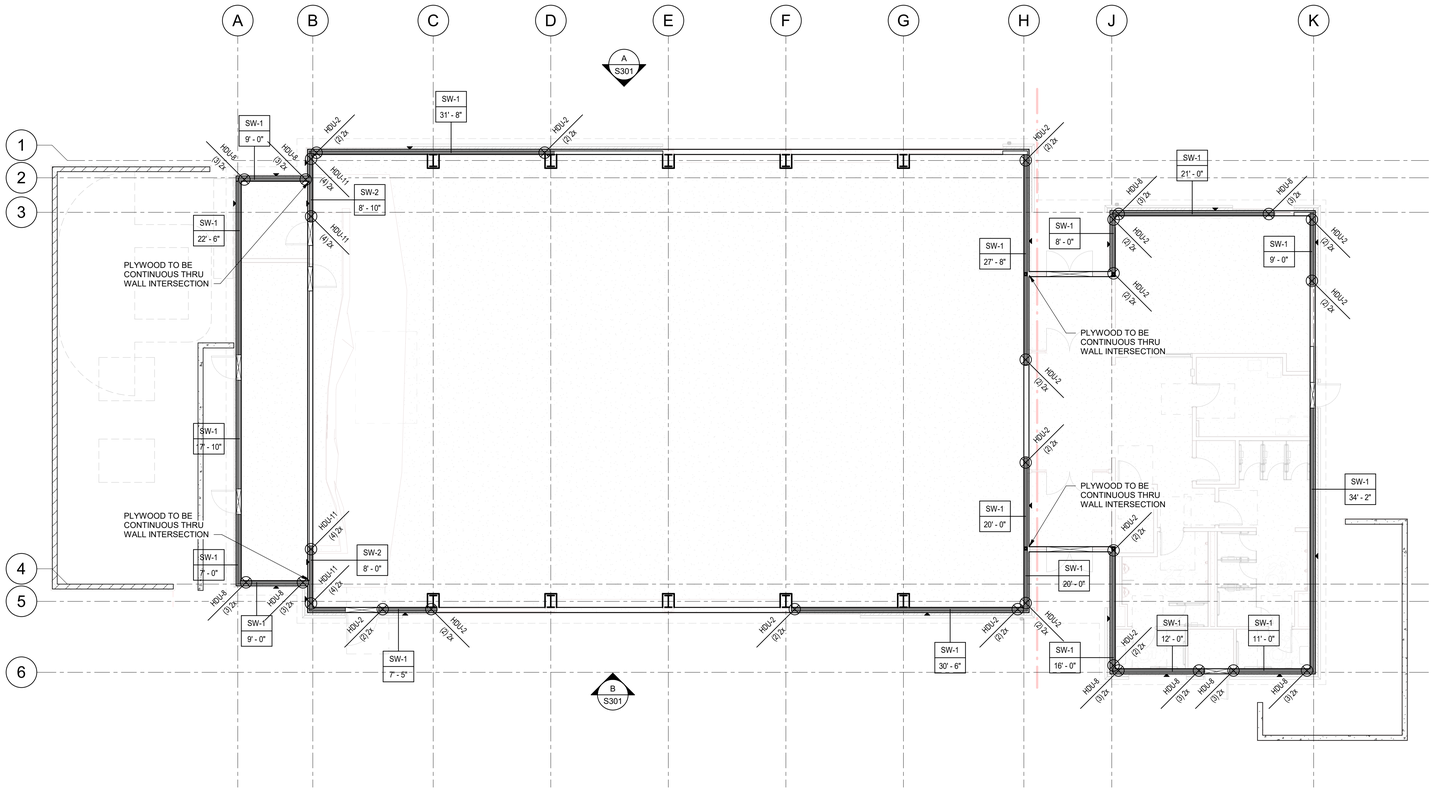
WOOD FRAMING NOTES:

1. FOR ROOF SHEATHING AND NAILING REQUIREMENTS, SEE STRUCTURAL NOTES SHEET S001.
2. SHEAR WALLS ARE INDICATED ON THIS SHEET. SEE THE SHEAR WALL SCHEDULE FOR SHEAR WALL ATTACHMENTS.
3. AT TOP PLATE SPLICE, LAP 6'-0" MIN. AND CONNECT WITH MIN (20) 16d COMMON NAILS.
4. U.N.O., ALL EXTERIOR WALLS, INTERIOR BEARING WALLS AND SHEAR WALLS SHALL BE SHEATHED WITH 1.75"x5.5" LVL 2.0 STUDS @ 16"o.c.. OTHER WALLS TO BE AS PER ARCHITECTURAL DRAWINGS.
5. TYPICAL HEADERS WHERE NOT OTHERWISE INDICATED TO BE AS FOLLOWS:

UP TO 4'-0" OPENING	(3) 2x8
4'-1" TO 5'-6"	(3) 2x10
5'-7" TO 10'-0"	(3) 1.75" x 9.25" LVL
10'-1" TO 14'-0"	(3) 1.75" x 11.87" LVL

6. FOR TYPICAL TRIMMERS, WHERE NOT OTHERWISE INDICATED, SEE DETAIL 1/S203
7. FOR TYPICAL KING STUDS, WHERE NOT OTHERWISE INDICATED, SEE DETAIL 1/S203
8. SEE DETAIL 1/S204 FOR PLYWOOD ROOF SHEATHING LAYOUT.
9. CONTRACTOR SHALL ERECT AND MAINTAIN ADEQUATE TEMPORARY BRACING UNTIL ALL ROOF FRAMING AND ROOF DIAPHRAGM ATTACHMENTS ARE COMPLETE.
10. SEE DETAIL 2/S203 FOR ATTACHMENT OF NON-BEARING WALLS TO PRE-MANUFACTURED TRUSSES.



SHEAR WALL AND HOLDOWN PLAN

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

A S102

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CONSTRUCTION DOCUMENTS

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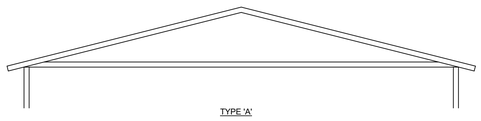
MAIN LEVEL SHEAR WALL & HOLDOWN PLAN

S102



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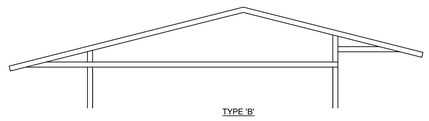

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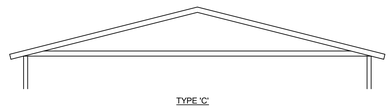


TYPE 'C'

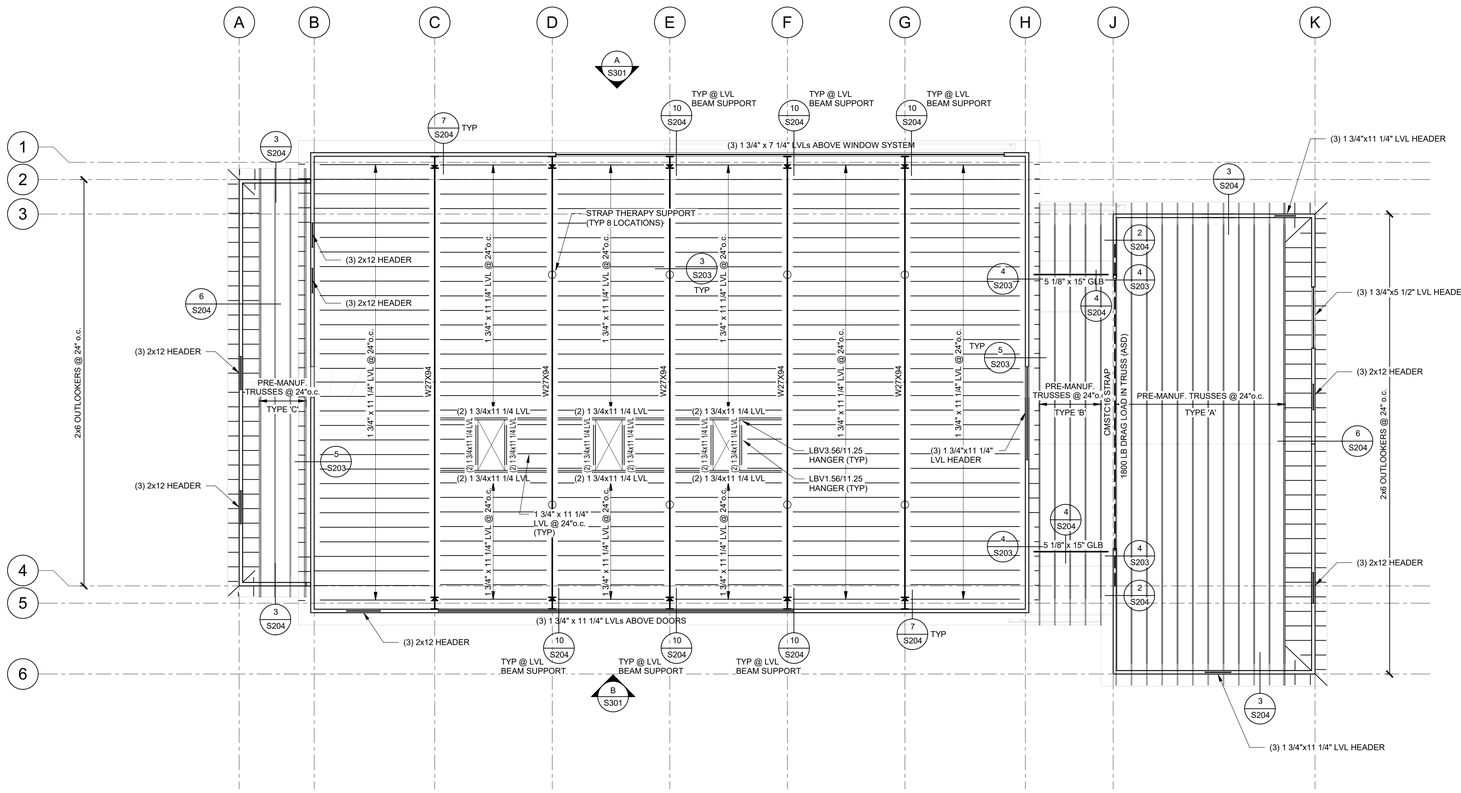
PRE-MANUFACTURED TRUSS NOTES :

1. PRE-MANUFACTURED TRUSSES SHALL BE DESIGNED PER ALL APPLICABLE LOAD COMBINATIONS AND LOAD CONFIGURATIONS AS REQUIRED BY THE GOVERNING CODE AND THE GENERAL STRUCTURAL NOTES :

   THE FOLLOWING CRITERIA SHALL BE USED IN DESIGN.

SNOW LOAD	=	PER GENERAL STRUCTURAL NOTES
LIVE LOAD	=	PER GENERAL STRUCTURAL NOTES
DEAD LOAD	=	10 PSF TOP CHORD 5 PSF BOTTOM CHORD
WIND LOAD	=	PER GENERAL STRUCTURAL NOTES
SNOW DRIFT	=	AS DETERMINED BY THE TRUSS MANUFACTURER. CONSIDER BALANCED, UNBALANCED AND DRIFT LOCATIONS

2. ALL TRUSSES SHALL BE DESIGNED FOR A 150 POUND POINT LOAD APPLIED AT ANY LOCATION ALONG THE BOTTOM CHORD. DESIGN ALL TRUSSES FOR WIND UPLIFT PER THE GOVERNING CODE WITH A 8 PSF DEAD LOAD.
3. ALL TRUSS TO TRUSS CONNECTIONS PROVIDED BY TRUSS MANUFACTURER. JACK TRUSSES SHALL BE ATTACHED TO HIP JACK TRUSSES WITH A METAL CONNECTOR DESIGNED AND DETAILED IN THE TRUSS SHOP DRAWINGS - AT A MINIMUM USE A SIMPSON LS90 @ EA. CONNECTION.
4. TRUSS MANUFACTURER SHALL COORDINATE AND INCLUDE ALL ADD LOADS AS INDICATED ON THE FRAMING PLAN(S).
5. COORDINATE DUCT RUNS AND TRUSS WEB CONFIGURATIONS WITH MECHANICAL & ARCH. DRAWINGS. DO NOT FIELD MODIFY TRUSSES TO ACCOMMODATE DUCTING AND OTHER MISCELLANEOUS EQUIPMENT WITHOUT WRITTEN DIRECTION FROM THE TRUSS MANUFACTURER OR STRUCTURAL ENGINEER.
6. INSTALL SIMPSON VGT HOLDOWNS WITH 1000 LBS CAPACITY @ EACH HIP JACK TRUSS & GIRDER TRUSS. TRUSS MANUF. TO VERIFY THAT THIS SIMPSON VGT HOLDOWN MEETS OR EXCEEDS REQUIRED UPLIFT CAPACITIES FOR ALL TRUSSES DESIGNED. TRUSS MANUF. RESPONSIBLE TO NOTIFY EOR IN WRITING WHERE UPLIFT CAPACITIES ARE EXCEEDED.
7. COORDINATE ALLOWABLE TRUSS DEFLECTIONS WITH ARCHITECT FOR DETAILING OF NON-BEARING STUD WALLS BELOW.
8. WHERE JACK TRUSSES AND HIP JACK TRUSSES OCCUR, TRUSS MANUFACTURER SHALL DESIGN THE FASCIA BOARD & ITS CONNECTION TO THE TRUSS AROUND THE PERIMETER OF THE ENTIRE BUILDING. THE FASCIA BOARD SHALL BE CAPABLE OF SUPPORTING GRAVITY LOADS (DEAD AND SNOW) AND WIND UPLIFT LOADS.
9. DESIGN DRAG TRUSSES FOR ASD LEVEL DRAG LOADS SHOWN ON THE PLANS.
10. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR REVIEW AS REQUIRED BY THE DEFERRED SUBMITTAL SECTION OF THE GENERAL STRUCTURAL NOTES.
11. WHERE INDICATED, BLOCK PANEL EDGES OF ROOF SHEATHING WITH FLAT 2X BLOCKING.



ROOF FRAMING PLAN

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

A S103 NORTH

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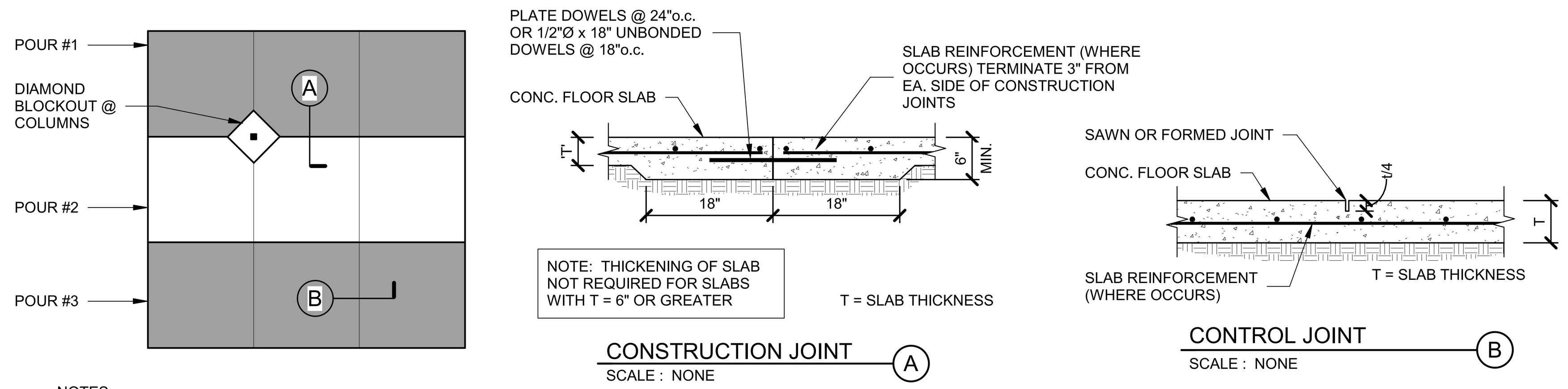
#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #:	00000.00
ARW PROJ. #:	18121
CHECKED BY:	T. Dye
DRAWN BY:	D.Bartelson
DATE:	08.09.18

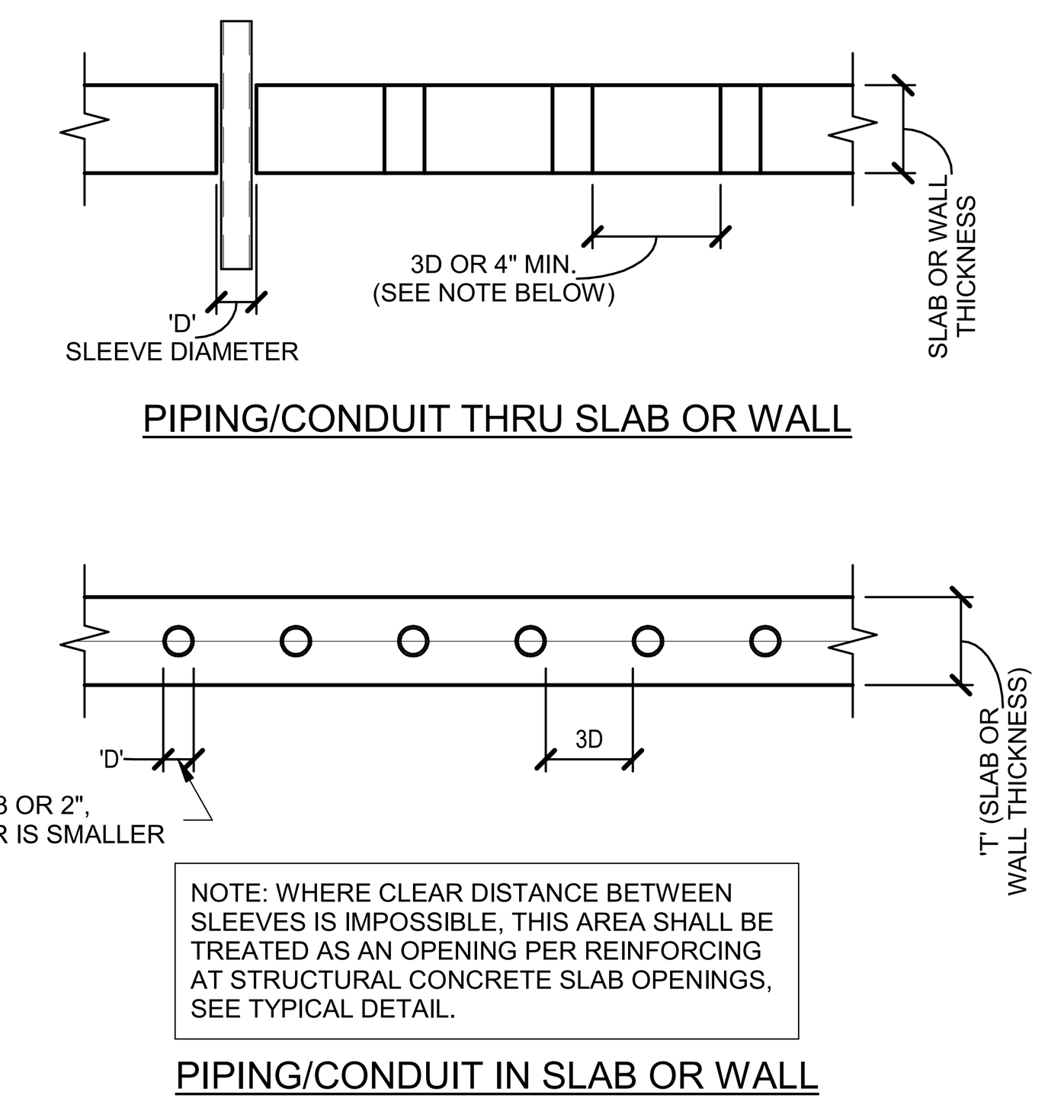
ROOF FRAMING PLANS

S103

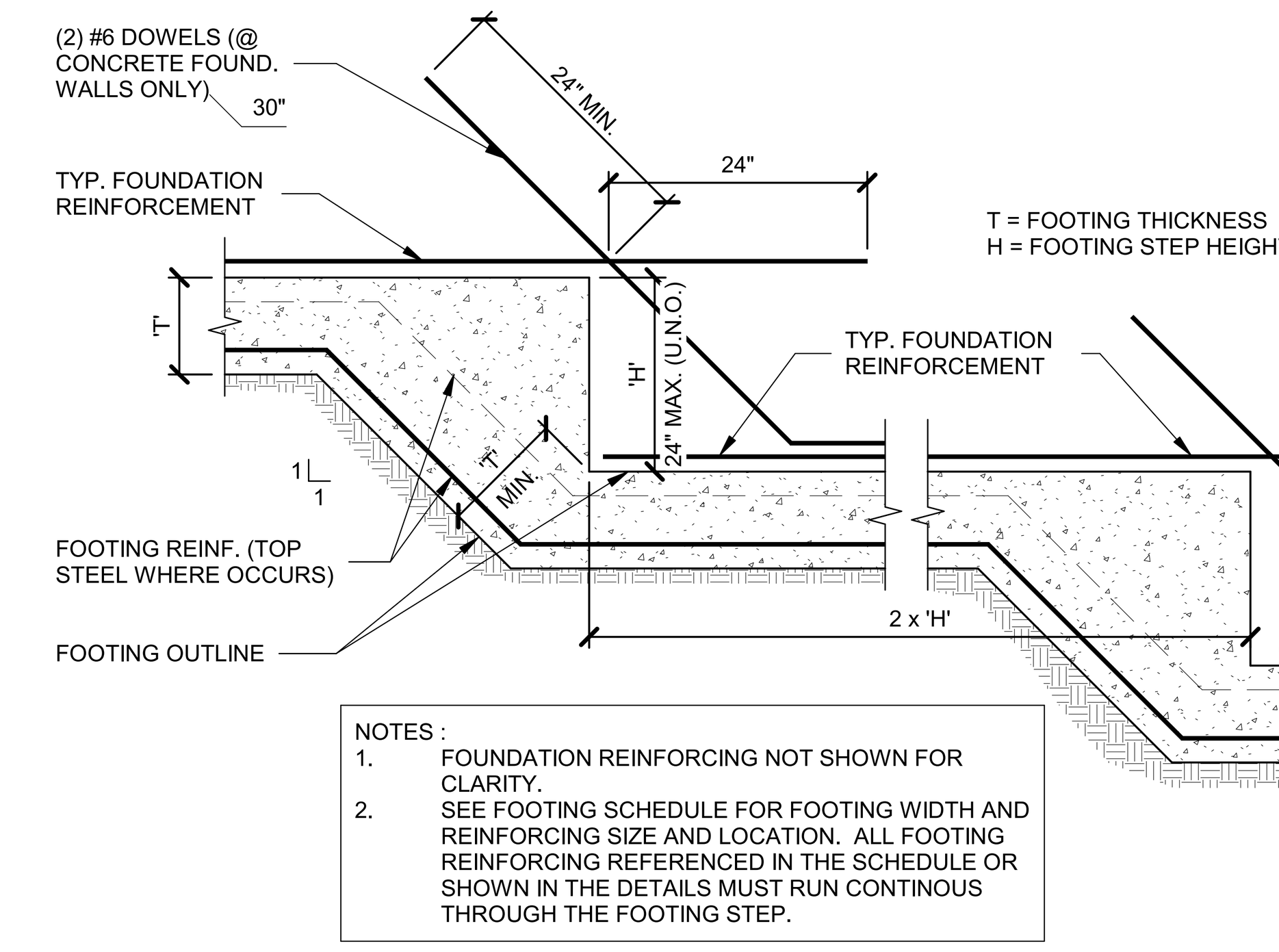


NOTES:
1. JOINTS SHALL OCCUR AT MAIN COLUMN/GRID LINES W/ 10'-0" MAX. SPACING BETWEEN JOINTS @ 4" SLABS; 12'-0" MAX. @ 5" SLABS, & 15'-0" MAX. @ 6" SLABS.
2. SEE PLAN FOR SLAB THICKNESS 'T' AND REINFORCING SIZE AND SPACING.

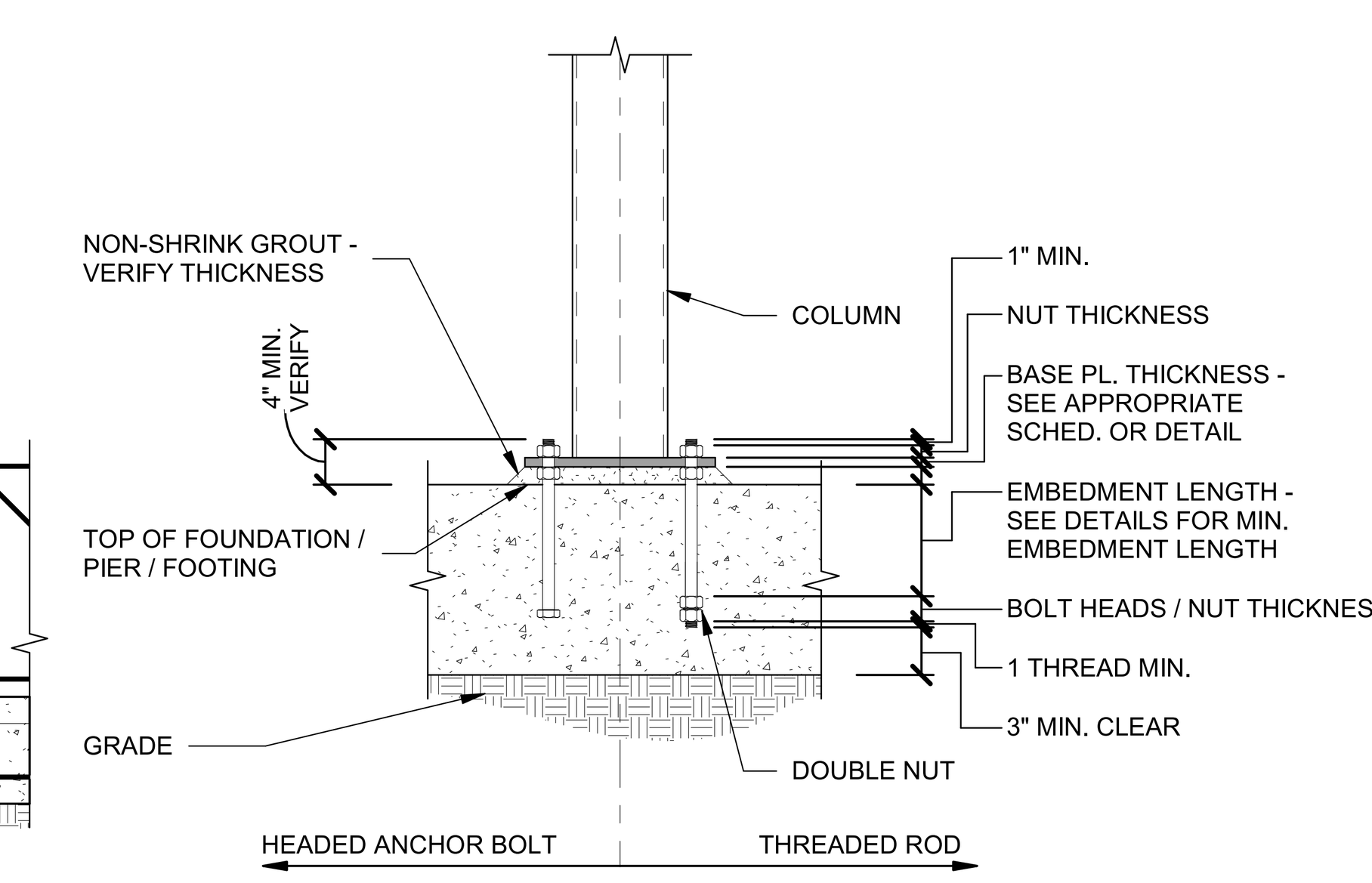
TYPICAL CONCRETE SLAB JOINTS
1 / S201
SCALE : 3/4" = 1'-0"



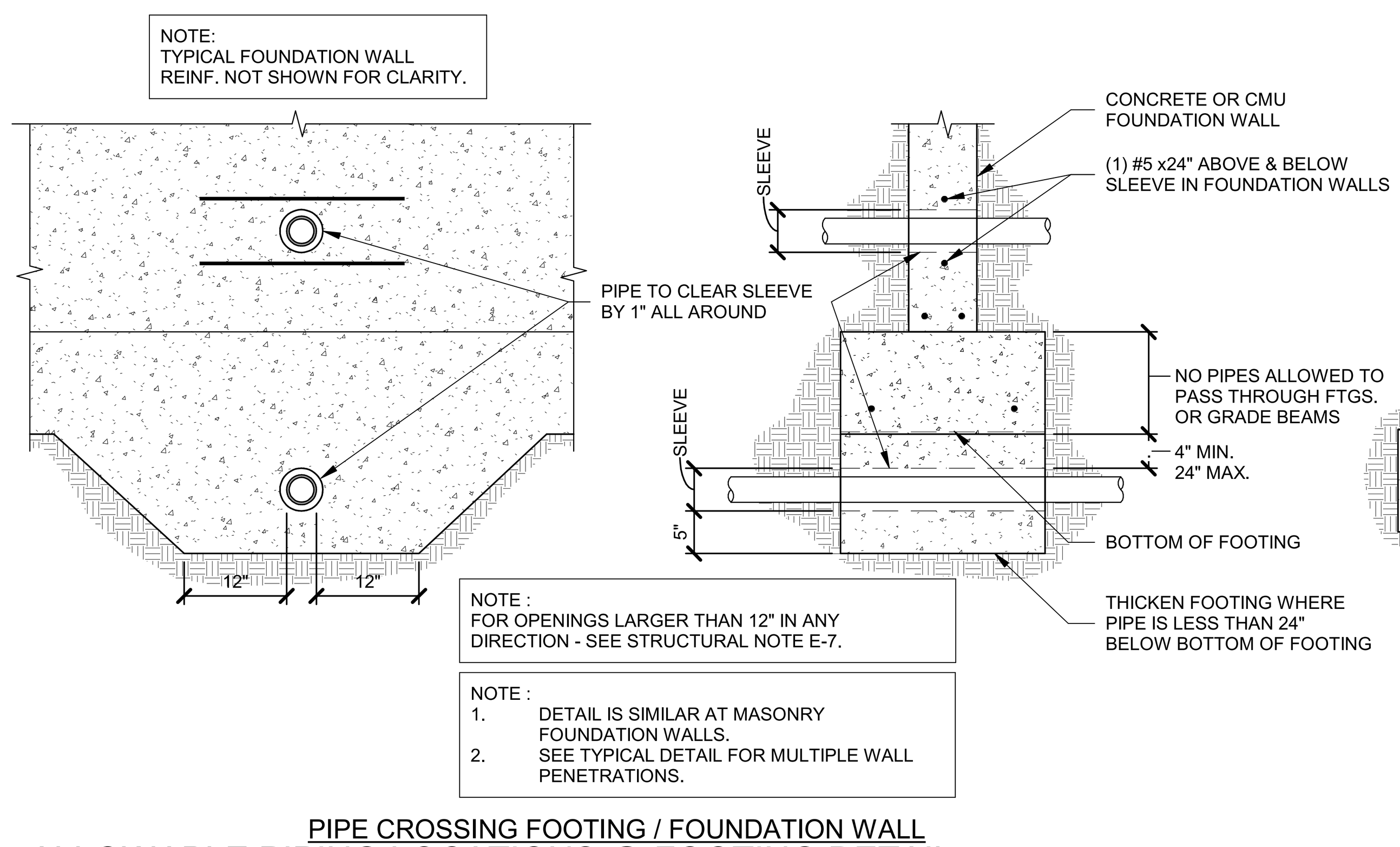
TYP. PIPING/CONDUIT AT SLAB OR WALL
2 / S201
SCALE : NONE

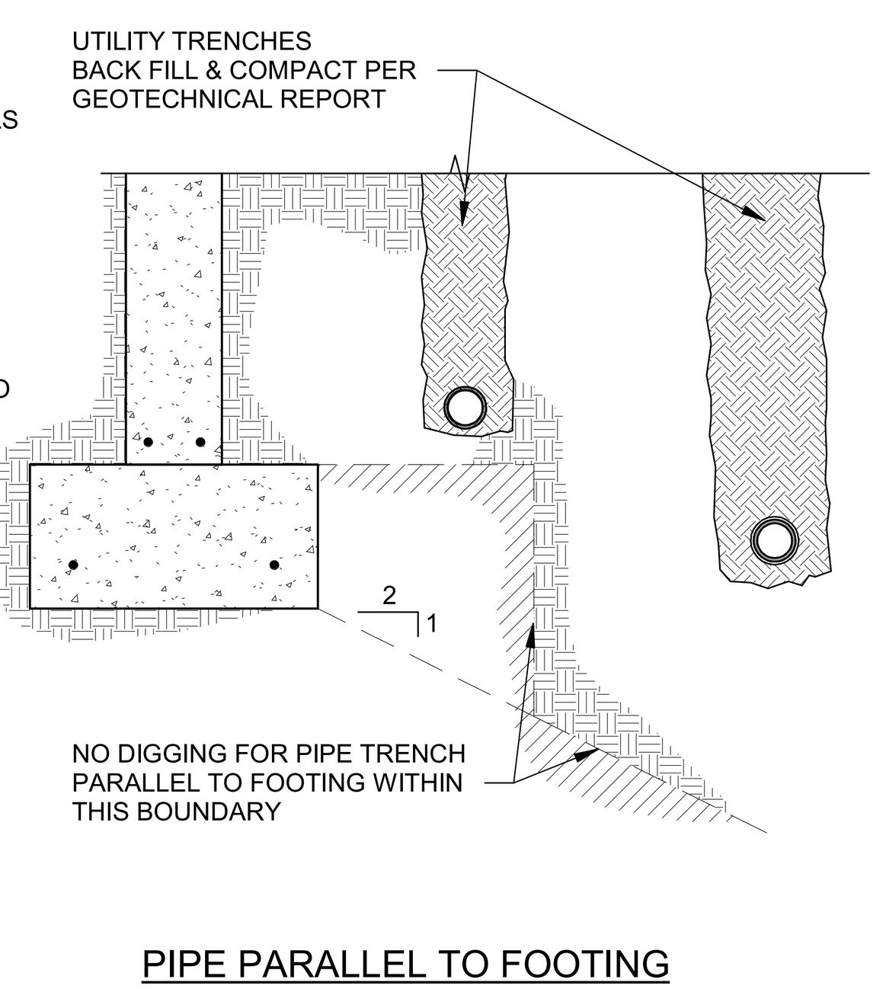


TYPICAL STEPPED FOOTING
3 / S201
SCALE : NONE

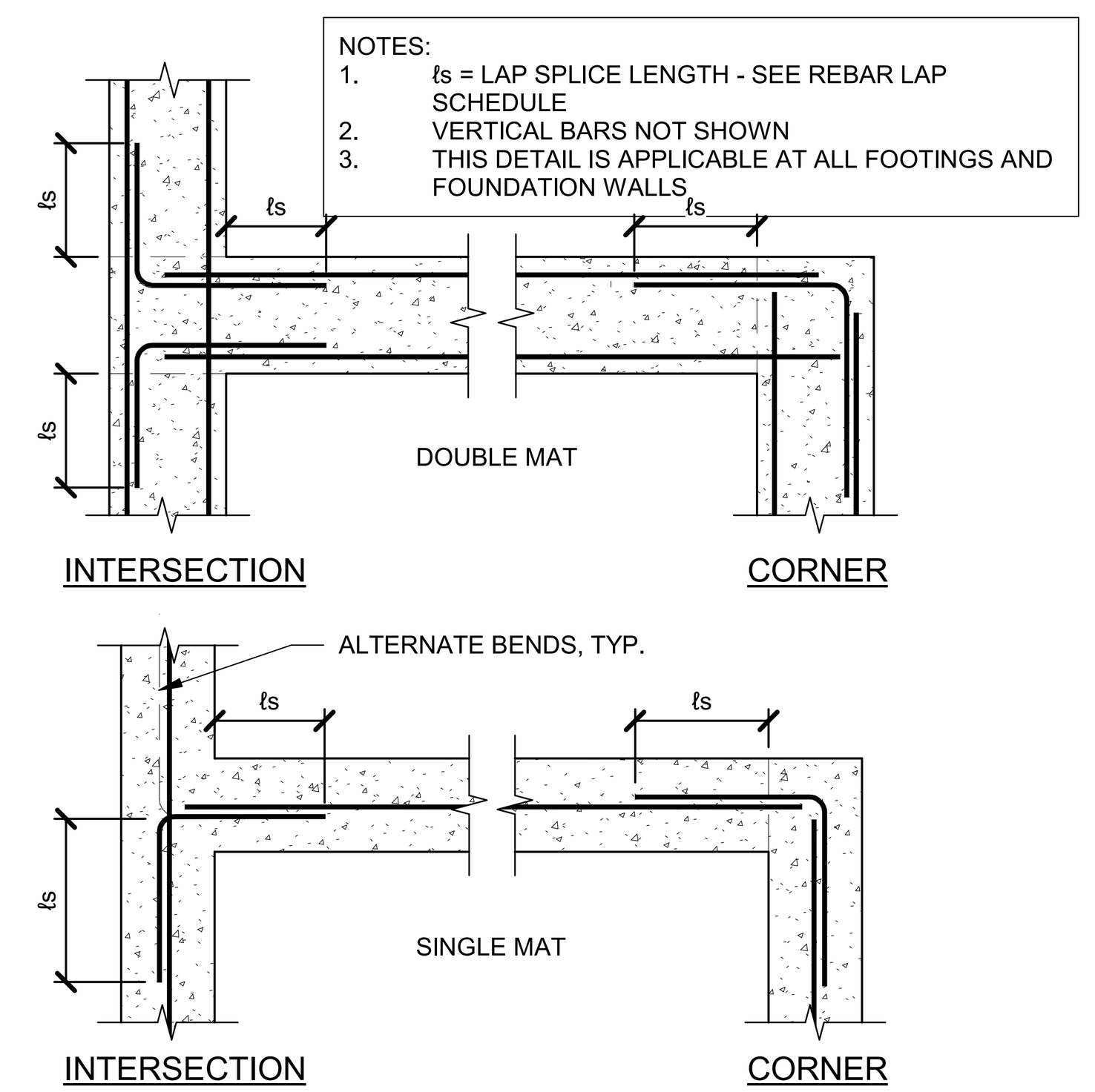


TYPICAL ANCHOR BOLT EMBEDMENT DETAIL
4 / S201
SCALE : NONE





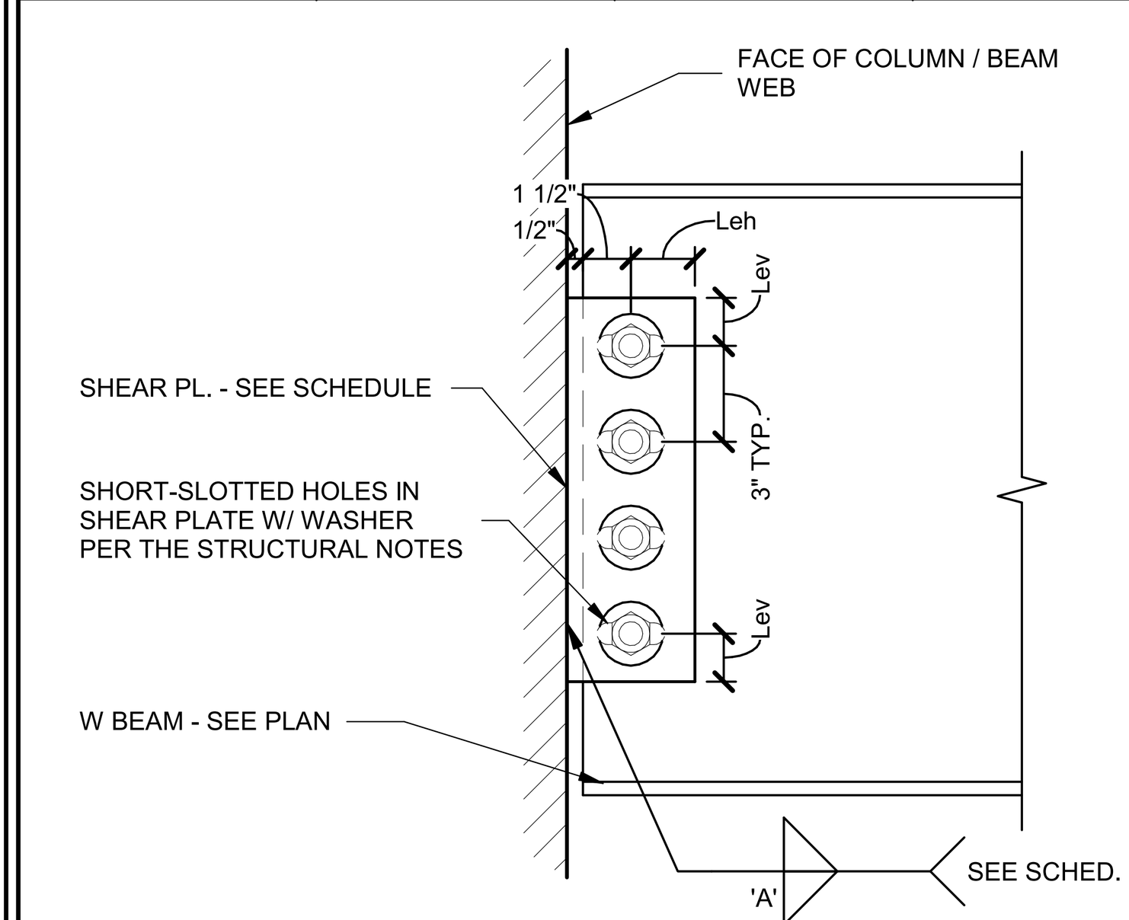
ALLOWABLE PIPING LOCATIONS @ FOOTING DETAIL
5 / S201
SCALE : NONE

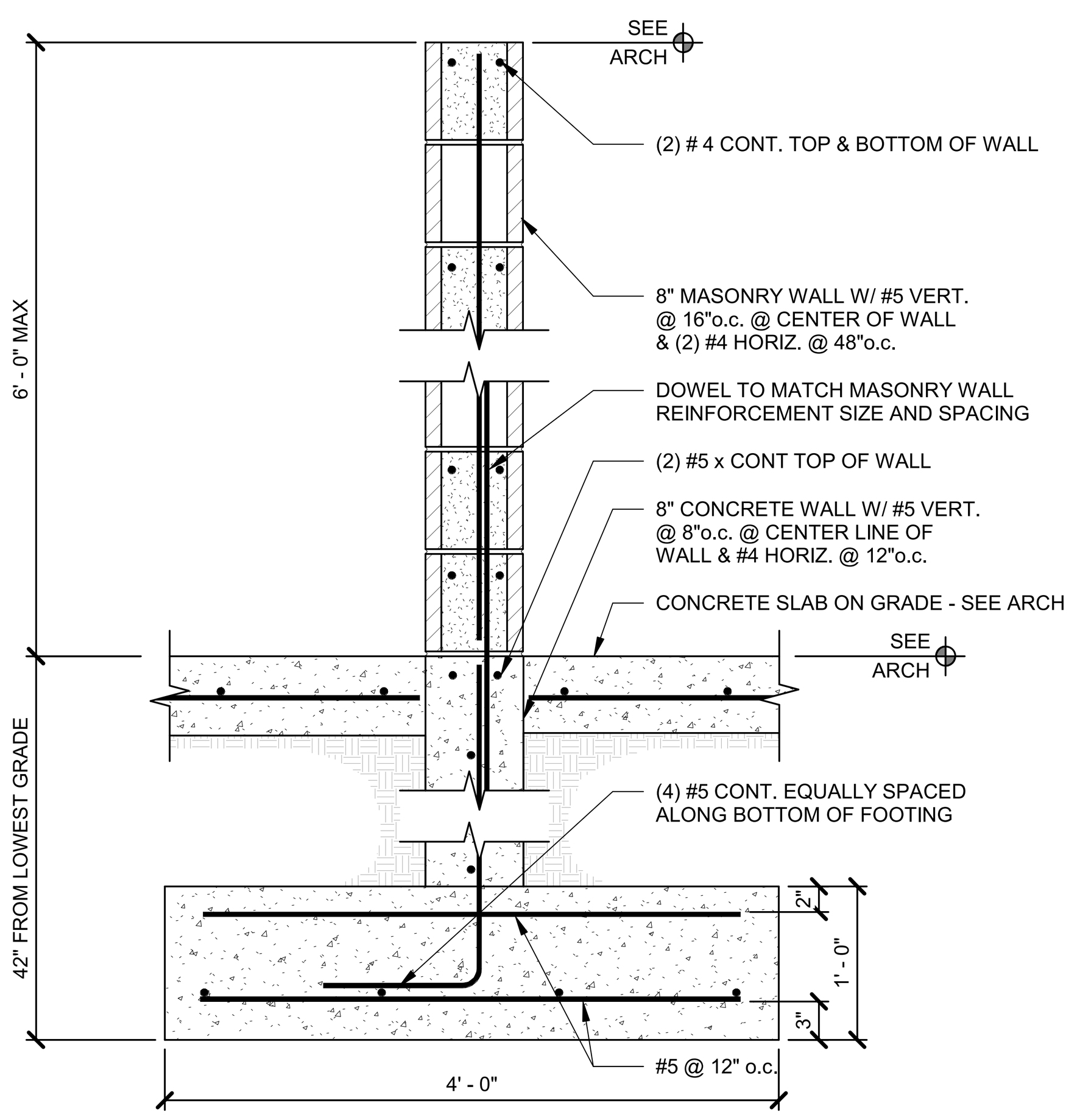


TYP. REINF. @ INTERSECTIONS IN CONC. DETAIL
6 / S201
SCALE : NONE

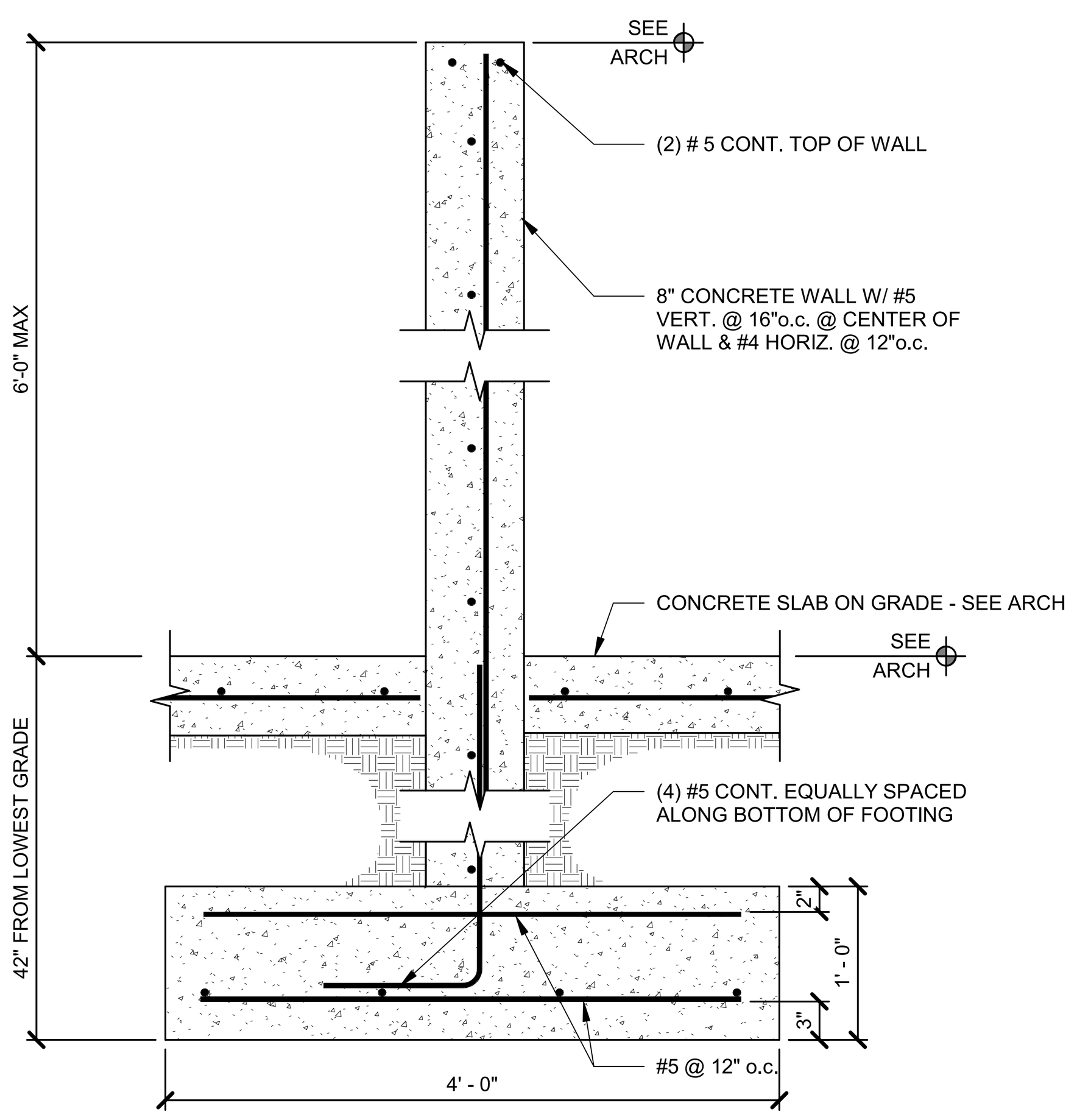
BEAM CONNECTION SCHEDULE

BEAM DEPTH	SHEAR PLATE INFORMATION			BOLTS W/ STANDARD WASHERS OVER SLOTS		WELD 'A'	COMMENTS
	PL. DIMENSIONS W/ SHORT-SLOTTED HOLES	Lev	Leh	No.	SIZE		
W8 x, W10 x	PL. 1/4" x 4"	1 1/2"	2"	2	3/4" Ø	3/16"	
W12 x	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W14 x 90 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W16 x 77 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	4	3/4" Ø	1/4"	
W18 x 65 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	5	3/4" Ø	1/4"	
W21 x 73 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	6	3/4" Ø	1/4"	
W24 x 94 & LIGHTER	PL. 3/8" x 4"	1 1/2"	2"	7	7/8" Ø	1/4"	
W27 x 114 & LIGHTER	PL. 3/8" x 4"	1 1/2"	2"	7	7/8" Ø	1/4"	
W30 x 124 & LIGHTER	PL. 1/2" x 4"	1 3/4"	2"	8	1" Ø	5/16"	
W33 x 130 & LIGHTER	PL. 1/2" x 4"	1 3/4"	2"	9	1" Ø	5/16"	
W36 x 160 & LIGHTER	PL. 1/2" x 4 1/2"	2"	2 1/4"	10	1-1/8" Ø	5/16"	





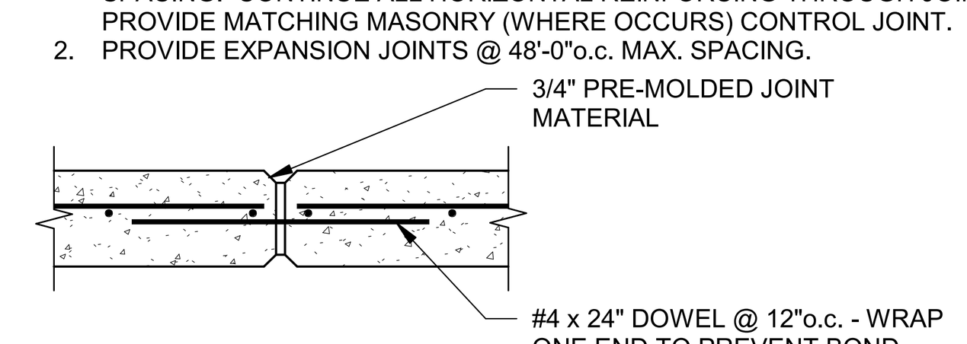
ENCLOSURE SCREEN WALL DETAIL
7 / S201
SCALE : NONE



ENCLOSURE SCREEN WALL DETAIL
8 / S201
SCALE : NONE

TYPICAL RETAINING WALL SCHEDULE

NOTES:
1. PROVIDE 3/4" DEEP VERTICAL CONTROL JOINT AT 15'-0" MAXIMUM SPACING. CONTINUE ALL HORIZONTAL REINFORCING THROUGH JOINT. PROVIDE MATCHING MASONRY (WHERE OCCURS) CONTROL JOINT.
2. PROVIDE EXPANSION JOINTS @ 48'-0"o.c. MAX. SPACING.

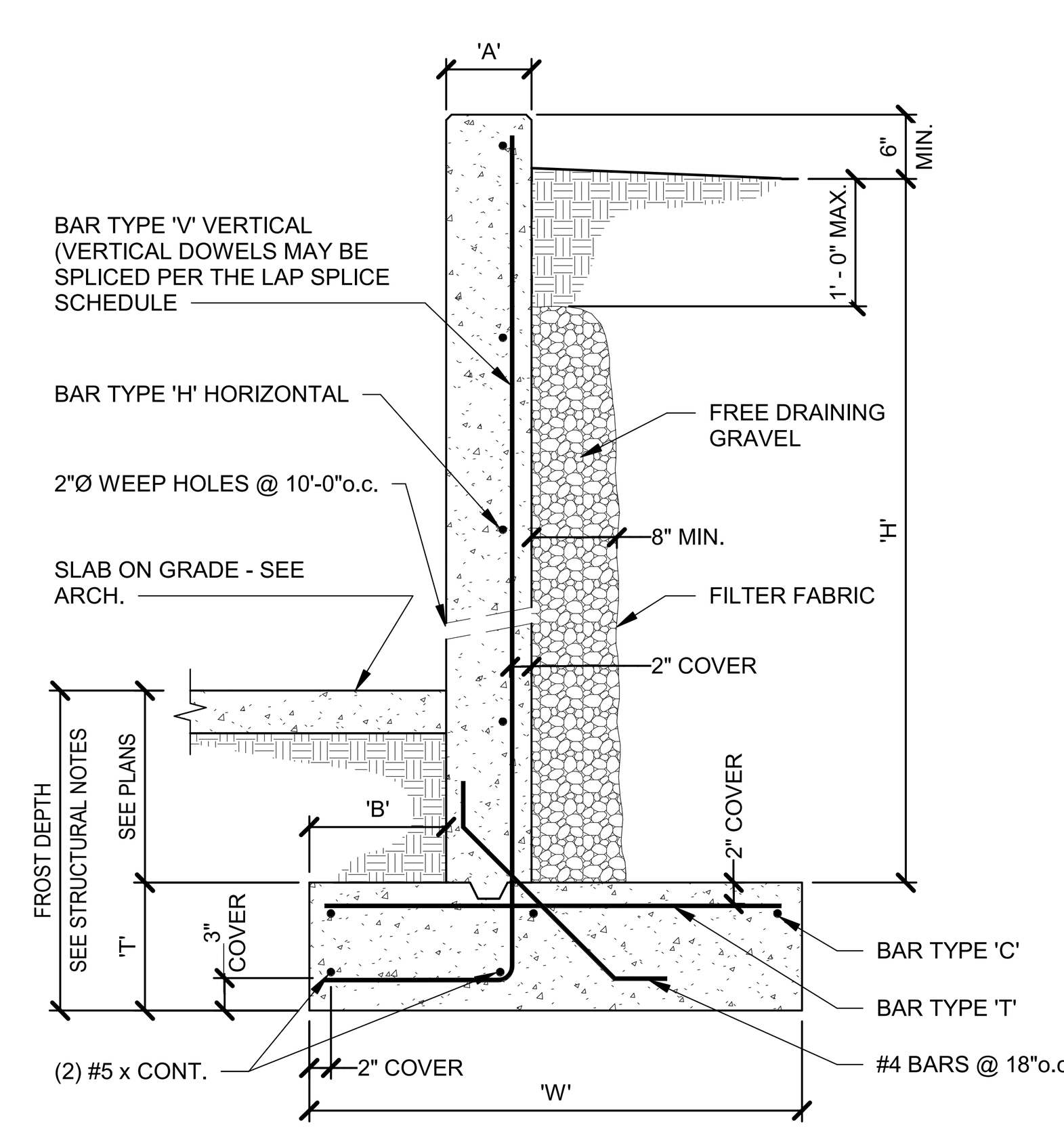


NOTE: JOINT IN FOOTING NOT REQUIRED.

3. EXTEND HORIZONTAL REINFORCING AROUND CORNERS OR ADD CORNER BARS AND LAP EACH WAY. SEE REBAR LAP SCHEDULE.
4. ALLOW CONCRETE TO REACH 100% OF DESIGN STRENGTH (f'c) PRIOR TO BACKFILLING.
5. PROVIDE 2"DIA. PVC PIPE WEEP HOLES @ 12'-0" WITH NON-FERROUS SCREEN AND GRAVEL BACKING. CONTINUOUS PERFORATED FOUNDATION DRAIN LINE TIED TO STORM DRAIN SYSTEM IS AN ACCEPTABLE ALTERNATE TO WEEP HOLES.
6. PROVIDE FILTER FABRIC BETWEEN GRANULAR BACKFILL AND BACK SIDE OF WALL. FILTER FABRIC TO BE FREE DRAINING WITHOUT ALLOWING INFILTRATION OF FINE SOILS.
7. EVERY OTHER VERTICAL BAR MAY BE DISCONTINUED AT 'H'/2 ABOVE FOOTING FOR 8'-0" AND 10'-0" HIGH WALLS, 1/3 OF VERTICAL BARS MAY BE DISCONTINUED AT 0.2'H' + 30 BAR DIAMETERS AND 0.4'H' + 30 BAR DIAMETERS ABOVE FOOTING. SPACING OF VERTICAL BARS SHALL BE 18" MAX. FOR 11'-0" THRU 14'-0" HIGH WALLS.

OTHER PARAMETERS
- NO WATER TABLE
- LEVEL SOIL SLOPE
- BEARING PRESSURE = 1500 psf
- 35 psf /.ft LATERAL SOIL PRESSURE
- 0 SURCHARGE
- 0 AXIAL LOADS
- 0 LATERAL LOADS
- SOIL WEIGHT = 110 psf

DIMENSION 'H'	DIMENSION				BAR TYPE 'H'		BAR TYPE 'V'		BAR TYPE 'C'		BAR TYPE 'T'	
	'T'	'A'	'B'	'W'	SIZE	SPACING	SIZE	SPACING	SIZE	NUMBER	SIZE	SPACING
H ≤ 3'-0"	12"	8"	6"	24"	#4	12"o.c.	#4	16"o.c.	#5	---	---	---
3'-0" - 5'-0"	12"	8"	9"	36"	#4	12"o.c.	#4	16"o.c.	#4	(3)	#4	16"o.c.
5'-0" - 7'-0"	12"	8"	18"	48"	#4	12"o.c.	#5	16"o.c.	#4	(5)	#5	16"o.c.
7'-0" - 9'-0"	12"	8"	30"	60"	#4	12"o.c.	#6	12"o.c.	#4	(5)	#5	16"o.c.



TYPICAL RETAINING WALL DETAIL
9 / S201
SCALE : NONE

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No. 374996
Troy M. Dye
08/09/18

#	Date	Revision

CONSTRUCTION DOCUMENTS

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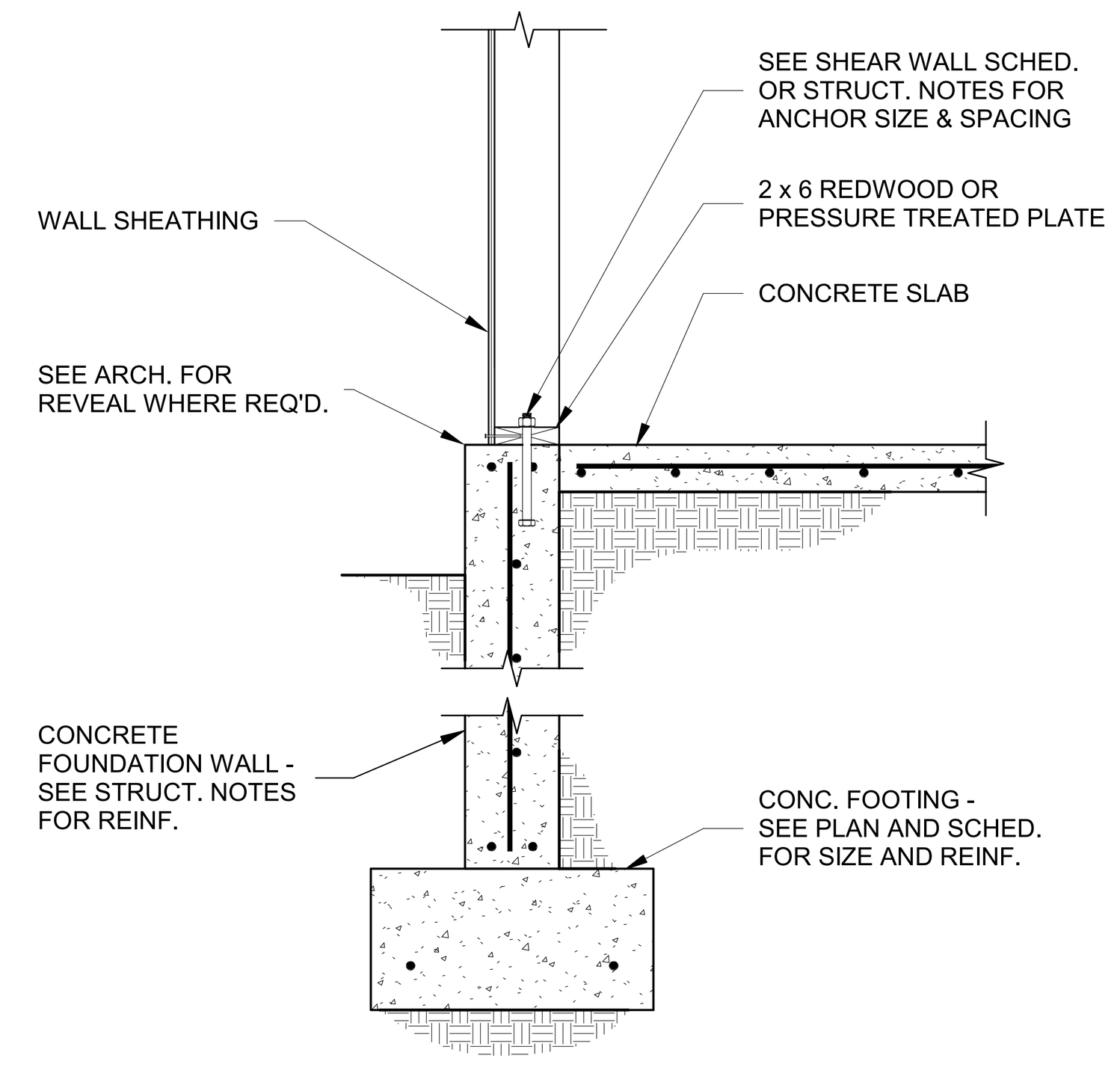
ARW PROJ. #: 18121
CHECKED BY: T. Dye
DRAWN BY: D.Bartelson
DATE: 08.09.18

DETAILS

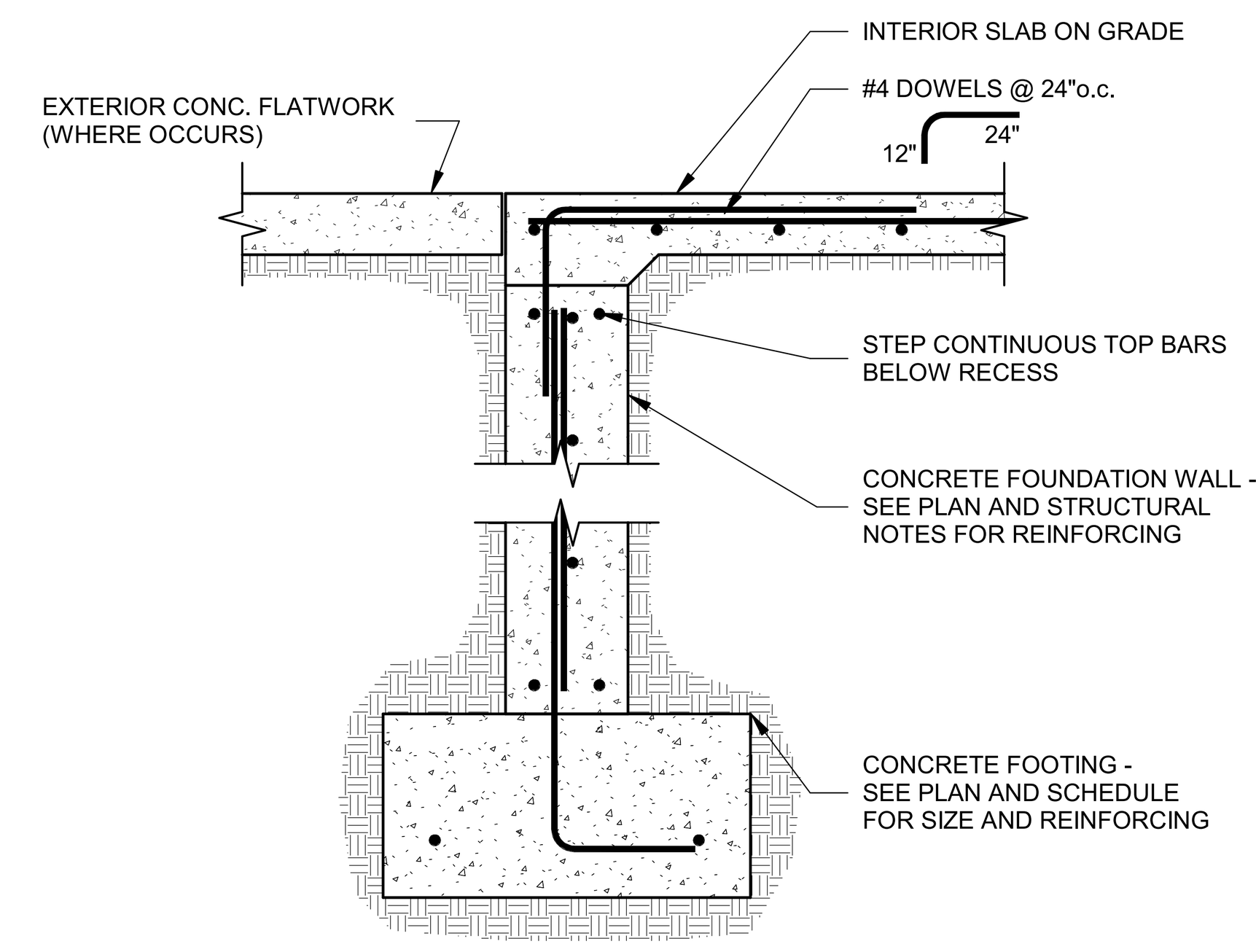
S201

C:\Users\TroyD\Documents\S-18121-NAC Recreation Center-2018_troyd@arwengineers.com.rvt

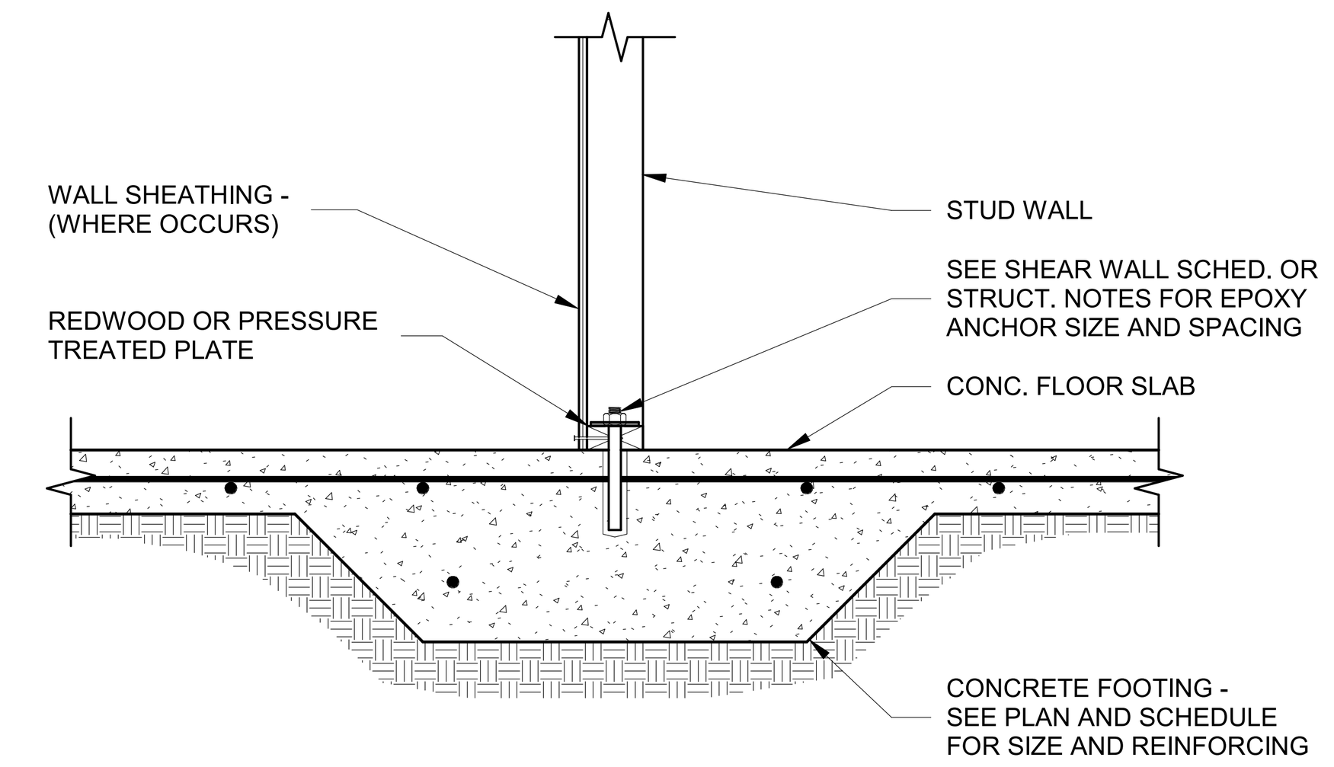
BASE PLATE SCHEDULE				
COLUMN SIZE	BASE PL. SIZE	DIMENSION 'A'	DIMENSION 'B'	A.B. SIZE
W18x76	1" x 12" x 1'-7"	3"	3"	1" W/ 12" MIN. EMBED



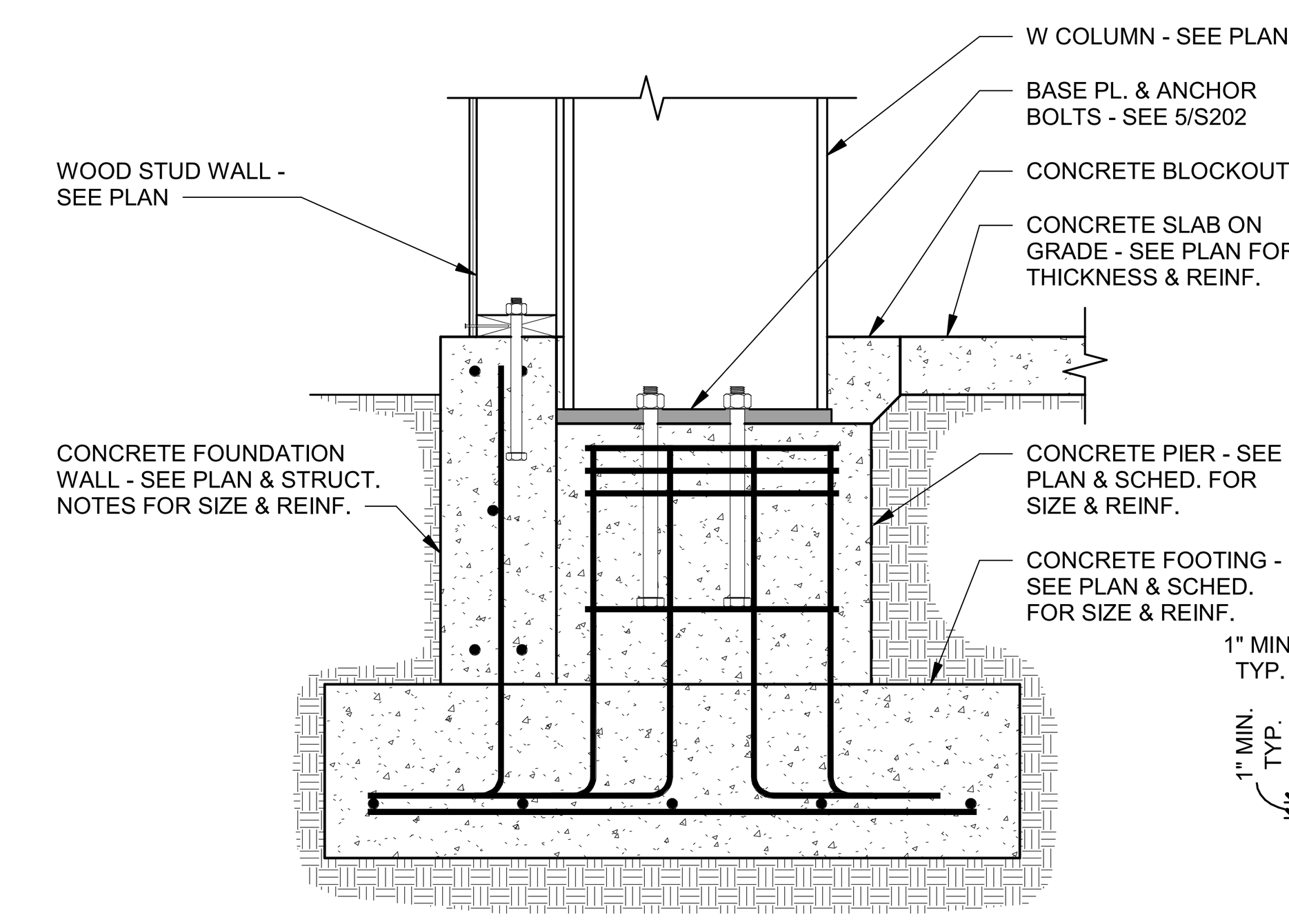
FOOTING SECTION @ TIMBER WALL DETAIL — 1 / S202
SCALE : NONE



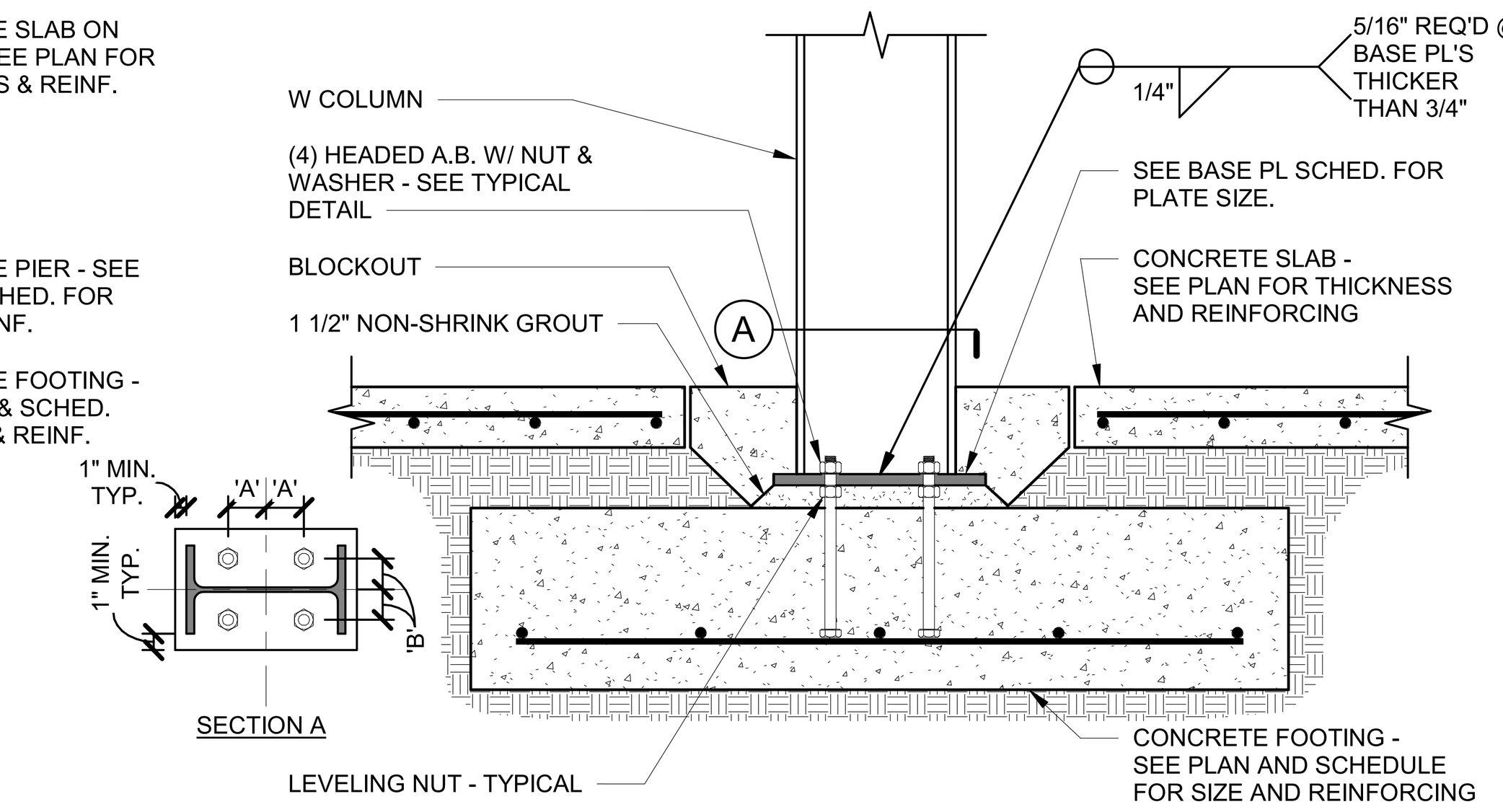
CONCRETE FOUNDATION @ OPENING — 2 / S202
SCALE : NONE



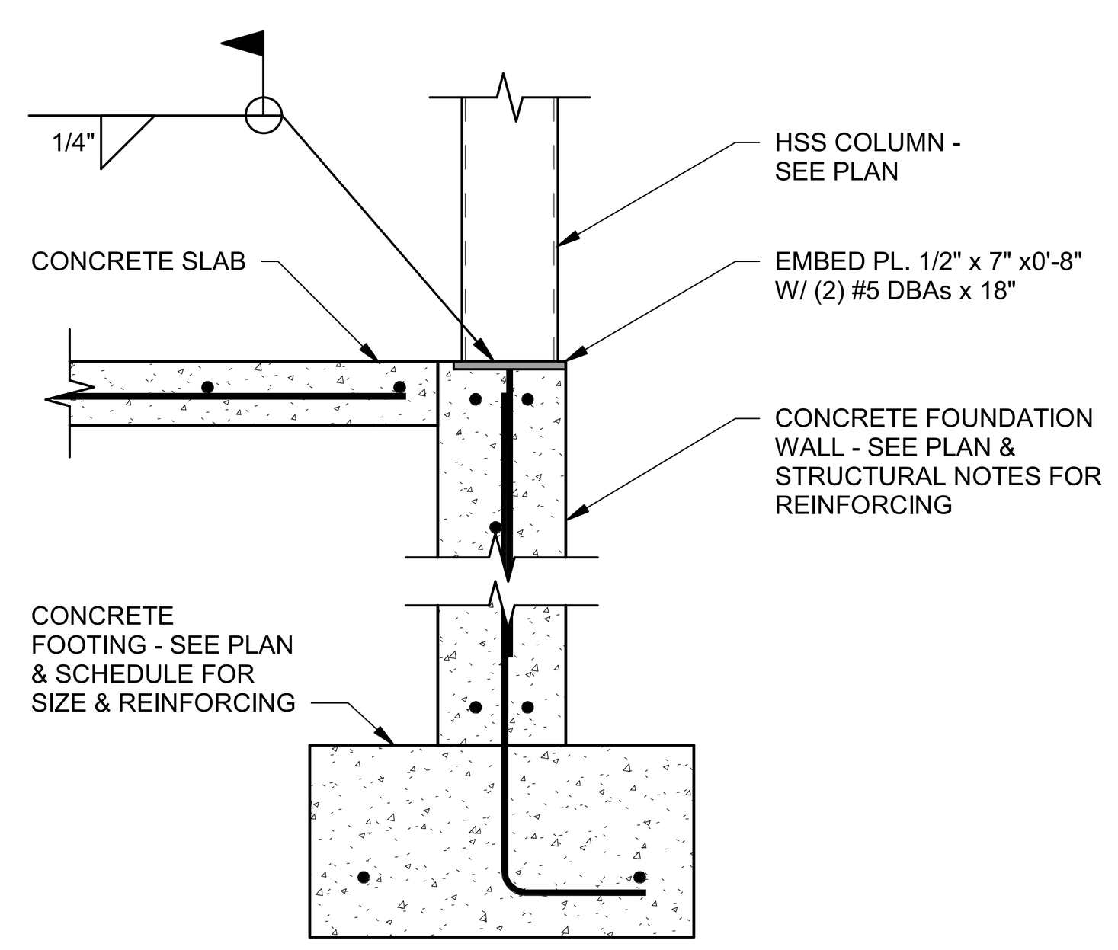
STUD WALL ON THICKENED SLAB — 3 / S202
SCALE : NONE



DETAIL — 4 / S202
SCALE : NONE



COLUMN TO SPOT FOOTING — 5 / S202
SCALE : NONE



DETAIL — 6 / S202
SCALE : NONE

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Troy M. Dye

#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 00000.00
ARW PROJ. #: 18121
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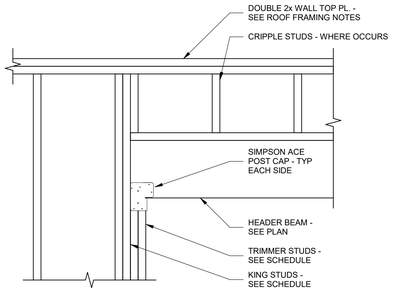
DRAWN BY: D.Bartelson
DATE: 08.09.18

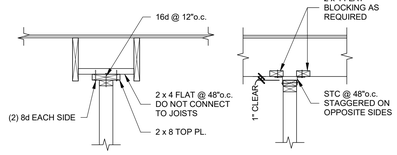
DETAILS

S202

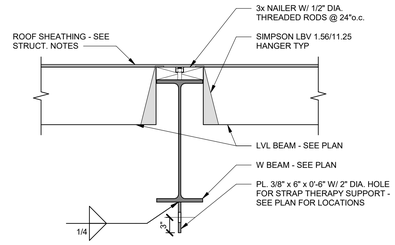


OPENING SIZE	KING STUDS	TRIMMER STUDS
UP TO 5'-0"	(1) 1.75"x5.5" LVL	(2) 1.75"x5.5" LVL
5'-1" TO 13'-0"	(3) 1.75"x5.5" LVL	(2) 1.75"x5.5" LVL

DETAIL 1 S203
SCALE : NONE



DETAIL 2 S203
SCALE : NONE



DETAIL 3 S203
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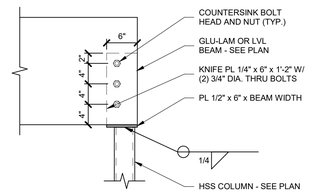

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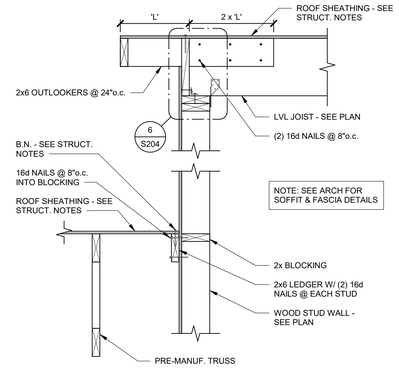

DETAIL 5 S203
SCALE : NONE

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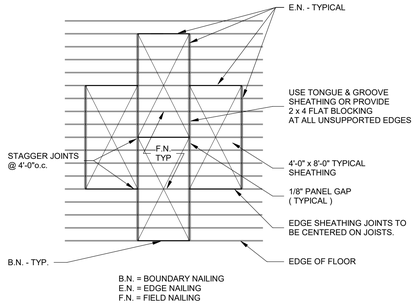
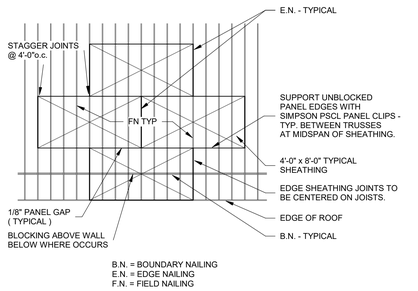
DETAILS

S203



B.N. = BOUNDARY NAILING
E.N. = EDGE NAILING
F.N. = FIELD NAILING

@ FLOOR



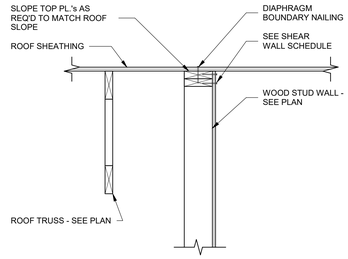
B.N. = BOUNDARY NAILING
E.N. = EDGE NAILING
F.N. = FIELD NAILING

@ ROOF

TYPICAL SHEATHING LAYOUT (UNBLOCKED DIAPHRAGM)

SCALE : NONE

1 / S204

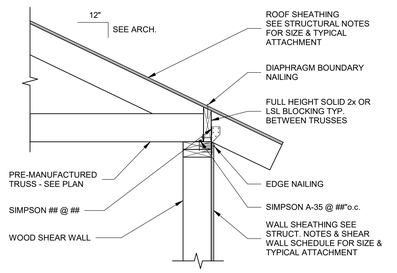


SHEAR WALL PARALLEL TO ROOF TRUSSES

DETAIL

SCALE : NONE

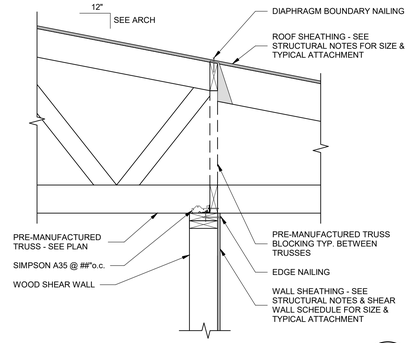
2 / S204



DETAIL

SCALE : NONE

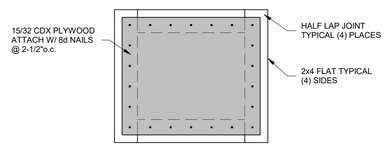
3 / S204



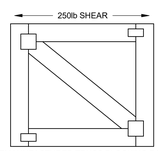
DETAIL

SCALE : NONE

4 / S204



ALTERNATE BLOCKING PANEL

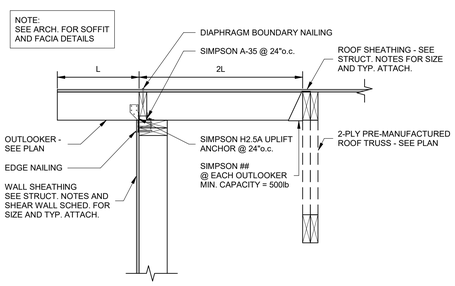


PREMANUFACTURED TRUSS BLOCKING PANEL

TRUSS BLOCKING PANELS

SCALE : NONE

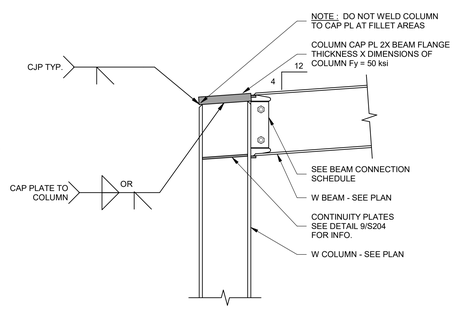
5 / S204



DETAIL

SCALE : NONE

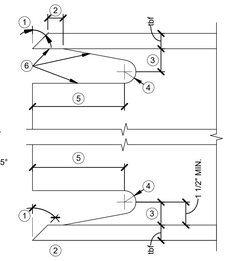
6 / S204



MOMENT CONNECTION DETAIL

SCALE : NONE

7 / S204



TOLERANCES SHALL NOT ACCUMULATE TO THE EXTENT THAT THE ANGLE OF THE ACCESS HOLE CUT TO THE FLANGE SURFACE EXCEEDS 25°

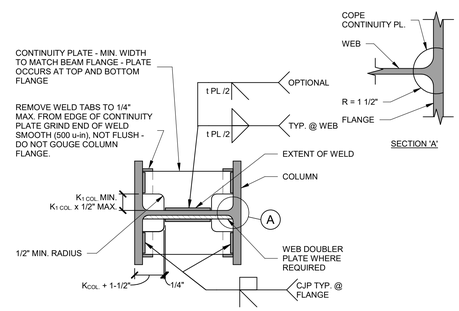
KEY NOTES :

1. BEVEL AS REQUIRED BY AWS D1.1 FOR SELECTED GROOVE WELD PROCEDURE.
2. LARGER OF t_B OR 1/2 INCH. (PLUS 1/2 t_B, OR MINUS 1/4 t_B).
3. 3/4 t_B TO t_B, 3/4" MINIMUM (+ 1/4 INCH).
4. 3/8" MINIMUM RADIUS (PLUS NOT LIMITED, OR MINUS 0).
5. 3 t_B, (+ 1/2 INCH).
6. SEE FEMA-353, RECOMMENDED SPECIFICATIONS AND QUALITY ASSURANCE GUIDELINES FOR STEEL MOMENT-FRAME CONSTRUCTION FOR SEISMIC APPLICATIONS, FOR FABRICATION DETAILS INCLUDING CUTTING METHODS AND SMOOTHNESS REQUIREMENTS.

DETAIL

SCALE : NONE

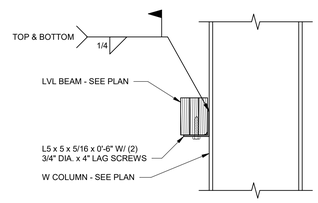
8 / S204



DETAIL

SCALE : NONE

9 / S204



DETAIL

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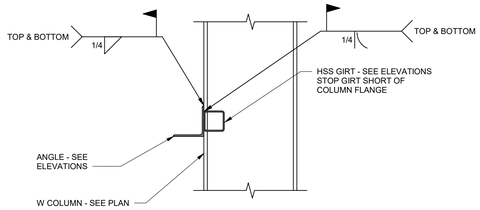
10 / S204



DETAIL

SCALE : NONE

11 / S204

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#	Date	Revision

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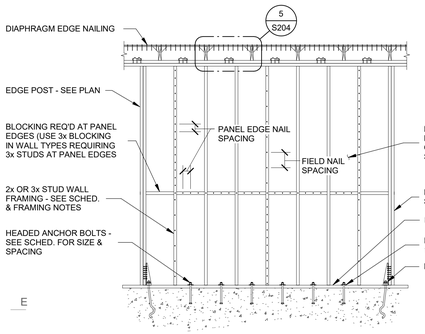
NEXUS PROJ. #: 00000.00
ARW PROJ. #: 18121
CHECKED BY: T. Dye
DRAWN BY: D.Bartelson
DATE: 08.09.18

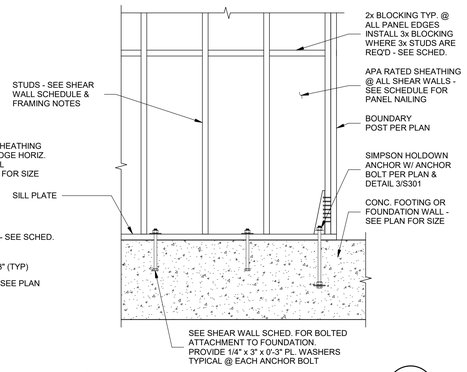
DETAILS

S204



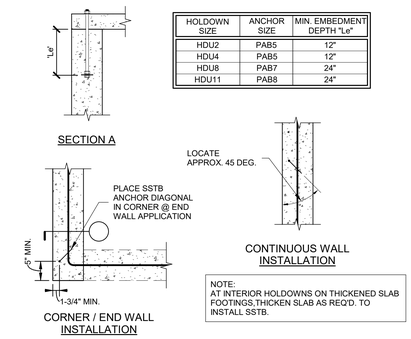
1 STORY BALLOON ELEV. 1 S301

SCALE : NONE



TYP. HOLD DOWN DETAIL 2 S301

SCALE : NONE



HOLDOWN SIZE	ANCHOR SIZE	MIN. EMBEDMENT DEPTH "Le"
HDU2	PAB5	12"
HDU4	PAB5	12"
HDU8	PAB7	24"
HDU11	PAB8	24"

NOTE:
AT INTERIOR HOLDOWNS ON THICKENED SLAB FOOTINGS,THICKEN SLAB AS REQ'D. TO INSTALL SSTB.

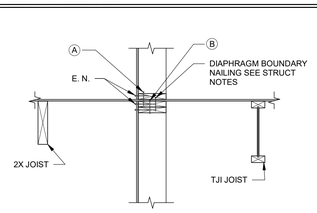
HOLDOWN EMBED SCHEDULE 3 S301

SCALE : NONE

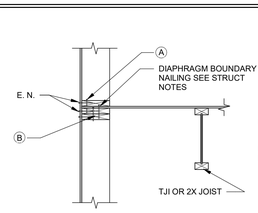
WOOD SHEAR WALL SCHEDULE

WALL MARK	(NOTE 8) PLYWOOD SHEATHING (CDX U.N.O.)	EDGE NAILING (E.N.) (SEE NOTES 2 & 3)	NOMINAL BOTTOM PLATE SIZE	(NOTE 7) NOM. STUD SIZE (MIN.)	CONNECTION NAILING				A.B. @ FOUND.		COMMENTS
					BOTTOM PL. Ⓐ (SEE NOTE 4) (L)-LAG (ST)-STAGGER	NAILING TOP PL. TOGETHER Ⓑ	BLKG. TO TOP PL. Ⓒ	TOP PL. SPLICE	DIA.	SPA.	
SW-1	15/32"	6"	2x	2x	---	10d x 3" @ 3"	A35 @ 24"	(20) 10d	5/8" DIA.	32"o.c.	
SW-2	15/32"	4"	2x	2x	---	10d x 3" @ 3"	A35 @ 16"	(20) 10d	5/8" DIA.	24"o.c.	

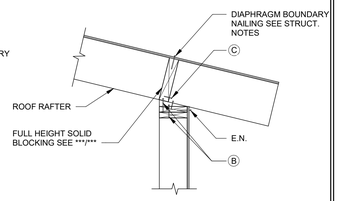
NOTES:
1. ALL SHEATHING PANEL EDGES TO BE BLOCKED.
2. ALL NAILS TO BE COMMON OR GALV. BOX.
3. FIELD NAILING TO BE SAME NAILS @ 12"o.c.
4. Ⓐ CONNECTION IS FOR 2ND FLOOR AND ABOVE.
5. AT SHEAR WALLS W/ SHEATHING ON BOTH SIDES, BOTH VERTICAL AND HORIZONTAL JOINTS ON OPPOSITE SIDES OF THE WALL SHALL BE STAGGERED.
6. STAGGER E.N. AT DOUBLE TOP PLATES.
7. 3x NOMINAL FRAMING MEMBERS TO OCCUR AT ABUTTING PANEL EDGES. 2x NOMINAL FRAMING MEMBERS MAY BE USED AT INTERIOR OF PANEL, UNLESS NOTED OTHERWISE IN FLOOR FRAMING NOTES. (2) 2x NAILED TOGETHER W/ (2) 16d NAILS @ 16"o.c. OR 4x NOMINAL FRAMING MEMBERS OF THE SAME DEPTH AND LUMBER GRADE MAY BE USED IN LIEU OF 3x MEMBERS AT CONTRACTOR OPTION.
8. SHEATHING SHALL BE STAMPED W/ APA STAMP. O.S.B. OF EQUIVALENT THICKNESS, GRADE, AND RATING MAY BE USED IN LIEU OF PLYWOOD.
9. ALL A.B.TO HAVE MIN. 8" EMBEDMENT INTO CONCRETE.
10. SEE THIS SHEET FOR TYPICAL SHEAR TRANSFER DETAILS.
11. TOP PLATE SPLICE NAILING SHALL APPLY TO EACH SIDE OF THE SPLICE. THE LENGTH OF THE OVERLAP SHALL BE SUFFICIENT TO PREVENT SPLITTING (48" MIN.)



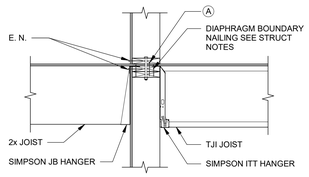
WALL PARALLEL TO FRAMING



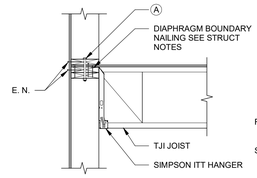
WALL PARALLEL TO FRAMING



WALL SUPPORTING ROOF RAFTERS



WALL PERPENDICULAR TO FRAMING



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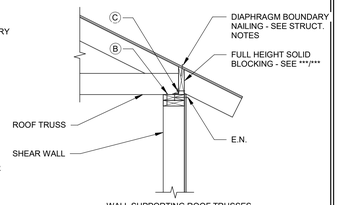
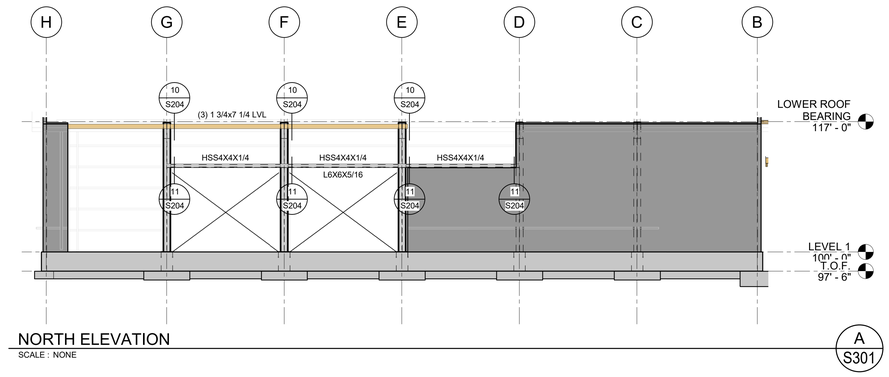


WALL SUPPORTING ROOF TRUSSES

INTERIOR
SHEAR TRANSFER DETAILS

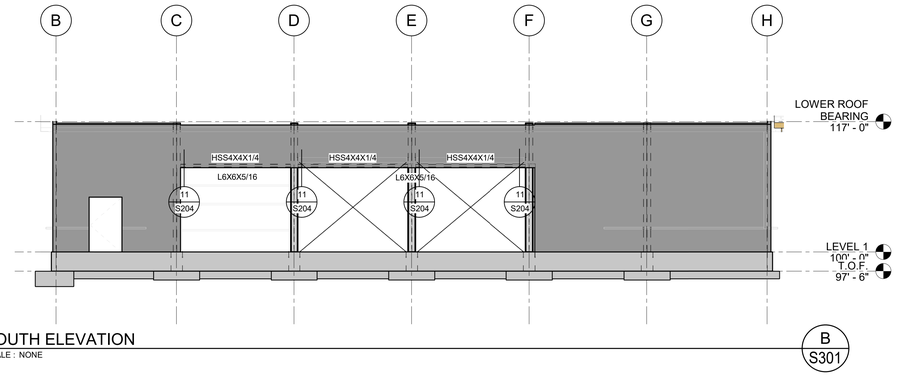
EXTERIOR
SHEAR TRANSFER DETAILS

ROOF
SHEAR TRANSFER DETAILS



NORTH ELEVATION A S301

SCALE : NONE



SOUTH ELEVATION B S301

SCALE : NONE

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DETAILS

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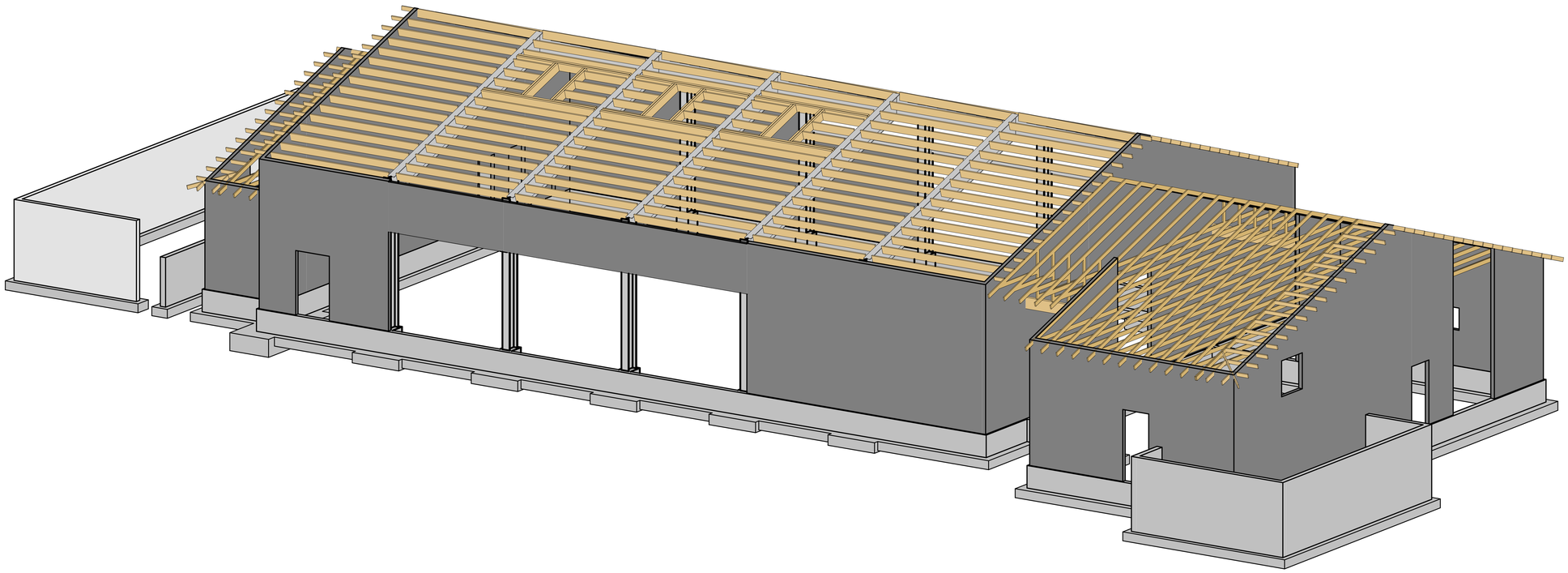

3D Reference
SCALE :

A
S401

NOTE: THIS VIEW REPRESENTS A SCHEMATIC RENDERING ONLY AND IS NOT INTENDED TO CONVEY CONSTRUCTION INFORMATION. ALL CONSTRUCTION SHALL COMPLY WITH SPECIFIC NOTES AND DETAILS WITHIN THE STRUCTURAL DRAWINGS.

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No. 374996
Troy M. Dye
REGISTERED UTAH
PROFESSIONAL STRUCTURAL ENGINEER
08/09/18

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SCHEMATIC REFERENCE

S401

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GENERAL NOTE - FLOOR PLAN

A. PLAN WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
B. FIELD VERIFY ALL EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE DISCREPANCIES WITH ARCHITECT.
C. DO NOT SCALE DRAWINGS.
D. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
E. SEE G SERIES SHEETS FOR WALL TYPES AND TYPICAL ACCESSIBILITY CLEARANCE AND COMPLIANCE REQUIREMENTS.
F. PROVIDE BACKING BEHIND ALL SURFACE MOUNTED EQUIPMENT AND/OR FIXTURES PER DETAIL B3 / A701

KEYNOTE LEGEND

10:BP1 BOULDER WALL PAD. SEE SHEET A702
10:BW1 BOULDERING WALL. SEE SHEET A702

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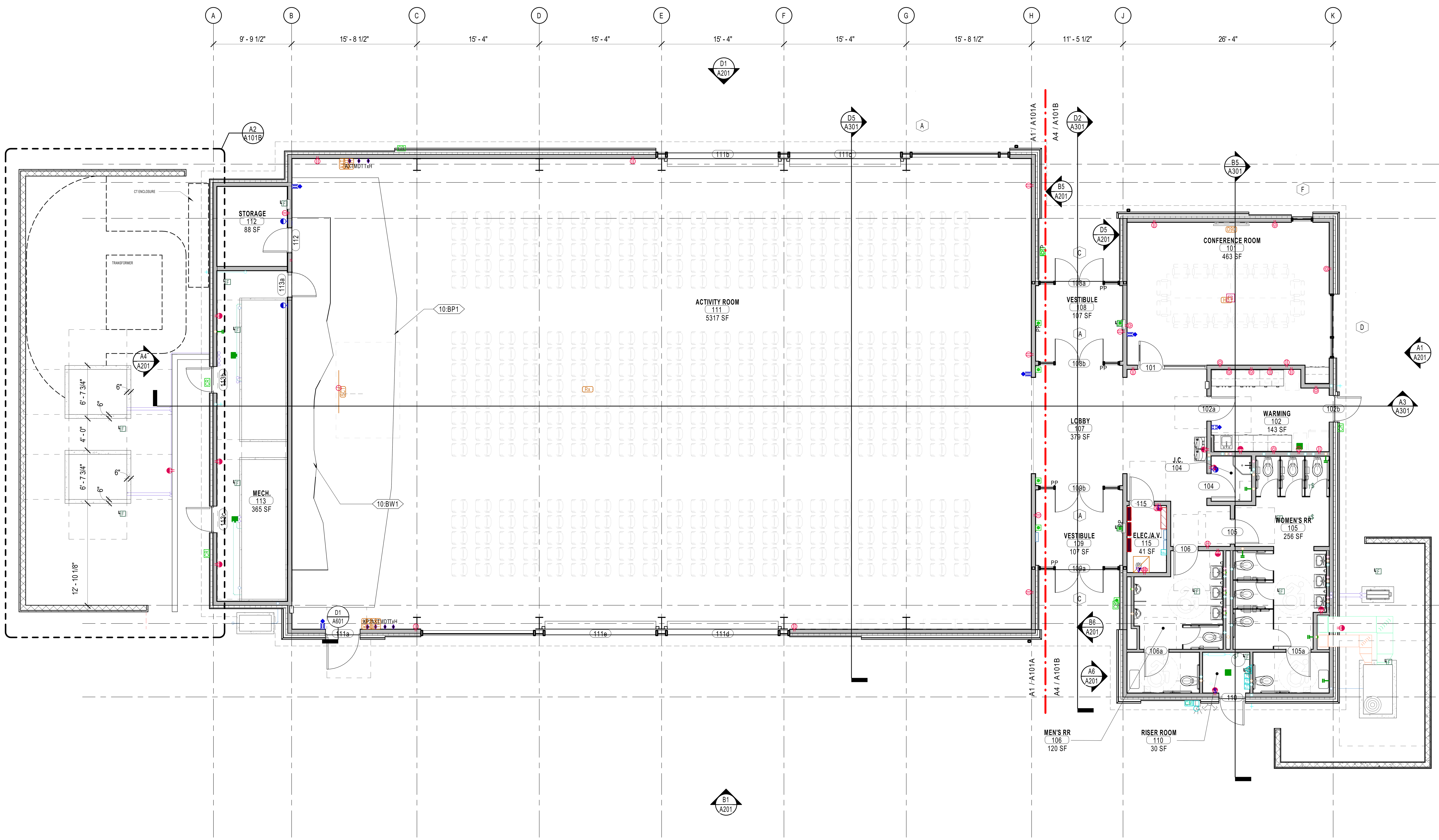

#	Date	Revision

A1 LEVEL 01 - OVERALL FLOOR PLAN
3/16" = 1'-0"

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
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FLOOR PLAN

A101

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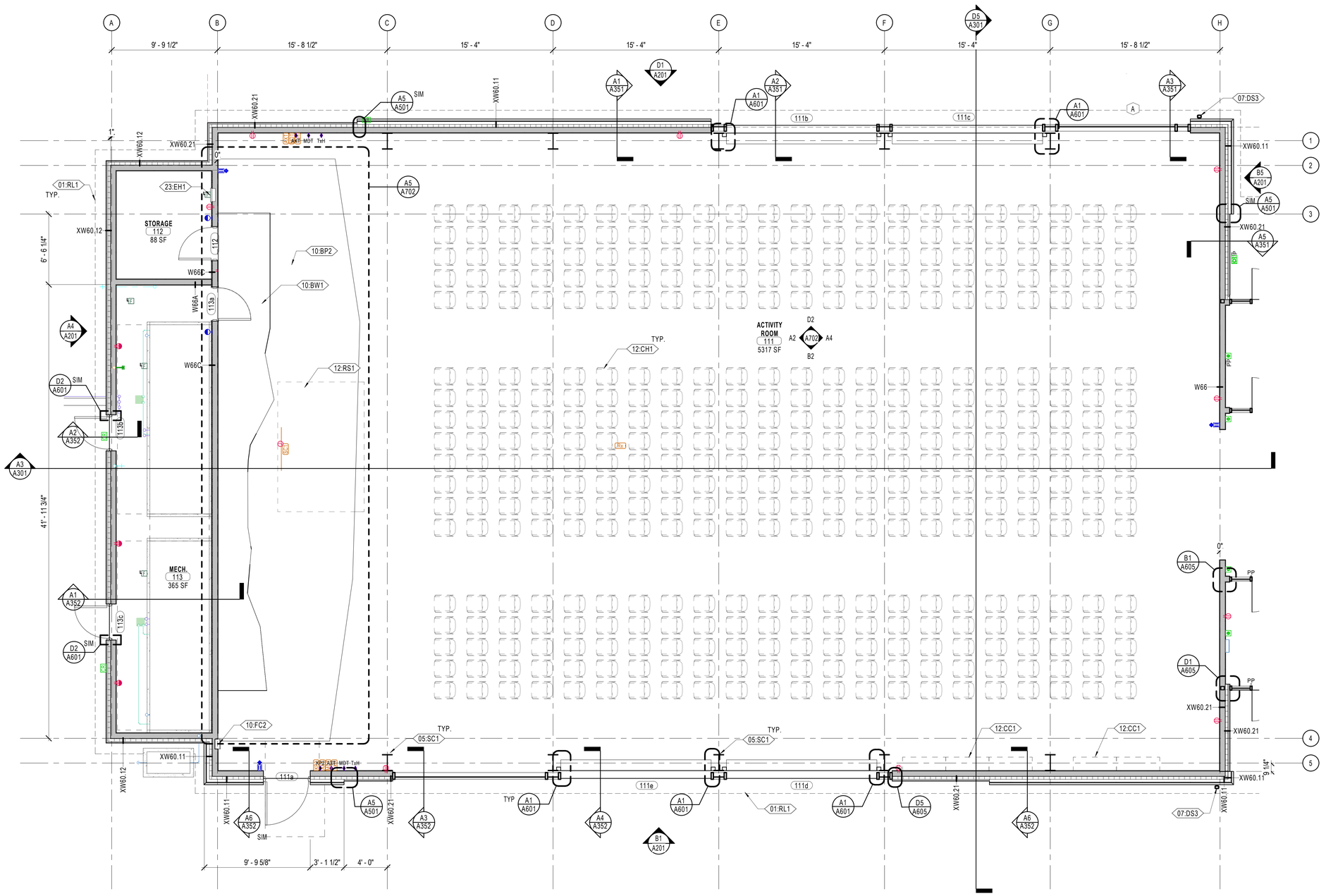

GENERAL NOTES - ENLARGED FLOOR PLAN

A. PLAN WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
B. FIELD VERIFY ALL EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE DISCREPANCIES WITH ARCHITECT.
C. DO NOT SCALE DRAWINGS.
D. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
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F. PROVIDE BACKING BEHIND ALL SURFACE MOUNTED EQUIPMENT AND/OR FIXTURES PER DETAIL B3/A701.

KEYNOTE LEGEND

01:RL1	ROOF LINE ABOVE
05:SC1	STEEL COLUMN
07:DS3	DOWNSPOUT
10:BP2	BOULDER PAD
10:BW1	BOULDERING WALL. SEE SHEET A702
10:FC2	SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE SHEET A701
12:CC1	CASEWORK CUBBIES. OFOI. FINISH TO BE PL-04
12:CH1	CHAIR. OFOI.
12:RS1	REMOVABLE STAGE. OFOI.
23:EH1	ELECTRICAL HEATER, WALL-MOUNTED; SEE MECHANICAL.

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FLOOR PLAN - AREA A

A101A

A1 / A101A LEVEL 01 - ENLARGED FLOOR PLAN - AREA A
1/4" = 1'-0"

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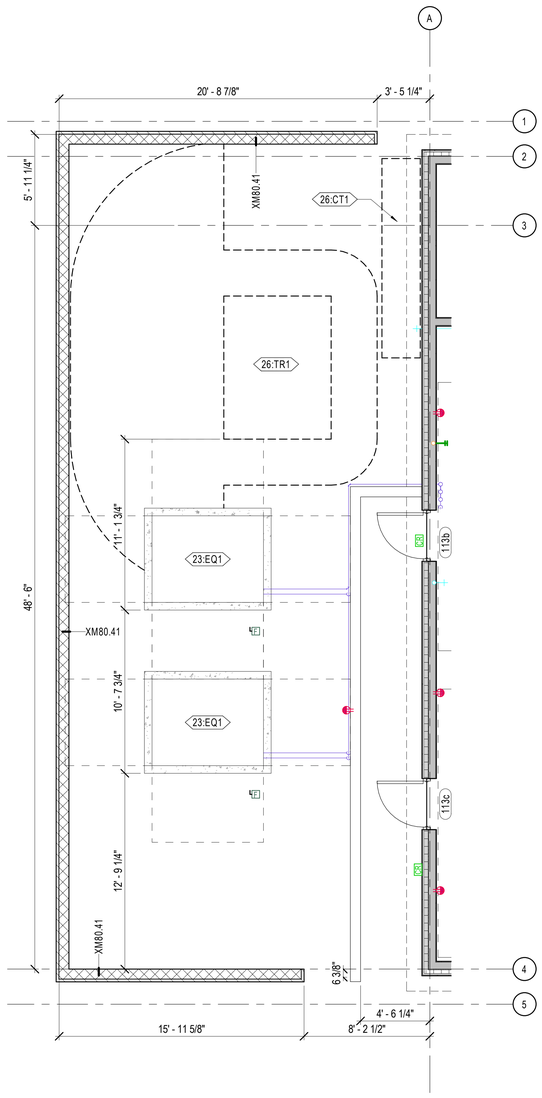
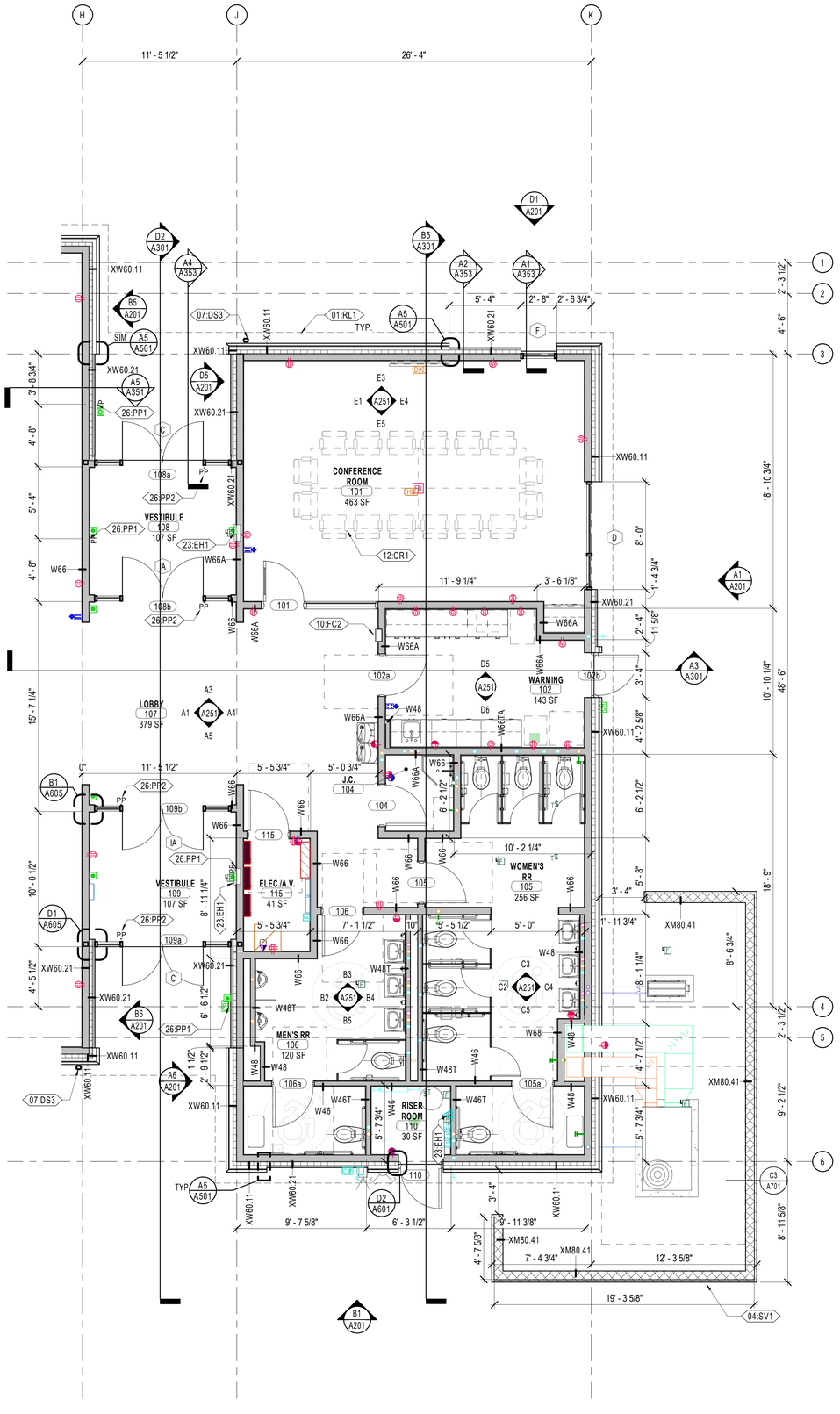


A2 LEVEL 01 - ENLARGED FLOOR PLAN - MECH. YARD
A101B 1/4" = 1'-0"



A4 LEVEL 01 - ENLARGED FLOOR PLAN - AREA B
A101B 1/4" = 1'-0"

N

GENERAL NOTES - ENLARGED FLOOR PLAN

A. PLAN WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
B. FIELD VERIFY ALL EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE DISCREPANCIES WITH ARCHITECT.
C. DO NOT SCALE DRAWINGS.
D. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
E. SEE G SERIES SHEETS FOR WALL TYPES AND TYPICAL ACCESSIBILITY CLEARANCE AND COMPLIANCE REQUIREMENTS.
F. PROVIDE BACKING BEHIND ALL SURFACE MOUNTED EQUIPMENT AND/OR FIXTURES PER DETAIL B3/A701.

KEYNOTE LEGEND

01:RL1	ROOF LINE ABOVE
04:SV1	STONE VENEER SCREEN WALL WITH TOP WALL CAP
07:DS3	DOWNSPOUT
10:FC2	SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE SHEET A701
12:CR1	CONFERENCE ROOM TABLE & CHAIRS. OFOI.
23:EH1	ELECTRICAL HEATER, WALL-MOUNTED; SEE MECHANICAL
23:EQ1	EQUIPMENT; SEE MECHANICAL
26:CT1	CT ENCLOSURE; SEE ELECTRICAL & LANDSCAPING
26:PP1	DOOR ACTUATOR. COORDINATE WITH ELECTRICAL
26:PP2	DOOR ACTUATOR ON ALUMINUM STOREFRONT MULLION. COORDINATE WITH ELECTRICAL
26:TR1	TRANSFORMER; SEE ELECTRICAL & LANDSCAPING

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FLOOR PLAN - AREA B

A101B

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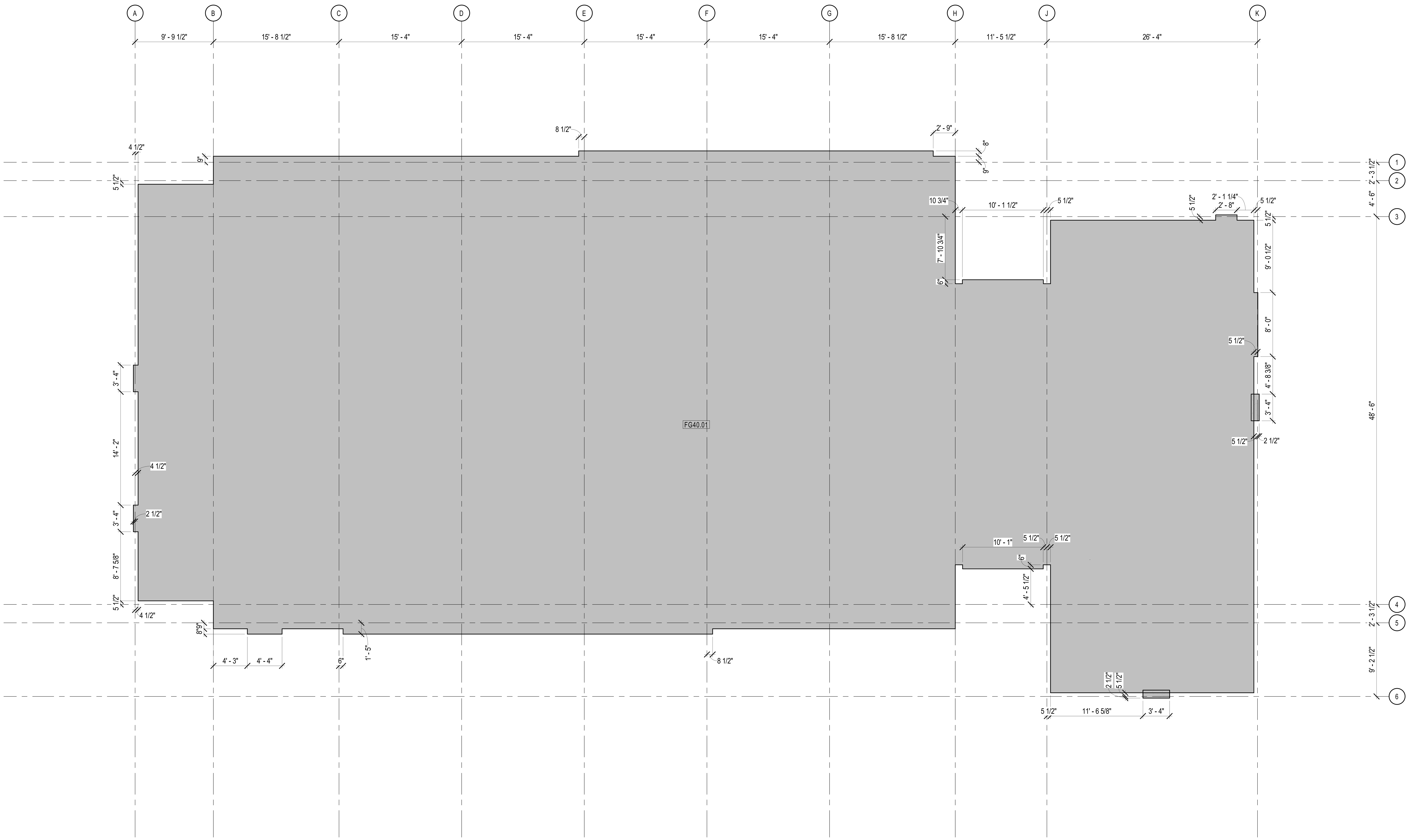
GENERAL NOTE - SLAB CONTROL

A. COORDINATE ALL PENETRATIONS IN SLAB SYSTEM WITH STRUCTURAL AND PLUMBING DRAWINGS.



A1 LEVEL 01 - SLAB CONTROL PLAN
A111 3/16" = 1'-0"

N

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SLAB CONTROL PLAN

A111

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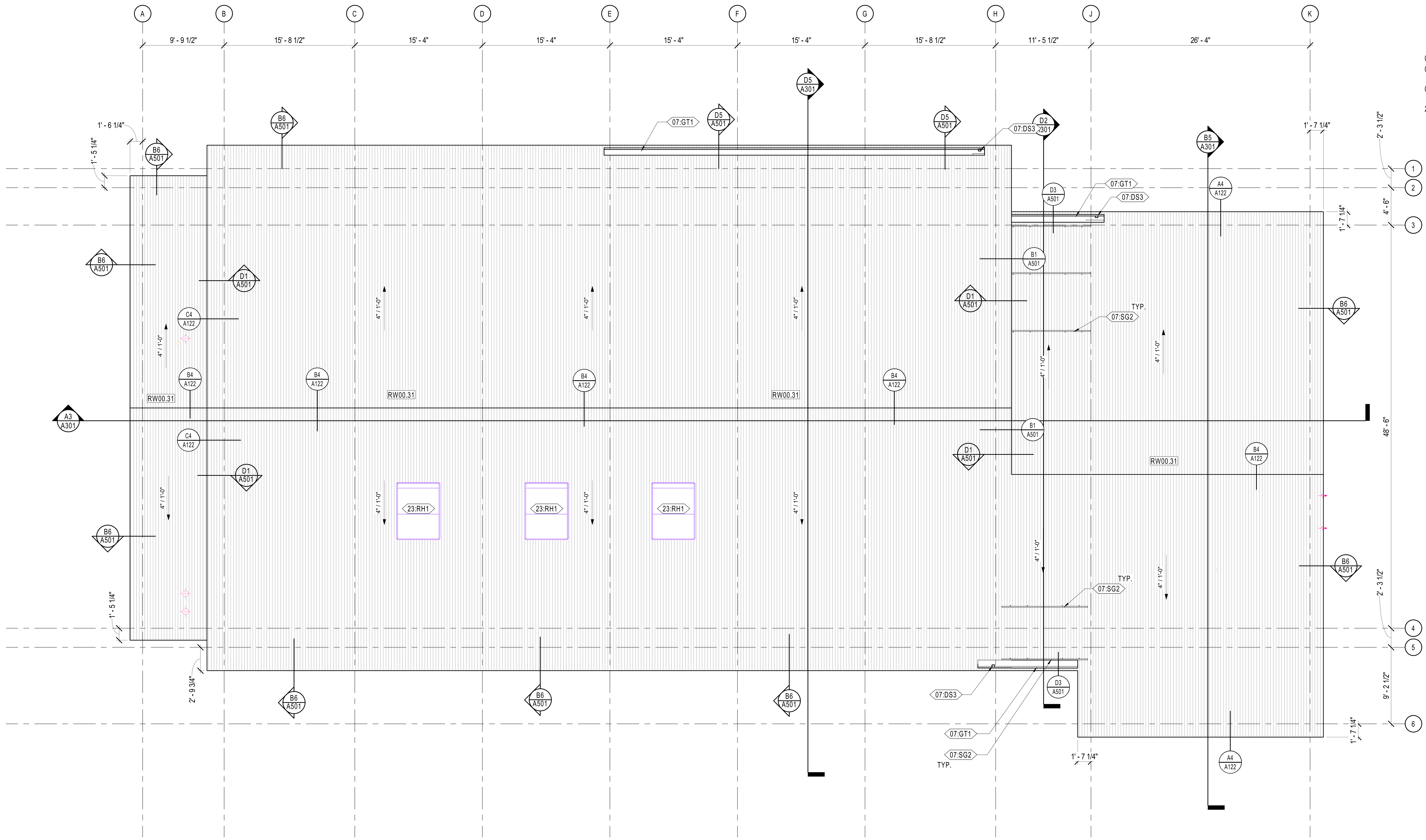
GENERAL NOTE - ROOF PLAN

A. COORDINATE ALL PENETRATIONS OF ROOF SYSTEM WITH MECHANICAL AND ELECTRICAL DRAWINGS.
B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN FIELD.
C. PROVIDE ADDITIONAL FLASHING, COUNTER FLASHING, PRESSURE TREATED WOOD BLOCKING AND ALL OTHER NECESSARY MATERIALS FOR COMPLETE ROOF RECONSTRUCTION.
D. PROVIDE CRICKETS ABOVE ALL OBSTRUCTIONS TO WATER FLOW WHICH ARE WIDER THAN 2 FEET. CRICKET BACK SLOPES SHALL BE TWICE THAT OF ROOF SLOPES.
E. ROOFING DETAILS ON THIS SHEET ARE INTENDED TO SHOW ROOF MEMBRANE AND FLASHING DETAILING AT VARIOUS TYPES OF ROOF PENETRATIONS. ACTUAL CONDITIONS BELOW THE MEMBRANE ARE SHOWN DIAGRAMMATICALLY. SEE PROJECT SPECIFICATIONS, WALL SECTIONS AND DETAILS FOR ROOF DECK SUBSTRATE, INSULATION, VAPOR RETARDER, ROOF SUBSTRATE AND COVER BOARD CONDITIONS.

KEYNOTE LEGEND

07:DS3	DOWNSPOUT
07:GT1	PRE-FINISHED CUSTOM ALUMINUM GUTTER AND DOWNSPOUT
07:SG2	SNOWGUARD. ANCHOR TO STRUCTURAL ROOF FRAMING
23:RH1	HATCH. SEE MECHANICAL



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DATE:	08.09.18

ROOF PLAN

A3 / A121 **ROOF PLAN**
3/16" = 1'-0"

N

8/10/2018 4:36:11 PM

A121

1 2 3 4 5 6

GENERAL NOTE - ROOF PLAN

A. COORDINATE ALL PENETRATIONS OF ROOF SYSTEM WITH MECHANICAL AND ELECTRICAL DRAWINGS.
B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN FIELD.
C. PROVIDE ADDITIONAL FLASHING, COUNTER FLASHING, PRESSURE TREATED WOOD BLOCKING AND ALL OTHER NECESSARY MATERIALS FOR COMPLETE ROOF RECONSTRUCTION.
D. PROVIDE CRICKETS ABOVE ALL OBSTRUCTIONS TO WATER FLOW WHICH ARE WIDER THAN 2 FEET. CRICKET BACK SLOPES SHALL BE TWICE THAT OF ROOF SLOPES.
E. ROOFING DETAILS ON THIS SHEET ARE INTENDED TO SHOW ROOF MEMBRANE AND FLASHING DETAILING AT VARIOUS TYPES OF ROOF PENETRATIONS. ACTUAL CONDITIONS BELOW THE MEMBRANE ARE SHOWN DIAGRAMMATICALLY. SEE PROJECT SPECIFICATIONS, WALL SECTIONS AND DETAILS FOR ROOF DECK SUBSTRATE, INSULATION, VAPOR RETARDER, ROOF SUBSTRATE AND COVER BOARD CONDITIONS.

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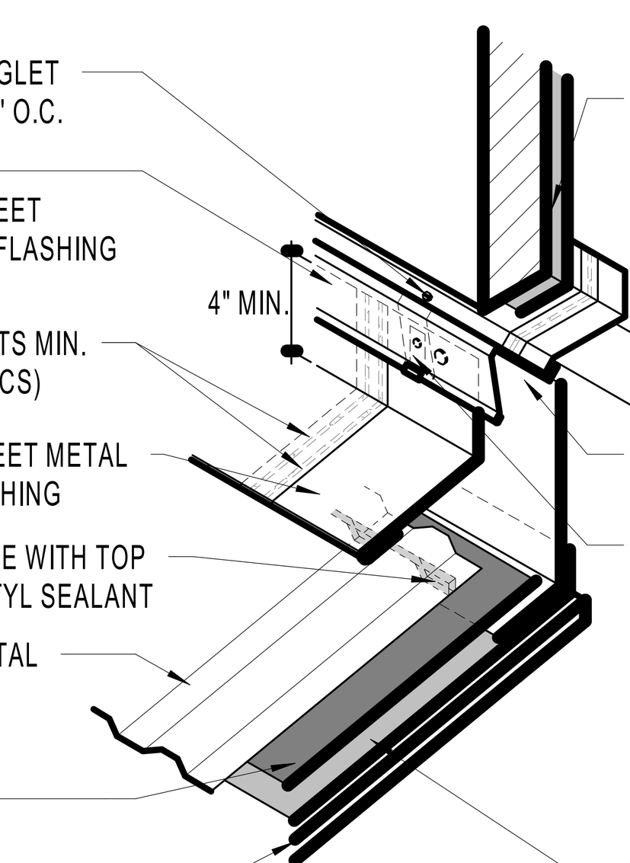
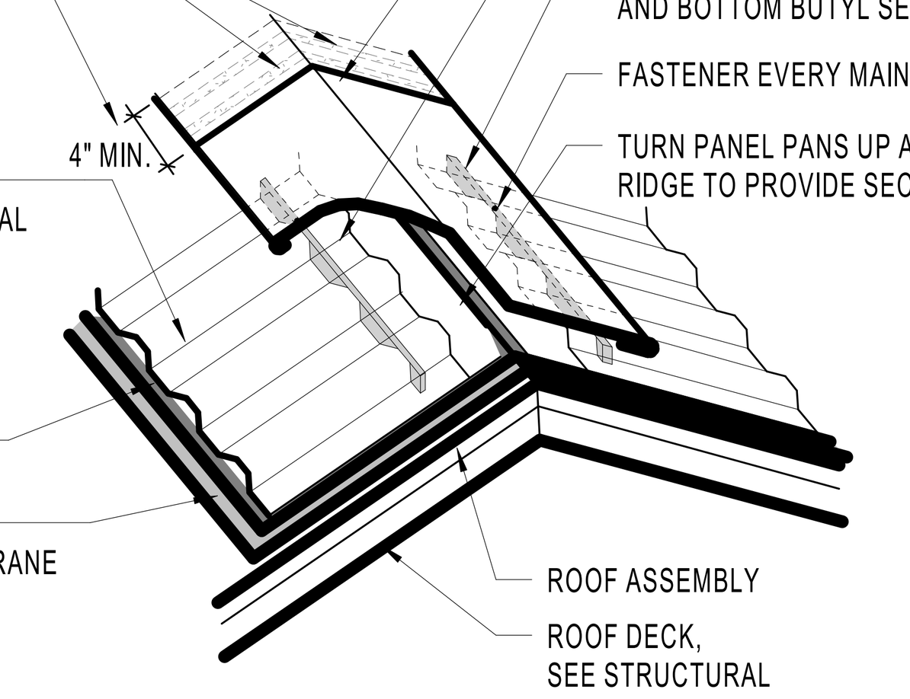
E



D

C4 ROOFING (METAL) - WALL FLASHING
A122 1 1/2" = 1'-0"

C



B4 ROOFING (METAL) - RIDGE
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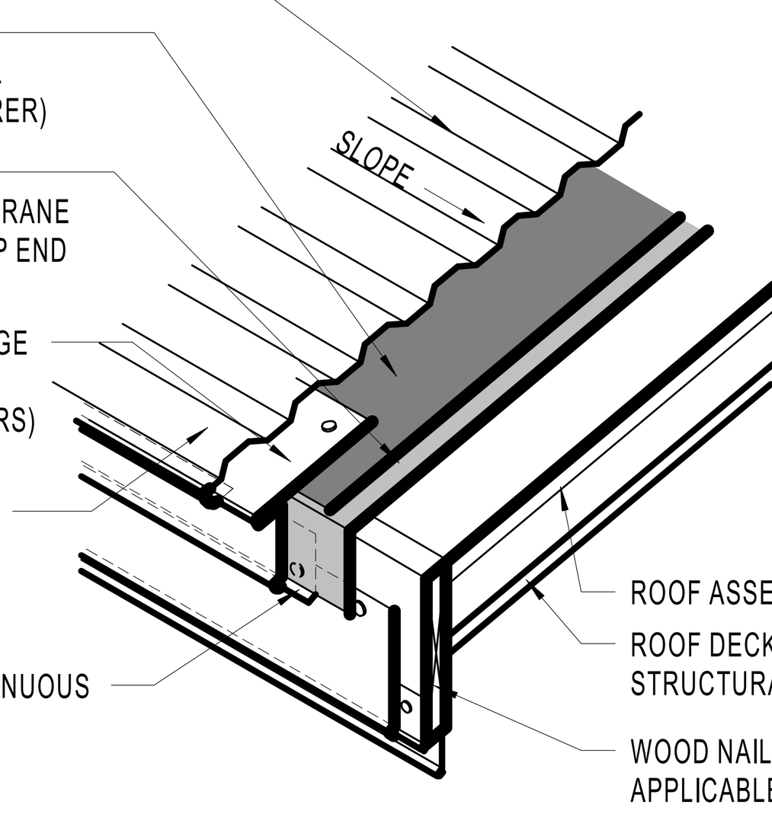

B6 ROOFING (METAL) - EDGE w/ RAKE
A122 1 1/2" = 1'-0"

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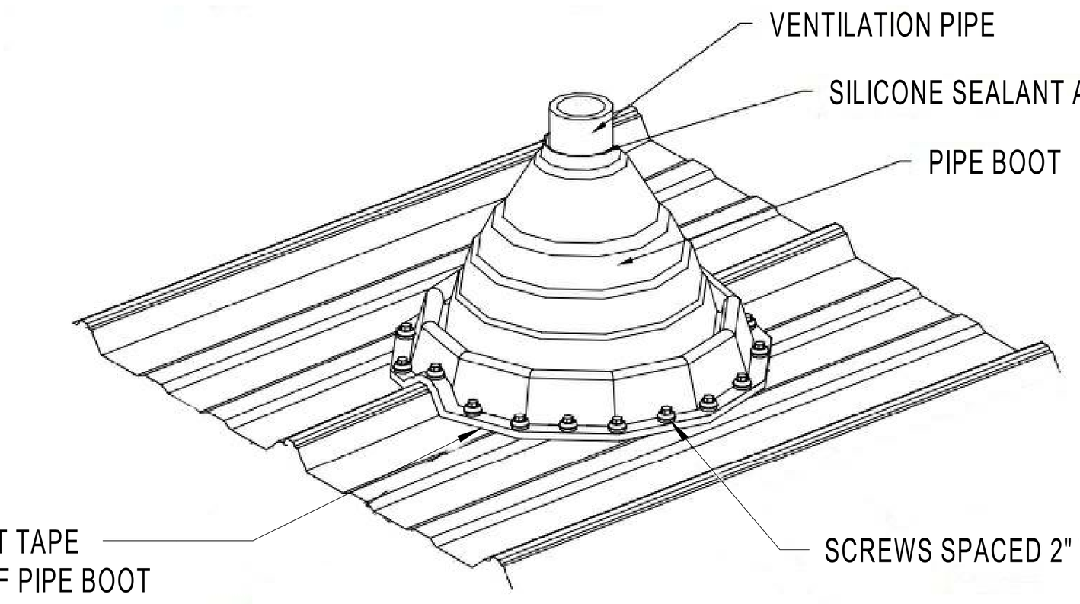
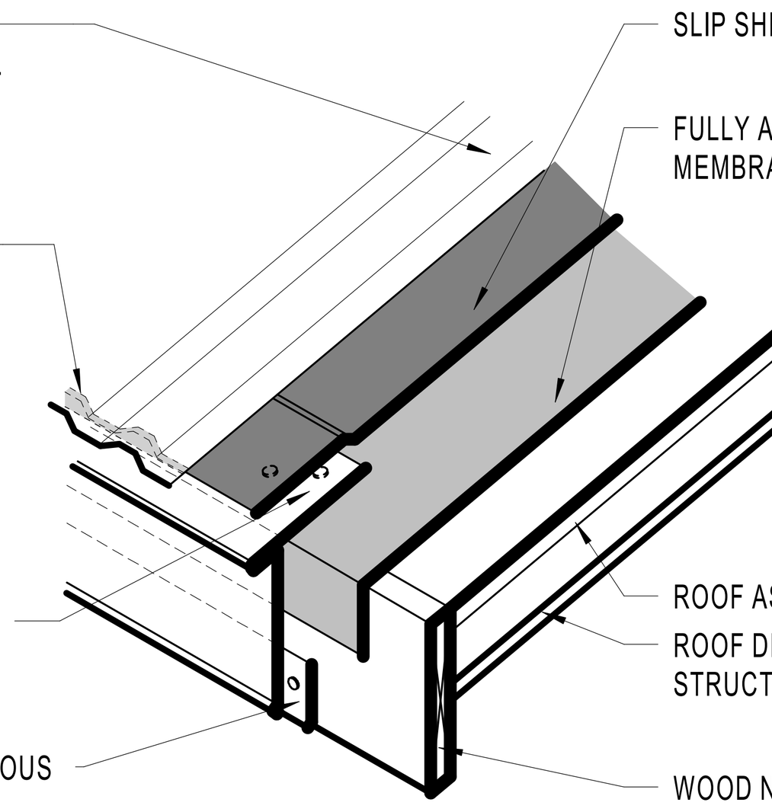
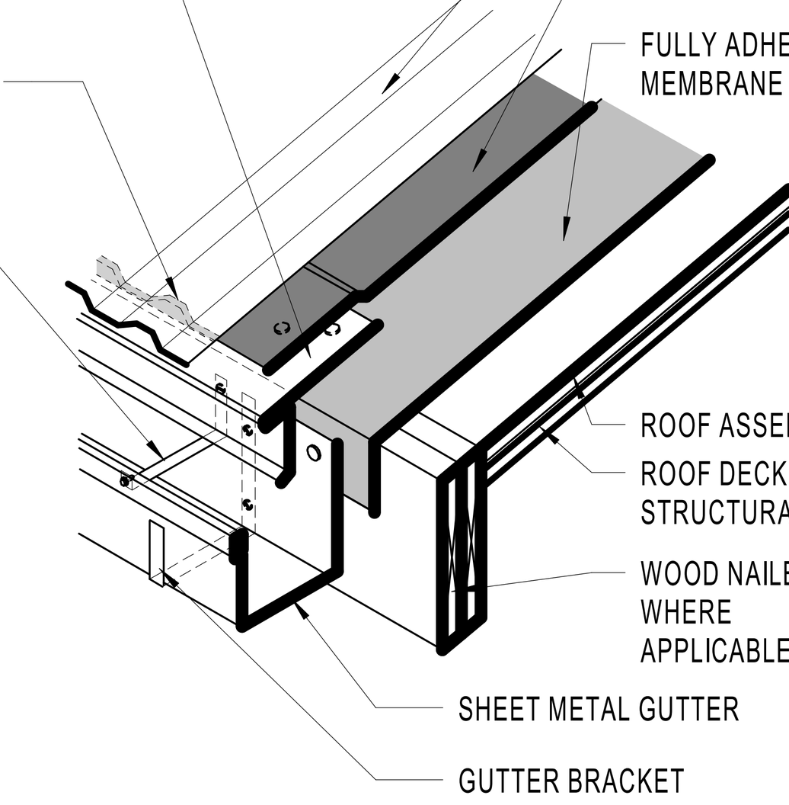
B



A2 ROOFING (METAL) - PLUMBING STACK
A122 1 1/2" = 1'-0"



A4 ROOFING (METAL) - EAVE
A122 1 1/2" = 1'-0"



A6 ROOFING (METAL) - EDGE w/ GUTTER
A122 1 1/2" = 1'-0"

A

8/10/2018 4:36:12 PM

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #:	18065
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DRAWN BY:	AS
DATE:	08.09.18

ROOF DETAILS

A122

GENERAL NOTE - RCP

A. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHTING AND DIFFUSER INFORMATION.
B. THE CEILING HEIGHT SHOWN IN THE ROOM TAG INDICATES THE HEIGHT OF THE DOMINANT CEILING FINISH. SEE ADDITIONAL CEILING FINISH CALLOUTS FOR OTHER CEILING HEIGHT OR FEATURES.
C. THE CONTRACTOR SHALL COORDINATE ALL TRADES TO ENSURE THAT DESIGNATED CEILING HEIGHTS CAN BE ACHEIVED. NOTIFY ARCHITECT OF ANY CONFLICTS OR CONDITIONS THAT PREVENT THIS FROM OCCURRING BEFORE PROCEEDING WITH THE WORK.
D. AT SOFFIT CONDITIONS, ALL LIGHTING FIXTURES/CONFIGURATION OF FIXTURES TO BE CENTERED IN SOFFIT, U.N.O. COORDINATE WITH ARCHITECT.

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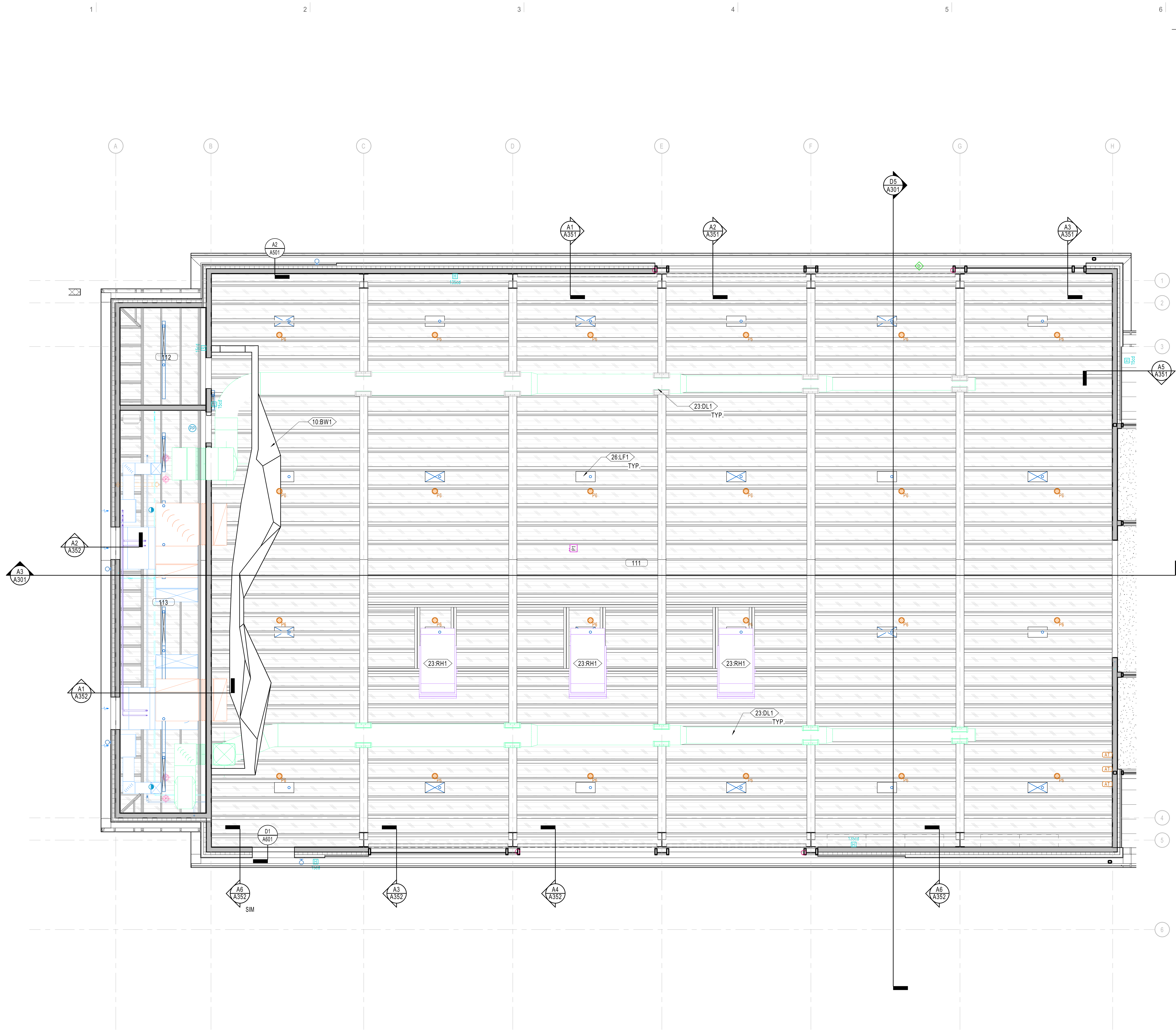
KEYNOTE LEGEND

10:BW1	BOULDERING WALL. SEE SHEET A702
23:DL1	DUCT LINER; SEE MECHANICAL
23:RH1	HATCH. SEE MECHANICAL
26:EF3	ELECTRICAL FIXTURE ALIGNMENT WITH FINISH, TO BE VERIFIED DURING CONSTRUCTION
26:LF1	LIGHT FIXTURE, SEE ELECTRICAL



A1 A151A LEVEL 01 - REFLECTED CEILING PLAN - AREA A
1/4" = 1'-0"

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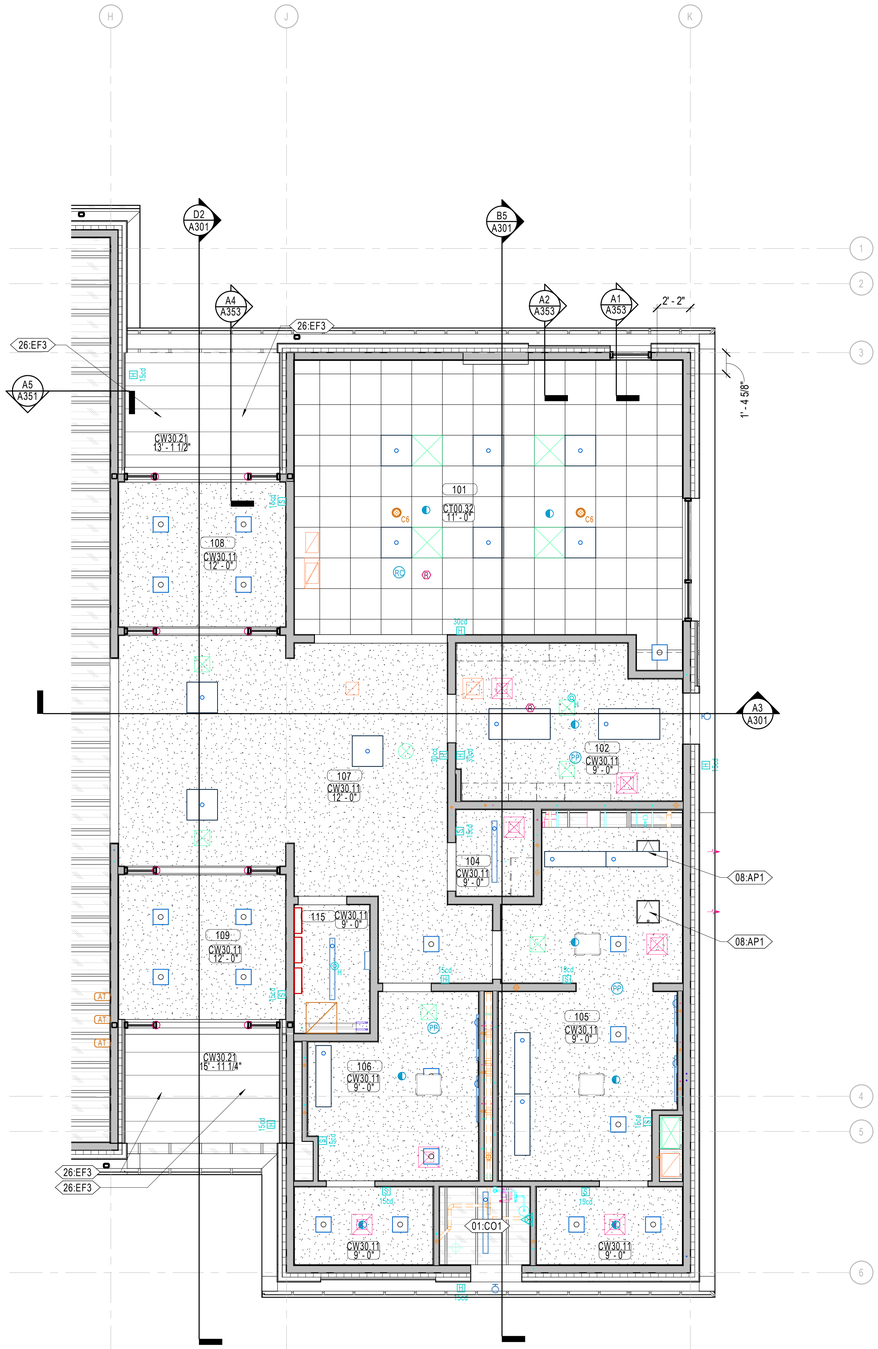
REFLECTED CEILING PLAN - AREA A

A151A



A4 / A151B **LEVEL 01 - REFLECTED CEILING PLAN - AREA B**
1/4" = 1'-0"

N

GENERAL NOTE - RCP

A. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHTING AND DIFFUSER INFORMATION.
B. THE CEILING HEIGHT SHOWN IN THE ROOM TAG INDICATES THE HEIGHT OF THE DOMINANT CEILING FINISH. SEE ADDITIONAL CEILING FINISH CALLOUTS FOR OTHER CEILING HEIGHT OR FEATURES.
C. THE CONTRACTOR SHALL COORDINATE ALL TRADES TO ENSURE THAT DESIGNATED CEILING HEIGHTS CAN BE ACHEIVED. NOTIFY ARCHITECT OF ANY CONFLICTS OR CONDITIONS THAT PREVENT THIS FROM OCCURRING BEFORE PROCEEDING WITH THE WORK.
D. AT SOFFIT CONDITIONS, ALL LIGHTING FIXTURES/CONFIGURATION OF FIXTURES TO BE CENTERED IN SOFFIT, U.N.O. COORDINATE WITH ARCHITECT.

KEYNOTE LEGEND

01:CO1	CEILING OPEN TO STRUCTURE ABOVE
08:AP1	CEILING ACCESS PANEL 18" X 18"
26:EF3	ELECTRICAL FIXTURE ALIGNMENT WITH FINISH, TO BE VERIFIED DURING CONSTRUCTION

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REFLECTED CEILING PLAN - AREA B

A151B

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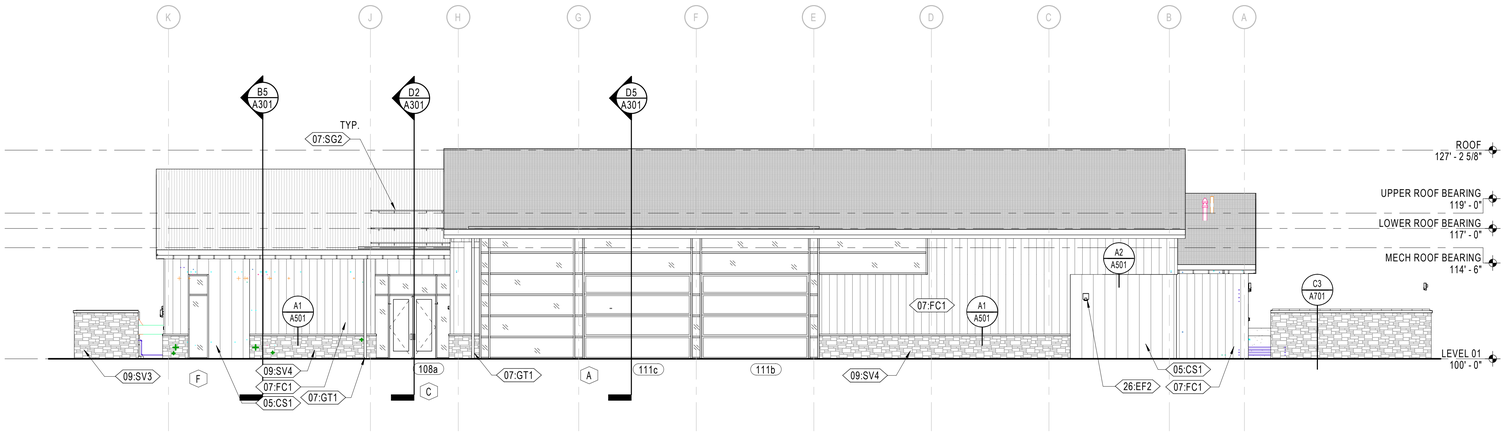
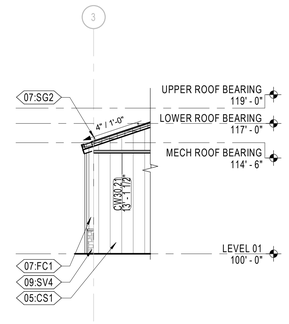
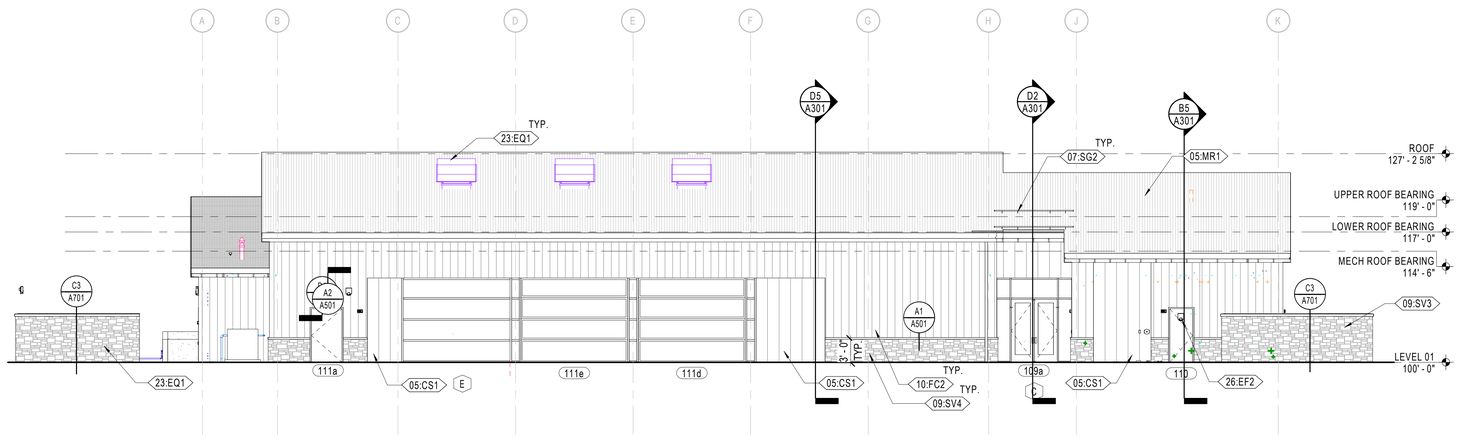


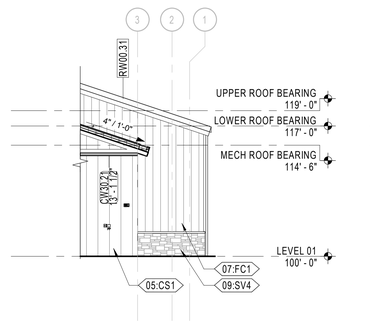
D1 A201 BUILDING ELEVATION (NORTH)
1/8" = 1'-0"



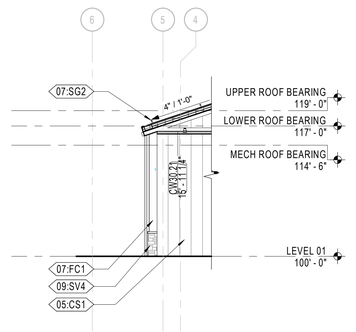
D5 A201 BUILDING ELEVATION (WEST @ NORTH ENTRY)
1/8" = 1'-0"



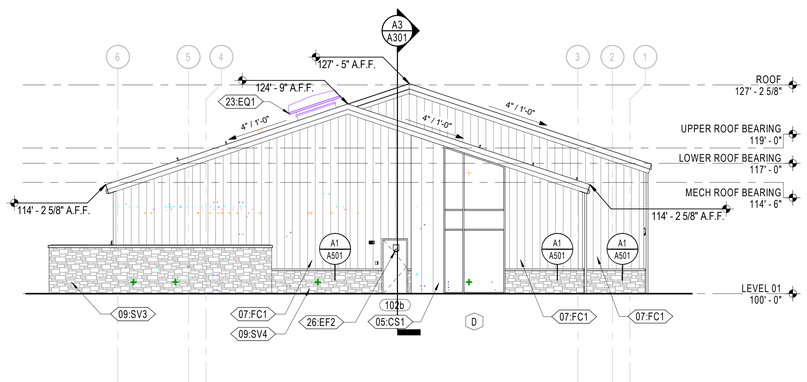
B1 A201 BUILDING ELEVATION (SOUTH)
1/8" = 1'-0"



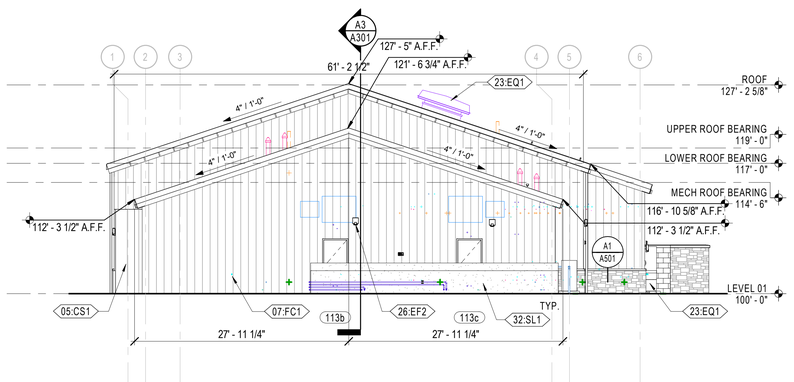
B5 A201 BUILDING ELEVATION (EAST @ NORTH ENTRY)
1/8" = 1'-0"



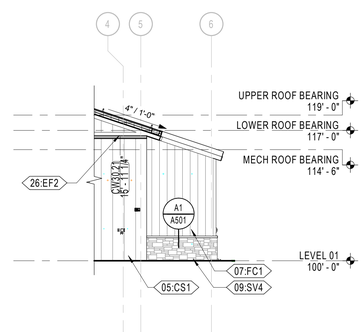
B6 A201 BUILDING ELEVATION (EAST @ SOUTH ENTRY)
1/8" = 1'-0"



A1 A201 BUILDING ELEVATION (EAST)
1/8" = 1'-0"



A4 A201 BUILDING ELEVATION (WEST)
1/8" = 1'-0"



A6 A201 BUILDING ELEVATION (WEST @ SOUTH ENTRY)
1/8" = 1'-0"

GENERAL NOTE - BUILDING ELEVATION

A. COORDINATE GRADING SHOWN ON ELEVATIONS w/ CIVIL
B. PROVIDE GUTTERS AND DOWN SPOUTS w/ HEAT CABLE, SNOW FENCES, AND SNOW CLIPS - SEE ROOF PLAN
C. FOR TYPICAL WALL ASSEMBLY INCLUDING MATERIAL DESIGNATIONS AND DETAILING APPROACH, SEE A350 SERIES

KEYNOTE LEGEND

05:CS1	STEEL PANEL
05:MR1	RUSTED CORRUGATED METAL ROOF
07:FC1	FIBER CEMENT BOARD AND BATTEN
07:GT1	PRE-FINISHED CUSTOM ALUMINUM GUTTER AND DOWNSPOUT
07:SG2	SNOWGUARD. ANCHOR TO STRUCTURAL ROOF FRAMING
09:SV3	STONE VENEER MECHANICAL SCREEN WALL
09:SV4	STONE VENEER
10:FC2	SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE SHEET A701
23:EQ1	EQUIPMENT; SEE MECHANICAL
26:EF2	ELECTRICAL LIGHT FIXTURE HEIGHTS TO BE VERIFIED DURING CONSTRUCTION
32:SL1	SEE LANDSCAPE

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BUILDING ELEVATIONS

A201

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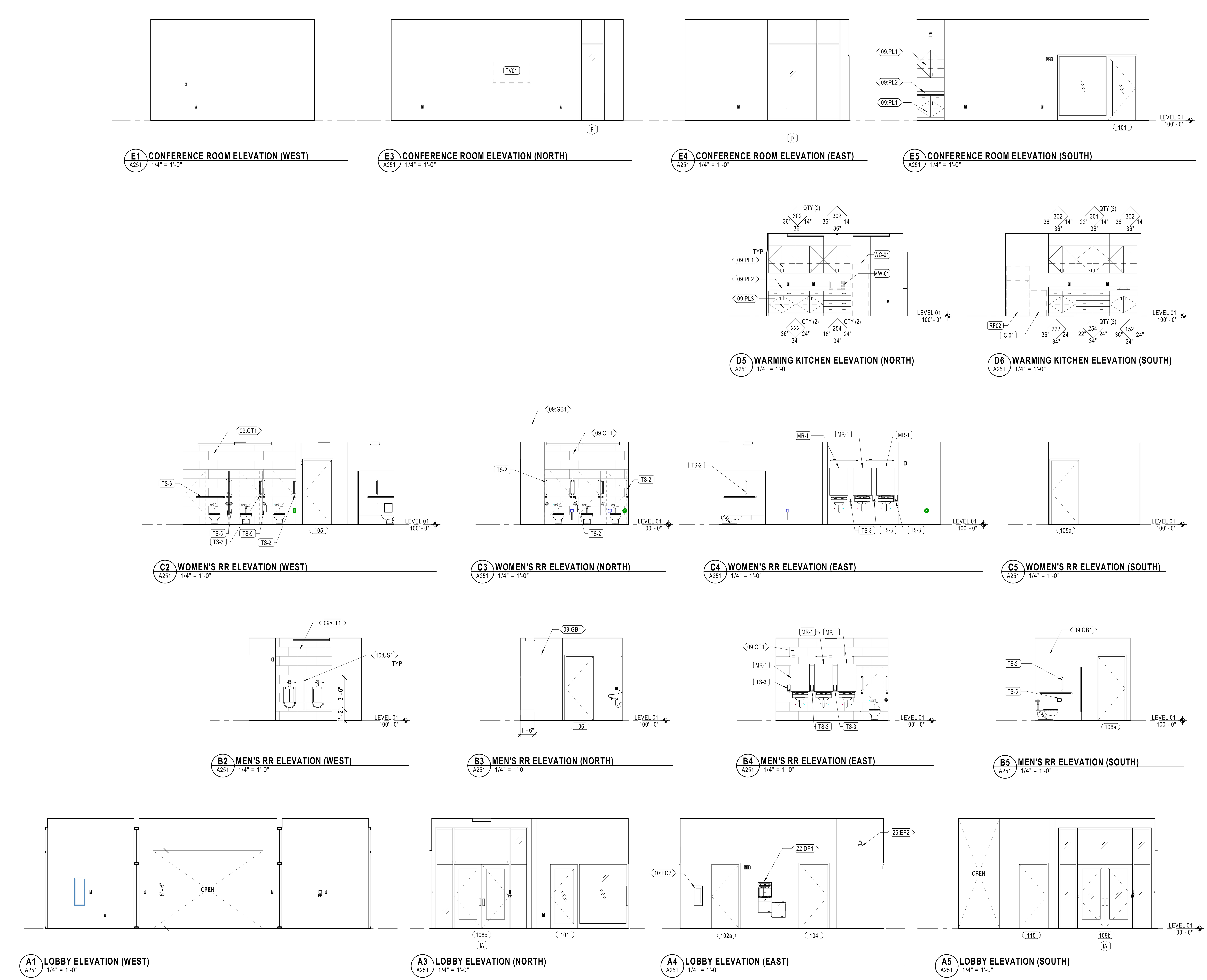

GENERAL NOTE - INTERIOR ELEVATION

A. ENSURE THAT ALL REQUIRED FIXTURE AND CABINET CLEARANCES AND OTHER REQUIREMENTS ARE MAINTAINED PURSUANT TO ADAAG AND ANSI A117.1. SEE SHEET G701 FOR GENERAL GUIDANCE ON COMMON MOUNTING HEIGHTS.

B. PROVIDE BLOCKING/BACKING AS NECESSARY FOR MOUNTING OF WALL-MOUNTED CABINETS, FIXTURES AND EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS. COORDINATE THIS REQUIREMENT THROUGH ALL FLOOR PLANS, EQUIPMENT PLANS, AND INTERIOR ELEVATIONS.

C. ON ALL EXPOSED CABINET SIDES, INCLUDING KNEE OPENINGS, PROVIDE FINISHED FACE TO MATCH CABINET FRONTS . PROVIDE SIDESPLASHES WHENEVER COUNTERTOPS ARE ADJACENT TO WALLS.

KEYNOTE LEGEND

09:CT1	CERAMIC TILE OVER THIN SET MORTAR BED
09:GB1	(1) LAYER 5/8" GYPSUM BOARD
09:PL1	PL-01 MILLWORK FINISH
09:PL2	PL-02 LAMINATE COUNTERTOP
09:PL3	PL-03 MILLWORK FINISH
10:FC2	SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE SHEET A701
10:US1	URINAL SCREEN
22:DF1	DRINKING FOUNTAIN
26:EF2	ELECTRICAL LIGHT FIXTURE HEIGHTS TO BE VERIFIED DURING CONSTRUCTION

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INTERIOR ELEVATIONS

A251

8/10/2018 4:36:30 PM

GENERAL NOTE - INTERIOR ELEVATION

A. ENSURE THAT ALL REQUIRED FIXTURE AND CABINET CLEARANCES AND OTHER REQUIREMENTS ARE MAINTAINED PURSUANT TO ADAAG AND ANSI A117.1. SEE SHEET G701 FOR GENERAL GUIDANCE ON COMMON MOUNTING HEIGHTS.
B. PROVIDE BLOCKING/BACKING AS NECESSARY FOR MOUNTING OF WALL-MOUNTED CABINETS, FIXTURES AND EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS. COORDINATE THIS REQUIREMENT THROUGH ALL FLOOR PLANS, EQUIPMENT PLANS, AND INTERIOR ELEVATIONS.
C. ON ALL EXPOSED CABINET SIDES, INCLUDING KNEE OPENINGS, PROVIDE FINISHED FACE TO MATCH CABINET FRONTS . PROVIDE SIDESPLASHES WHENEVER COUNTERTOPS ARE ADJACENT TO WALLS.

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KEYNOTE LEGEND

10:BW1	BOULDERING WALL. SEE SHEET A702
10:FC2	SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE SHEET A701
12:CC1	CASEWORK CUBBIES. OFOI. FINISH TO BE PL-04
12:CH1	CHAIR. OFOI.

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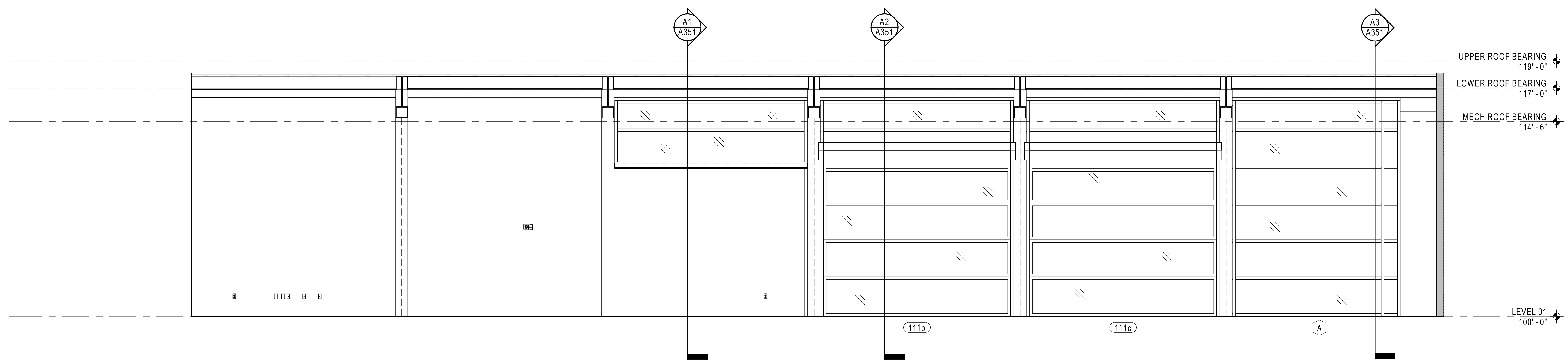
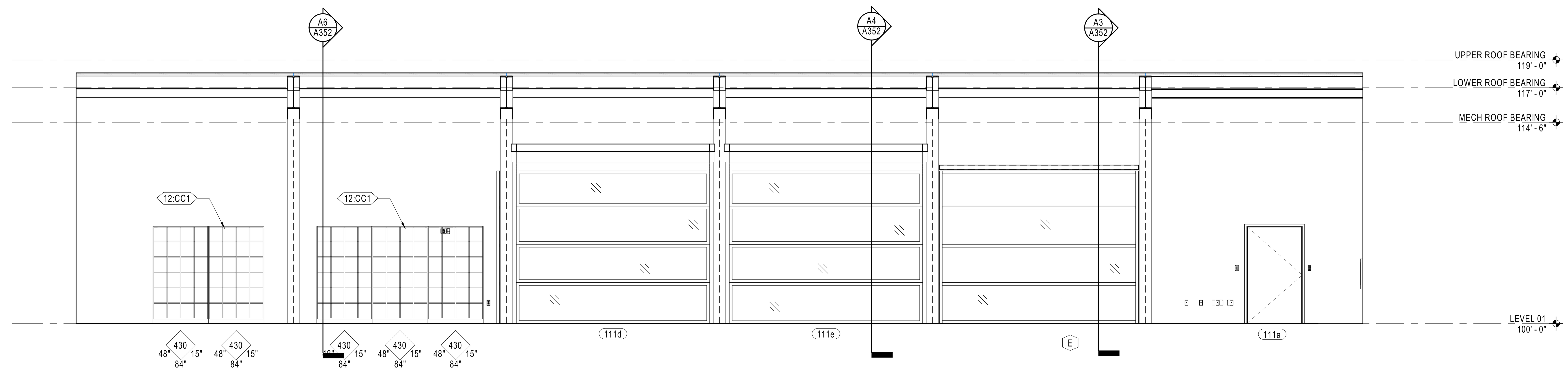
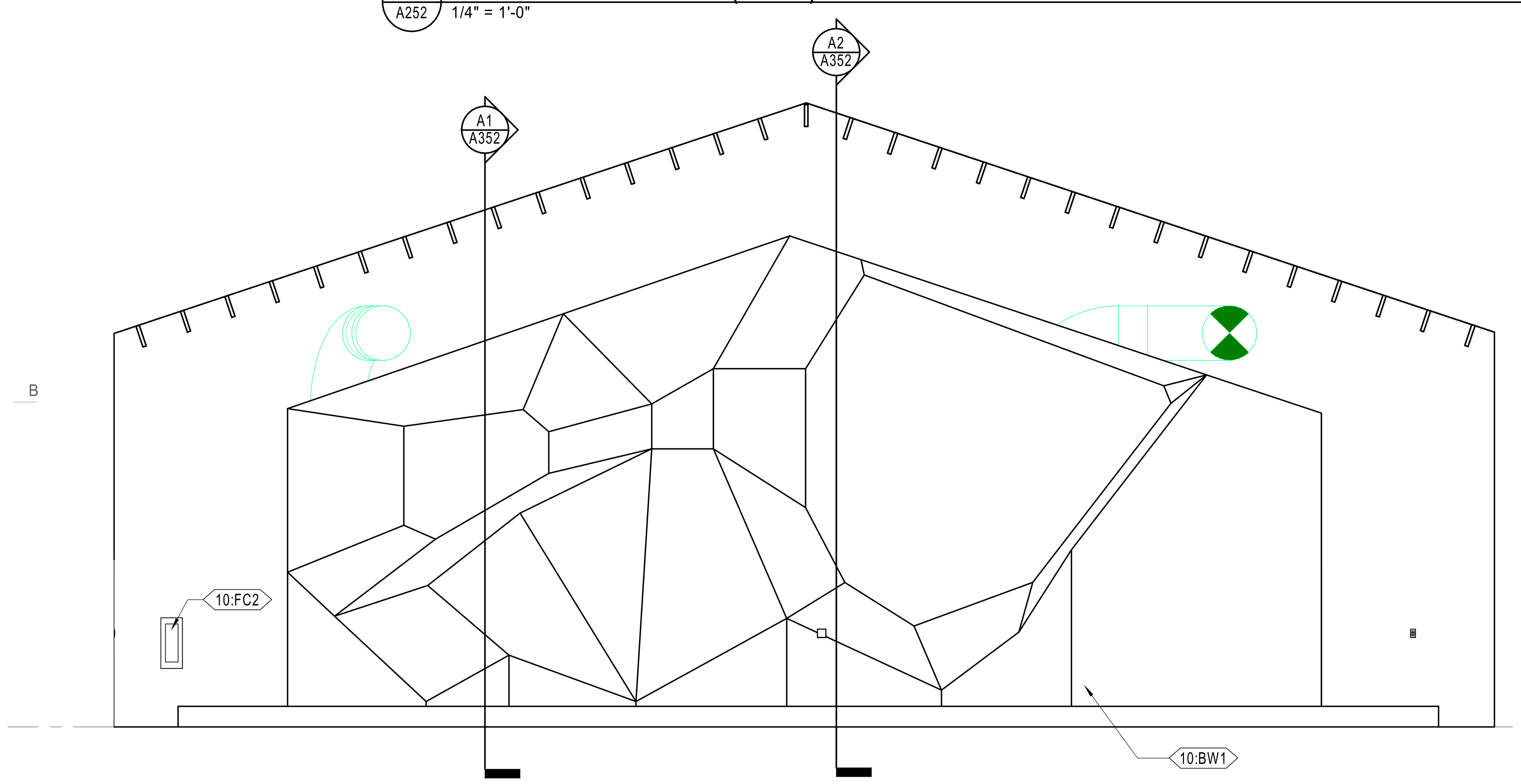


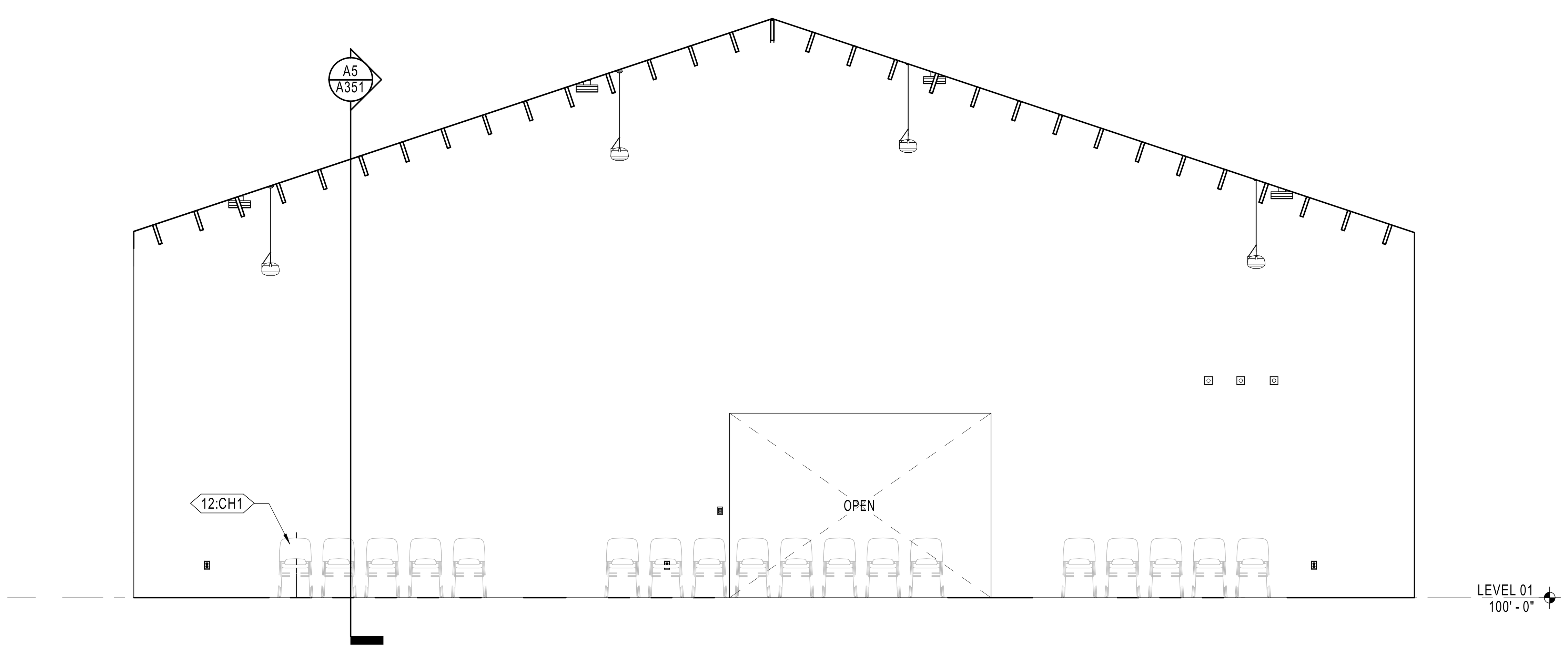
D2 ACTIVITY ROOM ELEVATION (NORTH)
A252 1/4" = 1'-0"



B2 ACTIVITY ROOM ELEVATION (SOUTH)
A252 1/4" = 1'-0"



A1 ACTIVITY ROOM ELEVATION (WEST)
A252 1/4" = 1'-0"



A4 ACTIVITY ROOM ELEVATION (EAST)
A252 1/4" = 1'-0"

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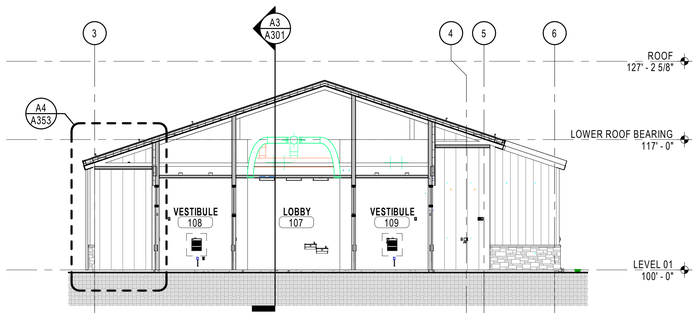
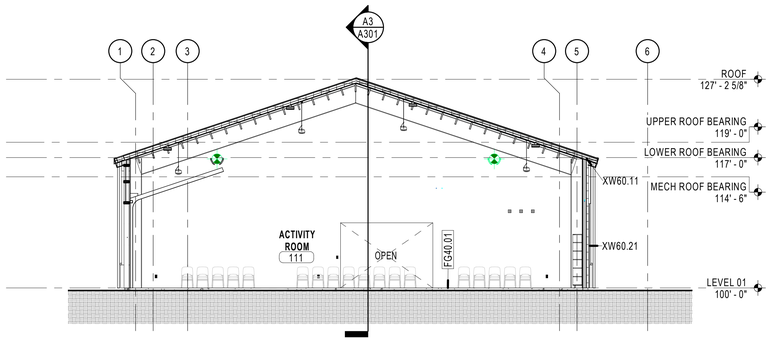
INTERIOR ELEVATIONS

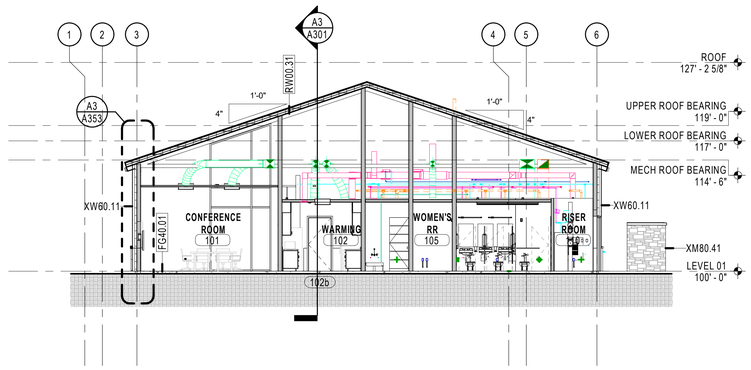
A252



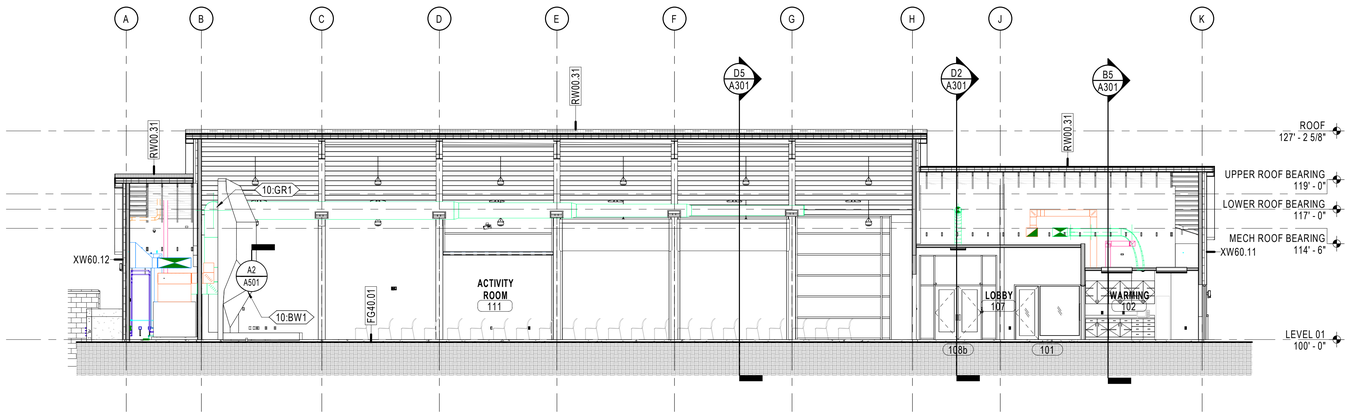
D2 BUILDING SECTION - TRANSVERSE 4
A301 1/8" = 1'-0"



D5 BUILDING SECTION - TRANSVERSE 1
A301 1/8" = 1'-0"



B5 BUILDING SECTION - TRANSVERSE 2
A301 1/8" = 1'-0"



A3 BUILDING SECTION - LONGITUDINAL
A301 1/8" = 1'-0"

GENERAL NOTE - SECTION

A. WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
B. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
C. SEE G SERIES SHEETS FOR WALL TYPES AND TYPICAL ACCESSIBILITY CLEARANCE AND COMPLIANCE REQUIREMENTS.
D. DO NOT SCALE DRAWINGS.

KEYNOTE LEGEND

10:BW1	BOULDERING WALL. SEE SHEET A702
10:GR1	TOP GRILLE FOR AIR SUPPLY ON TOP OF BOULDERING WALL - SEE MECHANICAL.

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BUILDING SECTIONS

A301

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GENERAL NOTE - SECTION

A. WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
B. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
C. SEE G SERIES SHEETS FOR WALL TYPES AND TYPICAL ACCESSIBILITY CLEARANCE AND COMPLIANCE REQUIREMENTS.
D. DO NOT SCALE DRAWINGS.

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KEYNOTE LEGEND

07:RI8 FOUNDATION INSULATION

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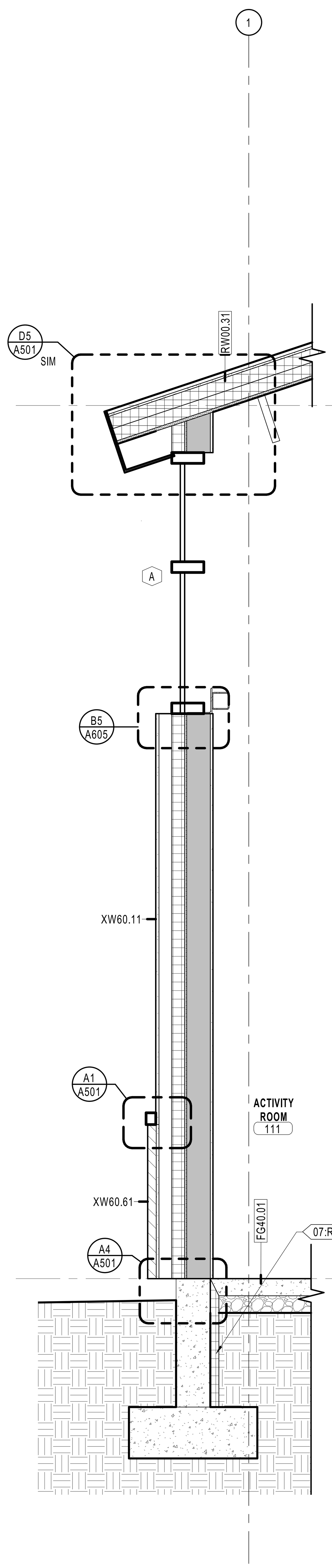
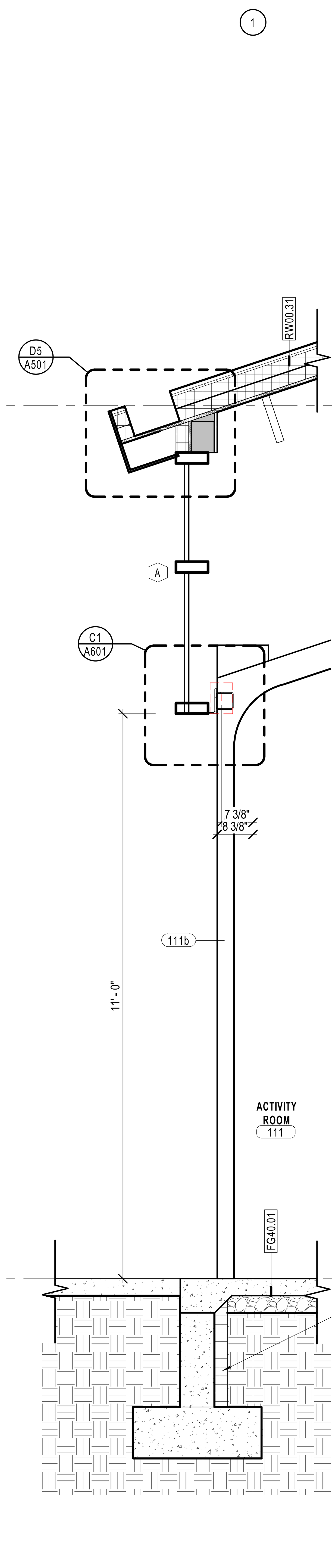
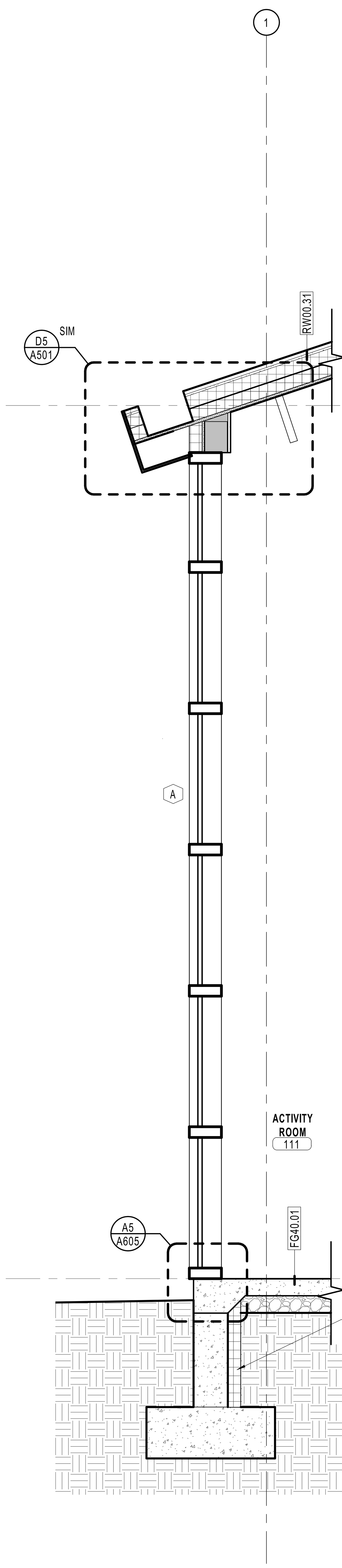


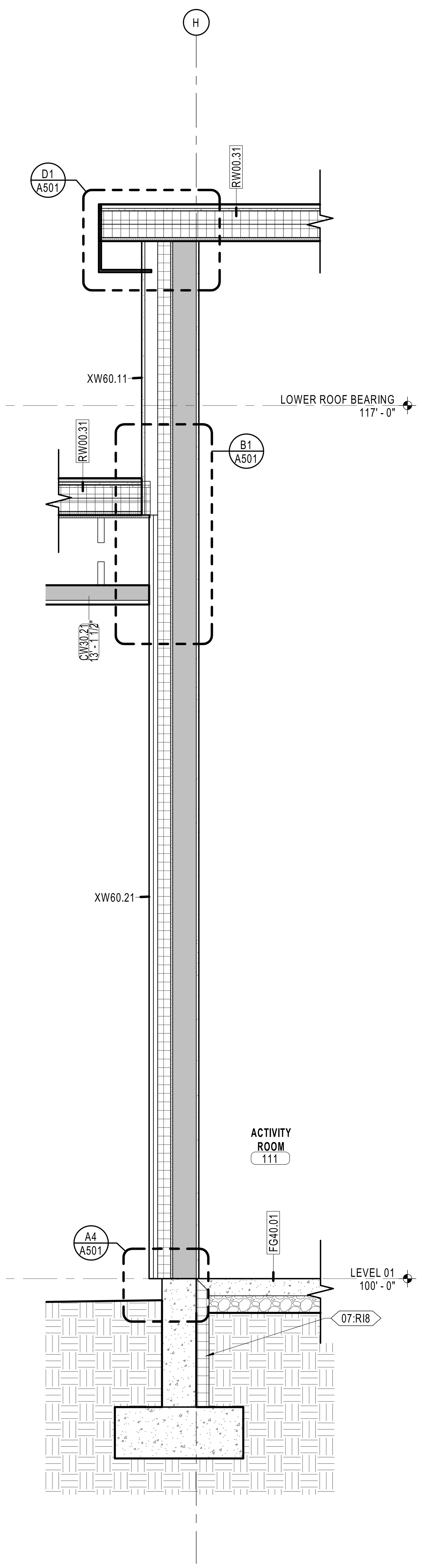
A1 WALL SECTION (NORTH WALL W/ CLERESTORY) GRID D/1
A351 3/4" = 1'-0"



A2 WALL SECTION (SECTIONAL DOOR) GRID E/1
A351 3/4" = 1'-0"



A3 WALL SECTION (NORTH CURTAIN WALL) GRID H/1
A351 3/4" = 1'-0"



A5 WALL SECTION (WALL NORTH ENTRANCE) GRID H/3
A351 3/4" = 1'-0"

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WALL SECTIONS - EXT.

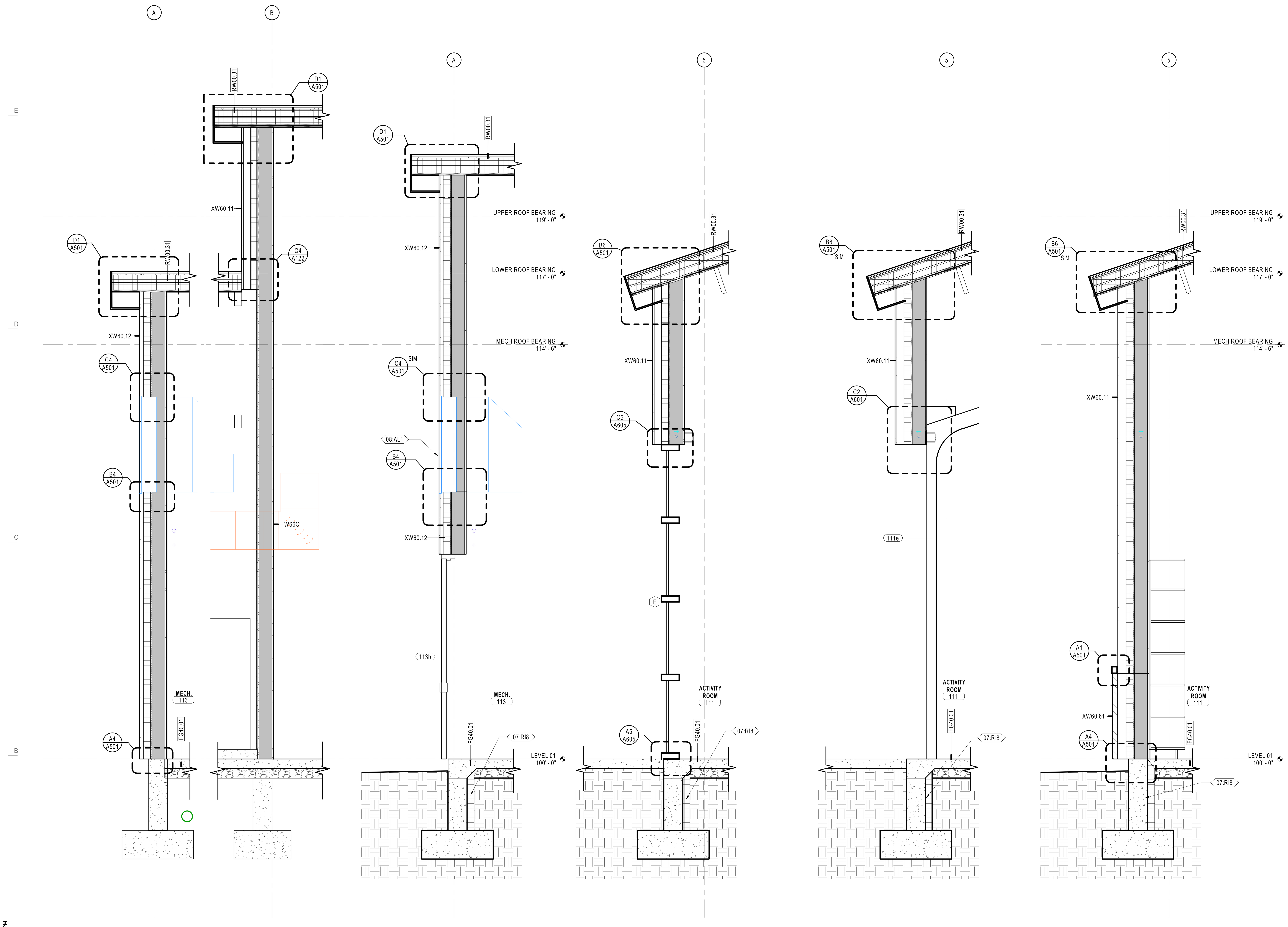
A351

GENERAL NOTE - SECTION

A. WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
B. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
C. SEE G SERIES SHEETS FOR WALL TYPES AND TYPICAL ACCESSIBILITY CLEARANCE AND COMPLIANCE REQUIREMENTS.
D. DO NOT SCALE DRAWINGS.

KEYNOTE LEGEND

07:RI8	FOUNDATION INSULATION
08:AL1	ALUMINUM LOUVER; RE: MECHANICAL



A1 WALL SECTION (WEST WALL 113) GRID A/4
A352 3/4" = 1'-0"

A2 WALL SECTION (LOUVER) GRID A/3
A352 3/4" = 1'-0"

A3 WALL SECTION (SOUTH CURTAIN WALL) GRID C/5
A352 3/4" = 1'-0"

A4 WALL SECTION (SOUTH SECTIONAL DOOR) GRID D/5
A352 3/4" = 1'-0"

A6 WALL SECTION (SOUTH WALL) GRID G/5
A352 3/4" = 1'-0"

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WALL SECTIONS - EXT.

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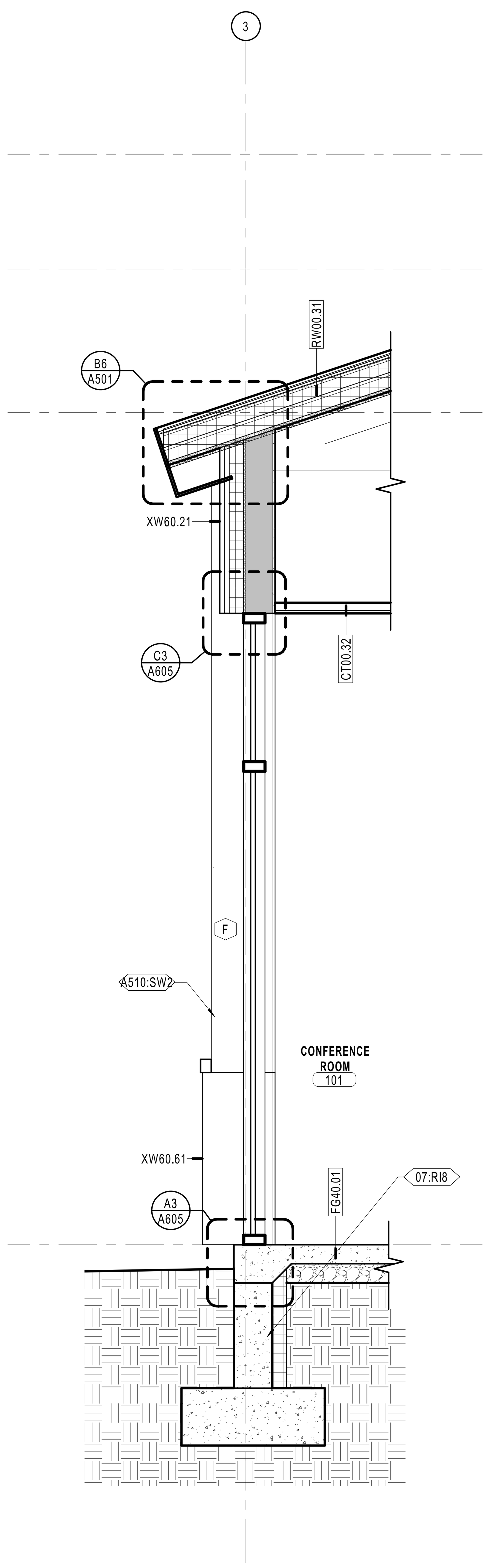
GENERAL NOTE - SECTION

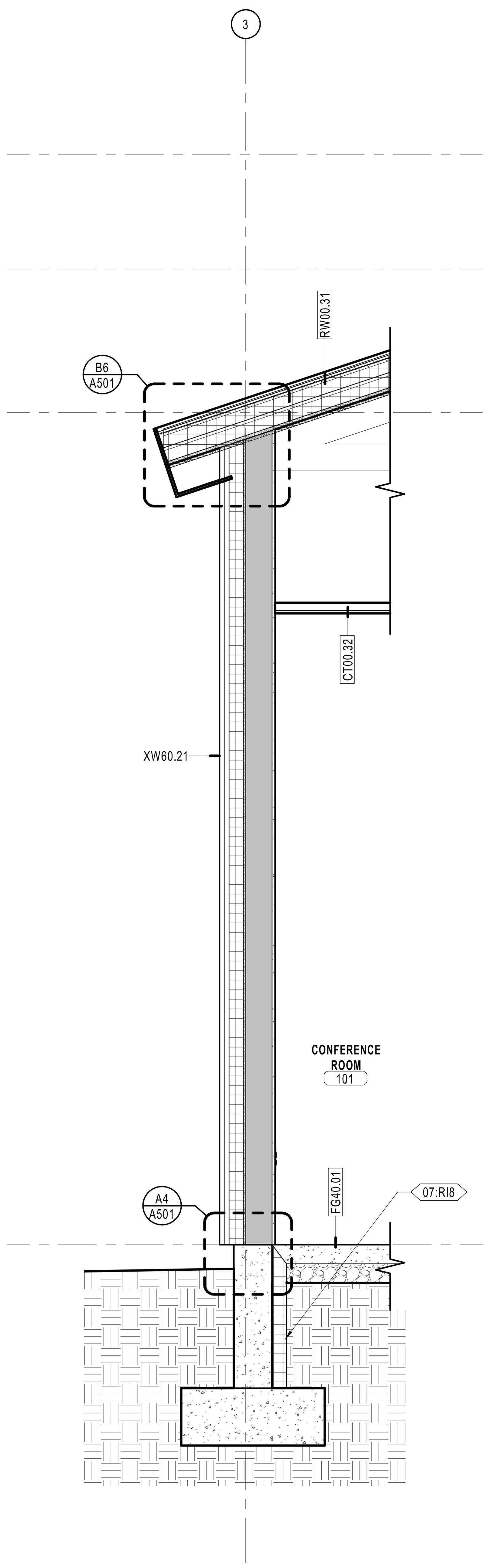
A. WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
B. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
C. SEE G SERIES SHEETS FOR WALL TYPES AND TYPICAL ACCESSIBILITY CLEARANCE AND COMPLIANCE REQUIREMENTS.
D. DO NOT SCALE DRAWINGS.

KEYNOTE LEGEND

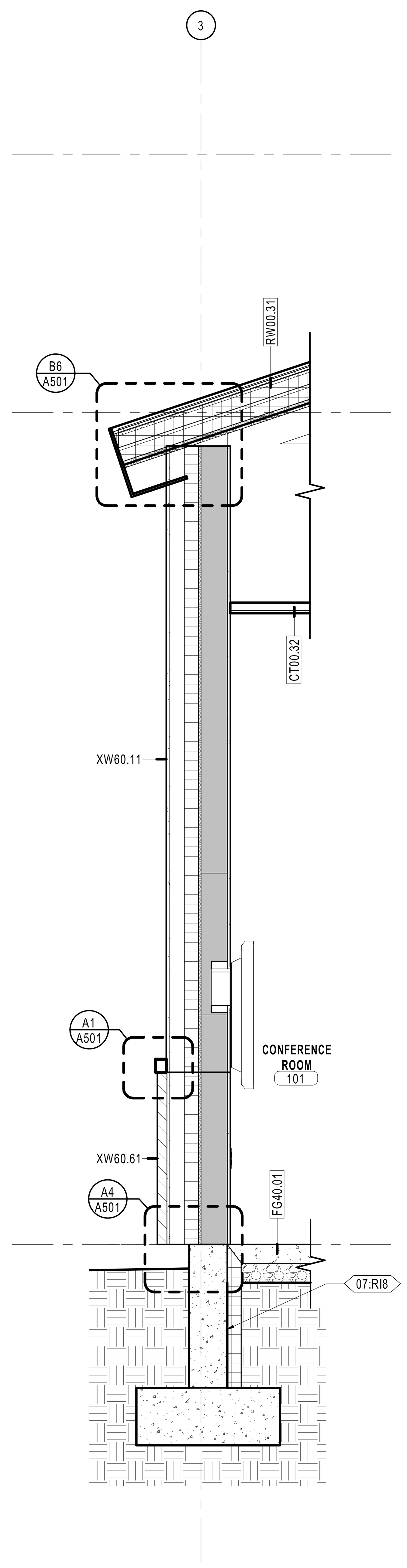
07:GT1	PRE-FINISHED CUSTOM ALUMINUM GUTTER AND DOWNSPOUT
07:RI8	FOUNDATION INSULATION
07:SG2	SNOWGUARD. ANCHOR TO STRUCTURAL ROOF FRAMING
A510:SW2	WALL BEYOND



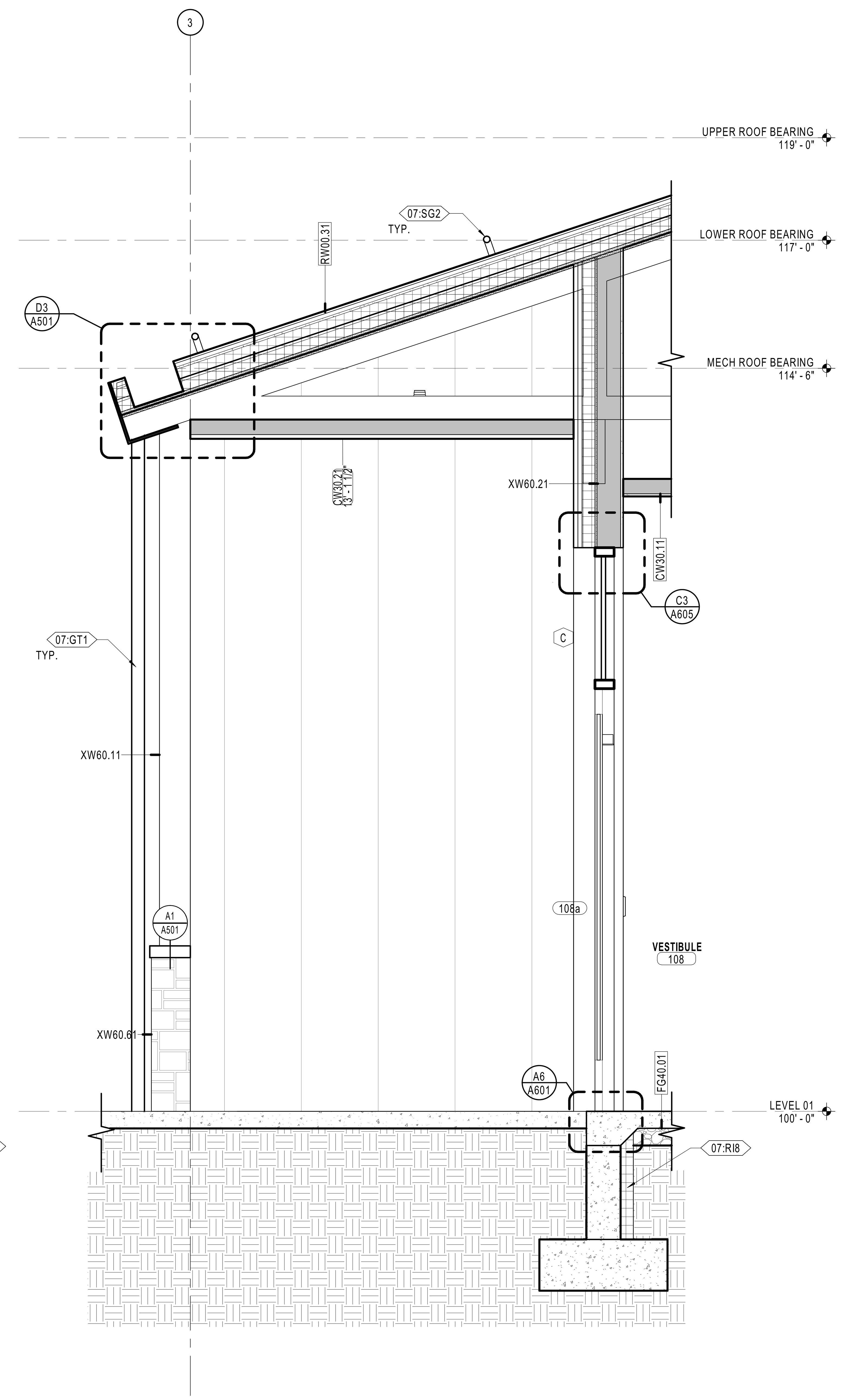
A1 A353 WALL SECTION (NORTH CURTAIN WALL) GRID K/3
3/4" = 1'-0"



A2 A353 WALL SECTION (101 NORTH WALL) GRID K/3
3/4" = 1'-0"



A3 A353 WALL SECTION (NORTH WALL) GRID J/3
3/4" = 1'-0"



A4 A353 WALL SECTION (ENTRANCE) GRID J/3
3/4" = 1'-0"

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CONSTRUCTION DOCUMENTS

NEXUS PROJ. #:	18065
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DATE:	08.09.18

WALL SECTIONS - EXT.

A353

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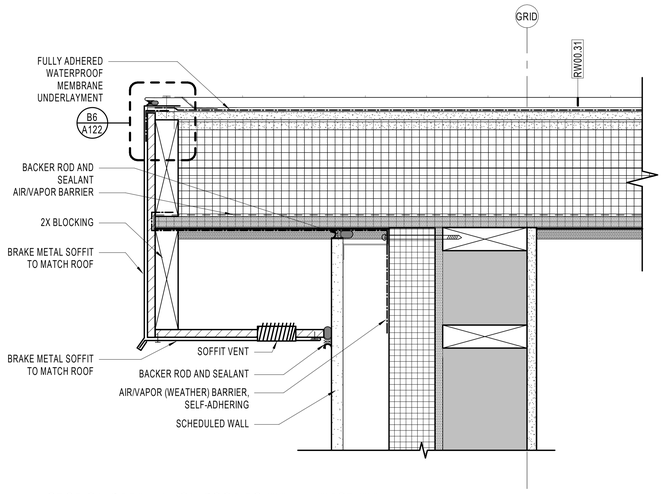
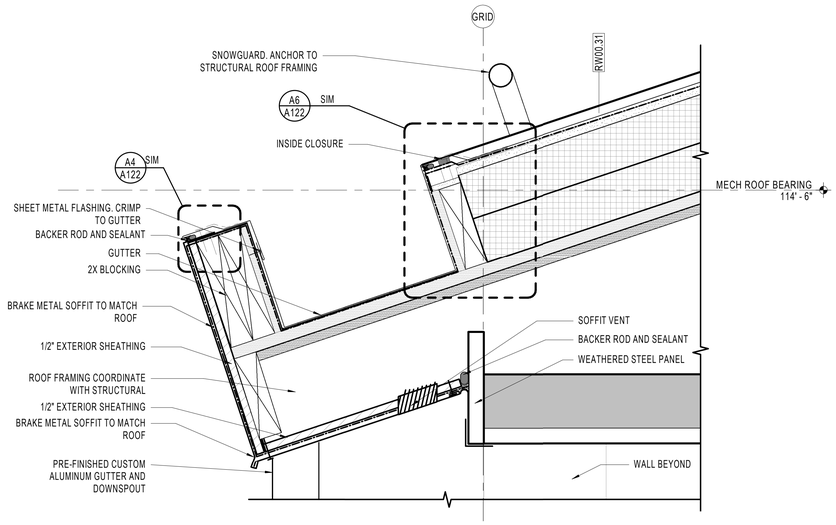
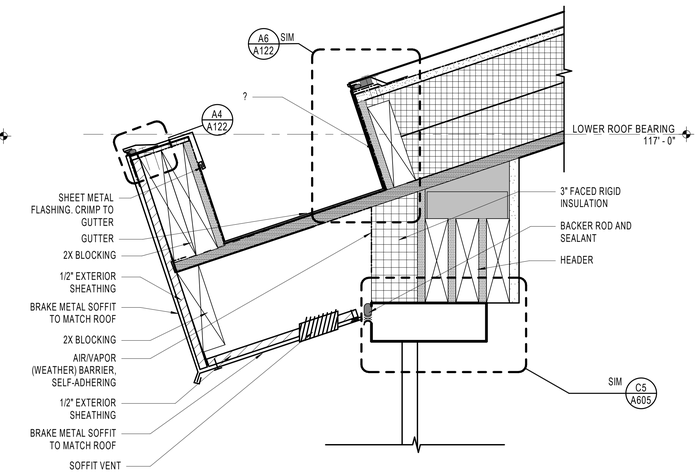


SECTION DETAIL (HIGH ROOF TO WALL - WEST WALL
D1 / A501 — 3" = 1'-0"

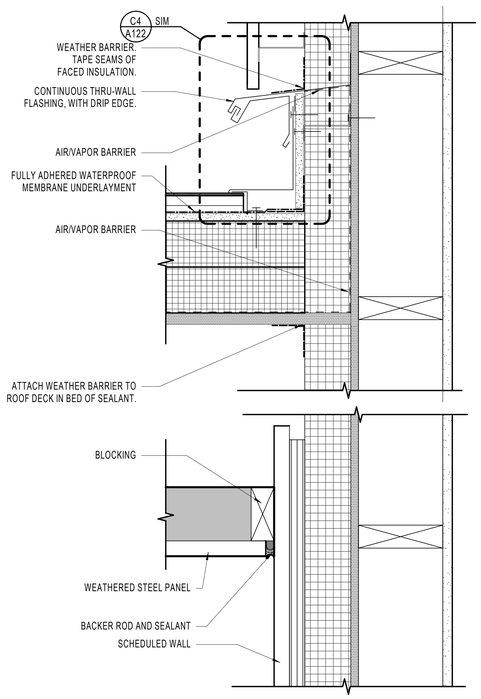
113) GRID A/4



SECTION DETAIL (GUTTER/SNOWGUARDS @ ENTRANCE) GRID J/3
D3 / A501 — 3" = 1'-0"

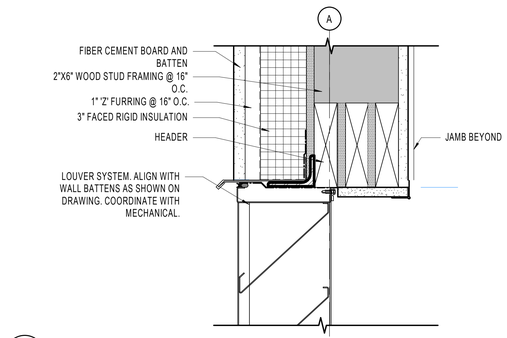


SECTION DETAIL (LOW ROOF EAVE @ NORTH WALL)
D5 / A501 — 3" = 1'-0"

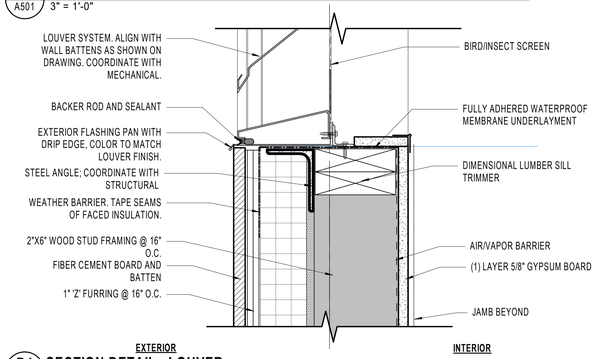


SECTION DETAIL (LOW ROOF TO WALL - EAST WALL)
B1 / A501 — 3" = 1'-0"

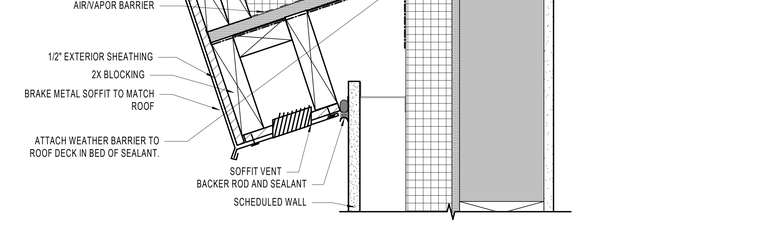
GRID H/3



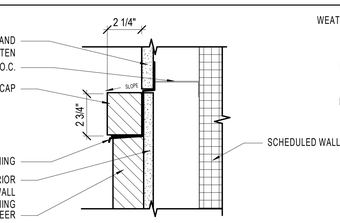
C4 SECTION DETAIL - MECHANICAL LOUVER HEAD
A501 — 3" = 1'-0"



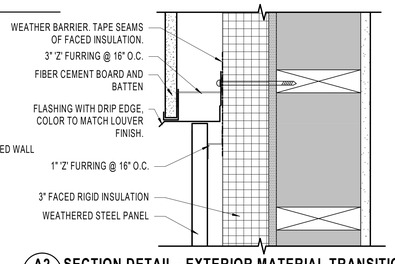
B4 SECTION DETAIL - LOUVER
A501 — 3" = 1'-0"



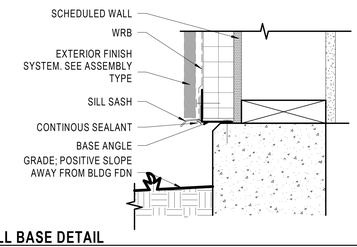
SECTION DETAIL (LOW ROOF EAVE @ SOUTH CURTAIN WALL) GRID C/5
B6 / A501 — 3" = 1'-0"



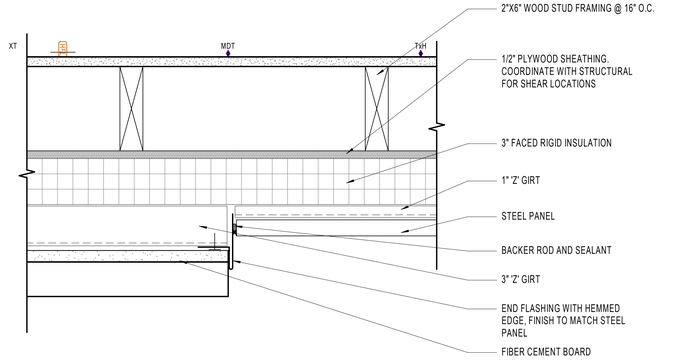
A1 SOLID STONE WALL CAP DETAIL
A501 — 3" = 1'-0"



A2 SECTION DETAIL - EXTERIOR MATERIAL TRANSITION
A501 — 3" = 1'-0"



A4 WALL BASE DETAIL
A501 — 3" = 1'-0"



PLAN DETAIL - EXTERIOR WALL MATERIAL TRANSITION
A5 / A501 — 3" = 1'-0"

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SECTION & PLAN DETAILS

A501

DOOR SCHEDULE

NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR TYPE	DOOR FINISH	FRAME DETAIL HEAD	FRAME DETAIL JAMB	FRAME DETAIL THRES	FRAME TYPE	FRAME FINISH	FIRE RATING	HARDWARE GROUP	NOTES	NUMBER
101	3' - 0"	7' - 0"	WS02	WD	D4/A601	C5/A601	D6/A601	TH	PT	-	205		101
102a	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	-	SH	PT	-	204		102a
102b	3' - 0"	7' - 0"	HS01	PX	D1/A601	D2/A601	A5/A601	SH	PX	-	103		102b
104	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	D6/A601	SH	PT	-	202		104
105	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	C6/A601	SH	PT	-	201		105
105a	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	-	SH	PT	-	206		105a
106	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	C6/A601	SH	PT	-	201		106
106a	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	-	SH	PT	-	206		106a
108a	6' - 0"	8' - 3"	AD01	AL	C3/A605	C5/A605	A6/A601	DA	AL	-	AS-100		108a
108b	6' - 0"	7' - 0"	AD01	AL	C1/A605	C6/A601	C6/A601	DA	AL	-	AS-101		108b
109a	6' - 0"	8' - 3"	AD01	AL	C3/A605	C5/A605	A6/A601	DA	AL	-	AS-100		109a
109b	6' - 0"	7' - 0"	AD01	AL	C1/A605	C6/A601	C6/A601	DA	AL	-	AS-101		109b
110	3' - 0"	7' - 0"	HS01	PX	D1/A601	D2/A601	A5/A601	SH	PX	-	101		110
111a	4' - 0"	7' - 0"	HS01	PX	D1/A601	D2/A601	A5/A601	SH	PT	-	104		111a
111b	13' - 11"	11' - 0"	OH01	PF	C1/A601	D5/A701	-	-	PF	-	OHD-100		111b
111c	13' - 11"	11' - 0"	OH01	PF	C1/A601	D5/A701	-	-	PF	-	OHD-100		111c
111d	13' - 11"	11' - 0"	OH01	PF	C2/A601	D5/A701	-	-	PF	-	OHD-100		111d
111e	13' - 11"	11' - 0"	OH01	PF	C2/A601	D5/A701	-	-	PF	-	OHD-100		111e
112	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	C6/A601	SH	PT	-	202		112
113a	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	C6/A601	SH	PT	-	101	INSULATED	113a
113b	3' - 0"	7' - 0"	HS01	PX	D1/A601	D2/A601	A5/A601	SH	PX	-	100		113b
113c	3' - 0"	7' - 0"	HS01	PX	D1/A601	D2/A601	A5/A601	SH	PX	-	101		113c
115	3' - 0"	7' - 0"	WS01	WD	D4/A601	C4/A601	-	SH	PT	-	202		115

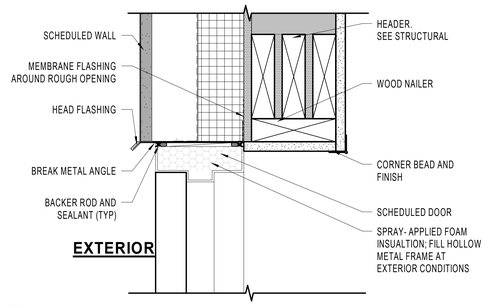
GENERAL NOTE - WINDOW TYPES

A. FIELD VERIFY ALL DIMENSIONS PRIOR TO SHOP DRAWING SUBMITTAL & SUBSEQUENT FABRICATION OF ALL DOOR AND WINDOW FRAMES.
B. PROVIDE CLEARANCE REQUIRED BY ACCESSIBILITY CODES ANSI A117.1 AND ADAAG AT ALL DOORS.
C. DOOR LITE DIMENSIONS SHOWN REPRESENT THE FINISHED CLEAR GLAZED OPENING BETWEEN TRIM KIT ELEMENTS
D. STOREFRONT SYSTEMS UNLESS NOTED OTHERWISE.

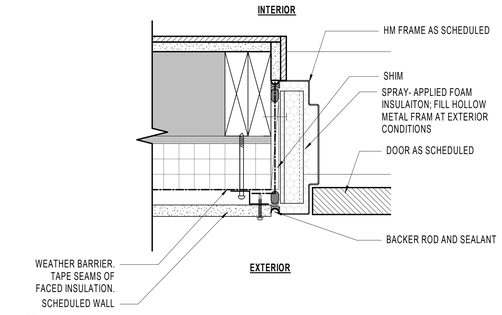
DOOR FINISH LEGEND	
AL	ALUMINUM, ANODIZED, COLOR TO BE SELECTED
PT	PAINT, REFER TO FINISH DRAWINGS
PX	PAINT, EXTERIOR, COLOR TO BE SELECTED
PF	PRE-FINISHED BY MANUFACTURER
WD	WOOD, STAINED, COLOR TO BE SELECTED
-	

DOOR SCHEDULE NOTES	
1	DOOR DETAILS BY ULTRAWALL PROVIDER
2	EXISTING DOOR TO REMAIN - PROVIDE NEW HARDWARE

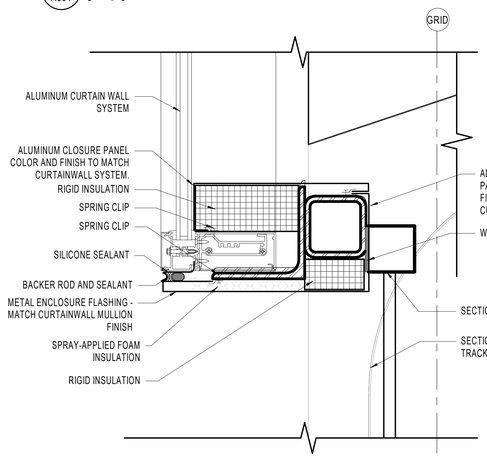
GLAZING SCHEDULE XX	
G1	1" INSULATED GLASS UNIT, CLEAR
G2	1" INSULATED GLASS UNIT, TEMPERED, CLEAR
G3	1" INSULATED GLASS UNIT, TEMPERED, TRANSLUCENT (WINDOW FILM)
G4	1/4" CLEAR
G5	1/4" TEMPERED, CLEAR
G6	SPANDREL
G7	1/2" DOUBLE STRENGTH INSULATING GLASS



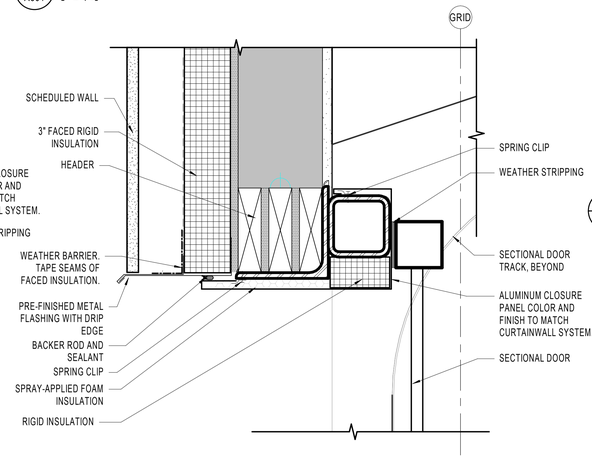
D1 A601 SECTION DETAIL - EXTERIOR DOOR HEADER
3" = 1'-0"



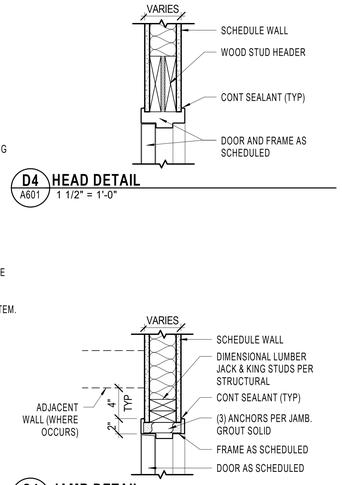
D2 A601 PLAN DETAIL - EXTERIOR HM DOOR JAMB
3" = 1'-0"



C1 A601 SECTION DETAIL - HEADER @ SECTIONAL DOOR OPENING CURTAIN WALL
3" = 1'-0"

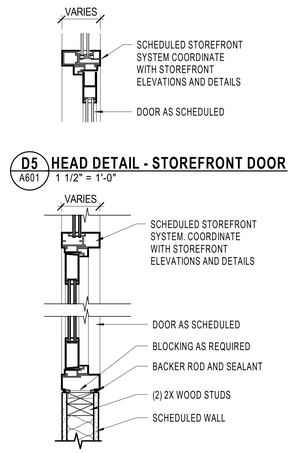


C2 A601 SECTIONAL DOOR HEADER (SOUTH WALL)
3" = 1'-0"



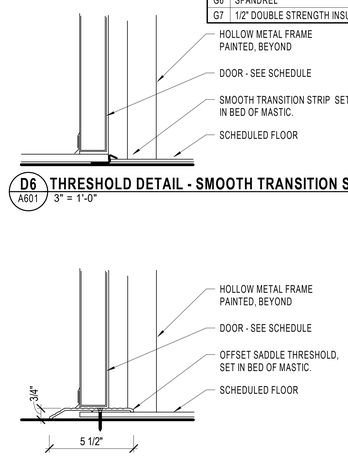
D4 A601 HEAD DETAIL
1 1/2" = 1'-0"

C4 A601 JAMB DETAIL
1 1/2" = 1'-0"



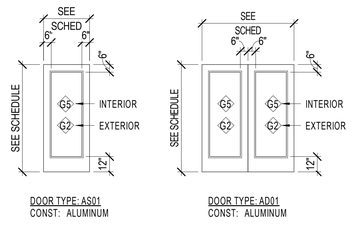
D5 A601 HEAD DETAIL - STOREFRONT DOOR
1 1/2" = 1'-0"

C5 A601 JAMB DETAIL - STOREFRONT DOOR
1 1/2" = 1'-0"

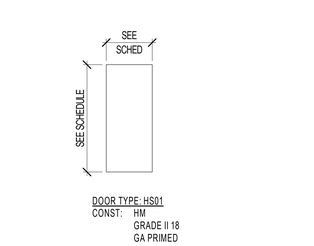


D6 A601 THRESHOLD DETAIL - SMOOTH TRANSITION STRIP
3" = 1'-0"

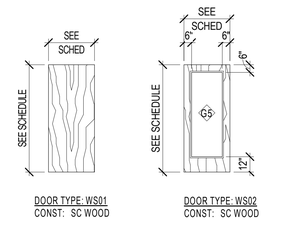
C6 A601 THRESHOLD DETAIL - OFFSET SADDLE
3" = 1'-0"



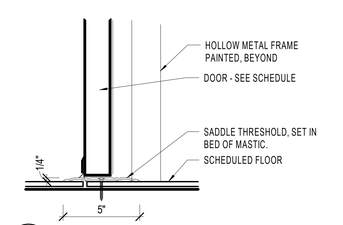
B3 A601 DOOR TYPES - ALUMINUM
1/4" = 1'-0"



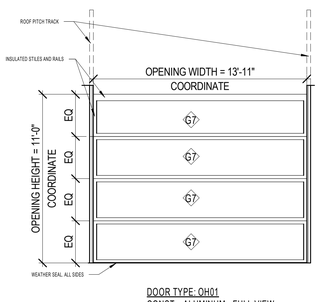
B4 A601 DOOR TYPES - HOLLOW METAL
1/4" = 1'-0"



B5 A601 DOOR TYPES - WOOD
1/4" = 1'-0"

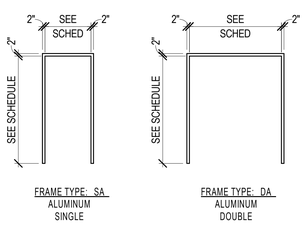


B6 A601 THRESHOLD DETAIL - SADDLE
3" = 1'-0"

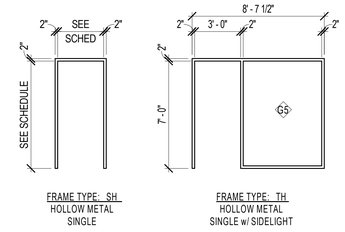


DOOR TYPE: OH01
CONST: ALUMINUM - FULL VIEW

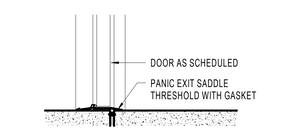
A2 A601 DOOR TYPES - SECTIONAL DOOR
1/4" = 1'-0"



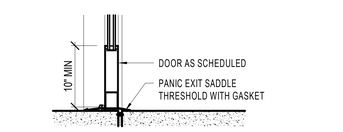
A3 A601 FRAME TYPES - ALUMINUM
1/4" = 1'-0"



A4 A601 FRAME TYPES - HOLLOW METAL
1/4" = 1'-0"



A5 A601 SILL DETAIL - EXTERIOR HM DOOR
1 1/2" = 1'-0"



A6 A601 SILL DETAIL - STOREFRONT DOOR
1 1/2" = 1'-0"

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DOOR SCHEDULE AND TYPES

A601

8/15/2018 10:48:29 AM

GENERAL NOTE - WINDOW TYPES

A. FIELD VERIFY ALL DIMENSIONS PRIOR TO SHOP DRAWING SUBMITTAL & SUBSEQUENT FABRICATION OF ALL DOOR AND WINDOW FRAMES.
B. PROVIDE CLEARANCE REQUIRED BY ACCESSIBILITY CODES ANSI A117.1 AND ADAAG AT ALL DOORS.
C. DOOR LITE DIMENSIONS SHOWN REPRESENT THE FINISHED CLEAR GLAZED OPENING BETWEEN TRIM KIT ELEMENTS
D. STOREFRONT SYSTEMS UNLESS NOTED OTHERWISE.

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GLAZING SCHEDULE XX	
G1	1" INSULATED GLASS UNIT, CLEAR
G2	1" INSULATED GLASS UNIT, TEMPERED, CLEAR
G3	1" INSULATED GLASS UNIT, TEMPERED, TRANSLUCENT (WINDOW FILM)
G4	1/4" CLEAR
G5	1/4" TEMPERED, CLEAR
G6	SPANDREL
G7	1/2" DOUBLE STRENGTH INSULATING GLASS

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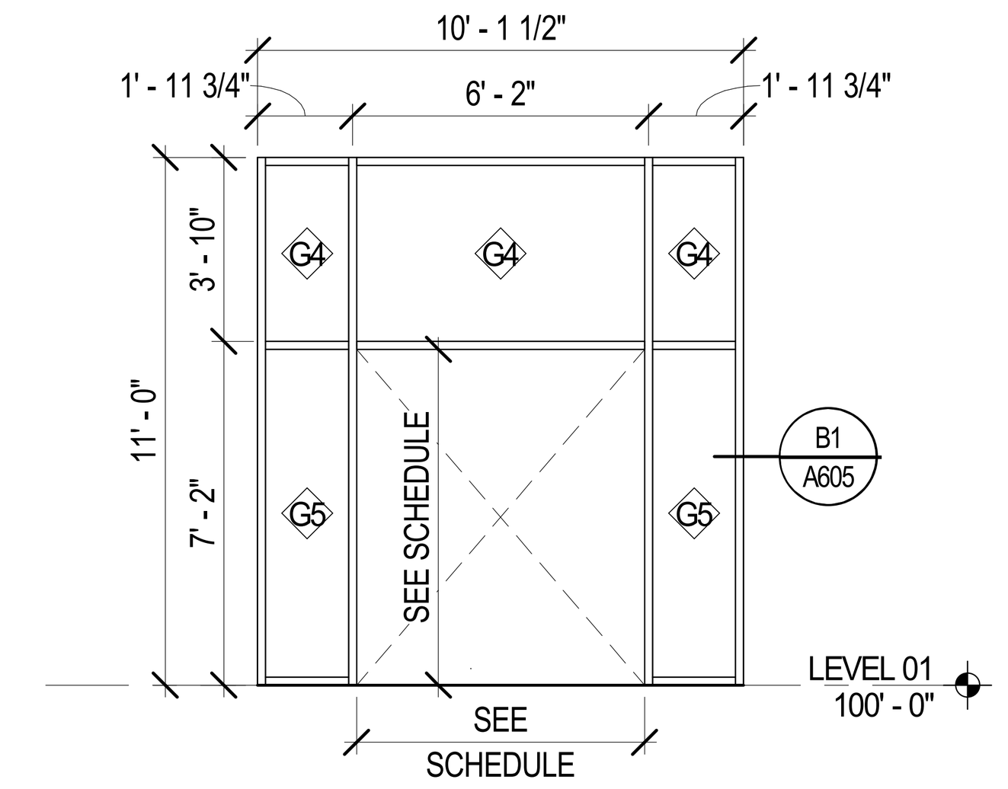
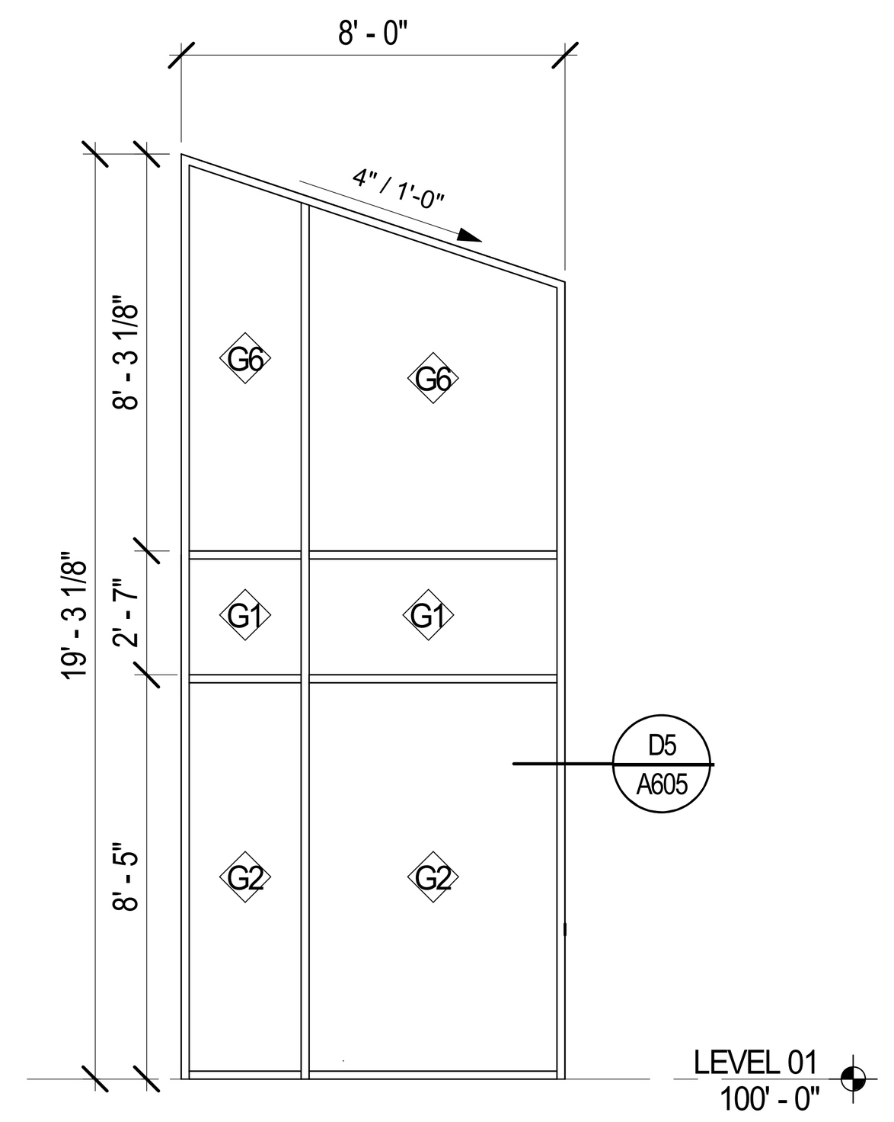
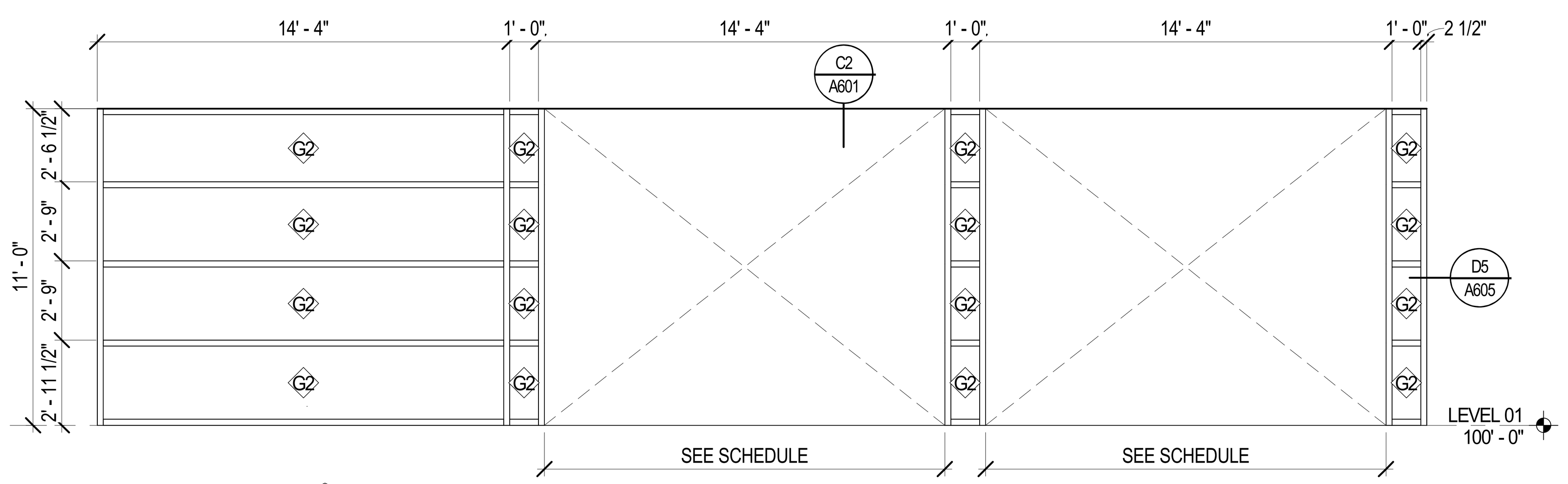


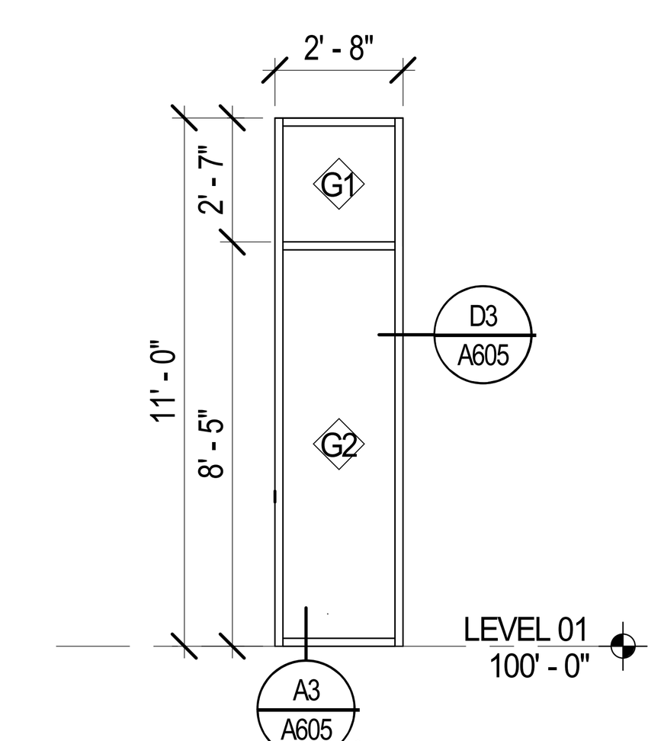
IA STOREFRONT



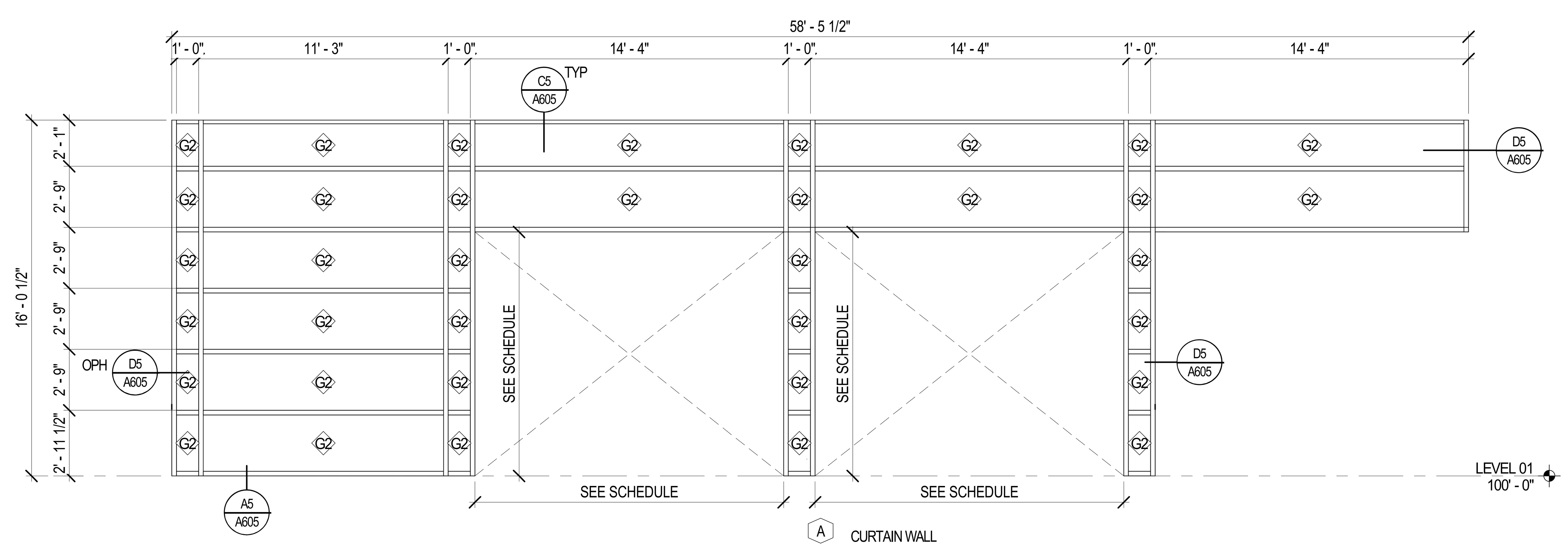
D CURTAIN WALL



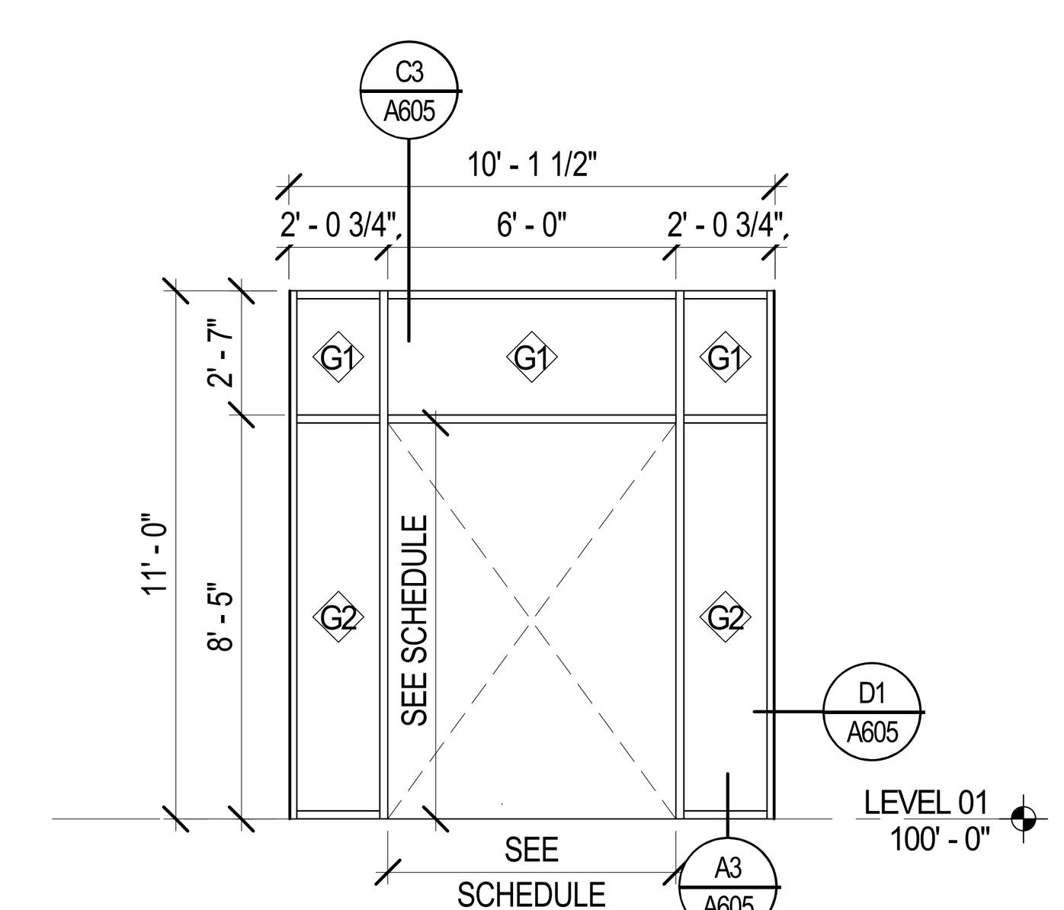
E CURTAIN WALL



F STOREFRONT



A CURTAIN WALL



C STOREFRONT

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WINDOW TYPES

A602

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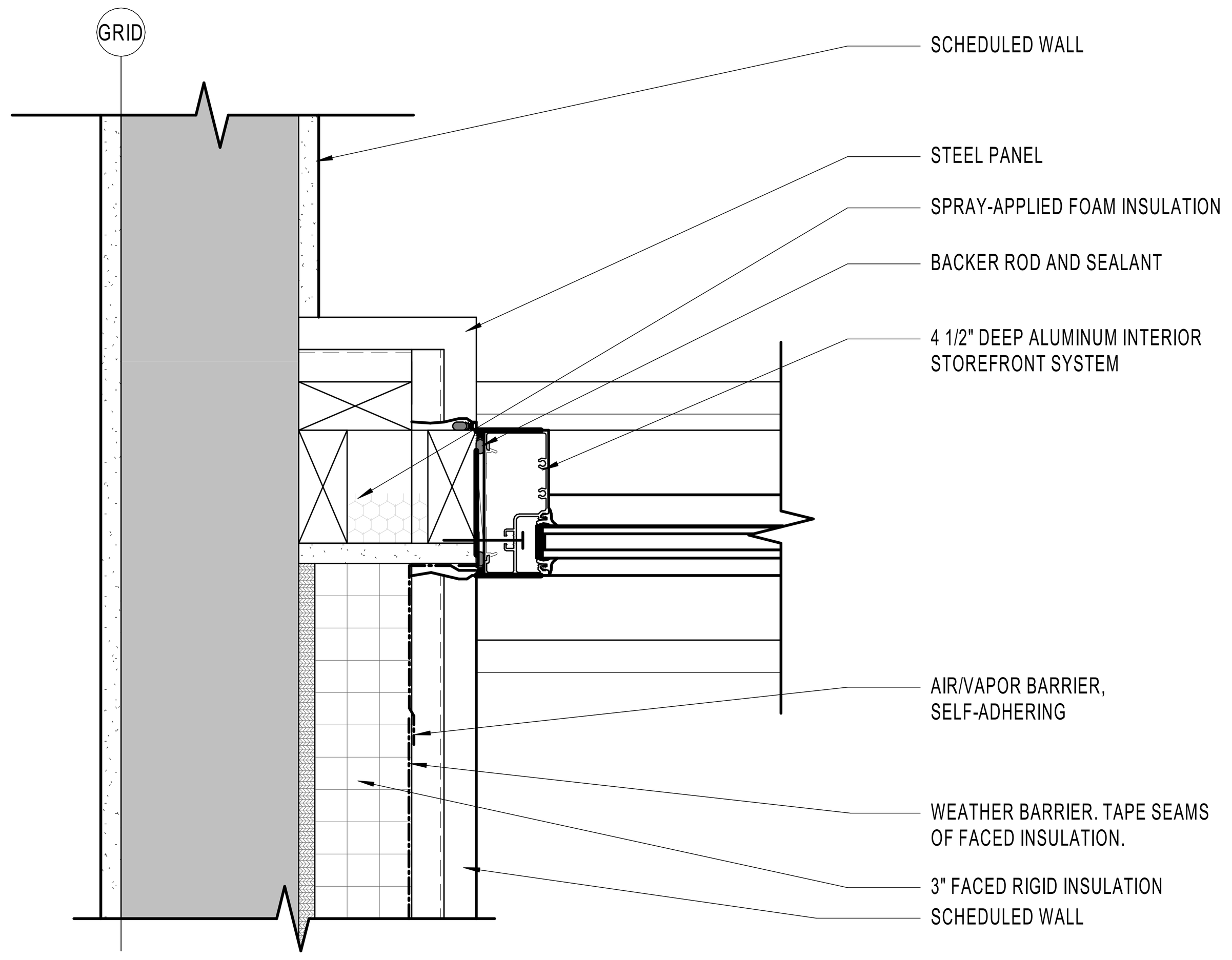
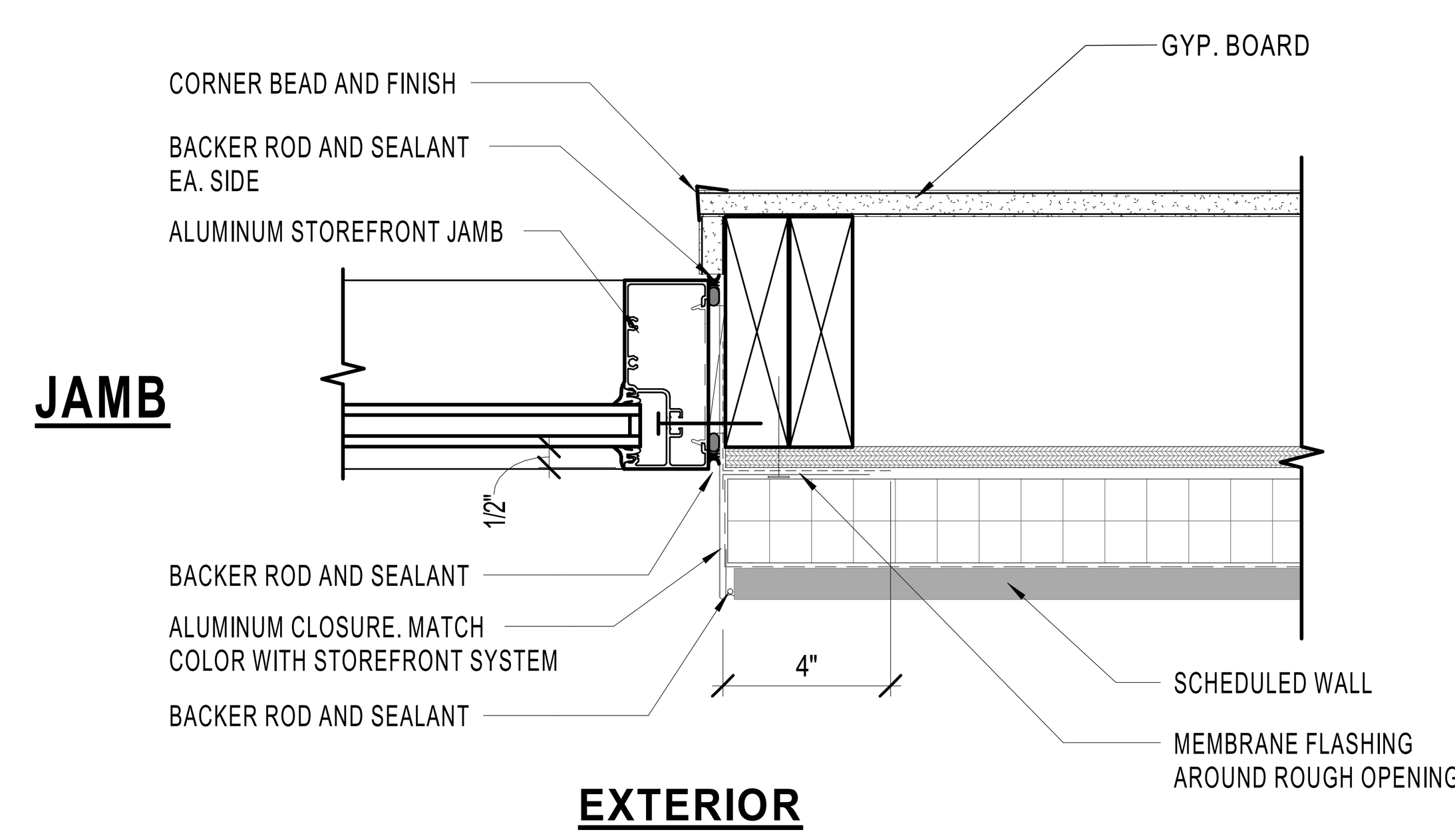
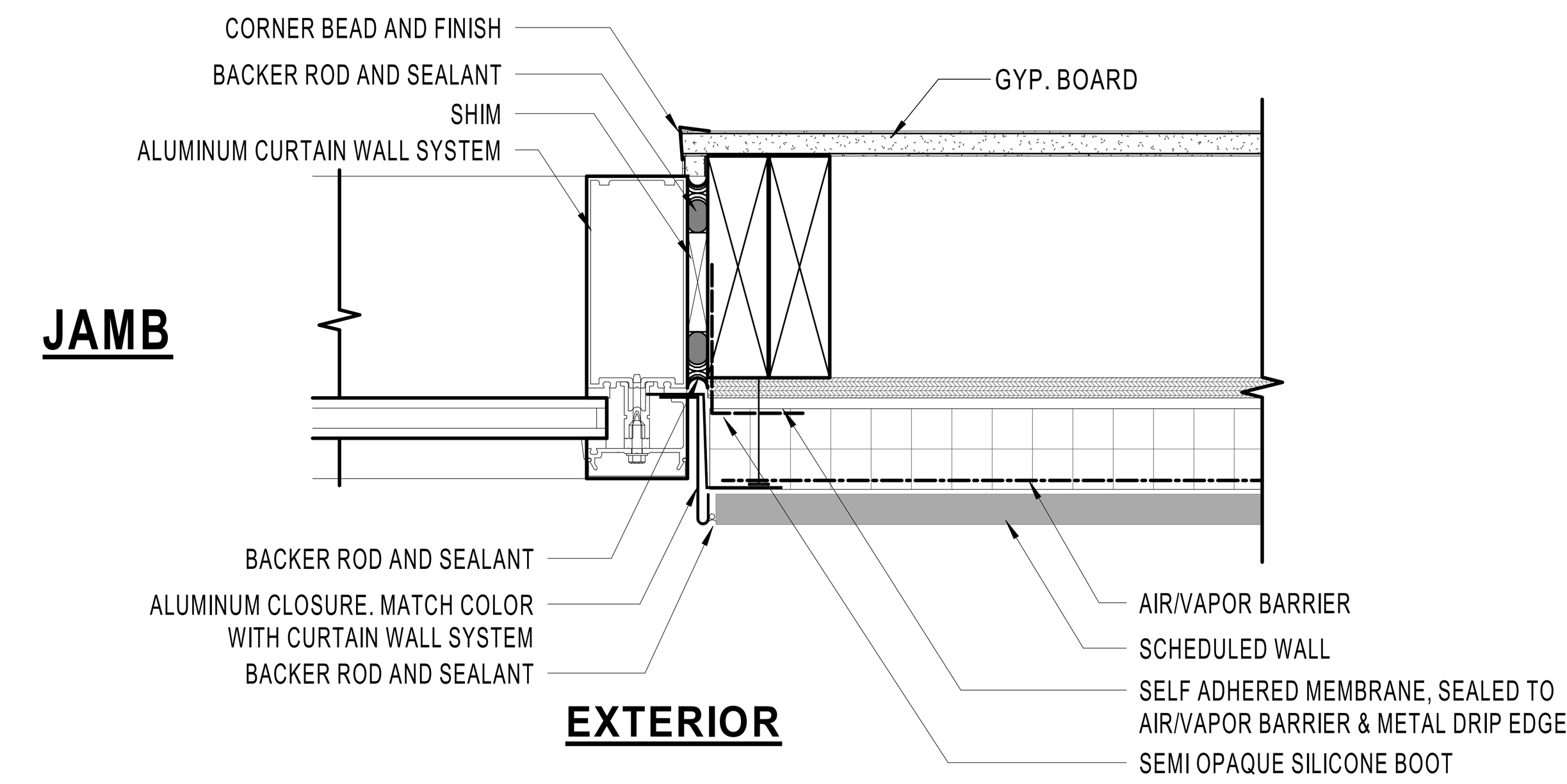


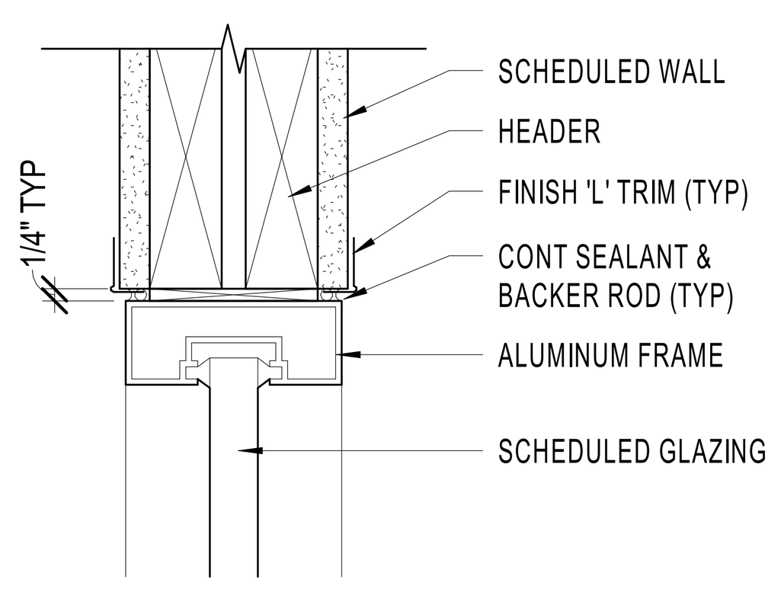
D1 A605 — **PLAN DETAIL - STOREFRONT ENTRANCE TO WALL**
3" = 1'-0"



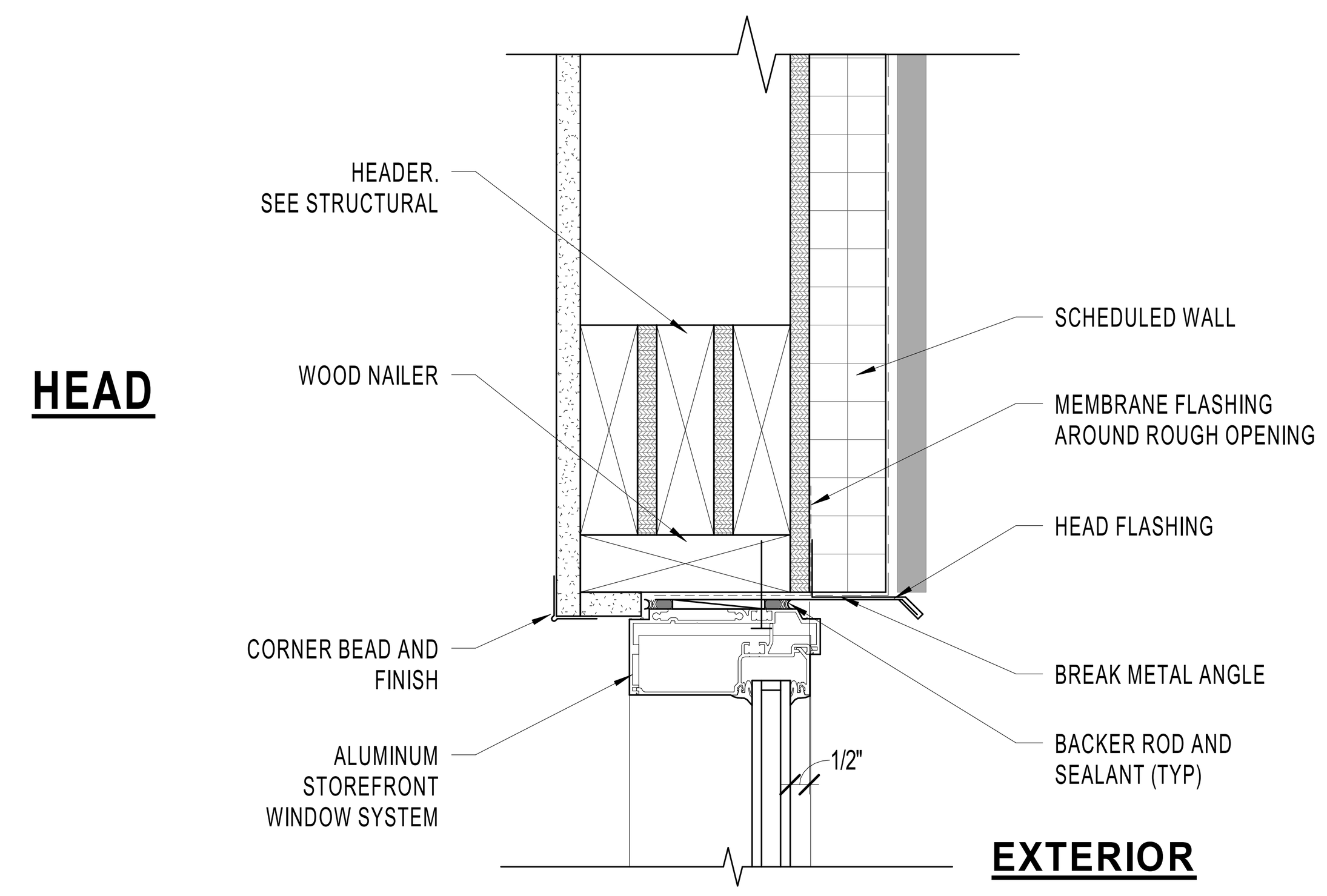
D3 A605 — **ALUMINUM FRAMED STOREFRONT JAMB DETAIL**
3" = 1'-0"



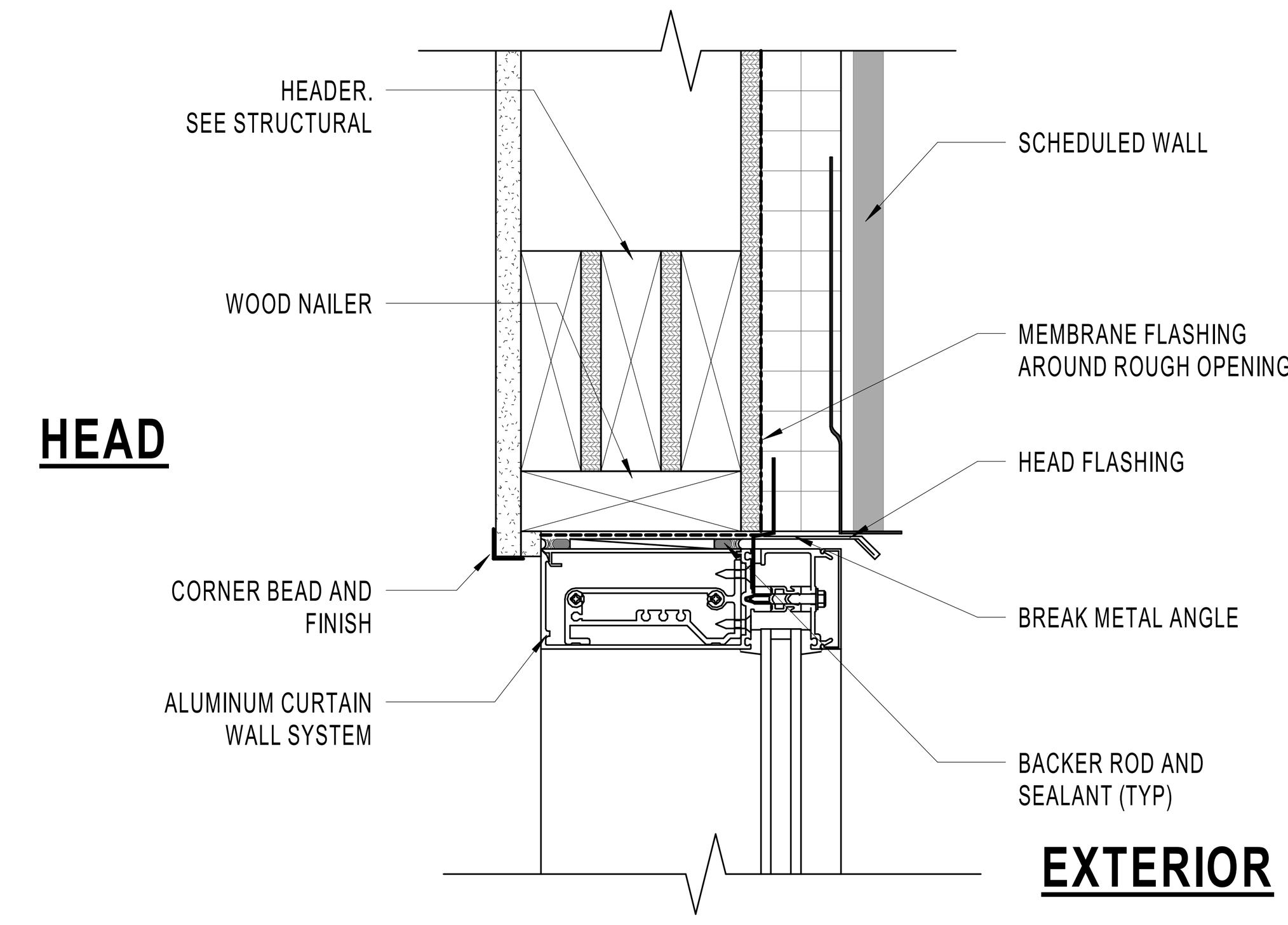
D5 A605 — **ALUMINUM CURTAIN WALL JAMB DETAIL**
3" = 1'-0"



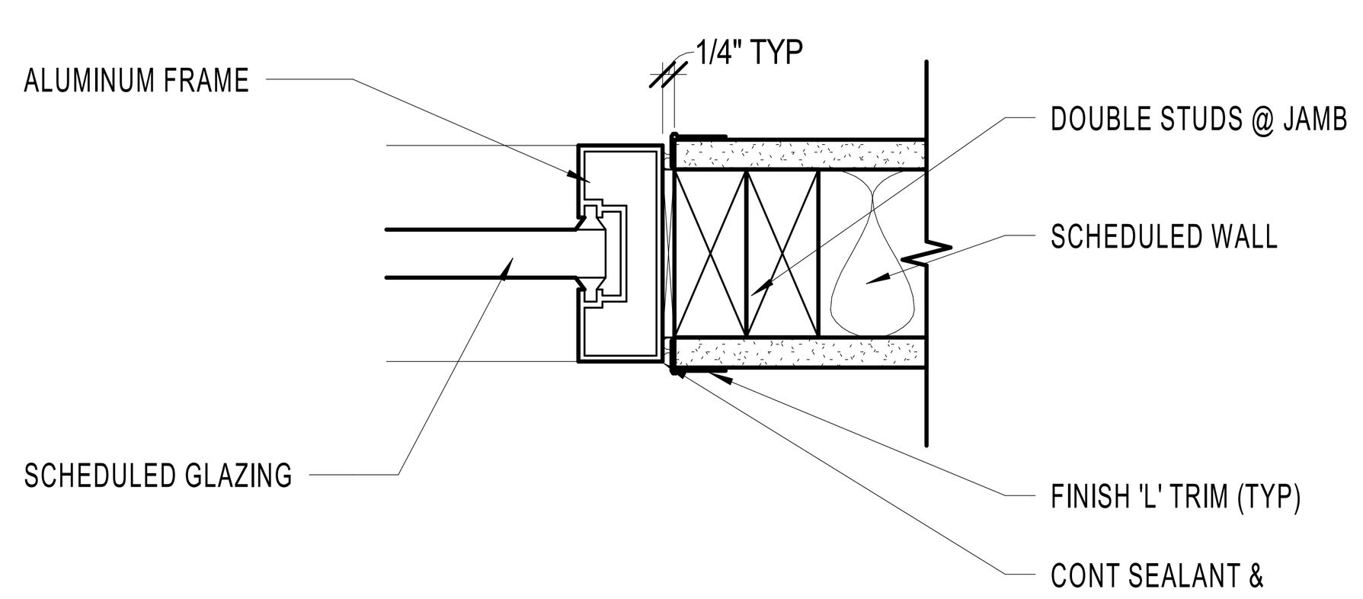
C1 A605 — **STOREFRONT HEAD DETAIL**
3" = 1'-0"



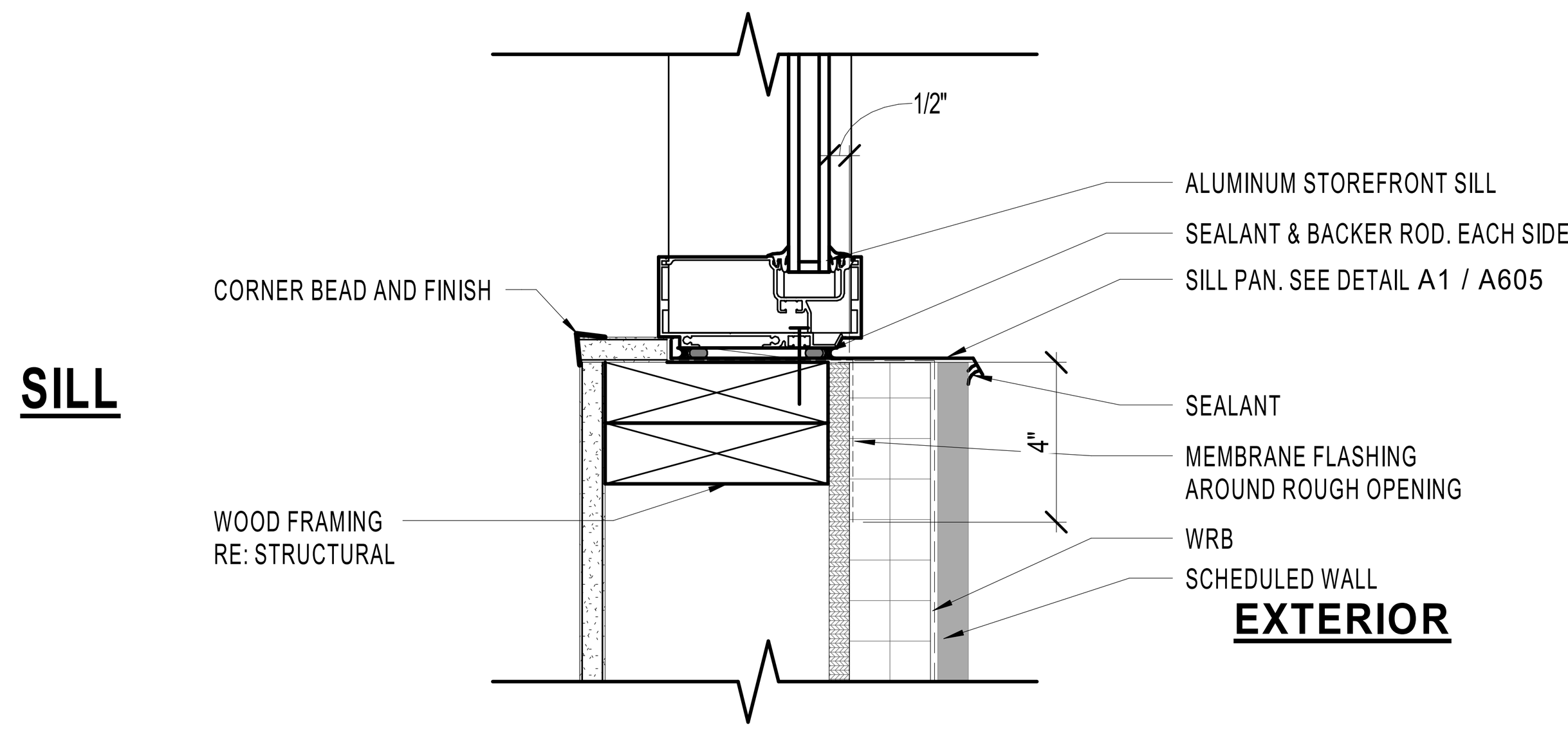
C3 A605 — **ALUMINUM FRAMED STOREFRONT HEAD DETAIL**
3" = 1'-0"



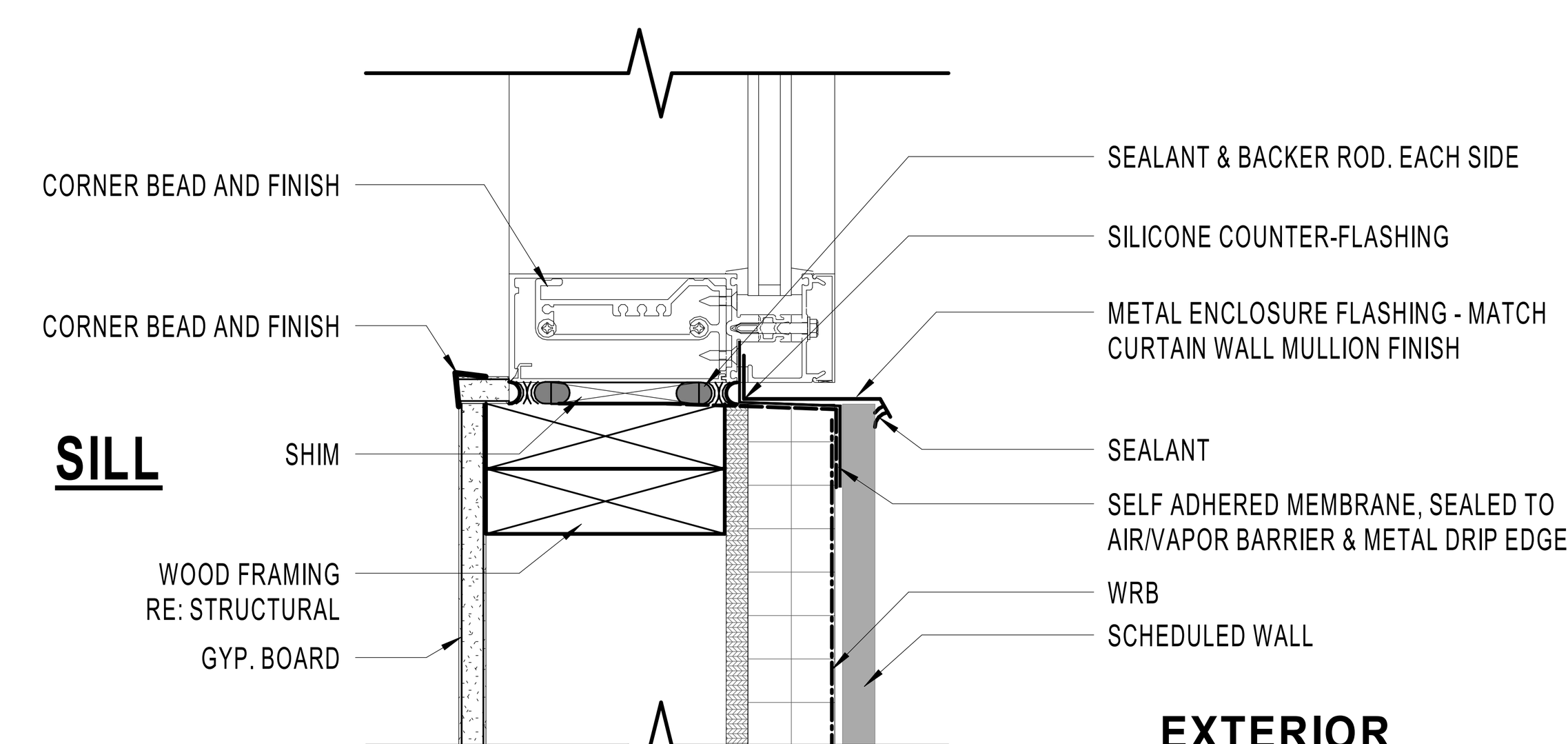
C5 A605 — **ALUMINUM CURTAIN WALL HEAD DETAIL**
3" = 1'-0"



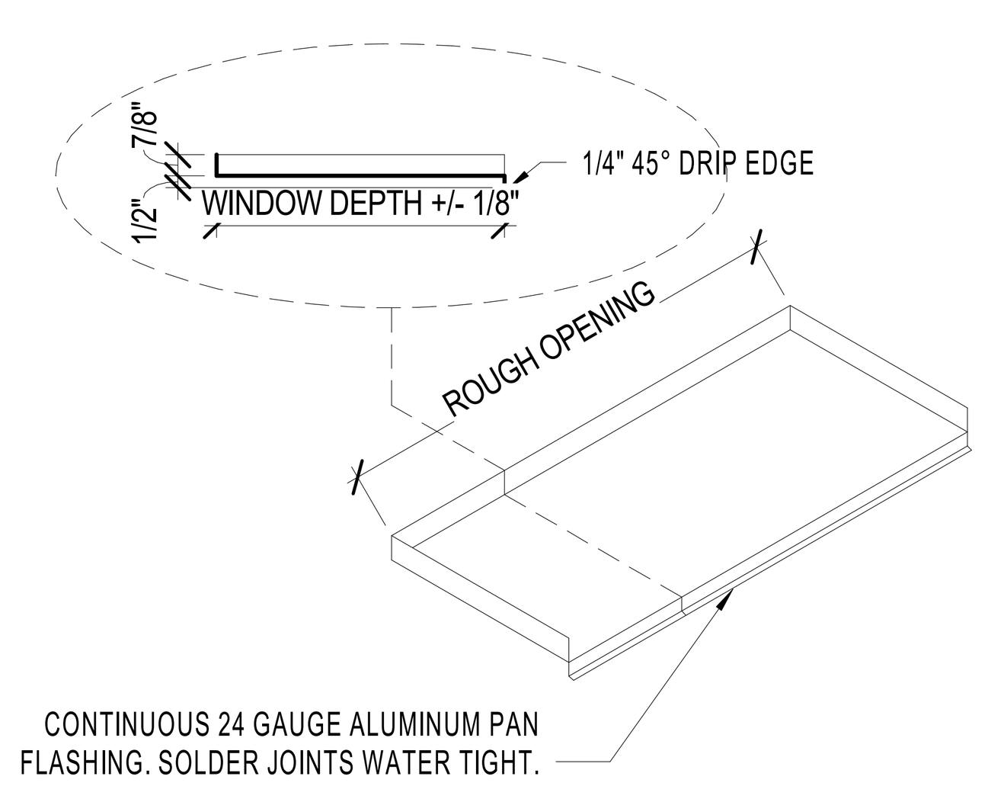
B1 A605 — **STOREFRONT JAMB DETAIL**
3" = 1'-0"



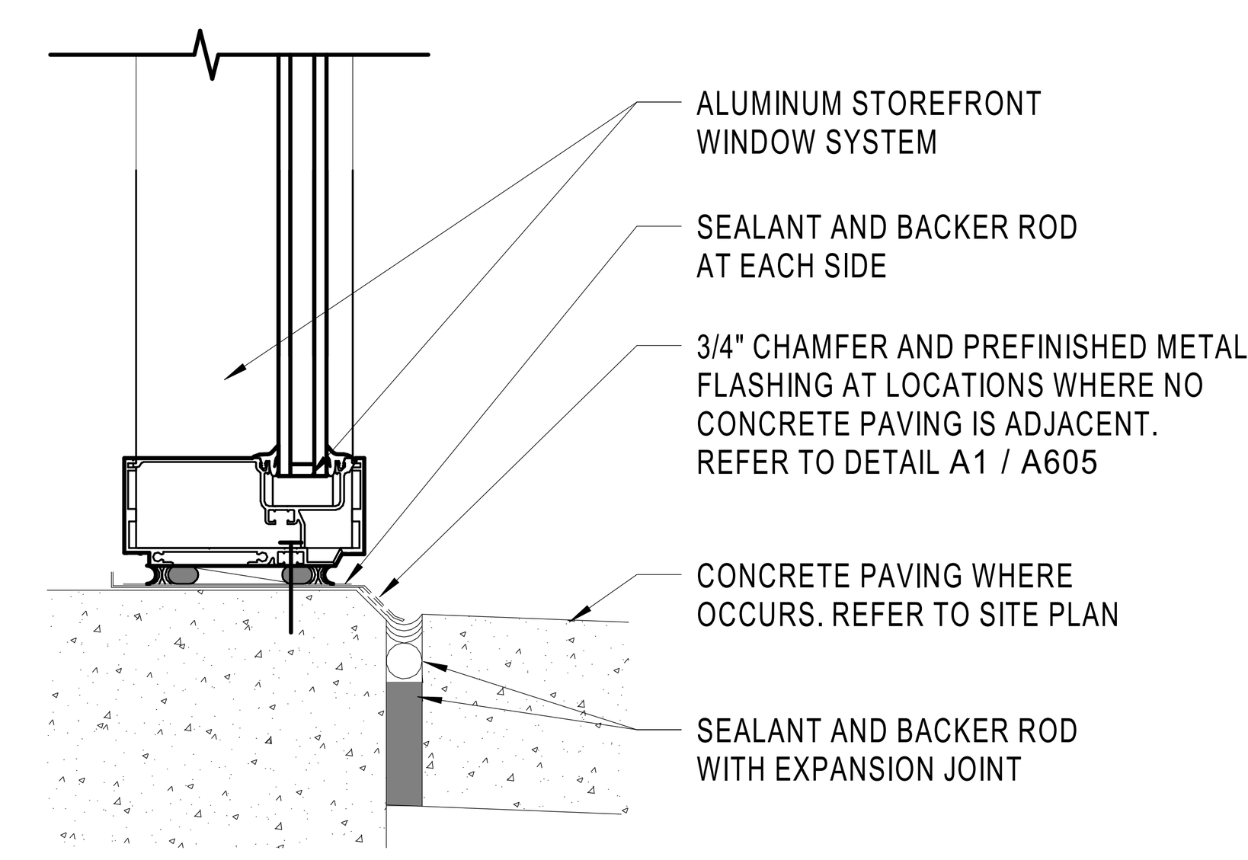
B3 A605 — **ALUMINUM FRAMED STOREFRONT SILL DETAIL**
3" = 1'-0"



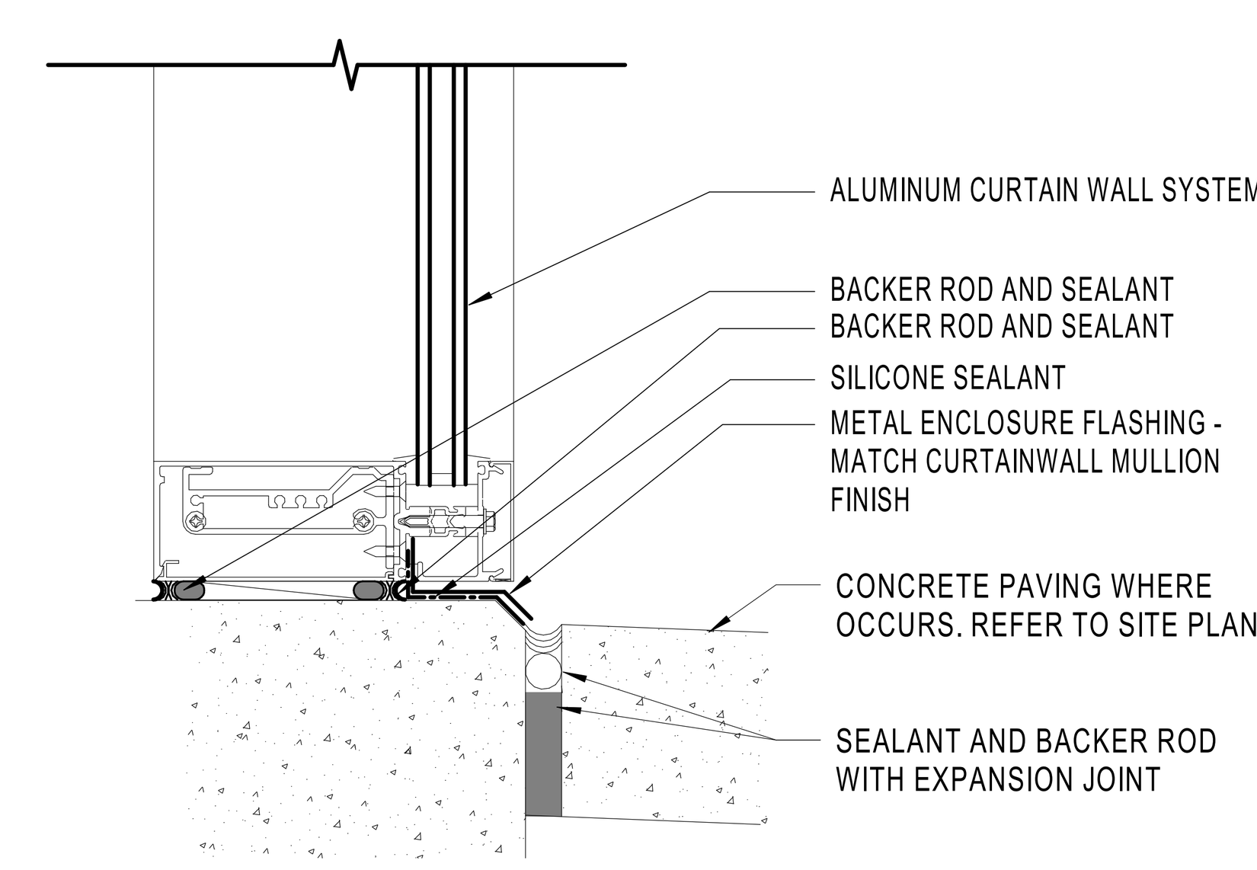
B5 A605 — **ALUMINUM CURTAIN WALL SILL DETAIL**
3" = 1'-0"



A1 A605 — **EXTERIOR STOREFRONT FLASHING PAN**
1 1/2" = 1'-0"



A3 A605 — **STOREFRONT SILL DETAIL**
3" = 1'-0"



A5 A605 — **CURTAIN WALL SILL DETAIL**
3" = 1'-0"

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WINDOW DETAILS

A605

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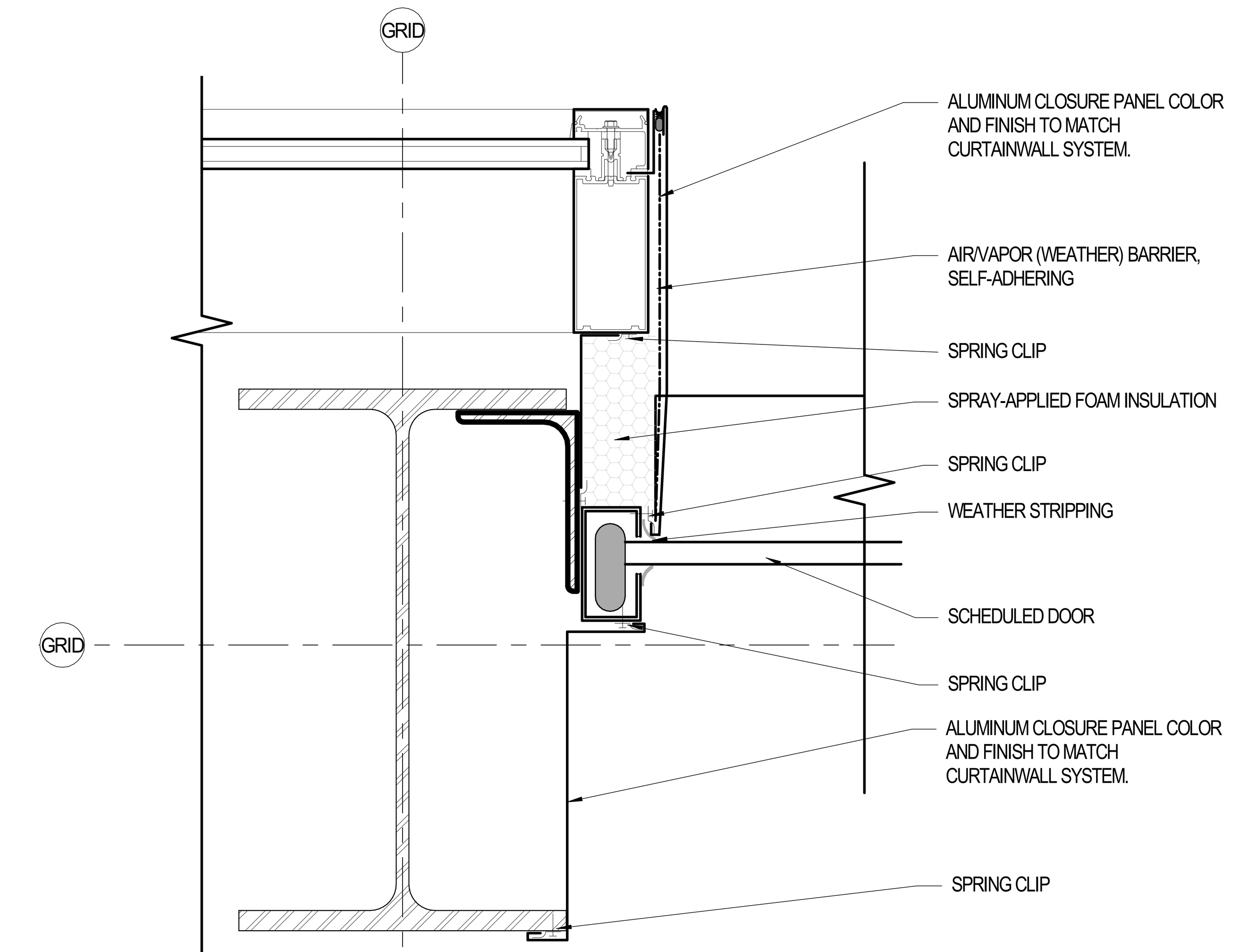
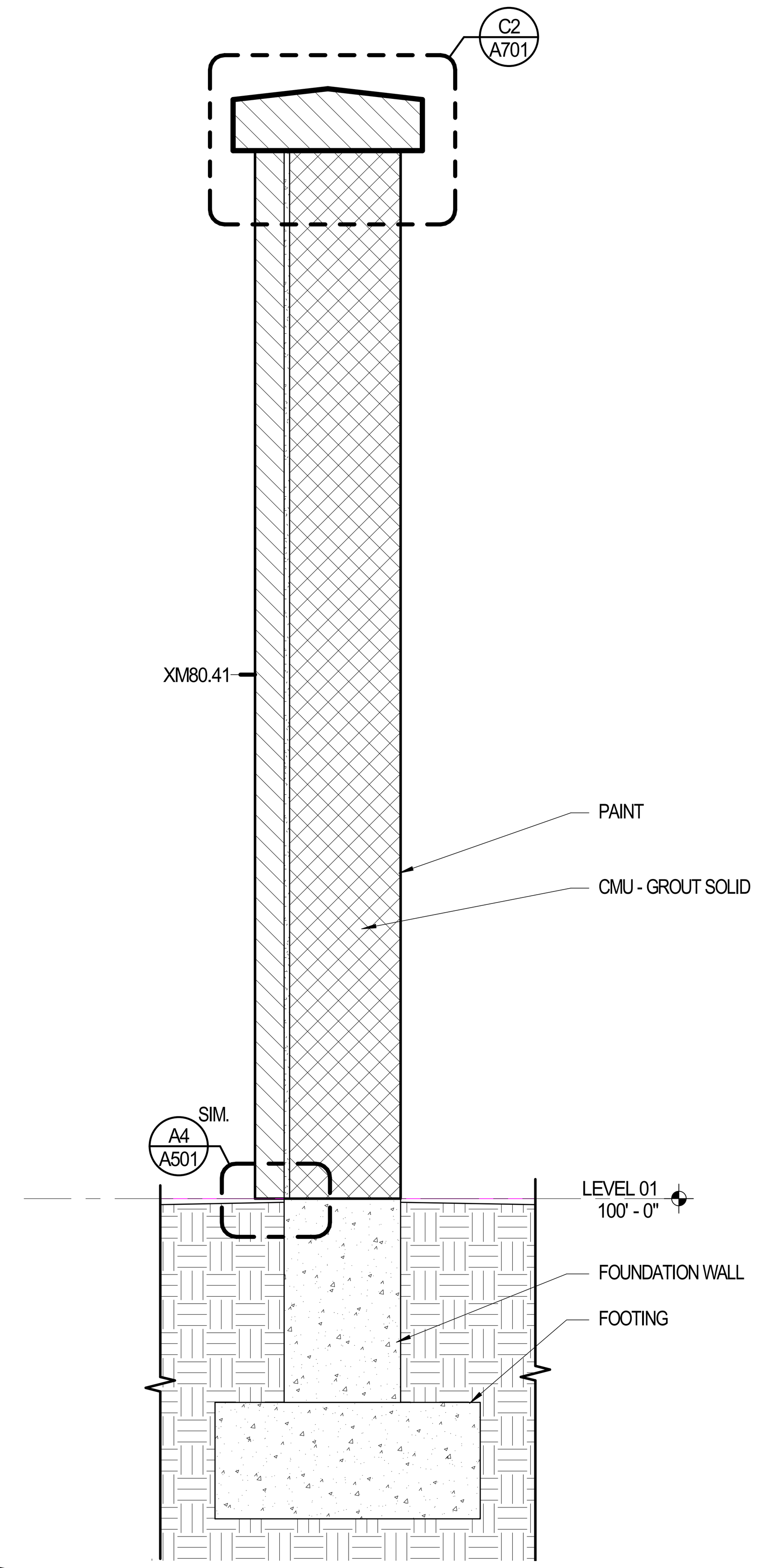
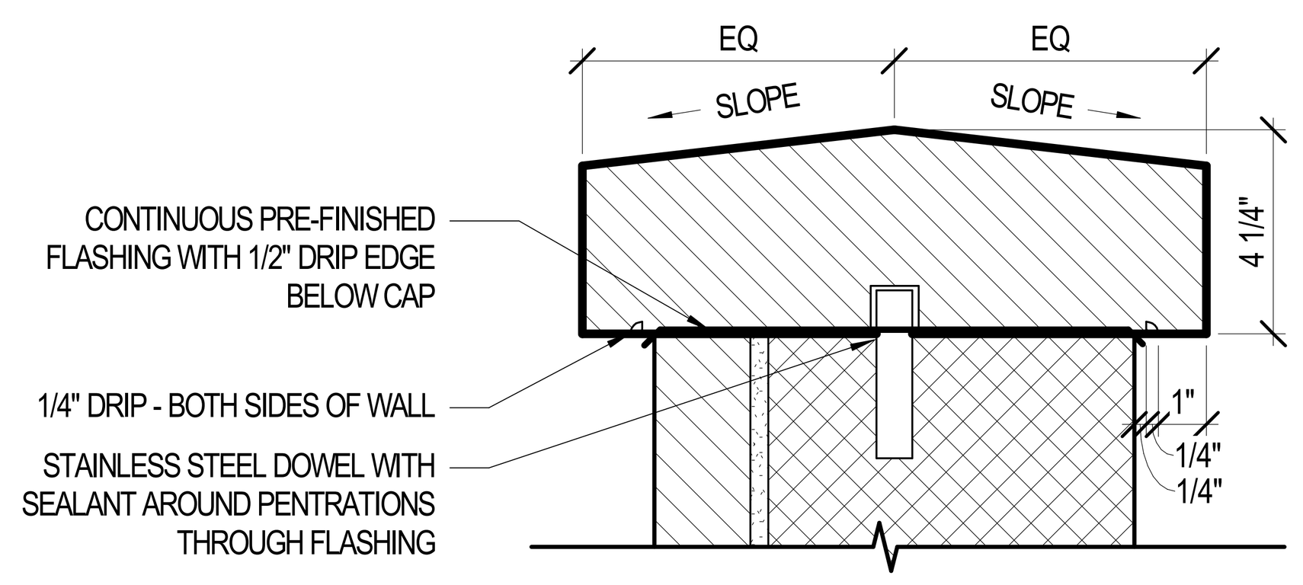


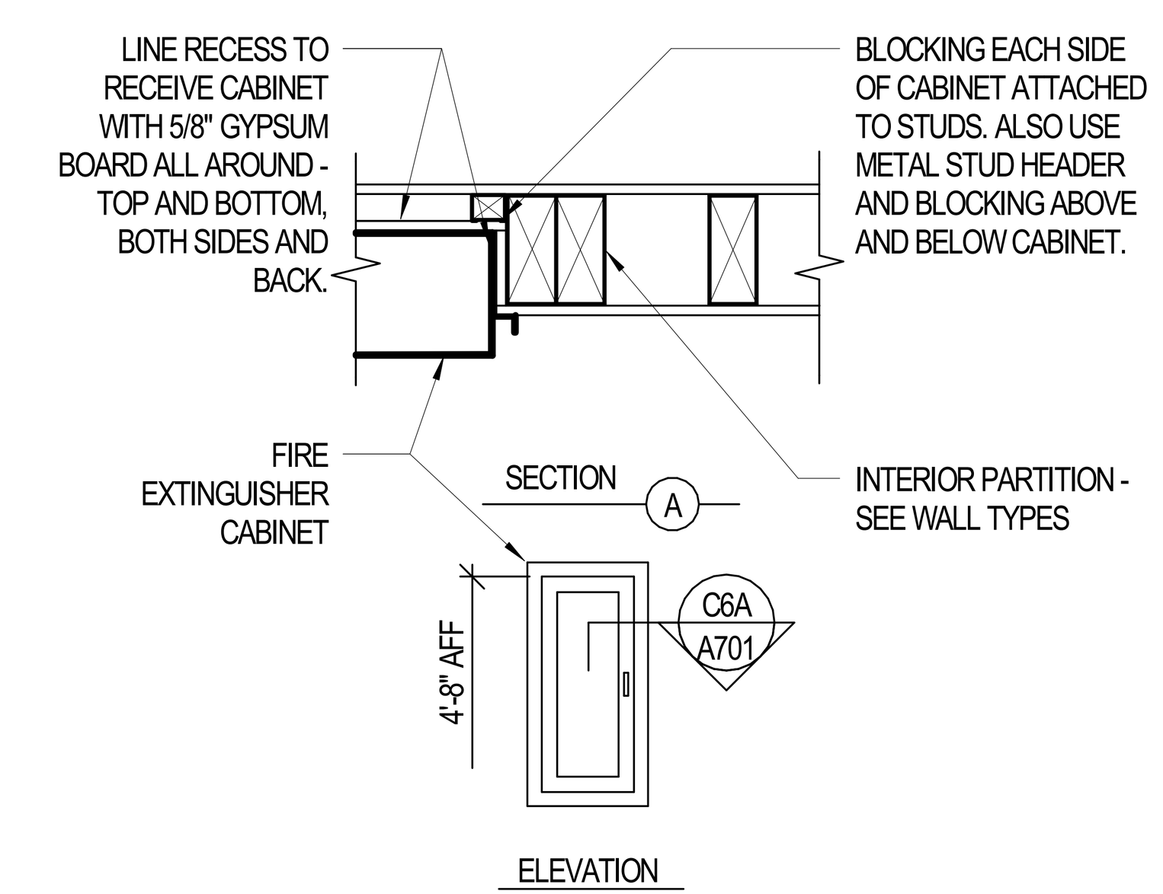
D5 A701 PLAN DETAIL - COLUMN TO CURTAIN WALL MULLION & BOARD WALL
3" = 1'-0"



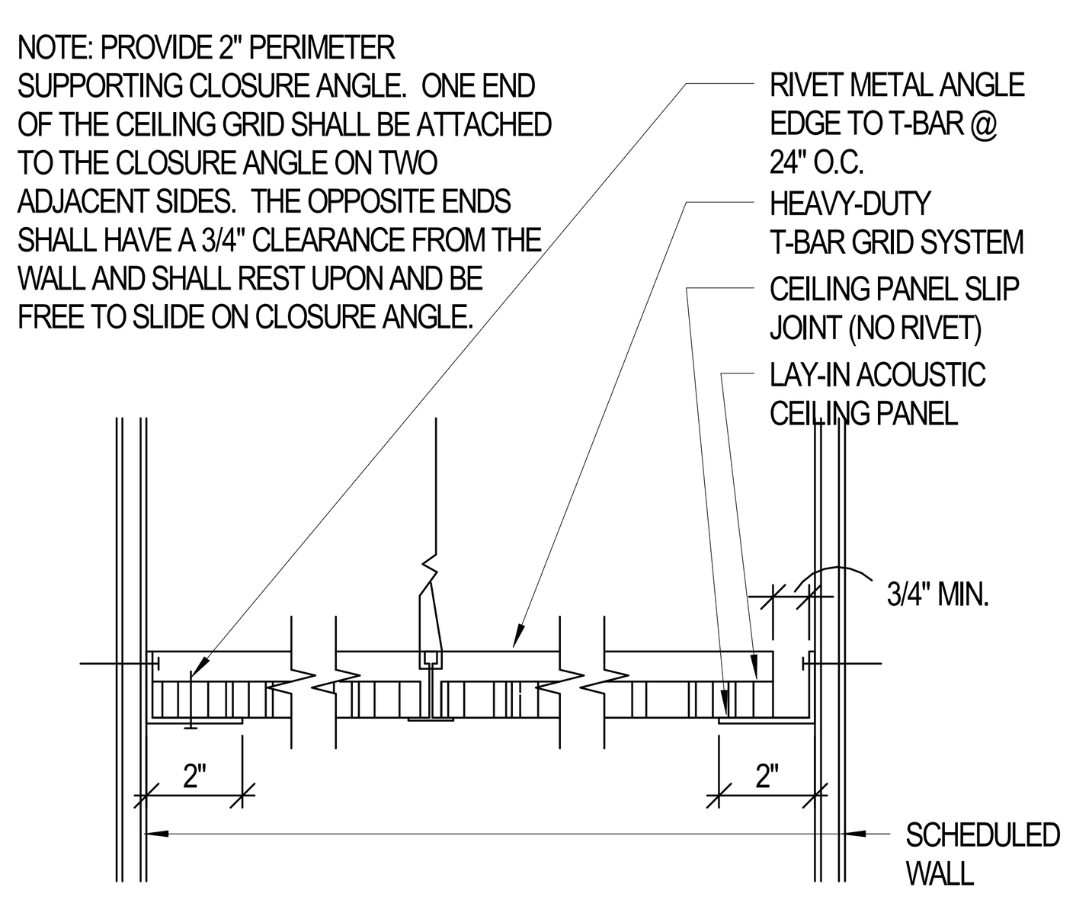


C2 A701 STONE CAP DETAIL
3" = 1'-0"

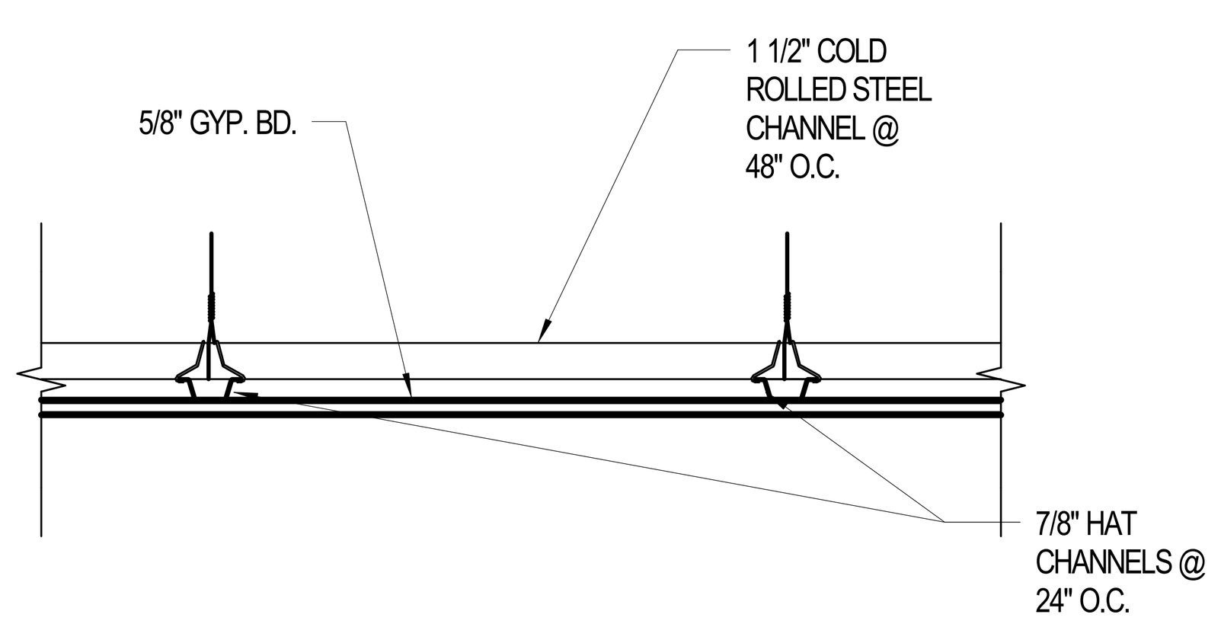
C3 A701 MECH. YARD SCREEN WALL
1 1/2" = 1'-0"



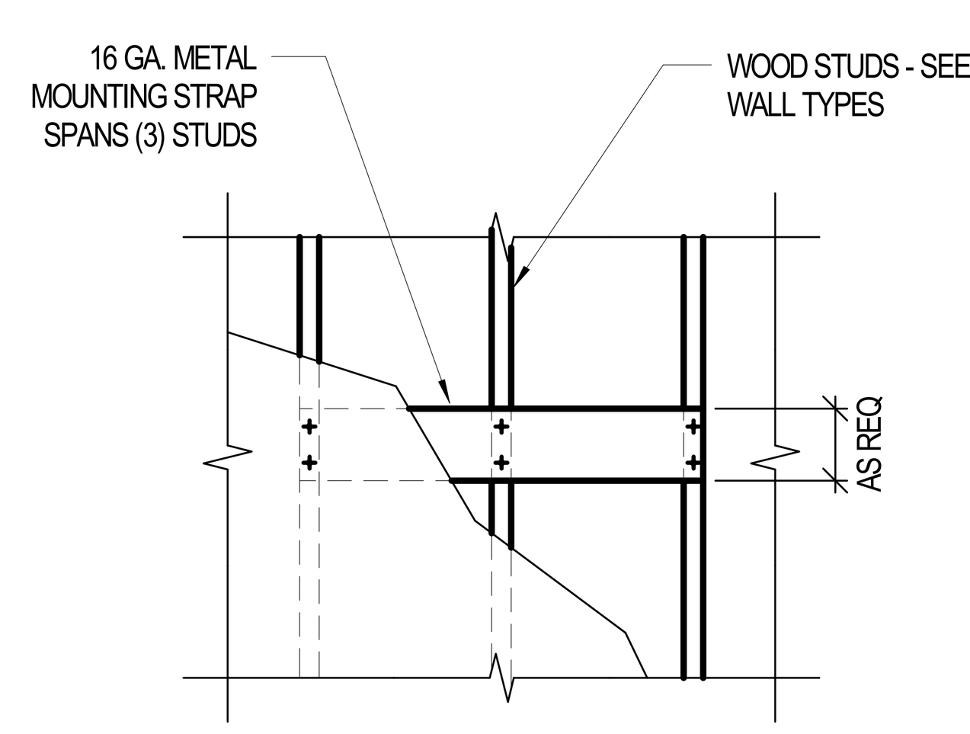
C6 A701 FIRE EXTINGUISHER CABINET DETAIL
3" = 1'-0"



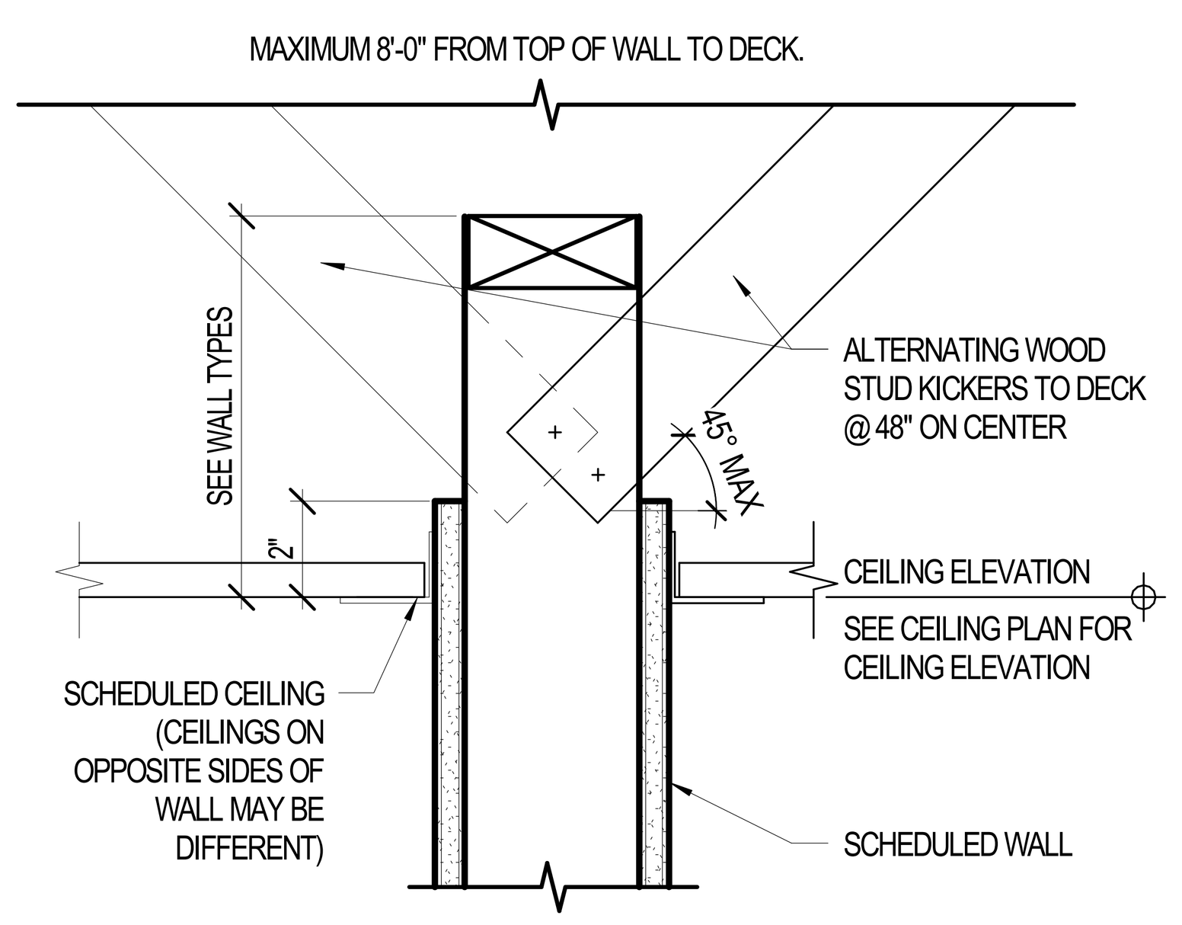
B1 A701 LAY-IN CEILING TILE EDGE
3" = 1'-0"



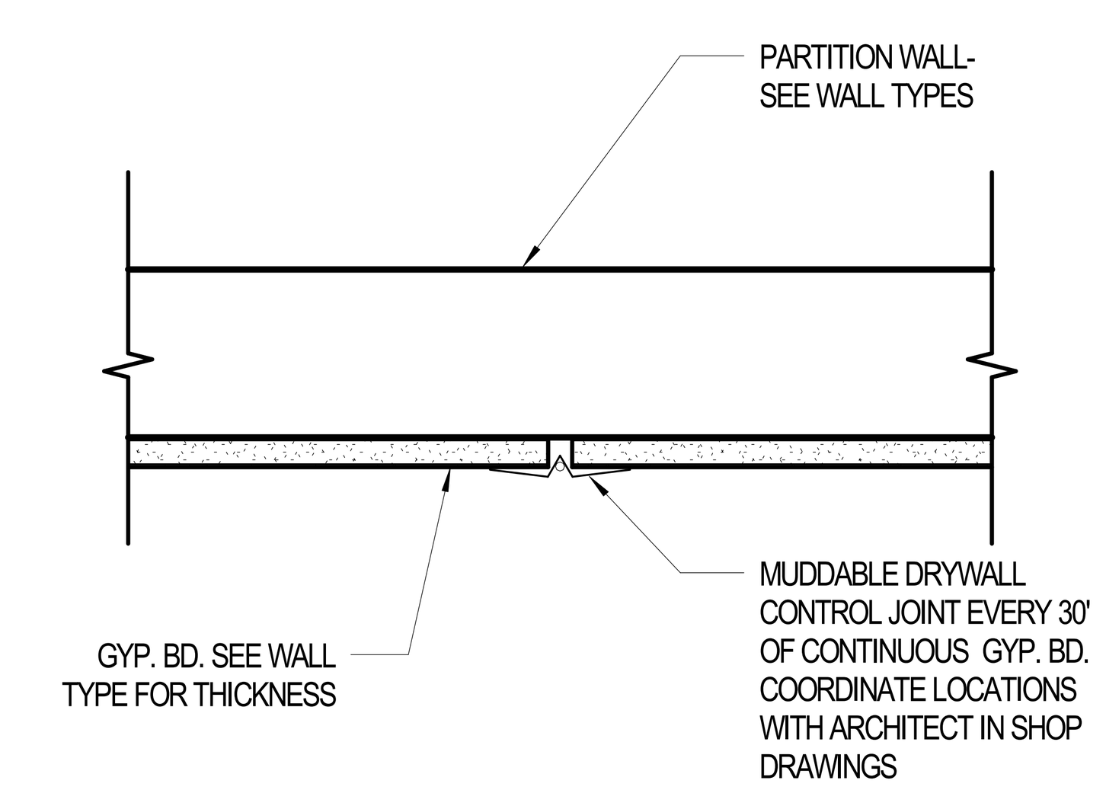
B2 A701 SUSPENDED CEILING DETAIL
3" = 1'-0"



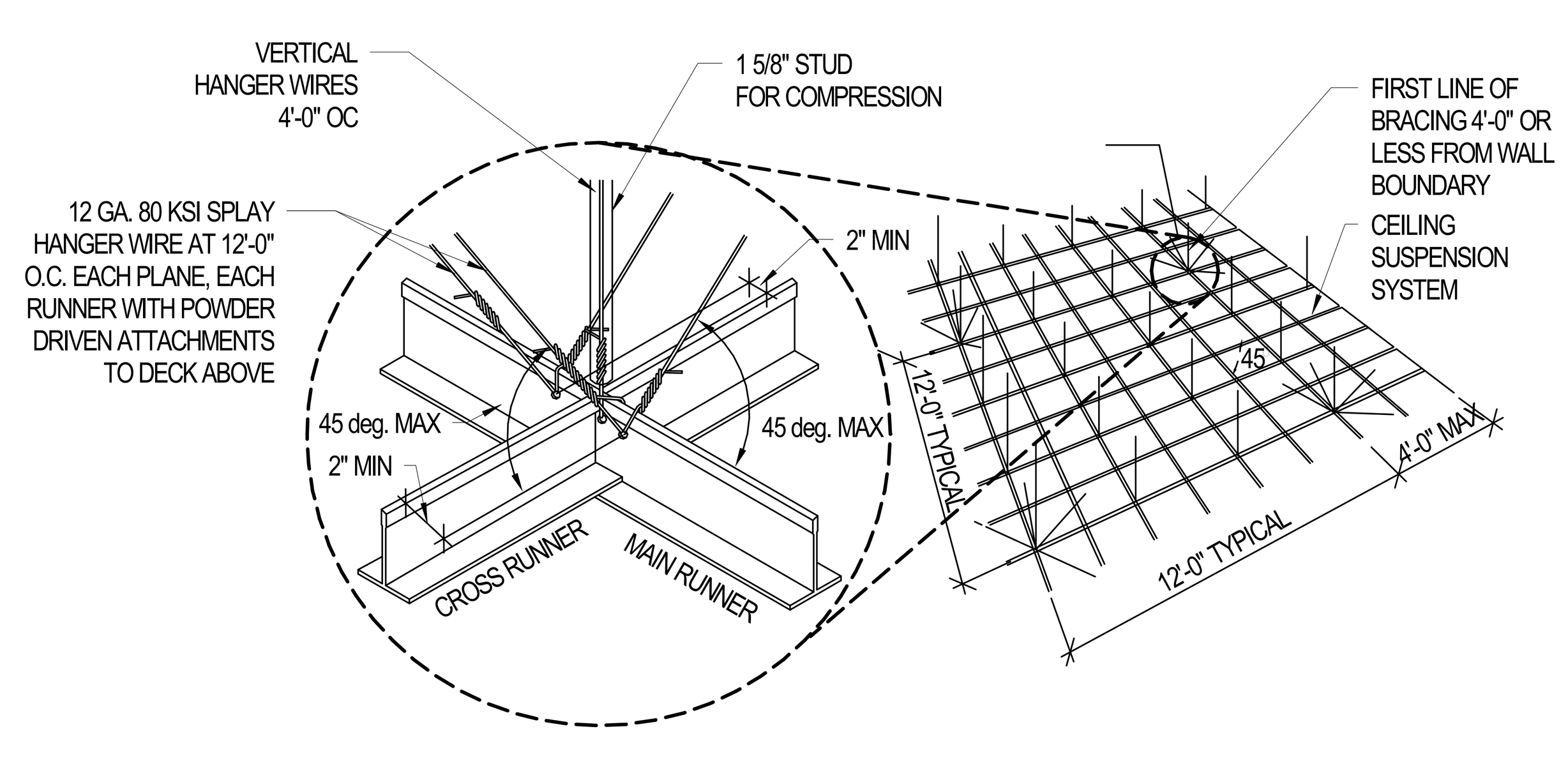
B3 A701 MOUNTING PLATE DETAIL
3" = 1'-0"



B5 A701 WALL BRACING DETAIL
3" = 1'-0"



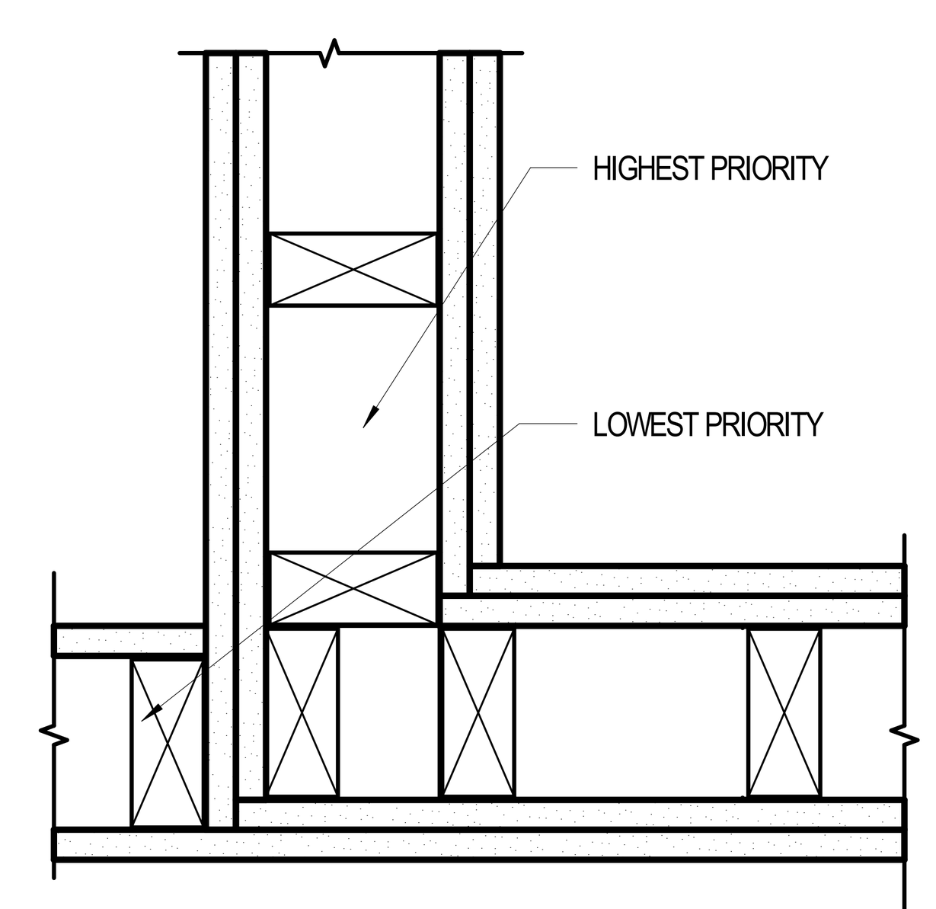
B6 A701 DRYWALL CONTROL JOINTS
3" = 1'-0"



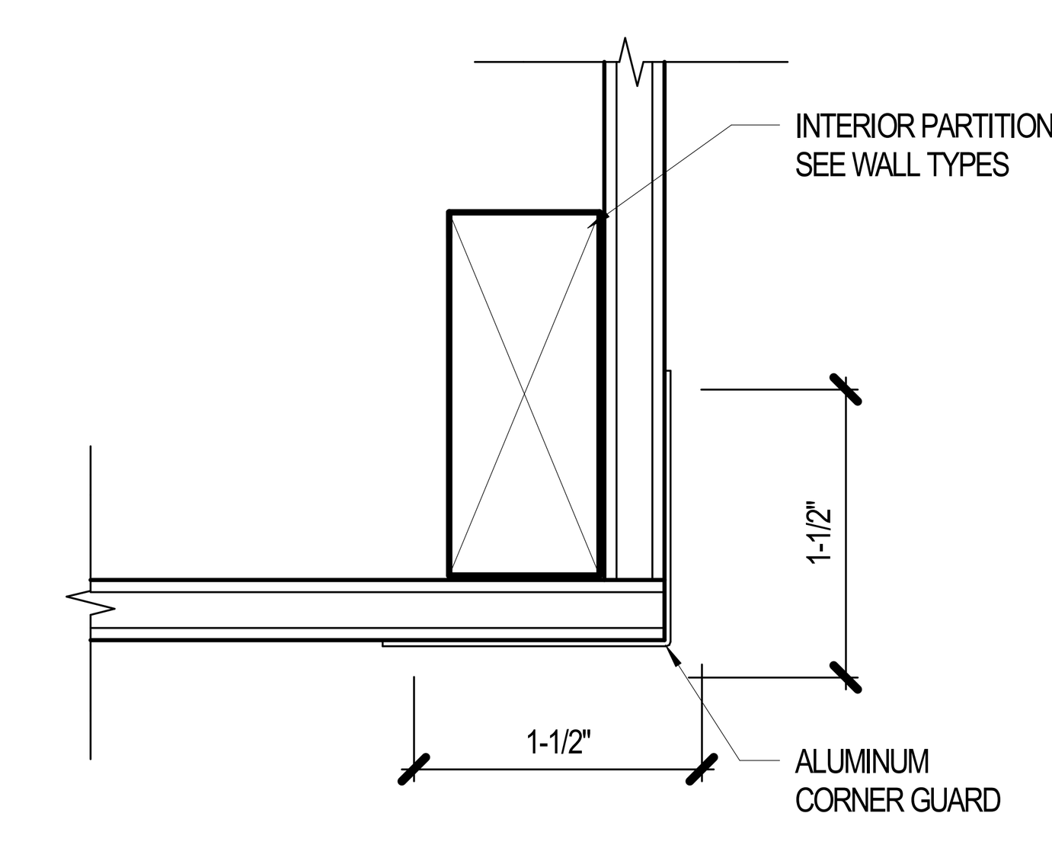
A1 A701 TYPICAL SEISMIC BRACING DETAIL
3" = 1'-0"

PARTITION PRIORITY LEGEND

TWO HOUR FIRE AND SMOKE WALL	PRIORITY 1 HIGHEST
TWO HOUR FIRE WALL	PRIORITY 2
TWO HOUR SHAFT WALL	
ONE HOUR FIRE AND SMOKE WALL	PRIORITY 3
ONE HOUR FIRE WALL	PRIORITY 4
SMOKE TIGHT WALL	PRIORITY 5
NON-RATED WALL	PRIORITY 6



A4 A701 PARTITION PRIORITY LEGEND
3" = 1'-0"



A6 A701 CORNER GUARD DETAIL
3" = 1'-0"

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TYPICAL DETAILS

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KEYNOTE LEGEND

10:BD1	6' TALL ACCESS DOOR TO BE INCLUDED WITH BOULDER WALL DESIGN
10:BD2	BOULDER WALL DESIGN TO MAINTAIN ACCESSIBILITY TO STORAGE AND MECHANICAL ROOMS BEHIND WALL
10:BP2	BOULDER PAD
10:BW1	BOULDERING WALL. SEE SHEET A702
10:BW4	BOULDER WALL. DESIGN TO FOLLOW ROOF LINE SLOPE AT TOP OF WALL. HOLDS TO BE LOCATED NO HIGHER THAN 12'
10:BW5	BOULDER WALL
10:WG1	SPACE BETWEEN TOP OF BOULDER WALL AND MECH/EXTERIOR WALL TO BE OPEN OR HAVE GRILLE(S) FOR RETURN AIR. GRILLE(S) WOULD BE BY BOULDER WALL MFG

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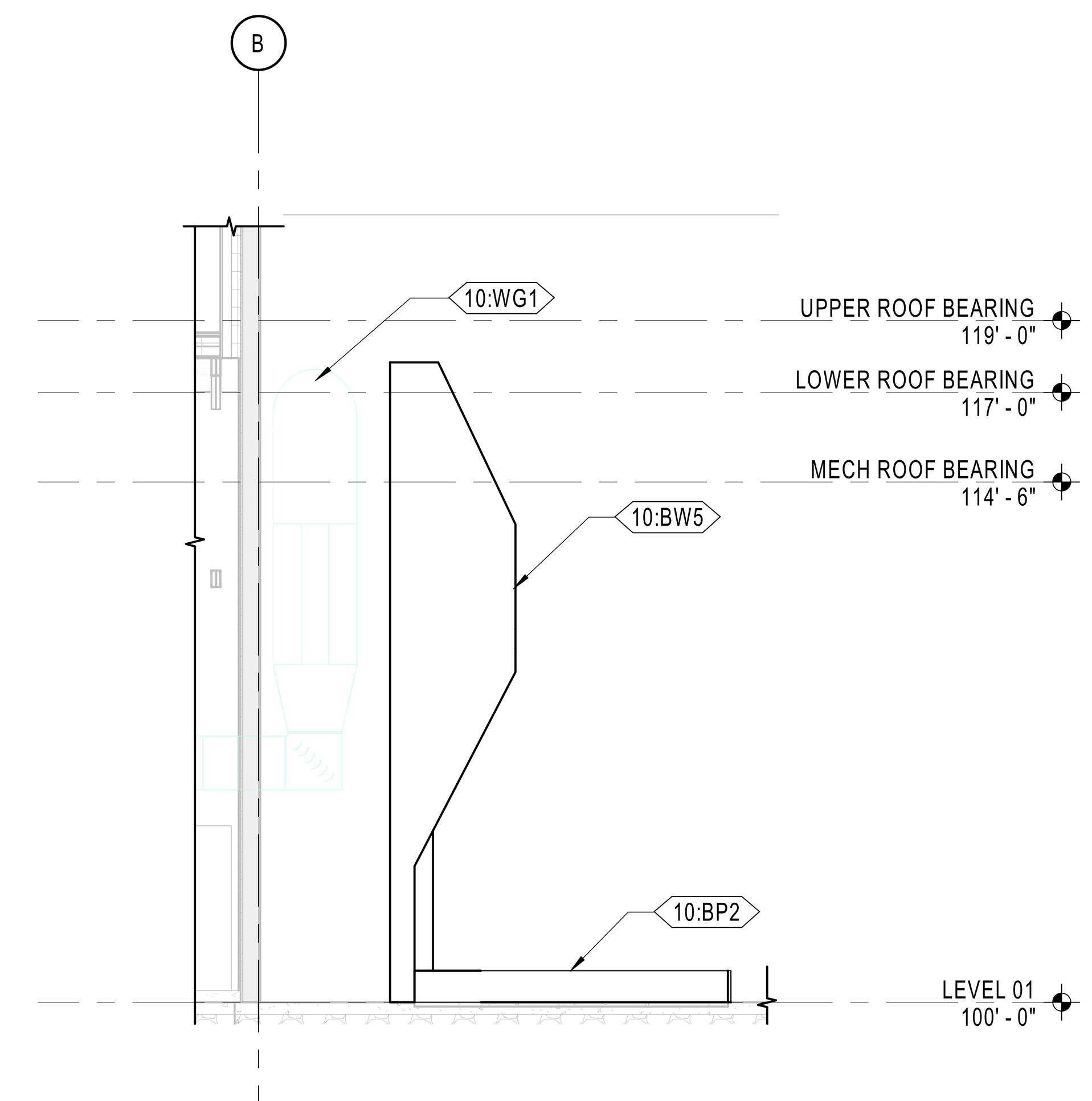
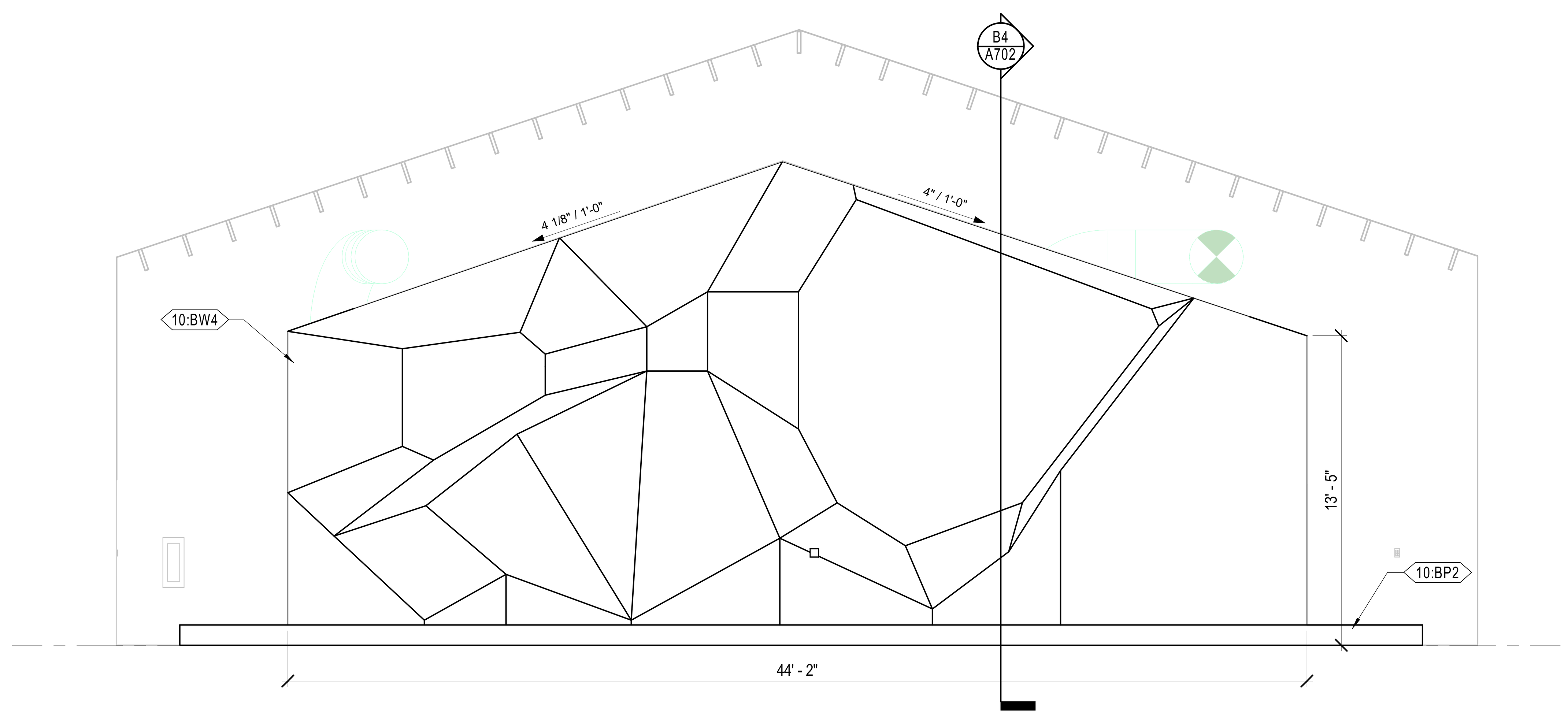
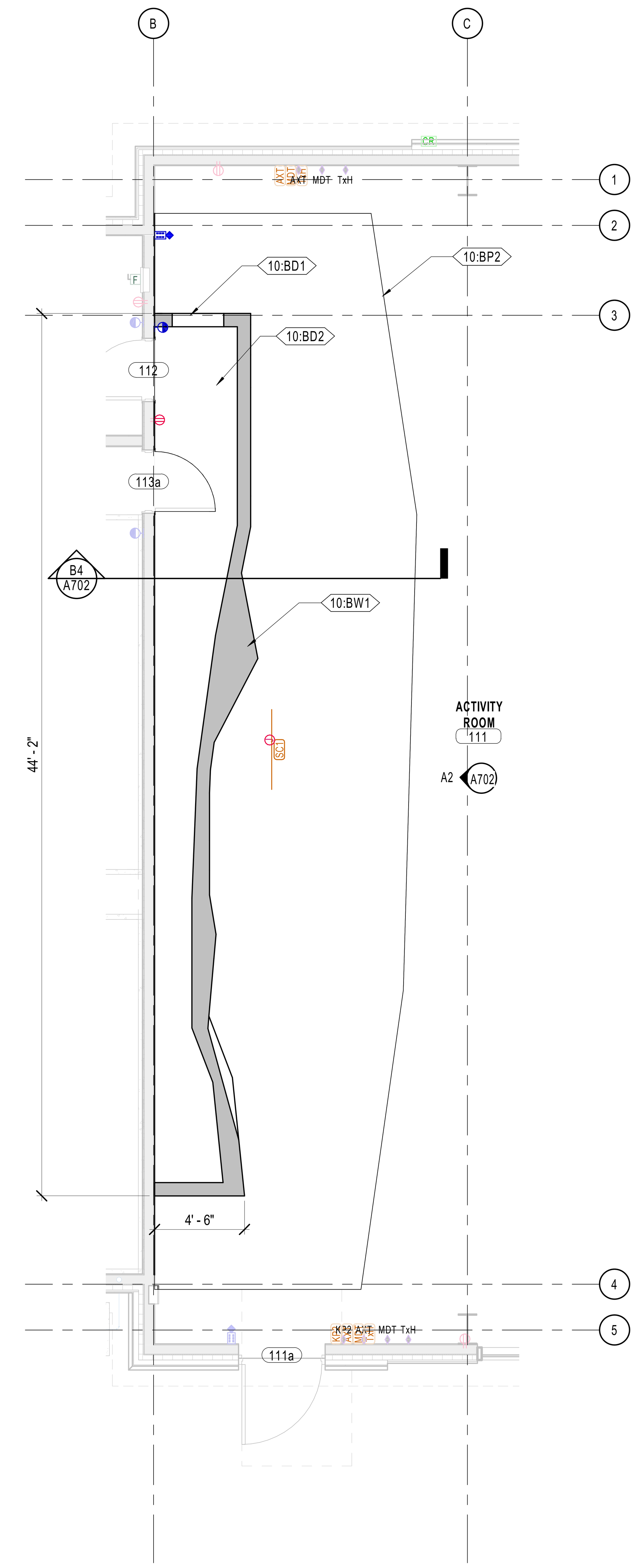


B4 A702 **BOULDER WALL SECTION**
1/4" = 1'-0"



A2 A702 **ACTIVITY ROOM ELEVATION - BOULDER WALL**
1/4" = 1'-0"



A5 A702 **LEVEL 01 - ENLARGED FLOOR PLAN - BOULDER WALL**
1/4" = 1'-0"

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BOULDER WALL

A702

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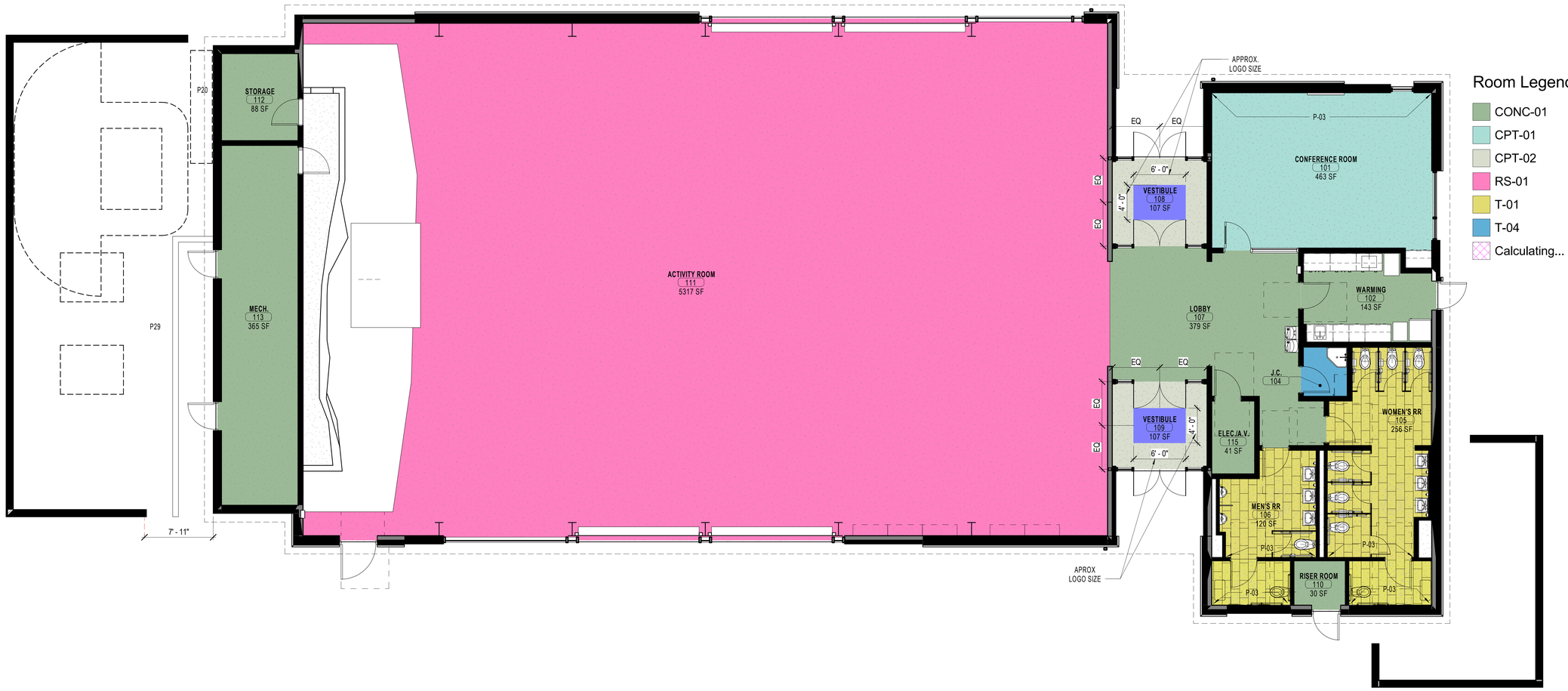

Room Legend

- CONC-01
- CPT-01
- CPT-02
- RS-01
- T-01
- T-04
- Calculating...

1 AI600 **LEVEL 01 - FLOOR FINISH PLAN**
3/16" = 1'-0"

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FLOOR FINISH PLAN

AI600

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EQUIPMENT AND ACCESSORY SCHEDULE

NUMBER	ITEM	BASIS OF DESIGN	NOTES	FLOOR	WALL	CEILING	COUNTER	PORTABLE	FURNISH	INSTALL
ACCESSORIES										
CS-02	BABY CHANGING STATION, CHILD PROTECTION SEAT	KOALA KARE; KB102			X				C	C
FS-01	FOLD DOWN SEAT	ASI; 8203-28			X				C	C
MR-1	MIRROR, FRAMED, 24" X 36"				X				C	C
TS-2	GRAB BAR, (2) 18" VERTICAL,(2) 36" HORIZONTAL				X				C	C
TS-3	SOAP DISPENSER	ASI - 0347			X				V	V
TS-6	(3) GRAB BARS, 36, 42, & 18"	ASI - 3401 -36, 42, &18			X				C	C
EQUIPMENT										
IC-01	ICE MACHINE	MANITOWOC; NEO UDF-024DA		X					O	O
MW-01	MICROWAVE	TO BE DETERMINED					X		O	O
RF02	RESIDENTIAL REFRIGERATOR / FREEZER			X						
ST-01	MOVEABLE STAGE			X					C	C
TS-5	RECESSED SEAT COVER & TOILET PATER DISPENSER WITH SANITARY DISPOSAL	ASI - 0482			X				V	V
WC-01	WARMING CABINET	AVANTCO; HP11836			X				O	O
TECHNOLOGY										
TV01	TELEVISION, 55" (WITH MOUNTING BRACKET)	REFER TO A/V SPECS			X				C	C

ROOM FINISH SCHEDULE

Room	Name	Floor	Base	Walls				Ceiling	Notes	Room
				N	E	S	W			
101	CONFERENCE ROOM	CPT-01	RB-02	P-03	P-01	P-01	P-01	ACP-01	N2	101
101a	AV CLOSET	CONC-01	RB-01	P-01	P-01	P-01	P-01	--		101a
102	WARMING	CONC-01	RB-01	P-05	P-05	P-05	P-05	GYP-02	N1	102
104	J.C.	T-04	RB-01	P-05 / T-05	P-05 / T-05	P-05	P-05	GYP-02	N4	104
105	WOMEN'S RR	T-01	T-02	P-05 / T-03	P-05 / T-03	P-05 / P-03	P-05 / T-03	GYP-02	N5	105
106	MEN'S RR	T-01	T-02	P-05	T-03	P-05	P-05 / T-03	GYP-02	N5	106
107	LOBBY	CONC-01	RB-01	P-01	P-01	P-01	P-01	GYP-01		107
108	VESTIBULE	CPT-02	RB-02	P-01	P-01	P-01	P-01	GYP-01		108
109	VESTIBULE	CPT-02	RB-02	P-01	P-01	P-01	P-01	GYP-01		109
110	RISER ROOM	CONC-01	RB-01	P-01	P-01	P-01	P-01	--		110
110	RISER ROOM	CONC-01	RB-01	P-01	P-01	P-01	P-01	--		110
111	ACTIVITY ROOM	RS-01	RB-02	P-01	P-01	P-01	P-01 / ST-01	WD-01	N3	111
111A	MAINT. ACCESS									111A
112	MECH.	CONC-01	RB-01	P-01	P-01	P-01	P-01	--		112
112	STORAGE	CONC-01	RB-01	P-01	P-01	P-01	P-01	--		112
113	MECH.	CONC-01	RB-01	P-01	P-01	P-01	P-01	--		113
115	ELEC./A.V.	CONC-01	RB-01	P-01	P-01	P-01	P-01	--		115

FINISH LEGEND

CODE	DESCRIPTION	REMARKS
ACOUSTICAL CEILING PANEL		
ACP-01	ACOUSTICAL CEILING PANEL: ROCKFON; ARTIC, SQUARE TEGULAR NARROW, SLN 620, 2' X 2' X 5/8"	
CARPET		
CPT-01	CARPET TILE: MILLIKEN; TEXTURED SKY COLLECTION, PATTERN: HORIZON LINE, COLOR: HRZ208-211-122 DAWN, SIZE: 25 CM X 1 M, INSTALLATION METHOD: MONOLITHIC	
CPT-02	WALK-OFF CARPET TILE: INTERFACE; SUPER FLOR; COLOR: 609009 MOUSE GREY, SIZE: 50 CM X 50 CM, CUSTOM LOGO PRINTED IN CENTER, REFER TO DWG FOR SIZE, COLOR TO MATCH BRANDING	
CONCRETE		
CONC-01	POLISH SEALED CONCRETE WITH SLIP RESISTANT FINISH, COLOR TBD: (LIGHT COLOR)	
GYPSUM CEILING		
GYP-01	GYPSUM CEILING: PAINTED P-02, REFER TO FINISH LEGEND	
GYP-02	GYPSUM CEILING: PAINTED P-06, REFER TO FINISH LEGEND	
PAINT		
P-01	GENERAL PAINT: DUNN EDWARDS PAINTS; DET600 DOLPHIN TALE, SHEEN: EGGSHELL	
P-02	CEILING PAINT: SHERWIN WILLIAMS; SW7757 HIGH REFLECTIVE WHITE, SHEEN: FLAT	
P-03	ACCENT PAINT: SHERWIN WILLIAMS; SW6487 CLOUDBURST; REFER TO FLOOR FINISH PLAN FOR LOCATIONS	
P-04	METAL DOOR FRAME PAINT: SHERWIN WILLIAMS; SW7018 DOVETAIL, SHEEN: SEMI-GLOSS	
P-05	GENERAL PAINT EPOXY: DUNN EDWARDS PAINTS; DET600 DOLPHIN TALE, EPOXY	
P-06	CEILING PAINT EPOXY: SHERWIN WILLIAMS; SW7757 HIGH REFLECTIVE WHITE, EPOXY	
PLASTIC LAMINATE		
PL-01	WILSONART; FAWN CYPRESS, 8208K-16, CASUAL RUSTIC FINISH	
PL-02	ARBORITE; P-344 RM INUKSHUK GREY	
PL-03	WILSONART; OCEAN D5Q2K-18, LINEARITY FINISH	
PL-04	NEVAMAR; ARMORED PROTECTION, AQUA LAGOON, S5059T TEXTURED	CUBBIES
RESILIANT FLOOR		
RS-01	RUBBER FLOOR: MONDO; ADVANCE 4MM, COLOR: L06 DARK GREY	
RUBBER BASE		
RB-01	RUBBER BASE: JOHNSONITE; TRADITIONAL WALL BASE, COLOR: 32 PEBBLE WG, 6" H W/ TOE	
RB-02	RUBBER BASE: JOHNSONITE; TRADITIONAL WALL BASE, COLOR: 32 PEBBLE WG, 6" H TOELESS	
STONE		
ST-01	ROCK WALL: FINISH TO MATCH EXTERIOR ROCK WALL	
TILE		
T-01	PORCELAIN TILE: DALTILE; INDUSTRIAL PARK, CHARCOAL BLACK IP09, 12" X 24"	RESTROOM FLOOR TILE
T-02	PORCELAIN TILE BASE: DALTILE; INDUSTRIAL PARK, CHARCOAL BLACK IP09, P-36C9T, 6" X 12"	RESTROOM WALL BASE
T-03	PORCELAIN TILE: DALTILE; CHORD, CANON GRAY CH22, DECORATIVE ACCENT TEXTURED, 12" X 24"	RESTROOM WALL TILE
T-04	MOSAIC TILE: DALTILE; 60% KEYSTONES, GROUP 1, COLOR: DESERT GRAY SPECKLE D200, 1" X 1", 40% KEYSTONES, GROUP 2, COLOR: SUEDE GRAY D182, 1" X 1"	JANITORS CLOSET FLOOR TILE
T-05	CERAMIC TILE: DALTILE; ARTIC WHITE 0190, SEMI-GLOSS, 4-1/4" X 4-1/4"	JANITORS CLOSET WALL TILE
WOOD		
WD-01	EXPOSED GLU-LAM BEAMS AND PLYWOOD. PROVIDE HIGHER GRADE PLYWOOD AT THIS LOCATION.	
FINISH SCHEDULE NOTES		
N1	MILLWORK TO BE AS FOLLOWS: PL-01 AS UPPER CABINETS, PL-03 AS LOWER CABINETS & PL-02 AS COUNTERTOP; REFER TO FINISH LEGEND	
N2	MILLWORK TO BE AS FOLLOWS: PL-01 AS BOTH UPPER & LOWER CABINETS, PL-02 AS COUNTEROP; REFER TO FINISH LEGEND	
N3	MILLWORK CUBBIES TO BE PL-04; REFER TO FINISH LEGEND	
N4	JANITOR'S CLOSET WALL TILE TO BE T-05; REFER TO FINISH LEGEND. TILE FROM F.F. TO 4'-0" A.F.F.; PLACEMENT TO BE ONLY WHERE SINK IS LOCATED.	
N5	RESTROOM WALL TILE TO INSTALL FROM FLOOR TO CEILING; NO BASE ON TILE WALLS.	

GENERAL NOTE - FINISH SCHEDULE

A. SEE REFLECTED CEILING PLANS FOR CEILING FEATURES AND FINISH ELEVATIONS.
B. SEE FLOOR FINISH PLAN FOR TILE PATTERNS.
C. HOLLOW METAL DOOR FRAMES TO BE PAINTED P-04; REFER TO FINISH LEGEND.
D. STAINLESS STEEL, BRUSHED FINISH, 14 GA HEAVY DUTY CORNER GUARDS TO BE APPLIED TO ALL EXPOSED GYPSUM CORNERS TYP.

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FINISH SCHEDULE

AI601

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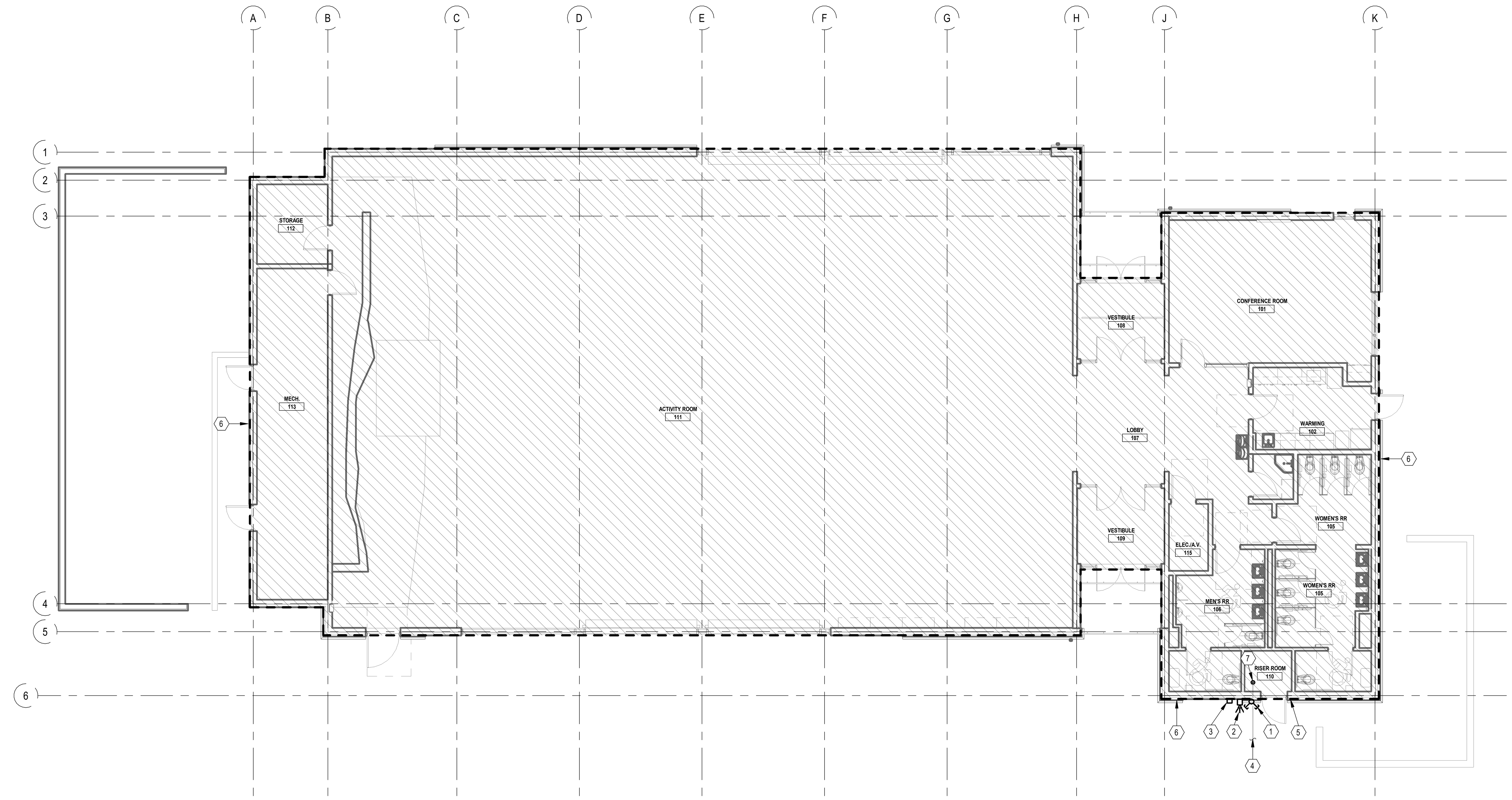
KEYED NOTES

1 WALL MOUNTED FIRE DEPARTMENT SIAMESE CONNECTION. RUN LINE INSIDE AND CONNECT TO FULL SIZE MAIN. FIELD VERIFY EXACT LOCATION WTH DESIGN SPECIFICATIONS AND FIRE PROTECTION CONTRACTOR.
2 FIRE ALARM AND STROBE.
3 PROVIDE KNOX BOX.
4 FIRE LINE FEED. SEE CIVIL DRAWINGS FOR CONTINUATION.
5 PROVIDE IDENTIFICATION SIGNS AT THE FIRE SPRINKLER RISER ROOM TO SAY: FIRE SPRINKLER RISER ROOM AND CONTROL VALVES ACCESS.
6 PROVIDE FIRE SPRINKLER SYSTEM TO AREA AS INDICATED IN BOUNDARY LINE.
7 FIRE RISER.

GENERAL NOTES

A. AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED IN ACCORDANCE WITH NFPA #13, 2015 EDITION.
B. AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA#13, 2015 EDITION, INSTALLATION OF SPRINKLER SYSTEMS.
C. FURNISH AND INSTALL NEW PIPE, FITTINGS, SPRINKLER HEADS AS REQUIRED TO COMPLETE THE WORK. ALL MATERIALS TO MATCH EXISTING.
D. NEW SPRINKLER HEADS TO MATCH CEILING TYPE. COORDINATE WITH ARCHITECTURAL SHEETS.
E. ALL PIPING SHALL BE DOMESTIC.
F. FITTINGS SHALL BE THREADED, WELDED AND GROOVED IN ACCORDANCE WITH LISTING AND NFPA #13 REQUIREMENTS.
G. SEISMIC BRACING AND FLEXIBLE COUPLINGS SHALL BE PROVIDED AS REQUIRED FOR SEISMIC PROTECTION.
H. PLAIN END OR MECHANICAL TEES SHALL NOT BE USED, UNLESS REQUIRED FOR FIELD MODIFICATION OF PIPING SYSTEM.
I. THE SPRINKLER CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND PROVIDE ADDITIONAL OFFSETS AS REQUIRED FOR INSTALLATION. SPRINKLER PIPING SHALL BE REROUTED AS REQUIRED WHERE CONFLICTS OCCUR. SPRINKLER CONTRACTOR'S PRICING SHALL INCLUDE ANY PIPING OFFSETS, OR REVISED CUT LENGTHS.
J. THE ARCHITECT SHALL PROVIDE SCHEMATIC SPRINKLER LAYOUTS ON REFLECTED CEILINGS DRAWINGS, FOR AREAS OF CONCERN. PROVIDE SPRINKLER LAYOUT AS PER ARCHITECTURAL DRAWINGS WHILE MEETING SPRINKLER LISTINGS. COORDINATE WITH ARCHITECT AND ENGINEER WHERE LAYOUTS ARE NOT FEASIBLE AS SHOWN.
K. SHOP DRAWINGS SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR USING A REVIT COMPATIBLE FORMAT. SUBMIT TO OWNERS INSURANCE REVIEW CONSULTANT, ARCHITECT, AND ENGINEER. AS-BUILT DRAWINGS AND ELECTRONIC DRAWING FILES SHALL BE PROVIDED AT END OF PROJECT BY CONTRACTOR.
L. FIRE SPRINKLER SHOP DRAWINGS, CALCULATIONS, AND MATERIALS SHALL BE SUBMITTED AND REVIEWED BY ENGINEER PRIOR TO SUBMITTING TO OTHER AUTHORITIES HAVING JURISDICTION.
M. FIRE SPRINKLER CONTRACTOR TO ACQUIRE ALL NECESSARY PERMITS AND/OR APPROVALS FROM CITY, COUNTY, AND STATE.
N. PRESSURE TEST AND CERTIFY SPRINKLER SYSTEM.
O. PIPE ROUTING, ELEVATIONS, SPRINKLER LOCATIONS, ARE SCHEMATIC, AND SHALL BE USED AS REFERENCE ONLY. INSTALLER SHALL FIELD VERIFY CONDITIONS, AND PROVIDE OFFSETS AS REQUIRED FOR INSTALLATION. DEVIATION FROM SCHEMATIC PLAN SHALL BE APPROVED IN WRITING BY THE ENGINEER, PRIOR TO INSTALLATION.
P. NEW FIRE PROTECTION WORK TO INCLUDE HEADS AND PIPING SYSTEM AS REQUIRED TO MEET NFPA REQUIREMENTS.
Q. NEW PIPING TO BE SCHEDULE 40 STEEL PIPE LISTED FOR FIRE PROTECTION.
R. SEE ARCHITECTURAL PLANS FOR CEILING HEIGHTS.
S. SUBMIT FIRE PROTECTION DRAWINGS TO LANDLORD'S/OWNER'S INSURANCE REVIEW CONSULTANT.
T. COORDINATE WITH AHJ FOR SYSTEM DESIGN REQUIREMENTS.
U. COORDINATE PIPE ROUTING WITH OTHER TRADES.
V. TIGHT CEILING SPACE WILL REQUIRE SOME SPRINKLER LINES TO OFFSET OVER OR UNDER DUCTWORK, PIPE, OR OTHER OBSTACLES. PROVIDE DRAINS AS REQUIRED.



1 LEVEL 01 - FIRE PROTECTION OVERALL FLOOR PLAN
SCALE: 1/8" = 1'-0"

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FIRE PROTECTION PLAN

F101

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MECHANICAL LEGEND

BURIED OR UNDERFLOOR DUCT	
DUCT SIZE (IN)FIRST FIGURE IS SIDE SHOWN	12/12
FLEXIBLE DUCT (HELICAL)	
FLEXIBLE DUCT CONNECTION	
SPIN-IN W/ MVD	
AIR FLOW STATION	
COMBINATION FIRE/SMOKE DAMPER	
FIRE DAMPER SMOKE DAMPER	
GRAVITY BACKDRAFT DAMPER	
MANUAL VOLUME DAMPER	
MOTORIZED DAMPER	
SMOKE DAMPER	
THERMOSTAT OR TEMP SENSOR W/ EQUIPMENT TAG	
RADIAL SUPPLY DIFFUSERS	
RETURN GRILLE	
SUPPLY DIFFUSER	
SUPPLY SLOT DIFFUSER	
DUCT TRANSITION	
ELBOW W/ TURNING VANES	
TEE W/ 45° ENTRY	
WYE W/ 45° ENTRY	
EXHAUST AIR DUCT DOWN	
EXHAUST AIR DUCT SECTION	
EXHAUST AIR DUCT UP	
RETURN AIR DUCT DOWN	
RETURN AIR DUCT SECTION	
RETURN AIR DUCT UP	
SUPPLY AIR DUCT DOWN	
SUPPLY AIR DUCT SECTION	
SUPPLY AIR DUCT UP	
FIRE DEPT. HORN & LIGHT	
FIRE HOSE CABINET	
POST TYPE FDC CONNECTION	
WALL TYPE FDC CONNECTION	
YARD HYDRANT	
FLOOR DRAIN	
FLOOR OR GRADE CLEANOUT	
FLOOR SINK	
GRADE CLEANOUT W/ CONCRETE PAD	
HOSE BIBB OR SILLCOCK	
MANHOLE	
REDUCED PRESSURE BACKFLOW PREVENTOR	RPBP
VENT THROUGH THE ROOF	
WALL CLEANOUT	
EXPANSION JOINT	
FLEXIBLE PIPE CONNECTION	
HEAT TRACING	
CHILLED WATER RETURN	X" CHR

CHILLED WATER SUPPLY	X" CHS
CONDENSER WATER RETURN	X" CR
CONDENSER WATER SUPPLY	X" CS
HEATING WATER RETURN	X" HWR
HEATING WATER SUPPLY	X" HWS
RADIANT FLOOR RETURN	X" RFR
RADIANT FLOOR SUPPLY	X" RFS
REFRIGERANT LIQUID	X" RL
REFRIGERANT SUCTION	X" RS
SNOWMELT RETURN	X" SMR
SNOWMELT SUPPLY	X" SMS
STEAM	X" S
STEAM CONDENSATE RETURN	X" SCR
GROUND LOOP RETURN	X" GLR
GROUND LOOP SUPPLY	X" GLS
HOT GAS	X" HG
HOT GAS BYPASS	X" HGBP
AQUASTAT	
FLOW SWITCH	
IN-LINE PUMP	
PRESSURE GAUGE W/ GAUGE COCK	
STRAINER	
TEMPERATURE & PRESSURE TEST PLUG	
TEMPERATURE SENSING WELL	
THERMOMETER	
VENTURI FLOW METER	
DIRECTION OF FLOW	
ELBOW DOWN	
ELBOW UP	
PIPE CAP	
REDUCER	
TEE DOWN	
UNION	
CONDENSATE DRAIN	X" D
DOMESTIC COLD WATER	X" DCW
DOMESTIC HOT WATER	X" DHW
DOMESTIC HOT WATER RECIRC.	X" DHWR
FIRE SERVICE	X" F
GREASE WASTE ABOVE GRADE	X" GW
GREASE WASTE BELOW GRADE	X" GW
NATURAL GAS	X" G
OVERFLOW DRAIN	X" OD
ROOF DRAIN	X" RD
SANITARY (PLBG) VENT	X" V
SANITARY WASTE ABOVE GRADE	X" W
SANITARY WASTE BELOW GRADE	X" W
COMPRESSED AIR	X" CA
TEMPERED WATER	X" T

ARGON	X" AR
CARBON DIOXIDE	X" CO2
DEIONIZED WATER RETURN	X" DI
DEIONIZED WATER SUPPLY	X" DIR
FUEL OIL RETURN	X" FOR
FUEL OIL SUPPLY	X" FOS
HELIUM	X" HE
HYDROGEN	X" H
INDUSTRIAL WATER (NON-POTABLE)	X" IW
MEDICAL AIR	X" MA
NITROGEN	X" N
NITROUS OXIDE	X" N2O
OXYGEN	X" O2
PROPANE	X" P
REVERSE OSMOSIS	X" RO
VACUUM	X" VAC
WATER TREATMENT	X" WT
ACCESS PANEL	
CARBON DIOXIDE SENSOR	CD
CARBON MONOXIDE SENSOR	C
HUMIDISTAT OR HUMIDITY SENSOR	H
NITROGEN DIOXIDE SENSOR	N
POINT OF CONNECTION TO EXISTING	
POINT OF REMOVAL FROM EXISTING	
AIR VENT (AUTOMATIC)	
AUTOMATIC CONTROL VALVE (2-WAY)	
AUTOMATIC CONTROL VALVE (3-WAY)	
BALL VALVE	
BUTTERFLY VALVE	
CALIBRATED BALANCE VALVE	
CHECK (SWING OR LIFT AS REQ'D) VALVE	
CURB COCK	
GAS COCK	
GATE OS & Y PATTERN VALVE	
GATE VALVE	
MOTORIZED ACTUATOR	M
P&T RELIEF VALVE	
PET COCK OR GAUGE COCK	
PLUG VALVE	
PRESSURE REDUCING VALVE	
SOLENOID VALVE	
THERMAL EXPANSION VALVE	
DETAIL TAG	DETAIL NO. / DRAWING NO.
KEYED NOTE	NOTE NO.
SECTION CUT LINE	SECTION NO. / DRAWING NO.

ABBREVIATIONS

Key Name	Comments
AD	ACCESS DOOR
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
BI	BACKWARD INCLINE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CBV	CALIBRATED BALANCE VALVE
CFM	CUBIC FEET PER MINUTE
CV	CONSTANT VOLUME
CV	CONTROL VALVE
DB	DRY BULB
DCW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
DIA	DIAMETER
DN	DOWN
DSN	DOWN SPOUT NOZZLE
DW	DISHWASHER
E	EXISTING
EA	EACH OR EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EFF	EFFICIENCY
ELEV	ELEVATION
ENCL	ENCLOSURE
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FO	FLAT OVAL
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
FV	FACE VELOCITY
GA	GAUGE
GAL	GALLON
GD	GARAGE DRAIN
GEA	GREASE EXHAUST AIR
GPM	GALLONS PER MINUTE
HP	HORSE POWER
HR	HOUR
HT	HEIGHT
IN	INCH
INWC	INCHES OF WATER COLUMN
INWG	INCHES OF WATER GAUGE
L	LAVATORY OR LOUVER
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS
MECH	MECHANICAL
MIN	MINIMUM
MPSA	MEDIUM PRESSURE SUPPLY AIR
MUA	MAKE-UP AIR
MVD	MANUAL VOLUME DAMPER
NC	NOISE CRITERIA OR NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OD	OVERFLOW DRAIN
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PD	PRESSURE DROP
PG	PROPYLENE GLYCOL
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RAD	RADIUS
RD	ROOF DRAIN
RLF	RELIEF AIR
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
SA	SUPPLY AIR OR SHOCK ARRESTOR
SEN	SENSIBLE
SF	SQUARE FEET
SIM	SIMILAR
SL	SEA LEVEL
SP	STATIC PRESSURE
SS	SERVICE SINK OR STAINLESS STEEL
TOD	TOP OF DUCT
TSP	TOTAL STATIC PRESSURE
TYP.	TYPICAL
U	URINAL
V	VENT
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VTR	VENT THROUGH THE ROOF
W	WASTE
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WPD	WATER PRESSURE DROP
WT	WEIGHT
Ø	ROUND OR DIAMETER

DRAWING INDEX

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MECHANICAL LEGEND, SYMBOLS & ABBREV.

M001

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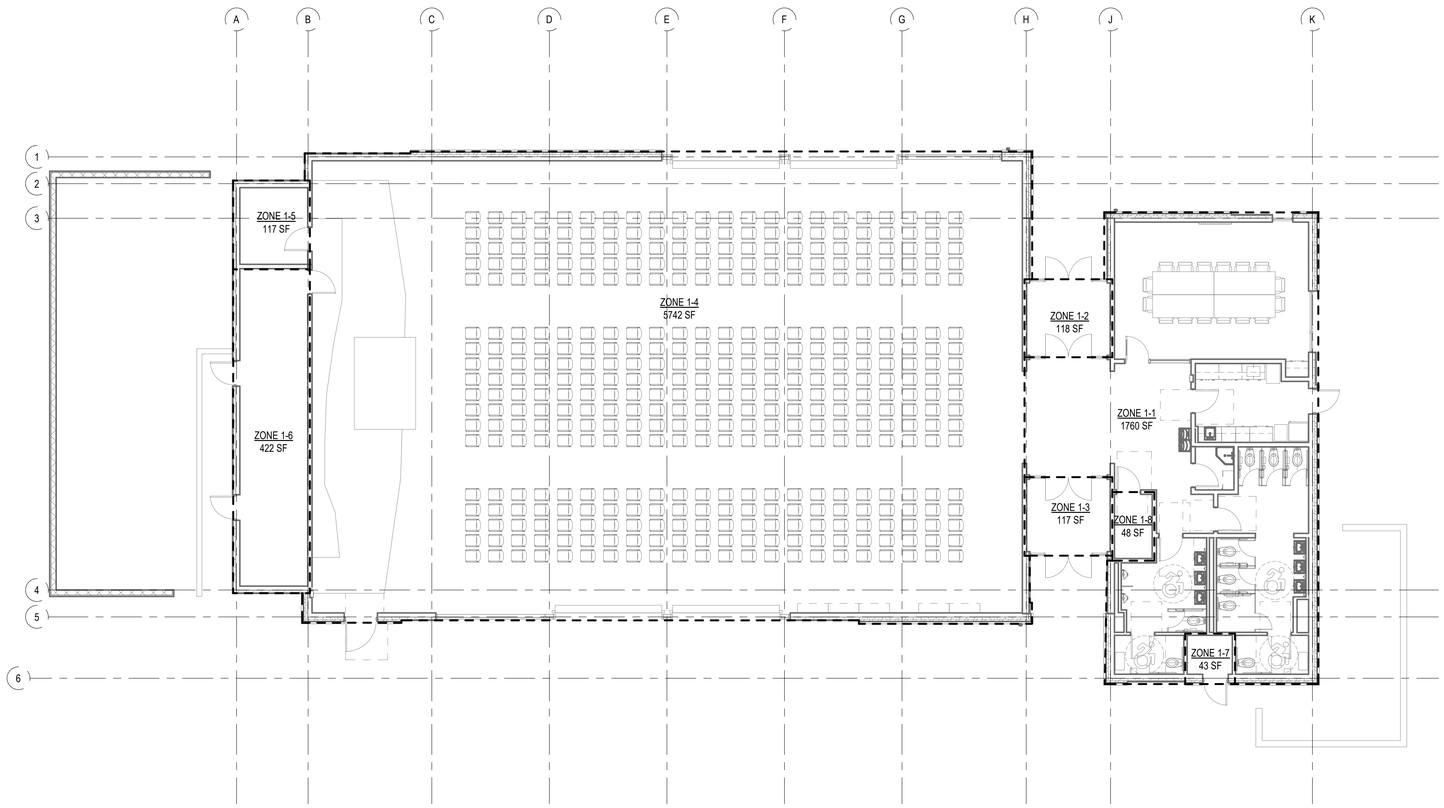

1 LEVEL 01 - MECHANICAL ZONING PLAN
SCALE: 1/8" = 1'-0"

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MECHANICAL ZONING PLAN

M011

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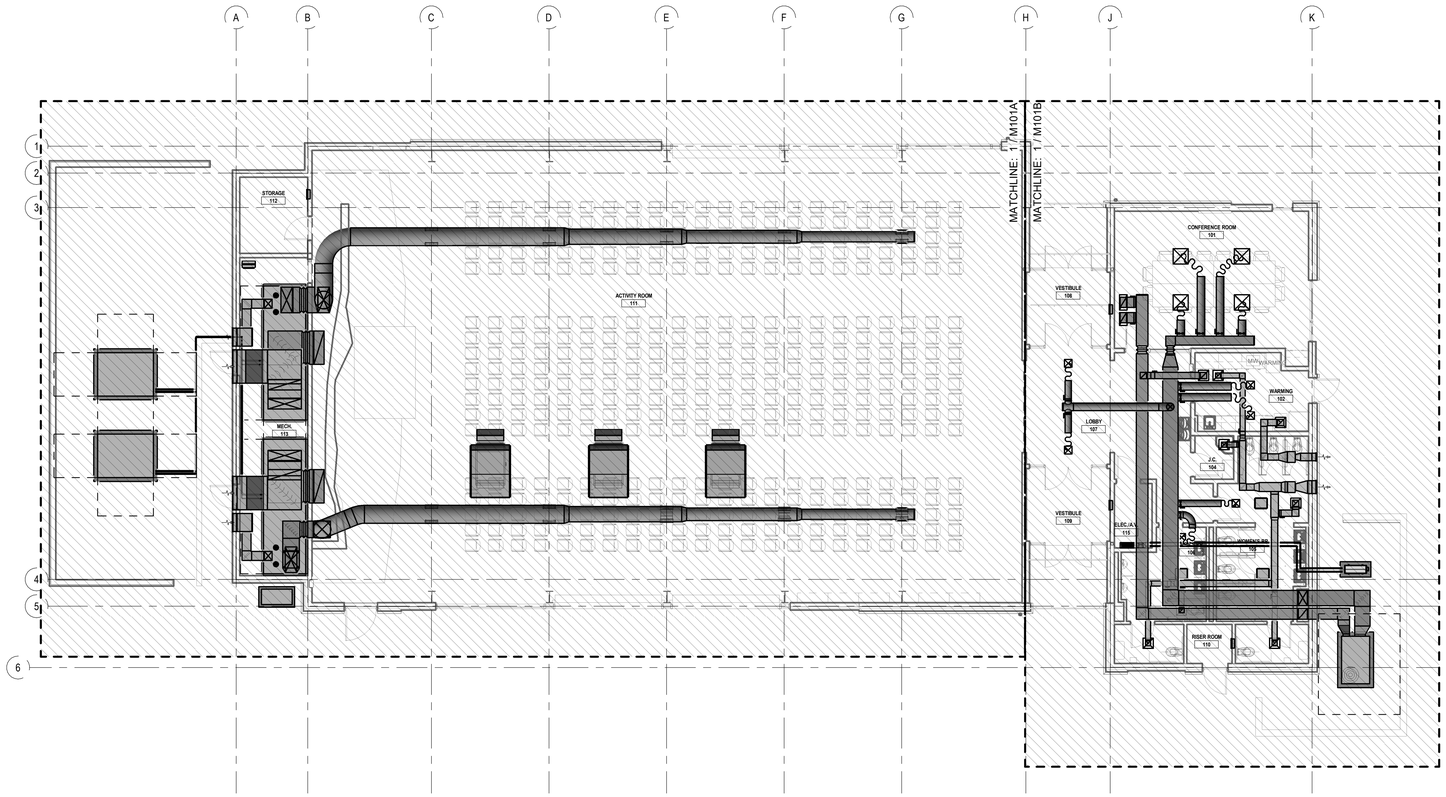

1 LEVEL 01 - MECHANICAL OVERALL FLOOR PLAN
SCALE: 1/8" = 1'-0"

8.09.18
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MECHANICAL OVERALL PLAN

M101

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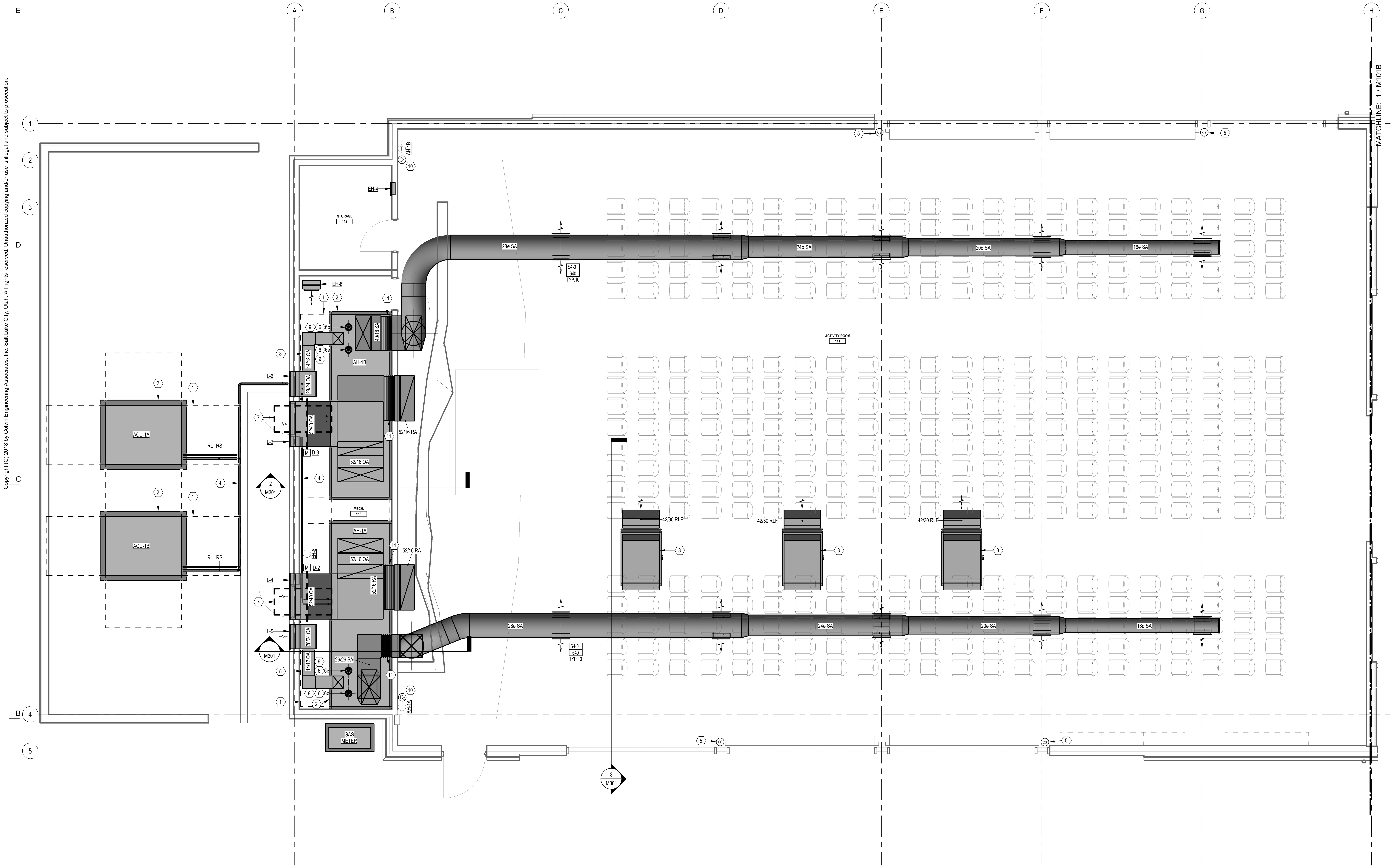
KEYED NOTES

1. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND MECHANICAL EQUIPMENT.
2. INSTALL MECHANICAL EQUIPMENT ON 4" CONCRETE PAD.
3. 42/60 RLF DUCT UP TO RELIEF HOOD.
4. STACK AND SUPPORT RL/RS PIPING TO WALL WITH UNISTRUT.
5. PROVIDE DOOR CONTACT SENSOR. AH-1A & AH-1B TO DEACTIVATE WHEN ALL ROLL UP DOORS ARE OPEN.
6. AIR HANDLER FURNACE FLUE EXHAUST. PROVIDE CODE COMPLIANT CAP. RISE A MINIMUM OF 3'-0" ABOVE ROOF LINE. B-VENT TYPE FLUE.
7. COIL PULL CLEARANCE SPACE.
8. COMBUSTION AIR DUCTWORK TO SERVICE AIR HANDLER FURNACE.
9. PROVIDE CONDENSATE DRAIN AT LOW POINT OF FLUE AND WITHIN CABINET. REFER TO MANUFACTURE INSTALLATION INSTRUCTIONS.
10. PROVIDE WALL MOUNTED CARBON DIOXIDE SENSORS.
11. PROVIDE FLEX DUCT AT PENETRATION OF WALL.

GENERAL NOTES

A. RUNOUTS TO DIFFUSERS ARE TO BE NECK SIZE UNLESS OTHERWISE NOTED ON DRAWINGS..
B. COORDINATE DUCT ROUTING WITH PLUMBING AND MECHANCIAL PIPING. PROVIDE OFFSETS AS REQUIRED.



1 LEVEL 01 - MECH ENLARGED FLOOR PLAN - AREA A
SCALE: 1/4" = 1'-0"

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MECHANICAL FLOOR PLAN - AREA A

M101A

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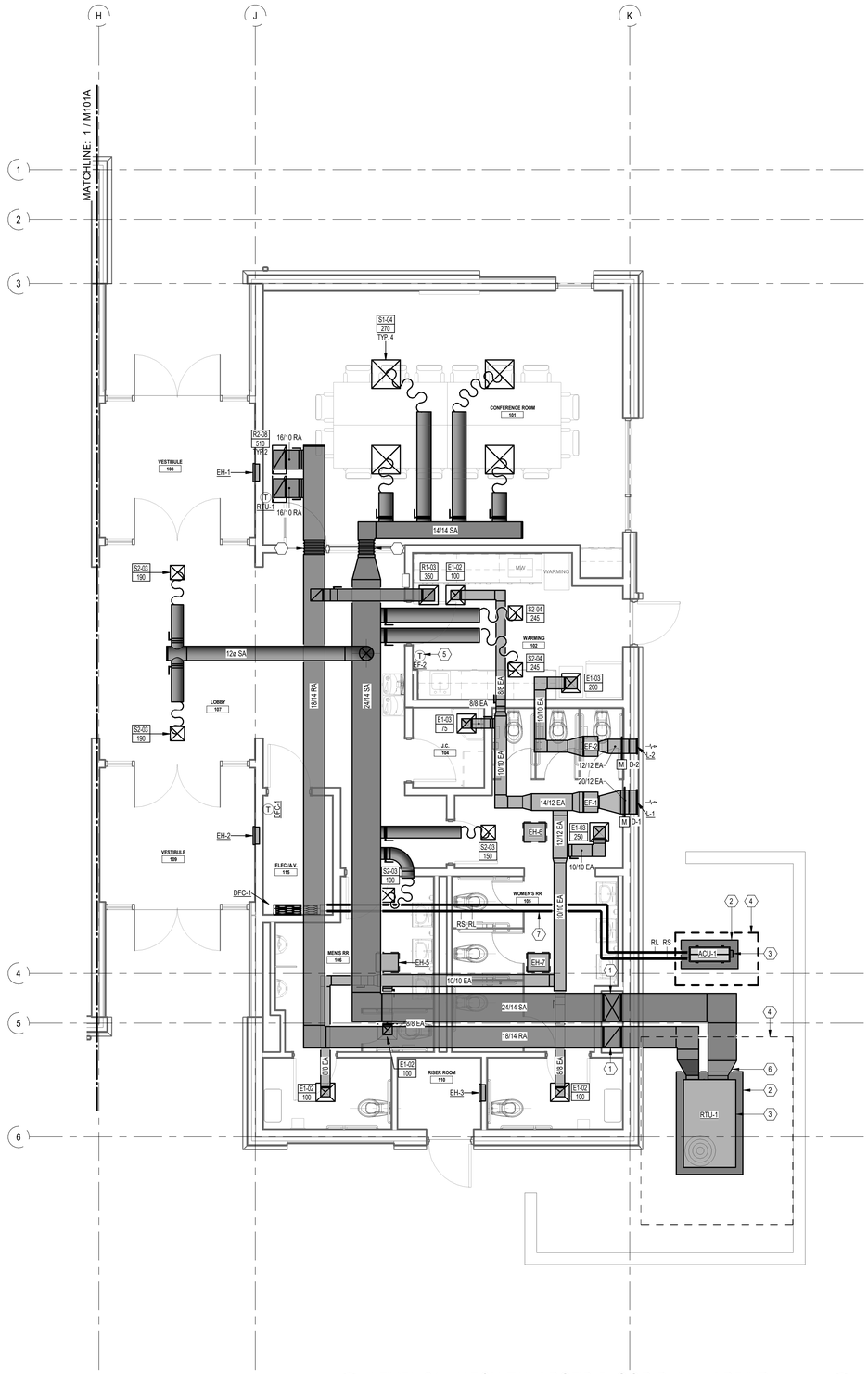
KEYED NOTES

1 RISE/DROP DUCT IN CHASE FROM CEILING SPACE TO EXTERIOR WALL.
2 INSTALL MECHANICAL EQUIPMENT ON 4" CONCRETE PAD.
3 MOUNT MECHANICAL EQUIPMENT ON GALVANIZED STEEL SUPPORT. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL DETAILS.
4 MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND MECHANICAL EQUIPMENT.
5 PROVIDE THERMOSTAT TO ACTIVATE EXHAUST FAN.
6 TRANSITION DUCT TO AIR HANDLER AS REQUIRED, TYP.
7 REFRIGERANT SUCTION/LIQUID PIPING FROM CONDENSING UNIT TO AIR HANDLER DX COIL. SIZING AS RECOMMENDED BY MANUFACTURER.

GENERAL NOTES

A. RUNOUTS TO DIFFUSERS ARE TO BE NECK SIZE UNLESS OTHERWISE NOTED ON DRAWINGS.
B. COORDINATE DUCT ROUTING WITH PLUMBING AND MECHANCIAL PIPING. PROVIDE OFFSETS AS REQUIRED.



1 LEVEL 01 - MECH ENLARGED FLOOR PLAN - AREA B
SCALE: 1/4" = 1'-0"

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MECHANICAL FLOOR PLAN AREA B

M101B

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GENERAL NOTES

A. RUNOUTS TO DIFFUSERS ARE TO BE NECK SIZE UNLESS OTHERWISE NOTED ON DRAWINGS.
B. COORDINATE DUCT ROUTING WITH PLUMBING AND MECHANICAL PIPING. PROVIDE OFFSETS AS REQUIRED.

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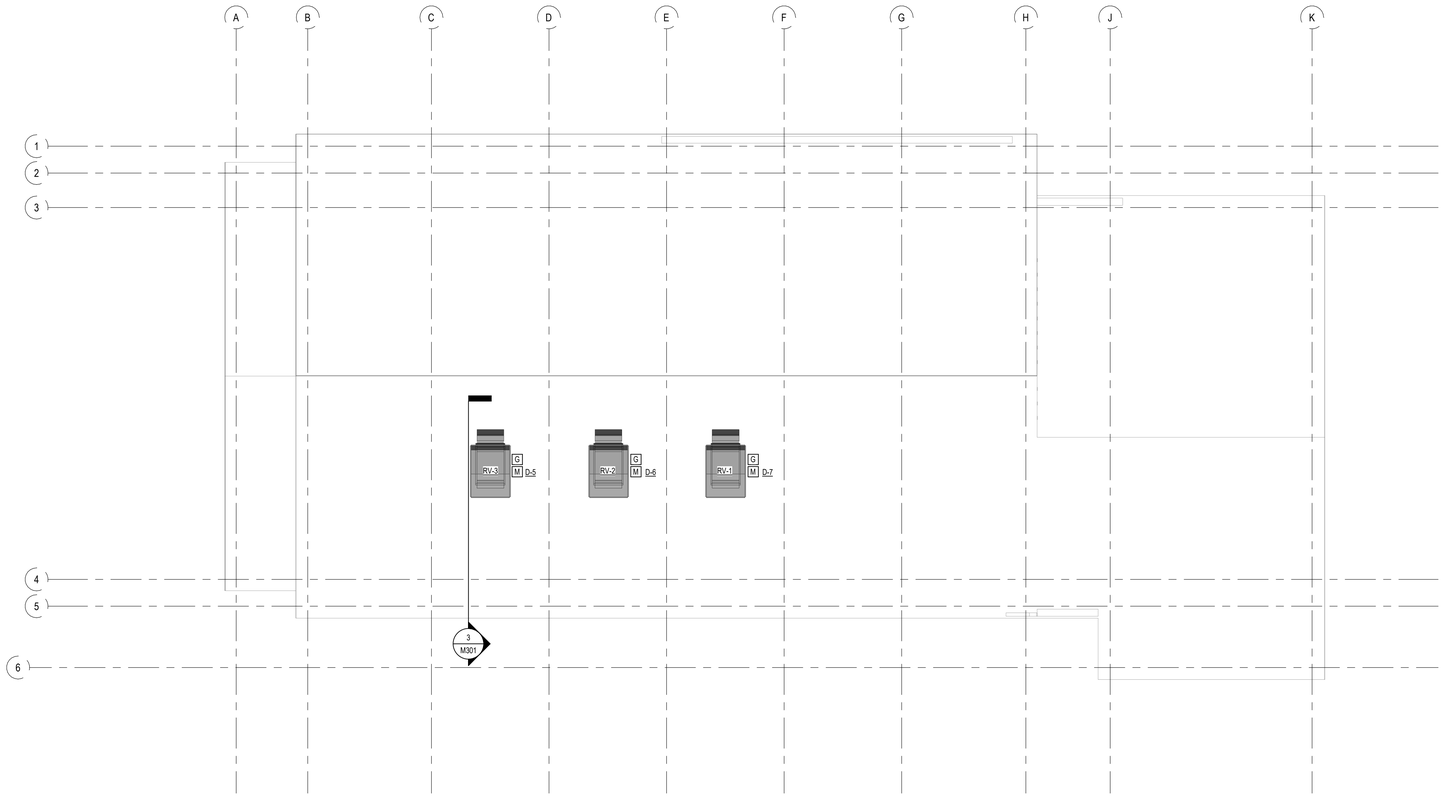

1 MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"

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MECHANICAL ROOF PLAN

M102

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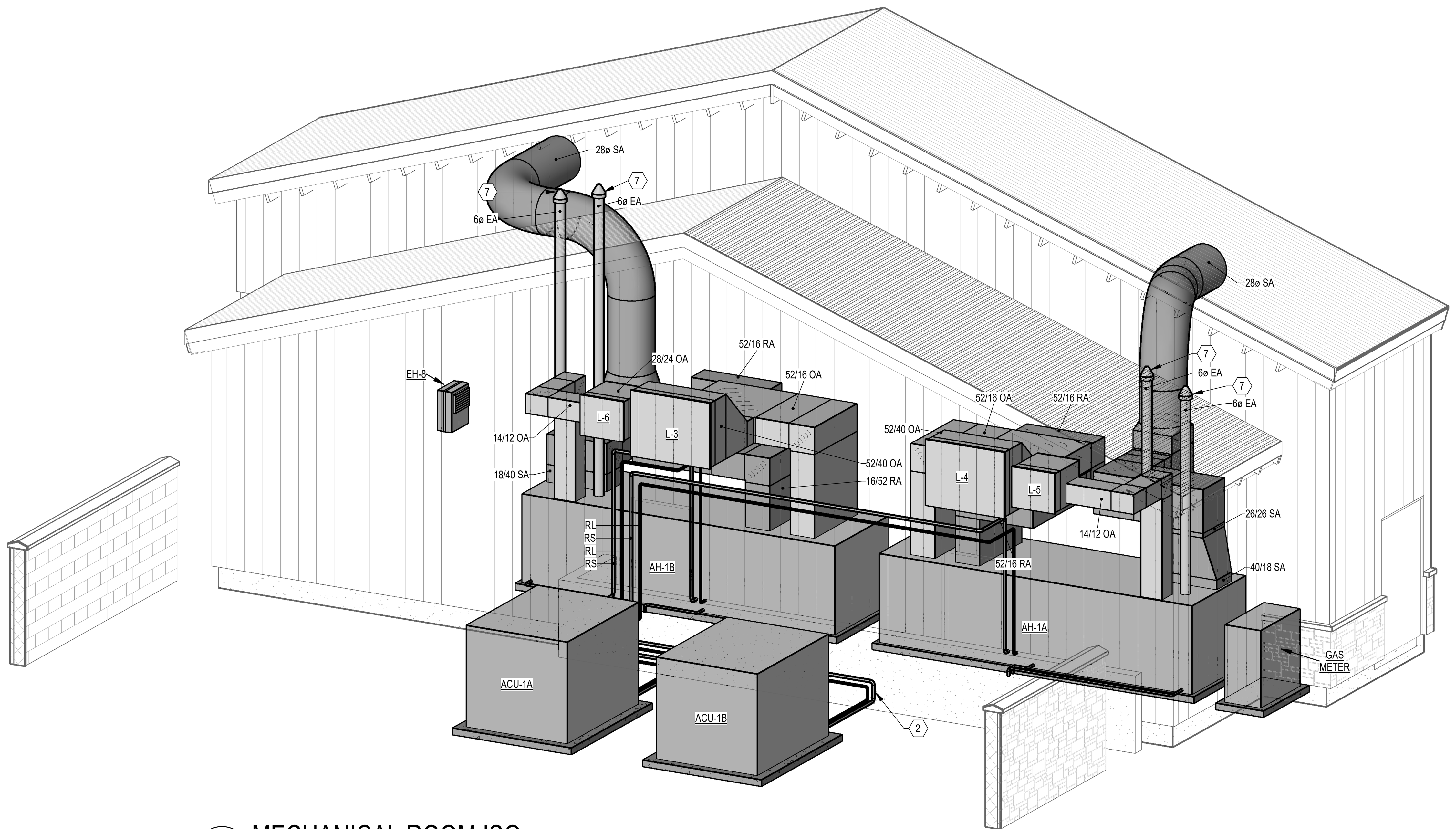
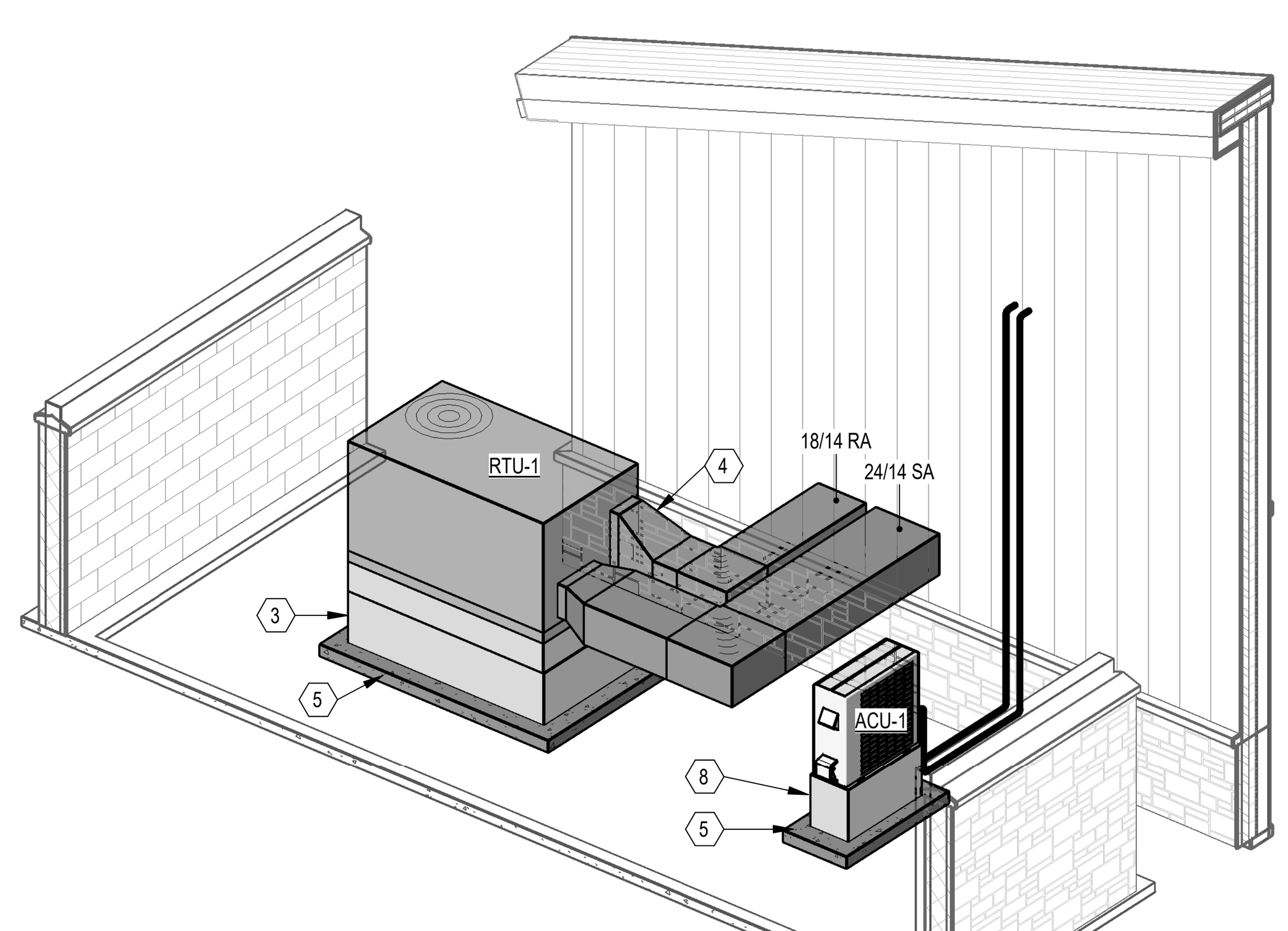
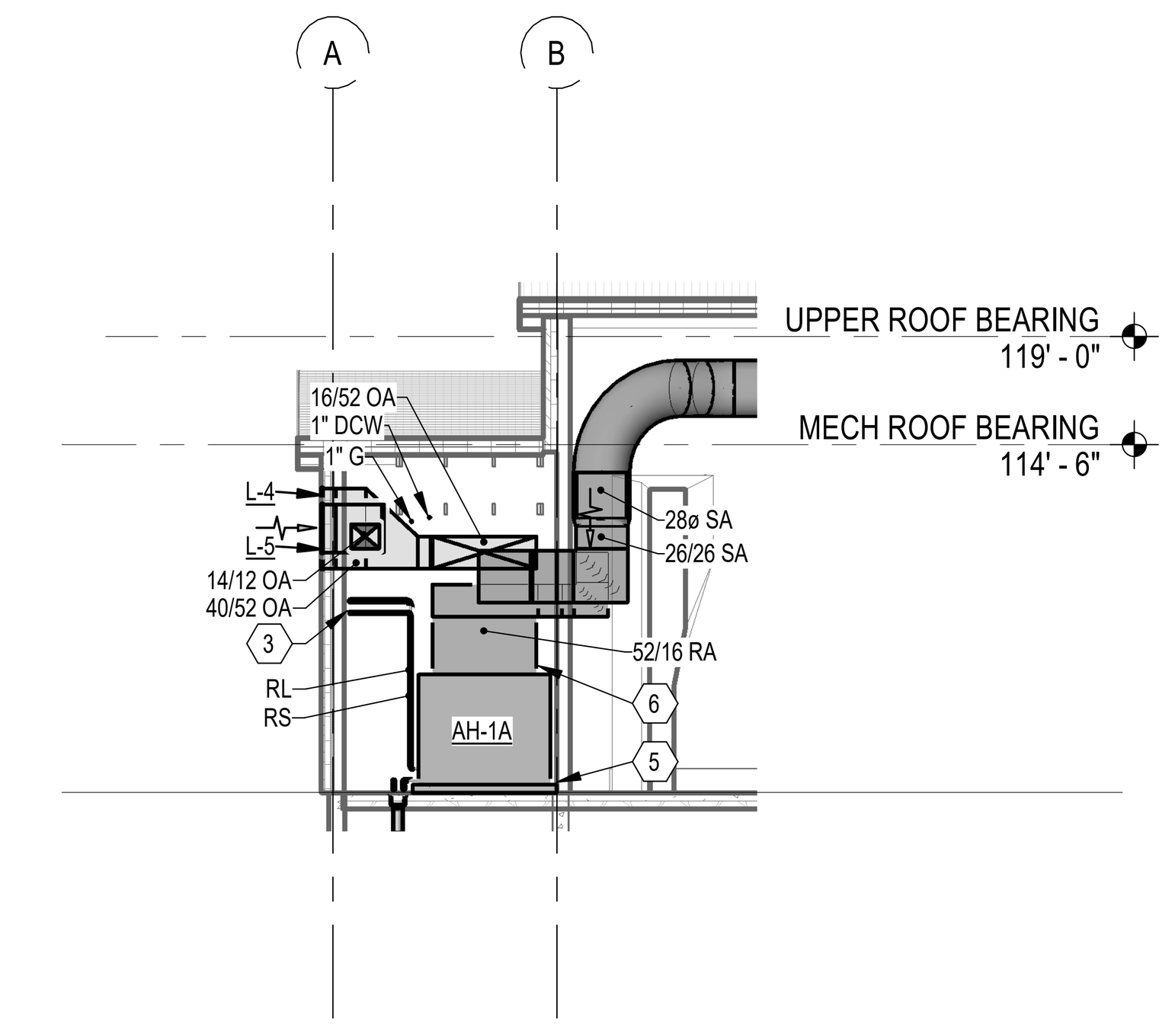


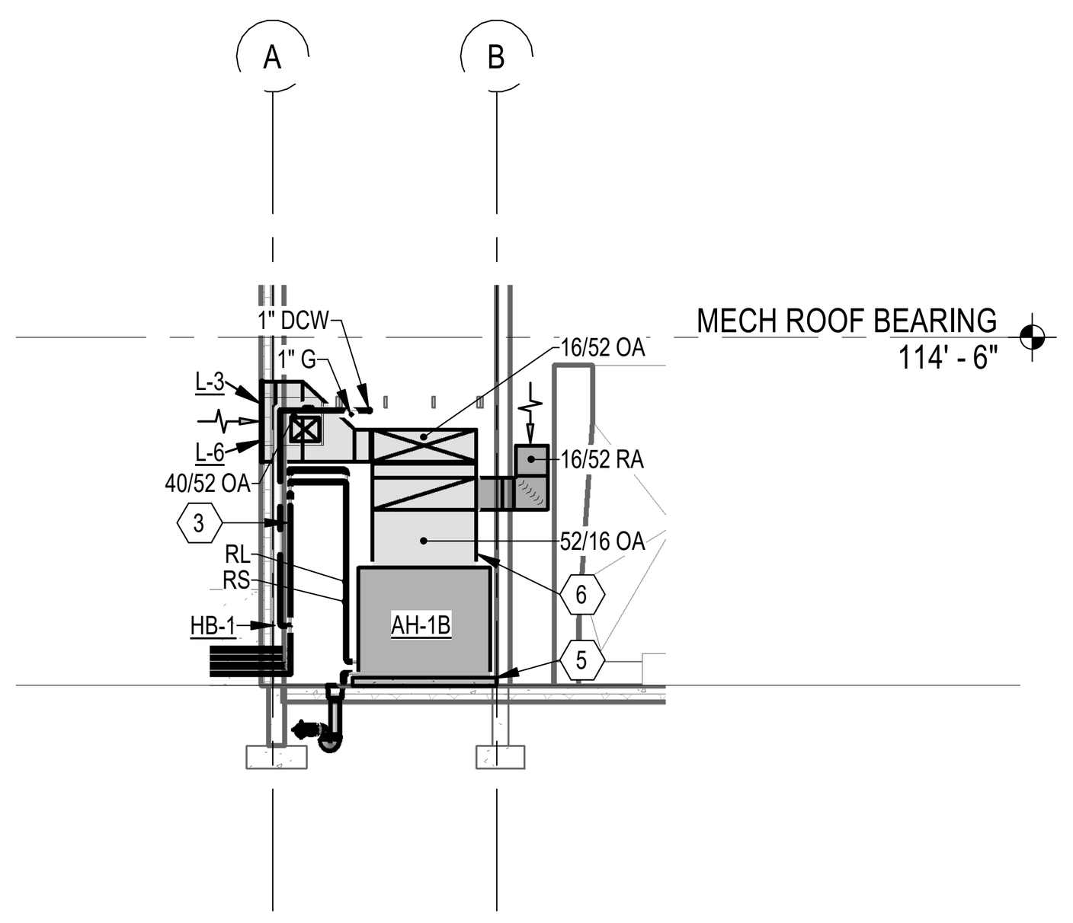
4 MECHANICAL ROOM ISO
SCALE: NONE



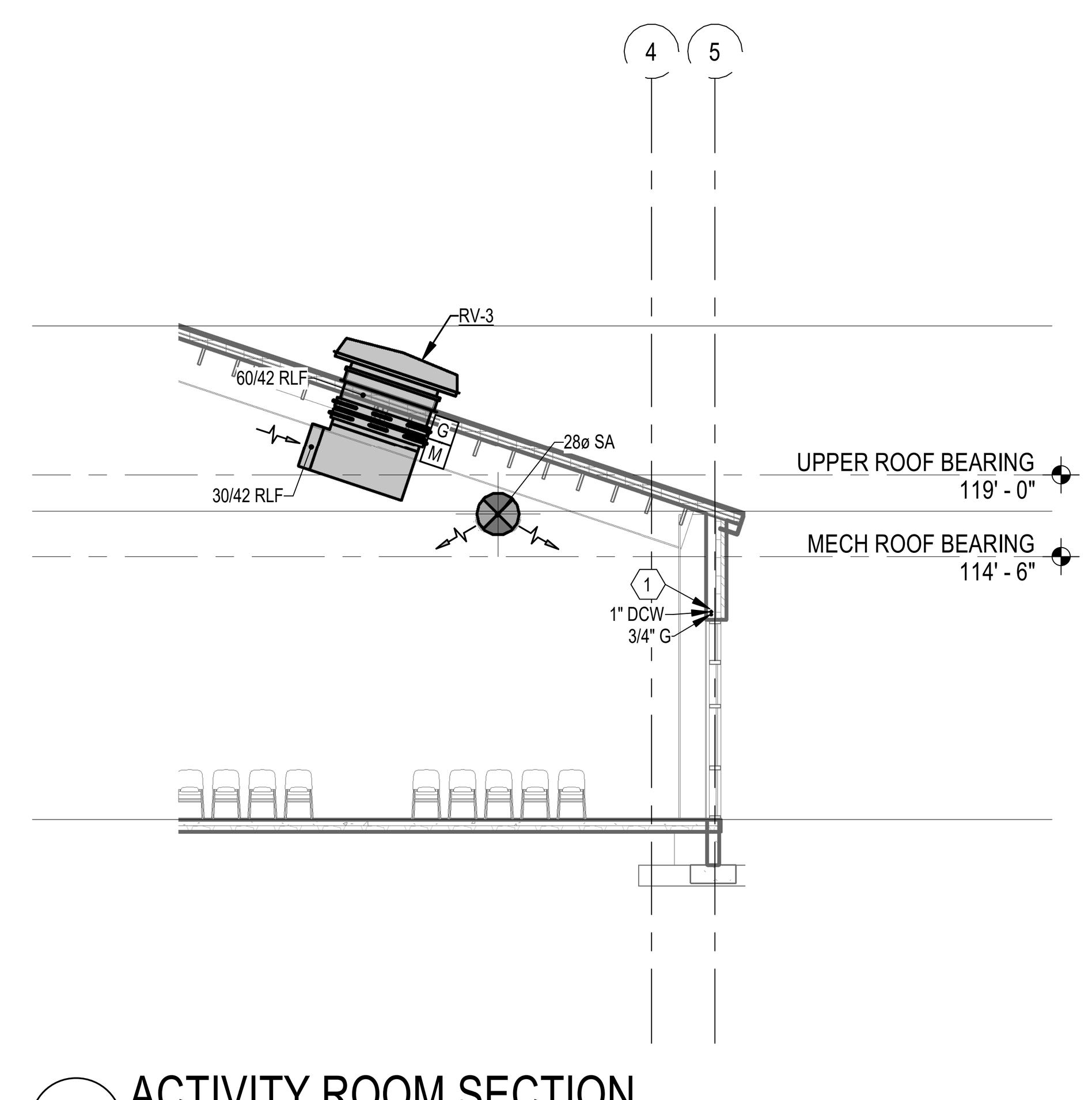
5 EXTERIOR (RTU-1) ISO
SCALE: NONE



1 MECHANICAL ROOM SECTION - 01
SCALE: NONE



2 MECHANICAL ROOM SECTION - 02
SCALE: NONE



3 ACTIVITY ROOM SECTION
SCALE: NONE

KEYED NOTES

1. ROUTE DCW AND G IN STUD SPACE OF WALL.
2. REFRIGERANT SUCTION/LIQUID PIPING FROM CONDENSING UNIT TO AIR HANDLER DX COIL. SIZING AS RECOMMENDED BY MANUFACTURER.
3. STACK AND SUPPORT RL/RS PIPING TO WALL WITH UNISTRUT.
4. TRANSITION DUCT TO RTU.
5. INSTALL MECHANICAL EQUIPMENT ON 4" CONCRETE PAD.
6. TRANSITION DUCT TO AIR HANDLER AS REQUIRED, TYP.
7. AIR HANDLER FURNACE FLUE EXHAUST. PROVIDE CODE COMPLIANT CAP. RISE A MINIMUM OF 3'-0" ABOVE ROOF LINE. B-VENT TYPE FLUE.
8. MOUNT MECHANICAL EQUIPMENT ON GALVANIZED STEEL SUPPORT. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL DETAILS.

GENERAL NOTES

A. RUNOUTS TO DIFFUSERS ARE TO BE NECK SIZE UNLESS OTHERWISE NOTED ON DRAWINGS..
B. COORDINATE DUCT ROUTING WITH PLUMBING AND MECHANCIAL PIPING. PROVIDE OFFSETS AS REQUIRED.

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DATE:	08.09.18

MECHANICAL SECTIONS

M301

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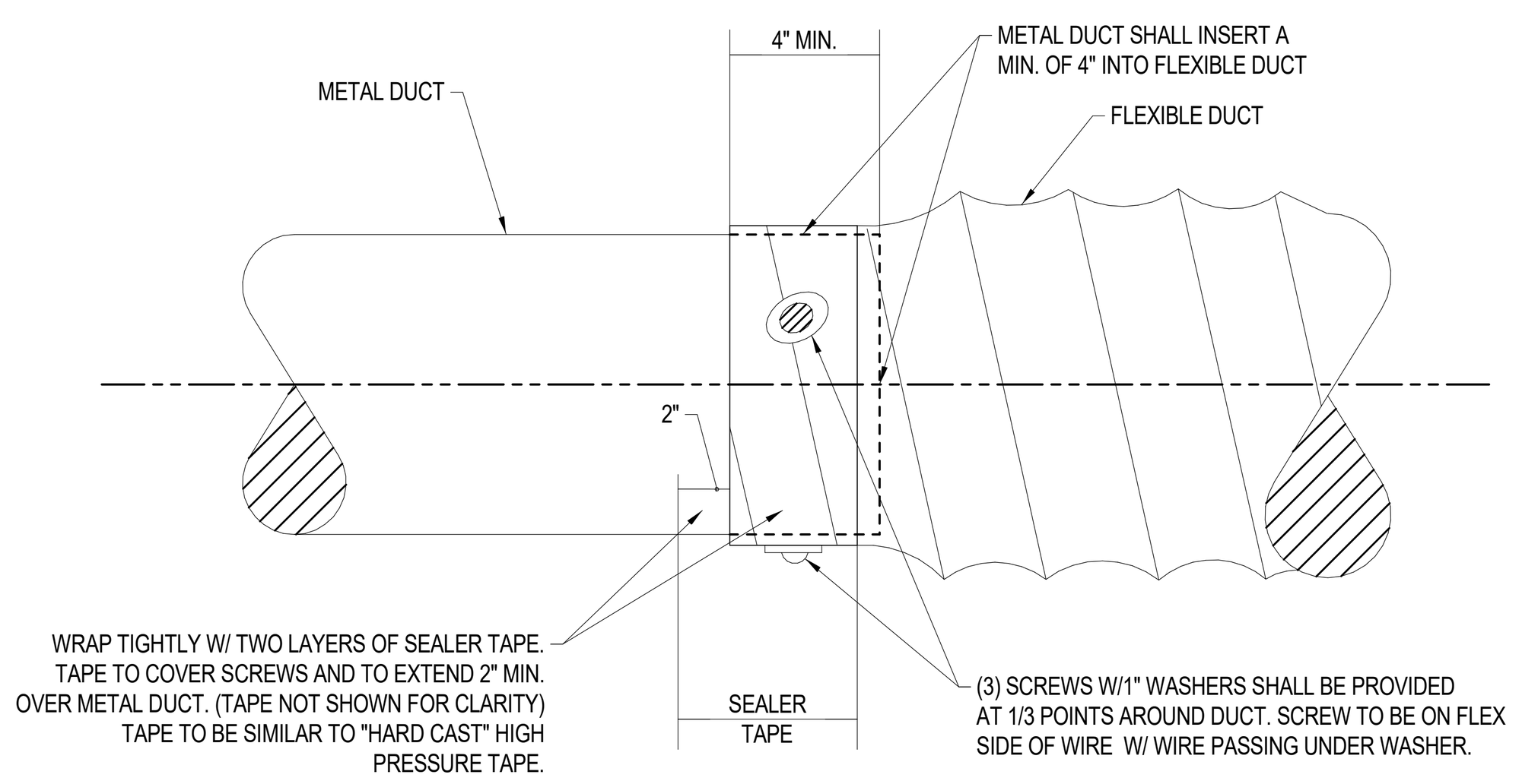
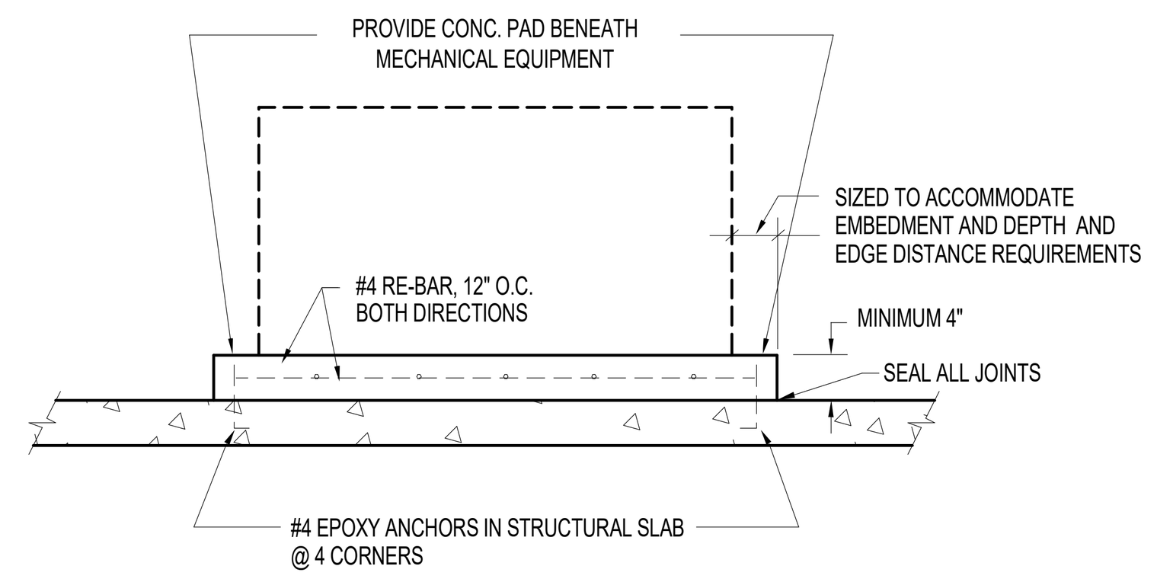
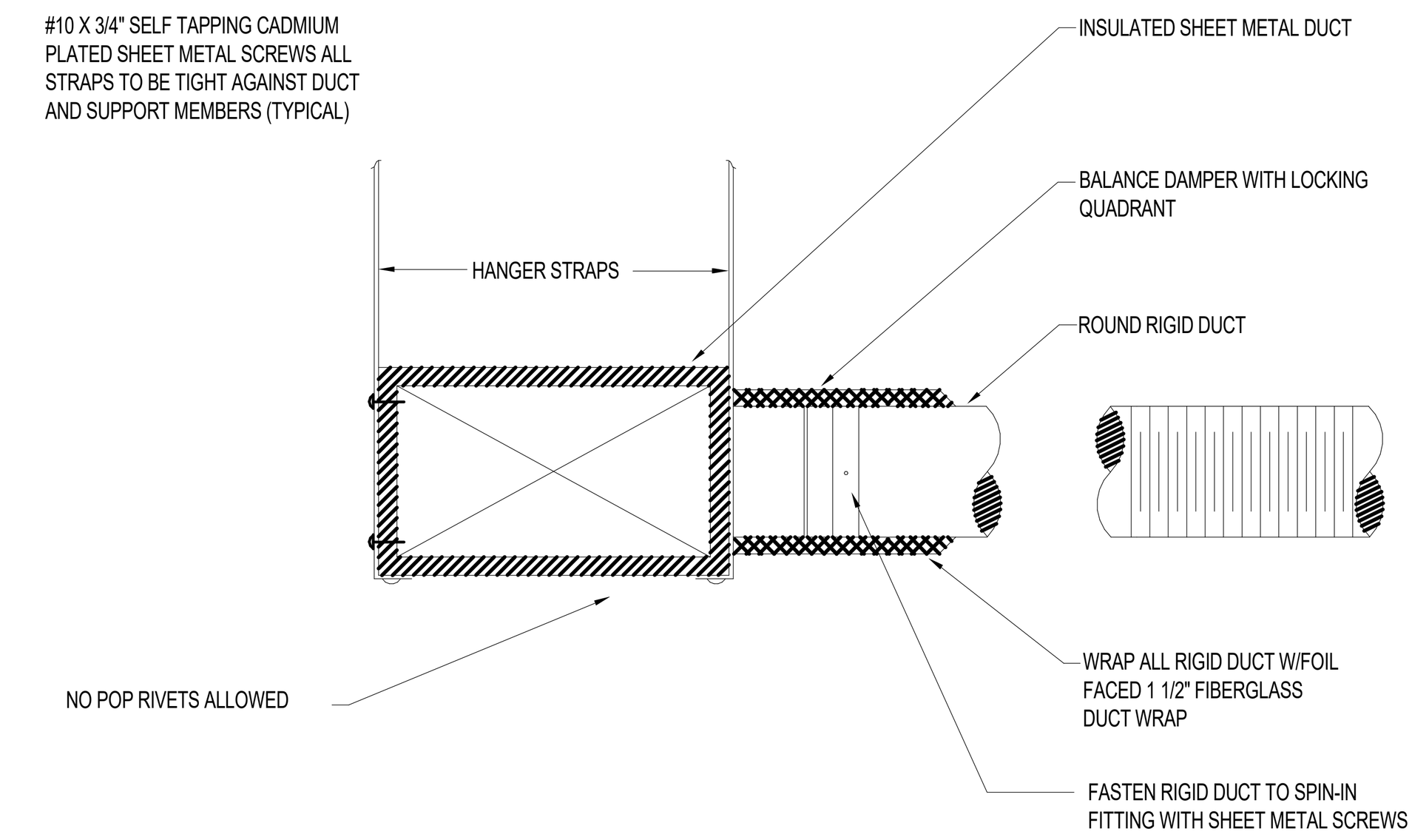


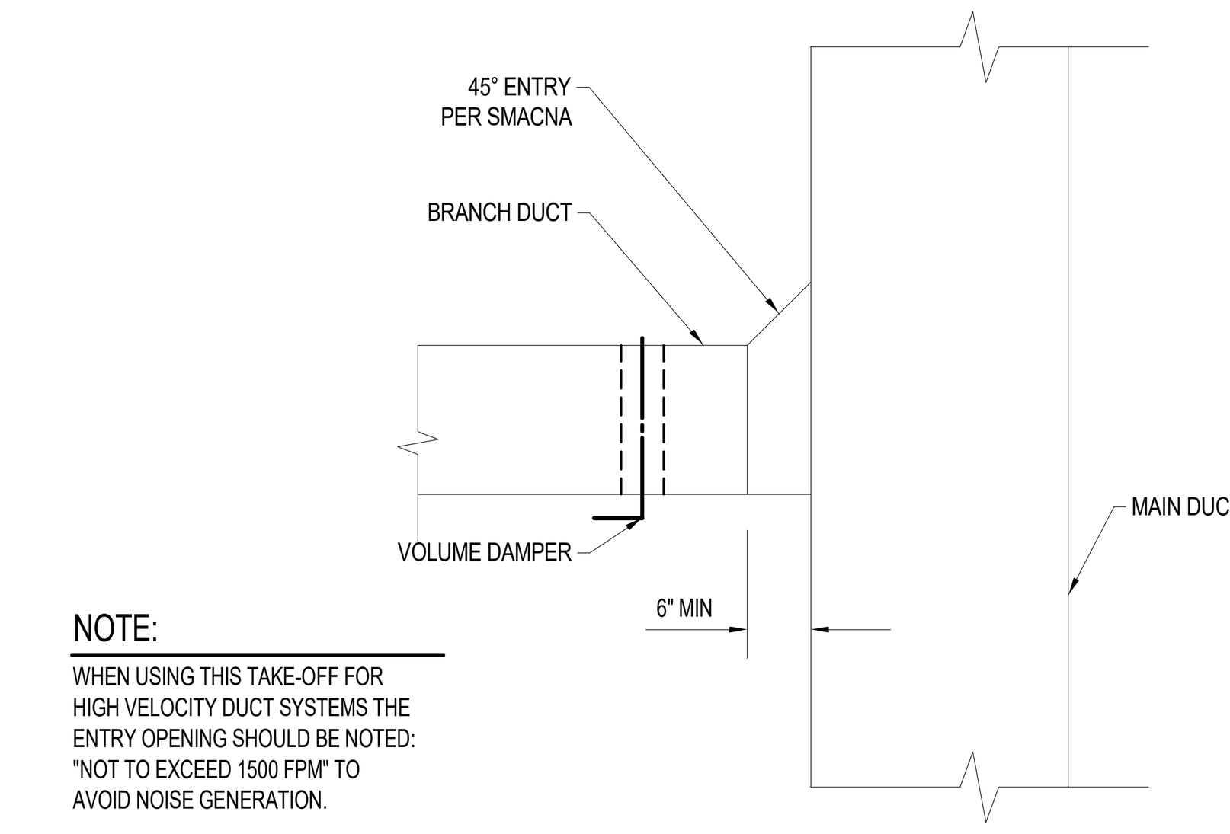
1 FLEXIBLE DUCT / RIGID DUCT CONNECTION
NO SCALE



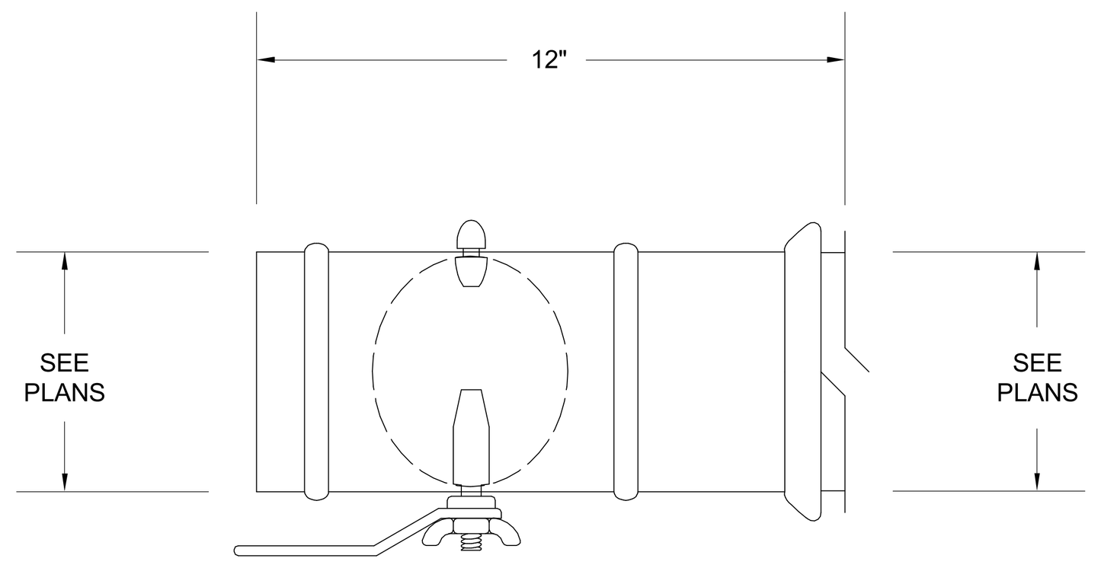
2 HOUSEKEEPING PAD
NO SCALE



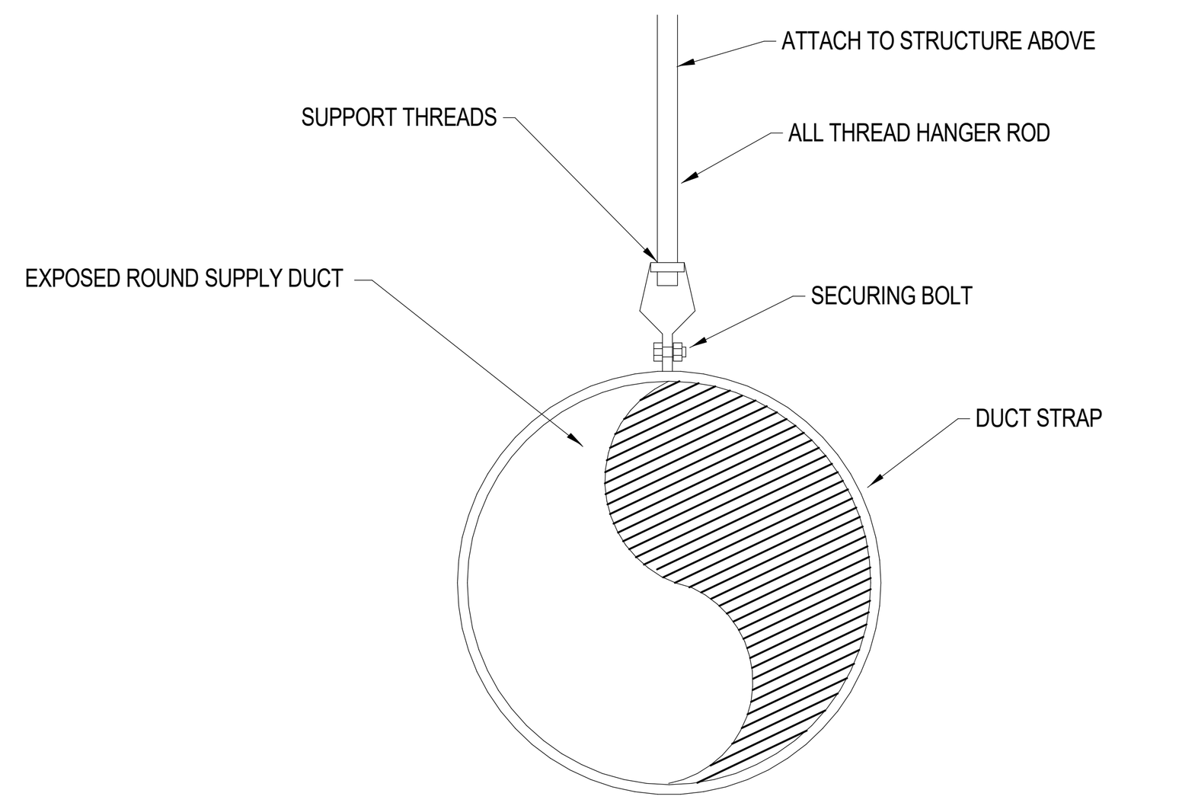
3 FLEX DUCT/SPIN-IN FITTING
NO SCALE



4 TYPICAL DUCT TAKEOFF DETAIL
NO SCALE



5 TYPICAL MANUAL VOLUME DAMPER DETAIL
NO SCALE



NOTE: PROVIDE DUCT SUPPORT SUBMITTAL TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL BEFORE ORDERING. EXPOSED DUCT, STRAP AND SUPPORT TO BE PAINTABLE. PAINTED ON SITE BY GENERAL CONTRACTOR.

6 EXPOSED DUCT SUPPORT DETAIL
NO SCALE

TRANSVERSE REINFORCING (1)

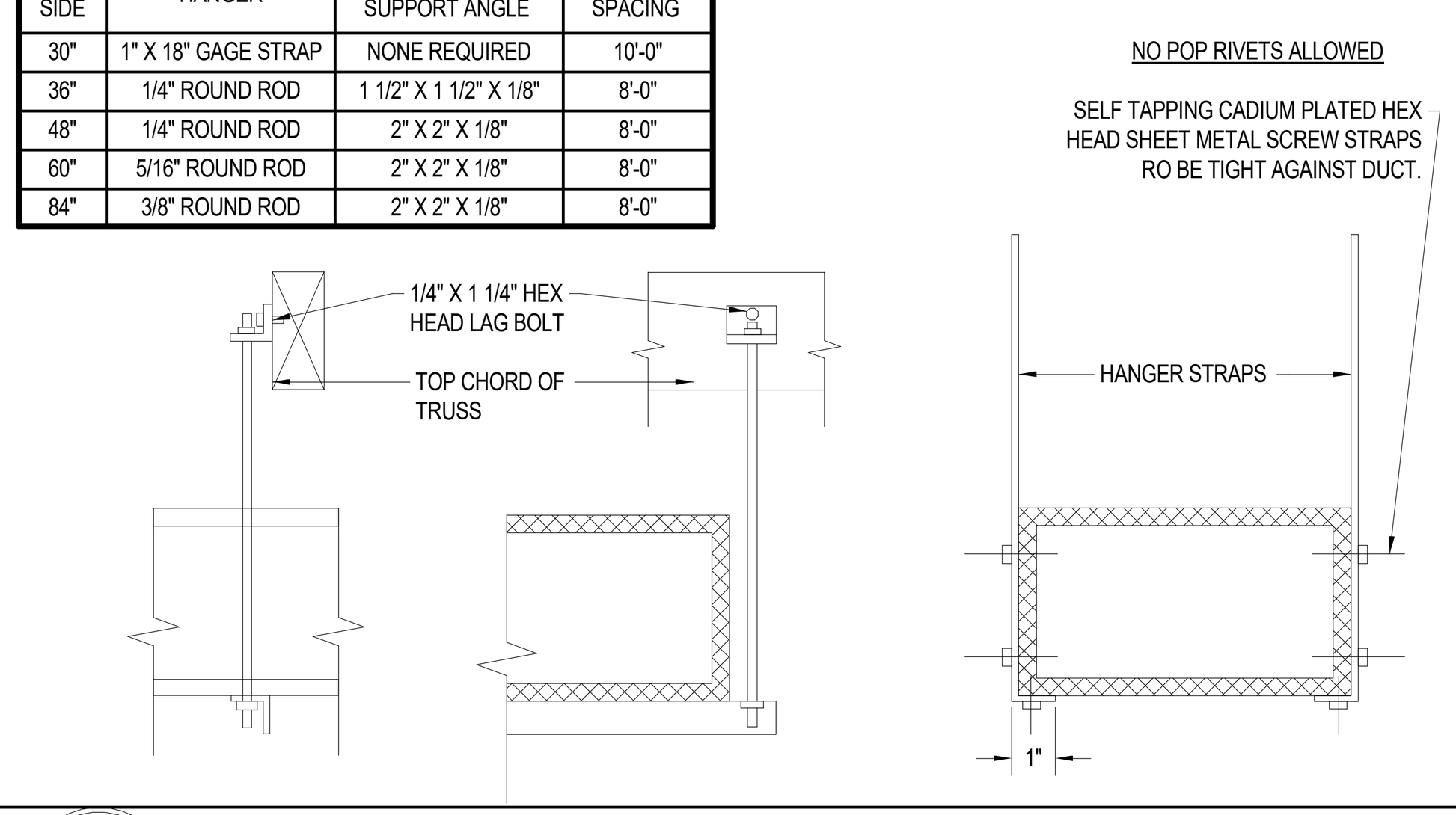
DIMENSION OF LONGEST SIDE, INCHES	SHEET METAL GAGE, ALL FOUR SIDES	MINIMUM REINFORCONG ANGLE SIZE & MAXIMUM LONGITUDINAL SPACING BETWEEN JOINTS &/OR INTERMEDIATE REINFORCING	MIN. H, IN.	DRIVE SLIP / PLAIN S SLIP: RECOM-MENDED GAGE	HEMMED S SLIP: RECOM-MENDED GAGE	ALT. BAR SLIP: RECOM-MENDED GAGE	REINFOR. BAR SLIP: RECOM-MENDED GAGE	BAR SLIP / ANGLE SLIP: RECOM-MENDED GAGE	BAR SLIP / ANGLE SLIP: REINFORCED ANGLE SIZE	STAND. SEAM / ANGLE REINFORCED STAND. SEAM: REINFORCED ANGLE SIZE	POCKET LOCK / ANGLE REINFORCED POCKET LOCK: RECOM-MENDED GAGE	POCKET LOCK / ANGLE REINFORCED POCKET LOCK: REINFORCED ANGLE SIZE
UP THRU 12	26	NONE REQ.	1	26	26	24	24	24	NONE REQ.	NONE REQ.	24	NONE REQ.
13-18	24	NONE REQ.	1	24	24	24	24	24	NONE REQ.	NONE REQ.	24	NONE REQ.
19-30	24	1X1X1/8 @60"	1	-	24	24	24	24	NONE REQ.	NONE REQ.	24	NONE REQ.
31-42	22	1X1X1/8 @60"	1	-	-	22	22	22	NONE REQ.	NONE REQ.	22	NONE REQ.
43-54	22	1.5X1.5X1/8 @60"	1 1/2	-	-	22	22	22	1.5X1.5X1/8	NONE REQ.	22	NONE REQ.
55-60	20	1.5X1.5X1/8 @60"	1 1/2	-	-	-	22	22	1.5X1.5X1/8	NONE REQ.	22	NONE REQ.
61-84	20	1.5X1.5X1/8 @30"	1 1/2	-	-	-	22	22	1.5X1.5X1/8	1.5X1.5X1/8	22	1.5X1.5X1/8

(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.

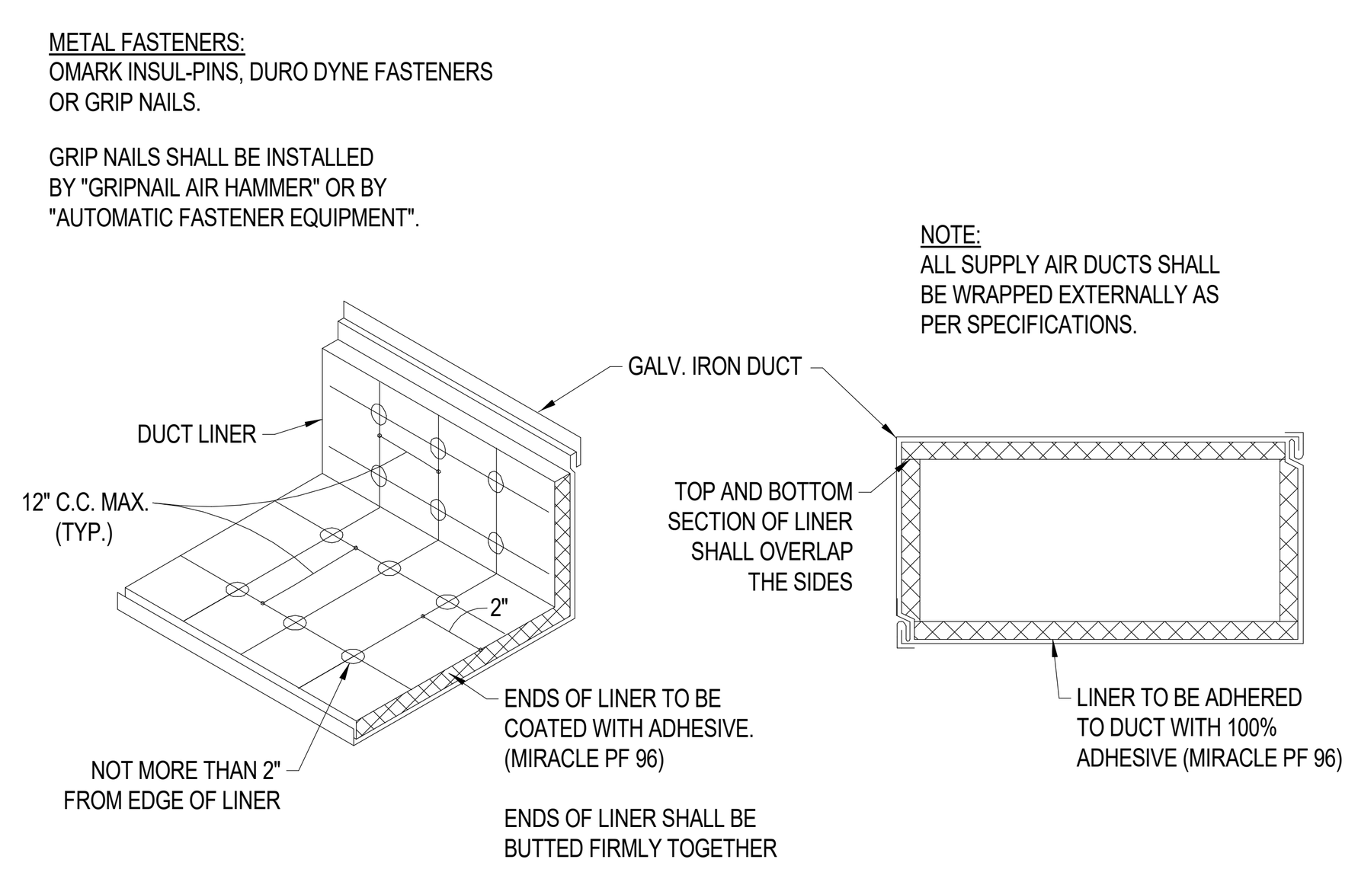
7 DUCT CONSTRUCTION DETAIL
NO SCALE

HANGER SIZES FOR RECTANGULAR DUCT

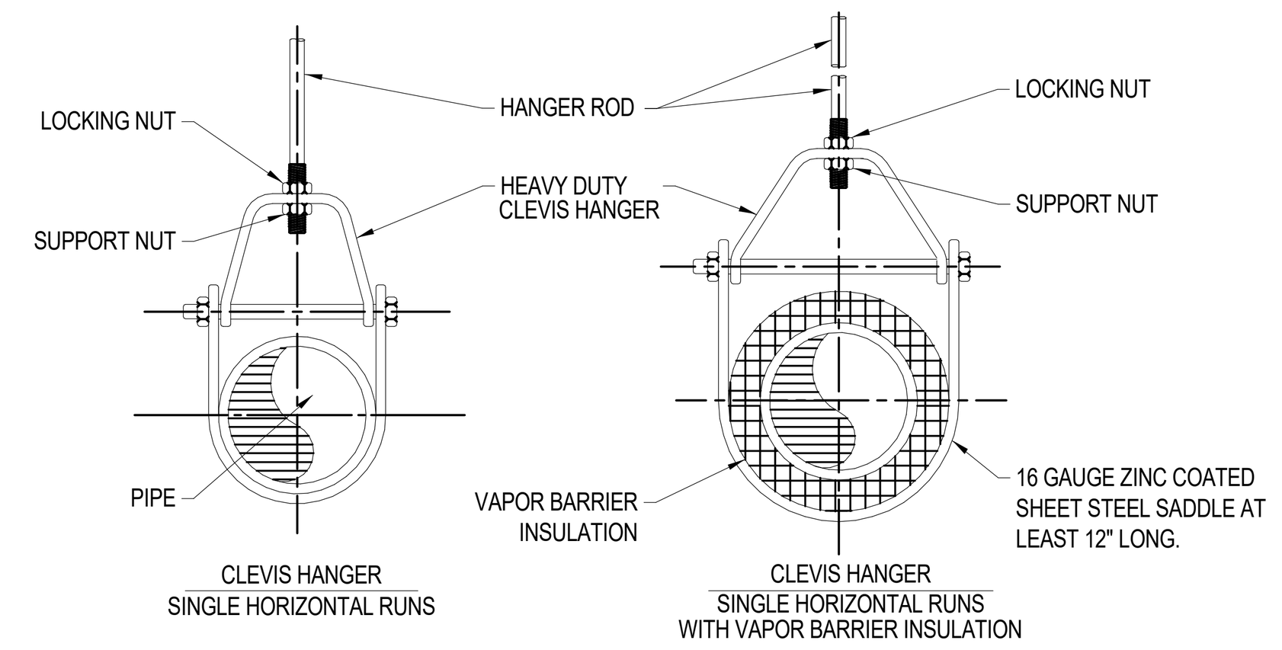
MAX. SIDE	HANGER	HORIZONTAL SUPPORT ANGLE	MAXIMUM SPACING
30"	1" X 18" GAGE STRAP	NONE REQUIRED	10'-0"
36"	1/4" ROUND ROD	1 1/2" X 1 1/2" X 1/8"	8'-0"
48"	1/4" ROUND ROD	2" X 2" X 1/8"	8'-0"
60"	5/16" ROUND ROD	2" X 2" X 1/8"	8'-0"
84"	3/8" ROUND ROD	2" X 2" X 1/8"	8'-0"



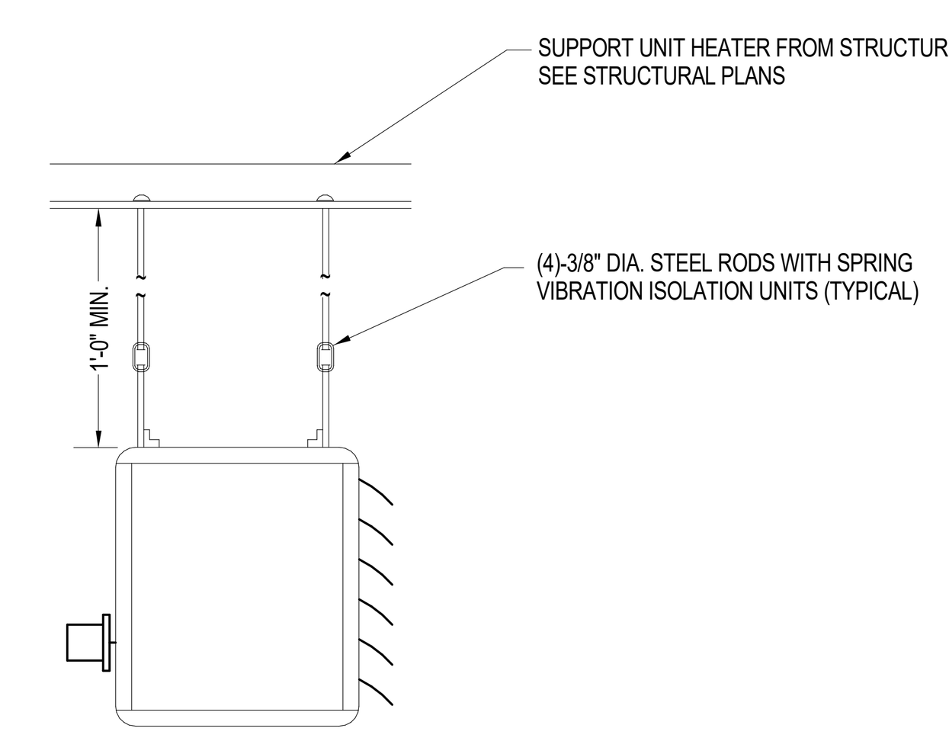
8 DUCT STRAP HANGER DETAIL
NO SCALE



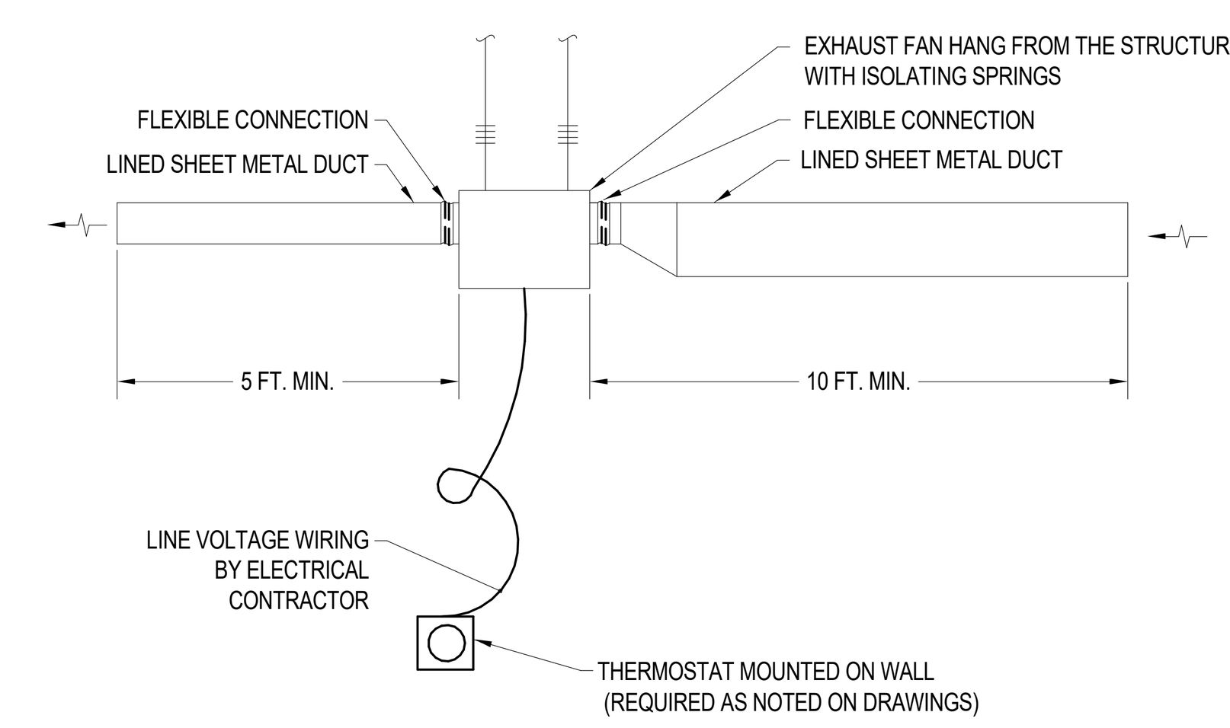
9 DUCT LINER DETAIL
NO SCALE



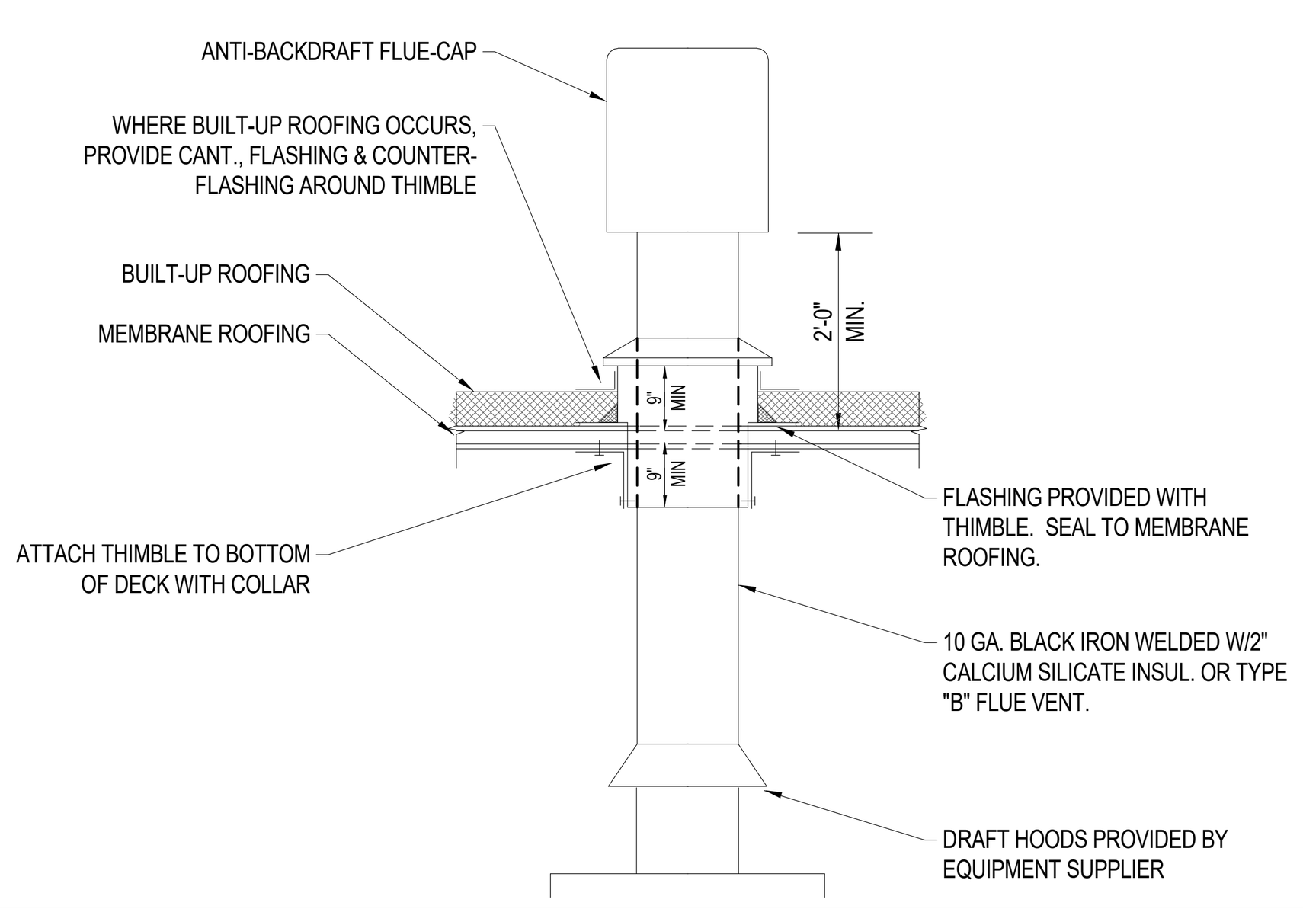
10 CLEVIS PIPE HANGER DETAIL
NO SCALE



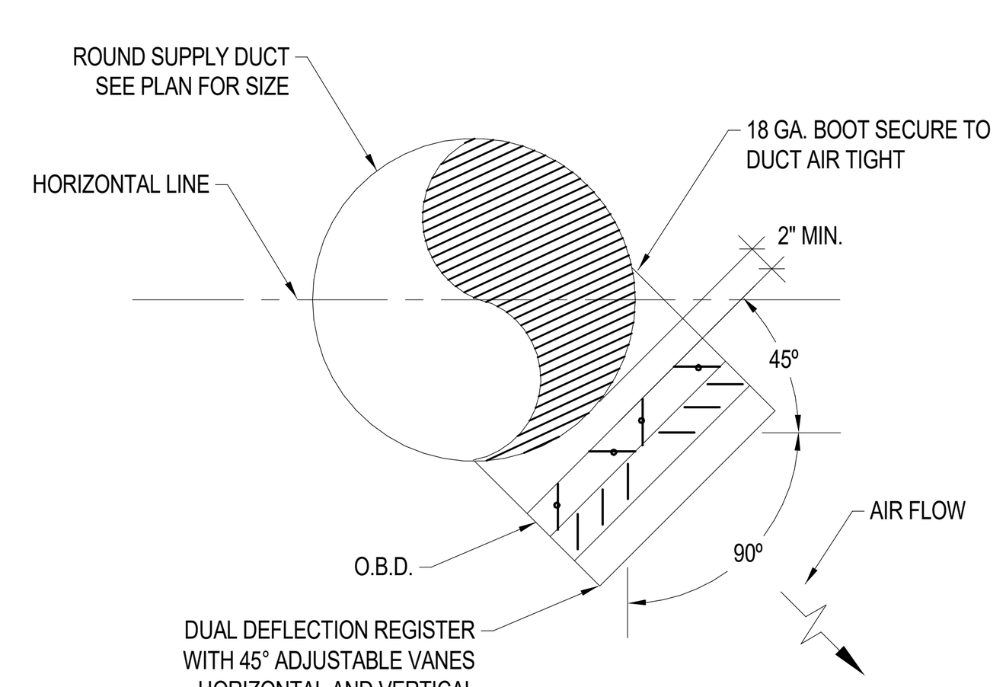
11 ELECTRIC UNIT HEATER DETAIL
NO SCALE



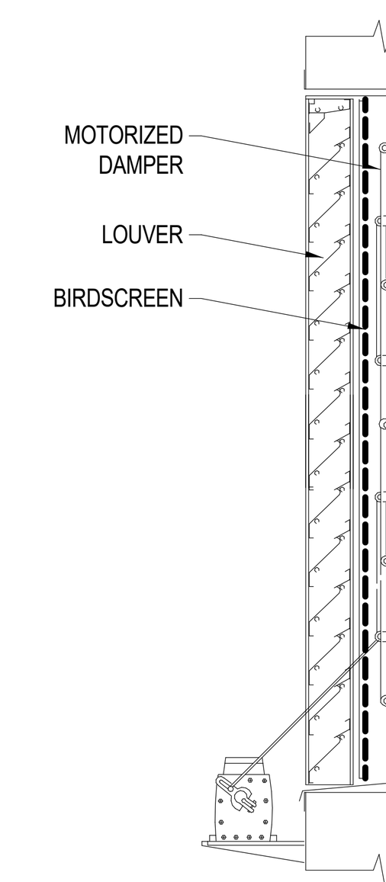
12 INLINE EXHAUST FAN DETAIL
NO SCALE



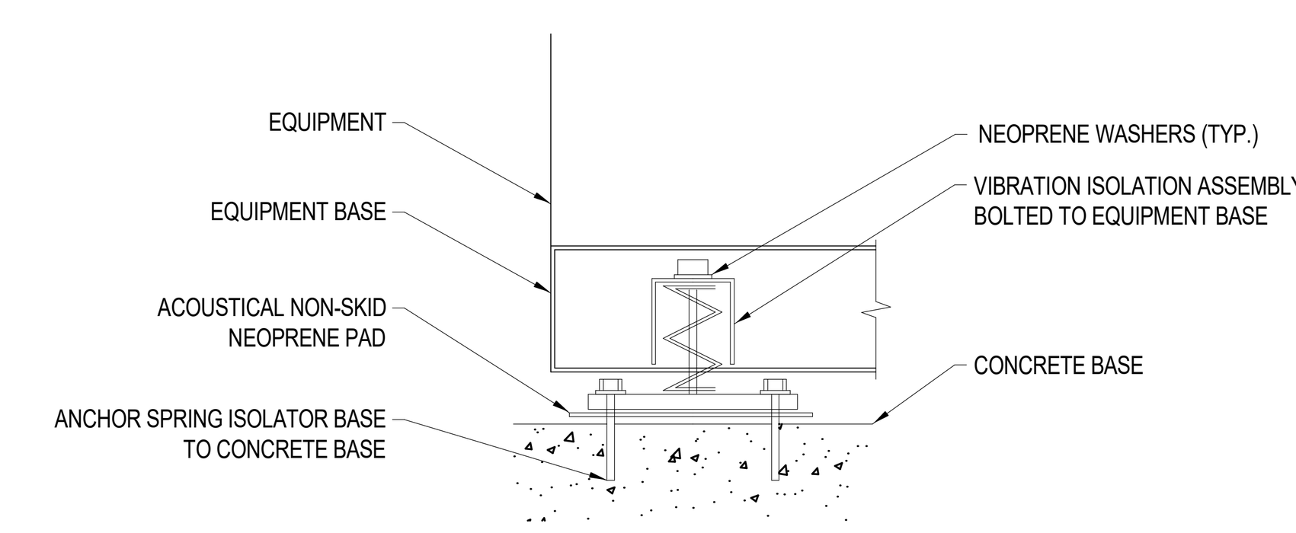
13 ATMOSPHERIC FLUE DETAIL
NO SCALE



14 DUCT MOUNTED DIFFUSER DETAIL 45º
NO SCALE



15 WALL LOUVER DETAIL
NO SCALE



16 SPRING ISOLATOR DETAIL
NO SCALE

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CONSTRUCTION DRAWINGS

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M501

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(SINGLE ZONE) ROOF TOP UNIT SCHEDULE (RTU) ①②

PLAN CODE	AREA SERVED	NOMINAL TONS	MIN OA (CFM)	SEER	SUPPLY FAN			COOLING				HEATING CAPACITY						FILTER	ECONOMIZER	RELIEF	AIRFLOW MEASURING	ELECTRICAL				CONTROLS	MAX DIMENSIONS				MANUFACTURER & MODEL NO.	REMARKS
					VOLUME (CFM)	ESP (IN WC)	OPERATING BHP	EAT (DB/WB) (°F)	LAT (°F)	STAGES	CONDENSER AMBIENT TEMP. (°F)	SEA LEVEL INPUT (MBH)	SITE OUTPUT (MBH)	EAT (°F)	EFFICIENCY (%)	HEAT EXCHANGER	FUEL					VOLT / PH	MCA / MOCP (AMPS)	CONNECTION	DISCONNECT		LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	MAX OPERATING WT (LBS)		
RTU-1	EAST WING	5	490	14.1	2250	0.70	1.62	95/62	52	SINGLE	95	108	86.4	51.5	80	INDIRECT	NG	MERV 8	100%	YES	YES	208/3	30/45	SINGLE	FACTORY	MANUFACTURER	75	47	42	980	CARRIER 48KCTA06B2A5-0A0A0	-

① PROVIDE WITH 18" HIGH JOB BUILT GALVANIZED STEEL SUPPORT.
② SIDE DISCHARGE AND RETURN.

DX FAN COIL UNIT SCHEDULE (DFC) ①②

PLAN CODE	SYSTEM SERVED	CFM RANGE	CAPACITY		SEER	EER	AIR OPERATING RANGE		REFRIGERANT TYPE	DRAIN PIPE SIZE (IN)	MAX DIMENSIONS				ELECT MCA	ELECT VOLT/ PH	MANUFACTURER & MODEL NO	REMARKS
			SENS MBH	TOTAL MBH			MAX (°F) DB/WB	MIN (°F) DB/WB			LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	OPERATING WT (LBS)				
DFC-1	ACU-1	320-425	12.2	18	18.5	9.9	90/73	66/59	R410A	5/8	36	10	12	40	1	208/1	MITSUBISHI PKA-A18HA7	-

① PROVIDE WITH CONDENSATE PUMP.
② PROVIDE WITH WALL MOUNTED WIRELESS REMOTE.

AIR COOLED CONDENSING UNIT SCHEDULE (ACU)

PLAN CODE	SYSTEM SERVED	SEER	NET COOLING (MBH)	AMBIENT TEMPERATURE		CAPACITY STEPS	ELECTRICAL			MAX DIMENSIONS				MANUFACTURER & MODEL NO	OPTIONS	REMARKS
				WINTER (°F)	SUMMER (°F)		VOLT/ PH	MCA	MOCP	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	OPERATING WT (LBS)			
ACU-1	DFC-1	18.5	18	-20	95	VARIABLE	208/1	11	28	33	12	25	110	MITSUBISHI PUY-A18NKA7-BS	①②③	-

① PROVIDE WITH 18" HIGH JOB BUILT GALVANIZED STEEL SUPPORT WITH OPEN BOTTOM TO ALLOW FOR DRAINAGE AND LIFT FROM SNOW ACCUMULATION.
② PROVIDE WITH OPTIONAL LOW AMBIENT CONTROLS DOWN TO -20 °F.
③ PROVIDE WITH OPTIONAL WIND BAFFLES FOR LOW AMBIENT CONTROL.

EXHAUST FAN SCHEDULE (EF)

PLAN CODE	AREA SERVED	TYPE	CFM @ ELEV	ESP @ ELEV	FAN RPM	MOTOR				SONES	DAMPER (GRAVITY OR MOTOR)	METHOD OF CONTROL	OPENING SIZE	MAX OPERATING WT (LBS)	MANUFACTURER & MODEL NO	REMARKS
						BHP/WATTS	HP/WATTS	EFFICIENCY %	VOLT/ PH							
EF-1	EAST WING	INLINE	850	0.75	2,180	0.28/-	0.33/-	36	115/1	12.5	MOTOR	OCCUPANCY	12X12	90	COOK 100SQN28D (VF)	①
EF-2	WARMING	INLINE	300	0.5	1,400	-/84.8	-/NA	76	115/1	3.0	MOTOR	THERMOSTAT	17X12	40	COOK GN-622	②

1. PROVIDE WITH FAN MOUNTED SPEED CONTROLLER.
2. PROVIDE WITH LINE VOLTAGE PROGRAMMABLE THERMOSTAT.

RELIEF VENT SCHEDULE (RV) ①

PLAN CODE	AREA/ FUNCTION	CFM (ALT)	PRESSURE DROP (IN WC)	THROAT SIZE		MAX DIMENSIONS			MAX OPERATING WT (LBS)	MANUFACTURER & MODEL NO	REMARKS
				LENGTH (IN)	HEIGHT (IN)	LENGTH (IN)	HEIGHT (IN)	WIDTH (IN)			
RV-1	ACTIVITY/ RELIEF	4270	0.021	42	60	87	24	63	195	COOK 42X60GR	PROVIDE WITH MOTORIZED DAMPER AND COUNTER BALANCED BACK DRAFT DAMPER
RV-2	ACTIVITY/ RELIEF	4270	0.021	42	60	87	24	63	195	COOK 42X60GR	PROVIDE WITH MOTORIZED DAMPER AND COUNTER BALANCED BACK DRAFT DAMPER
RV-3	ACTIVITY/ RELIEF	4270	0.021	42	60	87	24	63	195	COOK 42X60GR	PROVIDE WITH MOTORIZED DAMPER AND COUNTER BALANCED BACK DRAFT DAMPER

① PROVIDE WITH 8" CURB.

ELECTRIC HEATER SCHEDULE (EH)

PLAN CODE	ELECTRICAL				CFM (ALT)	MOUNTING	LOCATION	MANUFACTURER & MODEL NO	REMARKS
	TYPE	TOTAL KW	VOLT/ PH	MAX AMPS					
EH-1	WALL	4	208/1	19.2	100	2' AFF	VESTIBULE 108	QMARK AWH4408F	①
EH-2	WALL	4	208/1	19.2	100	2' AFF	VESTIBULE 109	QMARK AWH4408F	①
EH-3	WALL	2	208/1	9.6	100	2' AFF	RISER ROOM 110	QMARK AWH4408F	①
EH-4	WALL	4	208/1	19.2	100	2' AFF	STORAGE 112	QMARK AWH4408F	①
EH-5	CEILING	3	208/1	14.4	150	CEILING	RESTROOM 106	QMARK EFF4004	①
EH-6	CEILING	3	208/1	14.4	150	CEILING	RESTROOM 105	QMARK EFF4004	①
EH-7	CEILING	3	208/1	14.4	150	CEILING	RESTROOM 105	QMARK EFF4004	①
EH-8	HUNG	10	208/1	48	650	8.5' AFF	MECHANICAL 113	QMARK MUH108	

① THERMOSTAT IS INTEGRAL TO THE UNIT.

AIR DEVICE SCHEDULE

PLAN CODE → GRILLE CFM

PLAN CODE	TYPE & DUTY	FACE SIZE	NECK SIZE	CEILING TYPE (NOTE 2)	MAX CFM	MAX TP (IN WC)	NC LEVEL MAX	MIN THROW T50 (FT)	4-WAY MIN THROW (T50)	2-WAY MIN THROW (T50)	MANUFACTURER & MODEL NO.	REMARKS
S1-04	DIFFUSER SUPPLY	24"x24"	12"Ø	MATCH CEILING	390	0.065	15	-	10	-	PRICE SPD	
S2-03	DIFFUSER SUPPLY	12"x12"	10"Ø	MATCH CEILING	300	0.059	15	-	19	-	PRICE SMD	
S2-04	DIFFUSER SUPPLY	15"x15"	12"Ø	MATCH CEILING	400	0.068	15	-	21	-	PRICE SMD	
S4-01	DRUM SUPPLY	10"x18"	10"x18"	DUCT MNTD	640	0.085	22	70	-	-	PRICE HCD	
E1-02	PERFORATED EXHAUST	16"x16"	8"x8"	MATCH CEILING	220	0.042	*	-	-	-	PRICE PDDR	
E1-03	PERFORATED EXHAUST	16"x16"	10"x10"	MATCH CEILING	350	0.042	*	-	-	-	PRICE PDDR	
R1-03	PERFORATED RETURN	16"x16"	10"x10"	MATCH CEILING	350	0.042	*	-	-	-	PRICE PDDR	
R2-08	PERFORATED RETURN	12"X24"	10"X16"	MATCH CEILING	520	0.083	*	-	-	-	PRICE PDR	

1. RECOMMENDED MINIMUM DISTANCE BETWEEN DIFFUSERS IN 9' CEILING.
2. VERIFY FRAME TYPE OF ALL AIR DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN BEFORE ORDERING.
* NC RATING BELOW 15.

LOUVER SCHEDULE (L)

PLAN CODE	CFM	VELOCITY (FPM)	FREE AREA (SF)	MAX DIMENSIONS (WxH) (IN)	MANUFACTURER & MODEL NO
L-1	850	1,150	0.7	12X20	RUSKIN ELF6375DX
L-2	300	850	0.4	12X12	RUSKIN ELF6375DX
L-3	6,400	800	8.1	52x40	RUSKIN ELF6375DX
L-4	6,400	800	8.1	52x40	RUSKIN ELF6375DX
L-5	N/A	N/A	1.14	28x24	RUSKIN ELF6375DX
L-6	N/A	N/A	1.14	28x24	RUSKIN ELF6375DX

MOTORIZED DAMPER SCHEDULE (D)

PLAN CODE	CFM	VELOCITY (FPM)	FREE AREA (SF)	MAX DIMENSIONS (WxH) (IN)	DUTY
D-1	850	1,000	0.85	12X20	FULLY OPEN/CLOSE
D-2	300	600	0.5	12X12	FULLY OPEN/CLOSE
D-3	6,400	890	7.2	52X40	MODULATING
D-4	6,400	890	7.2	52X40	MODULATING
D-5	4,270	490	8.75	60X42	MODULATING
D-6	4,270	490	8.75	60X42	MODULATING
D-7	4,270	490	8.75	60X42	MODULATING

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CONSTRUCTION DRAWINGS

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M601

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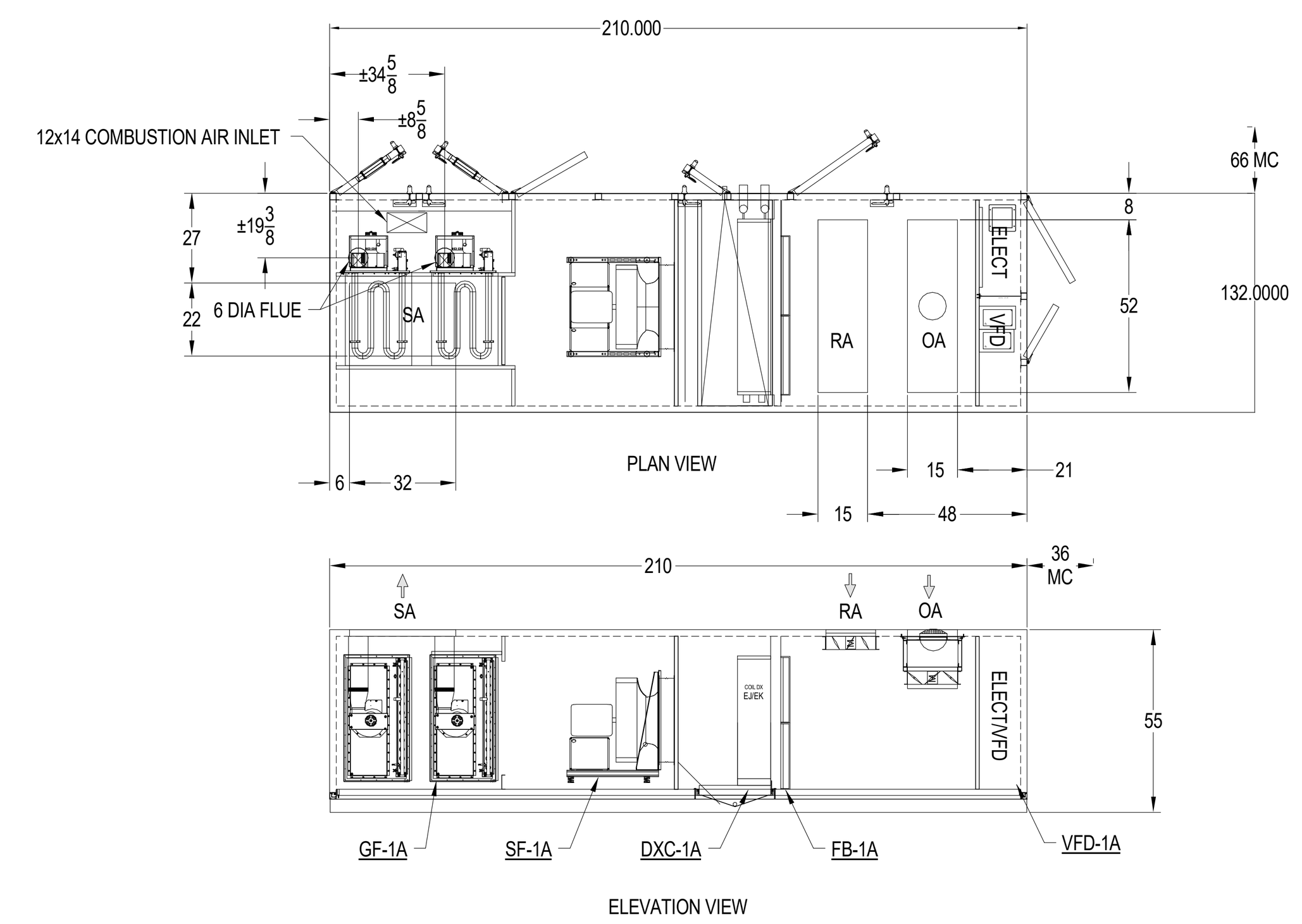
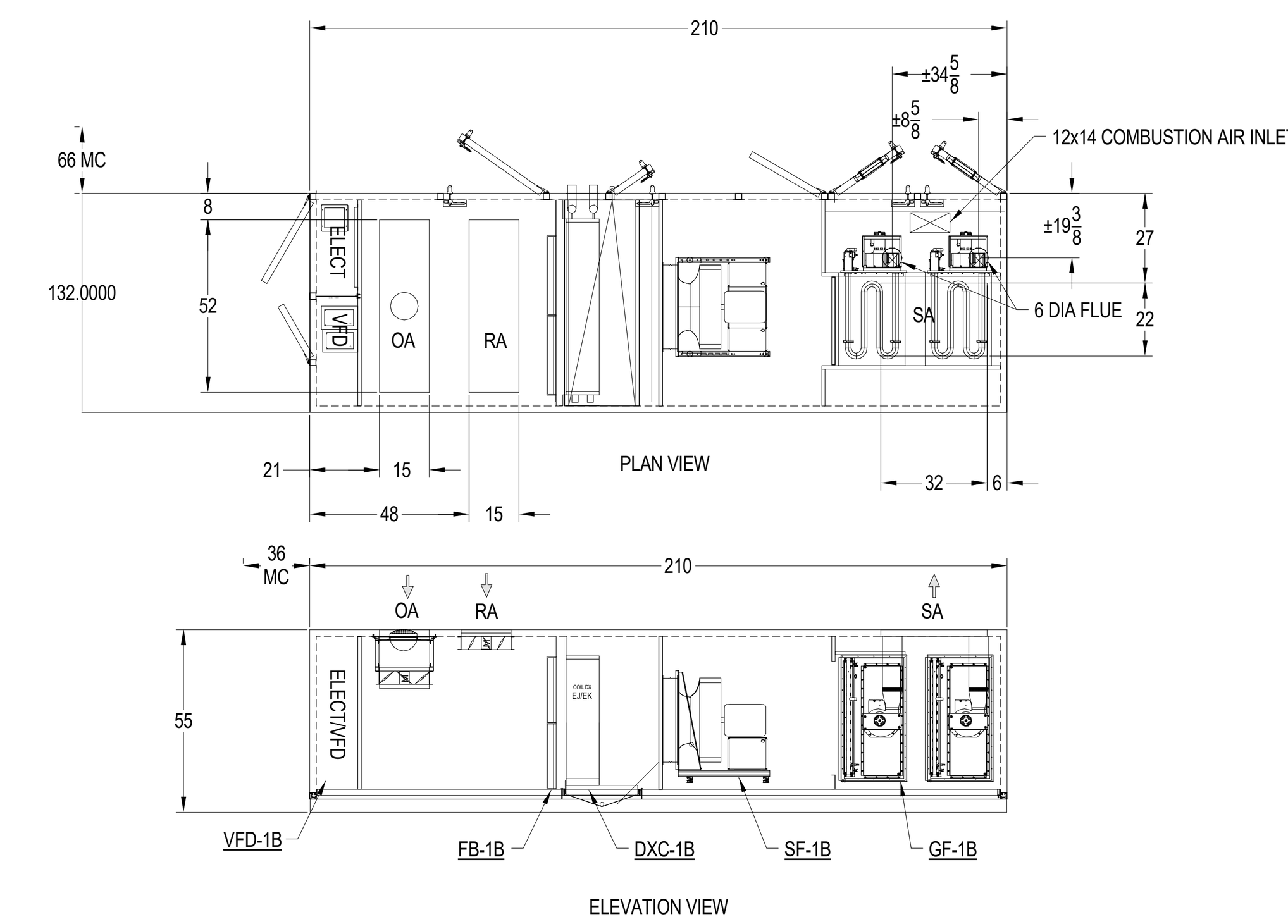


AH-1A
AIR HANDLER



AH-1B
AIR HANDLER

AIR HANDLER (AH)

PLAN CODE	CFM	MIN OSA (CFM)	ESP (IN WC)	MAX OVERALL DIMENSIONS (IN)			MAX WEIGHT (LBS)	ELECTRICAL			
				LENGTH	DEPTH	HEIGHT		VOLT / PH	MCA/MOCP (AMPS)	CONNECTION	DISCONNECT
AH-1A	6,400	2,950	1.5	210	66	55	3,600	208/3	39/60	SINGLE	FACTORY
AH-1B	6,400	2,950	1.5	210	66	55	3,600	208/3	39/60	SINGLE	FACTORY

1. HEIGHT INCLUDES 8" BASE RAIL
2. MAX. BLADE WIDTH OF INDIVIDUAL MOTORIZED DAMPERS = 42"
3. PERFORATED LINER, 2" PLENUM WALLS
4. ALL ACCESS TO UNIT FOR SERVICE MAINTENANCE TO BE ONE SIDE. COORDINATE WITH EQUIPMENT AND SITE CONDITIONS
5. PROVIDE WITH VIBRATION ISOLATOR PER DETAIL AND SPECIFICATION.

FILTER BANK (FB)

PLAN CODE	MERV	MAX CLEAN PD (IN WC)	DESIGN PD (IN WC)	MAX OVERALL DIMENSIONS (IN)		
				LENGTH	HIGHT	DEPTH
FB-1A	8	0.30	0.5	24	24	2
FB-1B	8	0.30	0.5	24	24	2

1. MERV RATINGS BASED ON ASHRAE 52.2
2. MAXIMUM FLAT FACE VELOCITY = 500 FPM

GAS FURNACE (GF)

PLAN CODE	AIR				HEATING				MANUFACTURER & MODEL NO	REMARKS
	AIRFLOW RATE (CFM)	EAT (°F) DB	LAT (°F) DB	MAX APD (IN WC)	SEA LEVEL INPUT (MBH)	SITE OUTPUT (MBH)	TURNDOWN	FUEL		
GF-1A	6,400	30.7	91.8	0.25	570	456	10:1	NG	ANNEX HMG 300	-
GF-1B	6,400	30.7	91.8	0.25	570	456	10:1	NG	ANNEX HMG 300	-

VARIABLE FREQUENCY DRIVE SCHEDULE (VFD) (1)

PLAN CODE	SERVICE	CONTROL INPUT	MANUFACTURER	REMARKS
VFD-1A	SF-1A	CONSTANT	ABB	PROVIDED BY AIR HANDLER MFG
VFD-1B	SF-1B	CONSTANT	ABB	PROVIDED BY AIR HANDLER MFG

1. VFD FOR TEST, BALANCE AND FAN START UP.

SUPPLY FAN SCHEDULE (SF)

PLAN CODE	FAN							MOTOR				REMARKS
	TYPE	CONFIGURATION	FLOW (CFM)	ESP (IN WC)	TSP (IN WC)	MIN EFF (%)	EAT (°F)	MAX BHP	HP	VOLT/PH	VOLUME CONTROL	
SF-1A	BI AF	PLUG	6,400	1.5	3.87	72	55	5.4	10	208/3	VFD	-
SF-1B	BI AF	PLUG	6,400	1.5	3.87	72	55	5.4	10	208/3	VFD	-

AIR COOLED CONDENSING UNIT SCHEDULE (ACU)

PLAN CODE	SYSTEM SERVED	EER	NET COOLING (MBH)	SUCTION TEMP (°F)	AMBIENT TEMP (°F)	CIRCUIT QTY	ELECTRICAL			MAX DIMENSIONS				MANUFACTURER & MODEL NO	OPTIONS	REMARKS
							VOLT/ PH	MCA	MOCP	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	OPERATING WT (LBS)			
ACU-1A	AH-1A	9.65	166	38.3	95	DUAL	208/3	79	100	87	68	63	2,190	ANNEX AXCU-AHZ-S-15	-	-
ACU-1B	AH-1B	9.65	166	38.3	95	DUAL	208/3	79	100	87	68	63	2,190	ANNEX AXCU-AHZ-S-15	-	-

DX COOLING COIL SCHEDULE (DXC)

PLAN CODE	AREA OR SYSTEM SERVED	CFM @ ELEV	CAPACITY		FACE VELOCITY (FPM)	MAX AIR PD (IN WC)	AIR SIDE		REFRIGERANT		ROWS	FPI	CIRCUITS	NO OF DISTRIBUTORS PER COIL	MAX DIMENSIONS				MANUFACTURER & MODEL NO	REMARKS
			SENS MBH	TOTAL MBH			EAT (°F) DB/ WB	LAT (°F) DB/ WB	TYPE	SAT SUCTION TEMP (°F)					WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	OPERATING WT (LBS)		
DXC-1A	AH-1A	6,400	151	162	500	0.26	83.7/61.3	55/51.1	R410A	40.3	4	8	8	29	51	36.25	10	170	ANNEX 12D36.25X51-8-4-W-Z-R	- -
DXC-1B	AH-1B	6,400	151	162	500	0.26	83.7/61.3	55/51.1	R410A	40.3	4	8	8	29	51	36.25	10	170	ANNEX 12D36.25X51-8-4-W-Z-R	- -

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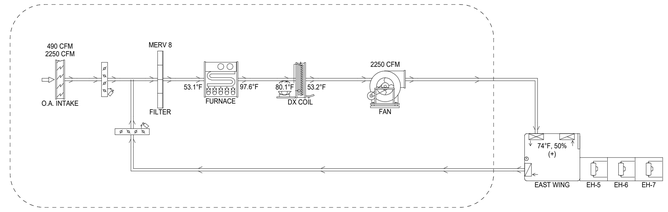
CONSTRUCTION DRAWINGS

NEXUS PROJ. #: 18065
CHECKED BY: BRC
DRAWN BY: CEA
DATE: 08.09.18

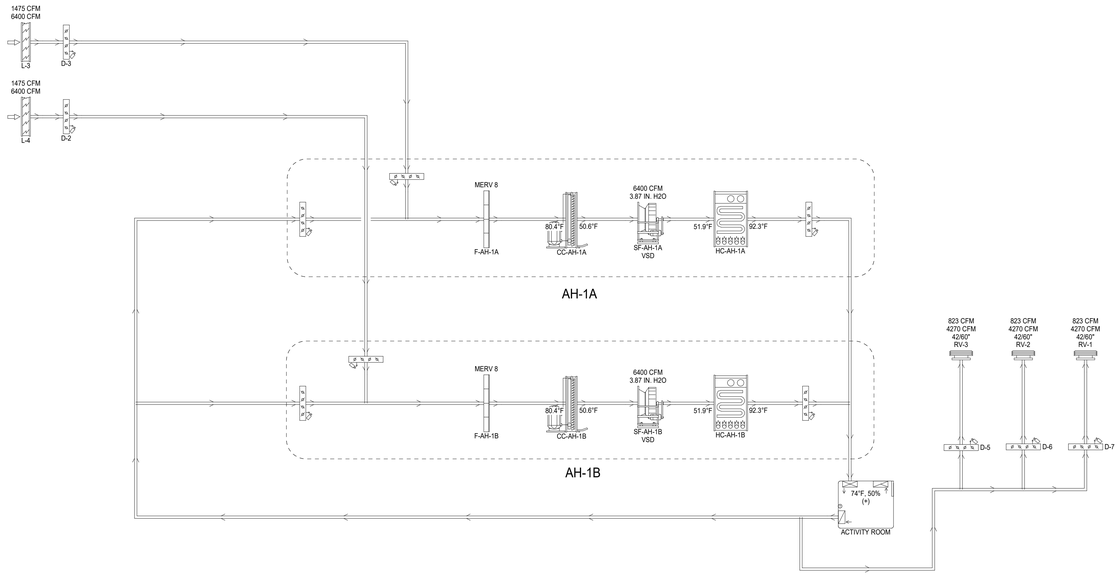
MECHANICAL SCHEDULES

M602

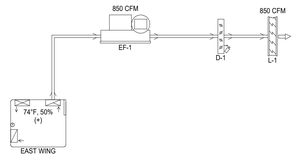
8/8/2018 3:46:05 PM



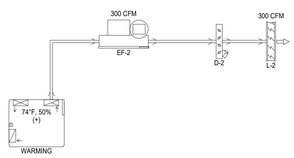
RTU-1



1 MECHANICAL AIRFLOW SCHEMATICS
SCALE: NONE



GENERAL EXHAUST



T-STAT CONTROLLED EXHAUST

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MECHANICAL SCHEMATICS

M701

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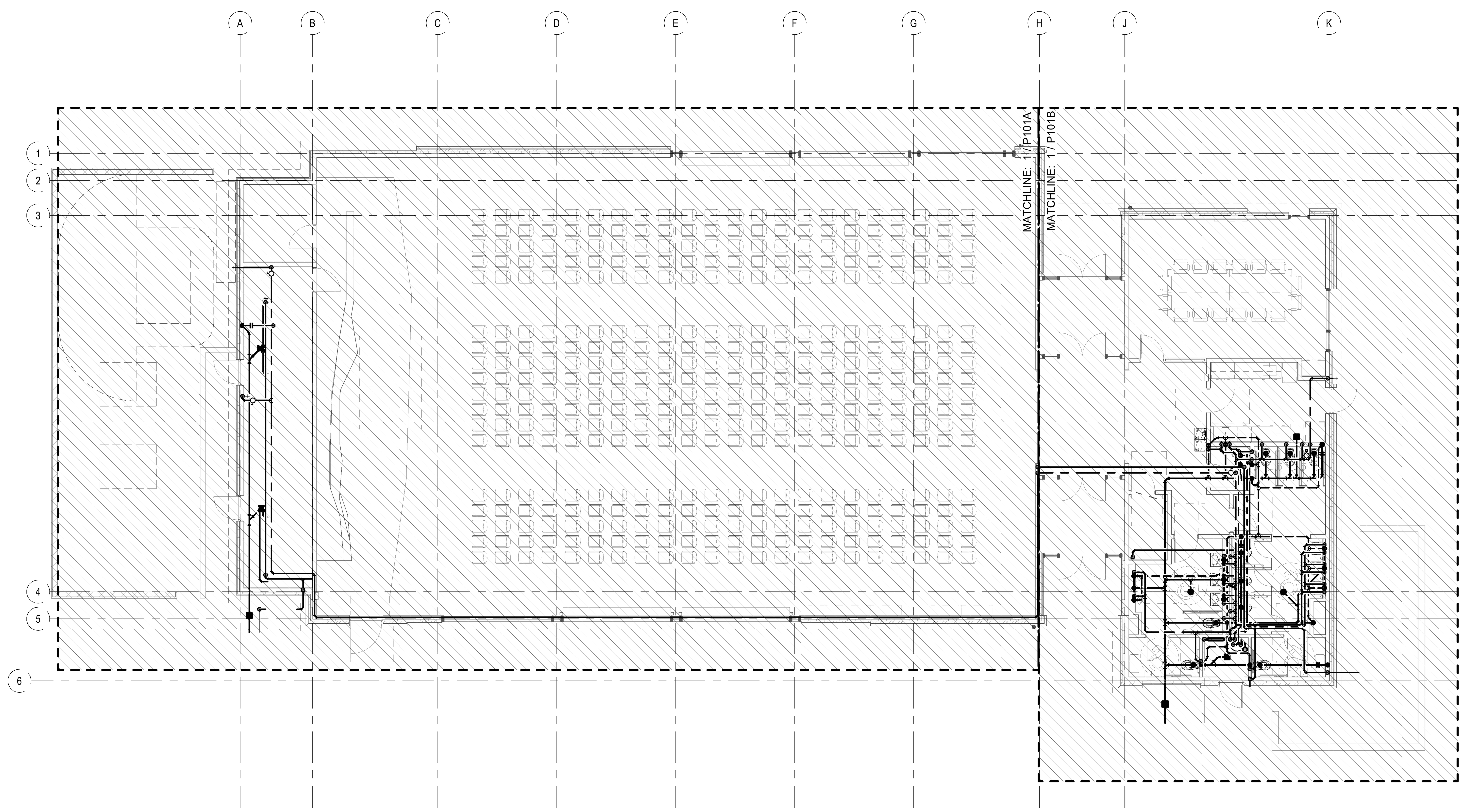

1 LEVEL 01 - PLUMBING OVERALL FLOOR PLAN
SCALE: 1/8" = 1'-0"

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PLUMBING OVERALL PLAN

P101

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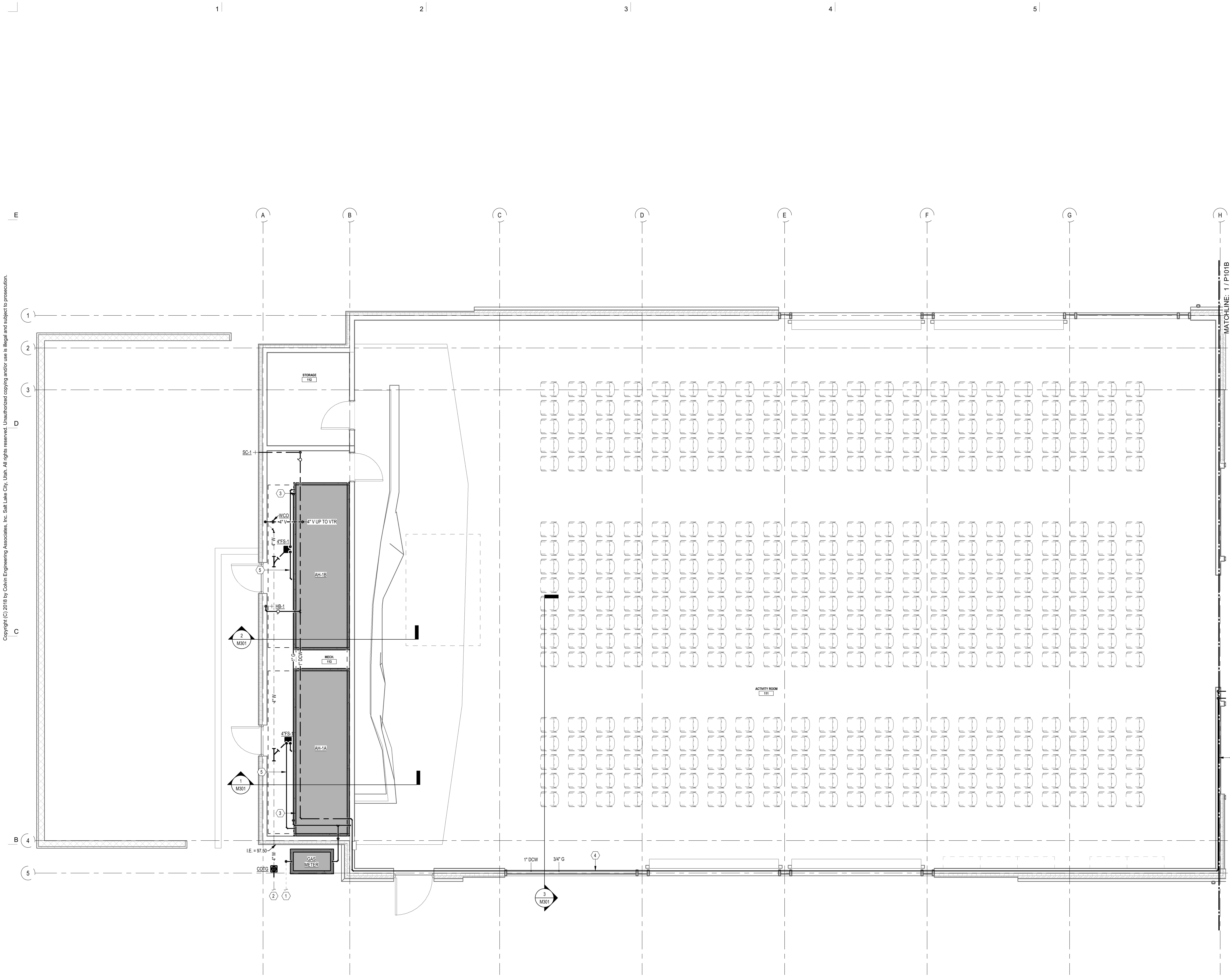

LEVEL 01 - PLUMBING ENLARGED FLOOR PLAN - AREA A

SCALE: 1/4" = 1'-0"

KEYED NOTES

1. NATURAL GAS FEED, SEE CIVIL DRAWINGS FOR CONTINUATION.
2. BUILDING SEWER, SEE CIVIL DRAWINGS FOR CONTINUATION.
3. PROVIDE 2 PSI TO 4 0Z PRESSURE REGULATOR AT GAS FIRED MECHANICAL EQUIPMENT.
4. ROUTE DCW AND G IN STUD WALL.
5. EXTEND DRAIN FROM AIR HANDLER TO FLOOR SINK. PROVIDE SUPPORT AT FLOOR. SLOPE PIPING AT 1/4" PER 1'-0". RUN PIPING NEATLY AND TIGHT CONCRETE CURB. TYPICAL. SIZE TO MATCH DRAIN OUTLET SIZE FROM AIR HANDLER.

GENERAL NOTES

A. COORDINATE PLUMBING PIPE ROUTING AND LOCATION WITH ALL TRADE BEFORE STARTING ANY WORK.
B. ALL SANITARY WASTE PIPING 2 1/2" AND SMALLER TO BE RUN AT 1/4" PER FOOT SLOPE. PIPE 3" AND LARGER RUN AT 1/8" PER FOOT SLOPE.
C. PROVIDE ACCESS DOORS TO ALL MIXING VALVES, SHUTOFF VALVES, ETC.
D. WHERE INDIVIDUAL OUTLET PIPING SIZE IS NOT SHOWN, SEE PLUMBING SCHEDULE SIZE.
E. DO NOT ROUTE OR LOCATE ANY PLUMBING PIPING OR EQUIPMENT OVER ANY ELECTRICAL EQUIPMENT, IDF, MDF, AND COMMUNICATION ROOMS.
F. INVERT ELEVATION IS BASED OFF ARCHITECTURAL LEVEL 1 ELEVATION OF 100.00'.

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PLUMBING FLOOR PLAN - AREA A

P101A

8/8/2018 3:46:13 PM

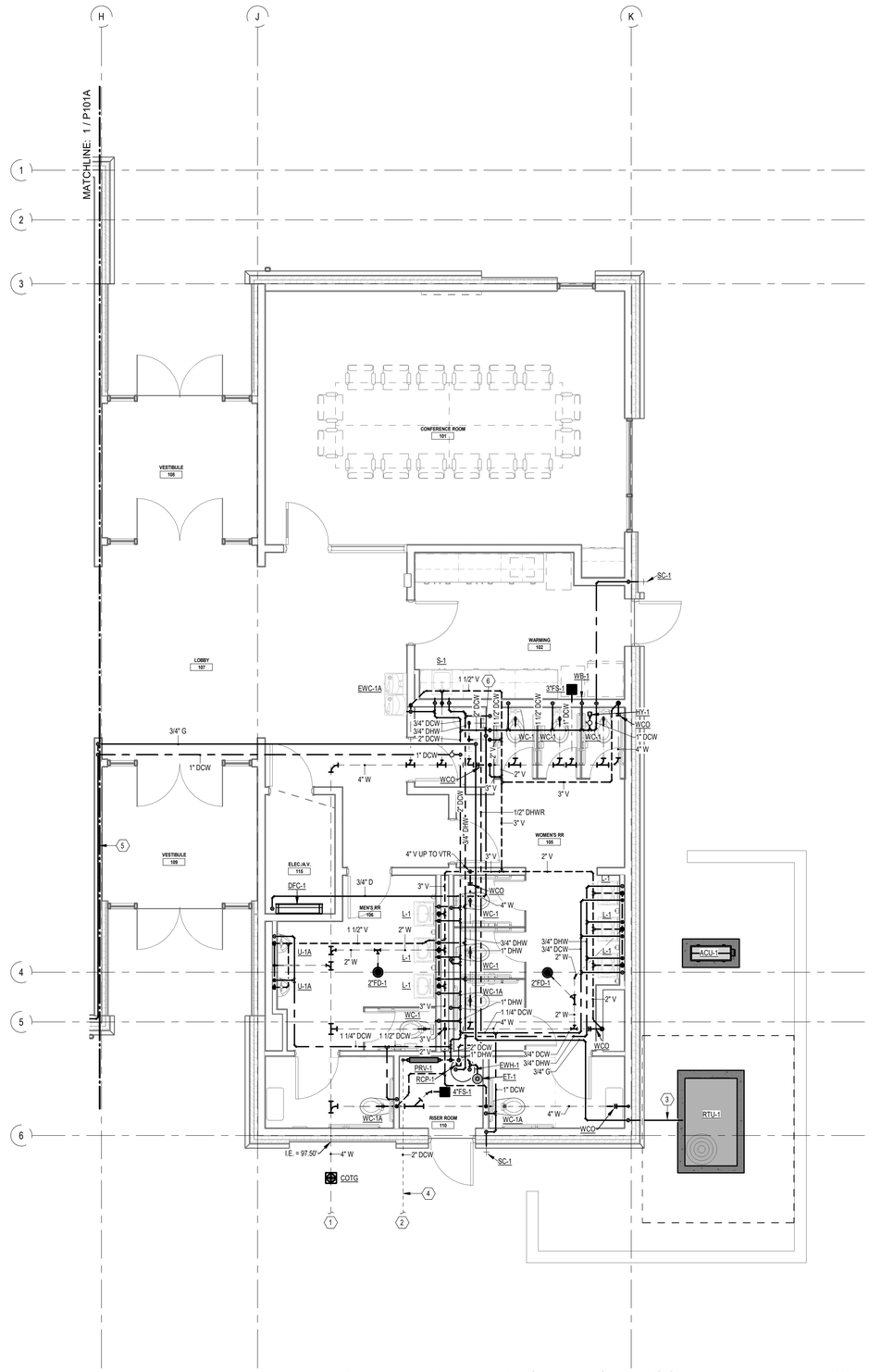
8/8/2018 3:46:16 PM

KEYED NOTES

1 BUILDING SEWER, SEE CIVIL DRAWINGS FOR CONTINUATION.
2 DOMESTIC WATER FEED, SEE CIVIL DRAWINGS FOR CONTINUATION.
3 PROVIDE 2 PSI TO 4 OZ PRESSURE REGULATOR AT GAS FIRED MECHANICAL EQUIPMENT.
4 UNDERGROUND PIPE AT MINIMUM DEPTH OF 48" BELOW FINISH GRADE.
5 ROUTE DCW AND G IN STUD WALL.
6 DRAIN CONDENSATE TO FLOOR SINK. ROUTE DRAIN DOWN IN WALL AND EXIT WALL AT 6" ABOVE SERVICE SINK RIM.

GENERAL NOTES

A. COORDINATE PLUMBING PIPE ROUTING AND LOCATION WITH ALL TRADE BEFORE STARTING ANY WORK.
B. ALL SANITARY WASTE PIPING 2 1/2" AND SMALLER TO BE RUN AT 1/4" PER FOOT SLOPE. PIPE 3" AND LARGER RUN AT 1/8" PER FOOT SLOPE.
C. PROVIDE ACCESS DOORS TO ALL MIXING VALVES, SHUTOFF VALVES, ETC.
D. WHERE INDIVIDUAL OUTLET PIPING SIZE IS NOT SHOWN, SEE PLUMBING SCHEDULE SIZE.
E. DO NOT ROUTE OR LOCATE ANY PLUMBING PIPING OR EQUIPMENT OVER ANY ELECTRICAL EQUIPMENT, IDF, MDF, AND COMMUNICATION ROOMS.
F. INVERT ELEVATION IS BASED OFF ARCHITECTURAL LEVEL 1 ELEVATION OF 100.00'.



1 LEVEL 01 - PLUMBING ENLARGED FLOOR PLAN - AREA B
SCALE: 1/4" = 1'-0"

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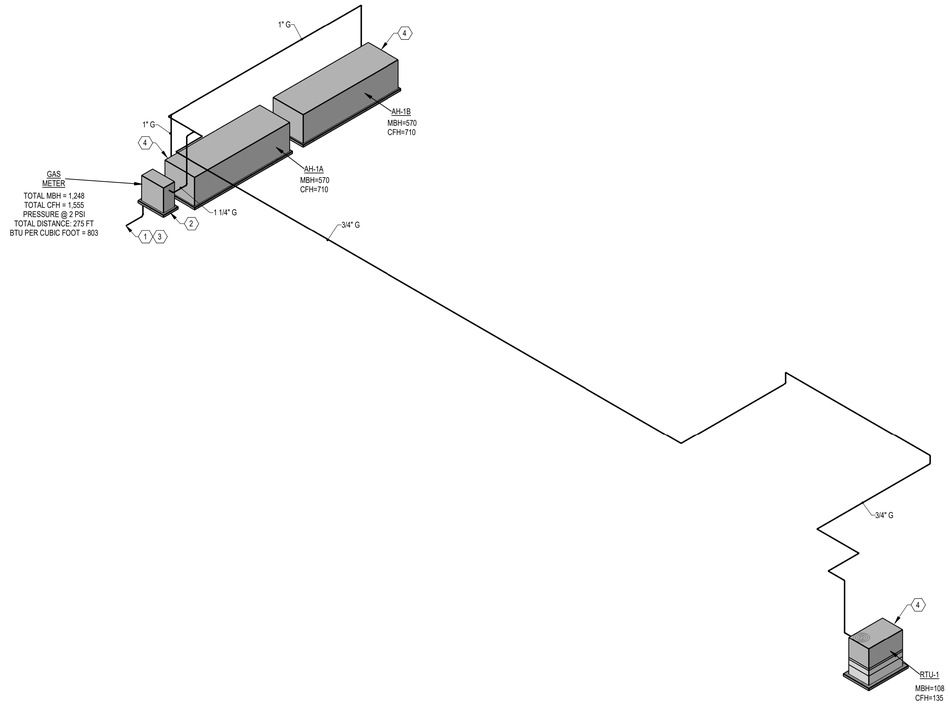
PLUMBING FLOOR PLAN - AREA B

P101B

8/8/2018 3:46:18 PM

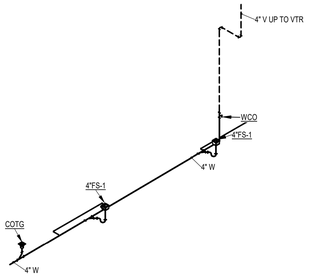
KEYED NOTES

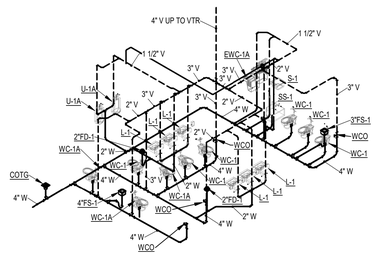
1. NATURAL GAS FEED, SEE CIVIL DRAWINGS FOR CONTINUATION.
2. PROVIDE 4" CONCRETE CURB FOR GAS METER. COORDINATE SIZE AND LOCATION WITH GAS COMPANY AND EQUIPMENT.
3. UNDERGROUND PIPE AT MINIMUM DEPTH OF 48" BELOW FINISH GRADE.
4. PROVIDE 2 PSI TO 4 OZ PRESSURE REGULATOR AT GAS FIRED MECHANICAL EQUIPMENT.



1 NATURAL GAS SCHEMATIC

SCALE: NONE





2 WASTE AND VENT ISOMETRIC

SCALE: NONE

GENERAL NOTES

A. COORDINATE PLUMBING PIPE ROUTING AND LOCATION WITH ALL TRADE BEFORE STARTING ANY WORK.
B. ALL SANITARY WASTE PIPING 2 1/2" AND SMALLER TO BE RUN AT 1/4" PER FOOT SLOPE. PIPE 3" AND LARGER RUN AT 1/8" PER FOOT SLOPE.
C. PROVIDE ACCESS DOORS TO ALL MIXING VALVES, SHUTOFF VALVES, ETC.
D. WHERE INDIVIDUAL OUTLET PIPING SIZE IS NOT SHOWN, SEE PLUMBING SCHEDULE SIZE.
E. DO NOT ROUTE OR LOCATE ANY PLUMBING PIPING OR EQUIPMENT OVER ANY ELECTRICAL EQUIPMENT, IDF, MDF, AND COMMUNICATION ROOMS.
F. INVERT ELEVATION IS BASED OFF ARCHITECTURAL LEVEL 1 ELEVATION OF 100.00'.

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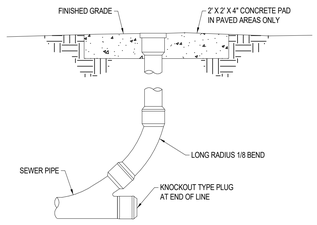
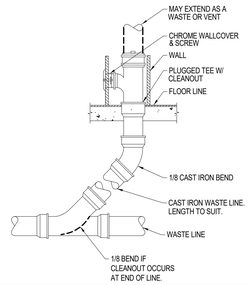
PLUMBING SCHEMATICS

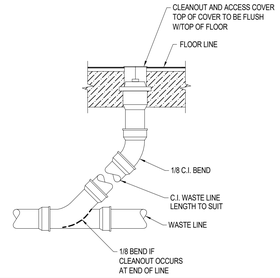
P201



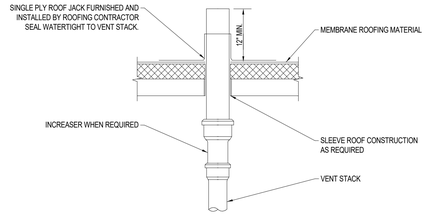
1 SURFACE CLEANOUT DETAIL
NO SCALE



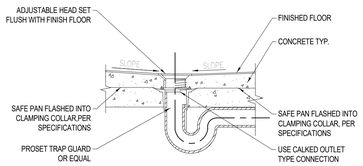
2 WALL CLEANOUT DETAIL
NO SCALE



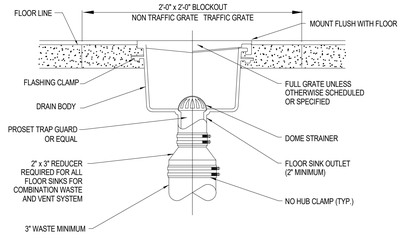
3 FLOOR CLEANOUT DETAIL
NO SCALE



4 VENT THROUGH ROOF DETAIL
NO SCALE

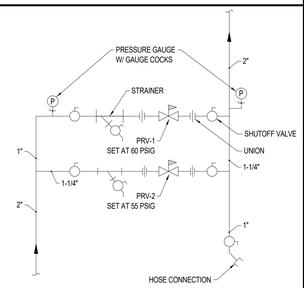


5 FLOOR DRAIN IN SLAB DETAIL (SUB FLOOR SIMILAR)
NO SCALE



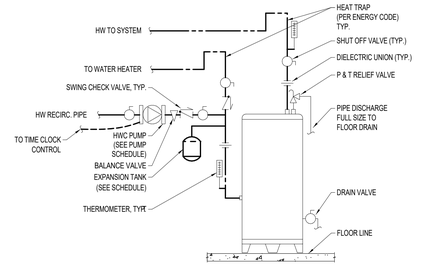
6 FLOOR SINK DETAIL
NO SCALE

PRV SCHEDULE			
PLAN CODE	SIZE	MAX GPM @ 10 PSI ΔP	MANUFACTURER & MODEL NO
PRV-1	1"	29	WATTS REGULATOR SERIES 223S
PRV-2	1 1/4"	46	WATTS REGULATOR SERIES 223S



PRV STATION DETAIL

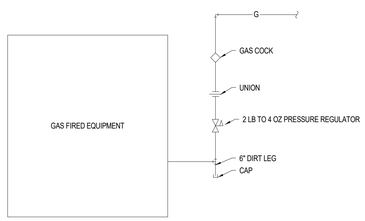
7
NO SCALE



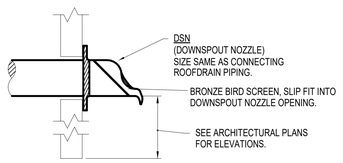
8 ELECTRIC WATER HEATER PIPING DETAIL
NO SCALE

* PROVIDE WATER HAMMER ARRESTORS ON WATER SUPPLY LINES TO THE FOLLOWING FIXTURES OR EQUIPMENT WITH QUICK CLOSING VALVES: WATER CLOSETS WITH FLUSH VALVES, DISHWASHERS, CLOTHES WASHERS, AND ICE MAKERS.

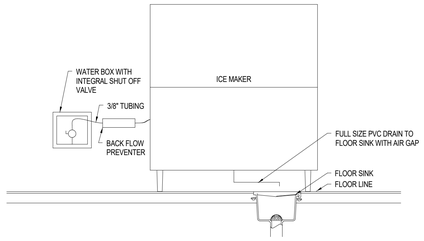
9 WATER HAMMER ARRESTOR INSTALLATION DETAIL
NO SCALE



10 MECHANICAL EQUIPMENT GAS PIPING DETAIL
NO SCALE



11 DOWNSPOUT NOZZLE DETAIL
NO SCALE



12 ICE MAKER PIPING DETAIL
NO SCALE

NOT USED
13 NO SCALE

NOT USED
14 NO SCALE

NOT USED
15 NO SCALE

NOT USED
16 NO SCALE

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PLUMBING DETAILS

P501

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ELECTRIC WATER HEATER SCHEDULE (EWH)

PLAN CODE	CAP (GAL)	RECOVERY @ ELEV (GPH)	INPUT (KW)	TEMP RISE (°F)	MAX DIMENSIONS				MAX. OPERATING WT (LBS)	MANUFACTURER & MODEL NO	REMARKS
					DIA (IN)	HEIGHT (IN)	VOLT/ PH	AMPS			
EWH-1	50	21	8	90	21	61	208/3	38.5	550	AO SMITH ENT-50	1

1. SIMULTANEOUS ELEMENT OPERATION. 2 ELEMENTS AT 4 KW EACH.

EXPANSION TANK SCHEDULE (ET)

PLAN CODE	SYSTEM SERVED	WATER TEMP (°F)	% GLYCOL	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	PRE-CHARGE (PSI)	MAX DIMENSIONS			MANUFACTURER & MODEL NO	REMARKS
							DIA (IN)	HEIGHT (IN)	OPERATING WT (LBS)		
ET-1	DHW	140	N/A	2.1	0.9	55	10	11	35	B&G PTA-5	-

PUMP SCHEDULE (RCP)

PLAN CODE	TYPE	DUTY	FLOW (GPM)	PRESSURE (FT)	MAX. ALLOWABLE BHP	FLUID	FLUID TEMPERATURE RANGE	SIZE (IN)	MOTOR				PUMP & MOTOR WT (LBS)	TOTAL WEIGHT (LBS)	MANUFACTURER & MODEL NO	REMARKS
									SIZE (WATTS)	SPEED (RPM)	VOLT/ PH	VFD				
RCP-1	IN-LINE	RECIRC	0.5	11.2	N/A	DHW	230	1/2	90	3000	115/1	NO	10	12	BELL & GOSSETT NBF-18S	1 2

1. LEAD FREE BRONZE CONSTRUCTION
2. PROVIDE WITH TC-1 AUTOMATIC TIMER KIT.

PLUMBING FIXTURE SCHEDULE

PLAN CODE	DISCRIPTION	ROUGH-IN SIZE					REMARKS
		C.W.	H.W.	TEMPERED	WASTE	VENT	
EWC-1A	BI LEVEL, WALL MOUNT ELECTRIC WATER COOLER, ADA COMPLIANT, INCLUDE BOTTLE FILLER	3/8"	-	-	1-1/2"	1-1/2"	ELKAY #LZSTL8WSLK (ADA), STAINLESS STEEL, 8.0 GPH, F.L.A. = 6, 115 V/1 PH/ 60 HZ. BOTTLE FILLER #LZWSR
FCO	FLOOR CLEANOUT	-	-	-	SEE PLANS	-	J.R. SMITH MANUFACTURING COMPANY SERIES 4020, CAST IRON ADJUSTABLE BODY, ABS PLUG, VANDAL PROOF SECURITY SCREWS. OR EQUAL.
FD-1	FLOOR DRAIN	-	-	-	SEE PLANS	1-1/2"	J.R. SMITH MANUFACTURING COMPANY FIG. 2005Y-NB-U, DUCO CAST IRON FLOOR DRAIN. SEE PLAN FOR OUTLET SIZE, STRAINER GRATE MUST BE HEEL PROOF. PROVIDE WITH TRAP GUARD OR EQUAL.
FS-1	FLOOR SINK	-	-	-	SEE PLANS	2"	J.R. SMITH SERIES 3001, WITH TRAP GUARD AND DEEP SEAL TRAP.
HB-1	HOSE BIBB (INDOOR)	3/4"	-	-	-	-	JAY R. SMITH SERIES 5673, INTEGRAL VACUUM BREAKER.
HY-1	HAMMER ARRESTOR	-	-	-	-	-	HAMMER ARRESTER. JR SMITH FIGURE 5005 FIXTURE RATING 1-11, FIGURE 5010 FIXTURE RATING OF 12-32, FIGURE 5020 FIXTURE RATING 33-60 & FIGURE 5030 FIXTURE RATING 61-113.
L-1	RECTANGULAR WALL MOUNT LAVATORY ADA, BATTERY POWERED SENSOR TYPE FAUCET, 0.5 GPM FLOW, WITH MIXING VALVE	1/2"	1/2"	-	1-1/2"	1-1/2"	KOHLER "KINGSTON" WALL MOUNT K-2007 FAUCET: KOHLER K-7515 DRAIN: KOHLER K-8920 P-TRAP: KOHLER K-9000
S-1	SINGLE COMPARTMENT, RECTANGULAR STAINLESS STEEL, UNDER COUNTER MOUNT SINK, GOOSENECK RIGID/SWING SPOUT WITH WRIST BLADES.	1/2"	1/2"	-	1-1/2"	1-1/2"	BOWL: JUST SL-2017-A-GR, 18 GAUGE, UNDER COUNTER MOUNTED. FAUCET, CHICAGO FAUCETS 786-E65VPCABCP, 5-3/8" SPOUT, 8" FIXED CENTER, 1.0 GPM LAMINAR OUTLET AND PLAIN END SPOUT RING, 4" WRIST BLADE, STRAINER: JUST J-3S STAINLESS STEEL CUP STRAINER.
SC-1	SILLCOCK (OUTDOOR FREEZE PROOF)	3/4"	-	-	-	-	JAY R. SMITH SERIES 5609QT, NON FREEZE HYDRANT, INTEGRAL VACUUM BREAKER, VANDAL RESISTANT.
SS-1	PRECAST TERRAZZO, 36" LONG, 36" WIDE, 3" GRID DRAIN AND FAUCET WITH VACUUM BREAKER, STOPS, TOP BRACE, CHROME FINISH.	3/4"	3/4"	-	2"	2"	SINK: ACORN TRH-363606-NC FAUCET: KOHLER K-8907
U-1A	URINAL, ADA COMPLIANT, WALL MOUNT, BATTERY POWERED SENSOR TYPE FLUSH VALVE, VITREOUS CHINA. .125 GPF	1"	-	-	2"	2"	URINAL: KOHLER BARDON K-4991-ET FLUSH VALVE: KOHLER K-10949-SV
WB-1	WATER BOX	1/2"	-	-	-	-	OATEY 38586, PROVIDE WITH BACK FLOW PREVENTOR
WC-1	WATER CLOSET, FLOOR MOUNTED, BATTERY POWERED SENSOR TYPE FLUSH VALVE, SIPHON JET, VITREOUS CHINA 1.28 GPF	1"	-	-	4"	2"	KOHLER "WELLCOMME ULTRA" BOWL K-96053-B SEAT: KOHLER K-4731 COMMERCIAL HEAVY-DUTY FLUSH VALVE: KOHLER K-10956-SV COLOR: WHITE
WC-1A	WATER CLOSET, ADA COMPLIANT, FLOOR MOUNT, BATTERY POWERED SENSOR TYPE FLUSH VALVE, SIPHON JET, VITREOUS CHINA 1.28 GPF	1"	-	-	4"	2"	KOHLER "HIGHCLIFF" BOWL K-96057 SEAT: KOHLER K-4731 COMMERCIAL HEAVY-DUTY FLUSH VALVE: KOHLER K-10956-SV COLOR: WHITE
WCO	WALL CLEANOUT	-	-	-	SEE PLANS	-	J.R. SMITH MANUFACTURING COMPANY SERIES 4530, CAST IRON CLEANOUT TEE, ABS PLUG, STAINLESS STEEL COVER WITH VANDAL PROOF SECURITY SCREWS. OR EQUAL.

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#	Date	Revision

CONSTRUCTION DRAWINGS

NEXUS PROJ. #: 18065
CHECKED BY: BRC
DRAWN BY: CEA
DATE: 08.09.18

PLUMBING SCHEDULES

P601

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SHEET INDEX

ELECTRICAL SITE UTILITY COORDINATION

ELECTRICAL SITE UTILITY INFORMATION HAS BEEN COORDINATED WITH THE FOLLOWING UTILITY COMPANY REPRESENTATIVES. VERIFY ALL LOCATIONS, DIMENSIONS, CLEARANCES, REGULATIONS, ETC., PRIOR TO INSTALLATION. NOTIFY ENGINEER OF ANY REVISIONS REQUIRED.

POWER COMPANY	X
CONTACT	X
PHONE NO.	X
EMAIL	X
WORK ORDER NO.	X
TELEPHONE COMPANY	X
CONTACT	X
PHONE NO.	X
EMAIL	X
CABLE TV COMPANY	X
CONTACT	X
PHONE NO.	X
EMAIL	X

ABBREVIATIONS INDEX

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
#	NUMBER	MH	MANHOLE
AC	ALTERNATING CURRENT	MIC	MICROPHONE
A.F.F.	ABOVE FINISH FLOOR	MIN	MINIMUM
AIC	AMPS INTERRUPTING CAPACITY	MTG	MOUNTING
AM	AMPS METER	MTR	MOTOR
AMP	AMPERE	N/A	NOT APPLICABLE
ANN	ANNUNCIATOR	NC	NORMALLY CLOSED
ATS	AUTOMATIC TRANSFER SWITCH	NEC	NATIONAL ELECTRICAL CODE
AUX	AUXILIARY	NEMA	NATIONAL ELECT. MANUFAC. ASSOC.
AWG	AMERICAN WIRE GAUGE	NFC	NATIONAL FIRE CODE
BC	BARE COPPER	NFPA	NATIONAL FIRE PROTECTION ASSOC.
BFG	BELOW FINISH GRADE	N.I.C.	NOT IN CONTRACT
C	CONDUIT	NO	NORMALLY OPENED
CAB	CABINET	NTS	NOT TO SCALE
CAT'B	COMMUNITY ANTENNA TELEVISION	OS & Y	OUTSIDE SCREW & YOKE
CATV	CABLE TELEVISION	PB	PUSHBUTTON
CKT	CIRCUIT	PF	POWER FACTOR
CLG	CEILING	PFR	PHASE FAILURE RELAY
CNTR	CONTRACTOR	PNL	PANEL
C.O.	CONDUIT ONLY	PT	POTENTIAL TRANSFORMER
CRT	COMPUTER TERMINAL	PVC	POLYVINYL CHLORIDE CONDUIT
CT	CURRENT TRANSFORMER	(R)	RELOCATE
CU	COPPER	RECEP	RECEPTACLE
C/W	COMPLETE WITH	REQ	REQUIREMENT
DB	DECIBEL	RLA	RATED LOAD AMPS
DC	DIRECT CURRENT	RMS	ROOT MEAN SQUARE
DWG	DRAWING	SE	SERVICE ENTRANCE
(E)	EXISTING	SPEC	SPECIFICATIONS
EC	EMPTY CONDUIT	SPKR	SPEAKER
EG	EMERGENCY GENERATOR	SS	SELECTOR SWITCH
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
EX	EXPLOSION PROOF	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SWGR	SWITCHGEAR
FC	FOOT CANDLE	TTB	TELEPHONE TERMINAL BOARD
FT	FOOT	TTC	TELEPHONE TERMINAL CABINET
GFI	GROUND FAULT INTERRUPTER	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
GRC	GALVANIZED RIGID CONDUIT	UG	UNDERGROUND
HP	HORSE POWER	UP	UTAH POWER
HZ	HERTZ	UPS	UNINTERRUPTED POWER SUPPLY
IG	ISOLATED GROUND	V	VOLT (KV-KILOVOLT)
IMC	INTERMEDIATE METALLIC CONDUIT	VA/R	VOLT-AMPS/REACTIVE
IN	INCH	VM	VOLT METER
J-BOX	JUNCTION BOX	W	WATTS
KV	KILOVOLT	W/	WITH
KVA	KILOVOLT AMPERES	WH	WATTHOUR METER
KVAR	KILOVARS	W/O	WITHOUT
KW	KILOWATT	WP	WEATHERPROOF
LRA	LOCKED ROTOR AMPS	XFMR	TRANSFORMER
LTG	LIGHTING	XFMR SW	TRANSFER SWITCH
MNF	MANUFACTURER	XP	EXPLOSION PROOF
MATV	MASTER ANTENNA TELEVISION	1P	SINGLE-PHASE
MAX	MAXIMUM	2P	TWO-POLE
MB	MAIN BUS	3P	THREE-POLE
MCC	MOTOR CONTROL CENTER	4P	FOUR-POLE
MCM	1000 CIRCULAR MILLS	∅	PHASE

GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC) OF ALL EQUIPMENT FURNISHED UNDER ALL DIVISIONS, INCLUDING ALL EXISTING EQUIPMENT TO BE RE-USED. REVIEW ALL SHOP DRAWINGS AND EXISTING EQUIPMENT BEFORE BEGINNING ROUGH-IN.
4. SEE SECTION 265100 (16510) OF THE SPECIFICATION FOR REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

20 AMP MINIMUM BRANCH CIRCUIT CONDUCTOR SIZING		
MAXIMUM LENGTH	BRANCH CIRCUIT VOLTAGE	
CONDUCTOR LENGTH (FT)	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 - 115	MIN. #10 AWG	MIN. #12 AWG
115 - 170	MIN. #8 AWG	MIN. #10 AWG
170 - 270	MIN. #6 AWG	MIN. #8 AWG
271 - 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

   A. THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.
   B. PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.
   C. CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.
12. CONTRACTOR SHALL VERIFY FURNITURE LAYOUT PRIOR TO ANY FLOORBOX OR POKE-THRU INSTALLATION. COORDINATE EXACT LOCATION OF FLOOR BOX OR POKE-THRU WITH OWNER AND FURNITURE PROVIDER PRIOR TO ROUGH-IN.

ELECTRICAL SYMBOL SCHEDULE

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
5. NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT MEASURED TO TOP OF THE BOX FROM FINISH FLOOR.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISH FLOOR.
12. COORDINATE WITH DOOR HARDWARE SUPPLIER.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, HOME RUN TO PANEL		
	2 CIRCUIT, HOME RUN TO PANEL		
	3 CIRCUIT, HOME RUN TO PANEL		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	CONDUIT UP		
	CONDUIT DOWN		
	CONDUIT STUB LOCATION	CAP CONDUIT	
	CONDUIT/CIRCUIT CONTINUATION		
	CABLE TRAY	AS NOTED	
	CEILING LIGHT FIXTURE	CEILING	1.
	WALL LIGHT FIXTURE	AS NOTED	1.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.
	RECESSED WALLWASH DOWNLIGHT FIXTURE	CEILING	1.
	LIGHT FIXTURE	AS NOTED	1
	EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM
	FLOOD OR TRACK FIXTURE	AS NOTED	
	CEILING/WALL MOUNTED EXIT LIGHT	CEILING/ AS NOTED	1.3.8.
$X	SINGLE POLE SWITCH	+4'-0"	6. 4.
$3	THREE-WAY SWITCH	+4'-0"	6.
$4	FOUR-WAY SWITCH	+4'-0"	6.
$K	KEY OPERATED SWITCH	+4'-0"	6.
$P	SWITCH WITH PILOT LIGHT	+4'-0"	6.
$D	VARIABLE INTENSITY SWITCH	+4'-0"	6.
$TM	TIMER SWITCH	+4'-0"	6.
$	MOMENTARY CONTACT SWITCH, CENTER POSITION OFF	+4'-0"	6.
$DX	LOW VOLTAGE WALLSTATION (SUBSCRIPT INDICATES CONFIGURATION & CONTROL SEQUENCE) SEE DIAGRAM	+4'-0"	6., SEE DIAGRAM, SPEC.
	CEILING/WALL MOUNTED OCCUPANCY SENSOR SUBSCIPT A=ANALOG, D = DIGITAL	CEILING/ +4'-0"	6.
PP	POWER PACK	CEILING	SEE DIAGRAM, SPEC.
RCX	DIGITAL ROOM CONTROLLER (SUBSCRIPT INDICATES NUMBER OF RELAYS)	CEILING	SEE DIAGRAM, SPEC.
EP	EMERGENCY LIGHTING CONTROL UNIT	ABOVE CEILING	SEE DIAGRAM, SPEC.
R	RECEPTACLE SWITCH PACK	CEILING	
A	AUTOMATIC RELAY PACK	CEILING	SEE DIAGRAM. SPEC.
T	LOW VOLTAGE TRANSFORMER		
P	PHOTO-ELECTRIC CONTROL	AS NOTED	TORK 2000A
	DIGITAL DAYLIGHT SENSOR	CEILING	SEE DIAGRAM, SPECIFICATION
TC	TIME CLOCK	+5'-0"	2.
	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+16" OR AS NOTED	9. 11.
	SIMPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
U	SIMPLEX RECEPTACLE WITH USB OUTLET	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
U	DUPLEX RECEPTACLE WITH USB OUTLET	+16" OR AS NOTED	9. 11.
G	CONTROLLED RECEPTACLE	+16" OR AS NOTED	9. 11.
A	DUPLEX RECEPTACLE		9.
W	ELECTRIC WATER COOLER RECEPTACLE		SEE DIAGRAM
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.
IG	ISOLATED GROUND RECEPTACLE	+16" OR AS NOTED	2. 9.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	GROUND FAULT INTERRUPTER FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	TVSS PROTECTED RECEPTACLE	+16" OR AS NOTED	9. 11.
	SPECIAL PURPOSE OUTLET	+16" OR AS NOTED	10. WITH CAP. 11
	CORD DROP		SEE DIAGRAM
	CORD REEL		SEE DIAGRAM
	TOMBSTONE RECEPTACLE		
	PLUGMOLD	+46" OR AS NOTED	
	TELEVISION OUTLET	+16" OR AS NOTED	11.
	POWER POLE		
DP	FLAT PANEL DISPLAY WALL BOX TVSS RECEPT., DATA AND OTHER DEVICES, REFER TO DIAGRAMS	AS NOTED	SEE DIAGRAM, SPEC. 26 2726
DP	CEILING PROJECTION SYSTEM CEILING BOX	ABOVE CEILING	SEE DIAGRAM, SPEC.
	DATA OUTLET, ONE CABLE	+16" OR AS NOTED	9. 11.
	DATA OUTLET, TWO CABLES	+16" OR AS NOTED	9. 11.
	DATA OUTLET, THREE CABLES	+16" OR AS NOTED	9. 11.
X	DATA OUTLET, W/MORE THAN (3) CABLES	+16" OR AS NOTED	9. 11.
	WIRELESS ACCESS POINT, ONE CABLE	CEILING	
	CALL SWITCH	+4'-0"	6.

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
C	CLOCK OUTLET	+7'-6"	8.
FB	FLOOR BOX - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
PT	POKE THRU - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
FT	FLIP-TOP BOX		9.
J	JUNCTION BOX ('F' IN FLOOR)	AS NOTED	
	MOTOR OUTLET	TO SUIT EQUIP.	
	PUSHBUTTON	+4'-0"	6.
	NON-FUSED DISCONNECT SWITCH	+5'-0"	5.
F	FUSED DISCONNECT SWITCH	+5'-0"	5.
$T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+4'-0"	2.
	MAGNETIC STARTER	+5'-0"	7.
F	MAGNETIC STARTER / DISCONNECT COMBINATION	+5'-0"	
VFD	VARIABLE FREQUENCY DRIVE	+6'-6"	
	PANEL BOARD	TOP AT +6'-0"	
	MAIN DISTRIBUTION PANEL		
	TELEPHONE TERMINAL BOARD		
L	GROUND BUS BAR		
E	EQUIPMENT CABINET/RACK		CIRCUIT TO 120V.
	BELL	+7'-6"	
	CHIME	+7'-6"	
F	FIRE ALARM MANUAL STATION	+4'-0"	6.
H	FIRE ALARM SIGNAL HORN/STROBE	+8'-0"	6.
HCLG	CONCEALED FIRE ALARM SIGNAL HORN/STROBE	CEILING	
H	CONCEALED FIRE ALARM SIGNAL HORN/STROBE WALL	+8'-0"	6.
E	FIRE ALARM SIGNAL SPEAKER/STROBE	+8'-0"	6.
ECLG	CONCEALED FIRE ALARM SIGNAL SPEAKER/STROBE	CEILING	
E	CONCEALED FIRE ALARM SIGNAL SPEAKER/STROBE WALL	+8'-0"	6.
S	FIRE ALARM STROBE	+8'-0"	6.
SCLG	CONCEALED FIRE ALARM SIGNAL STROBE	CEILING	
S	CONCEALED FIRE ALARM SIGNAL STROBE WALL	+8'-0"	6.
K	FIRE ALARM SPEAKER ONLY	+8'-0"	6.
B	FIRE ALARM SIGNAL STROBE WITH BLUE COLORED LENS (CO VISUAL ALARM)	CEILING/ +8'-0"	MOUNT AS PER. MFR.
V	ASPIRATING SMOKE DETECTION SYSTEM	CEILING	MOUNT AS PER. MFR.
S	SMOKE DETECTOR	CEILING	
SC	SMOKE/CARBON MONOXIDE DETECTOR	CEILING	
C	CARBON MONOXIDE DETECTOR	CEILING	
H	HEAT DETECTOR	CEILING	
D	DUCT SMOKE DETECTOR		MTD. IN DUCT
D	FIRE/SMOKE DAMPER		
	DOOR HOLDER	AS NOTED	
FS	FLOW SWITCH		
TS	TAMPER SWITCH		
WF	WATER FLOOD INDICATOR		
	O.S. & Y. VALVE		SEE DIAGRAM
R	FIRE ALARM RELAY OR SECURITY RELAY		
CM	FIRE ALARM CONTROL MODULE		
MM	FIRE ALARM MONITOR MODULE		
TWZ	TWO-WAY COMMUNICATION SYSTEM ANNUNCIATOR PANEL	+4'-0"	6.
TW	TWO-WAY COMMUNICATION SYSTEM CALL STATION	+4'-0"	6.
D	DURESS PUSHBUTTON	+4'-0"	6.
D1	SECURITY SYSTEM DOOR SWITCH	DOOR JAMB	
D2	SECURITY SYSTEM OVERHEAD DOOR SWITCH	CEILING	MOUNT AS PER. MFR.
M	MAGNETIC SHEAR LOCK		
A	SECURITY SYSTEM KEYED ACCESS SWITCH	+4'-0"	6.
K	SECURITY SYSTEM KEYPAD	+4'-0"	6.
I	INFRARED SENSOR	AS NOTED	
M	SECURITY MOTION DETECTOR		MOUNT AS PER. MFR.
P	SECURITY SYSTEM POP-IT		MOUNT AS PER. MFR.
G	GLASS BREAK DETECTOR	CEILING	
ES	ELECTRIC DOOR STRIKE		12.
EL	ELECTRIC DOOR LOCK		12.
X	ACCESS CONTROL SYSTEM, REQUEST TO EXIT		
CR	ACCESS CONTROL CARD READER	+4'-0"	6.
BR	ACCESS CONTROL BIOMETRIC READER	+4'-0"	6.
	CAMERA - SEE SCHEDULE	AS NOTED	SEE DIAGRAM, SPEC.
	DOOR POSITION INDICATING SWITCH		
A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
EQ	EQUIPMENT NUMBER		
842	ARCHITECTURAL ROOM NUMBER		
	DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		

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#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
CHECKED BY: Checker
DRAWN BY: Author
DATE: 08.09.18

SYMBOLS, SCHEDULES AND NOTES

E001

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ELECTRICAL FLOOR BOX SCHEDULE

TYPE	DESCRIPTION	MFGR.	CATALOG NUMBER	PWR GANGS	L.V. GANGS
FB1	FURNITURE FEED FLOOR BOX ASSEMBLY. COORDINATE WITH ARCHITECT FOR COVER STYLE. REFER TO FLOOR PLANS FOR AMOUNT OF HOME-RUNS AND CAT-6 CABLES REQUIRED. REFER TO A/V DRAWINGS FOR A/V NEEDS.	LEGRAND	BFBFF-OG		

Project Manager: Michelle Gutknecht

FIXTURE SCHEDULE

TYPE	DESCRIPTION	MFR.	CATALOG NUMBER	VOLTS	TOTAL WATTS	LAMP
A1	1' x 4' RECESSED LED BASKET FIXTURE; CURVED OPAL CENTER DIFFUSER; SFBA AND SCBA; 0-10 DIMMING; 80,000 HOURS (L70); 5 YEAR WARRANTY.	PHILIPS DAY-BRITE	1EVG38L830-4-D-UNV-DIM + FMA14	120 V	29.5	3,800 LUMEN LED; 3000K CCT; 80+ CRI
A2	2' x 2' RECESSED LED FLAT PANEL; SOLID FRAME AND FROSTED ACRYLIC LENS; SFBA AND SCBA; 0-10V DIMMING; 60,000 HOURS (L70); 5 YEAR WARRANTY.	FOCAL POINT	FTEL-22-ACS-2500L-30K-1C-UNV-LD1	120 V	27	2,500 LUMEN LED; 3000K CCT; 80+ CRI
A2E	2' x 2' RECESSED LED FLAT PANEL, SOLID FRAME AND FROSTED ACRYLIC LENS; SFBA AND SCBA; 0-10V DIMMING; 60,000 HOURS (L70); 5 YEAR WARRANTY. PROVIDE WITH EMERGENCY BATTERY CAPABLE OF PRODUCING 1000 LUMENS OVER 90 MINUTES MINIMUM.	FOCAL POINT	FTEL-22-ACS-2500L-30K-1C-UNV-LD1-EM	120 V	27	2,500 LUMEN LED; 3000K CCT; 80+ CRI
A3	2' x 4' RECESSED LED BASKET FIXTURE; CURVED OPAL CENTER DIFFUSER; SFBA AND SCBA; 0-10 DIMMING; 80,000 HOURS (L70); 5 YEAR WARRANTY.	PHILIPS DAY-BRITE	2EVG54LH830-4-D-UNV-DIM	120 V	39.4	5,400 LUMEN LED; 3000K CCT; 80+ CRI
A3E	2' x 4' RECESSED LED BASKET FIXTURE; CURVED OPAL CENTER DIFFUSER; SFBA AND SCBA; 0-10 DIMMING; 80,000 HOURS (L70); 5 YEAR WARRANTY. PROVIDE WITH EMERGENCY BATTERY CAPABLE OF PRODUCING 1100 LUMENS OVER 90 MINUTES MINIMUM.	PHILIPS DAY-BRITE	2EVG54LH830-4-D-UNV-DIM-EMLED	120 V	39.4	5,400 LUMEN LED; 3000K CCT; 80+ CRI
D1	4" RECESSED LED DOWNLIGHT WITH TRIM AND FLANGE KIT; 54DEG MEDIUM BEAM; CLEAR REFLECTOR; SFBA AND SCBA; 0-10V DIMMING; 50,00 HOURS (L70); 5 YEAR WARRANTY.	CONTECH LIGHTING	R4NC230K12D-C4322M-CLR	120 V	14	1,400 LUMEN LED; 3000K CCT; 80+ CRI
D1E	4" RECESSED LED DOWNLIGHT WITH TRIM AND FLANGE KIT; 54DEG MEDIUM BEAM; CLEAR REFLECTOR; SFBA AND SCBA; 0-10V DIMMING; 50,00 HOURS (L70); 5 YEAR WARRANTY. PROVIDE WITH EMERGENCY BATTERY CAPABLE OF PRODUCING 700 LUMENS OVER 90 MINUTES MINIMUM.	CONTECH LIGHTING	R4NC230K12D-ER-C4322M-CLR	120 V	14	1,400 LUMEN LED; 3000K CCT; 80+ CRI
HB1	COMPACT HIGH BAY LED LUMINAIRE; DIE-CAST ALUMINIUM HOUSING; PRECISION 120 DEGREE DEAM ANGLE; DIFFUSE LENS; SURFACE MOUNTED AT THE BOTTOM EDGE OF JOIST; 0-10V DIMMING; 100,000 HOUR (L70); 5 YEAR WARRANTY.	GE CURRENT	ABV2-0-1-E-48-D-N-V-SM-K-N-W	120 V	121	18,000 LUMEN LED; 3000K CCT; 80+ CRI
HB1E	COMPACT HIGH BAY LED LUMINAIRE; DIE-CAST ALUMINIUM HOUSING; PRECISION 120 DEGREE DEAM ANGLE; DIFFUSE LENS; SURFACE MOUNTED AT THE BOTTOM EDGE OF JOIST; 0-10V DIMMING; 100,000 HOUR (L70); 5 YEAR WARRANTY. PROVIDE WITH EMERGENCY BATTERY BACKUP CAPABLE OF PRODUCING 1750LUMENS OVER 90 MINUTES MINIMUM.	GE CURRENT	ABV2-0-1-E-48-D-N-V-SM-K-N-W-EL1	120 V	121	18,000 LUMEN LED; 3000K CCT; 80+ CRI
OD1	4" RECESSEDLENSED LED DOWNLIGHT WITH TRIM AND FLANGE KIT; CLEAR REFLECTOR AND CLEAR LOWER CONE; SFBA AND SCBA; WET LOCATION LISTED; 0-10V DIMMING; 50,00 HOURS (L70); 5 YEAR WARRANTY.	CONTECH LIGHTING	R4NC230K12D-C4327-CLR-CLR	120 V	14	1,400 LUMEN LED; 3000K CCT; 80+ CRI
OD1E	4" RECESSEDLENSED LED DOWNLIGHT WITH TRIM AND FLANGE KIT; CLEAR REFLECTOR AND CLEAR LOWER CONE; SFBA AND SCBA; WET LOCATION LISTED; 0-10V DIMMING; 50,00 HOURS (L70); 5 YEAR WARRANTY. PROVIDE WITH EMERGENCY BATTERY CAPABLE OF PRODUCING 700 LUMENS OVER 90 MINUTES MINIMUM.	CONTECH LIGHTING	R4NC230K12D-ER-C4327-CLR-CLR	120 V	14	1,400 LUMEN LED; 3000K CCT; 80+ CRI
OW1	LED WALL MOUNTED LUMINAIRE FOR OUTDOOR USE; 3000K COLOR TEMPERATURE. PROVIDE WITH EMERGENCY BATTERY CAPABLE OF PRODUCING 700 LUMENS OVER 90 MINUTES MINIMUM. FINISH BY ARCHITECT	BEGA	24373-K30-LED-SCBA	120 V	21.2	1,800 LUMEN LED; 3500CCT; 80+ CRI
OW1E	LED WALL MOUNTED LUMINAIRE FOR OUTDOOR USE; 3000K COLOR TEMPERATURE. PROVIDE WITH EMERGENCY BATTERY CAPABLE OF PRODUCING 700 LUMENS OVER 90 MINUTES MINIMUM. FINISH BY ARCHITECT. PROVIDE WITH BATTERY BACKUP CAPABLE OF PRODUCING 1000LUMENS OVER 90 MINUTES MINIMUM.	BEGA	24373-K30-LED-SCBA + EM	120 V	21.2	1,800 LUMEN LED; 3500CCT; 80+ CRI
S1Es	4' SUSPENDED LED STRIP; SYMMETRIC REFLECTOR; DROP LENS DIFFUSER; SFBA AND SCBA; 0-10V DIMMING; 100,000 HOURS (L70); 5 YEAR WARRANTY. PROVIDE WITH CHAIN HANGER SET. PROVIDE WITH EMERGENCY BATTERY CAPABLE OF PRODUCING 1100 LUMENS OVER 90 MINUTES MINIMUM.	PHILIPS DAY-BRITE	FSS440L830-UNV-DIM-EMLED + FKR-136	120 V	31	4,000 LUMEN LED; 3000K CCT; 80+ CRI
S1s	4' SUSPENDED LED STRIP; SYMMETRIC REFLECTOR; DROP LENS DIFFUSER; SFBA AND SCBA; 0-10V DIMMING; 100,000 HOURS (L70); 5 YEAR WARRANTY. PROVIDE WITH CHAIN HANGER SET.	PHILIPS DAY-BRITE	FSS440L830-UNV-DIM + FKR-136	120 V	31	4,000 LUMEN LED; 3000K CCT; 80+ CRI
S2Ew	2' WALL-MOUNTED LED STRIP; SYMMETRIC REFLECTOR; DROP LENS DIFFUSER; SFBA AND SCBA; 0-10V DIMMING; 100,000 HOURS (L70); 5 YEAR WARRANTY. PROVIDE WITH BATTERY BACKUP CAPABLE OF PRODUCING 1000 LUMENS OVER 90 MINUTES MINIMUM.	PHILIPS DAY-BRITE	FSS220L830-UNV-DIM-EMLED	120 V	18	3,000 LUMEN LED; 3000K CCT; 80+ CRI
W1	NARROW PROFILE WRAP RESTROOM VANITY FIXTURE; STEEL HOUSING AND ACRYLIC LENS; WALL MOUNTED; SFBA AND SCBA; 0-10V DIMMING; 150,000 HOURS (L70); 5 YEAR WARRANTY.	PRUDENTIAL LIGHTING	HSS-LED3-MO-3-SAL-YGW-SC-UNV-SUR-D M10	120 V	16.5	1,875 LUMEN LED; 3000K CCT; 80+ CRI

LIGHT FIXTURE ABBREVIATION SCHEDULE

NOTE: NOT ALL ABBREVIATIONS WILL NECESSARILY BE USED.

A.F.F.	ABOVE FINISH FLOOR
WALL@CLG	WALL MOUNT AT CORNER OF WALL AND CEILING
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT
SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT
MOD	MODIFY STANDARD LIGHT FIXTURE AS INDICATED

LIGHT FIXTURE GENERAL NOTES

1. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES 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 DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, FUSING, BALLAST, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
4. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOUVER REQUIREMENTS AS REQUIRED.
5. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.

BIDDING REQUIREMENTS

1. BID ONLY PRODUCTS THAT ARE SPECIFIED OR APPROVED BY ADDENDUM.
2. PACKAGING OF LIGHT FIXTURES WITH OTHER SYSTEMS IS NOT ALLOWED.
3. WHEN ONLY ONE PRODUCT IS APPROVED FOR BIDDING, THE PRICE FOR THAT ITEM SHALL BE BROKEN OUT SEPARATELY WHEN SUBMITTING PRICING TO VARIOUS DISTRIBUTORS AND/OR CONTRACTORS.
4. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPTION SHALL GOVERN.

PRIOR APPROVAL REQUIREMENTS

1. PRIOR APPROVAL IS REQUIRED BEFORE BIDDING THIS PROJECT.
2. 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.
3. 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. ANY EXCEPTIONS SHALL BE SO NOTED.
4. ITEMS THAT ARE SUBMITTED AND HAVE BEEN APPROVED WILL BE LISTED IN THE ADDENDUM(S). VERBAL APPROVAL WILL NOT BE GIVEN ON ANY ITEM.
5. IT IS NOT THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER TO NOTIFY THE SUBMITTING PARTY OF ERRORS IN THE SUBMITTAL. NOTIFICATION OF ERRORS BY THE ELECTRICAL ENGINEER PRIOR TO ISSUANCE OF THE ADDENDUM(S) MAY NOT BE GIVEN.
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 NOT BE APPROVED.
7. SUPPLY POINT-BY-POINTS AS REQUIRED BY THE ELECTRICAL ENGINEER AND/OR LIGHTING DESIGNER.
8. SAMPLE FIXTURES MUST BE SUPPLIED WITH A CORD, PLUG AND 120V BALLAST.

LIGHTING SHOP DRAWING REQUIREMENTS

1. REFER TO SPECIFICATIONS 260500, 265100 & 265600 (16001, 16510 & 16551).
2. MUST INCLUDE BALLAST AND LAMP CUT SHEETS.
3. LINEAR LIGHTING MUST INCLUDE DETAILED DRAWINGS WITH SUPPORT DETAILS, STEM LOCATIONS AND HAVE ALL LENGTHS IDENTIFIED WITH STEM LOCATIONS.
4. COLOR SAMPLES MUST BE INCLUDED IN FIRST SUBMITTAL.
5. CUT SHEETS MUST BE STAMPED WITH THE FACTORY REPRESENTATIVE'S COMPANY NAME.
6. VALUE ENGINEERING CONDUCTED WITHOUT THE DESIGN TEAM IE; ARCHITECT, OWNER, ENGINEER & LIGHTING CONSULTANT/DESIGNER WILL NOT BE ALLOWED, REVIEWED OR APPROVED.
7. PROVIDE A LIST OF SPARE PARTS, EQUIPMENT & LAMPS.

EQUIPMENT SCHEDULE

UNIT	#	DESCRIPTION	LOAD HP	LOAD FLA	LOAD MCA	LOAD VA	VOLT	PHASE	FULL LOAD AMPS	CONDUIT SIZE	WIRES SETS	WIRES QTY	WIRES SIZE	WIRES EQUIP. GND.	OCPD TYPE	OCPD AMPS	REFERENCE NOTES STARTER	REFERENCE NOTES DISCONNECT	REFERENCE NOTES OTHER	REMARKS
ACU	1	AIR COOLED CONDENSING UNIT		0 A	11 A	0 VA	208 V	1	8.8 A	3/4"	1	2	12	12	CB	20 A		2A		
ACU	1A	AIR COOLED CONDENSING UNIT		0 A	79 A	0 VA	208 V	3	63.2 A	1"	1	3	3	8	CB	100 A		2A		
ACU	1B	AIR COOLED CONDENSING UNIT		0 A	79 A	0 VA	208 V	3	63.2 A	1"	1	3	3	8	CB	100 A		2A		
AH	1A	AIR HANDLER		0 A	39 A	0 VA	208 V	3	31.2 A	3/4"	1	3	8	10	CB	50 A		2A		
AH	1B	AIR HANDLER		0 A	39 A		208 V	3	31.2 A	3/4"	1	3	8	10	CB	50 A		2A		
EF	1	EXHAUST FAN	0.33				120 V	1	9.8 A	3/4"	1	2	12	12	CB	20 A		4A		
EF	2	EXHAUST FAN	1.00				120 V	1	16.0 A	3/4"	1	2	12	10	CB	30 A		4A		
EH	1	ELECTRIC HEAT		0 A	19 A	0 VA	208 V	1	15.4 A	3/4"	1	2	12	10	CB	25 A		2A		
EH	2	ELECTRIC HEAT		0 A	19 A	0 VA	208 V	1	15.4 A	3/4"	1	2	12	10	CB	25 A		2A		
EH	3	ELECTRIC HEAT		0 A	10 A	0 VA	208 V	1	7.7 A	3/4"	1	2	12	12	CB	20 A		2A		
EH	4	ELECTRIC HEAT		0 A	19 A	0 VA	208 V	1	15.4 A	3/4"	1	2	12	10	CB	25 A		2A		
EH	5	ELECTRIC HEAT		0 A	14 A	0 VA	208 V	1	11.5 A	3/4"	1	2	12	12	CB	20 A		2A		
EH	6	ELECTRIC HEAT		0 A	14 A	0 VA	208 V	1	11.5 A	3/4"	1	2	12	12	CB	20 A		2A		
EH	7	ELECTRIC HEAT		0 A	14 A	0 VA	208 V	1	11.5 A	3/4"	1	2	12	12	CB	20 A		2A		
EH	8	ELECTRIC HEAT		0 A	48 A	0 VA	208 V	1	38.4 A	3/4"	1	2	6	10	CB	60 A		2A		
EWH	1	ELECTRIC WATER HEATER		39 A	0 A	0 VA	208 V	3	38.5 A	3/4"	1	3	6	10	CB	50 A		2A		
RCP	1	PUMP		0 A	0 A	90 VA	120 V	1	0.8 A	3/4"	1	2	12	12	CB	15 A		4A		
RTU	1	ROOF TOP UNIT		0 A	30 A	0 VA	208 V	3	24.0 A	3/4"	1	3	10	10	CB	40 A		2A		

NOTES:

1. **NON-FUSED DISCONNECT SWITCH**
2. **FUSED DISCONNECT SWITCH**
3. **BREAKER IN ENCLOSURE**
4. **MANUAL STARTER W/THERMAL OVERLOAD**
5. **MAGNETIC STARTER**
6. **MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION**
7. **MAGNETIC STARTER/FUSED DISCONNECT COMBINATION**
8. **MAGNETIC STARTER/BREAKER COMBINATION**
9. **VARIABLE FREQUENCY DRIVE**
10. **REDUCED VOLTAGE STARTER**
11. **DIRECT CONNECTION**
12. **RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.**
13. **TWO-SPEED STARTER, COORDINATE W/MOTOR TYPE**
14. **SOLID STATE SOFT STARTER**

A. FURNISHED, INSTALLED, AND CONNECTED UNDER DIVISION 26(16).
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 26(16).
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26(16).
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.

CB = CIRCUIT BREAKER - THERMAL MAGNETIC
CKW = CHILLER KILOWATTS

NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN PHASE CONDUCTOR.

SENSOR GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE SENSOR MANUFACTURER FOR PROPER PLACEMENT AND ADJUSTMENT OF OCCUPANCY SENSORS.
2. EACH ZONE SHALL HAVE COVERAGE BY OCCUPANCY SENSOR SUCH THAT NO BLIND SPOT EXIST.
3. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE FREE INSTALLATION.
4. THE LOCATION AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY COVER THE RESPECTIVE ROOM.

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SCHEDULES

E002

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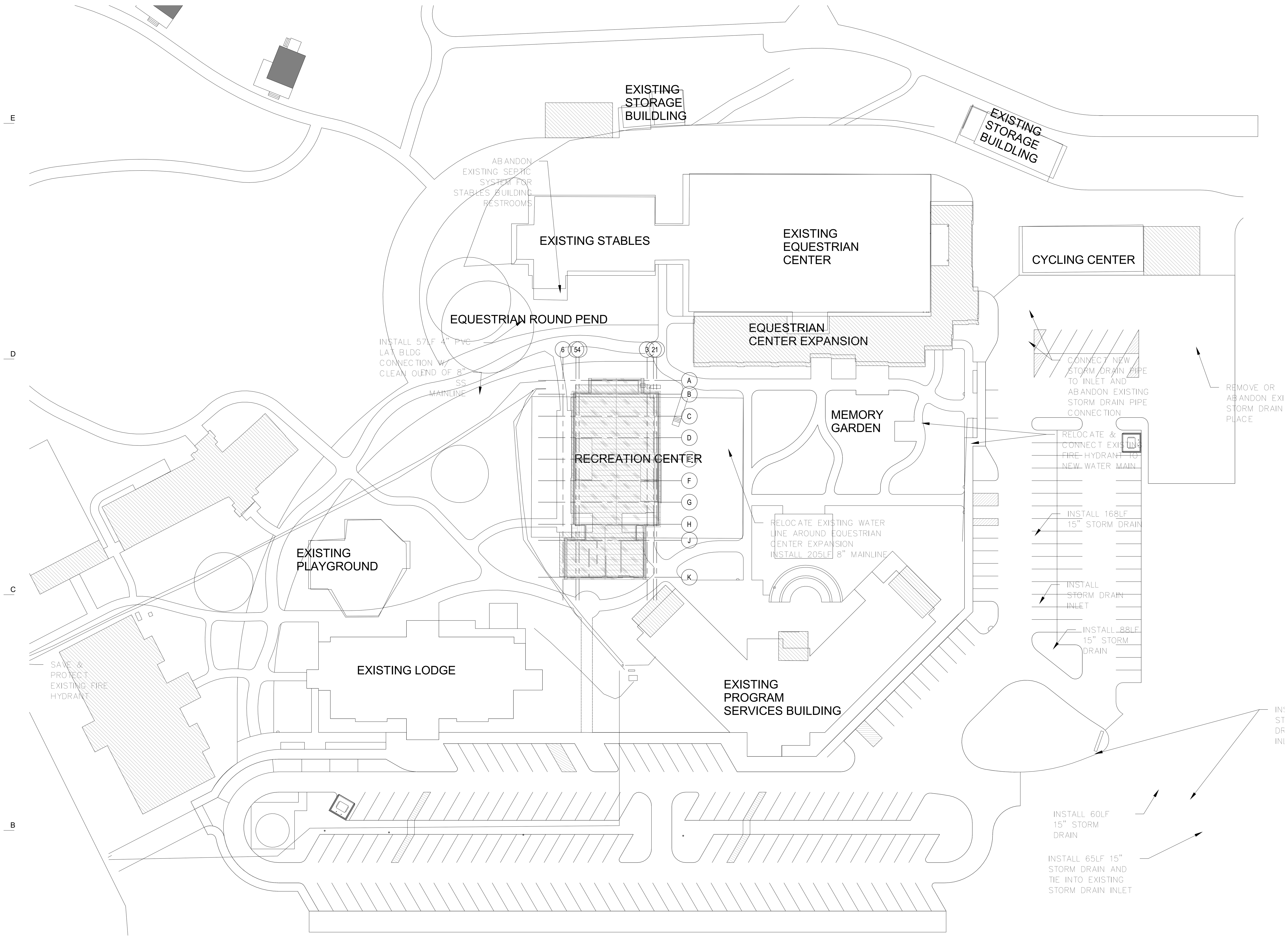

ELECTRICAL SITE PLAN
SCALE = 1" = 30'-0"

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ELECTRICAL SITE PLAN

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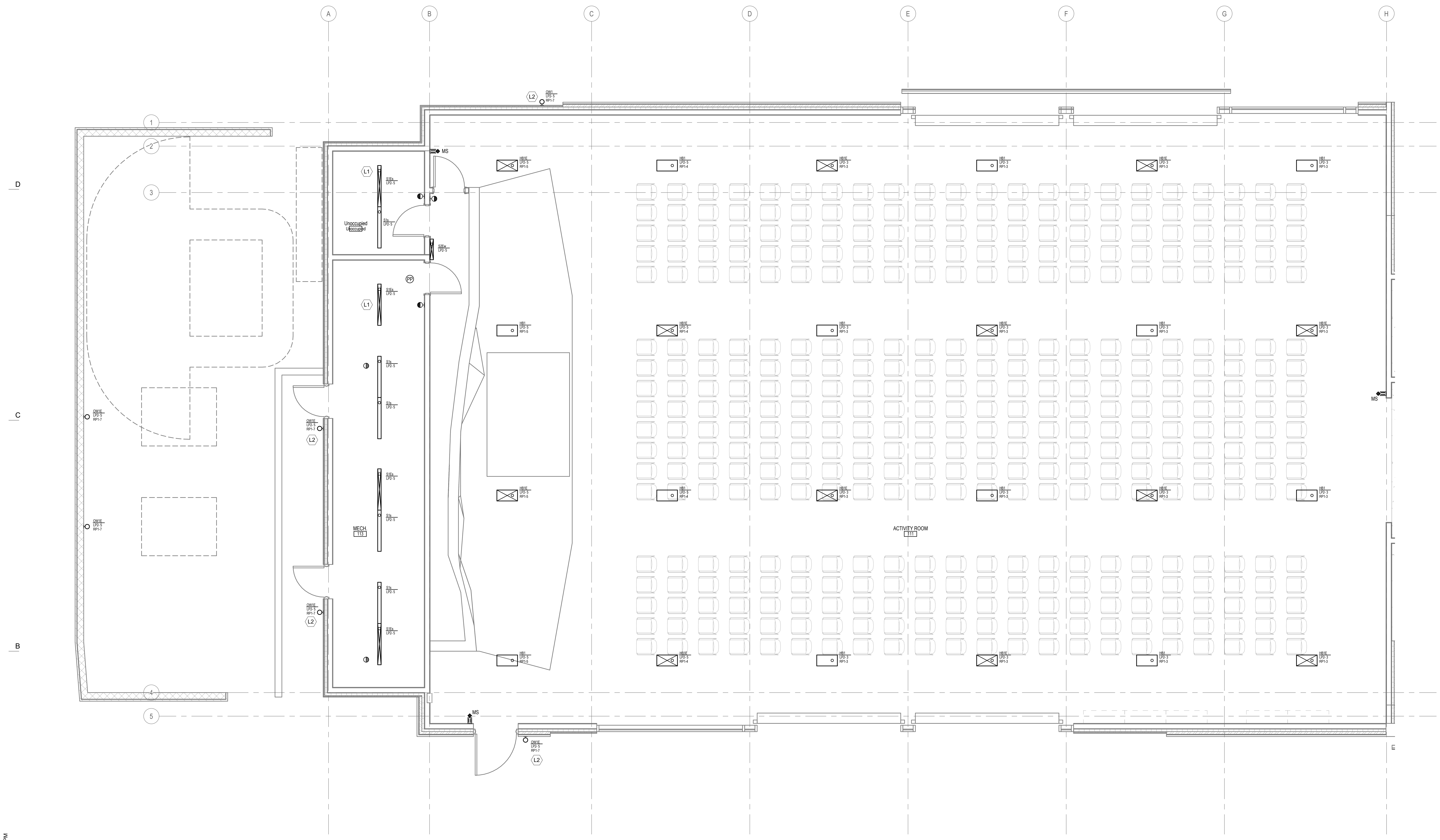
E101

GENERAL NOTES

1. PROVIDE UNSWITCHED HOT TO ALL EMERGENCY LIGHTS AND LIGHT FIXTURES WITH BATTERY PACKS FOR EMERGENCY POWER.
2. SEE LIGHTING LIGHTING CONTROL SWITCH CONFIGURATION DIAGRAMS ON SHEET E701 FOR ADDITIONAL LIGHTING CONTROL INFORMATION.

SHEET KEYNOTES

L1	FIXTURE LAYOUT FOR REFERENCE ONLY. ADJUST LOCATION TO PROVIDE EVEN ILLUMINATION AND TO AVOID OBSTRUCTION OF ILLUMINATION BY PIPES, DUCTS, EQUIPMENT, ETC. SUSPEND FISTURES ON CHAINS OR SURFACE MOUNT TO UNISTRUT AS REQUIRED.
L2	CONFIRM FINAL LOCATION AND MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.



AREA A LIGHTING PLAN
SCALE = 1/4" = 1'-0"

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AREA A LIGHTING PLAN

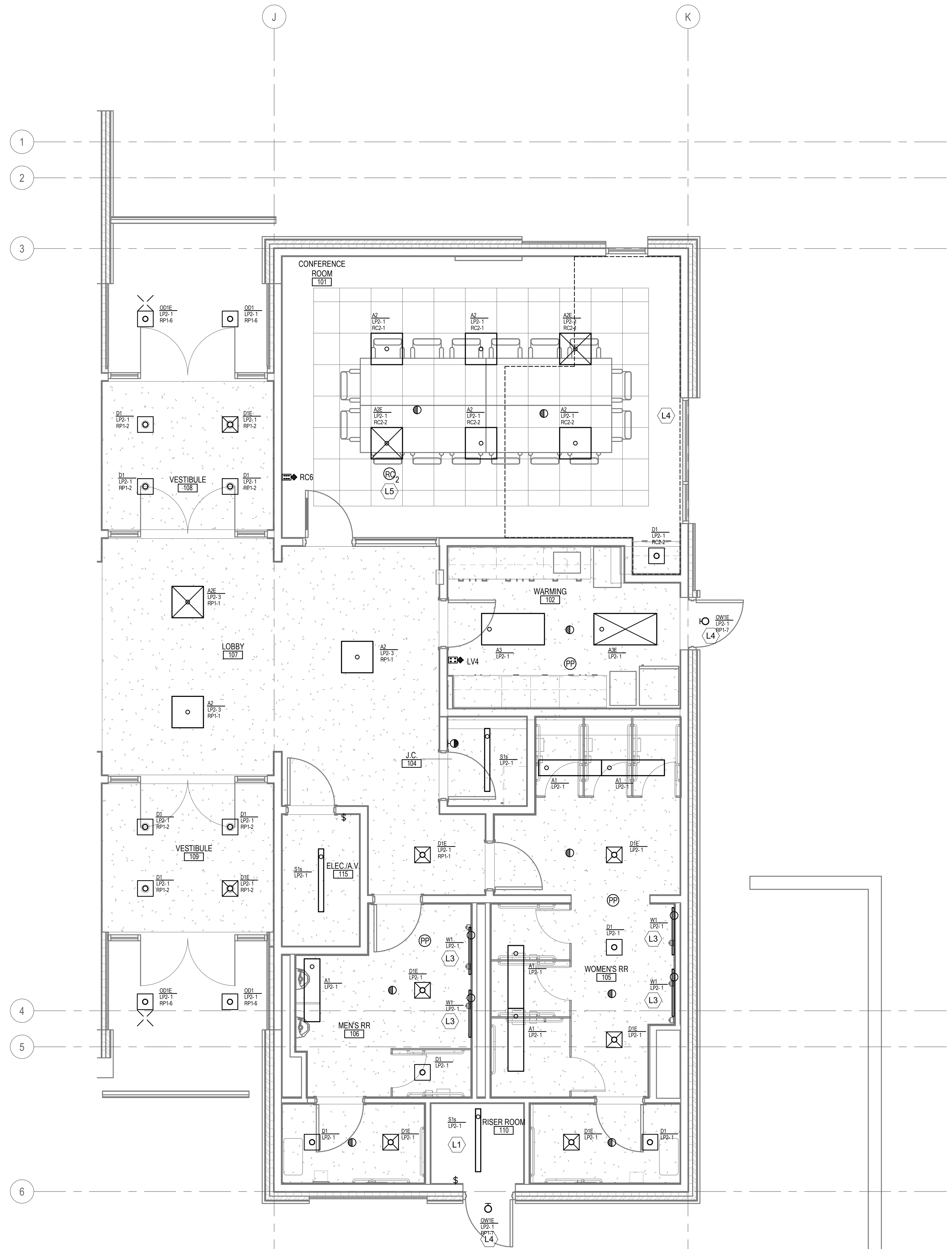
E201

GENERAL NOTES

1. PROVIDE UNSWITCHED HOT TO ALL EMERGENCY LIGHTS AND LIGHT FIXTURES WITH BATTERY PACKS FOR EMERGENCY POWER.
2. SEE LIGHTING LIGHTING CONTROL SWITCH CONFIGURATION DIAGRAMS ON SHEET E701 FOR ADDITIONAL LIGHTING CONTROL INFORMATION.

SHEET KEYNOTES

L1	FIXTURE LAYOUT FOR REFERENCE ONLY. ADJUST LOCATION TO PROVIDE EVEN ILLUMINATION AND TO AVOID OBSTRUCTION OF ILLUMINATION BY PIPES, DUCTS, EQUIPMENT, ETC. SUSPEND FISTURES ON CHAINS OR SURFACE MOUNT TO UNISTRUT AS REQUIRED.
L3	CONFIRM FINAL LOCATION AND MOUNTING HEIGHT OF WALL MOUNTED LIGHTING FIXTURES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
L4	DAY-LIGHT ZONE CONTROL NOT REQURED IN THIS AREA PER IECC.
L5	COORDINATE ROOM CONTROLLLER REQUIRMENTS WITH RECEPTACLE CONTROL IN THIS PLACE.



AREA B LIGHTING PLAN
SCALE = 1/4" = 1'-0"

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AREA B LIGHTING PLAN

E202

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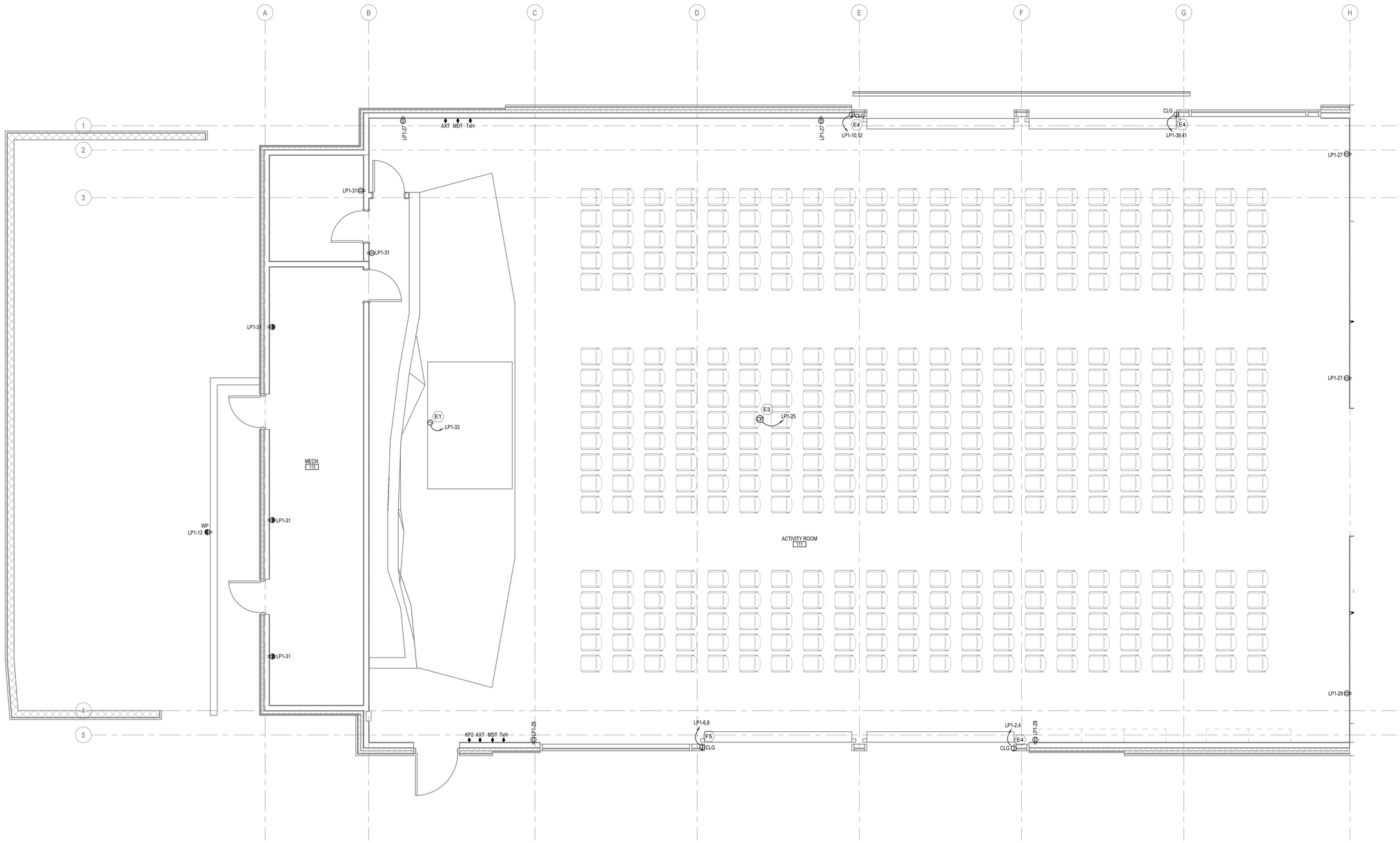
SHEET KEYNOTES

E1	PROVIDE POWER FOR MOTORIZED SCREEN. COORDINATE LOCATION OF JUNCTION BOX WITH SHOP DRAWINGS AND ARCHITECT SO THAT ALL ELECTRICAL CONNECTIONS ARE CONCEALED IN CEILING. PROVIDE CONDUIT AND ALL WIRE, TERMINATION, ETC. TO SCREEN CONTROLLER. COORDINATE LOCATION OF CONTROLLER WITH ARCHITECT PRIOR TO ROUGH-IN.
E3	PROVIDE POWER AND DATA FOR THE PROJECTOR. REFER TO AUDIOVISUAL DRAWINGS ON SHEET ET301 FOR EXACT LOCATION.
E4	PROVIDE JUNCTION BOX ABOVE CEILING FOR OVERHEAD DOOR MOTOR POWER NEEDS. COORDINATE EXACT POWER REQUIRMENTS WITH SHOP DRAWINGDS. PROVIEDE ALL NECESSARY 120 AND LOW VOLTAGE WIRING REQUIRMENTS FOR CONTROLLER. COORDINATE EXACT LOCATION OF DOOR CONTROLLER WITH ARCHITECT PRIOR TO ROUGH-IN.
F5	REMOTE FIRE ALARM ANNOUNCIATOR PANEL. REFER TO DIAGRAM D002 ON SHEET E701 FOR ADDITIONAL INFORMATION.



AREA A POWER PLAN
SCALE = 1/4" = 1'-0"

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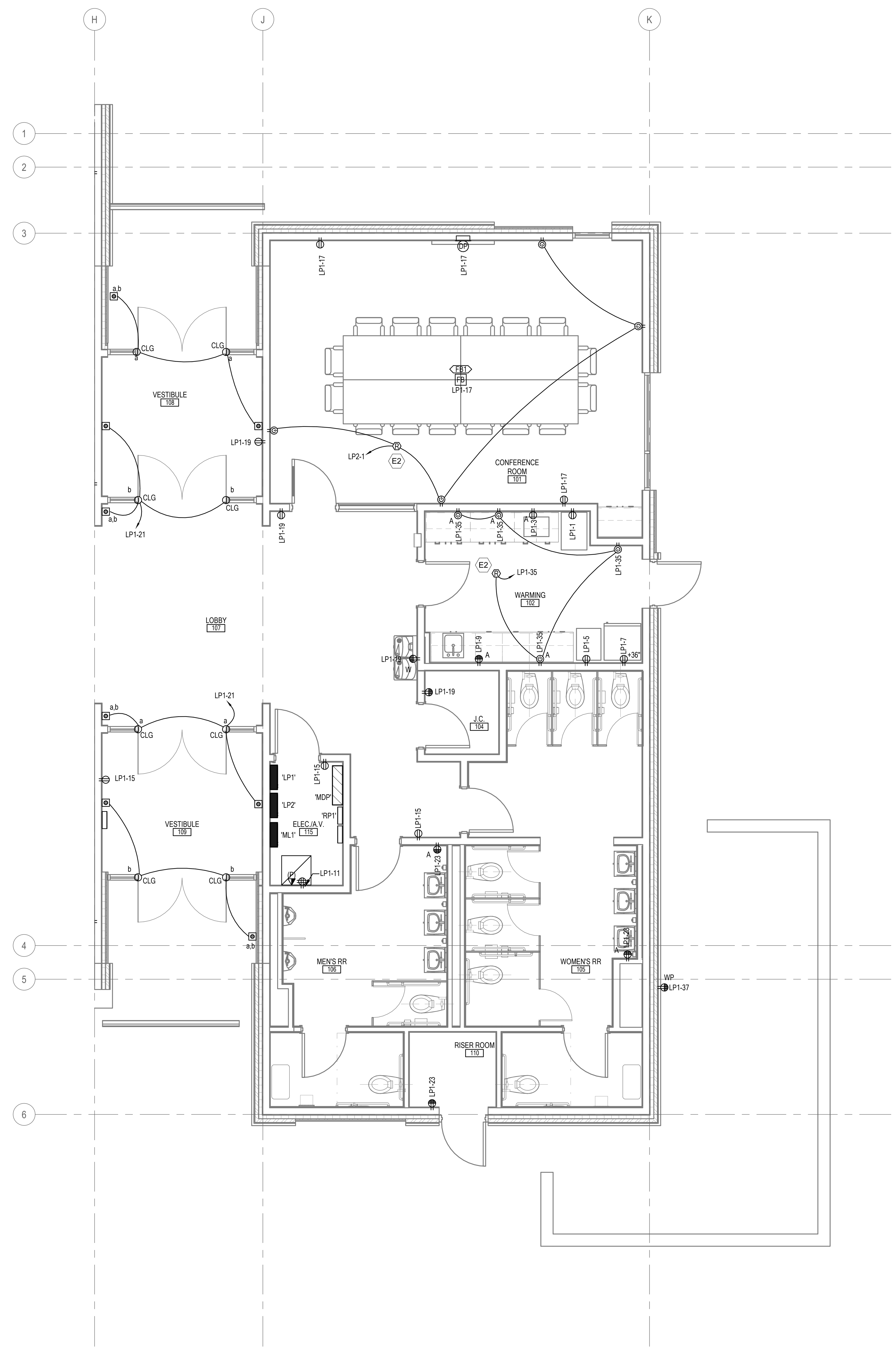
AREA A POWER PLAN

E301

SHEET KEYNOTES

E2	INDICATED CIRCUIT AT ROOM CONTROLLER IS TO CONTROL RECEPTACLES THAT IS WIRED TO CONTROLLED RECEPTACLES SHALL BE ROUTED THROUGH RECEPTACLE SWITCH PACK. SWITCH PACK SHALL BE CONTROLLED BY ROOM CONTROLLER. SEE DIAGRAM 3 ON SHEET E703 FOR ADDITIONAL INFORMATION.



AREA B POWER PLAN
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AREA B POWER PLAN

E302

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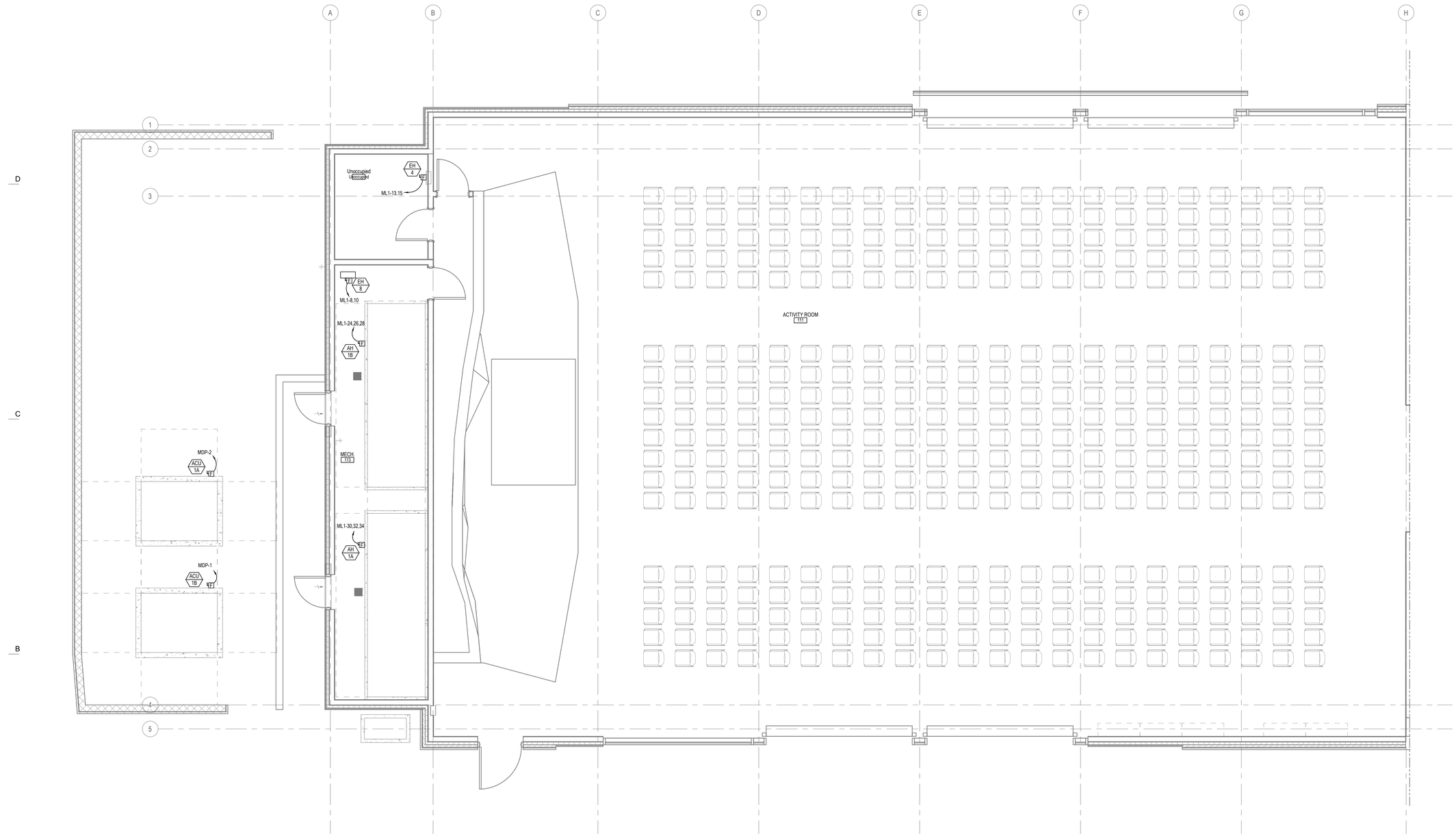

AREA A MECHANICAL POWER PLAN
SCALE = 1/4" = 1'-0"

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AREA A MECHANICAL POWER PLAN

E303

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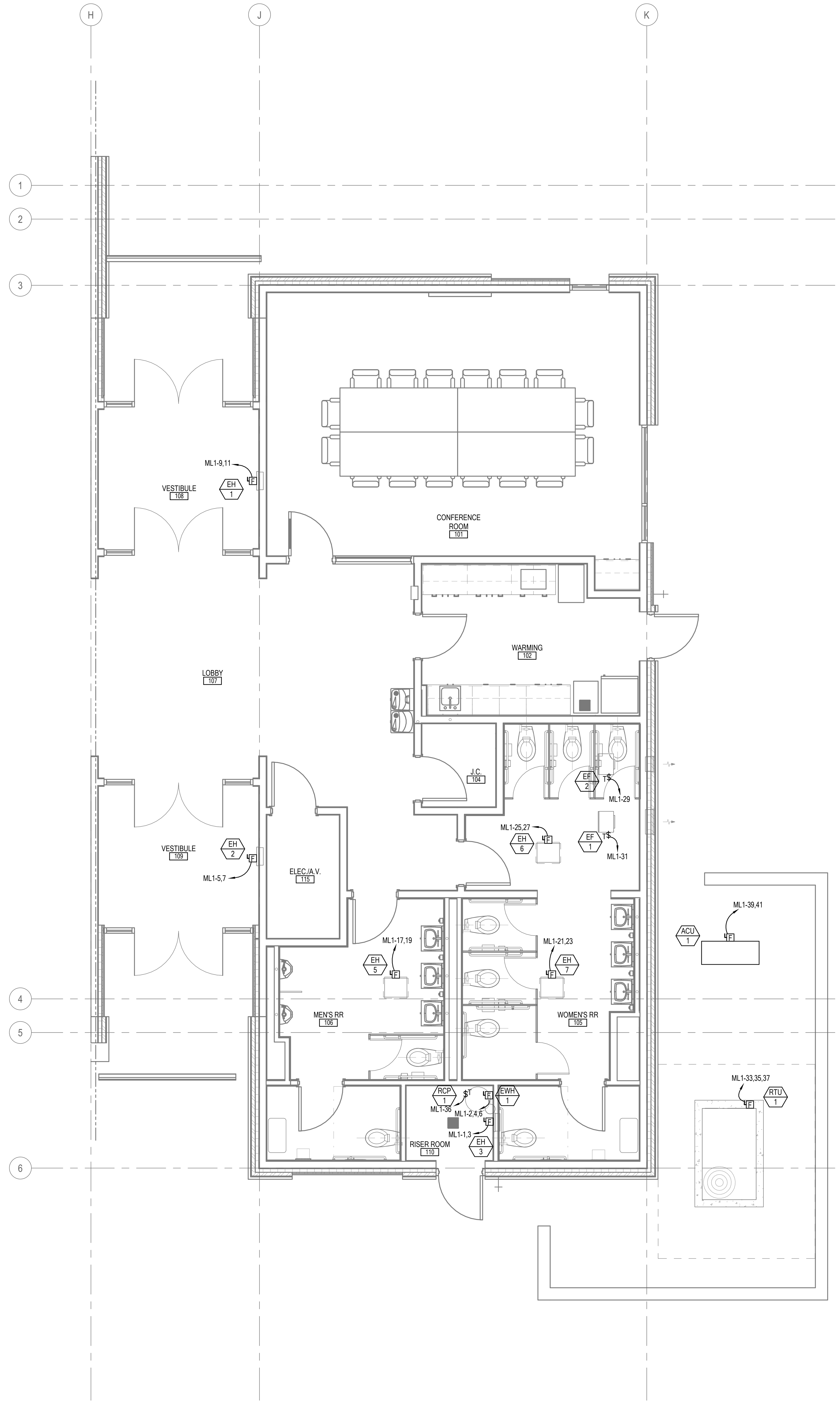

AREA B MECHANICAL POWER PLAN

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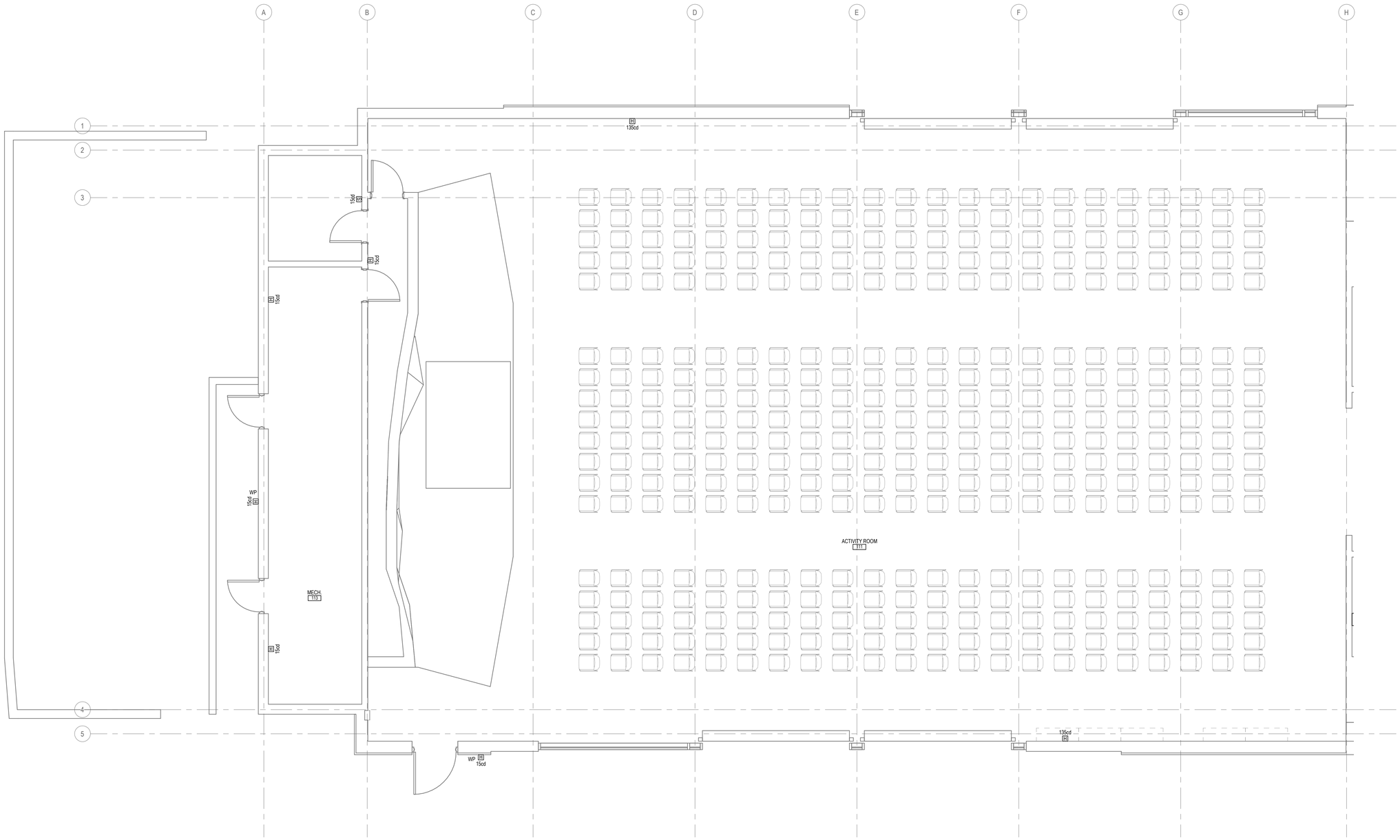
AREA B MECHANICAL POWER PLAN

E304



AREA A SYSTEMS PLAN
SCALE = 1/4" = 1'-0"

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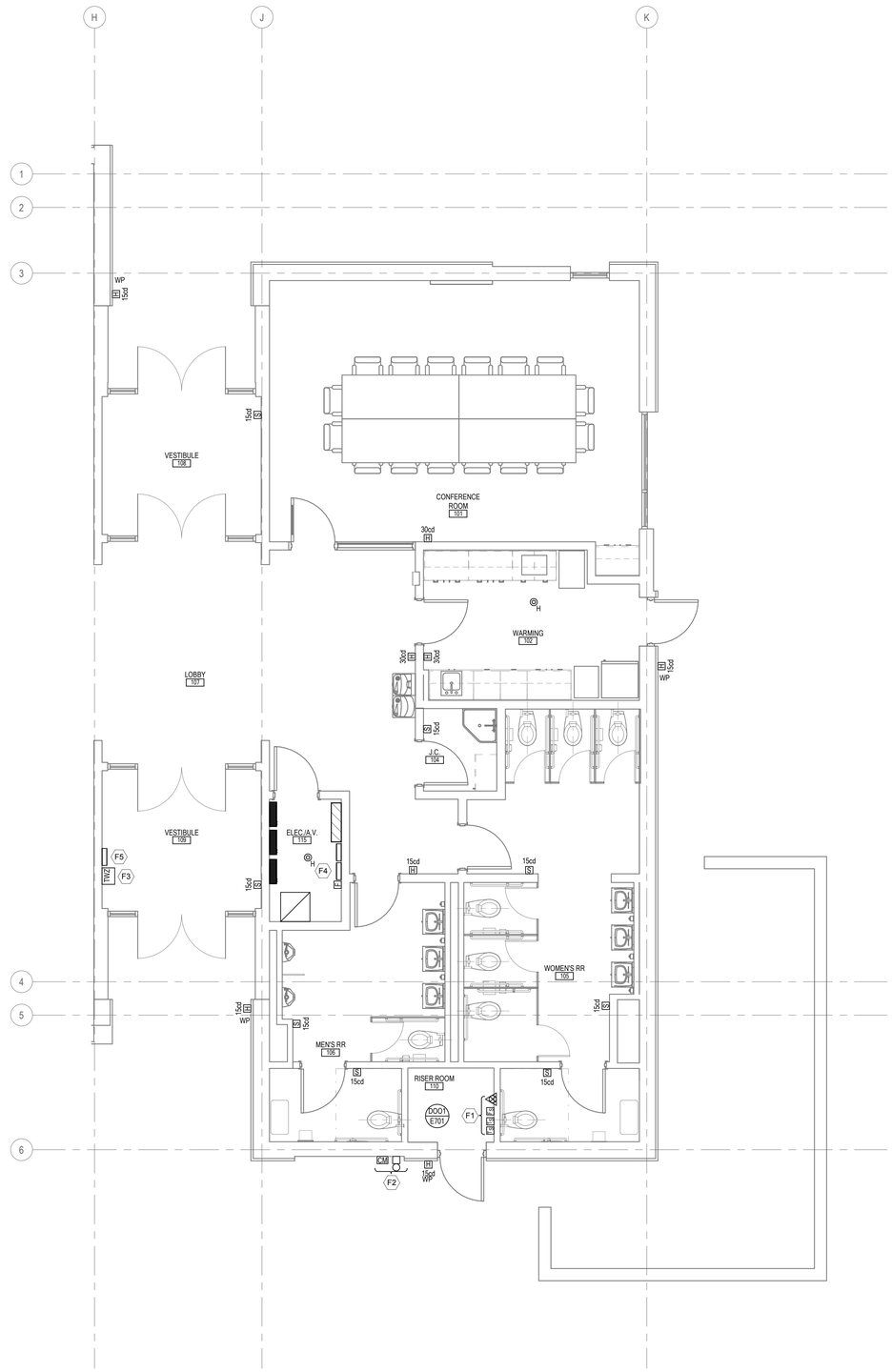
AREA A SYSTEMS PLAN

E401



AREA B SYSTEMS PLAN
SCALE = 1/4" = 1'-0"

GENERAL NOTES

1. PROVIDE 120V EMERGENCY CIRCUIT TO ALL FIRE/SMOKE DAMPERS RELAYS. NUMBER OF DEVICES PER CIRCUIT TO SHALL NOT EXCEED EIGHT. PROVIDE FIRE ALARM MODULES AND RELAYS AS NECESSARY FOR ALL FIRE/SMOKE DAMPERS SHOWN ON DIVISION 23 DRAWINGS. ALL FIRE/SMOKE DAMPERS SHALL HAVE A MANUAL OVERRIDE SWITCH. PROVIDE DUCT DETECTOR WITHIN 5'-0" OF EACH FIRE/SMOKE DAMPER. REFER TO DIAGRAM D012 IN SHEET E701 FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

F1	PROVIDE MONITOR MODULE FOR ALL TAMPER AND FLOW SWITCHES SHOWN ON THE DRAWINGS. LOCATE EXACT LOCATION OF SHUT OFF VALVE WITH MECHANICAL DRAWINGS PRIOR TO ROUGH-IN. REFER TO DETAIL D001 IN SHEET E702 FOR MORE INFORMATION.
F2	FIRE SPRINKLER BELL WITH CONTROL MODULE FOR RISER. COORDINATE WITH SPRINKLER CONTRACTOR FOR EXACT LOCATION OF HOSE CONNECTION IN THE OUTSIDE OF THE BUILDING PRIOR TO ROUGH-IN. PROVIDE 120V EMERGENCY CIRCUIT TO BELL.
F3	PROVIDE TWO-WAY COMMUNICATIONS SYSTEMS HEAD-END UNIT FOR NEW FIRE ALARM SYSTEM. PROVIDE A 120V DEDICATED CIRCUIT FROM 1LP1 AND ONE CATEGORY-6 CABLE AT THIS LOCATION. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
F4	PROVIDE (2) 120V SINGLE PHASE DEDICATED CIRCUITS AND (2) CATEGORY CABLE AT THIS LOCATION FOR FIRE ALARM CONTROL PANEL. COORDINATE EXACT LOCATION OF PANEL WITH ARCHITECT PRIOR TO ROUGH-IN.
F5	REMOTE FIRE ALARM ANNOUNCIATOR PANEL. REFER TO DIAGRAM D002 ON SHEET E701 FOR ADDITIONAL INFORMATION.

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CONSTRUCTION DOCUMENTS

NEXUS PROJ. #:	18065
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AREA B SYSTEMS PLAN

E402

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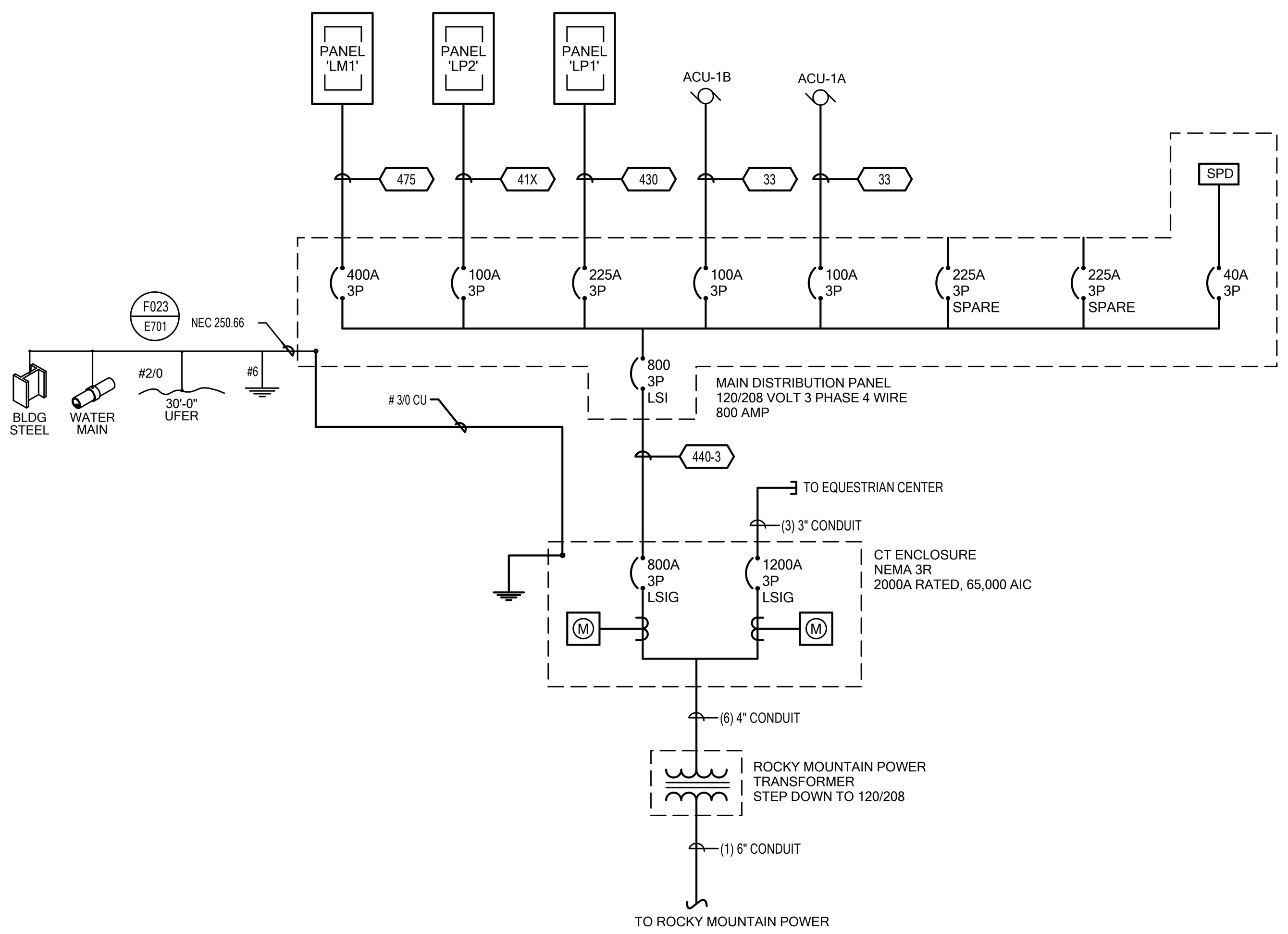

1 ONE-LINE DIAGRAM
NO SCALE

ONE-LINE GENERAL NOTES

1. PROVIDE PROTECTION DEVICE STUDY AS OUTLINED ON 26 0573 FOR THE NORMAL ELECTRICAL BRANCHES PRIOR TO SUBMITTAL OF PANELS.
2. PROVIDE DOOR-IN-DOOR COVERS FOR ALL PANELBOARDS.
3. SEE PLANS LOCATIONS OF PANELBOARDS, SWITCHBOARDS, TRANSFER SWITCHES, BUSWAY, TRANSFORMS,DISCONNECTS, ETC. PROVIDE NEMA 1(INDOOR) OR NEMA 3R(OUTDOOR) ENCLOSURES AS REQUIRED.
4. SUBMIT DIMENSIONED DRAWINGS OF ALL ELECTRICAL ROOMS WITH PANELBOARDS, SWITHCBOARDS, TRANSFER SWITCHES, SURGE PROTECTION, BUSWAY TRANSFORMERS, DISCONNECTS ETC. CLEARLY IDENTIFIED. DIMENSIONED DRAWINGS SHALL BE BASED UPON ACTUAL EQUIPMENT SIZED FROM SHOP DRAWINGS.
5. PROVIDE ARC FAULT REDUCTION SWITCH FOR ALL CIRCUIT BREAKERS RATED 1200 AMPS OR LARGER
6. PROVIDE ELECTRONIC TRIP CIRCUIT BREAKER FOR ALL CIRCUIT BREAKERS 600A AND ABOVE. REFER TO THE OVERCURRENT PROTECTION SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS.

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSUL-ATION	EQ. GND. COND.(AL)
31X	120	2"	3	1/0	XHHW-2	4
41X	120	2"	4	1/0	XHHW-2	4
51X	120	2"	5 *	1/0	XHHW-2	4
32X	135	2"	3	2/0	XHHW-2	4
42X	135	2"	4	2/0	XHHW-2	4
52X	135	2"	5 *	2/0	XHHW-2	4
33X	155	2"	3	3/0	XHHW-2	4
43X	155	2"	4	3/0	XHHW-2	4
53X	155	3"	5 *	3/0	XHHW-2	4
34X	180	2"	3	4/0	XHHW-2	4
44X	180	3"	4	4/0	XHHW-2	4
54X	180	3"	5 *	4/0	XHHW-2	2
325	205	2"	3	250	XHHW-2	2
425	205	3"	4	250	XHHW-2	2
525	205	3"	5 *	250	XHHW-2	2
330	230	3"	3	300	XHHW-2	2
430	230	3"	4	300	XHHW-2	2
530	230	3"	5 *	300	XHHW-2	2
335	250	3"	3	350	XHHW-2	2
435	250	3"	4	350	XHHW-2	2
535	250	3"	5 *	350	XHHW-2	2
340	270	3"	3	400	XHHW-2	2
440	270	3"	4	400	XHHW-2	2
540	270	3"	5 *	400	XHHW-2	2
350	310	4"	3	500	XHHW-2	1
450	310	4"	4	500	XHHW-2	1
550	310	4"	5 *	500	XHHW-2	1
375	385	4"	3	750	XHHW-2	1
475	385	4"	4	750	XHHW-2	1
575	385	4"	5 *	750	XHHW-2	1

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE FOR PARALLEL RUNS

TYPE	MAX. O.C. PROT.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND. COND.(AL)
325-2	400	410	2	3	250	2.5"	2/0
425-2	400	410	2	4	250	2.5"	2/0
525-2	400	410	2	5 *	250	2.5"	2/0
350-2	600	620	2	3	500	3"	2/0
450-2	600	620	2	4	500	3"	2/0
550-2	600	620	2	5 *	500	4"	2/0
375-2	800	770	2	3	750	3"	3/0
475-2	800	770	2	4	750	4"	3/0
575-2	800	770	2	5 *	750	4"	3/0
340-3	800	810	3	3	400	2.5"	3/0
440-3	800	810	3	4	400	3"	3/0
540-3	800	810	3	5 *	400	3"	3/0
375-3	1000	1155	3	3	750	4"	4/0
475-3	1000	1155	3	4	750	4"	4/0
575-3	1000	1155	3	5 *	750	4"	4/0
350-4	1200	1240	4	3	500	4"	250
450-4	1200	1240	4	4	500	4"	250
550-4	1200	1240	4	5 *	500	4"	250
340-6	1600	1620	6	3	400	4"	350
440-6	1600	1620	6	4	400	4"	350
540-6	1600	1620	6	5 *	400	4"	350
475-6	2000	2310	6	4	750	4"	400
475-7	2500	2695	7	4	750	5"	600
475-8	3000	3080	8	4	750	5"	600
475-11	4000	4235	11	4	750	5"	750

NOTES
IN PARALLEL RUNS SIZE GND. COND. IN ACCORDANCE WITH NEC PARA. 250-122.

GND. CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS

* 200% NEUTRAL
** COPPER CONDUCTOR (XHHW)

PROVIDE COMPACT STRANDED ALUMINUM ASSOCIATION 8000 SERIES ALLOY CONDUCTORS.

PROVIDE TERMINATION FOR ALUMINUM-ALLOY CONDUCTORS OF HYDRAULIC COMPRESSION TYPE ONLY LISTED UNDER UL 486-B MARKED "AL7CU" FOR 75° RATED CIRCUITS.

PROVIDE ALL ELECTRICAL EQUIPMENT WITH PROPER SIZING TO ACCOMMODATE ALUMINUM CONDUCTORS, COORDINATE WITH EQUIPMENT SUPPLIER.

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY / ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY Δ 480-208/120 Y

TRANS KVA	O.C. PROT.	TYPE COND.*	GND. COND.**	MIN. Z%	O.C. PROT.	TYPE COND.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND. COND.
30	50	36	8	3	100	T41X-1	120	1	4	1/0	1-1/2"	6
45	70	34	4	3	175	T44X-1	180	1	4	4/0	3"	4
75	125	32X	2	3	225	T435-1	250	1	4	350	3"	2
112.5	175	34X	2	4	400	T425-2	410	2	4	250	3"	1
150	300	350	2/0	4	600	T450-2	610	2	4	500	4"	2/0
225	400	375	3/0	4	800	T440-3	810	3	4	400	4"	3/0
300	600	350-2	3/0	5	1200	T450-4	1240	4	4	500	4"	250
500	800	340-3	3/0	5	1600	T440-6	1620	6	4	400	4"	350
750	1200	350-4	3/0	5	3000	T450-10	3100	10	4	500	4"	400***

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY / ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY (200% NEUTRAL) Δ 480-208/120 Y

TRANS KVA	O.C. PROT.	TYPE COND.*	GND. COND.**	MIN. Z%	O.C. PROT.	TYPE COND.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND. COND.
30	50	36	8	3	100	T51X-1	120	1	5	1/0	2"	6
45	70	34	4	3	175	T545-1	180	1	5	4/0	3"	4
75	125	32X	2	3	225	T535-2	250	1	5	350	3"	2
112.5	175	34X	2	4	400	T525-2	410	2	5	250	3"	1
150	300	350	2/0	4	600	T550-2	610	2	5	500	4"	2/0
225	400	375	3/0	4	800	T540-3	810	3	5	400	4"	3/0
300	600	350-2	3/0	5	1200	T550-4	1240	4	5	500	4"	250
500	800	340-3	3/0	5	1600	T540-6	1620	6	5	400	4"	350
750	1200	350-4	3/0	5	3000	T550-10	3100	10	5	500	4"	400***

* SEE SCHEDULE FOR CONDUIT AND WIRE SIZE ** COPPER GROUNDING ELECRODE *** CU GROUND

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CHECKED BY: Checker
DRAWN BY: Author
DATE: 08.09.18

ONE-LINE DIAGRAM

E501

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PANELBOARD SCHEDULE

PANEL: ML1 TYPE: Type 1 VOLTS: 120/208 Wye PHASE: 3 WIRES: 4

MOUNTING: SURFACE LOCATION: Space 115 MAINS: MLO

FED FROM: ____ SUBFEED LUGS

AMP: 400 A ____ ISO GROUND

____ 200% NEUTRAL

____ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
EH-3	20 A	2	12	1	799 VA			4623 VA			2	6	3	50 A	EWH-1
--	--	--	--	3		799 VA			4623 VA		4	--	--	--	--
EH-2	25 A	2	12	5			1597 VA			4623 VA	6	--	--	--	--
--	--	--	--	7	1597 VA			3994 VA			8	6	2	60 A	EH-8
EH-1	25 A	2	12	9		1597 VA			3994 VA		10	--	--	--	--
--	--	--	--	11			1597 VA				12				
EH-4	25 A	2	12	13	1597 VA						14				
--	--	--	--	15		1597 VA					16				
EH-5	20 A	2	12	17			1198 VA				18				
--	--	--	--	19	1198 VA						20				
EH-7	20 A	2	12	21		1198 VA					22				
--	--	--	--	23			1198 VA			3747 VA	24	8	3	50 A	AH-1B
EH-6	20 A	2	12	25	1198 VA			3747 VA			26	--	--	--	--
--	--	--	--	27		1198 VA			3747 VA		28	--	--	--	--
EF-2	30 A	1	12	29			1920 VA			3747 VA	30	8	3	50 A	AH-1A
EF-1	20 A	1	12	31	1176 VA			3747 VA			32	--	--	--	--
RTU-1	40 A	3	10	33		2882 VA			3747 VA		34	--	--	--	--
--	--	--	--	35			2882 VA			90 VA	36	12	1	20 A	RCP-1
--	--	--	--	37	2882 VA						38				
ACU-1	20 A	2	12	39		915 VA					40				
--	--	--	--	41			915 VA				42				
					26558	26298	23515	TOTAL (VA)							CONNECTED LOAD TOTAL
					225 A	223 A	196 A	AMPS/PHASE							76371 VA

Legend:
* PROVIDE 5mA GFCI CIRCUIT BREAKER

AIC RATING ____ AMPS RMS SYSM.

PANELBOARD SCHEDULE

PANEL: LP2 TYPE: Type 1 VOLTS: 120/208 Wye PHASE: 3 WIRES: 4

MOUNTING: SURFACE LOCATION: Space 115 MAINS: MLO

FED FROM: ____ SUBFEED LUGS

AMP: 100 A ____ ISO GROUND

____ 200% NEUTRAL

____ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
LTG	20 A	1		1	1632 VA			0 VA			2	--	1	20 A	SPARE
LTG	20 A	1		3		1041 VA			0 VA		4	--	1	20 A	SPARE
LTG MECH. 112	20 A	1		5			904 VA			0 VA	6	--	1	20 A	SPARE
SPARE	20 A	1	--	7	0 VA			0 VA			8	--	1	20 A	SPARE
SPARE	20 A	1	--	9		0 VA			0 VA		10	--	1	20 A	SPARE
SPARE	20 A	1	--	11			0 VA			0 VA	12	--	1	20 A	SPARE
SPARE	20 A	1	--	13	0 VA			0 VA			14	--	1	20 A	SPARE
SPARE	20 A	1	--	15		0 VA			0 VA		16	--	1	20 A	SPARE
SPARE	20 A	1	--	17			0 VA			0 VA	18	--	1	20 A	SPARE
SPARE	20 A	1	--	19	0 VA			0 VA			20	--	1	20 A	SPARE
SPARE	20 A	1	--	21		0 VA			0 VA		22	--	1	20 A	SPARE
SPARE	20 A	1	--	23			0 VA			0 VA	24	--	1	20 A	SPARE
SPARE	20 A	1	--	25	0 VA			0 VA			26	--	1	20 A	SPARE
SPARE	20 A	1	--	27		0 VA			0 VA		28	--	1	20 A	SPARE
SPARE	20 A	1	--	29			0 VA			0 VA	30	--	1	20 A	SPARE
SPARE	20 A	1	--	31	0 VA			0 VA			32	--	1	20 A	SPARE
SPARE	20 A	1	--	33		0 VA			0 VA		34	--	1	20 A	SPARE
SPARE	20 A	1	--	35			0 VA			0 VA	36	--	1	20 A	SPARE
SPARE	20 A	1	--	37	0 VA			0 VA			38	--	1	20 A	SPARE
SPARE	20 A	1	--	39		0 VA			0 VA		40	--	1	20 A	SPARE
SPARE	20 A	1	--	41			0 VA			0 VA	42	--	1	20 A	SPARE
					1632	1041	904	TOTAL (VA)							CONNECTED LOAD TOTAL
					14 A	9 A	8 A	AMPS/PHASE							3577 VA

Legend:
* PROVIDE 5mA GFCI CIRCUIT BREAKER

AIC RATING ____ AMPS RMS SYSM.

PANELBOARD SCHEDULE

PANEL: LP1 TYPE: Type 1 VOLTS: 120/208 Wye PHASE: 3 WIRES: 4

MOUNTING: SURFACE LOCATION: Space 115 MAINS: MLO

FED FROM: ____ SUBFEED LUGS

AMP: 225 A ____ ISO GROUND

____ 200% NEUTRAL

____ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
WARMING CABINETS	20 A	1	12	1	1440 VA			1000 VA			2	12	2	20 A	POWER
MICROWAVE	20 A	1	12	3		1500 VA			500 VA		4	--	--	--	--
ICE MAKER*	20 A	1	12	5			1200 VA			1000 VA	6	12	2	20 A	POWER
REFRIGERATOR*	20 A	1	12	7	720 VA			500 VA			8	--	--	--	--
RCPT WARMING 102	20 A	1	12	9		180 VA			1000 VA		10	12	2	20 A	POWER
RCPT Space 115	20 A	1	12	11			180 VA			500 VA	12	--	--	--	--
RECEPTACLE	20 A	1	12	13	180 VA			0 VA			14	--	1	20 A	SPARE
RCPT MEN'S RR 106	20 A	1	12	15		540 VA			0 VA		16	--	1	20 A	SPARE
RCPT CONFERENCE ROOM...	20 A	1	12	17			540 VA			0 VA	18	--	1	20 A	SPARE
ELEC WATER COOLER *	20 A	1	12	19	900 VA			0 VA			20	--	1	20 A	SPARE
POWER	20 A	1	12	21		1000 VA			0 VA		22	--	1	20 A	SPARE
RCPT RISER ROOM 110	20 A	1	12	23			540 VA			0 VA	24	--	1	20 A	SPARE
POWER	20 A	1	12	25	1000 VA			0 VA			26	--	1	20 A	SPARE
RCPT ACTIVITY ROOM 111	20 A	1	12	27		720 VA			0 VA		28	--	1	20 A	SPARE
RCPT ACTIVITY ROOM 111	20 A	1	12	29			540 VA			0 VA	30	--	1	20 A	SPARE
RCPT MECH. 112	20 A	1	12	31	900 VA			0 VA			32	--	1	20 A	SPARE
POWER ACTIVITY ROOM 111	20 A	1	12	33		1000 VA			0 VA		34	--	1	20 A	SPARE
RECEPTACLE WARMING 102	20 A	1	12	35			720 VA			0 VA	36	--	1	20 A	SPARE
RECEPTACLE	20 A	1	12	37	180 VA			0 VA			38	--	1	20 A	SPARE
POWER	20 A	2	12	39		1000 VA			0 VA		40	--	1	20 A	SPARE
--	--	--	--	41			500 VA			0 VA	42	--	1	20 A	SPARE
					6820	7440	5720	TOTAL (VA)							CONNECTED LOAD TOTAL
					58 A	63 A	48 A	AMPS/PHASE							19980 VA

Legend:
* PROVIDE 5mA GFCI CIRCUIT BREAKER

AIC RATING ____ AMPS RMS SYSM.

CONTROL RELAY SCHEDULE

Panel Name: RP1
Location: Space 115
Mounting: SURFACE
Nema Type: Type 1
Transformer Voltage: 120V
Control Circuit:
AIC Rating:

Relay #	Description	Panel Circuit	Control Switch	Dimming Type	Programming
1	LTG - LOBBY	SEE SCHED.	TIMECLOCK	SEE LFS	PER OWNER
2	LTG - VESTIBULES	SEE SCHED.	TIMECLOCK	SEE LFS	PER OWNER
3	LTG - ACTIVITY ROOM Z1	SEE SCHED.	TIMECLOCK	SEE LFS	PER OWNER
4	LTG - ACTIVITY ROOM Z2	SEE SCHED.	TIMECLOCK	SEE LFS	PER OWNER
5	LTG - ACTIVITY ROOM Z3	SEE SCHED.	TIMECLOCK	SEE LFS	PER OWNER
6	LTG - EXTERIOR ENTRY	SEE SCHED.	TIMECLOCK	SEE LFS	PER OWNER
7	LTG - EXTERIOR EGRESS	SEE SCHED.	TIMECLOCK	SEE LFS	PER OWNER
8					

Notes:

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DATE: 08.09.18

PANELBOARD SCHEDULES

E601

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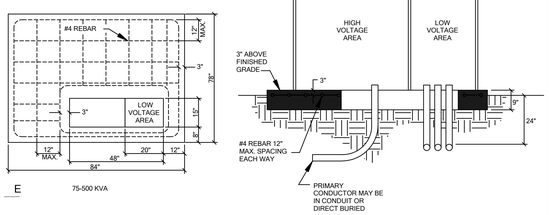

E

75-500 KVA

DIAGRAM Q004 PAD MOUNTED TRANSFORMER (75-500 KVA)

NTS

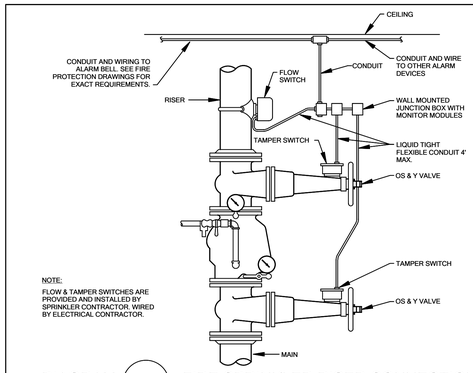

DIAGRAM D001 FIRE SPRINKLER RISER CONNECTION

NTS

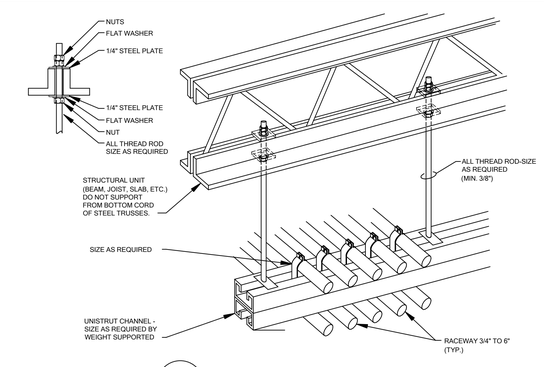

DIAGRAM H001 TYPICAL TRAPEZE CONDUIT RACK

NTS

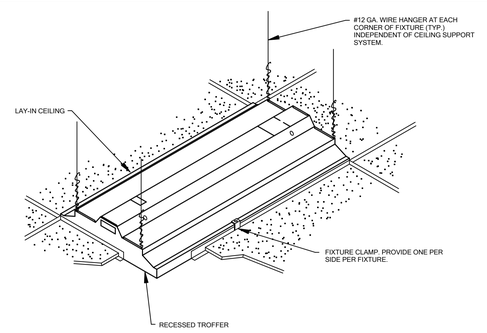

DIAGRAM A001 TYP. RECESSED FIXTURE MOUNTING

NTS

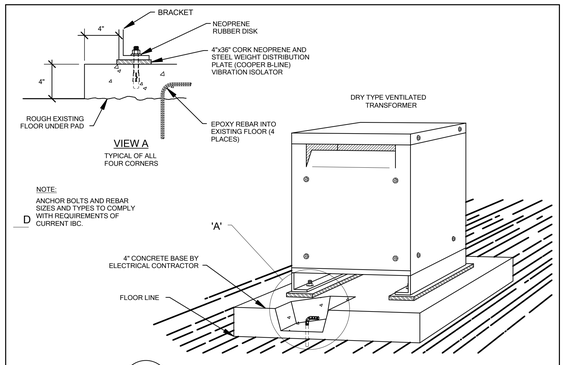

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DIAGRAM Q003 DRY TYPE TRANSFORMER MOUNTING

NTS

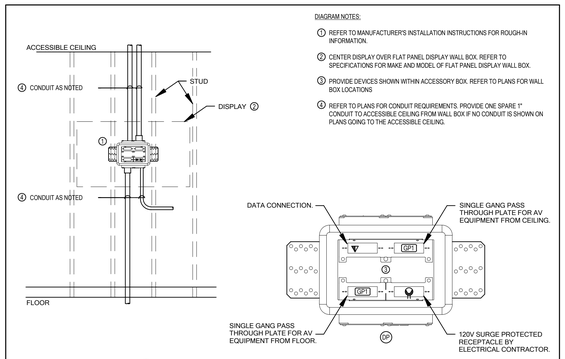


DIAGRAM V022 FLAT PANEL DISPLAY WALL BOX

NTS

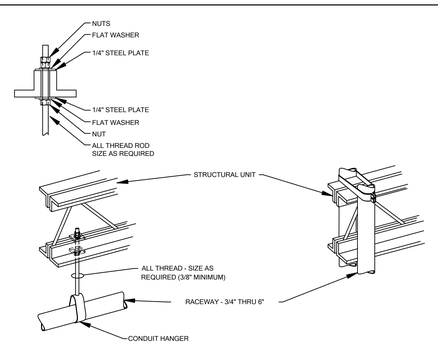


DIAGRAM H003 TYPICAL RACEWAY SUPPORT METHODS

NTS

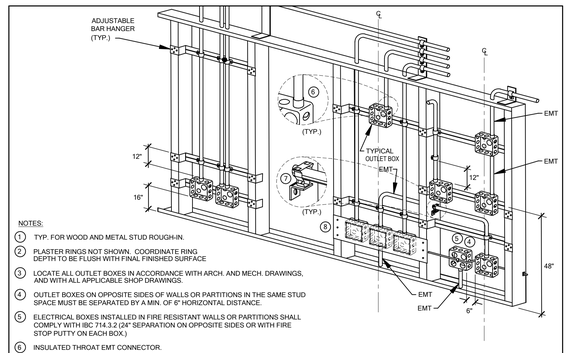


DIAGRAM H004 TYPICAL ROUGH IN REQUIREMENTS

NTS

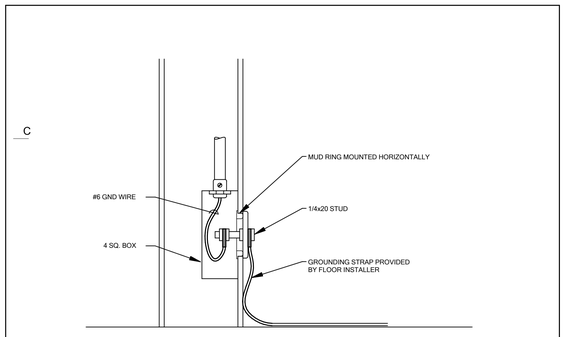


DIAGRAM F014 GROUNDING

NTS

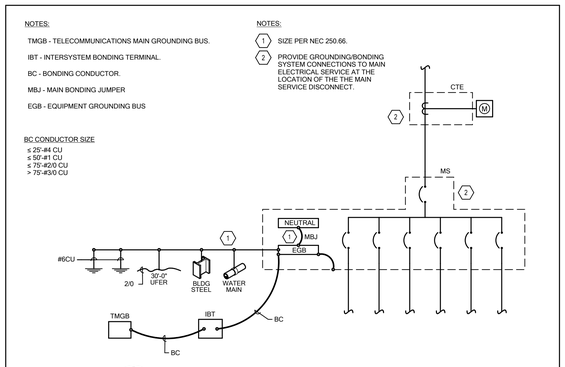


DIAGRAM F023 ELECTRICAL SERVICE GROUNDING/BONDING

NTS

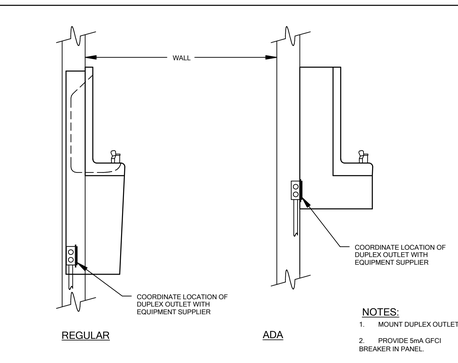


DIAGRAM R002 ELECTRIC WATER COOLER (EWC)

NTS

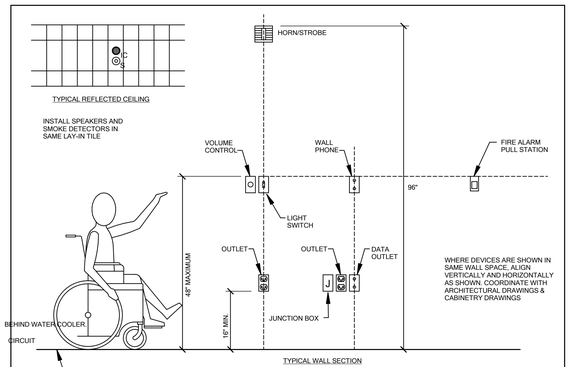
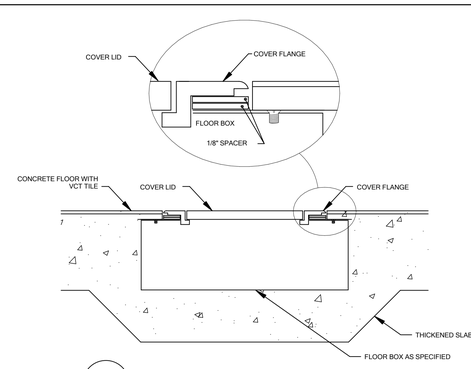


DIAGRAM R001 DEVICE MOUNTING HEIGHTS

NTS

B



A

DIAGRAM L008 MULTIPLE SERVICE FLOOR BOX

NTS

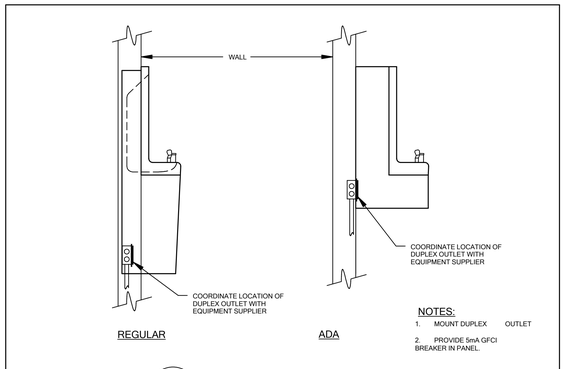


DIAGRAM R002 ELECTRIC WATER COOLER (EWC)

NTS

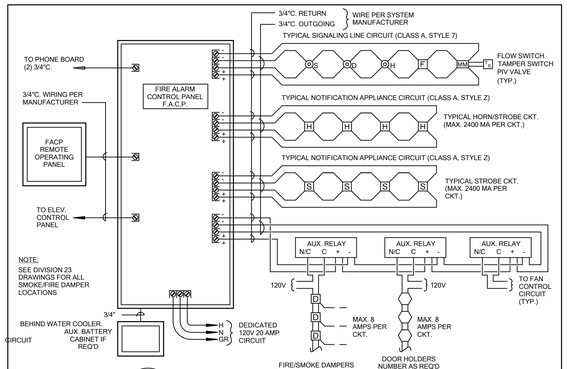


DIAGRAM D002 TYPICAL FIRE ALARM RISER

NTS

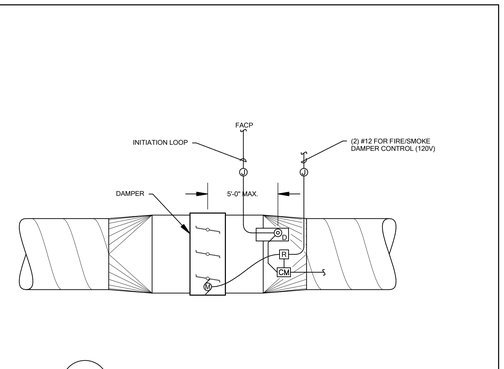


DIAGRAM D012 FIRE/SMOKE/DAMPERS CONNECTION

NTS

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#	Date	Revision

CONSTRUCTION DOCUMENTS

NEXUS PROJ. #: 18065
CHECKED BY: Checker
DRAWN BY: Author
DATE: 08.09.18

ELECTRICAL DIAGRAMS

E701

NOTES:

TMGB - TELECOMMUNICATIONS MAIN GROUNDING BUS.

IBT - INTERSYSTEM BONDING TERMINAL.

HC - HORIZONTAL CROSS-CONNECT ROOM.

MC - MAIN CROSS-CONNECT ROOM.

TGB - TELECOMMUNICATIONS GROUNDING BUS.

TBB - TELECOMMUNICATIONS BONDING BACKBONE.

BC - BONDING CONDUCTOR.

TR - TELECOMMUNICATIONS ROOM.

EF - ENTRANCE FACILITY.

NOTES:

(1) PROVIDE INSULATED GROUNDING BUSHINGS.

BC & TBB CONDUCTOR SIZE

≤ 25'-#4 CU
≤ 50'-#1 CU
≤ 75'-#2/0 CU
> 75'-#3/0 CU

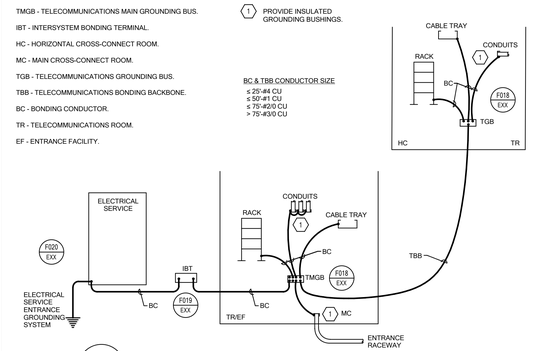


DIAGRAM F022 TYPICAL SMALL TELECOMMUNICATIONS SYSTEM GROUNDING/BONDING

NTS

NOTES:

TMGB - TELECOMMUNICATIONS MAIN GROUNDING BUS.

IBT - INTERSYSTEM BONDING TERMINAL.

BC - BONDING CONDUCTOR.

MBJ - MAIN BONDING JUMPER

EGB - EQUIPMENT GROUNDING BUS

TGB - TELECOMMUNICATIONS GROUNDING BUS

BC CONDUCTOR SIZE

≤ 25'-#4 CU
≤ 50'-#1 CU
≤ 75'-#2/0 CU
≥ #3/0 CU

NOTES:

(1) SIZE PER NEC 250.66.

(2) PROVIDE GROUNDING/BONDING SYSTEM CONNECTIONS TO MAIN ELECTRICAL SERVICE AT THE LOCATION OF THE THE MAIN SERVICE DISCONNECT.

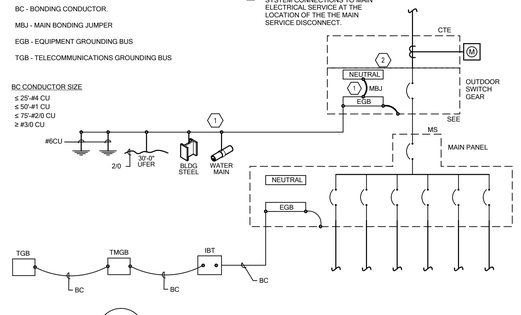


DIAGRAM F026 ELECTRICAL SERVICE GROUNDING/BONDING

NTS

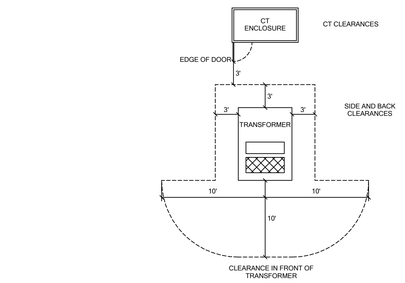
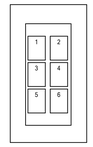


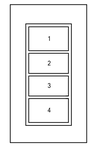
DIAGRAM Q014 TRANSFORMER/CT ENCLOSURE LAYOUT (RMP)

NTS



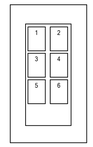
WALLSTATION 'RC6' CONFIGURATION

BUTTON	ENGRAVING	PROGRAMMING
1	ALL ON	BUTTON SHALL TURN ALL LIGHTS ON; ALL DIMMING ZONES TO 100%.
2	ALL OFF	BUTTON SHALL TURN ALL LIGHTS OFF.
3	RAISE	PRESS AND HOLD - BUTTON SHALL INCREASE ALL DIMMING ZONE LEVELS.
4	LOWER	PRESS AND HOLD - BUTTON SHALL DECREASE ALL DIMMING ZONES LEVELS.
5	SCENE 1	COORDINATE SPECIFIC PROGRAMMING REQUIREMENTS WITH OWNER.
6	SCENE 2	COORDINATE SPECIFIC PROGRAMMING REQUIREMENTS WITH OWNER.
		CONTROL SEQUENCE
UPON ENTERING THE SPACE, THE OCCUPANCY SENSOR SHALL TURN LIGHTING ON TO 50% OUTPUT. OCCUPANT MAY THEN CONTROL THE LIGHTING MANUALLY. OCCUPANCY SENSOR SHALL TURN LIGHTS OFF AFTER VACANCY / TIME-OUT.		



WALLSTATION 'LV4' CONFIGURATION

BUTTON	ENGRAVING	PROGRAMMING
1	ALL ON	BUTTON SHALL TURN ALL LIGHTS ON; ALL DIMMING ZONES TO 100%.
2	RAISE	PRESS AND HOLD - BUTTON SHALL INCREASE ALL DIMMING ZONE LEVELS.
3	LOWER	PRESS AND HOLD - BUTTON SHALL DECREASE ALL DIMMING ZONES LEVELS.
4	ALL OFF	BUTTON SHALL TURN ALL LIGHTS OFF.
		CONTROL SEQUENCE
UPON ENTERING THE SPACE, THE OCCUPANCY SENSOR SHALL TURN LIGHTING ON TO 50% OUTPUT. OCCUPANT MAY THEN CONTROL THE LIGHTING MANUALLY. OCCUPANCY SENSOR SHALL TURN LIGHTS OFF AFTER VACANCY / TIME-OUT.		



WALLSTATION 'MS' CONFIGURATION

BUTTON	ENGRAVING	PROGRAMMING
1	ALL ON	BUTTON SHALL TURN ALL LIGHTS ON; ALL DIMMING ZONES TO 100%.
2	ALL OFF	BUTTON SHALL TURN ALL LIGHTS OFF.
3	*	*
4	*	*
5	*	*
6	*	*
		CONTROL SEQUENCE
* COORDINATE ENGRAVING AND PROGRAMMING WITH OWNER.		

NOTES:

(1) PROVIDE 2-HOLE COMPRESSION LUGS AS REQUIRED.

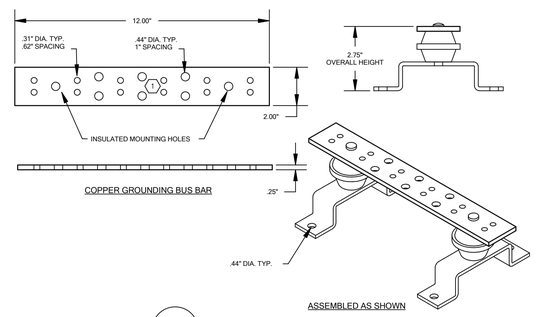


DIAGRAM F019 GROUNDING BUS BAR "IBT"

NTS

GENERAL DIAGRAM NOTES:

1. ALL PROGRAMING SHALL MEET THE REQUIREMENTS OF THE IECC 2015 OR CURRENT ENERGY CODE APPLIED TO THE PROJECT. DAYLIGHT ZONE CONTROL SHALL BE PROVIDED PER THE REQUIREMENTS OF C405.2.2.3.
2. THE LIGHTING CONTROLS AS SHOWN ARE BASED UPON EATON LIGHTING CONTROLS. PRIOR APPROVAL IS REQUIRED BEFORE BIDDING THIS PROJECT. SEE PRIOR APPROVAL NOTES.
3. COORDINATE ALL INSTALLATION REQUIREMENTS, CONNECTIONS AND CABLE TYPE WITH THE SUPPLIER PRIOR TO ANY INSTALLATION.
4. PROVIDE INTUITIVE BUTTON LABELING TO MATCH APPLICATION AND LOAD/RELAY CONTROLS. PROVIDE FACTORY ENGRAVED LABELING FOR ALL INDIVIDUAL PUSH-BUTTONS. DEVICE AND COVERPLATE COLORS AS SELECTED BY ARCHITECT.
5. PROGRAM OF ALL LIGHTING CONTROL SYSTEMS AS INDICATED AND/OR AS DIRECTED BY THE ELECTRICAL ENGINEER AND/OR OWNER. MEET WITH THE ELECTRICAL ENGINEER AT THEIR OFFICE PRIOR TO PREPARATION OF SHOP DRAWINGS TO DISCUSS SPECIFIC PROGRAMMING AND ZONING REQUIREMENTS OF SYSTEM(S). EACH NETWORKED OR STANDALONE SYSTEM SHALL BE PROGRAMMED TO REVERT BACK TO ITS NORMAL "ON" POSITION ONE HOUR AFTER SELECTING A SCENE OR RAISING OR LOWERING A LIGHTING ZONE.

DIAGRAM L001 LIGHTING CONTROL SWITCH CONFIGURATIONS

NTS

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#	Date	Revision

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NEXUS PROJ. #: 18065
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ELECTICAL DIAGRAMS

E702

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AUDIOVISUAL SYMBOLS, SCHEDULES & NOTES

ROUGH-IN SCHEDULE

NOTES:

1. HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISHED FLOOR.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISHED FLOOR.
3. REFER TO SPECIFICATIONS FOR CUSTOM ROUGH-IN REQUIREMENTS.
4. STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS.
5. ROUGH-IN TO BE HORIZONTAL.
6. ROUGH-IN TO BE INSTALLED ABOVE ACCESSIBLE CEILING.
7. ROUGH-IN TO BE INSTALLED ABOVE CEILING.
8. CABLE FROM DEVICE TO BE HOMERUN TO DESTINATION WITHOUT SPLICES.
9. ABOVE TABLE/COUNTER MOUNTED DEVICE.
10. REFER TO MANUFACTURER'S RECOMMENDED CABLE REQUIREMENTS FOR EXACT CABLE REQUIRED.

* TYPICAL SYMBOL SCHEDULE. SOME SYMBOLS MAY NOT BE USED IN THIS SET OF DRAWINGS.

ROUGH-IN IDENTIFIER:

- A0: 4" SQUARE 2 1/8" DEEP JUNCTION BOX.
- A1: 4" SQUARE 2 1/8" DEEP JUNCTION BOX WITH SINGLE GANG MUDRING.
- A1E: 4" SQUARE 2 1/8" DEEP JUNCTION BOX WITH 1 1/2" EXTENSION WITH SINGLE GANG MUDRING.
- A2: 4" SQUARE 2 1/8" DEEP JUNCTION BOX WITH DOUBLE GANG MUDRING.
- A2E: 4" SQUARE 2 1/8" DEEP JUNCTION BOX WITH 1-1/2" EXTENSION WITH DOUBLE GANG MUDRING.
- A3: 8 5/8" x 4 1/2" x 1 5/8" JUNCTION BOX WITH 3-GANG MUDRING.
- A4: 10 7/16" x 4 1/2" x 1 5/8" JUNCTION BOX WITH 4-GANG MUDRING.
- B1E: 4 11/16" SQUARE JUNCTION BOX WITH 1 1/2" EXTENSION WITH SINGLE GANG MUDRING.
- B2E: 4 11/16" SQUARE JUNCTION BOX WITH 1 1/2" EXTENSION WITH DOUBLE GANG MUDRING.
- C1: 12" x 12" x 4" JUNCTION BOX WITH TRIM RING AND GROMMET.
- C2: SEE SPECIFICATIONS FOR ROUGH-IN INFORMATION.
- D1: HUBBELL - HBL260 WITH SINGLE GANG MUD RING.
- D2: HUBBELL - HBL260 WITH DOUBLE GANG MUD RING.
- D3: HUBBELL - HBL263 WITH TRIPLE GANG MUD RING.

SYMBOL	DESCRIPTION	ROUGH-IN	MOUNTING HEIGHT	CABLE TYPE	NOTES
M	MICROPHONE INPUT, WALL PLATE	A1E	RECEPTACLE HEIGHT	(1) MA	4,8.
MD	DUAL MICROPHONE INPUT, WALL PLATE	A1E	RECEPTACLE HEIGHT	(2) MA	4,8.
AX	AUXILIARY INPUT, WALL PLATE	A1E	RECEPTACLE HEIGHT	(1) LA	4,8.
T	AUDIO OUTPUT, XLR, WALL PLATE	A1E	RECEPTACLE HEIGHT	(1) LA	4,8.
MA	MICROPHONE INPUT WITH AUXILIARY INPUT, WALL PLATE	A1E	RECEPTACLE HEIGHT	(1) MA (1) LA	4,8.
MC	MICROPHONE INPUT, CEILING	A1E	CEILING	(1) MA	8.
MDT	DUAL MICROPHONE INPUT, WALL PLATE, UTP TRANSMITTER	A1	RECEPTACLE HEIGHT	(1) UTP	4,8.
MAT	MICROPHONE AND AUXILIARY INPUT, WALL PLATE, UTP TRANSMITTER	A1E	RECEPTACLE HEIGHT	(1) UTP	4,8.
AXT	AUXILIARY INPUT, WALL PLATE, UTP TRANSMITTER	A1	RECEPTACLE HEIGHT	(1) UTP	4,8.
MXT	MICROPHONE AND AUXILIARY INPUT, WALL PLATE, UTP TRANSMITTER	D2	RECEPTACLE HEIGHT	(1) UTP	4,8.
MT	DUAL MICROPHONE INPUT/OUTPUT WALL PLATE, UTP TRANSMITTER	D1	RECEPTACLE HEIGHT	(1) UTP	4,8.
M2D	DUAL MICROPHONE INPUT/OUTPUT WALL PLATE, UTP TRANSMITTER	D2	RECEPTACLE HEIGHT	(1) UTP	4,8.
M4D	FOUR MICROPHONE INPUT WALL PLATE, UTP TRANSMITTER	D2	RECEPTACLE HEIGHT	(1) UTP	4,8.
VG	VGA INPUT, WALL PLATE	B1E	RECEPTACLE HEIGHT	(1) VG	4.
HD	HDMI INPUT, WALL PLATE	D1	RECEPTACLE HEIGHT	(1) HD	4.
HV	HDMI AND VGA INPUT, WALL PLATE	D2	RECEPTACLE HEIGHT	(1) HD (1) VG	4.
US	USB INPUT, WALL PLATE	A1E	RECEPTACLE HEIGHT	(1) STP	4.
TxH	HDMI INPUT TRANSMITTER, WALL PLATE	A1E	RECEPTACLE HEIGHT	(1) STP	4.
TxD	HDMI AND VGA TRANSMITTER, WALL PLATE	D2	RECEPTACLE HEIGHT	(1) STP	4.
TxM	HDMI AND VGA TRANSMITTER, MILLWORK		IN MILLWORK/ UNDER TABLE	(1) STP	4.
TxT	HDBaseT CATEGORY INPUT, WALL PLATE	A1E	RECEPTACLE HEIGHT	(1) STP	4.
RxH	HDMI RECEIVER, WALL PLATE	B1E	AS NOTED	(1) STP	4.
RxT	HDBaseT CATEGORY OUTPUT, WALL PLATE	A1E	AS NOTED	(1) STP	4.
CHV	HDMI AND VGA TRANSMITTER, WALL PLATE (POLEVAULT)	D2	RECEPTACLE HEIGHT	(1) UTP	4.
CHD	DUAL HDMI TRANSMITTER, WALL PLATE (POLEVAULT)	D2	RECEPTACLE HEIGHT	(1) UTP	4.
IR	INFRARED SENSOR, WALL/CEILING	A0	CEILING	(1) CT	6.
ALS	AMPLIFIED LISTENING SYSTEM	A0	CEILING	(1) S16 (1) LA	6.
AT	AV ANTENNA	A0	CEILING	(1) AT	6.
V	VOLUME CONTROL	A1E	SWITCH HEIGHT	(1) S16	4.
SV	VOLUME CONTROL WITH SOURCE SELECTOR	D2	SWITCH HEIGHT	(1) S16	4.
TPT	TOUCH PANEL, TABLE TOP		AS NOTED	(1) UTP	9.
TP3	TOUCH PANEL, 3" DIAGONAL	C2	SWITCH HEIGHT	(1) UTP	4,5.
TP5	TOUCH PANEL, 5" DIAGONAL	C2	SWITCH HEIGHT	(1) UTP	4,5.
TP7	TOUCH PANEL, 7" DIAGONAL	C2	SWITCH HEIGHT	(1) UTP	4,5.
TP0	TOUCH PANEL, 10" DIAGONAL	C2	SWITCH HEIGHT	(1) UTP	4,5.
FB#	FURNITURE BOX, NUMBER REFERS TO BOX TYPE REFER TO SPECIFICATIONS FOR DESCRIPTION		IN MILLWORK	SEE SPEC.	
	WALL MOUNTED LOUDSPEAKER	PER MFG	AS NOTED	(1) S16	4.
	LOUDSPEAKER, CABINET	A0	AS NOTED	(1) S12	4.
C#	LOUDSPEAKER	A0	CEILING	(1) S16	7.
P#	PENDANT LOUDSPEAKER	A0	CEILING	(1) S16	7.
D##	DISPLAY, NUMBER REFERS TO SCREEN SIZE REFER TO SPECIFICATIONS FOR DISPLAY TYPE	C2	AS NOTED	AS NOTED	2,4.
SM#	SMARTBOARD, NUMBER REFERS TO SCREEN SIZE REFER TO SPECIFICATIONS FOR DISPLAY TYPE	C2	AS NOTED	AS NOTED	2,4.
SC#	PROJECTION SCREEN, NUMBER REFERS TO SCREEN SIZE REFER TO SPECIFICATIONS FOR SCREEN TYPE	(2) A0	CEILING OR WALL	(1) UTP	7.
P#	PROJECTOR	A0	CEILING	AS NOTED	6.
	AV CAMERA	A2E	AS NOTED	AS NOTED	1,8.
R#	SOUND CABINET / EQUIPMENT RACK	C1	AS NOTED		
KP1	KEYPAD 1	D1	SWITCH HEIGHT	(1) CT or (1) UTP	4,10.
KP2	KEYPAD 2	D2	SWITCH HEIGHT	(1) CT or (1) UTP	4,10.
KP3	KEYPAD 3	D3	SWITCH HEIGHT	(1) CT or (1) UTP	4,10.
	CALL SWITCH	A1E	SWITCH HEIGHT	AS NOTED	7.
GP1	1 GANG GROMMET PASS THROUGH PLATE	D1	AS NOTED		
GP2	2 GANG GROMMET PASS THROUGH PLATE	D2	AS NOTED		
CSA	CLASSROOM SOUND AMPLIFICATION SYSTEM		IN MILLWORK		3.

CABLE AND CONDUIT SCHEDULE

NOTES:

1. APPROVED EQUALS FROM OTHER MANUFACTURERS ARE BELDEN, GEPCO/GENERAL, ICE AND LIBERTY CABLE.
2. WHEN COMBINING CABLE TYPES OF THE SAME GROUP, THE TYPE WITH THE LARGEST CONDUIT REQUIREMENT DICTATES CONDUIT SIZE.
3. CONDUIT REQUIREMENTS ARE MINIMUM, UNLESS OTHERWISE NOTED.
4. ALL CATEGORY CABLE SHALL BE TESTED TO ANSI/TIA/EIA-568C AND IEEE 802.3an STANDARDS USING A LEVEL IIIe TESTER.
5. CABLE QUANTITY INDICATED ON DRAWINGS SHOWS ON FINAL RUN. IF NOT NOTED PROVIDE CABLING FOR SINGLE DEVICE.
6. # INDICATES NUMBER OF CABLES WITHIN THE SAME RUN.

CABLE TYPE	DESCRIPTION	CONDUIT REQUIREMENTS	MANUFACTURER	MODEL NUMBER	CABLE GROUP
(#)AT	ANTENNA, COAXIAL RG8X	3/4" CONDUIT = (4) CABLES 1" CONDUIT = (7) CABLES	WEST PENN	807	5
(#)CT	CONTROL	1" CONDUIT = (7) CABLES 1 1/4" CONDUIT = (12) CABLES	WEST PENN	77350	5
(#)HD	HDMI < 25'	1 1/4" CONDUIT = (1) CABLES 2" CONDUIT = (3) CABLES	WEST PENN	CN-HD700-XX	5
(#)HD	HDMI > 25'	1 1/4" CONDUIT = (1) CABLES 2" CONDUIT = (3) CABLES	EXTRON	HDMI Pro/xx	5
(#)LA	LINE LEVEL, 22 AWG	3/4" CONDUIT = (14) CABLES 1" CONDUIT = (23) CABLES	WEST PENN	291	3
(#)MA	MICROPHONE, 22 AWG	3/4" CONDUIT = (14) CABLES 1" CONDUIT = (23) CABLES	WEST PENN	291	2
(#)MFB	MULTIMODE FIBER OPTIC	3/4" CONDUIT = (10) CABLES 1" CONDUIT = (17) CABLES	PER SPEC 27 1500	PER SPEC 27 1500	1
(#)RG6	RG-6 COAXIAL CABLE	3/4" CONDUIT = (5) CABLES 1" CONDUIT = (8) CABLES	WEST PENN	25841	5
(#)RG11	RG-11 COAXIAL CABLE	1" CONDUIT = (3) CABLES 1 1/4" CONDUIT = (6) CABLES	WEST PENN	25821	5
(#)S12	SPEAKER, 12 AWG	1" CONDUIT = (3) CABLES 1 1/2" CONDUIT = (7) CABLES 2" CONDUIT = (11) CABLES	WEST PENN	227	4
(#)S16	SPEAKER, 16 AWG	1" CONDUIT = (10) CABLES 1 1/4" CONDUIT = (17) CABLES	WEST PENN	225	4
(#)SFB	SINGLE MODE FIBER OPTIC	3/4" CONDUIT = (10) CABLES 1" CONDUIT = (17) CABLES	PER SPEC 27 1500	PER SPEC 27 1500	1
(#)STP	SHIELDED TWISTED PAIR, CAT 6	1" CONDUIT = (4) CABLES 1 1/4" CONDUIT = (8) CABLES	WEST PENN	4246AF	5
(#)UTP	UN-SHIELDED TWISTED PAIR	1" CONDUIT = (9) CABLES 1 1/4" CONDUIT = (15) CABLES	WEST PENN	4246	5
(#)VG	HIGH RESOLUTION VIDEO	1" CONDUIT = (1) CABLES 1 1/4" CONDUIT = (4) CABLES	WEST PENN	6CRGB2P	5

ABBREVIATIONS INDEX

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
#	NUMBER	(E)	EXISTING	N/A	NOT APPLICABLE
AFF	ABOVE FINISH FLOOR	FT	FOOT	NIC	NOT IN CONTRACT
ARCH	ARCHITECTURE	GND	GROUND	NTS	NOT TO SCALE
AUX	AUXILIARY	IG	ISOLATED GROUND	(R)	RELOCATE
AWG	AMERICAN WIRE GAUGE	IN	INCH	SPEC	SPECIFICATIONS
BC	BARE COPPER	J-BOX	JUNCTION BOX	SPKR	SPEAKER
C	CONDUIT	LTG	LIGHTING	TV	TELEVISION
CATV	CABLE TELEVISION	MEP	MECHANICAL, ELECTRICAL AND PLUMBING	TYP	TYPICAL
CLG	CEILING	MFG	MANUFACTURER	UG	UNDERGROUND
CNTR	CONTRACTOR	MAX	MAXIMUM	UPS	UNINTERRUPTED POWER SUPPLY
CU	COPPER	MIC	MICROPHONE	W	WATTS
C/W	COMPLETE WITH	MIN	MINIMUM	W/O	WITHOUT
DWG	DRAWING	MTG	MOUNTING		

RESPONSIBILITY MATRIX

	AV INTEGRATOR		ELECTRICAL CONTRACTOR		GENERAL CONTRACTOR		OWNER	
	FURNISH	INSTALL	FURNISH	INSTALL	FURNISH	INSTALL	FURNISH	INSTALL
CONDUIT W/PULL STRING			■	■				
CABLING (NON CATEGORY CABLE)	■	■						
CABLING (CATEGORY CABLING)			■	■				
DISPLAY(S)	■	■						
DISPLAY BACK BOX(ES)			■	■				
DISPLAY MOUNT(S)	■	■						
PROJECTOR(S)	■	■						
PROJECTOR MOUNT(S)	■	■						

NOTE: MATRIX REFERS TO RESPONSIBILITY BETWEEN OWNER AND CONTRACTORS FOR GENERAL ROUGH-IN AND FURNISHINGS.

AUDIOVISUAL GENERAL NOTES

1. ET SHEETS SHOW WORK AND MATERIALS BY DIVISION 26 AND DIVISION 27. SEE SPECIFICATIONS AND DRAWING NOTES FOR RESPONSIBILITY FOR EACH ITEM.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE REQUIRED PROVISIONS WITH THE PROJECT AV SYSTEMS INTEGRATOR PRIOR TO INSTALLATION OF AV SYSTEM ROUGH-IN. WHERE CONDUIT AND JUNCTION BOX PROVISIONS ARE SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS, NOTIFY THE AV CONSULTANT IN WRITING OF THE REQUIREMENTS. WHERE MINOR MODIFICATIONS TO PROVISIONS ARE REQUIRED, THEY SHALL BE MADE AT NO ADDITIONAL COST AS A MATTER OF JOB COORDINATION.
3. BIDDERS SHALL THOROUGHLY ACQUAINT AND EXAMINE THE EXISTING PROJECT CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, INCLUDING THE COMPLETE SET OF PLANS AND SPECIFICATIONS COVERING THE ENTIRE PROJECT. BIDDERS SHALL BECOME FULLY CONVERSANT WITH THE TYPE OF GENERAL CONSTRUCTION AS WELL AS ALL PERTINENT FACTS AFFECTING THE COST OF CARRYING OUT THE WORK THEY WILL CONTRACT TO PERFORM AND BRING ANY DISCREPANCIES OR OMISSIONS FOUND IN THE DRAWINGS TO THE AV CONSULTANT'S ATTENTION BEFORE SUBMITTING BID.
4. AV SYSTEMS INTEGRATOR SHALL PROVIDE A FULLY FUNCTIONING SYSTEM IN EVERY RESPECT. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT AV CONSULTANT PRIOR TO BIDDING.
5. THE FOREGOING WORK SHALL BE COMPLETE IN EVERY RESPECT, AND ANY MATERIAL OR WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT NECESSARY TO FULLY COMPLETE THE WORK, SHALL BE FURNISHED BY THE PROJECT AV SYSTEMS INTEGRATOR.
6. NO CHANGES TO THE DESIGN SHALL BE MADE WITHOUT THE PROJECT AV CONSULTANT'S WRITTEN CONSENT.
7. WHERE APPLICABLE, AV SYSTEMS INTEGRATOR SHALL FOLLOW ALL MANUFACTURER'S INSTALLATION GUIDELINES.
8. REFER TO DRAWINGS FOR EXACT NUMBER OF COMPONENTS USED IF NOT SPECIFIED IN EQUIPMENT LIST.
9. COORDINATE EXACT SPEAKER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS. ANY CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT AV CONSULTANT PRIOR TO BIDDING.
10. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL SPEAKERS AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND AV CONSULTANT PRIOR TO RELEASE.
11. INSTALL/SUSPEND ALL AUDIOVISUAL SYSTEMS EQUIPMENT IN COMPLIANCE WITH SEISMIC CODES, MANUFACTURER'S WRITTEN INSTRUCTIONS, AND INDUSTRY BEST PRACTICES. DURING THE SUBMITTAL PROCESS, PROVIDE SHOP DRAWINGS WHICH DETAIL PROPOSED MOUNTING FOR ALL SUCH EQUIPMENT.
12. ALL TWISTED-PAIR (U/UTP, F/UTP, U/FTP, S/FTP) CATEGORY TYPE CABLING SHALL BE TERMINATED BY CERTIFIED DATA TECHNICIANS.
13. ALL HDBaseT SIGNAL CABLING, TERMINATIONS, AND TERMINATION HARDWARE SHALL COMPLY WITH TIA/EIA WIRING CONFIGURATION T568B. ALL HDBaseT SIGNAL CABLING SHALL BE SHIELDED/FOIL (SF/UTP) CATEGORY TYPE CABLE.
14. CONDUCT A RADIO FREQUENCY AUDIT OF THE SITE PRIOR TO SELECTING RF OPERATIONAL FREQUENCIES. AV SYSTEMS INTEGRATOR TO ENSURE INTERFERENCE FREE OPERATION OF ALL RF DEVICES. AV SYSTEMS INTEGRATOR SHALL COORDINATE AUDIT RESULTS WITH MANUFACTURER PRIOR TO PURCHASING RF EQUIPMENT.
15. PROVIDE RACK MOUNT KITS FOR ALL RACK MOUNTED EQUIPMENT. PROVIDE CUSTOM RACK MOUNT KITS WHEN NOT AVAILABLE FROM THE EQUIPMENT MANUFACTURER.
16. PROVIDE SURGE PROTECTION DEVICE (SPD) IN ALL AV EQUIPMENT RACKS.
17. ALL AV EQUIPMENT RACKS SHALL BE GROUNDED AND BONDED TO MEET OR EXCEED THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC), IEC 1000-5-2, ANSI/J-STD-607-A.
18. ALL AV EQUIPMENT SHALL BE GROUNDED PER MANUFACTURER'S SPECIFICATIONS.
19. PROVIDE MANUFACTURER RECOMMENDED POWER SUPPLIES OR TRANSFORMERS FOR ALL SPECIFIED EQUIPMENT.
20. FILL ALL UNUSED RACK SPACE WITH BLANK PANELS UNLESS OTHERWISE NOTED.
21. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR LACK OF COORDINATION WITH AV CONSULTANT AS ADDRESSED IN THE DOCUMENTS

CABLING GROUPS AND CONDUIT SEPARATION SCHEDULE

AUDIO AND VIDEO WIRING TYPES:

AUDIO AND VIDEO SYSTEM WIRING IS DIVIDED INTO WIRING GROUPS ACCORDING TO THEIR NOMINAL LEVELS:

GROUP	WIRING TYPE
GROUP 1	FIBER OPTIC CABLE
GROUP 2	O mV TO 100 mV SIGNALS, EXAMPLE: MICROPHONE LEVEL SIGNAL
GROUP 3	100 mV TO 10 V SIGNALS, EXAMPLE: LINE-LEVEL SIGNAL
GROUP 4	10 V TO 70 V SIGNALS, EXAMPLE: SPEAKER LEVEL SIGNAL
GROUP 5	CONTROL, DIGITAL CIRCUITS, DATA AND VIDEO

NOTE: GROUPS LISTED ABOVE SHALL NEVER BE COMBINED WITHIN THE SAME CONDUIT

AUDIO AND VIDEO CONDUIT SEPARATION

MINIMUM CONDUIT SEPARATION BETWEEN CONDUITS CARRYING WIRING OF DIFFERENT AUDIO AND VIDEO GROUPS IS AS FOLLOWS:

GROUP	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5
GROUP 1	ADJACENT	ADJACENT	ADJACENT	ADJACENT	ADJACENT
GROUP 2	ADJACENT	ADJACENT	6"	12"	12"
GROUP 3	ADJACENT	6"	ADJACENT	12"	6"
GROUP 4	ADJACENT	12"	12"	ADJACENT	6"
GROUP 5	ADJACENT	12"	6"	6"	ADJACENT

NOTE: NINETY DEGREE CROSSING IN CLOSE PROXIMITY IS PERMITTED.

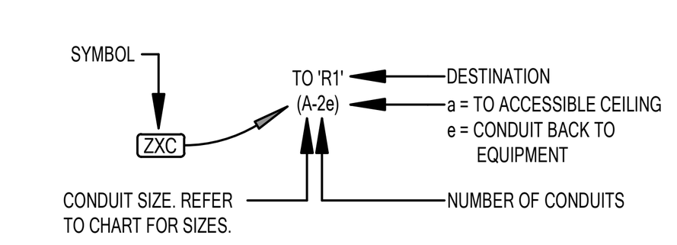
ELECTRICAL CONDUIT SEPARATION

MINIMUM CONDUIT SEPARATION BETWEEN CONDUITS CARRYING AUDIO AND VIDEO WIRING AND OTHER ELECTRICAL SERVICE CONDUIT IS AS FOLLOWS:

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5
277/480V AC CIRCUIT	ADJACENT	24"	24"	24"	24"
120/208V AC CIRCUIT	ADJACENT	24"	12"	12"	24"

NOTE: CONDUITS SHALL NOT RUN MORE THAN 20 FEET IN PARALLEL WITHIN THE GIVEN DISTANCES ABOVE.

ROUGH-IN LEGEND



CONDUIT SIZE CHART

A = 3/4" CONDUIT
B = 1" CONDUIT
C = 1-1/4" CONDUIT
D = 1-1/2" CONDUIT
E = 2" CONDUIT

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AV SYMBOLS AND SCHEDULES

ET001

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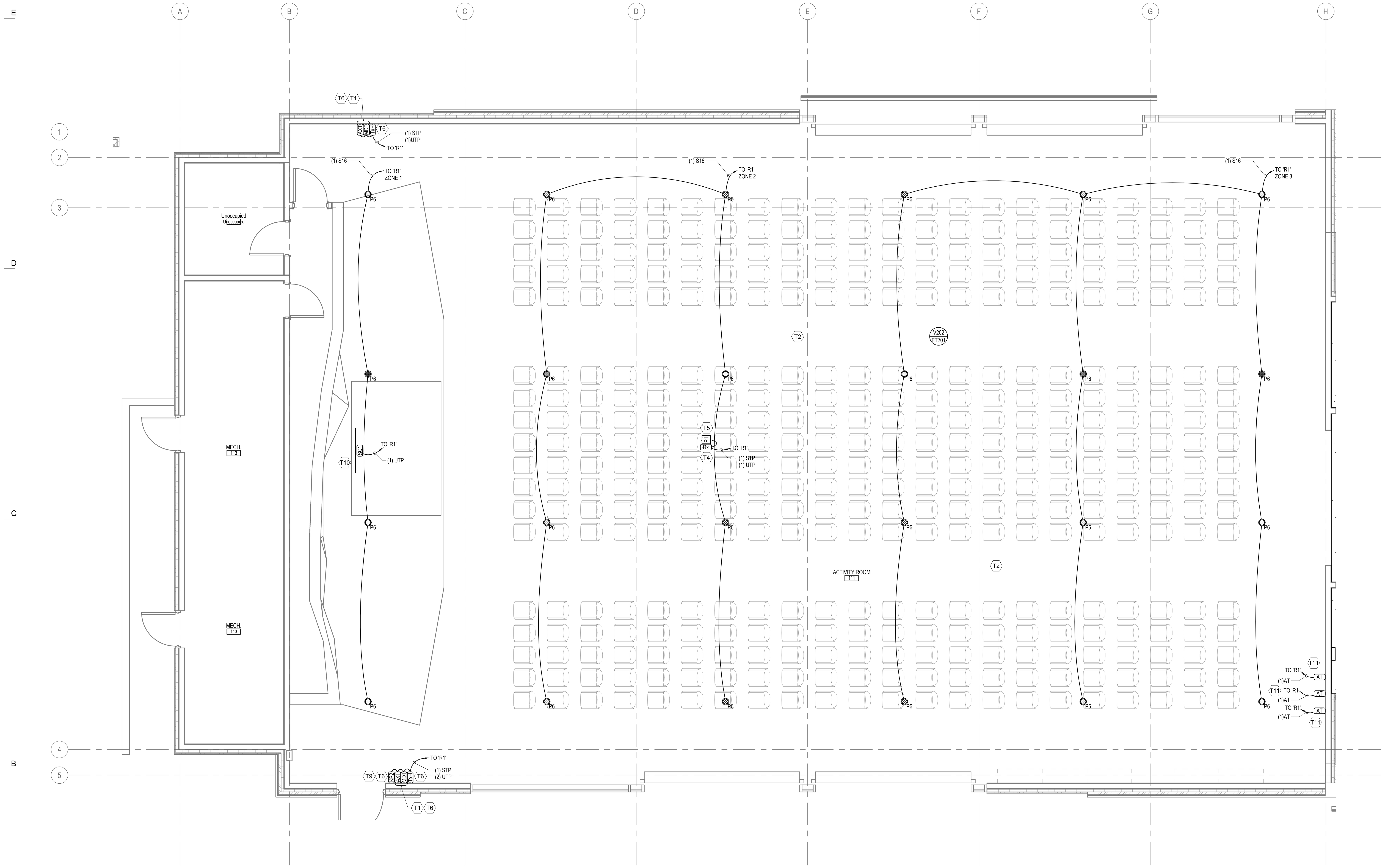
SHEET KEYNOTES

T1	PROVIDE A 'B2E' JUNCTION BOX FOR BOTH DEVICES. COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
T2	INSTALL LOUDSPEAKERS LEVEL TO THE LOWEST STRUCTURAL BEAMS. ALL PENDANT LOUDSPEAKERS SHALL BE LEVEL WITH EACH ANOTHER. INSTALL A SEISMIC CABLE TO EACH LOUDSPEAKER TO THE STRUCTURE ABOVE.
T4	SECURE DEVICE TO TOP OF PROJECTOR.
T6	PROVIDE A POLYCARBONATE PROTECTIVE CASING FOR DEVICE(S). PROTECTIVE CASING SIMILAR TO A THERMOSTAT COVER.
T9	VERTICALLY ALIGN DEVICE WITH DEVICES BELOW.
T10	PROJECTION SCREEN SHALL BE SECURED TO THE CEILING AWAY FROM ROCK-WALL. COORDINATE EXACT LOCATION WITH OWNER.



AREA A AV PLANS
SCALE = 1/4" = 1'-0"

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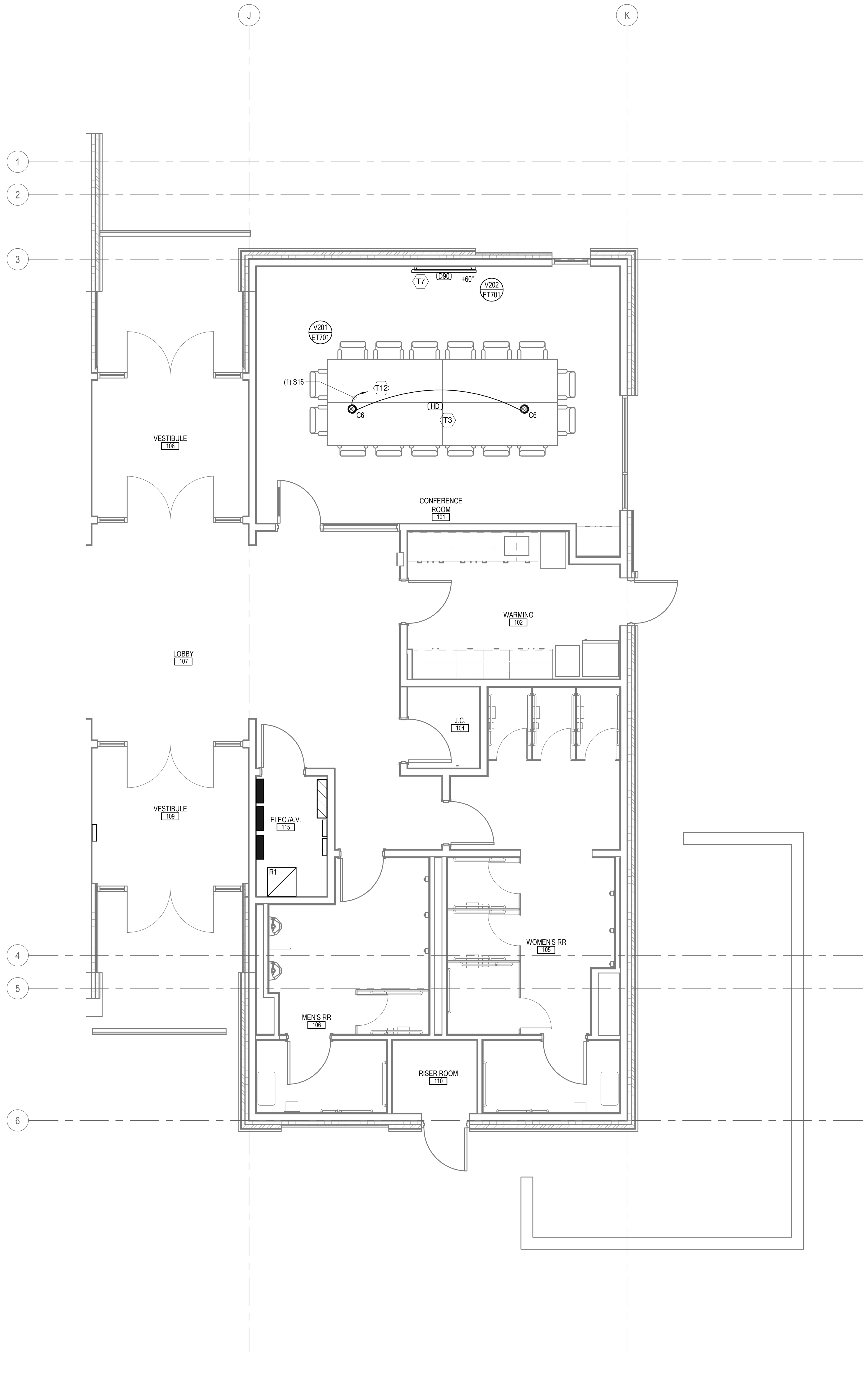
AREA A AV PLAN

ET301

SHEET KEYNOTES	
T3	DEVICE IS LOCATED IN FLOOR BOX. COORDINATE WITH ELECTRICAL DRAWINGS FOR EXACT LOCATION OF DEVICE.
T7	SECURE AMPLIFIER TO REAR SIDE OF DISPLAY.
T12	HOMERUN TO AMPLIFIER LOCATED BEHIND DISPLAY.



AREA B AV PLANS
SCALE = 1/4" = 1'-0"

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AREA B AV PLAN

ET302

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1 2 3 4 5 6

E

D

C

B

A

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DIAGRAM NOTES:

1. DEVICES SHALL BE MOUNTED WITHIN FLOOR BOX. PROVIDE (1) 12' HDMI CABLE FOR CONNECTION FROM FLOOR BOX TO OWNER PROVIDED FURNITURE.
2. PROVIDE (1) 1" CONDUIT FROM ACCESSORY BOX BEHIND DISPLAY TO ACCESSIBLE CEILING.
3. SECURE CABLING TO THE BOTTOM OF THE TABLE TOP, RUN CABLING IN THE LEGS OF THE CONFERENCE ROOM TABLE SO THAT NO CABLES ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CO-ORDINATING WITH TABLE MANUFACTURE AND INSTALLER PRIOR TO ROUGH IN.
4. SECURE AMPLIFIER TO REAR SIDE OF DISPLAY.

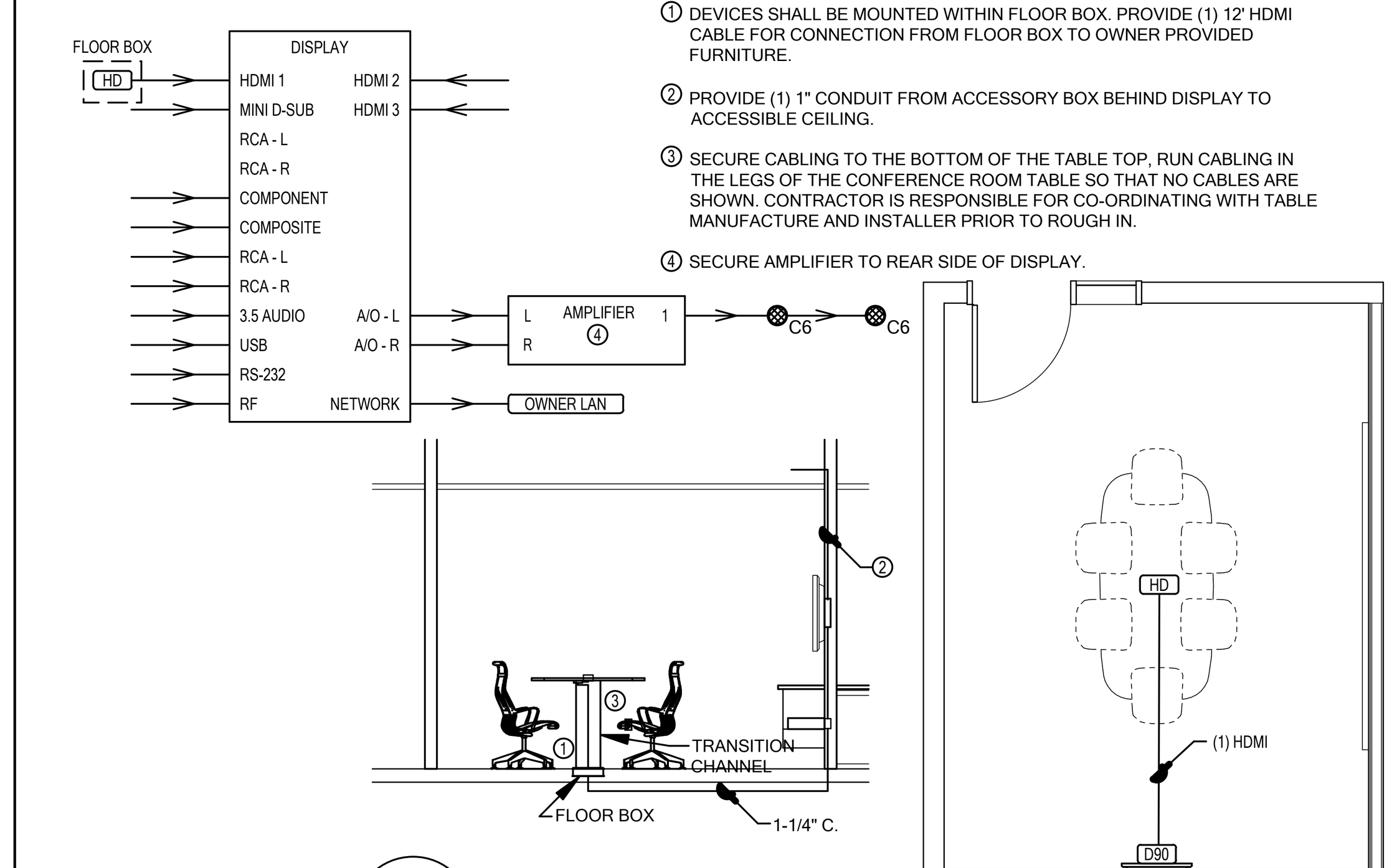

DIAGRAM V201 TYPICAL CONFERENCE ROOM AV

NTS

DIAGRAM NOTES:

1. DEVICE LOCATED IN ACTIVITY ROOM. REFER TO FLOOR PLAN FOR EXACT LOCATION.
2. PROVIDE CONTROL CABLE FROM RECEIVER TO PROJECTOR.
3. DEVICE LOCATED IN EQUIPMENT RACK.
4. LABEL DEVICE AS 'HDMI INPUT 1' FOR DEVICE ON THE NORTH END.
5. LABEL DEVICE AS 'HDMI INPUT 2' FOR DEVICE ON THE SOUTH END.
6. "PROJECTOR ON/OFF" ACTIVATES AND DEACTIVATES PROJECTOR RESPECTIVELY AND LOWERS (ON)/RAISES (OFF) THE PROJECTION SCREEN.
7. "HDMI INPUT 1" SHOWS THE CONTENT FROM THE HDMI INPUT ON THE NORTH SIDE OF THE ACTIVITY ROOM.
8. "HDMI INPUT 2" SHOWS THE CONTENT FROM THE HDMI INPUT ON THE SOUTH SIDE OF THE ACTIVITY ROOM.
9. "AUDIO INPUTS" ALLOWS THE USER TO ADJUST THE VOLUME EVEN WHILE ONE OF THE HDMI INPUTS IS IN USE. BUTTON SHALL ALLOW THE OPERATOR TO ACTIVATE THE AUDIO SYSTEM AND ADJUST THE VOLUME.
10. "MUTE" SHALL MUTE ALL AUDIO OUTPUTS.

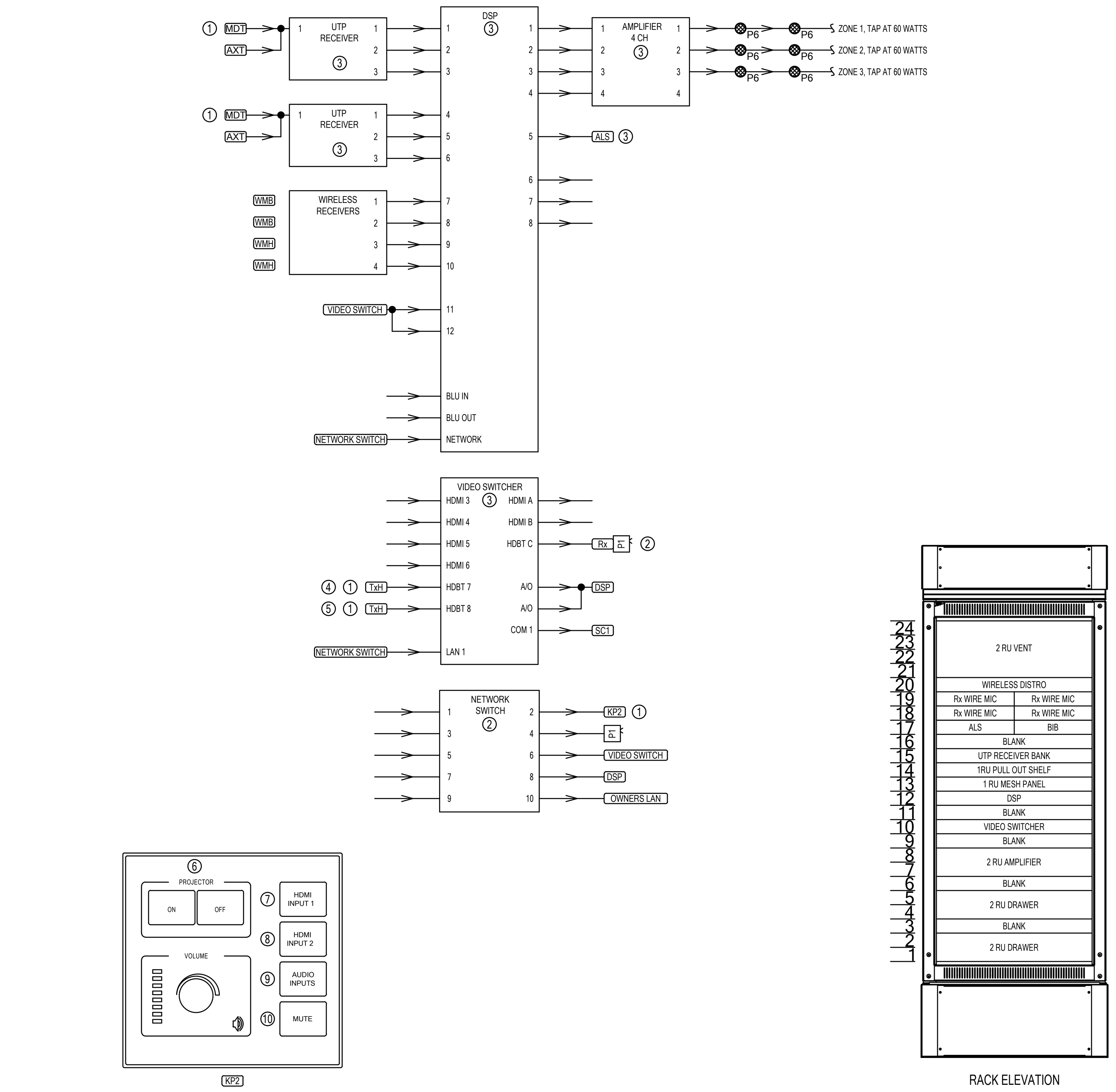

DIAGRAM V202 ACTIVITY ROOM AV RISER

NTS

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AV DIAGRAMS

ET701