

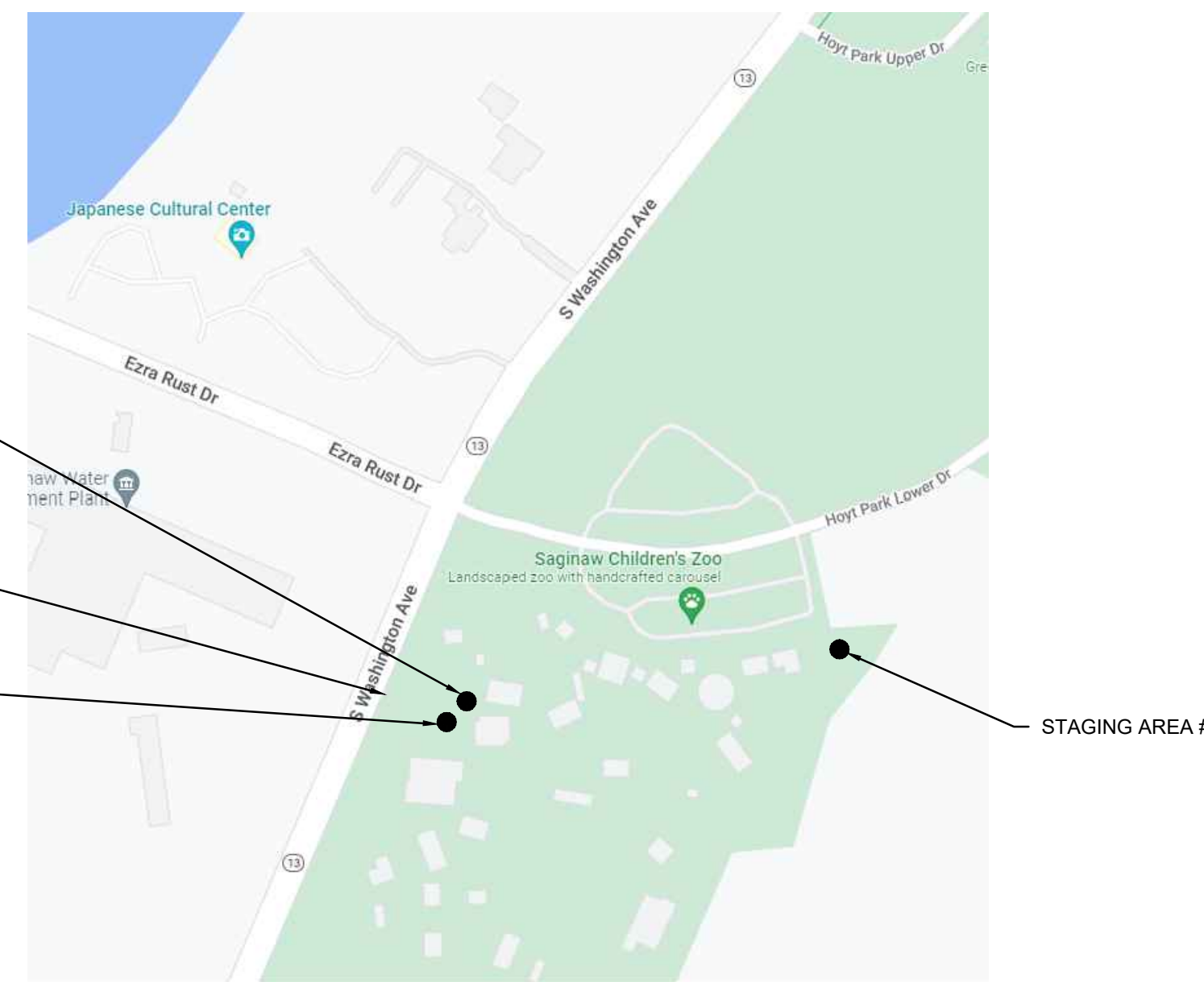
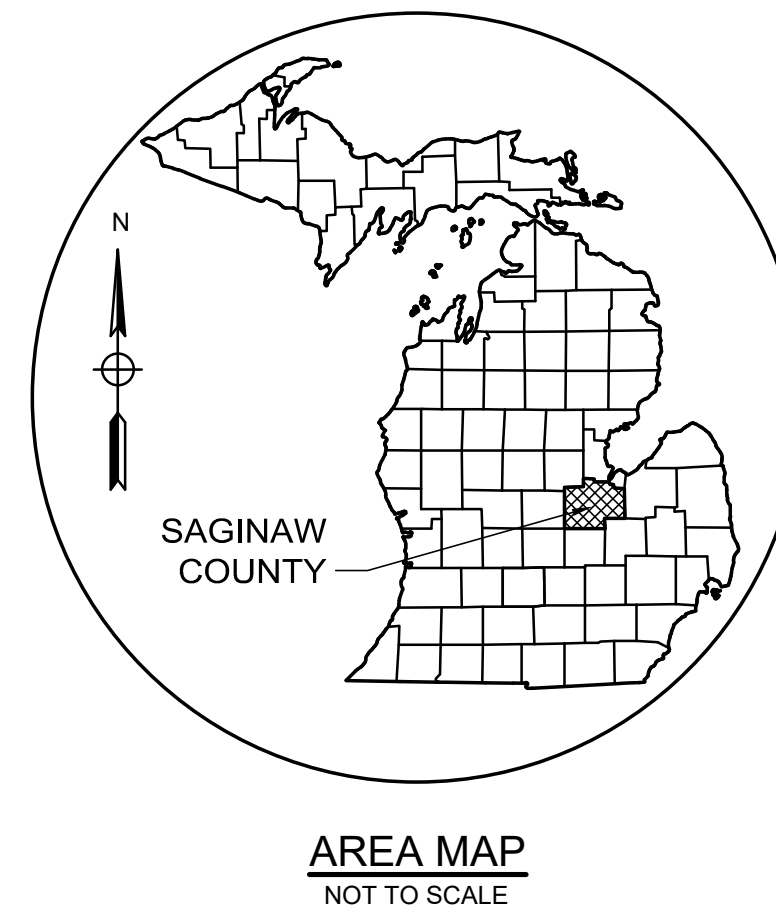
SAGINAW CHILDREN'S ZOO CENTRAL RESTROOM & CONCESSIONS AND NORTH TOILET ROOM ADDITION SAGINAW, MICHIGAN

BUILDING DATA

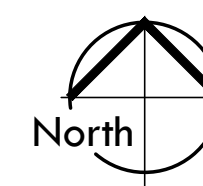
- OCCUPANCY CLASSIFICATION: USE GROUP SQUARE FEET
B 1,150 SF
- TYPE OF CONSTRUCTION: 5B
TABLE 601-FIRE RESISTANCE RATING FOR BUILDING ELEMENTS: 0 HOURS
- BUILDING AREA/HEIGHT: CODE REQ'D PROVIDED
BUILDING AREA: 9,000 SF 1,150 SF
BUILDING HEIGHT: 50 FT 20 FT
STORIES: 2 1
- CODES
2015 MICHIGAN BUILDING
2015 MICHIGAN MECHANICAL
2018 MICHIGAN PLUMBING
2017 NATIONAL ELECTRICAL CODE
MICHIGAN BARRIER FREE, ANSI 117.1-2009
- FIRE PROTECTION: NOT SPRINKLED
- SPACES REQUIRING RATED WALLS: NONE
- OCCUPANT LOAD: USE CALCULATION
BUSINESS (1,150) 1/100 GROSS = 11.5
- EGRESS: REQUIRED PROVIDED
TRAVEL DISTANCE: 200' MAX 20'
- PLUMBING FIXTURES FOR OCCUPANCY LOAD OF 100 PER MPC TABLE 403.1

	REQUIRED	PROVIDED
MEN - WATER CLOSETS	0	3
LAVATORIES	0	3
WOMEN - WATER CLOSETS	0	3
LAVATORIES	0	2
FAMILY - WATER CLOSETS	0	2
LAVATORIES	0	2
SERVICE SINK	0	1
DRINKING FOUNTAIN	0	1
- DESIGN LOADS PER CHAPTER 16 2015 MICHIGAN BUILDING CODE

FLOOR LIVE LOAD	100 PSF
FLOOR DEAD LOAD (ESTIMATED)	85 PSF
ROOF LIVE LOAD	35 PSF
ROOF SNOW LOAD	30 PSF
ROOF DEAD LOAD	25 PSF
WIND LOAD:	
EXPOSURE CATEGORY	"C"
WIND SPEED	115 MPH
WIND DESIGN PRESSURE:	
WINDWARD	21.93 PSF
LEEWARD	17015 PSF
LATERAL FORCE RESISTANCE SYSTEM	WALL BRACING



LOCATION MAP
SECTION 25
T.12N. - R.4.
CITY OF SAGINAW
SAGINAW, MICHIGAN



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DA-1431- 2	REFERENCE SHEET	T2.0	2
DA-1431- 3	NOTES	C1	3
DA-1431- 4	OVERALL PLAN	C2	4
DA-1431- 5	DEMOLITION PLAN	C3	5
DA-1431- 6	GRADING PLAN	C4	6
DA-1431- 7	UTILITY PLAN	C5	7
DA-1431- 8	SOIL EROSION PLAN	C6	8
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DA-1431- 13	DONOR GARDEN DETAILS	A0.2	13
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DA-1431- 15	N&S EXTERIOR ELEVATIONS & DETAILS	A3.0	15
DA-1431- 16	E&W EXTERIOR ELEVATIONS & DETAILS	A3.1	16
DA-1431- 17	ROOF PLAN & DETAILS	A4.0	17
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DA-1431- 21	WALL SECTIONS & DETAILS	A6.2	21
DA-1431- 22	INTERIOR ELEVATIONS	A7.0	22
DA-1431- 23	REFLECTED CEILING PLAN	A8.0	23
DA-1431- 24	DOOR & WINDOW SCHEDULES	A9.0	24
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DA-1431- 26	NORTH TOILET ADDITION ELEVATIONS	A11.0	26
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DA-1431- 35	MECH SCHEDULES	M4.1	35
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DA-1431- 40	ELEC RISER DIAGRAM PLAN	E4.1	40

ADD ALTERNATE #1
ALL SITE, STRUCTURAL, ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING ELEMENTS RELATED TO THE CONSTRUCTION OF THE NORTH TOILET ROOM ADDITION SHALL BE ITEMIZED AS A SEPARATE LINE ITEM ON THE BID FORM.

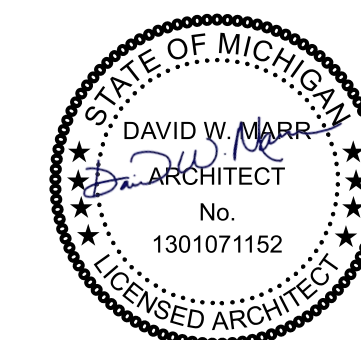
GENERAL NOTES

- THE CONTRACTOR SHALL CALL "MISS DIG", TELEPHONE 811, A MINIMUM OF 3 WORKING DAYS PRIOR TO STARTING ANY CONSTRUCTION ON THIS PROJECT. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" SYSTEM.
- THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.
- ALL PRODUCTS SHALL BE MANUFACTURER'S BEST BRAND OR GRADE AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL WORK SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM THE DATE OF FINAL PAYMENT.
- CONSTRUCT ALL MATERIALS STRAIGHT, PLUMB, AND LEVEL UNLESS SPECIFICALLY NOTED OR INDICATED OTHERWISE.
- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH FEDERAL, STATE, AND LOCAL - CODES, RULES, AND REGULATIONS.
- ALL MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH INDUSTRY STANDARDS AND THE ASSOCIATION THAT PERTAINS TO THE PARTICULAR PRODUCT. FOR EXAMPLE, AISC - AMERICAN INSTITUTE FOR STEEL CONSTRUCTION. USE THE MOST CURRENT EDITION WHEN REFERRING TO INDUSTRY STANDARDS.
- SITE PROTECTION: THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING ANY AND ALL ADJACENT EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING CONSTRUCTION SHALL, AT A MINIMUM, BE RESTORED TO A STATE EQUAL TO ITS PRE-CONSTRUCTION STATE AT THE CONTRACTOR'S EXPENSE.
- SITE RESTORATION: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED ON THE PLANS AND IN ACCORDANCE WITH THE SPECIFICATIONS. ALL SEEDED AREAS SHALL RECEIVE A MINIMUM OF 3 INCHES OF TOPSOIL UNLESS OTHERWISE NOTED. THE RESTORED AREAS SHALL BE MAINTAINED UNTIL VEGETATION IS WELL ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

OWNER:
SAGINAW ZOOLOGICAL SOCIETY
SAGINAW CHILDREN'S ZOO
1730 S. WASHINGTON AVE
SAGINAW, MI 48601

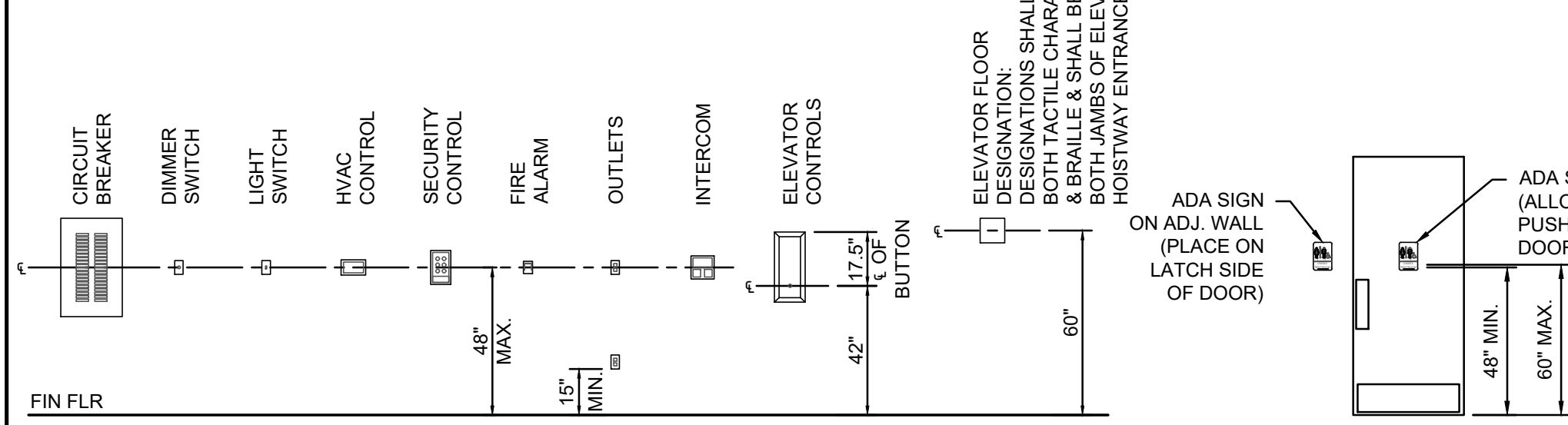
CONTACT:
GARY HOCHTHANNER
DIRECTOR OF PHYSICAL PLANT &
FACILITIES PLANNING
(989) 759-1408 X130

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
DATE	DATE	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>		
<p>CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO</p>		
<p>COVER SHEET</p>		
<p>Spicer group SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>		
DE. BY:	CH. BY: DSB	PROJECT NO.
DR. BY:	APP. BY: DWM	131928SG2022
STDS.	SHEET 1 OF 40	T
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-01	1.0
SCALE: NONE		

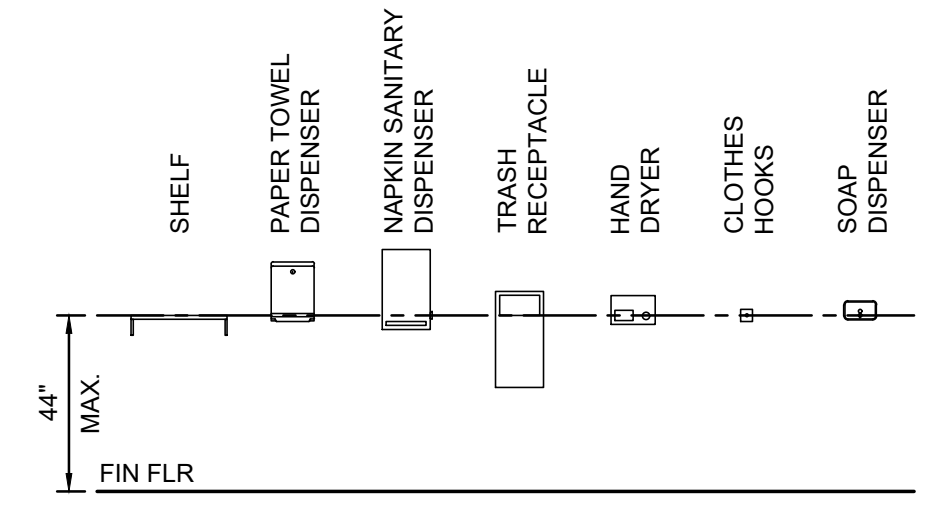


AC	AIR CONDITIONING	CSK	COUNTERSUNK	GC	GENERAL CONTRACTOR	MO	MASONRY OPENING	SAN	SANITARY
ACOUST	ACOUSTICAL	CT	CERAMIC TILE	GL	GLASS	MS	METAL STUD	SCHED	SCHEDULE
ACT	ACOUSTICAL CEILING TILE	CU	CONDENSING UNIT	GLZD/GLZ G	GLAZED/GLAZING	MT	METAL THRESHOLD	SECT	SECTION
ADA	AMERICANS WITH DISABILITIES ACT	CUH	CABINET UNIT HEATER	GRV	GRAVEL	MTP	METAL TOILET PARTITION	SF	SPLIT FACE
ADJ	ADJUSTABLE	DAMPG	DAMPPOOFING	GRV	GRAVITY ROOF VENT	NIC	NOT IN CONTRACT	SHT	SHEET
AF	ABOVE FINISHED FLOOR	DEG / °	DEGREE	GY	GYP	NOI#	NUMBER	SIM	SIMILAR
AGG	AGGREGATE	DEMO	DEMOLITION	HD	HD	NOM	NOMINAL	SKYLT	SKYLIGHT
AL	ALUMINUM	DF	DRINKING FOUNTAIN	HDCP	HANDICAP	NTS	NOT TO SCALE	SLDR	SOLDIER
ALT	ALTERNATE	DIA	DIAMETER	HDR CO	HEADER COURSE	OC	ON CENTER	SLNT	SEALANT
ANCH	ANCHOR	DIM	DIMENSION	HDWR	HARDWARE	OD	OUTSIDE DIAMETER	SPEC(S)	SPECIFICATION(S)
ANGL / L	ANGLE	DIV	DIVISION	HGT/HT	HEIGHT	OH	OVERHEAD DOOR	SPKR	SPEAKER
APPROX	APPROXIMATE (LY)	DP	DEPTH/DEEP	HP	HIGH POINT	OPNG	OPENING	SO	SQUARE
ARCH	ARCHITECT (URAL)	DR	DOOR	HR	HOUR	OPP	OPPOSITE	SS	SERVICE SINK/STAINLESS STEEL
ASPH	ASPHALT	DS	DOWNSPOUT	HP	HIGH POINT	PARG	PARGING	ST	STORM
AV	AUDIO/VISUAL	DTL	DETAIL	HR	HOUR	PART	PARTICLE	STD	STANDARD
BB	BACK TO BACK	DWG	DRAWING	HT	HEATING, VENTILATION, AIR CONDITIONING	PARTN	PARTITION	STL	STEEL
BD	BOARD	DWL	DOWEL	ID	INSIDE DIAMETER	PERF	PERFORATED	STRUCT	STRUCTURAL
BF	BARRIER FREE	EF	EXHAUST FAN	IN	INCH	PL	PLATE/PROPERTY LINE	SUSP	SUSPENDED
BIT	BITUMINOUS	EIFS	EXTERIOR INSULATED FINISH SYSTEM	IN	INCH	PLAM	PLASTIC LAMINATE	T	TREAD
BLDG	BUILDING	EJ	EXPANSION JOINT	INCL	INCLUDED	PLAS	PLASTER	T&B / TB	TOP & BOTTOM
BLK	BLOCK	EL	ELEVATION	INSUL	INSULATION	PLUMB	PLUMBING	TB	TACK BOARD
BLKG	BLOCKING	ELEV	ELEVATOR	INT	INTERIOR	PLYWD	PLYWOOD	TC	TOP OF CURB
BM	BEAM/BENCH MARK	EP	ELECTRICAL PANEL	JST	JOIST	PORC	PORCELAIN	TEMP	TEMPERED/TEMPORARY
BOT	BOTTOM	EQ	EQUAL	JT	JOINT	PREFAB	PREFABRICATED	TERR	TERRAZZO
BRCKT	BRACKET	EQUIP	EQUIPMENT	LAM	LAMINATE(D)	PSF	POUNDS PER SQUARE FEET	TH	THRESHOLD
BRG	BEARING	ES	EACH SIDE	LAV	LAVATORY	PSI	POUNDS PER SQUARE INCH	TOC	TOP OF CONCRETE
BUR	BUILT-UP ROOF	EWC	ELECTRICAL WATER COOLER	LBN#	LOCATIONS	PTD	PAINTED/PAPER TOWEL DISPENSER	TOF	TOP OF FOOTING
CAB	CABINET	EX/EXIST	EXISTING	LG	LENGTH	PVC	POLYVINYL CHLORIDE	TOM	TOP OF MASONRY
CB	CATCH BASIN	EXH	EXHAUST	LKR	LOCKER	QT	QUARRY TILE	TOS	TOP OF STEEL
CC	CLOSED CELL (FOAM INSULATION)	EXP	EXPANSION	LLH	LONG LEG HORIZONTAL	R	RADIUS/RISER	TR	TREATED
CEM	CEMENT	EXT	EXTERIOR	LLV	LONG LEG VERTICAL	RAG	RETURN AIR GRILLE	TV	TELEVISION
CER	CERAMIC	FA	FRESH AIR	LOC	LOCATIONS	RB	RUBBER BASE	TYP	TYPICAL
CFM	CUBIC FEET PER MINUTE	FD	FLOOR DRAIN	LP	LOW POINT	RC	RAIN CONDUCTOR	UNO	UNLESS NOTED OTHERWISE
CFS	COLD FORMED STEEL	FE	FIRE EXTINGUISHER	LT FIX	LIGHT FIXTURE	REF	REFERENCE/REFRIGERATOR	UV	UNIT VENTILATOR
CI	CONTINUOUS INSULATION	FEC	FIRE EXTINGUISHER CABINET	LT WT	LIGHT WEIGHT	REINF	REINFORCING	VAP BAR	VAPOR BARRIER
CIP	COMPACTED IN PLACE/ CAST IN PLACE	FF	FORCED FLOW CABINET HEATER	MFRG	MANUFACTURER	REQD	REQUIRED	VB	VINYL BASE
CJ	CONTROL JOINT	FHC	FIRE HOSE CABINET	MAR	MARBLE	RES	RESILIENT	VCT	VINYL COMPOSITE TILE
CL	CENTERLINE	FIN	FINISH	MAS	MASONRY	REV	REVISION	VERT	VERTICAL
CLG	CEILING	FIP	FOAMED IN PLACE INSULATION	MAT	MATERIAL	RF	ROOF EXHAUST FAN	VIF	VERIFY IN FIELD
CLK	CAULK	FLASH	FLASHING	MAU	MAKE UP AIR UNIT	RLGT	REGLET	VWC	VINYL WALL COVERING
CMU	CONCRETE MASONRY UNIT	FLR	FLOOR	MAX	MAXIMUM	RM	REMOVABLE MULLION/ROOM	W	WATER
COL	COLUMN	FOUND	FOUNDATION	MB	MARKER BOARD	RO	ROUGH OPENING	WI	WITH
COMP	COMPACTED	FRMG	FRAMING	MD	METAL DECK	ROW	RIGHT OF WAY	W/O	WITHOUT
CONC	CONCRETE	FT	FEET	MECH	MECHANICAL	ROWLK	ROWLOCK	WC	WATER CLOSET
CONST	CONSTRUCTION	FTG	FOOTING	MET / MTL	METAL	RS	ROOF SUMP	WD	WIDTH/WOOD
CONT	CONTINUOUS	FURG	FURRING	MEZZ	MEZZANINE	RTU	ROOF TOP UNIT	WH	WATER HEATER
CONTR	CONTRACTOR	G	GAS	MH	MANHOLE	RV	ROOF VENT	WP	WATERPROOFING / WEATHERPROOF / WORKING POINT
CORR	CORRIDOR	GA	GAUGE	MIN	MINIMUM/MINUTE	SK	SINK	WRB	WATER RESISTANT BARRIER
CRS	COURSES	GALV	GALVANIZED	MISC	MISCELLANEOUS	S & V	STAIN & VARNISH	WWF	WELDED WIRE FABRIC
CPT	CARPET	GB	GRAB BAR	ML	METAL LATH	SAG	SUPPLY AIR GRILLE		

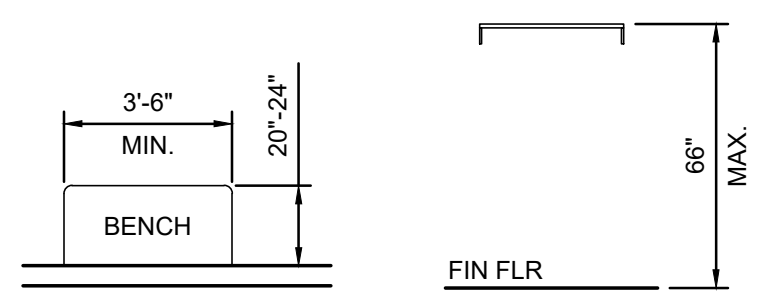
MOUNTING HEIGHTS



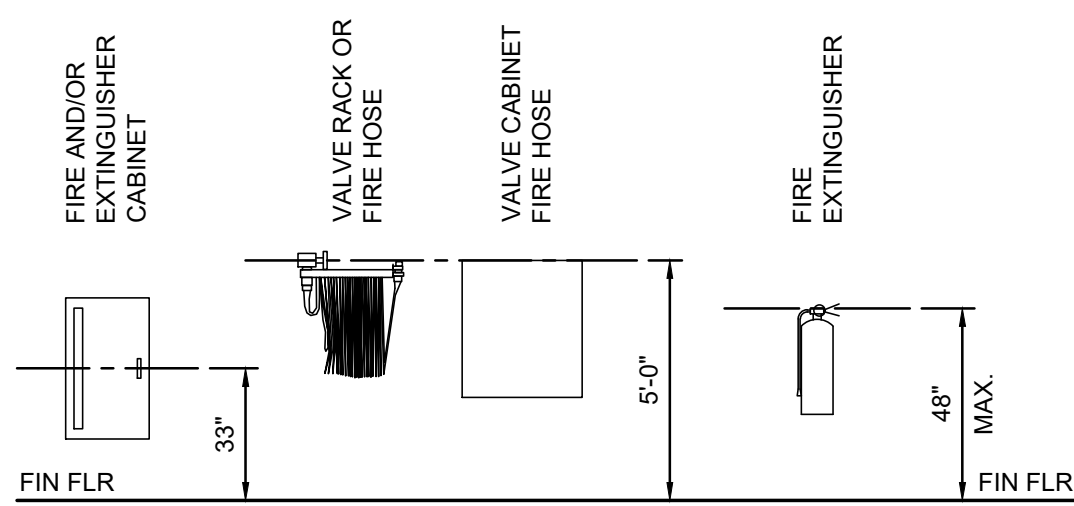
CONVENIENCE CONTROLS & OUTLETS



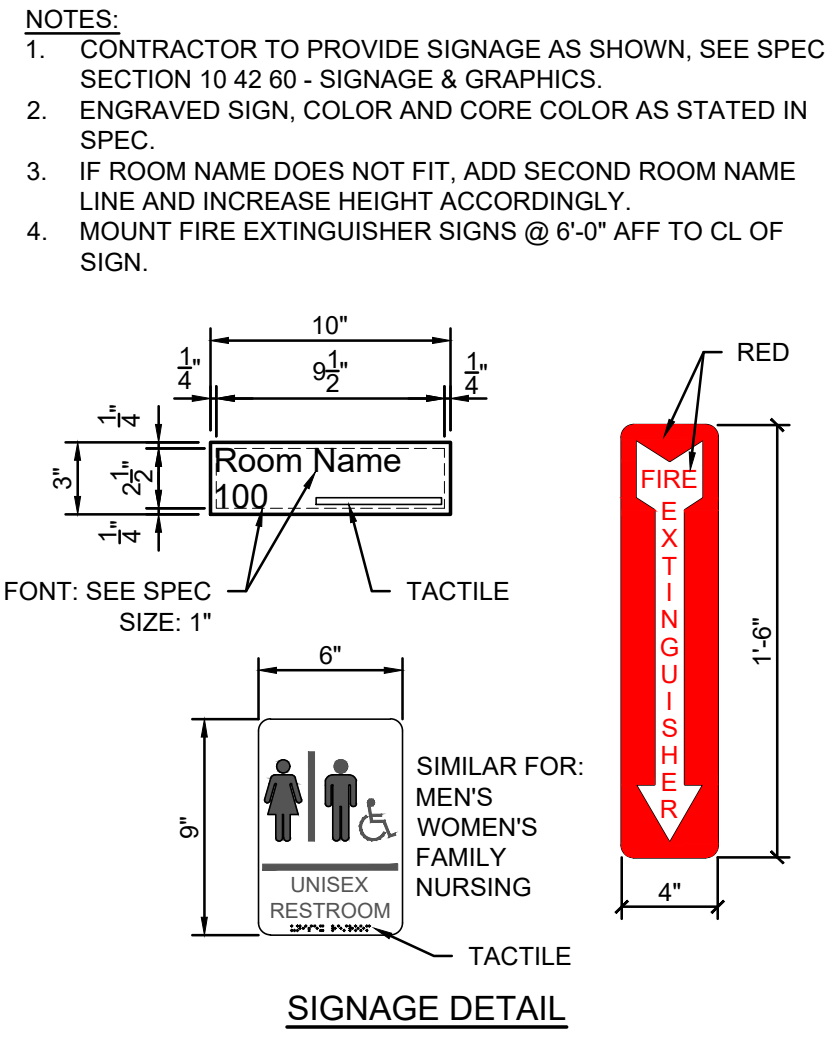
TOILET ROOM SIGNAGE



TOILET ROOM ACCESSORIES



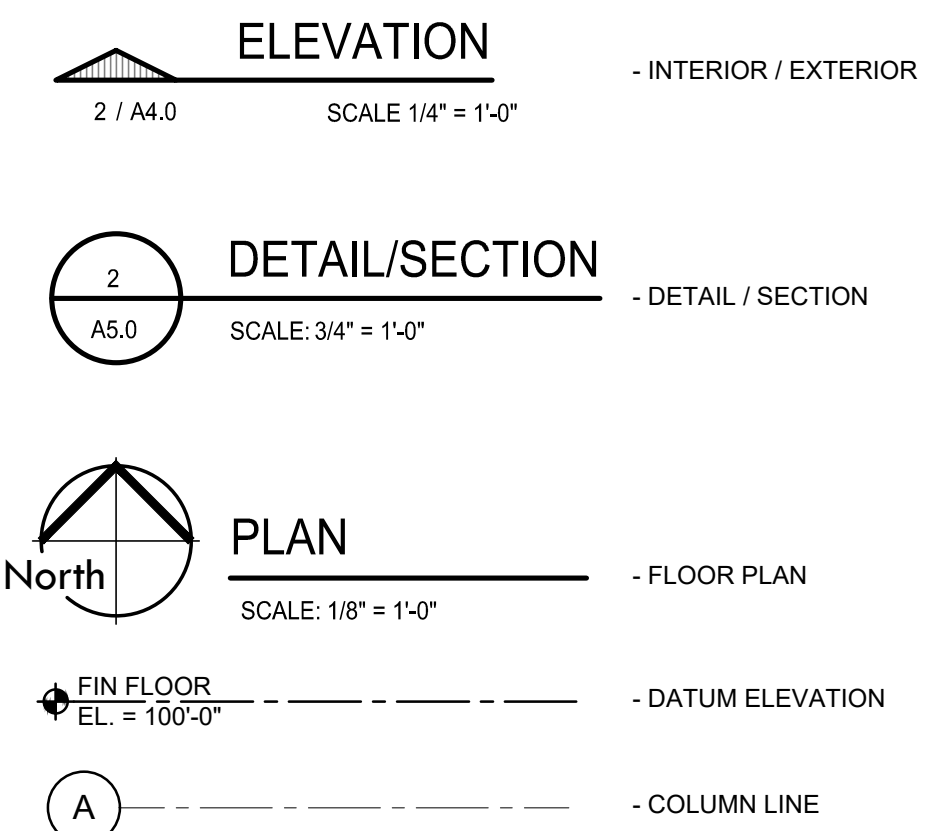
FIRE EXTINGUISHER EQUIPMENT



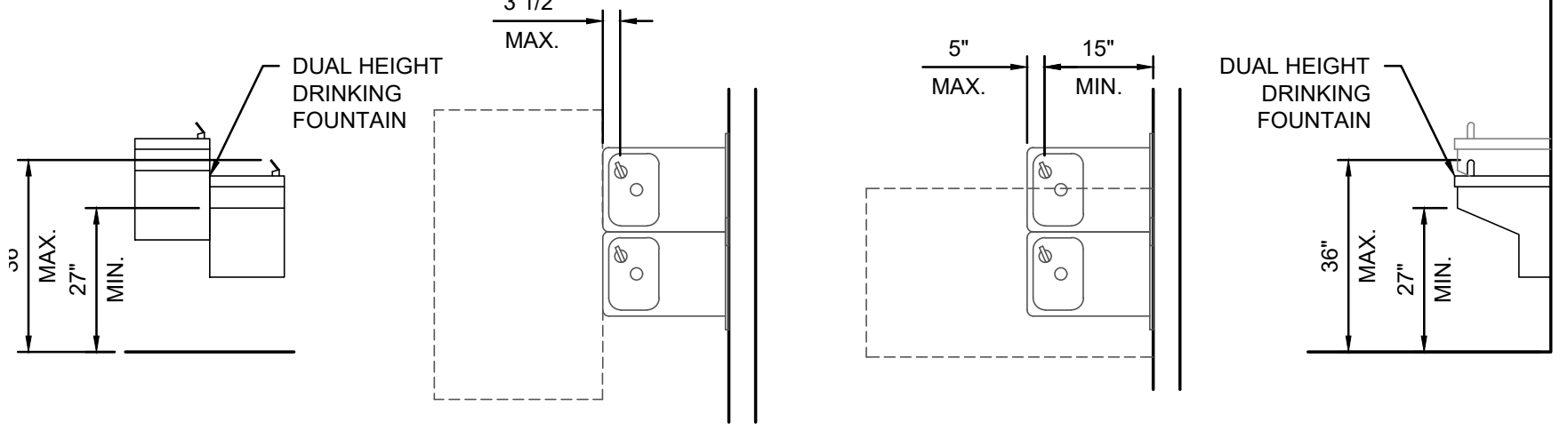
SIGNAGE DETAIL

SYMBOL LEGEND

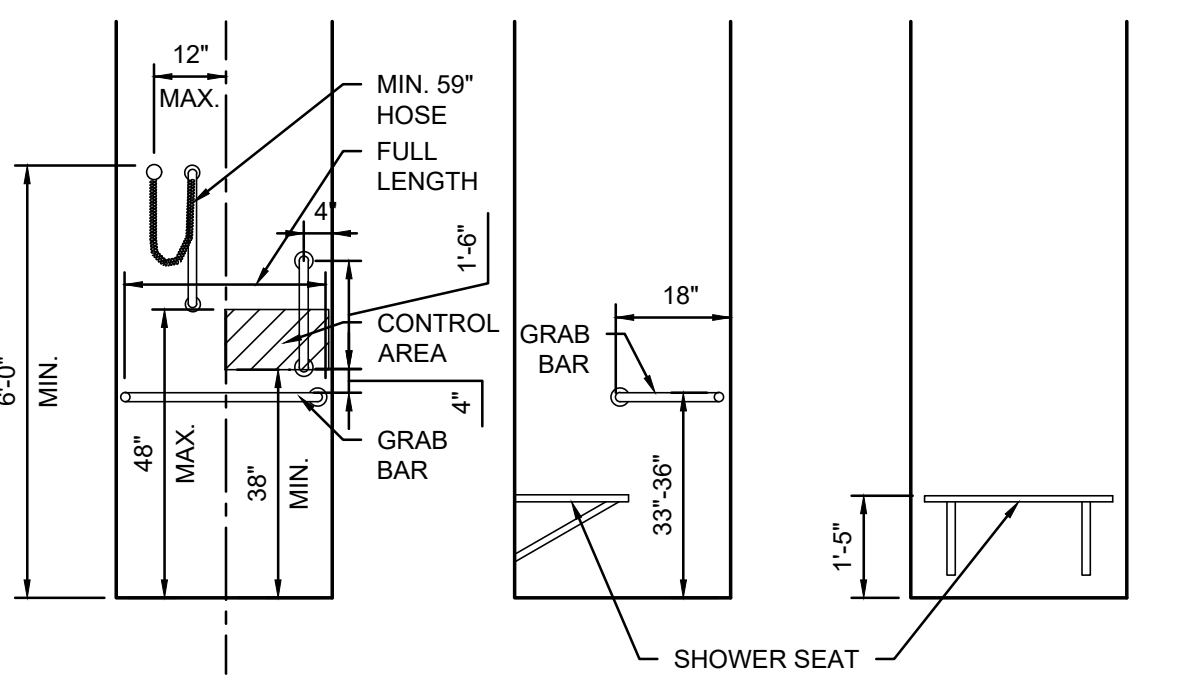
- F20 - FOUNDATION TYPE TAG
- # - NEW KEYED NOTE TAG
- Δ - REVISION TAG
- # - DEMO KEYED NOTE TAG
- 100 - DOOR NUMBER TAG
- A - WINDOW TYPE TAG
- 8 - WALL TYPE TAG
- 100 - EQUIPMENT TAG
- C1 - BF CLEARANCE TAG
- H - HAZARD TAG
- FE4 - FIRE EXTINGUISHER TAG



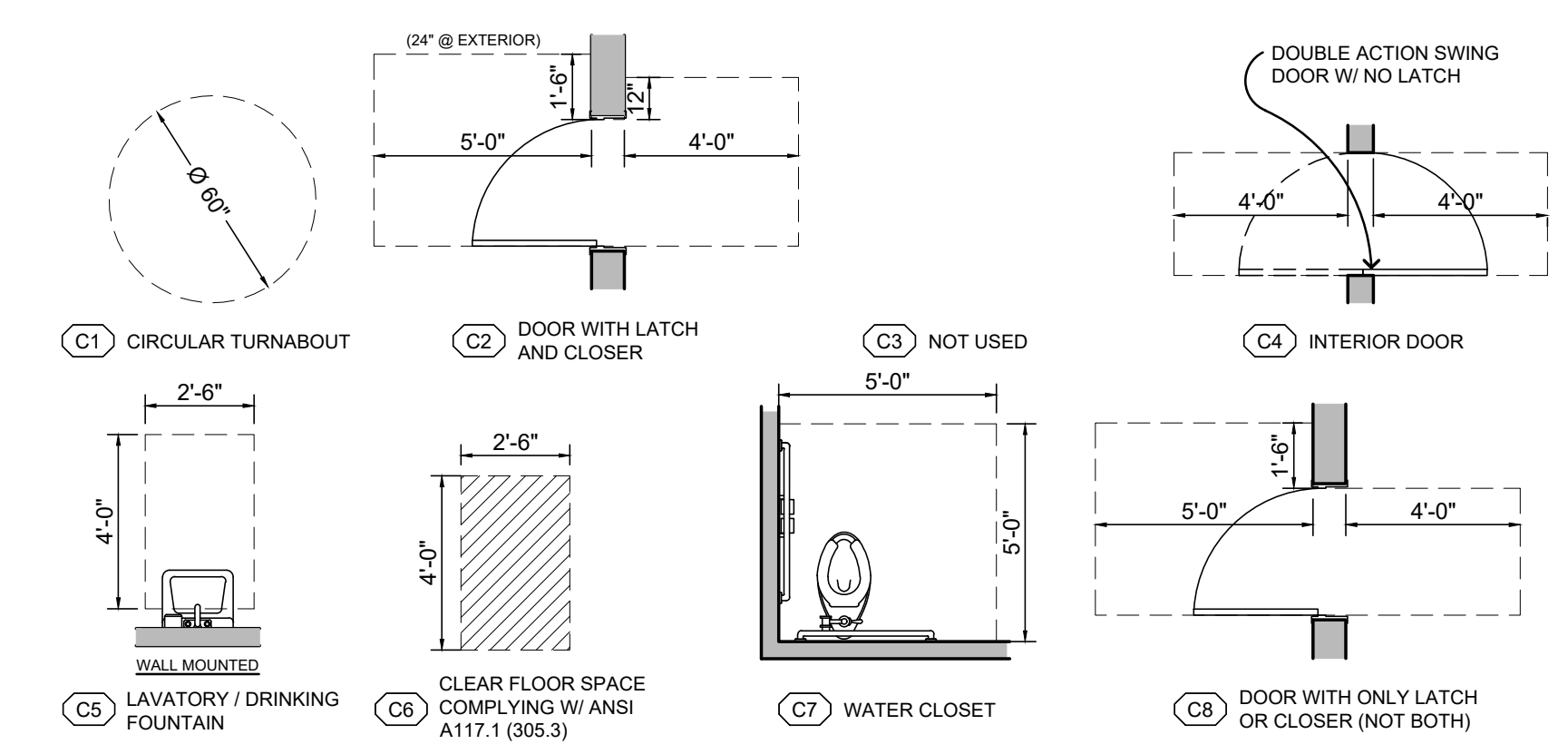
DRINKING FOUNTAIN DETAILS



SHOWER DETAILS



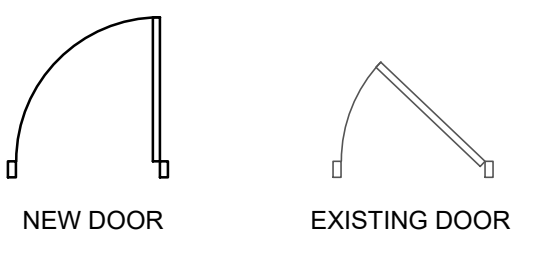
ACCESSIBILITY MINIMUM CLEARANCE LEGEND



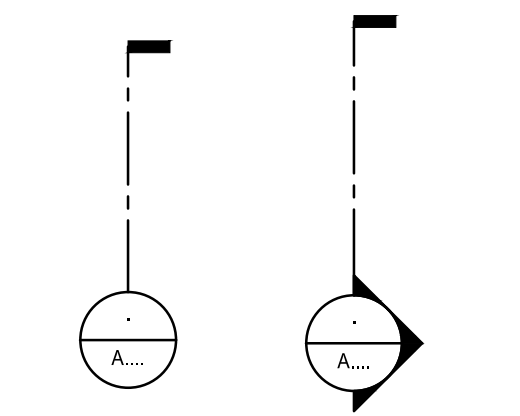
HATCH / MATERIAL LEGEND

- ACOUSTICAL PANEL OR TILE
- ASPHALT ON AGGREGATE
- BATT INSULATION
- BRICK
- COMPOSITION/PLYWOOD
- CONCRETE
- CONCRETE MASONRY UNIT
- CONTINUOUS WOOD FRAMING OR BLOCKING
- FINISH WOOD
- GRANULAR FILL
- CEMENT GROUT
- INTERRUPTED WOOD BLOCKING/SHIMS
- MARBLE
- PLASTER/GYPSUM BOARD
- RIGID INSULATION
- SOIL
- STONE/GRAVEL
- SPRAY FOAM INSULATION

ELEVATION CALLOUTS



WALL SECTION BUILDING SECTION



DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.		
CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
REFERENCE SHEET		
DE. BY:	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY:	APP. BY: DWM	
STDS.	SHEET 2 OF 40	T
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-02	2.0
SCALE: NONE		

0:\p0211082022_Saginaw Childrens Zoo\dwg\cabinets.dwg, 11/16/2022 4:29:14 PM, User: DWM, PLOT DATE: 11/16/2022 4:29:14 PM, PLOT SCALE: 1/8" = 1'-0"

GENERAL NOTES

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS, UNLESS AUTHORIZED BY THE OWNER.

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO START OF CONSTRUCTION, CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY.

ALL EXCAVATED MATERIAL NOT TO BE REUSED OR DISPOSED OF ON SITE SHALL BE REMOVED FROM SITE. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING MATERIALS ACCORDING TO LOCAL AND STATE REQUIREMENTS.

UNDERGROUND UTILITIES/MISS DIG

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.

ALL CONSTRUCTION UNDER EXISTING UTILITIES, INCLUDING HOUSE SERVICES, SHALL BE COMPLETELY BACKFILLED WITH SAND, IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED, PER THE SPECIFICATIONS OF THE INDIVIDUAL UTILITY COMPANY CLAIMING OWNERSHIP OF THE UTILITY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODABLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED/MULCH OR MULCH BLANKET AS DIRECTED BY THE ENGINEER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

ALL CATCHBASINS AND SEDIMENTATION TRAP/BASIN SHALL BE CLEANED OUT UPON COMPLETION OF THE PROJECT.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR UTILITY BEING INSTALLED.

ALL RIPRAP SHALL BE MDOT PLAIN RIPRAP TYPE MATERIAL, UNLESS OTHERWISE NOTED.

CONTRACTORS SHALL FINISH GRADE, SEED, FERTILIZE, AND MULCH DAILY ON ALL DISTURBED AREAS.

CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

PROPERTY OWNERS

PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

ADJUSTING MONUMENT BOXES

ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT. IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES, AS REQUIRED.

TRAFFIC

THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES. SIGNAGE MUST BE IN ACCORDANCE WITH THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL BE COORDINATED WITH THE ENGINEER AND GOVERNING ROAD AGENCY. PERMITS MAY BE REQUIRED.

PERMITS

PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE APPROPRIATE AGENCIES.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE AGENCIES.

GENERAL NOTES CONT.

SITE WORK

ELECTRIC SERVICE TO BUILDING AND PARKING LOT LIGHTS SHALL BE UNDERGROUND. ALL UTILITY COMPANY SERVICE LINES AND PAD LOCATIONS ARE SHOWN FOR REFERENCE ONLY. EXACT LOCATIONS TO BE COORDINATED WITH UTILITY COMPANY.

ALL TRENCHED CONSTRUCTION UNDER EXISTING, PROPOSED AND FUTURE GRAVEL, PAVED SURFACES OR UTILITIES SHALL BE COMPLETELY BACKFILLED WITH CLASS II SAND OR OTHER APPROVED GRANULAR MATERIAL IN 12" LAYERS AND COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT.

UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING OR OTHERWISE. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL UNLESS NOTED OTHERWISE.

CONTRACTOR IS RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE PATTERN TO ENSURE NO PONDING OF WATER ON ADJACENT EXISTING AND PROPOSED PAVED SURFACES.

DIMENSIONS SHOWN ARE GIVEN TO THE BACK OF CURBS AND FACE OF BUILDINGS UNLESS NOTED OTHERWISE.

WHERE A DISCREPANCY OCCURS BETWEEN PROPOSED WORK AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR CLARIFICATION.

PAVEMENT / SIDEWALK

CONTRACTOR SHALL SAWCUT PAVEMENT AND CURB & GUTTER FOR A CLEAN EDGE TO INSTALL PROPOSED PAVEMENT AND CURB & GUTTER.

HMA PAVEMENT AND OR CONCRETE SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN RAIN IS FORECAST OR THREATENING.

SIDEWALK SHALL BE CONSTRUCTED WITH A CROSS SLOPE SLOPED TOWARD THE STREET OR PARKING AREAS. SLOPES NOT TO EXCEED 2% UNLESS NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS OR PAVEMENT.

IN GRASS AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4" INCH HIGH THAN THE ADJACENT GROUND SURFACE, UNLESS NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS OR PAVEMENT.

THE CONTRACTOR SHALL PROTECT FRESH HMA OR CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC OR VANDALISM. DAMAGED HMA OR CONCRETE SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

PAVEMENT MARKINGS AND SIGNS

ALL PERMANENT PAVEMENT MARKINGS, SHAPES, AND DIMENSIONS SHALL CONFORM WITH MDOT PAVEMENT MARKING TYPICALS PAVE-900 SERIES.

STORM SEWER

PIPE MATERIALS SHALL BE AS FOLLOWS:

- 12" DIAMETER AND ABOVE - CONCRETE PIPE, C-76, ASTM C-443 OR PVC PIPE SDR35.
- LESS THAN 12" DIAMETER - PVC PIPE SDR35, OR HIGH DENSITY POLYETHYLENE (HDPE), DUAL WALL, CORRUGATED.

ALL MANHOLE RIMS IN ROADWAYS AND DRIVES SHALL BE ADJUSTED PRIOR TO FINAL PAVING TO BE FLUSH WITH FINISHED GRADE.

GRADING AROUND MANHOLES/CATCHBASINS, FLARED END SECTIONS, AND OTHER INLETS SHALL BE SMOOTH AND SHAPED TO PROVIDE POSITIVE DRAINAGE INTO THE INLETS.

ALL MANHOLE TO PLASTIC PIPE CONNECTIONS SHALL BE MADE WITH KOR-N-SEAL BOOT.

ALL FLARED END SECTIONS TO HAVE FACTORY SUPPLIED ANIMAL GUARD.

DRAINAGE STRUCTURE IN PROPOSED CURB - OFFSETS AND ELEVATIONS SHOWN ARE TO THE BACK AND TOP OF CURB. ALIGN THE STRUCTURE WITH THE BACK OF THE CASTING AND THE TOP OF THE CASTING FLUSH WITH THE PROPOSED BACK AND TOP OF CURB.

DRAINAGE STRUCTURES IN OUTLAW AREA AND PAVED AREA - OFFSET SHOWN IS TO CENTER OF STRUCTURE. RIM ELEVATIONS FOR DOME COVERS AND FLAT COVERS ARE TO THE TOP OF THE CASTING FRAME.

SANITARY SEWER

ALL SANITARY SEWER SHALL BE PVC, SDR35, TYPE PSM PLASTIC, CONFORMING TO ANSI/ASTM D3034 WITH RUBBER GASKET JOINTS, UNLESS SPECIFIED OTHERWISE.

ALL SEWER JOINTS SHALL CONFORM TO A.S.T.M. C-425.

ALL SEWER PIPE SHALL CONFORM TO A.S.T.M. C-700.

INFILTRATION SHALL NOT EXCEED 100 GAL./INCH DIA./MILE/DAY.

WATER MAIN

WATER MAIN PIPE SHALL CONFORM TO THE MUNICIPALITY'S STANDARDS AND SHALL BE PVC C-900 OR DUCTILE IRON, CLASS 52, CEMENT LINED.

WATER SERVICE PIPE FROM 3/4" TO 2-1/2" SHALL BE SEAMLESS, TYPE-K COPPER.

WATER MAIN SHALL HAVE A MINIMUM COVER OF 5'-6" UNLESS OTHERWISE SPECIFIED.

THE CONTRACTOR SHALL SECURE ALL MECHANICAL JOINT FITTINGS WITH RETAINERS GLANDS IN ADDITION TO THRUST BLOCKING. RETAINER GLANDS SHALL BE MEGA-LUG AS MANUFACTURED BY EBAA IRON OR APPROVED EQUAL.

WRAP ALL FITTINGS, VALVES, HYDRANTS, AND ALL D.I. PIPE IN 8 MIL POLYETHYLENE SHEET PER AWWA C105. THE CONCRETE USED FOR BLOCKING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.

ALL FITTINGS SHALL BE MECHANICAL JOINT. ALL HYDRANTS AND VALVES SHALL CONFORM TO THE MUNICIPALITY'S STANDARDS.

ALL BURIED FERROUS PARTS SHALL RECEIVE A 10 MIL (DRY MILL THICKNESS) COATING OF COAL TAR EPOXY.

ABBREVIATIONS

- BC = BACK OF CURB
- BM = BENCH MARK
- C/C = CENTER TO CENTER
- CB = CATCH BASIN
- CL = CENTERLINE
- CJ = CONSTRUCTION JOINT
- CMP = CORRUGATED METAL PIPE
- CSP = CORRUGATED STEEL PIPE
- CONC = CONCRETE
- DI = DUCTILE IRON PIPE
- EF = EACH FACE
- ELEC = ELECTRIC
- EL OR ELEV = ELEVATION
- EQM = EDGE OF METAL
- EOP = EDGE OF PAVEMENT
- EQ/SP = EQUALLY SPACED
- ESMT = EASEMENT
- EW = EACH WAY
- EX OR EXIST = EXISTING
- FF = FINISH FLOOR
- FL = FLOW LINE
- FS = FINISH SURFACE
- FG = FINISH GROUND
- GALV = GALVANIZED
- G = GUTTER
- HDP = HOT DIP GALVANIZED
- HOPE = HIGH DENSITY POLYETHYLENE
- HP = HIGH POINT
- HMA = HOT MIX ASPHALT
- HYD = HYDRANT
- INV = INVERT
- LP = LOW POINT
- OC = ON CENTER
- OH = OVERHEAD
- MH = MANHOLE
- MIN = MINIMUM
- MON = MONUMENT
- NFL = NOT FIELD LOCATED
- NTS = NOT TO SCALE
- PROP = PROPOSED
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- ROW = RIGHT OF WAY
- SAW = SANITARY
- SB = SOIL BORING
- SS = STAINLESS STEEL
- STA = STATION
- STM = STORM
- SWR = SEWER
- T/B = TOP AND BOTTOM
- TC = TOP OF CURB
- TOB = TOP OF BANK
- TOS = TOE OF SLOPE
- TELE = TELEPHONE
- TRW = TOP OF RETAINING WALL
- TW = TOP OF WALK
- UNO = UNLESS NOTED OTHERWISE
- WM = WATER MAIN
- WS = WATER SURFACE ELEVATION

LINE TYPE LEGEND

- EXISTING ROAD CENTERLINE
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER OR FORCEMAIN
- EXISTING STORM SEWER
- EXISTING TELEPHONE CABLE
- EXISTING GAS MAIN
- EXISTING ELECTRIC
- PROPOSED UTILITY
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- FENCE LINE
- OVERHEAD UTILITY
- RAILROAD TRACKS
- STATION LINE
- LIMITS OF RIGHT OF WAY
- EASEMENT
- SILT FENCE
- REVERSE PAN CURB & GUTTER
- TREE LINE
- EXISTING CONTOURS
- PROPOSED CONTOURS

**SYMBOL LEGEND
EXISTING SYMBOLS**

- - MANHOLE
- ⊗ - CATCH BASIN
- ⊗ - CURB CATCH BASIN
- ⊗ - FIRE HYDRANT
- ⊗ - GAS VALVE
- ⊗ - WATER VALVE
- ⊗ - TELEPHONE PEDESTAL
- - POWER POLE
- ⊗ - TELEPHONE POLE
- ⊗ - POWER AND TELEPHONE POLE
- ⊗ - LIGHT POLE
- ⊗ - GUY ANCHOR AND POLE
- - MAIL BOX
- ⊗ - WATER METER
- ⊗ - TELEPHONE MANHOLE
- ⊗ - ELECTRIC MANHOLE
- ⊗ - MONITORING WELL
- ⊗ - HAND HOLE
- ⊗ - TRANSFORMER
- ⊗ - ELECTRICAL PEDESTAL
- ⊗ - BARRIER FREE PARKING
- ⊗ - SPRINKLER
- ⊗ - RAILROAD SIGNAL
- ⊗ - ANTENNA
- ⊗ - SATELLITE DISH
- ⊗ - AIR CONDITIONING UNIT
- ⊗ - SOIL BORING
- ⊗ - BENCH MARK
- ⊗ - FOUND SURVEY CORNER
- - SET 1/2" IRON ROD
- - 1/4 SECTION CORNER
- ⊗ - BREAK IN LINE
- ⊗ - EXISTING SIGN-1 POST
- ⊗ - EXISTING SIGN-2 POST
- ⊗ - STUMP
- ⊗ - WETLANDS
- ⊗ - PINE
- ⊗ - BUSH
- ⊗ - TREE

PROPOSED SYMBOLS

- - MANHOLE
- ⊗ - CATCH BASIN
- ⊗ - FIRE HYDRANT
- - WATER VALVE
- ⊗ - BARRIER FREE PARKING
- ⊗ - LIGHT POLES
- ⇒ - DRAINAGE FLOW
- ⊗ - SPOT ELEVATION LABELS
- - GUTTER
- TW = WALK
- TC = TOP OF CURB
- FS = FINISH SURFACE

FOR UTILITIES CONTACT

TELEPHONE SERVICE

AT&T
c/o Engineering Department
Room 525
309 S. Washington Ave
Saginaw, MI 48607
TEL 989-776-4070

GAS AND ELECTRIC SERVICE

Consumers Energy
2400 Weiss Street
Saginaw, MI 48602
TEL 989-791-5869

WATER AND SEWER SERVICES

City of Saginaw
1315 S. Washington Ave.
Saginaw, MI 48601
TEL 989-399-1311

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>CHILDREN'S ZOO AT CELEBRATION SQUARE SAGINAW, MICHIGAN</p>			
<p>NOTES CHILDREN'S ZOO CENTRAL RESTROOMS & CONCESSIONS BUILDING</p>			
<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>		<p>PROJECT NO 1319285G2022</p>	
DE. BY: CAR	CH. BY: BSP	PROJECT NO	
DR. BY: CAR	APP. BY: DVM	1319285G2022	
STDS.	SHEET 3 OF 40	C	
DATE NOV. 9, 2022	FILE NO	1	
SCALE N/A	DA-1431- 3		

UTILITY NOTE

The utility locations as hereon shown are based on field observations and a careful review of municipal and utility company records. However, it is not possible to determine the precise location and depth of underground utilities without excavation. Therefore, we cannot guarantee the accuracy or completeness of the buried utility information hereon shown. The contractor shall call "MISS DIG" (1-800-482-7171) within three working days prior to any excavation. The contractor is responsible for verifying these utility locations prior to construction and shall make every effort to protect and/or relocate them as required. The contractor shall notify the Engineer/Surveyor as soon as possible in the event a discrepancy is found.

FOR UTILITIES CONTACT

TELEPHONE SERVICE
A7&T
c/o Engineering Department
Room 525
309 S. Washington Ave
Saginaw, MI 48607
TEL 517-776-4070

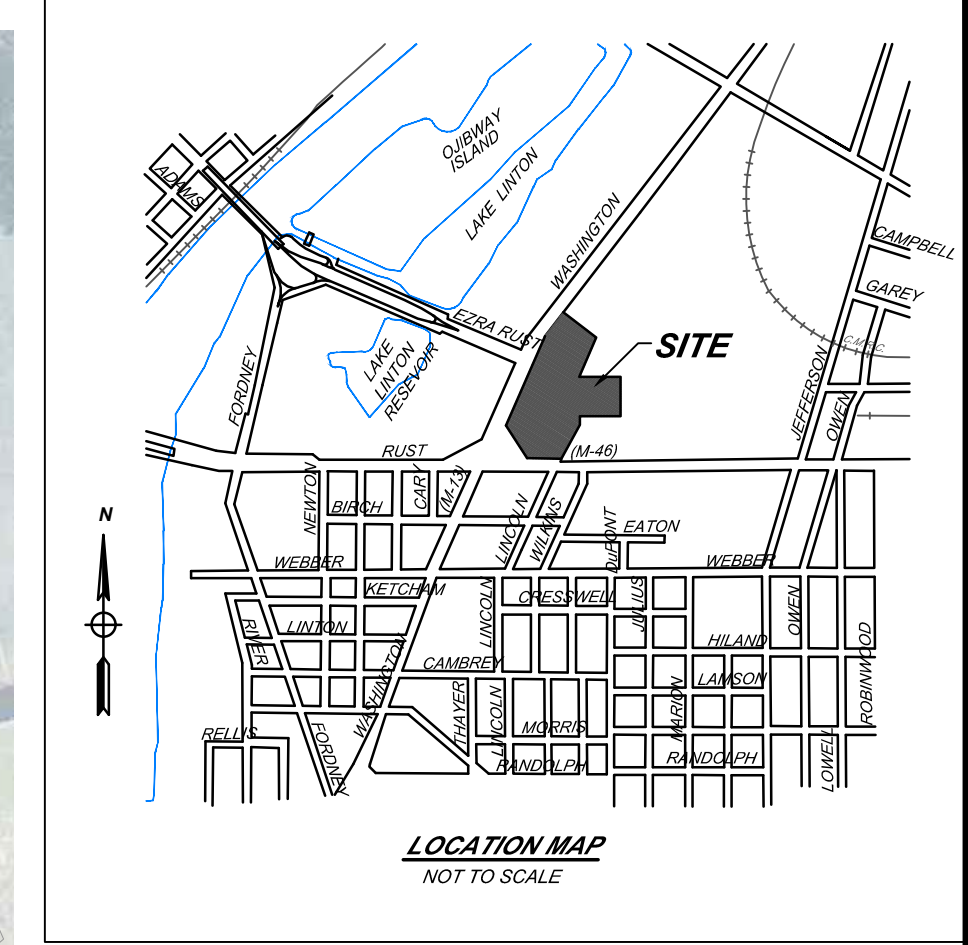
WATER AND SEWER SERVICES
City of Saginaw Engr. Dept.
1435 S. Washington Avenue
Saginaw, MI 48601
TEL 517-759-1410

CABLE
Charter Communications
2525 State Street
Saginaw, MI 48602
989-799-0315

GAS AND ELECTRIC SERVICE
Consumers Energy
2400 Weiss Street
Saginaw, MI 48602
TEL 989-791-5869

LEGEND

- - TELEPHONE PEDESTAL
- ⊙ - FOUND MONUMENT
- ⊙ - FOUND SURVEY CORNER
- - SET 3/4" IRON PIPE
- - SET P.K. NAIL
- ⊙ - PINE
- ⊙ - DECIDUOUS BUSH
- ⊙ - DECIDUOUS TREE
- ⊙ - GUY ANCHOR AND POLE
- ⊙ - POWER AND TELEPHONE POLE
- NFL - NOT FIELD LOCATED
- - MANHOLE
- ⊙ - CATCHBASIN
- ⊙ - CURB CATCHBASIN
- ⊙ - FIRE HYDRANT
- ⊙ - WATER VALVE
- ⊙ - LIGHT POLE
- ⊙ - SIGN
- ⊙ - ELECTRICAL OUTLET
- /// - BITUMINOUS SURFACE
- ▨ - CONCRETE SURFACE
- - - CONCRETE CURB
- - - CONTOUR



SECTION 25
T. 12 N. - R. 4 E.
CITY OF SAGINAW,
SAGINAW COUNTY, MICHIGAN

- BENCH MARK**
- BM 200 - SET GEAR SPIKE IN S.E. FACE OF POWER POLE ON N. SIDE OF WEST ENTRANCE INSIDE FENCE.
NAVD88 ELEV. 590.40
 - BM 201 - SET GEAR SPIKE IN E. FACE OF UTILITY POLE NEAR N.W. LY CORNER OF RESTROOM BUILDING AT WEST ENTRANCE.
NAVD88 ELEV. 589.36
 - BM 202 - SET CHISELED MARKER ON TOP OF N.E. LY CORNER OF LIGHTPOLE BASE NEAR N.E. LY CORNER OF RESTROOM BUILDING NEAR MAIN ENTRANCE.
NAVD88 ELEV. 593.60
 - BM 203 - FOUND NAIL IN S. LY FACE OF LIGHTPOLE SOUTH OF ZOO PARKING LOT.
NAVD88 ELEV. 593.93

FLOOD PLAIN NOTE

According to the Federal Emergency Management Agency Maps, Community Panel #28145C0135 D the subject property lies partially within Zone X, areas of 500-year flood plain; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 100 year flood. And partially within Zone X areas determined to be outside 500-year flood plain.

LEGAL DESCRIPTION

Part of Lots 28, 32, 33, and 77, Hoyt's Subdivision of Jame's Riley Reserve, City of Saginaw, Saginaw County, Michigan. Also being the West 350 feet of said Lot 77 (measured at Right angles to the East line of Washington Avenue, also a parcel bounded on the South by the North line of Rust Avenue, on the West by the East line of Washington Avenue, on the North by the South line of Lot 77 extended and on the East by the West line of said Lot 33 extended. Excepting from just described parcel of land lying Easterly and Southerly of a line Also beginning on the West line of said Lot 33, 450 feet Southerly of Southerly line of said Lot 77 extended, running thence westerly along the North line of G.T.R.R. right of way 439.85 feet, thence Southerly 68.85 feet at right angles, thence S.24°-30'-00"W., to the North line of Rust Avenue and the Point of Ending.

BY	MARK	REVISIONS	DATE
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<p>CHILDREN'S ZOO AT CELEBRATION SQUARE SAGINAW, MICHIGAN</p>			
<p>OVERALL PLAN CHILDREN'S ZOO CENTRAL RESTROOMS & CONCESSIONS BUILDING</p>			
<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>		<p>PROJECT NO. 1319285G2022</p>	
DE BY: CAR	CH BY: BSB	PROJECT NO.	
DR BY: CAR	APP BY: DWM	1319285G2022	
STDS.	SHEET 4	OF 40	
DATE	NOV. 9 2022	FILE NO.	DA-1431- 4
SCALE	1" = 40'		C 2

RET. F.B. PG. ACAD FILE. PLOTTING SCALE.

FLOOD PLAN NOTE

According to the Federal Emergency Management Agency Maps, Community Panel #26145C0135 D the subject property lies partially within Zone X, areas of 500-year flood plain; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 100 year flood. Any partially within Zone X areas determined to be outside 500-year flood plain.

DEMOLITION NOTES

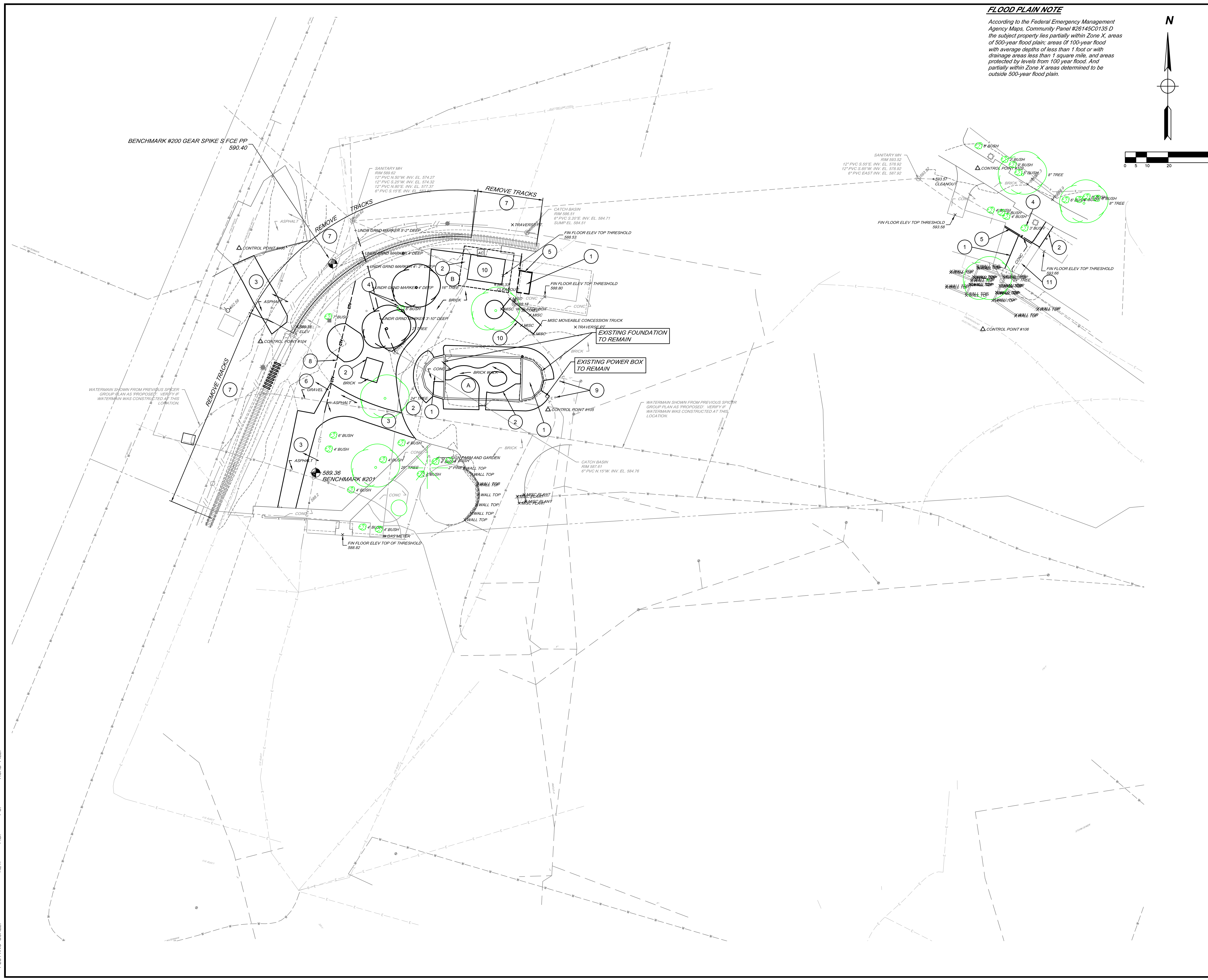
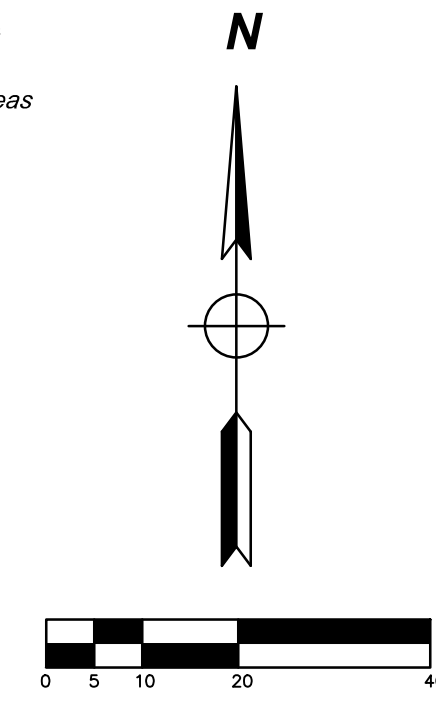
- PROTECT TREES, PLANT GROWTH, AND FEATURES DESIGNATED TO REMAIN, AS FINAL LANDSCAPING.
- CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE THE TAGGING OF SPECIFIC TREES/SHRUBS TO BE PRESERVED PRIOR TO BEGINNING DEMOLITION.
- REMOVE TREES AND SHRUBS WITHIN LIMITS OF CONSTRUCTION AS NOTED. REMOVE STUMPS, MAIN ROOT BALL, ROOT SYSTEM TO A DEPTH OF 12 INCHES AND SURFACE ROCK.
- CLEAR AREAS REQUIRED FOR ACCESS TO SITE AND EXECUTION OF WORK.
- REMOVE NOTED WALLS, FOUNDATIONS, PAVING, CURBS, AND SIDEWALKS.
- SAWCUT ALL PAVEMENT, CURBS AND WALKS NOTED FOR REMOVAL FOR A CLEAN EDGE.
- REMOVE ALL CLEARED ITEMS FROM SITE AND PROPERLY DISPOSE OF.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDING ALL DISTURBED AREAS.
- CONTRACTOR SHALL COORDINATE WITH OWNERS REPRESENTATIVE FOR ALL UNDERGROUND BURIED UTILITIES PRIOR TO STARTING CONSTRUCTION. MANY DATA & COMMUNICATION LINES COMING FROM THE SW CORNER OF THE STORAGE ROOM TO BE CAUTIOUS ABOUT.

DEMOLITION ITEMS

- SAWCUT AND REMOVE CONCRETE PAVEMENT TO NEAREST EXPANSION JOINT.
- REMOVE AND SALVAGE EXISTING BRICKS FOR RE-USE. MEMORIAL BRICKS AROUND DONOR GARDEN TO REMAIN.
 - BRICKS WITHIN DONOR GARDEN TO BE SALVAGED.
 - BRICKS REMOVED DUE TO NEW BUILDING PLACEMENT TO BE SALVAGED FOR RE-USE UP TO EAST DEPOT, SOUTH TO SOUTH EDGE OF LANDSCAPING BED.
 SEE OWNERS REPRESENTATIVE FOR PAVEMENT REMOVAL ORDER AND STORAGE LOCATION. SEE SITE PLAN FOR NEW WALK LAYOUT.
- REMOVE ASPHALT.
- REMOVE EXISTING TREE/SHRUB.
- REMOVE IRON FENCE OR WOOD FENCE. ALL REMOVED FENCING TO BE SALVAGED. SEE OWNERS REPRESENTATIVE FOR STORAGE LOCATION.
- REMOVE GRAVEL.
- REMOVE RAILROAD TRACKS, WOODEN TIES AND BALLAST, TO BE SALVAGED, STORED ON SITE AND REUSED. CONTRACTOR SHALL NOTE TO OWNER IF ANY WOODEN TIES CANNOT BE REUSED. SEE GRADING PLAN FOR LAYOUT AND ELEVATIONS.
- REMOVE AND RELOCATE BURIED ELECTRIC LINE. COORDINATE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION FOR EXACT LOCATION.
- REMOVE POST AND FOUNDATION, PATCH IN BRICK TO MATCH EXISTING.
- CONCESSION PREP. BUILDING & TRUCK TO BE REMOVED IN ONE PIECE. DO NOT DEMOLISH. RELOCATE TO A DESIGNATED LOCATION ON ZOO GROUND. COORDINATE WITH OWNER. FOUNDATION PIERS TO BE REMOVED. EXISTING ELECTRIC, GAS, WATER AND SANITARY SEWER TO BE REMOVED OR CUT & CAPPED. COORDINATE WITH OWNERS REPRESENTATIVE FOR PREFERRED METHOD.
 - *PRIOR TO START OF DEMOLITION, THE OWNER WILL NEED TO DISCONNECT AND TEMPORARILY CONNECT DATA SECURITY LINE BEFORE ANY WORK CAN BEGIN.
- PLASTIC SHED REMOVAL BY OWNER.

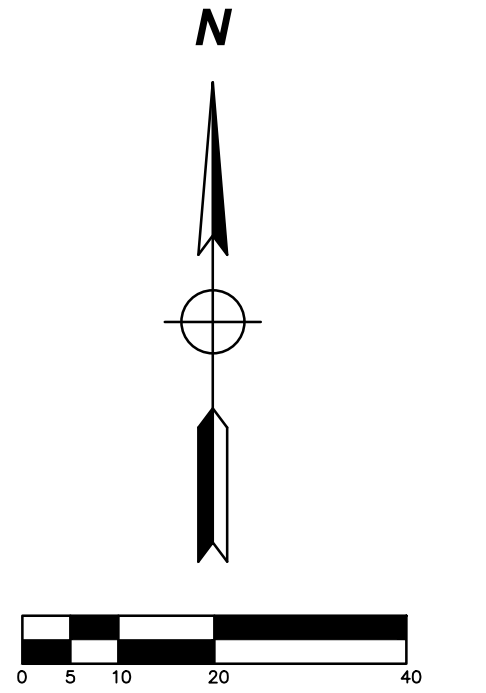
BENCH MARK

- BM 200 - SET GEAR SPIKE IN S.E. FACE OF POWER POLE ON N. SIDE OF WEST ENTRANCE INSIDE FENCE. NAVD88 ELEV. 590.40
- BM 201 - SET GEAR SPIKE IN E. FACE OF UTILITY POLE NEAR N.W. LY CORNER OF RESTROOM BUILDING AT WEST ENTRANCE. NAVD88 ELEV. 589.36
- BM 202 - SET CHISELED MARKER ON TOP OF N.E. LY CORNER OF LIGHTPOLE BASE NEAR N.E. LY CORNER OF RESTROOM BUILDING NEAR MAIN ENTRANCE. NAVD88 ELEV. 593.60
- BM 203 - FOUND NAIL IN S. LY FACE OF LIGHTPOLE SOUTH OF ZOO PARKING LOT. NAVD88 ELEV. 593.93

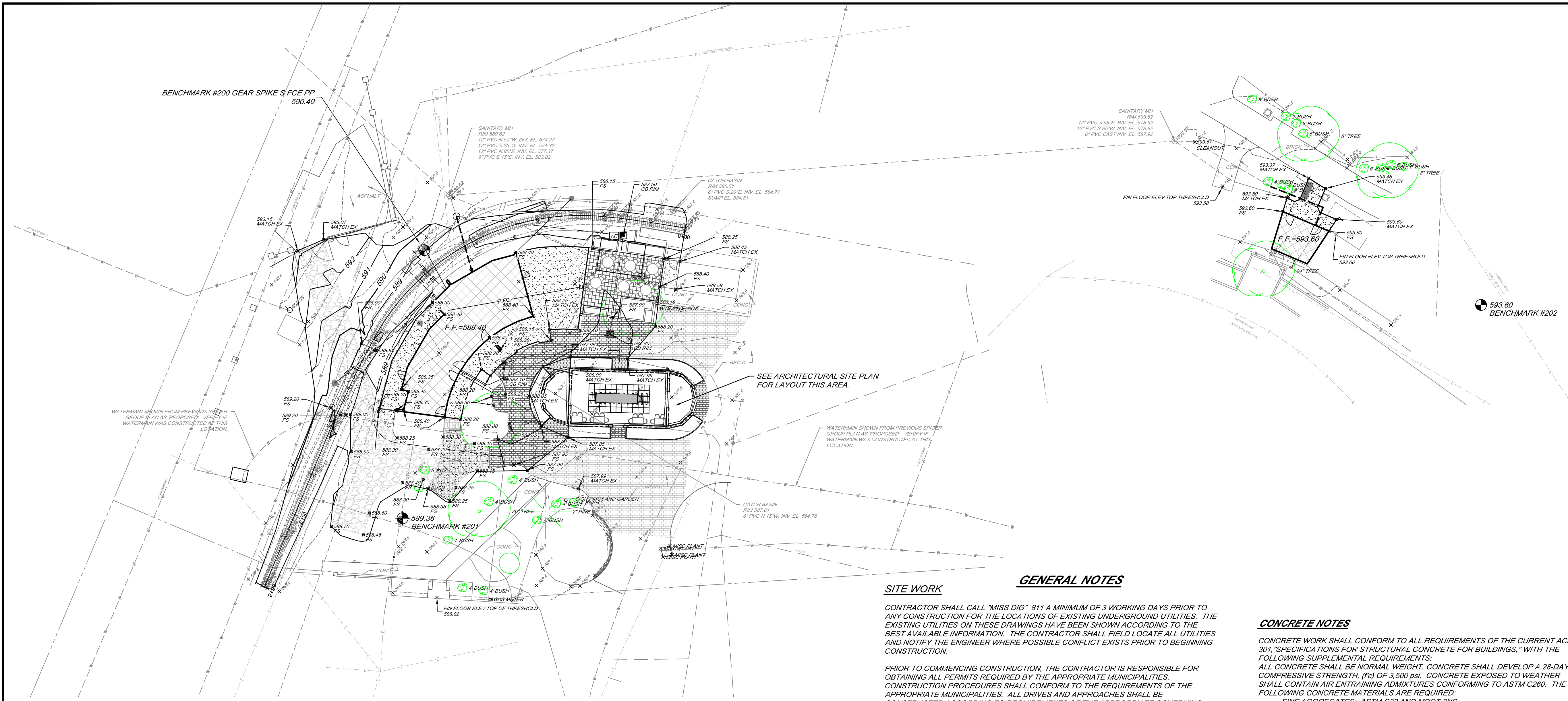


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CHILDREN'S ZOO AT CELEBRATION SQUARE SAGINAW, MICHIGAN			
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DE. BY: CAR	CH. BY: BSR	PROJECT NO. 1319285G2022	
DR. BY: CAR	APP. BY: DWAM		
STDS.	SHEET 5 OF 40	C	
DATE NOV. 9, 2022	FILE NO. DA-1431- 5	3	
SCALE 1" = 20'			

PLOTTING SCALE: RET. F.B. PG. ACAD FILE:



SECTION 25
T. 12 N. - R. 4 E.
CITY OF SAGINAW,
SAGINAW COUNTY, MICHIGAN



SITE WORK

CONTRACTOR SHALL CALL "MISS DIG" 811 A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY CONSTRUCTION FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES. THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES AND NOTIFY THE ENGINEER WHERE POSSIBLE CONFLICT EXISTS PRIOR TO BEGINNING CONSTRUCTION.

PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE APPROPRIATE MUNICIPALITIES. CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE MUNICIPALITIES. ALL DRIVES AND APPROACHES SHALL BE CONSTRUCTED ACCORDING TO REQUIREMENTS OF THE APPROPRIATE GOVERNING AUTHORITY.

ALL TRENCHED CONSTRUCTION UNDER GRAVEL, PAVED SURFACES OR UTILITIES SHALL BE BACKFILLED WITH CLASS II SAND OR OTHER APPROVED GRANULAR MATERIAL IN 12" LAYERS AND COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT.

UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING OR OTHERWISE. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL UNLESS NOTED OTHERWISE.

ALL PRODUCTS SHALL BE MANUFACTURER'S BEST BRAND OR GRADE AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

ALL WORK SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

CONSTRUCT ALL MATERIALS STRAIGHT, PLUMB, AND LEVEL UNLESS SPECIFICALLY NOTED OR INDICATED OTHERWISE.

ALL MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH INDUSTRY STANDARDS AND THE ASSOCIATION THAT PERTAINS TO THE PARTICULAR PRODUCT. FOR EXAMPLE, AISC - AMERICAN INSTITUTE FOR STEEL CONSTRUCTION.

USE THE MOST CURRENT EDITION WHEN REFERRING TO INDUSTRY STANDARDS.

STRIP ALL TOPSOIL IN AREAS TO RECEIVE FILL. ALL GRADES SHALL BE PROOF ROLLED AND OBSERVED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO FILL OR AGGREGATE BASE COURSE INSTALLATION.

ALL FILL SHALL BE GRANULAR MDOOT CLASS II COMPACTED IN PLACE TO 95% AND AGGREGATE BASE SHALL BE COMPACTED IN PLACE TO 98%.

ALL SALVAGEABLE EXCAVATIONS, NOT REUSED, TO BE RELOCATED TO ZOO GROUNDS. SEE OWNERS REPRESENTATIVE FOR LOCATION.

STORM SEWER

PIPE MATERIALS SHALL BE AS FOLLOWS:
• 12" DIAMETER AND ABOVE - CONCRETE PIPE, C-76-III.

WOOD TIMBER NOTES

TIMBER WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT (NDS) "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

SIZES SHOWN FOR LUMBER ARE STANDARD NOMINAL SIZES

TIMBER EXPOSED TO WEATHER OR GROUND, OR IN CONTACT WITH CEMENTITIOUS MATERIALS SHALL BE PRESSURE-IMPREGNATED BY AN APPROVED PROCESS AND PRESERVATIVE.

TIMBER TIES SHALL BE A MINIMUM SPACING OF 20".

RECOMMEND USING 6"x6"x48" OR 6"x8"x48", 00 CCA GREEN-TREATED SOFTWOOD TIES IN PONDEROSA PINE, JACK PINE, SOUTHERN YELLOW PINE, #2 DOUGLAS FIR, OR AN EQUIVALENT.

ALL CUT ENDS TO BE RE-TREATED.

GENERAL NOTES

CONCRETE NOTES

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

ALL CONCRETE SHALL BE NORMAL WEIGHT. CONCRETE SHALL DEVELOP A 28-DAY COMPRESSIVE STRENGTH, (f_c) OF 3,500 psi. CONCRETE EXPOSED TO WEATHER SHALL CONTAIN AIR ENTRAINING ADMIXTURES CONFORMING TO ASTM C260. THE FOLLOWING CONCRETE MATERIALS ARE REQUIRED:

FINE AGGREGATES: ASTM C33 AND MDOOT 2NS
COARSE AGGREGATES: ASTM C33 AND MDOOT 6AA
WATER: CLEAN AND NOT DETRIMENTAL TO CONCRETE
AIR ENTRAINMENT: MANUFACTURED BY W.R. GRACE OR EQUAL

CHLORIDE BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE. ALL OTHER ADMIXTURES SHALL BE APPROVED BY THE ENGINEER BEFORE USING.

REINFORCING STEEL SHALL BE DEFORMED AND CONFORM TO A615, A616, OR A617, GRADE 60 WITH A MINIMUM YIELD STRESS (F_y) OF 60,000 psi. UNLESS SHOWN PER PLAN, THE MINIMUM LAP FOR ALL SPLICES SHALL BE 18 INCHES. CONCRETE COVER ON REINFORCING STEEL SHALL BE A MINIMUM OF 1 1/2 INCHES UNLESS SHOWN OTHERWISE PER PLAN.

CONFORM TO ACI 301 AND 347 FOR DESIGN, FABRICATION, ERECTION, AND REMOVAL OF FORM WORK. CONSTRUCT FORM WORK TO MAINTAIN TOLERANCES REQUIRED FOR FORM WORK SURFACES BY ACI 301. DO NOT REMOVE FORM WORK OR BACK FILL AGAINST POURED WALLS UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.

MAXIMUM SLUMP SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C143. AIR-ENTRAINED CONCRETE SHALL HAVE AN AIR CONTENT BETWEEN 5% TO 7% BY VOLUME.

BOND BREAKER MATERIAL SHALL BE FIBER JOINT FILLER FOR CONCRETE CONSTRUCTION CONFORMING TO THE REQUIREMENTS OF ASTM D1751 WITH A 1/2 INCH MINIMUM THICKNESS.

RAILWAY NOTES:

TRACK INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURES INSTALLATION SPECIFICATIONS:
CHANCE MORGAN - CHANCE RIDES MANUFACTURING, INC.
OWNER TO PROVIDE COPY AT TIME OF BID.

BALLAST
PREFERRED MATERIAL IS A CRUSHED MATERIAL SUCH AS LIMESTONE, CRACKED GRAVEL OR TRAP ROCK, IT IS RECOMMENDED THAT 1/2" CLEAN TO A MAXIMUM OF 3/4" CLEAN MATERIAL BE USED.

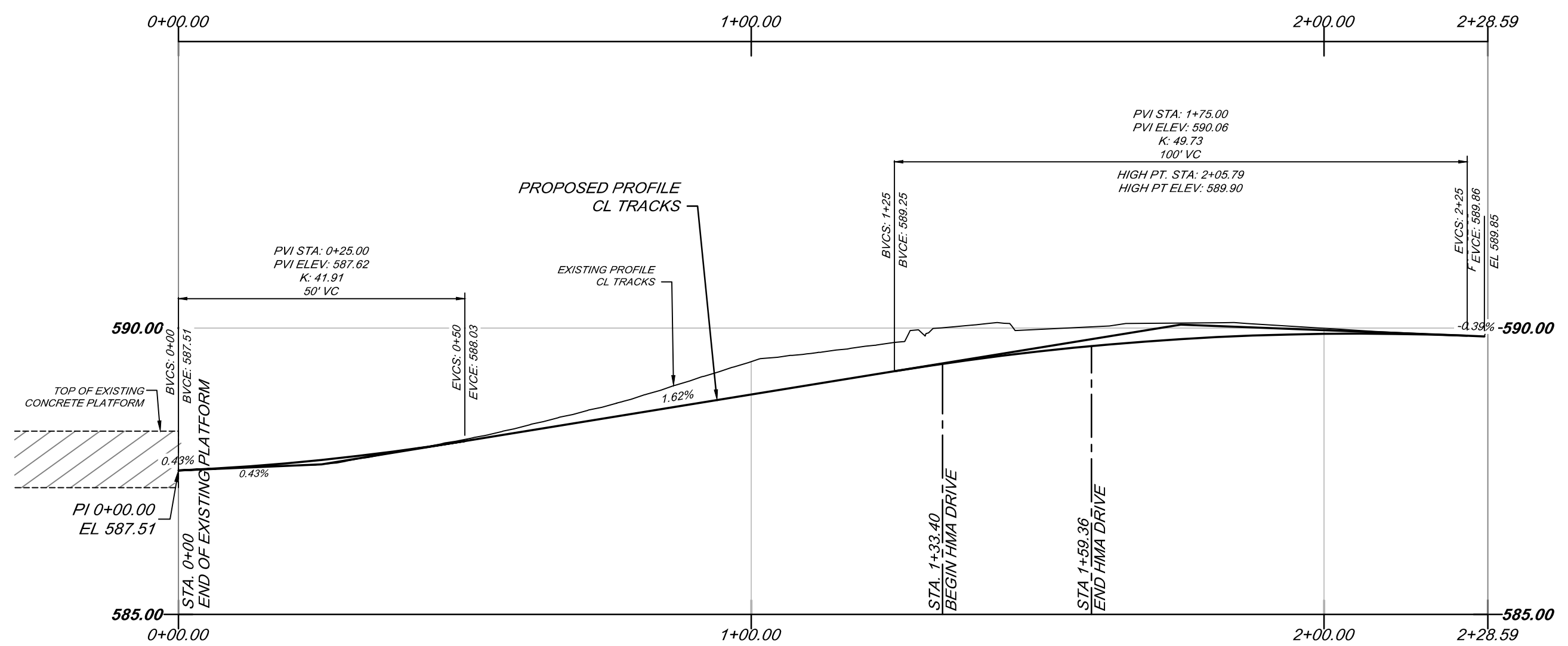
BASE BALLAST SHOULD BE PLACED IN AN EVEN LAYER OVER THE PREPARED TRACK BED AT A MINIMUM DEPTH OF 3 TO 4 INCHES AND A WIDTH OF 4 TO 6 FEET TO LEVEL THE TRACK AND PROVIDE PROPER BANK FOR CURVES.

GAUGE RODS
THEY ARE USUALLY NO NECESSARY ON A NEW TRACK INSTALLATION, PROVIDED THE TRACK IS BUILT PROPERLY.

TIES
WHEN USING 20-lb. RAIL, IT IS RECOMMENDED THAT 6"x6" TIES OR 6"x8" TIES BE USED FOR AVERAGE SOIL CONDITIONS, WITH A LENGTH OF 42 TO 48 INCHES.

RAILS
IT IS RECOMMENDED THAT 20-lb. RAIL BE USED WHENEVER POSSIBLE.
Lbs./FT. (NOMINAL) = 1.83
30 FT. TRACK FEET/NET TON = 150.0

RECOMMENDED SPIKES:
6"x6" TIE = 3/8" X 3-1/2" X 4-1/2" OR 1/2" X 1/2" X 4-1/2"
6"x8" TIE = 3/8" X 5" OR 9/16" X 5-1/2"



CURVE RADIUS / BANK CHART

RADIUS OF CURVES	* DEGREE OF BANK	EQUivalent HEIGHT OF SUPER ELEVATION
50 FT. TO 70 FT.	1-1/2 DEGREES	5/8 INCH
75 FT. TO 95 FT.	1 DEGREE	7/16 INCH
100 FT. TO 125 FT.	1/2 DEGREE	1/4 INCH

* RECOMMENDED APPROACH TO THE POINT OF CURVE SHOULD BE APPROXIMATELY 1/4 RISE OF THE LINE (OUTSIDE) RAIL PER 200 FEET APPROACH.

GRADES CHART

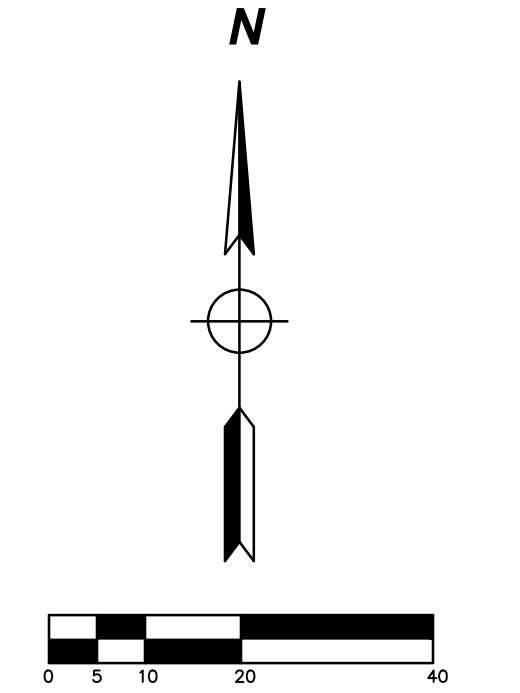
PERCENT GRADE OR RISE PER 100 FT.	ANGLE DEGREES & MIN.	NORMAL RAILS	SANDED RAILS
1	0°-34'	10	10
2	0°-9'	8	10
3	1°-43'	5	9

TEMPERATURE EXPANSION (GAP)

TEMPERATURE (IN DEGREES FAHRENHEIT)	EXPANSION (GAP) (IN INCHES)
-10°	5/16"
-10° TO 14°	1/4"
15° TO 34°	3/16"
35° TO 59°	1/8"
60° TO 85°	1/16"
OVER 85°	NONE

RET. F.B. PG. ACAD FILE. PLOTING SCALE:

BY MARK REVISIONS DATE			
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CHILDREN'S ZOO AT CELEBRATION SQUARE SAGINAW, MICHIGAN			
GRADING PLAN CHILDREN'S ZOO CENTRAL RESTROOMS & CONCESSIONS BUILDING			
Spicer group		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>	
DE. BY: CAR	CH. BY: BSB	PROJECT NO. 131928SG2022	
DR. BY: CAR	APP. BY: DJM		
STDS.	SHEET 6 OF 40	C	
DATE NOV. 9, 2022	FILE NO. DA-1431- 6	4	
SCALE 1" = 20'			



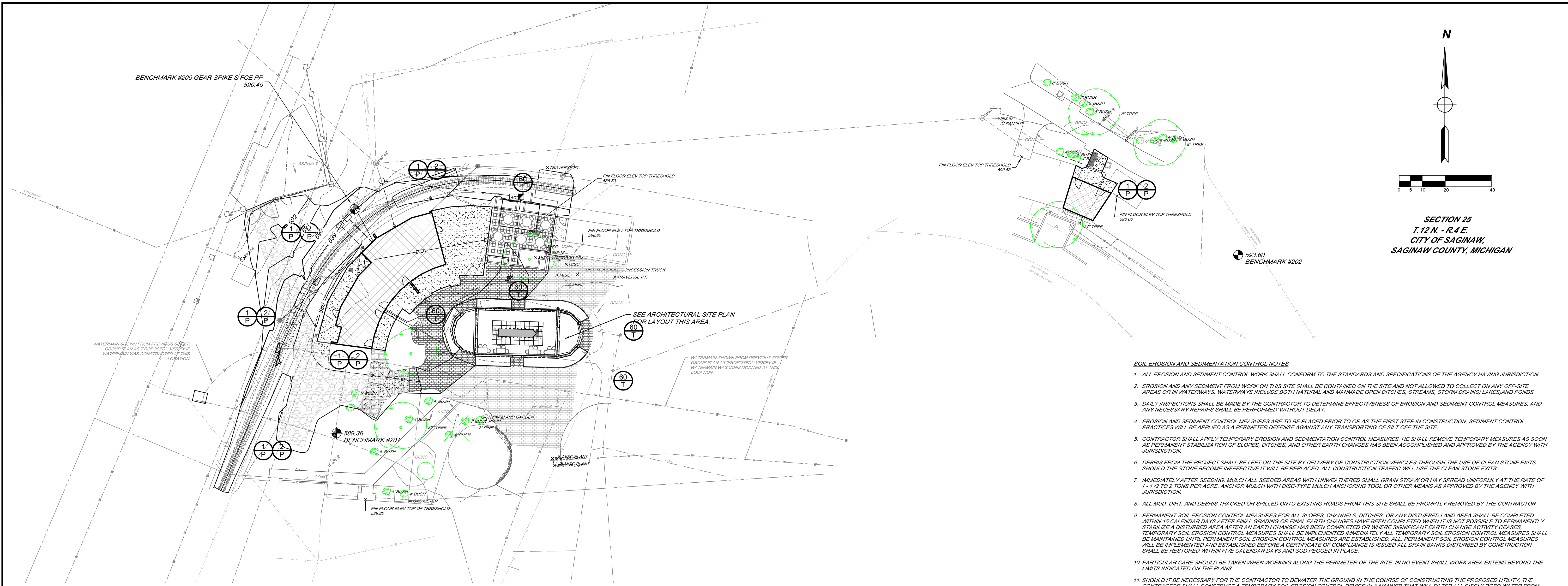
SECTION 25
T.12 N. - R.4 E.
CITY OF SAGINAW,
SAGINAW COUNTY, MICHIGAN

CONSTRUCTION NOTES

- 1 STORM SEWER - PVC, SDR26, TYPE PSM PLASTIC, CONFORMING TO ANSI/ASTM D3034 WITH RUBBER GASKET JOINTS.
- 2 12" OR LARGER SHALL BE ADS HP STORM ASTM F2881, LESS THAN 12" SHALL BE ADS N-12 SOIL TIGHT WITH INTEGRAL BELL, ASTM F2648.
- 3 CATCH BASIN.
- 4 MANHOLE.
- 5 CONNECT TO EXISTING WATER MAIN USING CORPORATION STOP PER CITY STANDARDS.
- 6 WATER SERVICE LEAD - TYPE-K COPPER.
- 7 CONNECT TO EXISTING SANITARY.
- 8 SANITARY LEAD - PVC, SDR26, TYPE PSM PLASTIC, CONFORMING TO ANSI/ASTM D3034 WITH RUBBER GASKET JOINTS.
- 9 SANITARY CLEANOUT.
- 10 ELECTRIC SERVICE LINE. EXACT LOCATIONS TO BE COORDINATED WITH UTILITY COMPANY.
- 11 GAS SERVICE CONNECTION TO BE COORDINATED THROUGH UTILITY COMPANY.
- 12 COMMUNICATION BURIED LINE W/PULL STRING - 1-1/2" CONDUIT BURIED FROM POWER POLE TO MECHANICAL ROOM, EXACT LOCATIONS TO BE COORDINATED WITH OWNER.
- 13 SECURITY LINE CONDUIT W/PULL STRING - EXACT LOCATIONS TO BE COORDINATED WITH OWNER.
- 14 FOR FUTURE - 1-1/2" CONDUIT W/PULL STRING, BURIED FROM POWER POLE TO OTHER SIDE OF R.R. TRACK AND PLUGGED, EXACT LOCATIONS TO BE COORDINATED WITH OWNER.
- 15 SECURITY AND DATA/COMMUNICATION PULL BOX.
- 16 ELECTRIC PULL BOX.

BY	MARK	REVISIONS	DATE
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CHILDREN'S ZOO AT CELBRATION SQUARE SAGINAW, MICHIGAN			
UTILITY PLAN CHILDREN'S ZOO CENTRAL RESTROOMS & CONCESSIONS BUILDING			
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DE BY:	CAR	CH. BY:	BSB
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PROJECT NO.		131928SG2022	
STDS.	SHEET 7 OF 40		C 5
DATE	NOV. 9 2022	FILE NO.	
SCALE	1" = 20'		

PLOTTING SCALE: RET. F.B. PG. ACAD FILE:



SECTION 25
T.12 N. - R.4 E.
CITY OF SAGINAW,
SAGINAW COUNTY, MICHIGAN

- SOIL EROSION AND SEDIMENTATION CONTROL NOTES**
1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION.
 2. EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
 3. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
 4. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
 5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAS BEEN ACCOMPLISHED AND APPROVED BY THE AGENCY WITH JURISDICTION.
 6. DEBRIS FROM THE PROJECT SHALL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME INEFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXITS.
 7. IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDING AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY SPREAD UNIFORMLY AT THE RATE OF 1 - 1.2 TO 2 TONS PER ACRE. ANCHOR MULCH WITH DISC-TYPE MULCH ANCHORING TOOL OR OTHER MEANS AS APPROVED BY THE AGENCY WITH JURISDICTION.
 8. ALL MUDD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
 9. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED. ALL DRAIN BANKS DISTURBED BY CONSTRUCTION SHALL BE RESTORED WITHIN FIVE CALENDAR DAYS AND SOO PEGGED IN PLACE.
 10. PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
 11. SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO DEWATER THE GROUND IN THE COURSE OF CONSTRUCTING THE PROPOSED UTILITY, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY SOIL EROSION CONTROL DEVICE IN A MANNER THAT WILL FILTER ALL DISCHARGED WATER FROM THE DEWATERING OPERATION IN NO INSTANCE SHALL THE DEWATERING DISCHARGE BE PERMITTED TO FLOW UNFILTERED FROM THE CONSTRUCTION SITE.
 12. THE CONTRACTOR SHALL CONTROL THE DUST ON THE SITE DURING THE LIFE OF THE CONTRACT. IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE COMMUNITY THIS DUST CONTROL SHALL BE ACCOMPLISHED BY THE APPLICATION OF A POSITIVE DUST PICK-UP METHOD WITH WATER ON HARD SURFACES. SUCH DUST CONTROL MATERIALS SHALL BE APPLIED AS OFTEN AS IS NECESSARY IN THE OPINION OF THE COMMUNITY TO CONTROL THE DUST.
 13. SHOULD THE SOIL EROSION CONTROL REQUIREMENTS BE NEGLECTED OR NOT ADEQUATELY FOLLOWED, THE COMMUNITY MAY REQUIRE THE CONTRACTOR TO CEASE CONSTRUCTION OPERATIONS AND TO APPLY HIS ENTIRE FORCE TO MEET THE REQUIREMENTS BEFORE PROCEEDING FURTHER WITH THE PROJECT.
 14. ALL WORK CONNECTED WITH SOIL EROSION AND SEDIMENTATION CONTROL, EITHER TEMPORARY OR PERMANENT, AS REQUIRED BY THE SOIL EROSION CONTROL PERMIT, IS TO BE IMPLEMENTED DURING CONSTRUCTION.

MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS
EROSION CONTROL & SEDIMENT MEASURES

KEY	SESC MEASURE	SYMBOL	WHERE USED
1	SEEDING		When bare soil is exposed, temporarily or permanently, to erosive forces from wind and/or water on flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles.
2	MULCH		On flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosive forces from wind or water.
60	STORM DRAIN INLET PROTECTION		Around the entrance to a newly constructed catch basin or an inlet that will capture runoff from an earth change activity.

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL

SYMBOLGY FOR INSERTION INTO CONSTRUCTION DRAWINGS:

- = PERMANENT MEASURE
- = TEMPORARY MEASURE

Contractor shall conform to Soil Erosion and Sedimentation Control Act, Part 91 of Public Act 451 of 1994, as amended. All catch basins, on the site and adjacent to the site, shall be covered with cloth filters for Soil Erosion and Sedimentation Control.

- SEQUENCE OF CONSTRUCTION - SESC**
1. INSTALL ALL TEMPORARY SOIL EROSION CONTROL MEASURES PRIOR TO DISTURBING ANY EARTH ON THE SITE.
 2. STABILIZE SLOPES STEEPER THAN 1 ON 4, CHANNELS AND SWALES WITHIN 7 DAYS OF EARTH DISTURBANCE. INSTALL PERMANENT STABILIZATION MEASURES WITHIN 5 DAYS OF FINAL GRADING.
 3. DURING STORM SEWER INSTALLATION, ALL NEWLY CONSTRUCTED DRAINAGE STRUCTURES SHALL BE PROTECTED WITH A DRAINAGE STRUCTURE FILTER. THIS WORK WILL BE INCLUDED IN THE DRAINAGE STRUCTURE COST.
 4. INSTALL TOPSOIL, AND HYDROSEED ON DISTURBED RIGHT-OF-WAY WITHIN 5 DAYS OF COMPLETING UTILITY INSTALLATION.
 5. PLACE RIPRAP WITHIN 24 HOURS OF PLACING END SECTIONS OR OTHER DRAINAGE OUTLETS.
 6. CLEAN ALL ACCUMULATED SEDIMENT FROM CATCH BASINS, SEWERS AND PAVEMENT AREAS AS REQUIRED FOLLOWING COMPLETION OF CONSTRUCTION.
 7. THE EXACT SCHEDULE OF SOIL EROSION AND SEDIMENTATION CONTROL EVENTS (WITH DAY AND/OR DATES OF THE VARIOUS ACTIVITIES) SHALL BE SUBMITTED TO SAGINAW COUNTY BY THE CONTRACTOR, FOR REVIEW AND APPROVAL, PRIOR TO OBTAINING A PERMIT.

NEAREST WATER BODY
SAGINAW RIVER

TIMING SEQUENCE

OPERATION	SCHEDULE
TEMPORARY CONTROL MEASURES	_____
STRIPPING/STOCKPILING OF SOIL	_____
ROUGH GRADING/SEDIMENTATION CONTROL	_____
STORM UTILITIES	_____
PERMANENT CONTROL MEASURE	_____
SITE CONSTRUCTION	_____
FINISH GRADING	_____

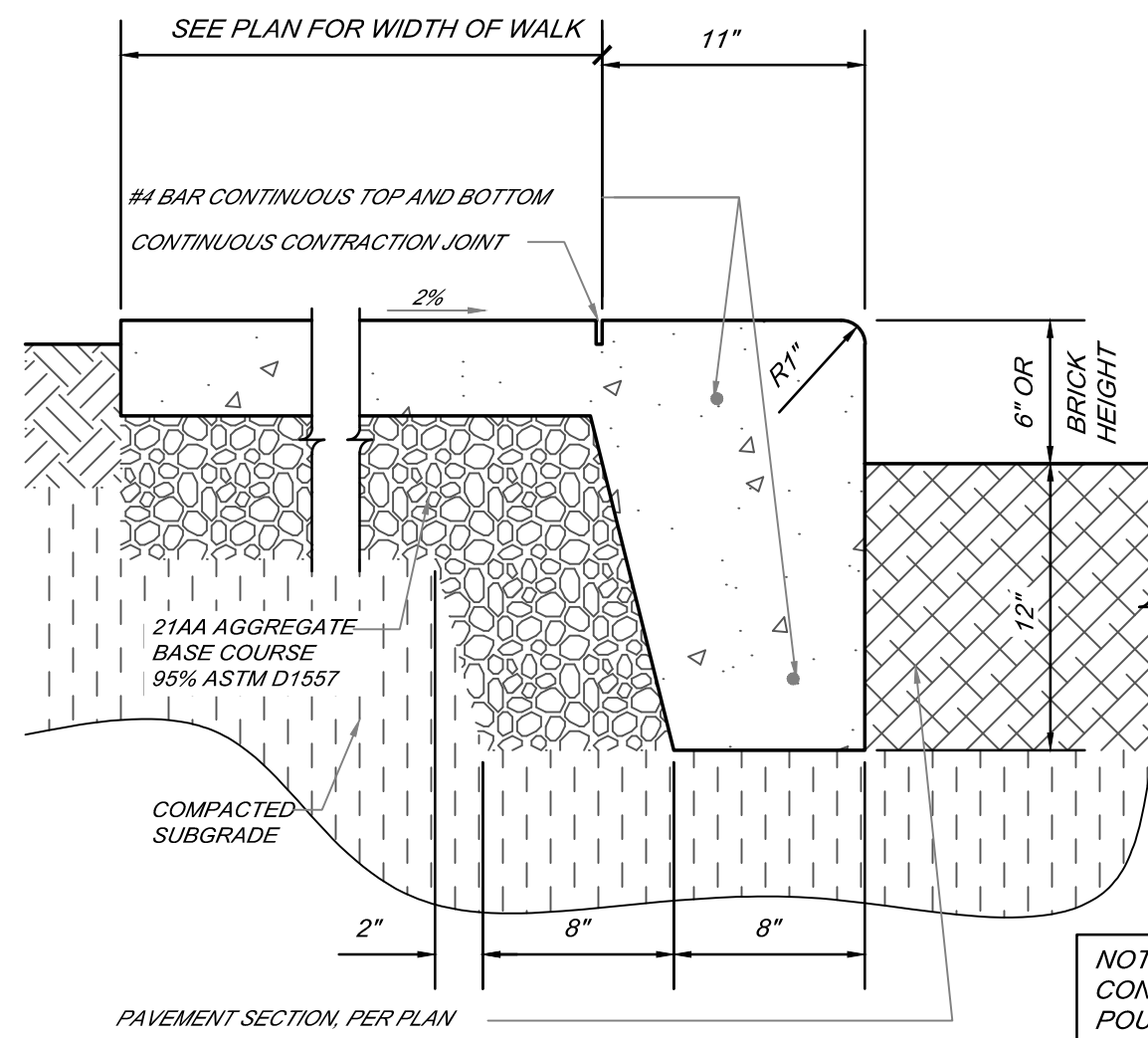
* SCHEDULE TO BE FILLED OUT BY CONTRACTOR/PERMITEE.

SOILS INFORMATION

SYMBOL	TYPE
63A	URBAN LAND-TAPPAN COMPLEX, 0 TO 3 PERCENT SLOPES
71	UDOETHENTS LOAMY, NEARLY LEVEL TO STEEP

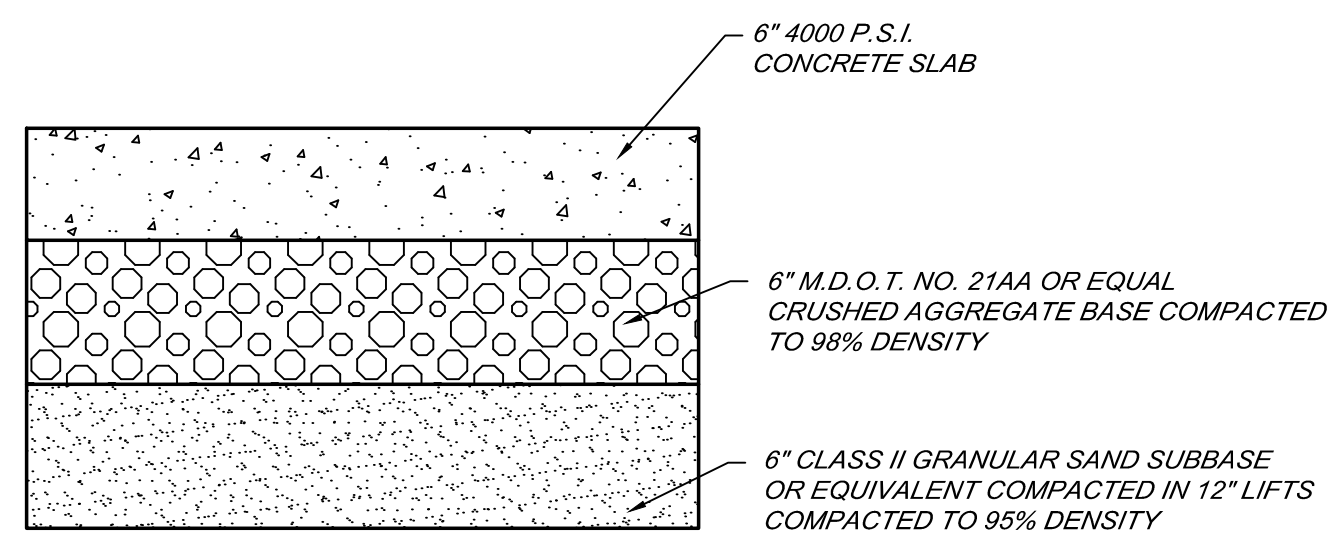
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STDS.	CAR	SHEET	8 OF 40
DATE	NOV. 9, 2022	FILE NO.	DA-1431- 8
SCALE	1" = 20'		6

ACAD FILE: PG. F.B. RET. PLOTTING SCALE:



TYPICAL CONC. WALK WITH INTEGRAL CURB DETAIL
NOT TO SCALE

NOTE: CONCRETE APRONS ARE TO BE POURED AFTER BRICK WALKS ARE COMPLETED. BRICK WALKS PROVIDED BY OTHERS.



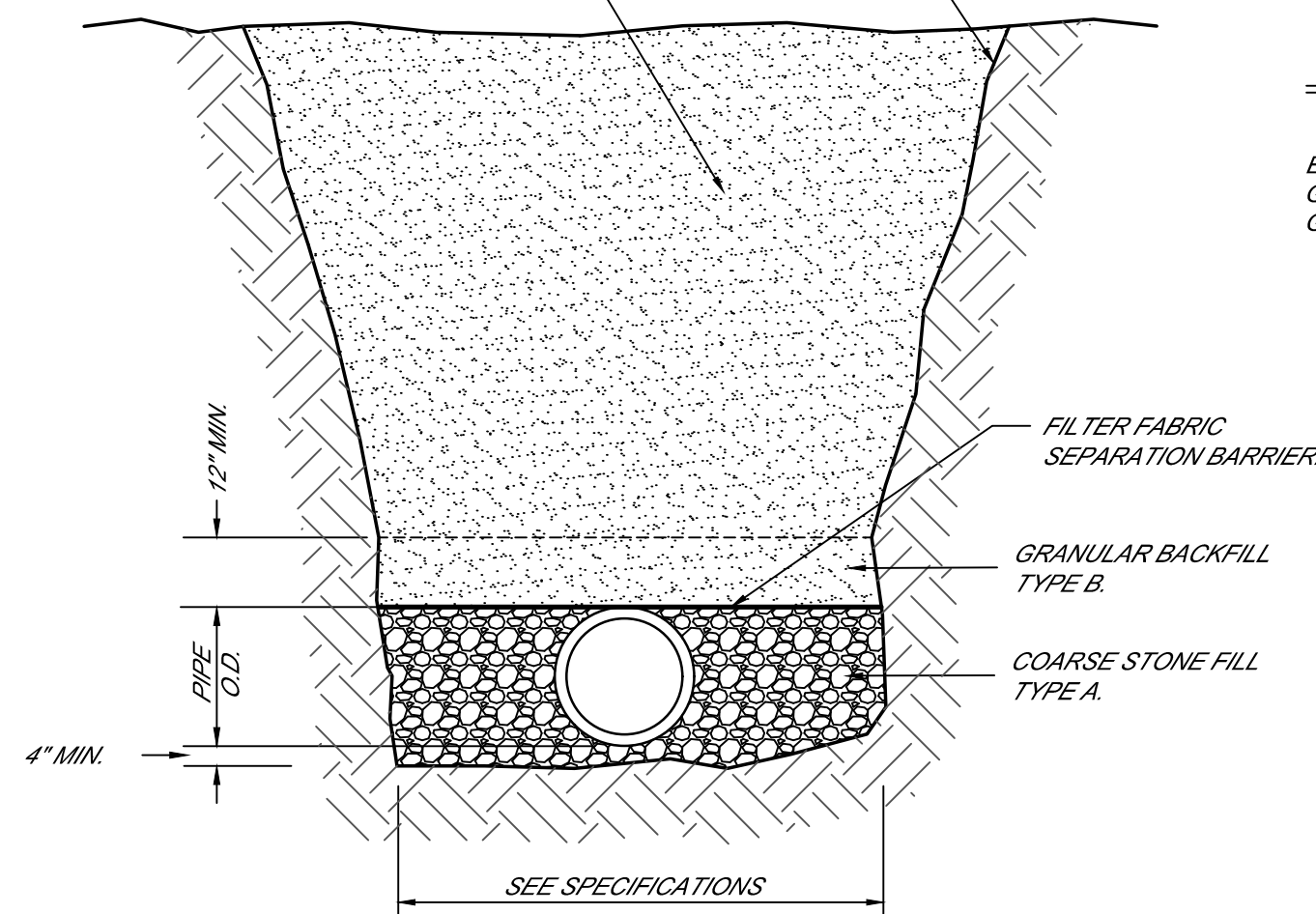
CONCRETE PAVEMENT CROSS-SECTION
NOT TO SCALE

STORM SEWER TRENCH WIDTH CHART

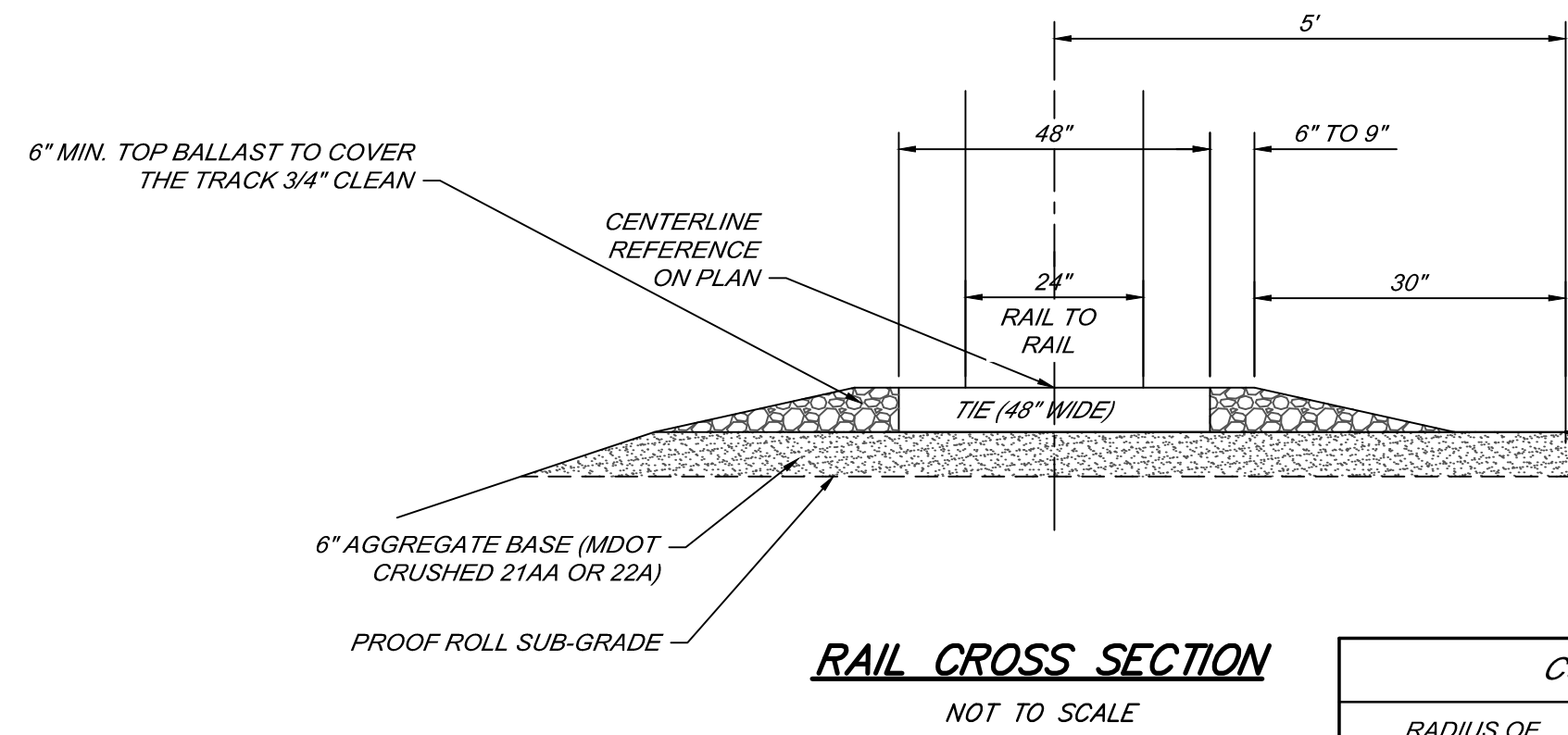
PIPE SIZE	TRENCH WIDTH	
	MINIMUM	MAXIMUM
6"	18"	24"
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	34"	40"
21"	38"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36"	I.D. + 20"	I.D. + 24"

UNDER PAVED AREAS TRENCH SHALL BE BACKFILLED COMPLETELY AS SPECIFIED WITH APPROVED GRANULAR MATERIAL AND COMPACTED AS SPECIFIED. UNPAVED AREAS TRENCHES MAY BE BACKFILLED WITH NATIVE EXCAVATED MATERIAL (AS SPECIFIED) AND COMPACTED AS SPECIFIED.

TRENCH SLOPE SHALL BE PER OSHA & MICHIGAN REGULATIONS.



TRENCH DETAIL FOR PVC/HDPE PIPE
NOT TO SCALE

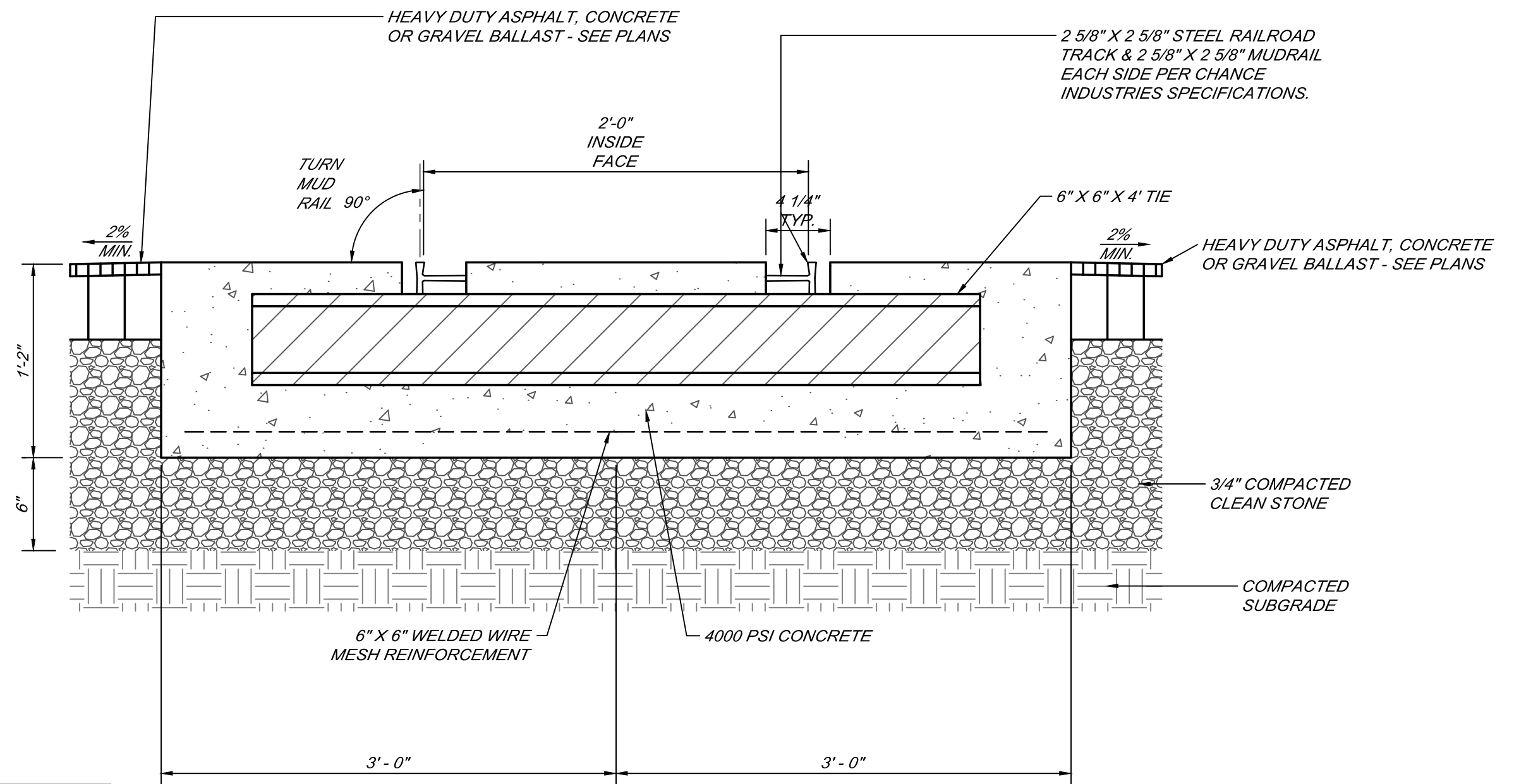


RAIL CROSS SECTION
NOT TO SCALE

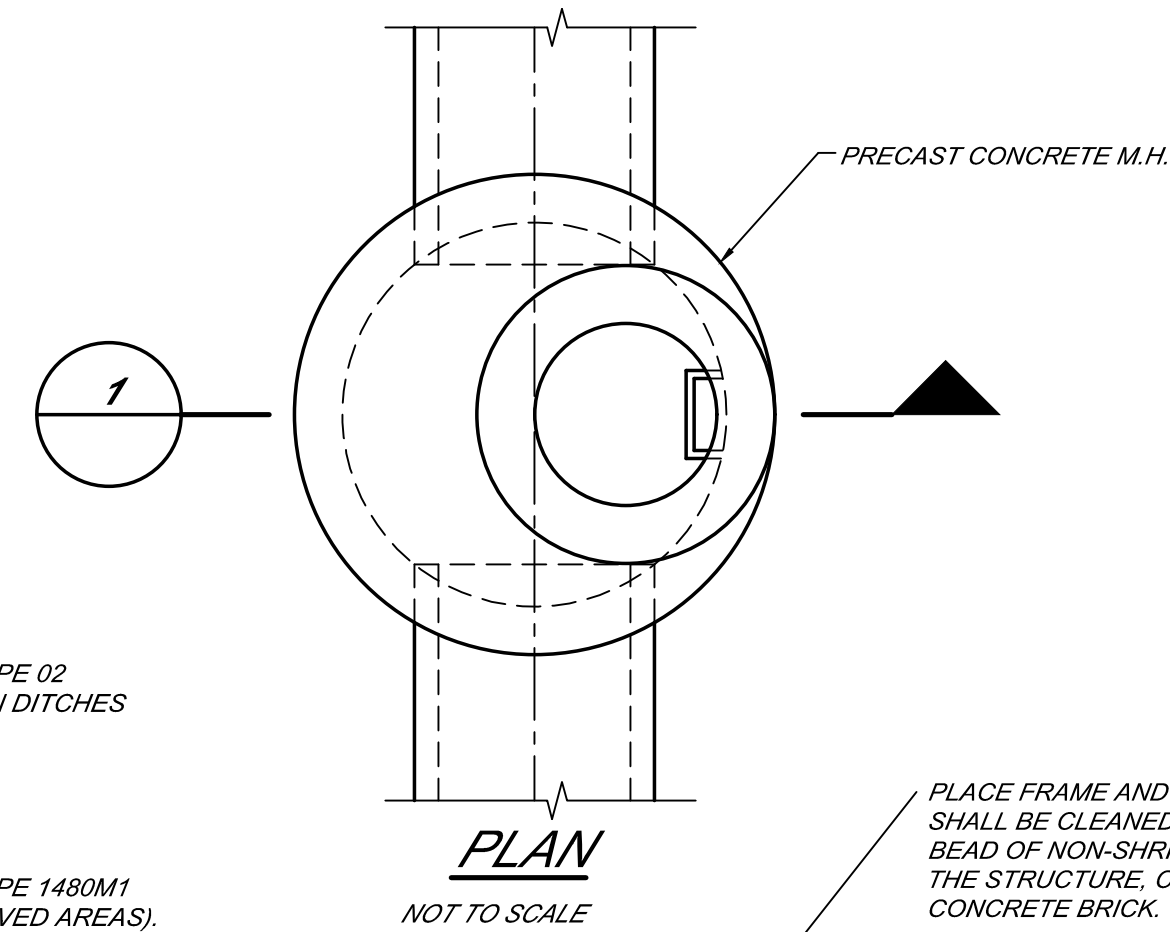
CURVE RADIUS / BANK CHART

RADIUS OF CURVES	* DEGREE OF BANK	EQUIVALENT HEIGHT OF SUPER ELEVATION
50 FT. TO 70 FT.	1-1/2 DEGREES	5/8 INCH
75 FT. TO 95 FT.	1 DEGREE	7/16 INCH
100 FT. TO 125 FT.	1/2 DEGREE	1/4 INCH

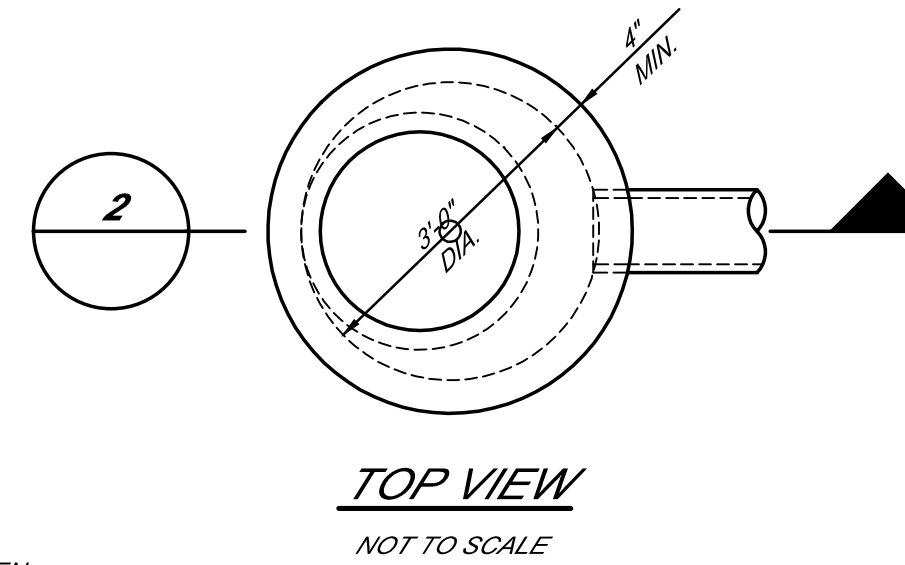
* RECOMMENDED APPROACH TO THE POINT OF CURVE SHOULD BE APPROXIMATELY 1/4 RISE OF THE LINE (OUTSIDE) RAIL PER 200 FEET APPROACH.



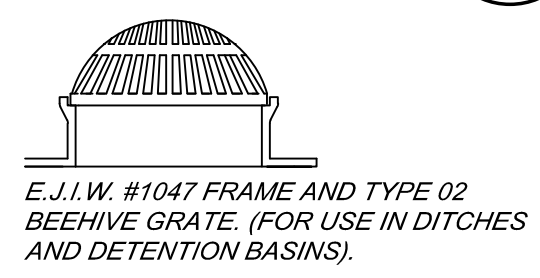
RAILROAD CROSSING DETAIL
NOT TO SCALE



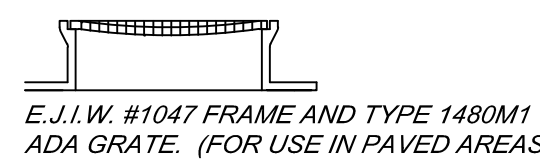
PLAN
NOT TO SCALE



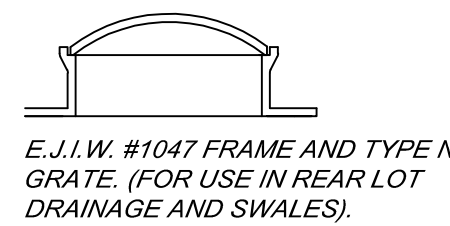
TOP VIEW
NOT TO SCALE



E.J.I.W. #1047 FRAME AND TYPE 02 BEEHIVE GRATE. (FOR USE IN DITCHES AND DETENTION BASINS).



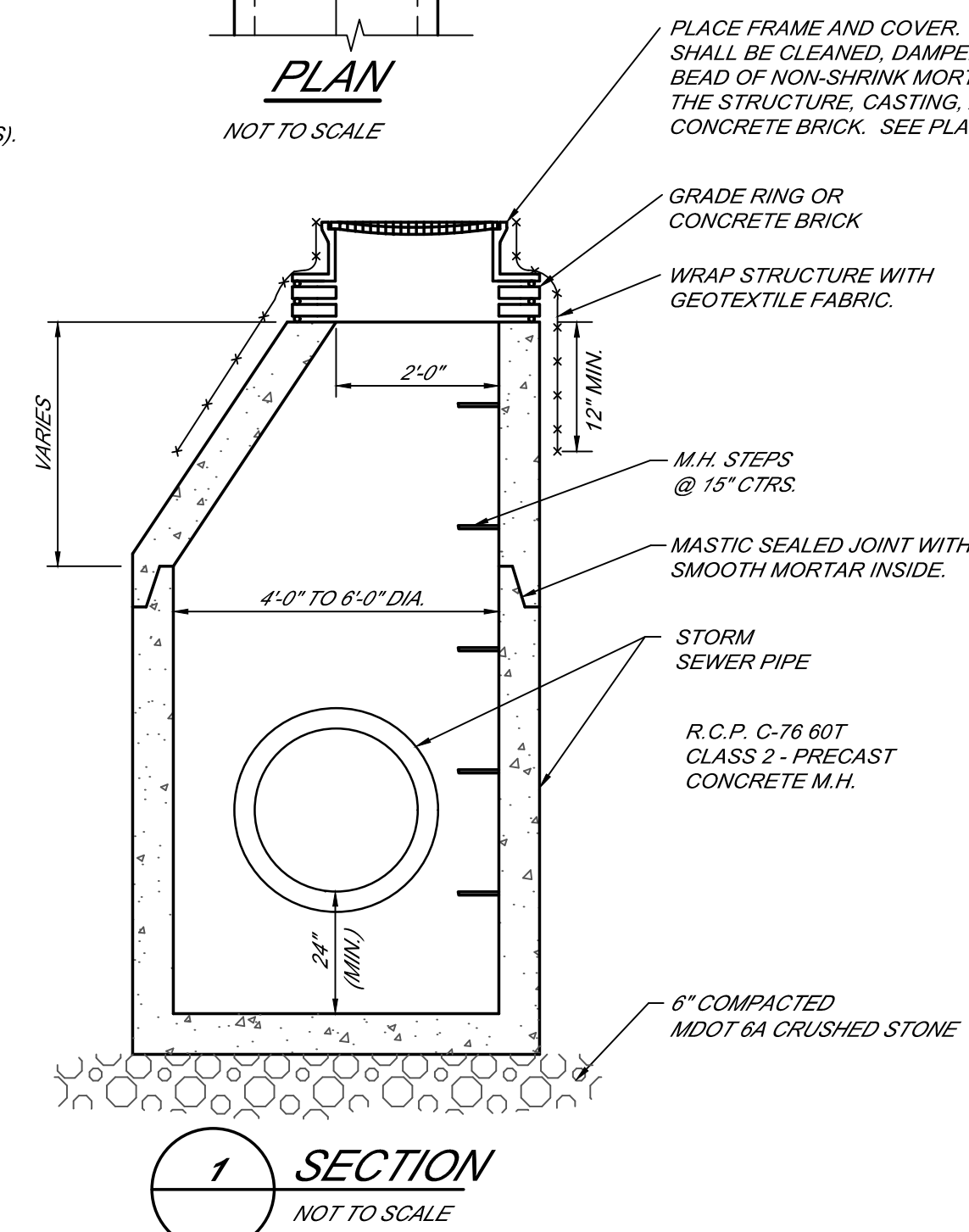
E.J.I.W. #1047 FRAME AND TYPE 1480M1 ADA GRATE. (FOR USE IN PAVED AREAS).



E.J.I.W. #1047 FRAME AND TYPE N GRATE. (FOR USE IN REAR LOT DRAINAGE AND SWALES).

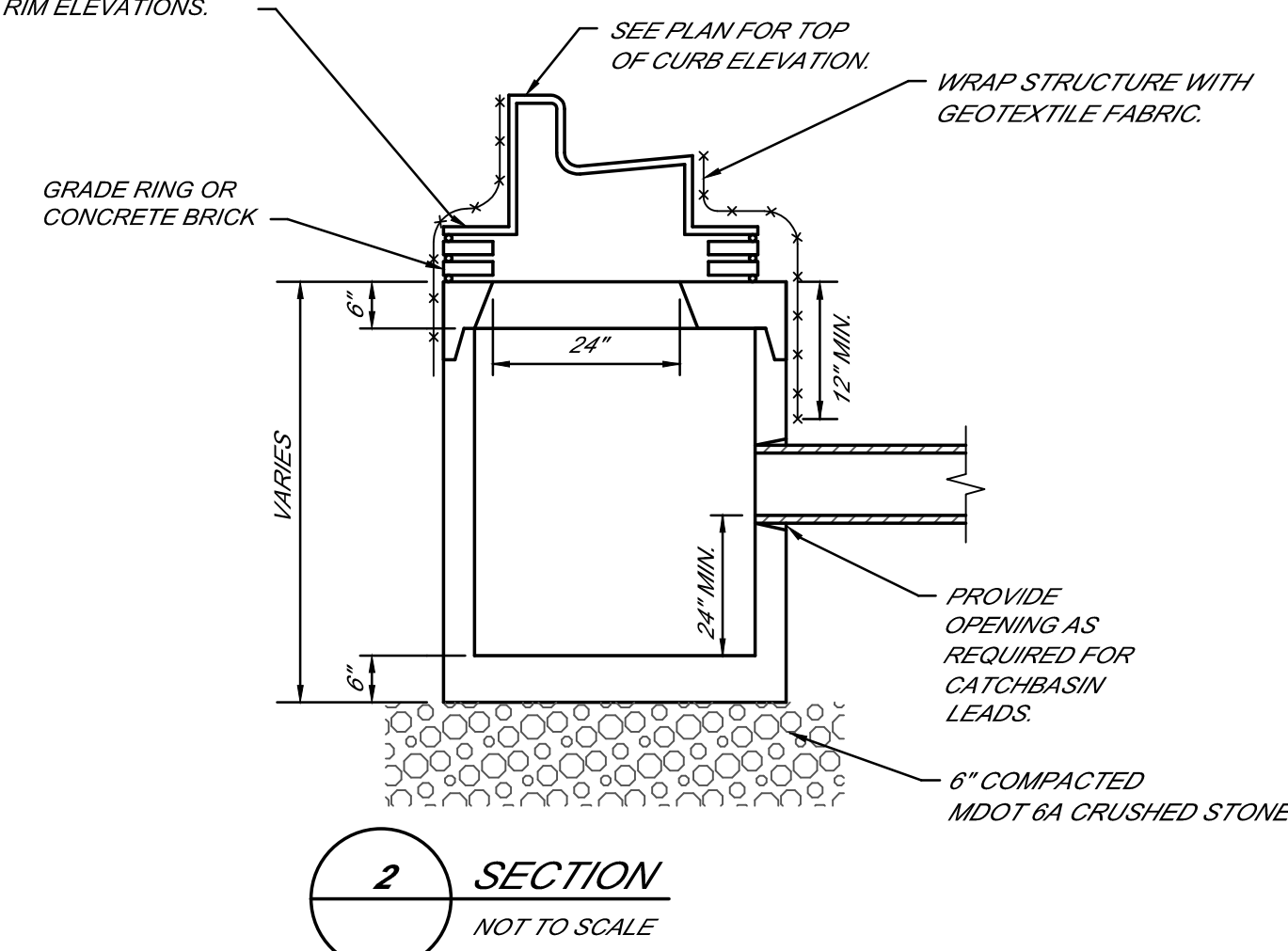


E.J.I.W. #7045 FRAME W/ TYPE M1 GRATE. (FOR USE IN CURB & GUTTER)



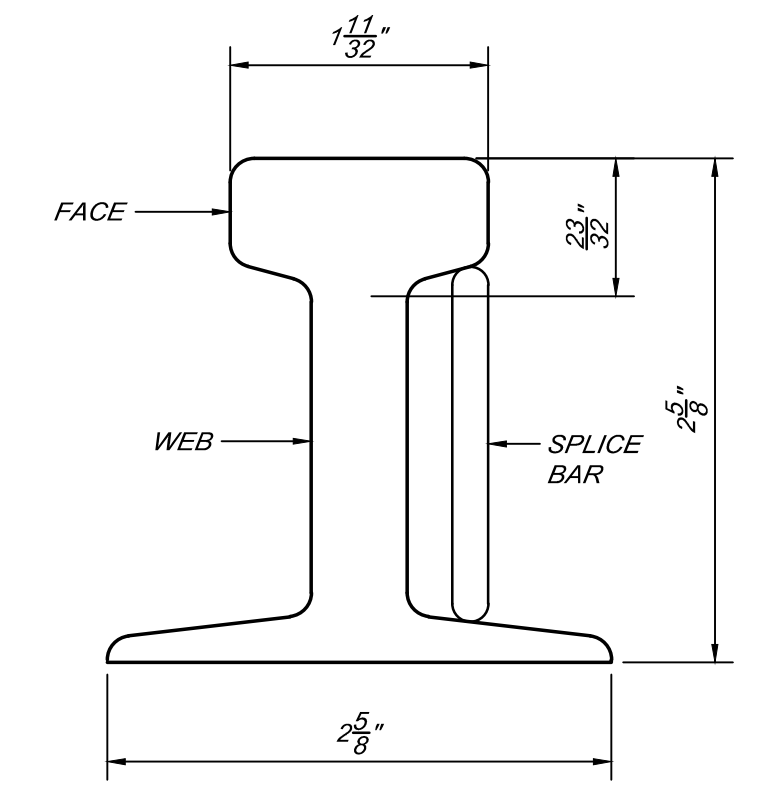
SECTION 1
NOT TO SCALE

4' - 6" DIA. COMBINATION M.H.-C.B.



SECTION 2
NOT TO SCALE

3' DIA. CATCH BASIN DETAIL

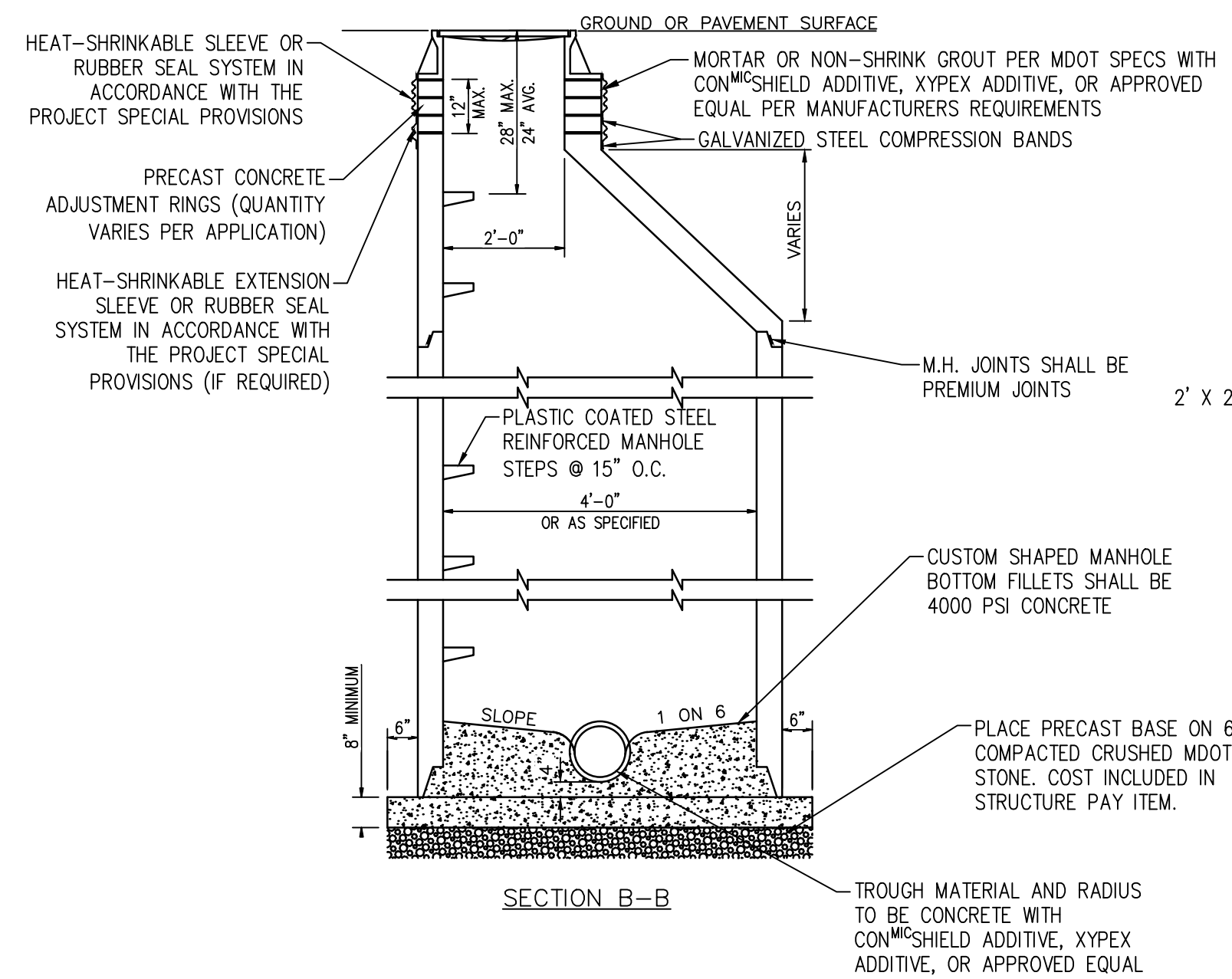


RAIL DIMENSIONS DETAIL
NOT TO SCALE

NOTES:
1. TRACK WIDTH TO MATCH EXISTING TRACK WIDTH SHOWN IN THIS DETAIL BASED ON "CHANCE RIDES, INC." CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION.
2. TRACKS SHALL BE SET FLUSH WITH CONCRETE SURFACE EXCEPT WHERE OTHERWISE NOTED.

ACAD FILE: PG. RET. F.B. PLOT SCALE:

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DE. BY: CAP	CH. BY: BSB	PROJECT NO. 1319285G2022	
DR. BY: CAP	APP. BY: DWM		
STDS.		SHEET 9 OF 40	C
DATE SCALE	NOV. 9, 2022 AS NOTED	FILE NO. DA-1431- 9	7



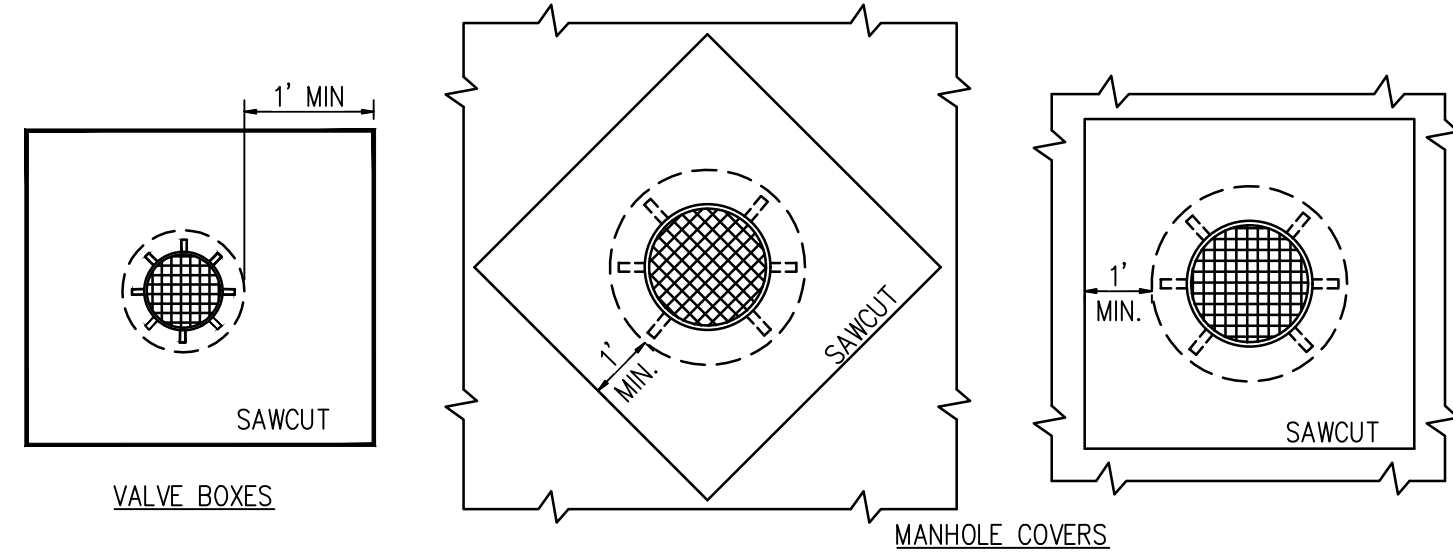
NOTE:
FRAMES AND COVERS SHALL BE WATERTIGHT. RIM ELEVATION OF THE FRAME SHALL BE ADJUSTED BEFORE FINAL COMPLETION TO MATCH THE PAVEMENT ELEVATION ON THE CONSTRUCTION PLAN SHEETS. CASTINGS MAY BE SET WITH BLOCKS OR BRICKS ON A FULL BED OF MORTAR. EXTENDED CHIMNEY SEALS SHALL BE INSTALLED ON ALL COMBINED SEWER MANHOLES. SEALS SHALL BE MANUFACTURED BY CRETEX SPECIALTY PRODUCTS, OR APPROVED EQUAL AS LISTED IN THE SPECIAL PROVISION.

SEE CONSTRUCTION PLAN SHEETS FOR PAVEMENT ELEVATION AND APPROXIMATE RIM ELEVATIONS

MORTAR OR NON-SHRINK GROUT PER MDOT SPECS WITH CON^{MS}SHIELD ADDITIVE, XYPEX ADDITIVE, OR APPROVED EQUAL PER MANUFACTURERS REQUIREMENTS

CITY OF SAGINAW STANDARD COMBINED SEWER MANHOLE SECTION VIEW

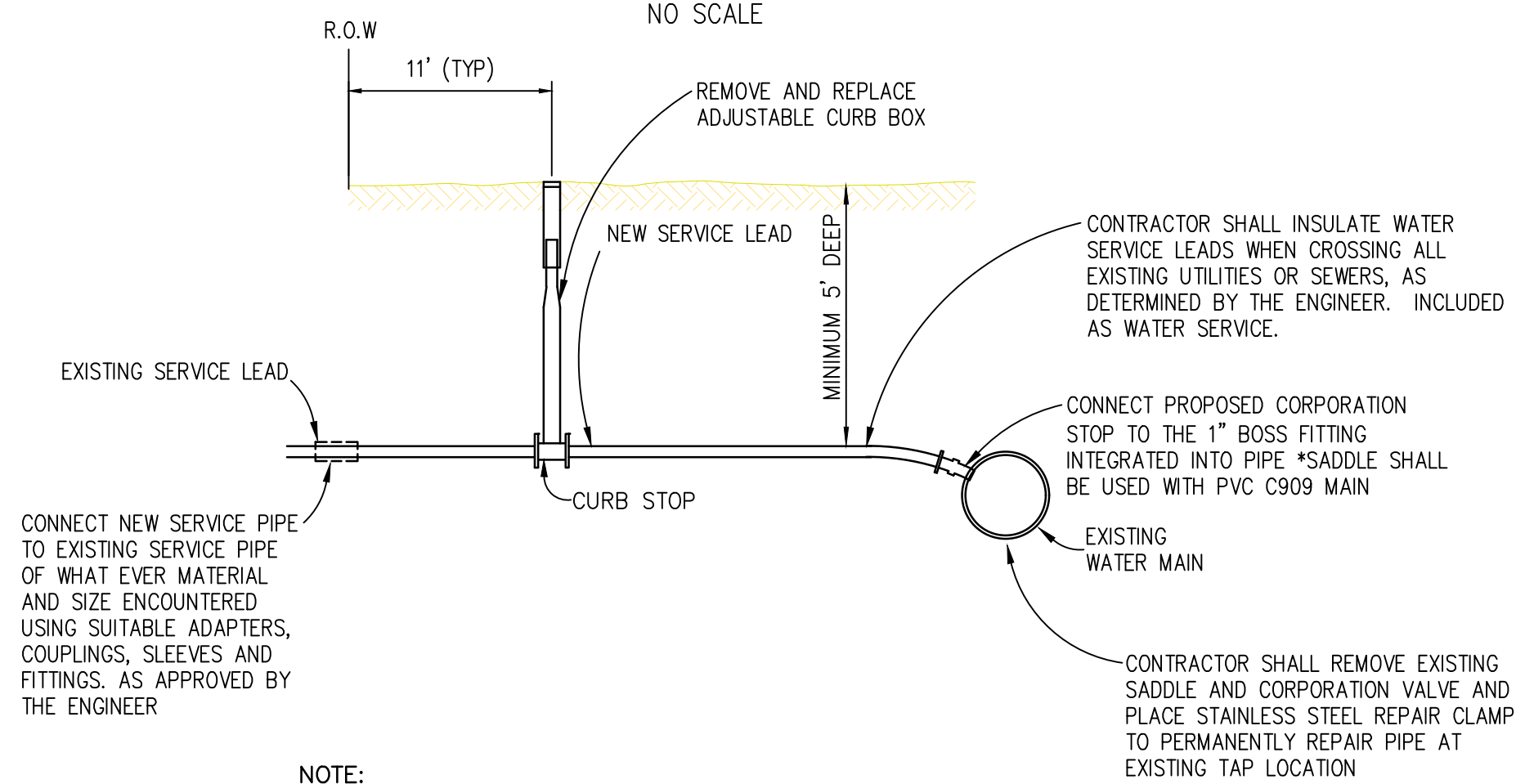
NO SCALE



- NOTE:
- ADJUSTMENTS SHALL BE PERFORMED ONLY WHEN ALL ASPHALT HAS BEEN PLACED EXCEPT FOR THE TOP COURSE. RIM ELEVATION OF THE FRAME SHALL BE ADJUSTED TO MATCH THE PAVEMENT ELEVATION ON THE CONSTRUCTION PLAN SHEETS.
 - ALL PAVEMENT TO BE REPLACED WITH GRADE P-NC CONCRETE TO A MINIMUM LEVEL OF 2 INCHES BELOW STRUCTURE GRADE.
 - USE OF BRICK OR BLOCK TO REACH FINAL ELEVATIONS AND REPAIR DAMAGED STRUCTURES WILL BE ALLOWED TO A MAXIMUM DEPTH OF TWELVE INCHES. FOR WORK IN EXCESS OF TWELVE VERTICAL INCHES, ALL COMPONENTS MUST BE PRECAST IN CONFORMANCE WITH THE CITY OF SAGINAW ALTERATIONS TO THE MUNICIPAL COMBINED SEWER SYSTEM PROVISION REQUIREMENTS.
 - FRAMES AND COVERS SHALL BE WATERTIGHT. SEWER STRUCTURES SHALL BE SEALED USING WRAPID SEAL, CANUSA, INFI-SHIELD, CRETEX "X-85", OR ENGINEER APPROVED EQUAL.

STRUCTURE, GAS AND WATER SHUTOFF ADJUST DETAILS

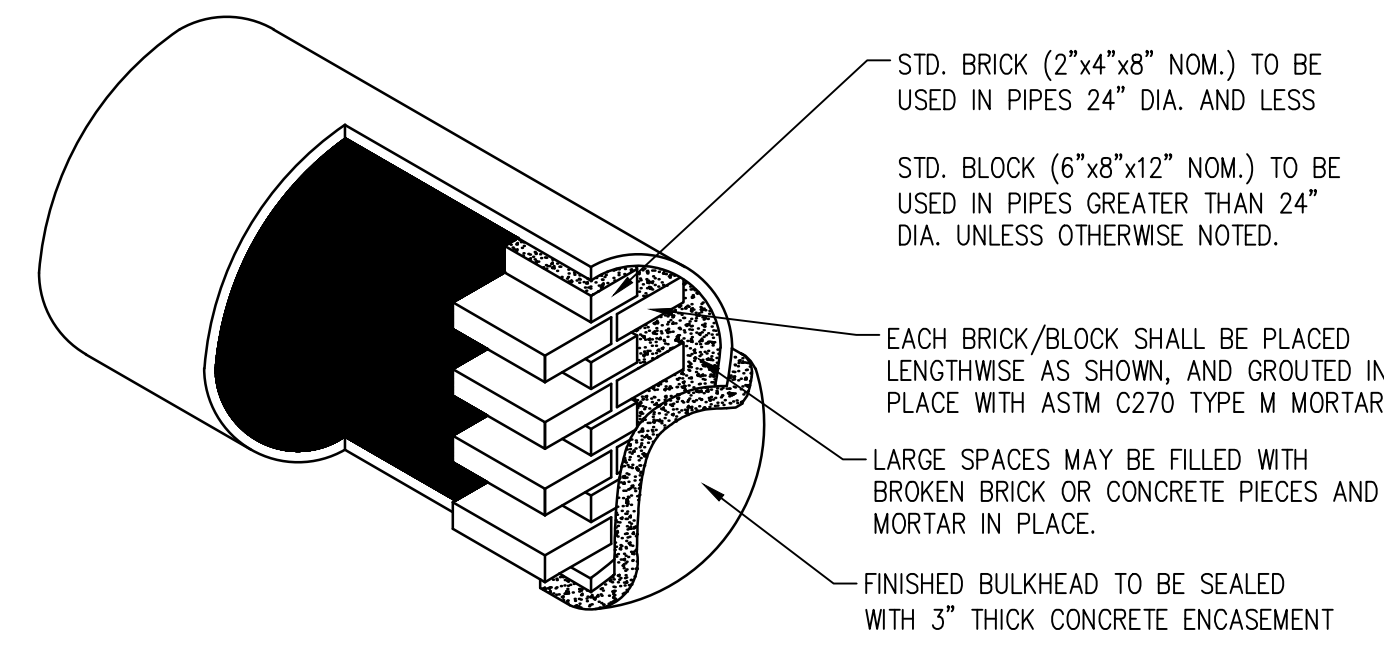
NO SCALE



NOTE:
NEW SERVICE LEAD AND CURB STOP SHALL BE SIZE AS CALLED FOR ON PLANS

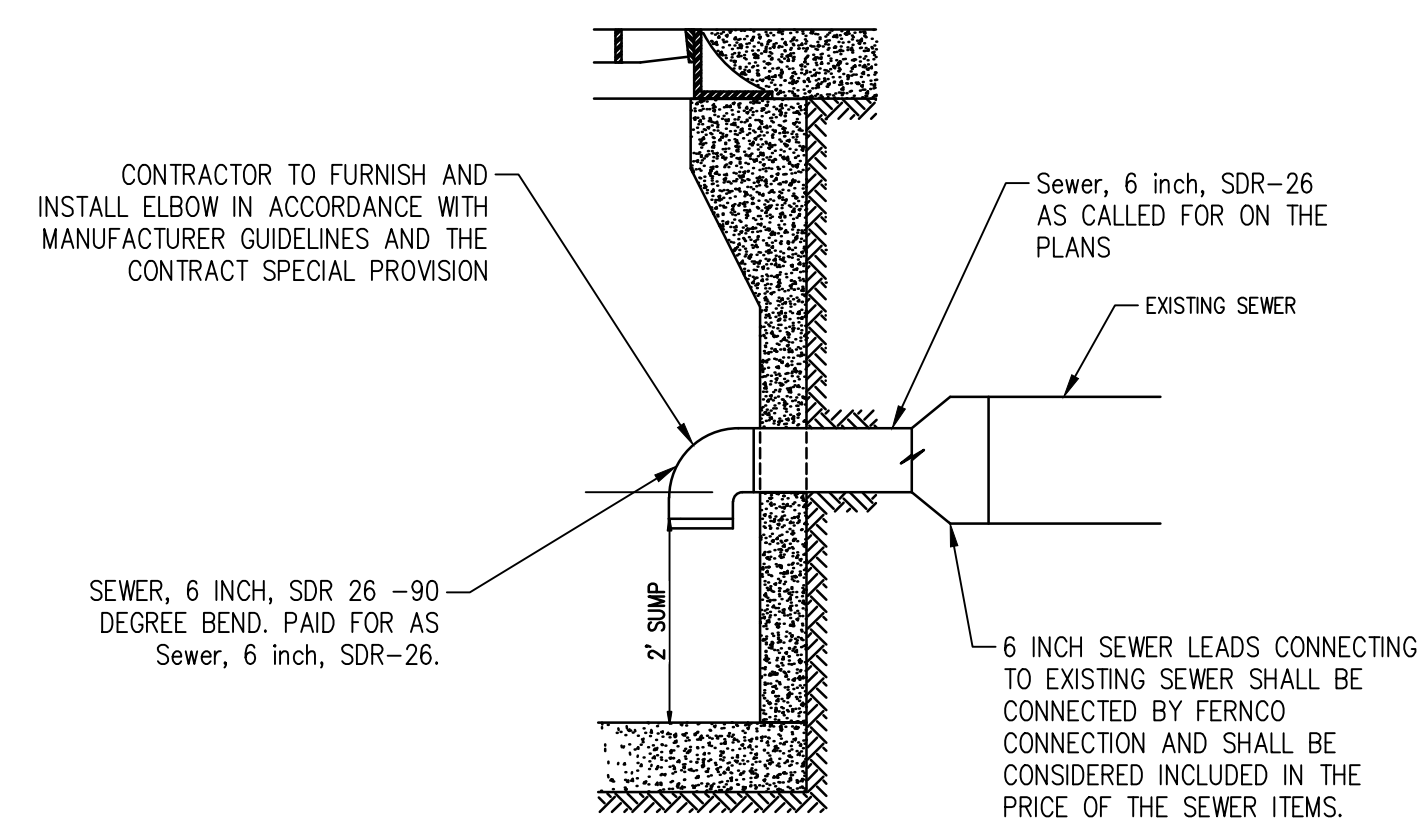
WATER SERVICE LEAD TRANSFER DETAIL

NO SCALE



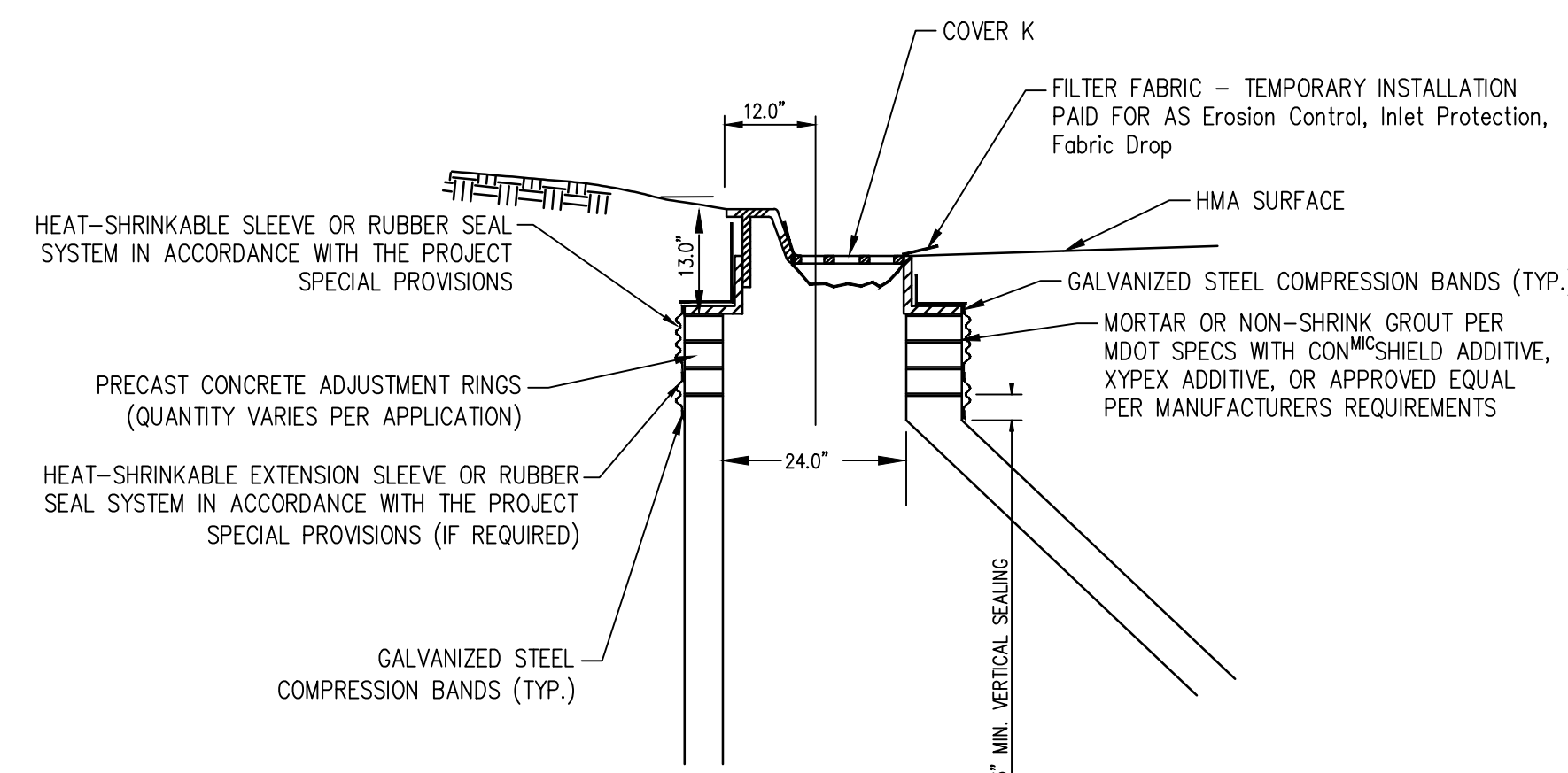
STANDARD BULKHEAD / PLUG DETAIL

NO SCALE



CITY OF SAGINAW SEWER REDUCER DETAIL

NO SCALE



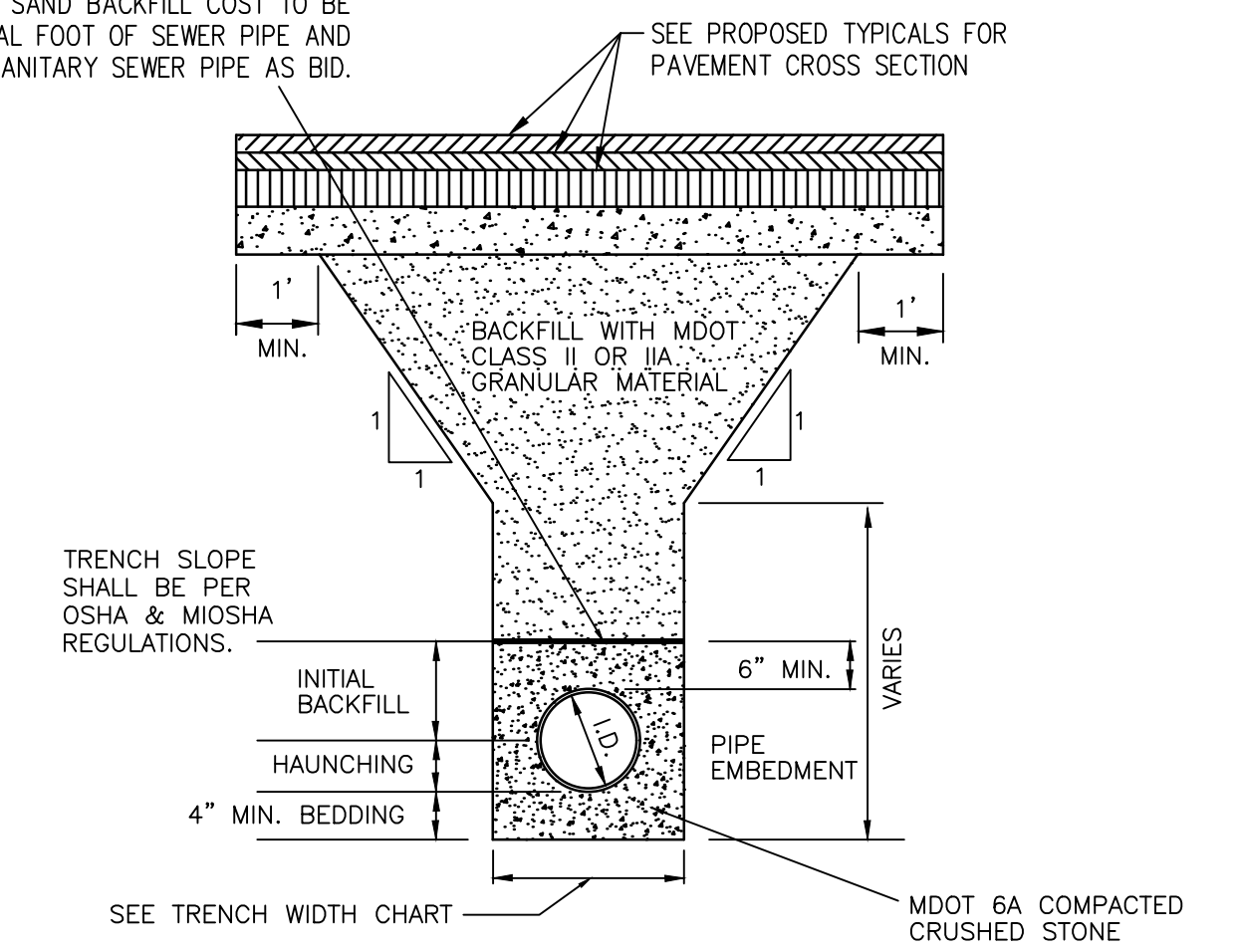
CATCHBASIN COVER FILTER FABRIC AND SEAL SYSTEM DETAIL

NO SCALE

WATER MAIN CONSTRUCTION NOTES

- All material and construction procedures shall comply with the construction drawings and the latest City of Saginaw, Department of Water and Sewer criteria.
- All water main shall have a minimum cover over the top of the pipe of 6 feet from finished grade. The standard laying conditions for water main shall be as specified on the drawings. The pipe shall be laid on a sand cushion with recesses to accommodate pipe bells. Laying material, backfill material and compaction is defined in the MDOT Standard Details.
- Contractor shall restrain all thrust in the system by the use of thrust blocks and restrained joints. This restraint system will be used in conjunction with standard rodding and blocking, as determined by the Engineer. All tees, vertical or horizontal bends and future valve connections shall be restrained.
Contractor will use a joint restraint system, such as Mega-Lug by EBAA Iron, or approved equal in conjunction with standard rodding and block, as determined by the Engineer. Restraint lengths shall be in accordance with manufacturers recommendations and per DIPRA recommendations.
The contractor shall secure all vertical bends with a minimum of 2-3/4" anchor rods for 10" and smaller water main and 3-3/4" anchor rods for 12" water main and larger, per fitting, either to concrete block, welded steel pipe sleeve or collars; method used shall be approved by the Engineer. All ferrous parts shall receive a 10 mil (dtm) coating of coal tar epoxy.
All hydrants shall be rodded. Threaded restraining rods shall be required at all hydrants in addition to all blocking. Rods shall receive a minimum dry film of 15 mils (dtm) of coal tar epoxy. All costs associated with this work shall be included in the unit price bid per each hydrant installed.
- All ground surfaces shall be restored to original condition or better prior to final contract approval.
- The Contractor shall install a corporation, a temporary blowoff, (larger corporations may be used if approved by the City) on the waterline for pressure testing, chlorine addition and for blow-off purposes. The corporations shall be appropriately sized for temporary blowoff following AWWA standards. The corporations shall have copper pipe extending to the ground surface. The Contractor shall remove the corporation and copper line upon a satisfactory test and install a plug. Temporary corporations/blowoffs will not be paid for separately but will be included in contract unit prices for water main pay items.
- The Contractor shall only remove pavement and existing water main necessary to install, test, and connect proposed water main.
- Any and all existing water connections and services that need temporarily relocated to allow for the installation of the new water main will be done so by the Contractor as directed by the Engineer. Work will not be paid for separately, but will be included in unit price bid per foot of water main.
- All ductile iron pipe shall be wrapped in accordance with ANSI/AWWA c105/a 21.5. Wrap all ductile iron fittings, valves and hydrants in a double wrap polyethylene sheet to within 12 inches of finish grade.

INSTALL 3-5 OZ. NON-WOVEN FILTER FABRIC OVER MDOT 6A COMPACTED CRUSHED STONE ON ROAD CROSSINGS AND ALL OTHER AREAS THAT REQUIRE COMPLETE SAND BACKFILL COST TO BE INCLUDED IN PAY ITEM FOR LINEAL FOOT OF SEWER PIPE AND SANITARY SEWER PIPE AS BID.



NOTE:
EXISTING SURFACE CONDITIONS ON THE PROPOSED TRENCH CENTERLINE SHALL GOVERN THE TYPE OF SURFACE RESTORATION THE CONTRACTOR SHALL PERFORM. THE TYPE OF PIPE BACKFILL AND BEDDING SHALL BE AS STATED IN THE PLANS AND SPECIFICATIONS AND APPROPRIATE BID UNITS SHOWN IN THE PROPOSAL.

- TRENCH WIDTH CHART -		
PIPE SIZE	MINIMUM	MAXIMUM
6", 8" & 10"	24"	30"
12" & 15"	30"	36"
18"	34"	40"
21"	38"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"

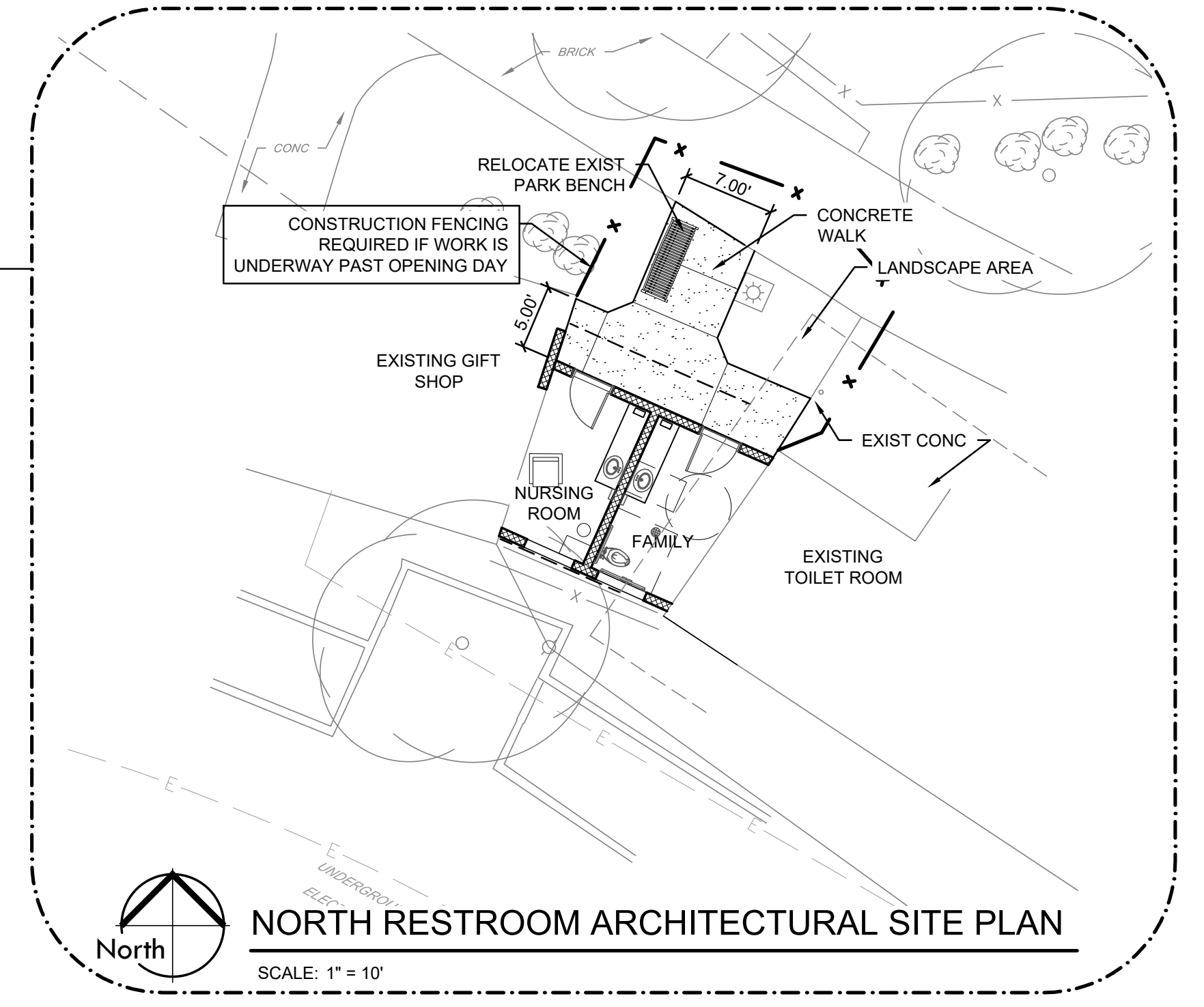
SPECIAL TRENCH DETAIL PVC SEWER PIPE

NO SCALE

ACAD FILE: PG. F.B. RET. PLOTTING SCALE:

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>CHILDREN'S ZOO AT CELBRATION SQUARE SAGINAW, MICHIGAN</p>			
<p>CITY OF SAGINAW DETAILS CHILDREN'S ZOO CENTRAL RESTROOMS & CONCESSIONS BUILDING</p>			
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>	
DE. BY:	CAR	CH. BY:	BSB
DR. BY:	CAR	APP. BY:	DWM
PROJECT NO.		131928SG2022	
STDS.	SHEET 10 OF 40		C
DATE	NOV. 9, 2022	FILE NO.	DA-1431- 10
SCALE	AS NOTED		8

ADD ALTERNATE #1

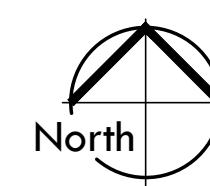
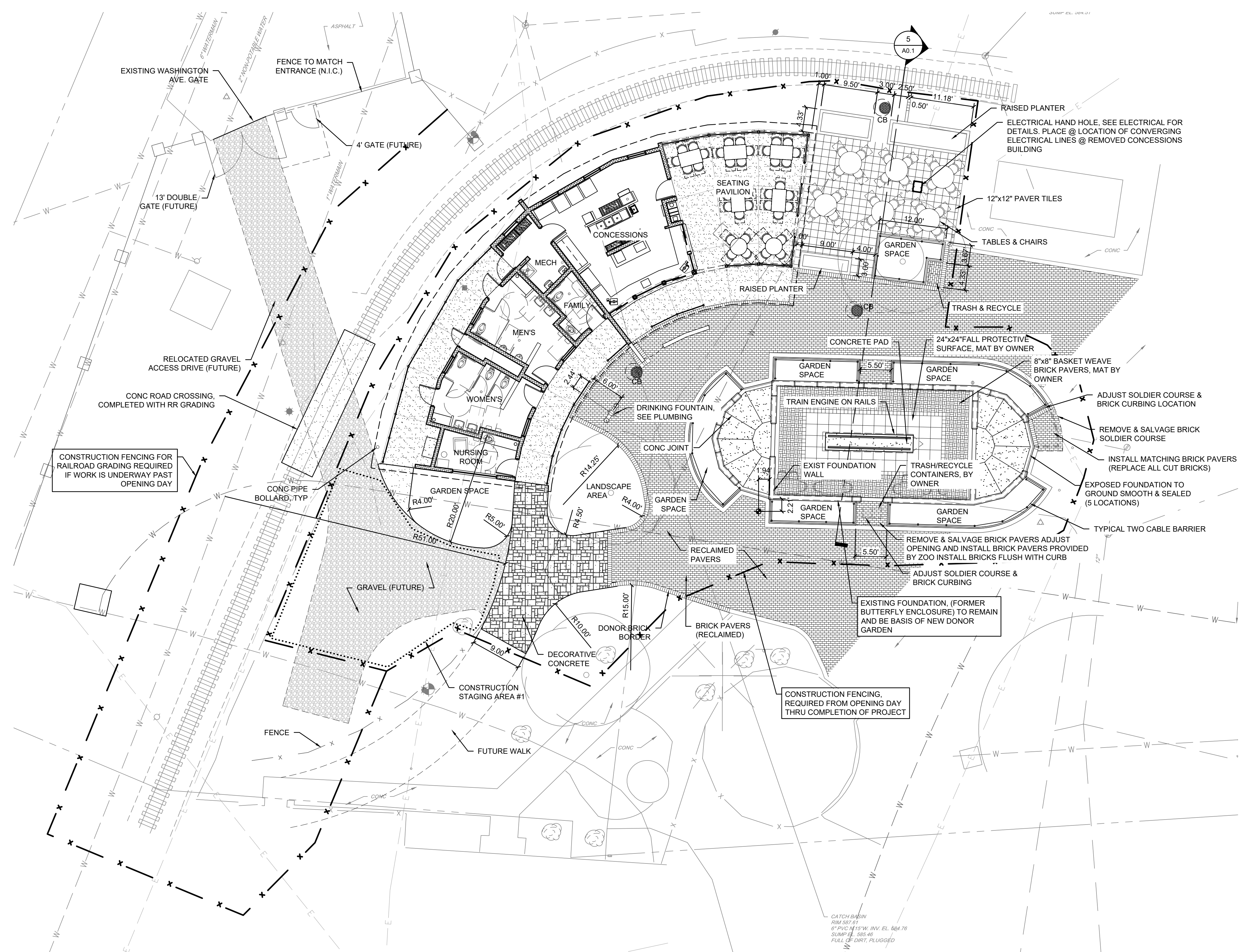


SITE GENERAL NOTES:

1. CONTRACTOR MUST PROVIDE CONSTRUCTION FENCING DURING ZOO OPERATING DAYS (MAY - OCTOBER)
2. CONTRACTOR SHALL CONTACT ZOO DIRECTOR OF PHYSICAL PLANT & FACILITIES PLANNING FOR LOCATING ALL UNDERGROUND UTILITIES WITHIN THE ZOO PROPERTY. THE CONTRACTOR MUST STILL CONTACT MISS DCS AT 811.
3. WORK HOUR SHALL BE FROM 7 AM TO 8 PM MONDAY THRU SATURDAY.
4. CONTRACTOR SHALL PROTECT ADJACENT EXHIBITS FROM DAMAGE.
5. ALL CONSTRUCTION EQUIPMENT SHALL ENTER THROUGH WASHINGTON AVENUE GATE.
6. SEE SITE MAP ON COVER SHEET FOR CONTRACTOR STAGING AREA #1, #2 AND CONTRACTOR PARKING.
7. ALL MATERIALS NOTED AS "BY OWNER" SHALL BE INSTALLED BY CONTRACTOR.
8. CONTRACTOR MUST MAINTAIN TOILET FACILITIES, FIRE EXTINGUISHERS AND FIRST AID EQUIPMENT ON SITE AT ALL TIMES.
9. DECORATIVE CONCRETE REFERS TO STAMPED AND COLORED CONCRETE. OWNER TO CHOOSE PATTERN AND COLOR.
10. TRAIN ENGINE AND ITS PLACEMENT BY OTHERS; CONTRACTOR TO PROVIDE CONCRETE AND EMBED RAILS (BY OWNER).
11. RAISED PLANTER BED TO BE CONSTRUCTED FROM TREATED LANDSCAPE TIMBERS.
12. SEE CIVIL DRAWINGS FOR ALL GRADING AND UTILITY INFORMATION.
13. FOR SITE GEOMETRY, A0.0 SHALL PREVAIL OVER CIVIL DRAWINGS.

CONCRETE AND ACCESSORIES:

1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 301 AND ACI 308. CONCRETE PLACED IN COLD WEATHER SHALL CONFORM TO ACI-308R. CONCRETE PLACED IN HOT WEATHER SHALL CONFORM TO ACI-305R.
2. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
3. CONCRETE SHALL HAVE A SLUMP RANGE OF 2"-4".
4. CONCRETE SUBJECT TO FREEZE/THAW CYCLES SHALL HAVE AN AIR CONTENT OF 5%-7% BY VOLUME PER ASTM C260.
5. FINE AGGREGATE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C33.
6. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO OWNER FOR REVIEW AND APPROVAL.
7. NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107 AND BE PREMIXED AND CONSIST OF COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, CEMENT, WATER REDUCING AGENT AND PLASTICIZING AGENTS CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTHS OF 2,400 PSI IN 48 HOURS AND 7,000 PSI IN 58 DAYS.
8. CONCRETE REINFORCING STEEL SHALL CONFORM TO ASTM A615 AND HAVE A YIELD STRENGTH OF 60 ksi. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW AND APPROVAL.
9. EPOXY FOR ANCHOR BOLTS AND REINFORCING STEEL SHALL BE HILTI-HY-200 EPOXY INJECTABLE MORTAR. INSTALL PER MANUFACTURERS INSTRUCTIONS.
10. THREADED ANCHOR RODS SHALL BE HILTI HAS-R ANCHOR RODS (PICK TYPE FOR PROJECT = HAS-E CARBON STEEL ZINC COATED, HAS-B HIGH STRENGTH STEEL, HAS-R 304 STAINLESS STEEL, HAS-R 316 STAINLESS STEEL).
11. PLYWOOD FORMWORK SHALL BE CONSTRUCTED OF 5-PLY DOUGLAS FIR, SOUND SHEETS WITH CLEAN, TRUE EDGES. STEEL FORMS SHALL BE SMOOTH, TRUE AND UNDAMAGED. ALL FORMWORK SHALL BE STIFFENED OR BRACED TO SUPPORT THE WEIGHT OF THE CONCRETE WITH MINIMUM DEFLECTION. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.
12. PROVIDE 3/4" CHAMFER STRIPS ON EXTERNAL CORNERS OF VISUALLY EXPOSED CONCRETE CORNERS.
13. ALL EXPANSION JOINTS SHALL BE FORMED WITH JOINTING TROWEL AND NOT SAWCUT.

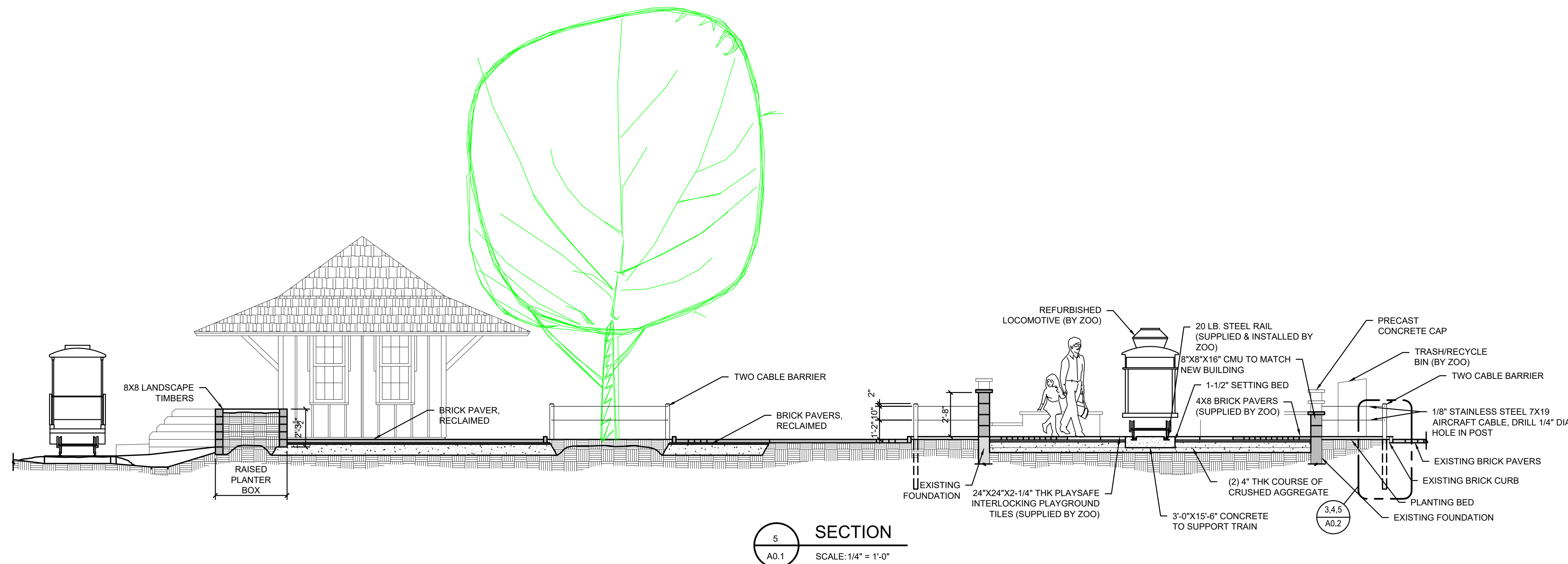
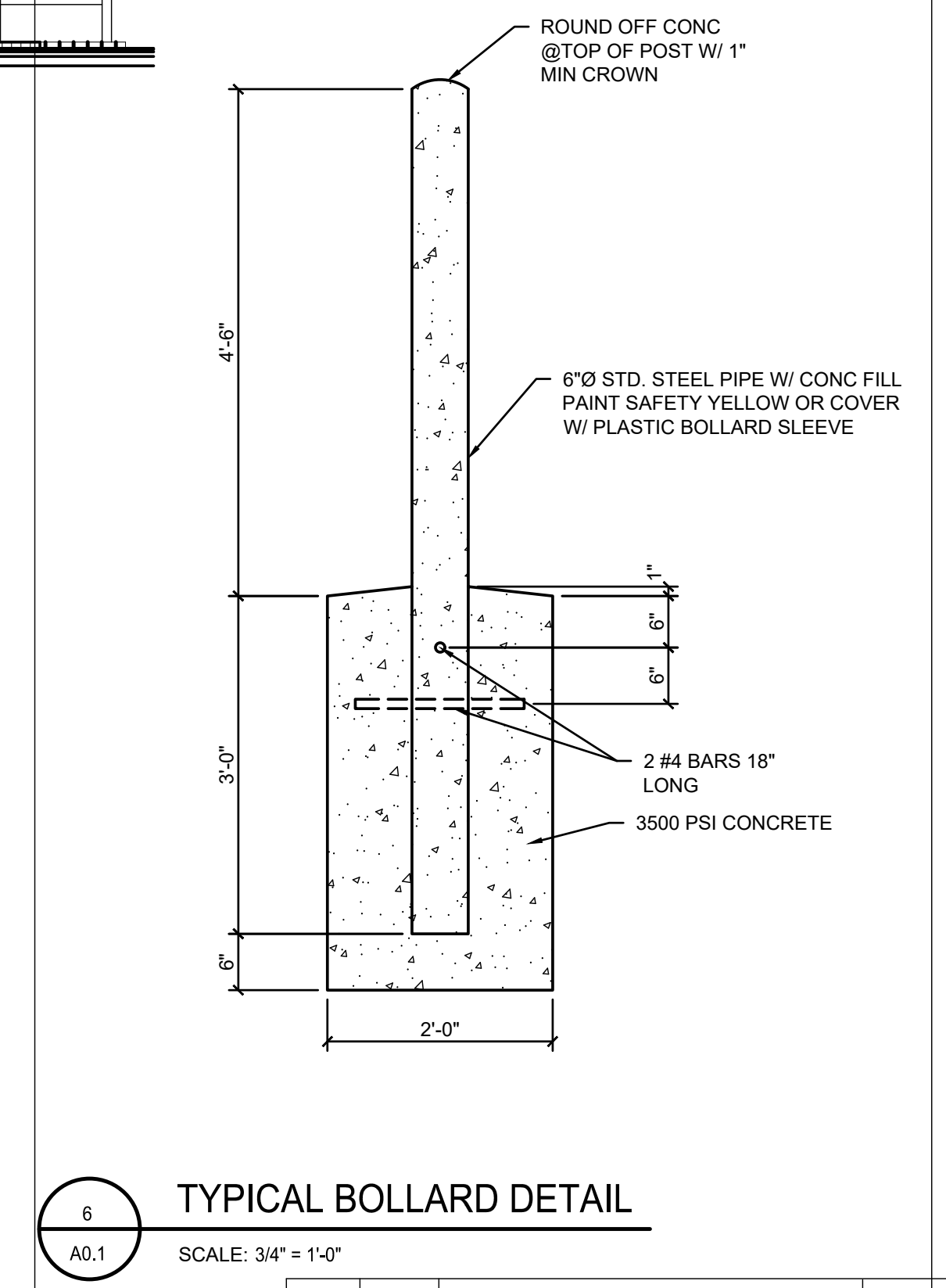
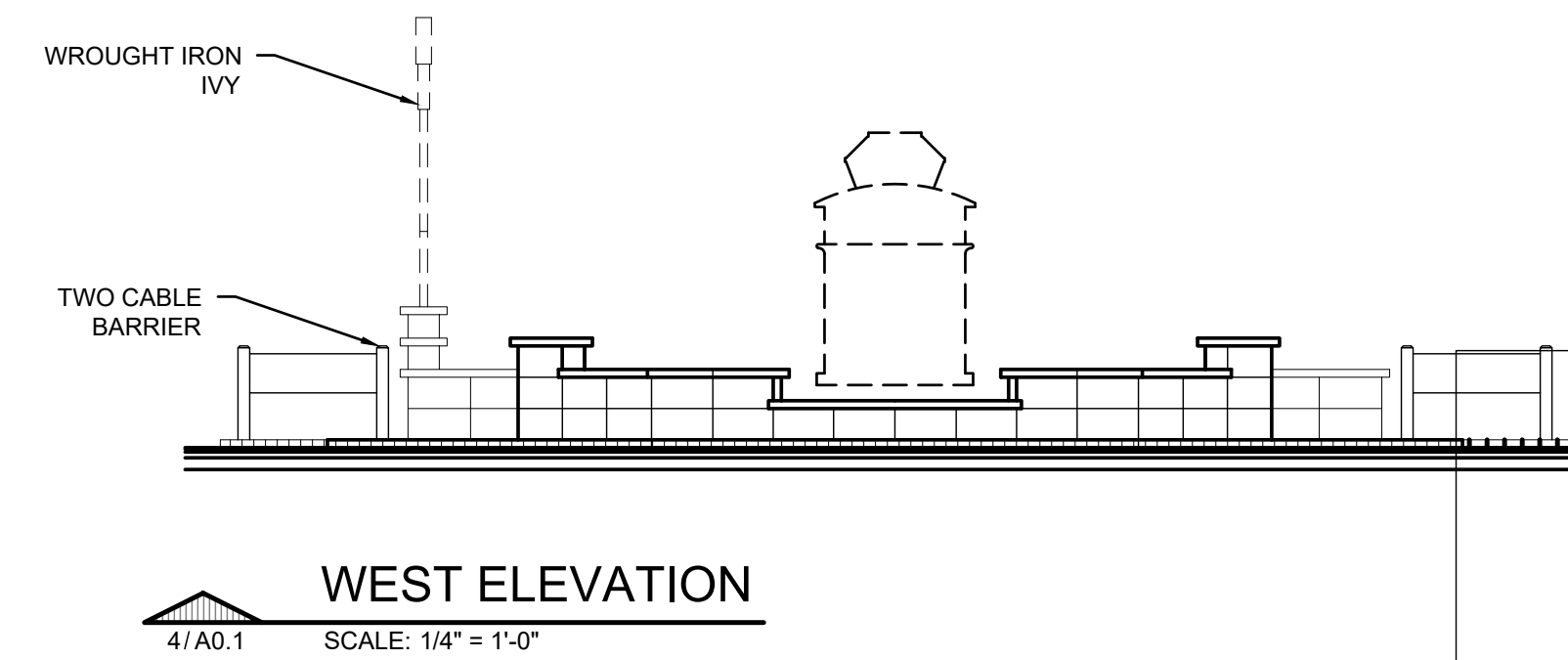
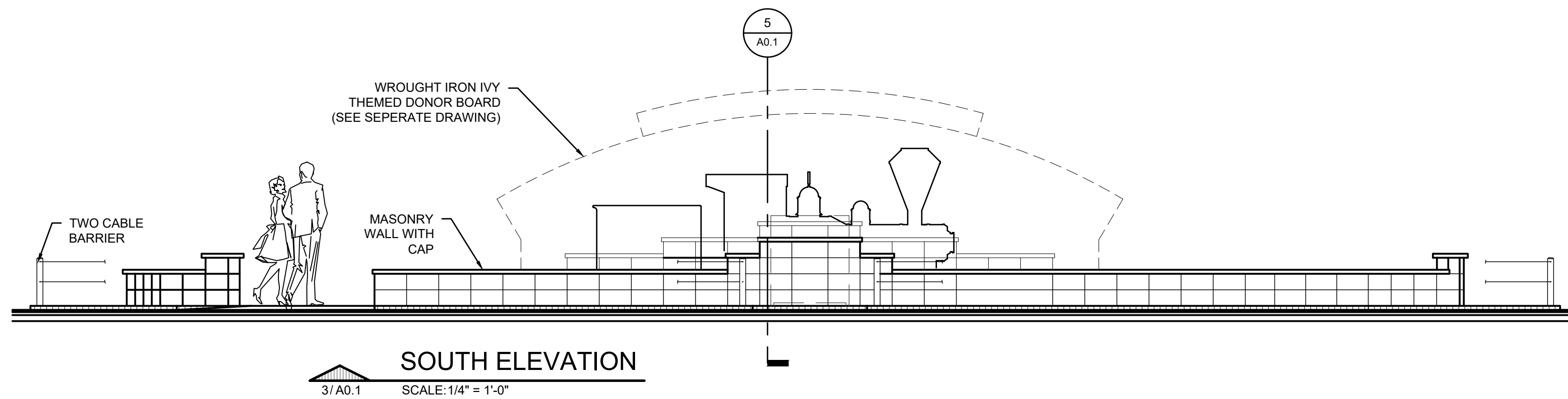
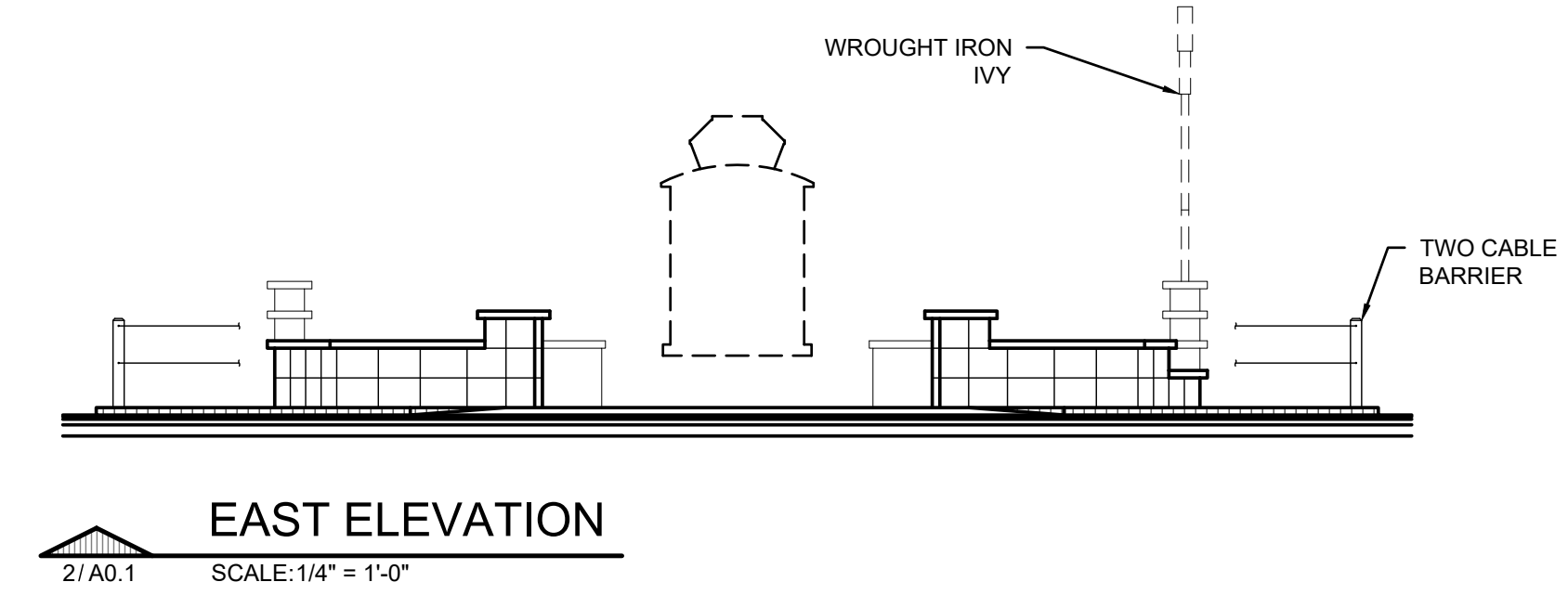
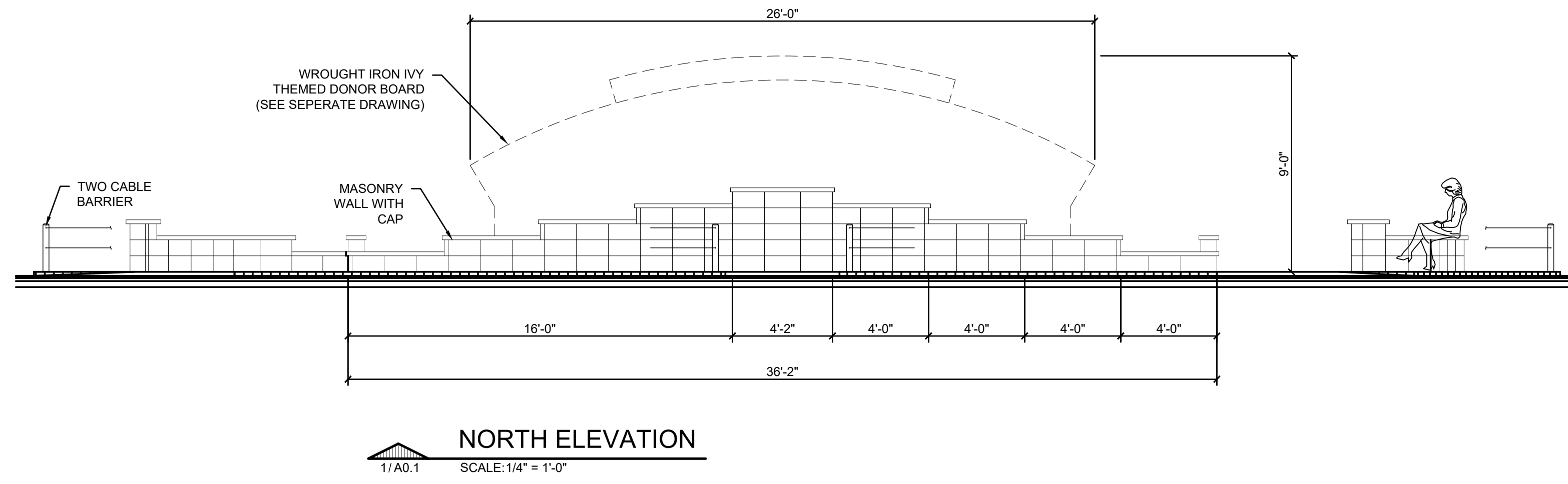


CENTRAL RESTROOM/CONCESSIONS ARCHITECTURAL SITE PLAN

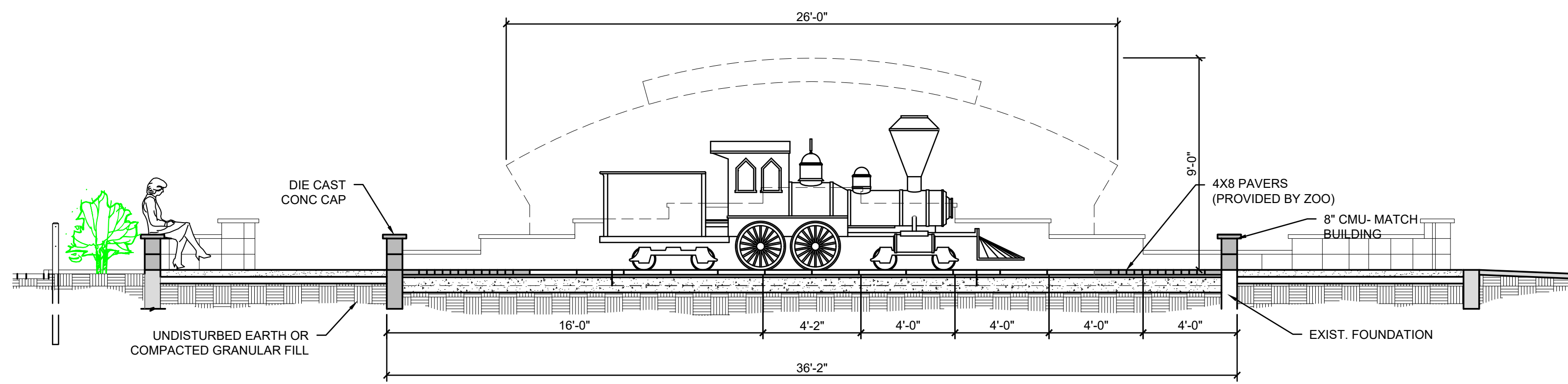
SCALE: 1" = 10'

BY	MARK	REVISIONS	DATE
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<p>CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO</p>			
<p>ARCHITECTUAL SITE PLAN CENTRAL RESTROOMS & CONCESSIONS NORTH TOILET ROOM ADDITION</p>			
<p>DE. BY: DWM DR. BY: DWM</p>		<p>CH. BY: DSB APP. BY: DWM</p>	
<p>PROJECT NO. 131928SG2022</p>		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>	
STDS.	SHEET 11 OF 40	A	
DATE	NOVEMBER 2, 2022	FILE NO.	DA-1431-11
SCALE	AS SHOWN	0.0	

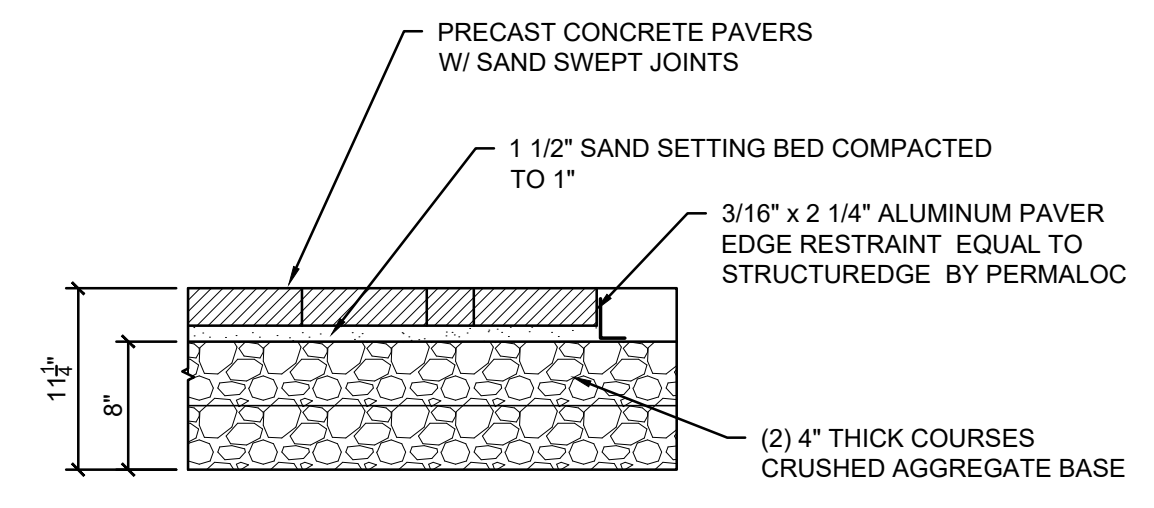
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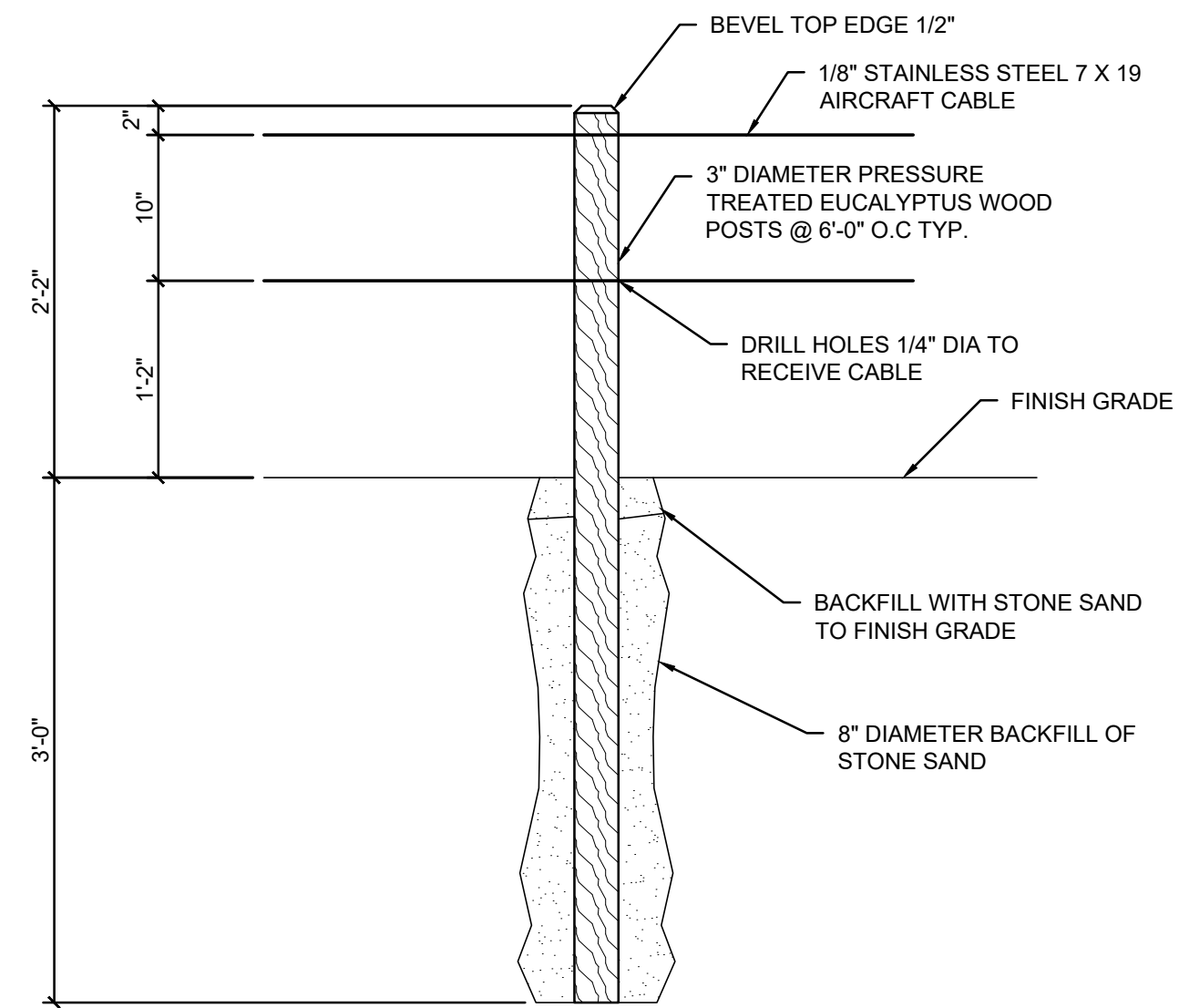
DWM	ISSUE FOR CLIENT REVIEW	9/16/22	
BY	MARK	REVISIONS	DATE
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CENTRAL RESTROOM & CONCESSIONS			
SAGINAW CHILDREN'S ZOO			
DONOR GARDEN			
DETAILS & ELEVATIONS			
Spicer Group			SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
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DR. BY:	DWM	APP. BY:	DWM
PROJECT NO.			131928SG2022
STDS.	SHEET 12 OF 40		A
DATE	NOVEMBER 2, 2022		FILE NO.
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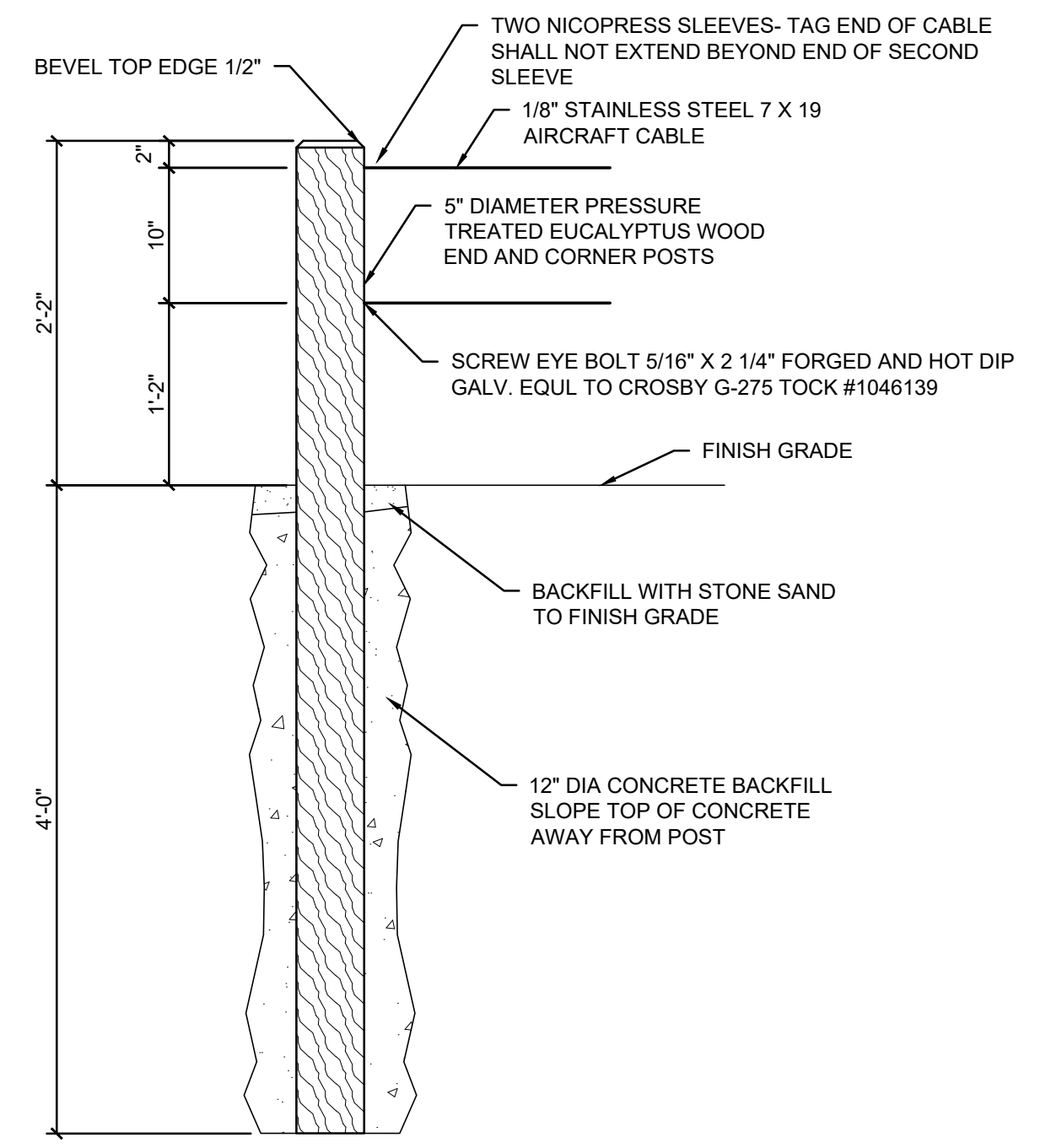
1 SECTION
A0.2 SCALE: 1/4" = 1'-0"



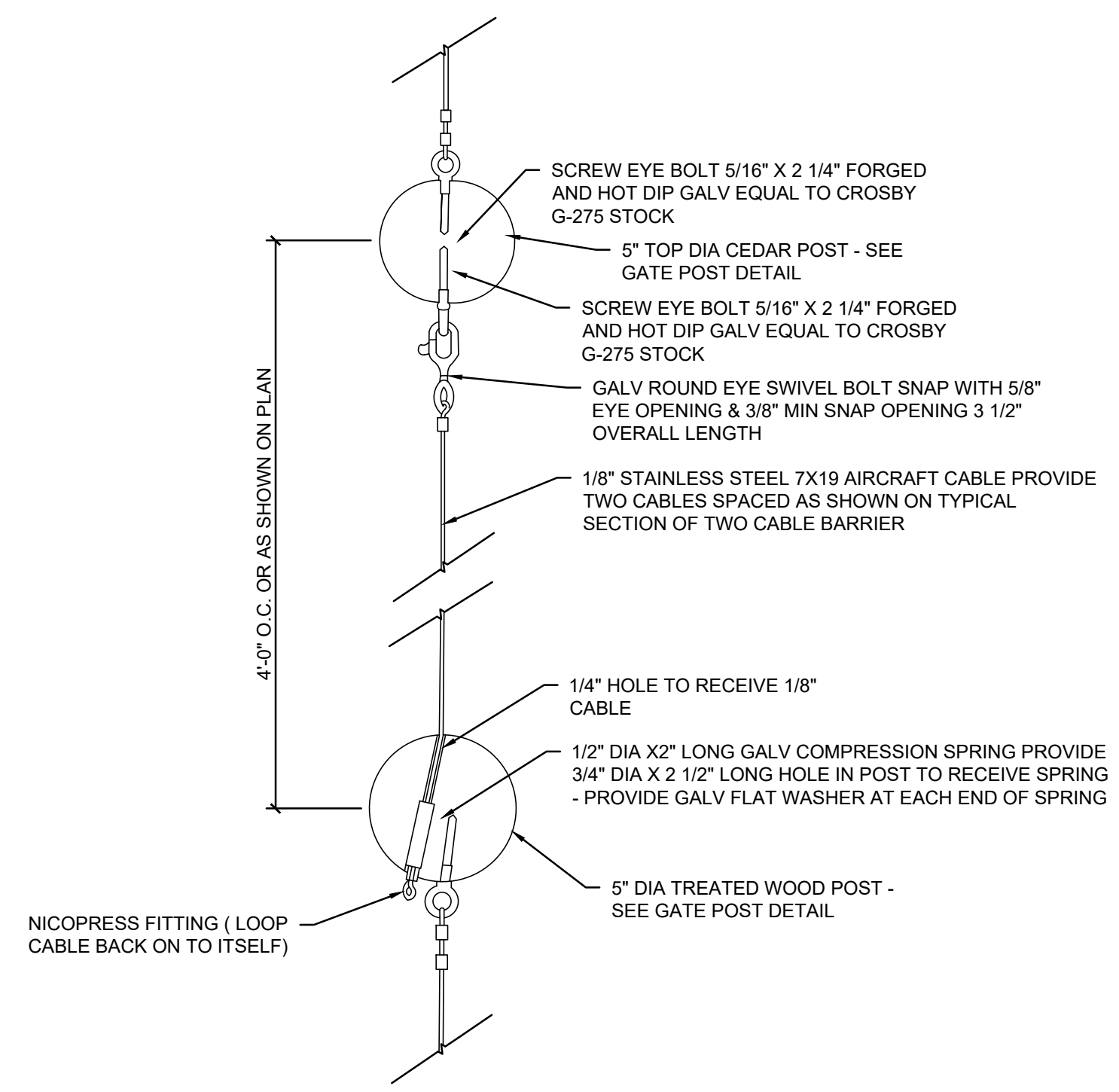
2 PRECAST CONCRETE PAVERS ON STONE BASE
A0.2 SCALE: 1" = 1'-0"



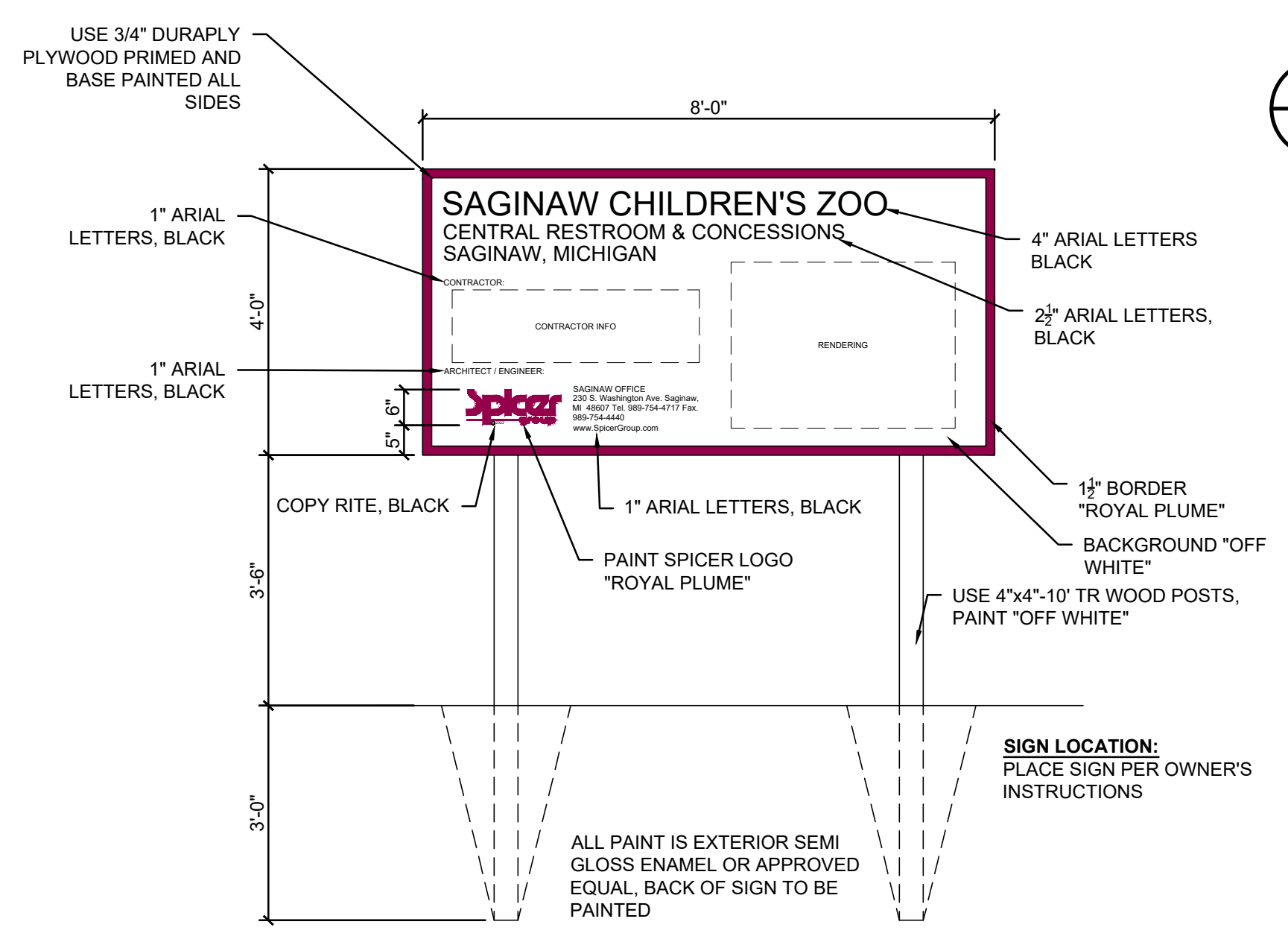
3 TWO CABLE BARRIER DETAIL
A0.2 SCALE: 1" = 1'-0"



4 TWO CABLE BARRIER DETAIL
A0.2 SCALE: 1" = 1'-0"



5 TWO CABLE BARRIER GATE DETAIL
A0.2 SCALE: 1" = 1'-0"



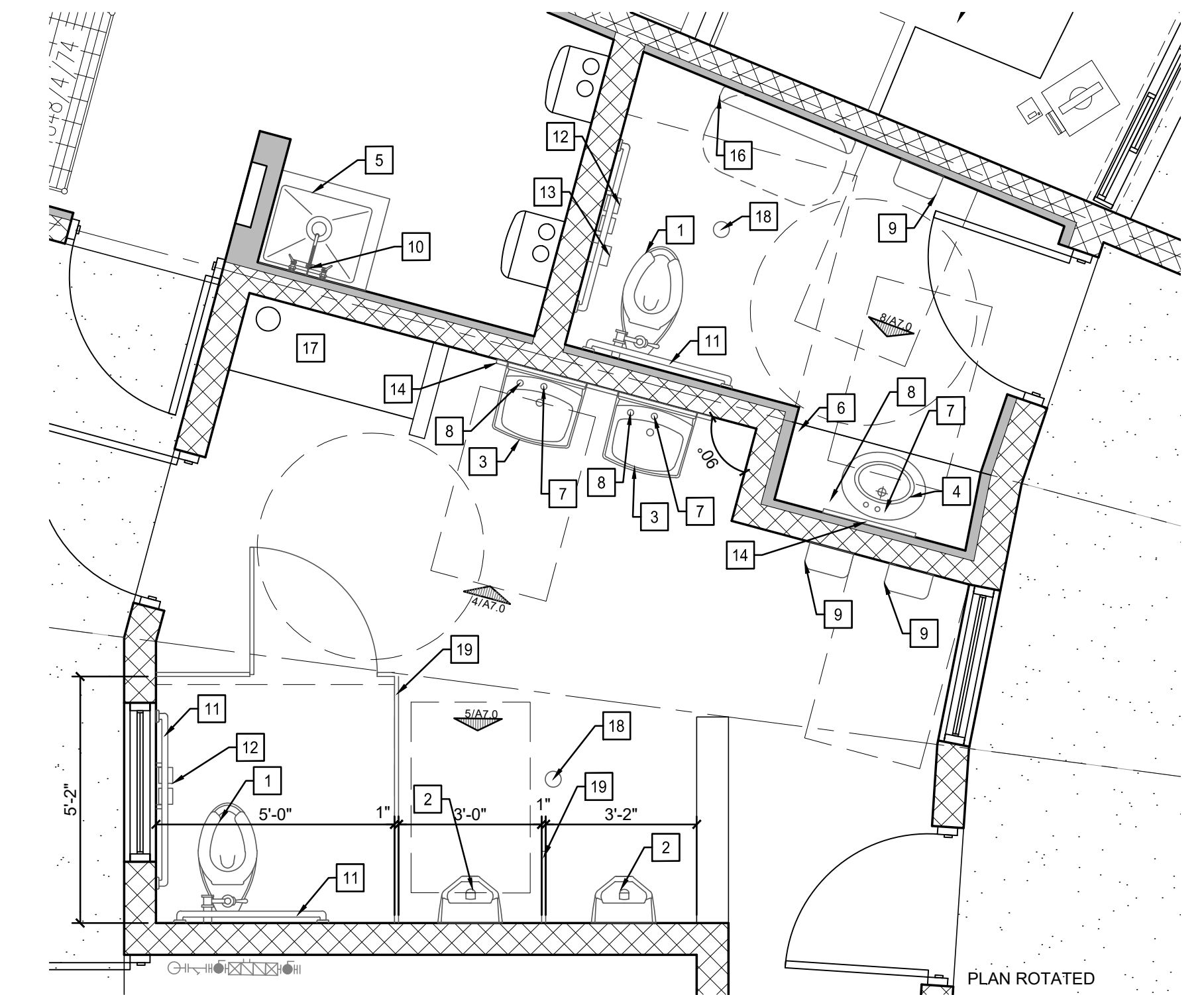
6 SITE CONSTRUCTION SIGN
A0.2 SCALE: 1/2" = 1'-0"

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BY	MARK	DATE
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
DONOR GARDEN DETAILS		
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: DWM	APP. BY: DWM	
STDS.	SHEET 13 OF 40	A
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-13	0.2
SCALE		

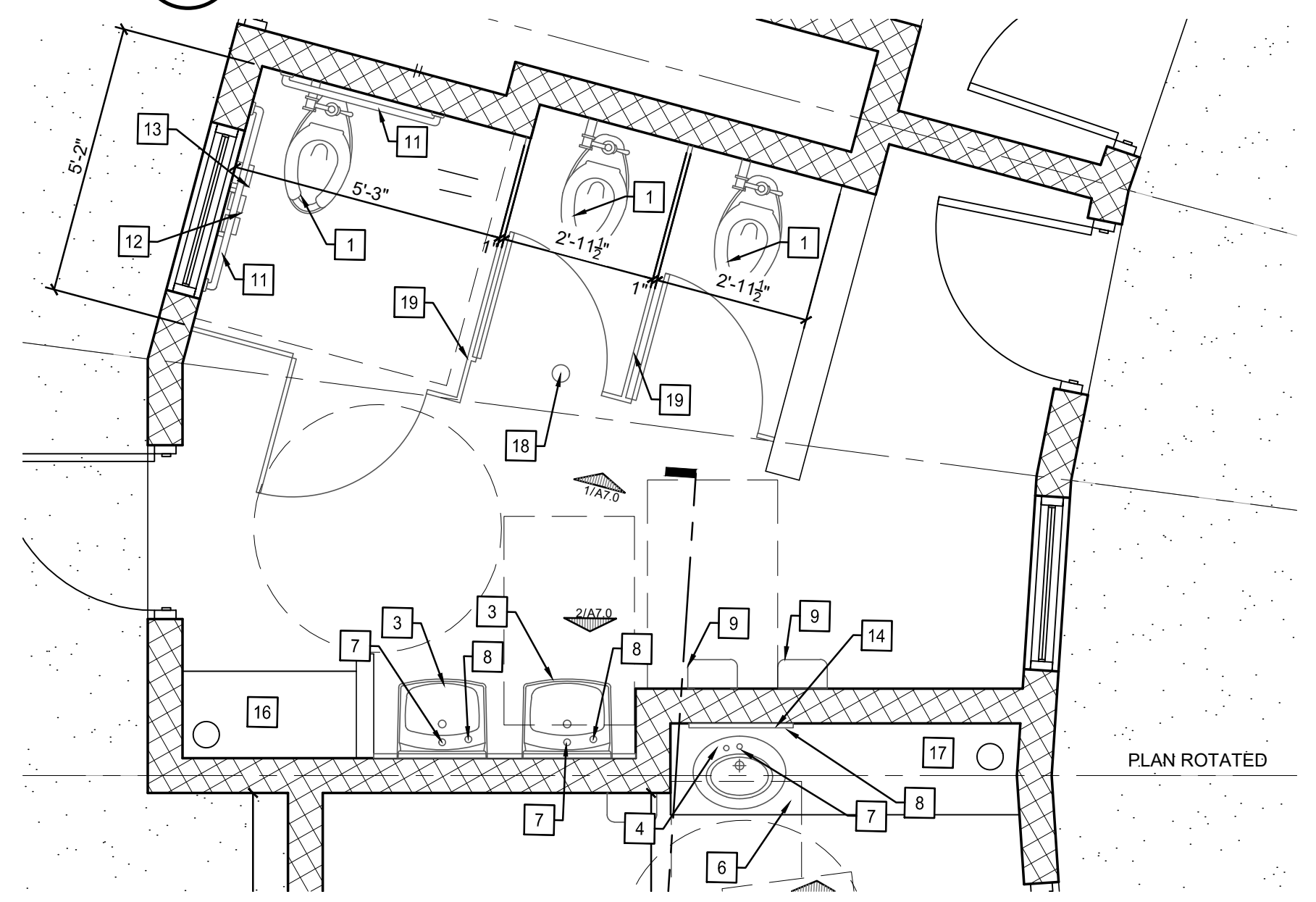
09/20/2022 10:00:00 AM - Saginaw Children's Zoo - Donor Garden - Details - 131928SG2022.dwg - 11/16/2022 10:19:00 AM - DWM
 PLOT FILE: ACAD FILE:
 RET. F.B.

KITCHEN EQUIPMENT SCHEDULE

- 100 HOT DOG ROLLER
- 101 PRETZEL MACHINE
- 102 POPCORN MACHINE
- 103 POINT OF SALE
- 104 SODA COOLER
- 105 TRASH CONTAINER
- 106 RECYCLE CONTAINER
- 107 3 COMPARTMENT SINK W/ SIDE TABLE
- 108 WIRE SHELVING UNIT
- 109 HAND SINK, SOAP DISPENSER & PAPER TOWEL DISPENSER
- 110 ICE MAKER
- 111 REFRIGERATOR
- 112 FREEZER
- 113 FIRST AID STATION
- 114 STAINLESS STEEL WORK TABLE W/ BACK SPLASH



1 ENLARGED MENS PLANS
SCALE: 3/8" = 1'-0"



2 ENLARGED WOMENS PLANS
SCALE: 3/8" = 1'-0"

KEYED NOTES - NEW CONSTRUCTION

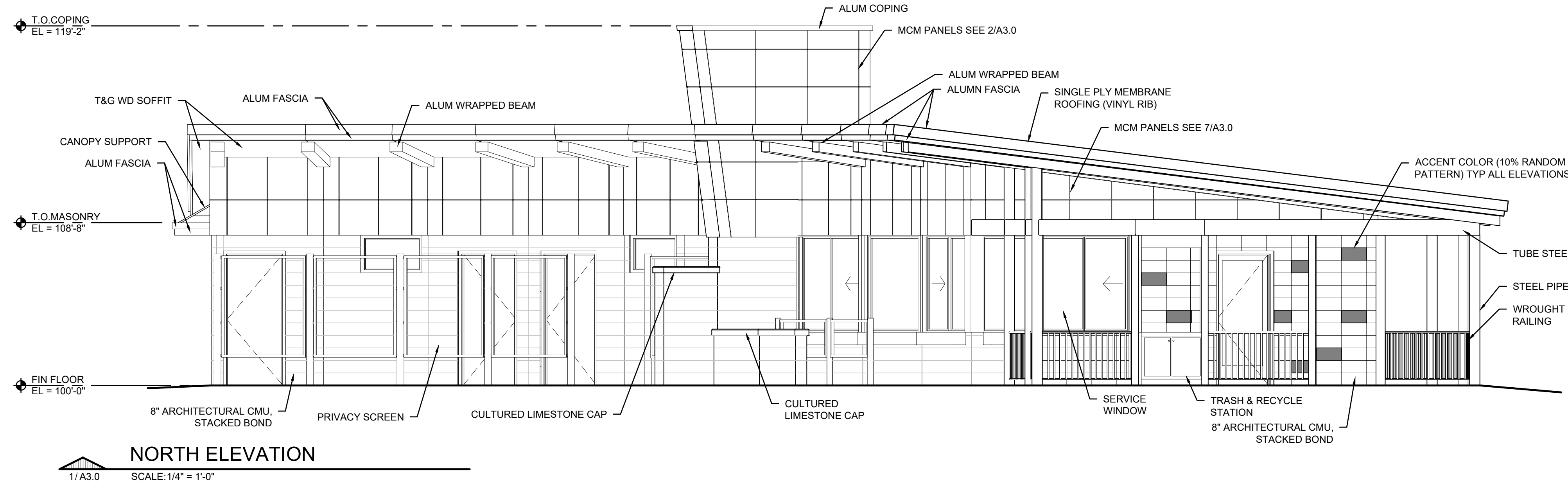
- | | |
|---|--|
| 1 TOILET - SEE NOTES | 16 SURFACE MOUNTED BABY CHANGE STATION |
| 2 URINAL - SEE NOTES | 17 SOLID SURFACE TOP BABY CHANGE STATION |
| 3 WALL HUNG LAVATORY - SEE NOTES | 18 FLOOR DRAIN |
| 4 DROP IN LAVATORY | 19 TOILET PARTITIONS |
| 5 MOP SINK | 20 GYP BD, PAINTED |
| 6 SOLID SURFACE COUNTER TOP | 21 CMU, PAINTED |
| 7 TOUCHLESS FAUCET | 22 SERVICE WINDOW |
| 8 TOUCHLESS SOAP DISPENSER | 23 STATIONARY WINDOW |
| 9 TOUCHLESS HAND DRYER | 24 COLUMN COVER |
| 10 MOP SINK FAUCET | 25 CUSTOM CASEWORK |
| 11 ADA COMPLIANT GRAB BARS, 36" , 42" & 18" VERTICAL SEE SHEET T2.0 | 26 FIRST AID KIT |
| 12 TOILET PAPER DISPENSER | 27 AED |
| 13 SANITARY NAPKIN DISPOSAL | |
| 14 MIRROR - SEE INTERIOR ELEVATIONS | |
| 15 HDPE PRIVACY PARTITIONS/ DOORS | |

FLOOR PLAN
SCALE: 1/4" = 1'-0"
1,234 SQUARE FEET

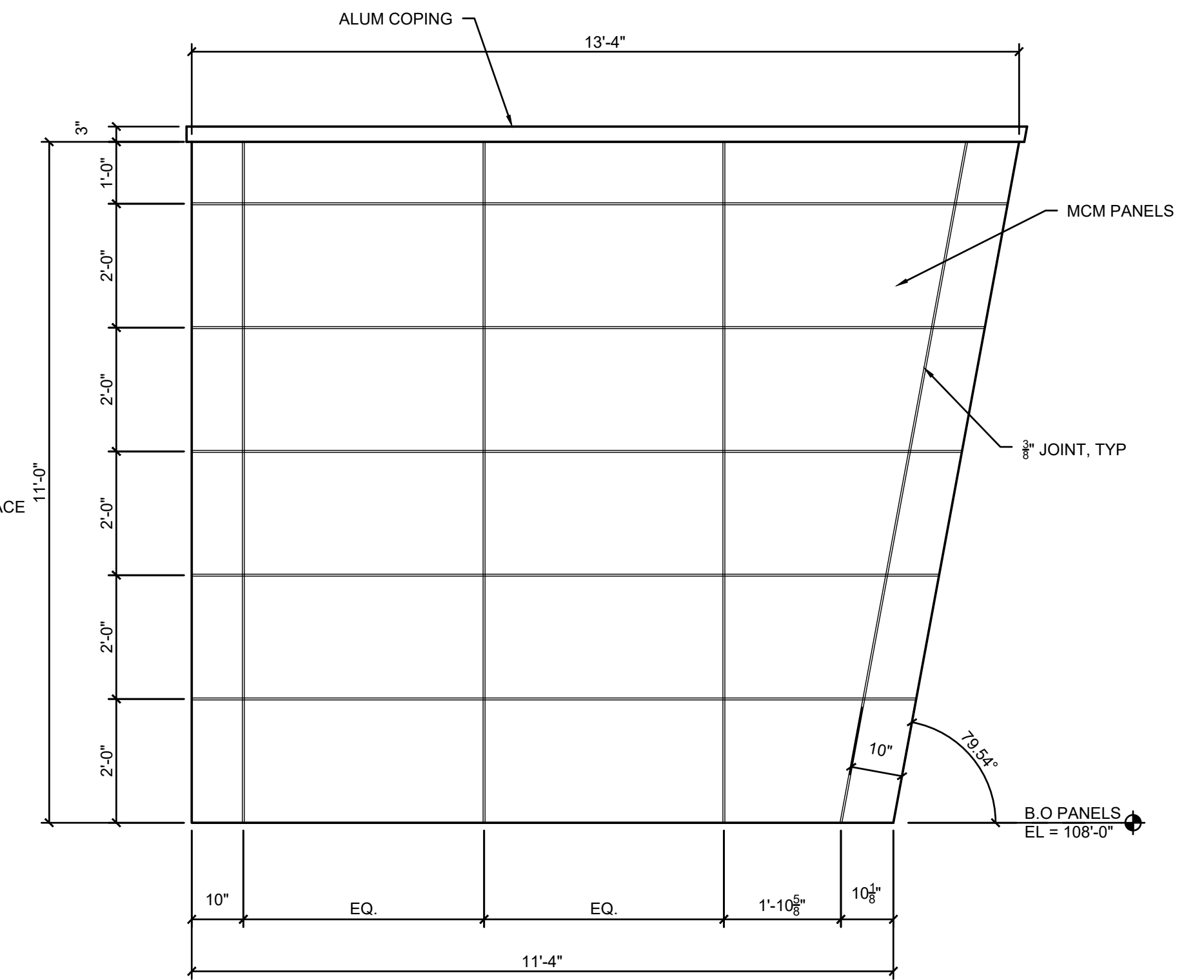
SEE A6.2 FOR WALL TYPES

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BY	MARK	REVISIONS
		DATE
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<p>CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO</p>		
<p>FLOOR PLAN ENLARGED PLANS</p>		
<p>Spicer group</p>		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>
DE. BY: DWM	CH. BY: DSB	PROJECT NO.
DR. BY: DWM	APP. BY: DWM	131928SG2022
STDS.	SHEET 14 OF 40	A
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-14	1.0
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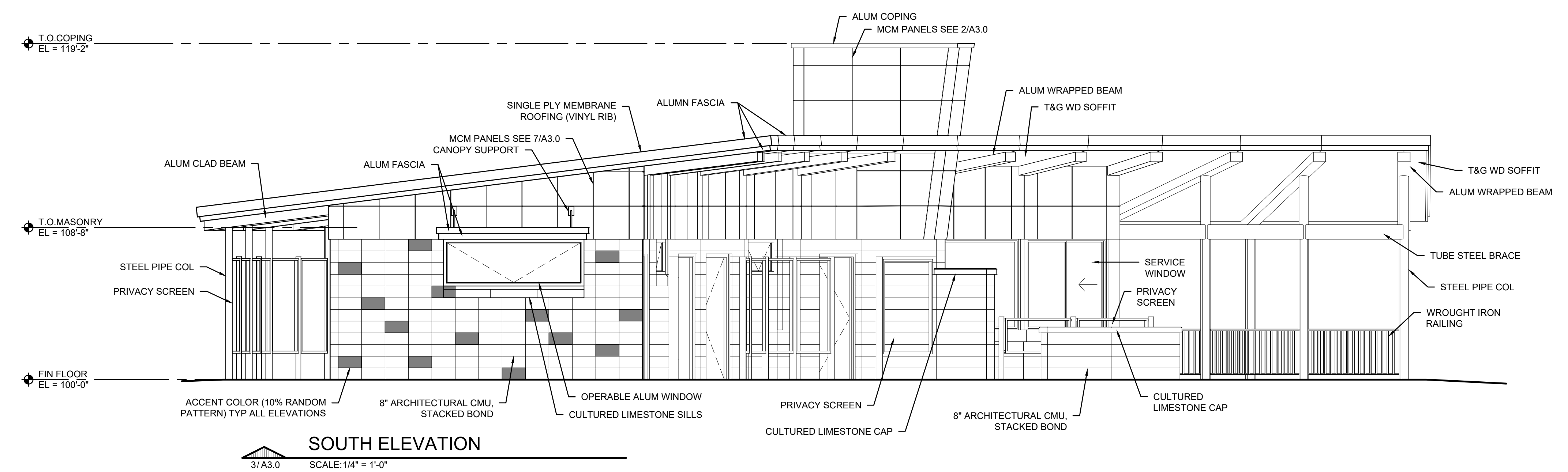
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 PLOTTING SCALE:



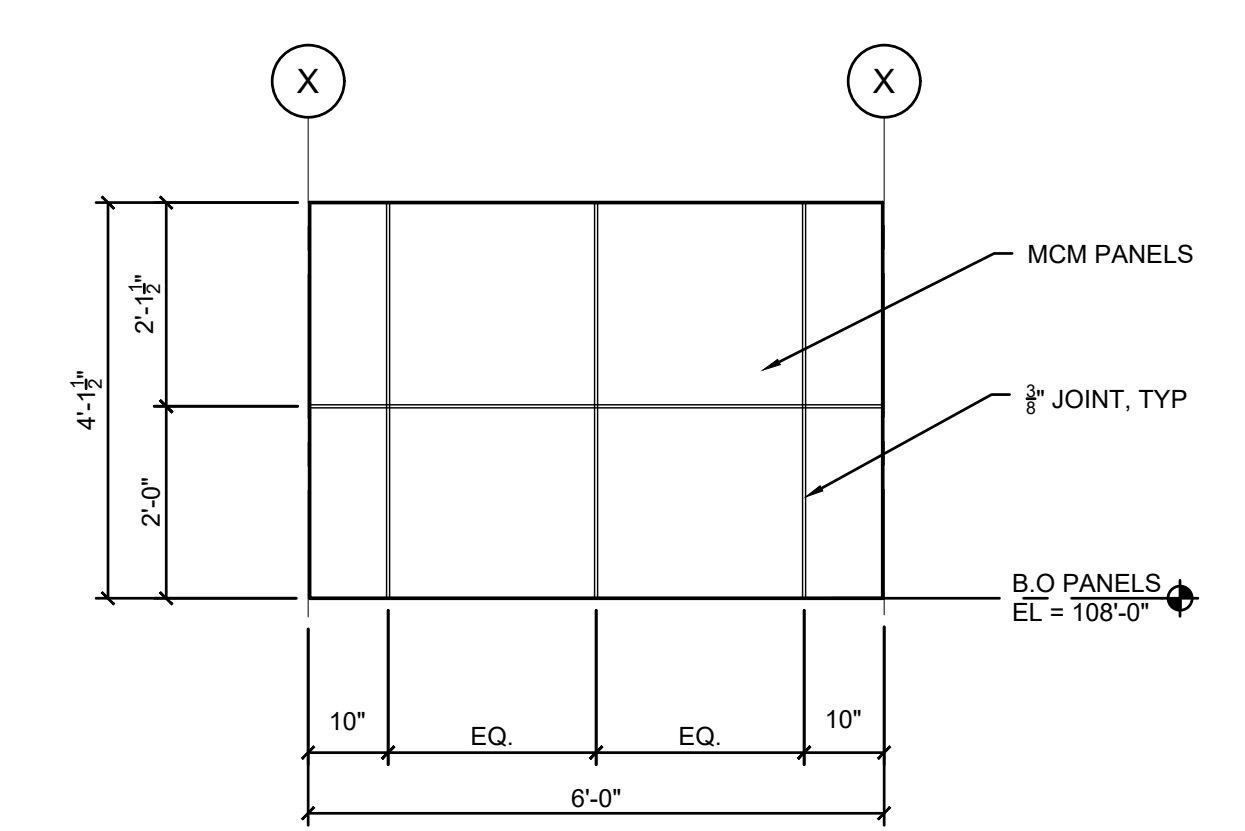
NORTH ELEVATION
1/A3.0 SCALE: 1/4" = 1'-0"



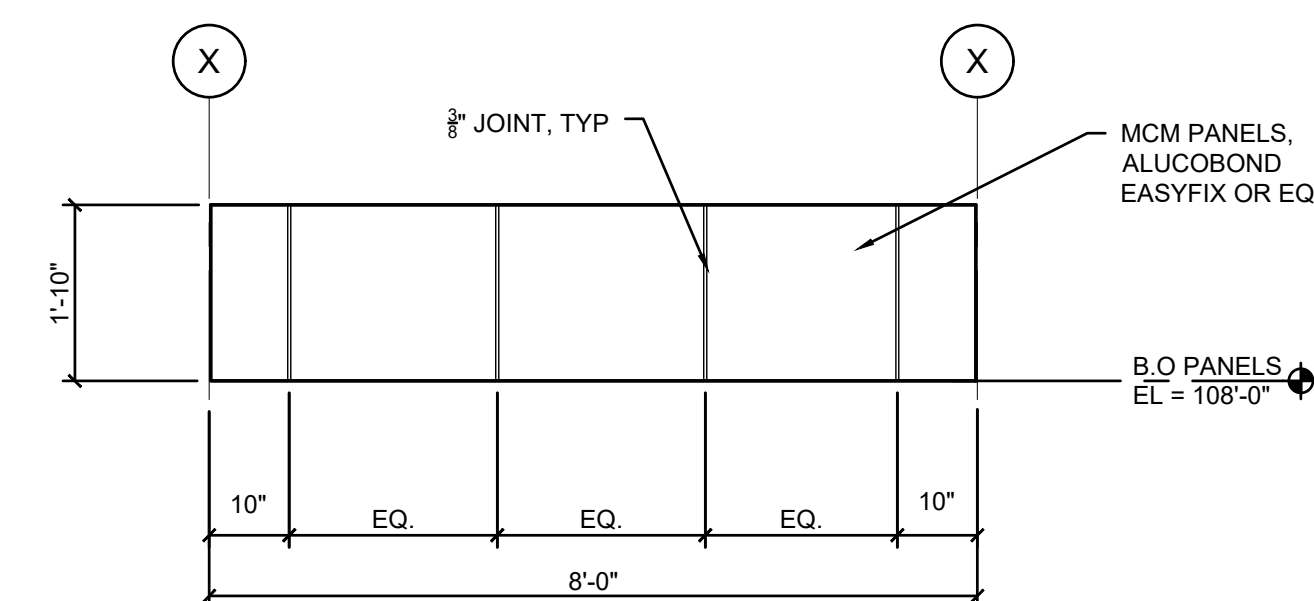
2 TYPICAL MCM PANEL LAYOUT TOWER WALL
A3.0 SCALE: 1/2" = 1'-0"



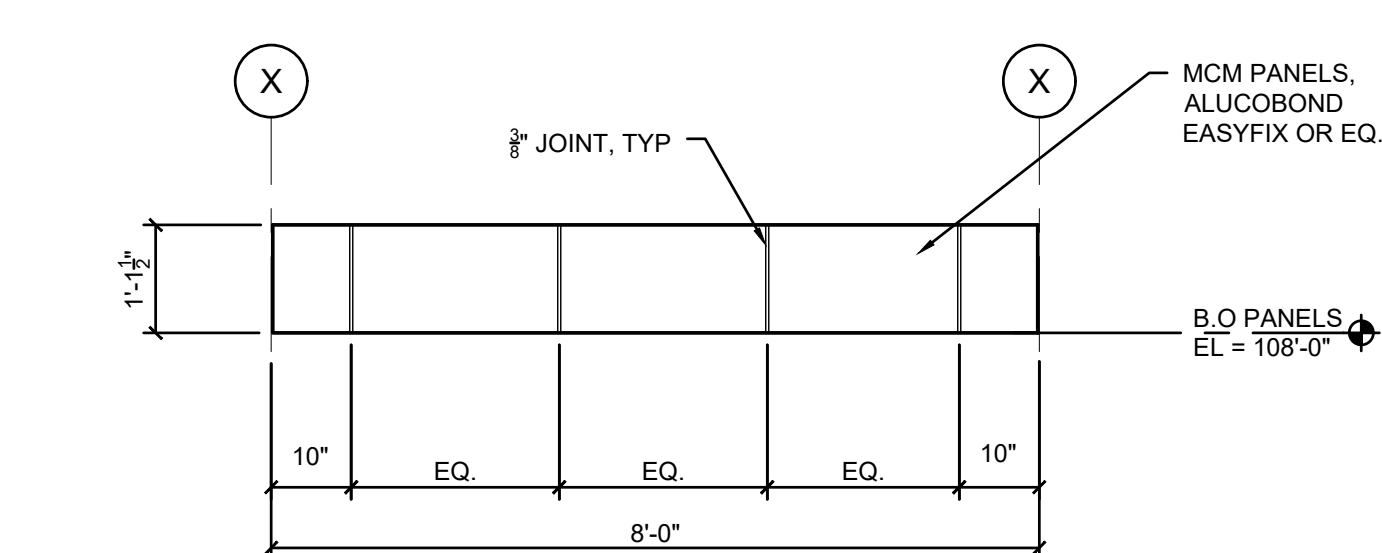
SOUTH ELEVATION
3/A3.0 SCALE: 1/4" = 1'-0"



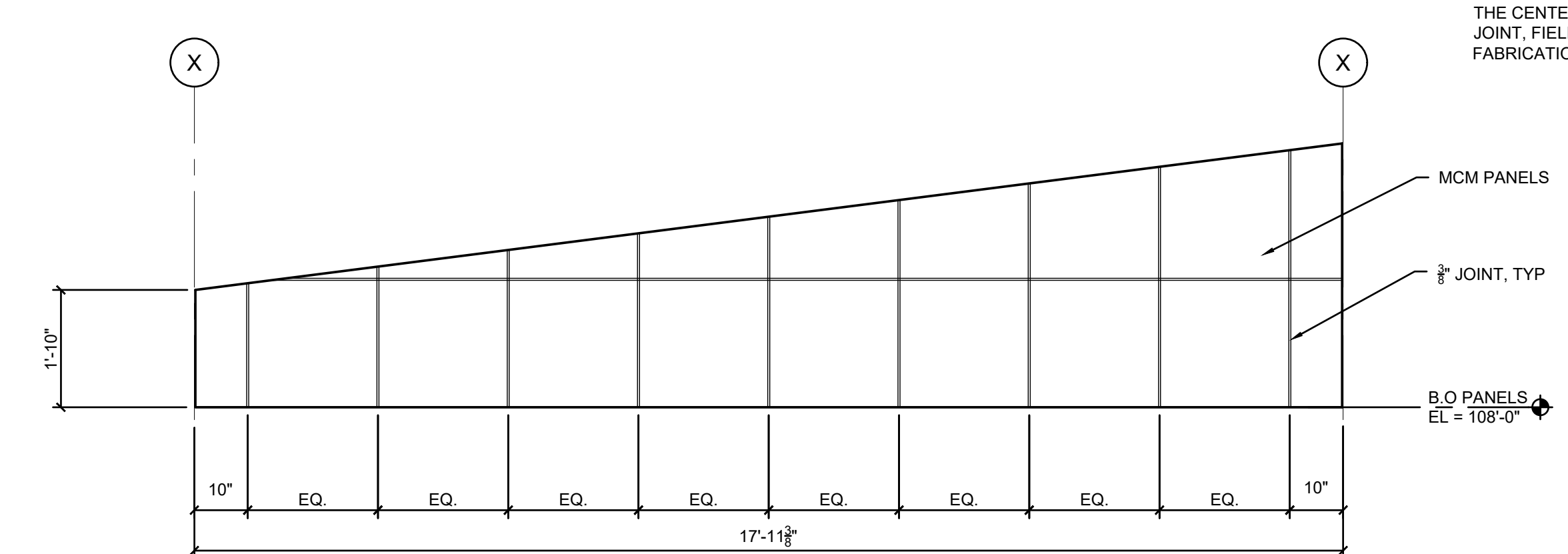
4 TYPICAL MCM PANEL LAYOUT FRONT WALL
A3.0 SCALE: 1/2" = 1'-0"



5 TYPICAL MCM PANEL LAYOUT REAR WALL
A3.0 SCALE: 1/2" = 1'-0"



6 TYPICAL MCM PANEL LAYOUT REAR WALL
A3.0 SCALE: 1/2" = 1'-0"

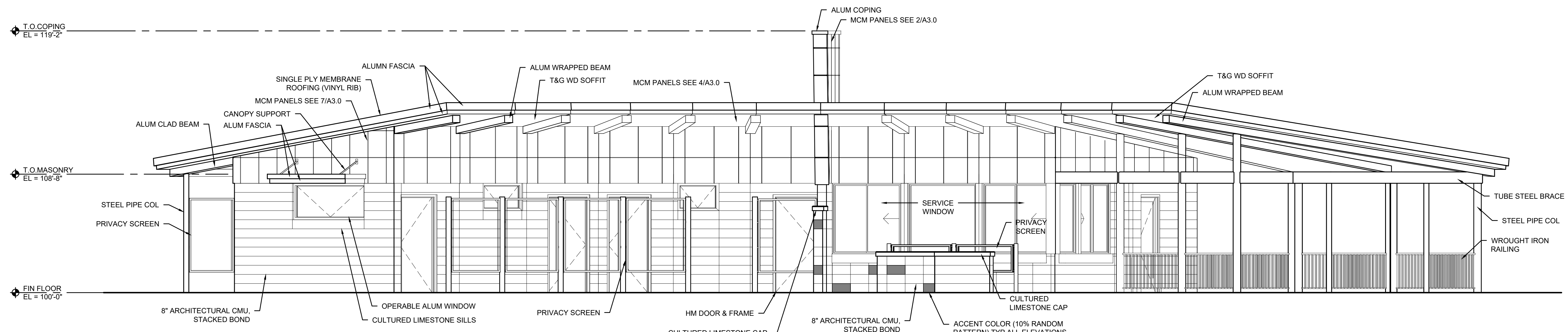


7 TYPICAL MCM PANEL LAYOUT REAR WALL
A3.0 SCALE: 1/2" = 1'-0"

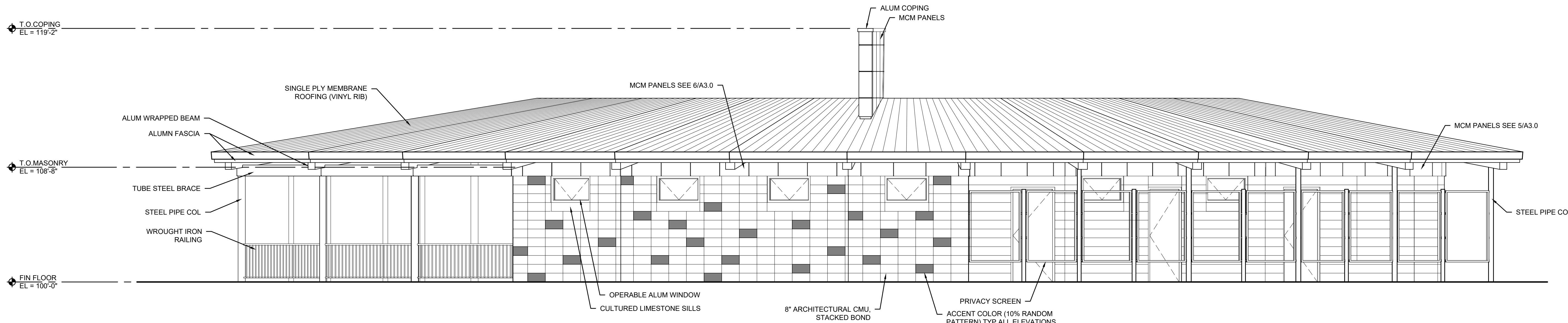
NOTE:
ALL MCM DIMENSIONS ARE TO
THE CENTERLINE OF THE 3/8"
JOINT. FIELD VERIFY PRIOR TO
FABRICATION

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK REVISIONS	DATE
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
N&S EXTERIOR ELEVATIONS & DETAILS		
Spicer Group		
SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com		
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: DWM	APP. BY: DWM	
STDS.	SHEET 15 OF 40	A
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-15	3.0
SCALE:		

09/16/2022 11:00:00 Spicer Group 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
 PLOTTING SCALE: ACAD FILE: RET. F.B.




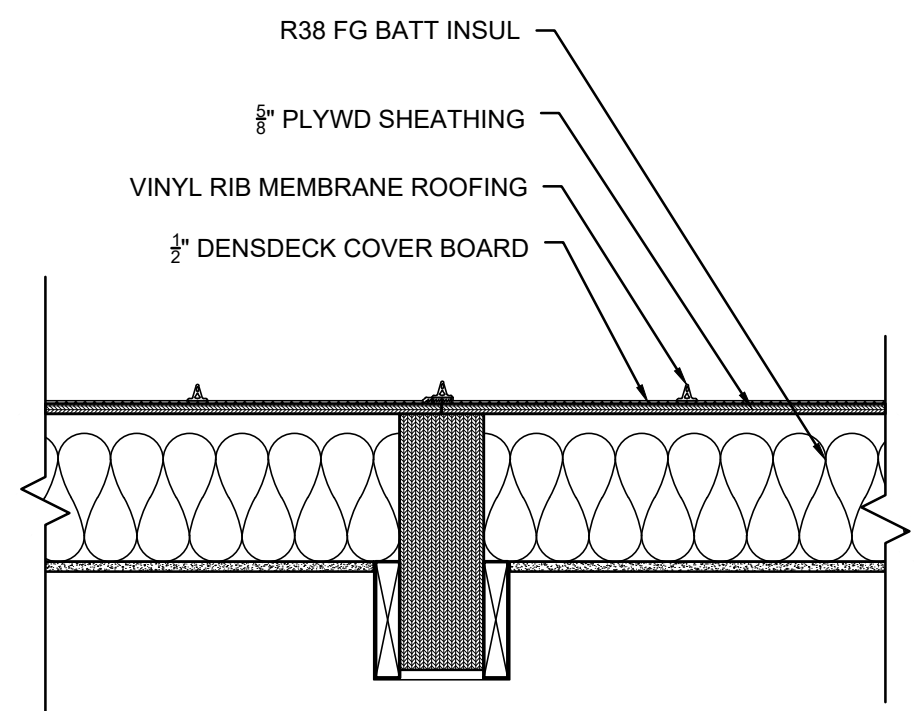
EAST ELEVATION
 1/A3.1 SCALE: 1/4" = 1'-0"



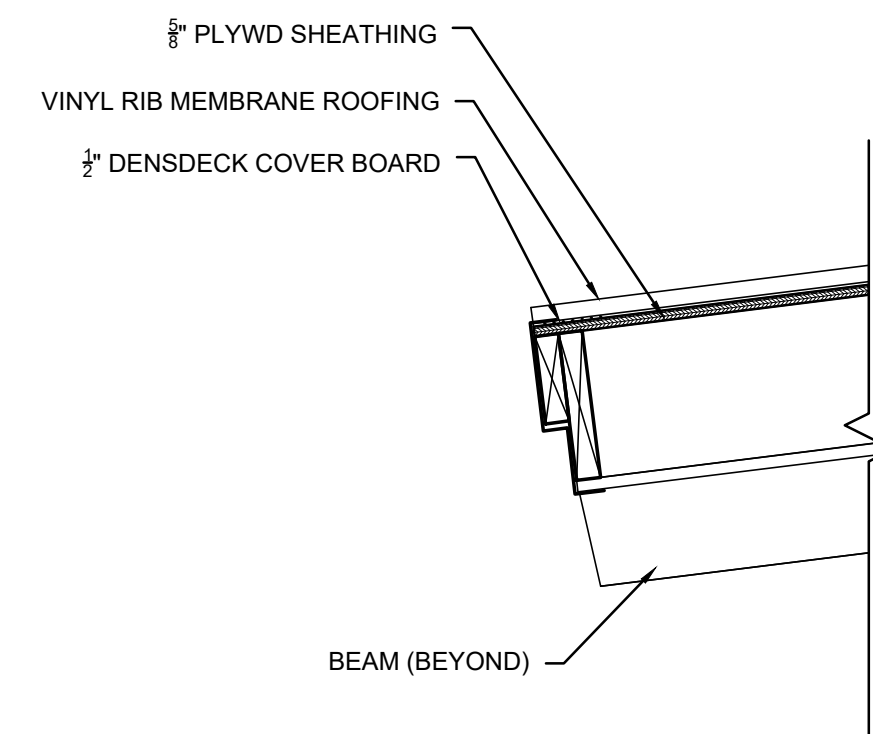
WEST ELEVATION
 2/A3.1 SCALE: 1/4" = 1'-0"

0:\p\2022\131928\2022_Saginaw_Children's_Zoo\dwg\2022\131928_Saginaw_Children's_Zoo.dwg
 PLOTTING SCALE: 1/4" = 1'-0"
 F.B.
 RET.
 F.C.
 ACAD FILE:

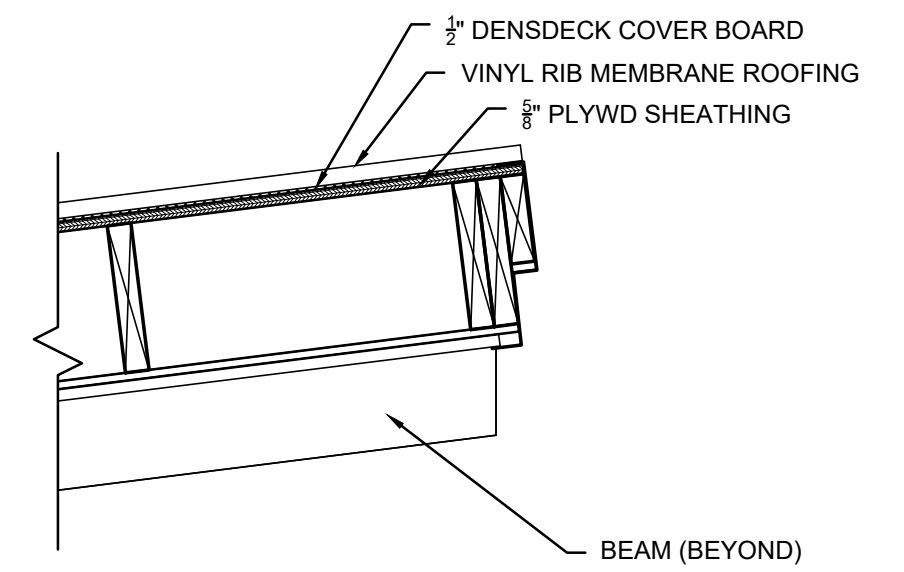
DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY MARK	REVISIONS	DATE
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>		
CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
E&W EXTERIOR ELEVATIONS & DETAILS		
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: DWM	APP. BY: DWM	
STDS.	SHEET 16 OF 40	A
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-16	3.1
SCALE:		



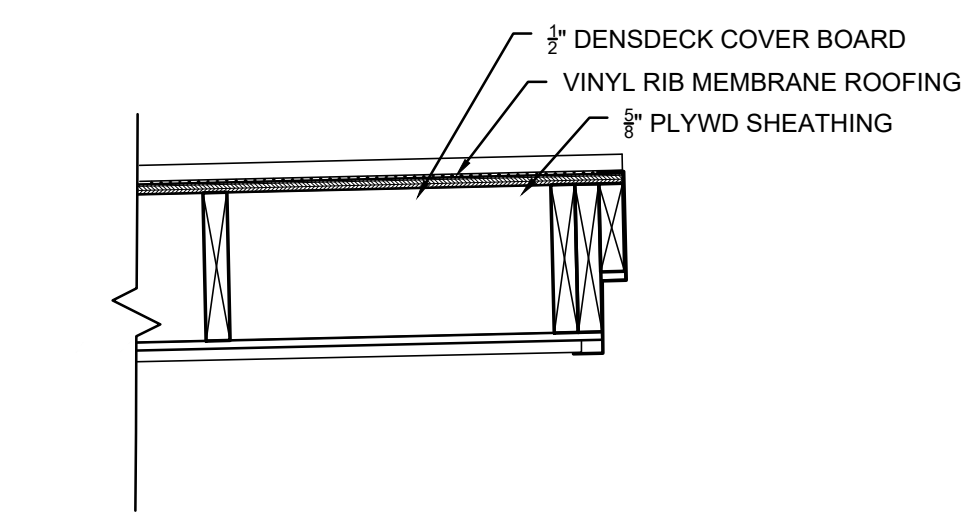
1 ROOF FRAMING @ BEAM DETAIL
SCALE: 1" = 1'-0"



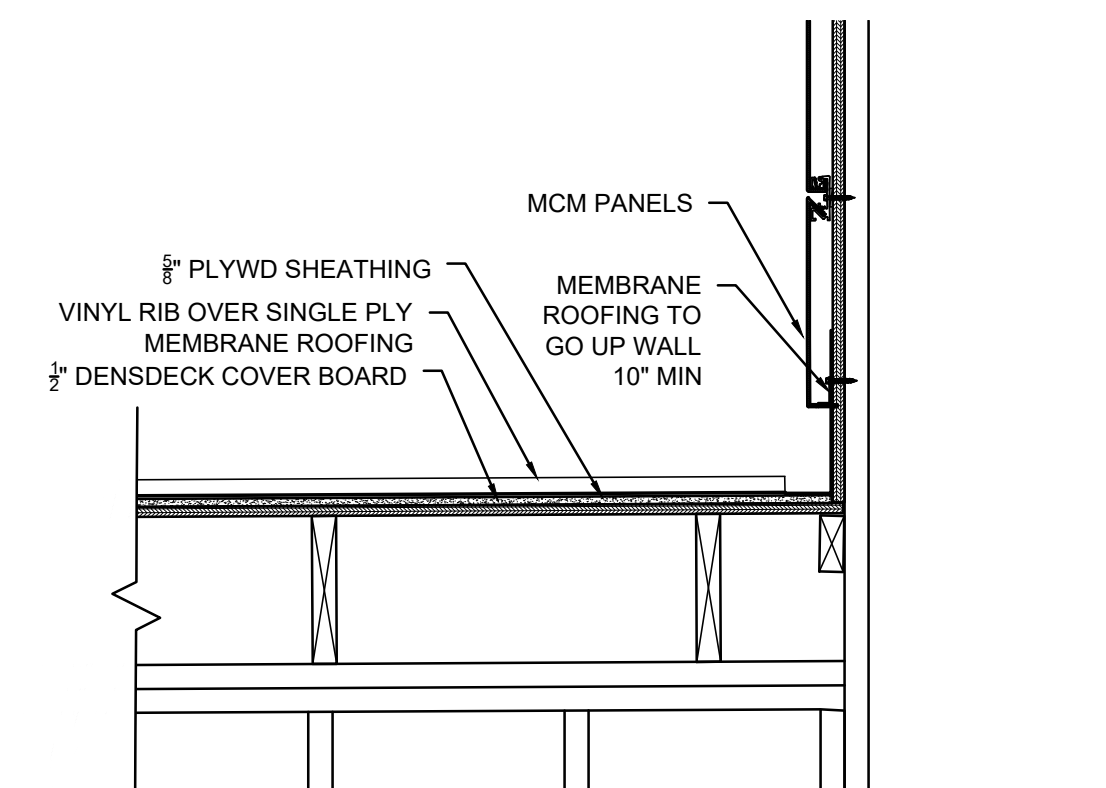
2 LOW FASCIA DETAIL
SCALE: 1" = 1'-0"



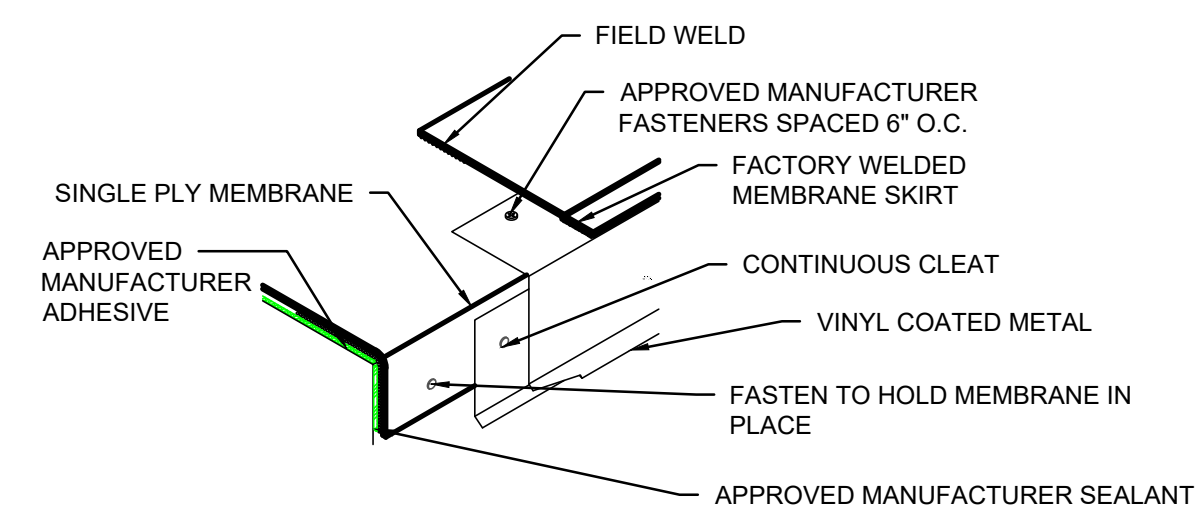
3 HIGH FASCIA DETAIL
SCALE: 1" = 1'-0"



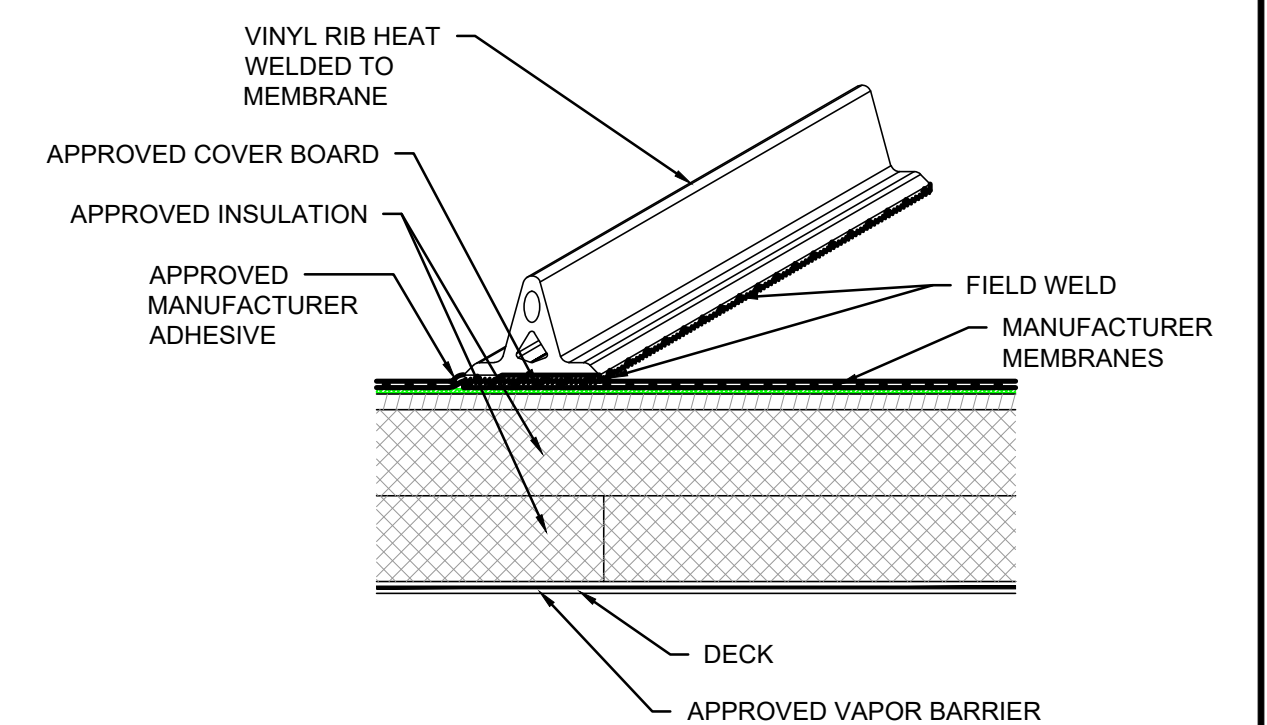
4 RAKE FASCIA DETAIL
SCALE: 1" = 1'-0"



5 FLASHING @ MCM PANEL WALL
SCALE: 1" = 1'-0"

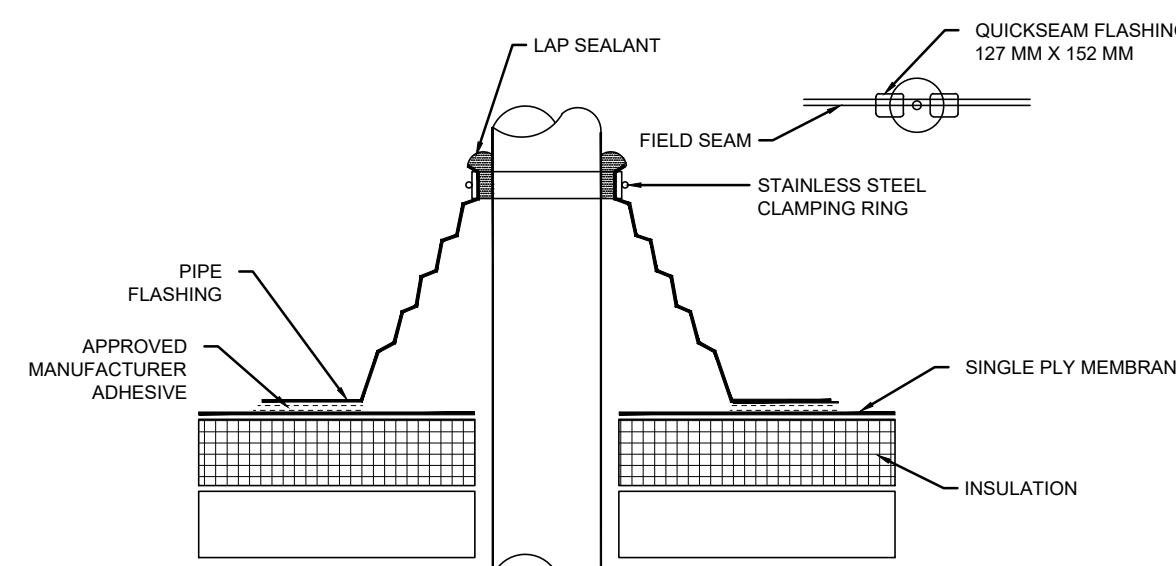


6 MEMBRANE EDGE DETAIL
SCALE: 1/4" = 1'-0"

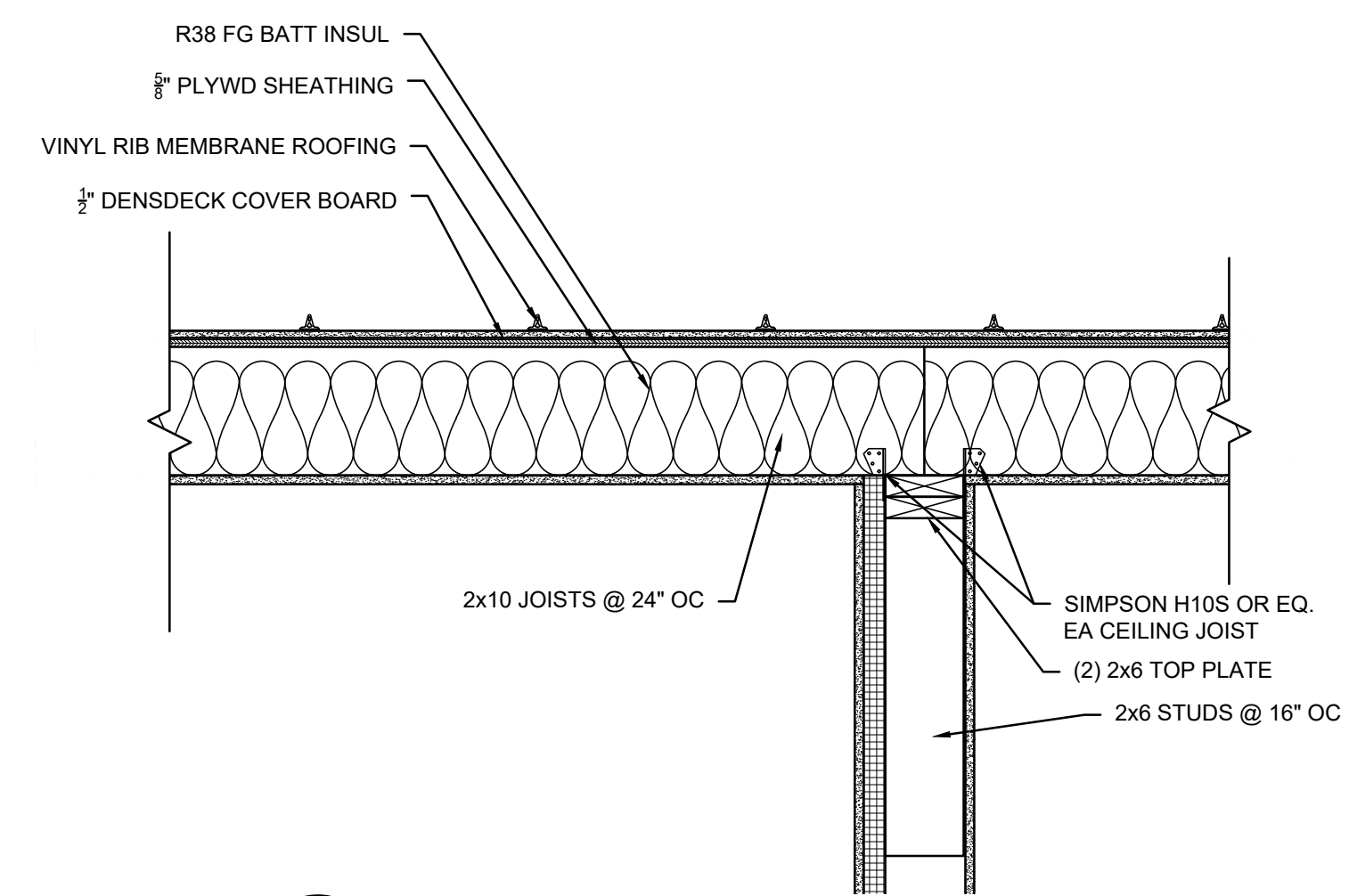


7 VINYL RIB DETAIL
SCALE: 1/4" = 1'-0"

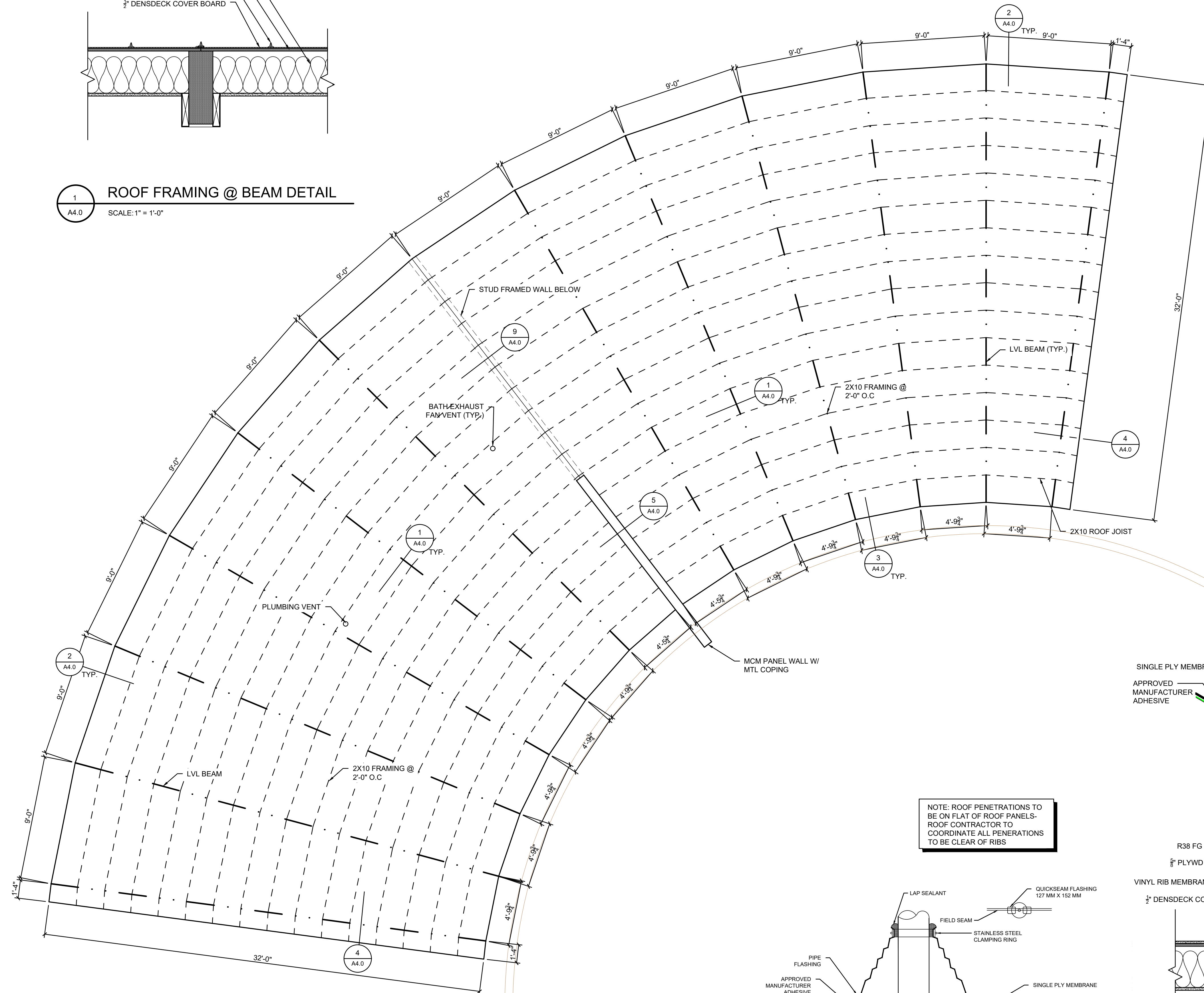
NOTE: ROOF PENETRATIONS TO BE ON FLAT OF ROOF PANELS. ROOF CONTRACTOR TO COORDINATE ALL PENETRATIONS TO BE CLEAR OF RIBS



8 VENT FLASHING DETAIL
SCALE: 3/8" = 1'-0"



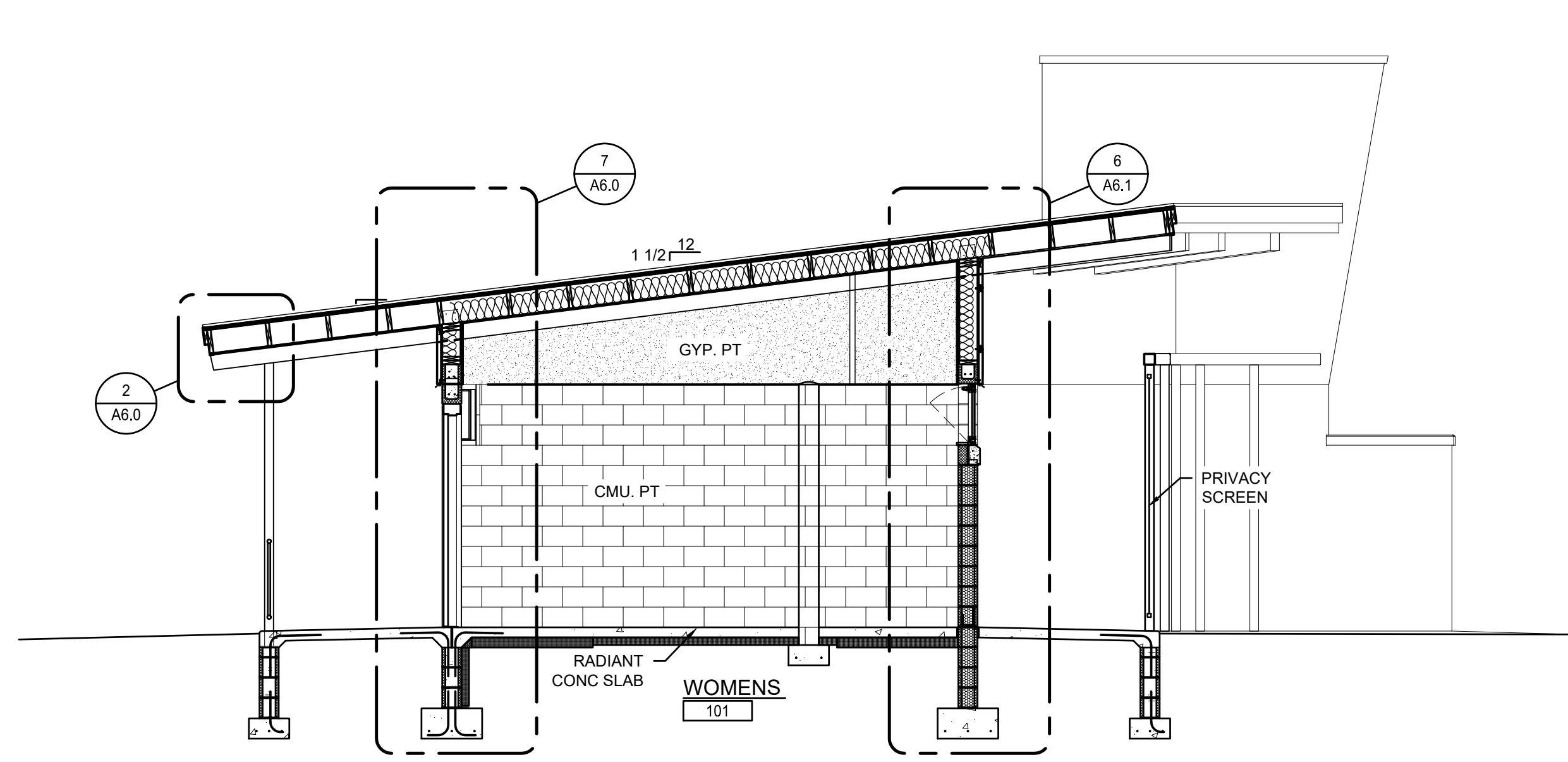
9 ROOF @ STUD WALL
SCALE: 1" = 1'-0"



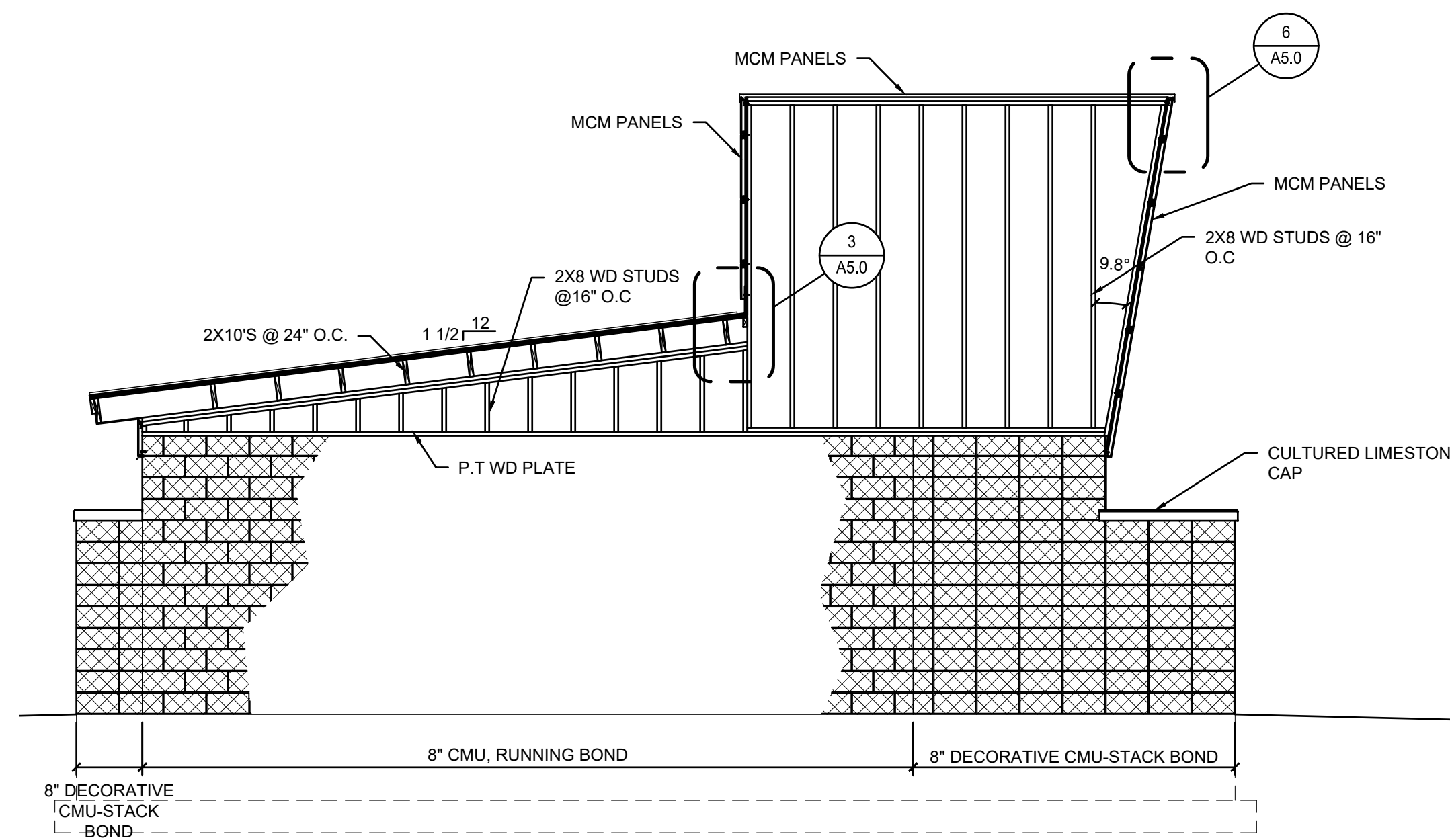
North
ROOF PLAN
SCALE: 1/4" = 1'-0"

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
DATE	DATE	DATE
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
ROOF PLAN & DETAILS		
Spicer group		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: DWM	APP. BY: DWM	
STDS.	SHEET 17 OF 40	A
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-17	4.0
SCALE:		

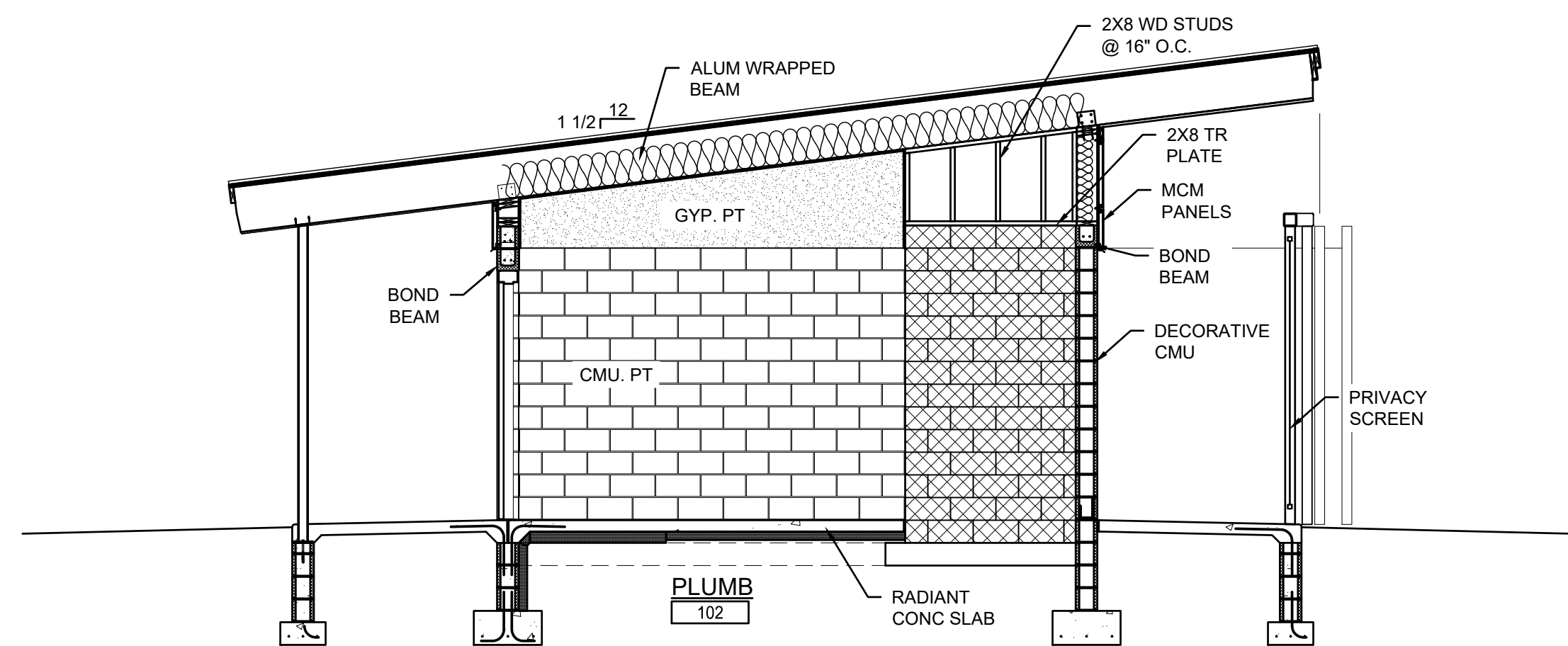
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 RET...



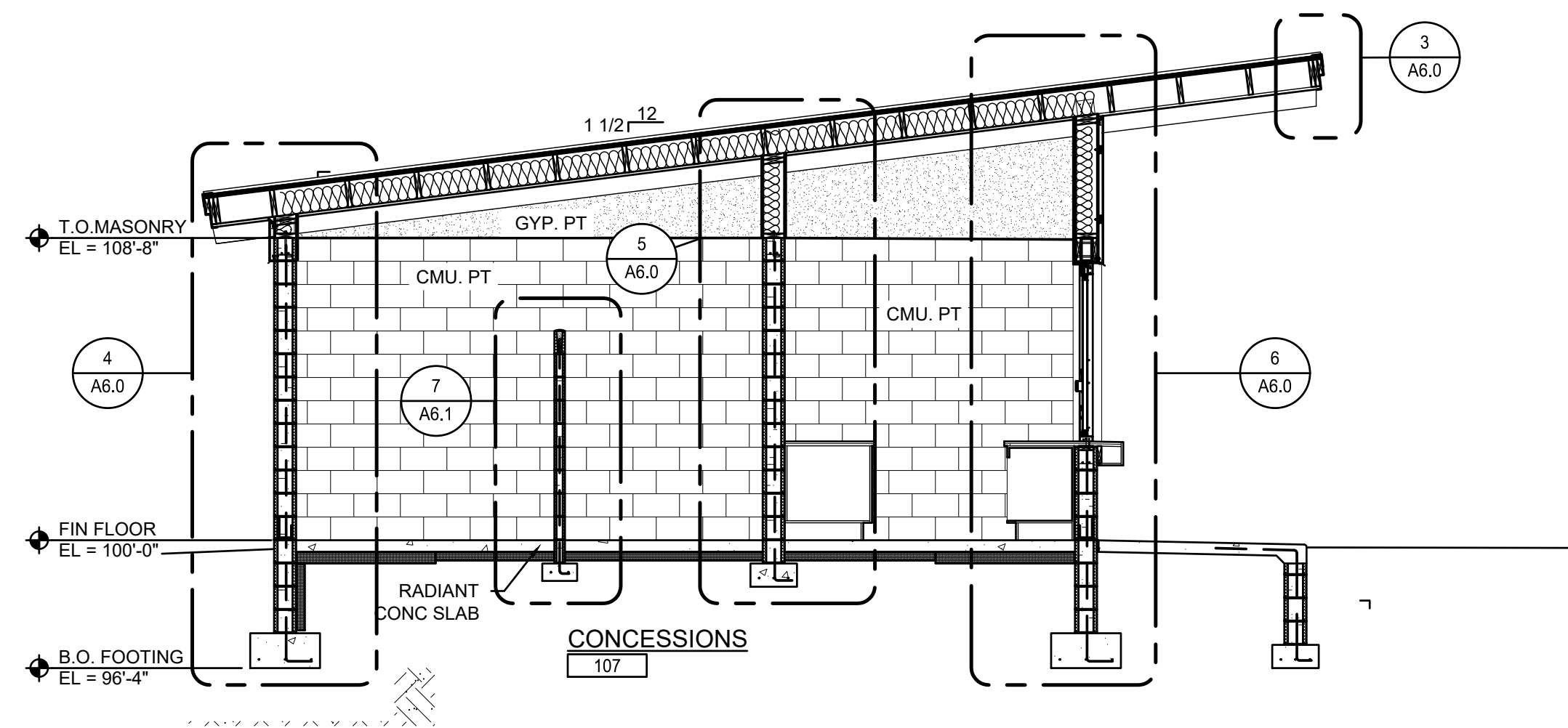
1 BUILDING SECTION
SCALE: 1/4" = 1'-0"



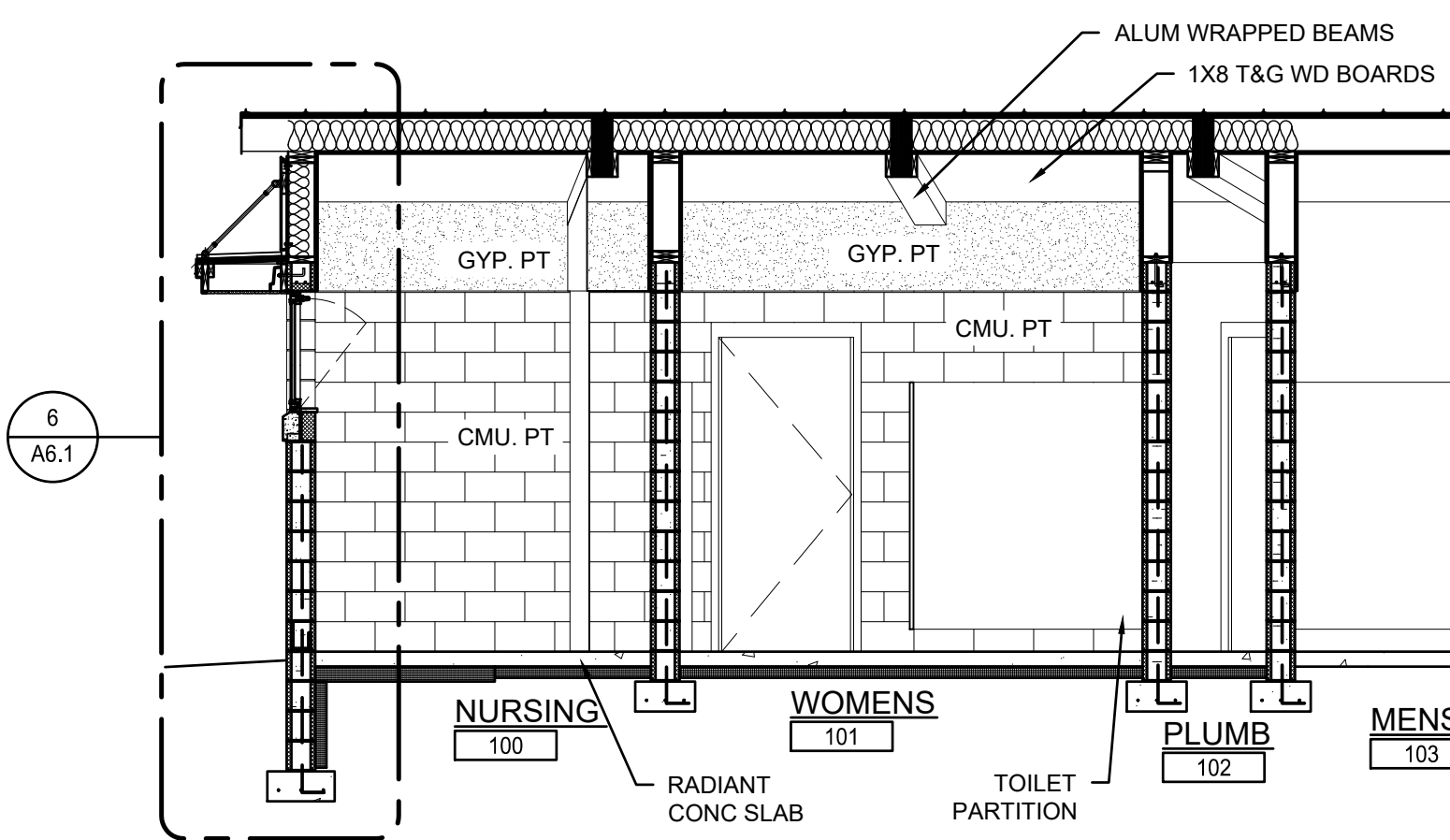
2 BUILDING SECTION
SCALE: 1/4" = 1'-0"



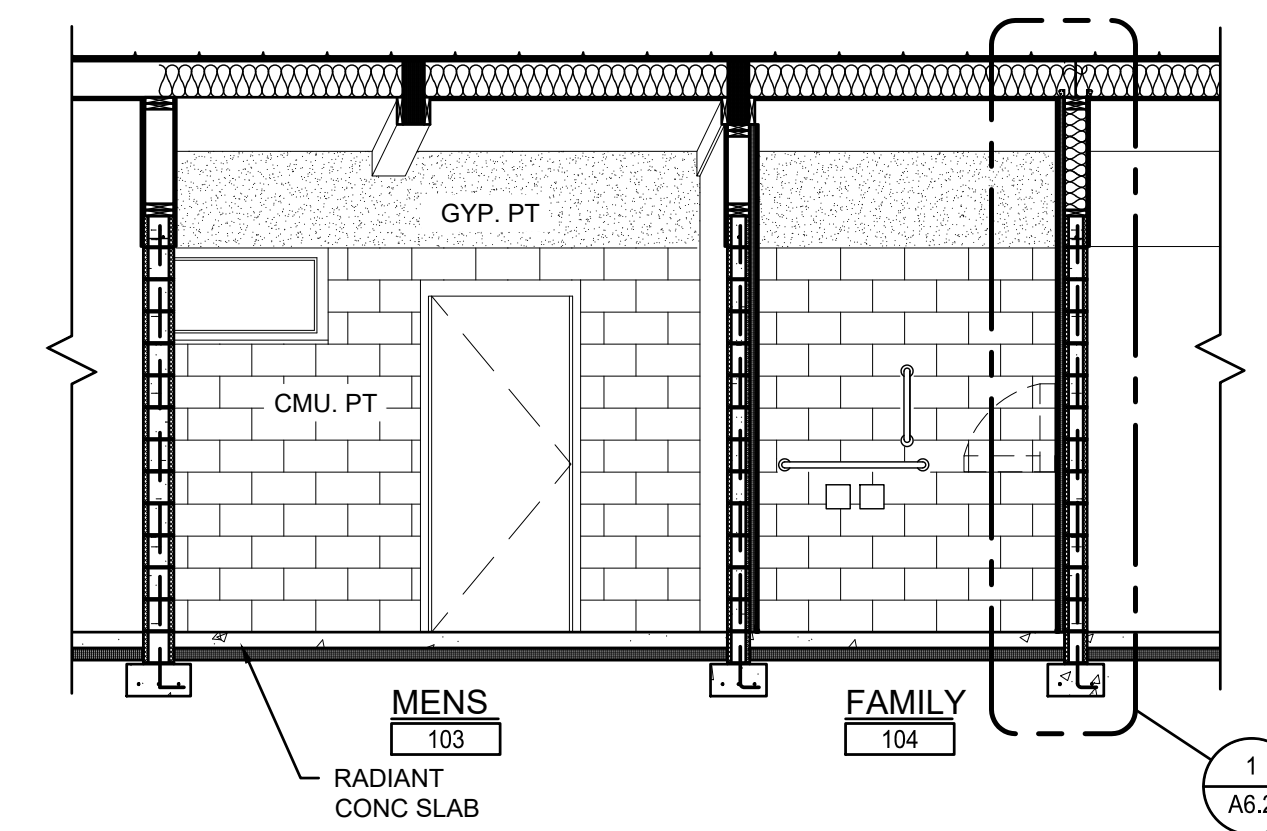
4 BUILDING SECTION
SCALE: 1/4" = 1'-0"



5 BUILDING SECTION
SCALE: 1/4" = 1'-0"



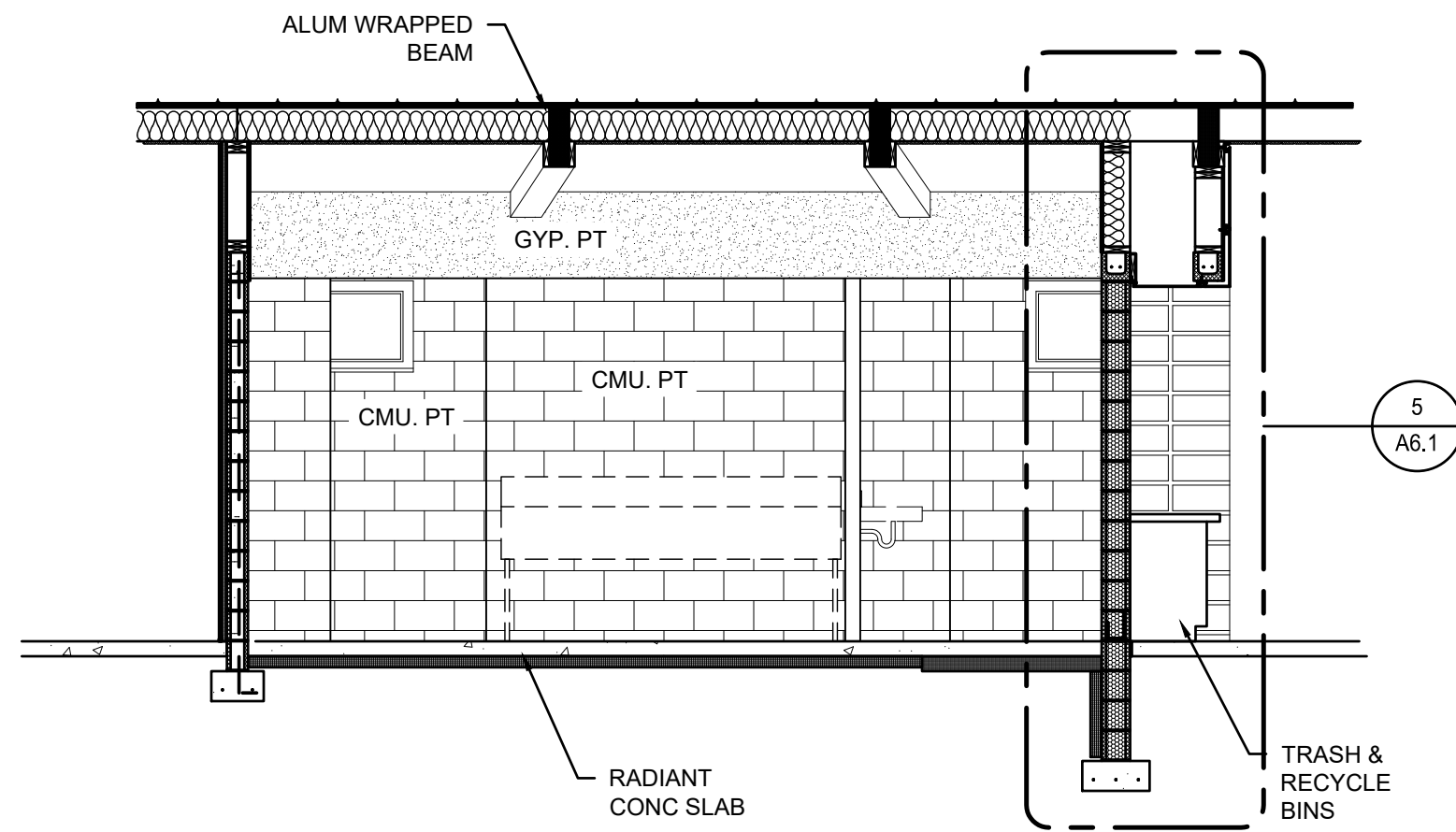
6 BUILDING SECTION
SCALE: 1/4" = 1'-0"



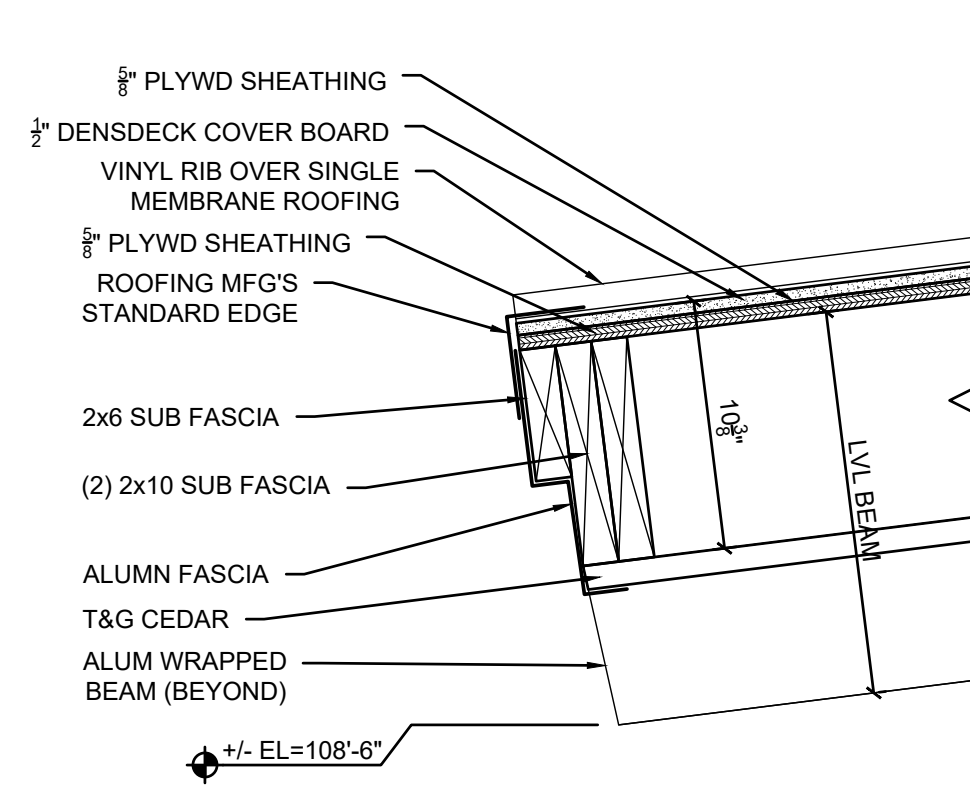
8 BUILDING SECTION
SCALE: 1/4" = 1'-0"

D:\Projects\131928\2022_Saginaw_Children's_Zoo\131928_SG2022\131928_SG2022.dwg
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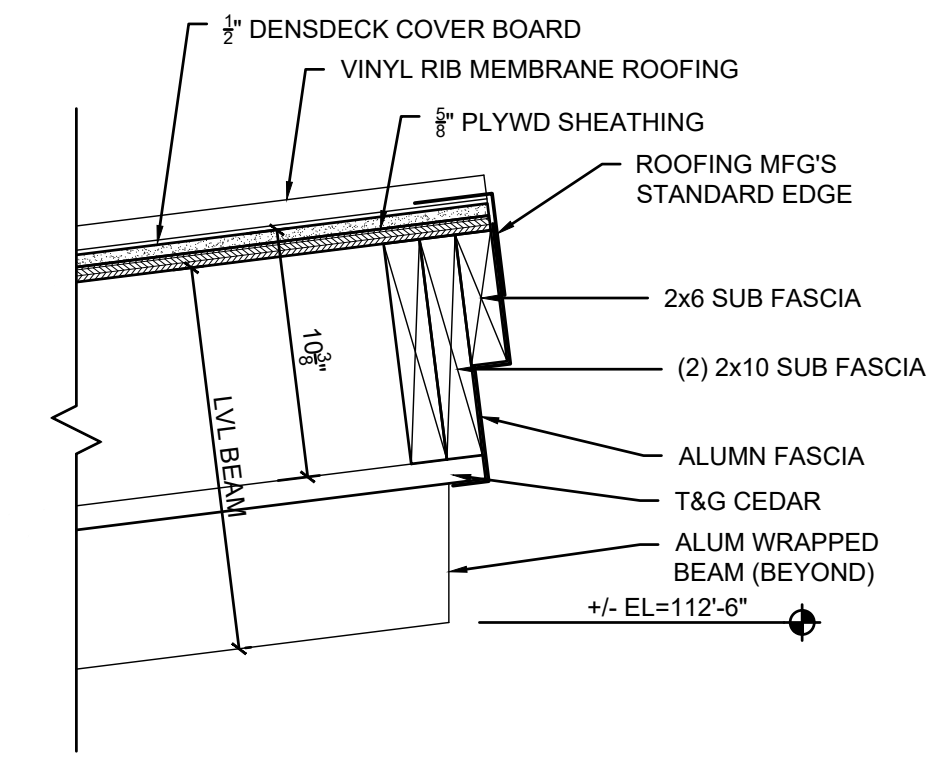
DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
DATE	DATE	DATE
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
BUILDING SECTIONS		
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: DWM	APP. BY: DWM	
STDS.	SHEET 18 OF 40	A
DATE NOVEMBER 2, 2022	FILE NO. DA-1431 -18	5.0
SCALE		



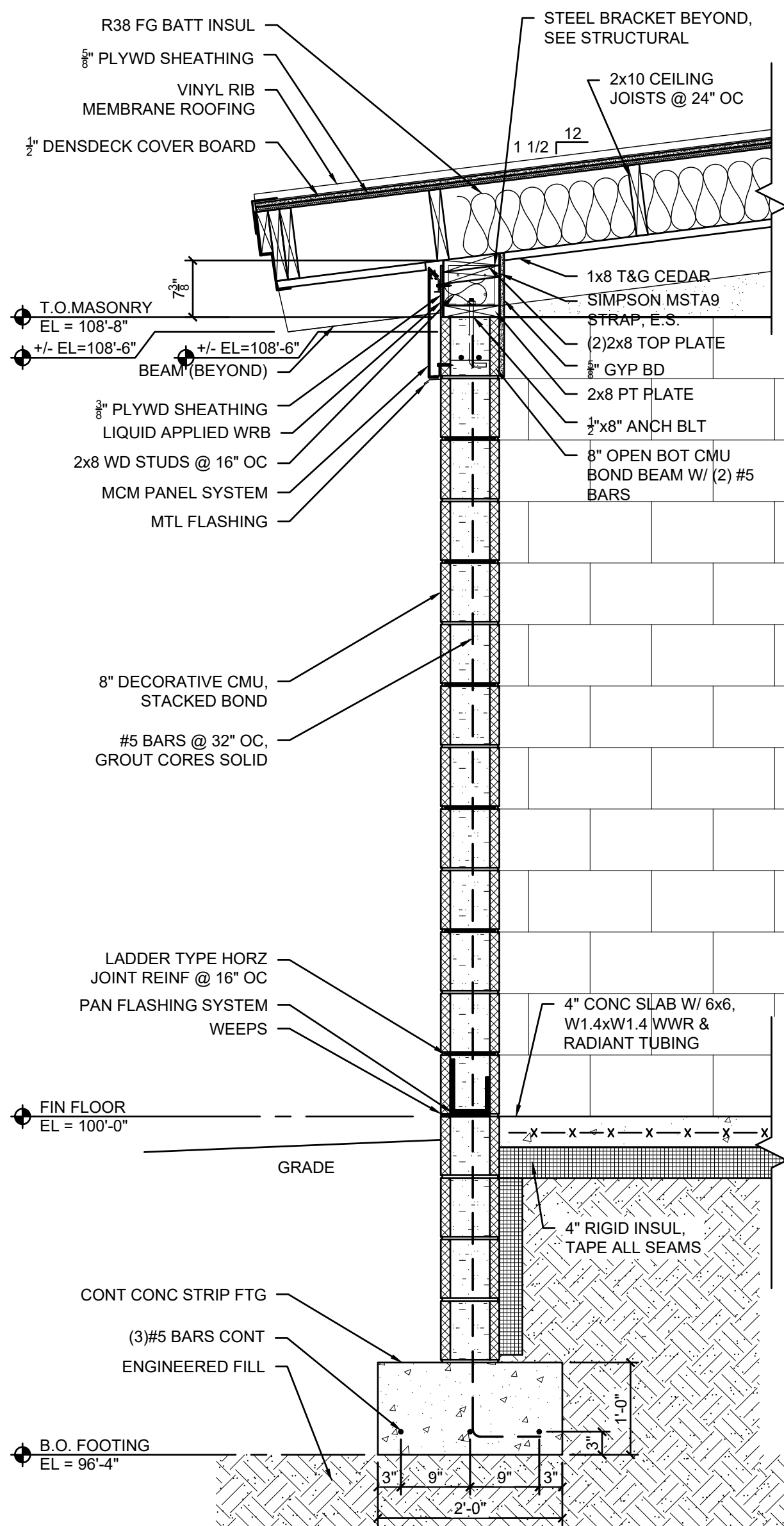
1 BUILDING SECTION
A6.0 SCALE: 1/4" = 1'-0"



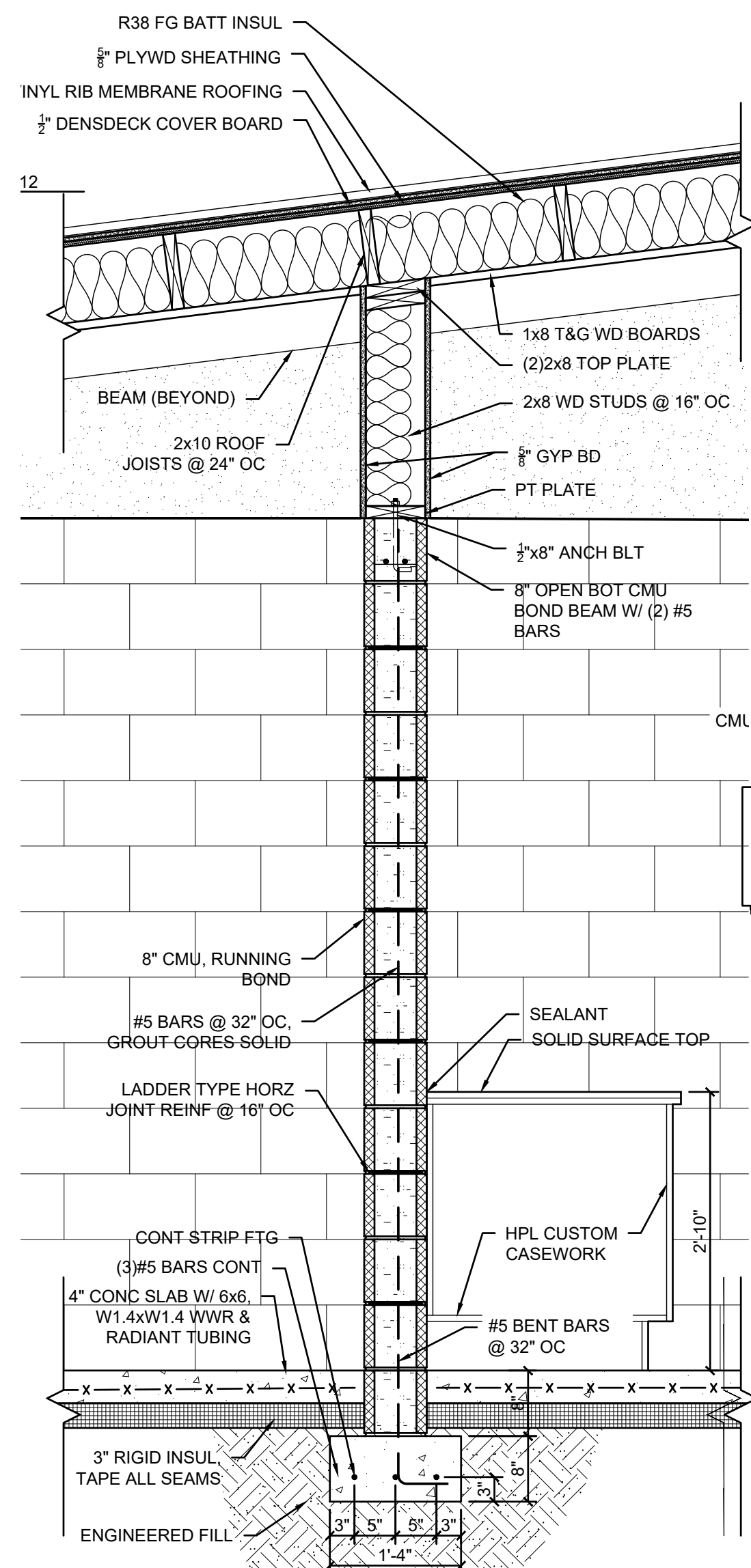
2 FASCIA @ LOW END DETAIL
A6.0 SCALE: 1 1/2" = 1'-0"



3 FASCIA @ HIGH END DETAIL
A6.0 SCALE: 1 1/2" = 1'-0"

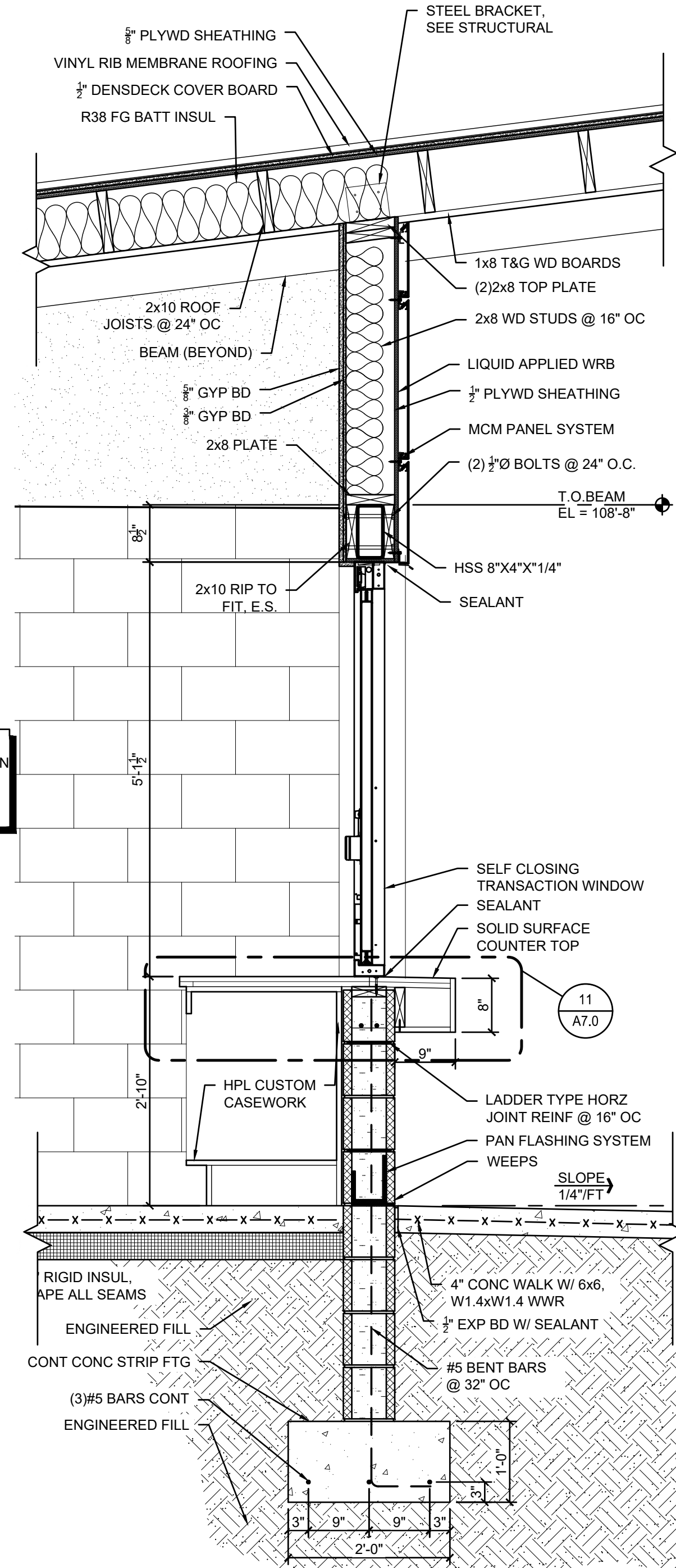


4 WALL SECTION
A6.0 SCALE: 3/4" = 1'-0"

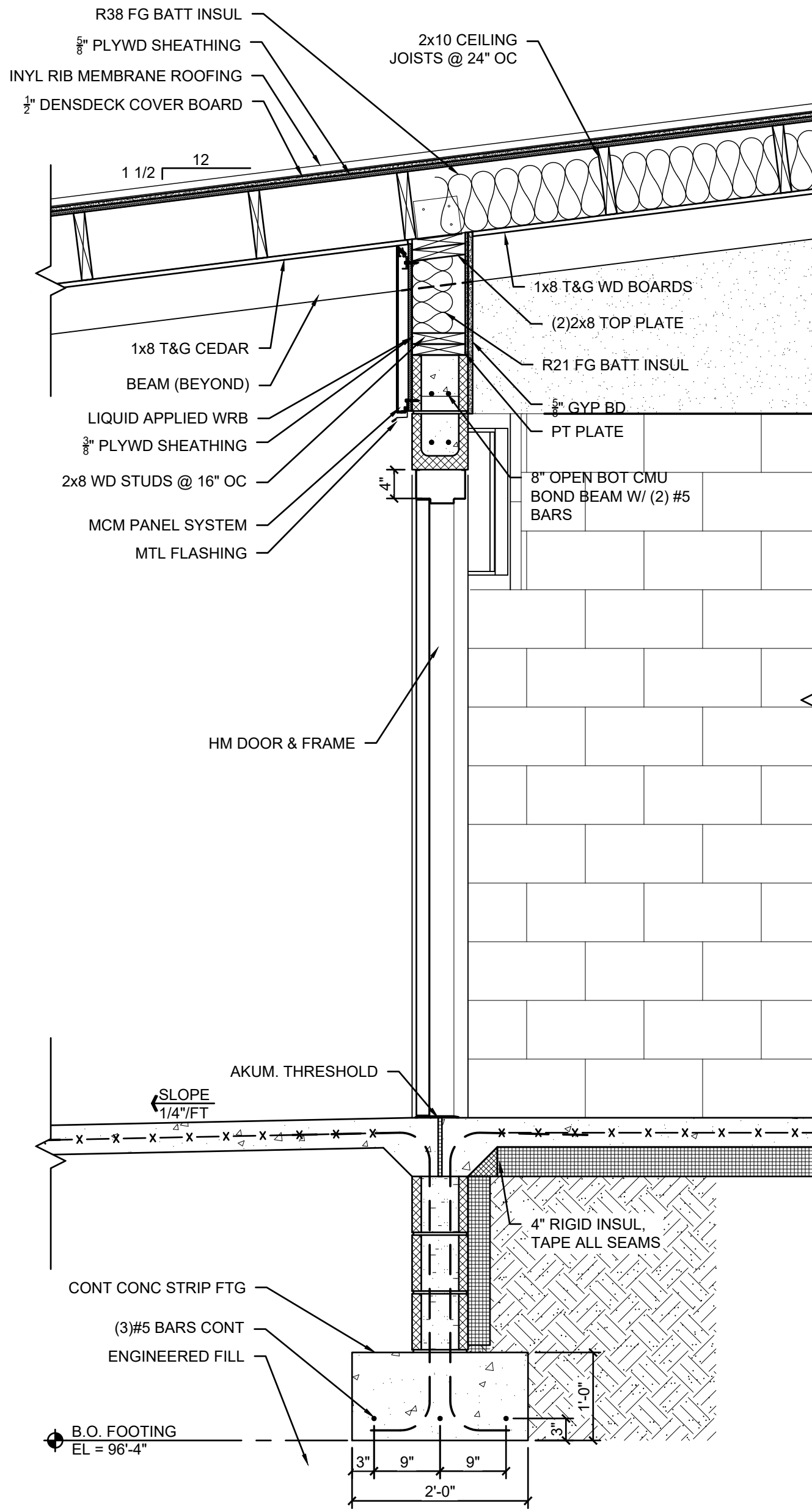


5 WALL SECTION
A6.0 SCALE: 3/4" = 1'-0"

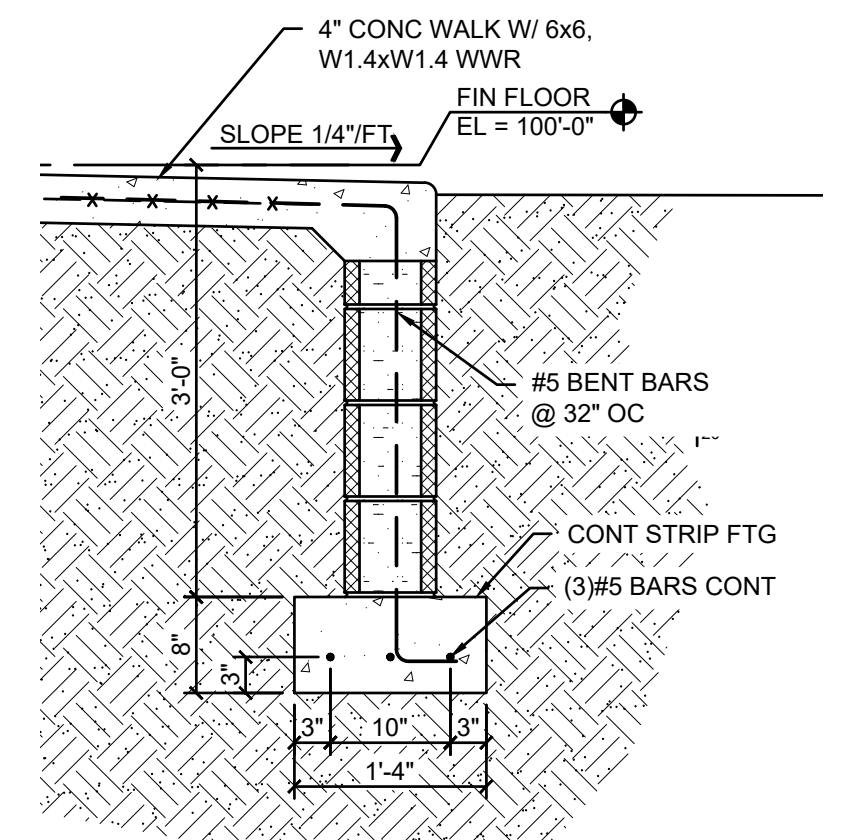
INSULATE ALL EMPTY CMU CORES WITH NON EXPANDING AMINOPLAST FOAM INSUL (TYP.)



6 WALL SECTION
A6.0 SCALE: 3/4" = 1'-0"



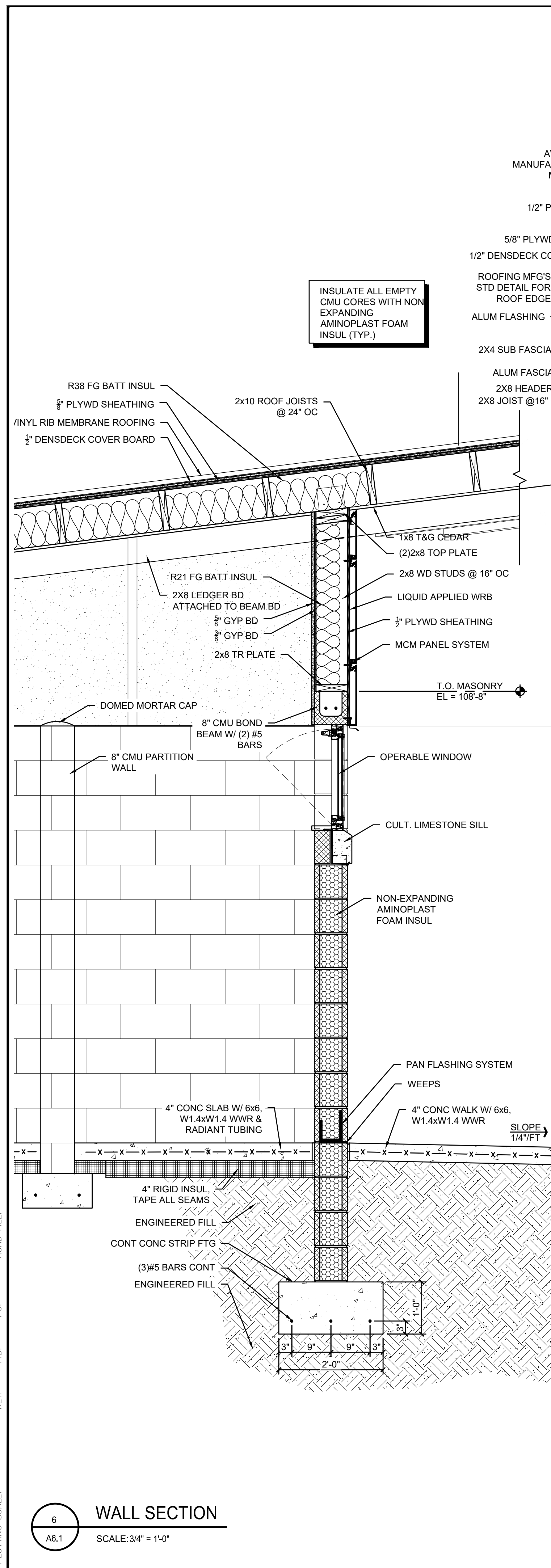
7 WALL SECTION
A6.0 SCALE: 3/4" = 1'-0"



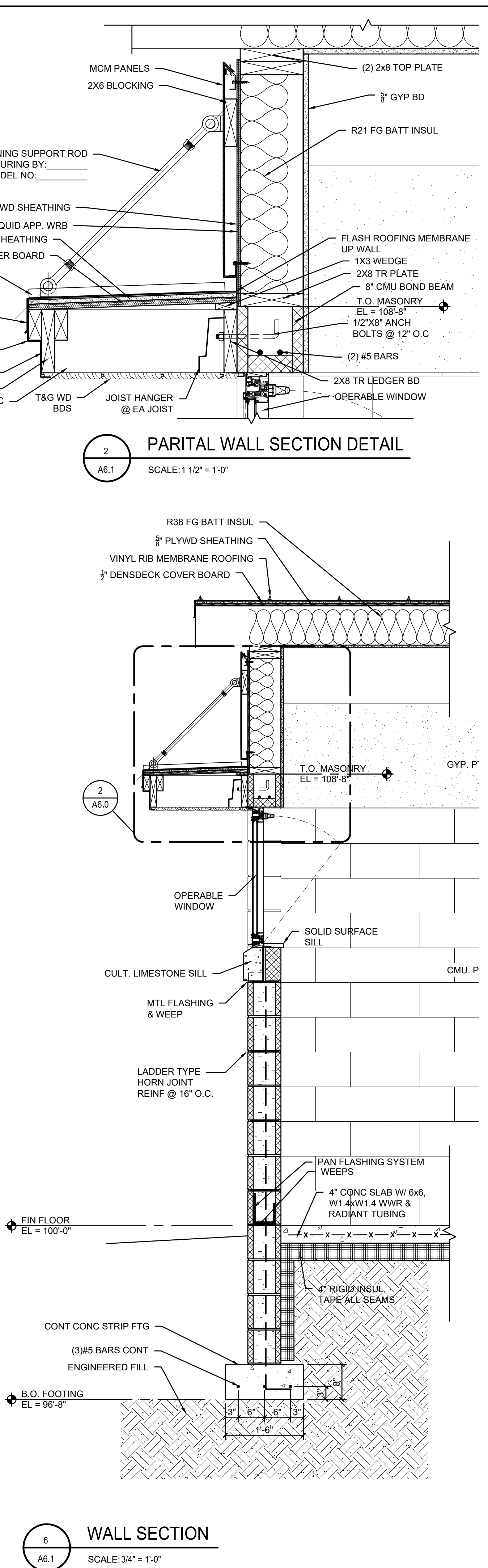
8 BUILDING SECTION
A6.0 SCALE: 3/8" = 1'-0"

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
DATE	DATE	DATE
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<p>CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO</p>		
<p>BUILDING SECTIONS & WALL SECTIONS</p>		
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: DWM	APP. BY: DWM	
STDS.	SHEET 19 OF 40	A
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-19	6.0
SCALE		

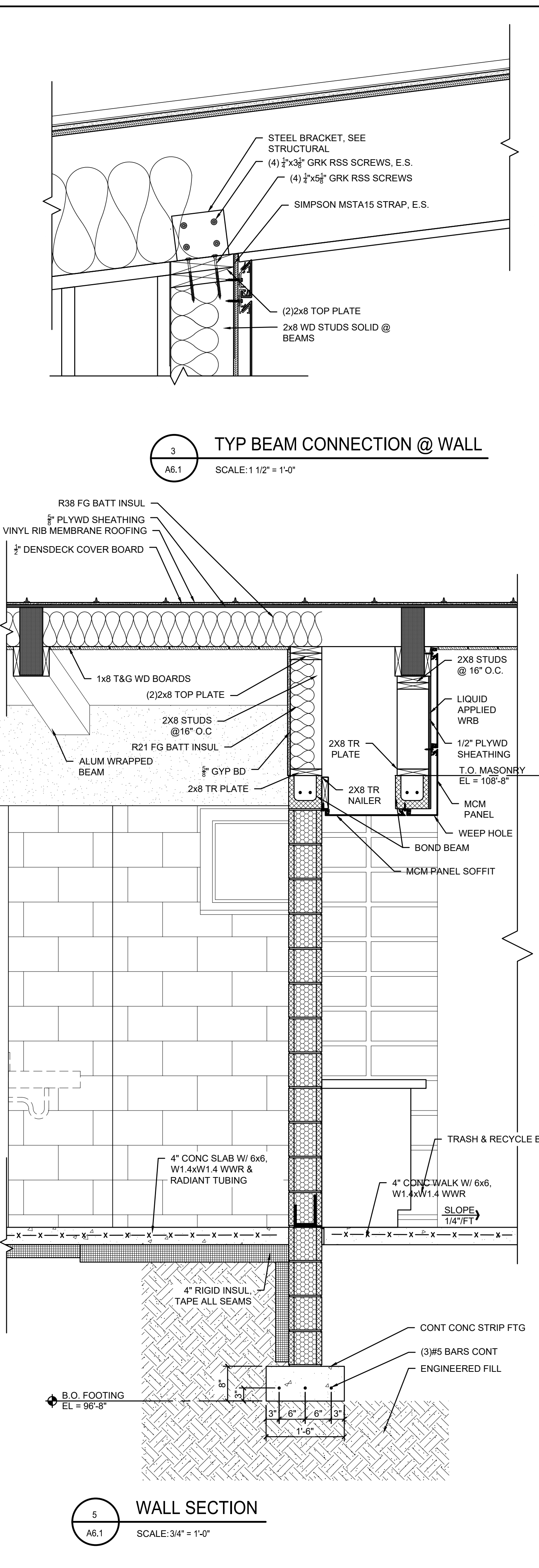
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 ACAD FILE: RET. F.B.



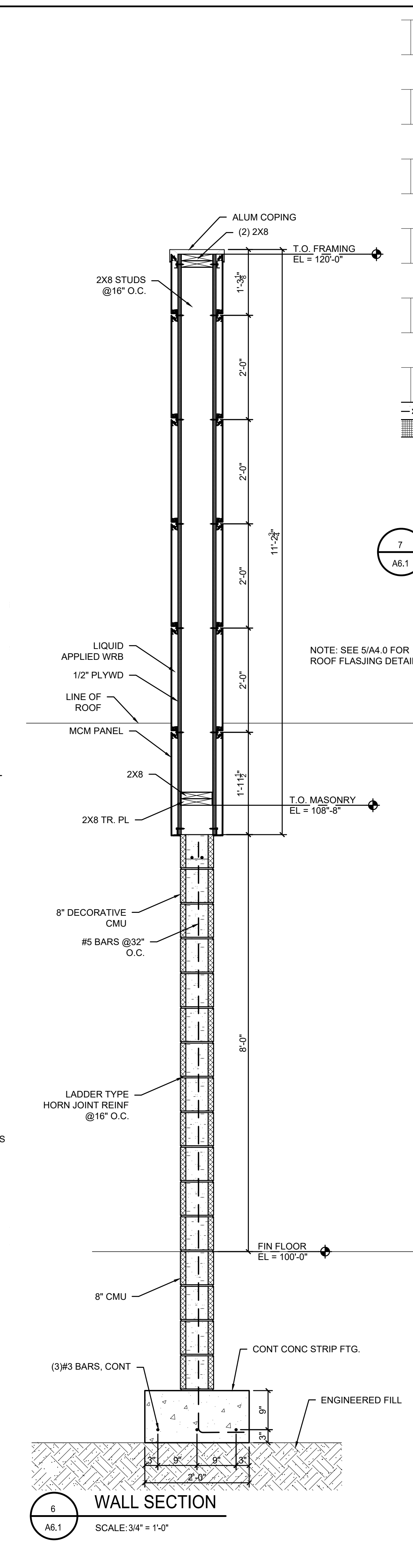
6 WALL SECTION
SCALE: 3/4" = 1'-0"



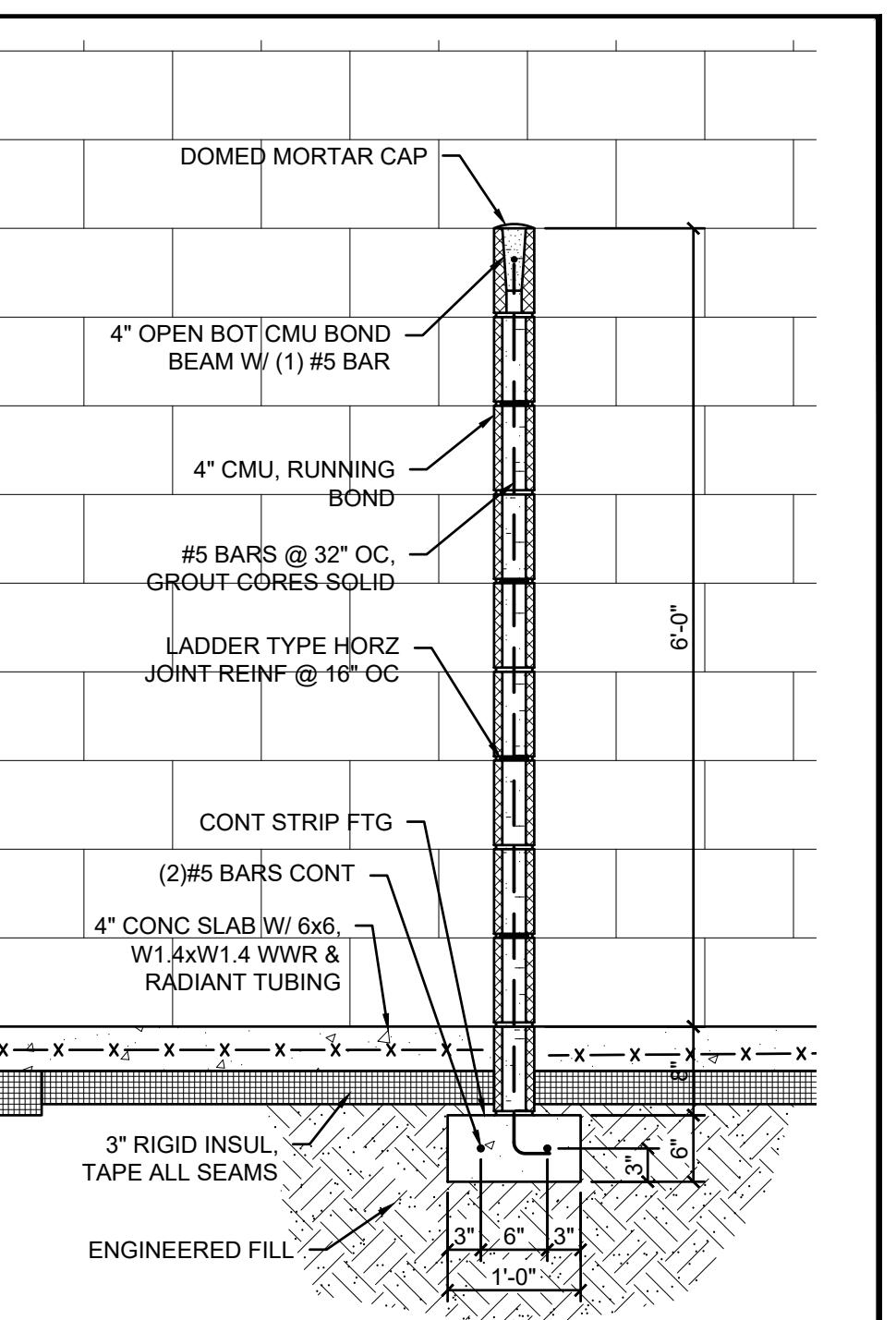
2 PARITAL WALL SECTION DETAIL
SCALE: 1 1/2" = 1'-0"



5 WALL SECTION
SCALE: 3/4" = 1'-0"



6 WALL SECTION
SCALE: 3/4" = 1'-0"



7 WALL SECTION
SCALE: 3/4" = 1'-0"

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				9/16/22

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**CENTRAL RESTROOM & CONCESSIONS
SAGINAW CHILDREN'S ZOO**

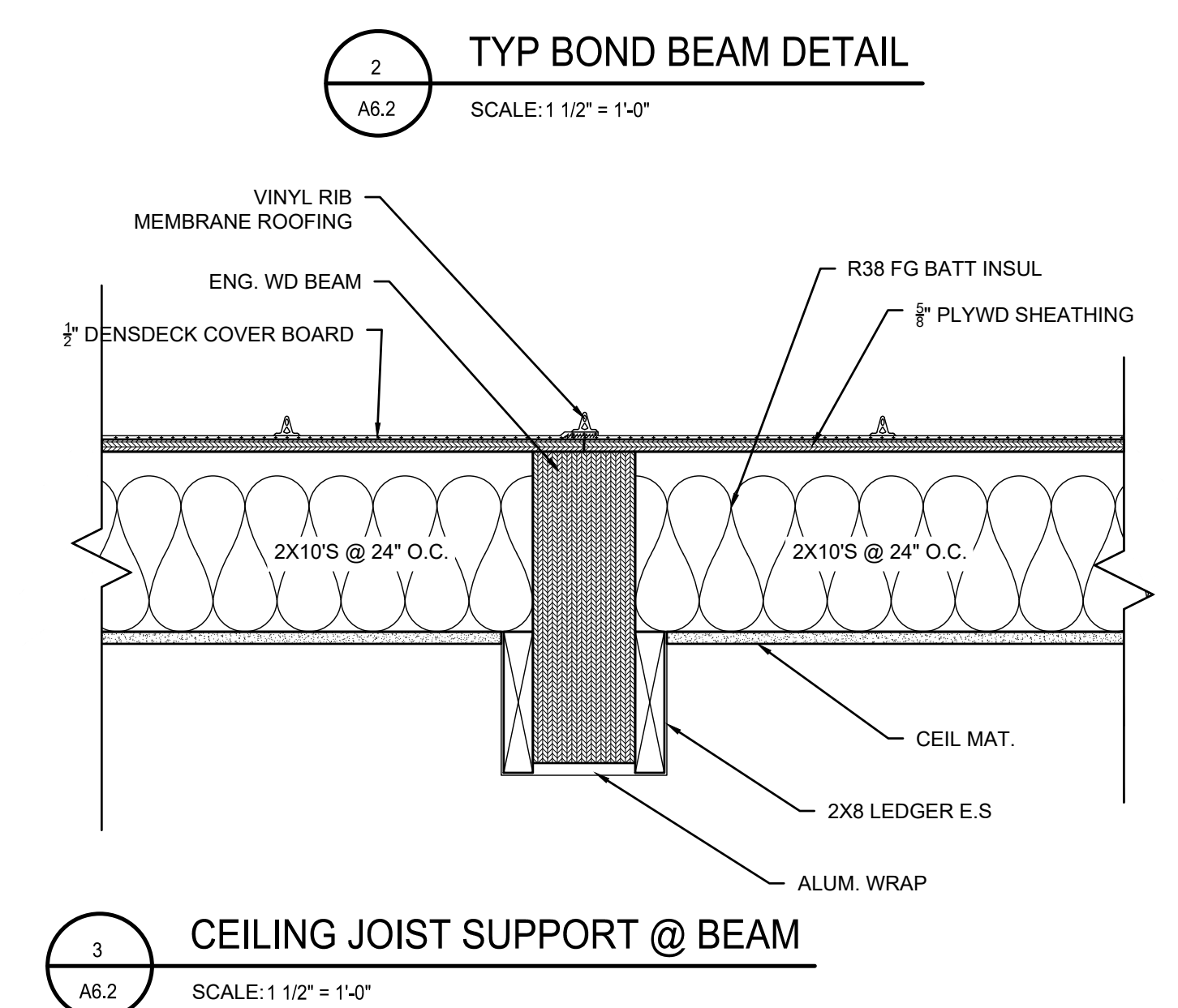
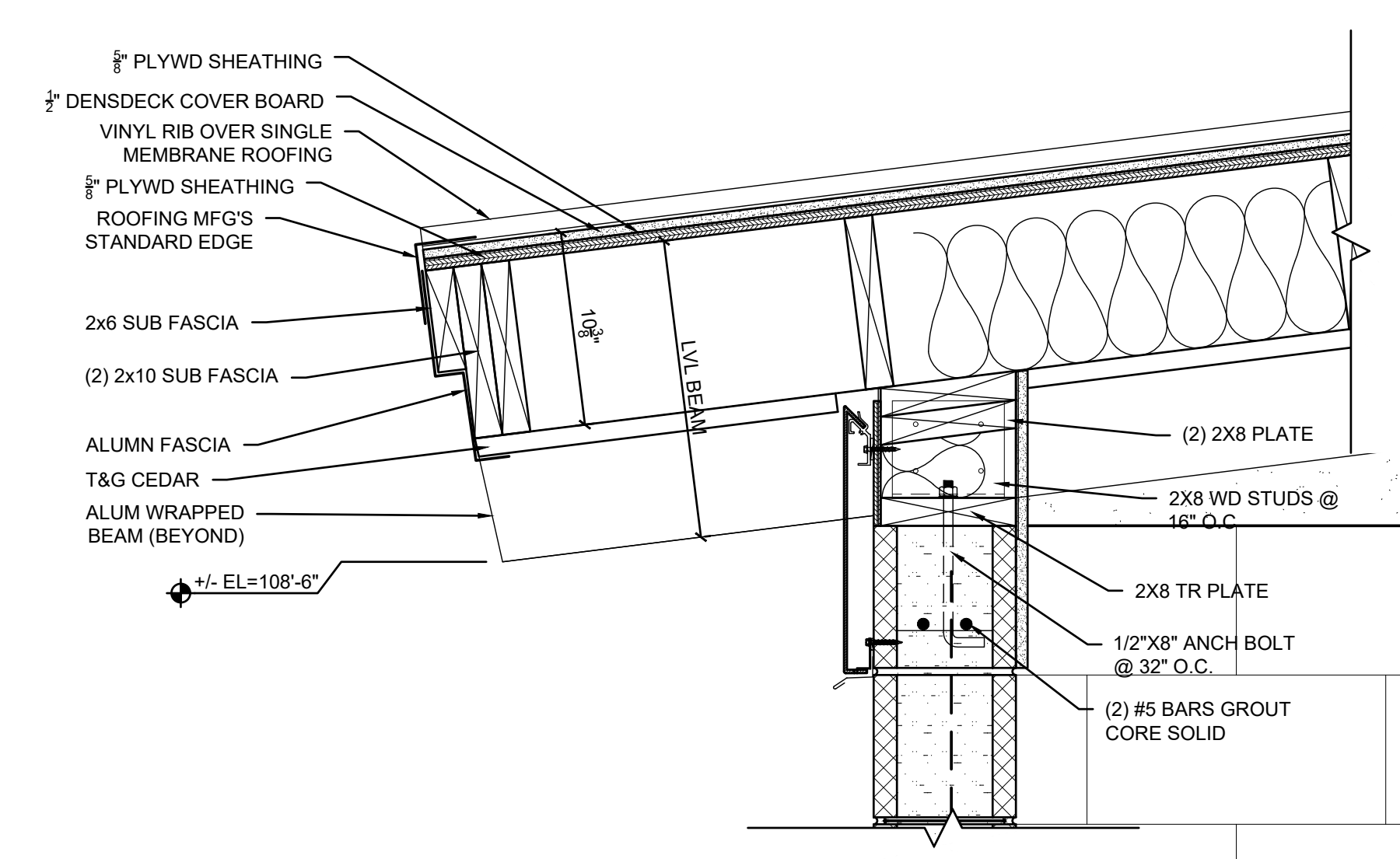
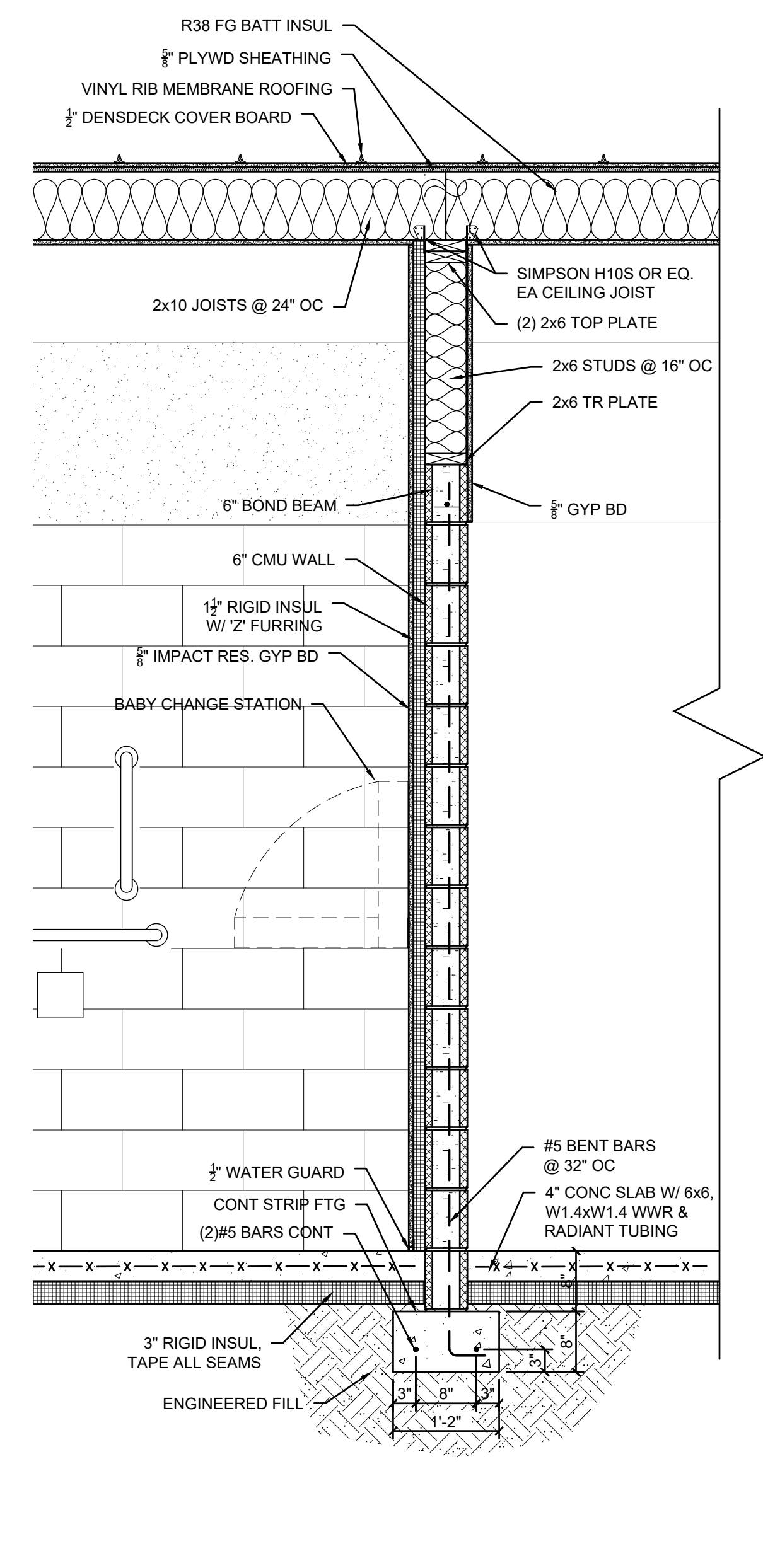
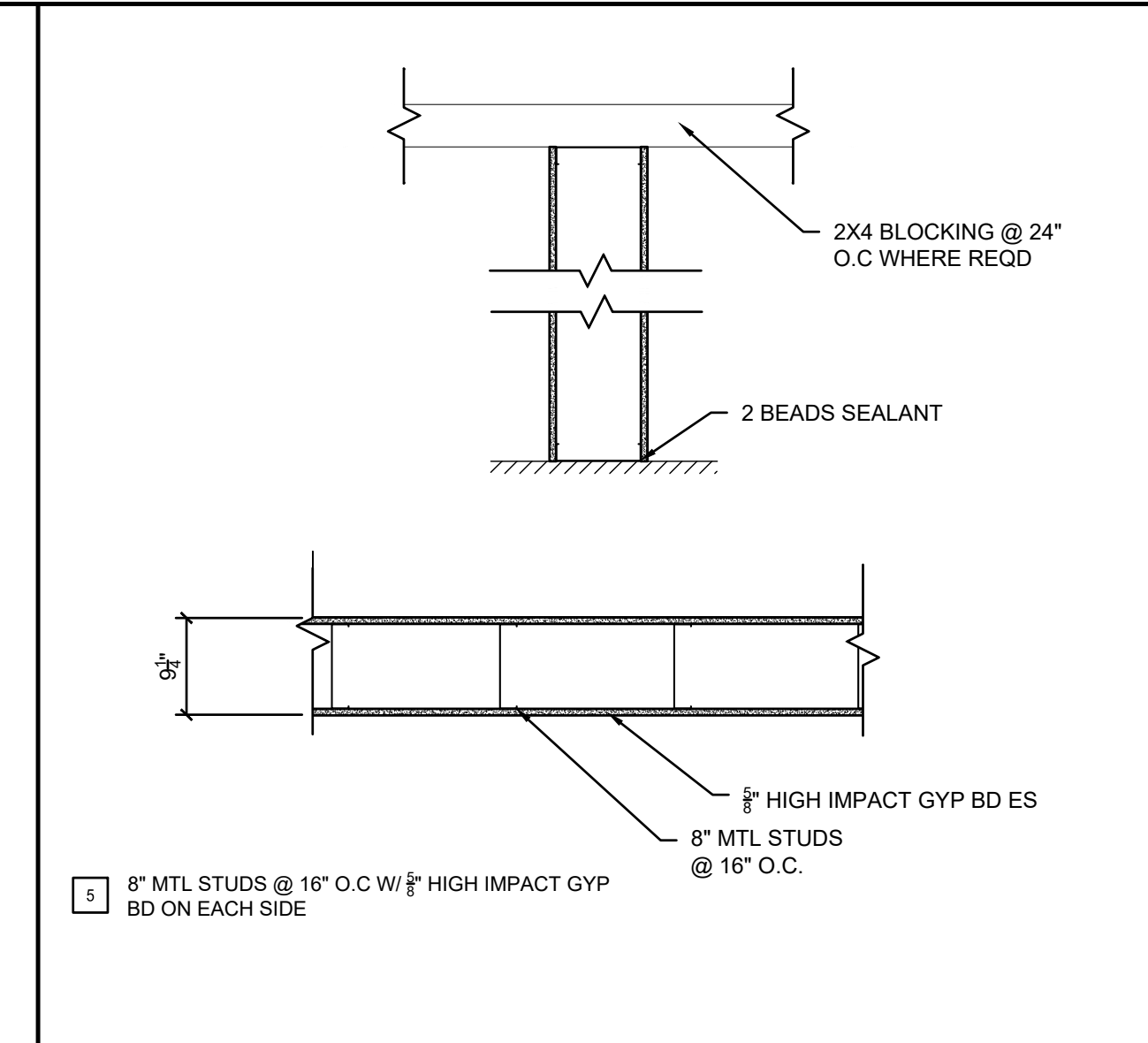
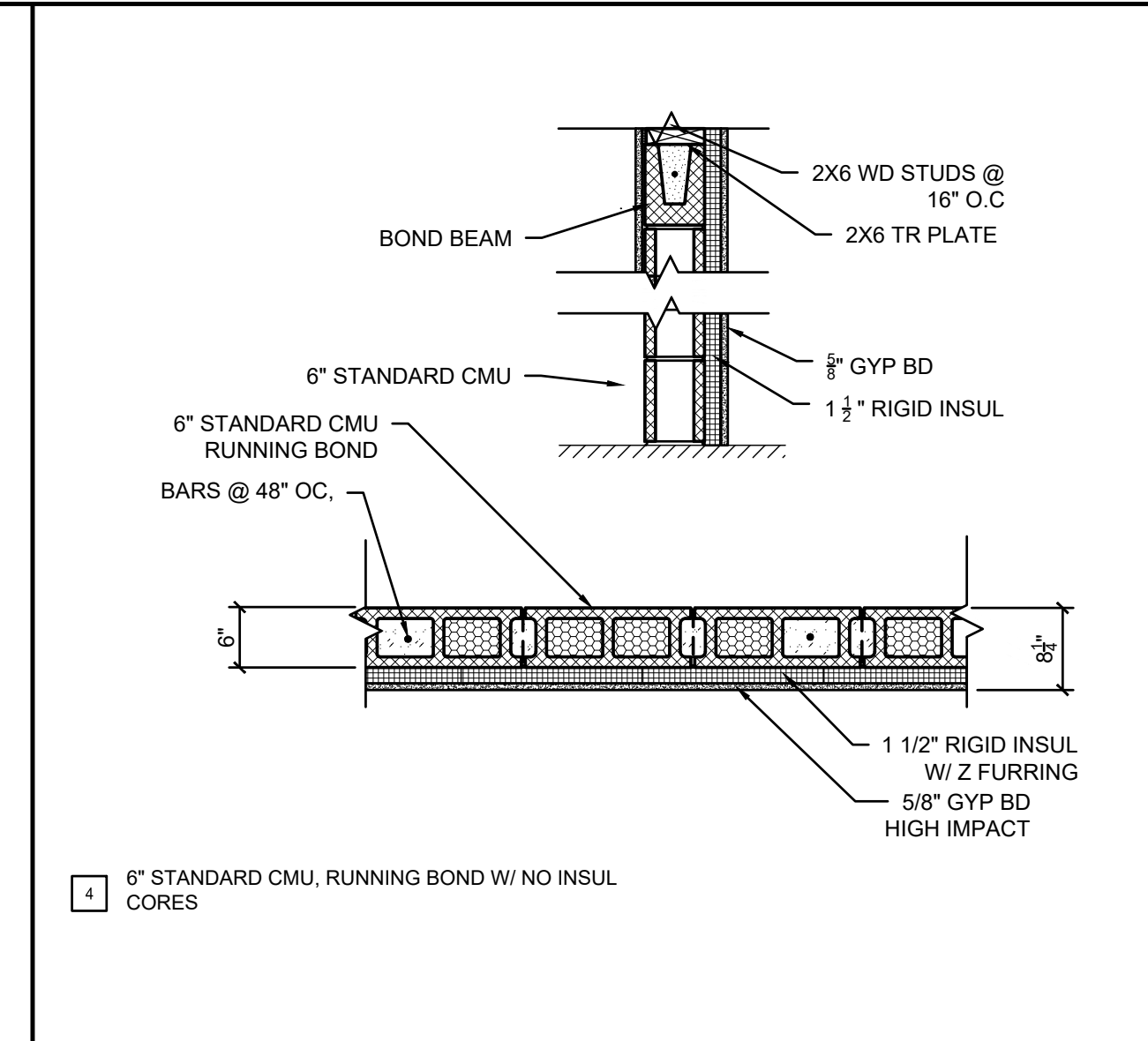
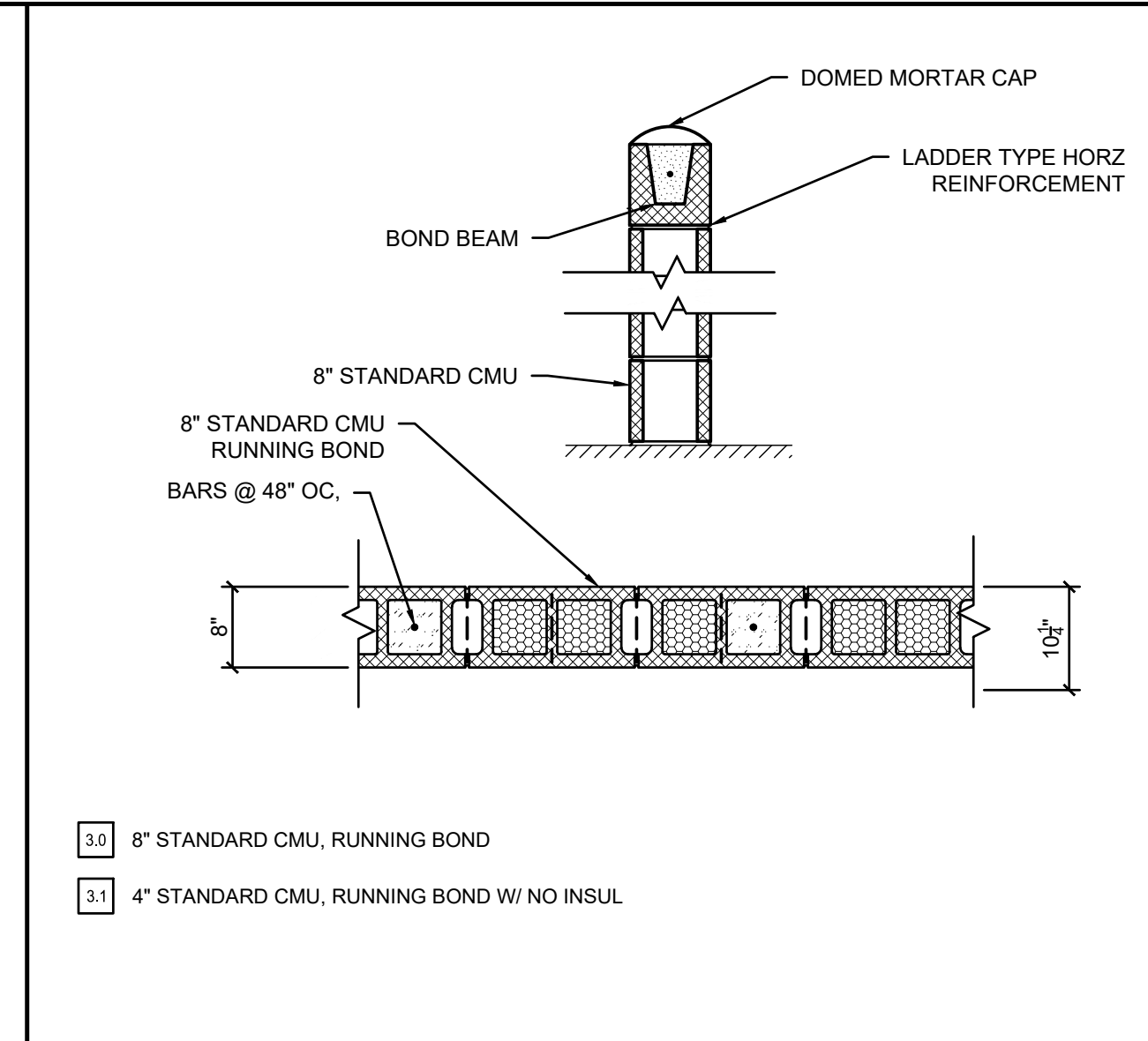
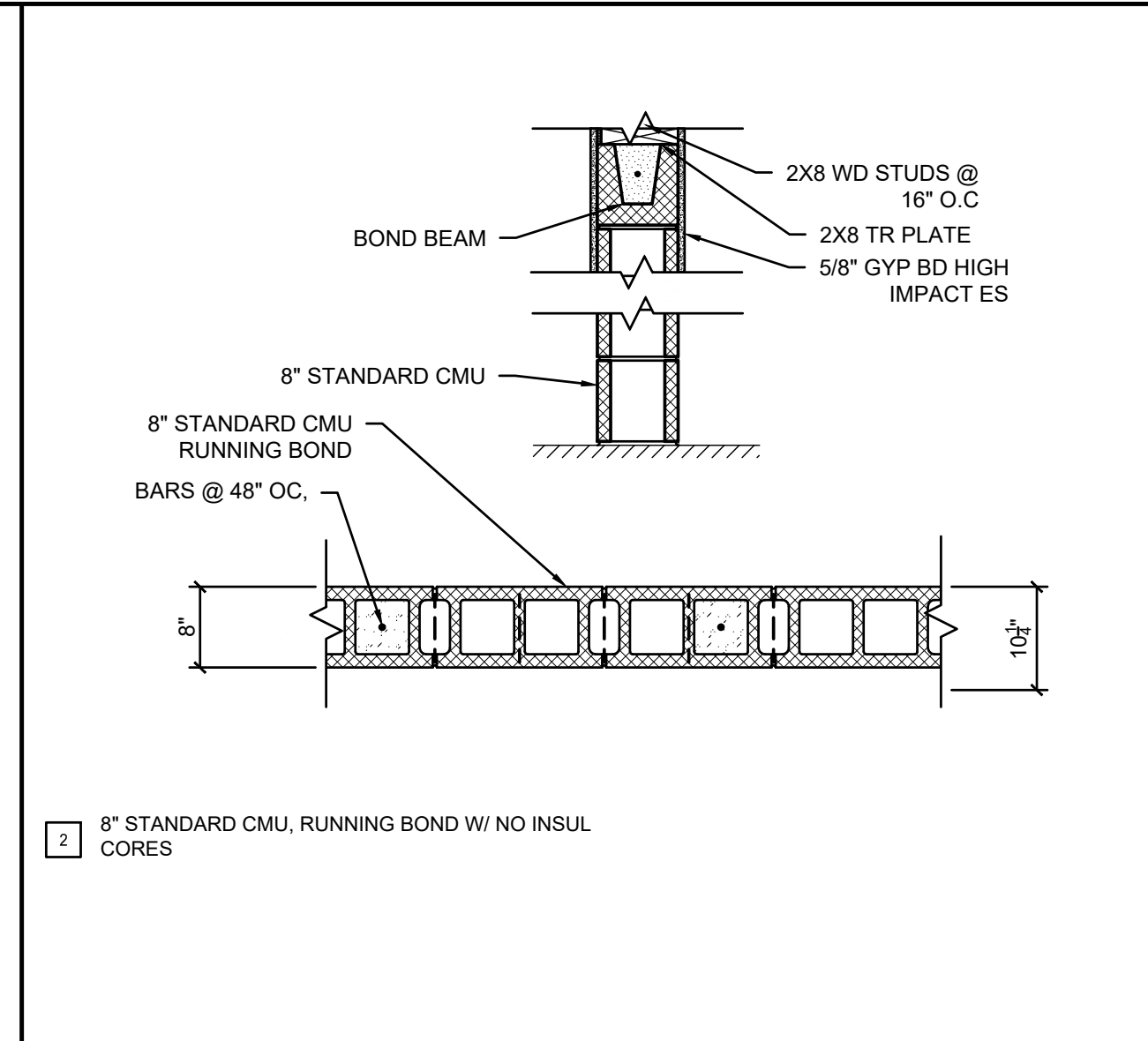
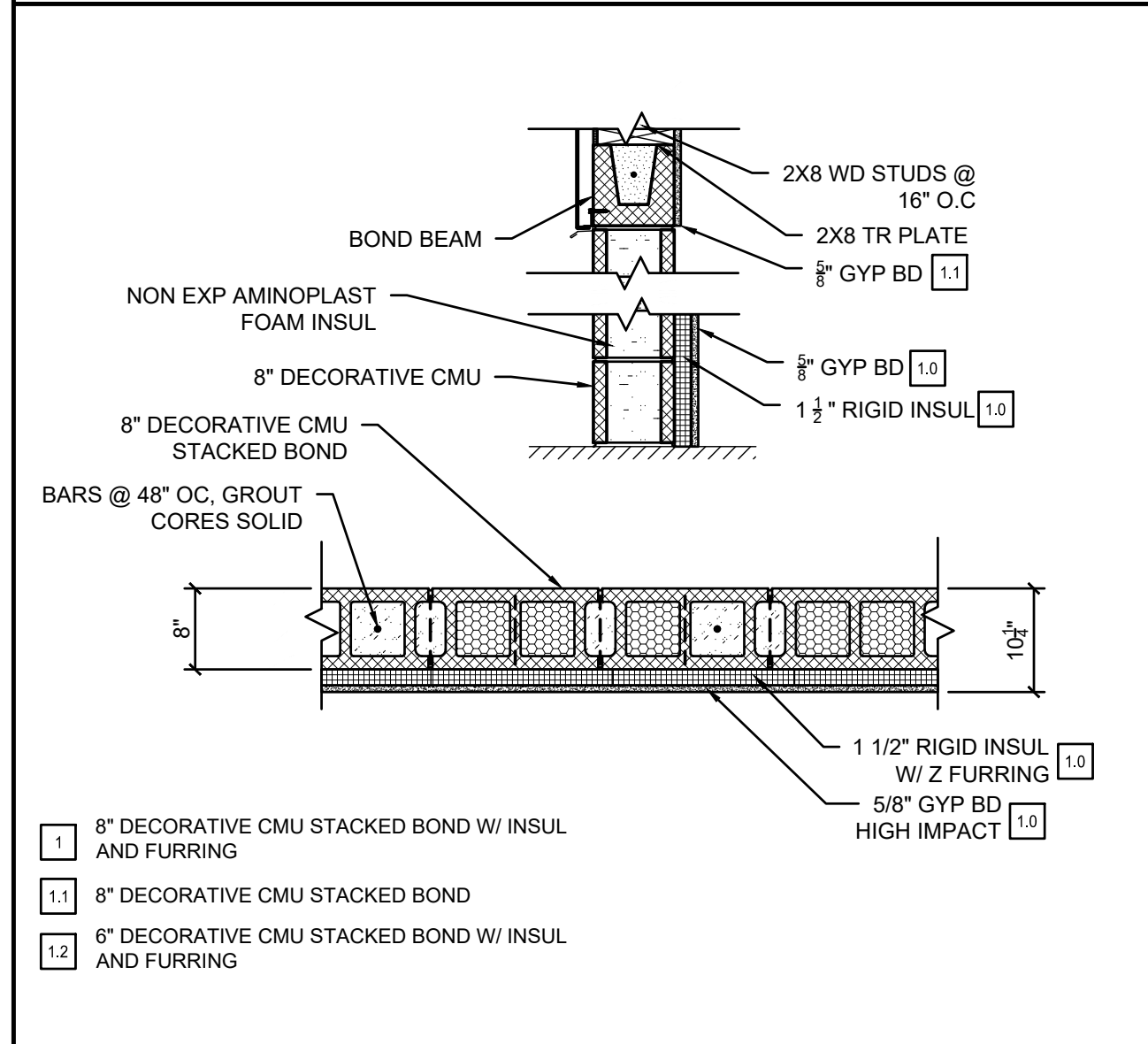
WALL SECTIONS

Spicer Group
SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607 Tel.
989-754-4717 Fax.
989-754-4440
www.SpicerGroup.com

DE. BY: DWM	CH. BY: DSB	PROJECT NO.
DR. BY: DWM	APP. BY: DWM	131928SG2022
STDS.	SHEET 20 OF 40	A
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-20	6.1

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WALL TYPES



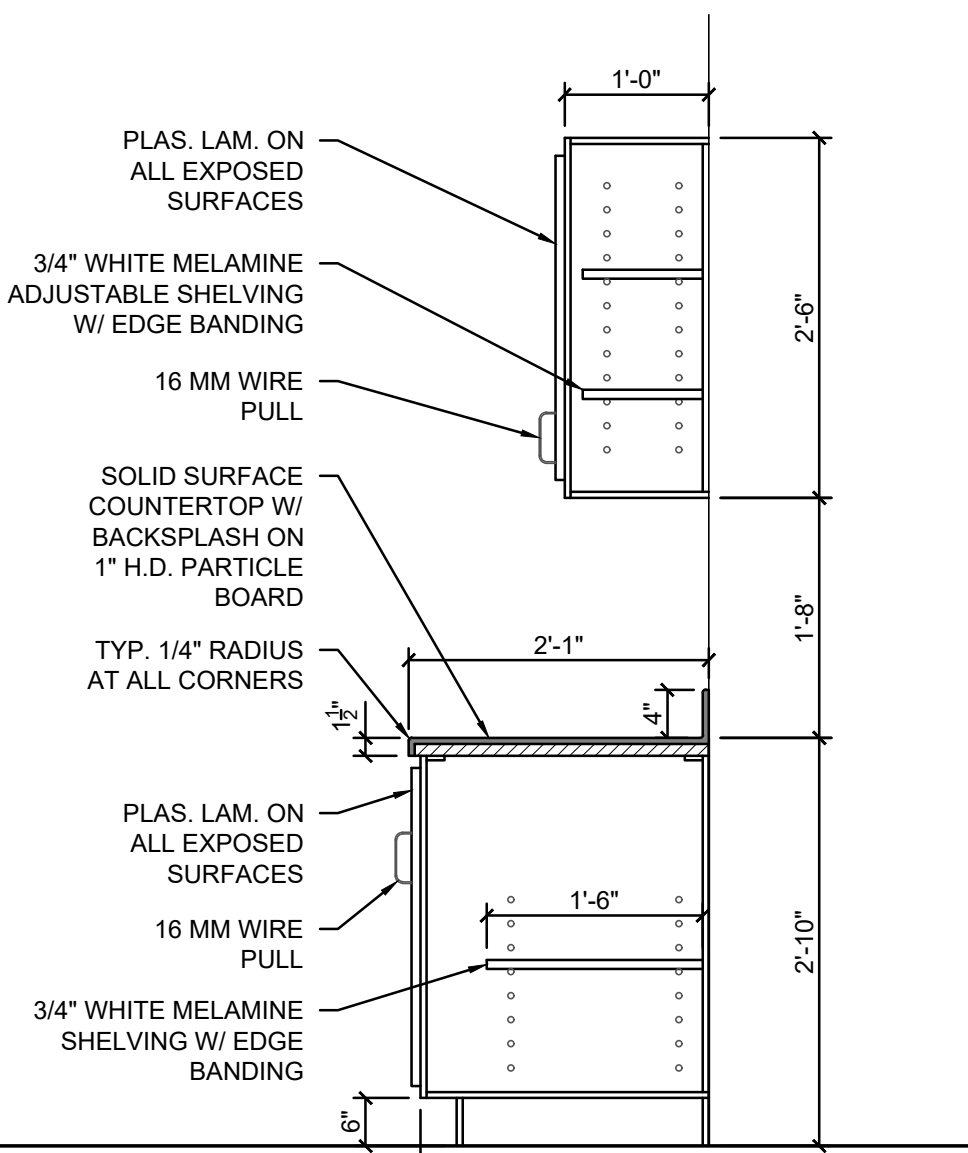
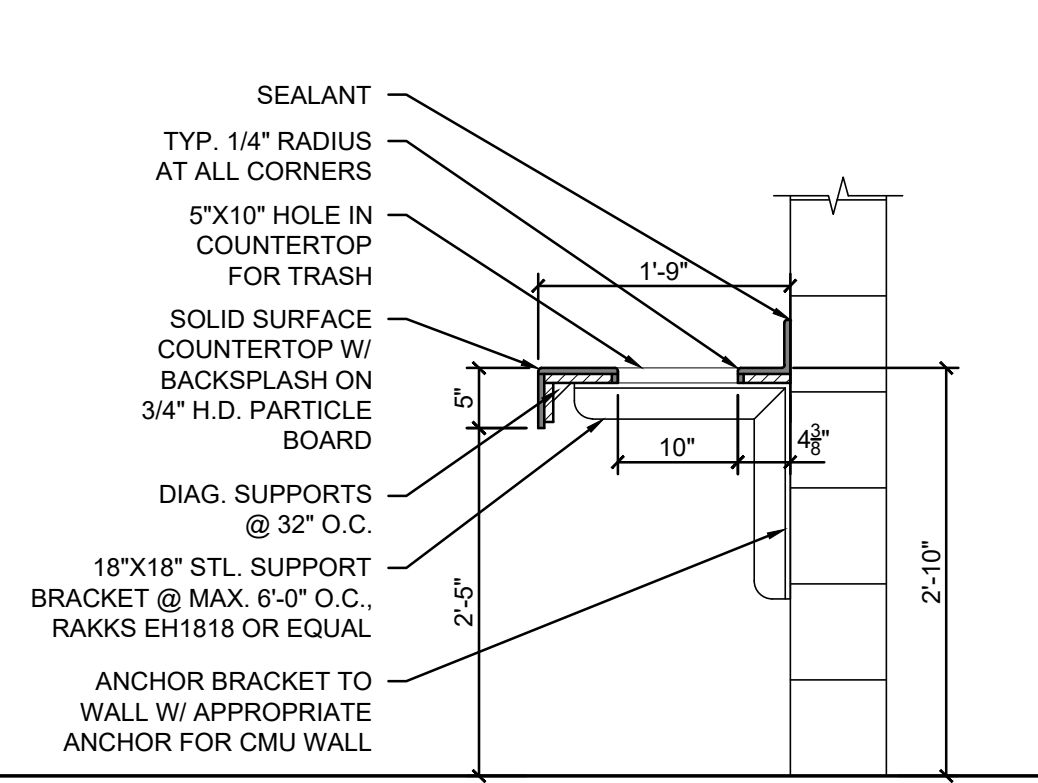
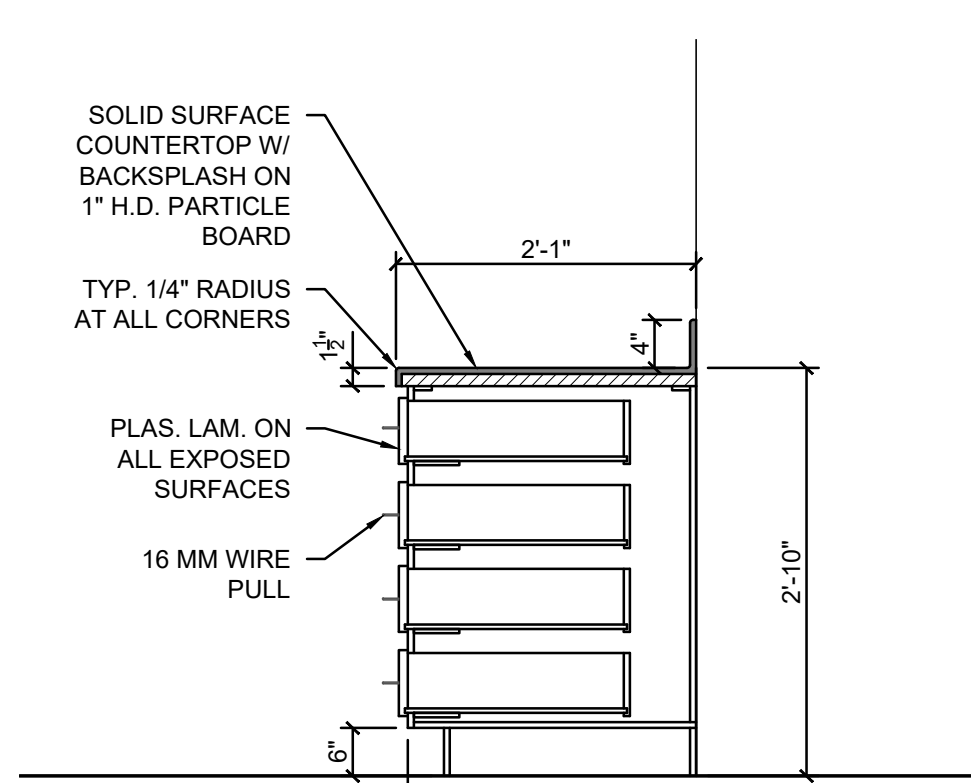
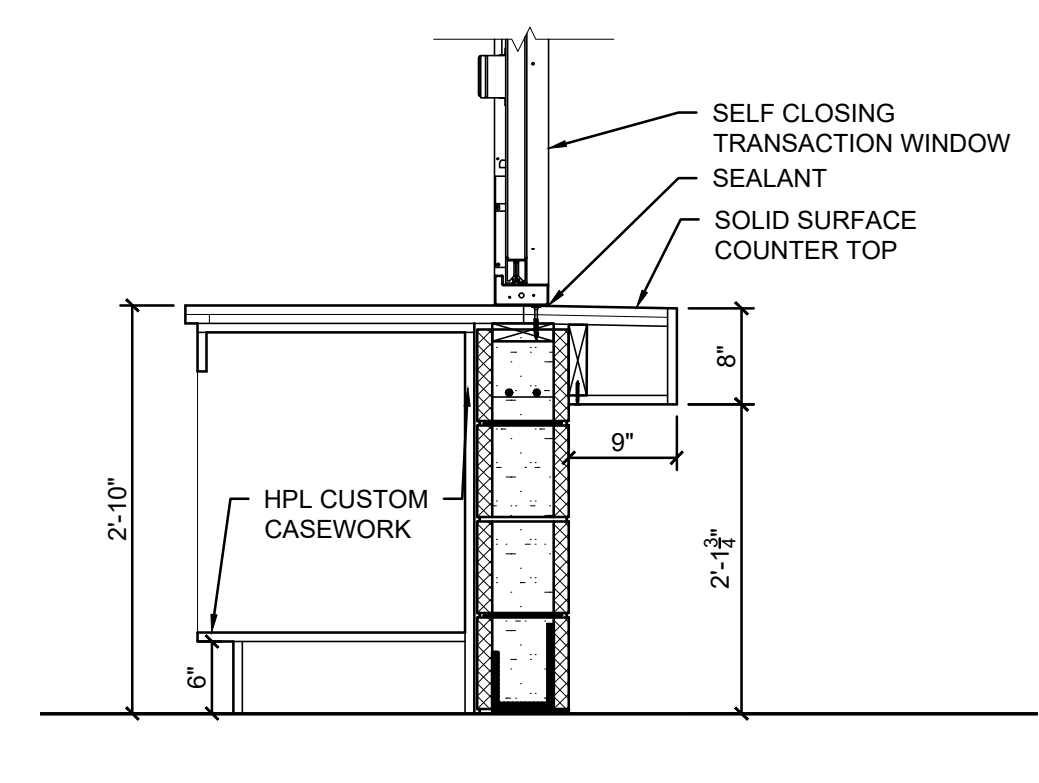
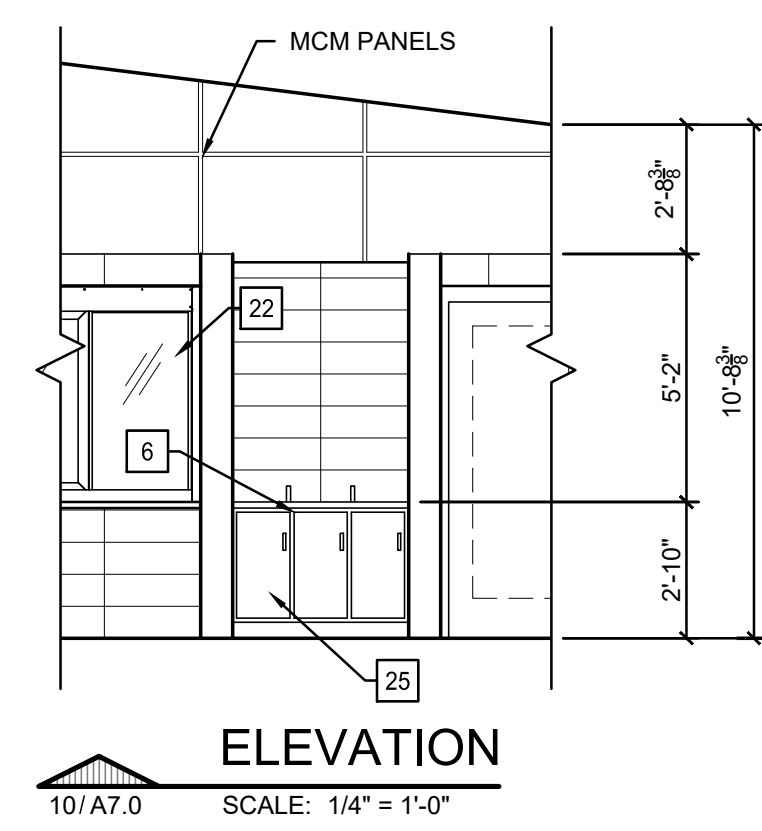
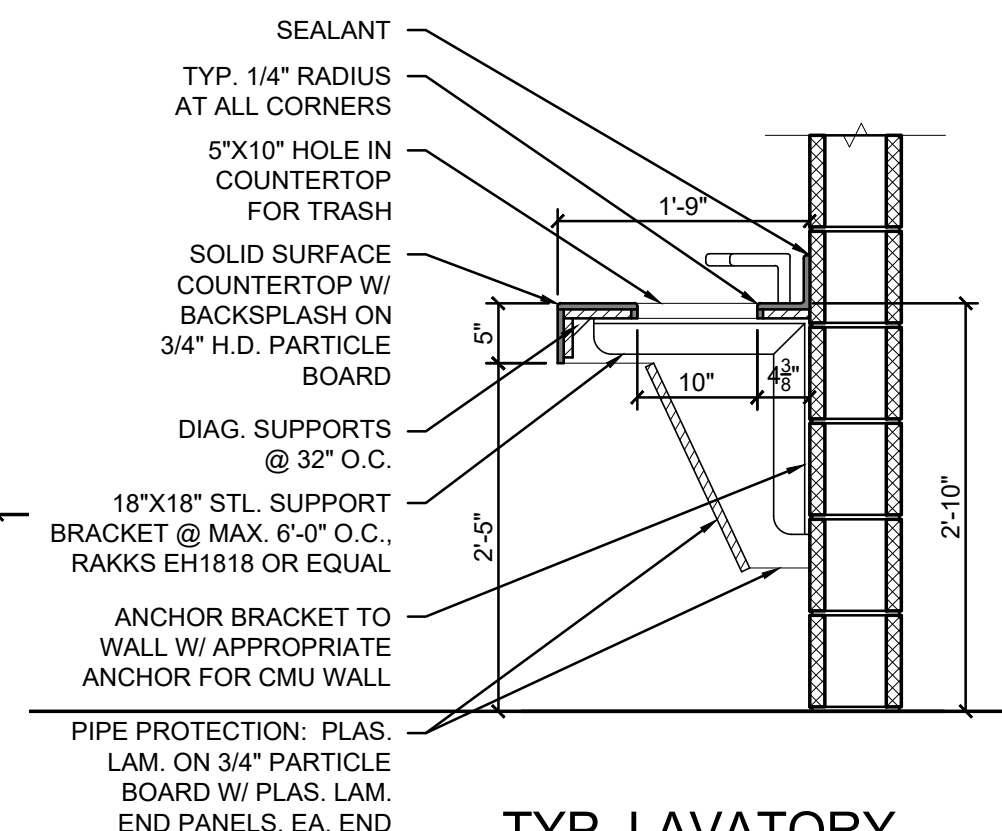
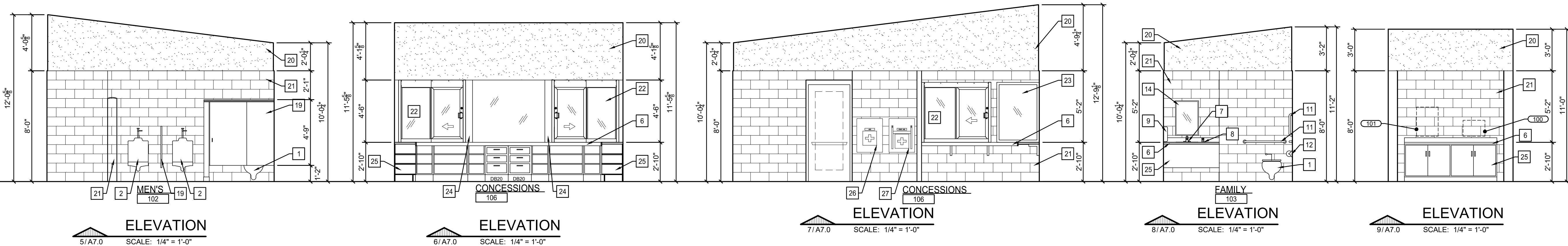
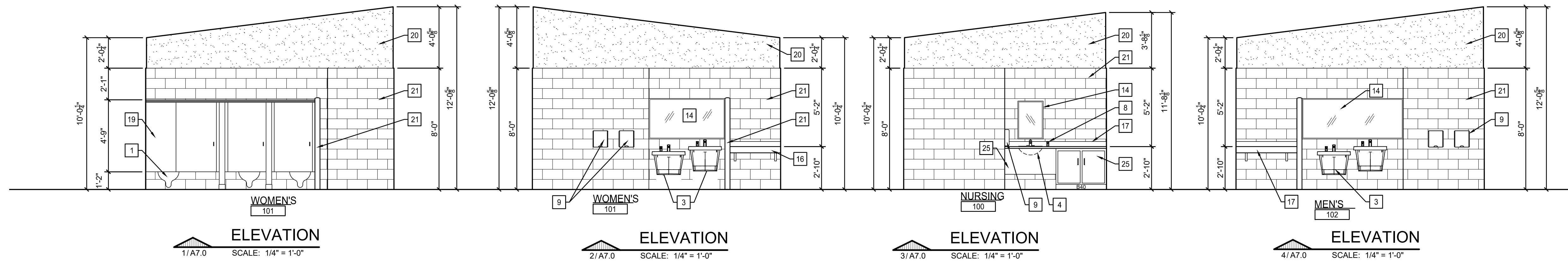
INSULATE ALL EMPTY CMU CORES WITH NON EXPANDING AMINOPLAST FOAM INSUL (TYP.)

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
WALL SECTION & DETAILS		
Spicer Group		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: DWM	APP. BY: DWM	
STDS.	SHEET 21 OF 40	A
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-21	6.2
SCALE		

P:\Projects\131928SG2022_Saginaw Childrens Zoo\Drawings\131928SG2022_SAGINAW CHILDREN'S ZOO_WALLS.dwg
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 PLOT: F.B.
 SCALE:

KEYED NOTES - NEW CONSTRUCTION



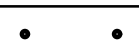



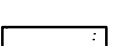
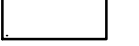
- 1 TOILET - SEE NOTES
- 2 URINAL - SEE NOTES
- 3 WALL HUNG LAVATORY - SEE NOTES
- 4 DROP IN LAVATORY
- 5 MOP SINK
- 6 SOLID SURFACE COUNTER TOP
- 7 TOUCHLESS FAUCET
- 8 TOUCHLESS SOAP DISPENSER
- 9 TOUCHLESS HAND DRYER
- 10 MOP SINK FAUCET
- 11 ADA COMPLIANT GRAB BARS, 36" , 42" & 18" VERTICAL SEE SHEET T2.0
- 12 TOILET PAPER DISPENSER
- 13 SANITARY NAPKIN DISPOSAL
- 14 MIRROR - SEE INTERIOR ELEVATIONS
- 15 HDPE PRIVACY PARTITIONS/ DOORS
- 16 SURFACE MOUNTED BABY CHANGE STATION
- 17 SOLID SURFACE TOP BABY CHANGE STATION
- 18 FLOOR DRAIN
- 19 TOILET PARTITIONS
- 20 GYP BD, PAINTED
- 21 CMU, PAINTED
- 22 SERVICE WINDOW
- 23 STATIONARY WINDOW
- 24 COLUMN COVER
- 25 CUSTOM CASEWORK
- 26 FIRST AID KIT
- 27 AED

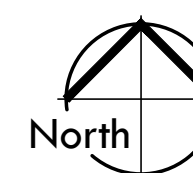
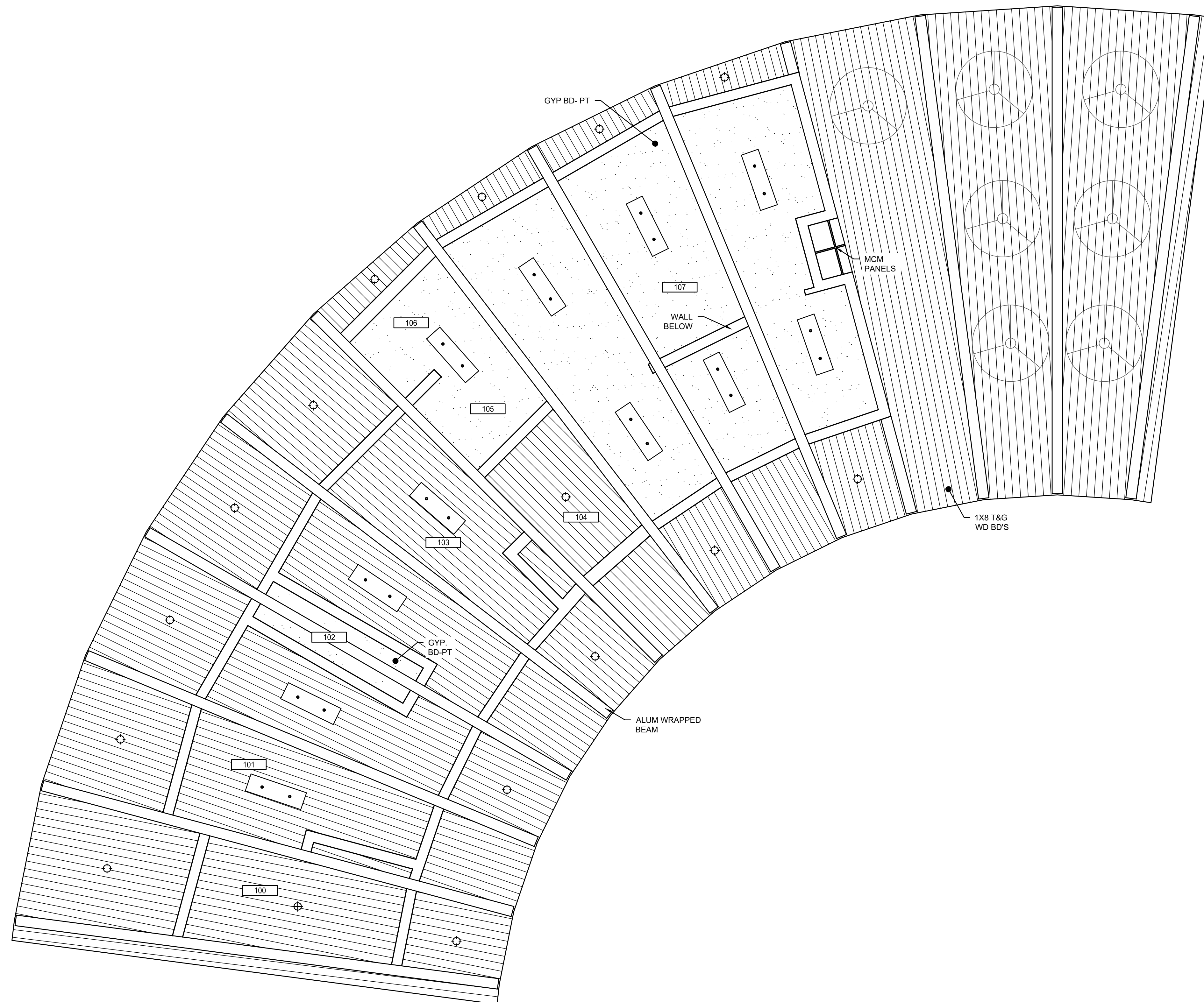


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BY	MARK	REVISIONS
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
INTERIOR ELEVATIONS		
SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com		
DE. BY: NJS	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: NJS	APP. BY: DWM	
STD.	SHEET 22 OF 40	A
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-22	7.0

09/16/2022 10:00:00 AM C:\Users\jacob\OneDrive\Documents\131928SG2022\131928SG2022.dwg 11/16/2022 11:01:01 AM Mac.Dwg
 ACAD FILE:
 RET. F.B.
 PLOT SCALE:


LEGEND

-  RECESSED CAN LIGHT FIXTURE
-  PENDANT LIGHT FIXTURE
-  SURFACE MOUNT / SUSPENDED 2'x4' LIGHT FIXTURE
-  INDICATES AN EMERGENCY LIGHT ON THE LIGHT FIXTURES ABOVE
-  EMERGENCY EXIT LIGHT
-  HARD CEILING (GYPSUM BOARD)
-  1X8 T&G WD SOFFIT
-  CEILING FAN



REFLECTED CEILING PLAN

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

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
		DATE
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
REFLECTED CEILING PLAN		
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax 989-754-4440 www.SpicerGroup.com
DE. BY: DESIGNBY	CH. BY: DSB	PROJECT NO.
DR. BY: DRAWNBY	APP. BY: DWM	131928SG2022
STDS.	SHEET 23 OF 40	A
DATE NOVEMBER 2, 2022	FILE NO.	8.0
SCALE NONE	DA-1431-23	

CENTRAL RESTROOM & CONCESSIONS
SAGINAW CHILDREN'S ZOO

REFLECTED CEILING PLAN

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230 S. Washington Ave.
Saginaw, MI 48607 Tel.
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www.SpicerGroup.com

DE. BY: DESIGNBY CH. BY: DSB PROJECT NO.
DR. BY: DRAWNBY APP. BY: DWM 131928SG2022

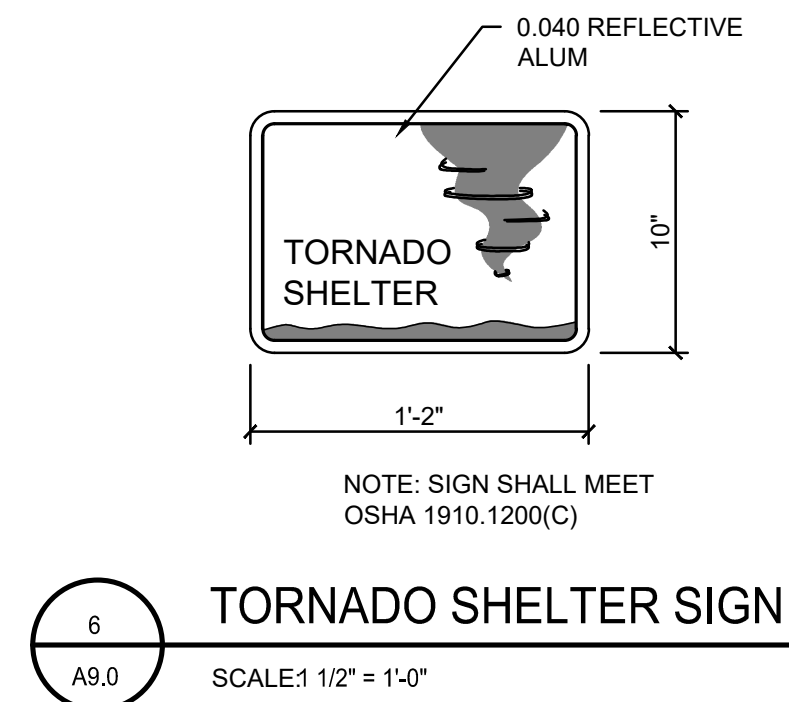
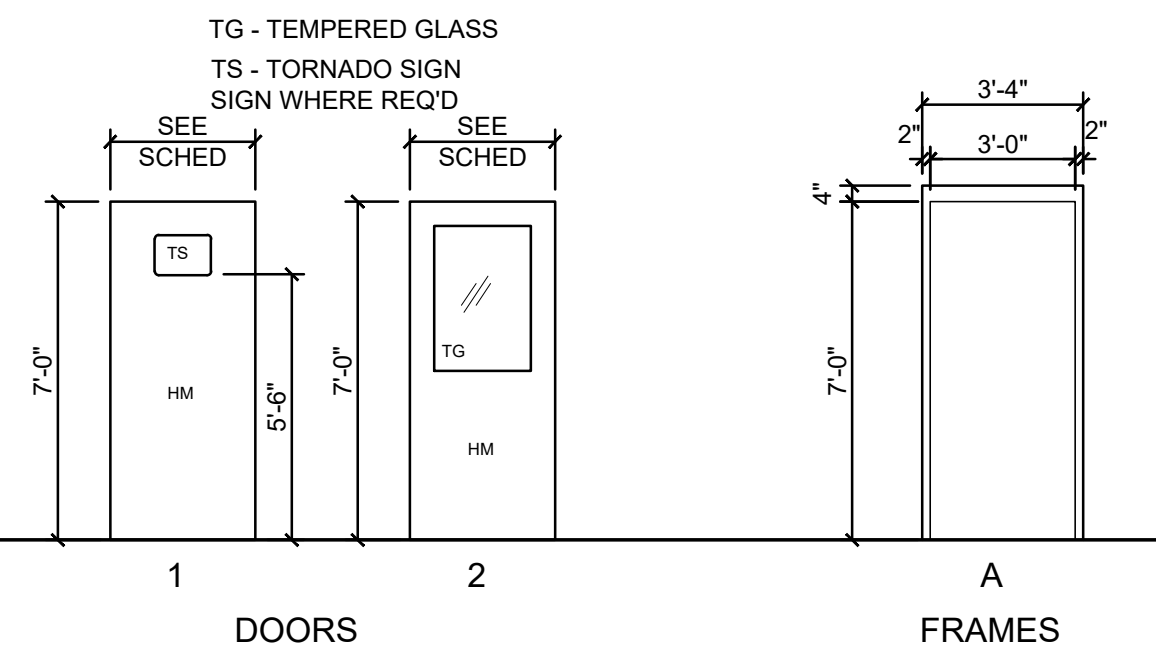
STDS. SHEET 23 OF 40 **A**

DATE NOVEMBER 2, 2022 FILE NO. **8.0**
SCALE NONE DA-1431-23

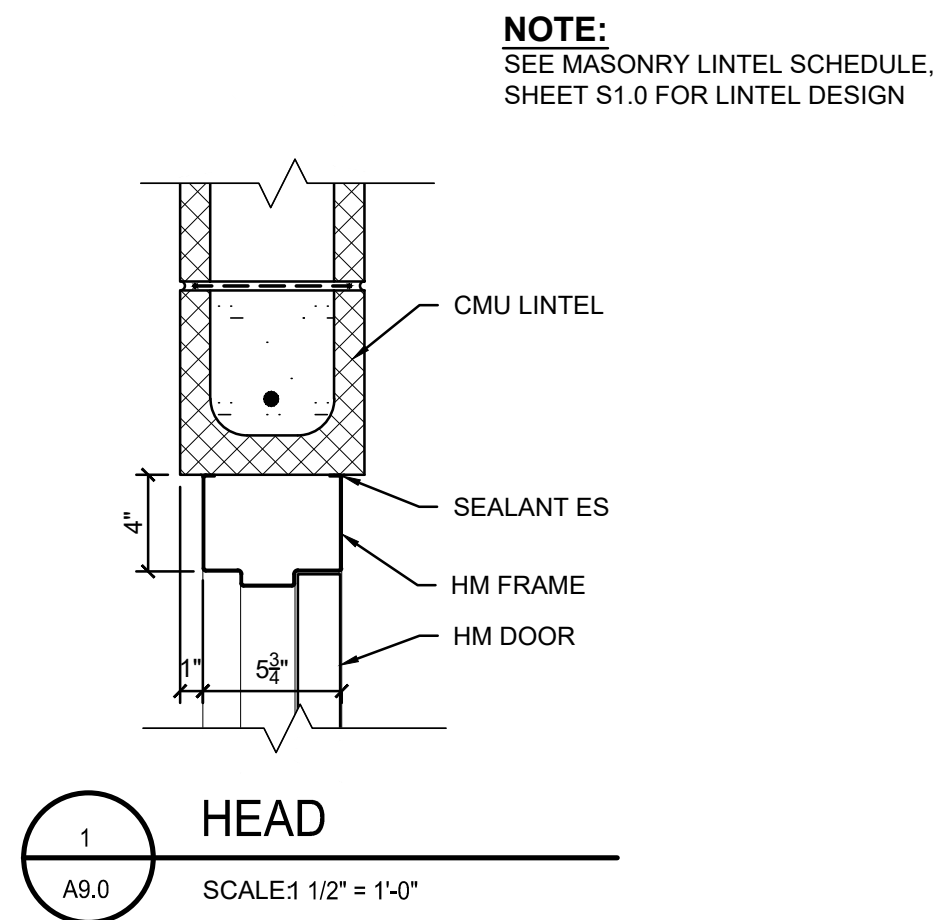
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 PLOTTING SCALE: RET. F.B. ACAD FILE:

DOOR SCHEDULE														
DOOR NO.	LOCATION	DOOR				FRAME			HARDWARE	REMARKS				
		TYPE	MAT	SIZE			RATING	TYPE			MAT	DETAIL		
				WIDTH	HEIGHT	THICK						HEAD	JAMB	SILL
100	NURSING	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	B	
101A	WOMENS	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	A	TORNADO SHELTER SIGN
101B	WOMENS	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	A	TORNADO SHELTER SIGN
102	PLUMBING	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	C	
103A	MENS	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	A	TORNADO SHELTER SIGN
103B	MENS	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	A	TORNADO SHELTER SIGN
104	FAMILY	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	B	
106	STORAGE	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	C	
107A	CONCESSIONS	1	HM	3'-4"	7'-0"	1 3/4"	-	A	HM	1	2	-	D	
107B	CONCESSIONS	2	HM	3'-4"	7'-0"	1 3/4"	-	A	H	3	4	-	A	

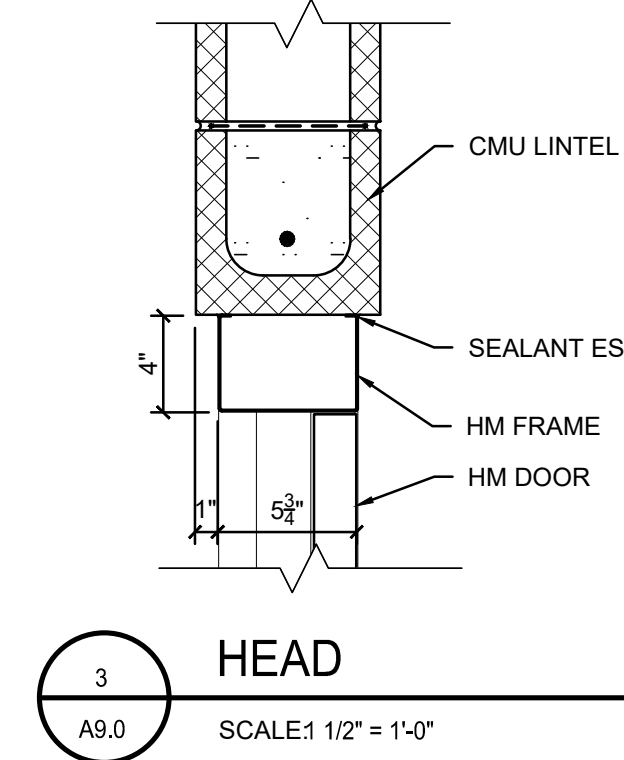
HM - HOLLOW METAL DOOR OR FRAME
AL - ALUMINUM DOOR OR FRAME



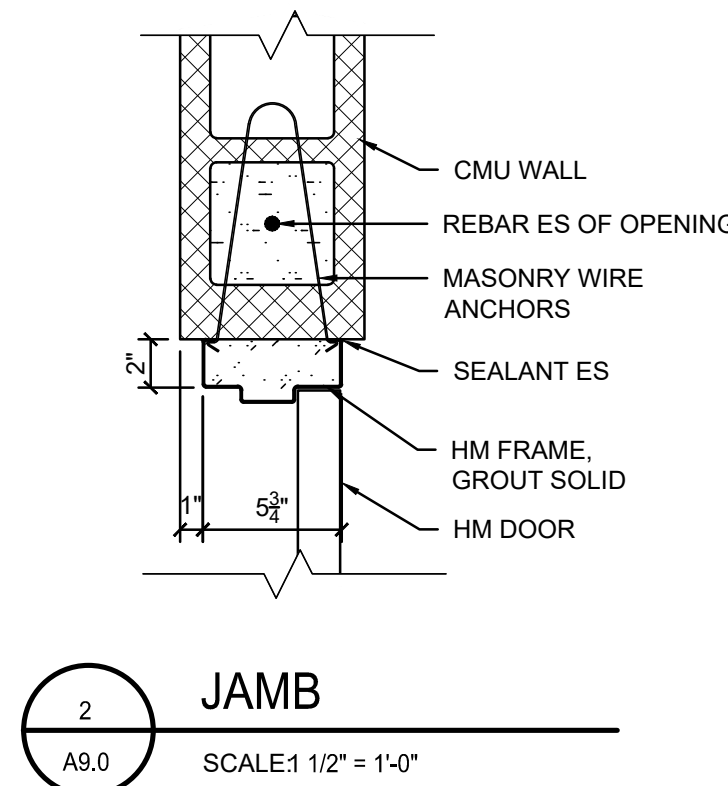
6 TORNADO SHELTER SIGN
SCALE: 1 1/2" = 1'-0"



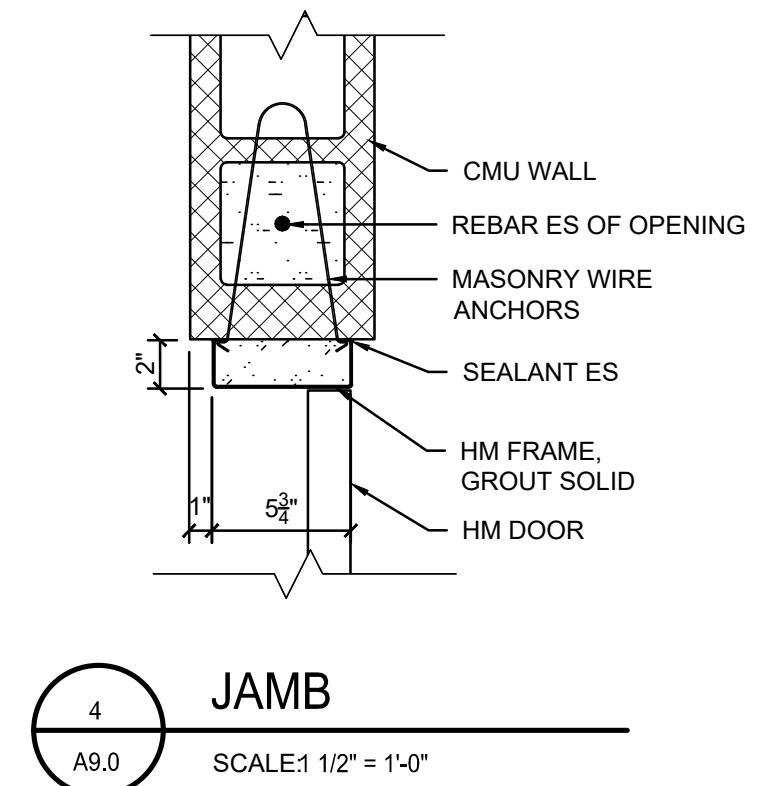
1 HEAD
SCALE: 1 1/2" = 1'-0"



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



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



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

HARDWARE			
SET	QTY	DESCRIPTION	FIN.
	1 1/2 pr	HINGES, 4 1/2" x 4 1/2" BALL BEARING NRP	654
	1	3 1/2" x 15" PULL PLATE	630
	1	3 1/2" x 15" PUSH PLATE	630
A	1	DEADBOLT SMALL CASE DOUBLE KEYED	630
	1	WEATHER STRIPPING & SWEEP	A
	1	THRESHOLD	689
	1	SURFACE CLOSER	689
SET	QTY	DESCRIPTION	FIN.
	1 1/2 pr	HINGES, 4 1/2" x 4 1/2" BALL BEARING	652
	1	LOCKSET, PASSAGE FUNCTION	626
B	1	SMALL CASE DEADBOLT W/ OCCUPANCY INDICATOR	630
	1	WEATHER STRIPPING & SWEEP	A
	1	THRESHOLD	689
	1	SURFACE CLOSER	689
SET	QTY	DESCRIPTION	FIN.
	1 1/2 pr	HINGES, 4 1/2" x 4 1/2" BALL BEARING	652
	1	LOCKSET, PASSAGE FUNCTION	626
C	1	SMALL CASE DEADBOLT	630
	1	WEATHER STRIPPING & SWEEP	A
	1	KICK DOWN DOOR STOP	689
	1	THRESHOLD	689
SET	QTY	DESCRIPTION	FIN.
	1 1/2 pr	HINGES, 4 1/2" x 4 1/2" BALL BEARING	652
	1	LOCKSET, PASSAGE FUNCTION	626
D	1	KICK DOWN DOOR STOP	689

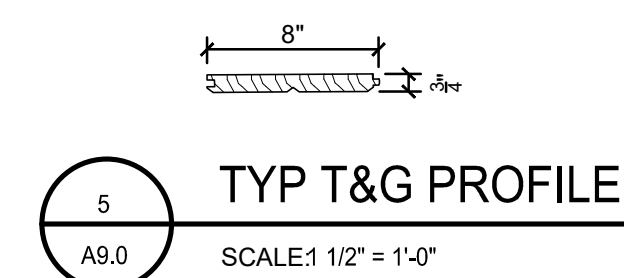
DOOR & HARDWARE NOTES:

- STANDARD LOCKSET SHALL BE COMMERCIAL LEVER TYPE, ANSI A156.1 GRADE 1, MORTISED, FUNCTION AS SCHEDULED, AND MANUFACTURED BY SARGENT, RUSSWIN, SCHLAGE, YALE OR CORBIN. OTHER MANUFACTURERS MUST BE APPROVED BY ARCHITECT PRIOR TO BIDDING.
- KEYING: YALE INTERCHANGEABLE CORES, MATER KEY & CHANGE KEY
- PROVIDE SWEEPS, STOPS, THRESHOLDS AND WEATHER STRIPPING AS NECESSARY.
- DOORS WITHOUT CLOSERS SHALL HAVE CUP TYPE STOPS MOUNTED ON WALL @ LOCKSET HEIGHT.
- ALL LOCK SETS SHALL BE BY SAME MANUFACTURER UNLESS NOTED OTHERWISE.
- FINISH SHALL BE AS NOTED IN SET DESCRIPTION.
- HOLLOW METAL FRAMES SHALL BE 14 GAGE GALVANNEALED METAL FOR ALL FRAMES.
- HOLLOW METAL DOORS SHALL BE 16 GAGE GALVANNEALED METAL FOR ALL DOORS.
- HOLLOW METAL FRAMES & STEEL DOORS SHALL BE PAINTED WITH (1) COAT PRIMER, (2) COATS FINISH. PAINT SHALL BE OIL BASED. OWNER SHALL APPROVE COLOR SELECTION.

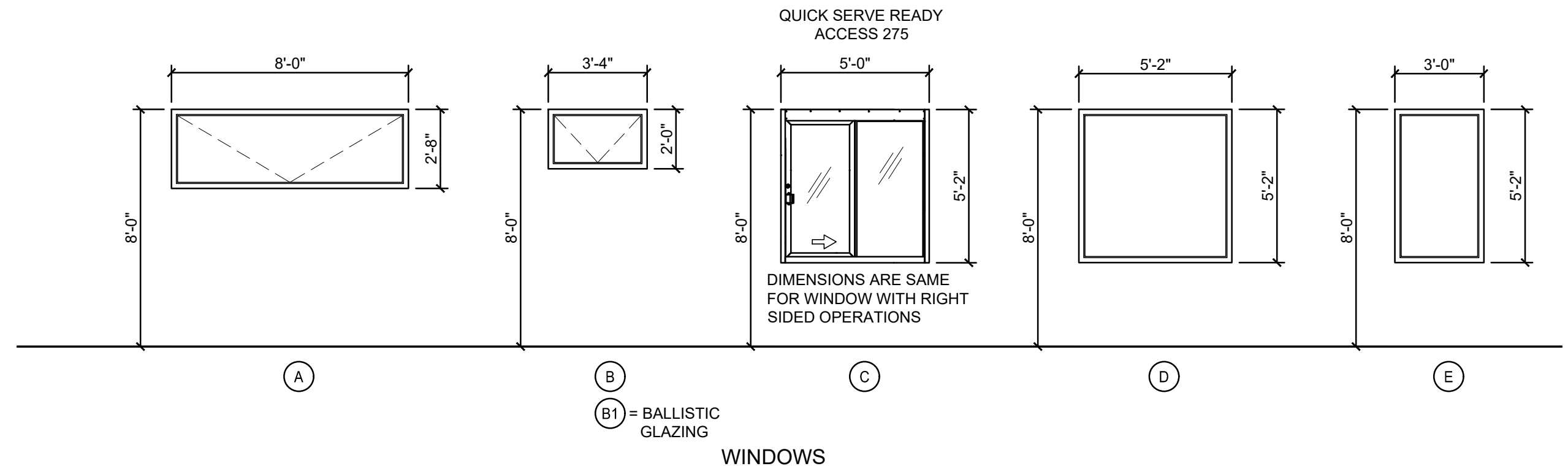
ROOM FINISH SCHEDULE															
ROOM	FLOOR	BASE	WALLS								CEILING			REMARKS	
			NORTH		SOUTH		EAST		WEST		MATERIAL	FINISH	HEIGHT		
			MAT	FIN	MAT	FIN	MAT	FIN	MAT	FIN					
100	NURSING	CON	EPXY-1	-	CMU	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	TGC	VAR	VARIES
101	WOMENS	CON	EPXY-1	-	CMU	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	TGC	VAR	VARIES
102	PLUMBING	CON	EPXY-1	-	CMU	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	TGC	PT-1	VARIES
103	MENS	CON	EPXY-1	-	CMU	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	TGC	VAR	VARIES
104	FAMILY	CON	EPXY-1	-	GYP	PT-1	CMU/GYP	PT-1	GYP	PT-1	CMU/GYP	EPXY-2	TGC	VAR	VARIES
105	MECHANICAL ROOM	CON	EPXY-1	-	GYP	PT-1	CMU/GYP	PT-1	CMU/GYP	EPXY-2	GYP	PT-1	TGC	PT-1	VARIES
106	STORAGE	CON	EPXY-1	-	GYP	PT-1	CMU/GYP	PT-1	GYP	PT-1	CMU/GYP	EPXY-2	TGC	PT-1	VARIES
107	CONCESSIONS	CON	EPXY-1	-	CMU	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	CMU/GYP	EPXY-2	TGC	PT-1	VARIES

NOTE: ALL EXTERIOR T&G WOOD CEILINGS/SOFFITS FINISH: VAR

CON - CONCRETE
EPXY-1 - EPOXY SEALER
EPXY-2 - (1) COAT LOXON CONCRETE & MASONRY PRIMER + (2) COATS SHERWIN WILLIAMS PRO INDUSTRIAL HIGH PERFORMANCE EPOXY, OWNERS CHOICE OF COLOR
CMU - CONCRETE MASONRY UNIT
PT-1 - (1) COAT PRIMER, (2) COATS SEMIGLOSS LATEX PAINT
TGC - TONGUE AND GROVE CEDAR BOARDS
VAR - (2) COATS MINWAX HELMSMAN SPAR URETANE- SATIN FINISH OR EQUAL



5 TYP T&G PROFILE
SCALE: 1 1/2" = 1'-0"

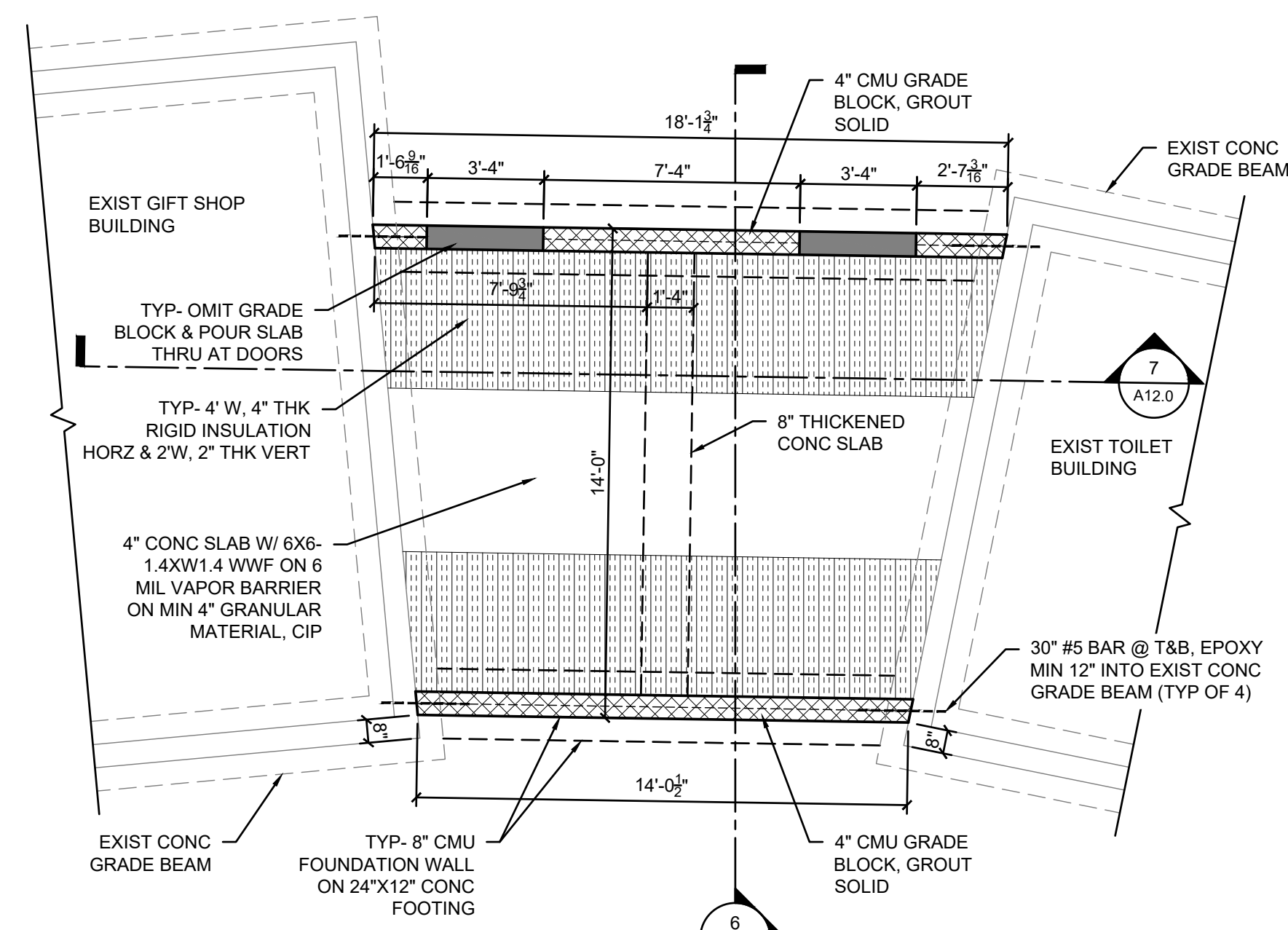


(B1) = BALLISTIC GLAZING

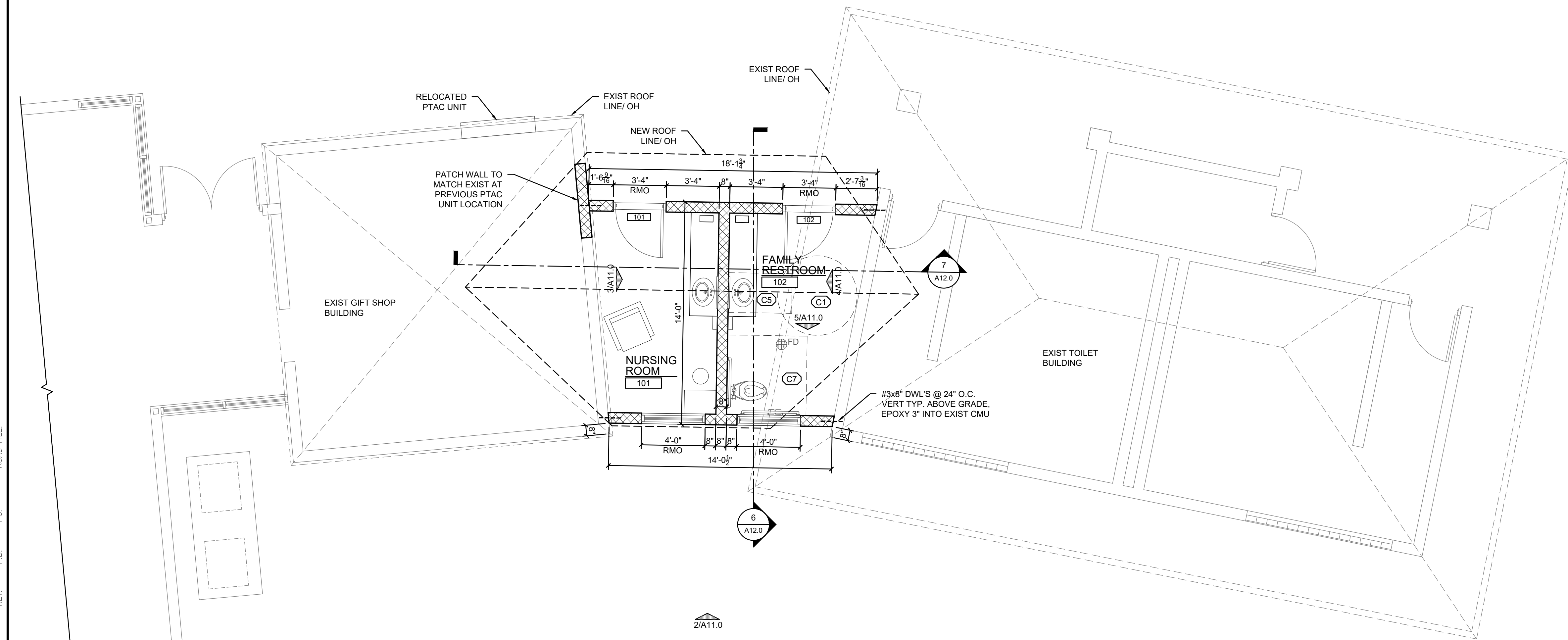
WINDOWS

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
DATE	DATE	DATE
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<p>CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO</p>		
<p>DOOR AND WINDOW SCHEDULES</p>		
DE. BY:	CH. BY:	PROJECT NO.
DR. BY:	APP. BY:	131928SG2022
STDS.	SHEET 24 OF 40	A
DATE	NOVEMBER 2, 2022	FILE NO.
SCALE	AS NOTED	DA-1431-24
		9.0

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 ACAD FILE: PLOT
 RET.



North
FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



North
FLOOR PLAN
SCALE: 1/4" = 1'-0"

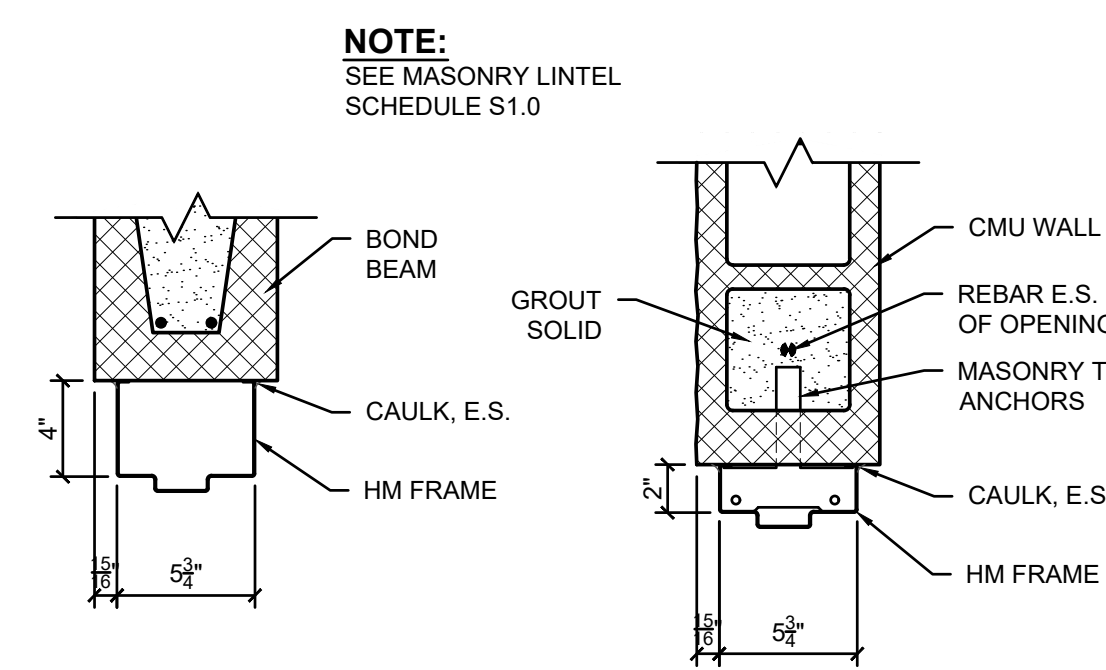
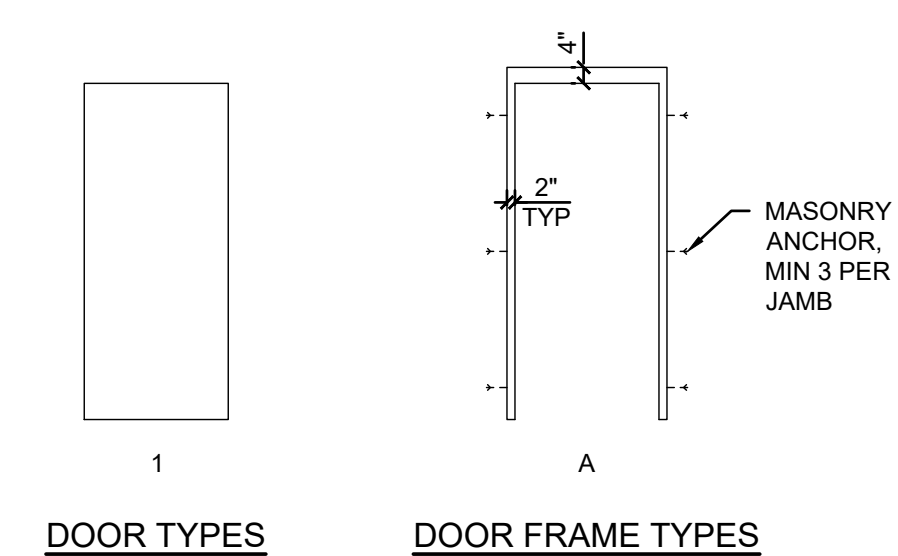
ROOM FINISH SCHEDULE																
ROOM	FLOOR	BASE	WALLS								CEILING		REMARKS			
			NORTH		SOUTH		EAST		WEST		MATERIAL	FINISH				
101	NURSING	CONC	EPXY-1	-	CMU	EPXY-2	CMU	EPXY-2	CMU	EPXY-2			EXIST	-	GB	PT
102	FAMILY RESTROOM	CONC	EPXY-1	-	CMU	EPXY-2	CMU	EPXY-2	EXIST	-	CMU	EPXY-2	GB	PT	8'-0"	

CONC - CONCRETE
EPXY-1 - EPOXY SEALER
EPXY-2 - (1) COAT LOXON CONCRETE & MASONRY PRIMER + (2) COATS
SHERWIN WILLIAMS PRO INDUSTRIAL HIGH PERFORMANCE EPOXY, OWNERS
CHOICE OF COLOR
CMU - CONCRETE MASONRY UNIT
GB - GYPSUM BOARD

DOOR SCHEDULE														
DOOR NO.	LOCATION	DOOR						FRAME				HARDWARE	REMARKS	
		TYPE	MAT	SIZE			RATING	TYPE	MAT	DETAIL				
				WIDTH	HEIGHT	THICK				HEAD	JAMB			SILL
101	NURSING ROOM	1	HM	3'-0"	7'-0"	1 3/4"	-	A	HM	H-A10	J-A10	-	B	
102	FAMILY RESTROOM	1	HM	3'-0"	7'-0"	1 3/4"	-	A	HM	H-A10	J-A10	-	B	

HM - HOLLOW METAL DOOR OR FRAME
WD - SOLID WOOD DOOR OR FRAME
AL - ALUMINUM DOOR OR FRAME

DOOR HARDWARE SETS:
SEE HARDWARE SECTION ON A9.0



NOTE:
SEE MASONRY LINTEL SCHEDULE S1.0

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

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY MARK	REVISIONS	DATE

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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO

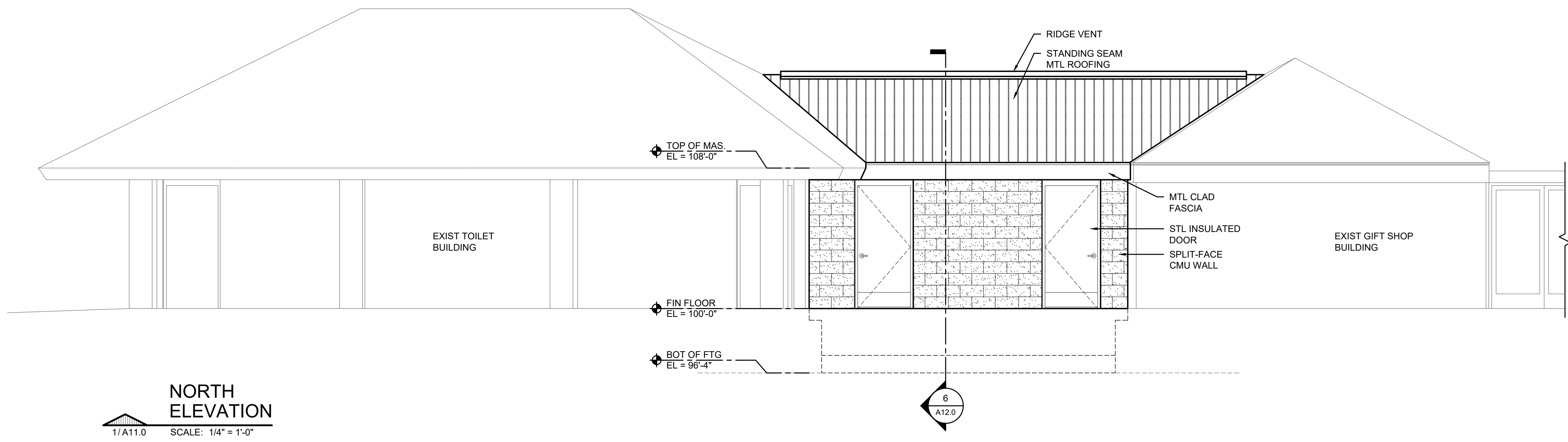
NORTH TOILET ROOM ADDITION FOUNDATION & FLOOR PLANS

SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607 Tel.
989-754-4717 Fax
989-754-4440
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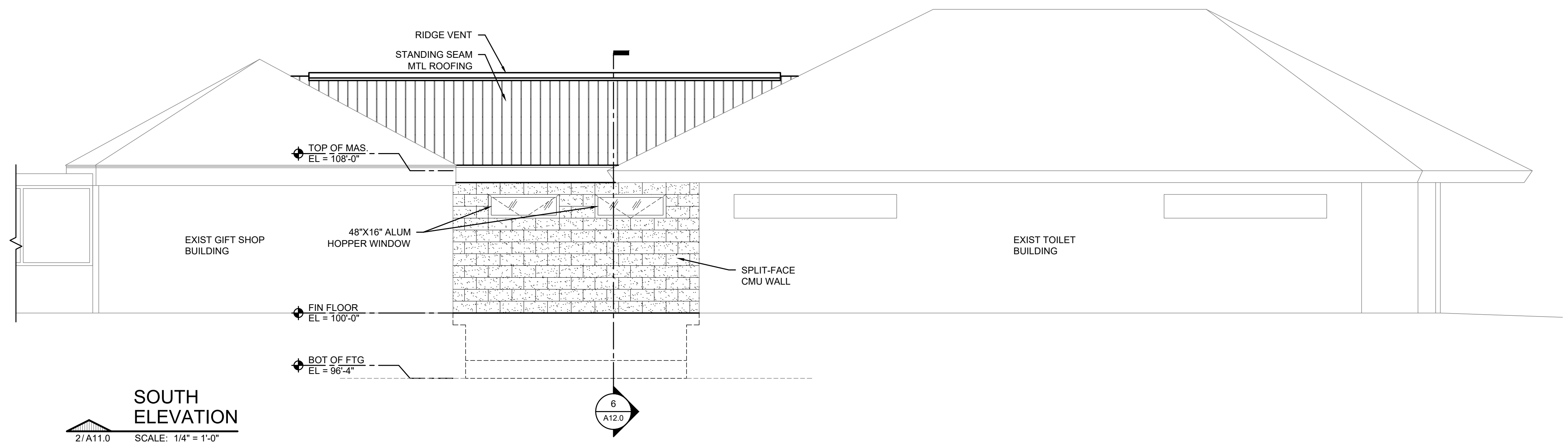
DE. BY: DWM	CH. BY: DSB	PROJECT NO.	
DR. BY: LTP	APP. BY: DWM	131928SG2022	
STDS.		SHEET 25 OF 40	A
DATE: NOVEMBER 2, 2022		FILE NO.	10.0
SCALE: 1/4" = 1'-0"		DA-1431-25	

ADD ALTERNATE #1

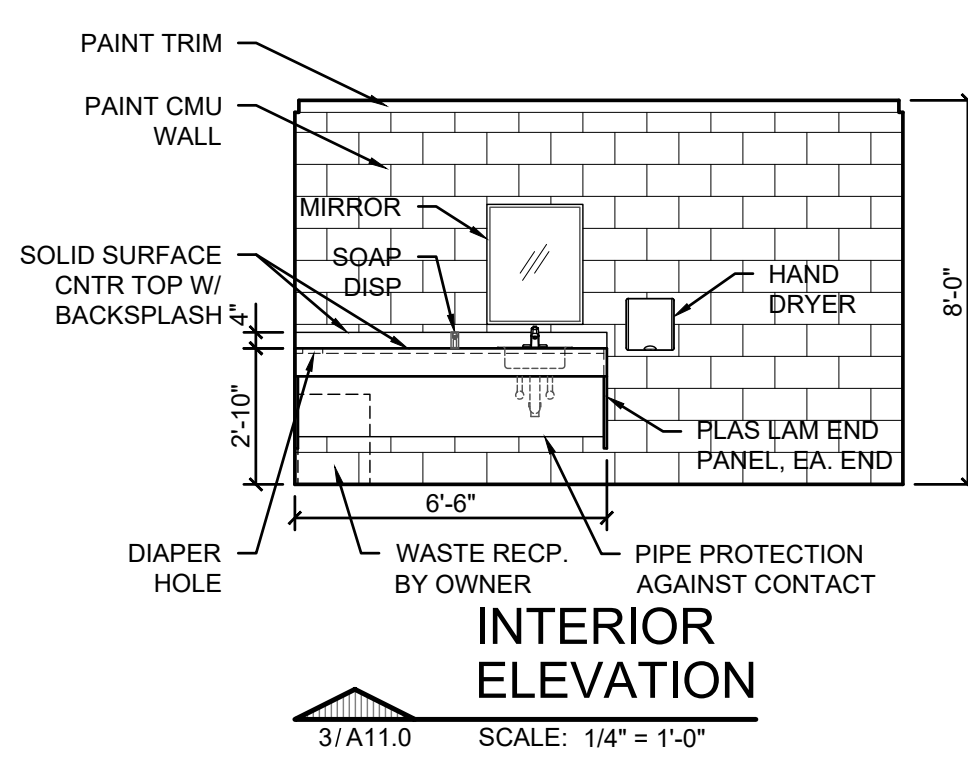
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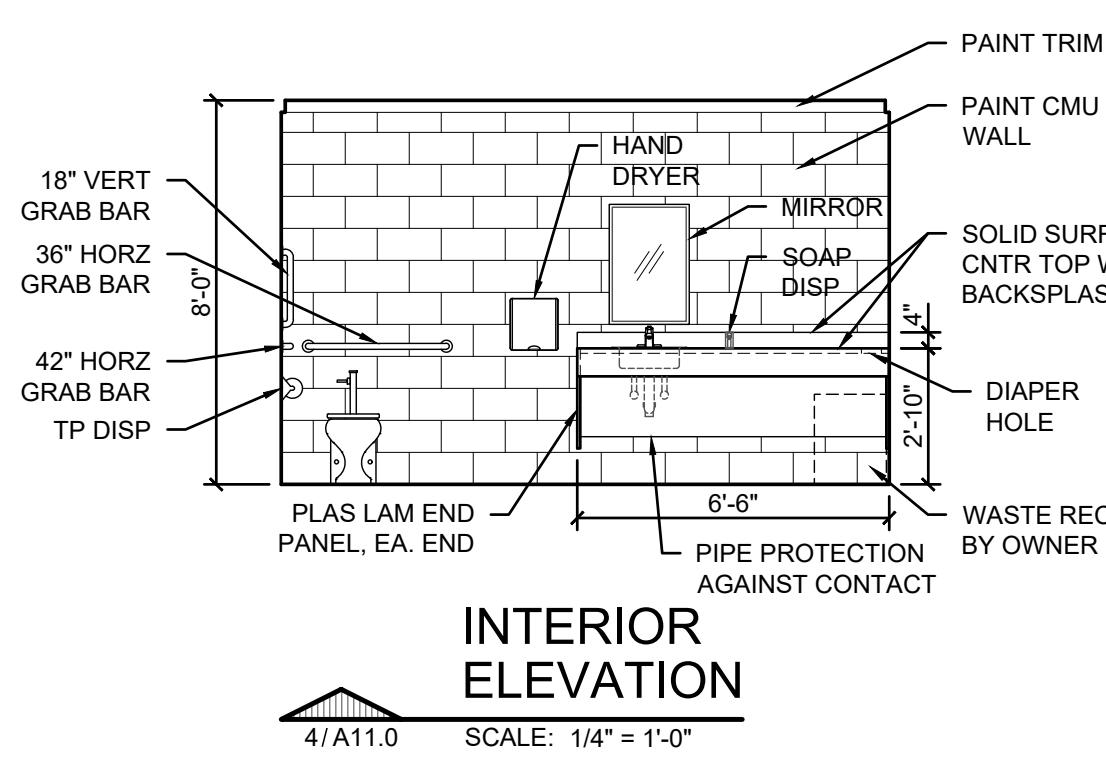
NORTH ELEVATION
1/A11.0 SCALE: 1/4" = 1'-0"



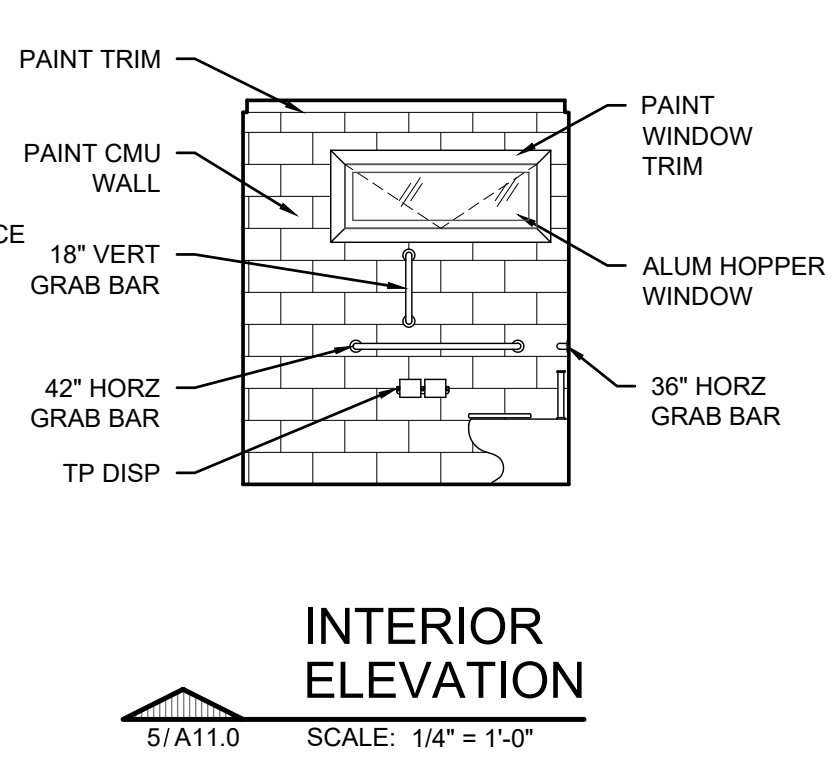
SOUTH ELEVATION
2/A11.0 SCALE: 1/4" = 1'-0"




INTERIOR ELEVATION
3/A11.0 SCALE: 1/4" = 1'-0"



INTERIOR ELEVATION
4/A11.0 SCALE: 1/4" = 1'-0"

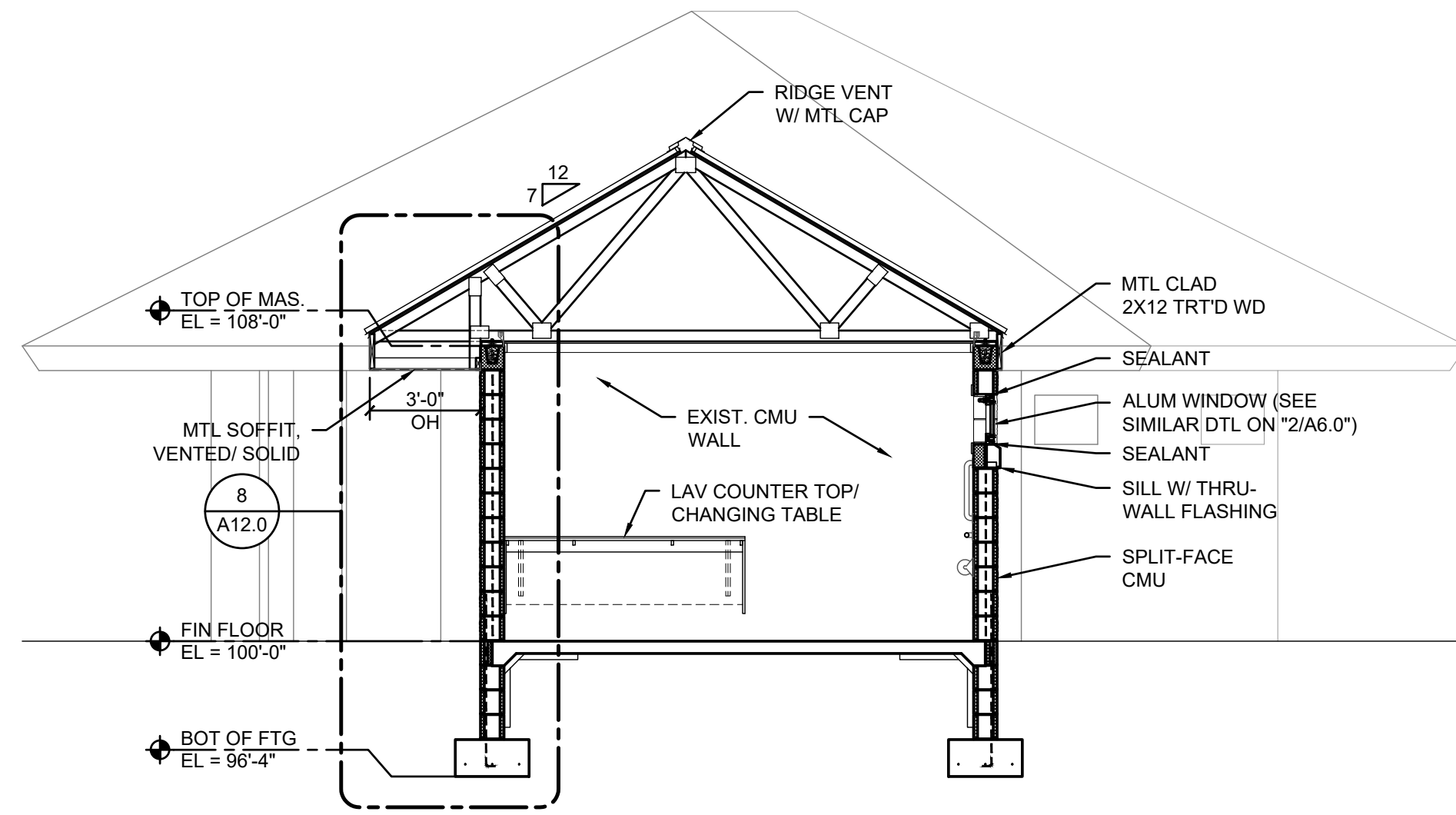


INTERIOR ELEVATION
5/A11.0 SCALE: 1/4" = 1'-0"

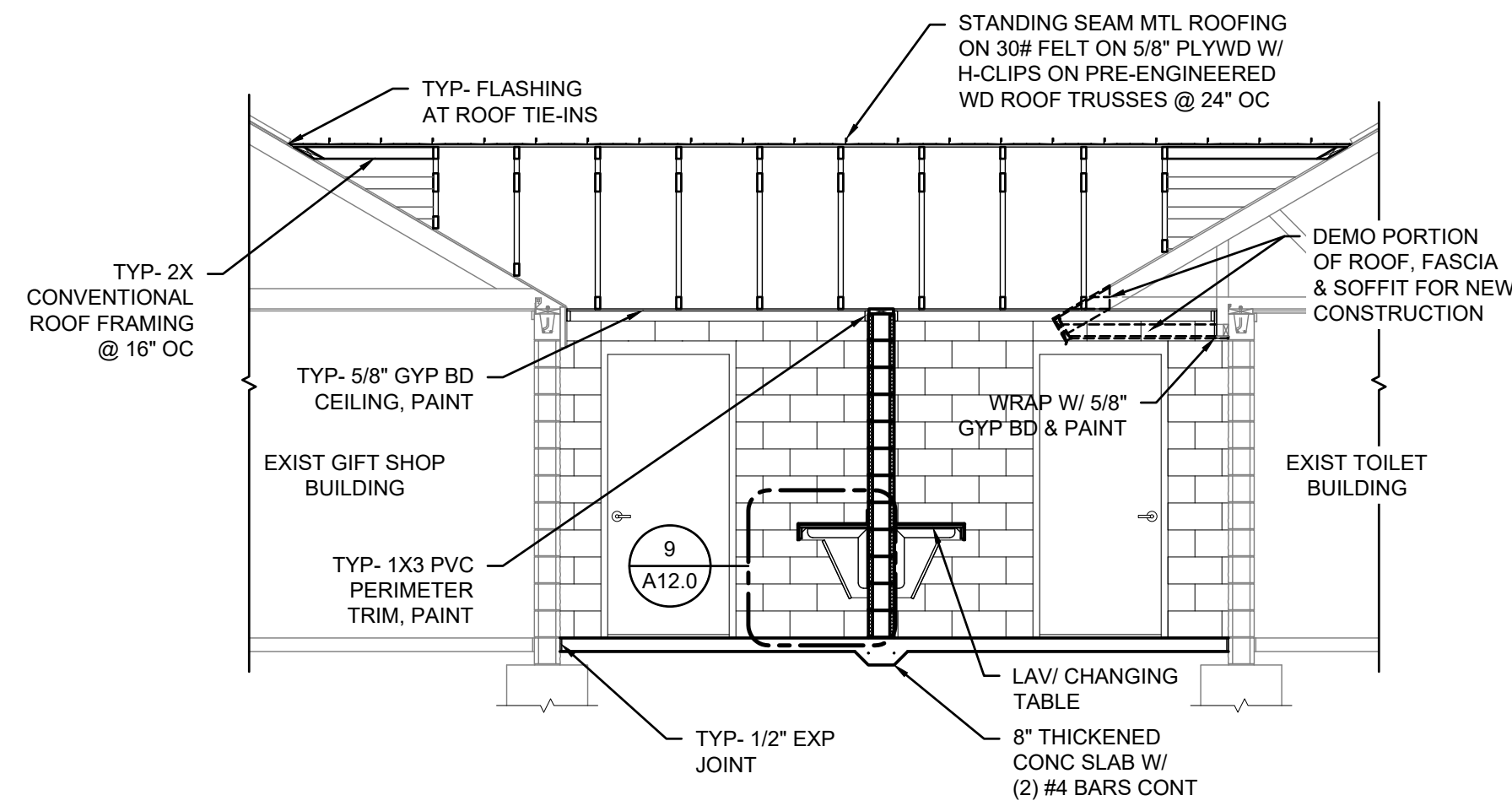
DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	DATE
	REVISIONS	
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
NORTH TOILET ROOM ADDITION ELEVATIONS		
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
DE. BY: DWM	CH. BY: DSB	PROJECT NO.
DR. BY: LTP	APP. BY: DWM	131928SG2022
STDS.	SHEET 26 OF 40	A
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-26	11.0
SCALE: 1/4" = 1'-0"		

ADD ALTERNATE #1

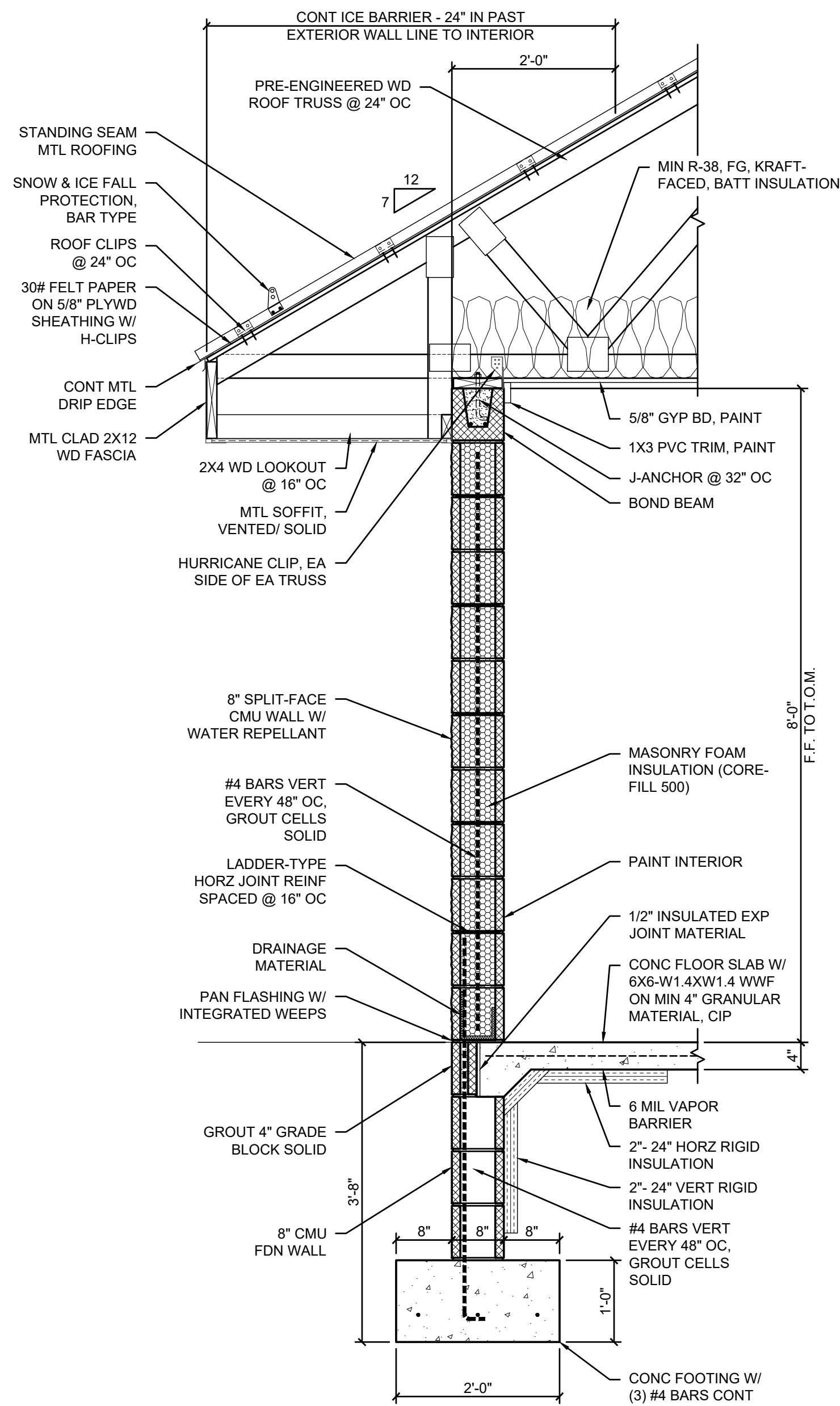
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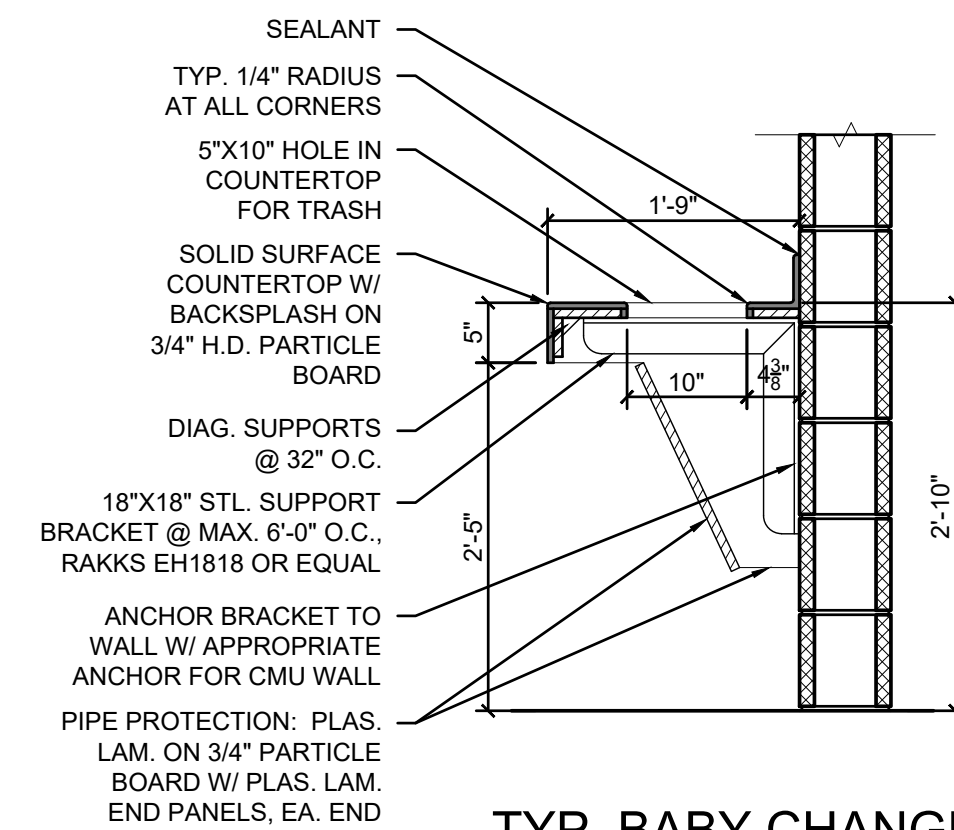
6 BUILDING SECTION
SCALE: 1/4" = 1'-0"



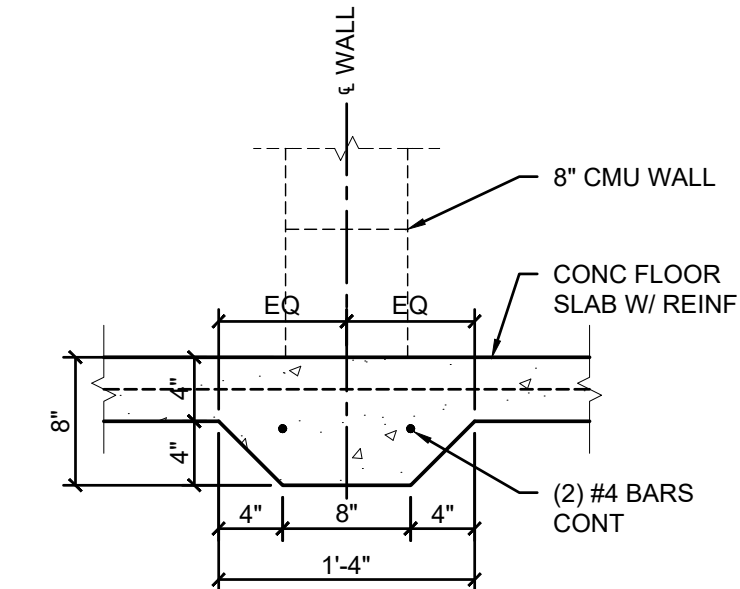
7 BUILDING SECTION
SCALE: 1/4" = 1'-0"



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



9 TYP. BABY CHANGE STATION SECTION
SCALE: 3/4" = 1'-0"

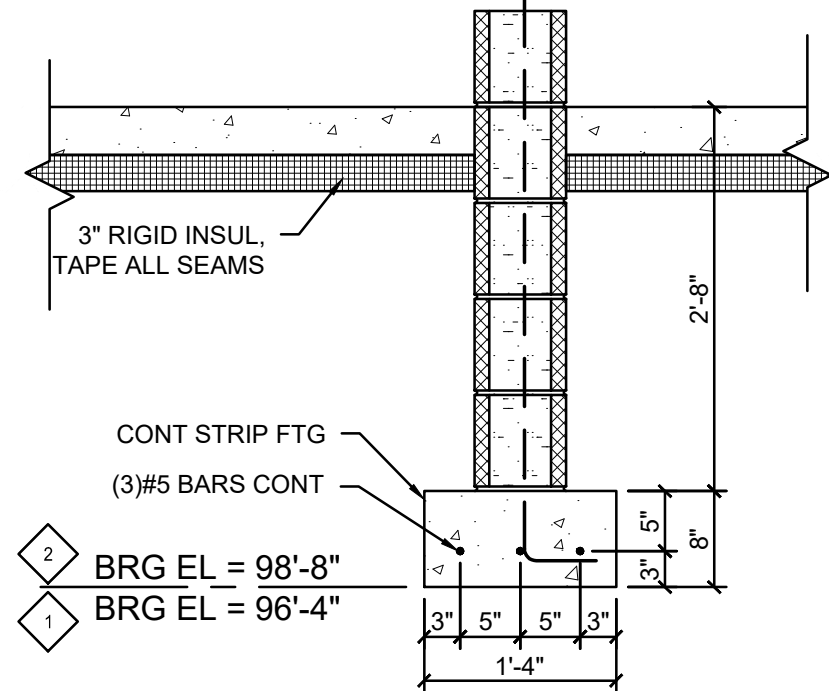


THICKENED SLAB SECTION
SCALE: 1" = 1'-0"

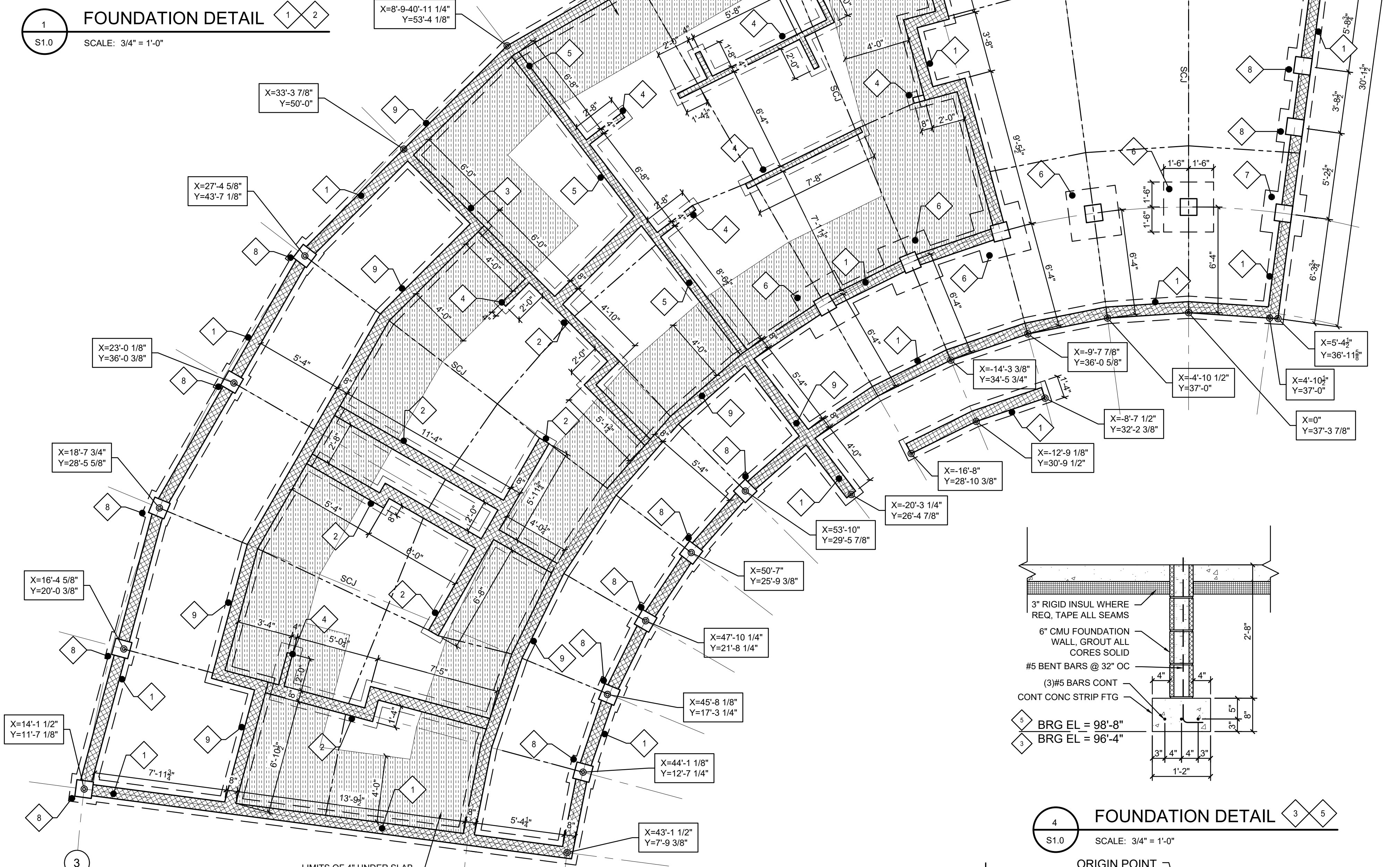
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 PLOTTING SCALE: RET. F.B. ACAD FILE:

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
NORTH TOILET ROOM ADDITION SECTIONS & DETAILS		
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>
DE. BY: DWM	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: LTP	APP. BY: DWM	
STDS.	SHEET 27 OF 40	A
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-27	12.0
SCALE: AS SHOWN		

ADD ALTERNATE #1

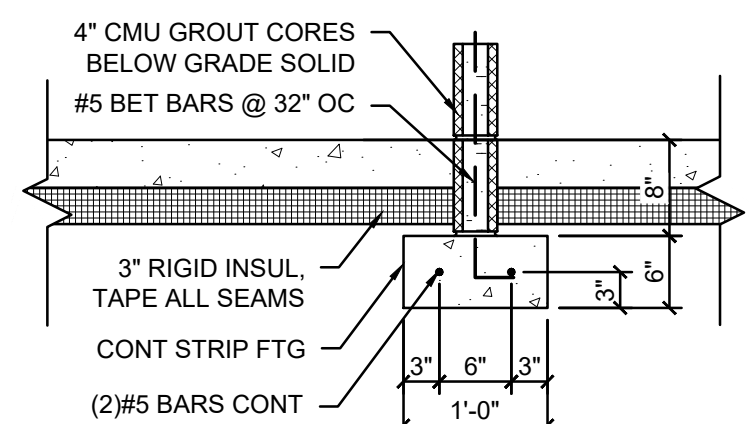


1 FOUNDATION DETAIL SCALE: 3/4" = 1'-0"

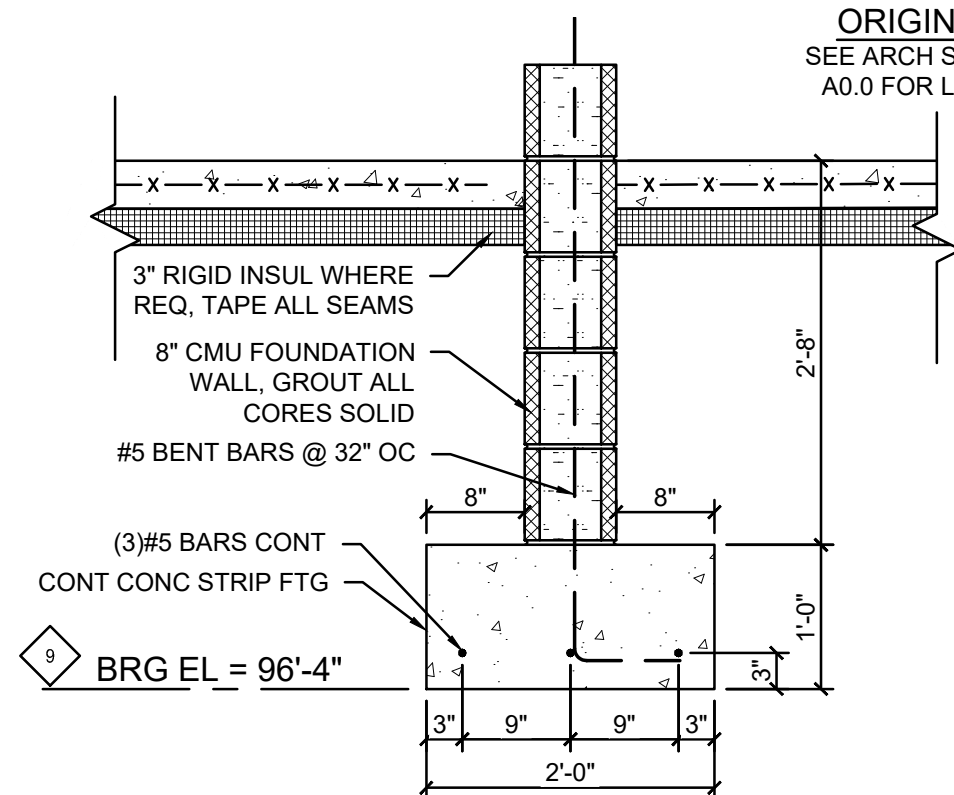


North FOUNDATION PLAN SCALE: 1/4" = 1'-0"

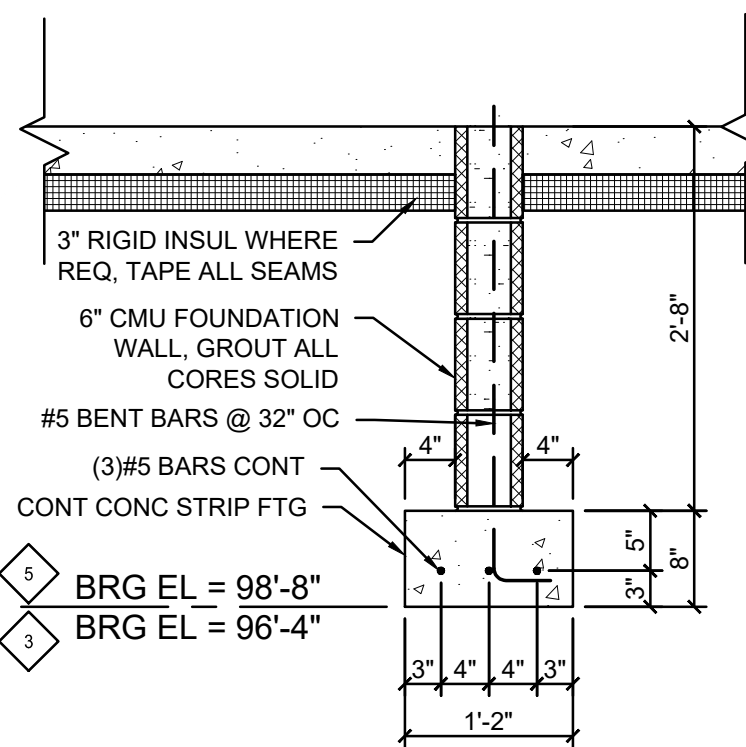
MASONRY LINTEL SCHEDULE				
WALL WIDTH	OPENING	LINTEL SIZE	REINFORCING BARS	END BEARING
6"	TO 6'-8"	6"x8"	(1) #4	0'-8"
	TO 4'-0"	8"x8"	(2) #4	8"
8"	4'-1" TO 6'-0"	8"x16"	(1) #5 T & B	8"
	6'-0" TO 8'-0"	8"x16"	(2) #4 T & B	16"
	8'-0" TO 10'-0"	8"x16"	(1) #6 T & B	16"
	10'-0" TO 12'-0"	8"x16"	(1) #7 T & B	16"



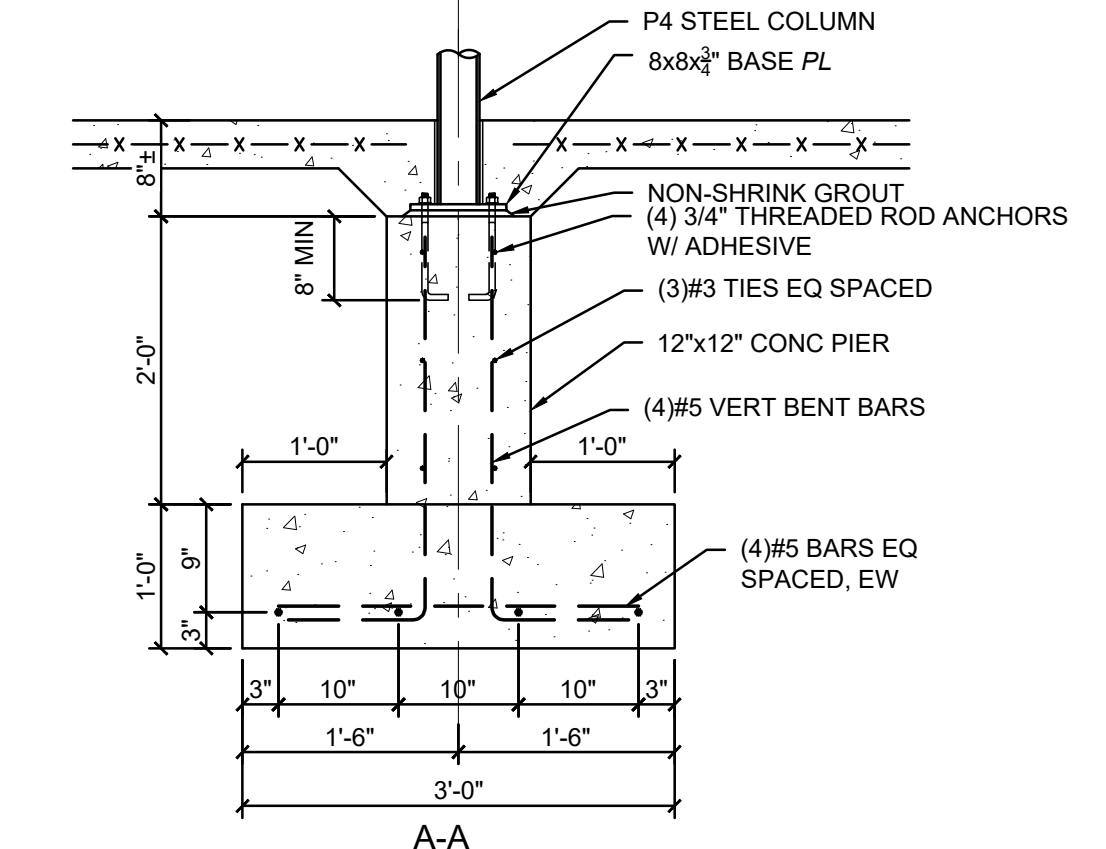
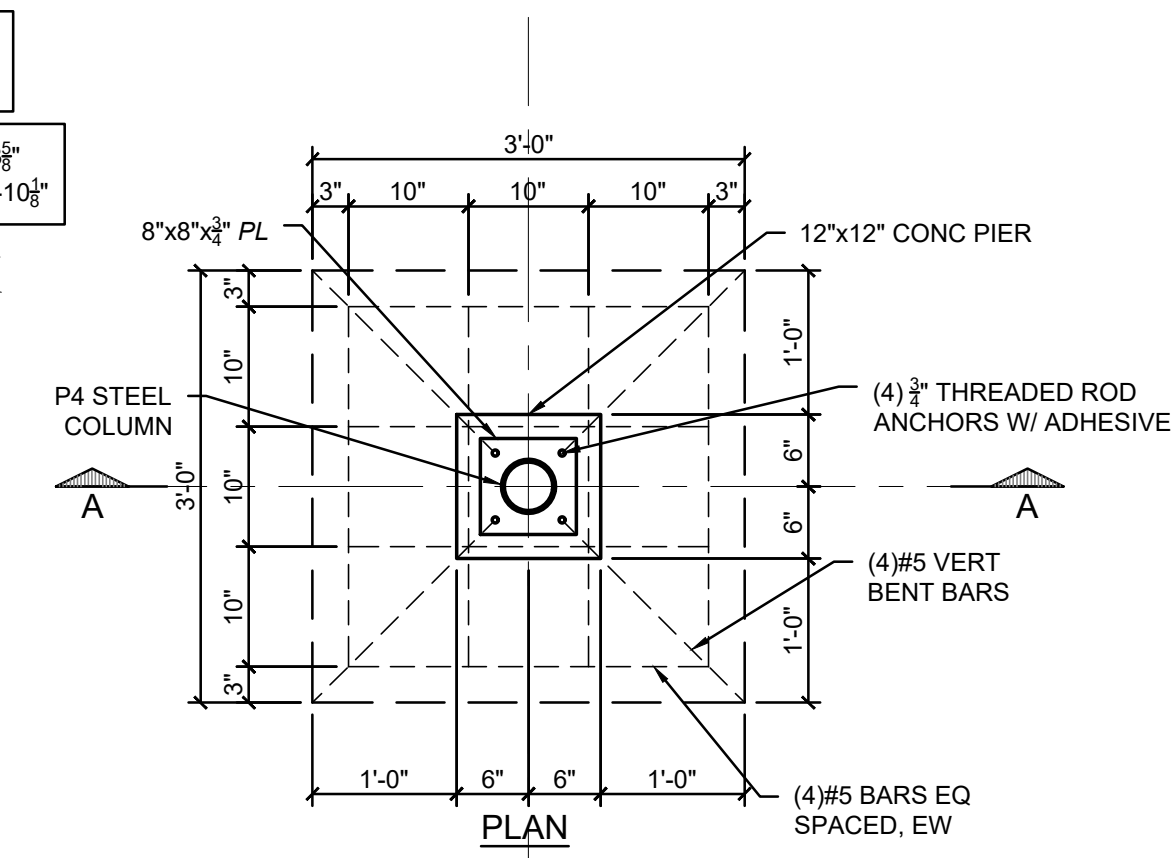
5 FOUNDATION DETAIL SCALE: 3/4" = 1'-0"



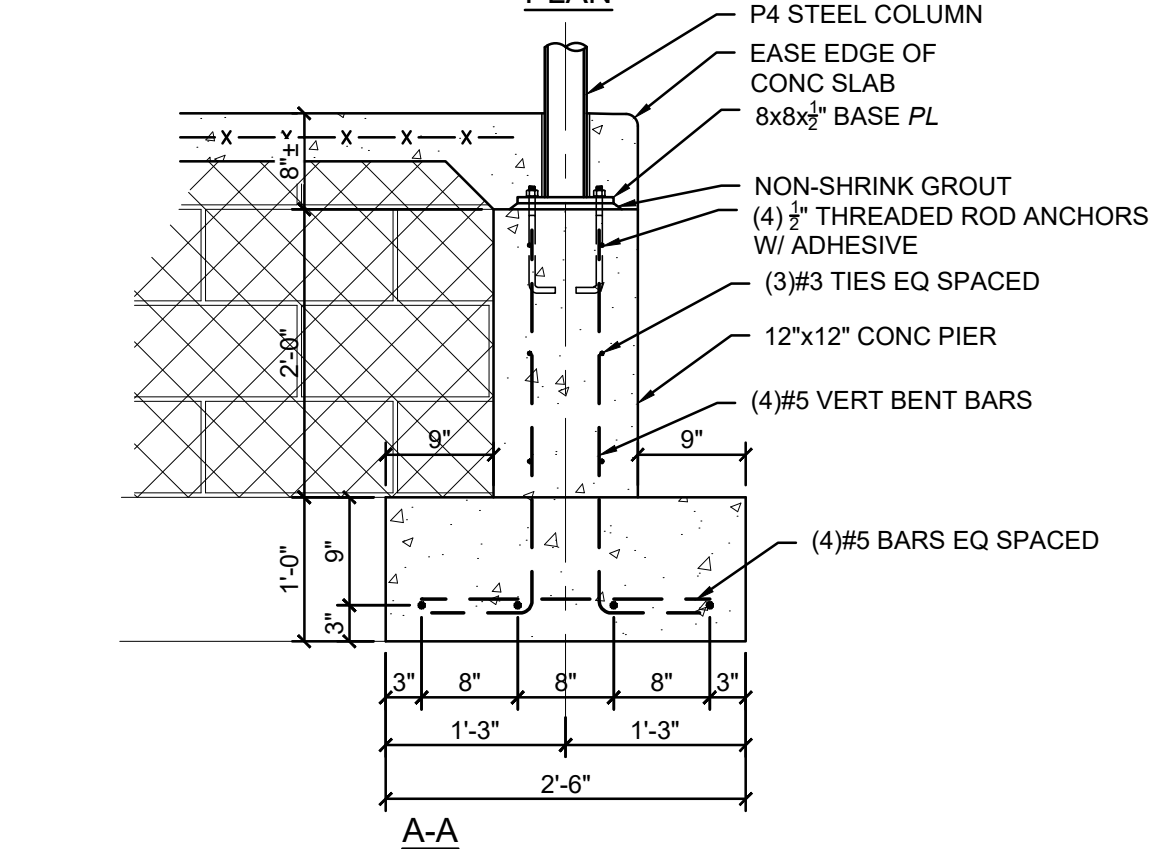
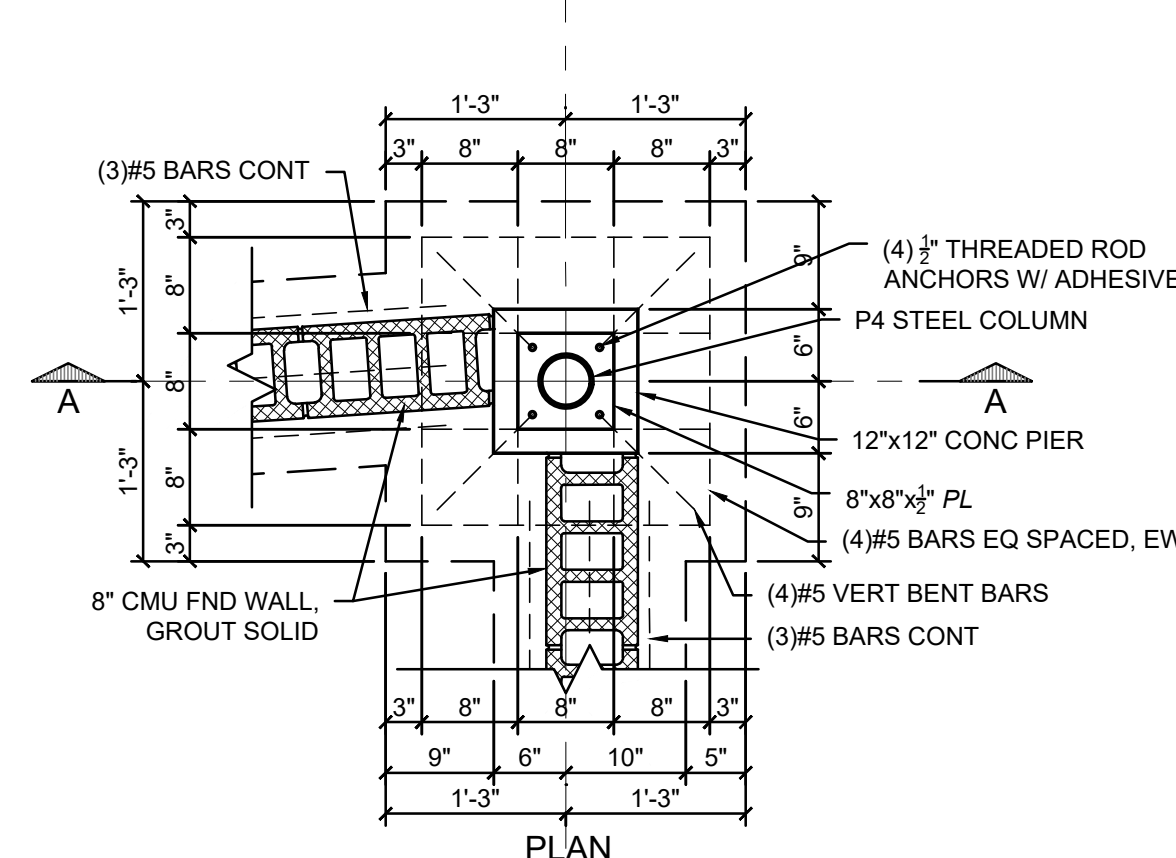
6 FOUNDATION DETAIL SCALE: 3/4" = 1'-0"



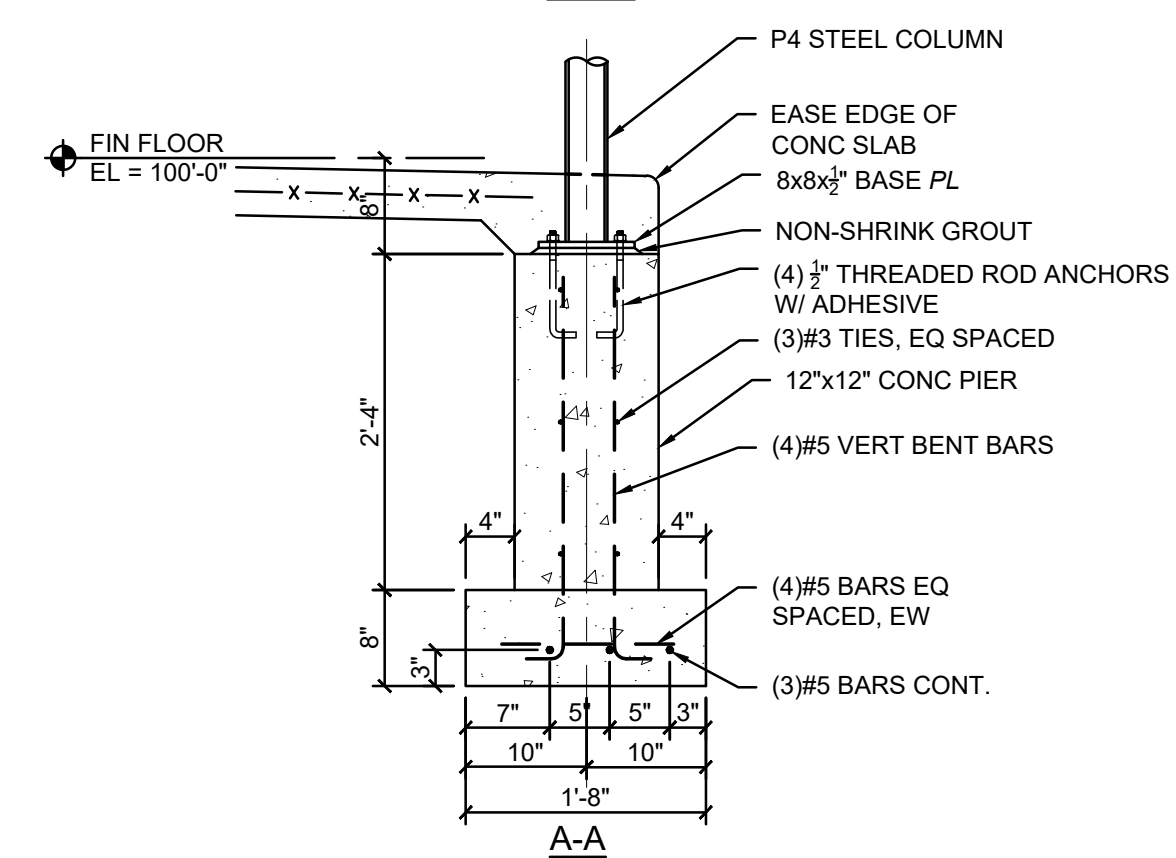
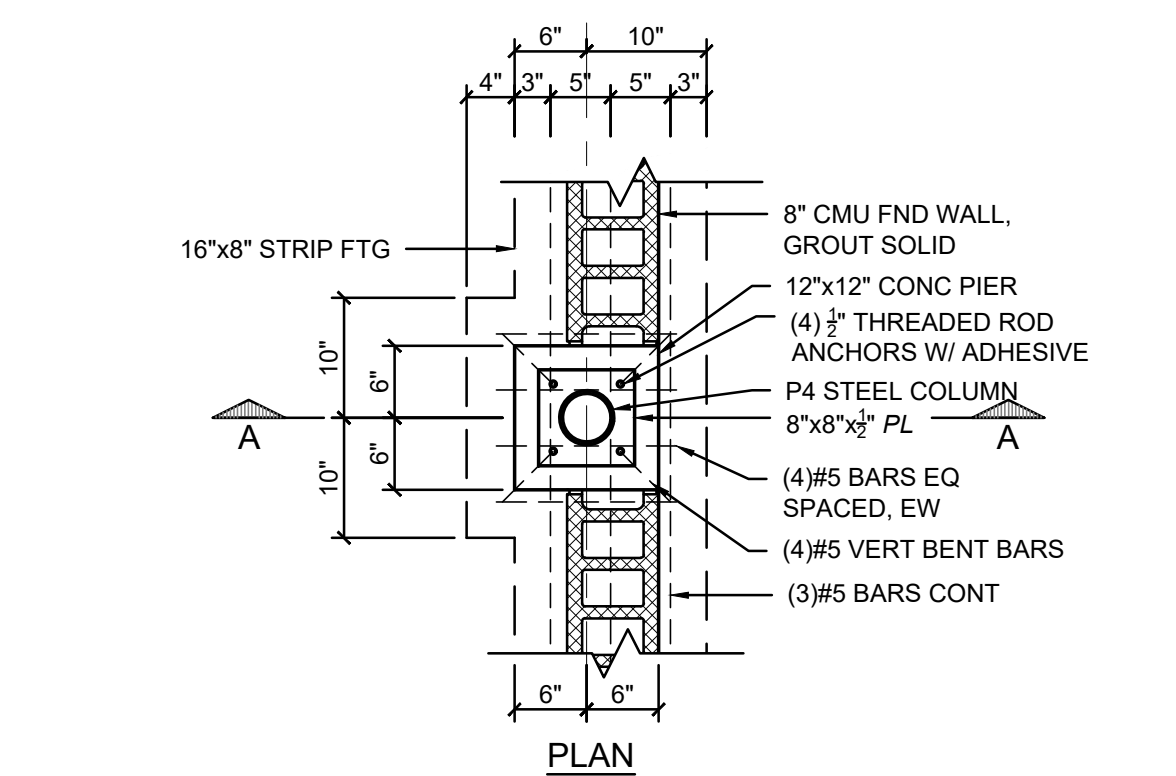
4 FOUNDATION DETAIL SCALE: 3/4" = 1'-0"



2 FOUNDATION DETAIL SCALE: 3/4" = 1'-0"



3 FOUNDATION DETAIL SCALE: 3/4" = 1'-0"



7 FOUNDATION DETAIL SCALE: 3/4" = 1'-0"

- CONCRETE AND ACCESSORIES:**
- ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 301 AND ACI 308. CONCRETE PLACED IN COLD WEATHER SHALL CONFORM TO ACI-308R. CONCRETE PLACED IN HOT WEATHER SHALL CONFORM TO ACI-308R.
 - CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
 - CONCRETE SHALL HAVE A SLUMP RANGE OF 2"-4".
 - CONCRETE SUBJECT TO FREEZE/THAW CYCLES SHALL HAVE AN AIR CONTENT OF 5%-7% BY VOLUME PER ASTM C260.
 - FINE AGGREGATE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C33.
 - CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO OWNER FOR REVIEW AND APPROVAL.
 - NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107 AND BE PREMIKED AND CONSIST OF COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, CEMENT, WATER REDUCING AGENT AND PLASTICIZING AGENTS CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTHS OF 2,400 PSI IN 48 HOURS AND 1,000 PSI IN 58 DAYS.
 - CONCRETE REINFORCING STEEL SHALL CONFORM TO ASTM A615 AND HAVE A YIELD STRENGTH OF 60 ksi. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW AND APPROVAL.
 - EPOXY FOR ANCHOR BOLTS AND REINFORCING STEEL SHALL BE HILTI-HY-200 EPOXY INJECTABLE MORTAR. INSTALL PER MANUFACTURERS INSTRUCTIONS.
 - THREADED ANCHOR RODS SHALL BE HILTI HAS-R ANCHOR RODS (PICK TYPE FOR PROJECT) - HAS-E CARBON STEEL ZINC COATED, HAS-B HIGH STRENGTH STEEL, HAS-R 304 STAINLESS STEEL, HAS-R 316 STAINLESS STEEL.
 - PLYWOOD FORMWORK SHALL BE CONSTRUCTED OF 5/4" DOUGLAS FIR SOUND SHEETS WITH CLEAN, TRUE EDGES. STEEL FORMS SHALL BE SMOOTH, TRUE AND UNDAMAGED. ALL FORMWORK SHALL BE STIFFENED OR BRACED TO SUPPORT THE WEIGHT OF THE CONCRETE WITH MINIMUM DEFLECTION. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.
 - PROVIDE 3/4" CHAMFER STRIPS ON EXTERNAL CORNERS OF VISUALLY EXPOSED CONCRETE CORNERS.
 - SLAB EXPANSION JOINTS MAY BE SAW CUT.

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
DATE	DATE	DATE

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CENTRAL RESTROOM & CONCESSIONS
SAGINAW CHILDREN'S ZOO

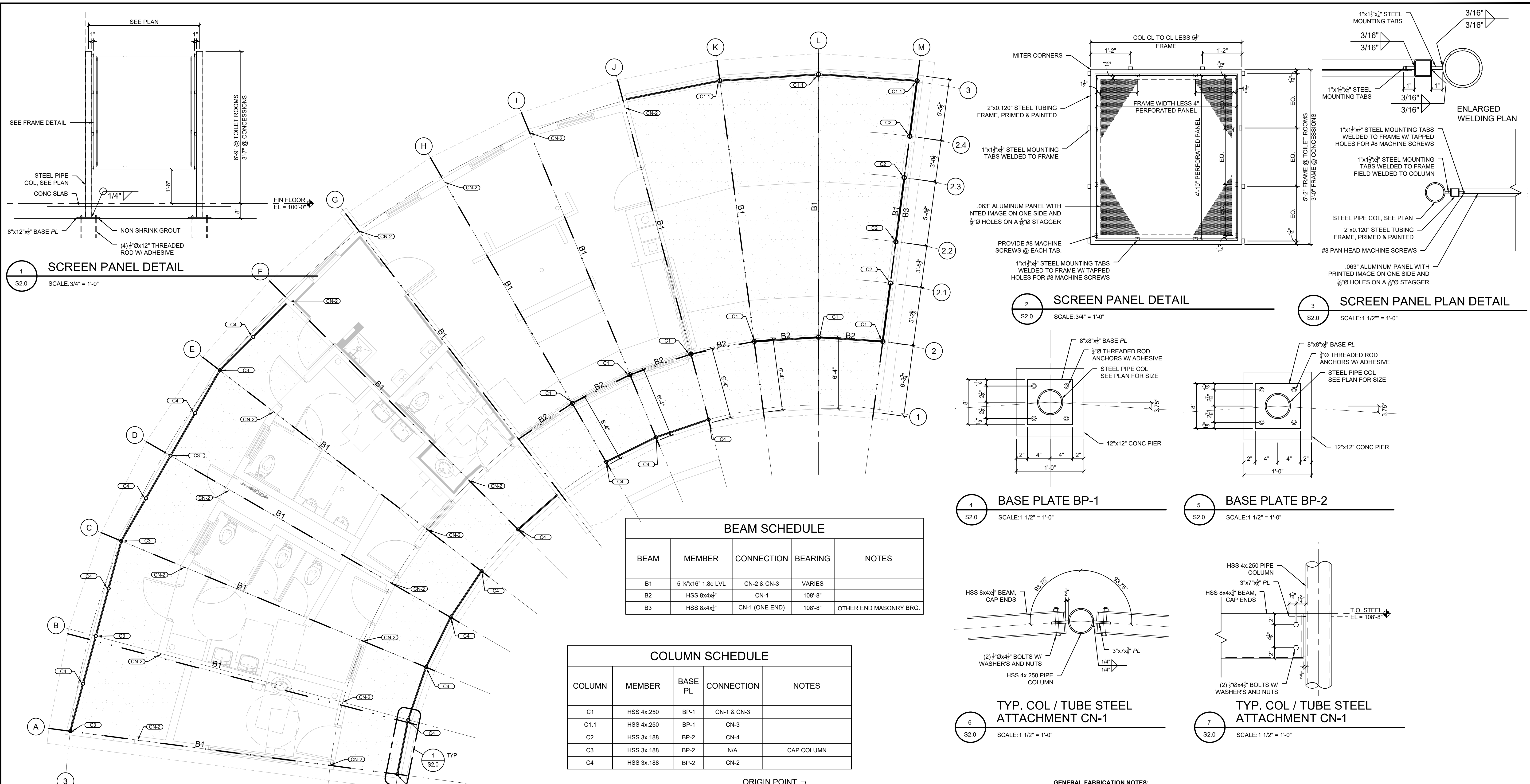
FOUNDATION PLAN & DETAILS

SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607 Tel.
989-754-4717 Fax.
989-754-4440
www.SpicerGroup.com

DE. BY: DWM	CH. BY: DSB	PROJECT NO.
DR. BY: DWM/JWL	APP. BY: DWM	131928SG2022

STDS.	SHEET 28 OF 40	S
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-28	1.0

09/16/2022 10:00:00 AM: Spicor\chdm\jwl\p\131928SG2022\FD\131928SG2022.FDW ACAD FILE: F.B. PLOT FILE: F.B. PLOT SCALE:



1 SCREEN PANEL DETAIL
SCALE: 3/4" = 1'-0"

2 SCREEN PANEL DETAIL
SCALE: 3/4" = 1'-0"

3 SCREEN PANEL PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

4 BASE PLATE BP-1
SCALE: 1 1/2" = 1'-0"

5 BASE PLATE BP-2
SCALE: 1 1/2" = 1'-0"

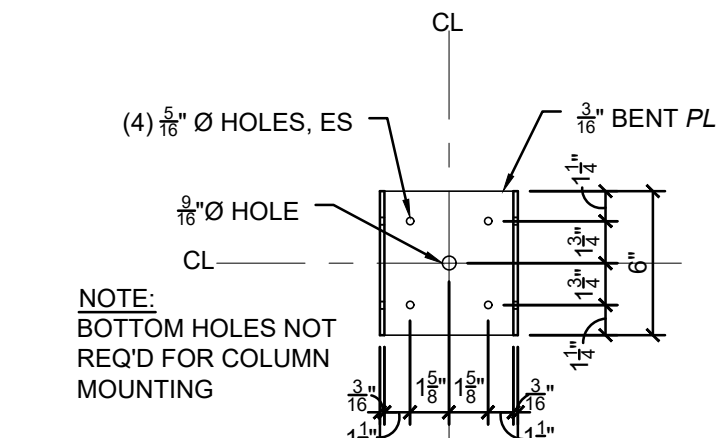
BEAM SCHEDULE				
BEAM	MEMBER	CONNECTION	BEARING	NOTES
B1	5 1/4"x16" 1.8e LVL	CN-2 & CN-3	VARIABLE	
B2	HSS 8x4x3/8	CN-1	108'-8"	
B3	HSS 8x4x3/8	CN-1 (ONE END)	108'-8"	OTHER END MASONRY BRG.

COLUMN SCHEDULE				
COLUMN	MEMBER	BASE PL	CONNECTION	NOTES
C1	HSS 4x.250	BP-1	CN-1 & CN-3	
C1.1	HSS 4x.250	BP-1	CN-3	
C2	HSS 3x.188	BP-2	CN-4	
C3	HSS 3x.188	BP-2	N/A	CAP COLUMN
C4	HSS 3x.188	BP-2	CN-2	

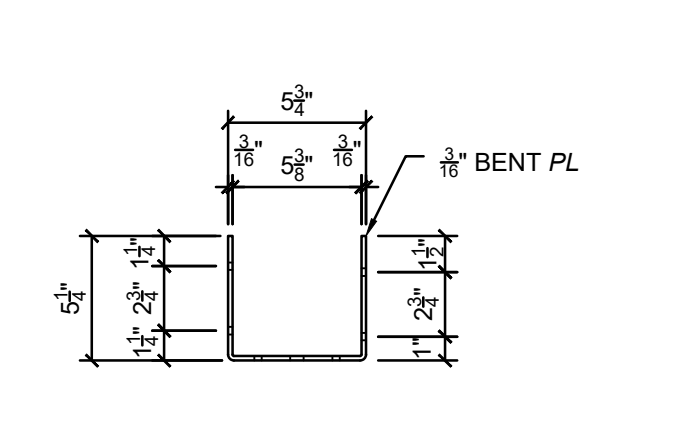
6 TYP. COL / TUBE STEEL ATTACHMENT CN-1
SCALE: 1 1/2" = 1'-0"

7 TYP. COL / TUBE STEEL ATTACHMENT CN-1
SCALE: 1 1/2" = 1'-0"

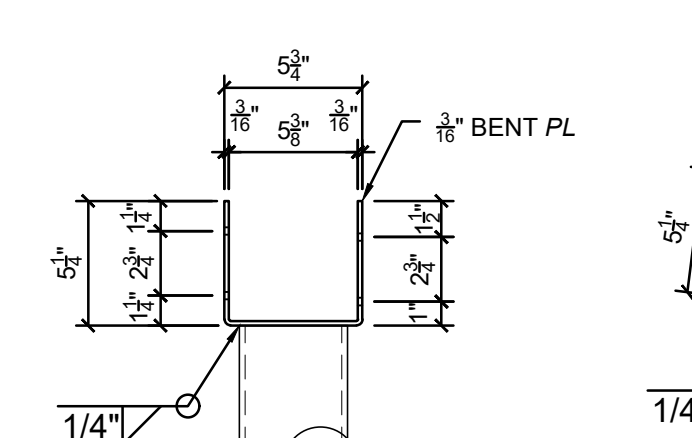
FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



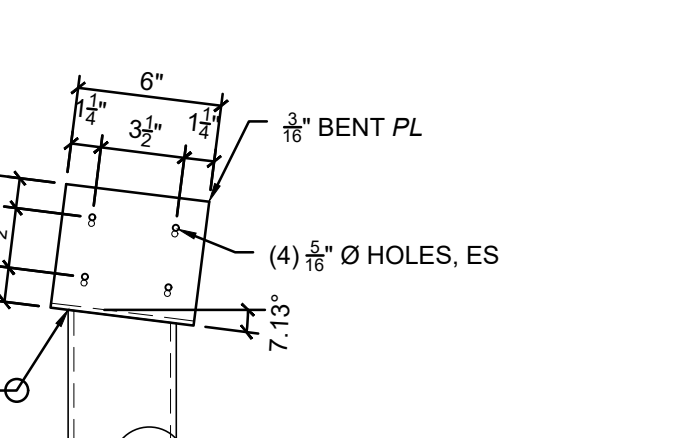
8 CONNECTION CN-2 TOP
SCALE: 1 1/2" = 1'-0"



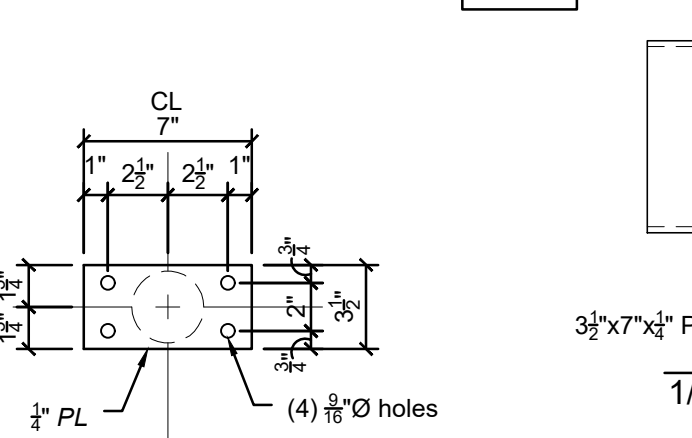
9 CONNECTION CN-2 FRONT
SCALE: 1 1/2" = 1'-0"



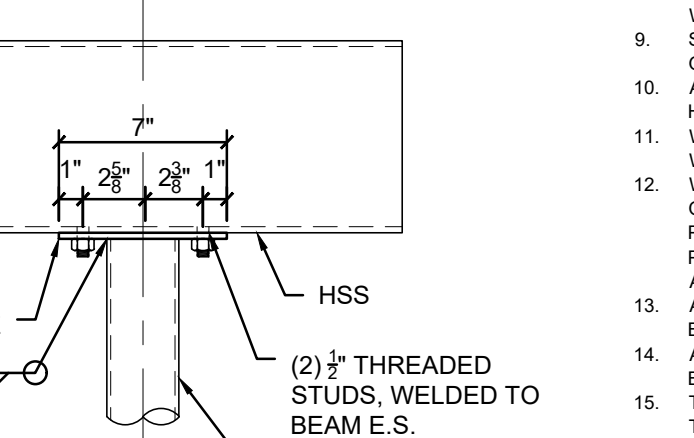
10 CONNECTION CN-3 FRONT
SCALE: 1 1/2" = 1'-0"



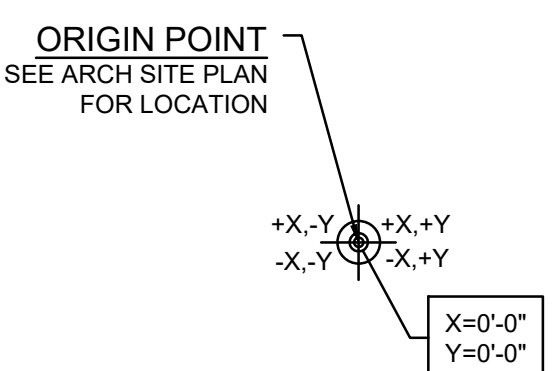
11 CONNECTION CN-3 SIDE
SCALE: 1 1/2" = 1'-0"



12 CONNECTION CN-4 TOP
SCALE: 1 1/2" = 1'-0"



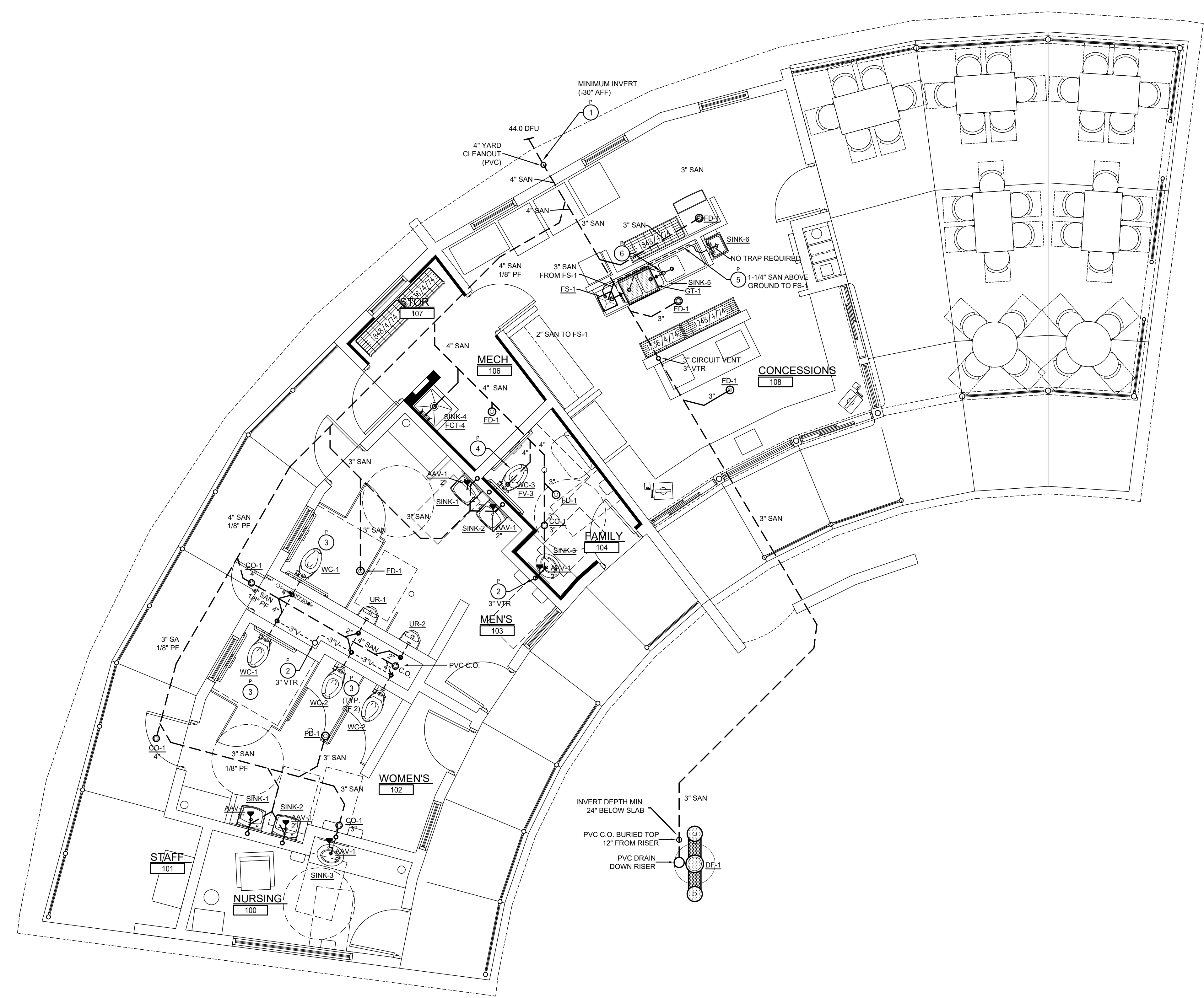
13 CONNECTION CN-4 SIDE
SCALE: 1 1/2" = 1'-0"



- GENERAL FABRICATION NOTES:**
- ROLLED ANGLES, C-CHANNELS, PLATES AND BARS SHALL CONFORM TO ASTM A-36.
 - ROLLED BEAMS SHALL CONFORM TO ASTM A-992.
 - CIRCULAR PIPE SHALL CONFORM TO ASTM A-53, GRADE B.
 - SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A-500, GRADE B.
 - CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A-615, GRADE 60.
 - ALL STEEL MEMBERS SHALL BE NEW UNLESS OTHERWISE NOTED.
 - EXPOSED EDGES ON STEEL FABRICATIONS SHALL HAVE CORNERS ROUNDED TO 1/16" RADIUS BY GRINDING OR OTHER APPROVED METHOD.
 - ALL HOLES SHALL BE PUNCHED OR DRILLED. FLAME CUTTING OF HOLES WILL NOT BE PERMITTED UNLESS SPECIFIED BY THE ENGINEER.
 - STRUCTURAL GRADE HEX BOLTS SHALL BE ASTM F3125 (HOT DIP GALVANIZED).
 - AFTER FABRICATION IS COMPLETE ALL STEEL FABRICATED ITEMS SHALL BE HOT DIP GALVANIZED PER ASTM A-123.
 - WELDING SHALL CONFORM TO THE CURRENT AWS D1.1 "STRUCTURAL WELDING CODE-STEEL".
 - WELDS SHALL BE MADE ONLY BY CERTIFIED WELDERS AND WELDING OPERATORS WHO HAVE BEEN PREVIOUSLY QUALIFIED BY TESTS AS PRESCRIBED IN THE CURRENT AWS "STRUCTURAL WELDING CODE-STEEL".
 - PROOF OF CERTIFICATION SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL UPON REQUEST BEFORE ANY WELDING IS PERMITTED TO BEGIN.
 - AFTER FLAME CUTTING OF ANY STEEL MEMBER REMOVE ALL METAL BURRS BEFORE ERECTING.
 - ALL STEEL SURFACES SHALL BE CLEANED OF PAINT, OIL, DEBRIS, ETC., BEFORE WELDING FOR STEEL CONNECTIONS SHOWN ON THE DRAWINGS.
 - THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ANS/AISC-360 "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS AND BRIDGES".
 - SPlicing OF STRUCTURAL STEEL IS PROHIBITED EXCEPT AS DETAILED.
 - STRUCTURAL STEEL SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE PAINTED WITH ONE COAT OF APPROVED PRIMER AND APPROVED FINISH COAT TO MATCH EXISTING STEEL. COLOR SELECTION SHALL BE DETERMINED BY OWNER.

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
STEEL FRAMING PLAN & DETAILS		
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
DE. BY: DWM	CH. BY: DSB	PROJECT NO.
DR. BY: DWM/JL	APP. BY: DWM	131928SG2022
STDS.	SHEET 29 OF 40	S
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-29	2.0

09/16/2022 10:00:00 Spicer Group 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com



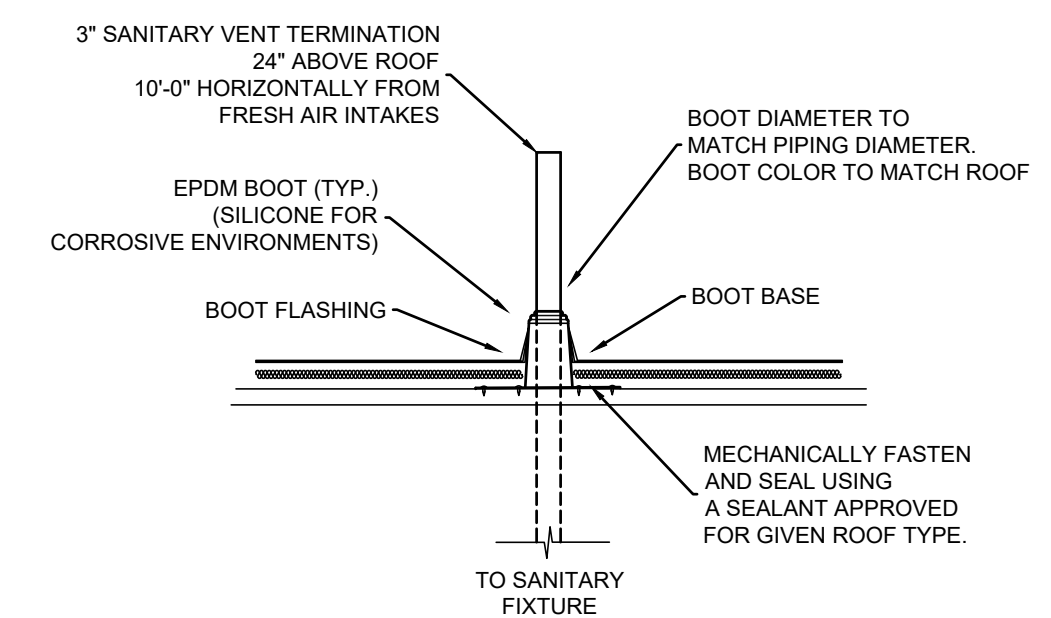
PLUMBING & SANITARY NOTES:

GENERAL:

WATER CLOSETS WC-1 & WC-2 SHALL BE WALL-HUNG REAR OUTLET. WC-3 SHALL BE FLOOR MOUNT, BOTTOM-OUTLET.

KEYNOTES:

- 1 FIELD VERIFY INVERT ELEVATIONS WITH SITE PLAN. CONTRACTOR MAY DETERMINE FINAL DEPTH. TYPICAL UPSTREAM STARTING B.O. PIPE APPROX. 12" BELOW FINISHED FLOOR.
- 2 3" COMMON VENT WITH 3" VENT-THRU-ROOF (VTR).
- 3 WALL HUNG WATER CLOSET WHERE MECHANICAL CHASE ALLOWS ACCESS.
- 4 FLOOR MOUNTED WATER CLOSET IN LOCATION WITH NO MECHANICAL CHASE.
- 5 SINK-5 & GT SHALL DRAIN TO FLOOR SINK, FS-1. PIPE SINK-6 TO FLOOR SINK (UNTRAPPED) USING 1-1/4" PVC ABOVE FLOOR ON WALL TO FLOOR SINK.



**SANITARY VENT PIPING
BOOT DETAIL**
NO SCALE

SANITARY FLOOR PLAN
SCALE: 1/4" = 1'-0"

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
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<p>CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO</p>		
<p>MECHANICAL SANITARY FLOOR PLAN</p>		
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>
DE. BY: ASW	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: ASW	APP. BY: DWM	
STDS.	SHEET 30 OF 40	M
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-30	1.1
SCALE AS SHOWN		

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 PLOTTING SCALE: F.B.
 ACAD FILE: F.B.

UNDERGROUND SANITARY POTABLE AND HEATING HOT WATER PIPING NOTES:

GENERAL:

THE NEW BUILDING SPACES HAVE OPEN JOIST DESIGN AND PIPING SHALL NOT BE RUN EXPOSED OVERHEAD.

ALL UNDERGROUND DOMESTIC POTABLE PIPING SHALL BE CONTINUOUS (NO UNDERGROUND JOINTS) USING UPONOR AQUA PEX ASTM F876/877 OR EQUAL. PIPING SHALL BE INSULATED WITH 1" ARMAFLEX CLOSED CELL FOAM OR UPONOR PRE-INSULATED PIPING USING ASHRAE 90.1-2013 COMPLIANT CLOSED-CELL FOAM.

ALL UNDERGROUND HEATING HOT WATER BRANCH PIPING FEEDING RADIANT FLOOR HEATING ZONES SHALL BE INSULATED WITH MINIMUM 3/4" ARMAFLEX CLOSED CELL FOAM. SEE PLAN FOR SIZES.

EACH UNDERGROUND PEX RUN-OUT PIPING (CW, HW, HWS, HWR) SHALL INCLUDE ISOLATION BALL VALVES AT MAIN PIPING HEADER AND INCLUDE A WINTERIZATION BLOW-OUT VALVE ON ONE OR MORE ENDS FOR BLOW-OUT AS NEEDED. SLOPE HARD PIPING TO DRAINAGE VALVES (1/8" PF).

IMPORTANT: CONTRACTOR SHALL PROVIDE A VERY ACCURATE AS-BUILT (MARKED-UP FULL SIZE PRINT) WITH DEPTH AND TYPE OF PIPING (CW, HW, OR HWS, HWR). AS A RULE RUN-OUT PEX PIPING SHALL BE BETWEEN 6" AND 12" BELOW SLAB.

KEYNOTES:

- 1 EACH UNDERGROUND FEED PIPING (POTABLE OR HEATING HOT WATER) MUST HAVE AN ISOLATION BALL VALVE AT ONE OR MORE ENDS. SEE WATER SERVICE, BACKFLOW PROTECTION, AND CW PIPING DETAIL FOR MORE INFORMATION.
- 2 EACH UNDERGROUND HYDRONIC BRANCH HWS & HWR PIPING FEED MUST HAVE AN ISOLATION BALL VALVE. SEE BOILER PIPING & DOMESTIC & HYDRONIC HEATING SYSTEM SCHEMATIC FOR MORE INFORMATION AND DETAIL.
- 3 ALL HYDRONIC HWS & HWR PIPING FEED SHALL RUN OUT UNDER THE SLAB TO RADIANT FLOOR HEATING ZONE AND ENTER THE SLAB. ALL UNDERGROUND HWS/R PIPING SHALL BE INSULATED WITH MINIMUM 3/4" ARMAFLEX CLOSED-CELL INSULATION. FIBERGLASS INSULATION IS NOT APPROVED FOR UNDERGROUND USE. SEE SLEEVING REQUIREMENTS BELOW.
- 4 CONCRETE SLAB THROUGH PENETRATIONS AND ENTER AND EXITS INTO RADIANT HEATING SLABS. CONTRACTOR SHALL SLEEVE ALL SLAB THROUGH-PENETRATIONS (FOR CW/HW, & HWS/HWR) AND PENETRATIONS WHERE TUBING ENTERS AND EXITS THE SLAB. THROUGH PENETRATIONS SHOULD BE SCHEDULE 40 PVC. WHERE TUBING ENTERS RADIANT FLOOR HEATING SLAB EXTEND CLOSED-CELL INSULATION CONCRETE BOUNDARY.

TOTAL COLD WATER FIXTURE UNIT CALCS:

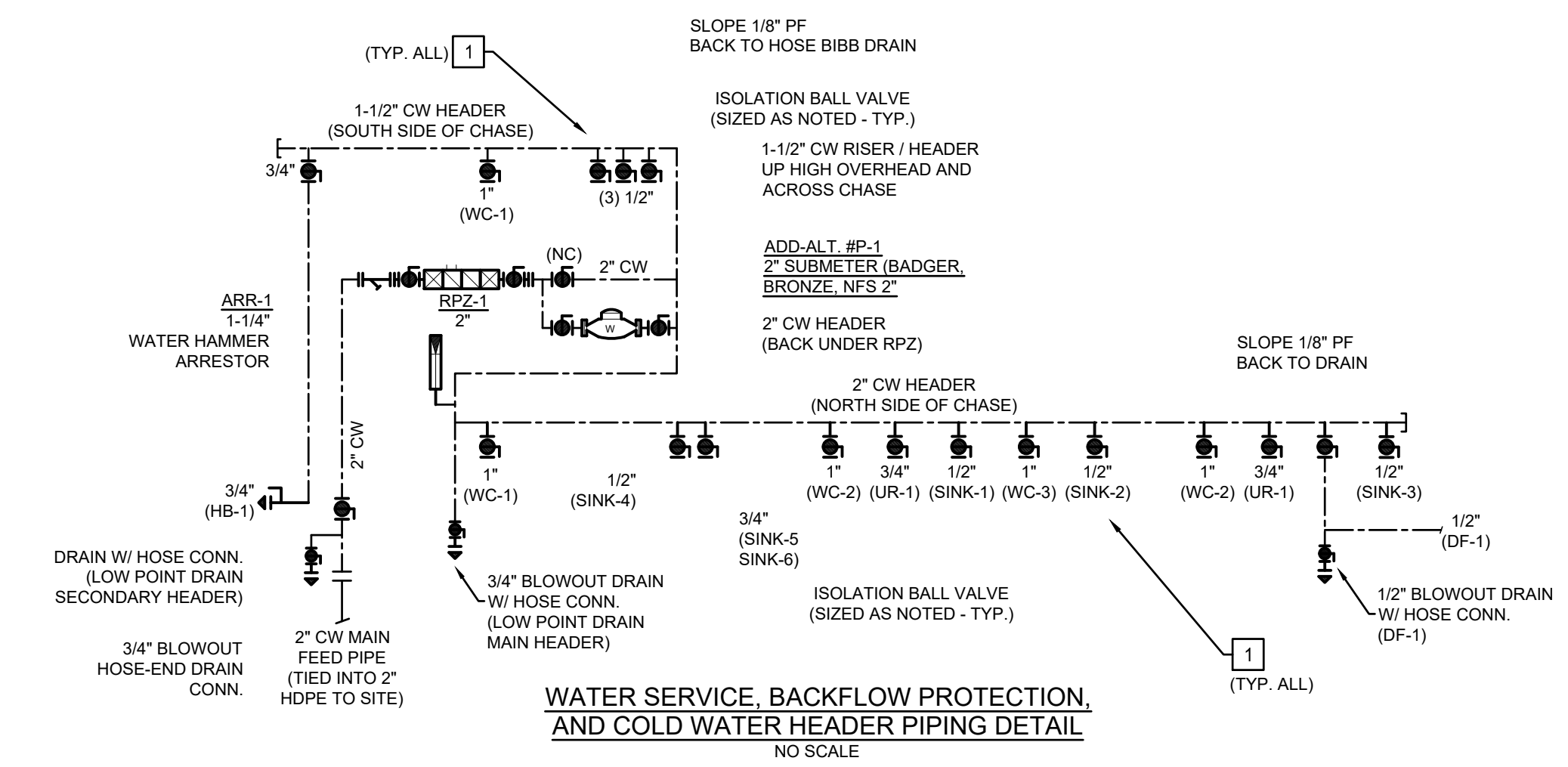
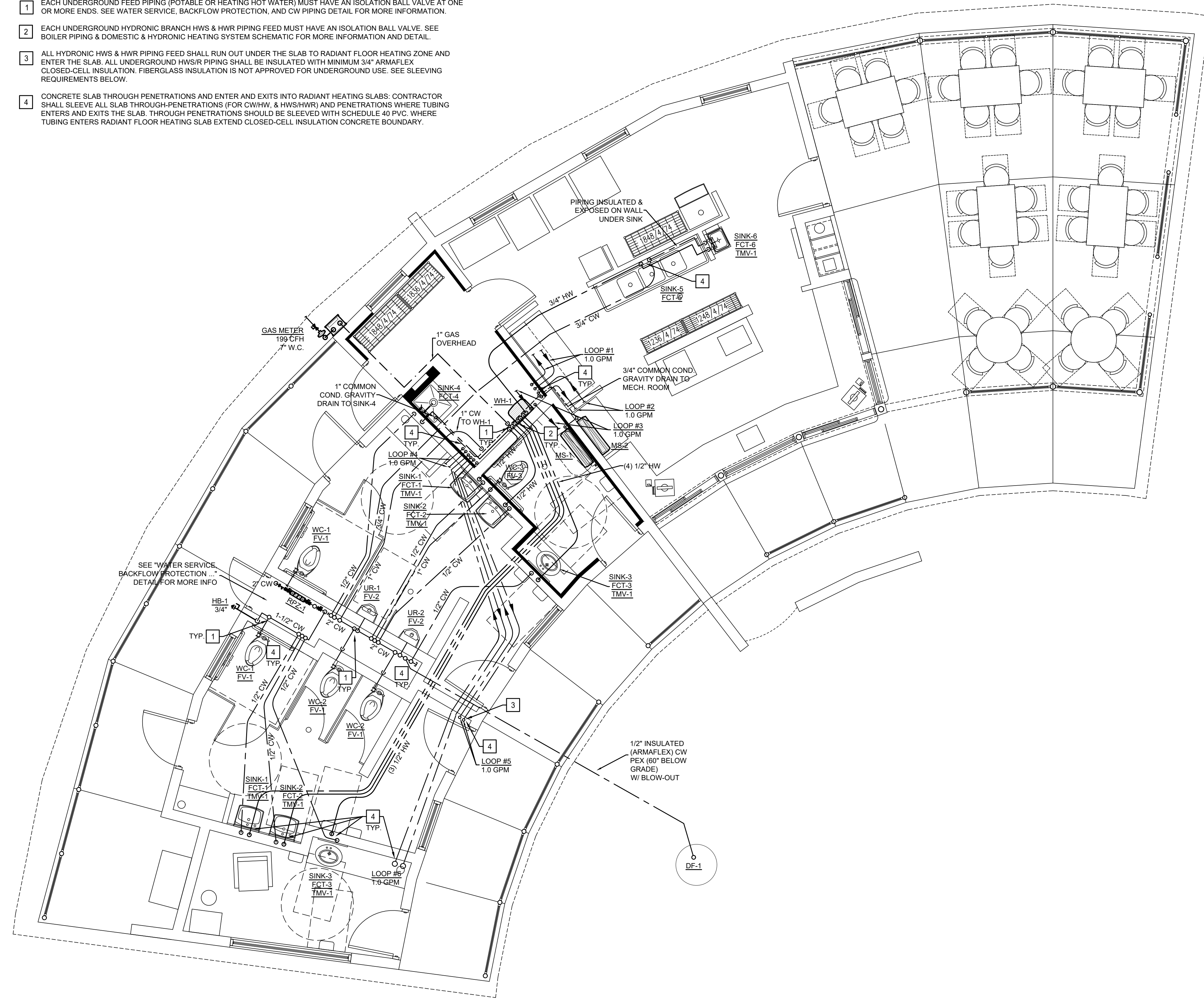
LAV SINKS: 7 x 2.0 = 14.0
 MOP SINK: 1 x 3.0 = 3.0
 3-COMP: 1 x 4.0 = 4.0
 HOSE BIBB: 1 x 3.0 = 3.0
 WCs: 5 x 10 = 50.0
 URs: 2 x 5.0 = 10.0
 DF: 1 x 1.0 = 1.0

TOTAL = 85.0 (63.0 GPM MAX. PEAK)

HOT WATER FIXTURE UNIT CALCS:

LAV SINKS: 7 x 1.5 = 10.5 (3.5 GPM MAX.)
 MOP SINK: 1 x 2.25 = 2.25 (2.0 GPM MAX.)
 3-COMP: 1 x 3.0 = 3.0 (3.0 GPM MAX.)

TOTAL = 15.75 (8.5 GPM x 0.6 = 5.0 GPM APPROX. DEMAND)



PLUMBING & UNDERGROUND HYDRONIC HEATING HOT WATER PIPING FLOOR PLAN
 SCALE: 1/4" = 1'-0"

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	DATE
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MECHANICAL PLUMBING & UNDERGROUND PIPING FLOOR PLAN		
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
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STDS.	SHEET 31 OF 40	M
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-31	1.2
SCALE: AS SHOWN		

09/16/2022 10:00:00 Spicer Group, Inc. 2022/09/16 10:00:00 AM 131928SG2022.dwg 131928SG2022.dwg
 PLOTTING SCALE: RET. F.B.

MECHANICAL PIPING NOTES:

GENERAL:

ALL HEATING PEX TUBING SHALL BE UPONOR PEX-A WITH OXYGEN BARRIER.

THE FIRST 24" AROUND PERIMETER OF FOUNDATION WALL SHALL BE INSULATED WITH A MINIMUM R-10 BLUE-BOARD INSULATION. ALL OTHER TUBING AREAS SHALL BE INSULATED WITH A MINIMUM R-5 BLUE BOARD INSULATION. SUSPEND 6x6 STEEL MESH SO THAT TOP OF RADIANT TUBING IS MID-SLAB. FASTEN TUBING TO GRID USING HEAVY DUTY TWIST-TIES.

HYDRONIC SYSTEM SHALL BE FILLED WITH 35% PROPYLENE GLYCOL.

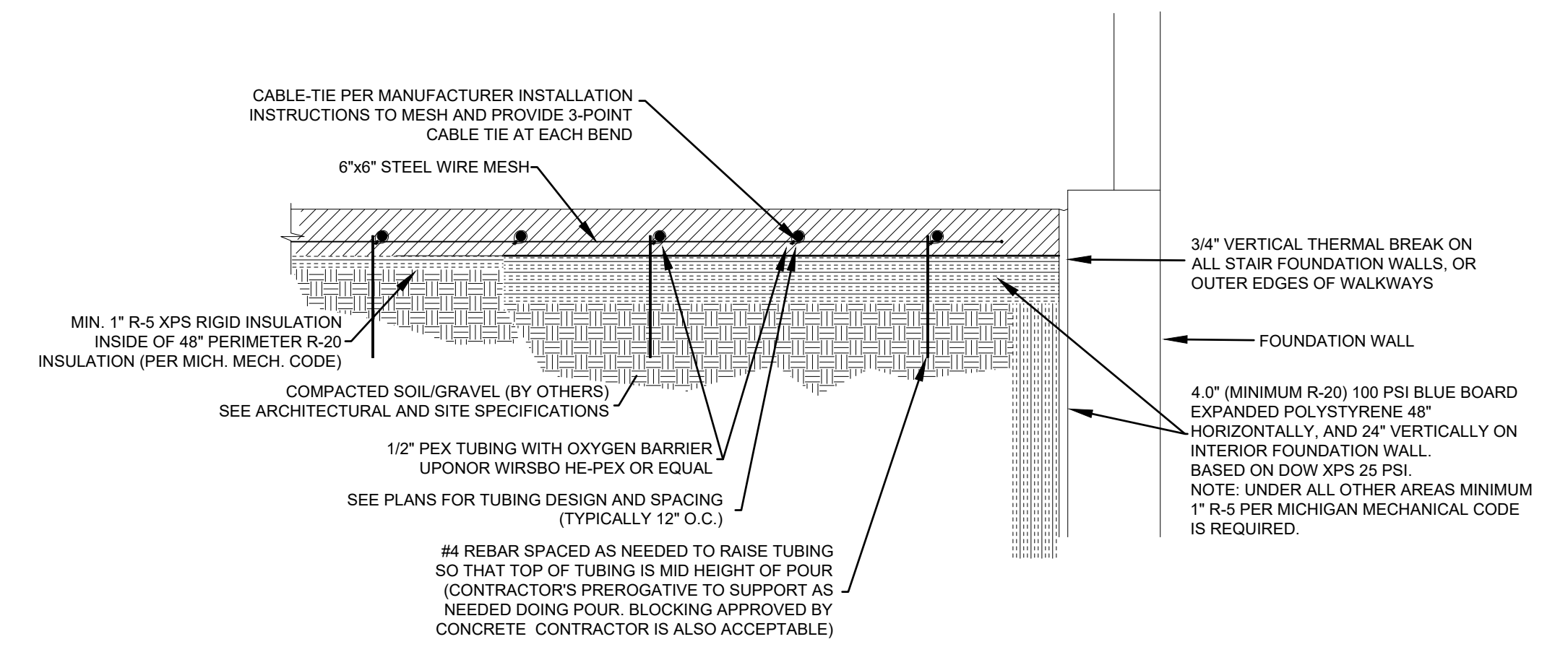
ALL HWS/R PIPING SHALL HAVE ISOLATION VALVES. SEE BOILER PIPING & DOMESTIC & HYDRONIC HEATING SYSTEM SCHEMATIC FOR MORE INFORMATION AND DETAILS.

ALL HWR PIPING RETURNS TO SECONDARY LOOP SHALL BE PIPED IN PARALLEL AS SHOWN WITH CHECK VALVE AND CIRCUIT SETTER.

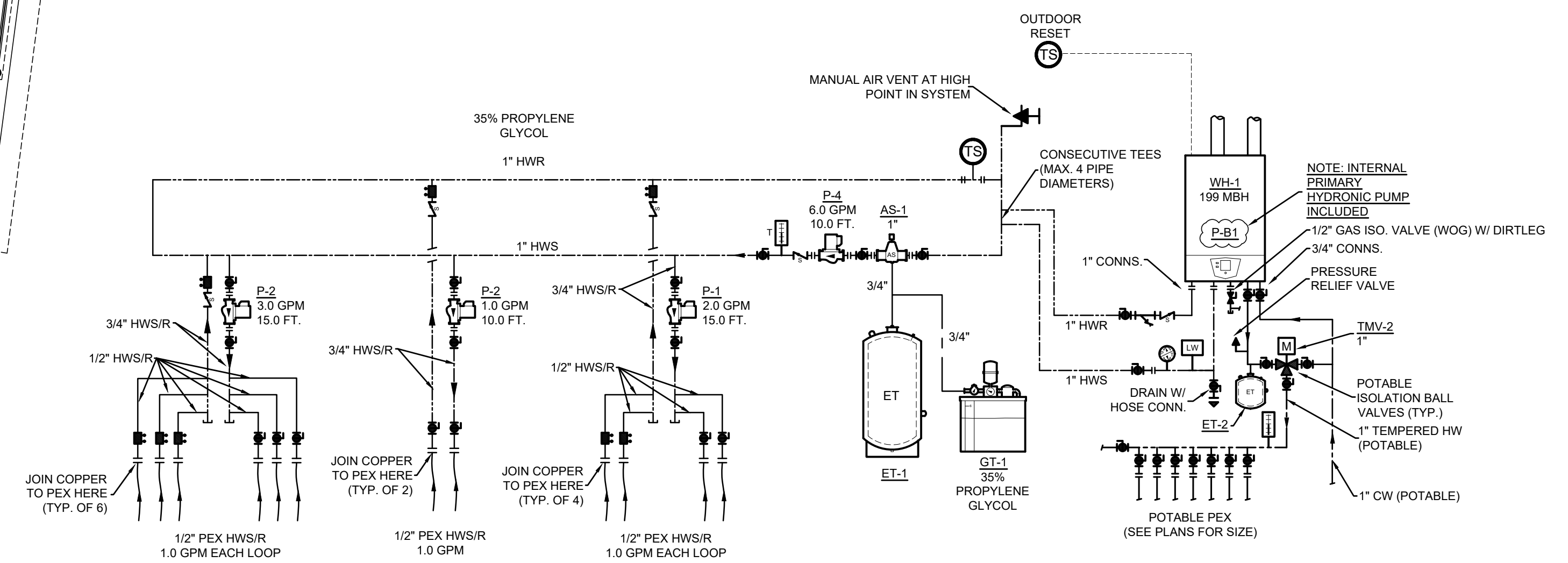
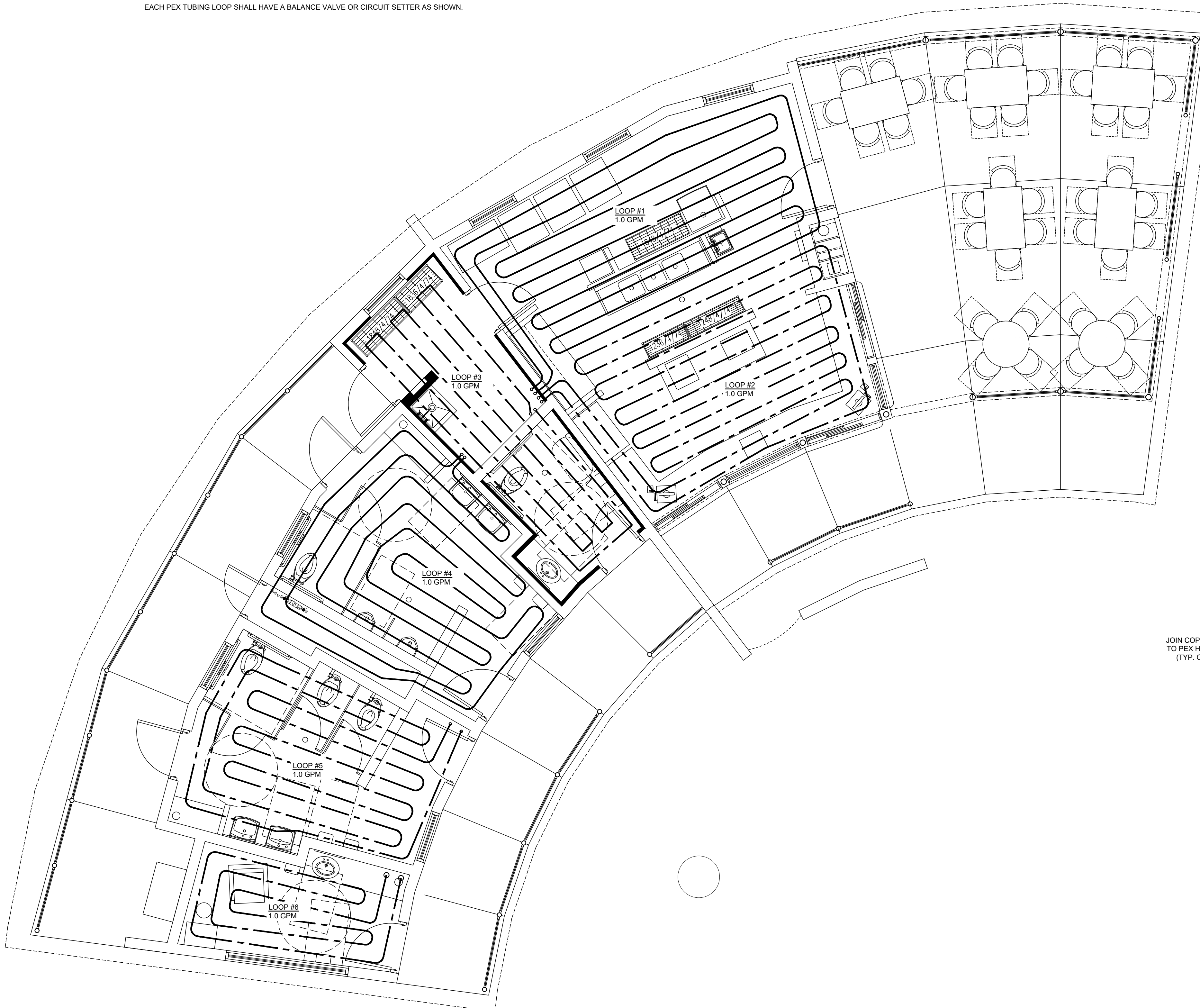
EACH PEX TUBING LOOP SHALL HAVE A BALANCE VALVE OR CIRCUIT SETTER AS SHOWN.

RADIANT TUBING SYSTEM INSTALLATION NOTES:

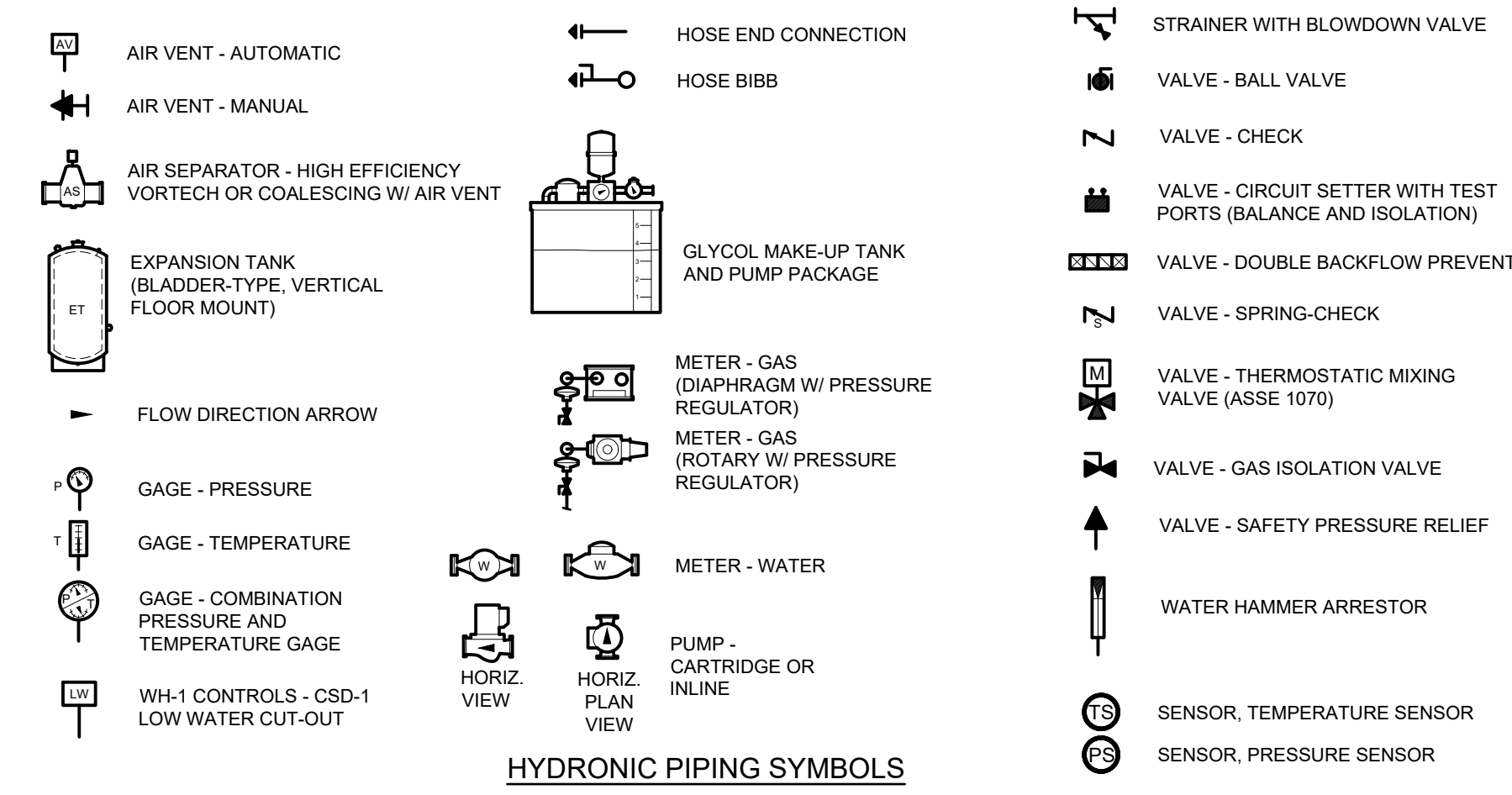
- INSTALL TUBING IN STRICT ACCORDANCE WITH UPONOR HE-PEX (OR EQUAL) INSTALLATION GUIDE.
- INSULATE USING R-20, 4" STANDARD 25 PSI EXPANDED POLYSTYRENE RIGID INSULATION UNDER THE FIRST 4'-0" OF SLAB HORIZONTALLY FROM FOUNDATION WALL AROUND EXTERIOR WALL OF TRUCK BAY AND OFFICE AREA. INSULATE THE INTERIOR FOUNDATION WALL AS REQUIRED BY ARCHITECTURAL PLANS. (SEE DETAIL NOTES BELOW FOR MORE INSULATION DATA).
- CABLE TIE RADIANT FLOOR TUBING TO 6"x6" STEEL MESH. CABLE TIE EACH RADIUS AT TOP AND SIDES TO PREVENT SHIFTING.
- SLEEVE TUBING AT CONCRETE FLOOR CONTROL JOINTS.
- TYPICAL RADIANT FLOOR SHALL USE 1/2" TUBING UNLESS LONG-RUN APPLICATIONS ARE SHOWN, THEN 3/4" TUBING SHALL BE INSTALLED.
- PRESSURIZE TUBING PER MICHIGAN MECHANICAL CODE. COMPLETE INSTALLATION OF TUBING AND MANIFOLD SHOULD BE COMPLETE. TUBING MUST BE INSPECTED BY AUTHORITY HAVING JURISDICTION PRIOR TO POURING CONCRETE.



RADIANT FLOOR TUBING IN CONCRETE DETAIL
NO SCALE



BOILER PIPING & DOMESTIC & HYDRONIC HEATING SYSTEM SCHEMATIC
NO SCALE



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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
MECHANICAL HVAC RADIANT FLOOR PLAN		
DE. BY: ASW	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: ASW	APP. BY: DWM	
STDS.	SHEET 32 OF 40	M
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-32	2.1
SCALE: AS SHOWN		

HVAC RADIANT PIPING PLAN
SCALE: 1/4" = 1'-0"

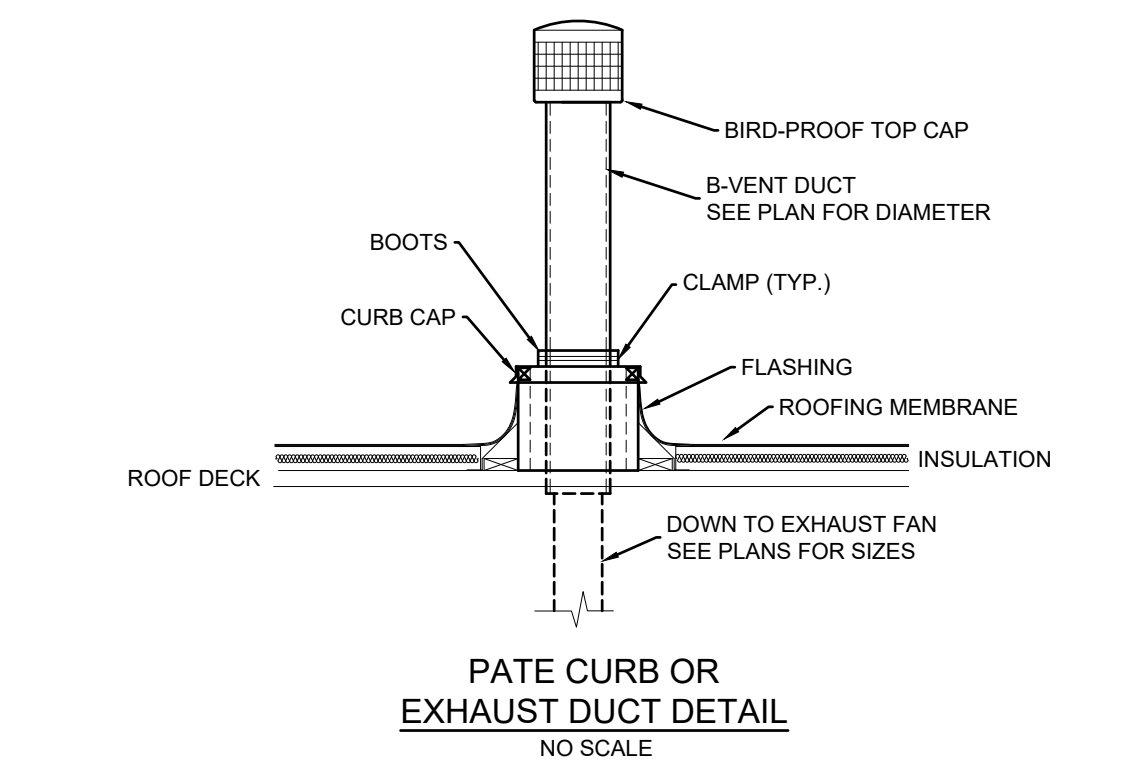
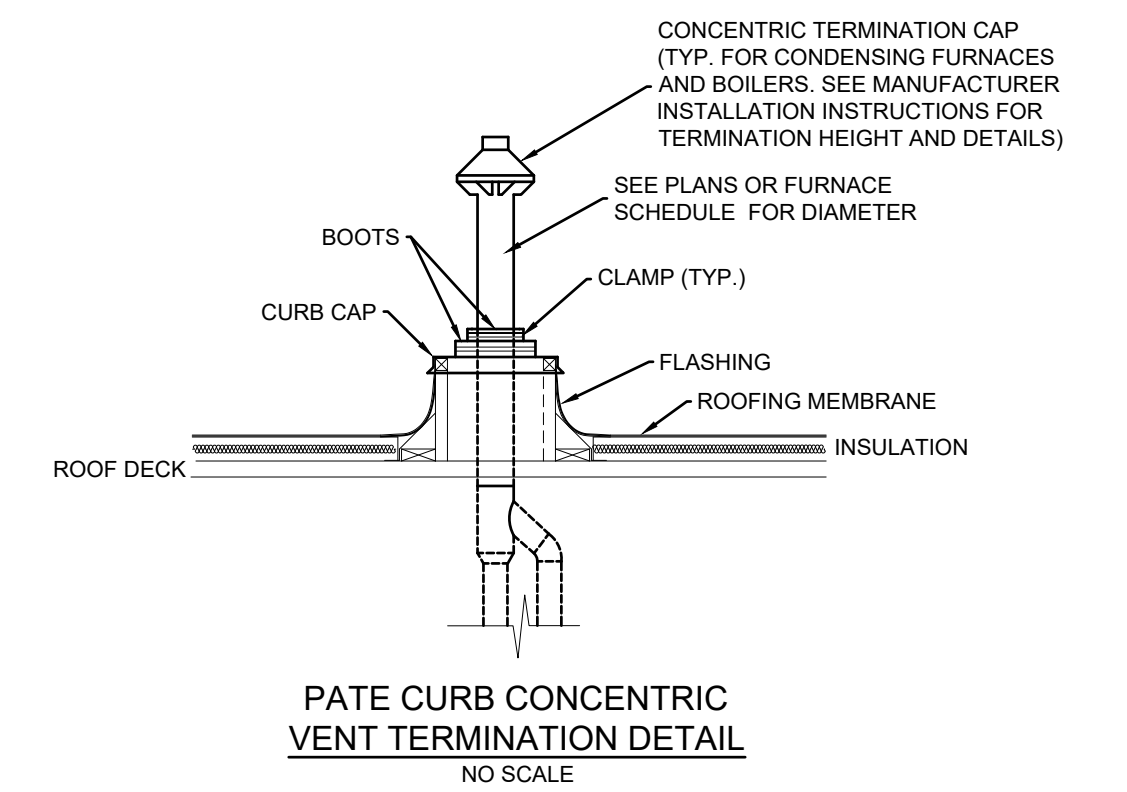
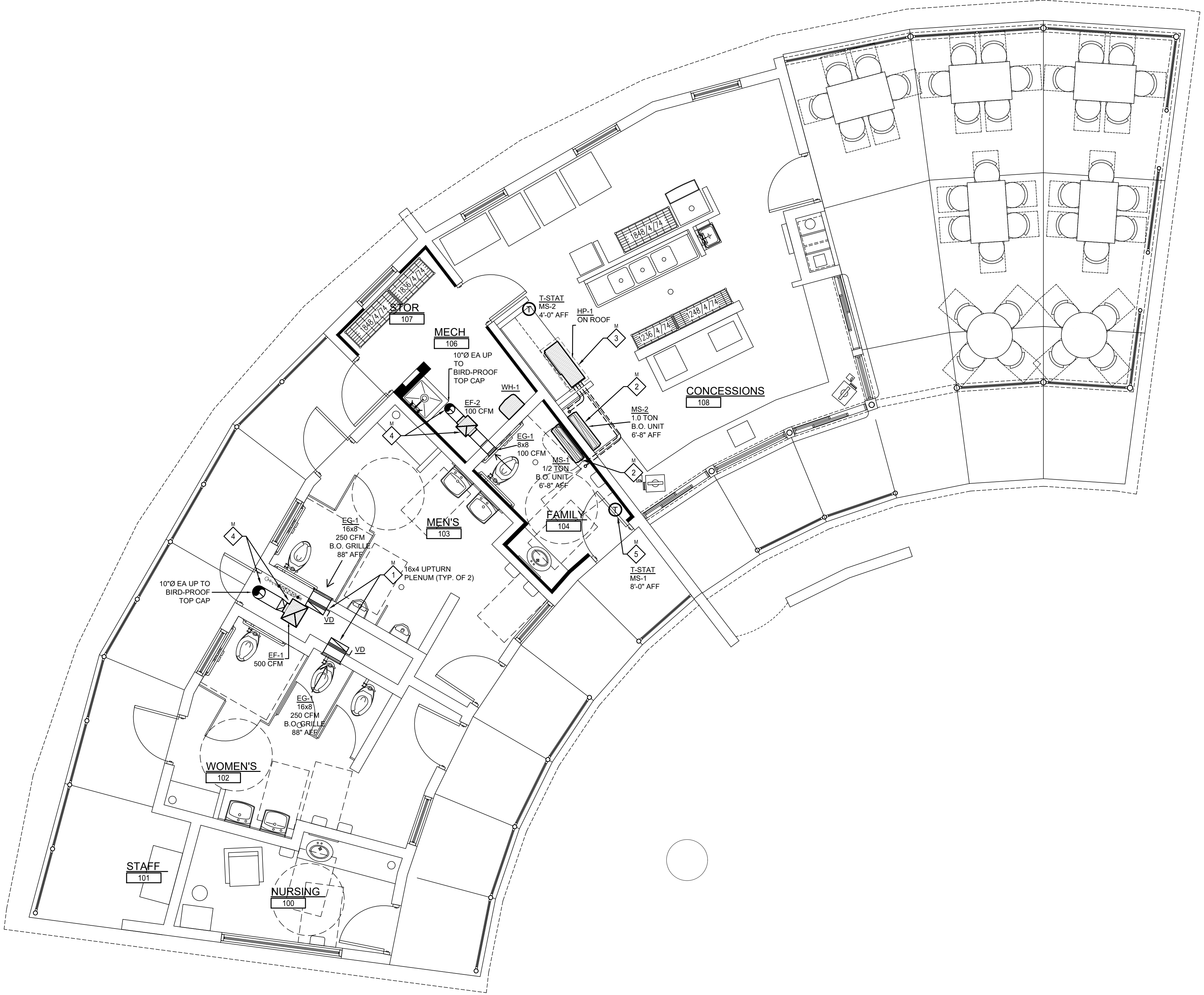
09/16/2022 11:00:00 Spicer Childrens Zoo/Restroom/Concessions.dwg 11/16/2022 10:51:14 AM 131928SG2022
 PLOTTING SCALE: RET. F.B. ACAD FILE:

MECHANICAL NOTES:

GENERAL:
ALL DUCTWORK SHALL BE INSTALLED PER SMACNA REQUIREMENTS AND THE 2015 MICHIGAN MECHANICAL CODE.

KEYNOTES:

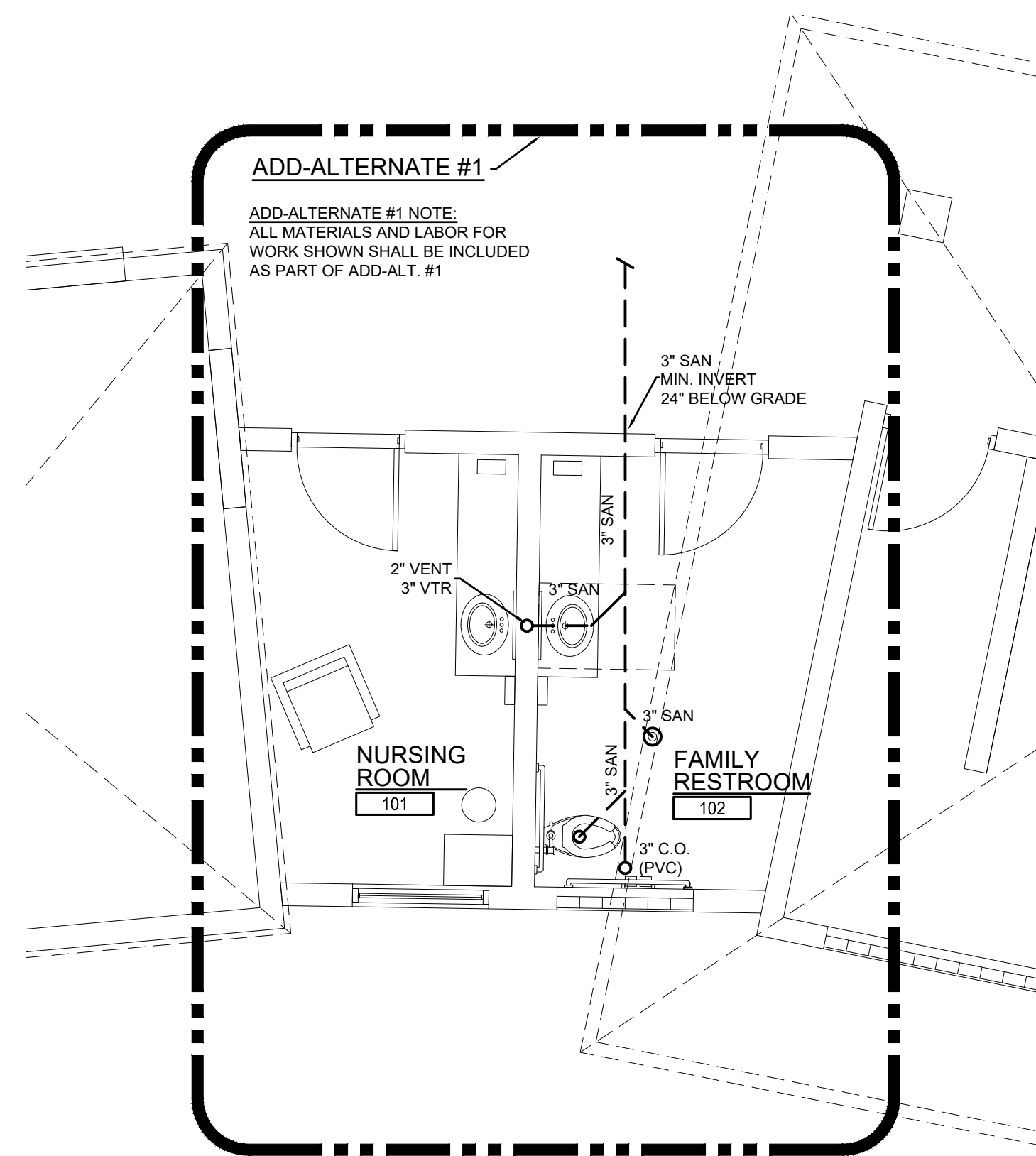
- 1 MOUNT BOTTOM OF EXHAUST GRILLES AT 8" AFF (MIN. 80" AFF). INSTALL UPTURN PLENUM ON REAR SIDE OF GRILLES TO ENSURE PRIVACY.
- 2 INSTALL (2) MINI-SPLITS UP HIGH ON WALL. PIPE LINESETS UP THRU ROOF THRU PATE CURB BOOTS. PIPE COMMON CONDENSATE AS SHOWN ON PLUMBING PLAN TO MECH. ROOM AND MOP SINK.
- 3 INSTALL MINI-SPLIT HEAT PUMP ON ROOF ON PITCHED ROOF ADJUSTABLE MOUNT LEGS (MIRO INDUSTRIES MODEL HD OR EQUAL). OPTIONAL MOUNT OPTION IS ON REAR EXTERIOR WALL. (COORDINATE W/ GARY HOCHTHANNER AND SPICER GROUP.)
- 4 MOUNT EXHAUST FANS EXPOSED IN MECH. ROOM OR CHASE AS SHOWN. PIPE EXHAUST UP THRU ROOF USING INSULATED DOUBLE-WALLED B-VENT THRU PITCHED 16x16 BY 18" TALL PATE CURB CUT DOWN FOR SLOPE, AND TERMINATE USING BIRD-PROOF TOP CAP.
- 5 IN FAMILY ROOM 104, INSTALL HARD-WIRED MINI-SPLIT T-STATS UNDER TAMPERPROOF CLEAR POLYCARBONATE COVERS AT 8'-0" AFF (NOT REACHABLE TO GENERAL PUBLIC).



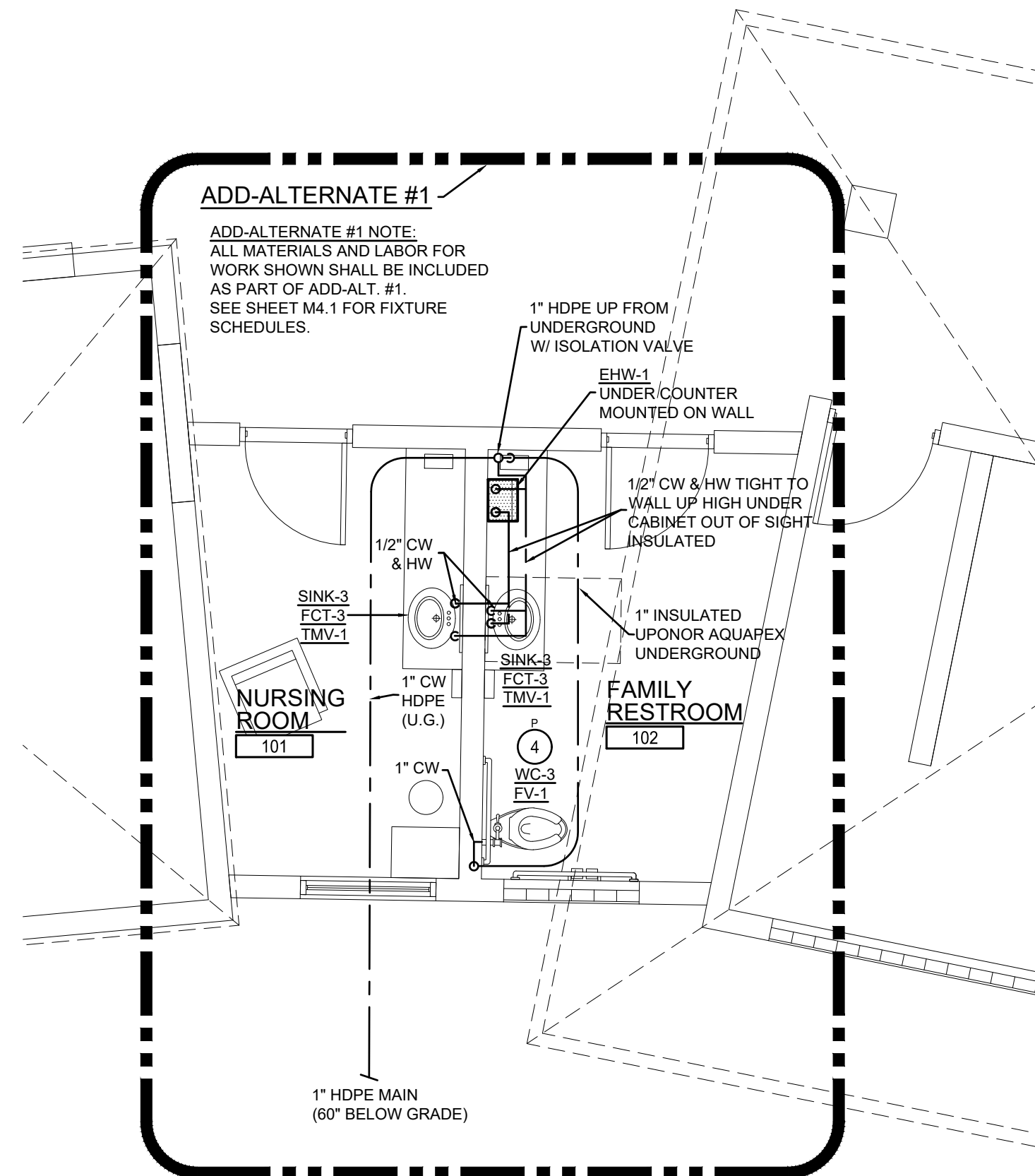
DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>		
<p>CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO</p>		
<p>MECHANICAL HVAC FLOOR PLAN</p>		
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>
DE. BY: ASW	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: ASW	APP. BY: DWM	
STDs.	SHEET 33 OF 40	M
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-33	2.2
SCALE AS SHOWN		

HVAC FLOOR PLAN
 SCALE: 1/4" = 1'-0"

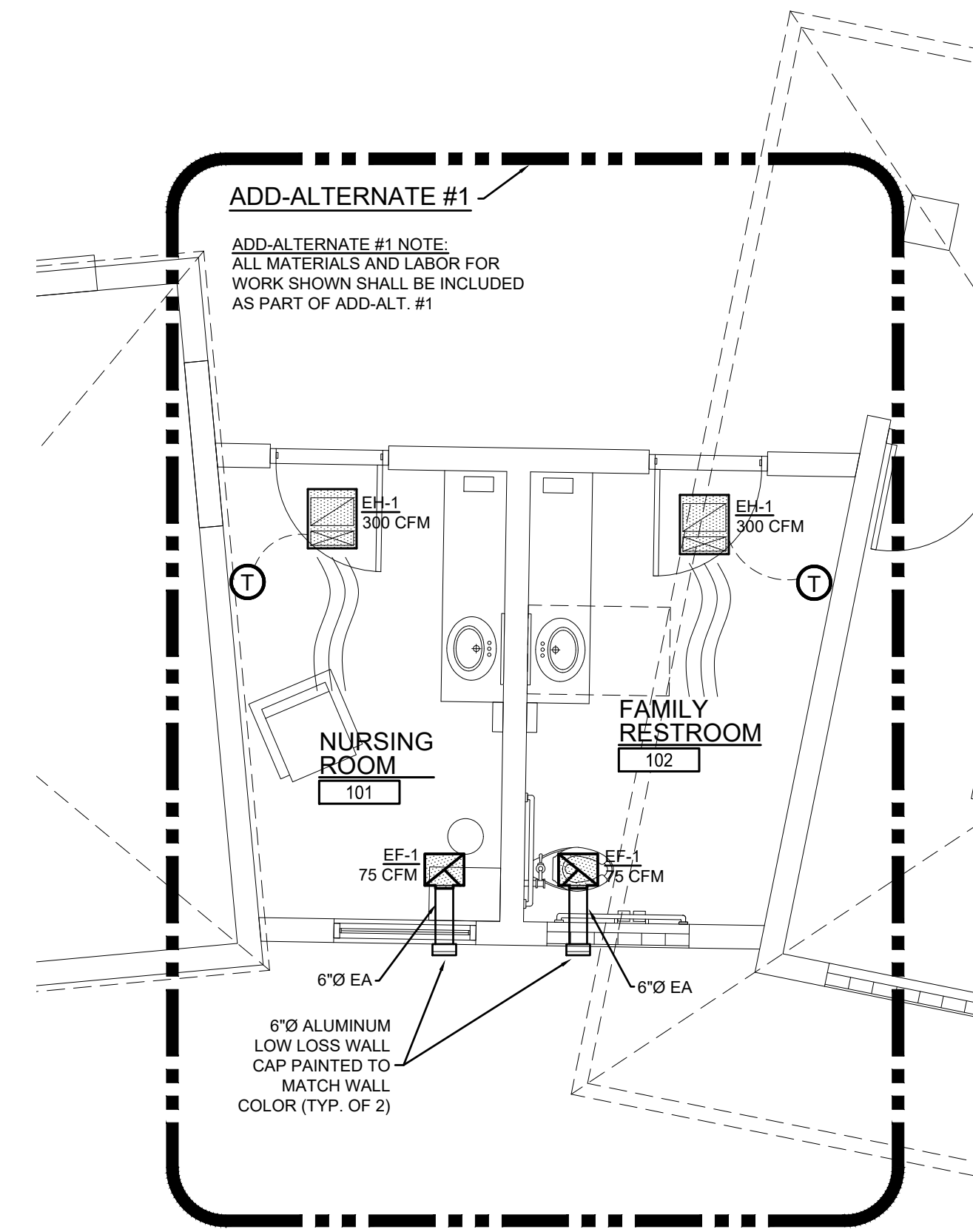
09/16/2022 11:00:00 Spicer-ChildrensZoo-CentralRestroom-Concessions-Mechanical-Floor-Plan.dwg
 PLOTTING SCALE: RET. F.B. ACAD FILE:



North
SANITARY FLOOR PLAN
 SCALE: 1/4" = 1'-0"



North
PLUMBING FLOOR PLAN
 SCALE: 1/4" = 1'-0"



North
HVAC FLOOR PLAN
 SCALE: 1/4" = 1'-0"

NOTE: FOR ADD-ALT. #1 SEE SHEET M4.1 FOR PLUMBING FIXTURE SCHEDULES

ADD-ALTERNATE #1 - EXHAUST FAN SCHEDULE																
TAG	LOCATION	SERVES	DESCRIPTION	MANUFACTURER & MODEL #	AIRFLOW DATA				NOISE DATA		WEIGHT LBS.	ELECTRICAL DATA			CONTROL SEQUENCE	ACCESSORIES & NOTES
					CFM	E.S.P.	FAN HP	FAN RPM	SONES	dBa		VOLTAGE	F.L.A.	M.F.S.		
EF-3 (TOTAL OF 2)	NORTH BUILDING	FAMILY BATHROOM	CENTRIFUGAL INLINE DIRECT DRIVE EXHAUST FAN	GREENHECK SP-A90	75	0.13"	N/A	900	0.8	N/A	VERIFY W/ SHOPS	120V	0.34 (F.V.)	15	ON WITH ROOM LIGHTING OCCUPANCY SCHEDULE	1. BACKDRAFT DAMPER

ALTERNATE #1 - ELECTRIC WATER HEATER SCHEDULE															
TAG	DESCRIPTION	MANUFACTURER & MODEL #	GAL.	GPH @10' F RISE	KW MBH	EFFICIENCY LISTED / TESTED	DIMENSIONS			CONNS.			ELECTRICAL DATA		ACCESSORIES & NOTES
							HEIGHT	WIDTH	CW	HW	VOLTAGE	F.L.A.	M.F.S.		
EWH-1	ELECTRIC WATER HEATER UNDERCOUNTER MOUNT	LOCHIVAR MODEL JEC002BS	2.5	7.0	1.44	NAECA-ASHRAE 90.1-2013	14.5"	11.75"	1/2"	1/2"	120V	12.0	20	1. T&P VALVE PROVIDE COMPLETE FOR INSTALLATION. MOUNT ON WALL UNDERCABINET	

ALTERNATE #1 - ELECTRIC HEATER SCHEDULE													
TAG	LOCATION	MANUFACTURER & MODEL #	COLOR	HEAT CAPACITY		CFM	DIMENSIONS (INCHES)			ELECTRICAL DATA			ACCESSORIES & NOTES
				MBH	KW		WIDTH	LENGTH	HEIGHT	VOLTAGE	F.L.A.	M.F.S.	
EH-1	BATHROOM / STORAGE ROOM AREA	BERKO MODEL CDFSE COMMERCIAL DOWNFLOW SURFACE MOUNT CEILING HEATER	WHITE	6.8	2.0 KW (4/32)	300	20.0"	16.5"	3.75"	240	8.3	20	CONTRACTOR TO FIELD SELECT 3.0 KW PIN. INCLUDE HANGER KIT PROGRAMMABLE T-STAT

DWM	ISSUE FOR CLIENT REVIEW	9/16/22	
BY	MARK	REVISIONS	DATE

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CENTRAL RESTROOM & CONCESSIONS
 SAGINAW CHILDREN'S ZOO

MECHANICAL
 HVAC
 FLOOR PLAN

Spicer Group
 SAGINAW OFFICE
 230 S. Washington Ave.
 Saginaw, MI 48607 Tel.
 989-754-4717 Fax.
 989-754-4440
 www.SpicerGroup.com

DE. BY: ASW CH. BY: DSB PROJECT NO.
 DR. BY: ASW APP. BY: DWM 131928SG2022

STDS. SHEET 34 OF 40 M
 DATE NOVEMBER 2, 2022 FILE NO. DA-1431-34 2.2
 SCALE AS SHOWN

LIGHT SWITCH SYMBOLS	
\$	LIGHT SWITCH
\$	3-WAY SWITCH
\$	KEYED SWITCH
\$	ROOM CONTROLLER
\$	LIGHT SWITCH W/ INTEGRAL OCCUPANCY SENSOR

LIGHT FIXTURE SYMBOLS	
	2' X 4' RECESSED LIGHT FIXTURE
	EMERGENCY FIXTURE BATTERY BACKUP
	2' X 2' RECESSED LIGHT FIXTURE
	2' X 4' SURFACE MOUNT FIXTURE
	2' X 2' SURFACE MOUNT FIXTURE
	24" PENDANT MOUNT FIXTURE
	12" PENDANT MOUNT FIXTURE
	RECESSED DOWN LIGHT FIXTURE
	WALL MOUNT FIXTURE
	TRACK LIGHT FIXTURE
	LINEAR PENDANT MOUNT FIXTURE
	EXIT SIGN
	EMERGENCY LIGHT FIXTURE

LIGHTING CONTROL SYMBOLS	
	LIGHTING CONTROL PANEL
	ROOM CONTROLLER
	POWER PACK/LIGHTING RELAY
	OCCUPANCY SENSOR
	DAYLIGHT SENSOR

ELECTRICAL SYMBOLS	
	SIMPLEX RECEPTACLE
	DUPLX RECEPTACLE
	QUAD RECEPTACLE
	GROUND FAULT CIRCUIT INTERRUPTER
	COUNTERTOP RECEPTACLE MTD. 6" ABOVE COUNTER
	ISOLATED GROUND RECEPTACLE
	WEATHERPROOF RECEPTACLE
	PEDESTAL MTD. RECEPTACLE
	FLOOR BOX DUPLX RECEPTACLE
	FLOOR BOX QUAD RECEPTACLE
	TV OUTLET, 2-GANG BACKBOX, 3/4" CONDUIT
	HARDWIRED POWER CONNECTION
	JUNCTION BOX
	ELECTRICAL DISCONNECT
	FUSED DISCONNECT
	COMBINATION DISCONNECT STARTER
	MOTOR TOGGLE SWITCH
	PUSHBUTTON CONTROLLER
	MOTOR
	SURFACE MOUNT PANEL
	RECESSED PANEL

TECHNOLOGY/COMMUNICATIONS SYMBOLS	
	SINGLE DATA OUTLET, 1-GANG BACKBOX W/ 1" CONDUIT TO CEILING
	DOUBLE DATA OUTLET, 1-GANG BACKBOX W/ 1" CONDUIT TO CEILING
	QUAD DATA OUTLET, 2-GANG BACKBOX W/ 1" CONDUIT TO CEILING
	FLOOR BOX
	CLOCK MOUNT @ 96" UNLESS OTHERWISE NOTED

FIRE ALARM SYMBOLS	
	FIRE ALARM PULL BOX
	SMOKE DETECTOR
	HEAT DETECTOR
	FIRE ALARM STROBE
	FIRE ALARM HORN AND STROBE
	FIRE ALARM CONTROL PANEL
	GAS DETECTOR
	DUCT DETECTOR

GENERAL ELECTRICAL NOTES

- INSTALLATION OF ALL WORK SHALL BE IN ACCORDANCE OF ALL APPLICABLE LOCAL CODES, ORDINANCES, AND THE EDITION OF THE NATIONAL ELECTRICAL CODE NFPA 70 (NEC) IN EFFECT.
- PRIOR TO WORK BEGINNING, CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND/OR CLEARANCES FROM THE AUTHORITIES HAVING JURISDICTION. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM.
- FINAL LOCATIONS OF ELECTRICAL EQUIPMENT SHALL BE COORDINATED IN THE FIELD ACCORDING TO EQUIPMENT BEING SERVED.
- ALL CONDUCTORS SHALL BE IDENTIFIED.
- ALL EQUIPMENT SHALL BE UL LISTED.
- ELECTRICAL SYSTEMS SHALL BE GROUNDED PER NEC 250.
- PRIOR TO SUBMITTING BIDS, CONTRACTOR SHALL VISIT THE SITE AND INSPECT EXISTING EQUIPMENT AND AREA CONDITIONS THAT MAY AFFECT WORK TO BE PERFORMED. CONTRACTOR SHALL INFORM ARCHITECT/ENGINEER OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND INTENT OF DRAWINGS AND SPECIFICATIONS.
- PROVIDE ALL WIRE NECESSARY FOR THE PROPER OPERATION OF THE SYSTEM.
- ALL EXISTING AND NEW PANELS IMPACTED BY THE PROJECT SHALL BE PROVIDED WITH UPDATED TYPEWRITTEN PANELS SCHEDULES INDICATING ROOM NUMBER AND EQUIPMENT OR DEVICES SERVED BY THE CIRCUIT.
- CONTRACTOR TO BALANCE LOADS ON AVAILABLE PHASES IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- INSTALLATION OF EQUIPMENT, COMPONENTS AND WIRING FOR ELECTRICAL SYSTEMS SHALL BE IN ACCORDANCE OF MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR TO COORDINATE WORK WITH ALL OTHER TRADES.
- ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL, PLUMBING AND OTHER TRADES TO PROVIDE ALL EQUIPMENT ASSOCIATED WITH THEIR RESPECTIVE TRADES WITH NECESSARY WIRING AND CONDUIT INFRASTRUCTURE FOR ALL SENSORS, AND CONTROL SYSTEMS AS REQUIRED.

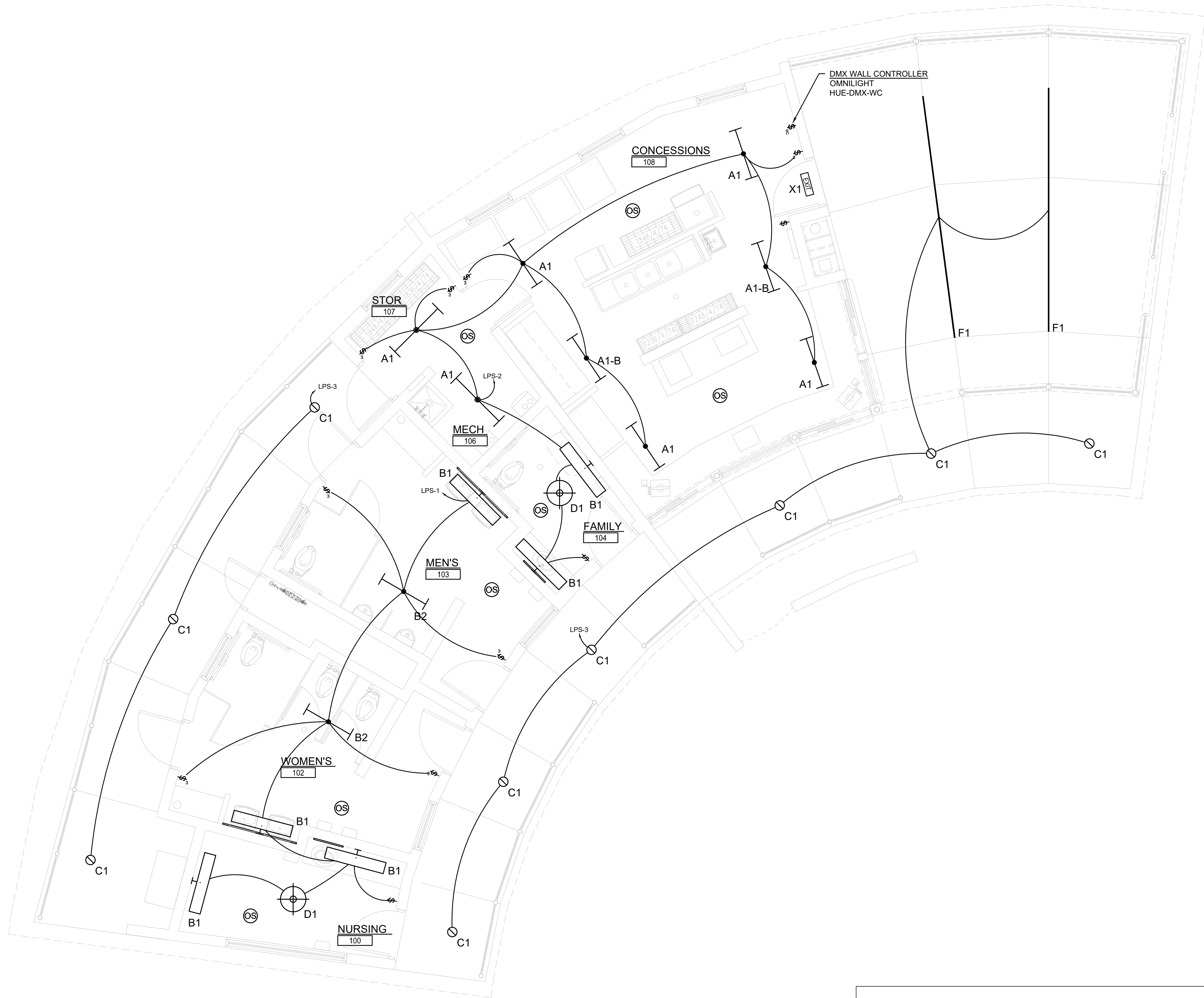
ELECTRICAL GENERAL DEMO NOTES

- PRIOR TO SUBMITTING BID, ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO VERIFY/INSPECT THE EXTENT OF EXISTING CONDITIONS.
- REMOVE ALL ASSOCIATED ELECTRICAL COMPONENTS, HANGERS, WIRING, CABLING, CONDUIT, BOXES, DEVICES AND ALL OTHER ITEMS RELATED TO EQUIPMENT AND MATERIALS WHICH ARE INDICATED TO BE REMOVED.
- REMOVE ALL WIRING AND CONDUIT BACK TO THE SOURCE IN EXISTING CIRCUITS WHICH ARE BEING DEMOLISHED.
- UNLESS INDICATED, NO EQUIPMENT, MATERIALS OR ASSOCIATED COMPONENTS SHALL BE ABANDONED IN PLACE.
- ALL CONDUITS WHICH ARE CONCEALED IN CONCRETE WALLS OR SLABS SHALL BE ABANDONED. ALL WIRING/ CABLING SHALL BE REMOVED FROM ABANDONED CONDUITS.
- CONTRACTOR SHALL CLEAN THE PROJECT SITE AT THE END OF EACH WORKING DAY.
- PROTECT FROM DAMAGE ALL EXISTING WORK TO REMAIN. ANY DAMAGED MATERIAL AND EQUIPMENT TO REMAIN SHALL BE REPLACED WITH MATERIALS AND EQUIPMENT CONFORMING TO SPECIFICATIONS.
- WHERE EXISTING FLOORS, WALLS AND ROOFS MUST BE CUT OR ARE DAMAGED DURING REMOVAL OR RELOCATION OF ELECTRICAL WORK, PATCH THE CUT OR DAMAGED AREAS TO MATCH ADJACENT CONSTRUCTION.

ABBREVIATIONS

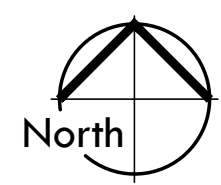
A	AMPS	EP	EMERGENCY PANEL	LP	LIGHTING PANEL	PWR	POWER
AC	ABOVE COUNTER	EWC	ELECTRIC WATER COOLER	LT	LIGHT	RECP	RECEPTACLE
ACU-	AIR CONDITIONING UNIT	EX	EXISTING	LTG	LIGHTING	RGC	RIGID GALVANIZED STEEL CONDUIT
AFF	ABOVE FINISHED FLOOR	FLA	FULL LOAD AMPS	LT FLEX	LIQUID TIGHT FLEXIBLE METAL CONDUIT	RP	RECEPTACLE PANEL
AHJ	AUTHORITY HAVING JURISDICTION	FLEX	FLEXIBLE CONDUIT	MAX	MAXIMUM	RTU-	ROOF TOP UNIT
AIC	AMPS INTERRUPTING CAPACITY	FLR	FLOOR	MC	MECHANICAL CONTRACTOR	SPEC	SPECIFICATIONS
AS	ABOVE SHELF	FLOUR	FLOURESCENT	MCC	MOTOR CONTROL CENTER	SW	SWITCH
ATS	AUTOMATIC TRANSFER SWITCH	FSES	FOOD SERVICE EQUIP. SUPPLIER	MIN	MINIMUM	SWBD	SWITCHBOARD
B-	BOILER	F/S	FIRE/SMOKE	MLO	MAIN LUG ONLY	TCC	TEMPERATURE CONTROL CONTRACTOR
BC	BELOW COUNTER	FU-	FURNACE	MT	MOUNT	TR	TAMPER PROOF RECEPTACLE
BLDG	BUILDING	GC	GENERAL CONTRACTOR	MTD	MOUNTED	TS	TAMPER PROOF SWITCH
CND (C)	CONDUIT	GFI	GROUND FAULT INTERRUPTER	MTG	MOUNTING	TYP	TYPICAL
CKT	CIRCUIT	GND	GROUND	MUA	MAKE UP AIR UNIT	UF	UNDER FLOOR
CKT BKR	CIRCUIT BREAKER	H-	HUMIDIFIER	NC	NORMALLY CLOSED	UH-	UNIT HEATER
CU-	CONDENSING UNIT	HID	HIGH INTENSITY DISCHARGE	NL	NIGHT LIGHT	UL	UNDERWRITERS' LABORATORIES, INC.
CUH-	CABINET UNIT HEATER	HOA	HAND-OFF-AUTO SELECTOR SWITCH	NO	NORMALLY OPEN	UNO	UNLESS NOTED OTHERWISE
DF-	DRINKING FOUNTAIN	HP	HORSEPOWER	NTS	NOT TO SCALE	V	VOLTS
DISC	DISCONNECT	HR	HOUR	P	POLE	VL	VERIFY LOCATION W/ OWNER
DWG	DRAWING	HVAC	HEATING, VENTILATING, AIR CONDITIONING	P-	PUMP	W	WATTS
EC	ELECTRICAL CONTRACTOR	IG	ISOLATED GROUND	PB	PULL BOX	W/	WITH
EF-	EXHAUST FAN	IMC	INTERMEDIATE METAL CONDUIT	PNL	PANEL	W/O	WITHOUT
EM	EMERGENCY	JB	JUNCTION BOX	PVC	POLY VINYL CLORIDE	WP	WEATHER PROOF
EMT	ELECTRICAL METALLIC TUBING	LC	LIGHT CONTROL	PP	POWER PANEL	XFMR	TRANSFORMER

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
ELECTRICAL COVER SHEET		
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>
DE. BY: JAJ	CH. BY: DSB	PROJECT NO.
DR. BY: JAJ	APP. BY: DWM	131928SG2022
STDS.	SHEET 36 OF 40	E
DATE NOVEMBER 2, 2022	FILE NO. DA-1431-36	0.1
SCALE AS SHOWN		



GENERAL LIGHTING NOTES:

1. ALL LIGHTING SHALL MEET ASHRAE 90.1 2013.
2. INSTALL LED RIBBON/TAPE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. TAPE SHALL BE INSTALLED WITHIN CHANNEL TYPE MOUNTING SYSTEM RATED FOR OUTDOOR USE.
3. ALL RGBW LIGHT FIXTURES TO BE CONTROLLED BY PHOTOCELL AS WELL DMC CONTROLLER LOCATED IN KITCHEN. FINAL LOCATION OF CONTROLLER SHALL BE COORDINATED WITH OWNER.
4. LIGHT FIXTURE D1 TO BE PURCHASED BY OWNER AND INSTALLED BY CONTRACTOR.



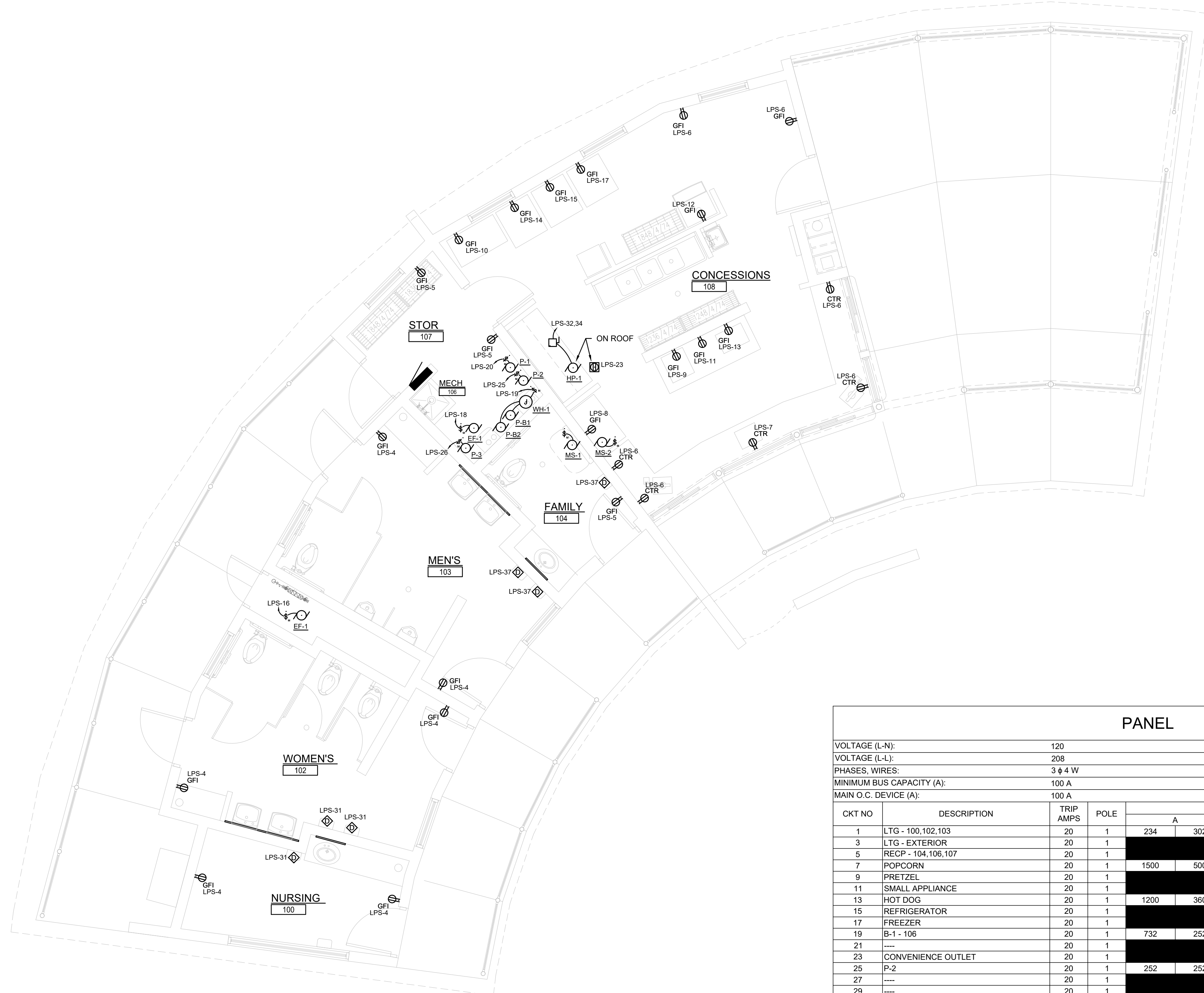
ELECTRICAL LIGHTING FLOOR PLAN

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

ELECTRICAL LIGHTING DEVICE SCHEDULE								
TAG	DESCRIPTION	ELECTRICAL DATA		LAMP DATA		BASIS OF DESIGN		NOTES
		VOLTAGE	QTY	WATTAGE	COLOR TEMPERATURE	MANUFACTURER	MODEL OR SERIES	
A1	4' LED STRIP LIGHT	120/1/60	1	31.8	4000K	COOPER LIGHTING	4NWS3C3-UNV	B= BATTERY BACKUP
B1	4' LINEAR WALL MOUNT LED	120/1/60	1	29.6	3000 - 5000K	COOPER LIGHTING	SQW F 075U 025D 93050 1 D UNV STD	
B2	4' LED STRIP LIGHT	120/1/60	1	31.8	3000 - 5000K	COOPER LIGHTING	SQ4 F 075U 050D 93050 1 D UNV STD AV48 UM	
C1	RGBW FLOODLIGHT	120/1/60	1	24.0	RGBW	WE-EF LIGHTING	139-2035 683-9329 SMC-200	SURFACE MOUNT
D1	SURFACE/PENDANT DECROITIVE LED	120/1/60	1	0.0	-	BY OWNER	BY OWNER	
F1	RGBW LED TAPE	120/1/60	1	72.2	RGBW	OMNILIGHT	HUEWL-RGB-HO-16	OCH-DCS CHANNEL COORDINATE W/ OWNER
X1	LED EXIT SIGN	120/1/60	2	4	6200K	COOPER LIGHTING	LPXC 25 R3 SRP	

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
ELECTRICAL LIGHTING FLOOR PLAN		
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>
DE. BY: JAJ	CH. BY: DSB	PROJECT NO.
DR. BY: JAJ	APP. BY: DWM	131928SG2022
STDS.	SHEET 37 OF 40	E
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-37	1.1
SCALE: AS SHOWN		

0:\p\2022\131928SG2022_Saginaw Children's Zoo\cwp\spicer\131928SG2022.dwg, 11/16/22 14:23:00, Aec, Dwg, W, PLOT, F, B, PLOTTING SCALE:



GENERAL ELECTRICAL NOTES:

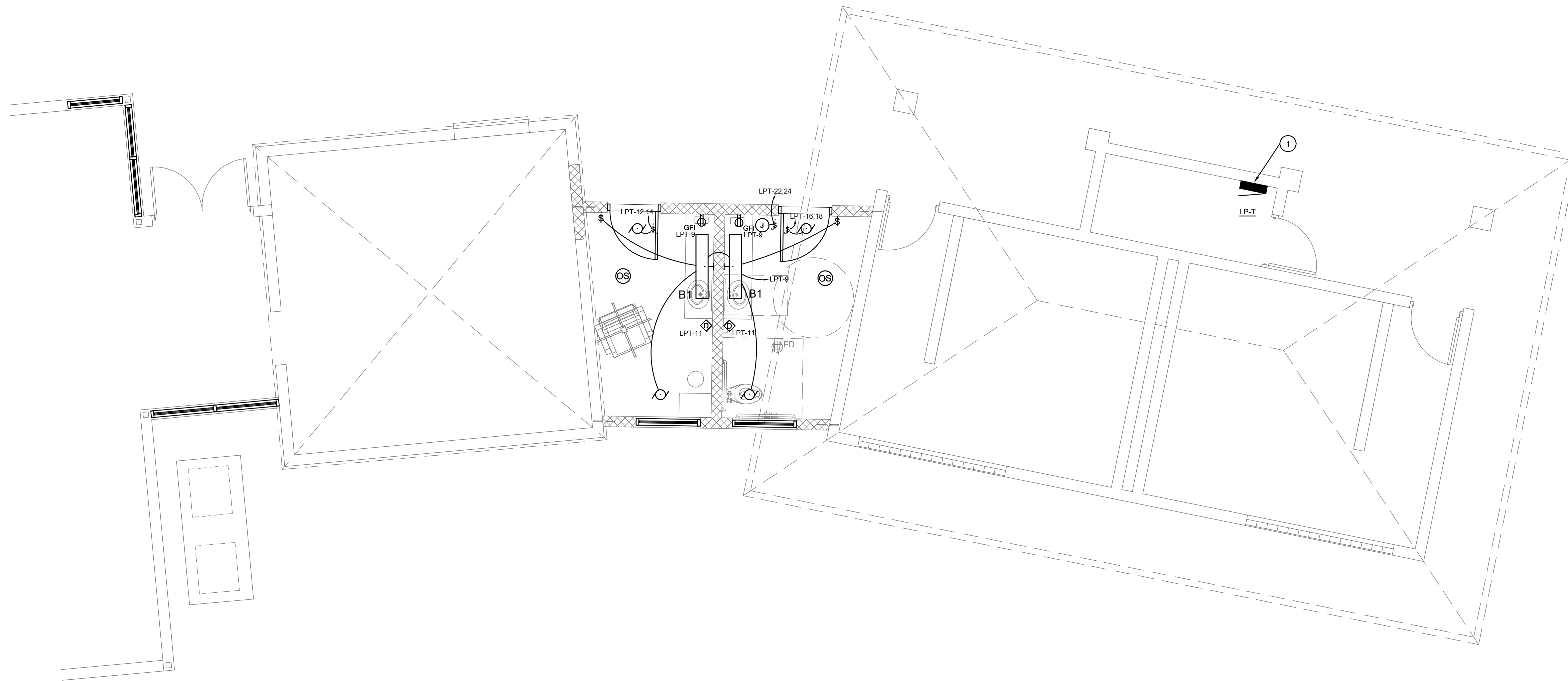
1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND THE AHJ.
2. COORDINATE WORK WITH ALL OTHER TRADES.
3. CONTRACTOR TO FIELD VERIFY ALL EXISTING LOADS THAT SHALL BE REQUIRED TO BE REFEED FROM NEW PANEL.
4. PROVIDE JUNCTION BOX AND UNDERGROUND SPLICE FROM EXISTING PANELS LOCATION TO NEW PANEL LOCATION SHOWN ON THIS SHEET. SEE ELECTRICAL ONE-LINE ON SHEET E3.1 AND ARCHITECTURAL SITE PLAN ON SHEET A0.0.
5. MS-1 & MS-2 POWERED FROM OUTDOOR UNIT. PROVIDE ALL NECESSARY AND CONDUIT AND WIRE FROM OUTDOOR UNIT TO INDOOR UNITS. INCLUDE DISCONNECT SWITCH AT MS-1 & MS-2

PANEL		LPS		PHASE LOADS (VA)						POLE		TRIP AMPS		DESCRIPTION		CKT NO			
CTK NO	DESCRIPTION	TRIP AMPS	POLE	A	B	C	D	E	F	G	H	I	J	K	L	M			
1	LTG - 100,102,103	20	1	234	302							1	20	LTG - 104,106,108	2				
3	LTG - EXTERIOR	20	1			360	1080					1	20	RECP - 100,102,103	4				
5	RECP - 104,106,107	20	1					540	1080			1	20	POINT OF SALE	6				
7	POPCORN	20	1	1500	500							1	20	COOLER	8				
9	PRETZEL	20	1			1500	500					1	20	COOLER	10				
11	SMALL APPLIANCE	20	1					1500	700			1	20	ICE MACHINE	12				
13	HOT DOG	20	1	1200	360							1	20	REFRIGERATOR	14				
15	REFRIGERATOR	20	1			360	120					1	20	EXHAUST FAN	16				
17	FREEZER	20	1					820	120			1	20	EXHASUT FAN	18				
19	B-1 - 106	20	1	732	252							1	20	P-1	20				
21	---	20	1			0	0					1	20	---	22				
23	CONVENIENCE OUTLET	20	1					180	0			1	20	---	24				
25	P-2	20	1	252	252							1	20	P-3	26				
27	---	20	1			0	0					1	20	---	28				
29	---	20	1			0	0					1	20	---	30				
31	HAND DRYERS - 100,102	20	1	1539	1768							2	20	HP-1	32,34				
33	---	20	1			0	1768					2	20	HP-1	32,34				
35	---	20	1					0	0			1	20	---	36				
37	HAND DRYERS - 103, 104	20	1	1539	0							1	20	---	38				
39	---	20	1			0	4992					2	60	DEPOT	40,42				
41	---	20	1					0	4992			2	60	DEPOT	40,42				
				CONNECTED LOAD PHASE TOTALS (VA)															
				10430	10680	9932													
				CONNECTED LOAD (KVA)			DEMAND FACTOR			DEMAND LOAD (KVA)									
				Lighting	0.8	1.25	0.9												
				Equipment	4.3	1.00	4.3												
				Motors (Largest)	4.1	1.00	4.1												
				Receptacles (0 - 10 KVA)	0.5	1.25	0.6												
				Motors	2.9	1.00	2.9												
				NEC 220.56 - Kitchen	8.2	0.65	5.3												
				Existing Load	10.0	1.25	12.5												
				TOTAL:	30.7		30.7												
				LOAD (AMPS):	85.3		85.1												
				DEMAND LOAD		30.7 KVA		SPARE CAPACITY		5.4 KVA		SPARE CAPACITY		14.9 AMPS		SPARE CAPACITY		15 %	
				PHASE BALANCE		A TO B		98 %		B TO C		93 %		C TO A		95 %			

ELECTRICAL POWER FLOOR PLAN
SCALE: 1/4" = 1'-0"

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK	REVISIONS
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>		
CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
ELECTRICAL POWER FLOOR PLAN		
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>
DE. BY: JAJ	CH. BY: DSB	PROJECT NO.
DR. BY: JAJ	APP. BY: DWM	131928SG2022
STDS.	SHEET 38 OF 40	E
DATE: NOVEMBER 2, 2022	FILE NO. DA-1431-38	2.1
SCALE: AS SHOWN		

ACAD FILE: 09/16/2022 10:00:00 AM, Spicor Group, Inc., 230 S. Washington Ave., Saginaw, MI 48607, Tel: 989-754-4717, Fax: 989-754-4440, www.SpicerGroup.com, PLOT DATE: 9/16/22 10:00:00 AM, Plot Scale: 1/4" = 1'-0", PLOT FILE: 131928SG2022.dwg, PLOTTER: HP DesignJet T1100PS, PLOTTING SCALE: 1/4" = 1'-0"



ELECTRICAL POWER FLOOR PLAN
 SCALE: 1/4" = 1'-0" 1,234 SQUARE FEET

PANEL		LPT																	
VOLTAGE (L-N):		120		ENCLOSURE TYPE:		NEMA 1													
VOLTAGE (L-L):		208		MOUNTING:		SURFACE													
PHASES, WIRES:		3 φ 4 W		AIC RATING (A):		0													
MINIMUM BUS CAPACITY (A):		100 A		NOTES:		----													
MAIN O.C. DEVICE (A):		100 A																	
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (VA)						POLE	TRIP AMPS	DESCRIPTION	CKT NO						
				A		B		C											
1	EHD-1	25	1	2300	2300					1	25	EHD-1	2						
3	EHD-1	25	1			2300	2300			1	25	EHD-1	4						
5	LTG/EF/RECP	20	1					1200	1200	1	20	LTG/EF/RECP	6						
7	EXTERIOR LTG/UC	20	1	900	2000					2	30	EX. WATER HEATER	8,10						
9	NEW LTG/EF/RECP	20	1			420	2000			2	30	EX. WATER HEATER	8,10						
11	NEW HAND DRYERS	20	1					1026	863	2	20	EH-1	12,14						
13	SPARE	20	1	0	863					2	20	EH-1	12,14						
15	SPARE	20	1			0	863			2	20	EH-1	16,18						
17	SPARE	20	1					0	863	2	20	EH-1	16,18						
19	---	20	1	0	0					1	20	---	20						
21	---	20	1			0	2000			2	20	EW-1	22,24						
23	---	20	1					0	2000	2	20	EW-1	22,24						
				CONNECTED LOAD PHASE TOTALS (VA)															
				8363		9883		7152											
				CONNECTED LOAD (KVA)		DEMAND FACTOR		DEMAND LOAD (KVA)											
				0.1		1.25		0.1											
Lighting				24.0		1.00		24.0		SPARE CAPACITY									
Equipment				0.5		1.00		0.5		SPARE CAPACITY									
Motors				0.5		1.25		0.6		PHASE BALANCE									
Motors (Largest)				0.4		1.00		0.4		A TO B									
Receptacles (0 - 10 KVA)				25.4		25.5		85 %		B TO C									
TOTAL:				70.5		70.9		86 %		C TO A									
LOAD (AMPS):				25.4		25.5		85 %											
				70.5		70.9		86 %											

GENERAL ELECTRICAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND THE AHJ.
2. COORDINATE WORK WITH ALL OTHER TRADES.
3. LIGHTING SHALL MEET ASHRAE 90.1 2013.

ELECTRICAL KEYED NOTES

- ① DEMO EXISTING PANEL LP-T. INSTALL NEW 24 SPACE 100A MCB QO LOAD CENTER. REUSE EXISTING FEEDERS.

DWM	MARK	ISSUE FOR CLIENT REVIEW	9/16/22
		REVISIONS	DATE

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CENTRAL RESTROOM & CONCESSIONS
SAGINAW CHILDREN'S ZOO

NORTH RESTROOM ADDITION
ELECTRICAL POWER
FLOOR PLAN



SAGINAW OFFICE
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989-754-4440
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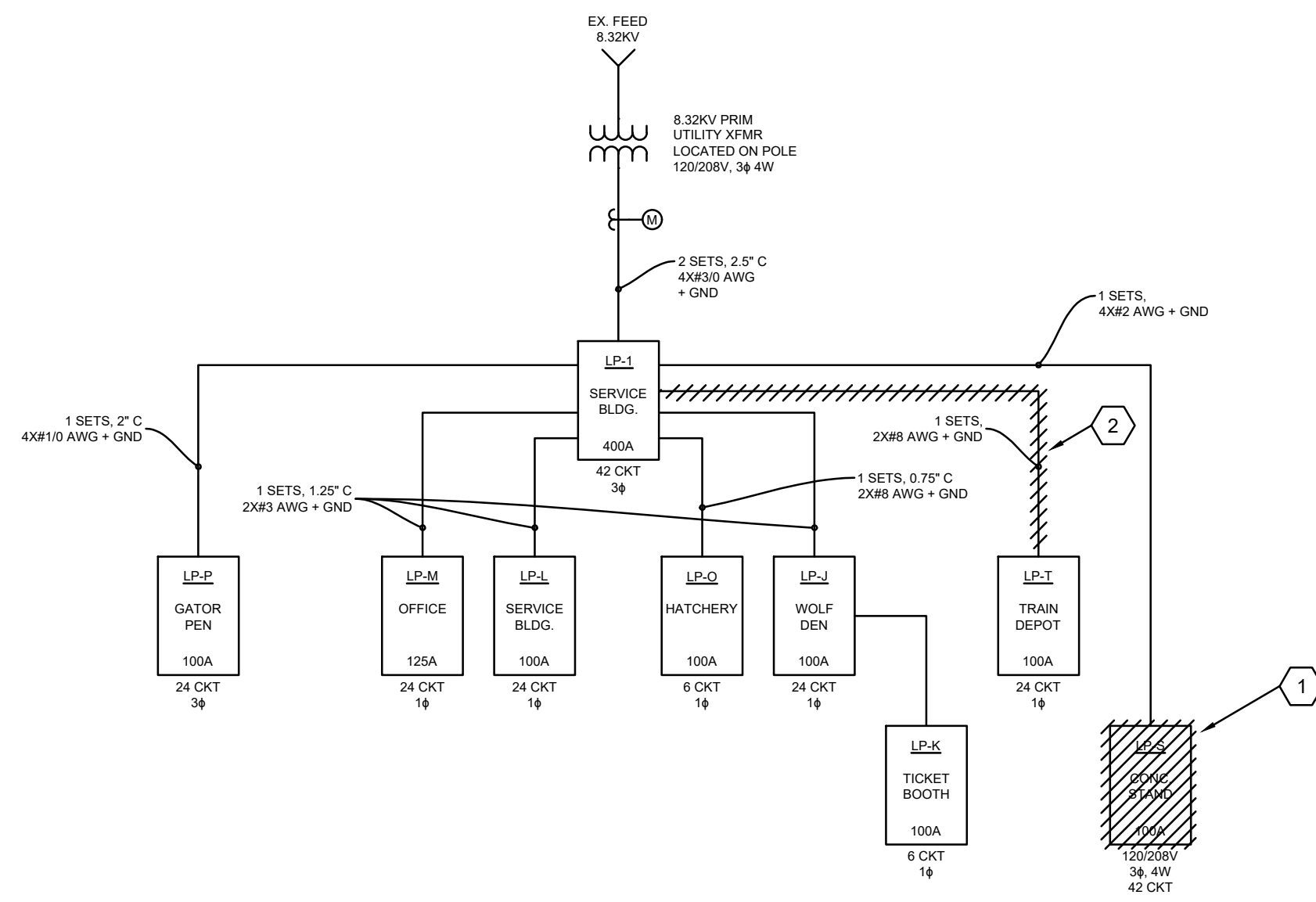
DE. BY: JAJ	CH. BY: DSB	PROJECT NO.
DR. BY: JAJ	APP. BY: DWM	131928SG2022

STDS.	SHEET 39 OF 40	E
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DATE: NOVEMBER 2, 2022	FILE NO. DA-1431 -39	2.1
SCALE: AS SHOWN		

ADD ALTERNATE #1

0:\p\2022\131928SG2022_Saginaw Childrens Zoo\caddwg\131928SG2022_Elec_Plan_Restroom Addition.dwg
PLOT DATE: 11/16/22 11:45:00 AM User: DSWK
PLOT FILE: F.B.

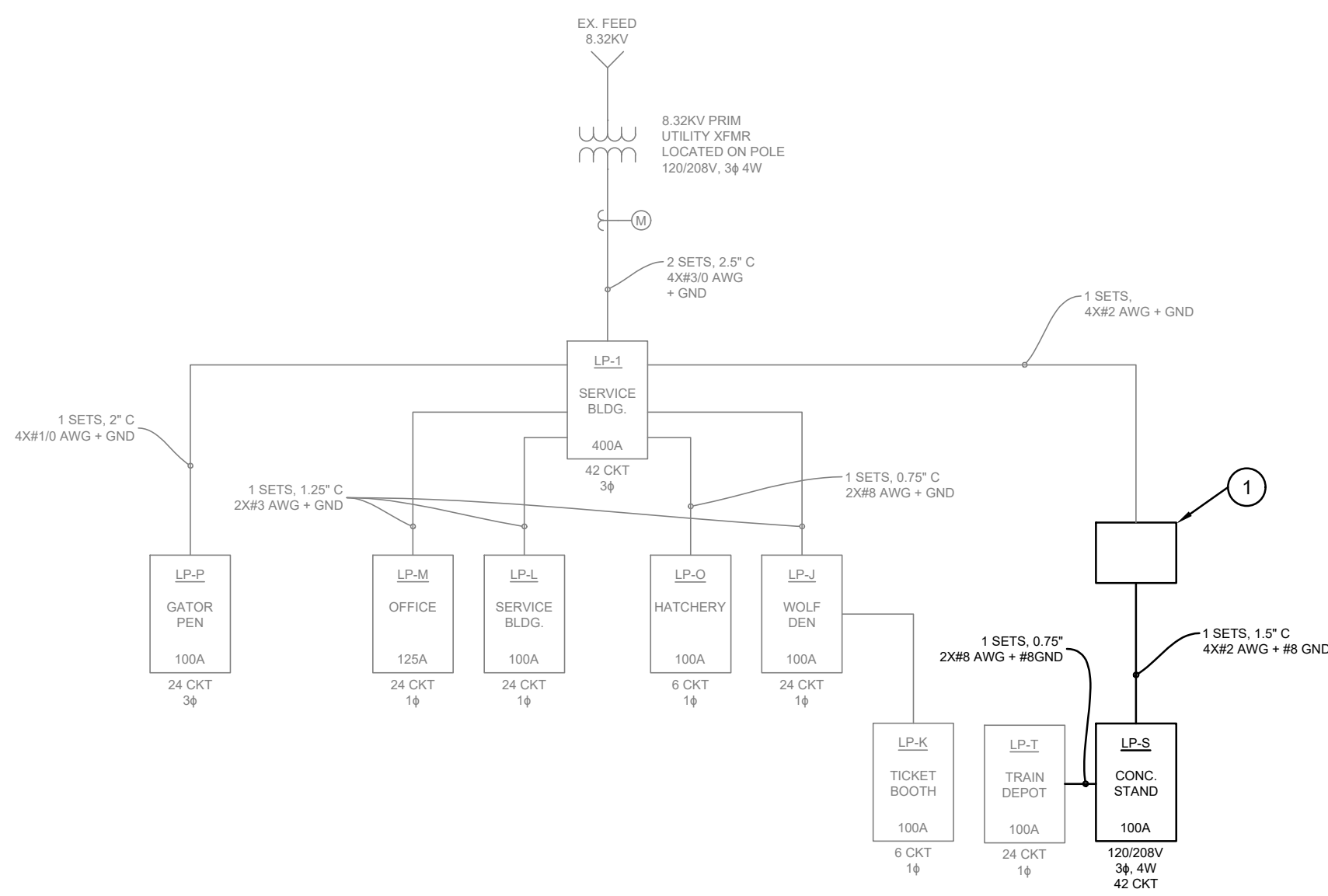


ELECTRICAL ONELINE DEMO

SCALE: NTS

ELECTRICAL DEMO KEYED NOTES

- 1 DEMO EXISTING PANEL LP-S. PREPARE EXISTING FEEDERS TO INSTALLED IN UNDERGROUND JUNCTION BOXED AND UNDERGROUND SPLICE TO NEW BUILDING LOCATION. SEE SHEET A0.0 FOR SITE PLAN.
- 2 DISCONNECT EXISTING OVERHEAD FEEDERS FROM EXISTING CIRCUIT BREAKER IN SERVICE BUILDING AND TRAIN DEPOT. PREPARE PANEL LP-T TO BE REFEED FROM NEW PANEL LP-S.




ELECTRICAL ONELINE

SCALE: NTS

ELECTRICAL KEYED NOTES

- 1 UNDERGROUND JUNCTION BOX. SEE SHEET A0.0 FOR LOCATION. SPLICE EXISTING WIRES TO PROPOSED FEEDERS FOR NEW PANEL LP-S. JUNCTION BOX BASIS OF DESIGN QUAZITE PG STYLE 11X18X18 TIER 8.

0:\p\2022\131928\2022_Saginaw Childrens Zoo\spicer\2022\131928\14431.dwg, 11/16/22 14:43:30, Alex D'Amico, P.E.
 PLOTTING SCALE: RET. F.B.

DWM	ISSUE FOR CLIENT REVIEW	9/16/22
BY	MARK REVISIONS	DATE
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CENTRAL RESTROOM & CONCESSIONS SAGINAW CHILDREN'S ZOO		
ELECTRICAL RISER DIAGRAMS		
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>
DE. BY: JAJ	CH. BY: DSB	PROJECT NO. 131928SG2022
DR. BY: JAJ	APP. BY: DWM	
STDS.	SHEET 40 OF 40	E
DATE NOVEMBER 2, 2022	FILE NO. DA-1431	4.1
SCALE AS SHOWN		