

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

State of Missouri - OA FMDC
Eminence, Missouri

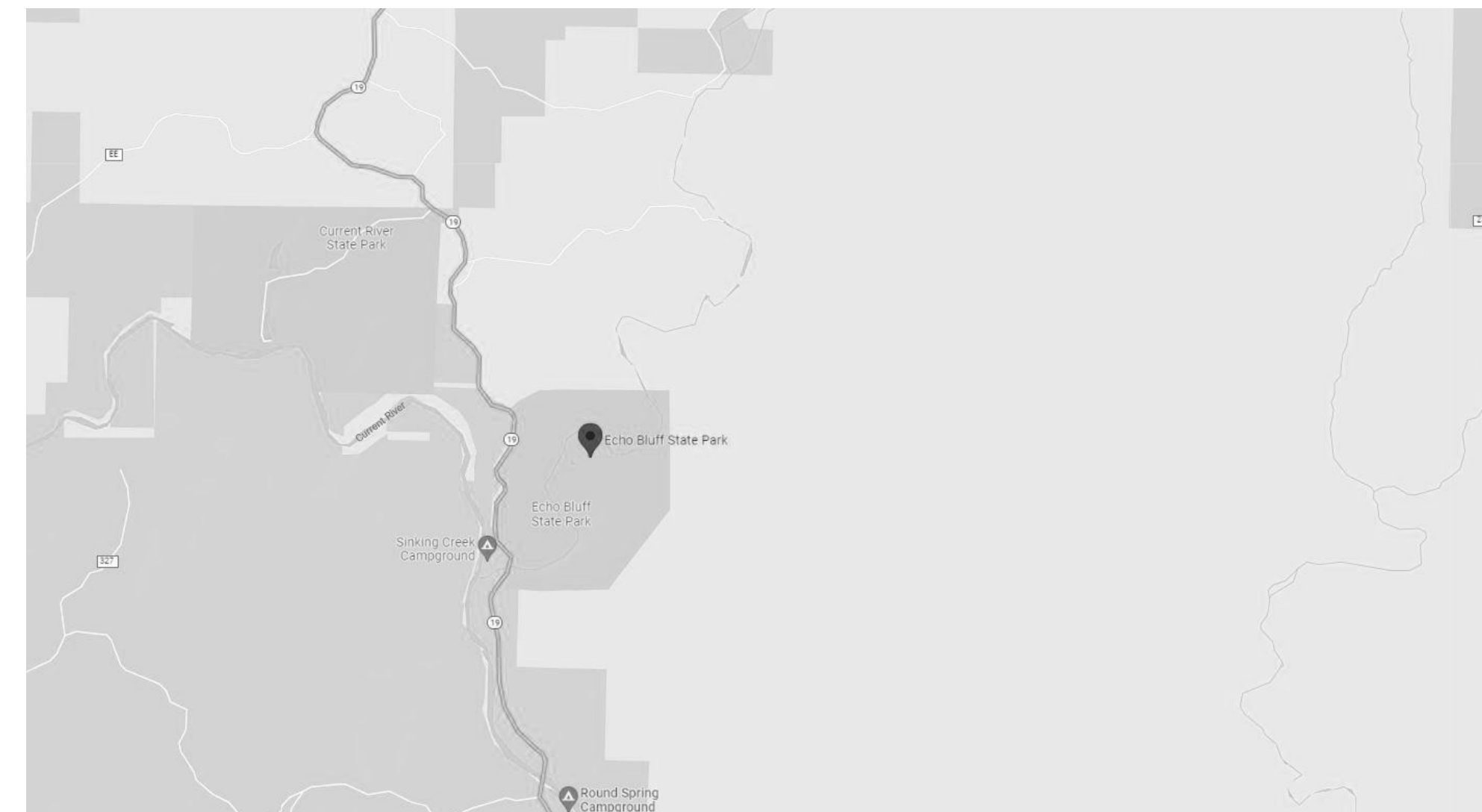


20 Allen Avenue, Suite 200 - St Louis, Missouri 63119 - Phone: (314) 962-7900 / info@f-w.com

OWNER: STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF
MISSOURI STATE PARKS

**PROJECT
MANAGEMENT:** OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION



DESIGNER: FARNSWORTH GROUP

PROJECT NUMBER: #X2208-01

SITE NUMBER: 5235
FACILITY NUMBER: 7815235017 - Cabin 500
7815235019 - Cabin 501
7815235020 - Cabin 502
7815235021 - Cabin 503
7815235022 - Cabin 504
7815235023 - Cabin 505

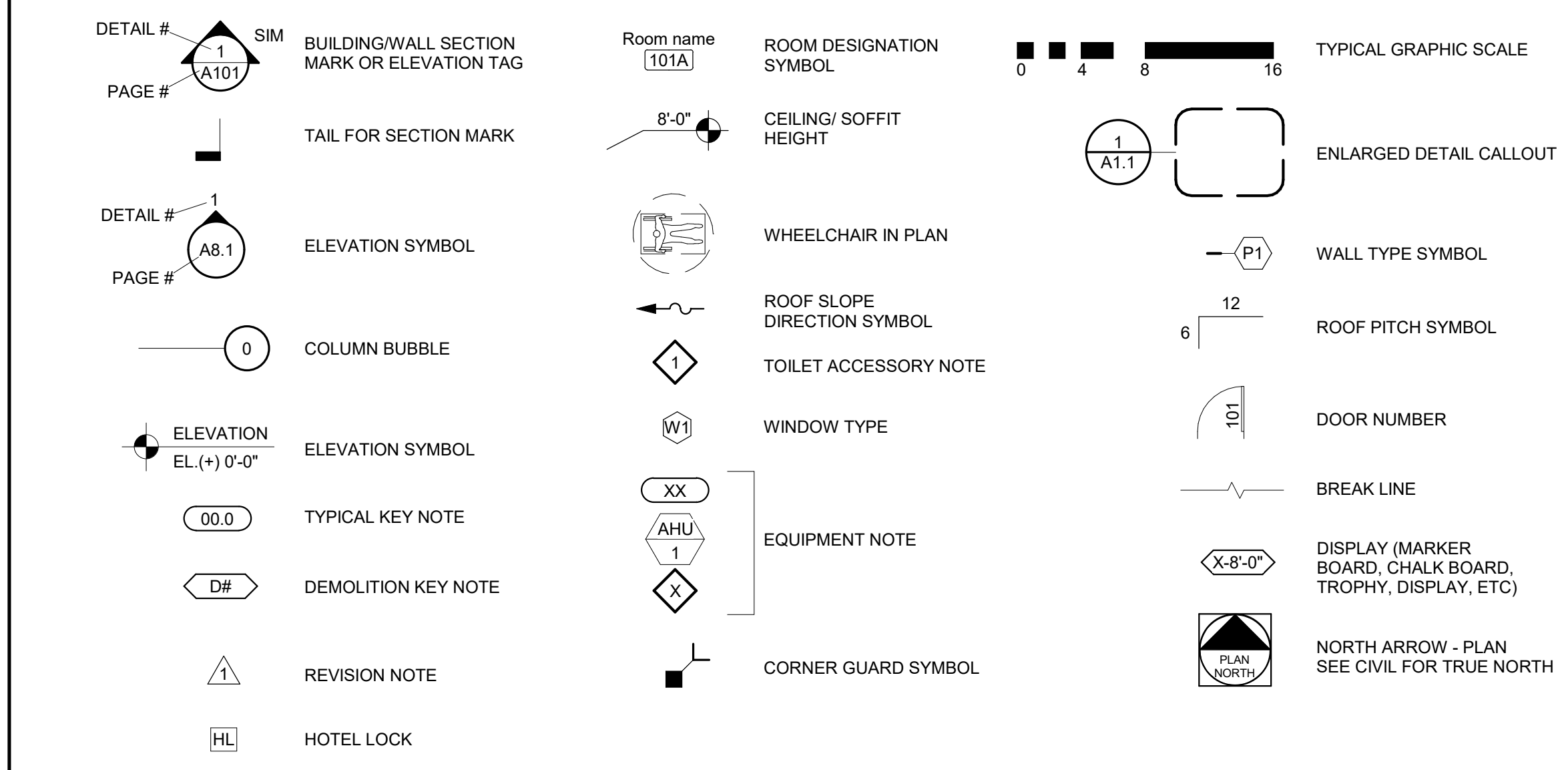
SHEET NUMBER:

G-001

SHEET 01 of 75
03/02/2023

2/20/2023 11:23:44 AM

SYMBOL LEGEND

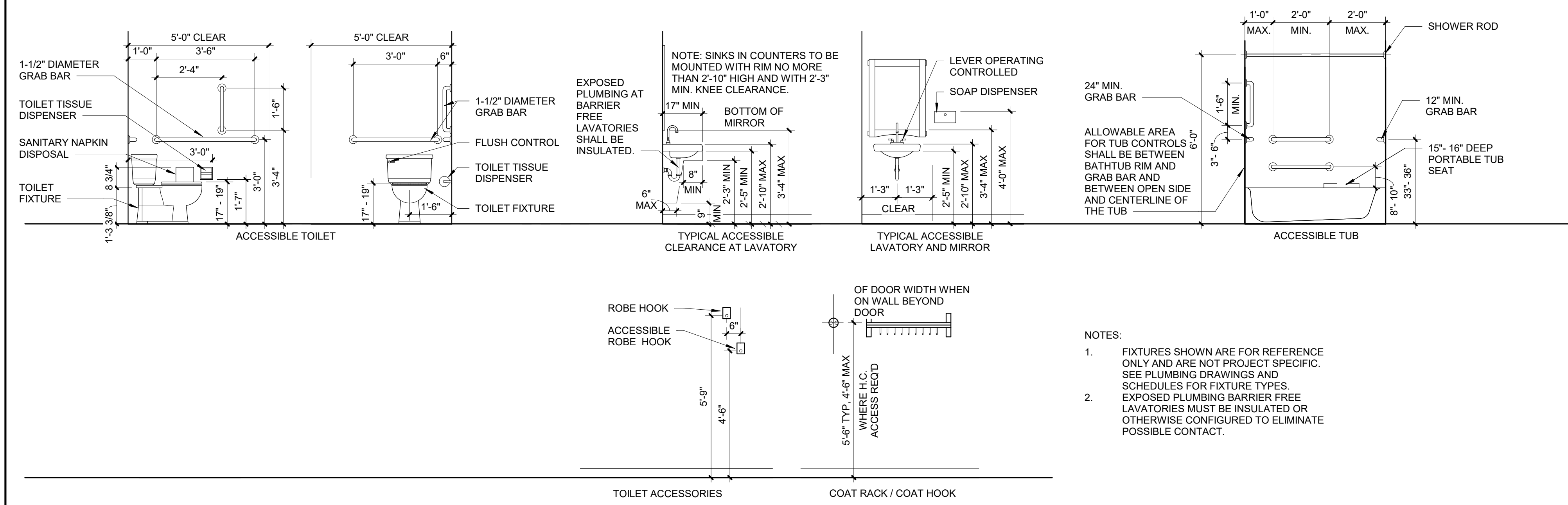


ABBREVIATIONS

A.B. (S)	ANCHOR BOLT(S)	F.E.C.	FIRE EXTINGUISHER CABINET	P.C.	PLUMBING CONTRACTOR
A.C.	AIR CONDITIONER	FIBERGLS.	FIBERGLASS	P.E.B.	PRE-ENGINEERED BUILDING
A.F.F.	ABOVE FINISHED FLOOR	FDN.	FOUNDATION	P.J.F.	PERFORMED JOINT FILLER
ACOUS.	ACOUSTIC(AL)	FIN.	FINISH	P.T.	PRESERVATIVE TREATED
ACT.	ACOUSTIC(AL) TILE	FLSHG.	FLASHING	PART.	PARTITION
ADTL.	ADDITIONAL	FLUR.	FLUORESCENT FLOOR	PERIM.	PERIMETER
AGG.	AGGREGATE	FLR.	FLOOR	PL.	PLATE
ALT.	ALTERNATE	FRMG.	FRAMING	PLAST. LAM.	PLASTIC LAMINATE
ALUM.	ALUMINUM	FT.	FOOT/FEET	PLBG.	PLUMBING
APPROX.	APPROXIMATE(LY)	FTG.	FOOTING	PLYWD.	PLYWOOD
ASPH.	ASPHALT	FUR.	FURRING	PNL(S)	PANEL(S)
				PNT.	PAINT
				PR.	PAIR
				PTD.	PAINTED
B/O	BOTTOM OF BUILDING	G.C.	GENERAL CONTRACTOR	R.O.	ROUGH OPENING
BLDG.	BLOCKING	GA.	GAUGE	R.S.	ROUGH SAWN
BLKG.	BLOCKING	GALV.	GALVANIZED	RAD.	RADIUS
BOT.	BOTTOM	GEN'L.	GENERAL	REC.	RECESSED
BRG.	BEARING	GL.	GLASS	REINF.	REINFORCED
		GR.	GRADE	REQ'D	REQUIRED
		GYP.	GYPSUM	REV.	REVISED (REVISION)
				RM.	ROOM
C	CENTERLINE			RTN'G	RETAINING
C/C	CENTER TO CENTER			S	SOUTH
C.J.	CONTROL JOINT	H.C.	HEATING CONTRACTOR	S.B.	SPLASH BLOCK
C.L.L.	CONTRACT LIMIT LINE	H.M.	HOLLOW METAL	S.F.	SQUARE FEET
CEM.	CEMENT(TIOUS)	HD.	HEAD	S.S.	STAINLESS STEEL
CMU	CONCRETE MASONRY UNIT	HDWR.	HARDWARE	SAN.	SANITARY
CLG.	CEILING	HL.	HOTEL LOCK	SHT.	SHEET
CLKG.	CAULKING	HOL.	HOLLOW	SHT'G	SHEATHING
CLR.	CLEAR	HOR.	HORIZONTAL	SIM.	SIMILAR
COL.	COLUMN	HT.	HEIGHT	SPEC.	SPECIFICATIONS
CONC.	CONCRETE	I.D.	INSIDE DIAMETER	SPCG.	SPACING
CONST.	CONSTRUCTION	IN.	INCH	SO.	SQUARE
CONTIN.	CONTINUOUS	INCL.	INCLUDING	STD.	STANDARD
CPT.	CARPET	INSUL.	INSULATION	STL.	STEEL
CTRFLSHG.	COUNTERFLASHING	INT.	INTERIOR	STOR.	STORAGE
				STRUCT.	STRUCTURAL
				SUSP.	SUSPENDED
DB	DOOR BELL	T&G	TONGUE AND GROOVE		
D.F.	DRINKING FOUNTAIN	T/O	TOP OF	TELE.	TELEPHONE
D.S.	DOWNSPOUT	TH.	THICK(NESS)	THR.	THRESHOLD
DBL.	DOUBLE	TRTD.	TREATED	TRTD.	TREATED
DEG.	DEGREE	TS	TUBE STEEL	TS	TUBE STEEL
DET.	DETAIL	TYP.	TYPICAL	UNFIN.	UNFINISHED
DIA.	DIAMETER			V.	VENT
DN.	DOWN			V.C.J.	VERTICAL CAULKED JOINT
DRN.	DRAIN			VCT.	VINYL COMPOSITION TILE
DTL.	DETAIL			VENT.	VENTILATOR
DWG(S)	DRAWING(S)			VERT.	VERTICAL
DWL(S)	DOWEL(S)			W	WEST
				W(O)	WITH(OUT)
				W.C.	WATER CLOSET
				W.GL.	WIRED GLASS
				W W.F.	WELDED WIRE FABRIC
				WD.	WOOD
				WT.	WEIGHT
E	EAST				
E.C.	ELECTRICAL CONTRACTOR				
EHO	ELECTRICAL HOLD OPEN				
E.J.	EXPANSION JOINT				
E.W.	EACH WAY				
EA.	EACH				
EIFS.	EXTERIOR INSULATION FINISH SYSTEM				
EL.	ELEVATION				
ELEC.	ELECTRICAL				
ELEV.	ELEVATOR				
EOR	ENGINEER OF RECORD				
EQ.	EQUAL				
EQUIP.	EQUIPMENT				
EXIST.	EXISTING				
EXT.	EXTERIOR				
F.D.	FLOOR DRAIN				
F.E.	FIRE EXTINGUISHER				

DRAWING LIST

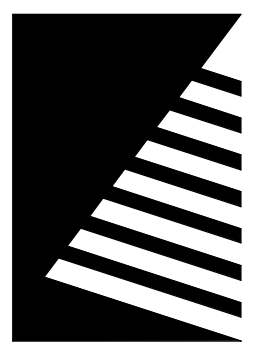
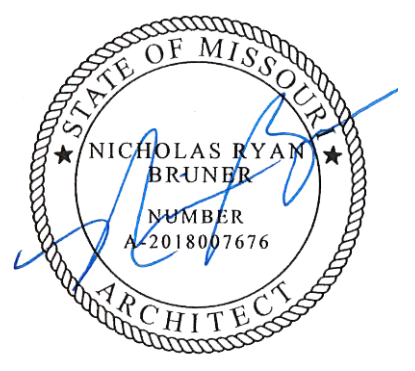
GENERAL	
G-001	COVER
G-002	SHEET LIST, SYMBOLS AND ABBREVIATIONS
G-003	TWO BEDROOM CABIN LIFE SAFETY
G-004	FOUR BEDROOM CABIN LIFE SAFETY
CIVIL	
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C-103	HARDSCAPE PLAN
C-104	GRADING AND EROSION CONTROL PLAN
C-105	UTILITY PLAN
C-301	SANITARY SEWER PROFILE
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A-102	FOUR BEDROOM CABIN FLOOR PLAN
A-103	TWO BEDROOM CABIN ROOF PLAN
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A-201	TWO BEDROOM CABIN BUILDING ELEVATION
A-202	FOUR BEDROOM CABIN BUILDING ELEVATIONS
A-203	FOUR BEDROOM CABIN BUILDING ELEVATIONS
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A-402	TWO BEDROOM CABIN ENLARGED PLANS AND ELEVATIONS
A-403	FOUR BEDROOM CABIN ENLARGED PLANS AND ELEVATIONS
A-404	FOUR BEDROOM CABIN ENLARGED PLANS AND DETAILS
A-501	GENERAL DETAILS
A-502	GENERAL DETAILS
A-503	GENERAL STAIR DETAILS
A-504	GENERAL CASEWORK DETAILS
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A-701	TWO BEDROOM CABIN REFLECTED CEILING PLAN
A-702	FOUR BEDROOM CABIN REFLECTED CEILING PLAN
INTERIORS	
I-001	GENERAL FINISH INFORMATION AND SYMBOL LEGENDS
I-101	TWO BEDROOM CABIN INTERIOR FINISH PLAN
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FIRE PROTECTION	
F-001	GENERAL INFORMATION
F-101	TWO BEDROOM CABIN FIRE PROTECTION PLAN
F-102	FOUR BEDROOM CABIN FIRE PROTECTION PLAN
PLUMBING	
P-001	GENERAL INFORMATION
P-101	TWO BEDROOM CABIN PLUMBING PLANS
P-102	FOUR BEDROOM CABIN PLUMBING PLANS
P-601	DIAGRAMS
P-602	DIAGRAMS
P-603	SCHEDULES
MECHANICAL	
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M-101	TWO BEDROOM CABIN MECHANICAL PLAN
M-102	FOUR BEDROOM CABIN MECHANICAL PLAN
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E-101	FLOOR PLAN - LIGHTING - TWO BEDROOM CABIN
E-102	FLOOR PLAN - LIGHTING - FOUR BEDROOM CABIN
E-103	FLOOR PLAN - POWER - TWO BEDROOM CABIN
E-104	FLOOR PLAN - POWER - FOUR BEDROOM CABIN
E-105	FLOOR PLAN - SYSTEMS - TWO BEDROOM CABIN
E-106	FLOOR PLAN - SYSTEMS - FOUR BEDROOM CABIN
E-401	ELECTRICAL SITE PLAN
E-402	ELECTRICAL SITE PLAN
E-501	DETAILS
E-601	ONE-LINE DIAGRAM
E-602	SCHEDULES
E-603	SCHEDULES



NOTES:

1. FIXTURES SHOWN ARE FOR REFERENCE ONLY AND ARE NOT PROJECT SPECIFIC. SEE PLUMBING DRAWINGS AND SCHEDULES FOR FIXTURE TYPES.
2. EXPOSED PLUMBING BARRIER FREE LAVATORIES MUST BE INSULATED OR OTHERWISE CONFIGURED TO ELIMINATE POSSIBLE CONTACT.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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DIVISION OF FACILITIES
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AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #:
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

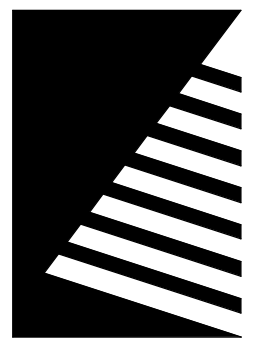
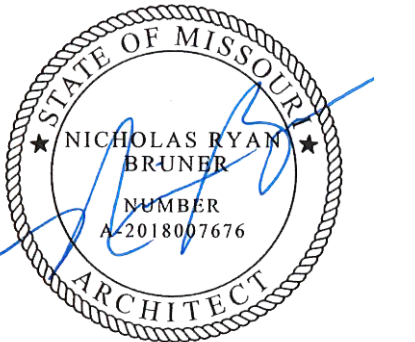
DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:
**SHEET LIST,
SYMBOLS AND
ABBREVIATIONS**

SHEET NUMBER:

G-002

SHEET 02 of 75
ISSUE DATE: 03/02/2023



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PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #:

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	
7815235023 - Cabin 505	X

DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:

**TWO BEDROOM
CABIN LIFE SAFETY**

SHEET NUMBER:

G-003

SHEET 03 of 75
ISSUE DATE: 03/02/2023

LIFE SAFETY NOTES

1. THE USE OF THE BUILDING IS R1 SINGLE FAMILY DWELLING, LEASED FOR VARYING LENGTHS OF STAY.
2. CONSTRUCTION CLASSIFICATION IS TYPE VB, FULLY SPRINKLERED WITH NFPA 13D SYSTEM.

CODE INFORMATION

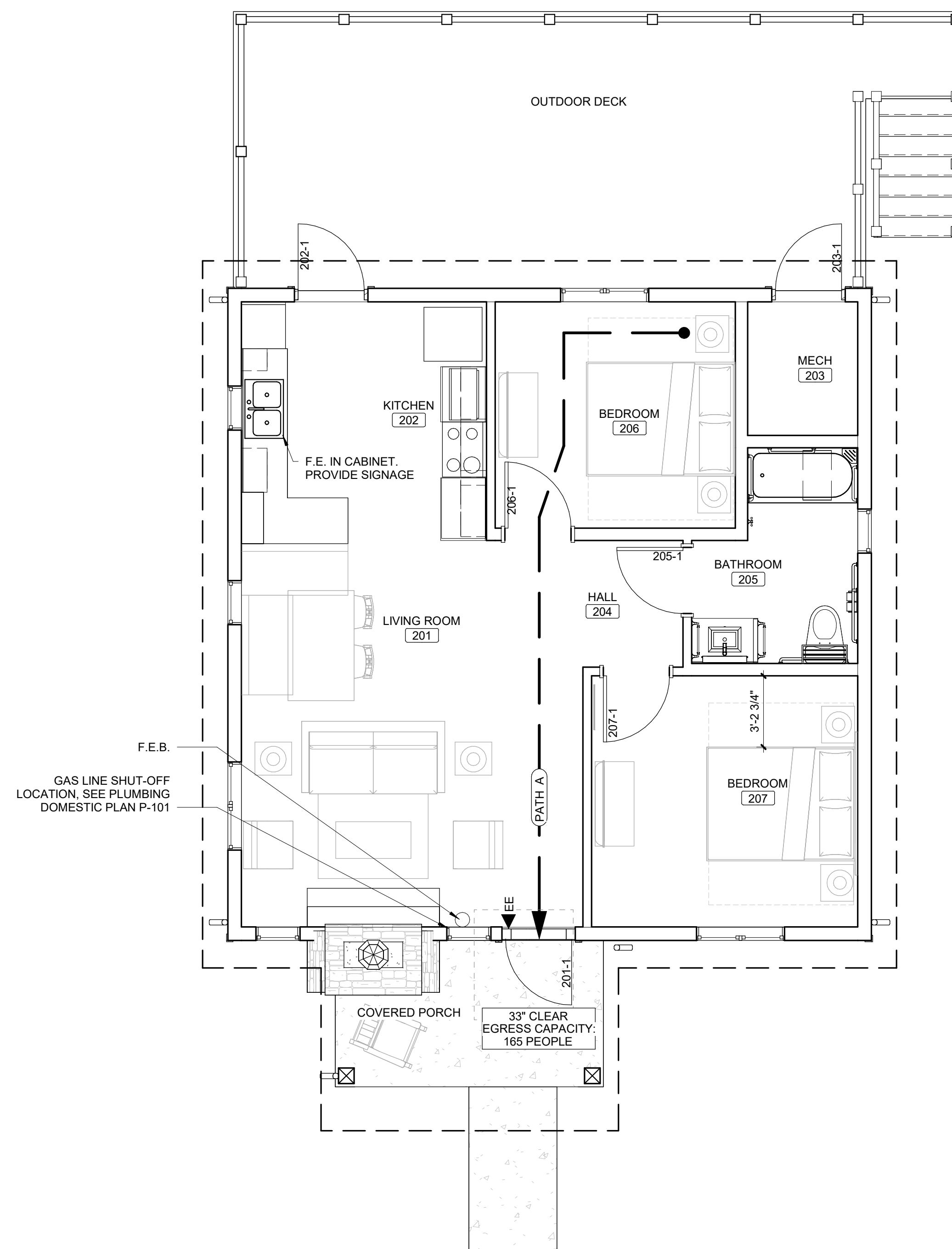
PROPOSED USE: TRANSIENT LODGING
OWNED BY: STATE
CODE ENFORCEMENT JURISDICTION: STATE
APPLICABLE CODES:
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2021 INTERNATIONAL FIRE CODE
2020 NATIONAL ELECTRIC CODE
2010 AMERICANS WITH DISABILITIES ACT
GENERAL CODE INFORMATION:
CONSTRUCTION TYPE:VB
PRIMARY OCCUPANCY:R-1
SECONDARY OCCUPANCY:NONE
NEW CONSTRUCTION
RENOVATION (EXISTING BUILDING)
MIXED CONSTRUCTION
SPRINKLERED PER IBC [F]420.4
MEZZANINE
MIXED OCCUPANCY
AREA AND HEIGHT REQUIREMENTS:
AREA TOTAL = 865 SF
AREA ALLOWED = UNLIMITED
BUILDING HEIGHT = 15'-8"
ALLOWABLE HEIGHT = 40'-0", 3 STORIES

EGRESS INFORMATION	
GROSS BUILDING AREA (OUTSIDE FACE WALLS)	865 SF
GROSS MEASURED AREA (INTERIOR FACE WALLS)	793 SF
OCCUPANT LOAD (per IBC TABLE 1004.5)	RES = 865 GSF/200 = 5 PPL
EGRESS WIDTH (per IBC 1005.1)	EXIT DOORS = 33"(0.20) = 165 PPL
COMMON PATH OF TRAVEL (per IBC 1006.2.1)	75'-0" MAXIMUM (SPRINKLERED)
EXIT ACCESS TRAVEL (per IBC TABLE 1017.2)	250'-0" MAXIMUM (SPRINKLERED)
DEAD-END CORRIDOR (per IBC 1020.5)	20'-0" MAXIMUM
REQUIRED # OF EXITS (per IBC 1006.2)	1 EXIT REQUIRED IF UNDER 49 TOTAL OCCUPANTS

EGRESS PATHS	
PATH	TRAVEL DISTANCE
A	33'-2"

LIFE SAFETY LEGEND

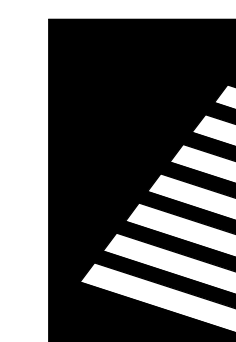
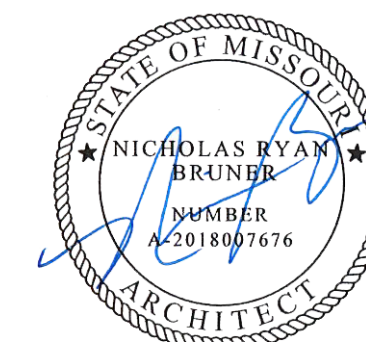
- - - - -> EGRESS PATH
- ▶ EXIT IDENTIFICATION SYMBOLS
- EE = EXTERIOR EXIT
- F.E. FIRE EXTINGUISHER
- F.E.B. FIRE EXTINGUISHER BRACKET
- ▨ OCCUPANCY RESIDENTIAL
- ⊙ CO CARBON MONOXIDE DETECTOR
- ⊙ S SMOKE DETECTOR



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1 LIFE SAFETY PLAN
SCALE: 1/4" = 1'-0"





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RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:
**FOUR BEDROOM
CABIN LIFE SAFETY**

SHEET NUMBER:

G-004

SHEET 04 of 75
ISSUE DATE: 03/02/2023

LIFE SAFETY NOTES

- THE USE OF THE BUILDING IS R1 SINGLE FAMILY DWELLING, LEASED FOR VARYING LENGTHS OF STAY.
- CONSTRUCTION CLASSIFICATION IS TYPE VB, FULLY SPRINKLERED WITH NFPA 13D SYSTEM.

CODE INFORMATION

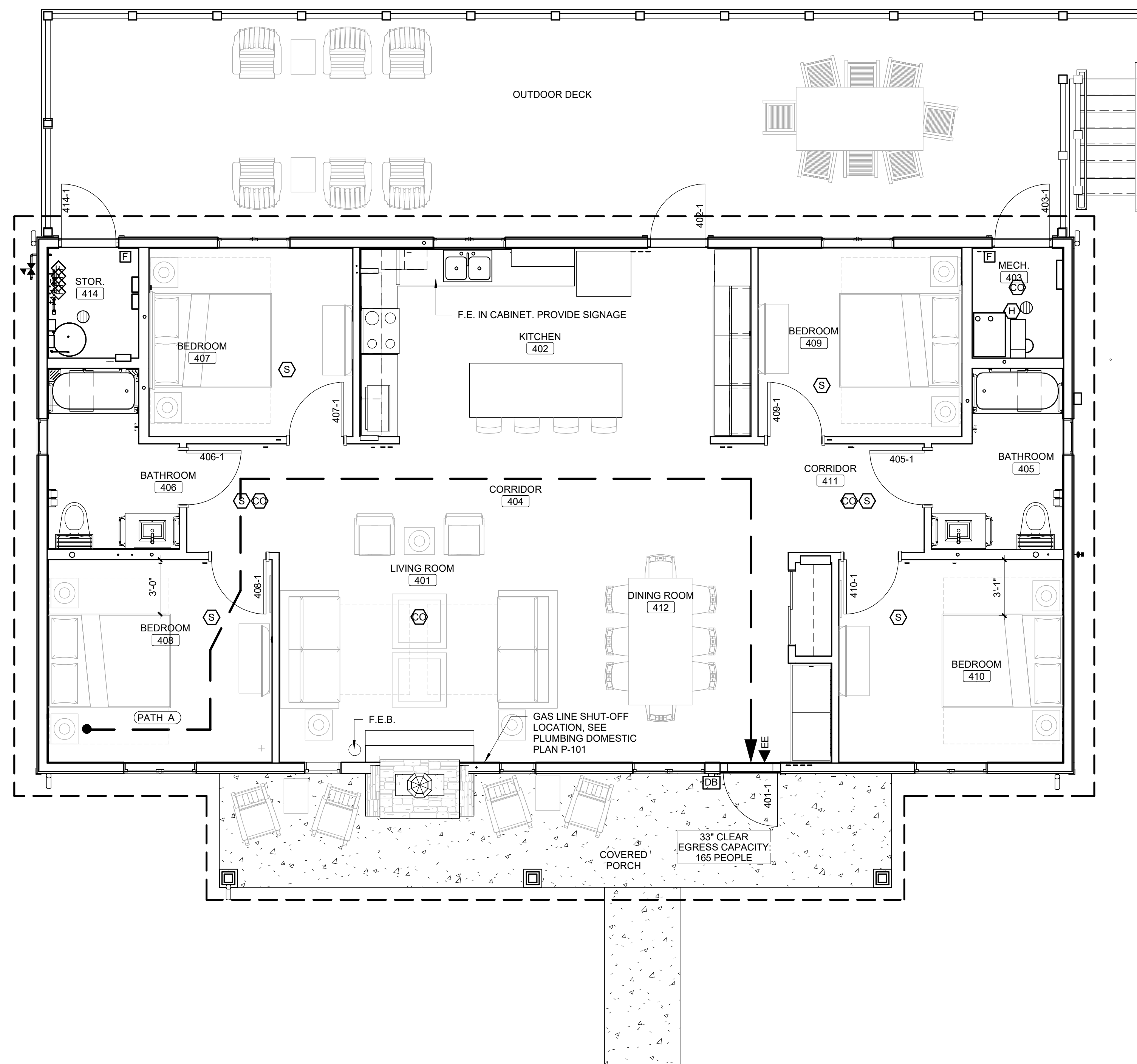
PROPOSED USE: TRANSIENT LODGING
OWNED BY: STATE
CODE ENFORCEMENT JURISDICTION: STATE
APPLICABLE CODES:
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2021 INTERNATIONAL MECHANICAL CODE
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2020 NATIONAL ELECTRIC CODE
2010 AMERICANS WITH DISABILITIES ACT
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PRIMARY OCCUPANCY: R-1
SECONDARY OCCUPANCY: NONE
NEW CONSTRUCTION
RENOVATION (EXISTING BUILDING)
MIXED CONSTRUCTION
SPRINKLERED PER IBC [F]420.4
MEZZANINE
MIXED OCCUPANCY
AREA AND HEIGHT REQUIREMENTS:
AREA TOTAL = 1,680 SF
AREA ALLOWED = UNLIMITED
BUILDING HEIGHT = 15'-5"
ALLOWABLE HEIGHT = 40'-0", 3 STORIES

EGRESS INFORMATION	
GROSS BUILDING AREA (OUTSIDE FACE WALLS)	1,680 SF
GROSS MEASURED AREA (INTERIOR FACE WALLS)	1,587 SF
OCCUPANT LOAD (per IBC TABLE 1004.5)	RES = 1,680 GSF/200 = 9 PPL
EGRESS WIDTH (per IBC 1005.1)	EXIT DOORS = 33"(0.20) = 165 PPL
COMMON PATH OF TRAVEL (per IBC 1006.2.1)	75'-0" MAXIMUM (SPRINKLERED)
EXIT ACCESS TRAVEL (per IBC TABLE 1017.2)	250'-0" MAXIMUM (SPRINKLERED)
DEAD-END CORRIDOR (per IBC 1020.5)	20'-0" MAXIMUM
REQUIRED # OF EXITS (per IBC 1006.2)	1 EXIT REQUIRED IF UNDER 49 TOTAL OCCUPANTS

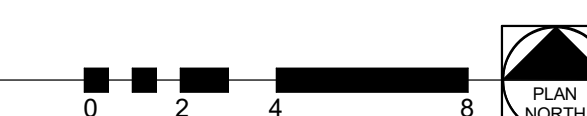
EGRESS PATHS	
PATH	TRAVEL DISTANCE
A	64'-10"

LIFE SAFETY LEGEND

- EGRESS PATH
- EXIT IDENTIFICATION SYMBOLS
- EE = EXTERIOR EXIT
- F.E. FIRE EXTINGUISHER
- F.E.B. FIRE EXTINGUISHER BRACKET
- ▨ OCCUPANCY RESIDENTIAL
- CO CARBON MONOXIDE DETECTOR
- S SMOKE DETECTOR



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EMINENCE, MISSOURI

PROJECT #.: X2208-01

SITE #.: 5235

FACILITY #.: xxxx

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: JSE/NJT
CHECKED BY: BK
DESIGNED BY: JSE/NJT

SHEET TITLE:

GENERAL NOTES'

SHEET NUMBER:

C-001

SHEET 05 of 75
ISSUE DATE: 03/02/2023

SYMBOLS LEGEND

	EXISTING BUSH
	EXISTING DECIDUOUS TREE
	EXISTING EVERGREEN TREE
	EXISTING EVERGREEN BUSH
	EXISTING DECIDUOUS TREE TO BE REMOVED (UNDER SEPARATE CONTRACT)
	EXISTING EVERGREEN TREE TO BE REMOVED (UNDER SEPARATE CONTRACT)
	EXISTING BORE HOLE
	EXISTING SIGN
	EXISTING GUY WIRE
	EXISTING POWER POLE
	EXISTING POWER POLE W/ TRANSFORMER
	EXISTING TRANSFORMER
	712.25 X NEW FINISH SPOT ELEVATION
	T/W/P 712.25 X NEW TOP OF WALK/PAVEMENT ELEVATION
	P 712.25 X NEW PAVEMENT ELEVATION
	ME 712.25 X NEW MATCH EXISTING ELEVATION
	TW 712.25 X NEW TOP OF WALK ELEVATION
	FL 712.25 X NEW FLOWLINE ELEVATION
	3 PARKING COUNT DESIGNATOR
	NEW SWALE LINE
	NEW WATER VALVE
	NEW CURB STOP AND BOX
	NEW SIGN
	NEW INLET PROTECTION
	NEW DITCH CHECK

LINE LEGEND

	EX 5' CONTOUR	505
	EX 1' CONTOUR	504
	EX STORM SEWER	ST
	EX OVERHEAD ELECTRIC	OE
	EX UNDERGROUND ELECTRIC	E
	EXISTING TREE MASS	
	FINISH 5' CONTOUR	505
	FINISH 1' CONTOUR	504
	SAWCUT LINE	
	NEW STORM SEWER	ST
	NEW SANITARY SEWER	SA
	NEW GAS MAIN	G
	NEW TELEPHONE SERVICE	T
	NEW UNDERGROUND ELECTRICAL SERVICE	E
	NEW WATER MAIN	W
	EROSION CONTROL BARRIER	
	TREE PROTECTION FENCE	TP

ABBREVIATIONS

EX	EXISTING	ELEV	ELEVATION
TYP	TYPICAL	MB	MAILBOX
TBR	TO BE REMOVED	FP	FLAG POLE
TR	TO REMAIN	FO	FIBER OPTIC
TBR&REL	TO BE RELOCATED	DS	DOWNSPOUT
TBR&REL	TO BE REMOVED & RELOCATED	CO	CLEANOUT
ME	MATCH EXISTING	MH	MANHOLE
BM	BENCHMARK	SAN	SANITARY
COR	CORNER	ST	STORM
PB	PLAT BOOK	FL	FLOW LINE
DB	DEED BOOK	PVC	POLYVINYLCHLORIDE
PG	PAGE	CMP	CORRUGATED METAL PIPE
(S)	SURVEYED	RCP	REINFORCED CONCRETE PIPE
(R)	RECORD	UTIL	UTILITY
N	NORTH	STM	STEAM
S	SOUTH	UG	UNDERGROUND
E	EAST	M.E.	MATCH EXISTING
W	WEST	H.P.	HIGH POINT
S.F.	SQUARE FEET		
BLDG	BUILDING		
CONC	CONCRETE		

GENERAL NOTES

- REFER TO GRADING AND EROSION CONTROL PLAN FOR INDIVIDUAL AREAS FOR GRADING AND DRAINAGE.
- REFER TO GRADING AND EROSION CONTROL PLAN FOR INDIVIDUAL AREAS FOR EROSION CONTROL.
- REFER TO SHEETS C-105 & C-301 FOR ABOVE AND BELOW GROUND SEWERS AND UTILITIES.
- ALL EXISTING IMPROVEMENTS SHALL REMAIN UNLESS NOTED OTHERWISE ON SHEET C-101.
- ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND DIMENSIONS OF EXIT PORCHES, RAMP, PATIOS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATION.
- THE CONTRACTOR SHALL KEEP ALL ACCESS ROADS FREE FROM MUD AND DEBRIS AT ALL TIMES.
- THE CONTRACTOR SHALL SAWCUT ALL EDGES OF EXISTING PAVEMENT THAT IS TO BE REMOVED. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO CREATE A SMOOTH WORKING EDGE AND TO PLACE BACKFILL AND PAVEMENT SUCH THAT SETTLEMENT DOES NOT OCCUR.
- REFERENCE LANDSCAPE PLANS FOR RESTORATION INFORMATION.
- ALL LANDSCAPE AREAS SHALL BE ROUGH GRADED TO 6" BELOW TOP OF ALL WALKS AND CURBS. TOP SOIL TO BE ADDED TO THE LEVEL OF THE WALKS OR CURBS.
- THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING BUT NOT LIMITED TO SILTATION FABRIC FENCES. CONTROL SHALL COMMENCE WITH NOTICE TO PROCEED AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT OR IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR MODOT.
- REFER TO ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS FOR EARTHWORK AND COMPACTION REQUIREMENTS FOR ALL SLABS AND BUILDING FOUNDATIONS.
- ALL EARTHWORK AND SITE PREPARATION SHALL BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE LATEST VERSION OF THE SUBSURFACE INVESTIGATION REPORTS PREPARED BY:
SCI ENGINEERING, INC.
1114 NORTH BISHOP
ROLLA, MO 65401
- FINISH SPOT ELEVATIONS AND CONTOURS ARE SHOWN TO TOP OF NEW PAVEMENT, WALKS, SOD, ETC.
- STORMWATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT. SINK HOLES ARE NOT ADEQUATE NATURAL DISCHARGE POINTS.
- ALL EXISTING UNDERGROUND IMPROVEMENTS SHALL REMAIN UNLESS NOTED OTHERWISE.
- BACKFILL ALL UTILITY TRENCHES UNDER PAVEMENT WITH GRANULAR MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING TOPS AND FLOWLINES OF ALL EXISTING SEWERS PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND/OR ABANDONMENT OF ALL EXISTING UTILITY SERVICES (INCLUDING UTILITY COMPANY FEES).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND CONNECTING ALL UTILITIES (INCLUDING, BUT NOT LIMITED TO POWER, CABLE TV, TELEPHONE, ETC.) FROM LOCAL UTILITY COMPANY SOURCE TO BUILDING.
- CONTRACTOR TO VERIFY EXISTING ELEVATIONS AT ALL ENDS OF PIPES. CONTACT ENGINEER IF ANY DISCREPANCIES PRIOR TO STARTING.
- ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III UNLESS NOTED OTHERWISE.
- ALL POLYVINYLCHLORIDE PIPE (PVC) SHALL BE SDR 21 UNLESS NOTED OTHERWISE.
- ALL HDPE PIPE SHALL BE AASHTO M-294 TYPE S UNLESS NOTED OTHERWISE.
- INLET TOPS MUST MATCH SLOPE OF THE ADJOINING PAVEMENT.
- ALL SEWERS SHALL BE INSTALLED WITH 3' MIN. COVER UNLESS NOTED OTHERWISE.
- FOR SEWER PIPE (STORM AND SANITARY) WITH A DESIGN GRADE LESS THAN ONE PERCENT (1%), VERIFICATION OF THE PIPE GRADE WILL BE REQUIRED FOR EACH INSTALLED REACH OF SEWER, PRIOR TO ANY SURFACE RESTORATION OR INSTALLATION OF ANY SURFACE IMPROVEMENT. THE CONTRACTOR'S FIELD SUPERVISOR WILL BE REQUIRED TO PROVIDE DAILY DOCUMENTATION VERIFYING THAT THE AS-BUILT PIPE GRADE MEETS THE DESIGN GRADE THROUGH THE SUBMITTAL OF SIGNED CUT SHEETS TO THE ENGINEER UPON REQUEST.
- FIELD SURVEYED VERIFICATION MUST BE MADE UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR OR REGISTERED ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE ANY SEWER REACH HAVING AN AS-BUILT GRADE WHICH IS FLATTER THAN THE DESIGN GRADE BY MORE THAN 0.1%. SEWERS WITH GRADES GREATER THAN THE DESIGN SLOPE MAY BE LEFT IN PLACE, PROVIDED NO OTHER DESIGN GRADE IS REDUCED BY THIS VARIANCE IN THE AS-BUILT GRADE.
- TREES BEYOND THE LIMITS OF DISTURBANCE SHALL BE CONSIDERED WITHIN TREE PROTECTION ZONES.
- CONTRACTOR TO CLEAN OUT ALL MUD, DEBRIS, SILTATION, ETC. THAT ACCUMULATES IN THE STORM SEWER PIPES CONSTRUCTED, PRIOR TO SUBSTANTIAL COMPLETION.



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: xxxx
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

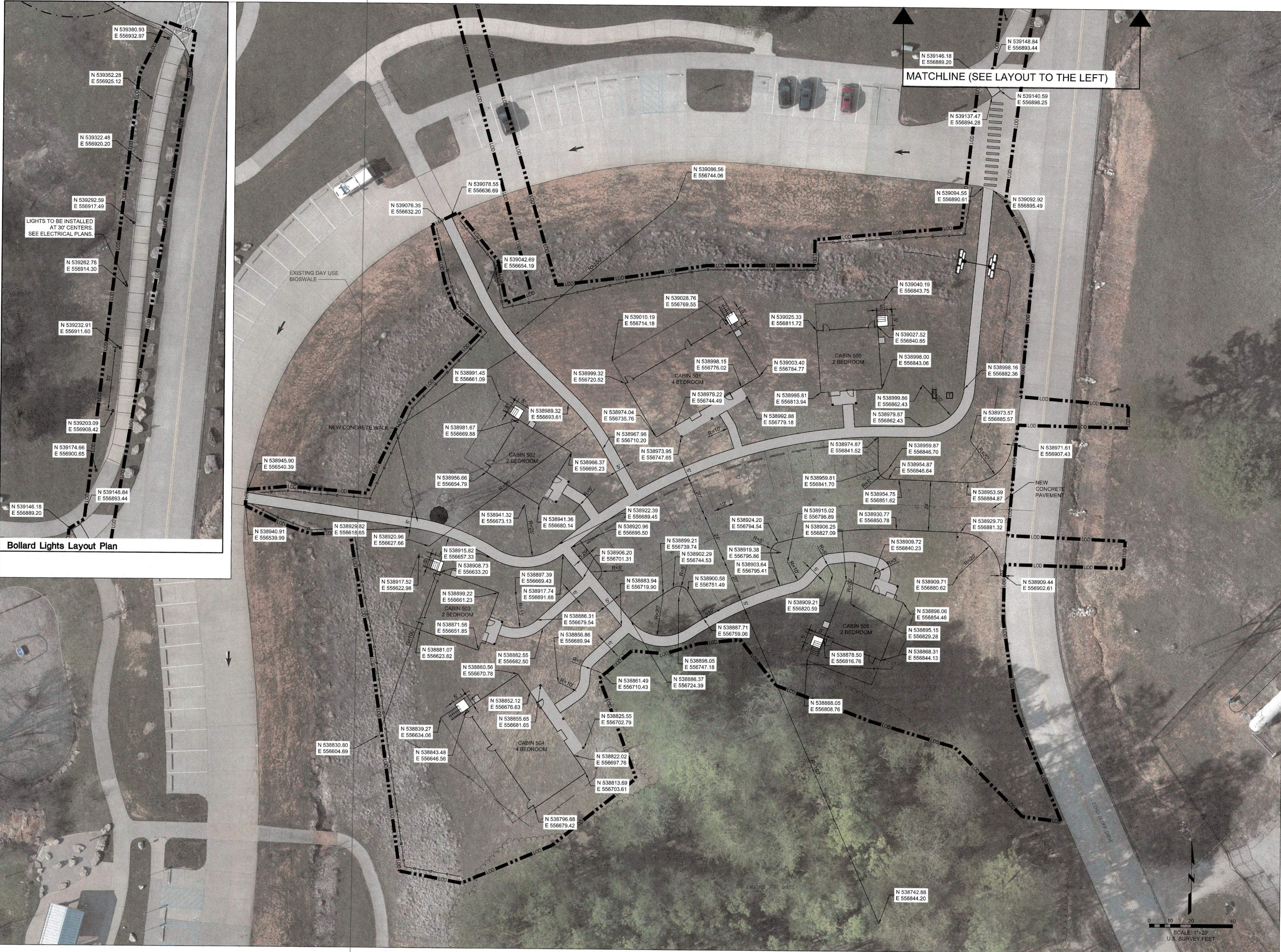
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CHECKED BY: BK
DESIGNED BY: JSE/NJT

**SHEET TITLE:
EXISTING CONDITIONS
& DEMOLITION PLAN**

SHEET NUMBER:

C-101

SHEET 06 of 75
ISSUE DATE: 03/02/2023



Bollard Lights Layout Plan

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SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: xxxx
DATE: DESCRIPTION:

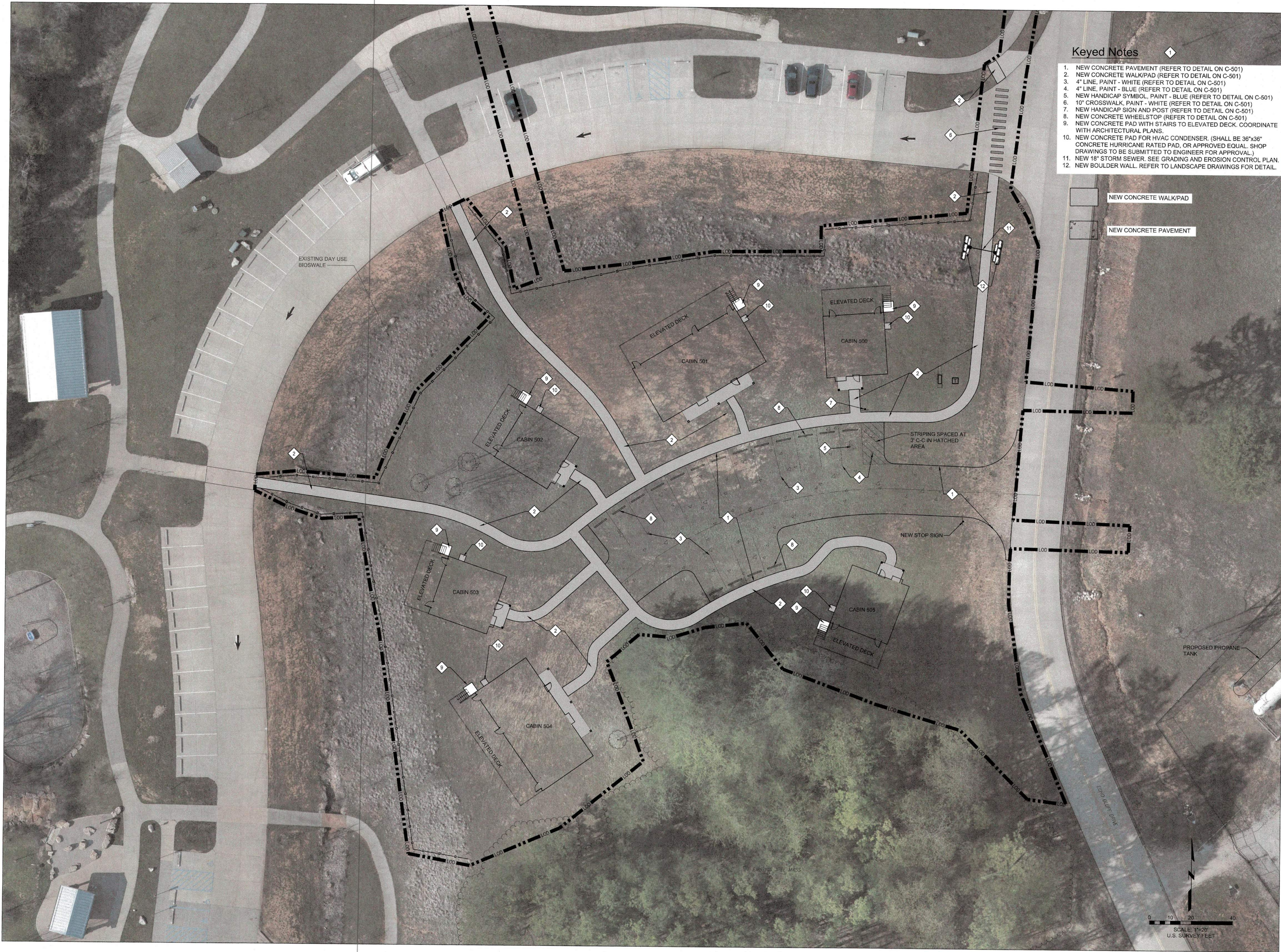
Facility#	Relevant to Sheet:
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7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

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SHEET TITLE:
LAYOUT PLAN

SHEET NUMBER:
C-102

SHEET 07 of 75
ISSUE DATE: 03/02/2023



- Keyed Notes**
1. NEW CONCRETE PAVEMENT (REFER TO DETAIL ON C-501)
 2. NEW CONCRETE WALK/PAD (REFER TO DETAIL ON C-501)
 3. 4" LINE, PAINT - WHITE (REFER TO DETAIL ON C-501)
 4. 4" LINE, PAINT - BLUE (REFER TO DETAIL ON C-501)
 5. NEW HANDICAP SYMBOL, PAINT - BLUE (REFER TO DETAIL ON C-501)
 6. 10" CROSSWALK, PAINT - WHITE (REFER TO DETAIL ON C-501)
 7. NEW HANDICAP SIGN AND POST (REFER TO DETAIL ON C-501)
 8. NEW CONCRETE WHEELSTOP (REFER TO DETAIL ON C-501)
 9. NEW CONCRETE PAD WITH STAIRS TO ELEVATED DECK. COORDINATE WITH ARCHITECTURAL PLANS.
 10. NEW CONCRETE PAD FOR HVAC CONDENSER. (SHALL BE 36"x36" CONCRETE HURRICANE RATED PAD, OR APPROVED EQUAL. SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL.)
 11. NEW 18" STORM SEWER. SEE GRADING AND EROSION CONTROL PLAN.
 12. NEW BOULDER WALL. REFER TO LANDSCAPE DRAWINGS FOR DETAIL.



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PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: xxxx
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

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SHEET TITLE:
HARDSCAPE PLAN

SHEET NUMBER:

C-103

SHEET 08 of 75
ISSUE DATE: 03/02/2023

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EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: xxxx
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

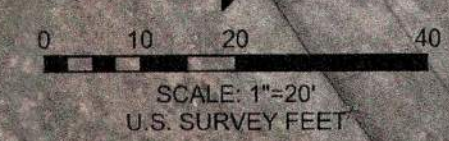
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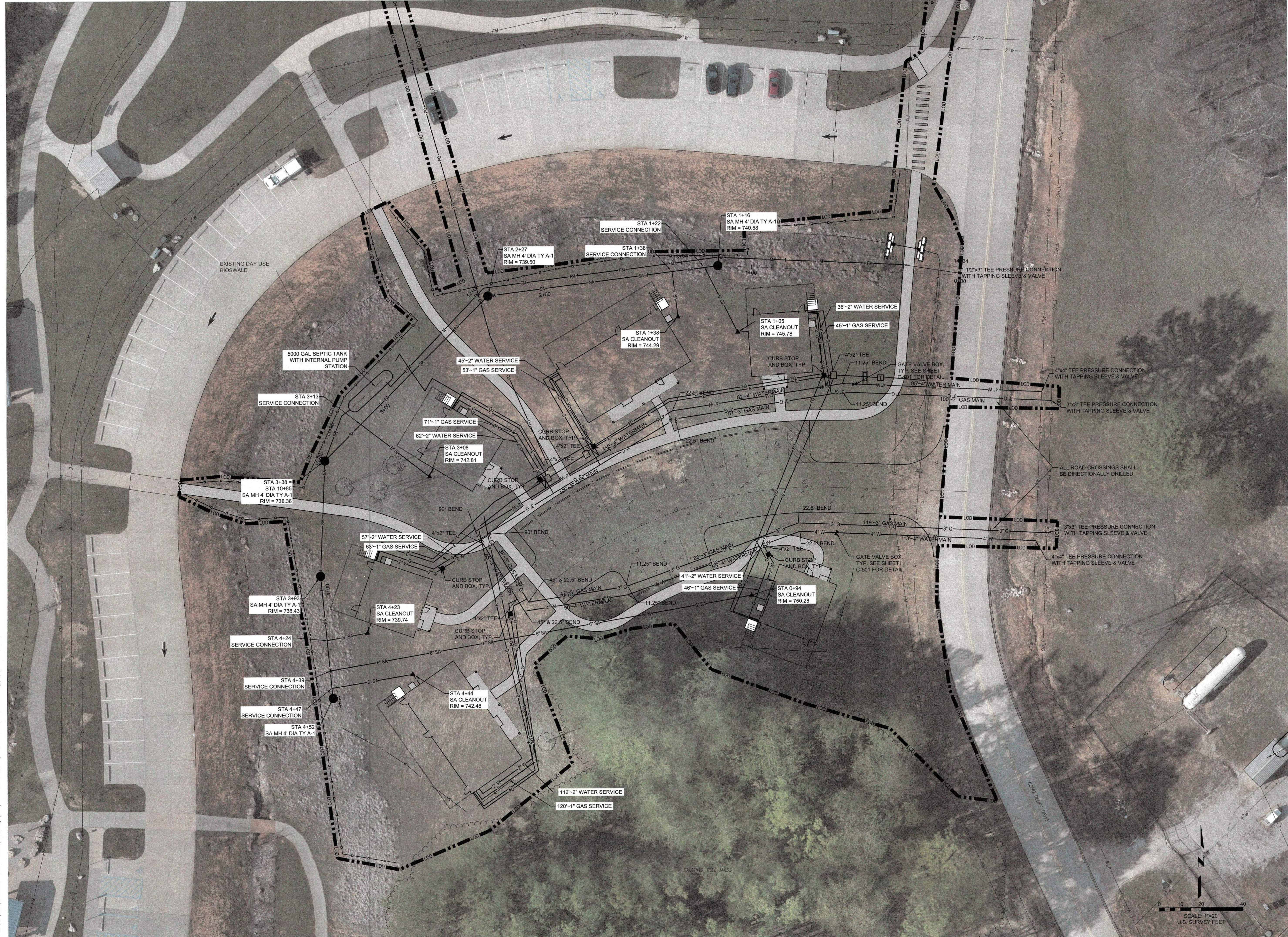
SHEET TITLE: GRADING AND EROSION CONTROL PLAN

SHEET NUMBER:

C-104

SHEET 09 of 75
ISSUE DATE: 03/02/2023





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EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: xxxx
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
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7815235019	Cabin 501 X
7815235020	Cabin 502 X
7815235021	Cabin 503 X
7815235022	Cabin 504 X
7815235023	Cabin 505 X

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SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:

C-105

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ISSUE DATE: 03/02/2023





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SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: xxxx

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

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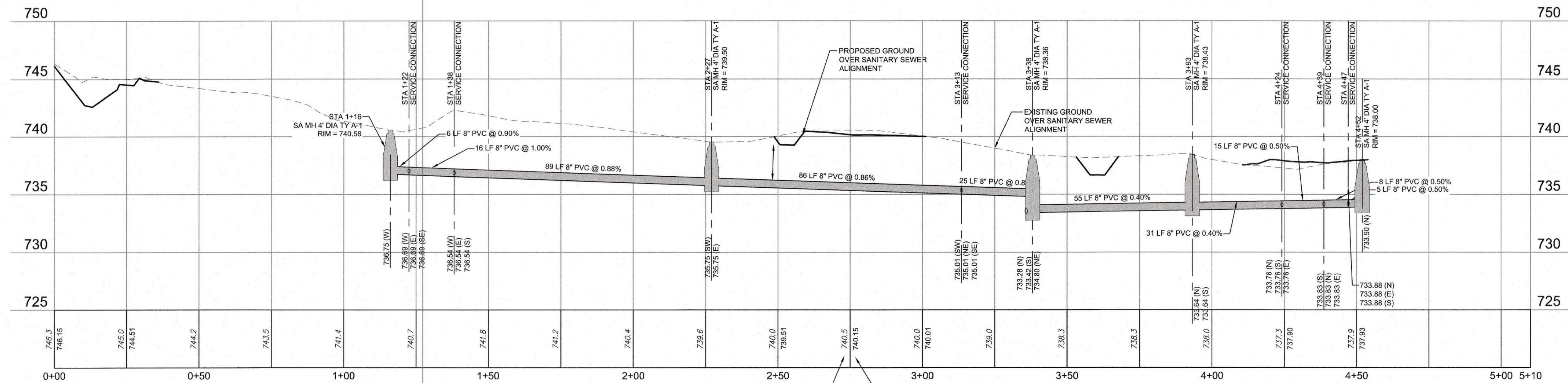
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**SANITARY SEWER
PROFILE**

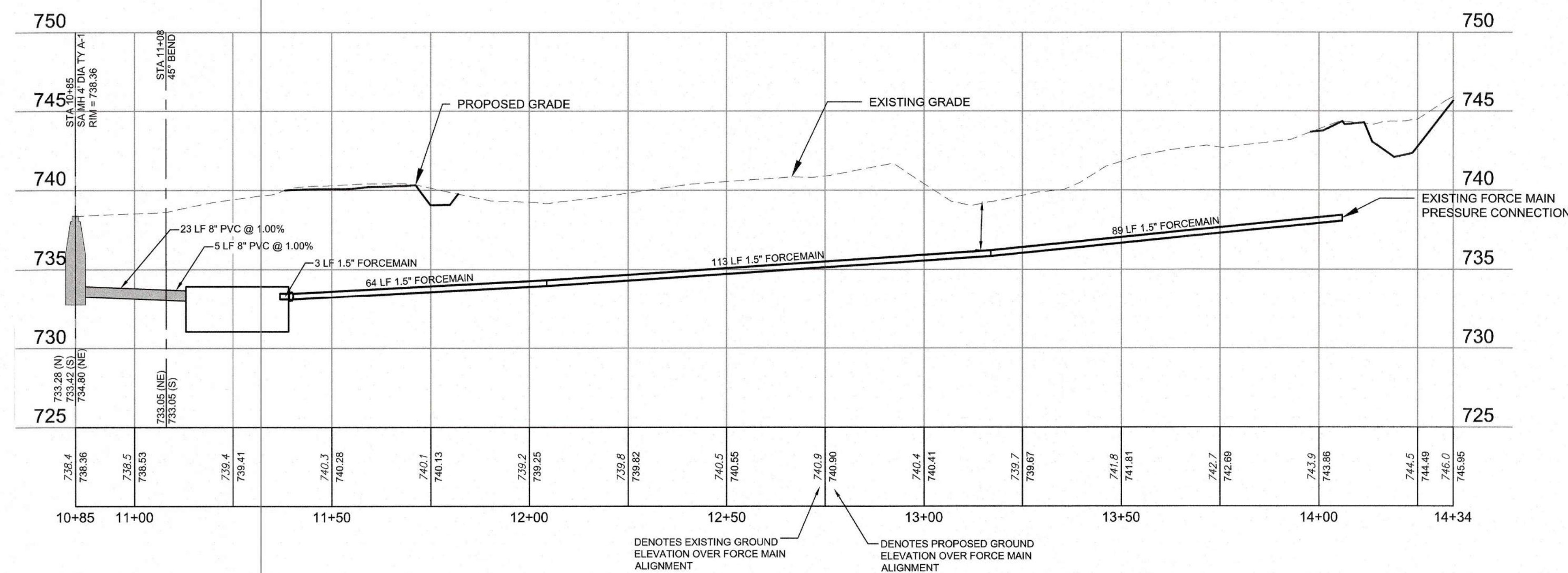
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SHEET 11 of 75
ISSUE DATE: 03/02/2023



SANITARY SEWER ALIGNMENT
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SCALE: 20H : 5V



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EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: xxxx

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

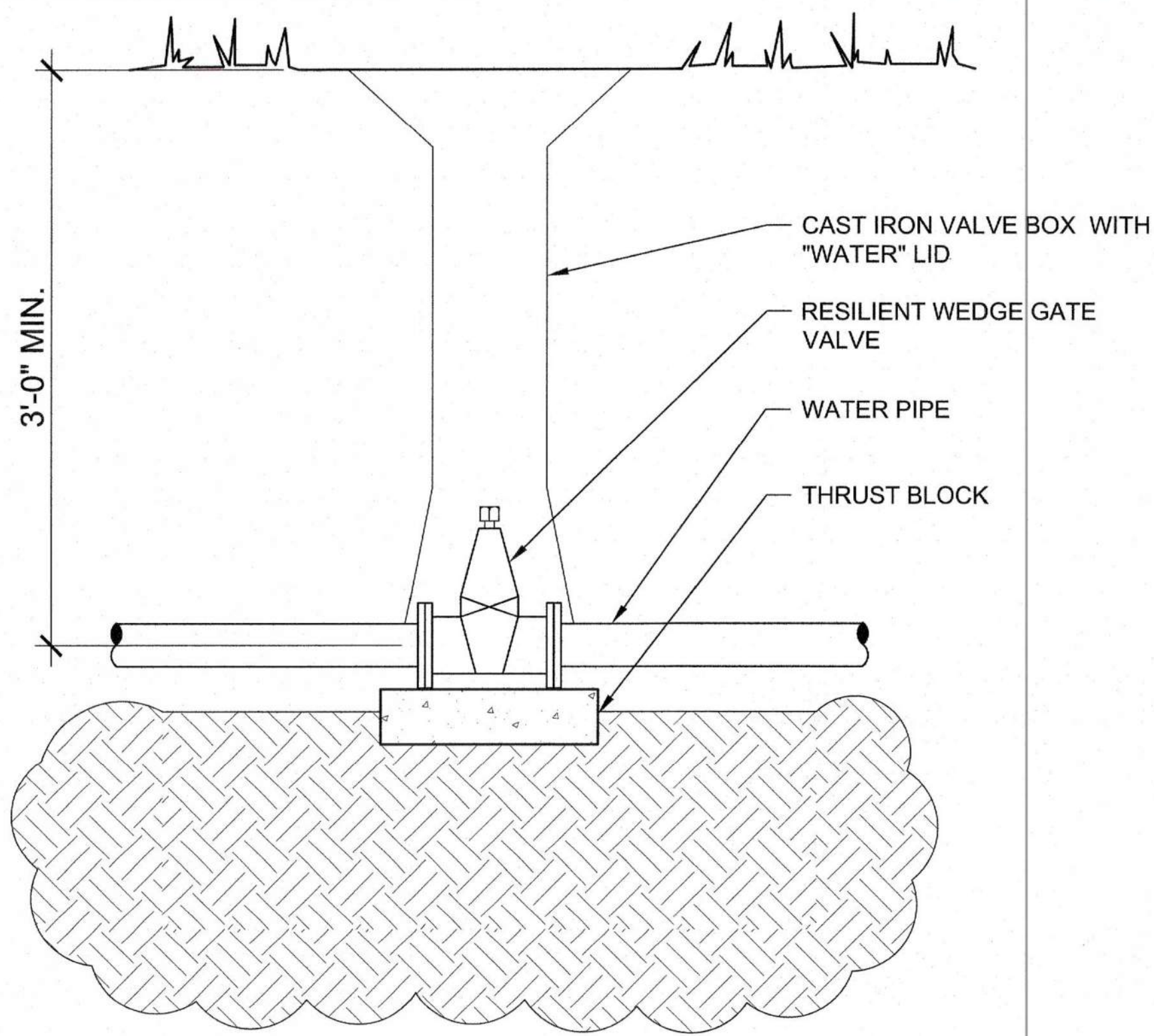
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SHEET TITLE:
CIVIL DETAILS

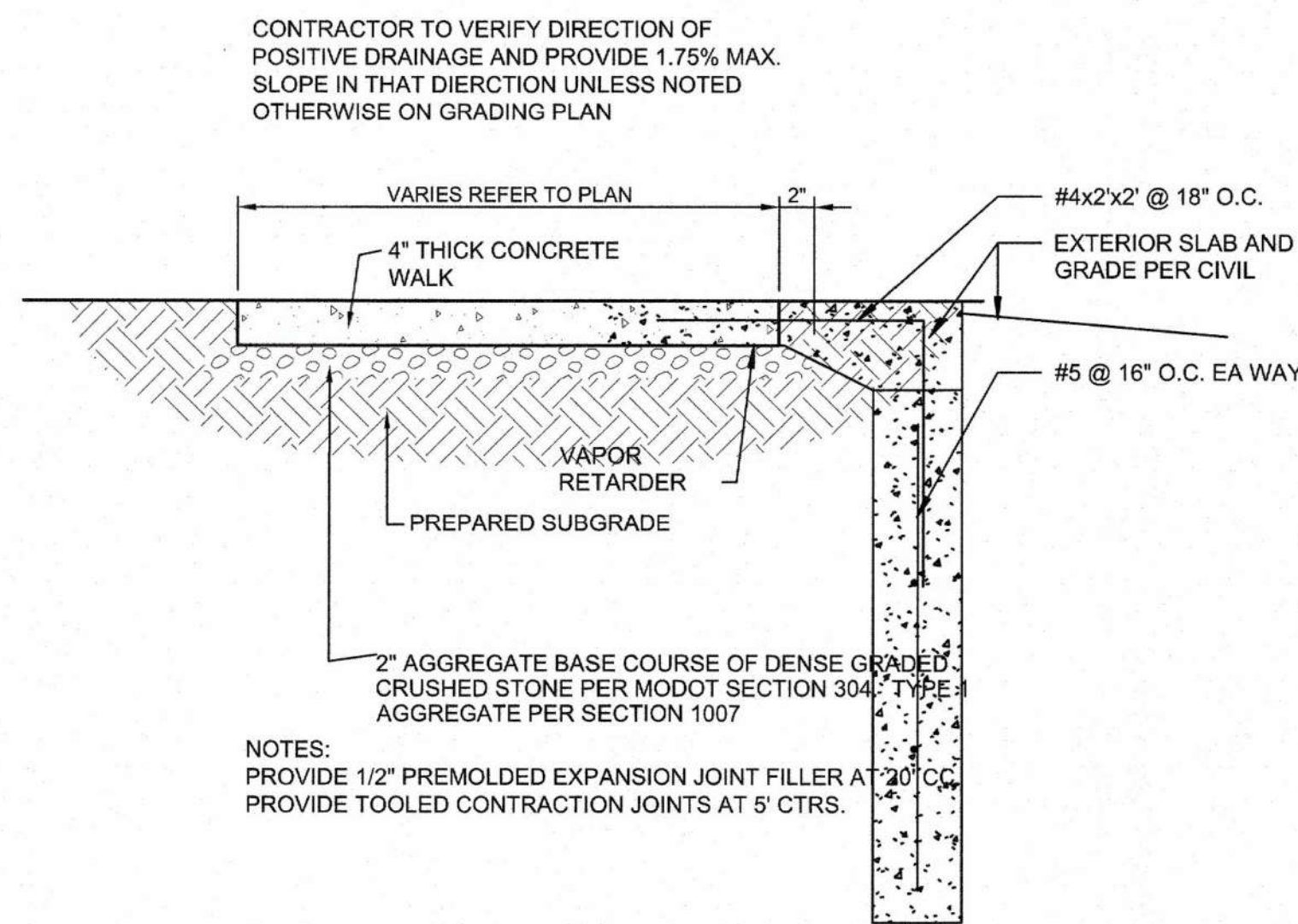
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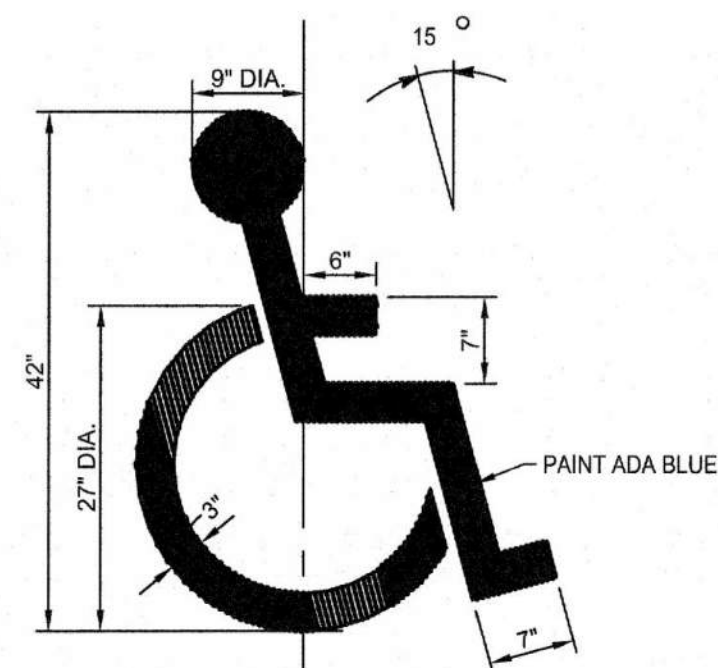
SHEET 12 of 75
ISSUE DATE: 03/02/2023



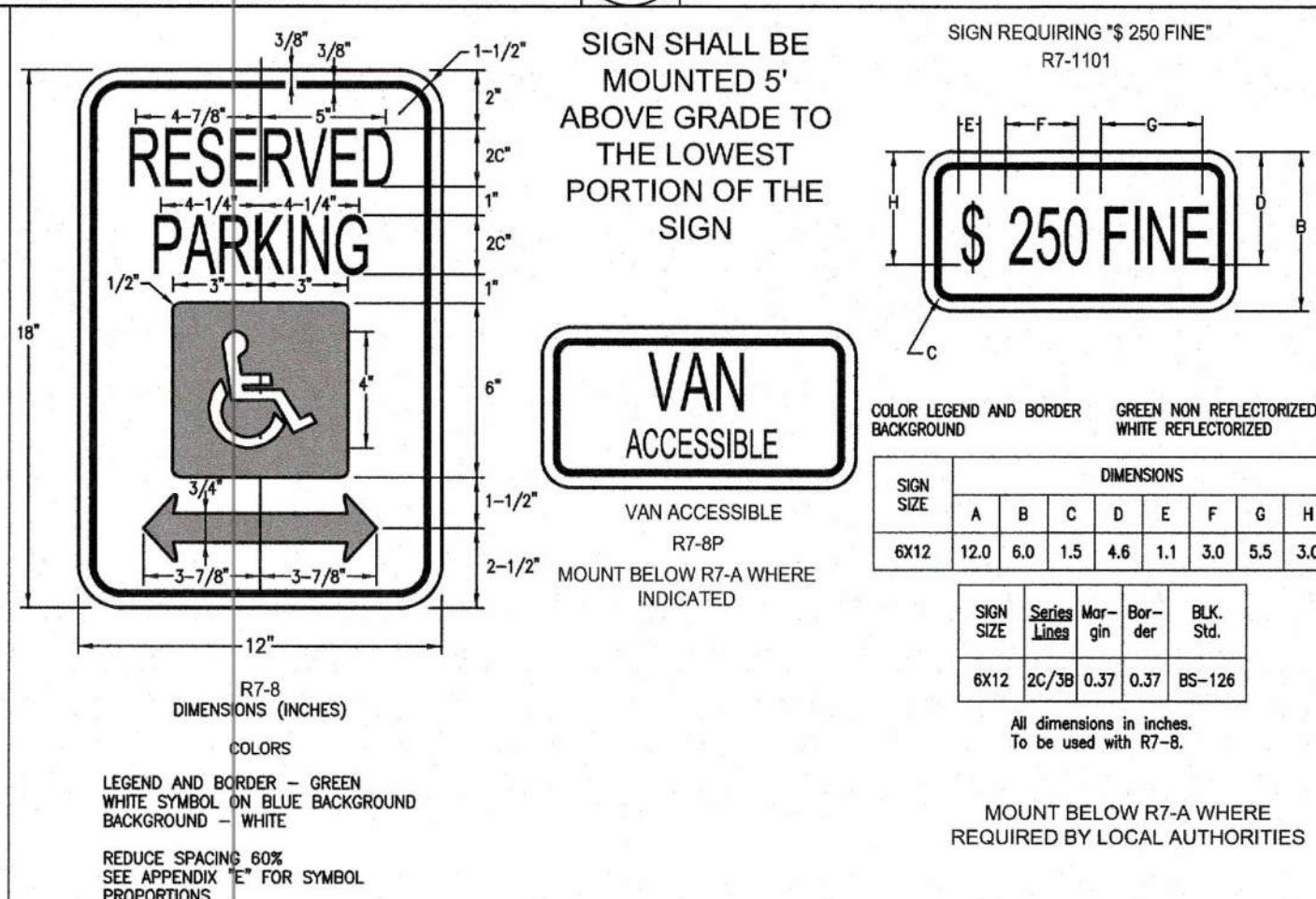
8 GATE VALVE DETAIL
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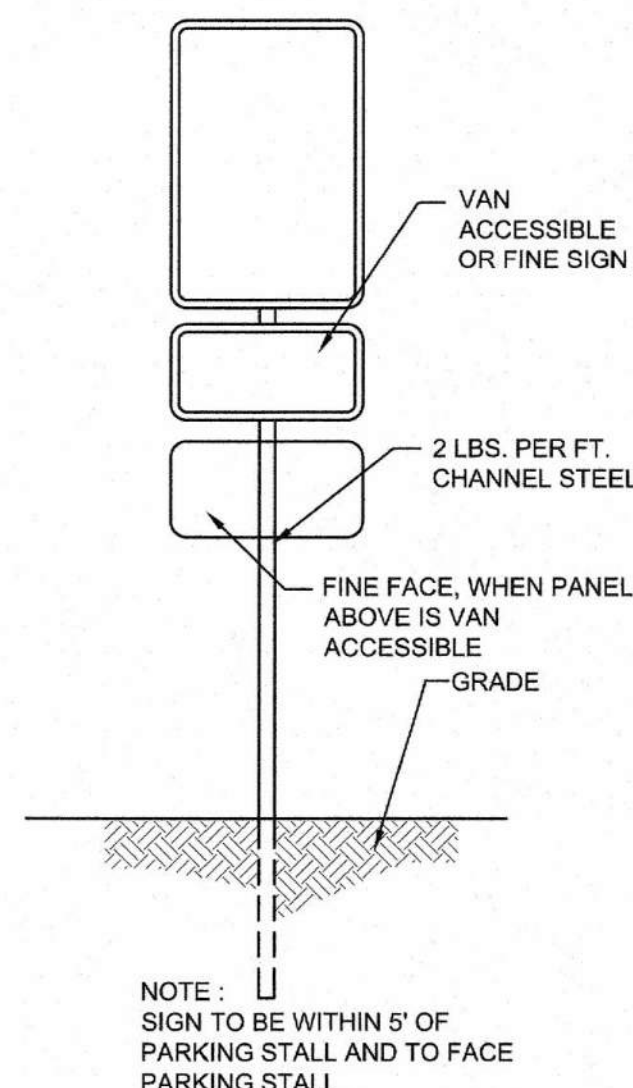
9 CONCRETE PAD AT STAIR LANDING WITH FROST WALL DETAIL
SCALE: Not To Scale



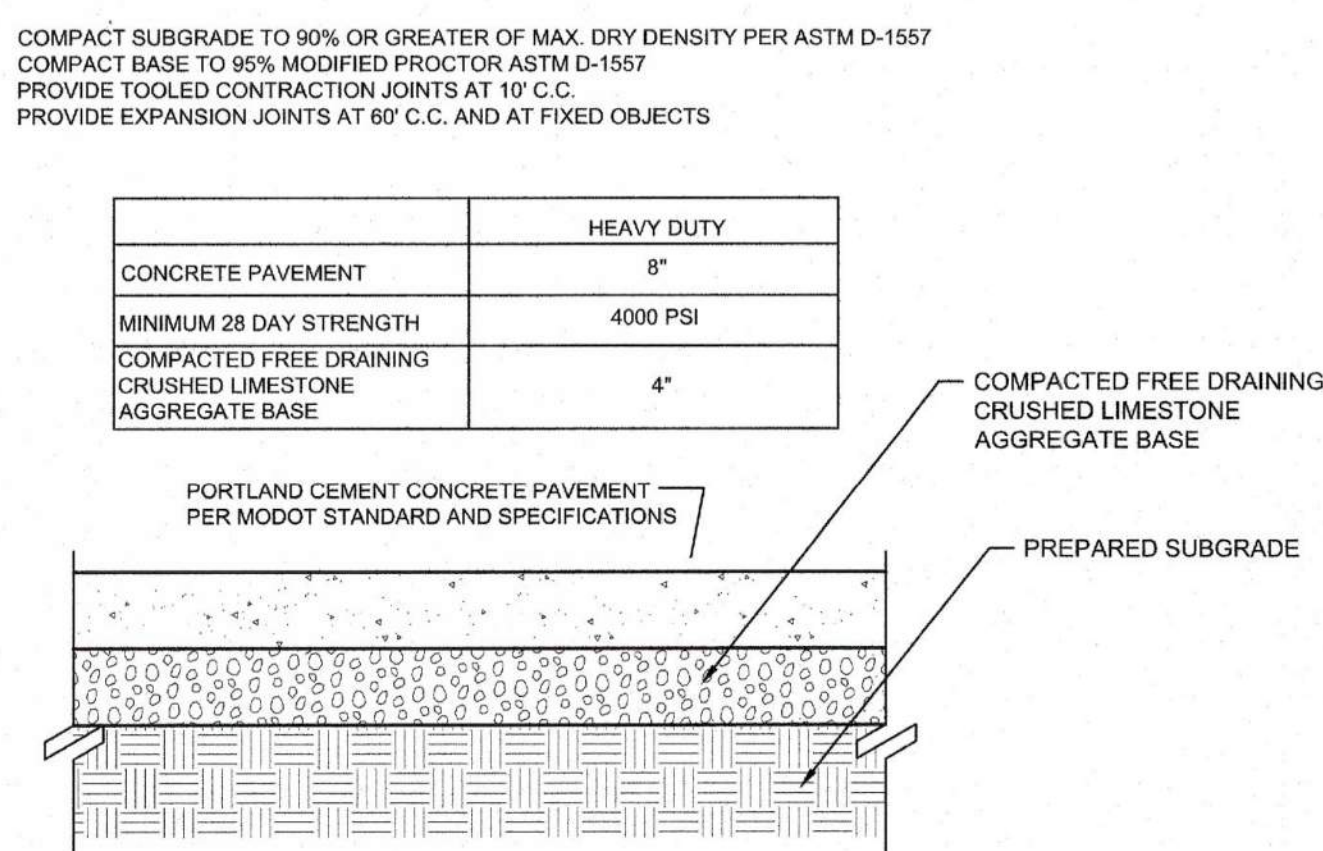
5 Handicap Parking Painted Symbol
SCALE: Not To Scale



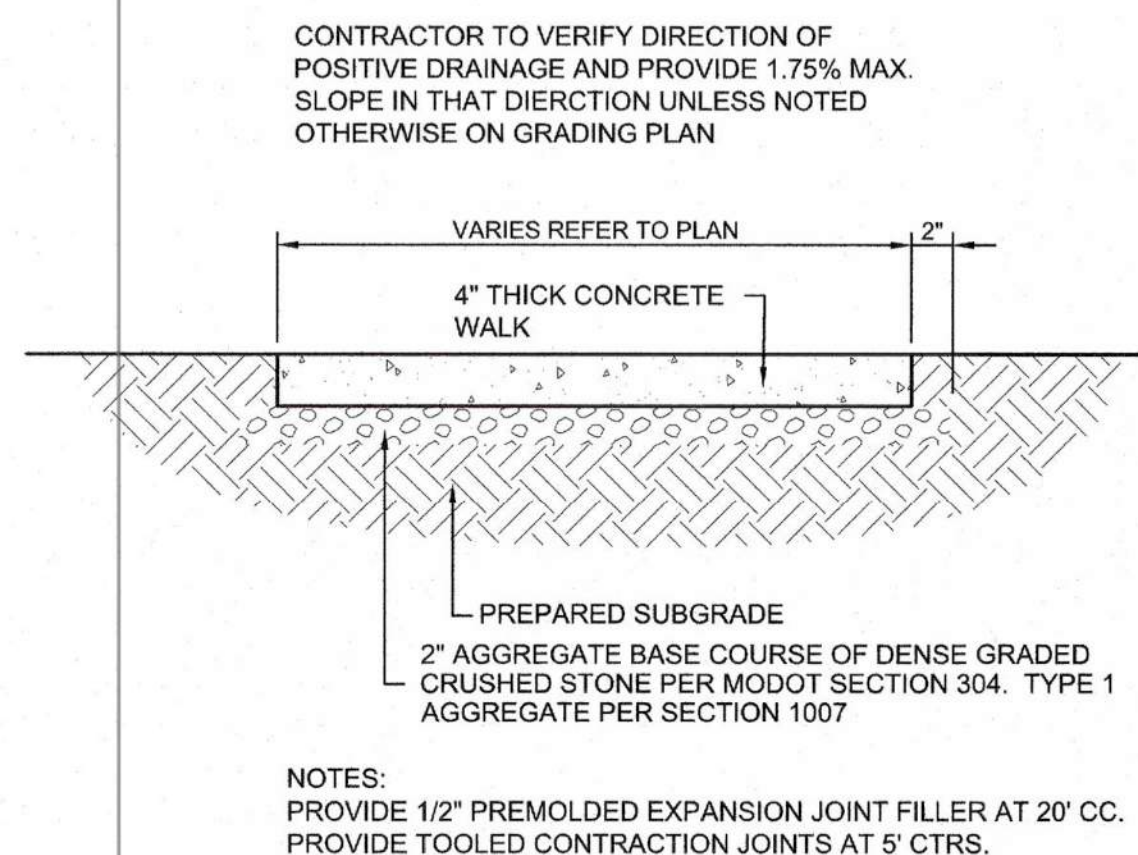
6 Handicap Parking Only Sign Detail
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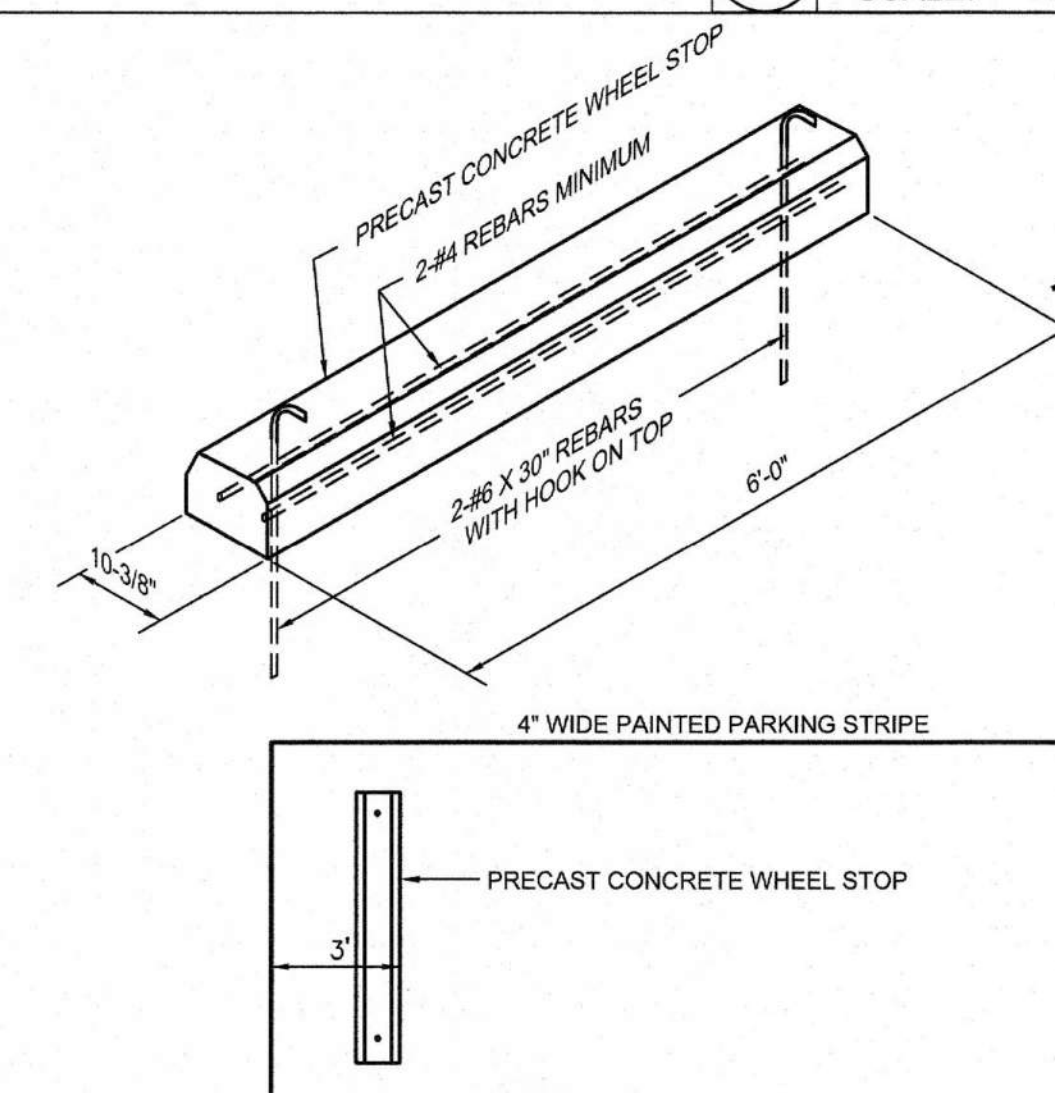
7 Utility Trench Detail
SCALE: Not To Scale



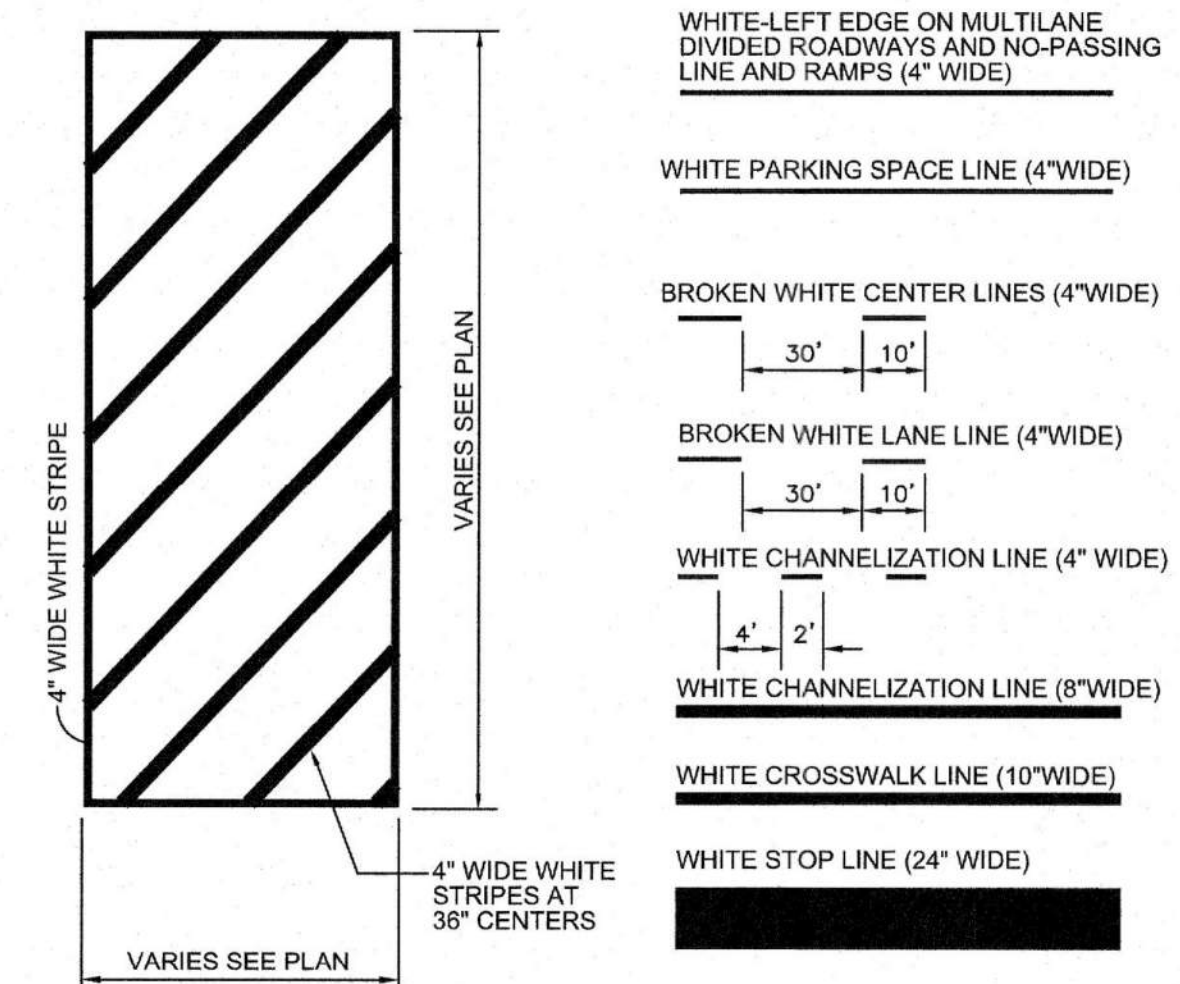
1 Concrete Pavement Detail
SCALE: Not To Scale



2 Concrete Walk/Stoop Detail
SCALE: Not To Scale



3 Concrete Wheel Stop Detail
SCALE: Not To Scale



4 Painted Striping Detail
SCALE: Not To Scale

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: xxxx

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
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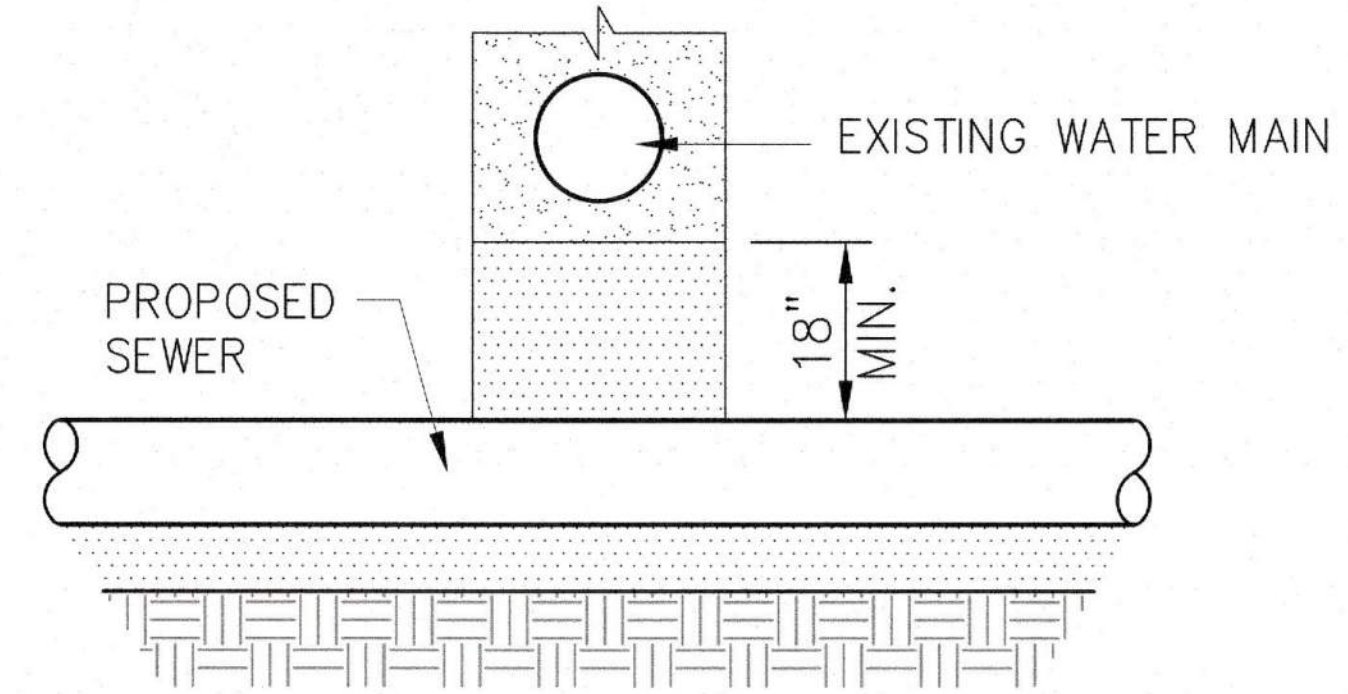
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SHEET TITLE:
CIVIL DETAILS

SHEET NUMBER:

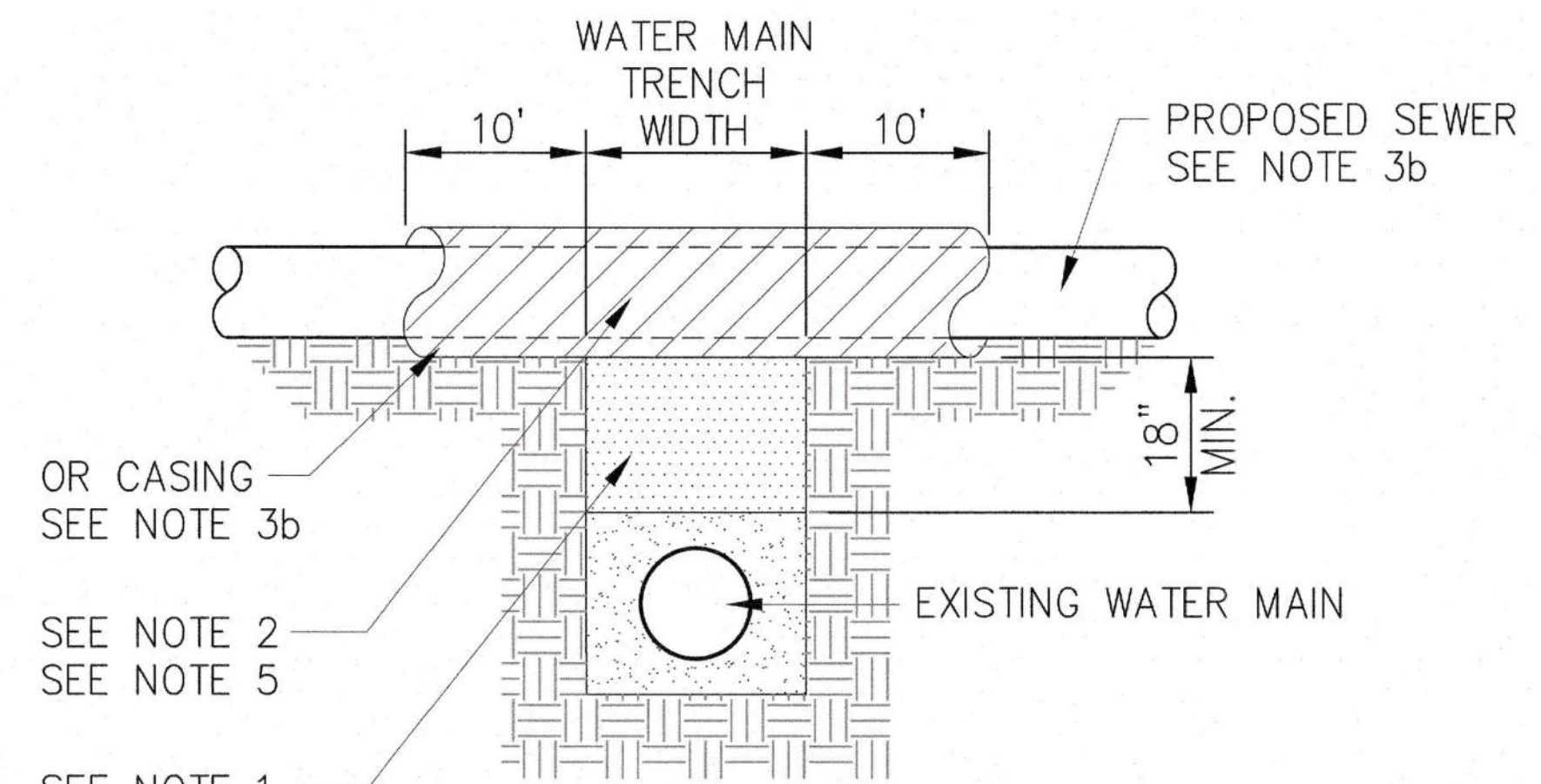
C-502

SHEET 13 of 75
ISSUE DATE: 03/02/2023



NOTES

1. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.
2. MAINTAIN 18" MINIMUM VERTICAL SEPARATION FOR 10 FEET.
PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH MINIMUM 18" SEPARATION.



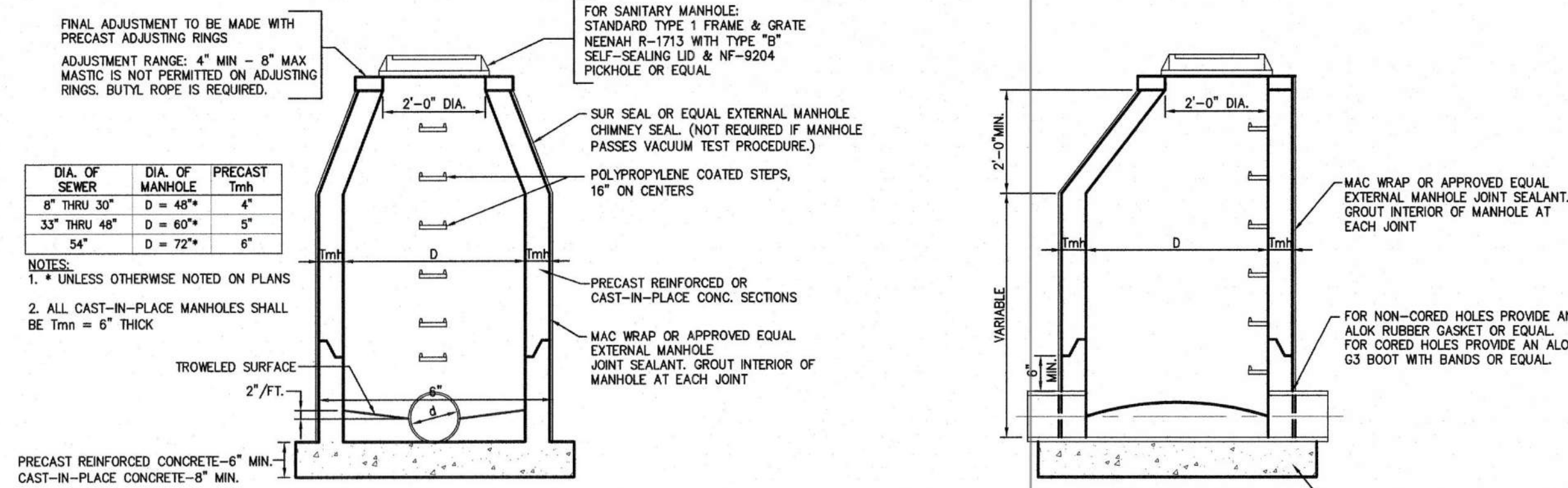
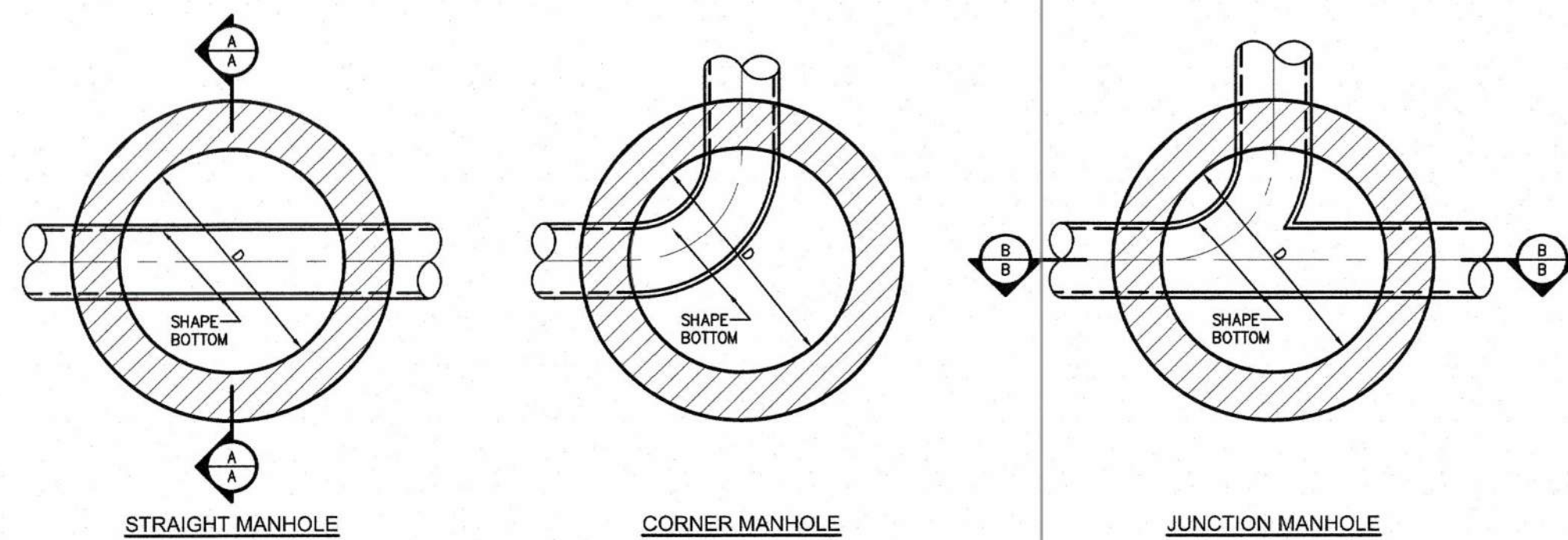
NOTES

1. IF SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF PIPE AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT FOR 10 FEET ON EITHER SIDE OF WATER MAIN.
- 3a. CONSTRUCT (20 + PIPE O.D.) FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR;
- 3b. USE (20 + PIPE O.D.) FEET OF CASING FOR PROPOSED SEWER AND SEAL ENDS OF CASING.
4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
5. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.
6. CLASS IV MATERIAL TO BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY.

EXISTING WATER MAIN BELOW PROPOSED SEWER LINE WITH 18" MINIMUM SEPARATION.

12 WATER SEWER SEPARATION DETAILS

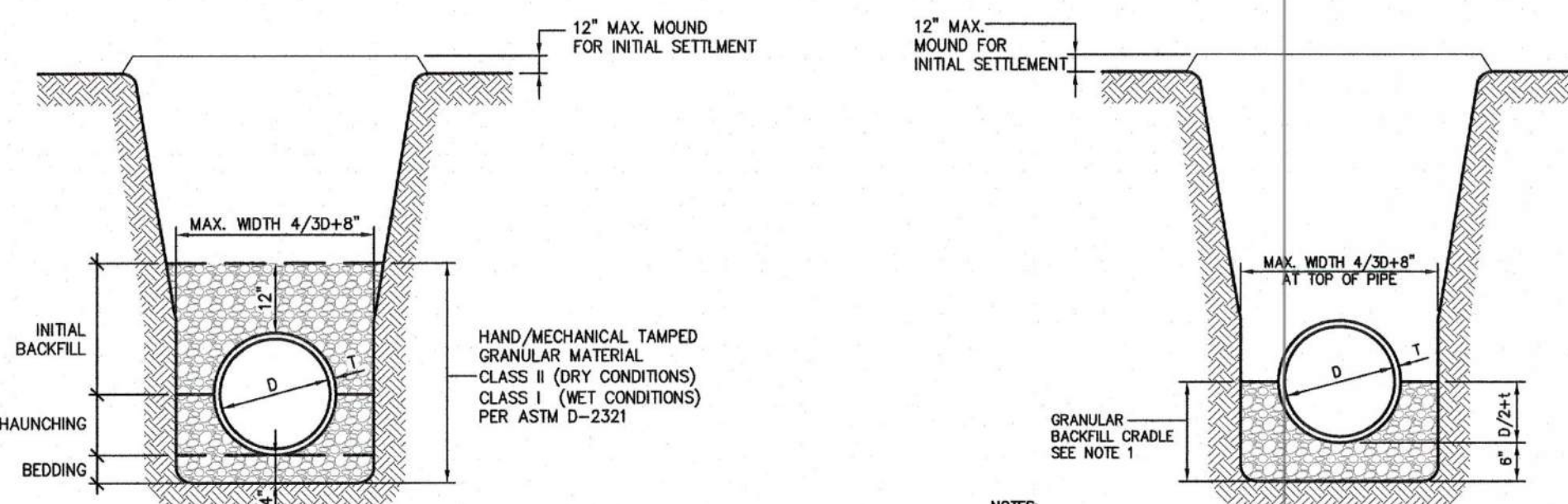
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- MANHOLE NOTES:**
1. MANHOLE COVER ON SANITARY AND COMBINATION SEWERS SHALL BE CLOSED TYPE, ON STORM SEWERS THEY SHALL BE OPEN TYPE.
 2. ALL SANITARY SEWER MANHOLES TO BE WATER TIGHT.
 3. ALL MANHOLES TO BE BACKFILLED WITH SELECT POROUS GRANULAR MATERIAL.
 4. 8" THRU 24" DIAMETER SEWERS TO BE LAID THROUGH MANHOLES WITH FITTINGS FOR JUNCTIONS IF REQUIRED AND TOP HALF BROKEN OUT. (SANITARY ONLY).
 5. THE MANHOLE SHALL BE TESTED AS PER THE SPECIFICATIONS. THE MANHOLE WILL BE TESTED WITH THE FRAME ATTACHED TO THE MANHOLE AND ALL ADJUSTING RINGS IN PLACE.
- FRAME AND GRATE**
- TYPE 1 - NEENAH R-1713
TYPE 3 - NEENAH NO. R-3010 WITH OPEN TYPE CURB BOX AND TYPE A GRATE
TYPE 50 - NEENAH NO. R-3067 AND TYPE A GRATE
TYPE 60 - NEENAH NO. R-4341-A GRATE
TYPE 81 - NEENAH NO. R-4342 GRATE

13 STANDARD STORM MANHOLE PLANS AND SPECIFICATIONS

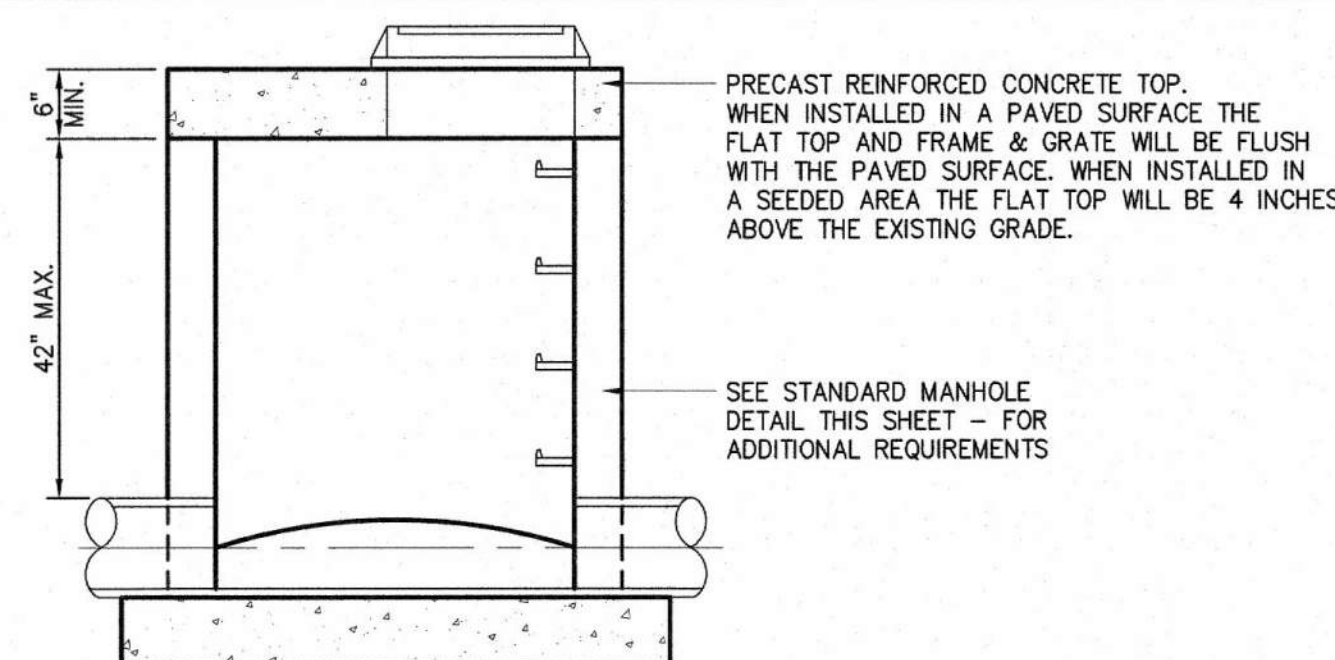
SCALE: Not To Scale



- NOTES:**
1. PIPE BEDDING (GRANULAR CRADLE) SHALL EXTEND TO VIRGIN GROUND WHEN SEWER IS CONSTRUCTED IN FILL AREAS.
 2. BEDDING TYPE "C" PER A.S.T.M. C12.
 3. PROVIDE WARNING TAPE AND TRACER WIRE OVER FORCE MAIN.

10 SEWER PIPE BEDDING DETAIL

SCALE: Not To Scale



- NOTES:**
1. WHEN MANHOLE IS INSTALLED IN A PAVED SURFACE A ONE INCH THICK EXPANSION JOINT TO BE INSTALLED BETWEEN THE MANHOLE AND PAVED SURFACE.
 2. WHEN MANHOLE IS INSTALLED IN PAVED SURFACE USE STANDARD FRAME & GRATE R-1646 WITH SELF SEALING SANITARY LID & NF-9204 PICKHOLE.

11 TYPE C MANHOLE DETAIL

SCALE: Not To Scale



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PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: xxxx

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: JSE/NJT
CHECKED BY: BK
DESIGNED BY: JSE/NJT

SHEET TITLE:
CIVIL DETAILS

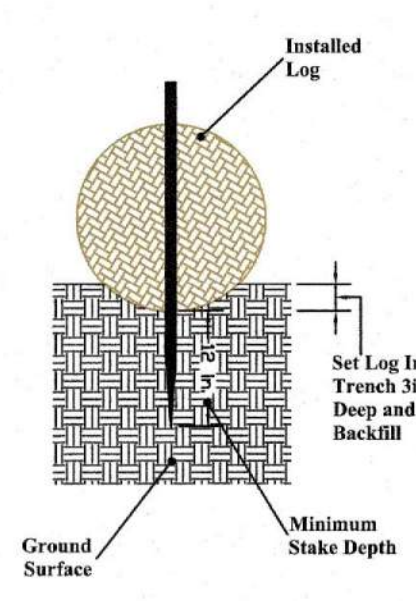
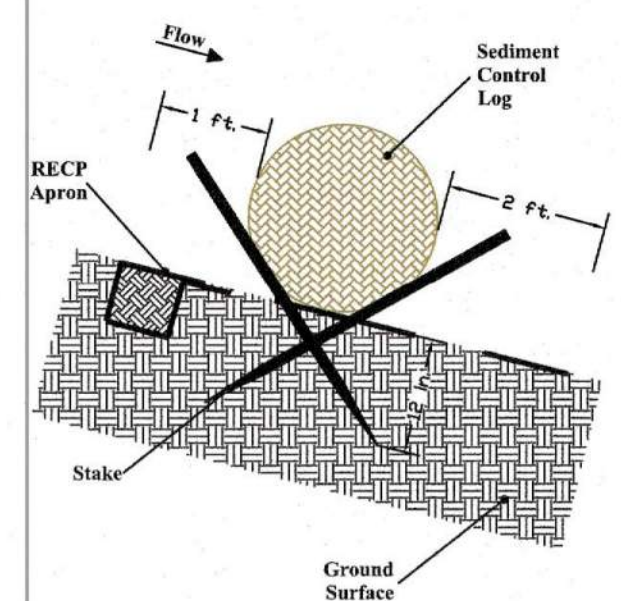
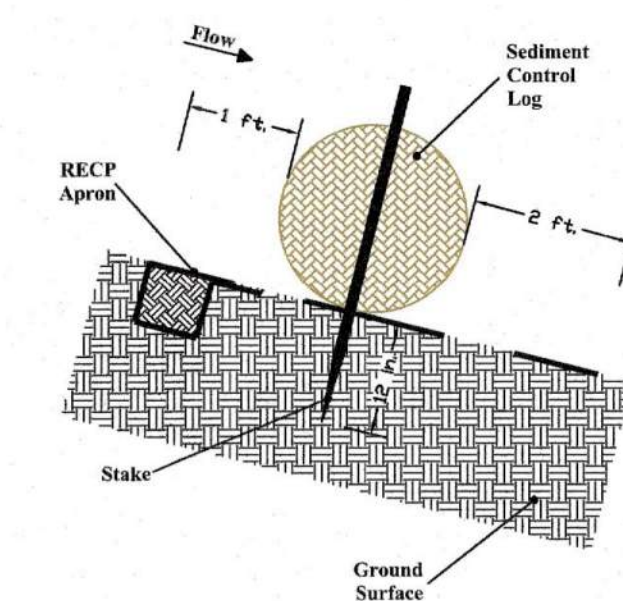
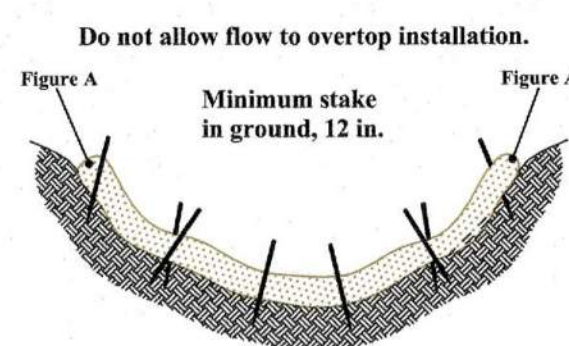
SHEET NUMBER:

C-503

SHEET 14 of 75
ISSUE DATE: 03/02/2023

INSTALLATION NOTES:
USE MINIMUM 1/8" DIAMETER EXCELSIOR WAFFLE.
USE 2" WOODEN STAKES WITH A 2" x 2" NOMINAL CROSS SECTION. ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AS DIRECTED.
INSTALL A MINIMUM OF 2 UP SLOPE STAKES AND 4 DOWN SLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
INSTALL WITH A MINIMUM OF ONE FOOT OVERLAP WHERE DITCH TYPICAL SECTION REQUIRES MORE THAN ONE WATTLE.
PROVIDE STAPLES MADE OF 0.125" DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 INCHES.

MAINTENANCE NOTES:
REMOVE AND DISPOSE OF SILT ACCUMULATIONS WHEN THE DEPTH REACHES ONE-HALF OF THE HEIGHT OF THE WATTLE.
REPLACE OR CLEAN THE WATTLE AS NEEDED TO ALLOW RUNOFF TO SLOWLY DEWATER THROUGH THE DEVICE BETWEEN RAIN EVENTS.
MONITOR THE WOODEN STAKES AND STAPLES TO ENSURE THAT THE WATTLE REMAINS SECURELY ANCHORED AFTER RAIN EVENTS.



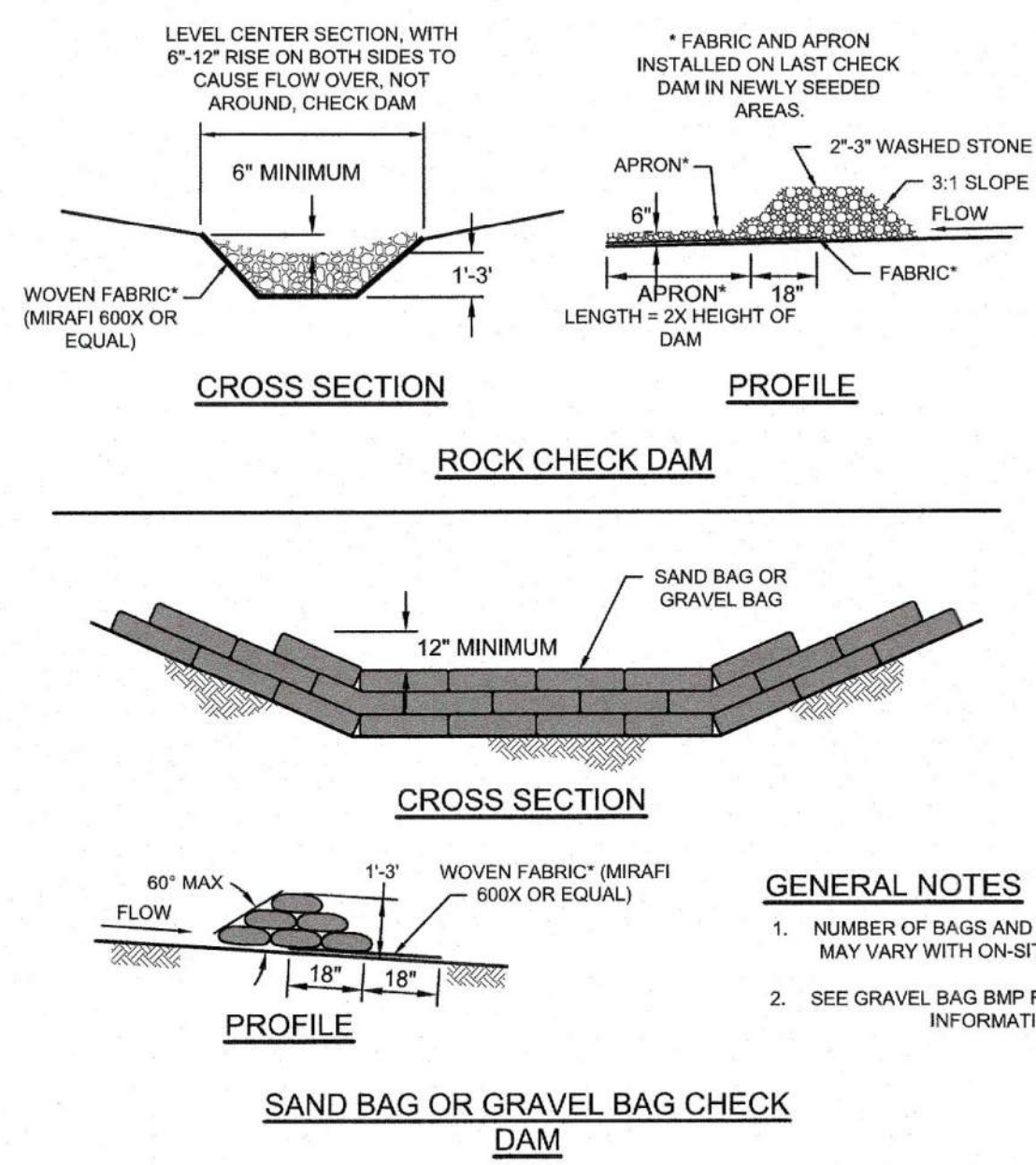
Channel Installation Cross-Section View
Figure A - Profile View
Slope/Channel Installation
Figure B - Profile View
Flat Ground (Perimeter Guard) Installation

16 Wattle Details

SCALE: Not To Scale

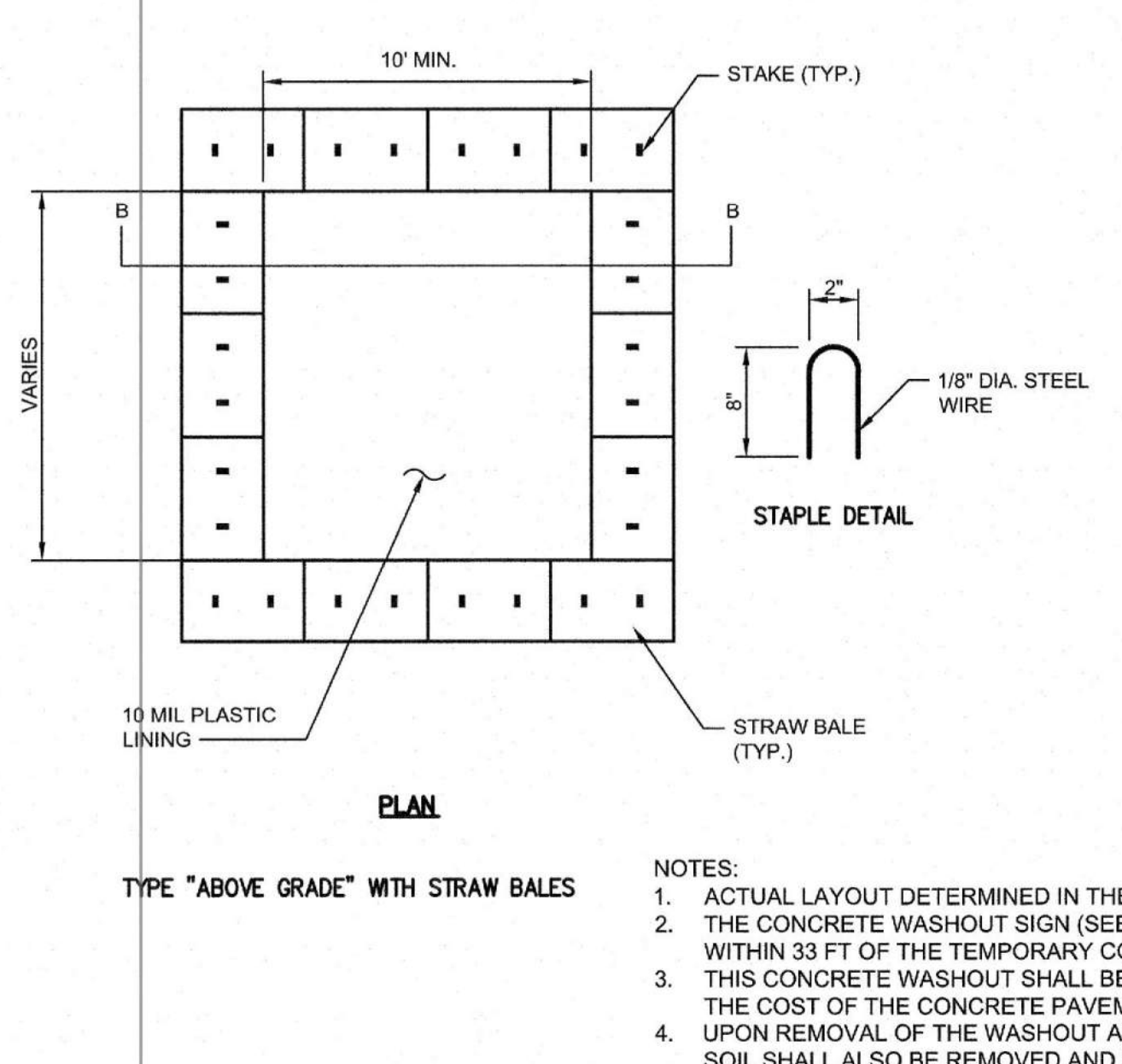
17 Silt Fence Detail

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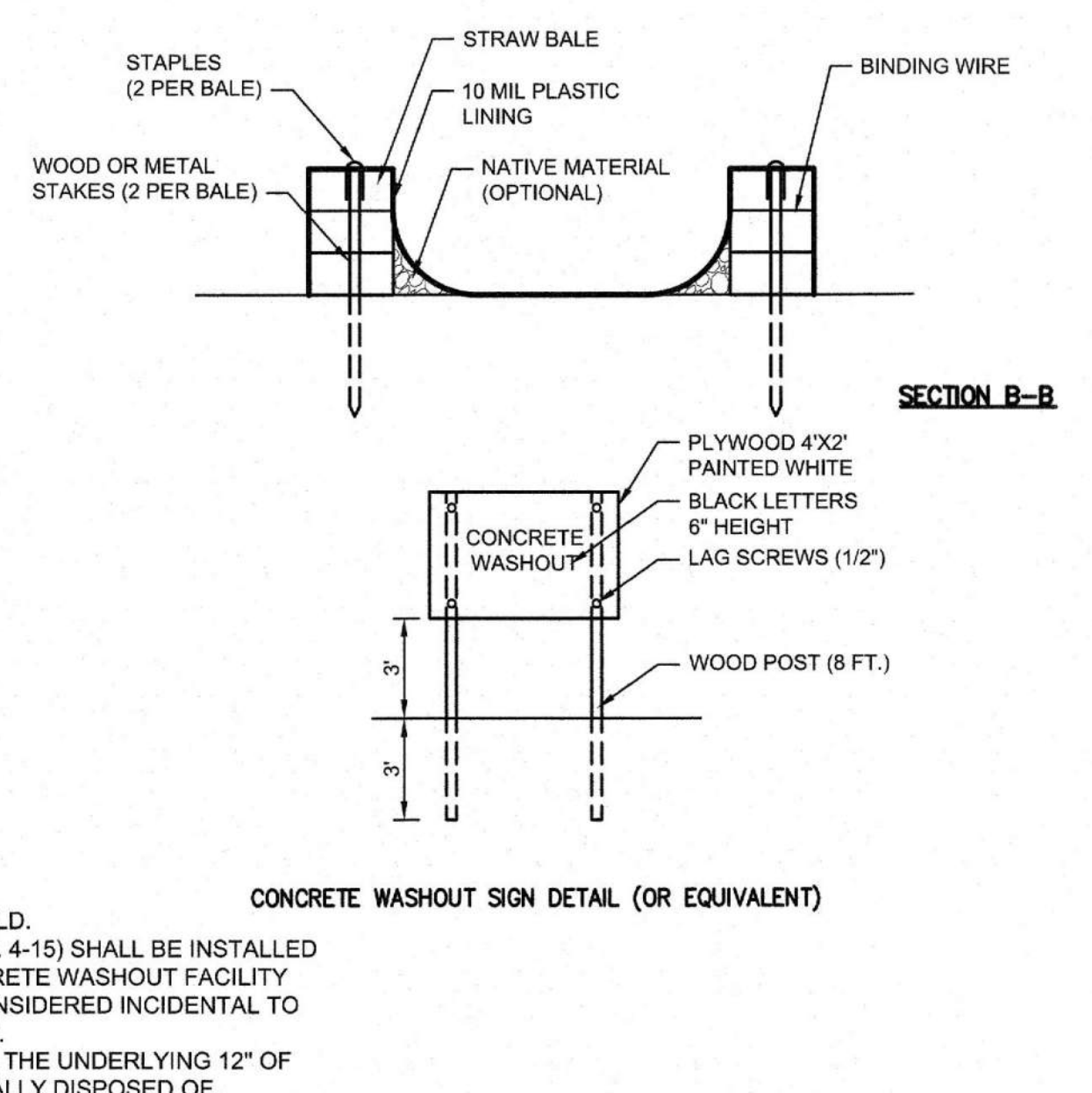
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15 Concrete Washout Detail

SCALE: Not To Scale



17 Silt Fence Detail

SCALE: Not To Scale

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: xxxx

DATE: DESCRIPTION:

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7815235023 - Cabin 505	X

DRAWN BY: JSE/NJT
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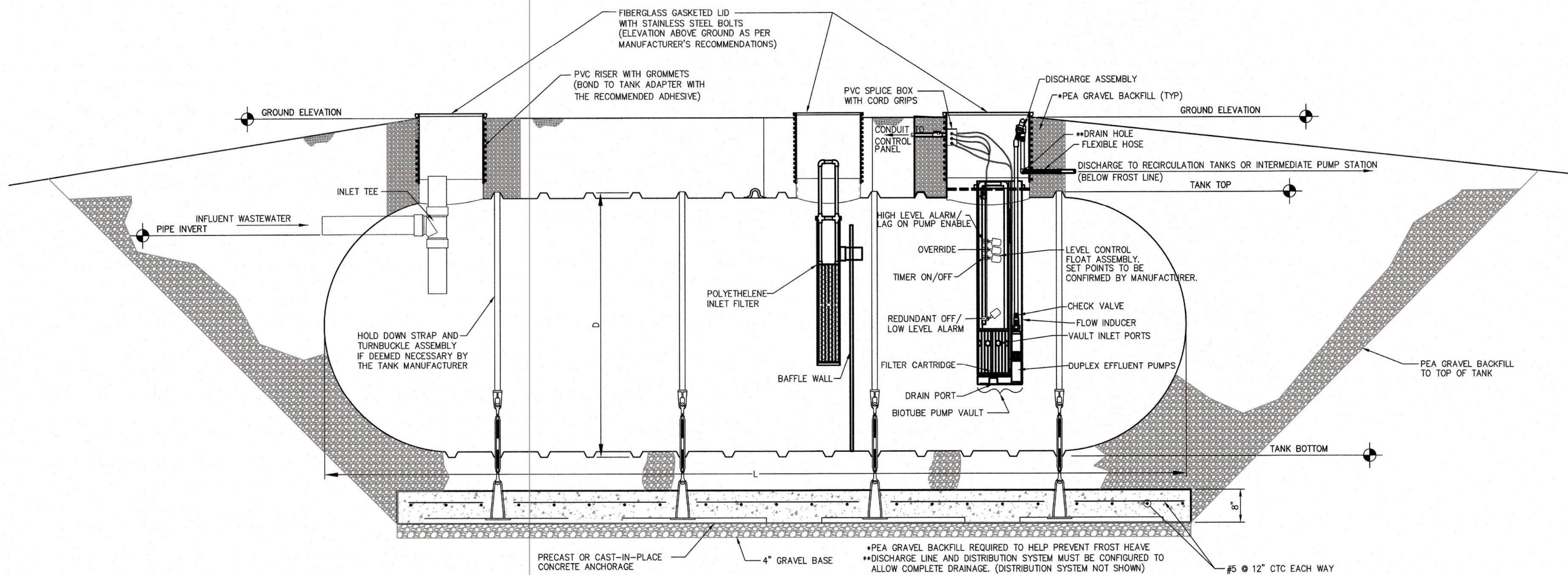
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CIVIL DETAILS

SHEET NUMBER:

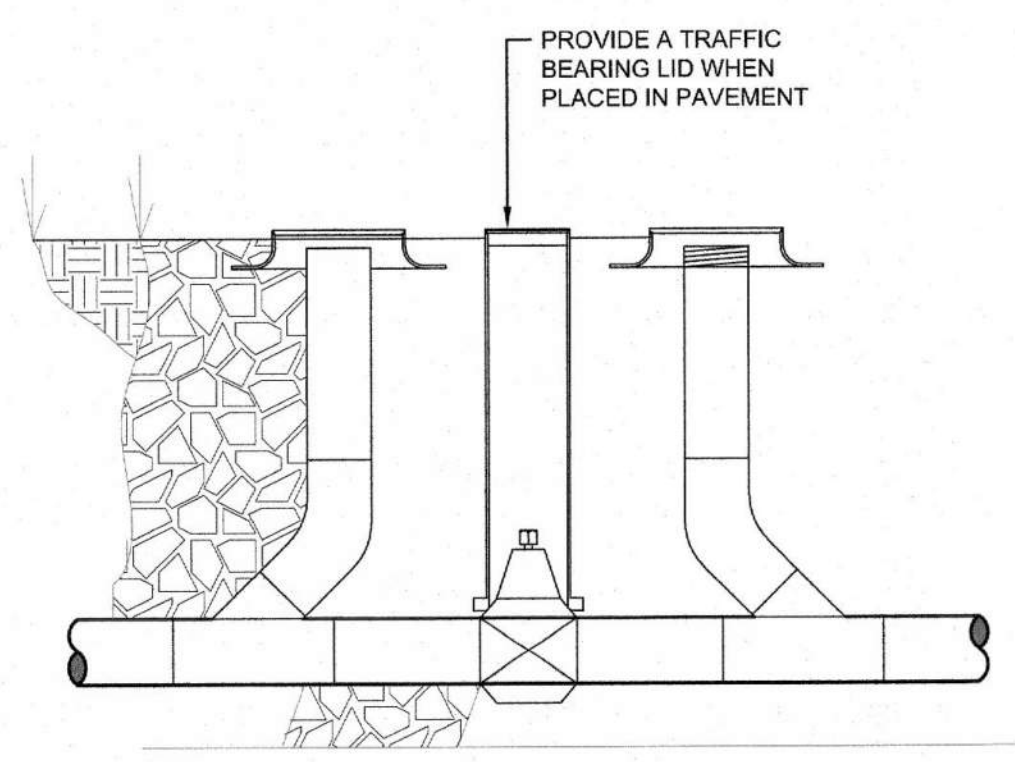
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SHEET 15 of 75
ISSUE DATE: 03/02/2023



Primary Septic Tanks																		
	Estimated Daily Flow (gpd)	Septic Tank Size (min) (gal)	Septic Tank Design Nominal Volume (gal)	Diameter (ft)	Length (ft)	Invert Diameter (in.)	Estimated Daily Flow (gpm)	Peak Flowrate (gpm)	Invert Elevation (ft)	Top of Tank Elevation (ft)	Bottom of Tank Elevation (ft)	Ground Elevation (ft)	High Level Alarm Float Elevation (ft)	Min. Surface Area of Filter Between Compartments (sq. ft.)	Min. Flow Area of Filter Between Compartments (sq. ft.)	Pump Vault Length (in.)	Min. Surface Area of Pump Vault Filter (sq. ft.)	Inlet Hole Height from Bottom of Pump Vault (in.)
SEPTIC TANK	1,900	3,350	5,000	6'	26' - 5"	8"	1.32	13.19	733.00	734.5	728.5	740.5	733	11.40	4.0	68	30	46

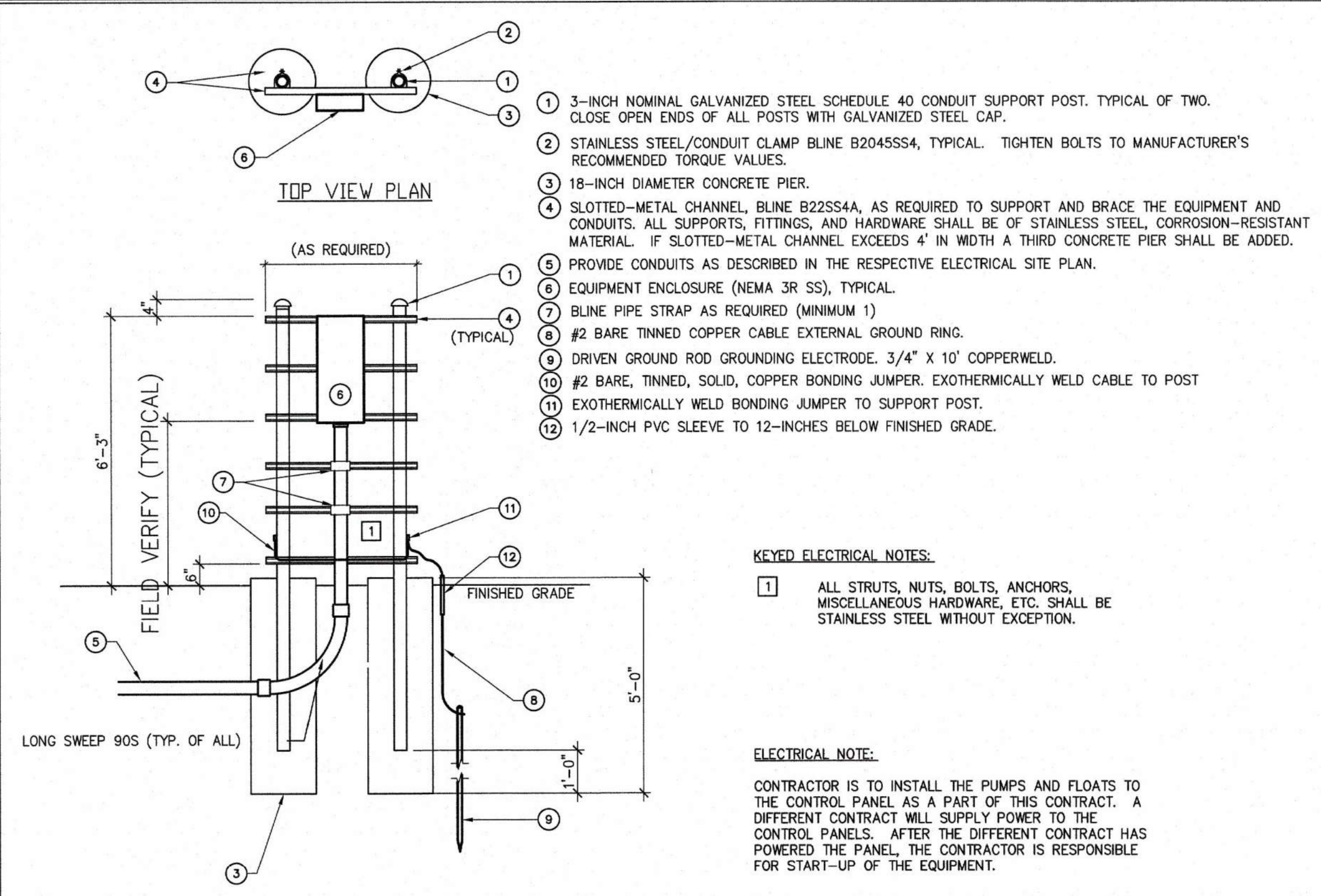
20 Primary Septic Tank Detail - Pumped Discharge
SCALE: T.S.



- SCHEDULE:**
- 45° WYE - PIPE TYPE AND CLASS TO MATCH SEWER LINE.
 - POLYPROPYLENE VALVE CURB STOP WITH FEMALE THREADS AND RATCHETING VALVE HANDLE. ATTACH TO HDPE FORCE MAIN WITH POLYPROPYLENE COMPRESSION FITTING ADAPTORS.
 - 45° SWEEP - PIPE TYPE AND CLASS TO MATCH SEWER LINE.
 - PIPE TO GRADE - EXTEND CLEANOUT TO 2" BELOW GRADE. INSTALL SCREW CAP. PIPE TYPE AND CLASS TO MATCH SEWER LINE.
 - METER COVER - CAST IRON. MCWANE 6150-R, OR EQUAL. MARKED "SEWER".
 - METER BOX - CAST IRON. MCWANE 6150-R-18, OR EQUAL.
 - PIPE BEDDING - PLACE BEDDING MATERIAL OF SAME TYPE AND CLASS AS ROAD CUT BEDDING. EXTEND TO GRADE - WHOLE.
 - CURB BOXES MADE FROM ABS WITH A CAST IRON LID.

- NOTES:**
- WHERE MAINLINE CLEANOUTS ARE CALLED OUT THEY SHOULD BE A DOUBLE CLEANOUT AS PICTURED.
 - CLEANOUTS AT SEPTIC TANKS SHALL BE SINGLE ENDED FROM THE TANK WITHOUT THE VALVE.
 - CLEANOUTS AT FORCEMAIN CONNECTION LOCATIONS SHALL BE SINGLE ENDED AWAY FROM THE CONNECTION WITH A VALVE AT THE CONNECTION.

18 Cleanout Detail
SCALE: N.T.S.



19 ELECTRIC CONTROL PANEL DETAIL
SCALE: T.S.

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PLANT SCHEDULE NORTH CABINS

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE
CAR OV1	2	Carya ovata	Shagbark Hickory	2" Cal
NYS SY1	3	Nyssa sylvatica	Black Gum	2" Cal
QUE MA3	3	Quercus macrocarpa	Burr Oak	2.5" Cal
QUE MU1	2	Quercus muehlenbergii	Chinkapin Oak	2" Cal

EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE
PIN ECH	6	Pinus echinata	Short Leaf Pine	8' Tall

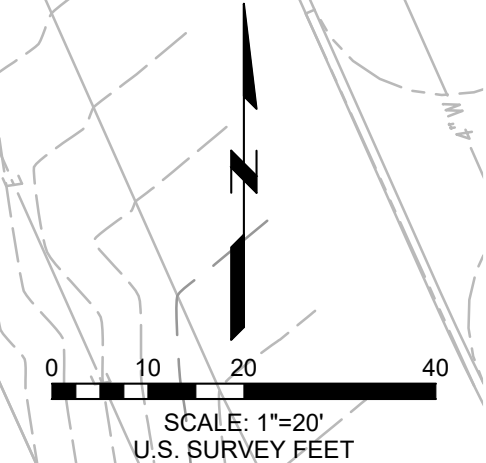
FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE
AME AR2	5	Amelanchier arborea	Serviceberry	8" Tall
ASI TRI	3	Asimina triloba	Pawpaw	1.5" Cal
CER CA1	4	Cercis canadensis	Eastern Redbud	1.5" Cal
COR FL1	5	Cornus florida	Flowering Dogwood	1.5" Cal

NOT INCLUDED IN CONTRACT

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	M2	2,292 sf	MULCH	AGGREGATE	S.F.	
	M1	589 sf (NOT INCLUDED IN CONTRACT)	MULCH	HARDWOOD	S.F.	

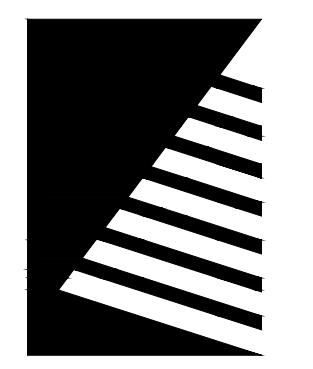
TURF GRASS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	TUR SEE	37,736 sf (ALL SEEDED AREAS TO BE HYDROSEEDDED PER SPECIFICATIONS)	Turf Seed - Fescue		Seed	
	TUR SOD	8,014 sf	Turf Seed - Fescue		Sod	

NOTE:
1. ALL TREE PLANT MATERIAL AND ALL ASSOCIATED MATERIALS TO BE FURNISHED AND PLACED BY OWNER.



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STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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SIX NEW CABINS**

EMINENCE, MISSOURI

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7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

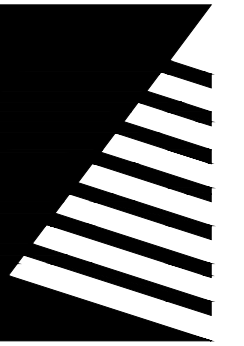
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DRAWN BY: JLH
CHECKED BY: BAB
DESIGNED BY: JLH

SHEET TITLE:
PLANTING PLAN

SHEET NUMBER:

L-101

16 OF 75 SHEETS
ISSUE DATE: 03/02/2023



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ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: xxxx

DATE: DESCRIPTION:

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7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

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DESIGNED BY: JLH

SHEET TITLE:

PLANTING DETAILS

SHEET NUMBER:

L-501

17 OF 75 SHEETS
ISSUE DATE: 03/02/2023

REFERENCE NOTES SCHEDULE

SITE CONDITIONS SYMBOL DESCRIPTION

01-01-01 (SITE CONDITIONS) THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE SCOPE OF WORK, SOIL, LOCATION OF UTILITIES, AND WATER CONDITIONS BEFORE PROCEEDING WITH THE WORK.

01-01-02 (SITE CONDITIONS) THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS TO THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH WORK.

SITE PREPARATION SYMBOL DESCRIPTION

01-02-01 (PREPARATION) REMOVE ALL EXISTING WEEDS AND GRASSES WITHIN THE PROJECT LIMITS PRIOR TO STARTING TURF GRASS INSTALLATION.

01-02-02 (GRADING) FINISH GRADES IN PLANTING BEDS ARE TO BE SMOOTH AND PROVIDE POSITIVE DRAINAGE PRIOR TO PLANT, SHREDDED HARDWOOD MULCH, AND LAWN INSTALLATION. ALL PLANTING BEDS WITHIN PARKING ISLANDS SHALL BE MOUNDED.

01-02-03 (SITE PREPARATION) REMOVE ANY EXISTING LAWN, STONES LARGER THAN 1.5" IN DIAMETER, AND OTHER MATERIAL HARMFUL TO PLANT GROWTH PRIOR TO FORMING PLANTING BEDS, PROPOSED LAWN AREAS, AND TREE PITS.

01-02-04 (TOPSOIL FOR SEEDED AREAS) INSTALL AND GRADE ALL TOPSOIL AREAS PER THE LANDSCAPE PLAN PRIOR TO STARTING ANY PLANTING OPERATIONS.

PLANT MATERIAL SYMBOL DESCRIPTION

01-03-01 (PLANT TAGGING) PLANT MATERIAL TAGGING SCHEDULE*
(1) ALL FIELD GROWN AND POTTED MATERIAL TO BE REVIEWED AND TAGGED AT THE NURSERY.
(2) REVIEW AND TAG 6 REPRESENTATIVE EXAMPLES AT THE NURSERY. REVIEW ALL OTHERS AT THE PROJECT SITE.
(3) REVIEW MATERIAL AT THE PROJECT SITE PRIOR TO INSTALLATION.
*SEE SPECIFICATIONS FOR COMPLETE TAGGING PROCEDURES AND INFORMATION.

01-03-02 (SUBSTITUTIONS) PLANT SUBSTITUTIONS WILL NOT BE ACCEPTABLE UNLESS APPROVED BY THE LANDSCAPE ARCHITECT AND THE MISSOURI DEPT. OF NATURAL RESOURCES.

01-03-03 (PLANT QUALITY) ALL PLANTS SHALL BE NORMAL HEALTH, HEIGHT, LEAF DENSITY, AND SPREAD AS DEFINED BY THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 LATEST AVAILABLE EDITION, OR THE AMERICAN ASSOCIATION OF NURSERYMEN.

01-03-04 (PLANT SIZES) THE SIZES INDICATED IN THE PLANT SCHEDULE ARE THE MINIMUM REQUIRED AT THE TIME OF PLANTING.

INSTALLATION SYMBOL DESCRIPTION

01-04-01 (DISCREPANCIES) IF THERE ARE DISCREPANCIES BETWEEN PLANT QUANTITIES ON THE PLANS AND THE PLANT SCHEDULE, THEN USE THE QUANTITIES SHOWN ON THE PLANS. ALL QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO BUILD WHAT IS SHOWN ON THE PLANS.

01-04-02 (LAYOUT/SPACING) THE CONTRACTOR SHALL FIELD STAKE THE FOLLOWING ITEMS AND REVIEW WITH THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION:
*SHADE TREES
*FLOWERING TREES
*EVERGREEN TREES
*ALL SPADE EDGING.

01-04-03 (BED FINISHING) SPREAD PRE-EMERGENCE HERBICIDE AND 3 INCHES OF SHREDDED HARDWOOD BARK MULCH IN ALL PLANTING BEDS, EXCEPT PERENNIAL AND ANNUAL BEDS. SPREAD 2 INCHES OF MUSHROOM COMPOST IN ALL PERENNIAL AND ANNUAL BEDS.

01-04-04 (NEW TURF SOD OR SEED) INSTALL SOD OR SEED, PER THE PLANS. REVIEW THE LIMITS OF THE INSTALLATION WITH THE OWNER PRIOR TO STARTING THE WORK.

01-04-05 (LAYOUT/SPACING) PLANT SPACING WILL BE SCALED ON PLAN UNLESS NOTED OTHERWISE.

01-04-06 (PLANTING MIX) MIX AND INSTALL PER SPECIFICATIONS

01-04-07 (DAMAGE) LANDSCAPE CONTRACTOR IS TO PREVENT DAMAGE TO CURBS AND PAVEMENTS ADJACENT TO CONSTRUCTION.

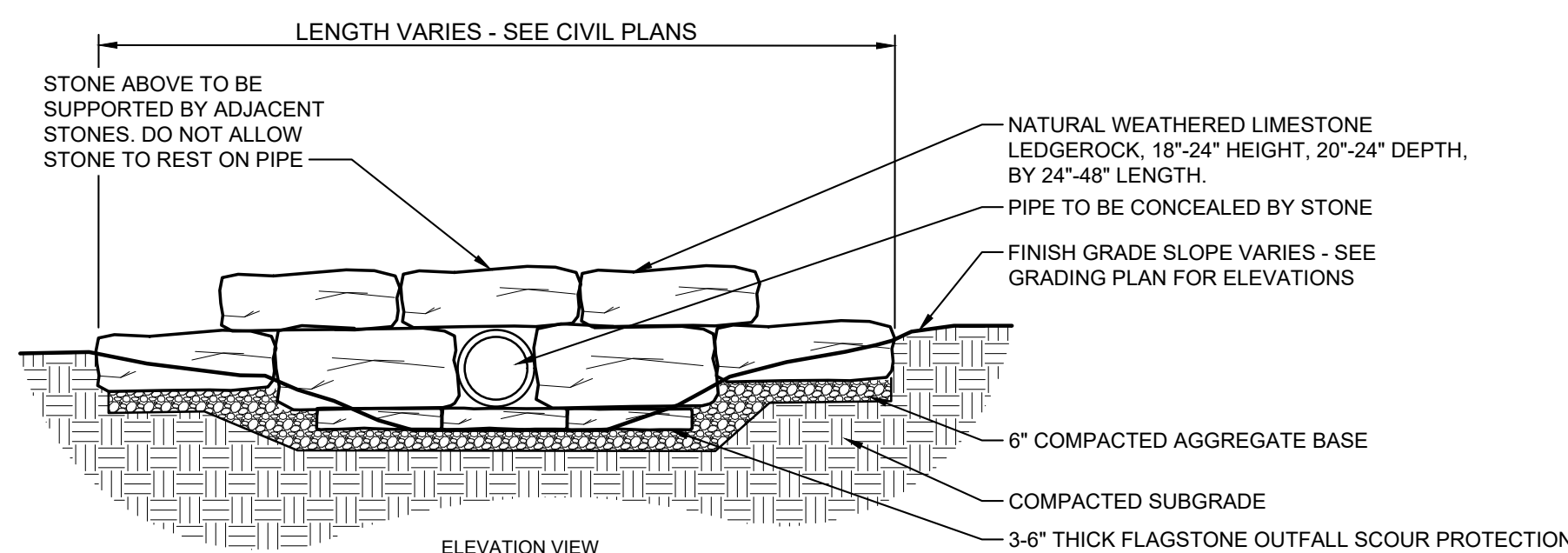
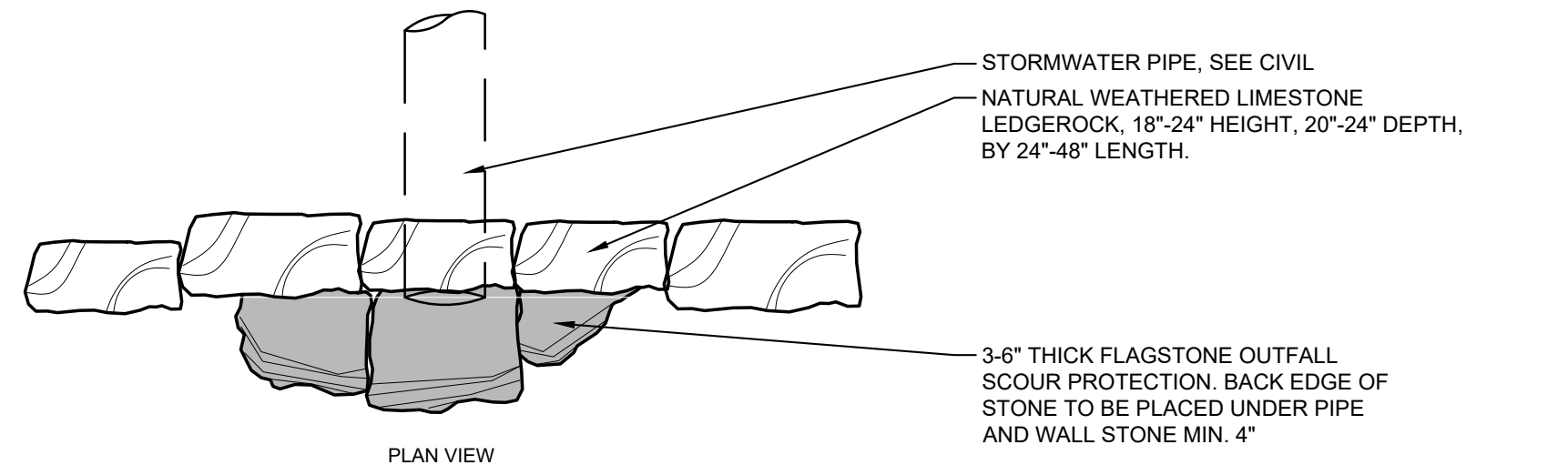
01-04-08 (MULCH RINGS) REFER TO THE PLANTING DETAILS FOR SIZE.

SPECIFICATIONS & DETAILS SYMBOL DESCRIPTION

01-05-01 (PLANTING DETAILS) ALL DETAILS AND SECTIONS SHOWN ON THE DRAWING ARE INTENDED TO BE TYPICAL AND SHALL BE CONSIDERED TO APPLY TO SIMILAR CONDITIONS.

01-05-02 REFER TO SPECIFICATION 329200 FOR TURF GRASS INFORMATION.

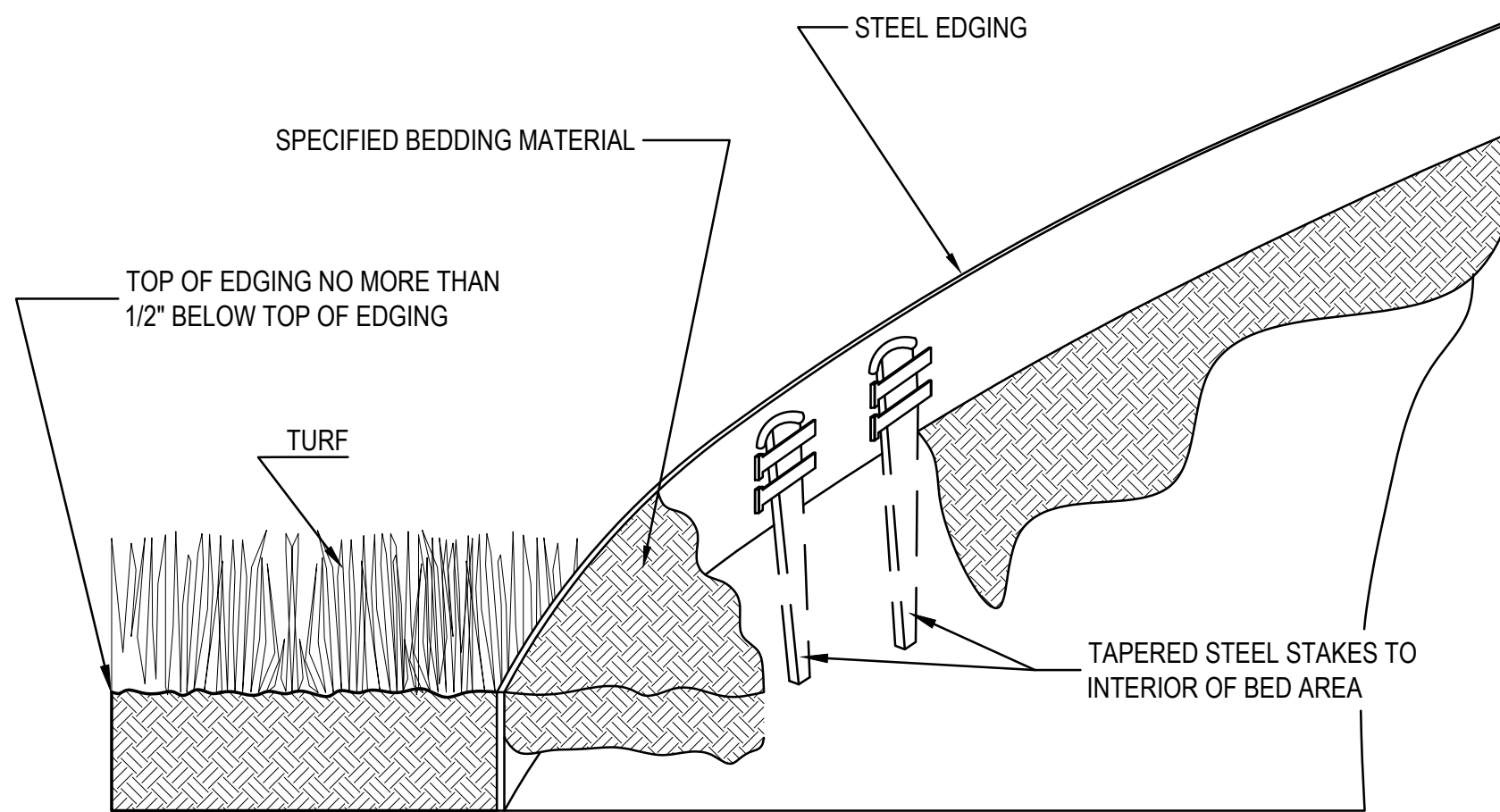
01-05-03 REFER TO SPECIFICATION 329300 FOR PLANT MATERIAL.



7

NATURAL STONE HEADWALL - BASE BID

SCALE: NOT TO SCALE



- SELECT DESIRED SIZE
- 1/4" X 5" X 16" (.20 - .250" AVERAGE THICKNESS)

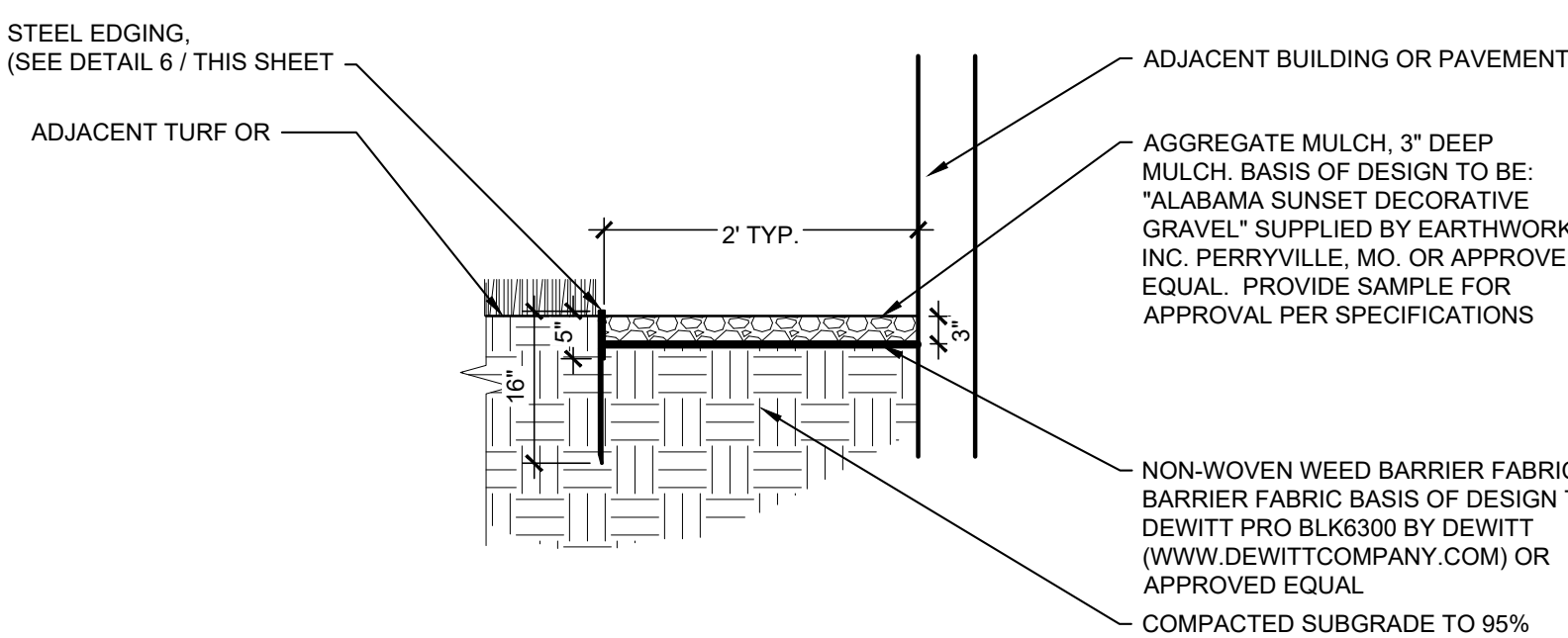
NOTES:

- COLOR TO BE BLACK FINISH
- CONTRACTOR SHALL SUBMIT INFORMATIONAL CUT SHEET FOR APPROVAL BY LANDSCAPE ARCHITECT

6

SPADE CUT EDGING

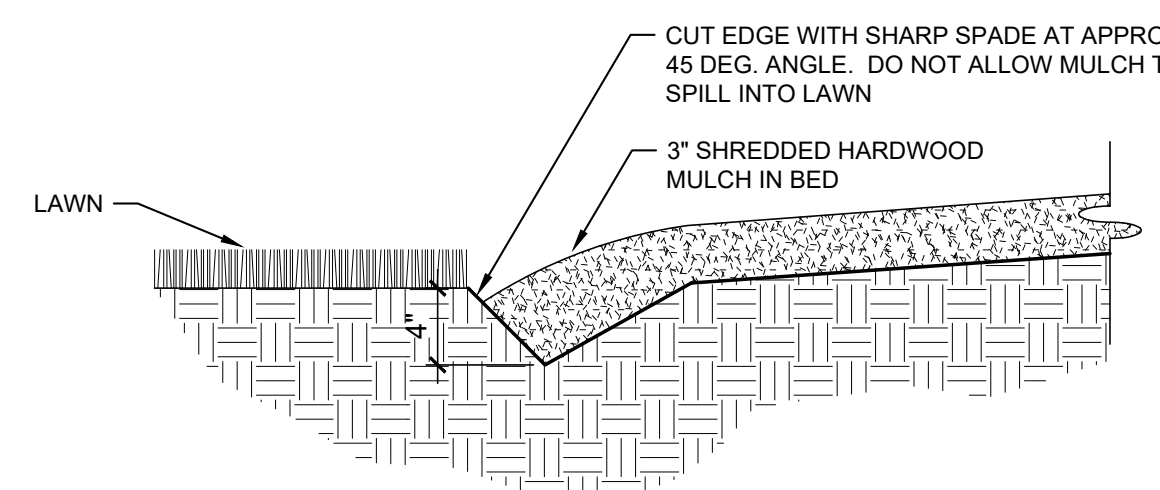
SCALE: NOT TO SCALE



5

SPADE CUT EDGING

SCALE: NOT TO SCALE



4

SPADE CUT EDGING

SCALE: NOT TO SCALE

3

NOT USED

SCALE: NOT TO SCALE

2

NOT USED

SCALE: NOT TO SCALE

1

NOT USED

SCALE: NOT TO SCALE

GENERAL CONSTRUCTION:

- A. ALL DETAILS, SECTIONS, AND PLAN NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO SIMILAR CONDITIONS ELSEWHERE.
B. THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND THE DRAWINGS. IN THE EVENT OF A CONFLICT, NOTIFY THE ENGINEER FOR CLARIFICATION.
C. THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK. SEE SPECIFICATIONS.
D. REQUESTS FOR INFORMATION SHALL BE SUBMITTED TO THE ENGINEER UNLESS OTHERWISE NOTED.
E. THE CONTRACTOR IS TO ASSUME FULL RESPONSIBILITY, UNRELIEVED BY REVIEW OF SHOP DRAWINGS OR PERIODIC OBSERVATIONS, FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
F. THE CONTRACTOR SHALL BE FAMILIARIZED WITH THE SCOPE OF THE WORK AND SOIL AND WATER CONDITIONS BEFORE PROCEEDING WITH THE WORK. SOIL BORING LOCATIONS AND SOIL BORING LOGS ARE INCLUDED IN THE SPECIFICATIONS. SOIL INFORMATION RELEASED IN THE SPECIFICATIONS IS FOR GENERAL INFORMATION ONLY. THE ACTUAL CONDITIONS MAY VARY AT THE SITE.
G. THE CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
H. VERIFY SIZE AND LOCATIONS OF HOLES AND SLEEVES THROUGH CONCRETE WALLS AND SLABS WITH MECHANICAL AND PLUMBING CONTRACTORS.
I. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED EXCLUSIVELY BY WOOD SHEAR WALLS (SEE PLAN SHEETS FOR LOCATIONS). THESE WALLS PROVIDE ALL LATERAL LOAD RESISTANCE IN EACH ORTHOGONAL BUILDING DIRECTION. THE WOOD ROOF DECK SERVES AS A HORIZONTAL DIAPHRAGM THAT DISTRIBUTES THE LATERAL WIND AND SEISMIC FORCES HORIZONTALLY TO THE SHEAR WALLS. THE SHEAR WALLS CARRY THE APPLIED LATERAL LOADS TO THE BUILDING FOUNDATION.
J. SEE ARCHITECTURAL DRAWINGS FOR:
1. SIZE AND LOCATION OF STOREFRONT SYSTEMS, DOOR, AND WINDOW OPENINGS, EXCEPT AS SHOWN OR NOTED.
2. FLOOR AND ROOF FINISHES, DRAINAGE, AND WATERPROOFING
3. FIREPROOFING REQUIREMENTS INCLUDING FIREPROOFING OF STRUCTURAL STEEL
4. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
K. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR:
1. PIPE RUNS, SLEEVES, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
2. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS
3. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES.
L. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHER SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
M. FOR PIPES EMBEDDED IN CONCRETE:
1. PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY SEOR.
2. NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECK.
3. PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS.
4. DO NOT STACK CONDUITS. SPACE EMBEDDED PIPES/CONDUITS AT A MINIMUM OF 3 DIAMETERS CLEAR FROM OTHER EMBEDDED PIPES/CONDUITS AND REBAR.
N. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. THE CONTRACTOR SHALL DESIGN AND PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
O. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE DESIGN INTENT FOR THE FINISHED STRUCTURE. THEY DO NOT INDICATE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE CONTRACTOR IS RESPONSIBLE FOR PROVISIONS OF TEMPORARY SHORING AND OTHER CONSTRUCTION AIDS, INCLUDING ALL ENGINEERING OF SUCH SYSTEMS, FOR TEMPORARY SUPPORT OF NEW AND/OR EXISTING STRUCTURAL ELEMENTS AS REQUIRED FOR ERECTION AND OTHER CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, UNLESS NOTED OTHERWISE. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

DELEGATED DESIGN:

- A. THE FOLLOWING ITEMS SHALL BE TERMED AS DELEGATED DESIGN AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN SIGNED AND SEALED DRAWINGS, AND CALCULATIONS AS APPLICABLE, BY OTHERS.
1. WOOD TRUSSES AND CONNECTIONS
2. TIMBER FRAMING AND CONNECTIONS
3. GLULAM AND TIE-ROD TRUSS AND CONNECTIONS
B. THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE DELEGATED DESIGN ITEMS AS REQUIRED PER SPECIFICATIONS.
C. ALL DELEGATED DESIGN ITEMS SHALL BE DESIGNED FOR MINIMUM LOADS AND CONDITIONS AS PROVIDED IN THE DESIGN CRITERIA, OTHER PLAN NOTES, DETAILS, OR SPECIFICATIONS.

SHOP DRAWING REVIEW:

- A. FARNSWORTH GROUP WILL REVIEW THE GENERAL CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETED, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL STRUCTURAL SYSTEM DESIGNED BY FARNSWORTH GROUP.
B. PRIOR TO SUBMITTAL OF A SHOP DRAWING OR ANY RELATED MATERIAL TO FARNSWORTH GROUP, THE GENERAL CONTRACTOR SHALL:
1. REVIEW EACH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS FOR CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
2. REVIEW AND APPROVE EACH SUBMISSION.
3. STAMP EACH SUBMISSION AS APPROVED.
C. FARNSWORTH GROUP SHALL ASSUME THAT NO SUBMISSION COMPRISES A VARIATION UNLESS THE GENERAL CONTRACTOR ADVISES FARNSWORTH GROUP WITH WRITTEN DOCUMENTATION.
D. SHOP DRAWINGS AND RELATED MATERIAL (IF ANY) REQUIRED ARE INDICATED BELOW. SHOULD FARNSWORTH GROUP REQUIRE MORE THAN TEN (10) WORKING DAYS TO PERFORM THE REVIEW, FARNSWORTH GROUP SHALL SO NOTIFY THE GENERAL CONTRACTOR.
1. CONCRETE DESIGN MIXES AND REINFORCING STEEL.
2. MISCELLANEOUS ANCHORS SHOWN ON THE STRUCTURAL DRAWINGS.
3. STRUCTURAL STEEL FRAMING AND CONNECTIONS.
4. WOOD TRUSS LAYOUT
E. ONLY TWO REVIEWS PER SHOP DRAWING SHALL BE ALLOWED. ANY SUBSEQUENT REQUIRED REVIEWS OF THE SAME SHOP DRAWING SHALL BE AT THE COST OF THE CONTRACTOR.

DESIGN CRITERIA:

- A. THE STRUCTURAL ENGINEERING DESIGN IS BASED ON AND IN ACCORDANCE WITH THE FOLLOWING CODE:
INTERNATIONAL BUILDING CODE - 2021
RISK CATEGORY = II
B. UNLESS OTHERWISE SHOWN OR NOTED ON THE DRAWINGS, THE STRUCTURAL DESIGN IS BASED ON THE FOLLOWING TYPICAL UNIFORM LOADS:

Table with columns: DEAD LOADS, LIVE LOADS, SNOW LOADS. Rows include Roof Top Chord, Roof Bott Chord, Exterior Deck, Cabin Floor, Porch Roof, etc. with values in PSF.

Table with columns: WIND DESIGN DATA, EXPOSURE CATEGORY, COMPONENTS AND CLADDING ULTIMATE WIND PRESSURES. Rows include V (ULT), V (NOM), Gcpi, and various wind pressure values for different zones.

Table with columns: ZONE, EFFECTIVE WIND AREA (SF), ULTIMATE WIND PRESSURE (PSF). Rows include zones 1, 2e, 2r, 2n, 3e, 3r, 4, 5 with corresponding wind area and pressure values.

Table with columns: EARTHQUAKE DESIGN DATA, SEISMIC DESIGN CATEGORY, BASIC SEISMIC-FORCE-RESISTING SYSTEM, ANALYSIS PROCEDURE. Rows include I, Ss, S1, SITE CLASS, SDS, SD1, R, Cs, V, and analysis procedure details.

FOUNDATIONS:

- A. GEOTECHNICAL INFORMATION AND FOUNDATION DESIGN IS BASED ON THE FOLLOWING GEOTECHNICAL REPORT(S):
ECHO BLUFF STATE PARK ADDITIONAL CABINS NOVEMBER 2022
B. COPIES OF THE REPORT(S) AND ANY ADDENDUM/SUPPLEMENTAL LETTERS SHALL BE AVAILABLE AT THE JOBSITE AT ALL TIMES.
C. FOOTING DESIGN CRITERIA:
ALLOWABLE BEARING CAPACITY 2,500 PSF
FROST DEPTH 30"
D. SEE GEOTECHNICAL REPORT, CIVIL, AND EARTHWORK SPECIFICATION FOR SITE SUBGRADE PREPARATION REQUIREMENTS INCLUDING BUT NOT LIMITED TO REMEDIATION OF SOIL 24" BELOW FOOTING BEARING. FOOTING SHALL BEAR A MINIMUM OF 30" BELOW FINISHED GRADE. ADJUST FT/FG ELEVATION AS REQ'D.
E. COMPACTED FILL FOR THE PURPOSE OF UNDERLYING BUILDING OR SITE STRUCTURES SHALL BE PREPARED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
F. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR EXTENT AND DEPTH OF OVEREXCAVATION (SUB-EXCAVATION), AND FOR RECOMPACTION AND SOIL CONDITIONING REQUIREMENTS.
G. BOTTOM DEPTHS OF EXCAVATION AS WELL AS ALL PLACEMENT AND COMPACTION OF FILL SHALL BE OBSERVED AND TESTED BY THE PROJECT GEOTECHNICAL ENGINEER.
H. ALL PAD FOOTINGS AND PIERS SHALL BE CENTERED ON BUILDING COLUMN REFERENCE LINES UNLESS INDICATED BY AN OFFSET DIMENSION.
I. ALL WALL FOOTINGS SHALL BE CENTERED ON WALL CENTERLINE UNLESS INDICATED BY AN OFFSET DIMENSION.
J. ALL FOOTINGS SHALL REST ON UNDISTURBED SOIL OR COMPACTED FILL WHICH HAS A MINIMUM ALLOWABLE BEARING CAPACITY EQUAL TO OR GREATER THAN THAT SHOWN ABOVE.
K. ALL FOOTING ELEVATIONS SHOWN ON THE DRAWINGS MEET THE REQUIRED DEPTHS FOR BEARING AND/OR FROST PROTECTION. ACTUAL FIELD CONDITIONS MAY REQUIRE ADDITIONAL EXCAVATION AND/OR COMPACTED FILL.
L. BACKFILL SHALL BE PLACED EVENLY AGAINST EACH SIDE OF SUBGRADE STRUCTURAL ELEMENTS TO PRODUCE APPROXIMATELY EQUAL AND OPPOSITE LATERAL PRESSURES.
M. SUBGRADE STRUCTURAL ELEMENTS SUBJECTED TO DIFFERENTIAL LATERAL SOIL PRESSURE SHALL BE ADEQUATELY BRACED UNTIL THE STRUCTURAL SLABS WHICH PROVIDE LATERAL RESTRAINT HAVE BEEN PLACED AND ALLOWED TO CURE FOR A MINIMUM OF 7 DAYS.
N. BACKFILL SHALL BE A CRUSHED AGGREGATE WITH A GRADATION THAT INCLUDES A MINIMUM 10 PERCENT FINES PASSING THE #200 SIEVE AND MAXIMUM PARTICLE SIZE OF 1 1/2". ACCEPTABLE GRADATIONS INCLUDE CA-6, CA-10 AND PIT RUN SAND.

STRUCTURAL CONCRETE:

- A. REINFORCED CONCRETE DESIGNED IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) BY THE AMERICAN CONCRETE INSTITUTE.
B. REINFORCING BAR DETAILING, FABRICATING, AND PLACING SHALL CONFORM TO THE CONCRETE REINFORCING STEEL INSTITUTE'S "REINFORCING BAR DETAILING" AND "PLACING REINFORCING BARS".
C. MINIMUM CONCRETE COMPRESSIVE STRENGTH (FC) AT 28 DAYS:
FOOTINGS 4000 PSI
FOUNDATION WALLS 4000 PSI
PEDESTALS 4000 PSI
D. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE III, UNLESS OTHERWISE NOTED.
E. CONCRETE REINFORCEMENT:
1. DEFORMED BARS - NEW BILLET STEEL COMPLYING WITH ASTM A615 AND HAVING A MINIMUM YIELD STRENGTH OF 60000 PSI.
2. WELDED WIRE FABRIC - SMOOTH WIRE FABRIC COMPLYING WITH ASTM A185
F. CONCRETE PROTECTION FOR REINFORCEMENT: UNLESS OTHERWISE SHOWN THE CLEAR DISTANCE FROM THE FACE OF CONCRETE TO THE REINFORCING STEEL SHALL BE:
CONCRETE POURED AGAINST GROUND (NOTE A) 3"
CONCRETE POURED AGAINST FORMS (NOTE A, B):
#6 BARS OR LARGER 2"
SMALLER THAN #6 BARS 1 1/2"
SLABS POURED TO FORMS:
FORMED SURFACE (NOTE B) 3/4"
TROWELED SURFACE (NOTE B) 1"
SCREEDED SURFACE FOR APPLIED TOPPING 3/4"
SLABS POURED ON GRADE:
FROM BOTTOM SURFACE 2"
TROWELED SURFACE (NOTE B) 1"
SCREEDED SURFACE FOR APPLIED TOPPING 3/4"
(NOTE A) EXCLUDING SLABS POURED ON GRADE.
(NOTE B) INCREASE BY 1/2" IF SURFACE IS TO BE IN PERMANENT CONTACT WITH GROUND OR WATER.

- G. UNLESS OTHERWISE SHOWN OR NOTED, SPLICING OF REINFORCING BARS OR WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ACI 318.
H. ARRANGE, SPACE, AND SECURELY TIE BARS AND BAR SUPPORTS TO HOLD REINFORCEMENT IN POSITION DURING CONCRETE PLACEMENT OPERATIONS. SET WIRE TIES SO ENDS ARE DIRECTED INTO CONCRETE.
I. PROVIDE SUPPORT FOR REINFORCEMENT INCLUDING BOLSTERS, CHAIRS, AND SPACERS WITH SAND PLATES FOR SUPPORTING AND FASTENING REINFORCING BARS TO PROVIDE THE CONCRETE COVER INDICATED.
J. ALTERNATE LOCATION OF LAP SPLICE IN WALLS AND SLABS.
K. ALL HORIZONTAL BARS IN WALLS SHALL BE BENT AT CORNERS AND INTERSECTIONS IN SUCH A WAY THAT CONTINUITY IS PROVIDED THROUGH THE JOINT. SEPARATE CORNER BARS OF THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCING MAY BE SUBSTITUTED FOR THE BENT PORTION OF THE CONTINUOUS BAR.
L. ALL CONSTRUCTION JOINTS SHOWN ON THE DRAWINGS SHALL BE INCORPORATED IN THE STRUCTURE UNLESS THEIR ELIMINATION IS APPROVED BY THE ENGINEER. ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON SHOP DRAWINGS. WHEN CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS ARE REQUIRED, THE REINFORCEMENT SHALL PASS CONTINUOUSLY THROUGH THE JOINT AND A KEY SHALL BE PROVIDED FOR ADEQUATE SHEAR TRANSFER.
1. PLACE VERTICAL FOUNDATION WALL CONSTRUCTION JOINTS AT MAXIMUM 50'-0" O.C. SEE TYPICAL DETAIL.
2. DO NOT PLACE FOUNDATION WALL CONSTRUCTION JOINT WITHIN 48" OF BUILDING CORNER.
M. ALL KEYS FOR CONSTRUCTION JOINTS SHALL BE 2" X 4" (NOMINAL) UNLESS OTHERWISE SHOWN OR NOTED ON THE DRAWINGS.
N. UNLESS OTHERWISE SHOWN OR NOTED, PROVIDE 2-#5 BARS (1-EACH FACE) AROUND UNFRAMED OPENINGS IN CONCRETE WALLS. PLACE BARS PARALLEL TO SIDES OF OPENING AND EXTEND 24" BEYOND CORNERS.
O. COORDINATE CAMBER OF ADJACENT JOISTS WITH NONCAMBERED CONNECTIONS IN CAST IN PLACE CONCRETE WALLS.

STEEL:

- A. STRUCTURAL STEEL IS DESIGNED IN ACCORDANCE WITH AND SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," AND THE AISC "STEEL CONSTRUCTION MANUAL".
B. ALL STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
W-SHAPES A992 OR A572, GRADE 50
C. SHOP CONNECTIONS MAY BE WELDED OR HIGH STRENGTH BOLTED AT FABRICATOR'S OPTION, SUBJECT TO ENGINEER'S APPROVAL.
D. ALL BOLTED CONNECTIONS FOR STRUCTURAL STEEL SHALL CONFORM TO AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS".
E. UNLESS OTHERWISE SHOWN OR NOTED ON THE DRAWINGS, ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER HIGH STRENGTH BOLTS, BEARING TYPE WITH THREADS IN THE SHEAR PLANE, CONFORMING TO ASTM F1554, GRADE A325-N, GROUP A.
F. ALL WELDED CONNECTIONS FOR STRUCTURAL STEEL SHALL CONFORM TO AWS "STRUCTURAL WELDING CODE," D1.1.
G. UNLESS OTHERWISE SHOWN OR NOTED ON THE DRAWINGS, ALL WELDED CONNECTIONS SHALL BE MADE WITH E70-XX LOW HYDROGEN ELECTRODES.
H. PROVIDE ALL BOLT HOLES, STUDS, ANCHORS, AND CLIP ANGLES REQUIRED TO ATTACH OTHER MATERIALS AS SHOWN ON THE DRAWINGS.
I. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, 36KSI AND SHALL BE PLACED WITHIN THE FOLLOWING TOLERANCES:
TOP OF ANCHOR BOLT ELEVATION +1" TO - 3/8"
OUT OF POSITION OF ANCHOR BOLTS ±1/8"
ELEVATION OF FINISHED CONCRETE SURFACE FOR BEARING ± 1/8"
J. ALL STEEL SHALL HAVE ONE SHOP COAT OF PRIMER, EXCEPT:
1. WHERE PROHIBITED BY THE REQUIREMENTS OF THE "SPECIFICATION FOR STRUCTURAL JOINTS" USING ASTM A325 BOLTS
2. GALVANIZE ALL EXTERIOR STEEL, STEEL IN EXTERIOR WALLS, AND THEIR CONNECTIONS.
3. WHERE OTHERWISE NOTED ON PLANS AND DETAILS.

WOOD:

- A. ENGINEERED TIMBER CONSTRUCTION DESIGNED IN ACCORDANCE WITH THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
B. WOOD BEAMS, HEADERS, RAFTERS, AND OTHER STRUCTURAL WOOD MEMBERS WHICH ARE 2" TO 4" THICK AND WIDER THAN 6" SHALL BE DOUGLAS FIR LARCH NO.2 AND HAVE THE FOLLOWING MINIMUM PROPERTIES:
Fb (SINGLE MEMBER USE) 900 PSI
Fc (PARALLEL TO GRAIN) 1350 PSI
Fc (PERPENDICULAR TO GRAIN) 625 PSI
Fv 180 PSI
E 1,600,000 PSI
Emin 580,000 PSI
C. USE PORT ORFORD CEDAR #1 FOR ALL EXPOSED WOOD.
D. TIMBER CONNECTIONS SHALL BE AS SHOWN ON THE DRAWINGS, AND WHEN NOT DETAILED, SHALL CONFORM TO ACCEPTED INDUSTRY STANDARDS SUBJECT TO THE ENGINEER'S APPROVAL.

EXPOSED TIMBER FRAMING:

- A. HEAVY TIMBER CONSTRUCTION SHALL BE DELEGATED DESIGN SYSTEMS BY THE SUPPLIER INCLUDING BUT NOT LIMITED TO ALL PURLINS, BEAMS, TIMBER/MULTI PLY & TIE ROD TRUSSES & THEIR CONNECTIONS. MEMBER SIZES & DETAILS INDICATED ARE CONCEPTUAL. SEE ARCH FOR CONCEPTUAL PROFILES AND DETAILS NOT SHOWN AND FOR FIRE RATING REQUIREMENTS. FINAL AESTHETICS SHALL BE COORDINATED WITH THE ARCHITECT BEFORE FABRICATION. SEE SO.1 FOR DESIGN CRITERIA. TIMBER SYSTEM AND CONNECTIONS SHALL WITHSTAND THE EFFECTS OF GRAVITY AND LATERAL STRUCTURAL DESIGN CRITERIA AS SHOWN ON THE DRAWINGS AND COMPLY WITH ASCET, AF&PA, NDS, TPEC1, AND TCM.
B. SUBMIT REPRESENTATIVE SAMPLES OF WOOD SPECIES INDICATED, OF THE GRADE AND FINISH SPECIFIED, FOR ARCHITECT'S APPROVAL.
C. WOOD SPECIFICATION INFORMATION:
a. SPECIES SHALL BE PORT ORFORD CEDAR NO 1
b. UNLESS OTHERWISE NOTED, ALL TIMBER SHALL BE PER "STANDARD GRADING RULES FOR WESTERN LUMBER;" RECORDS OF GRADE MARKS AND CERTIFICATES INDICATING CONFORMANCE WITH THE SPECIFICATIONS SHALL BE MAINTAINED BY THE CONTRACTOR.
c. MOISTURE CONTENT: 19% MAXIMUM MOISTURE CONTENT AT TIME OF DRESSING
D. FABRICATE BEAM SEATS, HANGERS, STRAP TIES, AND SHEAR PLATES FROM STEEL WITH DIMENSIONS AS REQUIRED FOR STRUCTURE PERFORMANCE. SHEAR PLATES SHALL COMPLY WITH ASTM D 5933.
E. FABRICATE TIE RODS FROM ROUND STEEL BARS WITH UPSET THREADS CONNECTED WITH FORGED-STEEL TURNBUCKLES COMPLYING WITH ASTM A 668/A 668M.
F. PROVIDE BOLTS, 3/4" DIAMETER MINIMUM OR LARGER AS REQUIRED FOR STRUCTURAL PERFORMANCE, COMPLYING WITH ASTM A 307, GRADE A; PROVIDE NUTS COMPLYING WITH ASTM A 563; AND WHERE REQUIRED FOR STRUCTURAL PERFORMANCE, PROVIDE FLAT WASHERS. BOLTS, WASHERS, AND NUTS SHALL BE ZINC/GALVANIZED.
G. MATERIALS:
1. STRUCTURAL STEEL SHAPES, PLATES, AND FLAT BARS COMPLYING WITH ASTM A 36/A 36M.
2. ALL STRUCTURAL STEEL SHALL BE THOROUGHLY CLEANED AND GIVEN ONE HEAVY SHOP COAT OF AN APPROVED RED LEAD PRIMER (BLACK), WELL WORKED INTO ALL JOINTS AND OPEN SPACES. TOUCH UP AFTER ERECTION.
3. SURFACES WHICH ARE NOT ACCESSIBLE FOR FIELD PAINTING SHALL HAVE ONE SHOP COAT OF BLACK PAINT BEFORE LEAVING THE SHOP.
H. JOINERY SHALL BE IN THE BEST OF THE EARLY ENGLISH AND EARLY AMERICAN TRADITIONS, DESIGNED FOR STRENGTH, SHRINKAGE, CHECKING, AND TWISTING. ALL WORKMANSHIP SHALL BE OF THE VERY HIGHEST QUALITY. JOINERY SHALL BE ACCURATELY CUT SO AS TO MAKE A NEAT, SNUG FIT.

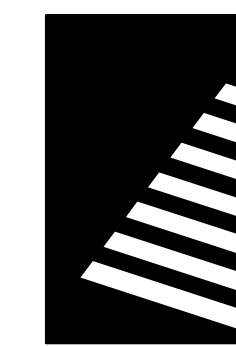
PREFABRICATED WOOD TRUSSES:

- A. METAL PLATE CONNECTED ROOF TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH ANSI/TPI "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION" TPI HIB COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING, AND BRACING METAL PLATE CONNECTED WOOD TRUSSES," AND TPI DS8 "RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
B. THE CONTRACTOR SHALL PROVIDE CONTINUOUS LATERAL BRACING AS REQUIRED BY THE TRUSS MANUFACTURER'S TRUSS DESIGN DRAWINGS AND BC51-B3. ALL CONTINUOUS PERMANENT BRACING SHALL BE DIAGONALLY BRACED AT 20'-0" OC MAXIMUM, ONCE MINIMUM.
C. SHOP DRAWINGS SHALL SHOW LOCATION, PITCH, SPAN, CAMBER, CONFIGURATION, AND SPACING FOR EACH TYPE OF TRUSS REQUIRED. INDICATE SIZES, STRESS GRADES, AND SPECIES OF LUMBER.
D. TRUSSES, TRUSS BRACING, AND TRUSS TO TRUSS CONNECTIONS SHALL BE DELEGATED DESIGN. SUBMIT ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED STRUCTURAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION. DELEGATED DESIGN INCLUDES MEMBER SIZES OF TRUSS AS WELL AS PERMANENT BRACING REQUIRED TO PREVENT BUCKLING OF INDIVIDUAL TRUSS MEMBERS DUE TO DESIGN LOADS.
E. MAXIMUM VERTICAL DEFLECTION:
ROOF TRUSSES - L/240 FOR TOTAL LOAD AND L/360 FOR LIVE LOAD.
F. LUMBER: DOC PS 20 AND APPLICABLE RULES-WRITING AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARD COMMITTEE (ALSC) BOARD OF REVIEW. PROVIDE LUMBER GRADED BY AN AGENCY CERTIFIED BY THE ALSC BOARD OF REVIEW TO INSPECT AND GRADE LUMBER UNDER THE RULES INDICATED.
1. PROVIDE DRY LUMBER WITH 19% MAXIMUM MOISTURE CONTENT AT TIME OF DRESSING.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP 12/31/2024



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CONSTRUCTION
DOCUMENTS

OFFICE OF
ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT, DESIGN
AND CONSTRUCTION

Owner

ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS

EMMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Table with columns: Facility#, Relevant to Sheet:. Rows include 7815235017 - Cabin 500, 7815235019 - Cabin 501, 7815235020 - Cabin 502, 7815235021 - Cabin 503, 7815235022 - Cabin 504, 7815235023 - Cabin 505.

DRAWN BY: PND
CHECKED BY: PMH
DESIGNED BY: PND

SHEET TITLE:

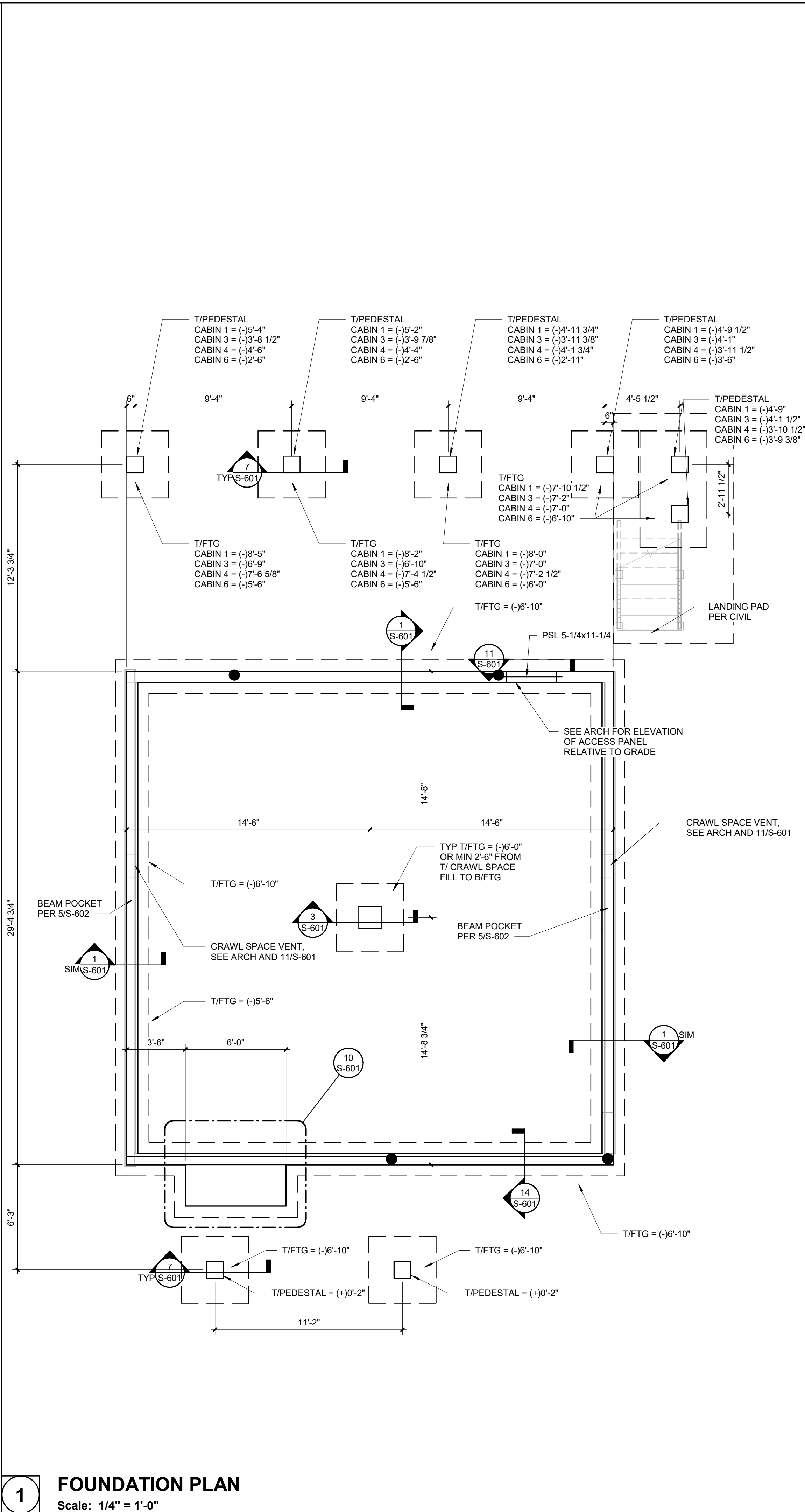
GENERAL
STRUCTURAL NOTES

SHEET NUMBER:

S-001

SHEET 18 of 75

ISSUE DATE: 03/02/2023



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

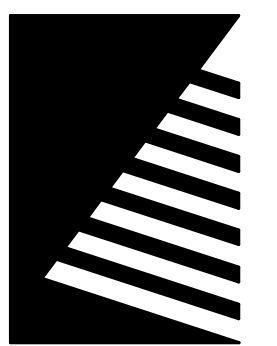
FOUNDATION PLAN NOTES

- A. SEE S-001 FOR GENERAL STRUCTURAL NOTES.
- B. SEE GENERAL STRUCTURAL NOTES FOR DESIGN SOIL BEARING PRESSURE.
- C. SEE ARCHITECTURAL FOR DIMENSIONS NOT SHOWN.
- D. SLAB SUBGRADE PREPARATION SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
- E. ALL PAD FOOTINGS TO BE 4'x4'x1' REINFORCED W/ #5 @ 12" O.C. EA WAY.
- F. SEE PLAN FOR T/FOOTING ELEVATION
- G. SEE SECTIONS FOR T/FOUNDATION WALL ELEVATIONS.
- H. SEE 4/S-601 FOR FOUNDATION WALL CONSTRUCTION JOINT.
- I. SEE 6/S-601 FOR TYPICAL CORNER AND WALL INTERSECTION REINFORCEMENT.
- J. COORDINATE ALL FLOOR SLAB AND FOUNDATION WALL OPENINGS WITH OTHER TRADES. SEE DETAIL 5/S-601 FOR TYP PIPE PENETRATION NEAR THE FOOTING AND 13/S-601 FOR TYPICAL WALL SLEEVE DETAIL.
- K. SEE ARCHITECTURE AND PLUMBING FOR WATERPROOFING REQUIREMENTS.
- L. ● INDICATES SIMPSON HDU HOLDDOWN OR EQUAL WITH 2600 LB MINIMUM CAPACITY WITH 5/8"Ø SIMPSON SB ANCHOR WITH 18" EMBED FROM TOP OF FOUNDATION WALL OR FOOTING. PROVIDE MIN (2)2X STUDS AT HOLDDOWN.
- M. SEE 12/S-601 AND 3/S-602 FOR HOLD DOWN DETAIL.
- N. ALL EXTERIOR ANCHORS, PLATES, AND CONNECTIONS SHALL BE GALVANIZED.
- O. SEE C-102 FOR CABIN NUMBER DESIGNATIONS.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP 12/31/2024



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CONSTRUCTION DOCUMENTS

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MANAGEMENT, DESIGN
AND CONSTRUCTION

Owner

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	
7815235023 - Cabin 505	X

DRAWN BY: PND
CHECKED BY: PMH
DESIGNED BY: PND

SHEET TITLE:
**TWO BEDROOM
FOUNDATION PLAN**

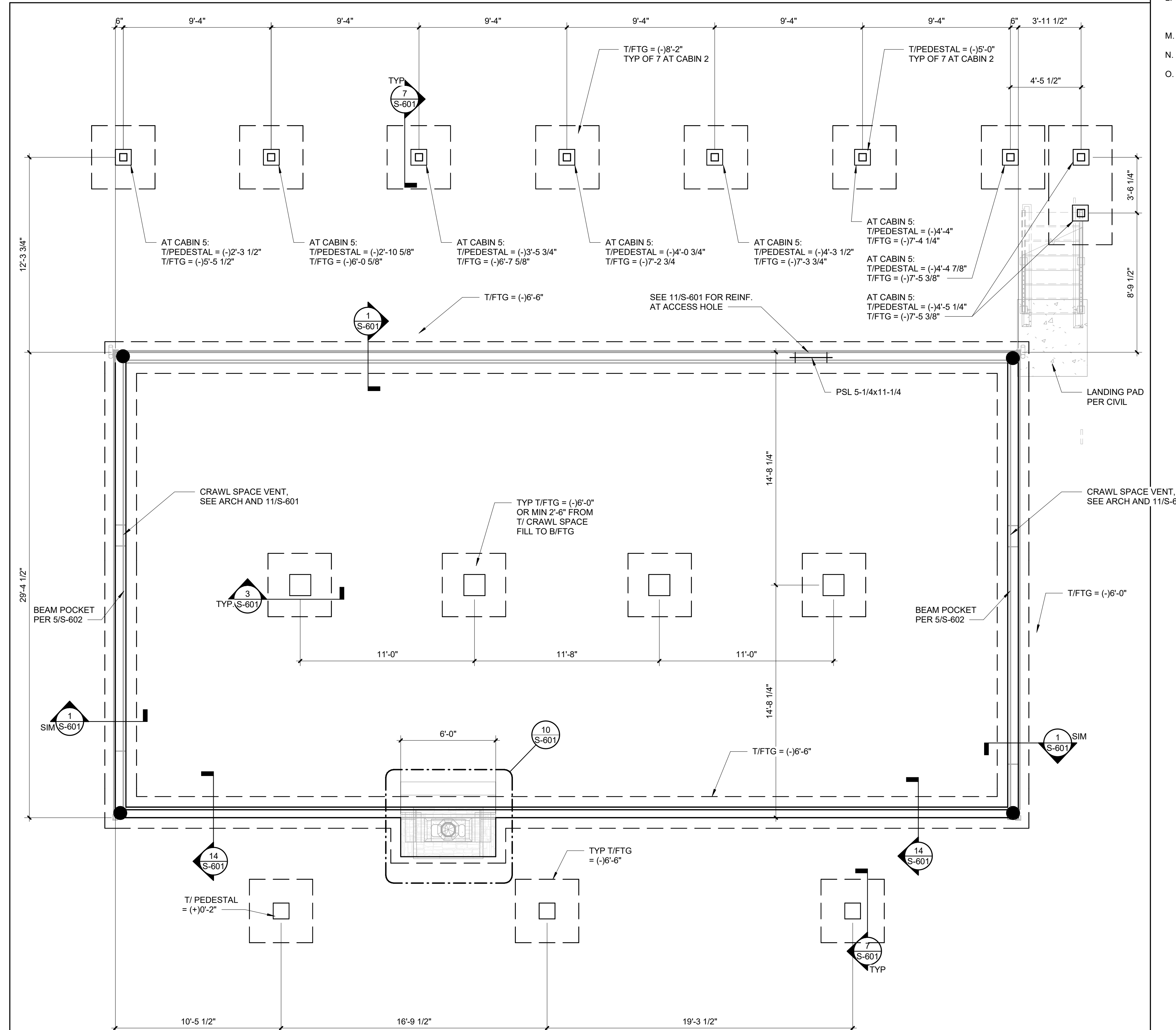
SHEET NUMBER:

S-101

SHEET 19 of 75
ISSUE DATE: 03/02/2023

FOUNDATION PLAN NOTES

- A. SEE S-001 FOR GENERAL STRUCTURAL NOTES.
- B. SEE GENERAL STRUCTURAL NOTES FOR DESIGN SOIL BEARING PRESSURE.
- C. SEE ARCHITECTURAL FOR DIMENSIONS NOT SHOWN.
- D. SLAB SUBGRADE PREPARATION SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
- E. ALL PAD FOOTINGS TO BE 4"x4"x1' REINFORCED WITH #5 @ 12" O.C. EA WAY.
- F. SEE PLAN FOR T/FOOTING ELEVATIONS.
- G. SEE SECTIONS FOR T/FOUNDATION WALL ELEVATIONS.
- H. SEE 4/S-601 FOR FOUNDATION WALL CONSTRUCTION JOINT.
- I. SEE 6/S-601 FOR TYPICAL CORNER AND WALL INTERSECTION REINFORCEMENT.
- J. COORDINATE ALL FLOOR SLAB AND FOUNDATION WALL OPENINGS WITH OTHER TRADES. SEE DETAIL 5/S-601 FOR TYP PIPE PENETRATION NEAR THE FOOTING AND 13/S-601 FOR TYPICAL WALL SLEEVE DETAIL.
- K. SEE ARCHITECTURE AND PLUMBING FOR WATERPROOFING REQUIREMENTS.
- L. ● INDICATES SIMPSON HDU HOLDDOWN OR EQUAL WITH 2600 LB MINIMUM CAPACITY WITH 5/8"Ø SIMPSON SB ANCHOR WITH 18" EMBED FROM TOP OF FOUNDATION WALL OR FOOTING. PROVIDE MIN (2)2X STUDS AT HOLDDOWN.
- M. SEE 12/S-601 AND 3/S-602 FOR HOLD DOWN DETAIL.
- N. ALL EXTERIOR ANCHORS, PLATES, AND CONNECTIONS SHALL BE GALVANIZED.
- O. SEE C-102 FOR CABIN NUMBER DESIGNATIONS.

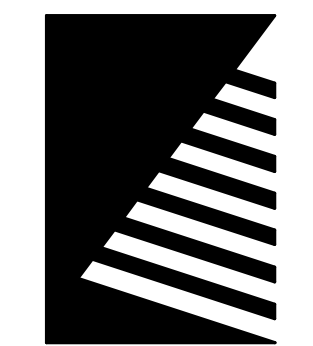


1 FOUNDATION PLAN
Scale: 1/4" = 1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON,
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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: PND
CHECKED BY: PMH
DESIGNED BY: PND

SHEET TITLE:
**FOUR BEDROOM
CABIN FOUNDATION
PLAN**

SHEET NUMBER:

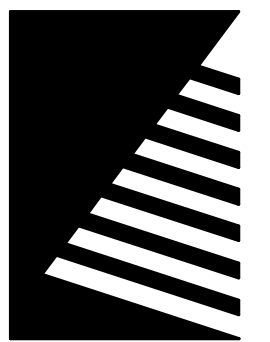
S-102

SHEET 20 of 75
ISSUE DATE: 03/02/2023

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Owner

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
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7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: PND
CHECKED BY: PMH
DESIGNED BY: PND

SHEET TITLE: TWO BEDROOM FLOOR AND ROOF FRAMING PLANS

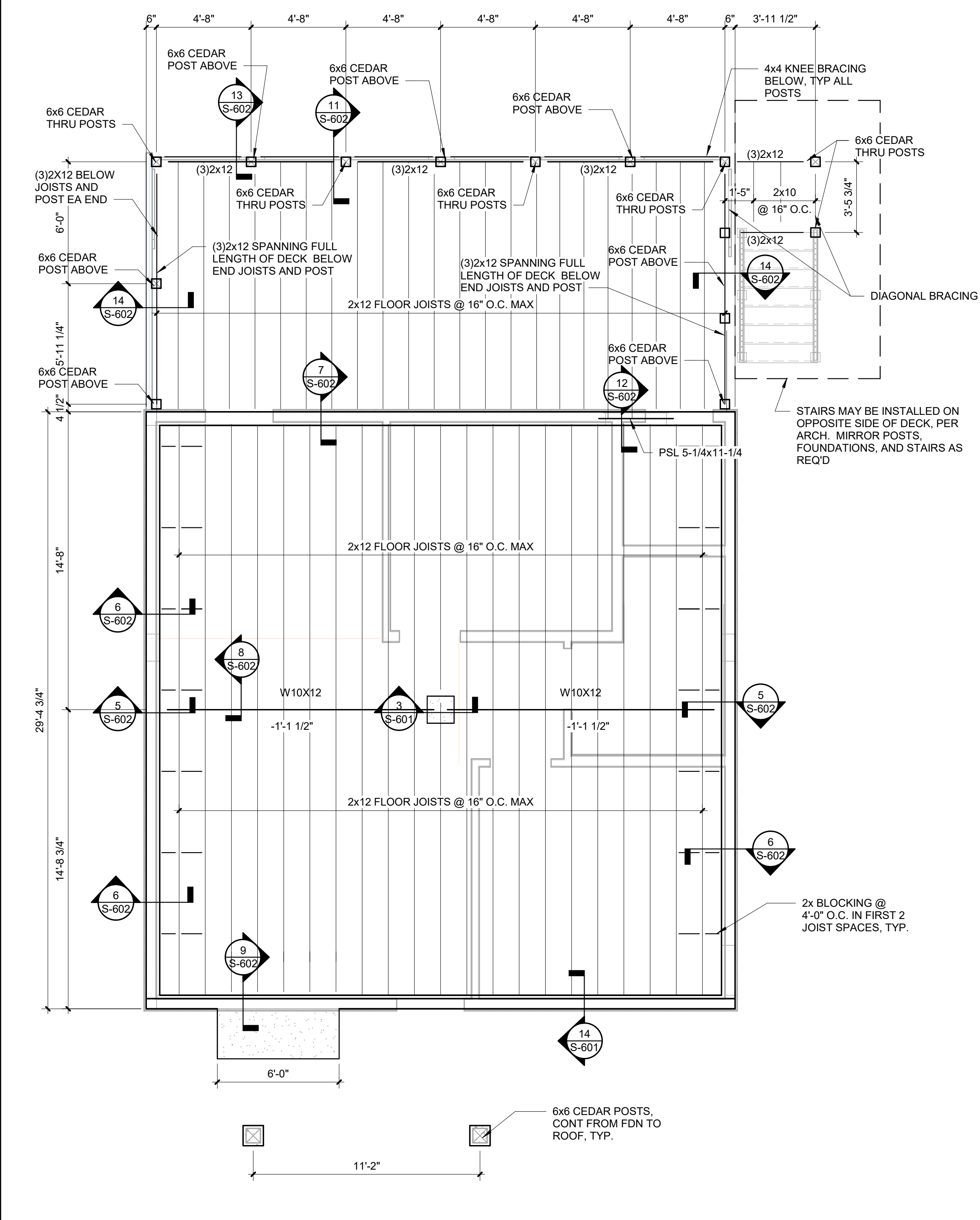
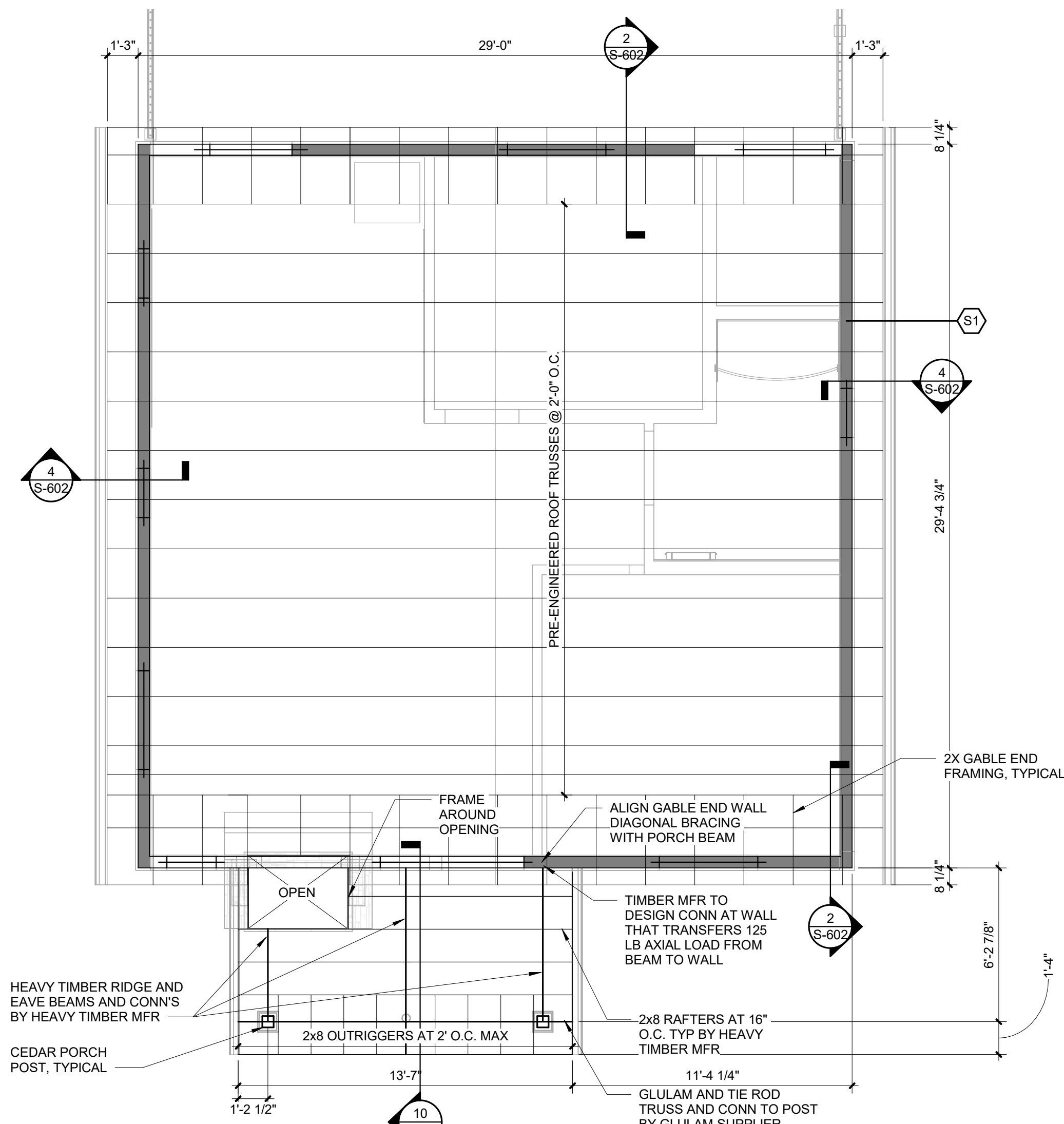
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S-103

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ISSUE DATE: 03/02/2023

FRAMING PLAN NOTES

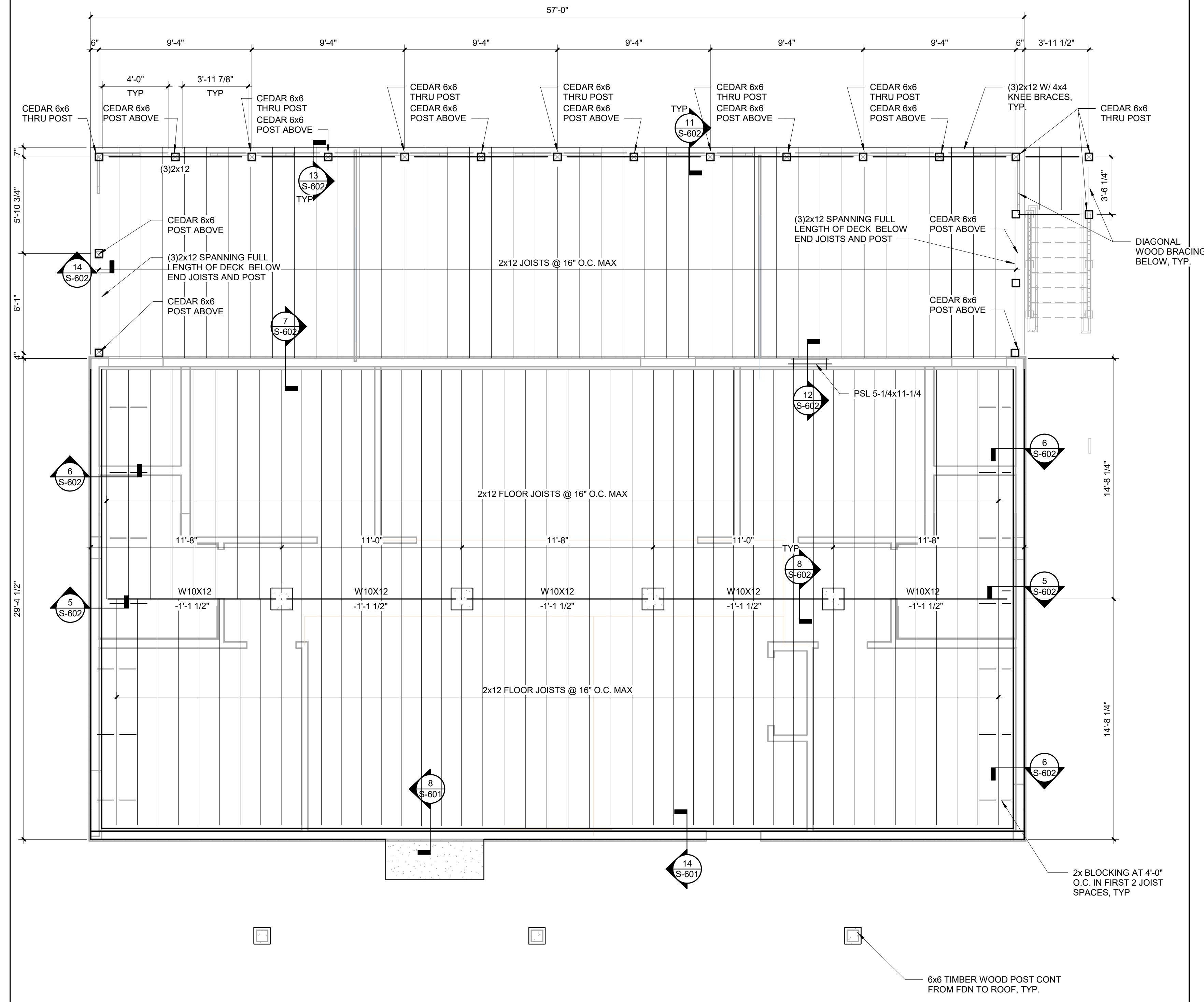
- A. SEE S-001 FOR GENERAL STRUCTURAL NOTES.
- B. SEE ARCHITECTURAL FOR DIMENSIONS NOT SHOWN.
- C. CABIN ROOF CONSTRUCTION SHALL BE 5/8" APA RATED SHEATHING FASTENED WITH 10d AT 6" OC WITH 1-1/2" MIN PENETRATION ALONG PANEL EDGES AND 10d AT 6" OC IN THE FIELD.
- D. PORCH ROOF CONSTRUCTION SHALL BE 5/8" APA RATED SHEATHING FASTENED TO 2x PLANKING WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND AT 12" O.C. IN THE FIELD WITH 1-3/8" MIN PENETRATION. 2x6 PLANKING SHALL BE FASTENED TO STRUCTURE WITH (2)16d NAILS AT END BEARING SUPPORTS AND (3)16d NAILS AT BOUNDARY MEMBERS.
- E. CABIN FLOOR CONSTRUCTION SHALL BE 3/4" APA RATED SHEATHING - BLOCKED. FASTEN WITH 10d NAILS AT 4" O.C. W/ 1-1/2" MIN PENETRATION ALONG PANEL EDGES AND 10d NAILS AT 12" O.C. IN THE FIELD.
- F. DECK FLOOR CONSTRUCTION SHALL BE COMPOSITE DECKING PER ARCH WITH FASTENING PER MANUFACTURER'S RECOMMENDATIONS.
- G. [Symbol] INDICATES LOCATIONS OF SHEAR WALL.
- H. SHEAR WALL SHEATHING REQUIREMENTS ARE AS FOLLOWS:
S1: 15/32" APA RATED SHEATHING ON ONE FACE AND BLOCKING AT ALL UNSUPPORTED EDGES. FASTENED WITH 10d AT 6" OC WITH 1-1/2" MIN PENETRATION ALONG PANEL EDGES AND 10d AT 12" OC IN THE FIELD.
- I. SEE 1/S-602 FOR TYPICAL SHEAR WALL DETAIL.
- J. BEARING WALL STUDS SHALL BE 2x6 @ 16" OC MAX UNLESS OTHERWISE NOTED. PROVIDE MIN. (3)2x STUDS ALIGNED DIRECTLY BELOW ALL GIRDER TRUSS OR PORCH BEAM BEARING LOCATIONS UNLESS OTHERWISE NOTED.
- K. SEE ARCHITECTURAL BUILDING SECTIONS FOR TRUSS PROFILES. TRUSS PROFILES NOT SHOWN SHALL BE DETERMINED BY TRUSS MFR. ALL OVERHANG AND CORNER FRAMING SHALL BE DESIGNED BY TRUSS MFR. TRUSS TO TRUSS CONNECTIONS SHALL BE SPECIFIED BY THE TRUSS MFR.
- L. TYPICAL HEADER AT EXTERIOR WALL SHALL BE MIN (3)2x10 FOR SPANS UP TO 5'-0" W/ MIN (2)2x6 FULL HEIGHT STUDS AT EACH END AND MIN (2)2x6 JACK STUDS.
- M. TYPICAL TRUSS SPACING SHALL BE 2'-0" UNLESS NOTED OTHERWISE.
- N. TRUSS BEARING AND BOTTOM CHORD ELEVATION = (+)9'-0" UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL PLANS, ELEVATIONS, AND SECTIONS FOR ADDITIONAL TRUSS BEARING INFORMATION.
- O. TRUSSES SHALL BE DESIGNED TO SUPPORT MECHANICAL EQUIPMENT. COORDINATE SIZE AND LOCATION OF UNITS WITH MECHANICAL CONTRACTOR. COORDINATE TRUSS LAYOUT WITH MECHANICAL DUCTS AND FLOOR PENETRATIONS - PROVIDE RECTANGULAR DUCT OPENINGS IN TRUSS WEBS TO ACCOMMODATE ANY DUCTWORK THAT WILL NOT FIT BETWEEN THE TYPICAL WEB CONFIGURATION. TYPICAL ENTIRE SHEET.
- P. ALL PARTITION WALLS ARE TO BE CONSIDERED NON-STRUCTURAL UNLESS NOTED OTHERWISE.
- Q. ALL EXTERIOR ANCHORS, PLATES, AND CONNECTORS SHALL BE GALVANIZED.
- R. ALL EXTERIOR EXPOSED FRAMING SHALL BE PORT ORFORD CEDAR NO. 1.
- S. TIMBER AND GLULAM CONSTRUCTION AT THE FRONT PORCH SHALL BE DELEGATED DESIGN SYSTEM BY THE SUPPLIER INCLUDING ALL PURLINS, BEAMS, POSTS, GLULAM & TIE ROD TRUSSES, AND THEIR CONNECTIONS. MEMBER SIZES AND DETAILS INDICATED ARE CONCEPTUAL. FINAL DESIGN AESTHETICS SHALL BE COORDINATED WITH THE ARCHITECT. SEE S-001 FOR DESIGN CRITERIA.
- T. SEE ARCH FOR GLULAM & TIE ROD TRUSS PROFILE AND CONCEPTUAL DETAILS.
- U. COORDINATE FLOOR JOIST LOCATIONS WITH PLUMBING TO PREVENT CONFLICTS.
- V. SEE ARCHITECTURAL FOR WALL FRAMING AT FIREPLACE.



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FLOOR FRAMING PLAN NOTES

- A. SEE S-001 AND FOR GENERAL STRUCTURAL NOTES.
- B. SEE ARCHITECTURAL FOR DIMENSIONS NOT SHOWN.
- C. CABIN FLOOR CONSTRUCTION SHALL BE 3/4" APA RATED SHEATHING FASTENED WITH 10d AT 4" OC WITH 1-1/2" MIN PENETRATION ALONG PANEL EDGES AND 10d AT 12" OC IN THE FIELD.
- D. DECK FLOOR CONSTRUCTION SHALL BE COMPOSITE DECKING PER ARCH WITH FASTENING PER MANUFACTURER'S RECOMMENDATIONS.
- E. COORDINATE SIZES AND LOCATIONS OF OPENINGS THROUGH FLOOR DECK WITH MEP CONTRACTORS.
- F. BEARING WALL STUDS SHALL BE 2x6 @ 16" OC MAX UNLESS OTHERWISE NOTED. PROVIDE MIN. (3)2x STUDS ALIGNED DIRECTLY BELOW ALL GIRDER TRUSS OR PORCH BEAM BEARING LOCATIONS UNLESS OTHERWISE NOTED.
- G. SEE ARCHITECTURAL BUILDING SECTIONS FOR TRUSS PROFILES. TRUSS PROFILES NOT SHOWN SHALL BE DETERMINED BY TRUSS MFR. ALL OVERHANG AND CORNER FRAMING SHALL BE DESIGNED BY TRUSS MFR. TRUSS TO TRUSS CONNECTIONS SHALL BE SPECIFIED BY THE TRUSS MFR.
- H. ALL PARTITION WALLS ARE TO BE CONSIDERED NON-STRUCTURAL UNLESS NOTED OTHERWISE.
- I. ALL EXTERIOR EXPOSED WOOD SHALL BE PORT ORFORD CEDAR NO. 1.
- J. COORDINATE JOIST LOCATIONS WITH PLUMBING TO PREVENT CONFLICTS.
- K. SEE ARCHITECTURAL FOR WALL FRAMING AT FIREPLACE.
- L. ALL EXTERIOR ANCHORS, PLATES, AND CONNECTIONS SHALL BE GALVANIZED.

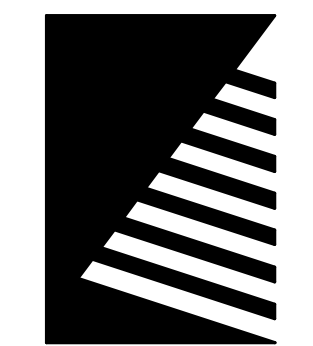


1 FLOOR FRAMING PLAN
Scale: 1/4" = 1'-0"

STATE OF MISSOURI
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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
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7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: PND
CHECKED BY: PMH
DESIGNED BY: PND

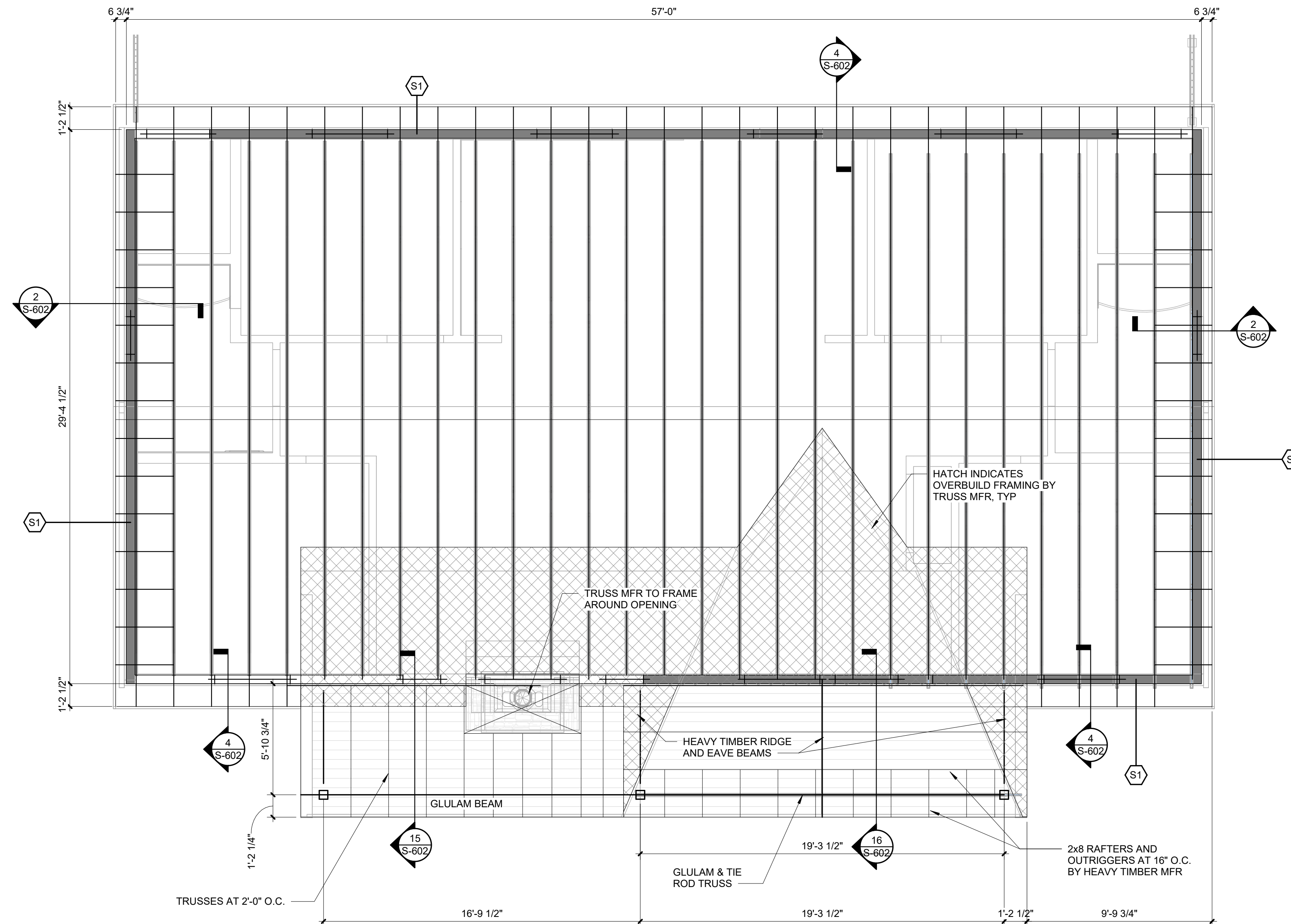
SHEET TITLE:
**FOUR BEDROOM
CABIN FLOOR
FRAMING PLAN**

SHEET NUMBER:
S-104

SHEET 22 of 75
ISSUE DATE: 03/02/2023

ROOF FRAMING PLAN NOTES

- A. SEE S-001 FOR GENERAL STRUCTURAL NOTES.
- B. SEE ARCHITECTURAL FOR DIMENSIONS NOT SHOWN.
- C. CABIN ROOF CONSTRUCTION SHALL BE 5/8" APA RATED SHEATHING FASTENED WITH 10d AT 6" OC WITH 1-1/2" MIN PENETRATION ALONG PANEL EDGES AND 10d AT 12" OC IN THE FIELD.
- D. PORCH ROOF CONSTRUCTION SHALL BE 5/8" APA RATED SHEATHING FASTENED TO 2x PLANKING WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND AT 12" O.C. IN THE FIELD WITH 1-3/8" MIN PENETRATION. 2x6 TONGUE AND GROOVE PLANKING SHALL BE FASTENED TO STRUCTURE WITH (2)16d NAILS AT END BEARING AND (3)16d NAILS AT BOUNDARY MEMBERS.
- E. COORDINATE SIZES AND LOCATIONS OF OPENINGS THROUGH ROOF DECK WITH MEP CONTRACTORS.
- F. INDICATES LOCATIONS OF SHEAR WALLS.
- G. SHEAR WALL SHEATHING REQUIREMENTS ARE AS FOLLOWS:
S1:19/32" APA RATED SHEATHING ON ONE FACE AND BLOCKING AT ALL UNSUPPORTED EDGES. FASTENED WITH 10d AT 6" OC WITH 1-3/8" MIN PENETRATION ALONG PANEL EDGES AND 10d AT 12" OC IN THE FIELD.
- H. SEE 1/S-602 FOR TYPICAL SHEAR WALL DETAIL.
- I. BEARING WALL STUDS SHALL BE 2x6 @ 16" OC MAX UNLESS OTHERWISE NOTED. PROVIDE MIN. (3)2x STUDS ALIGNED DIRECTLY BELOW ALL GIRDER TRUSS OR PORCH BEAM BEARING LOCATIONS UNLESS OTHERWISE NOTED.
- J. SEE ARCHITECTURAL BUILDING SECTIONS FOR TRUSS PROFILES. TRUSS PROFILES NOT SHOWN SHALL BE DETERMINED BY TRUSS MFR. ALL OVERHANG AND CORNER FRAMING SHALL BE DESIGNED BY TRUSS MFR. TRUSS TO TRUSS CONNECTIONS SHALL BE SPECIFIED BY THE TRUSS MFR.
- K. TYPICAL HEADER AT EXTERIOR WALL SHALL BE MIN (3)2x10 FOR SPANS UP TO 4'-8" W/ MIN (2)2x6 FULL HEIGHT STUDS AT EACH END AND MIN (2)2x6 JACK STUDS.
- L. TYPICAL TRUSS SPACING SHALL BE 2'-0" UNLESS NOTED OTHERWISE. ADD ADDITIONAL TRUSS ALIGNED WITH INTERIOR SHEAR WALLS AS INDICATED BELOW.
- M. TRUSS BEARING AND BOTTOM CHORD ELEVATION = 9'-0" UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL PLANS, ELEVATIONS, AND SECTIONS FOR ADDITIONAL TRUSS BEARING INFORMATION.
- N. ROOF TRUSSES SHALL BE DESIGNED TO SUPPORT MECHANICAL EQUIPMENT COORDINATE SIZE AND LOCATION OF UNITS WITH MECHANICAL CONTRACTOR. COORDINATE WEB LOCATIONS WITH MECHANICAL DUCT RUNS.
- O. ALL PARTITION WALLS ARE TO BE CONSIDERED NON-STRUCTURAL UNLESS NOTED OTHERWISE.
- P. TIMBER AND GLULAM CONSTRUCTION AT THE FRONT PORCH SHALL BE A DELEGATED DESIGN SYSTEM BY THE SUPPLIER INCLUDING ALL PURLINS, BEAMS, POSTS, GLULAM AND TIE ROD TRUSSES, AND THEIR CONNECTIONS. MEMBER SIZES AND DETAILS ARE CONCEPTUAL. FINAL DESIGN AESTHETICS SHALL BE COORDINATED WITH THE ARCHITECT. SEE S-001 FOR DESIGN CRITERIA.
- Q. SEE ARCH FOR GLULAM AND TIE ROD TRUSS PROFILE AND CONCEPTUAL DETAILS.
- R. SEE ARCHITECTURAL FOR WALL FRAMING AT FIREPLACE.
- S. ALL EXTERIOR ANCHORS, PLATES, AND CONNECTIONS SHALL BE GALVANIZED.

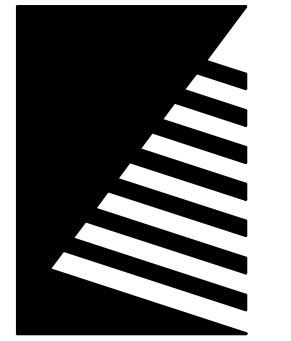


1 ROOF FRAMING PLAN
Scale: 1/4" = 1'-0"

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: PND
CHECKED BY: PMH
DESIGNED BY: PND

SHEET TITLE:
**FOUR BEDROOM
CABIN ROOF
FRAMING PLAN**

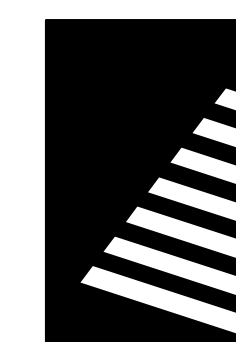
SHEET NUMBER:

S-105

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ISSUE DATE: 03/02/2023



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Owner

ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS

EMMINENCE, MISSOURI

PROJECT #: X2208-01

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7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: PND
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DESIGNED BY: PND

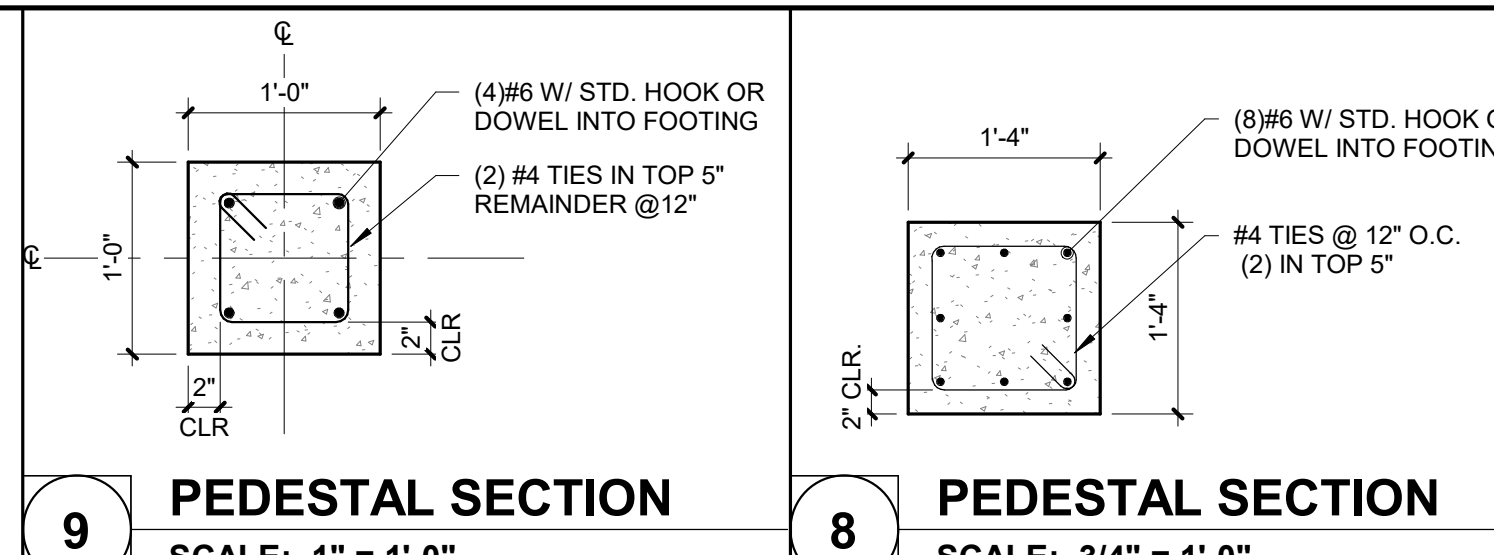
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FOUNDATION
DETAILS

SHEET NUMBER:

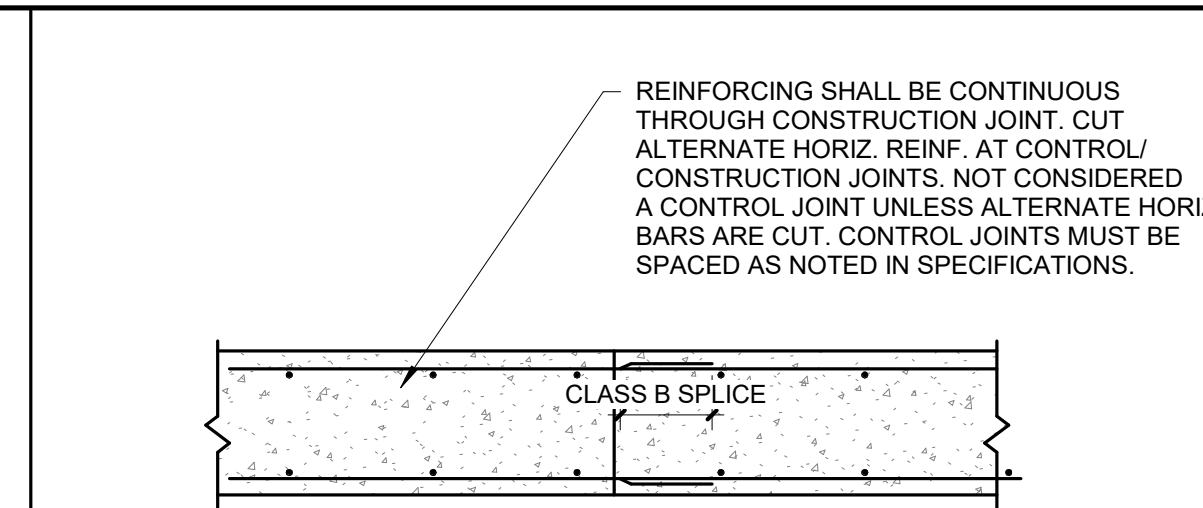
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ISSUE DATE: 03/02/2023

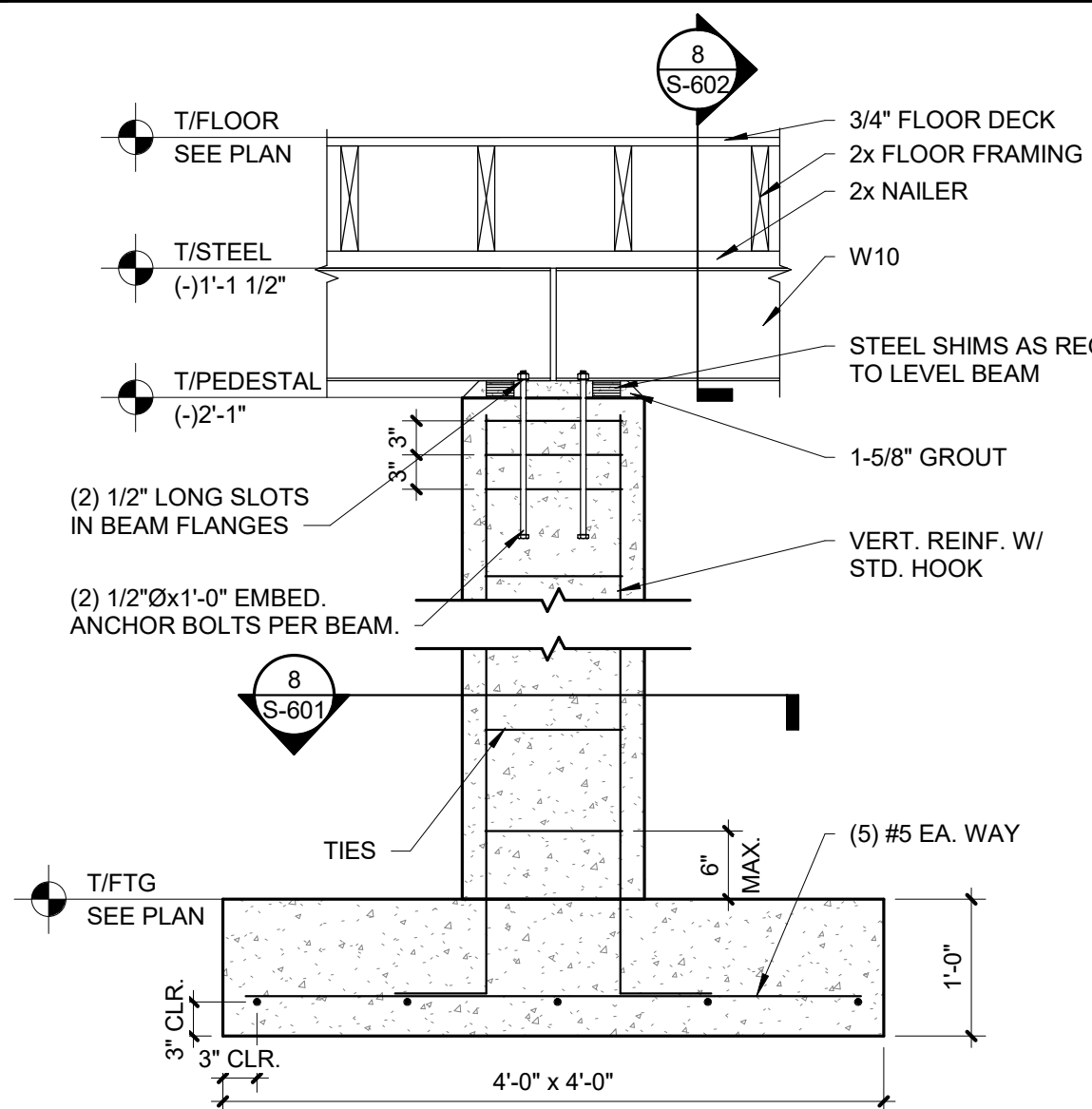


9 PEDESTAL SECTION
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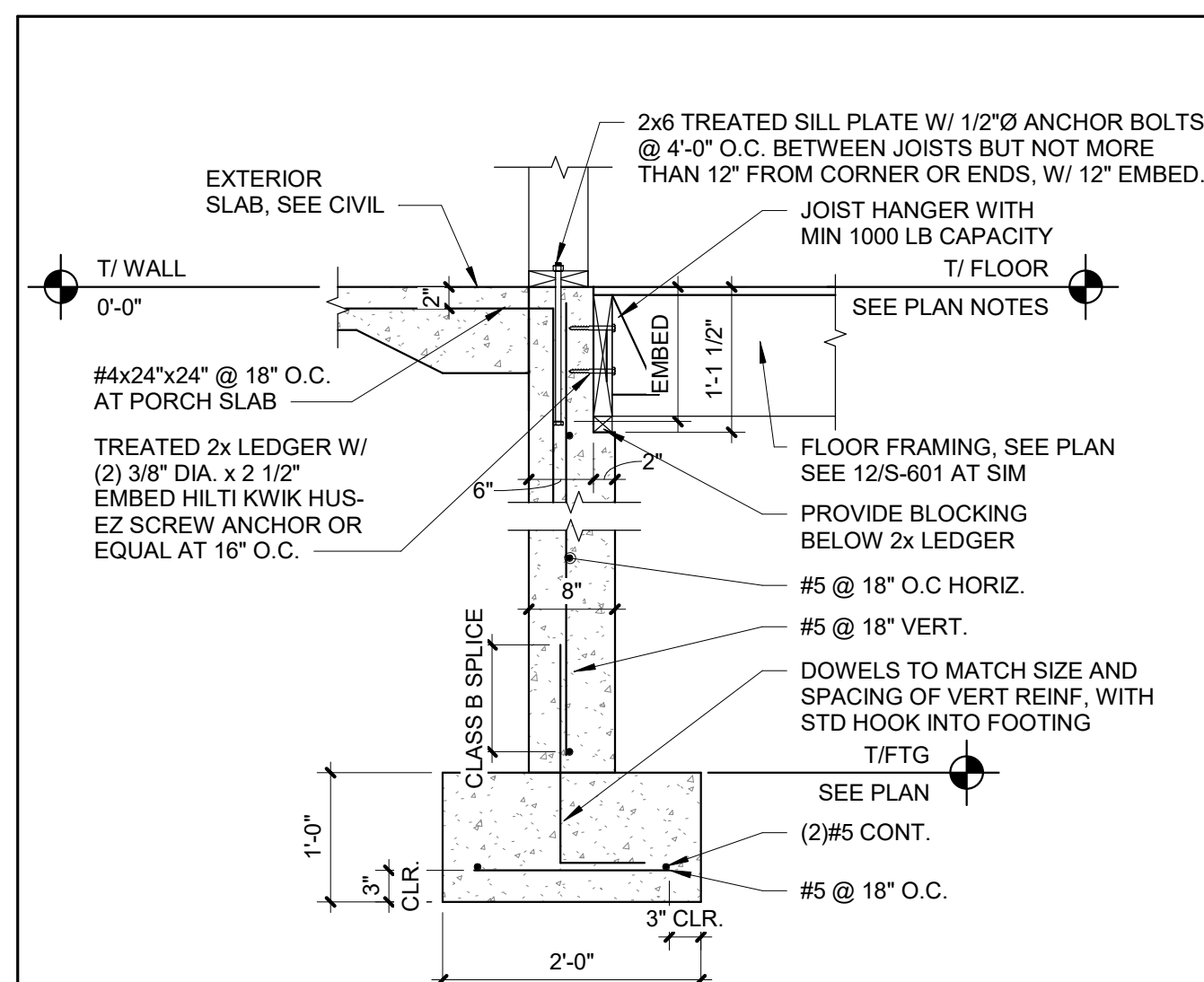
8 PEDESTAL SECTION
SCALE: 3/4" = 1'-0"



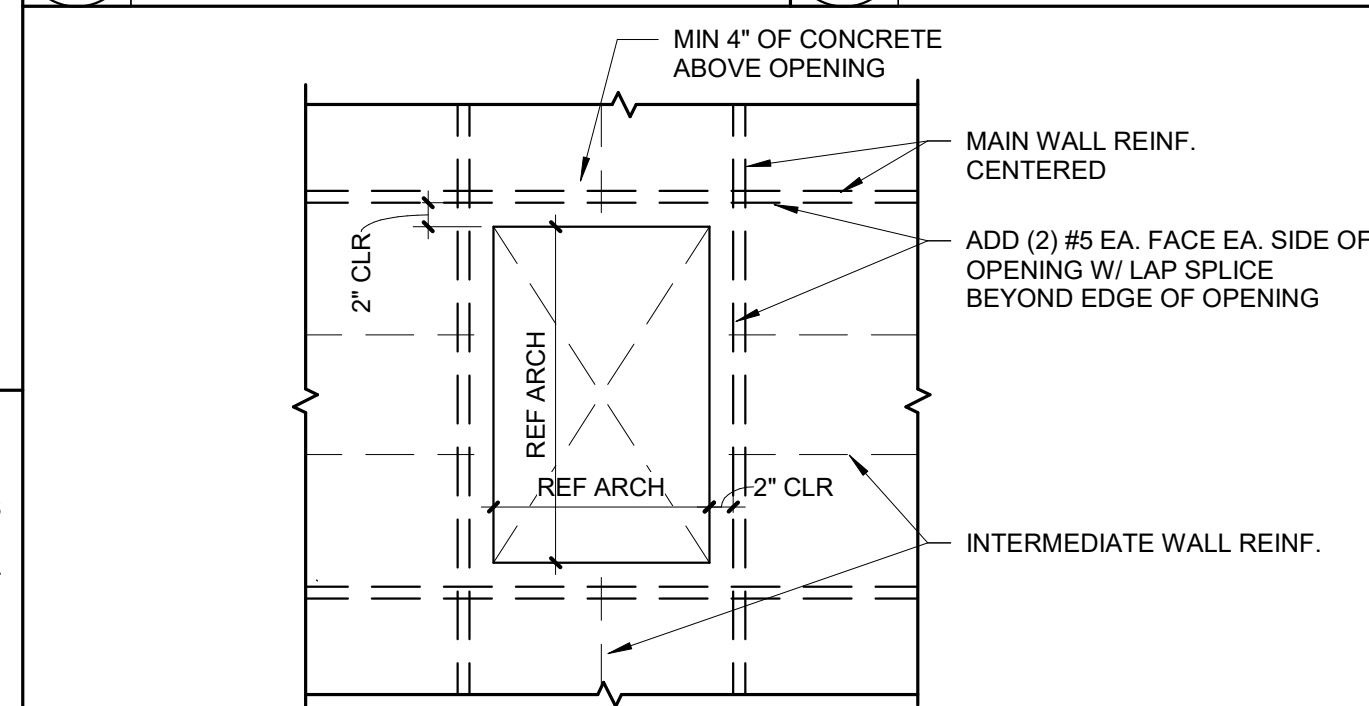
4 WALL CONSTRUCTION/CONTROL JOINT
SCALE: 3/4" = 1'-0"



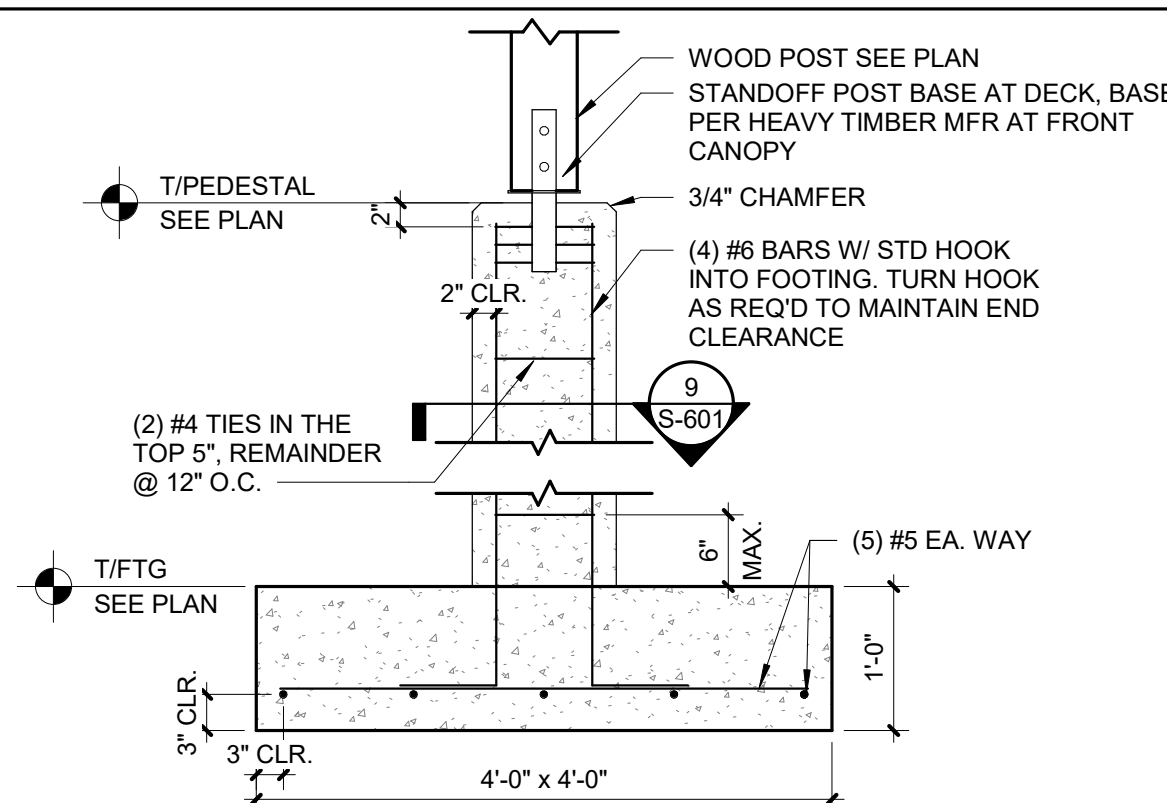
3 INTERIOR PEDESTAL
SCALE: 3/4" = 1'-0"



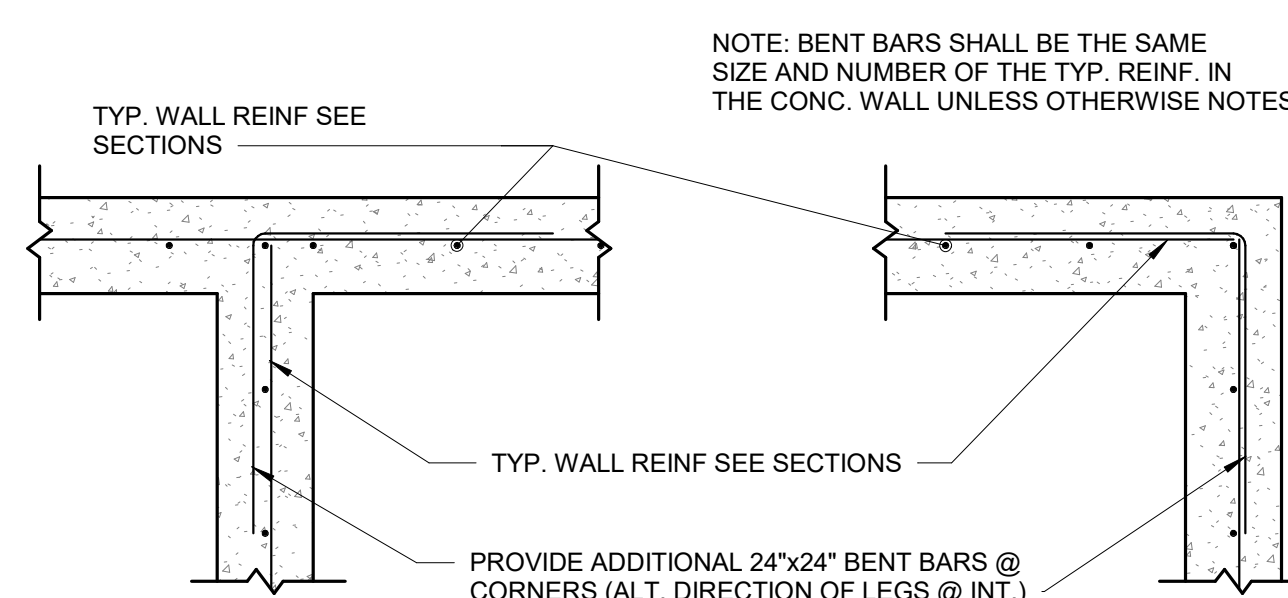
14 SPECIAL FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"



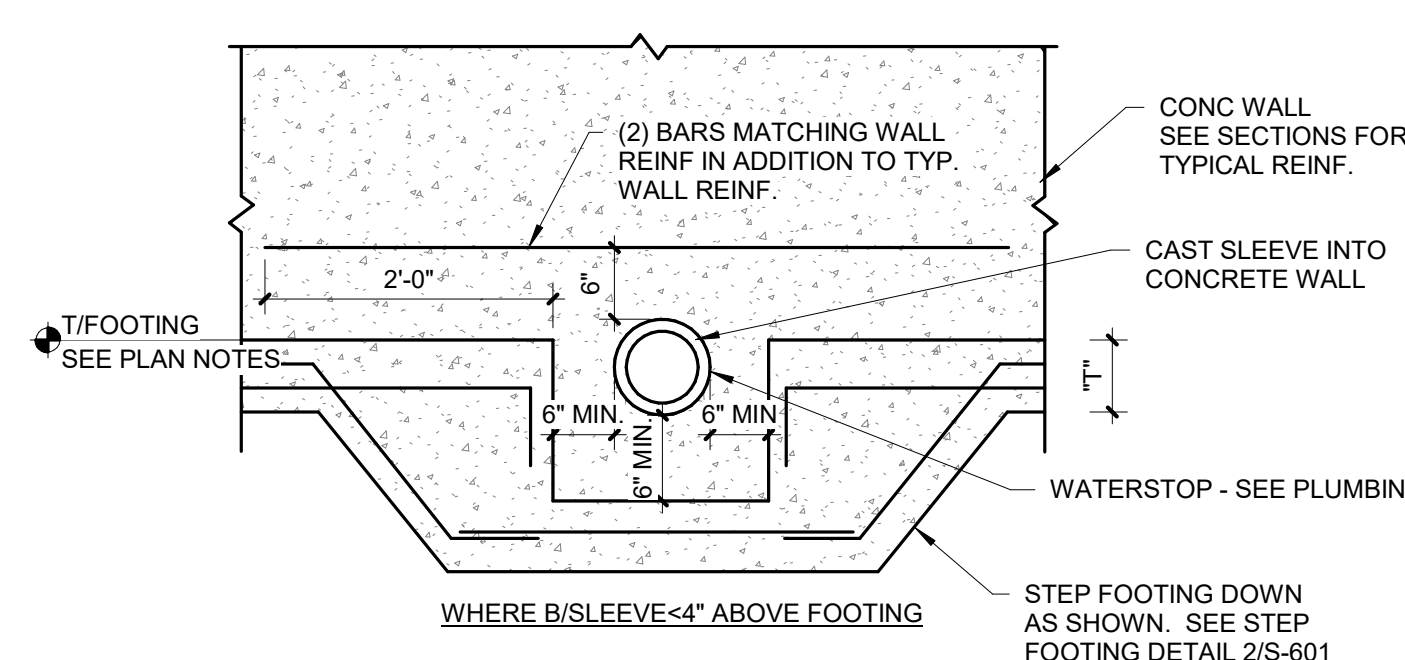
11 ACCESS HOLE THROUGH FDN WALL
SCALE: 3/4" = 1'-0"



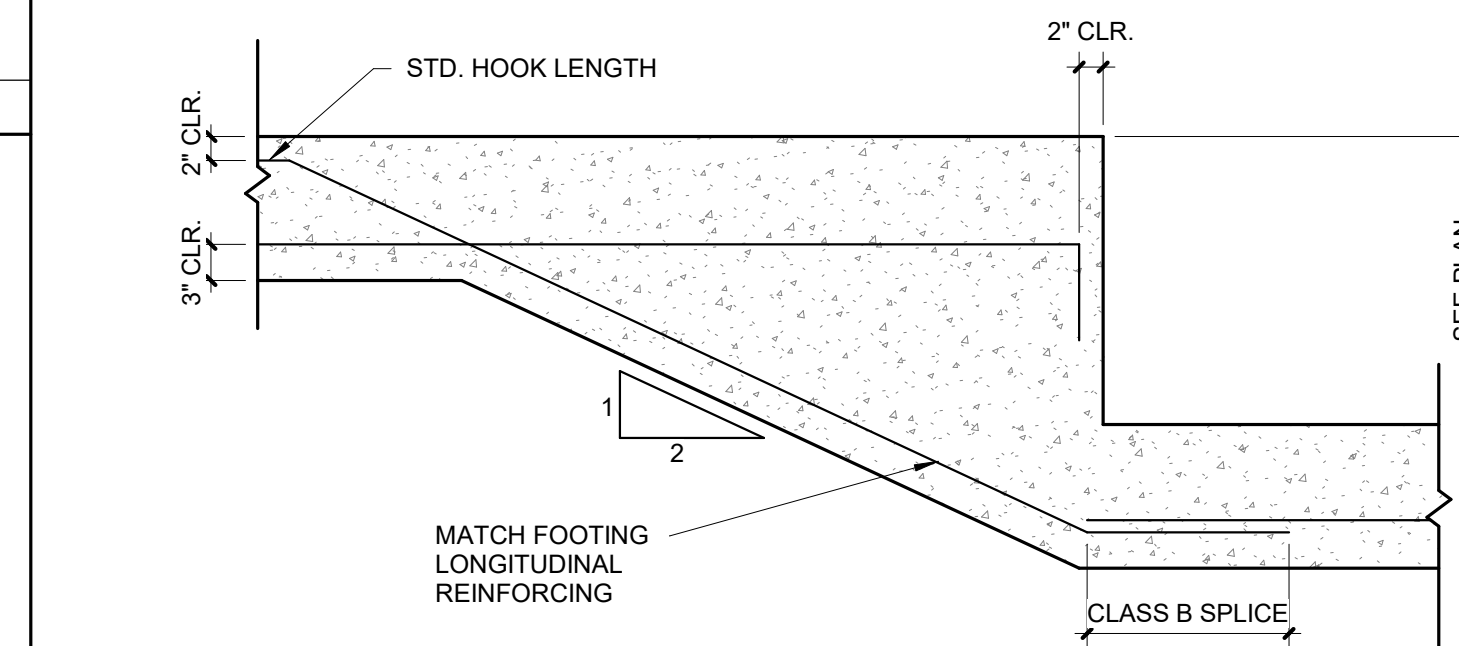
7 PORCH PEDESTAL
SCALE: 3/4" = 1'-0"



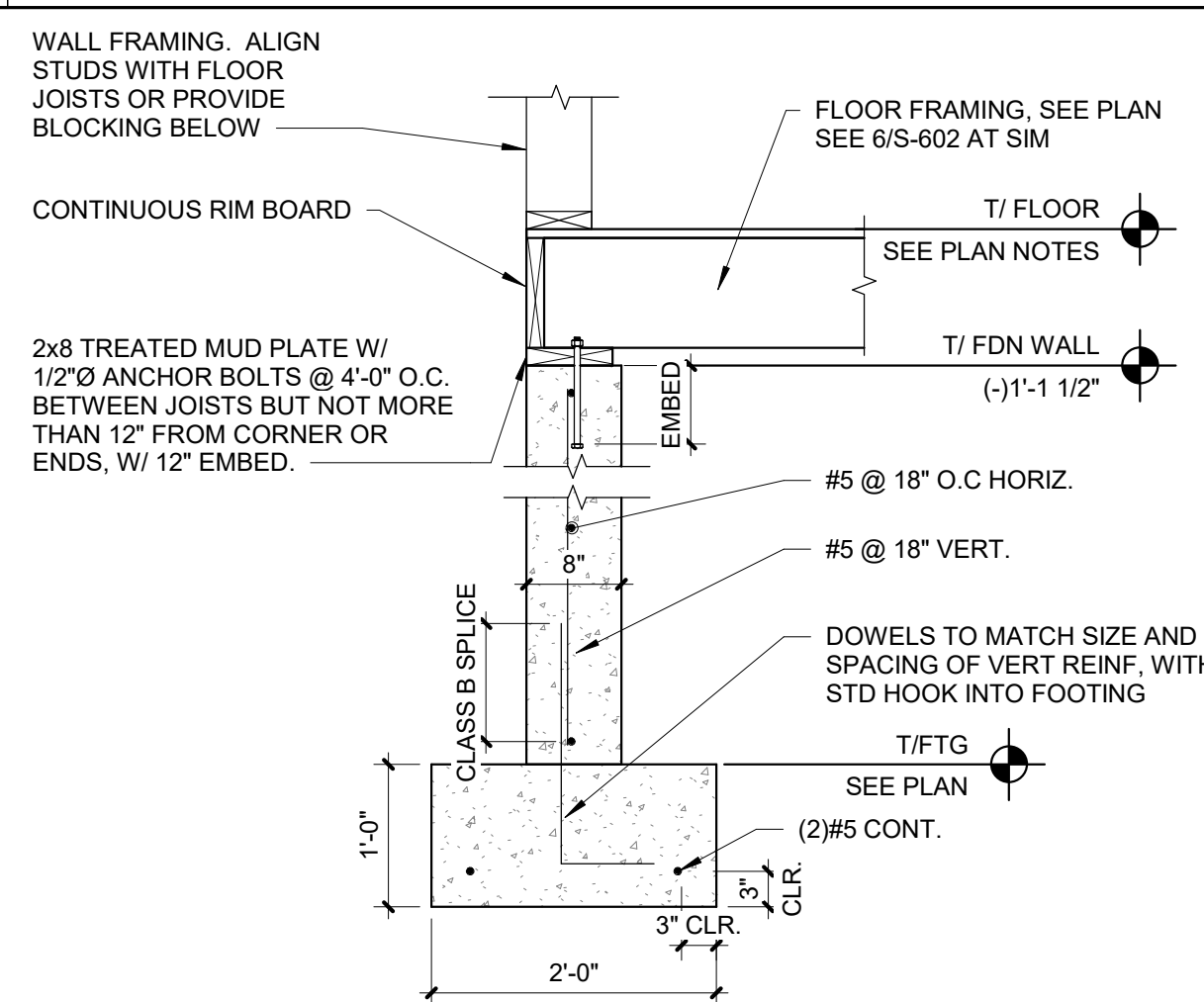
6 SINGLE REINF WALL INTERSECTION
SCALE: 3/4" = 1'-0"



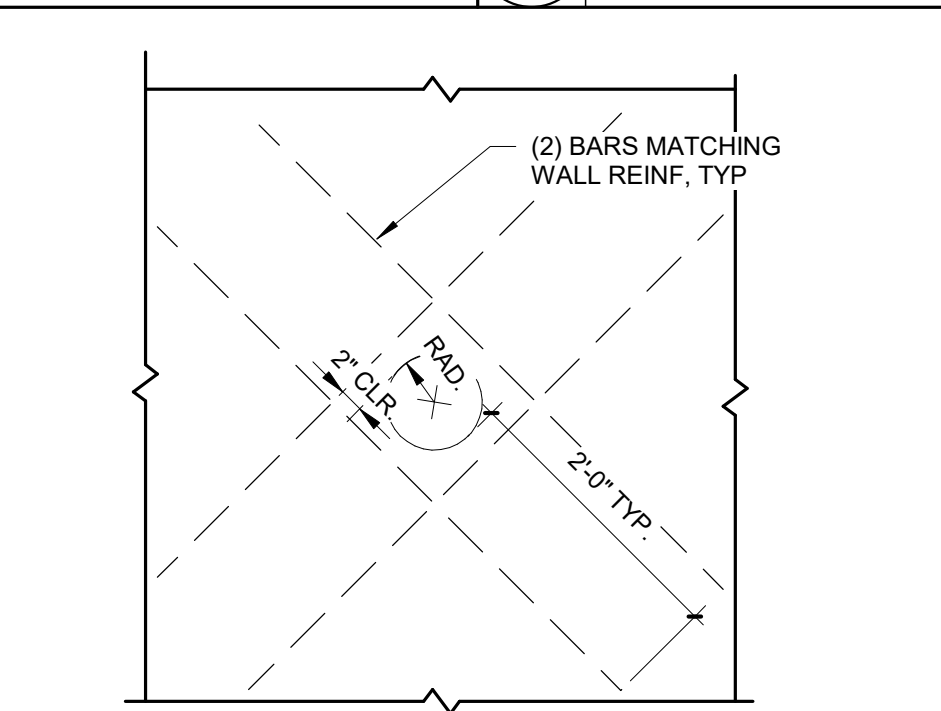
5 PIPE PENETRATION DETAIL
SCALE: 3/4" = 1'-0"



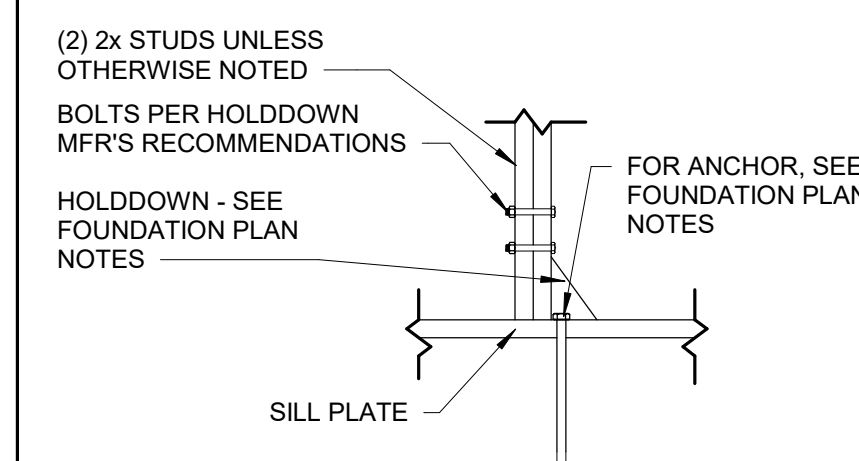
2 TYPICAL SINGLE STEP FOOTING
SCALE: 3/4" = 1'-0"



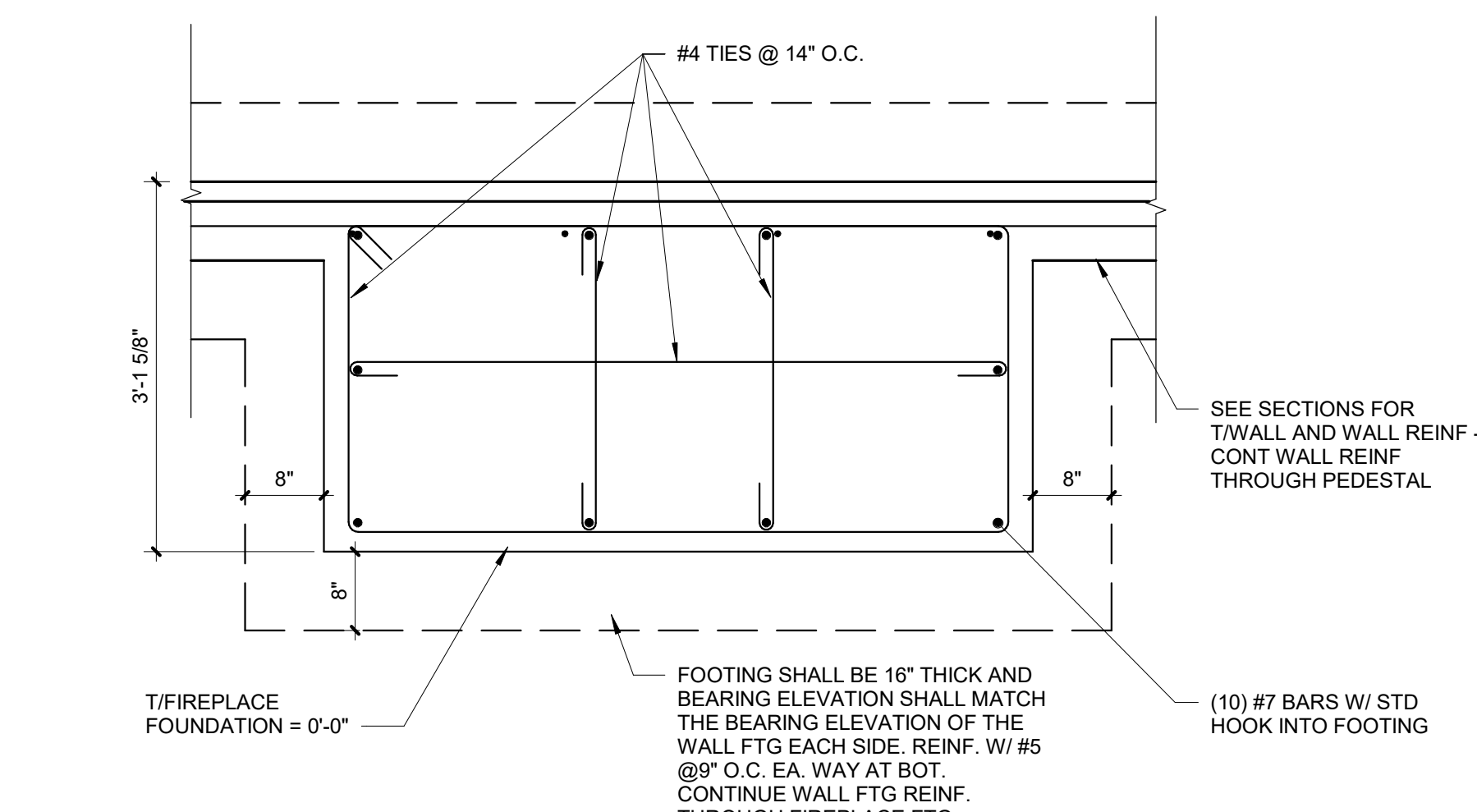
1 TYPICAL FOUNDATION SECTION
SCALE: 3/4" = 1'-0"



13 SLEEVE THROUGH CONC WALL
SCALE: 3/4" = 1'-0"



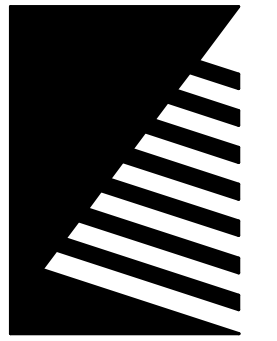
12 HOLDDOWN DETAIL
SCALE: 3/4" = 1'-0"



10 FIREPLACE FOUNDATION PLAN VIEW
SCALE: 3/4" = 1'-0"



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMMINENCE, MISSOURI

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7815235023 - Cabin 505	X

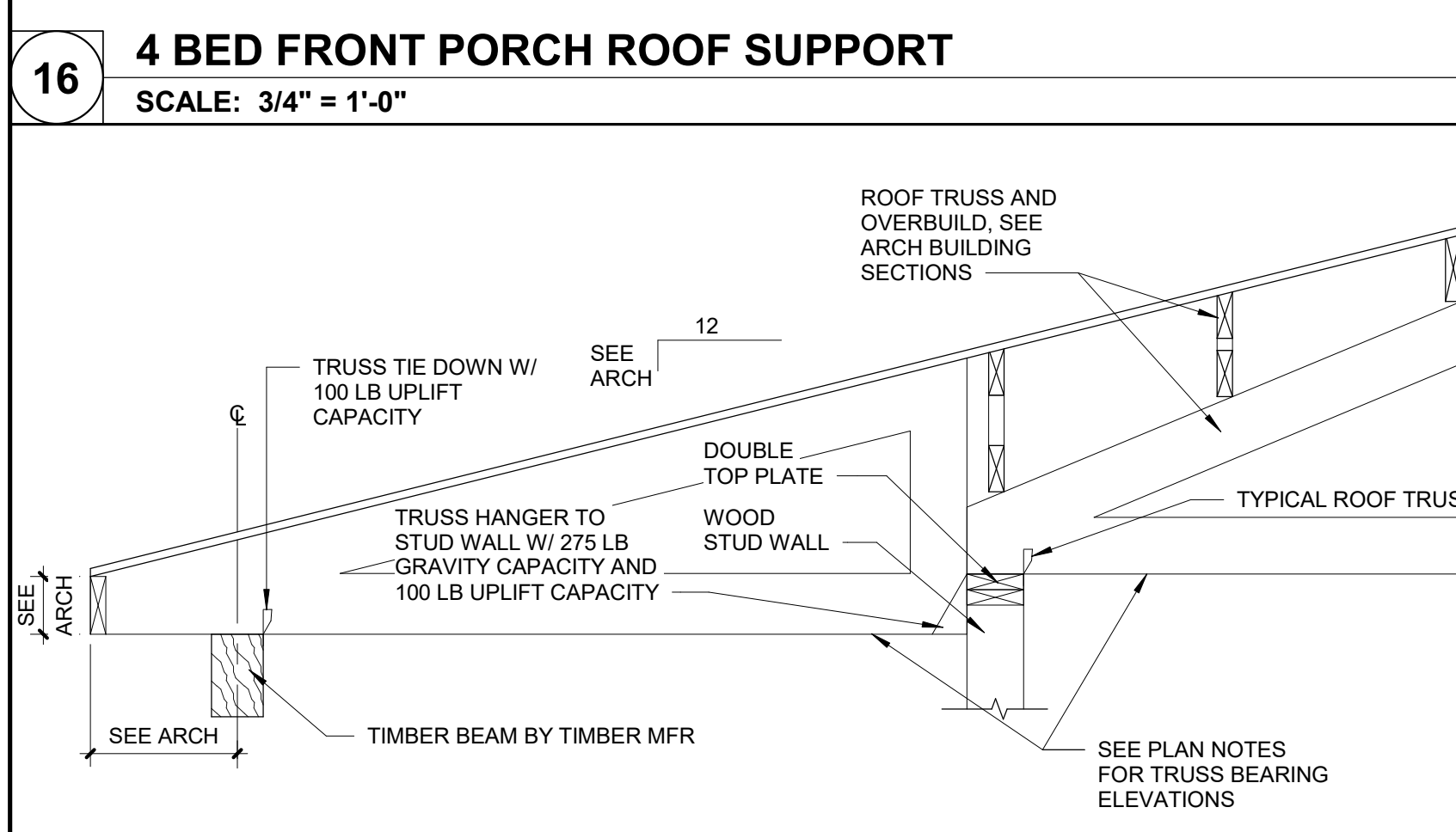
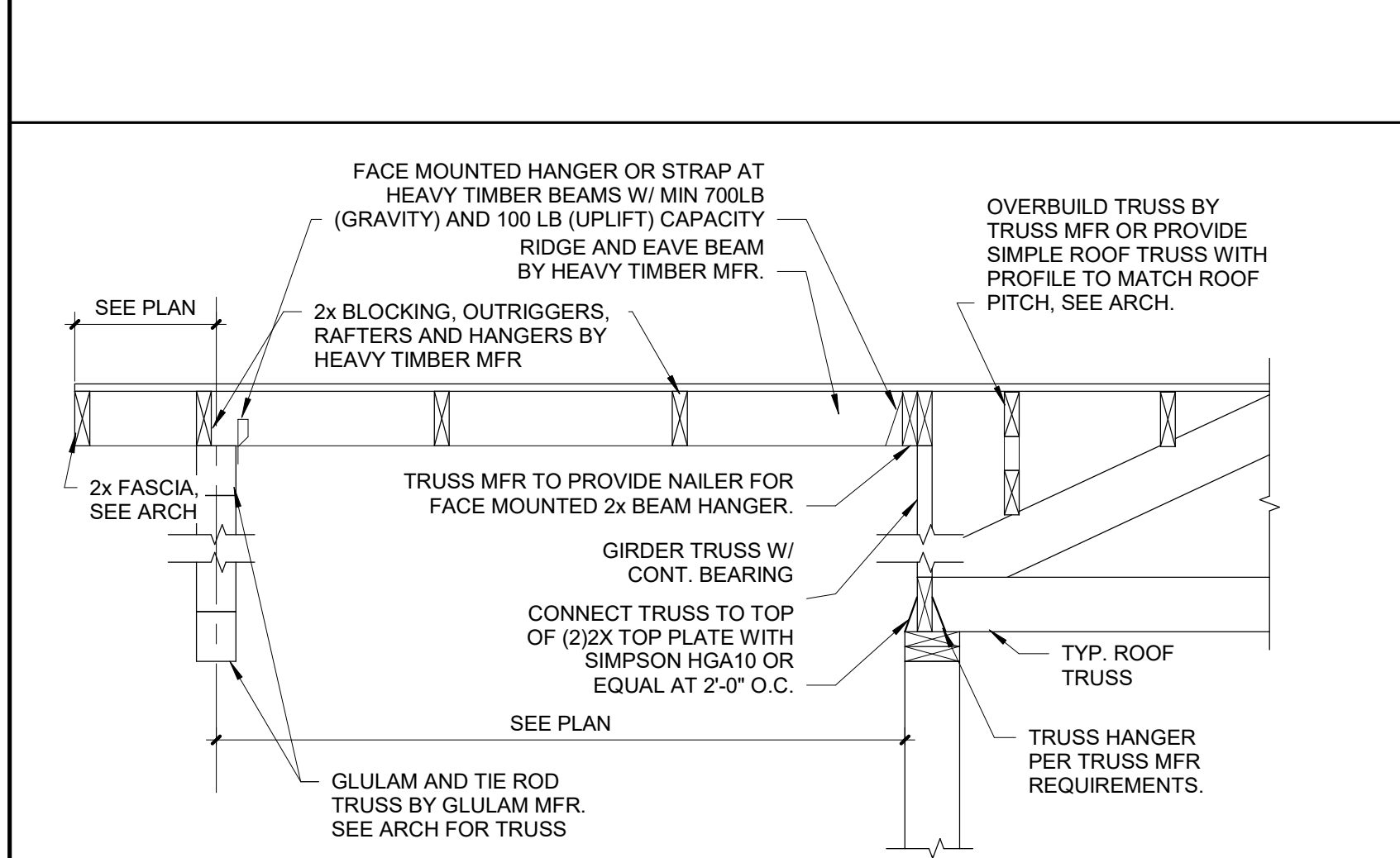
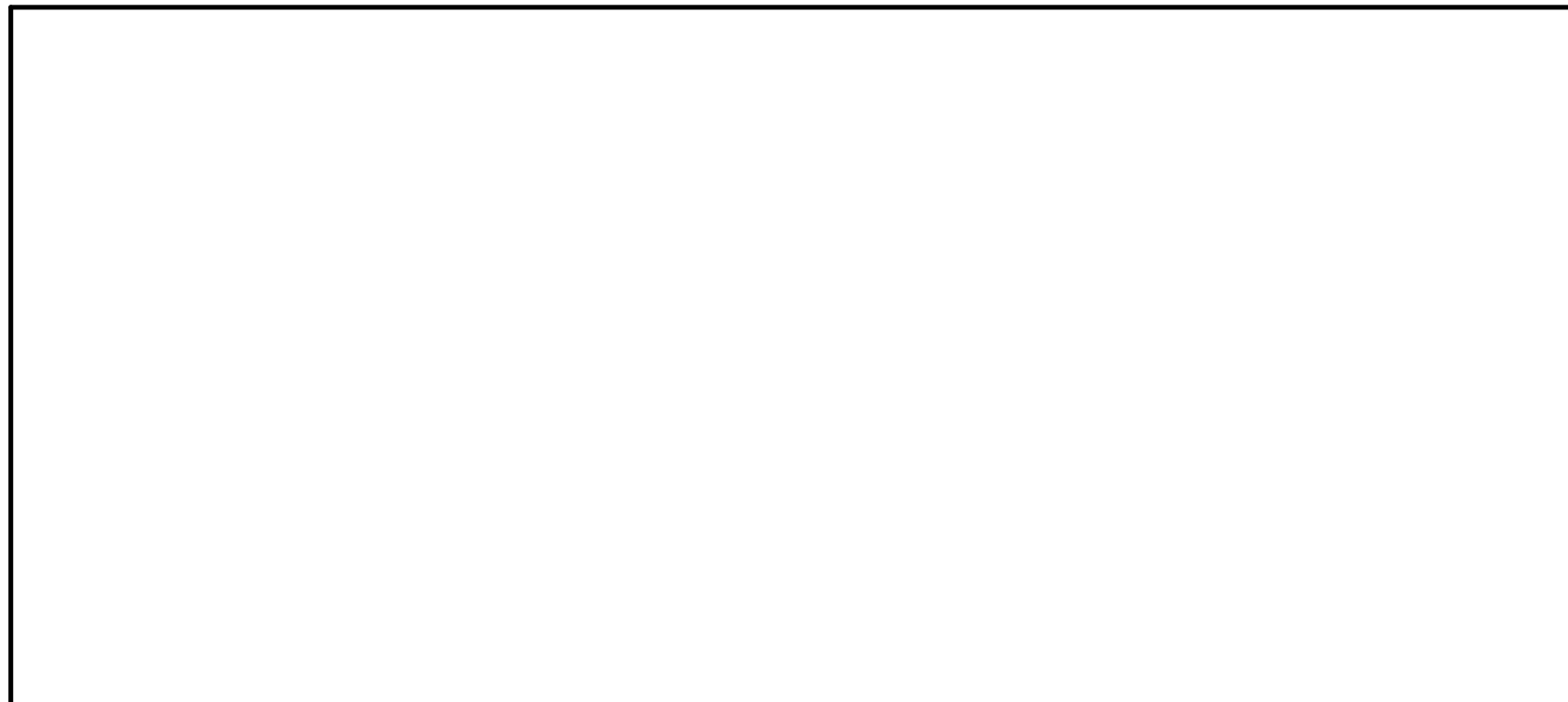
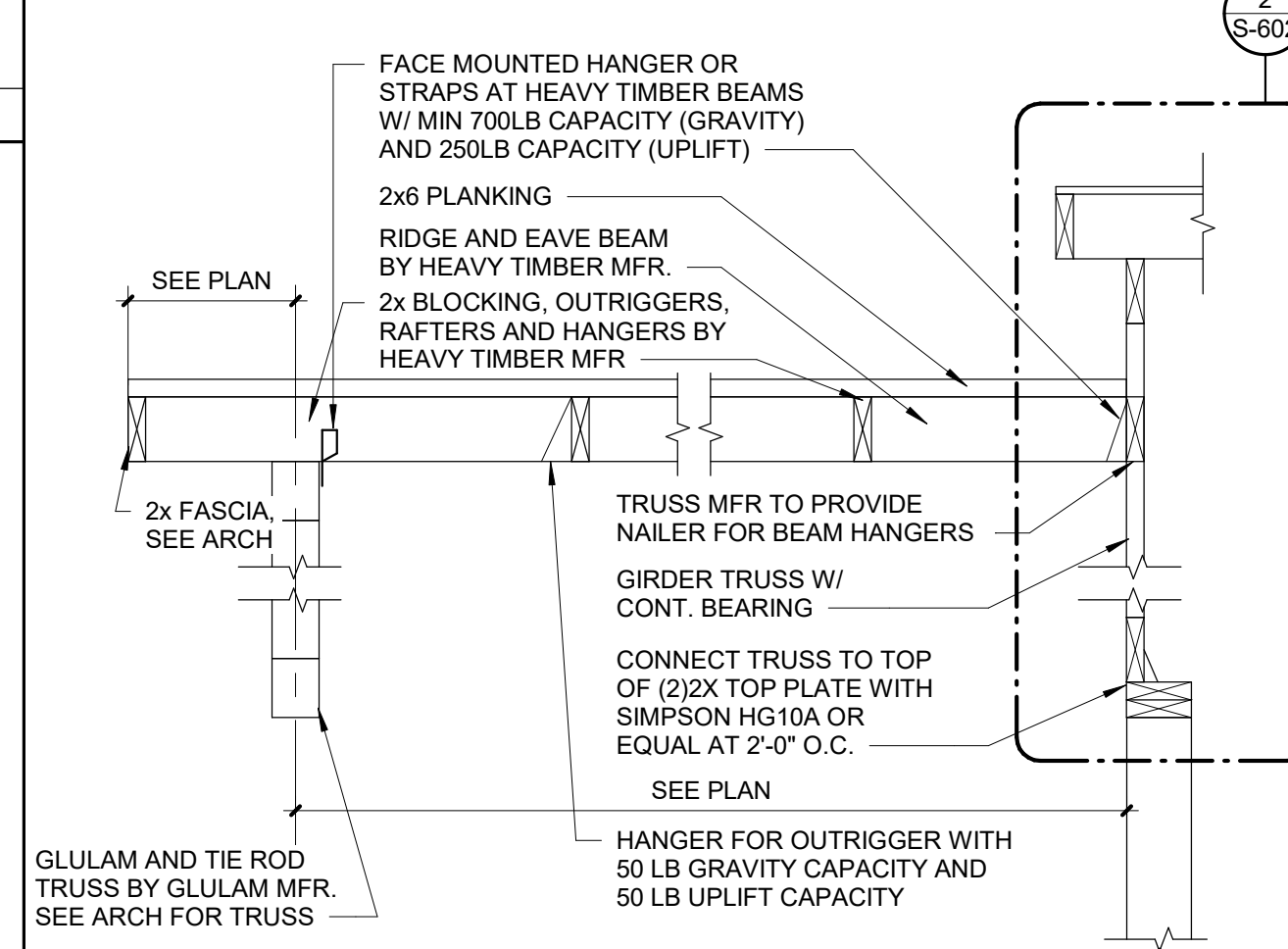
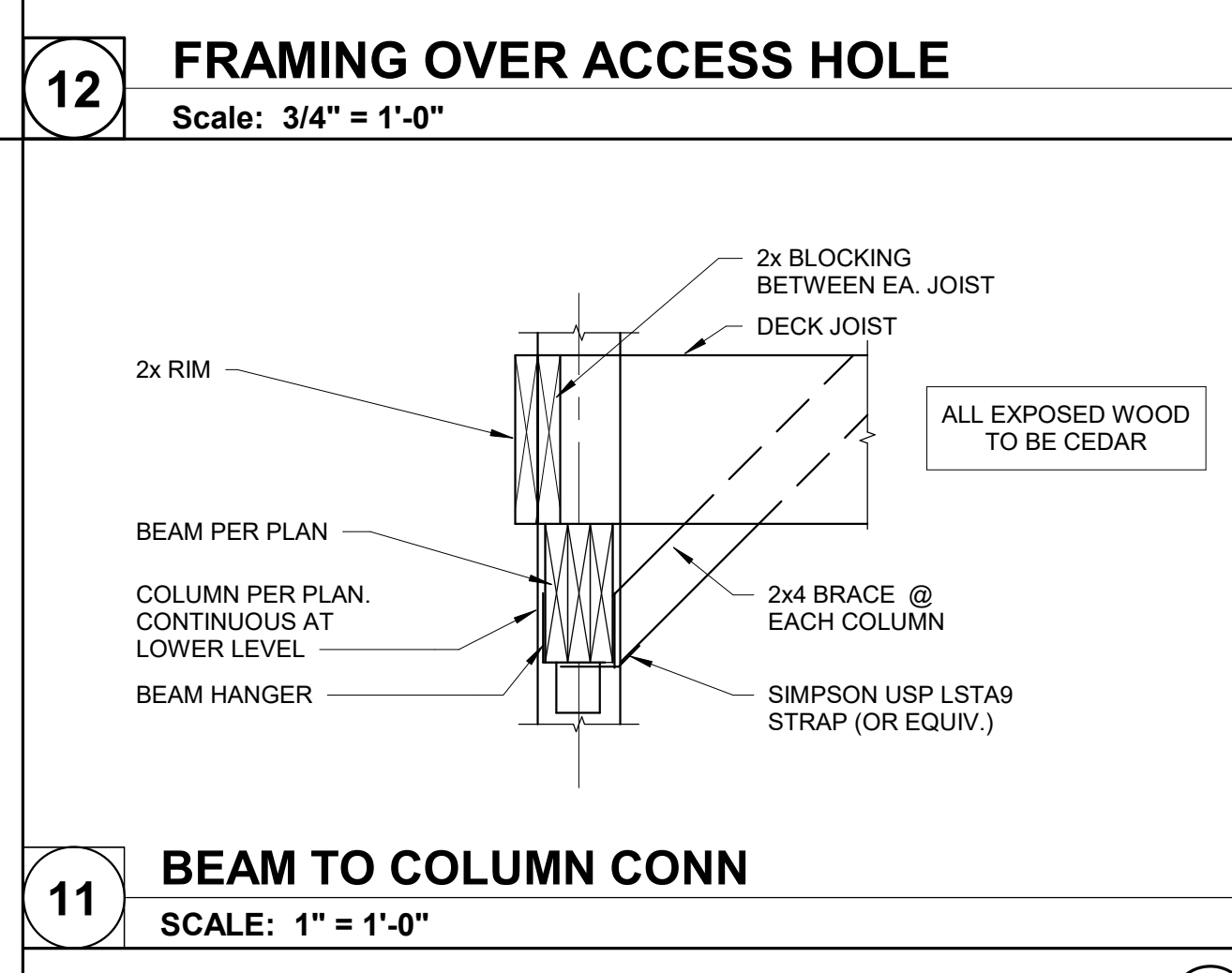
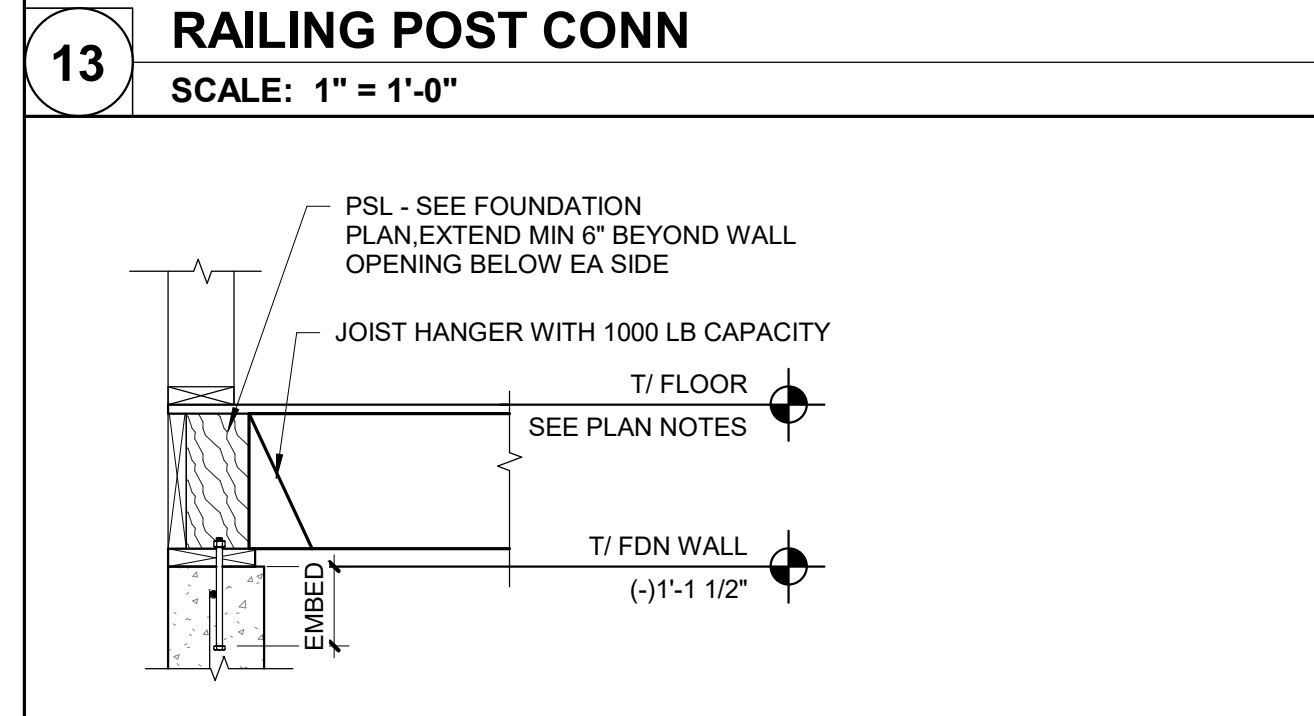
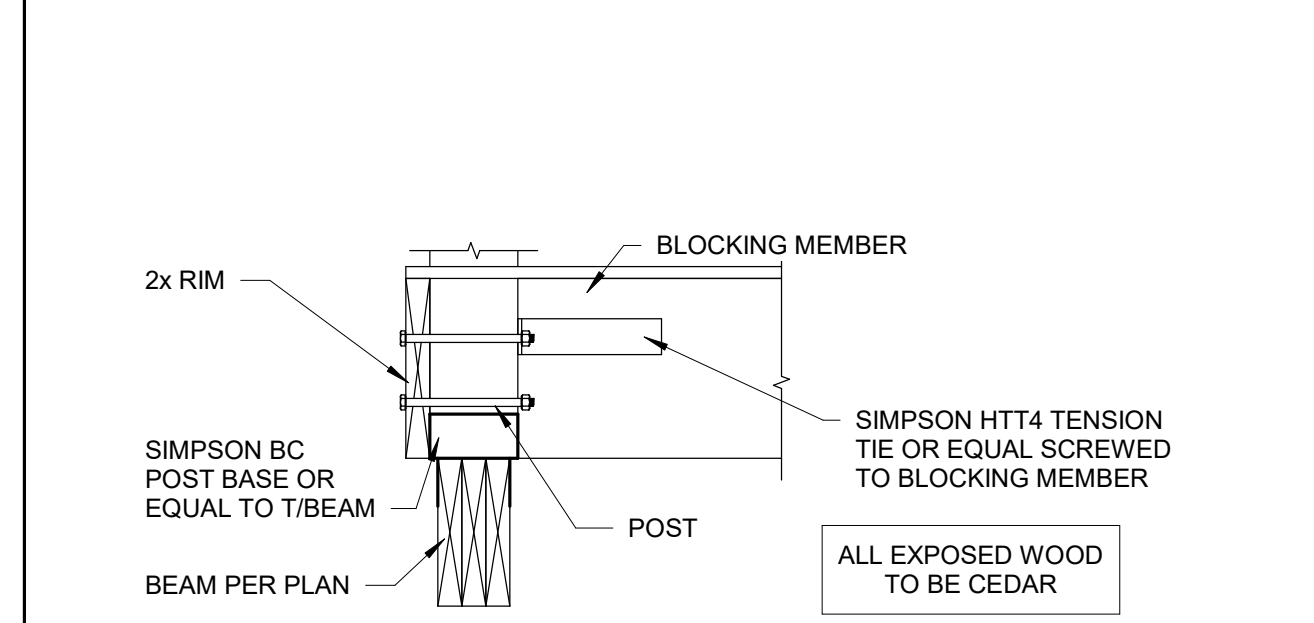
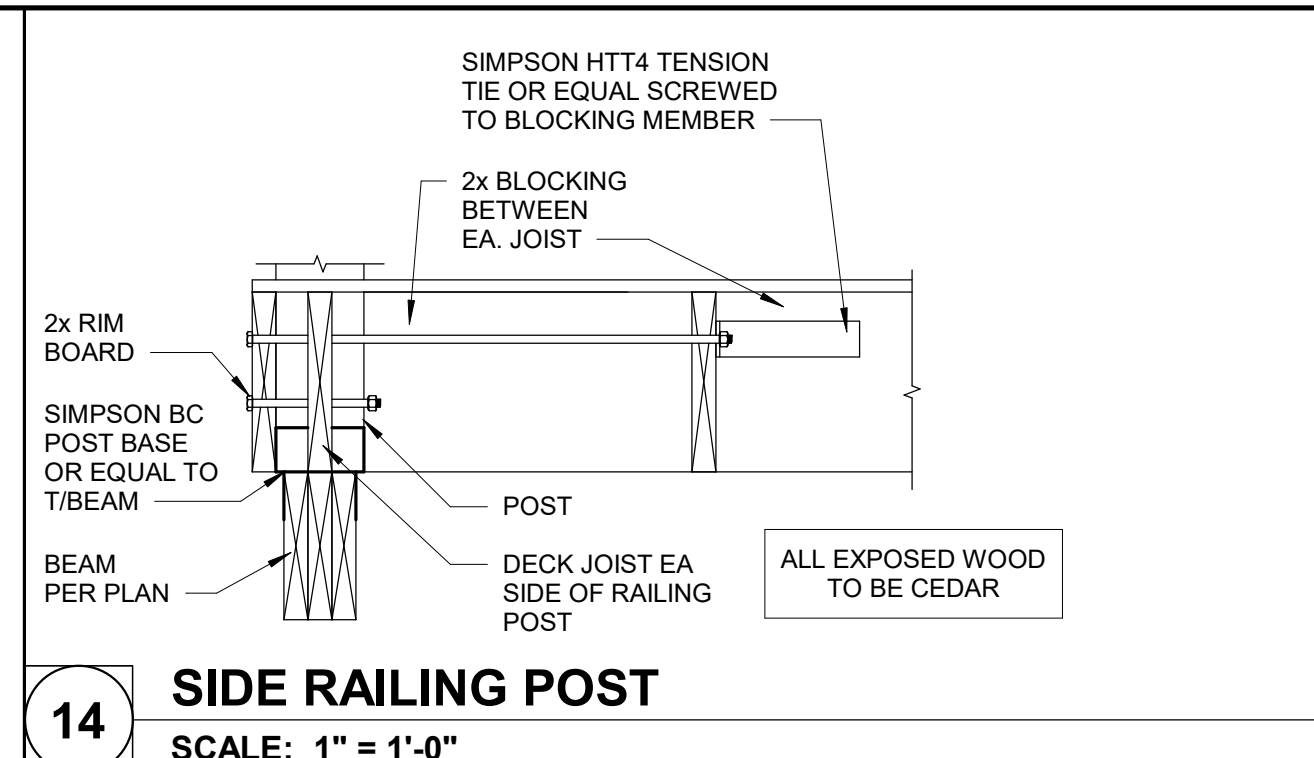
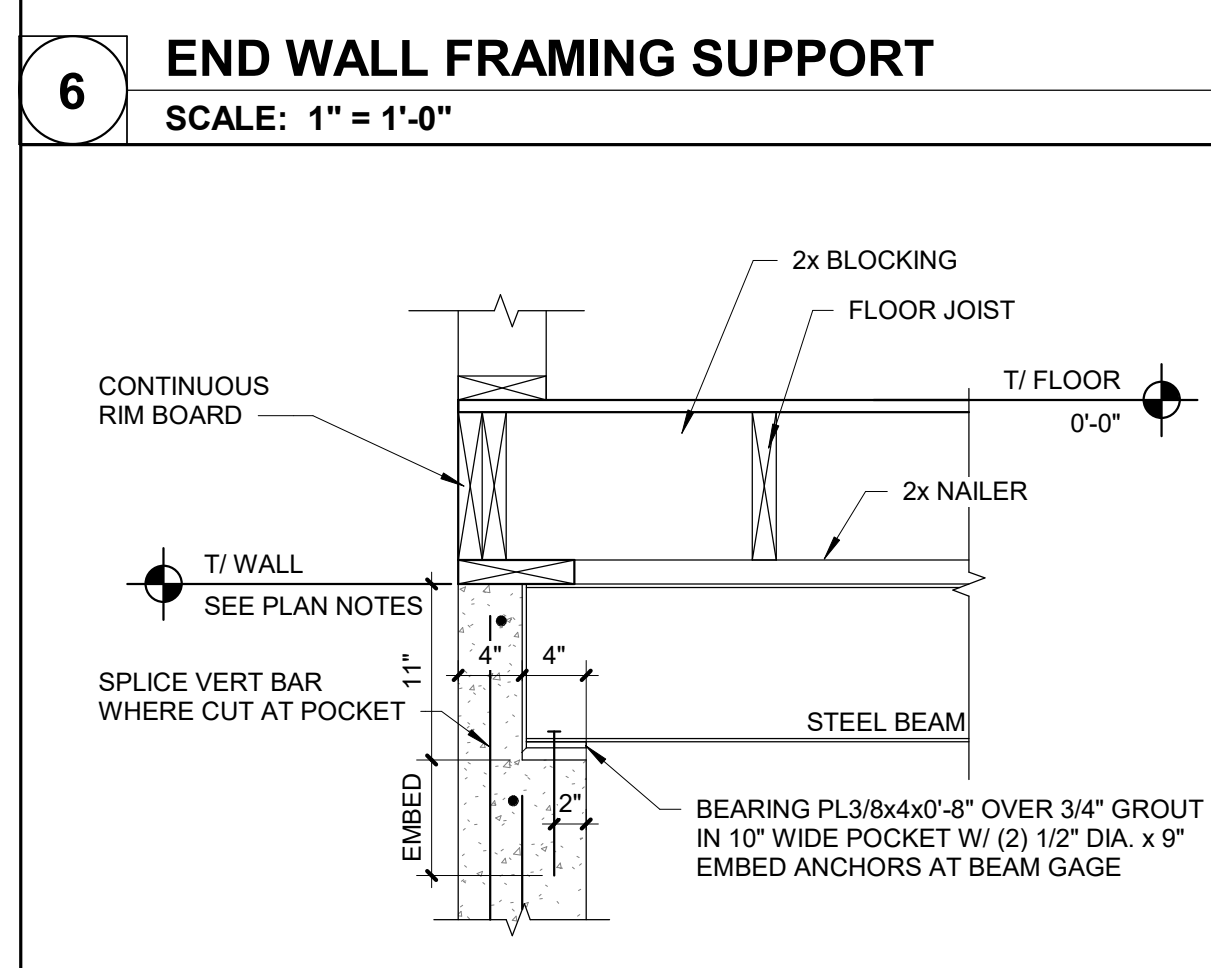
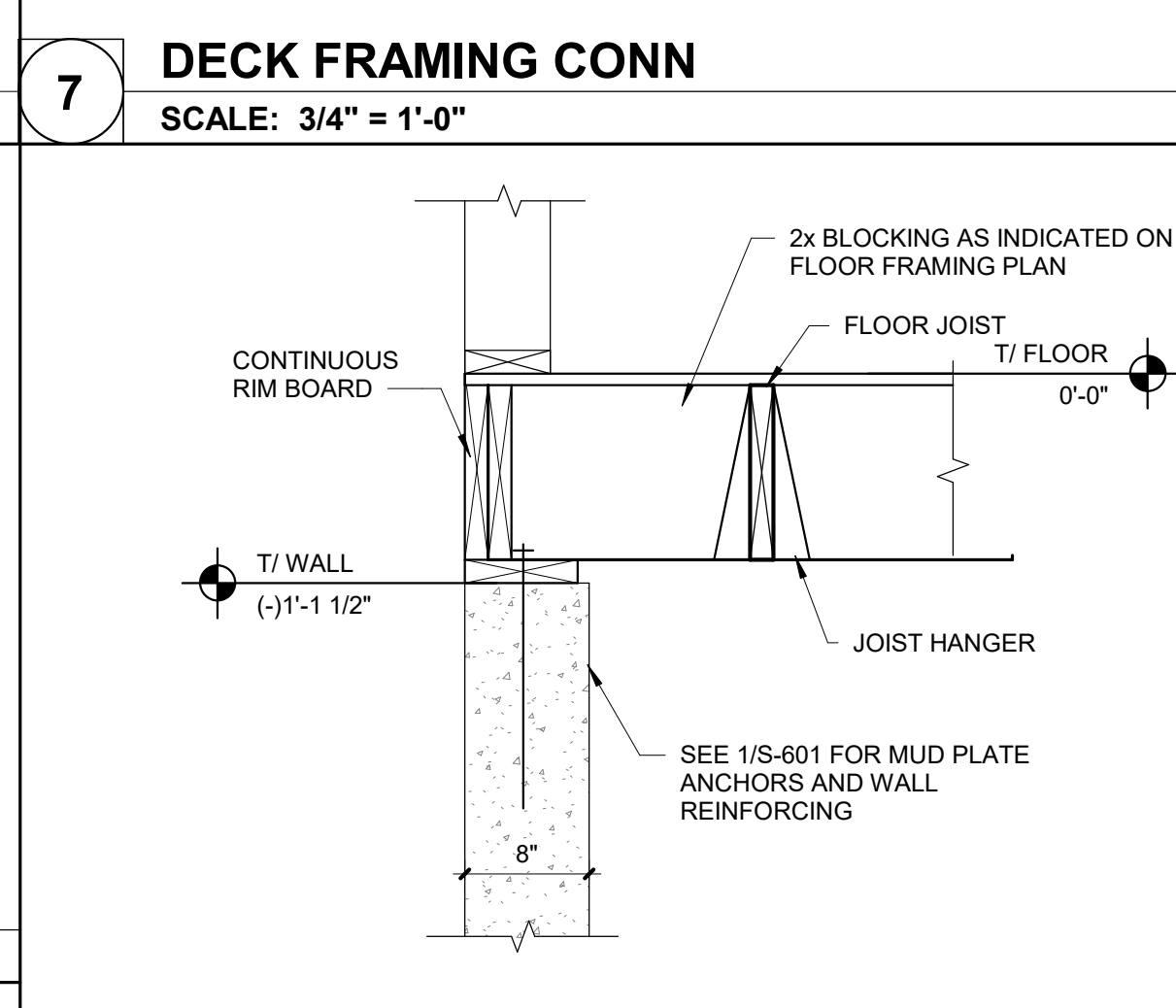
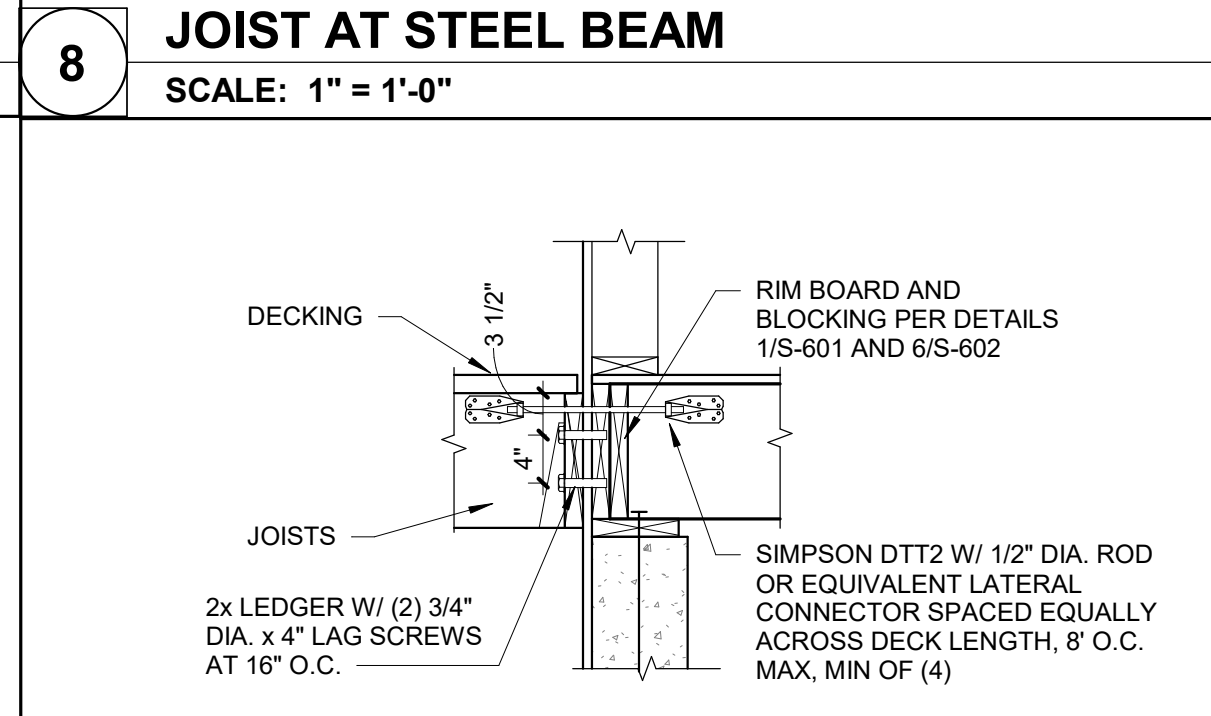
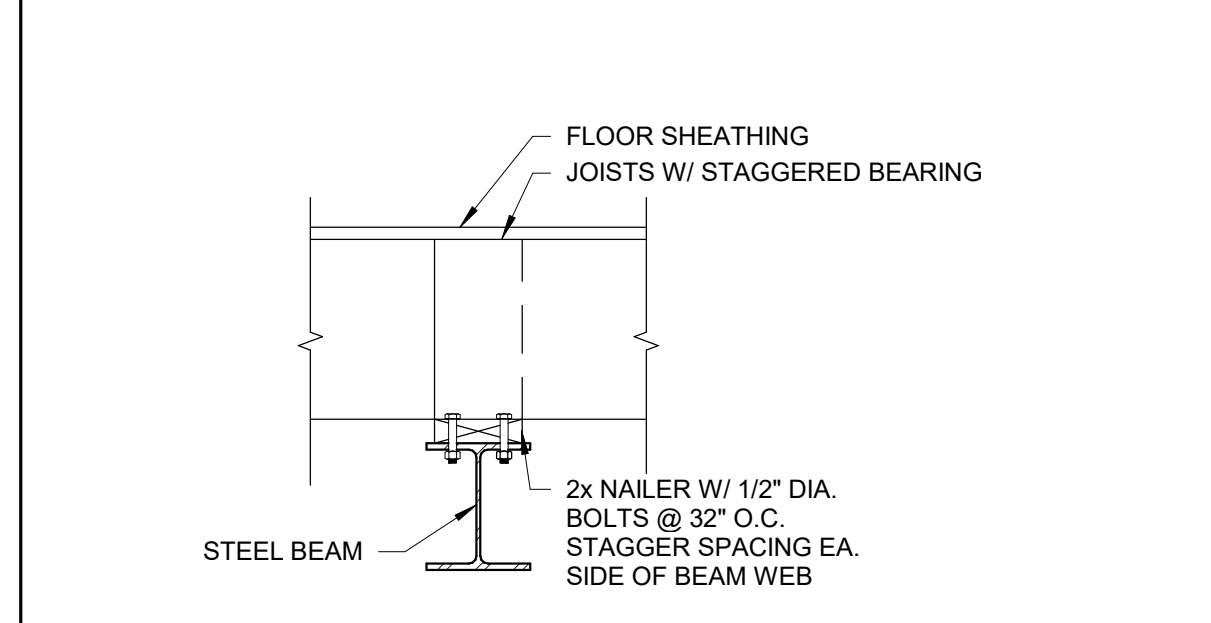
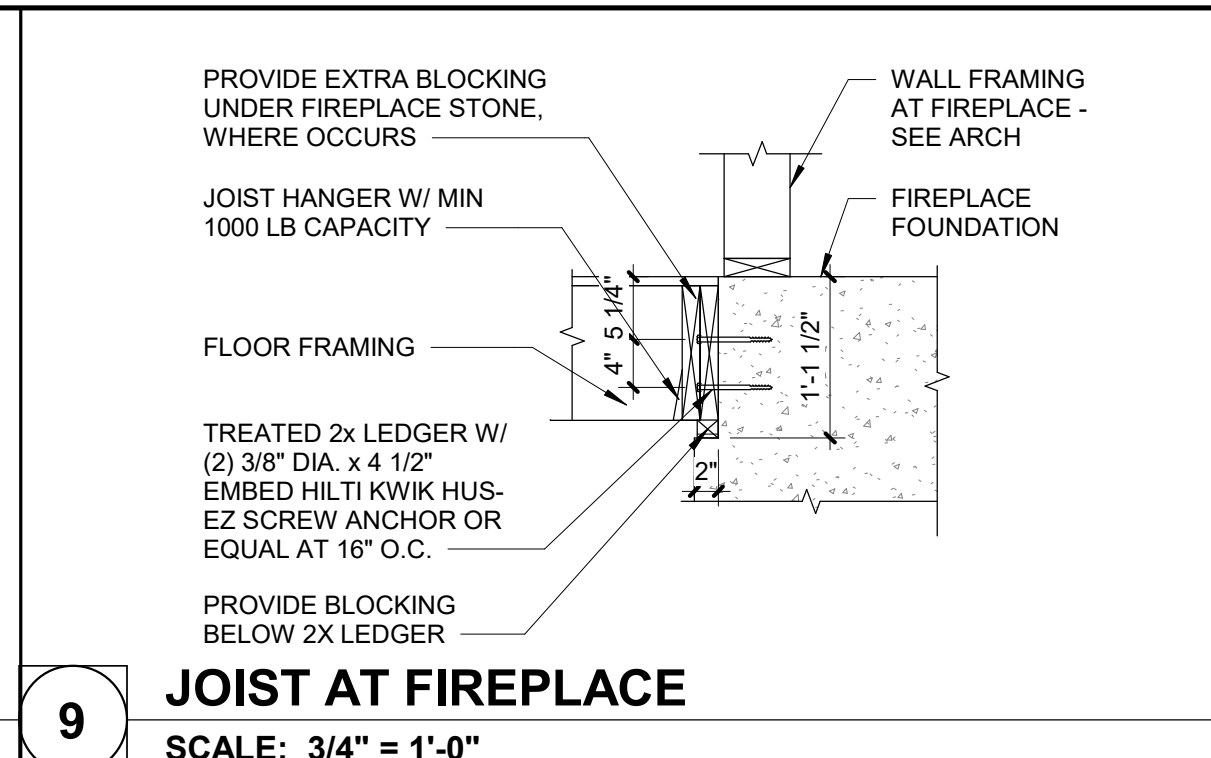
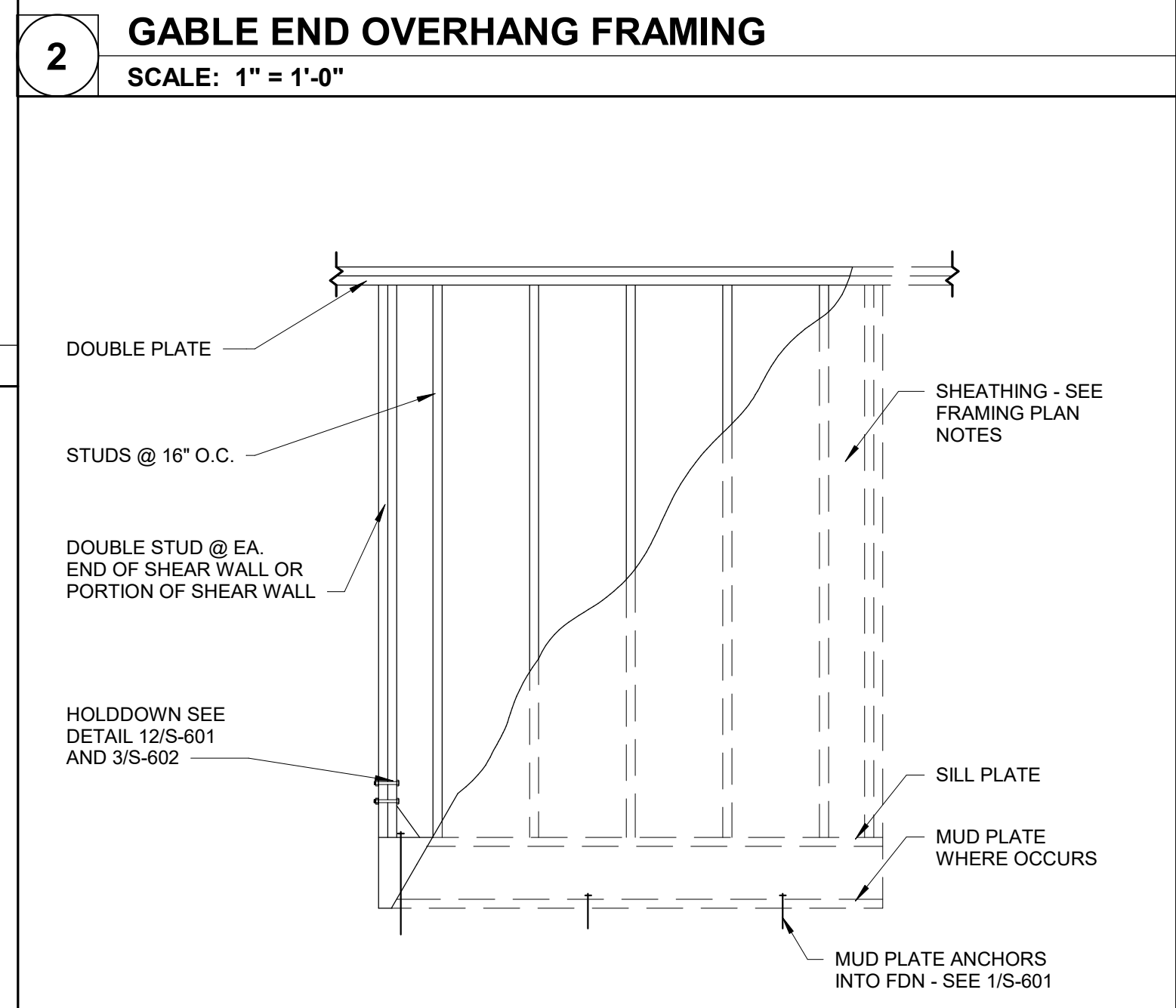
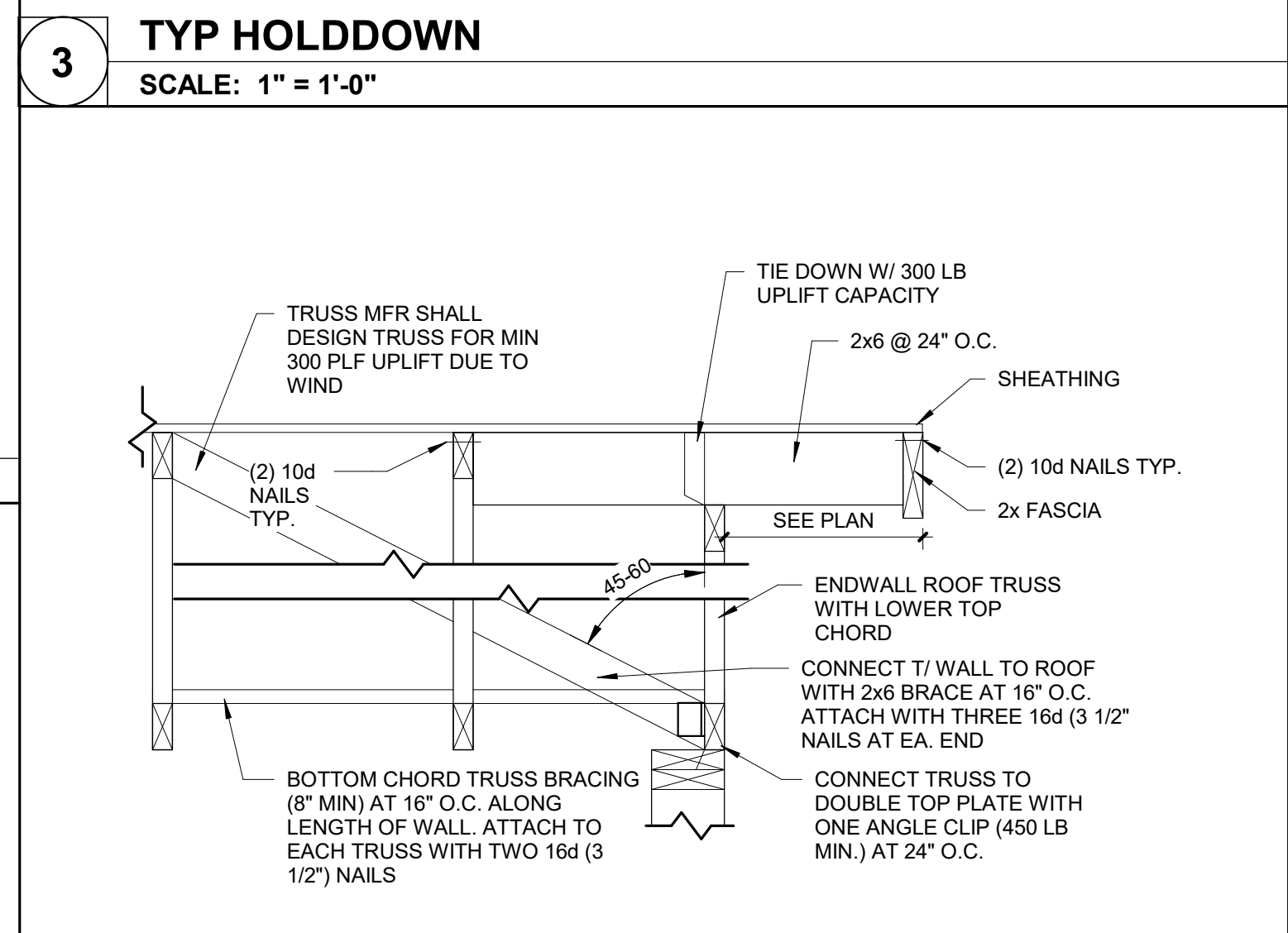
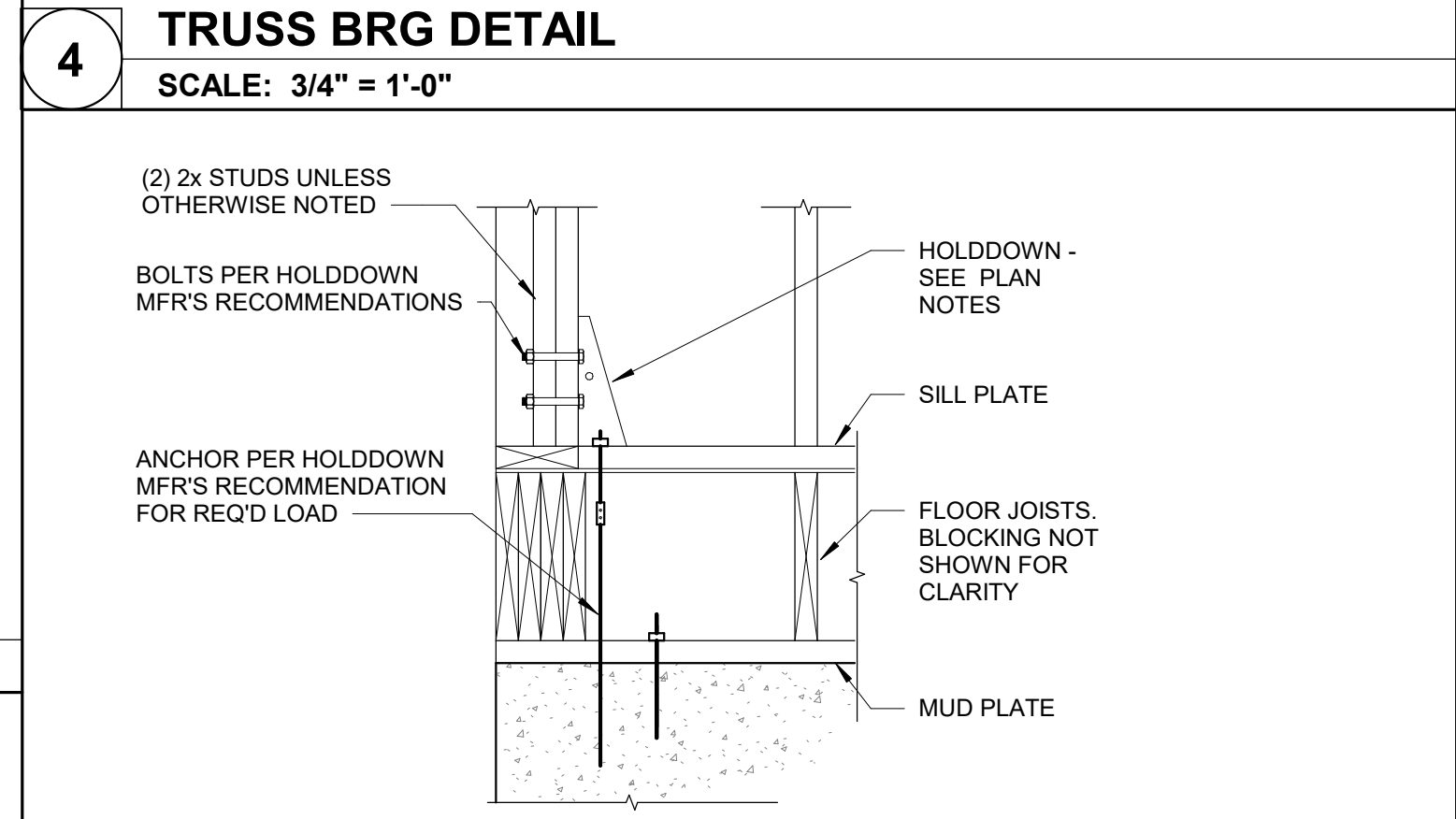
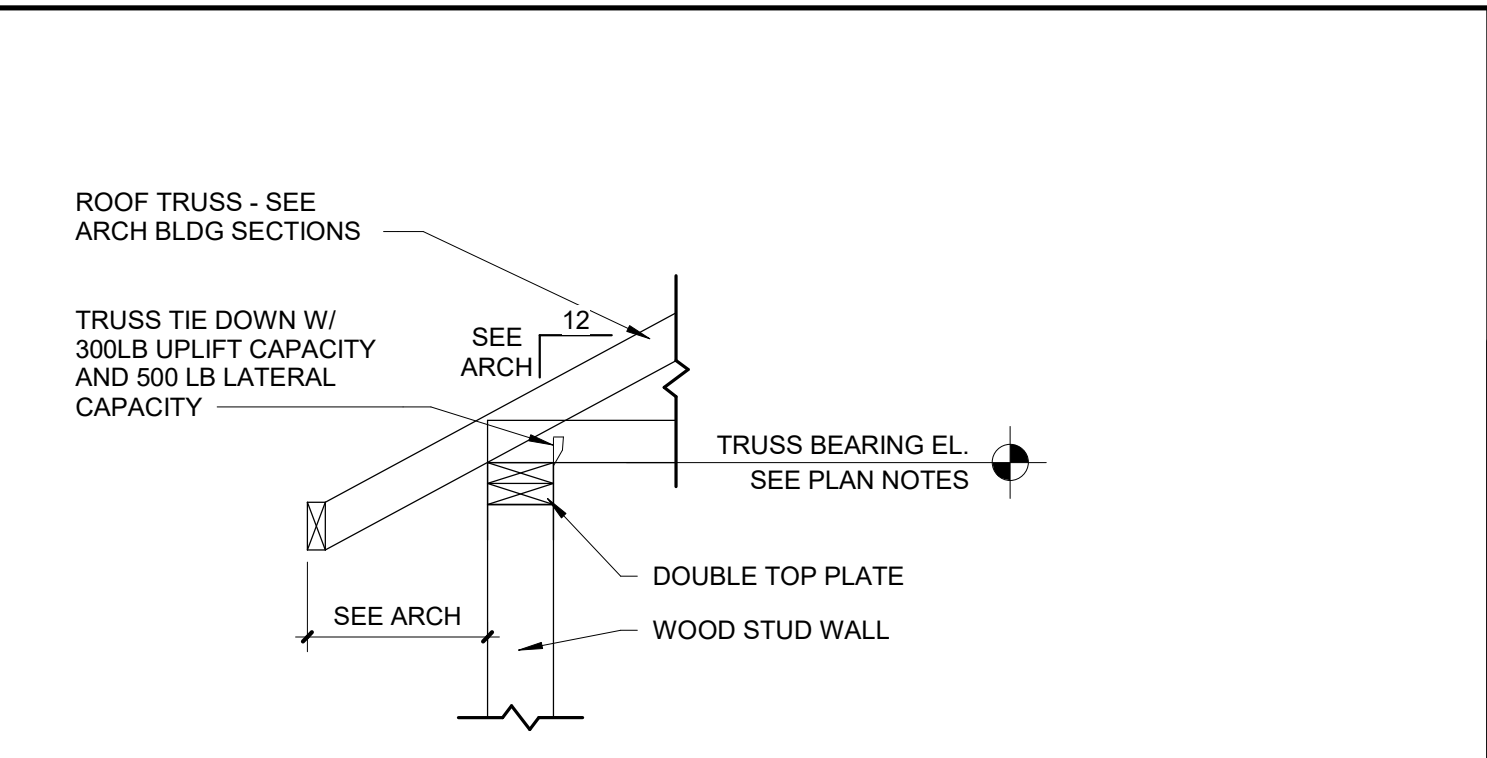
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CHECKED BY: PMH
DESIGNED BY: PND

SHEET TITLE:
FRAMING DETAILS

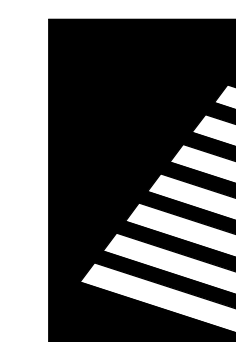
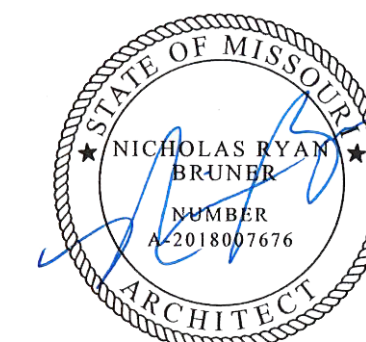
SHEET NUMBER:

S-602

SHEET 25 of 75
ISSUE DATE: 03/02/2023



202303 15:43 AM



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PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

TWO BEDROOM CABIN FLOOR PLAN

SHEET NUMBER:

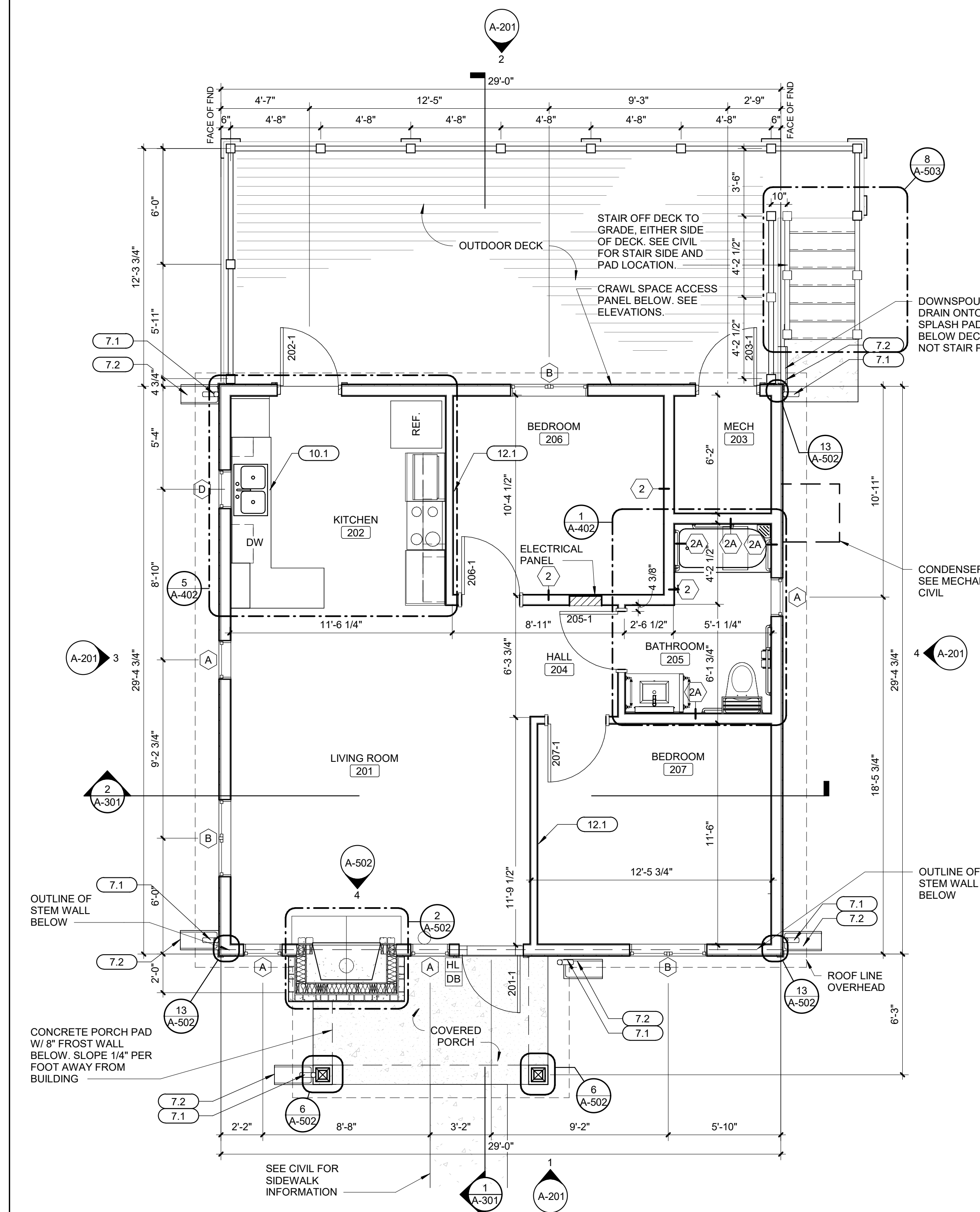
A-101

SHEET 26 of 75

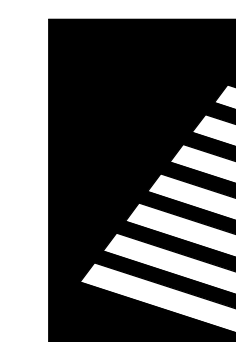
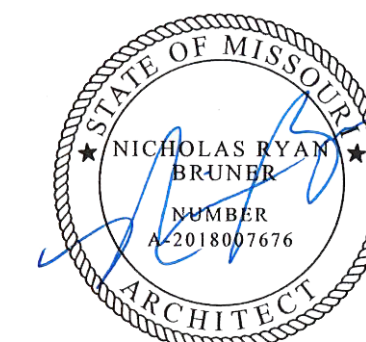
ISSUE DATE: 03/02/2023

GENERAL NOTES

- SEE A-601 FOR WINDOW & PARTITION TYPES. ALL INTERIOR PARTITIONS ARE TYPE 1 UNLESS OTHERWISE NOTED OR SHOWN.
- ALL DIMENSIONS ARE TO FACE OF STUD, CMU AND/OR CONCRETE UNLESS NOTED OTHERWISE.
- ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED UNLESS OTHERWISE NOTED.
- USE GYP BOARD TYPE "MR" AT ALL WET LOCATIONS. STOP BOARD AT 1/2" ABOVE FINISHED FLOOR.
- IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO PROVIDE COMPLETE WORKING SYSTEMS FOR ALL NEW ELEMENTS.
- ALL CONTRACTORS SHALL PROVIDE NEW, UNDAMAGED MATERIALS UNLESS OTHERWISE SPECIFIED.
- STORE MATERIALS IN SUCH A MANNER AS NOT TO OVERSTRESS, OVERLOAD, OR OTHERWISE PUT AN UNSAFE LOAD ON ANY STRUCTURE DURING CONSTRUCTION.
- INSTALL ALL WORK IN ACCORDANCE WITH CURRENT APPLICABLE CODES, PUBLISHED STANDARDS, AND ACCEPTABLE CONSTRUCTION STANDARDS.
- ALL NEW WORK SHALL BE PLUMB AND LEVEL UNLESS OTHERWISE NOTED.
- DISSIMILAR FLOOR MATERIALS SHALL MEET UNDER CENTER OF DOOR LEAF.
- EACH CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES.
- DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS. IF A REQUIRED DIMENSION IS NOT INDICATED, CONTACT THE ARCHITECT FOR DETERMINATION.
- DETAILS ARE GENERALLY TYPICAL AND ARE NOT TO BE CONSTRUED AS LIMITED TO THOSE AREAS SPECIFICALLY INDICATED. REVIEW ANY QUESTIONS OR CONFLICTING INFORMATION WITH THE ARCHITECT PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL NOT CUT STRUCTURAL MEMBERS/ELEMENTS WITHOUT WRITTEN PERMISSION FROM THE EOR.
- REFER TO STRUCTURAL DRAWINGS FOR FRAMING INFORMATION AND FRAMING DIMENSIONS.
- HINGE SIDE OF DOOR JAMBS TO BE LOCATED 4" FROM NEAREST WALL INTERSECTION UNLESS OTHERWISE NOTED.
- ALL APPLIANCES ARE SHOWN TO BE REFERENCE ONLY. APPLIANCES ARE NOT PART OF GENERAL CONTRACTOR CONTRACT.
- PAINT ALL STEEL DOORS, DOOR FRAMES, INTERIOR BORROW LITE FRAMES, LINTELS AND OTHER EXPOSED METAL ITEMS UNLESS OTHERWISE NOTED OR SHOWN.
- PROVIDE 3/4" PLYWOOD T&G SUBFLOOR AND 1/2" CEMENT BOARD UNDERLAYMENT AT CERAMIC TILE LOCATIONS PER TCNA F144-17.
- INSULATE INTERIOR WALLS AROUND BEDROOMS, BATHROOMS, AND STORAGE/MECHANICAL ROOMS.



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



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PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

**FOUR BEDROOM
CABIN FLOOR PLAN**

SHEET NUMBER:

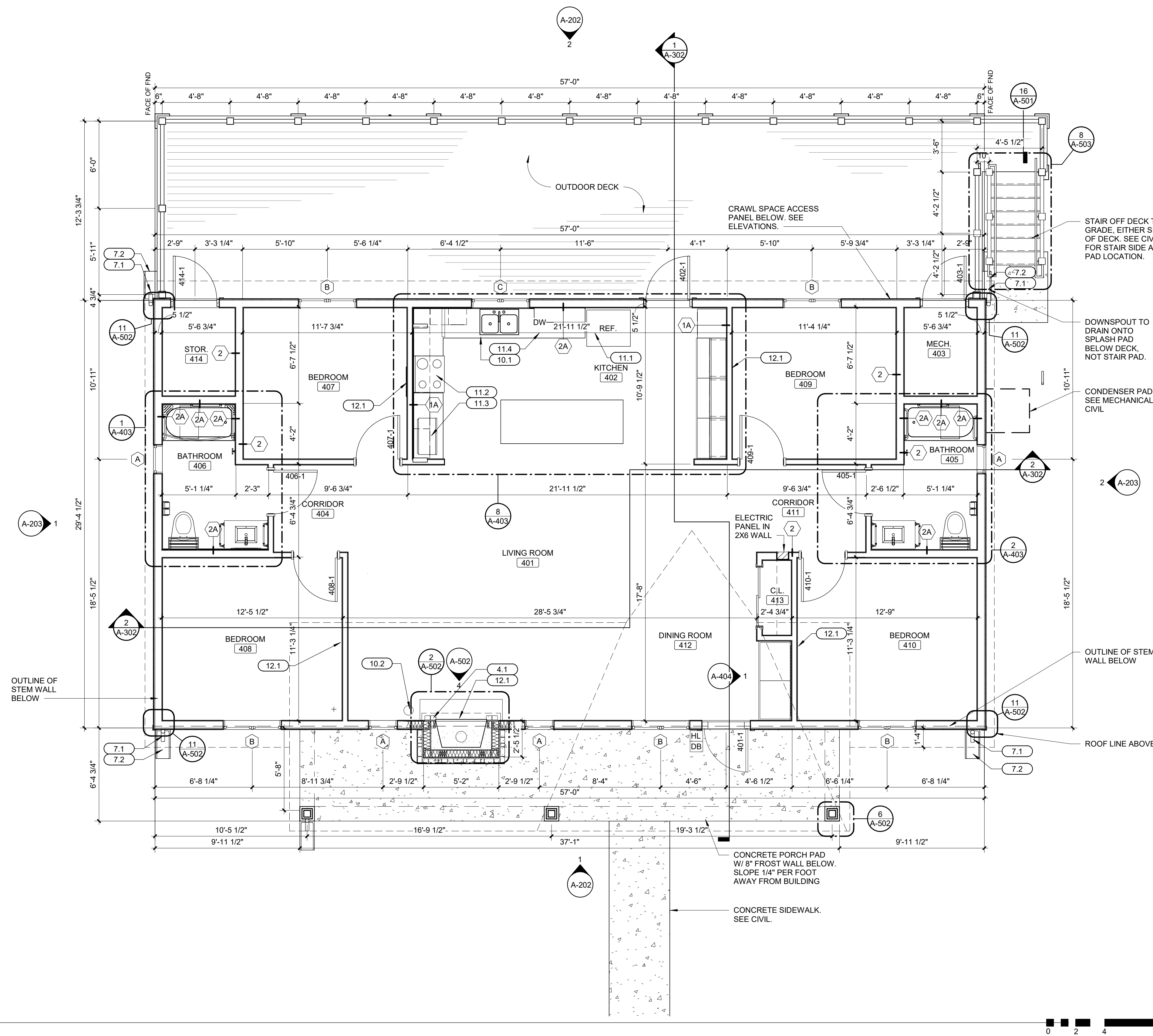
A-102

SHEET 27 of 75

ISSUE DATE: 03/02/2023

GENERAL NOTES

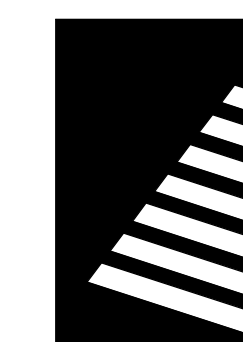
- SEE A-601 FOR WINDOW & PARTITION TYPES. ALL INTERIOR PARTITIONS ARE TYPE 1 UNLESS OTHERWISE NOTED OR SHOWN.
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- USE GYP BOARD TYPE "MR" AT ALL WET LOCATIONS. STOP BOARD AT 1/2" ABOVE FINISHED FLOOR.
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- STORE MATERIALS IN SUCH A MANNER AS NOT TO OVERSTRESS, OVERLOAD, OR OTHERWISE PUT AN UNSAFE LOAD ON ANY STRUCTURE DURING CONSTRUCTION.
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- DISSIMILAR FLOOR MATERIALS SHALL MEET UNDER CENTER OF DOOR LEAF.
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- THE CONTRACTOR SHALL NOT CUT STRUCTURAL MEMBERS/ELEMENTS WITHOUT WRITTEN PERMISSION FROM THE EOR.
- REFER TO STRUCTURAL DRAWINGS FOR FRAMING INFORMATION AND FRAMING DIMENSIONS.
- HINGE SIDE OF DOOR JAMBS TO BE LOCATED 4" FROM NEAREST WALL INTERSECTION UNLESS OTHERWISE NOTED.
- ALL APPLIANCES ARE SHOWN TO BE REFERENCE ONLY. APPLIANCES ARE NOT PART OF GENERAL CONTRACTOR CONTRACT.
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- INSULATE INTERIOR WALLS AROUND BEDROOMS, BATHROOMS, AND STORAGE/MECHANICAL ROOMS.



PLAN KEYNOTES (BY DIVISION)

DIVISION	KEYNOTE	DESCRIPTION
4.1	STONE CHIMNEY WITH GAS FIREPLACE INSERT	
7.1	DOWNSPOUT	
7.2	SPLASHBLOCK	
10.1	FIRE EXTINGUISHER MOUNTED TO INSIDE OF CABINET UNDERNEATH THE KITCHEN SINK. PROVIDE SIGNAGE	
10.2	FIRE EXTINGUISHER & BRACKET MOUNTED TO THE DESIGNATED WALL	
11.1	REFRIGERATOR, N.I.C.	
11.2	RANGE AND HOOD, OFCI	
11.3	MICROWAVE, N.I.C.	
11.4	DISHWASHER, N.I.C.	
12.1	AV HOOK-UP ABOVE FOR FLAT PANEL TV (SEE ELECTRICAL DRAWINGS), PROVIDE IN-WALL BLOCKING FOR TV MOUNTING, OWNER SUPPLIED AND INSTALLED	





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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

**TWO BEDROOM
CABIN ROOF PLAN**

SHEET NUMBER:

A-103

SHEET 28 of 75

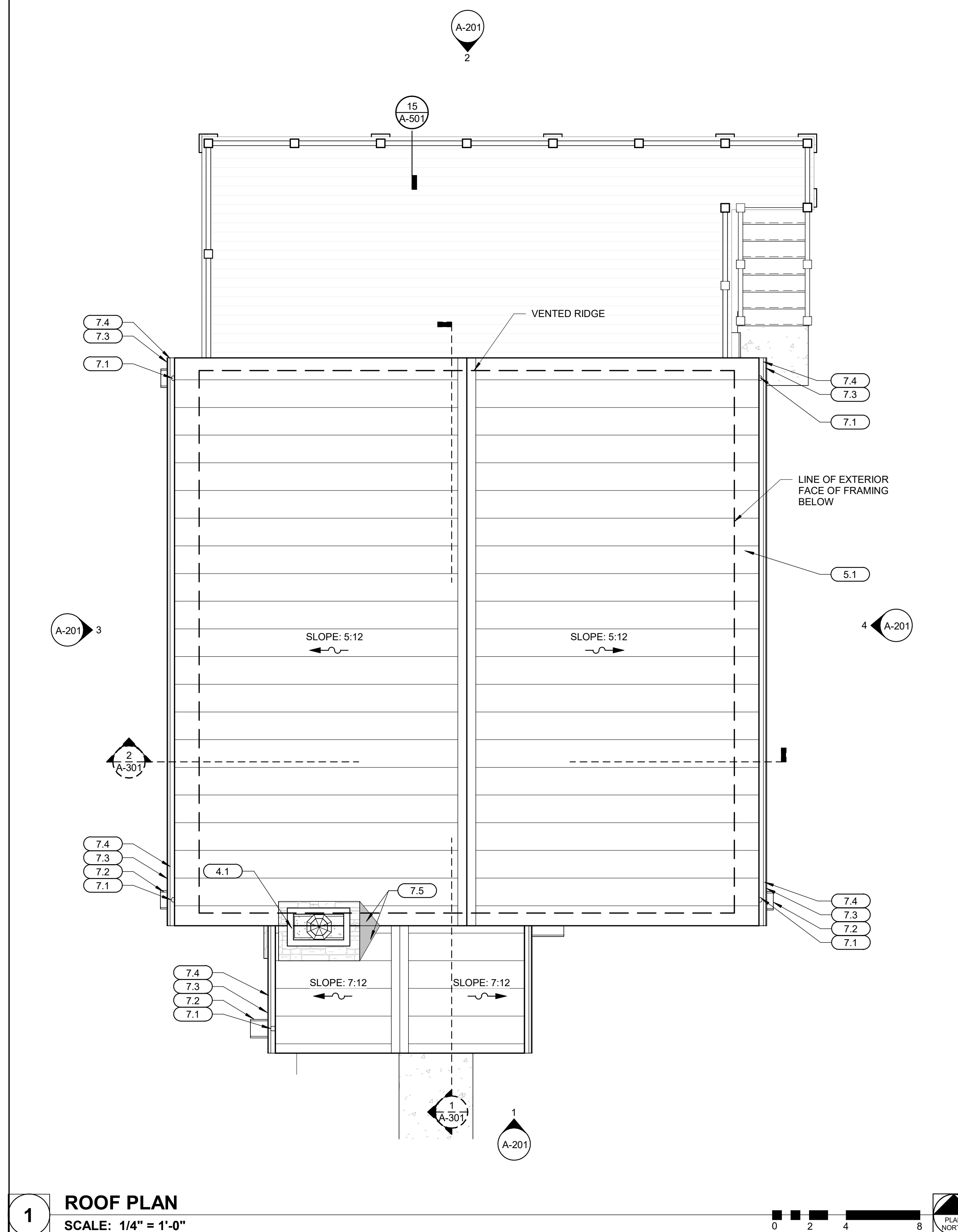
ISSUE DATE: 03/02/2023

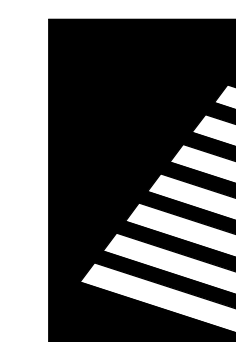
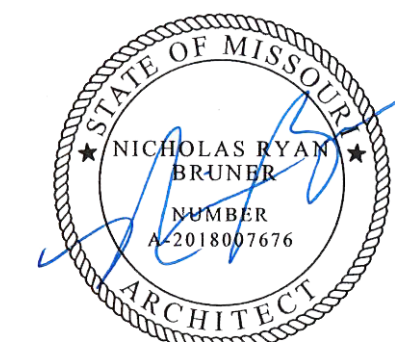
ROOF GENERAL NOTES

1. CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD PRIOR TO BEGINNING CONSTRUCTION.
2. ALL ROOF SURFACES TO SLOPE AT A MINIMUM 1/4" PER FOOT UNLESS OTHERWISE NOTED OR SHOWN.
3. COORDINATE ALL ROOF PENETRATION REQUIREMENTS WITH MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
4. ROOFING COMPONENTS MAY VARY DEPENDING ON ROOFING MANUFACTURER. CONTRACTOR SHALL INSTALL A COMPLETE CODE COMPLIANT AND WARRANTED ROOFING SYSTEM BASED ON THE SPECIFIED ROOFING MANUFACTURERS WRITTEN INSTRUCTIONS AND INSTALLATION GUIDELINES.
5. ROOFING INSULATION THERMAL LTR-VALUE AND CORRESPONDING R-VALUE MAY VARY DEPENDING ON INSULATION MANUFACTURER. ROOFING CONTRACTOR TO CONSULT INSULATION MANUFACTURERS WRITTEN DOCUMENTATION AND PROVIDE A ROOF INSULATION THICKNESS TO MEET OR EXCEED THE IECC REQUIREMENT.
6. THE CONTRACTOR SHALL INSURE THAT, UPON COMPLETION OF ROOFWORK: ALL GUTTERS, DOWNSPOUTS AND ROOF DRAINS ARE CLEAN AND CLEAR OF DEBRIS TO PROVIDE AN UNOBSTRUCTED FREE FLOW OF WATER.
7. GENERAL CONTRACTOR SHALL COORDINATE ALL ROOF PENETRATIONS WITH ROOFING CONTRACTOR PRIOR TO INSTALLATION OF ROOF SYSTEM.
8. ALL FLASHING MATERIAL IS TO BE STAINLESS STEEL UNLESS OTHERWISE NOTED OR SHOWN.
9. PROVIDE MINIMUM 15'-0" CLEARANCE FROM ANY INTAKE FOR ALL EQUIPMENT AND VENT STACKS
10. ONCE ROOF WORK BEGINS, THE CONTRACTOR IS ACCEPTING ALL CONDITIONS AND WILL BE RESPONSIBLE FOR ALL DEMOLITION AND NEW WORK REQUIRED TO PROVIDE A WATERTIGHT ROOF SYSTEM
11. ALL ROOF PENETRATIONS TO BE AS PER MANUFACTURER'S RECOMMENDATIONS AND NRCA RECOMMENDATIONS

ROOF PLAN KEYNOTES (BY DIVISION) #

DIVISION 4	
4.1	STONE CHIMNEY WITH GAS FIREPLACE INSERT
DIVISION 5	
5.1	STANDING SEAM METAL ROOF
DIVISION 7	
7.1	DOWNSPOUT
7.2	SPLASHBLOCK
7.3	GUTTER
7.4	LEAF GUARD GUTTER - CAP EXPOSED ENDS
7.5	CRICKET





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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

**FOUR BEDROOM
CABIN ROOF PLAN**

SHEET NUMBER:

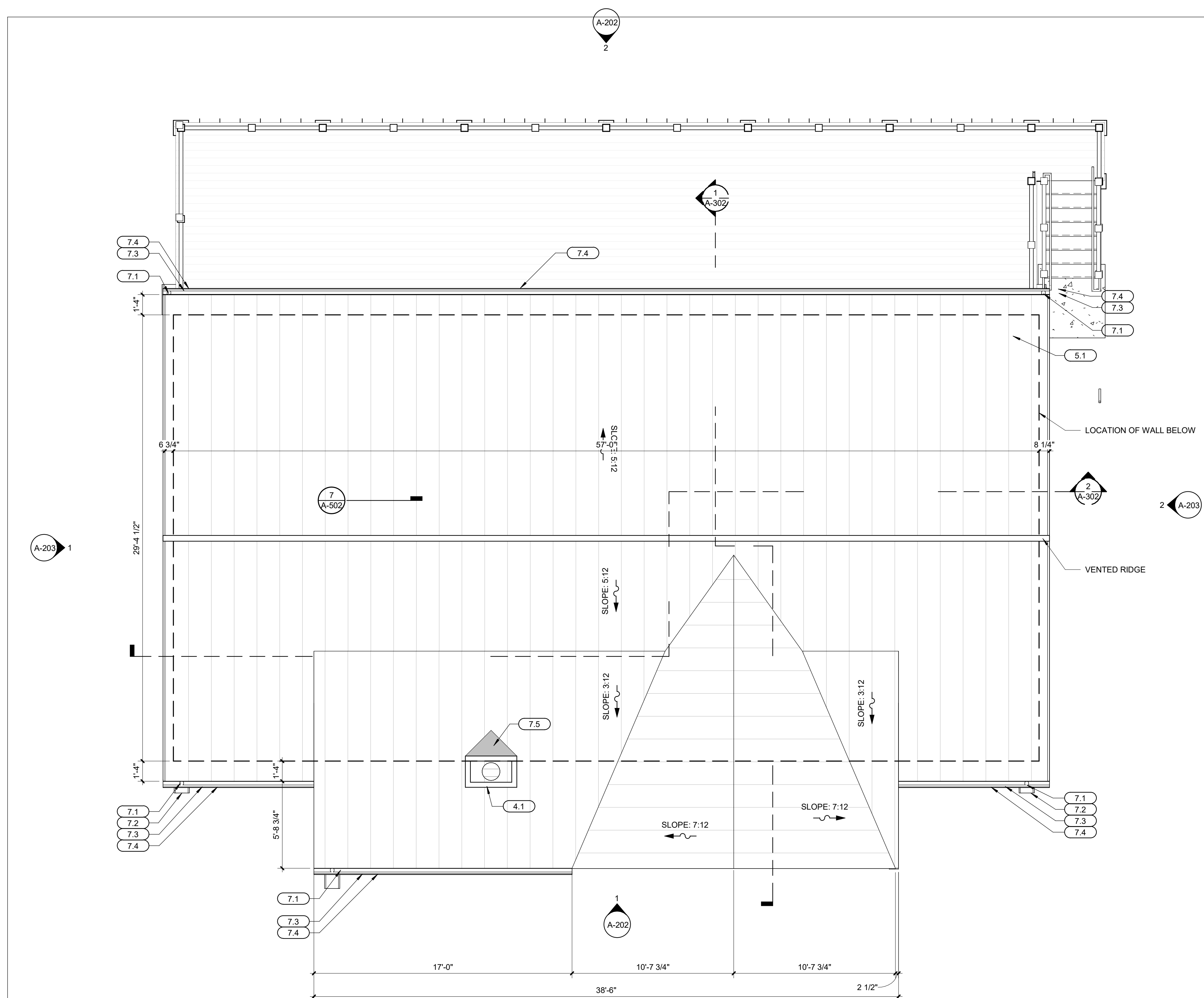
A-104

SHEET 29 of 75

ISSUE DATE: 03/02/2023

ROOF GENERAL NOTES

- CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD PRIOR TO BEGINNING CONSTRUCTION.
- ALL ROOF SURFACES TO SLOPE AT A MINIMUM 1/4" PER FOOT UNLESS OTHERWISE NOTED OR SHOWN.
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- ROOFING COMPONENTS MAY VARY DEPENDING ON ROOFING MANUFACTURER. CONTRACTOR SHALL INSTALL A COMPLETE CODE COMPLIANT AND WARRANTED ROOFING SYSTEM BASED ON THE SPECIFIED ROOFING MANUFACTURERS WRITTEN INSTRUCTIONS AND INSTALLATION GUIDELINES.
- ROOFING INSULATION THERMAL LTR-VALUE AND CORRESPONDING R-VALUE MAY VARY DEPENDING ON INSULATION MANUFACTURER. ROOFING CONTRACTOR TO CONSULT INSULATION MANUFACTURERS WRITTEN DOCUMENTATION AND PROVIDE A ROOF INSULATION THICKNESS TO MEET OR EXCEED THE IECC REQUIREMENT.
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- PROVIDE MINIMUM 15'-0" CLEARANCE FROM ANY INTAKE FOR ALL EQUIPMENT AND VENT STACKS
- ONCE ROOF WORK BEGINS, THE CONTRACTOR IS ACCEPTING ALL CONDITIONS AND WILL BE RESPONSIBLE FOR ALL DEMOLITION AND NEW WORK REQUIRED TO PROVIDE A WATERTIGHT ROOF SYSTEM
- ALL ROOF PENETRATIONS TO BE AS PER MANUFACTURER'S RECOMMENDATIONS AND NRCA RECOMMENDATIONS



ROOF PLAN KEYNOTES (BY DIVISION) #

DIVISION 4	
4.1	STONE CHIMNEY WITH GAS FIREPLACE INSERT
DIVISION 5	
5.1	STANDING SEAM METAL ROOF
DIVISION 7	
7.1	DOWNSPOUT
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7.5	CRICKET

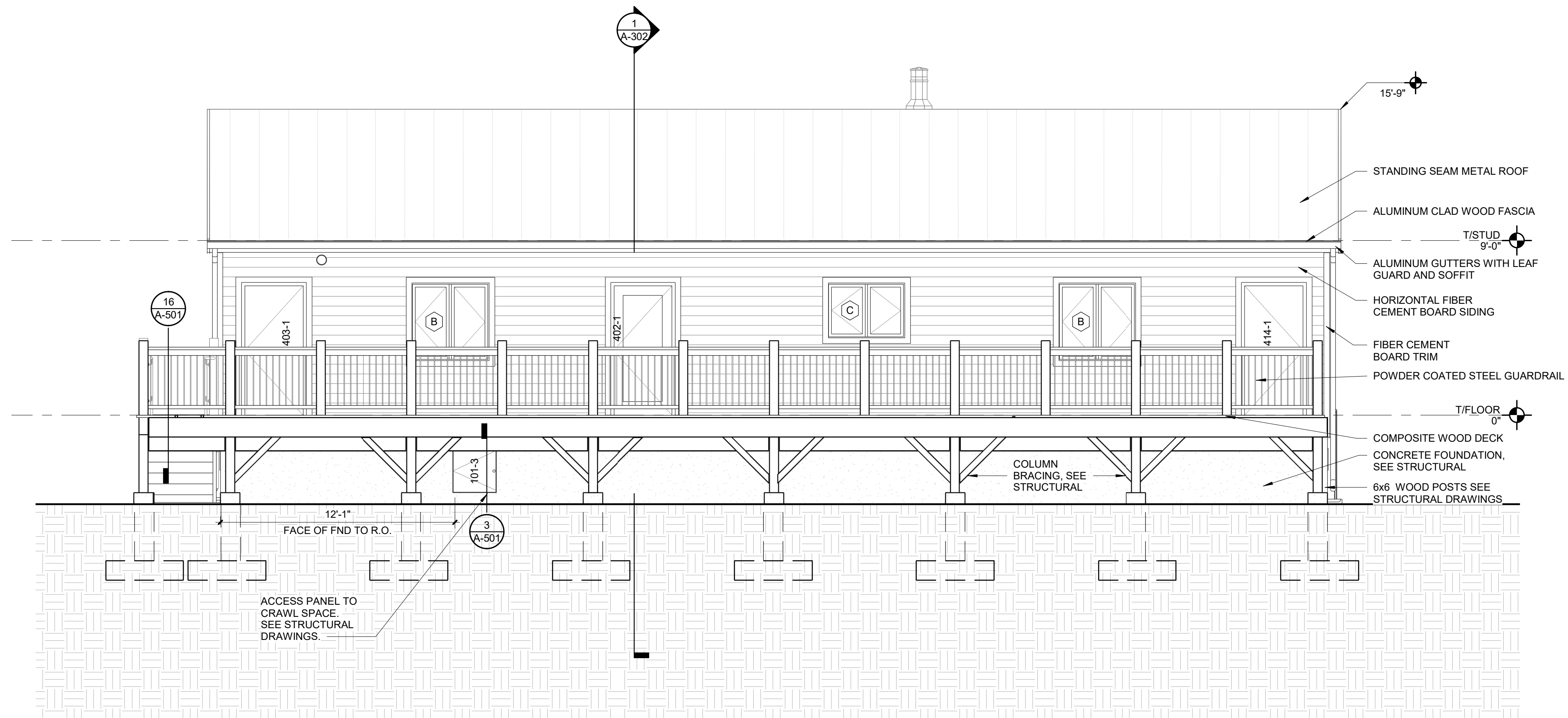
1 ROOF PLAN
SCALE: 1/4" = 1'-0"



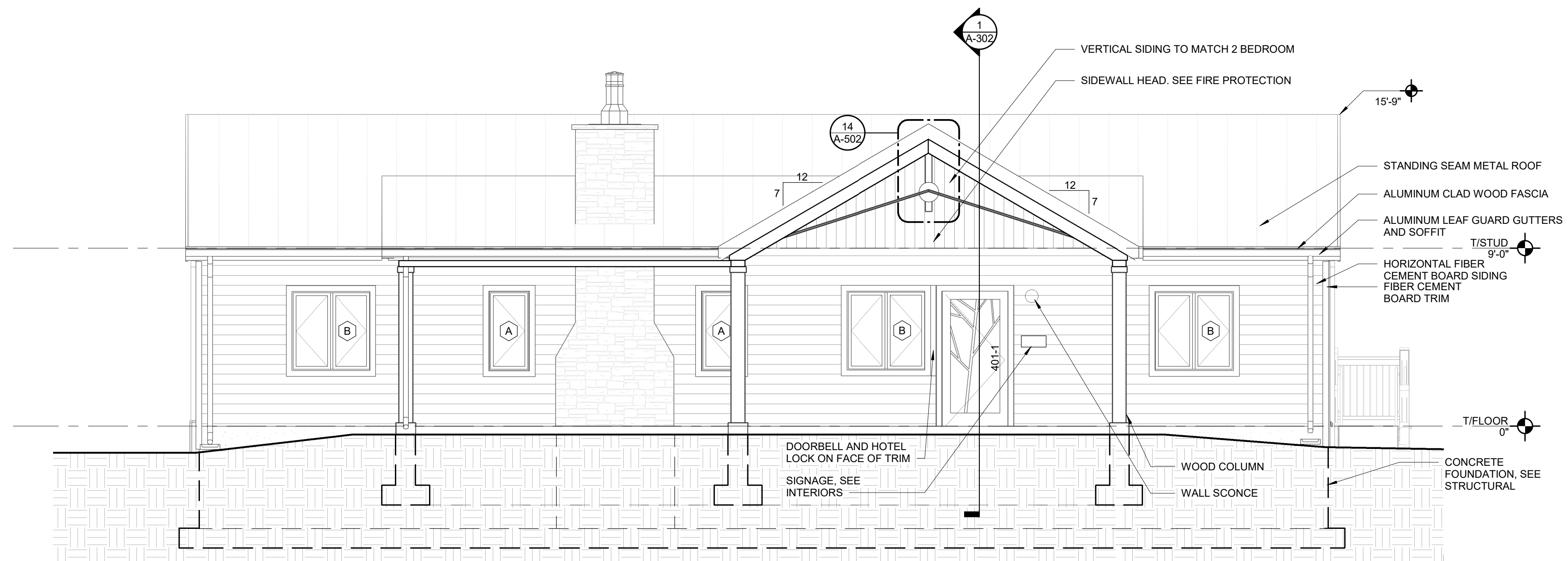
EXTERIOR FINISH SCHEDULE

STONE	METAL ROOF	EXPOSED WOOD	GUTTERS AND DOWNSPOUTS	BOLLARDS	CEMENT BOARD SIDING AND TRIM	DOORS AND FRAMES	VENTS AND LOUVERS	WINDOW FRAMES
SEE NOTES 1 & 2	LEAD-COTE (BERRIDGE)	STAIN - "BUTTERNUT" (DEFY STAIN)	LEAD-COTE (BERRIDGE)	MONTANA MOSS 6009-3 (VALSPAR)	FILOLI MAJESTIC OAK 2008-78 (VALSPAR)	MONTANA MOSS 6009-3 (VALSPAR)	MONTANA MOSS 6009-3 (VALSPAR)	MONTANA MOSS 6009-3 (VALSPAR)

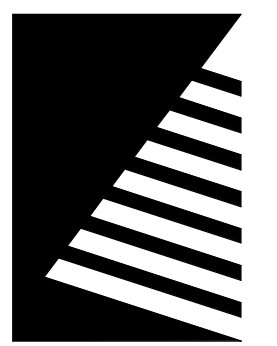
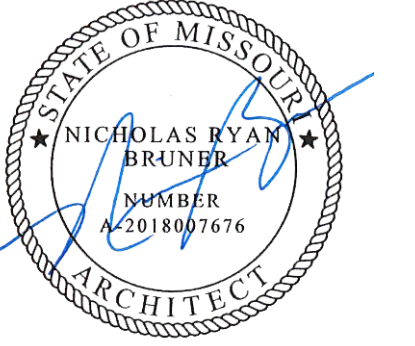
NOTES:
 1. STONE VENEER = WEATHERED FIELDSTONE IN FULL AND THINCUT DEPTHS AS NOTED
 2. WINDOW LINTELS AND SILLS = CAST STONE WITH ROCK TEXTURE AND BUFF COLOR



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



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



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
 SITE #: 5235
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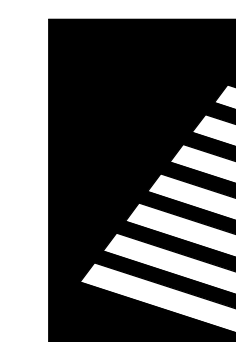
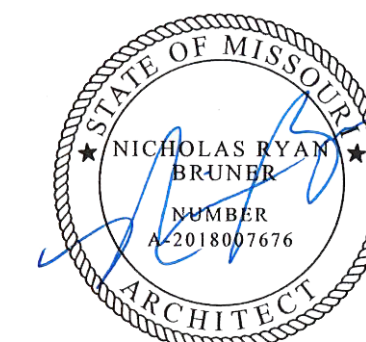
Facility#	Relevant to Sheet:
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7815235019 - Cabin 501	X
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7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV
 CHECKED BY: NRB
 DESIGNED BY: NRB

SHEET TITLE:
**FOUR BEDROOM
CABIN BUILDING
ELEVATIONS**

SHEET NUMBER:

A-202



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MANAGEMENT, DESIGN
AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

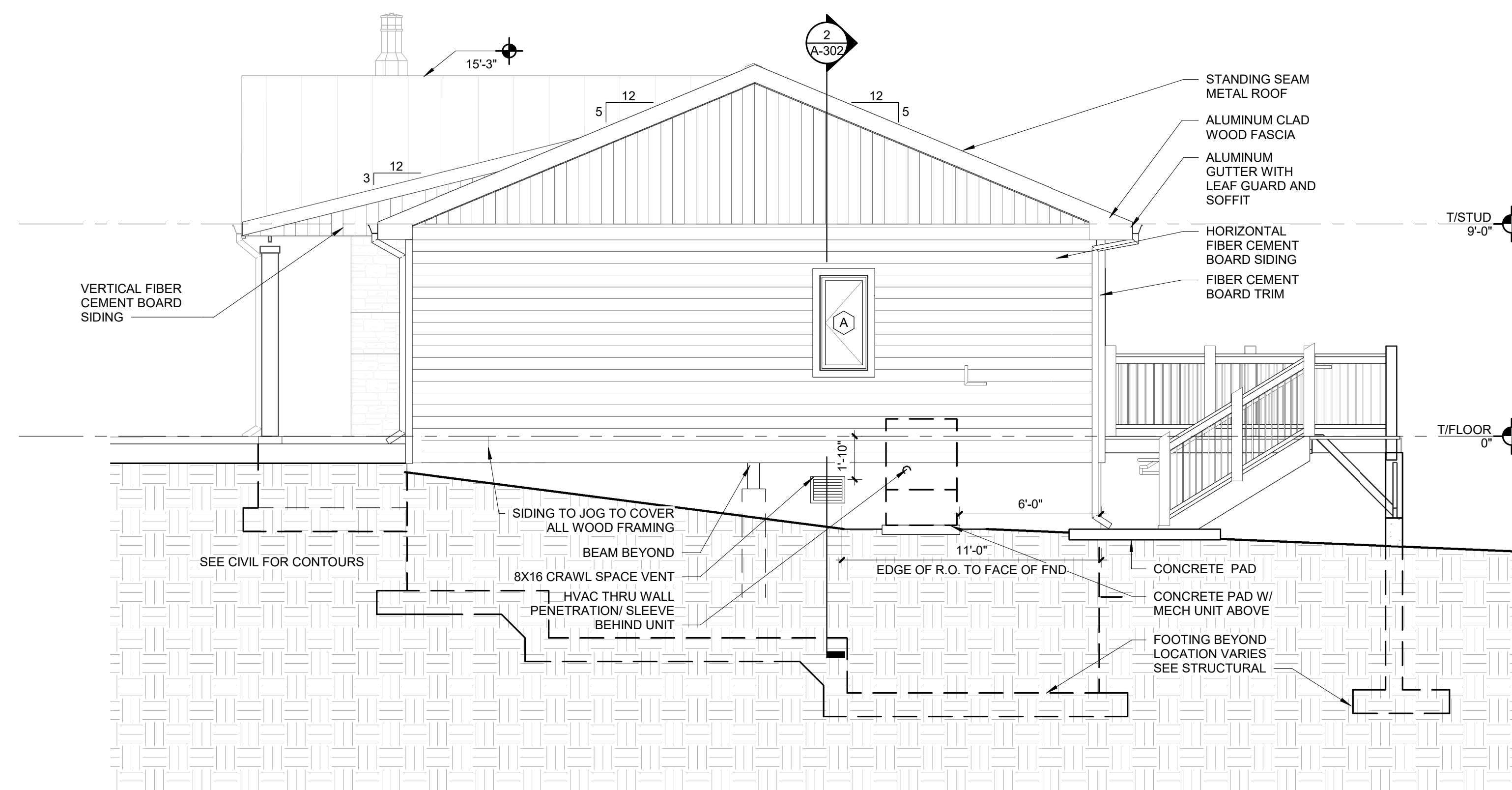
**FOUR BEDROOM
CABIN BUILDING
ELEVATIONS**

SHEET NUMBER:

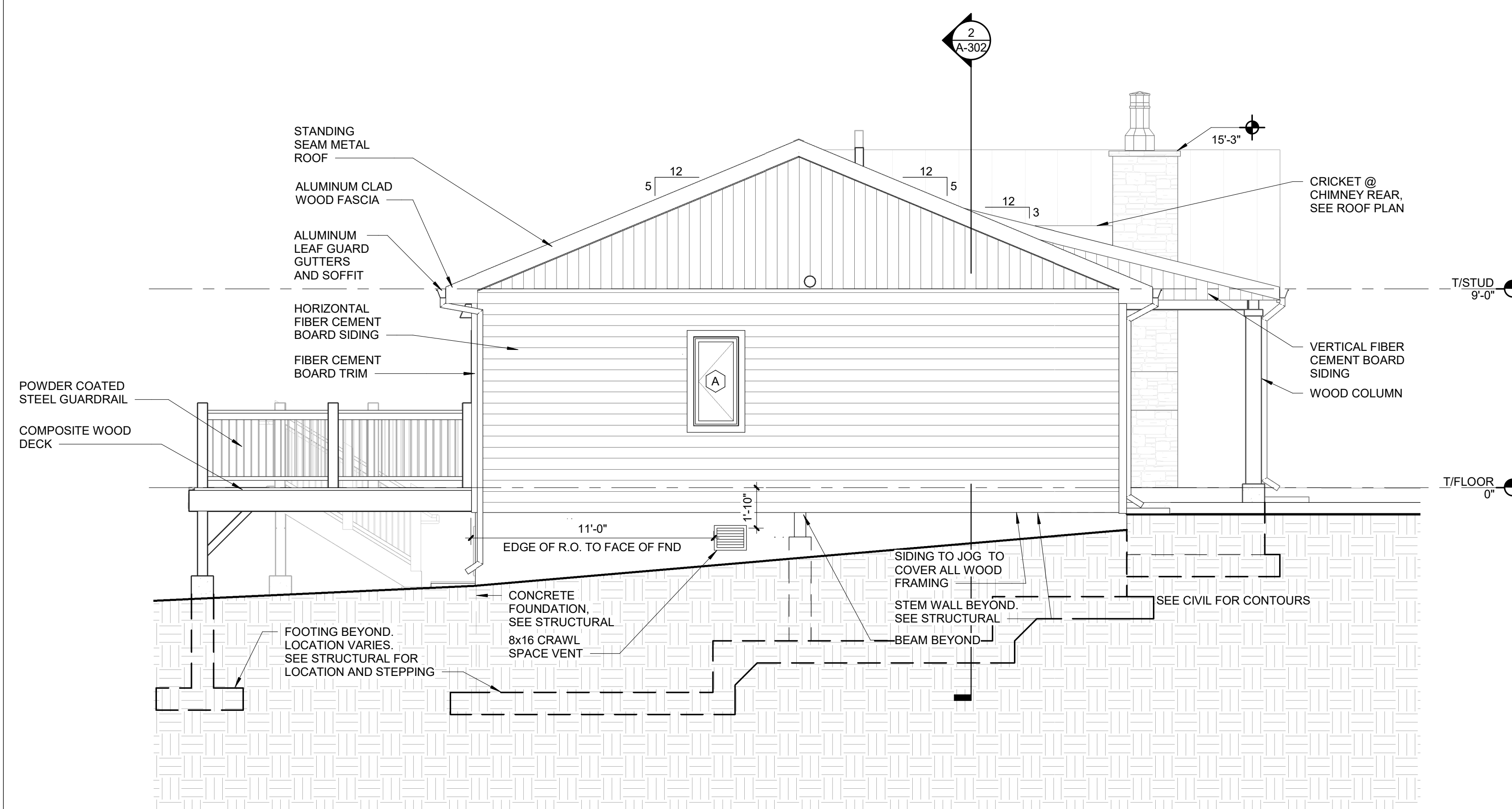
A-203

SHEET 32 of 75

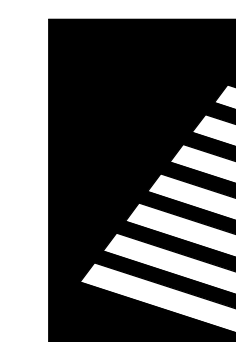
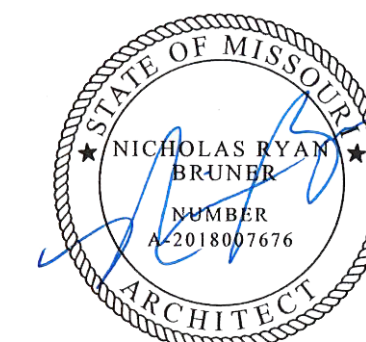
ISSUE DATE: 03/02/2023



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



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



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
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7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

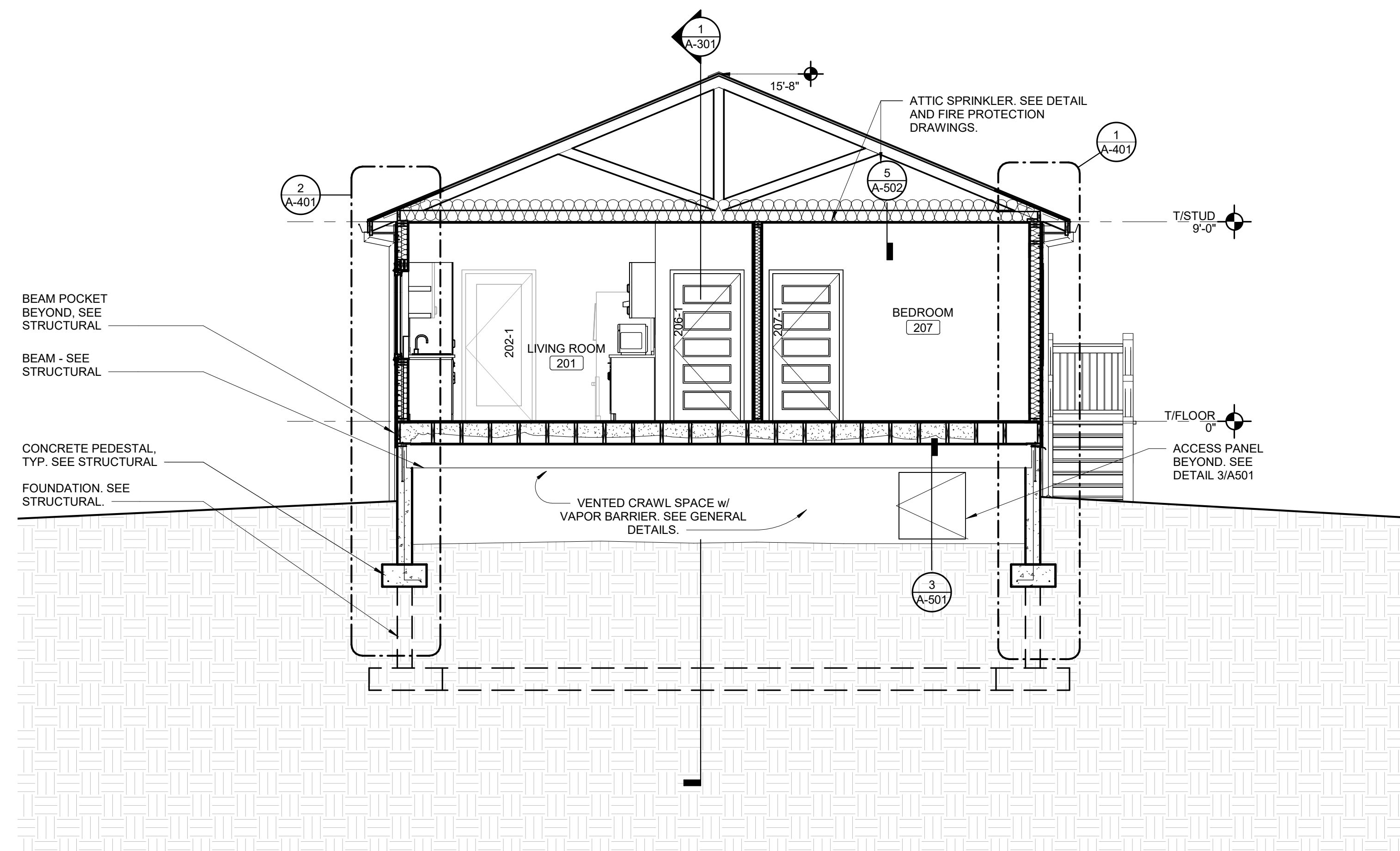
**TWO BEDROOM
CABIN BUILDING
SECTIONS**

SHEET NUMBER:

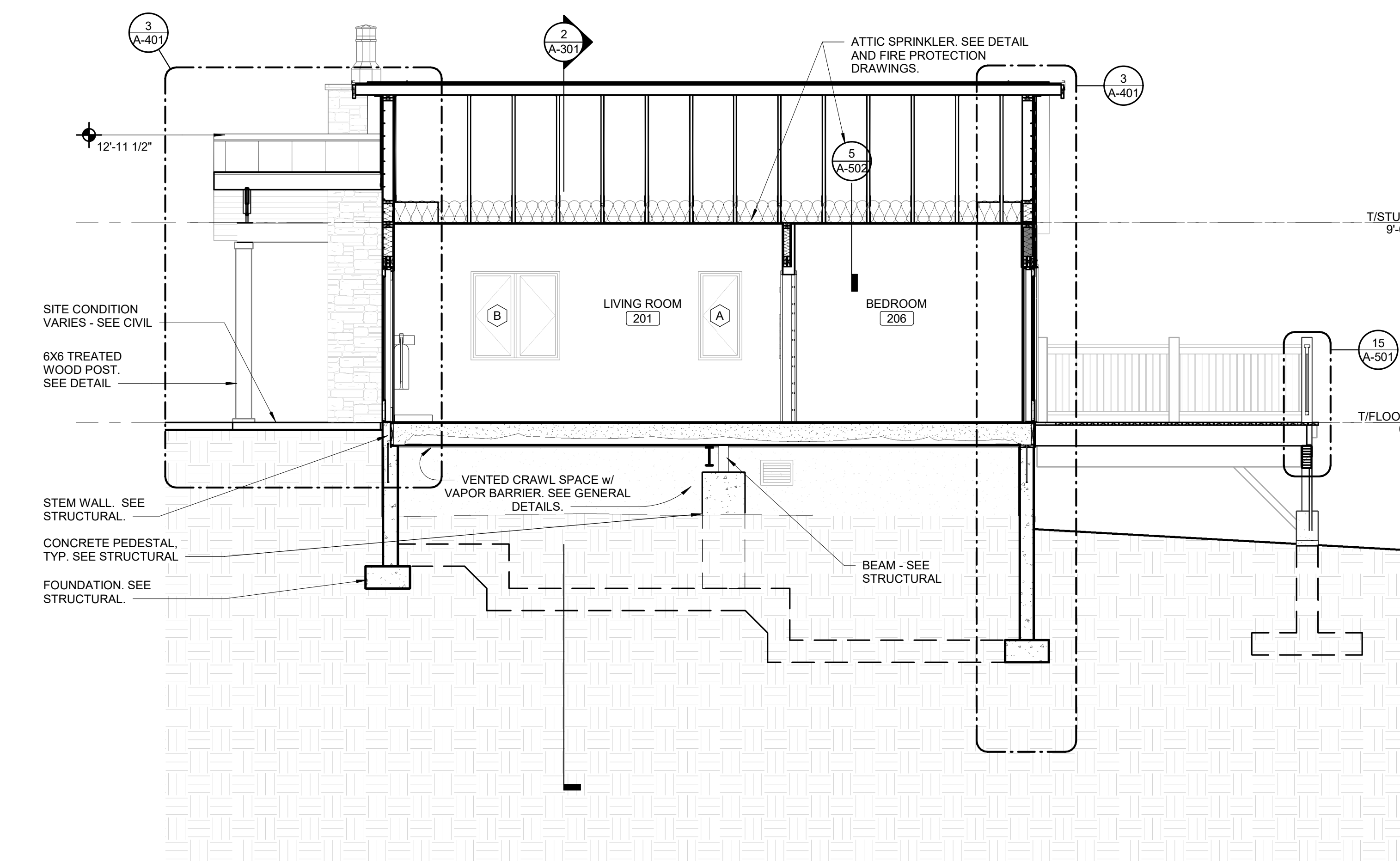
A-301

SHEET 33 of 75

ISSUE DATE: 03/02/2023

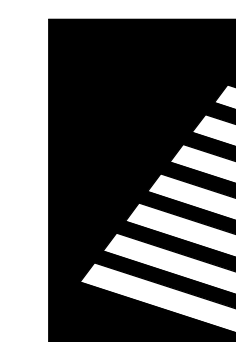
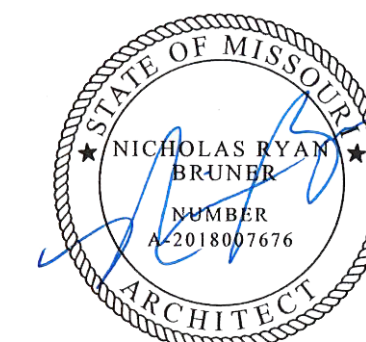


2 2 BEDROOM - SECTION THRU SIDE WALLS
SCALE: 1/4" = 1'-0"



1 2 BEDROOM SECTION THRU FRONT AND BACK
SCALE: 1/4" = 1'-0"





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7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

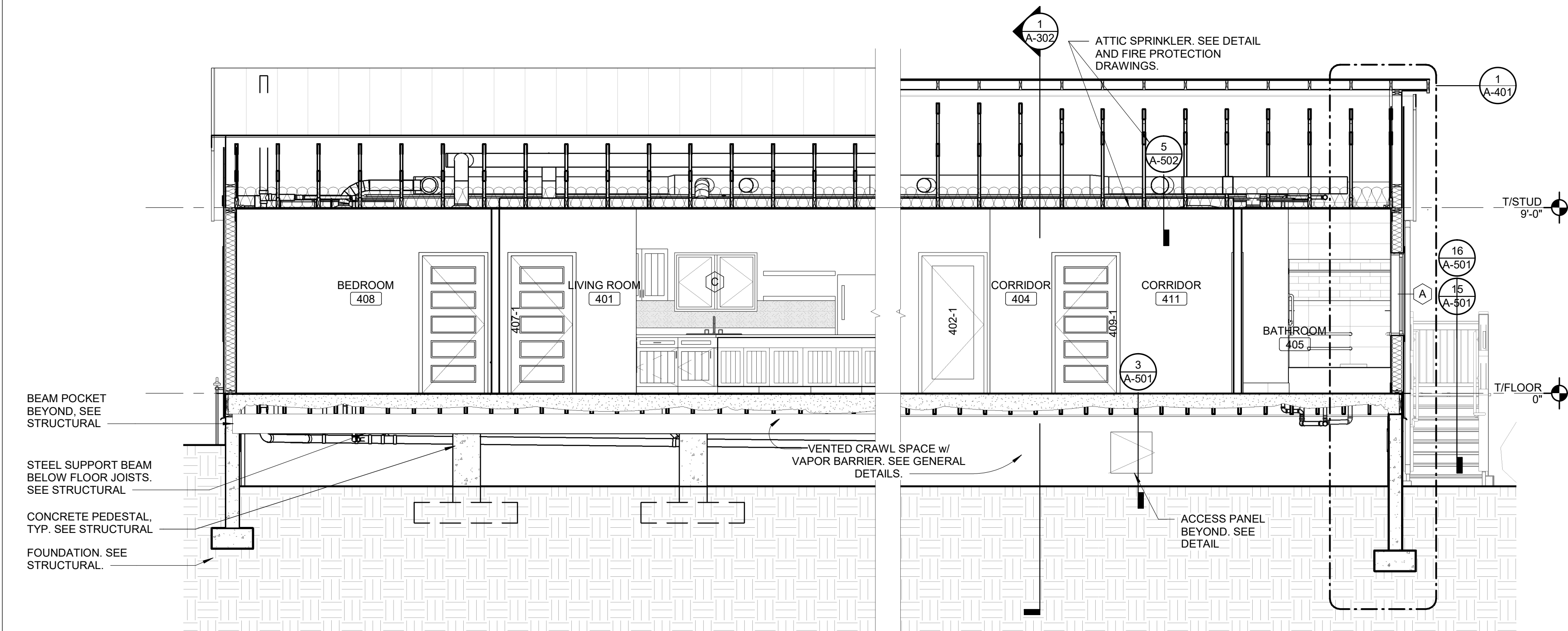
**FOUR BEDROOM
CABIN BUILDING
SECTIONS**

SHEET NUMBER:

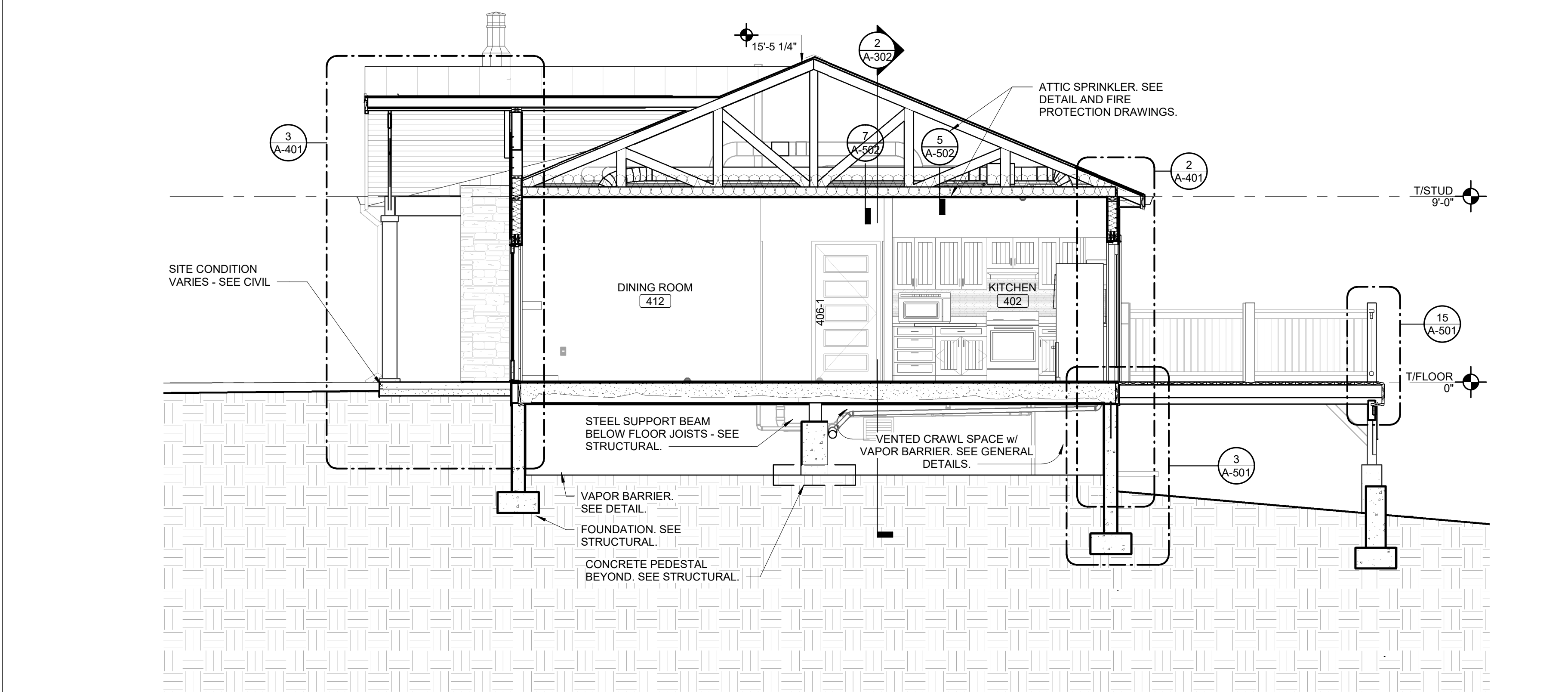
A-302

SHEET 34 of 75

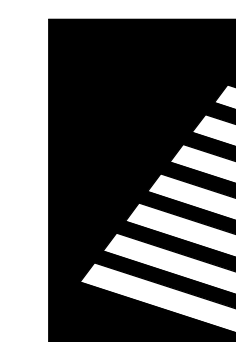
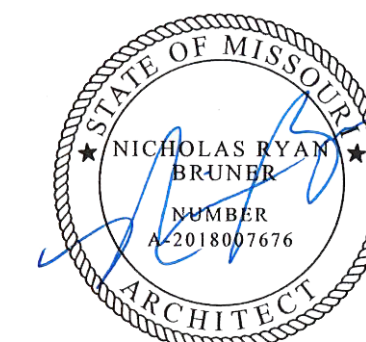
ISSUE DATE: 03/02/2023



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



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



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SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

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DATE: DESCRIPTION:

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7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

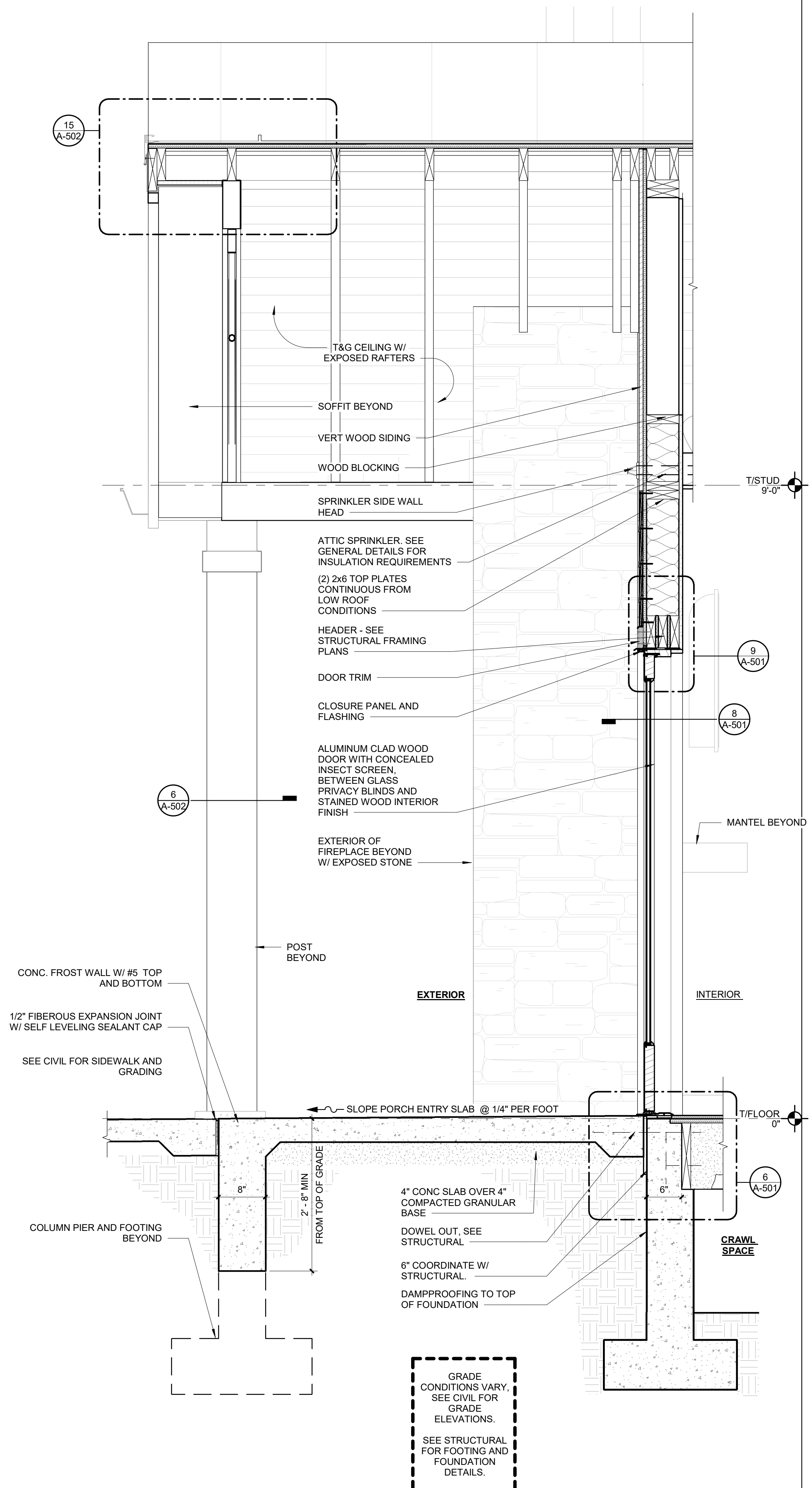
DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:
**GENERAL WALL
SECTIONS**

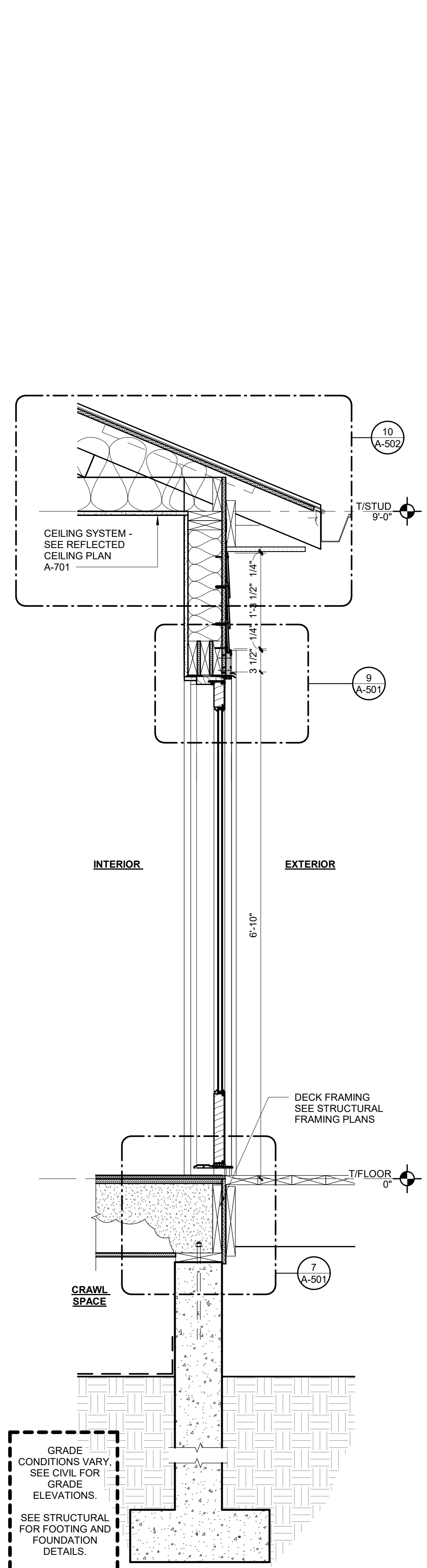
SHEET NUMBER:

A-401

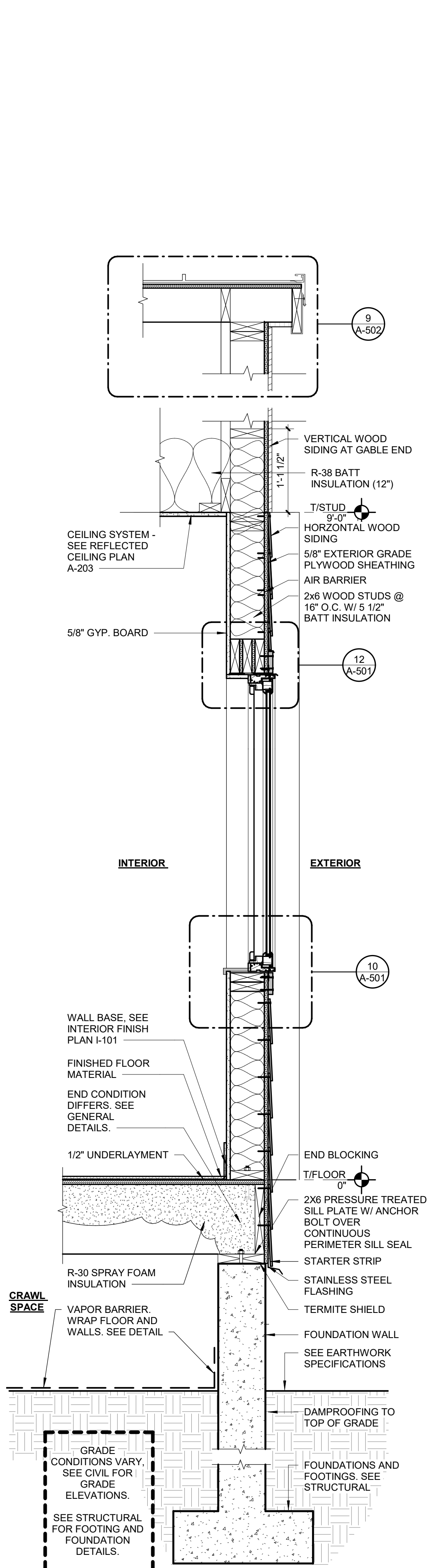
SHEET 35 of 75
ISSUE DATE: 03/02/2023



3 EXT PORCH SECTION @ ENTRY DOOR
SCALE: 1" = 1'-0"

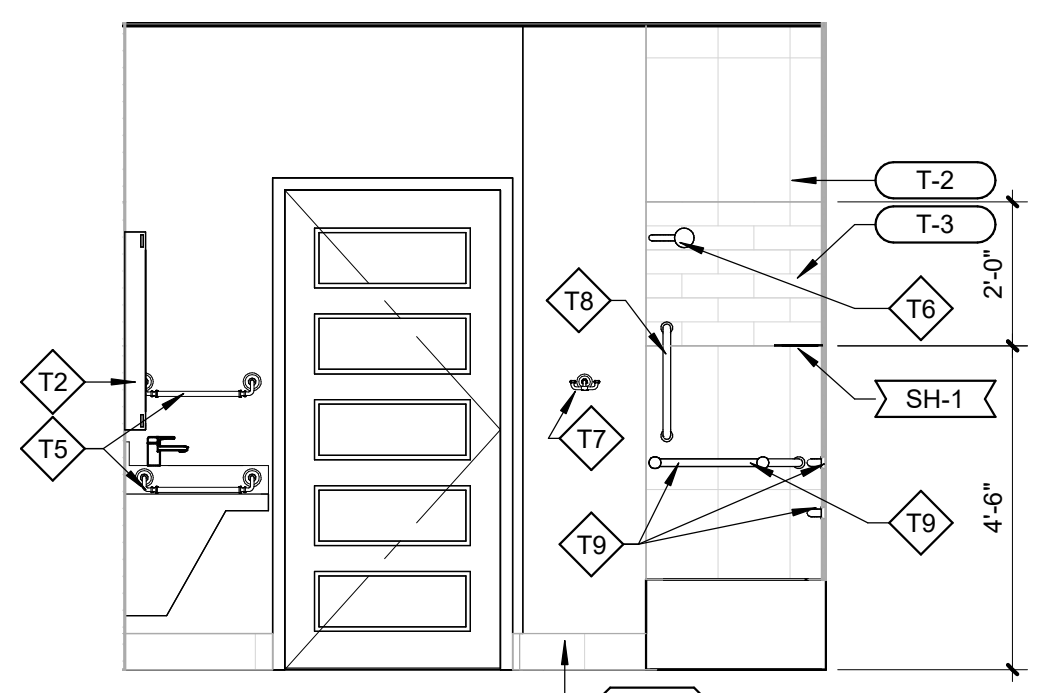


2 WALL SECTION @ REAR DOOR/ DECK
SCALE: 1" = 1'-0"

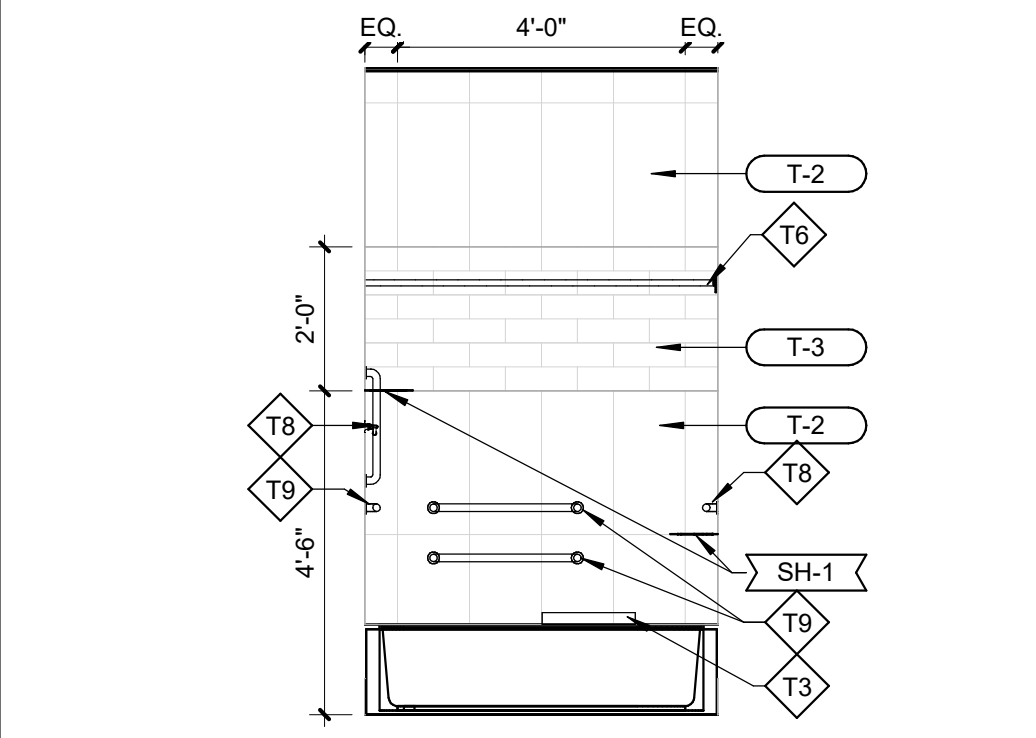


1 TYP EXT WALL SECTION
SCALE: 1" = 1'-0"

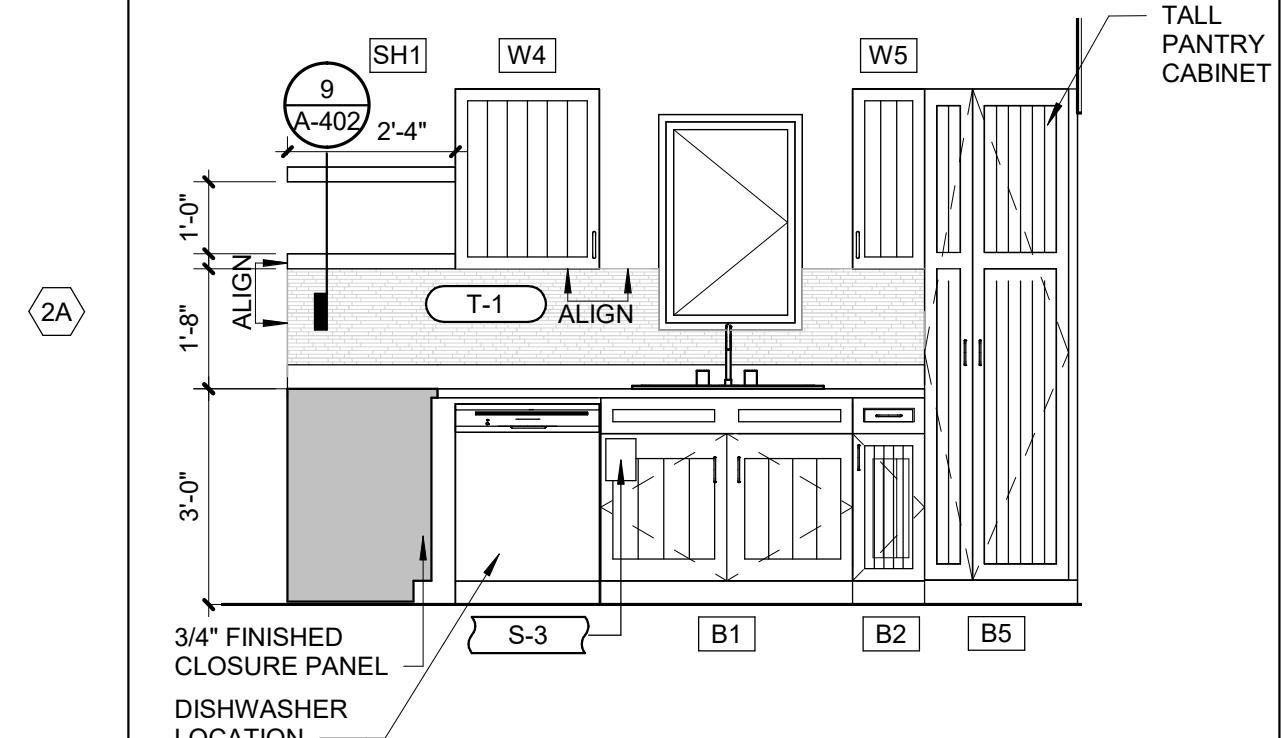
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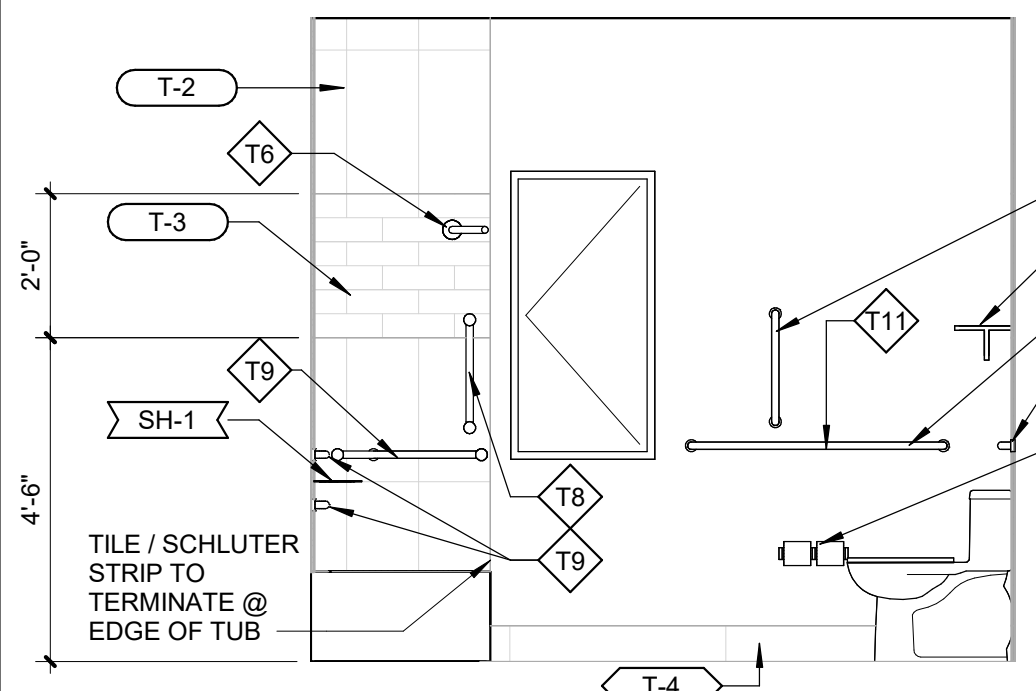
8 ENLARGED BATHROOM - WEST
SCALE: 3/8" = 1'-0"



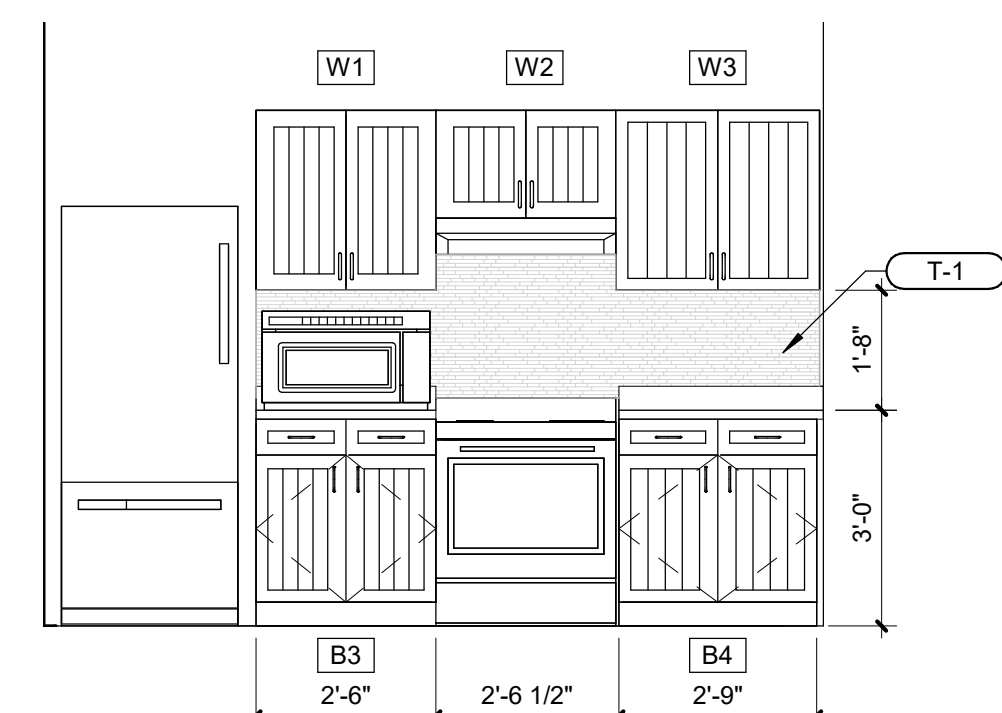
4 ENLARGED BATHROOM AT TUB
SCALE: 3/8" = 1'-0"



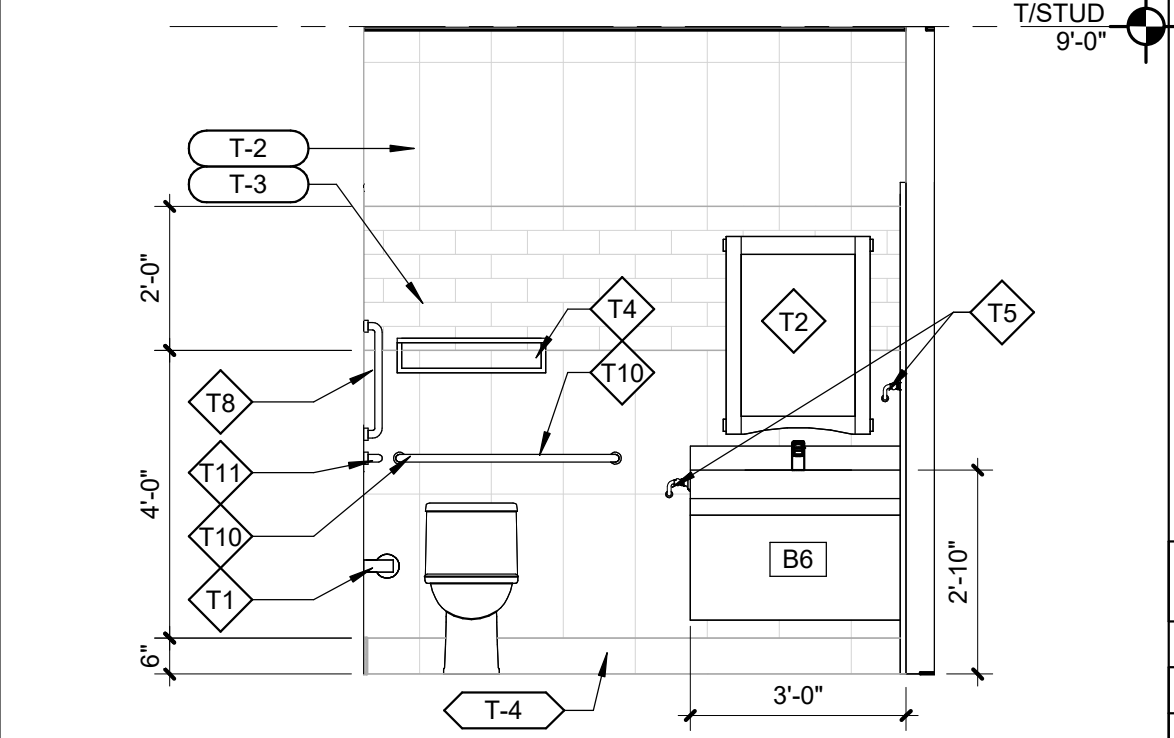
7 ENLARGED KITCHEN - WEST
SCALE: 3/8" = 1'-0"



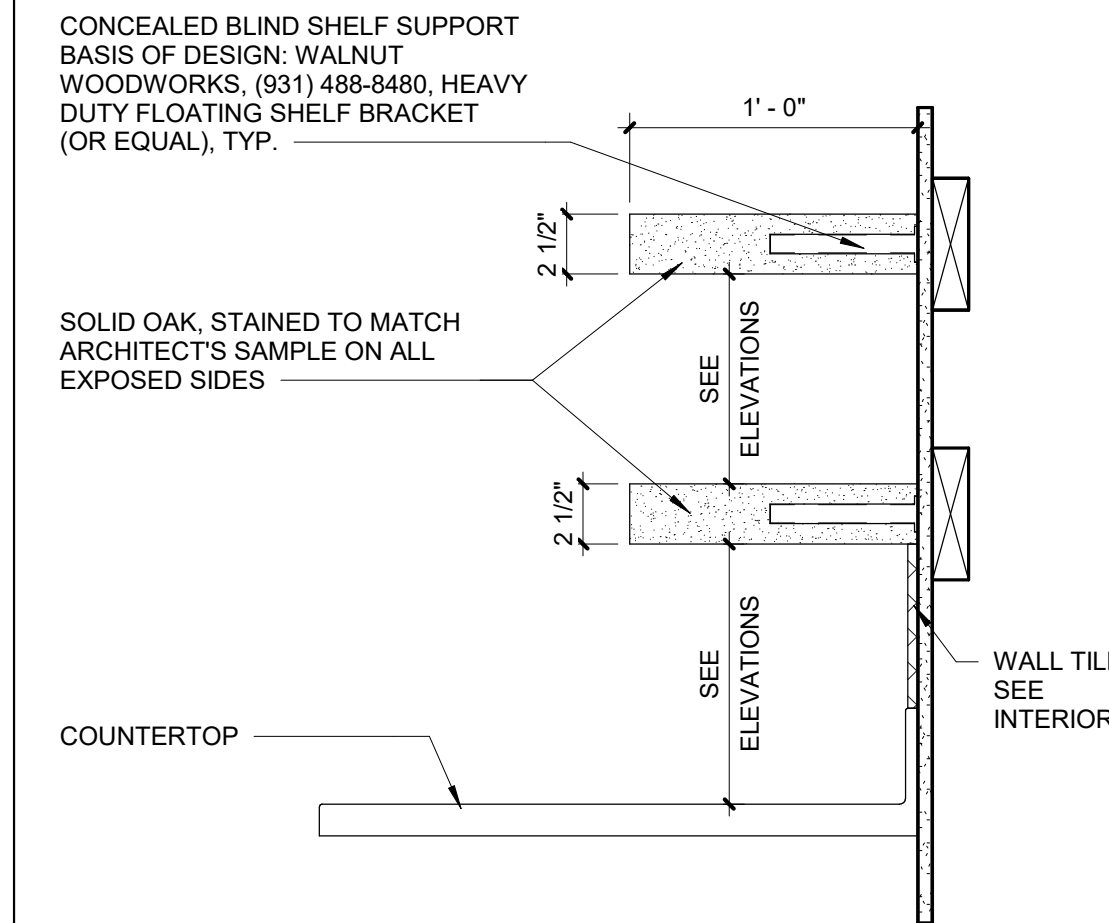
3 ENLARGED BATHROOM - EAST
SCALE: 3/8" = 1'-0"



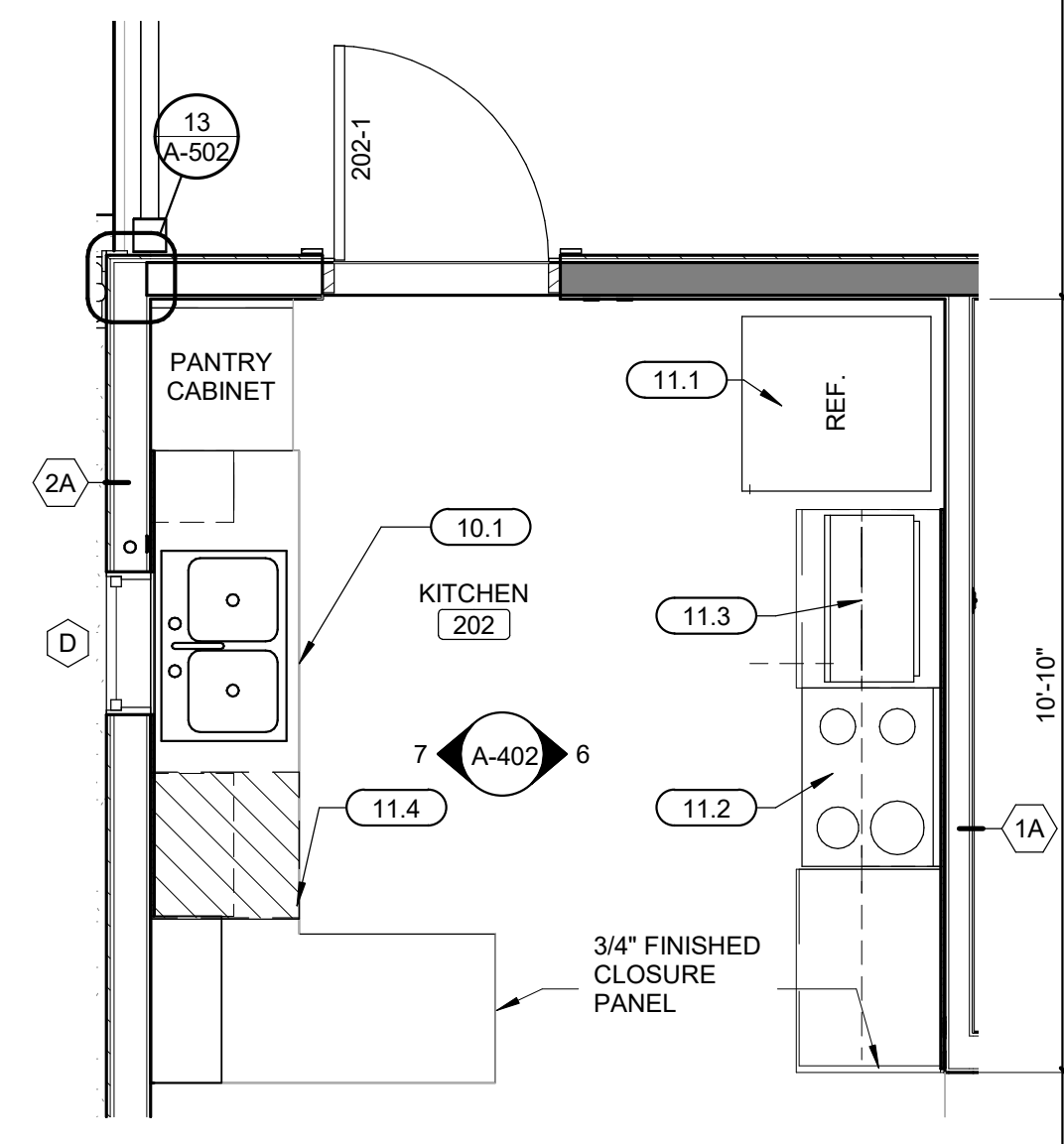
6 ENLARGED KITCHEN - EAST
SCALE: 3/8" = 1'-0"



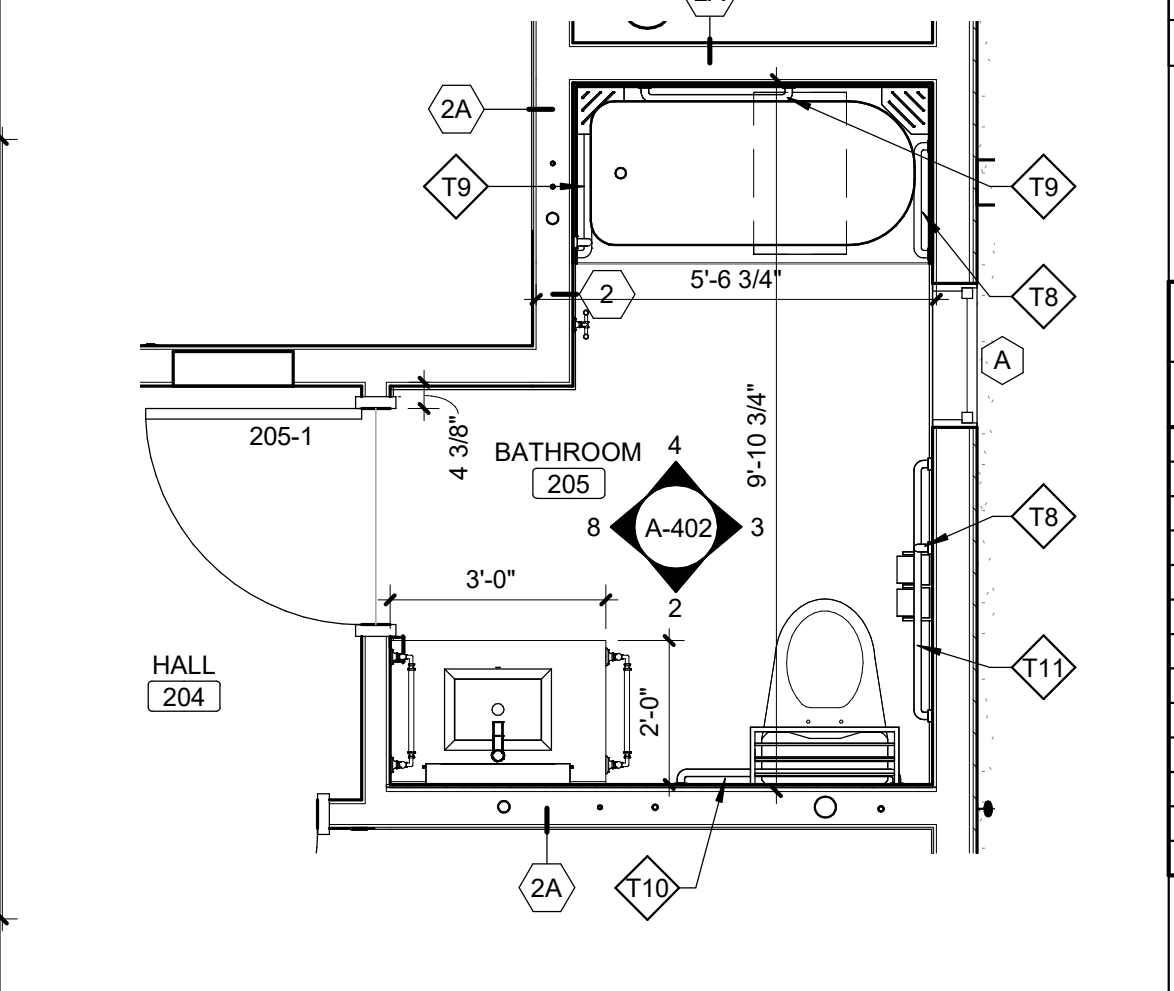
2 ENLARGED BATHROOM - SOUTH
SCALE: 3/8" = 1'-0"



9 FLOATING SHELF DETAIL
SCALE: 1 1/2" = 1'-0"



5 ENLARGED KITCHEN 102
SCALE: 3/8" = 1'-0"



1 ENLARGED BATHROOM 106
SCALE: 3/8" = 1'-0"

INTERIOR ELEVATION GENERAL NOTES

- A. SEE G-002 FOR STANDARD MOUNTING HEIGHTS.
- B. CONTROL JOINTS SHOWN ARE DESIGNATED FOR AESTHETIC PURPOSES. WHERE CONTROL JOINTS ARE NOT SHOWN, COMPLY WITH REQUIREMENTS AS DICTATED IN THE PARTITION GENERAL NOTES.
- C. SEE INTERIORS PLANS AND SCHEDULES FOR PRODUCT INFORMATION.

PLAN KEYNOTES (BY DIVISION) #

DIVISION 10	
10.1	FIRE EXTINGUISHER MOUNTED TO INSIDE OF CABINET UNDERNEATH THE KITCHEN SINK. PROVIDE SIGNAGE
DIVISION 11	
11.1	REFRIGERATOR, N.I.C.
11.2	RANGE, N.I.C.
11.3	MICROWAVE, N.I.C.
11.4	DISHWASHER, N.I.C.

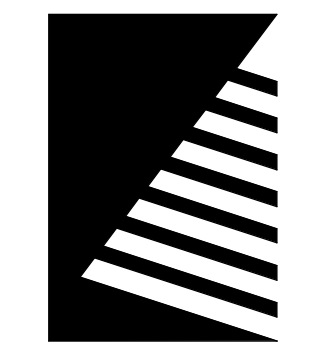
TOILET ACCESSORIES

T1	TOILET TISSUE DISPENSER
T2	MIRROR UNIT
T3	SHOWER BENCH
T4	HOTELIER
T5	18" TOWEL BAR
T6	SHOWER ROD
T7	DOUBLE ROBE HOOK
T8	18" GRAB BAR
T9	24" GRAB BAR
T10	36" GRAB BAR
T11	42" GRAB BAR

CASEWORK SCHEDULE

NO.	WIDTH	HEIGHT	DEPTH	DETAIL NO.	DESCRIPTION
B1	3'-6"	2'-10 1/2"	2'-0"		
B2	1'-0"	2'-10 1/2"	2'-0"		
B3	2'-6"	2'-10 1/2"	2'-0"		
B4	2'-9"	2'-10 1/2"	2'-0"		
B5	2'-0"	7'-2"	2'-0"		
B6	2'-6"	2'-8 1/2"	2'-0"		
SH1	2'-4"	2'-0 1/2"	1'-0"		FLOATING SHELF
W1	2'-6"	2'-6"	1'-2"		
W2	3'-0"	1'-6"	1'-2"		
W3	3'-6"	2'-6"	1'-2"		
W4	2'-0"	2'-6"	1'-2"		
W5	1'-0"	2'-6"	1'-2"		

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	
7815235023 - Cabin 505	X

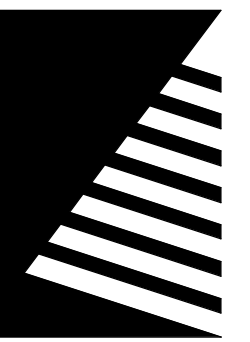
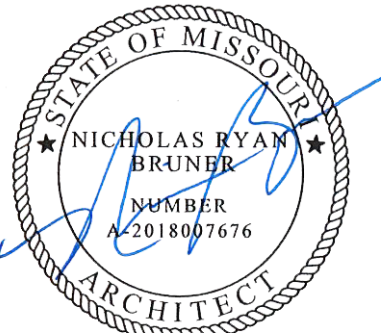
DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

**SHEET TITLE:
TWO BEDROOM
CABIN ENLARGED
PLANS AND
ELEVATIONS**

SHEET NUMBER:

A-402

SHEET 36 of 75
ISSUE DATE: 03/02/2023



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7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:

**FOUR BEDROOM
CABIN ENLARGED
PLANS AND
ELEVATIONS**

SHEET NUMBER:

A-403

SHEET 37 of 75

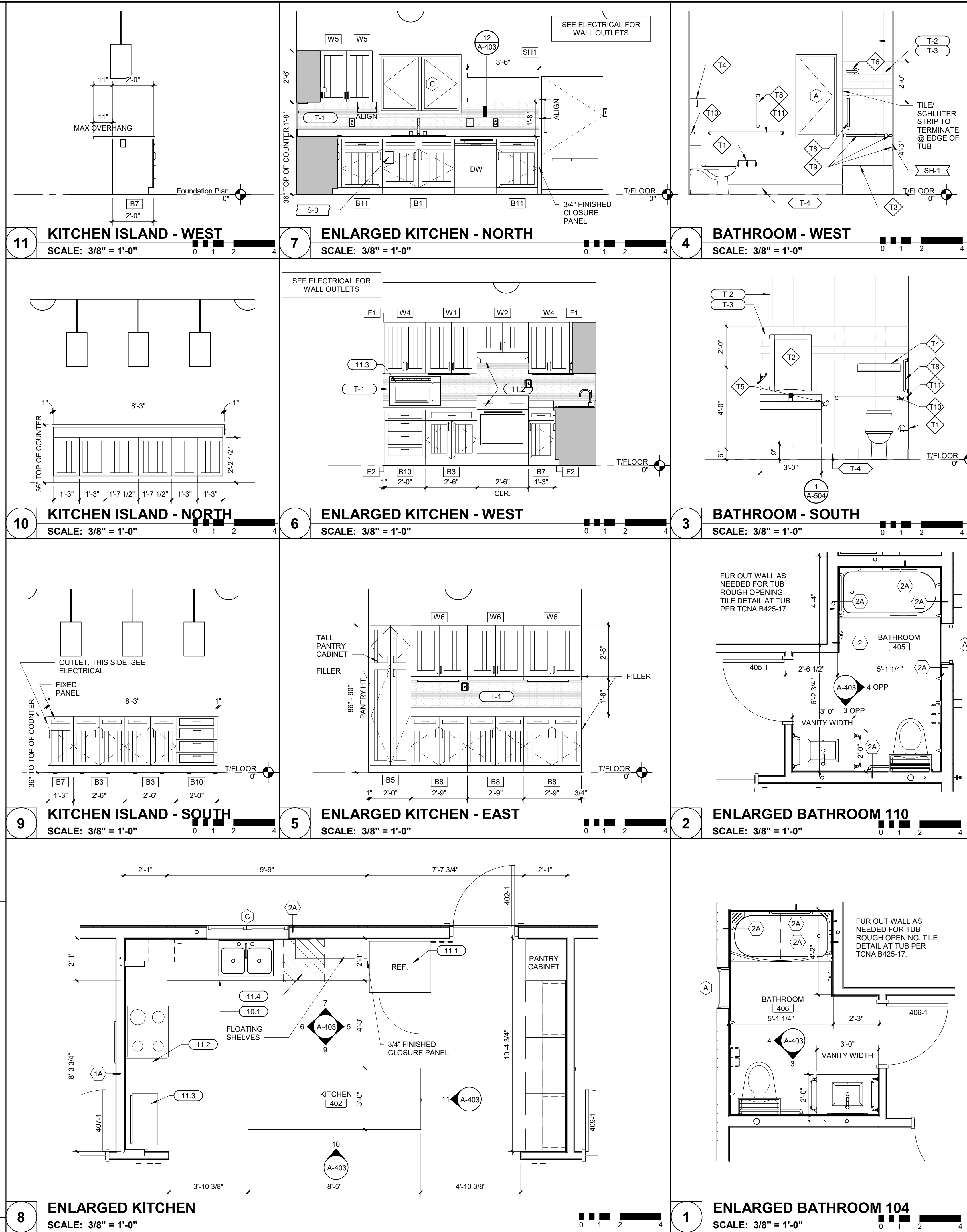
ISSUE DATE: 03/02/2023

INTERIOR ELEVATION GENERAL NOTES

- SEE G-002 FOR STANDARD MOUNTING HEIGHTS.
- CONTROL JOINTS SHOWN ARE DESIGNATED FOR AESTHETIC PURPOSES. WHERE CONTROL JOINTS ARE NOT SHOWN, COMPLY WITH REQUIREMENTS AS DICTATED IN THE PARTITION GENERAL NOTES.
- SEE INTERIORS PLANS AND SCHEDULES FOR PRODUCT INFORMATION.

PLAN KEYNOTES (BY DIVISION)

DIVISION	KEYNOTE	DESCRIPTION
10	10.1	FIRE EXTINGUISHER MOUNTED TO INSIDE OF CABINET UNDERNEATH THE KITCHEN SINK. PROVIDE SIGNAGE.
11	11.1	REFRIGERATOR, N.I.C.
11	11.2	RANGE AND HOOD, OFCI
11	11.3	MICROWAVE, N.I.C.
11	11.4	DISHWASHER, N.I.C.

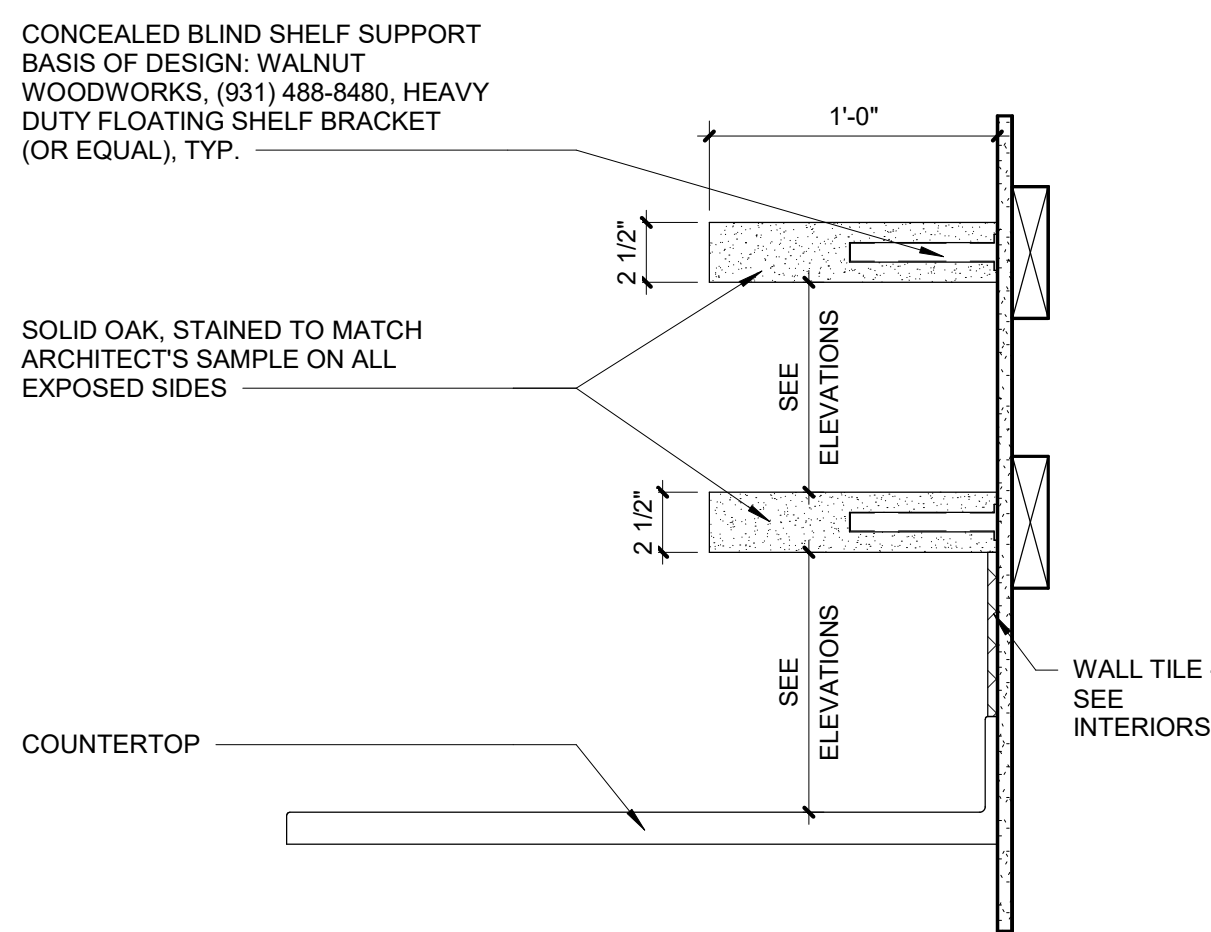


TOILET ACCESSORIES

T1	TOILET TISSUE DISPENSER
T2	MIRROR UNIT
T3	SHOWER BENCH
T4	HOTELIER
T5	18" TOWEL BAR
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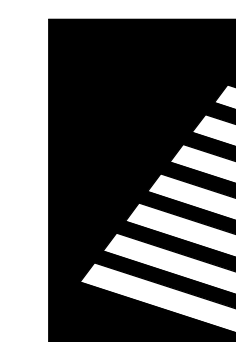
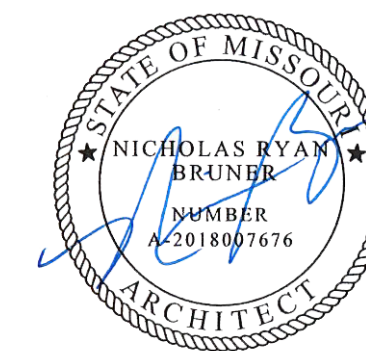
CASEWORK SCHEDULE

NO.	WIDTH	HEIGHT	DEPTH	DETAIL NO.	DESCRIPTION
BASE CABINETS					
B1	3'-6"	2'-8 1/2"	2'-0"		
B3	2'-6"	2'-8 1/2"	2'-0"		<varies>
B6	3'-0"	2'-8 1/2"	2'-0"		
B7	1'-3"	2'-8 1/2"	2'-0"		
B8	2'-9"	2'-8 1/2"	2'-0"		
B10	2'-0"	2'-8 1/2"	2'-0"		
B11	2'-0"	2'-8 1/2"	2'-0"		
F2	<varies>	2'-8 1/2"	2'-0"		BASE CABINET FILLER
ENTRY BENCH					
B12	2'-7 1/2"	1'-4 1/2"	2'-2"		
B13	4'-9 1/2"	6'-9 3/8"	1/2"		
B14	5'-5 1/2"	7'-5 3/8"	3/4"		
FLOATING SHELVES					
SH1					FLOATING SHELF
WALL CABINETS					
B5	2'-0"	7'-2"	2'-0"		FOUR HINGED DOORS, FOUR ADJUSTABLE SHELVES
F1	<varies>	2'-6"	1'-0"		WALL CABINET FILLER
W1	2'-6"	2'-6"	1'-2"		
W2	3'-0"	1'-6"	1'-2"		
W4	2'-0"	2'-6"	1'-2"		
W5	1'-0"	2'-6"	1'-2"		
W6	2'-9"	2'-6"	1'-2"		



12 FLOATING SHELF DETAIL
SCALE: NOT TO SCALE

20/03/2023 11:55:32 AM



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7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV
CHECKED BY: TJH
DESIGNED BY: Designer

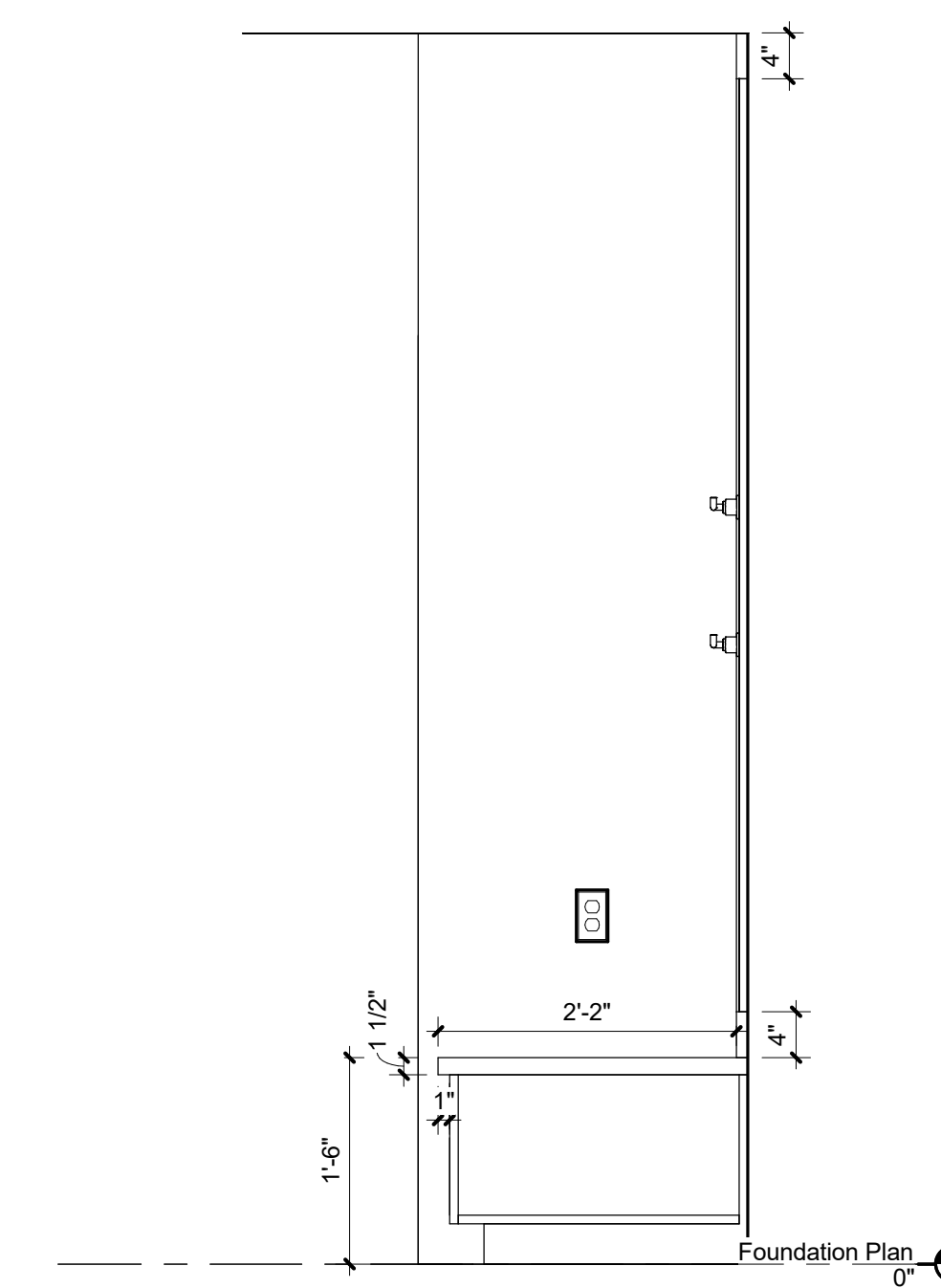
SHEET TITLE:

**FOUR BEDROOM
CABIN ENLARGED
PLANS AND DETAILS**

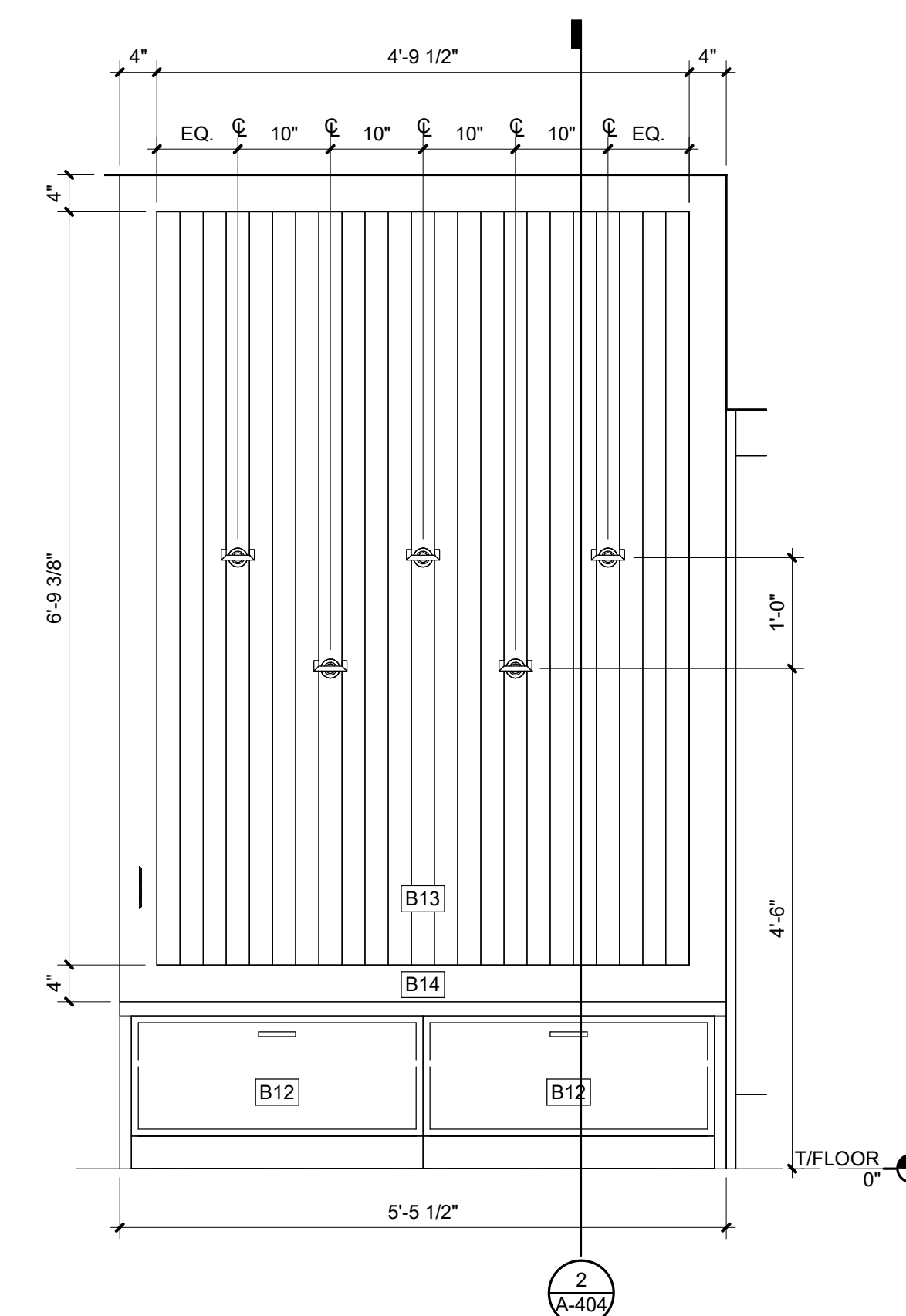
SHEET NUMBER:

A-404

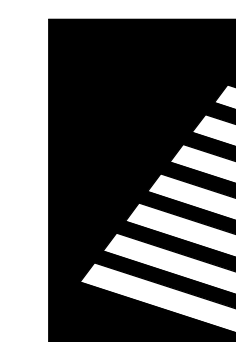
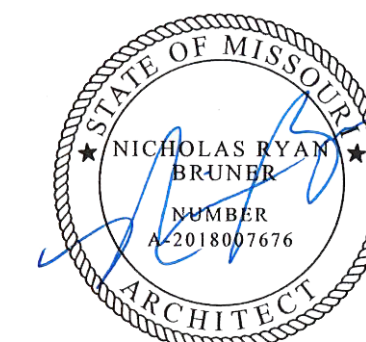
SHEET 38 of 75
ISSUE DATE: 03/02/2023



2 ENTRY BENCH SECTION
SCALE: 3/4" = 1'-0"



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



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ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS

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7815235023 - Cabin 505	X

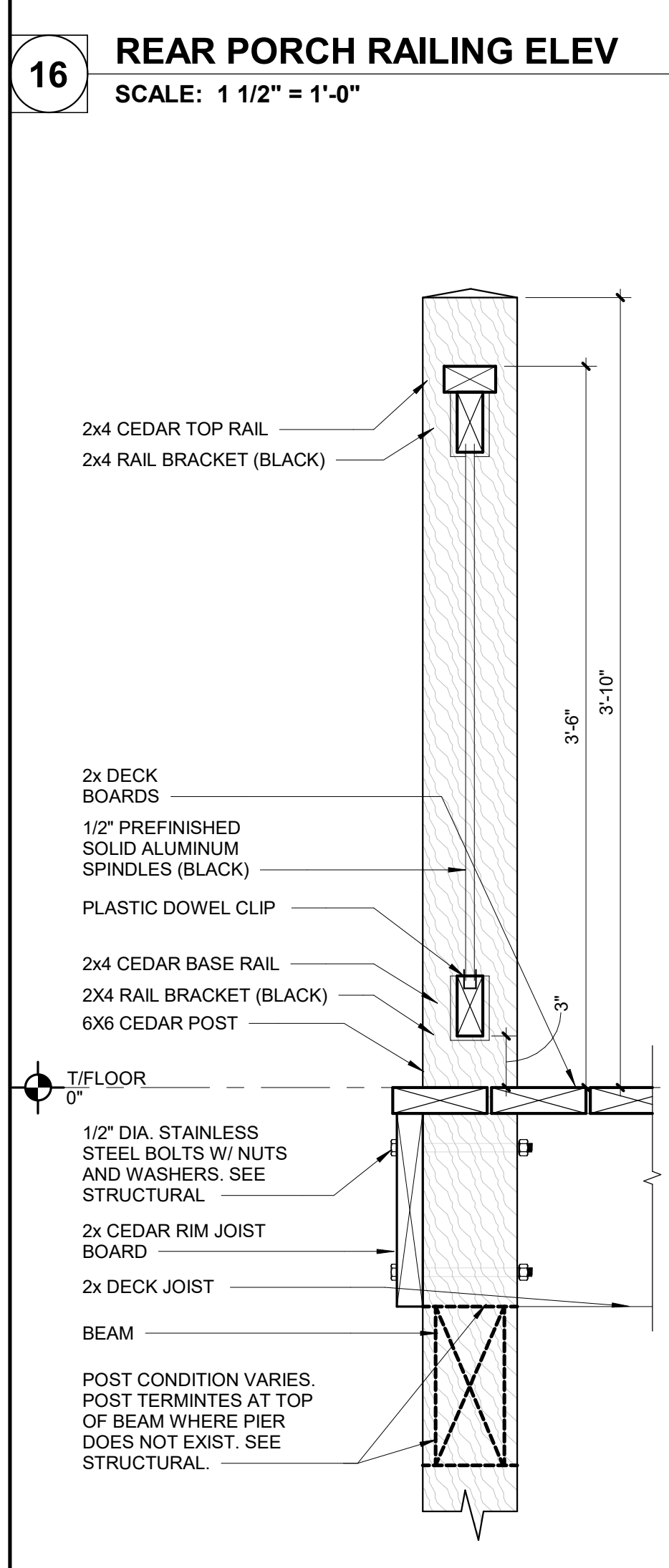
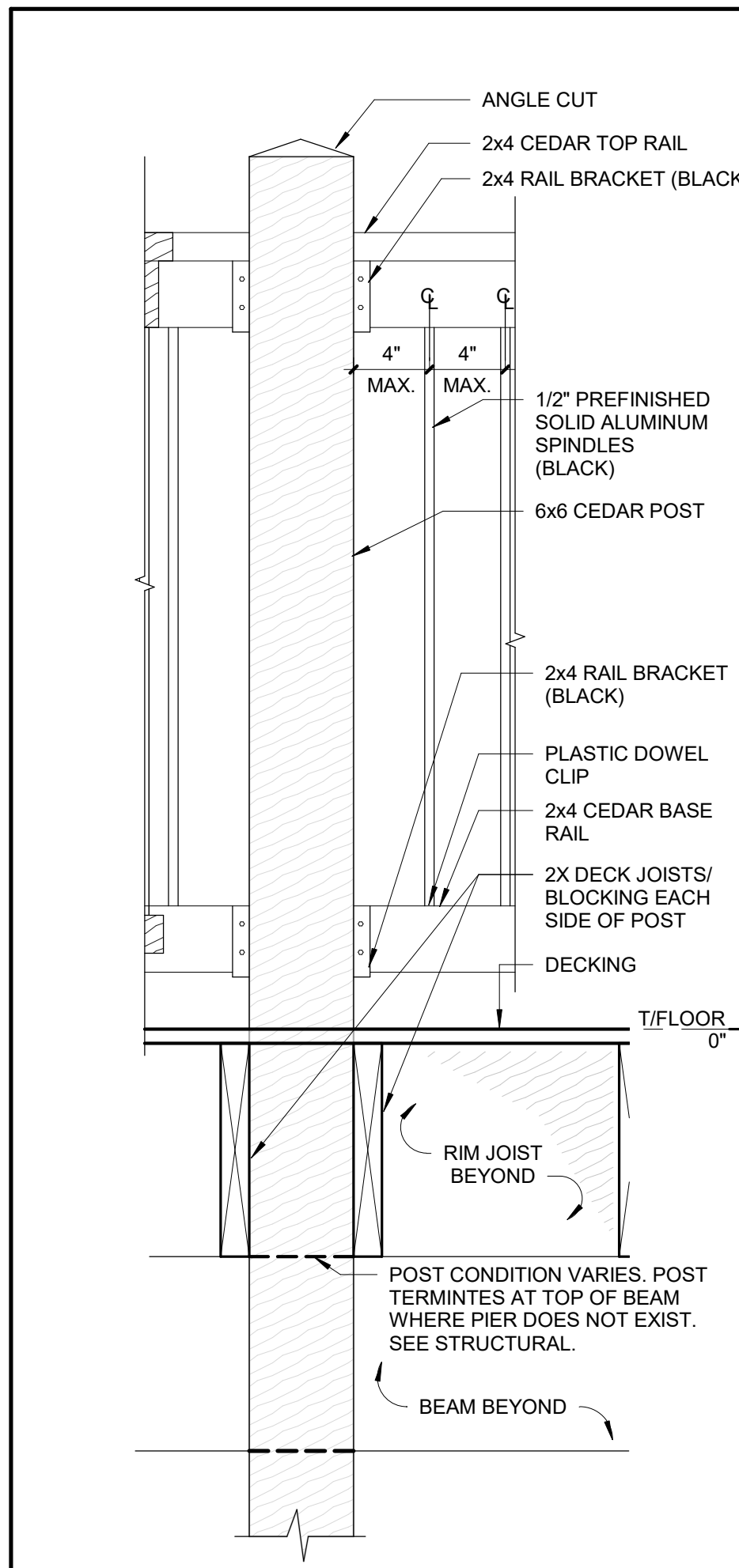
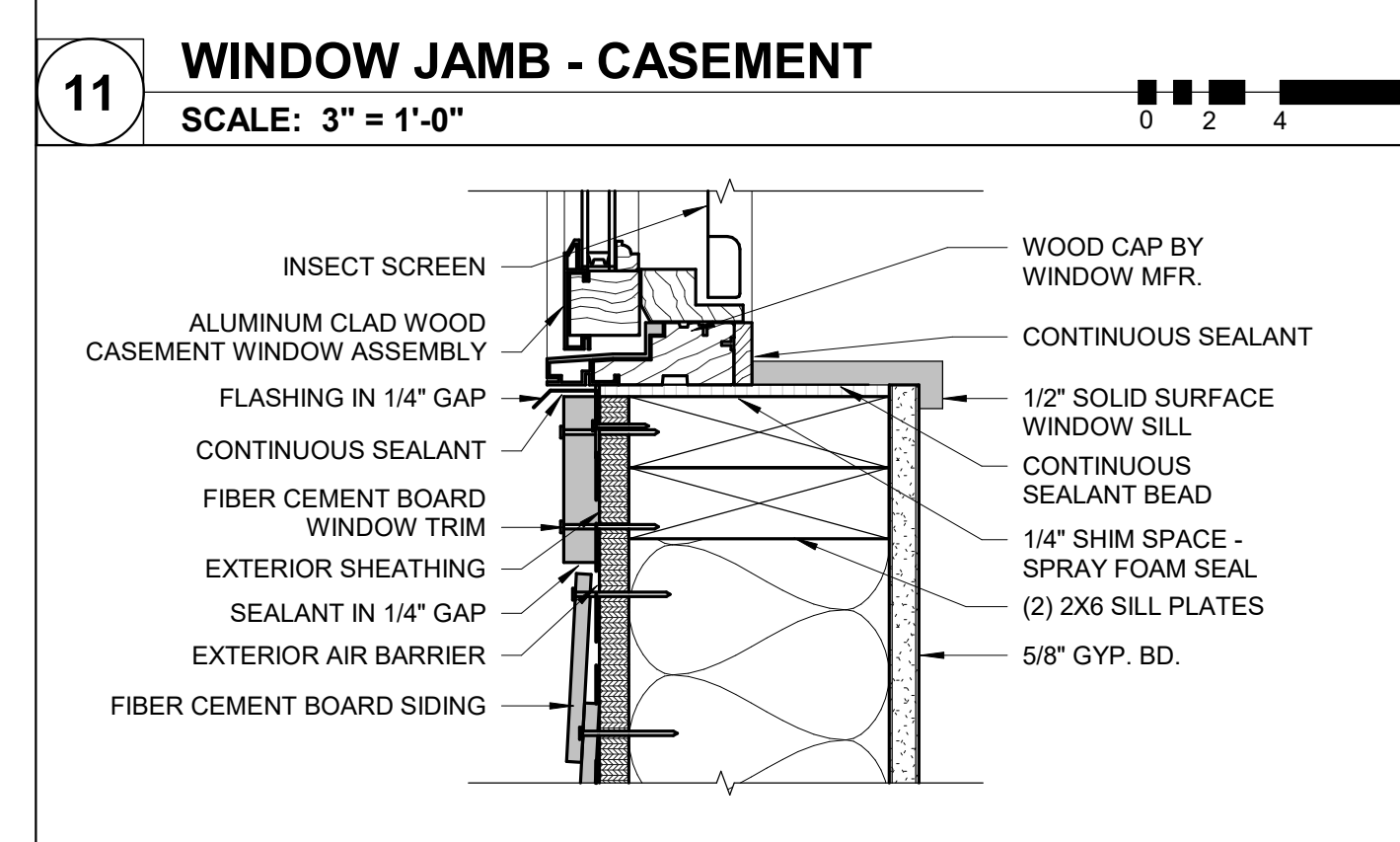
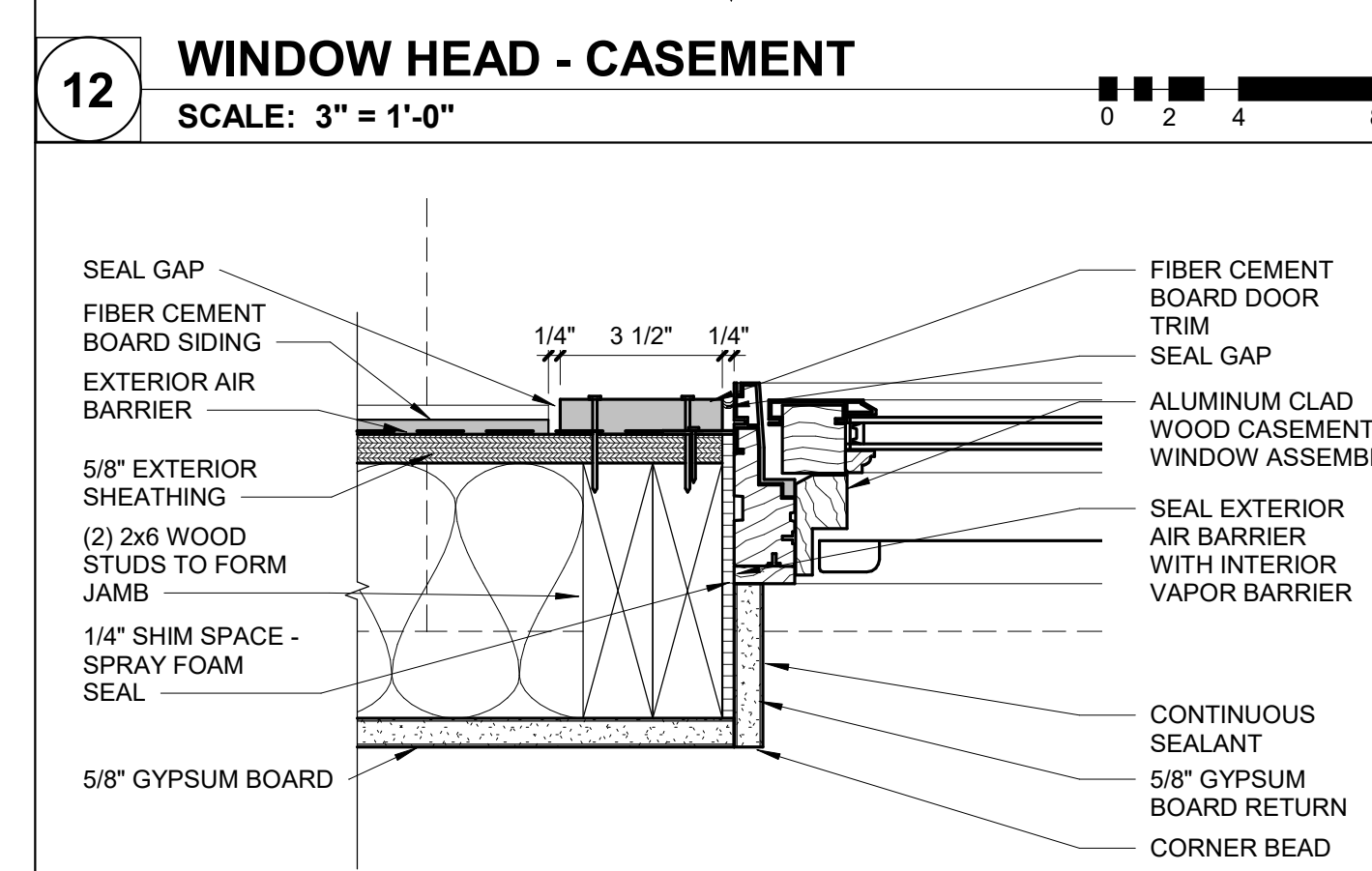
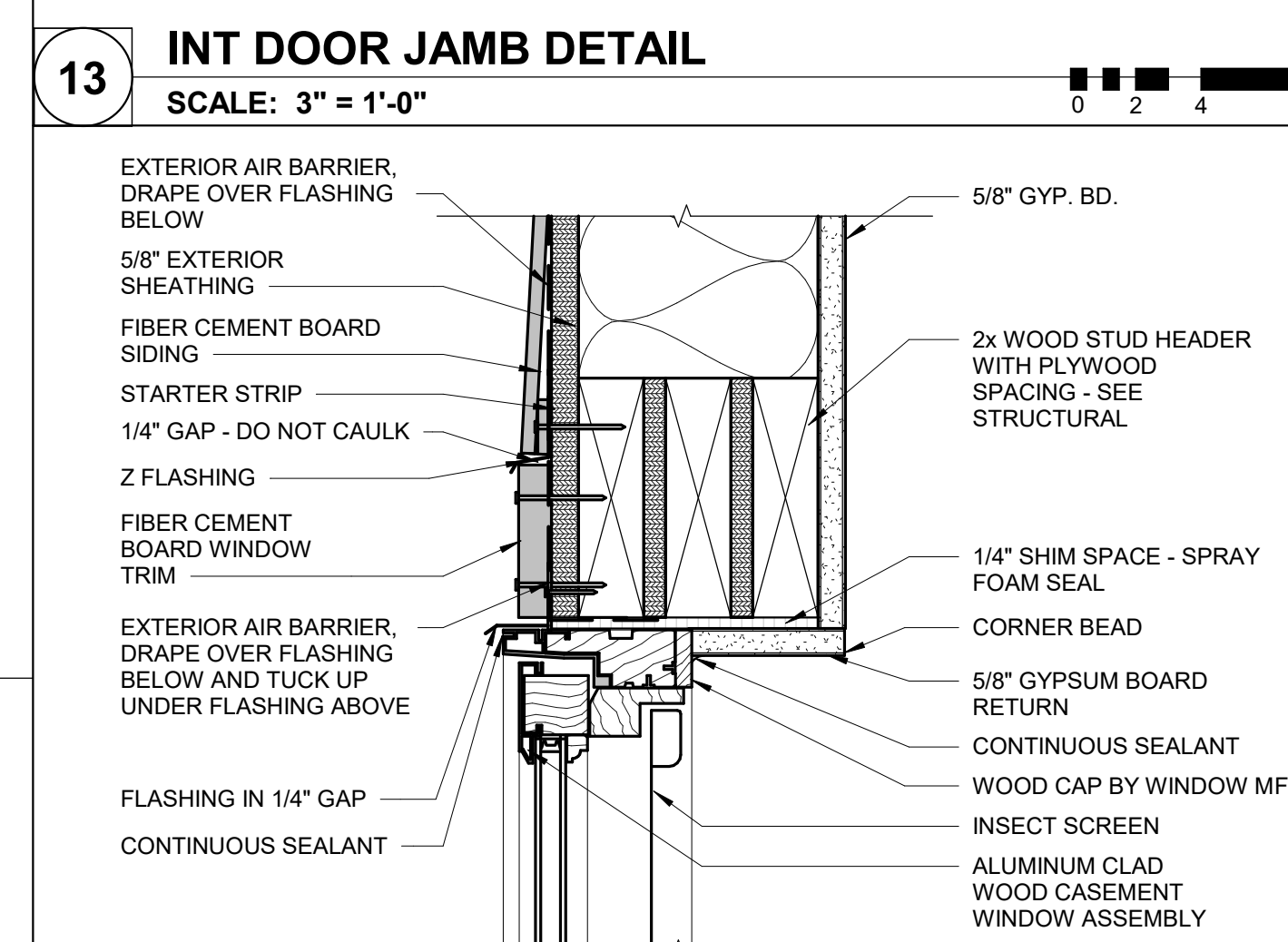
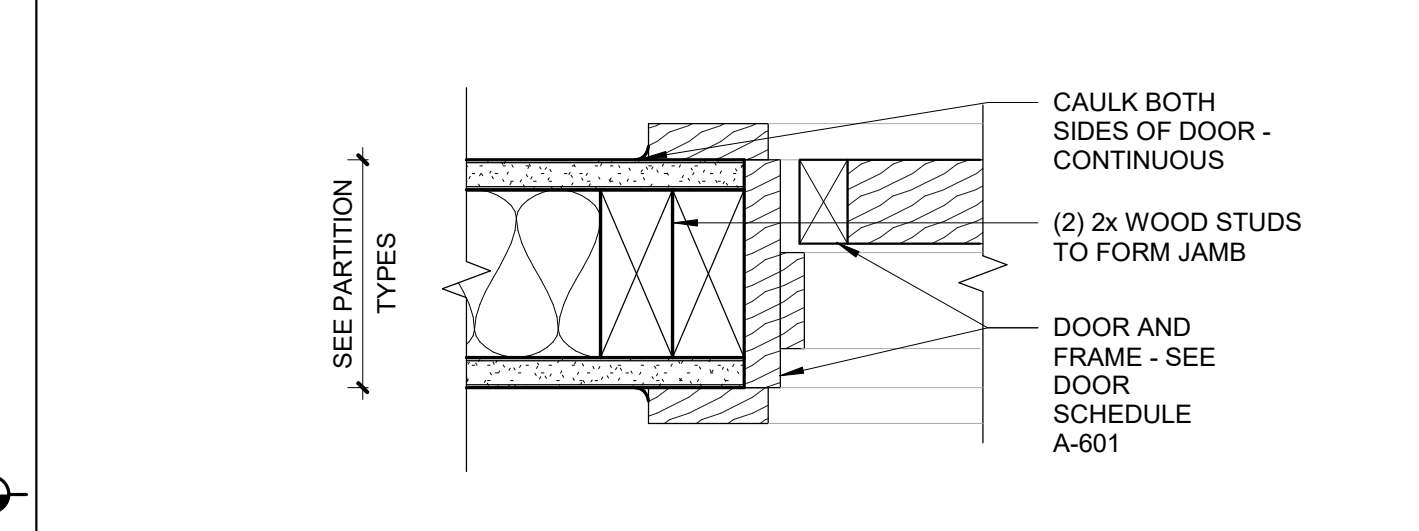
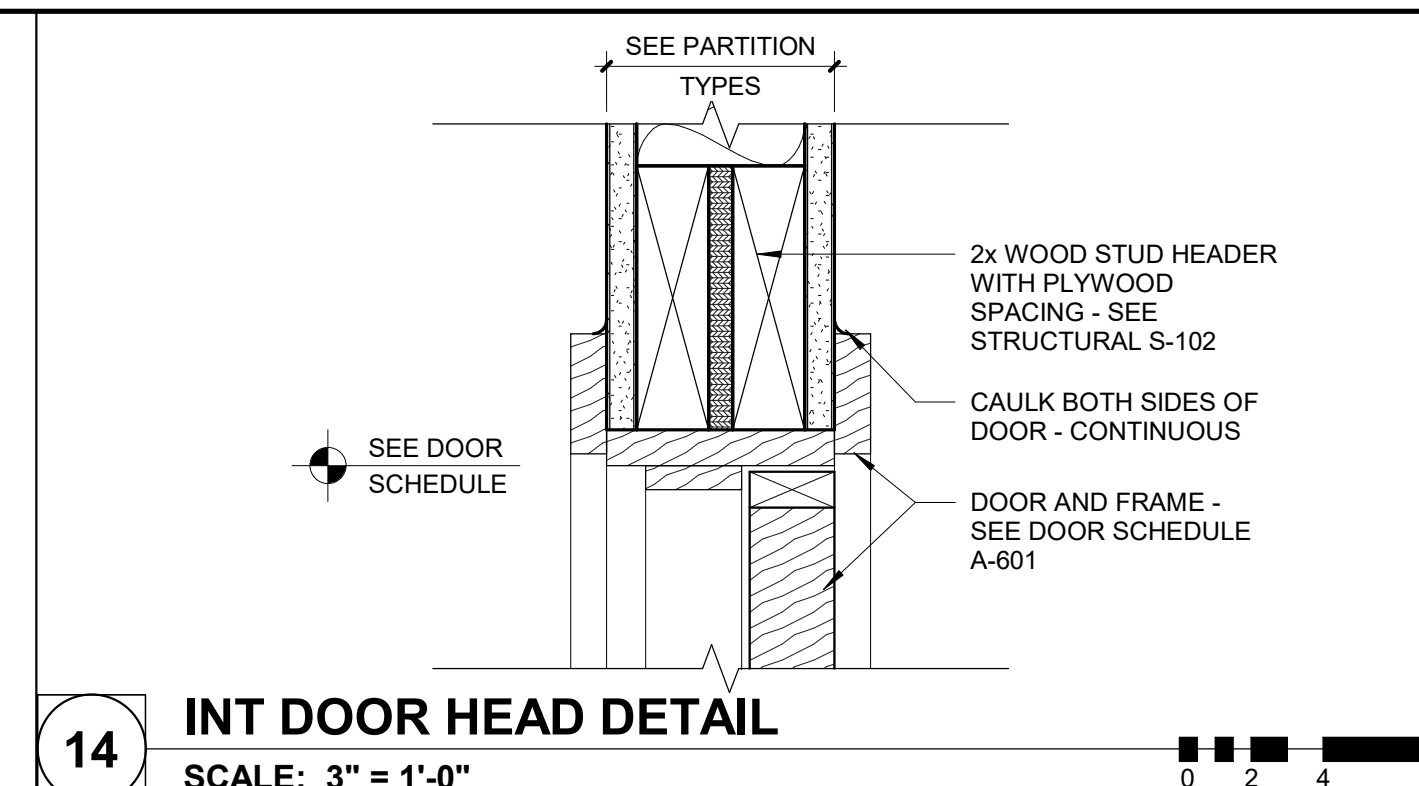
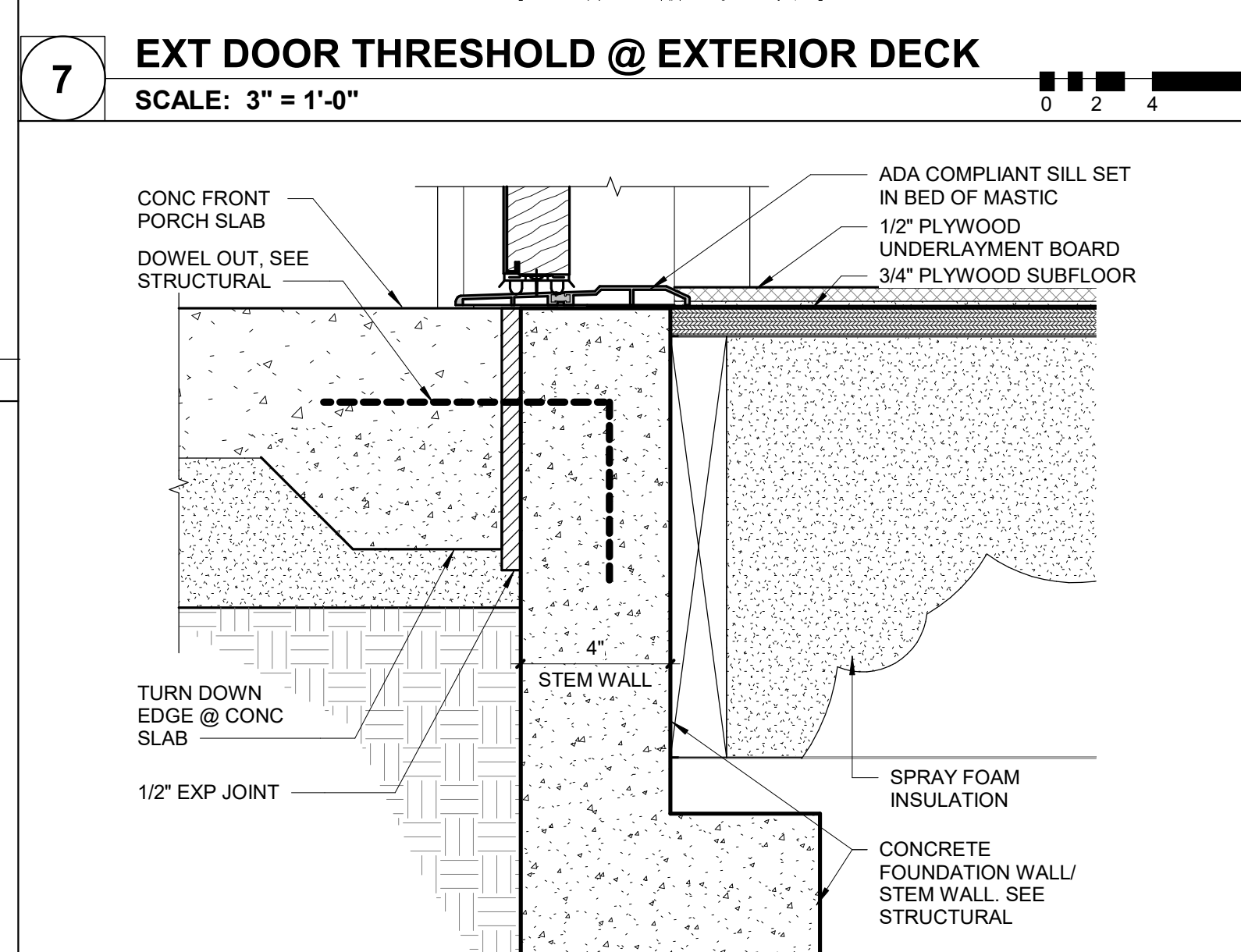
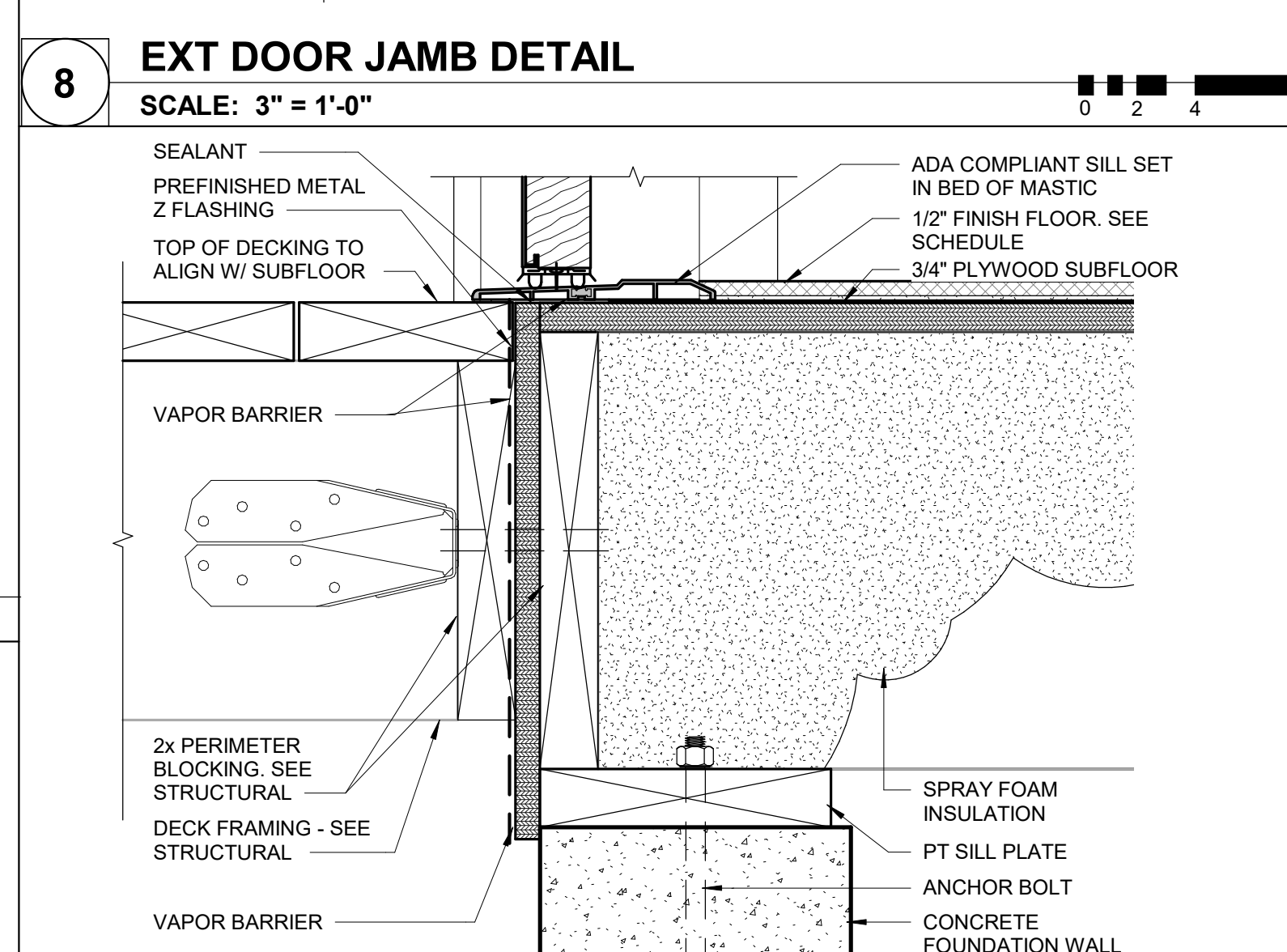
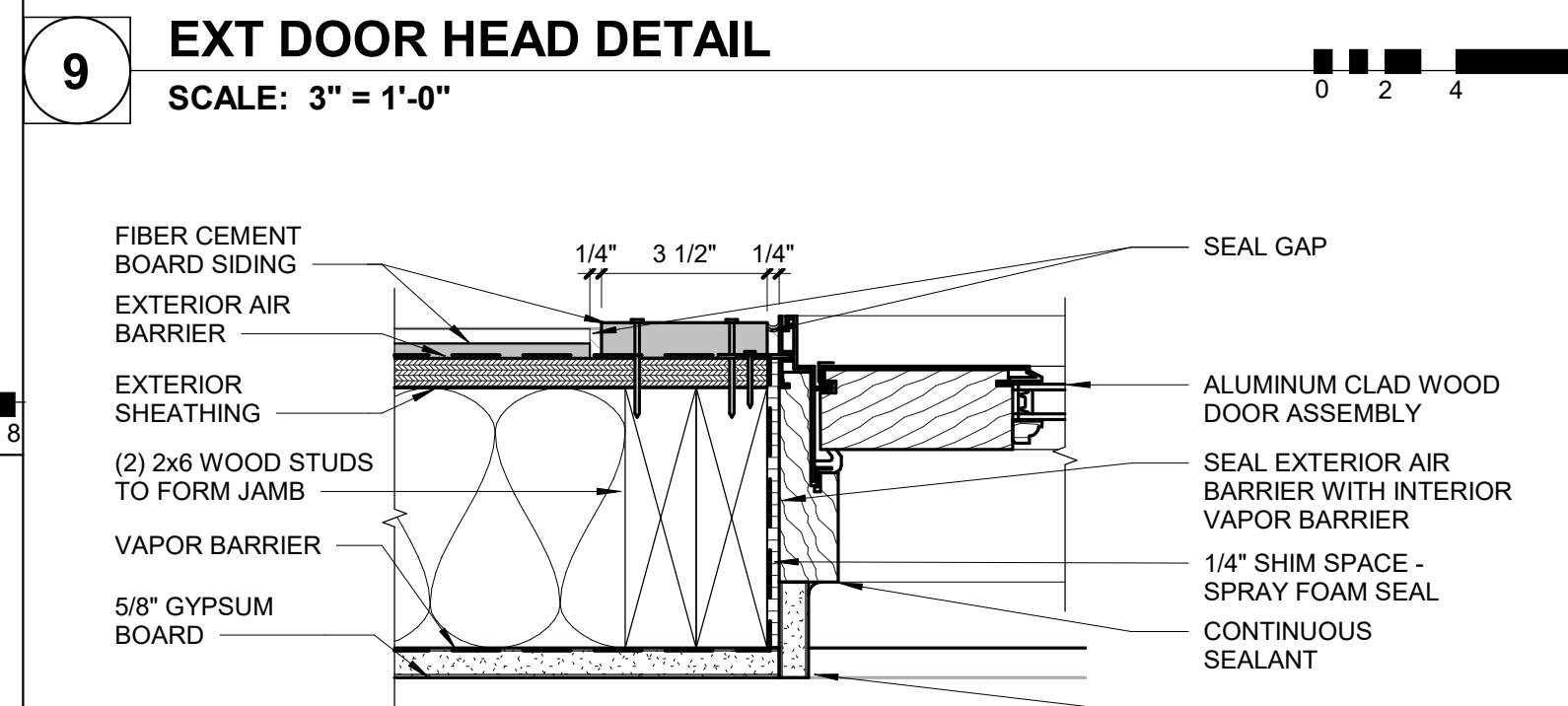
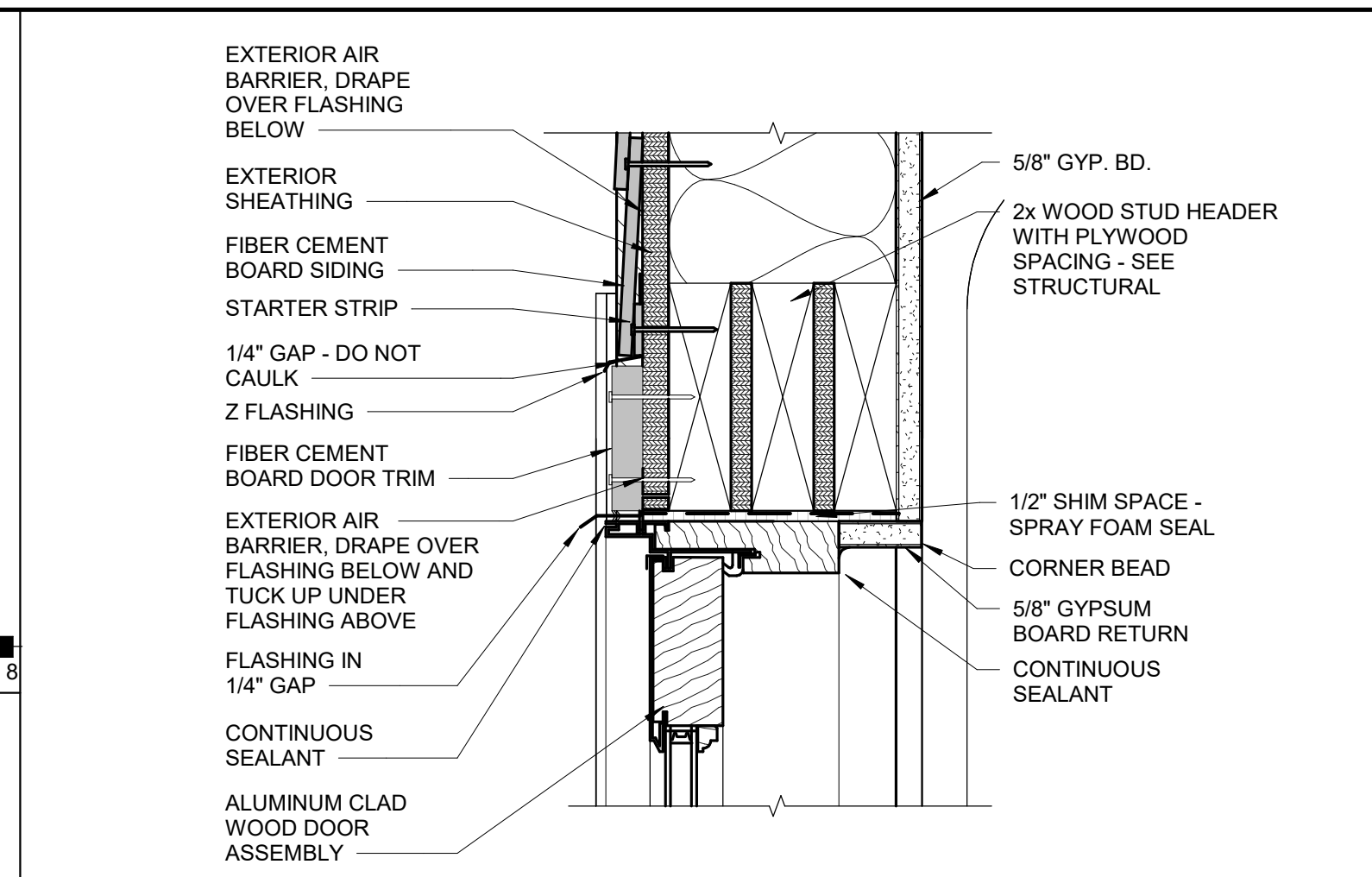
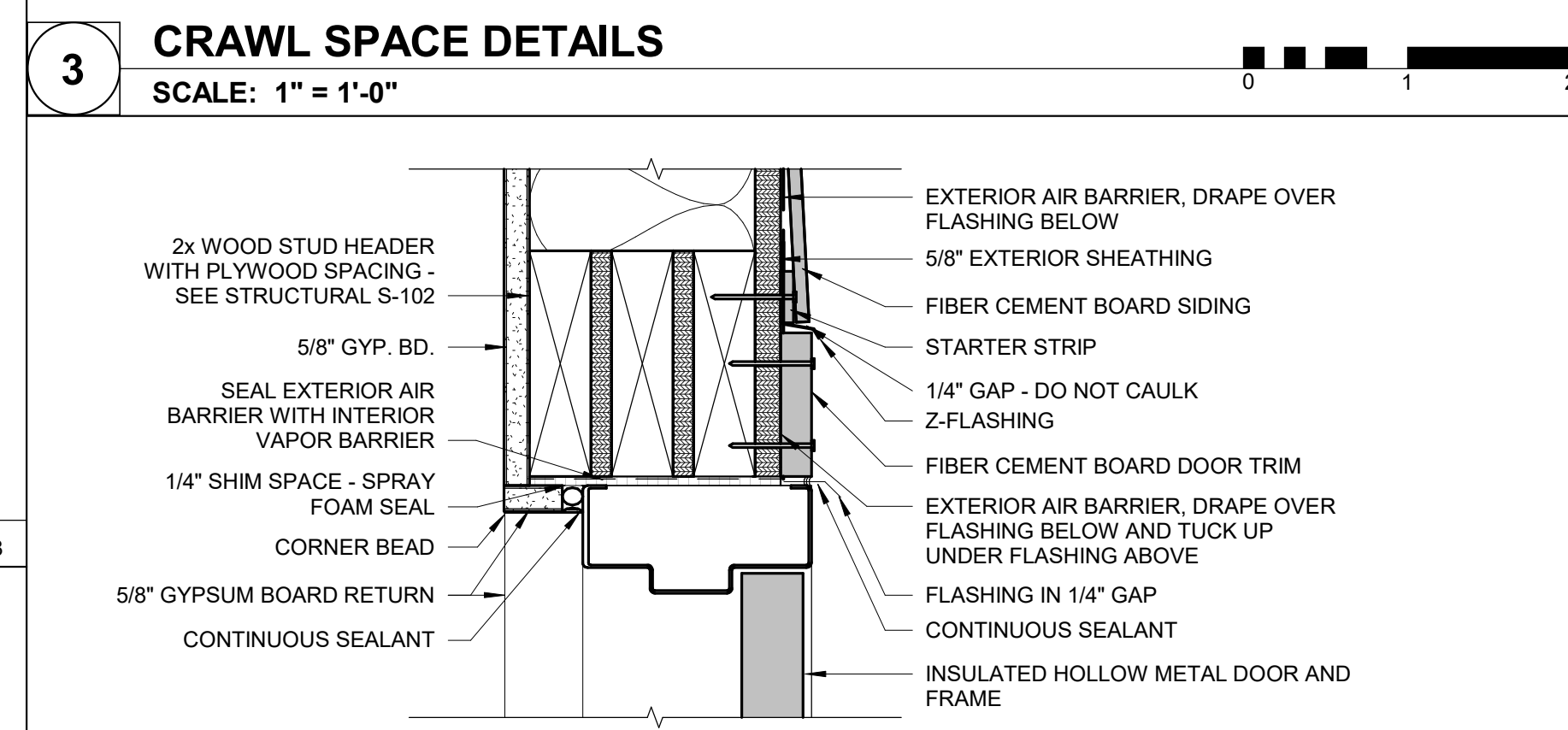
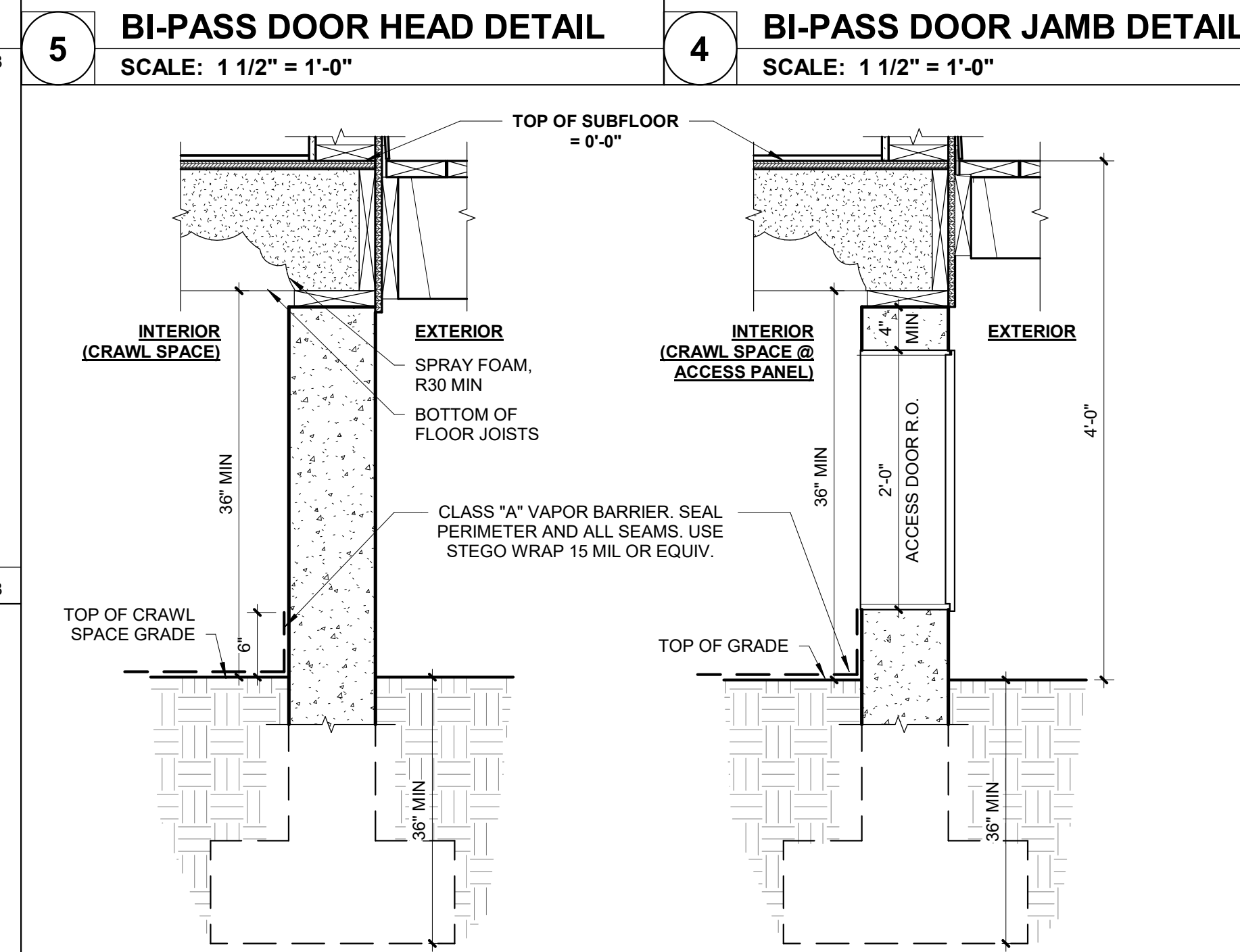
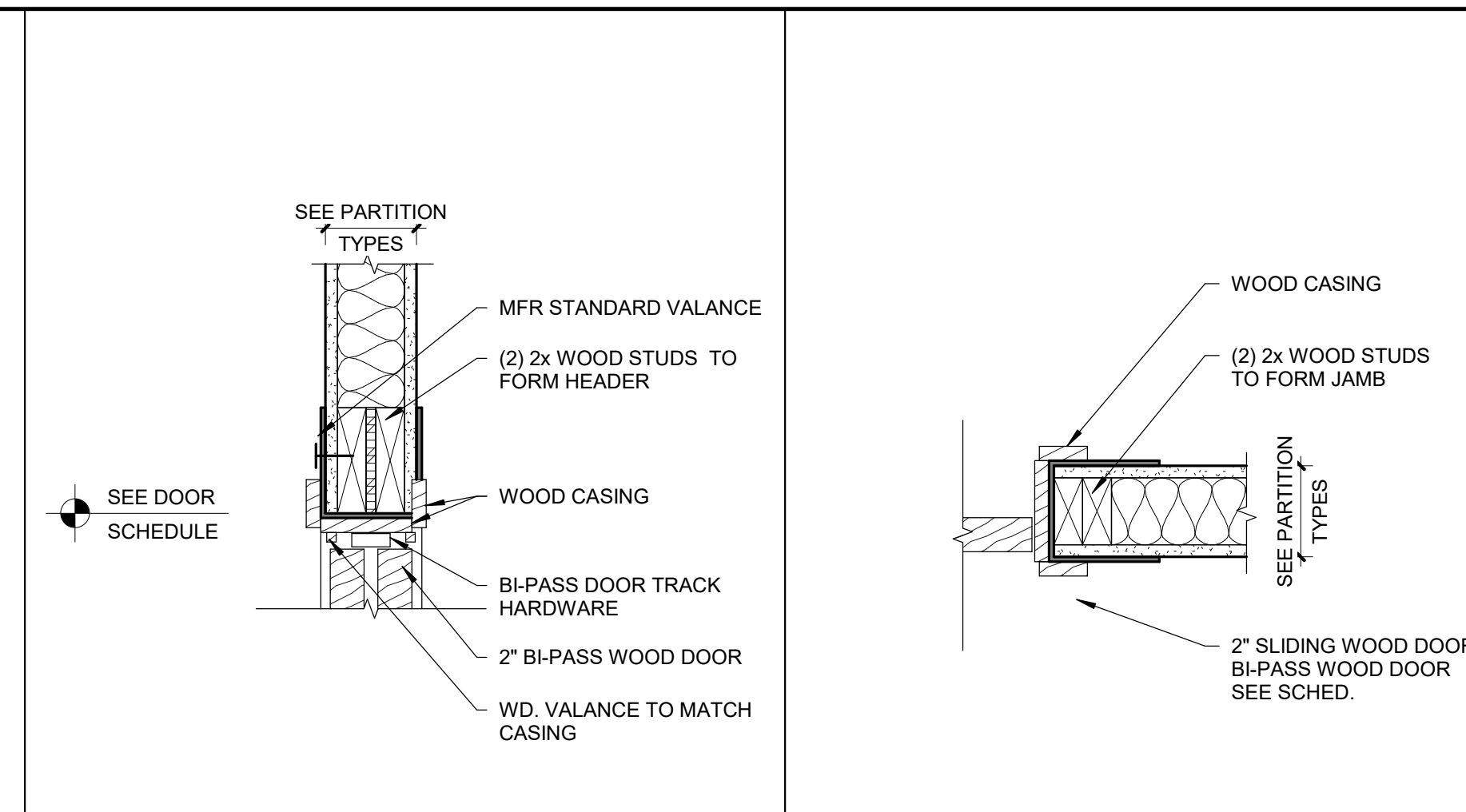
DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:
GENERAL DETAILS

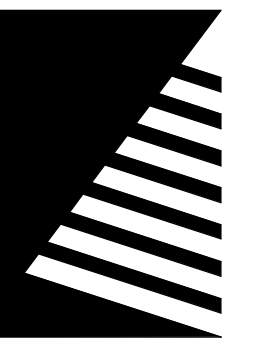
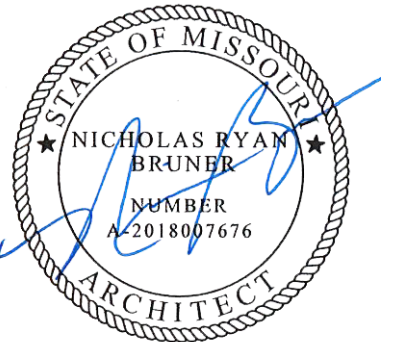
SHEET NUMBER:

A-501

SHEET 39 of 75
ISSUE DATE: 03/02/2023



20/03/2023 11:28:36 AM



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RESOURCES DIVISION OF STATE
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ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #.: X2208-01
SITE #.: 5235
FACILITY #.: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:	
7815235017 - Cabin 500	X	
7815235019 - Cabin 501	X	
7815235020 - Cabin 502	X	
7815235021 - Cabin 503	X	
7815235022 - Cabin 504	X	
7815235023 - Cabin 505	X	

DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

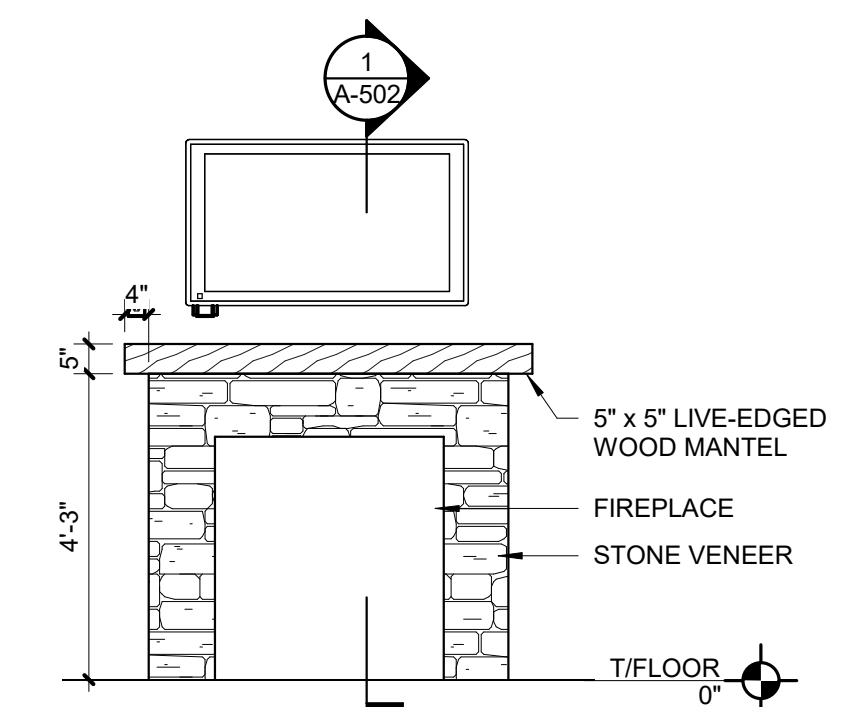
SHEET TITLE: GENERAL DETAILS

SHEET NUMBER:

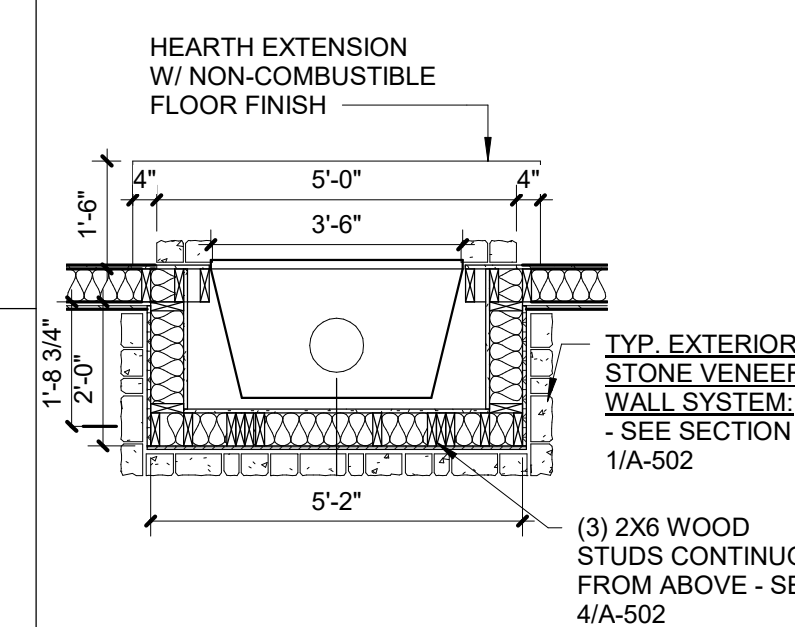
A-502

SHEET 40 of 75
ISSUE DATE: 03/02/2023

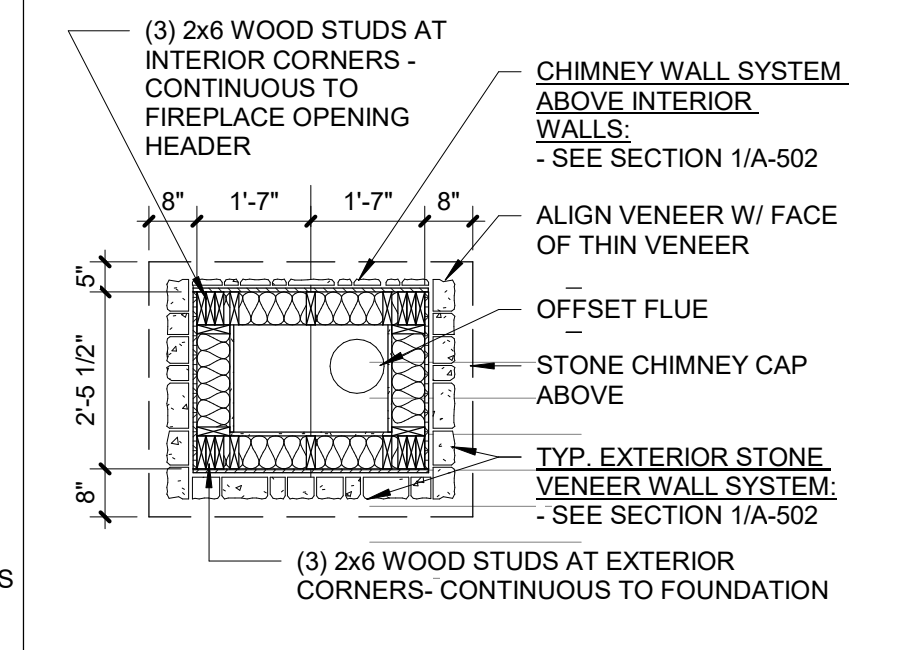
FIREPLACE DETAILS



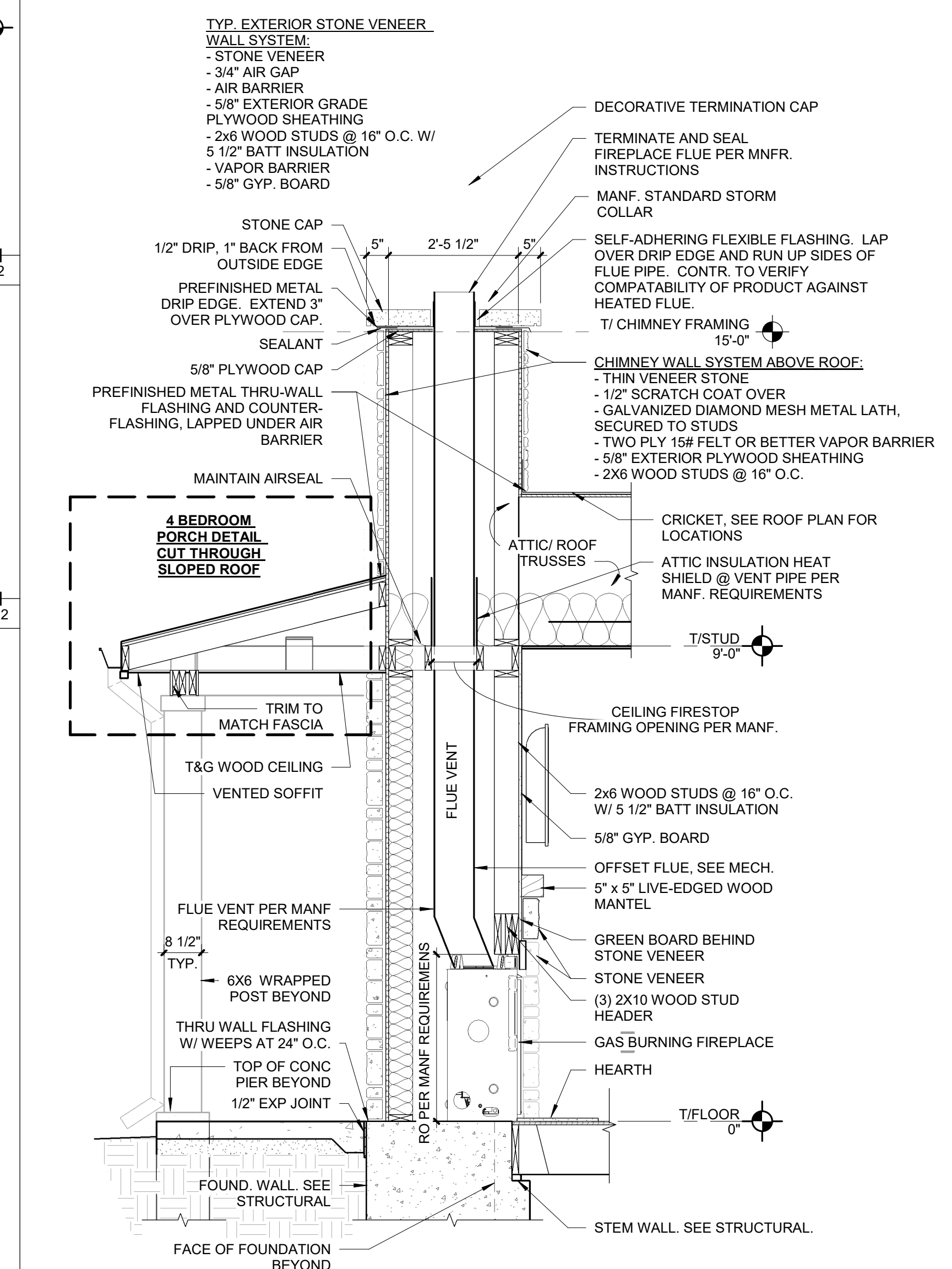
4 FRONT ELEVATION
SCALE: 3/8" = 1'-0"



3 PLAN SECTION
SCALE: 3/8" = 1'-0"

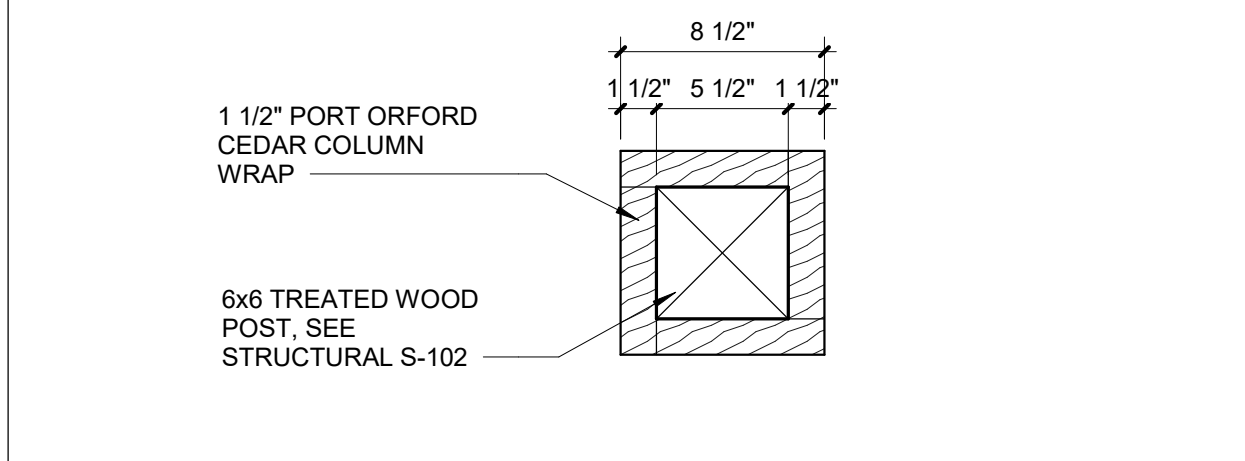


2 CHIMNEY PLAN SECTION
SCALE: 3/8" = 1'-0"

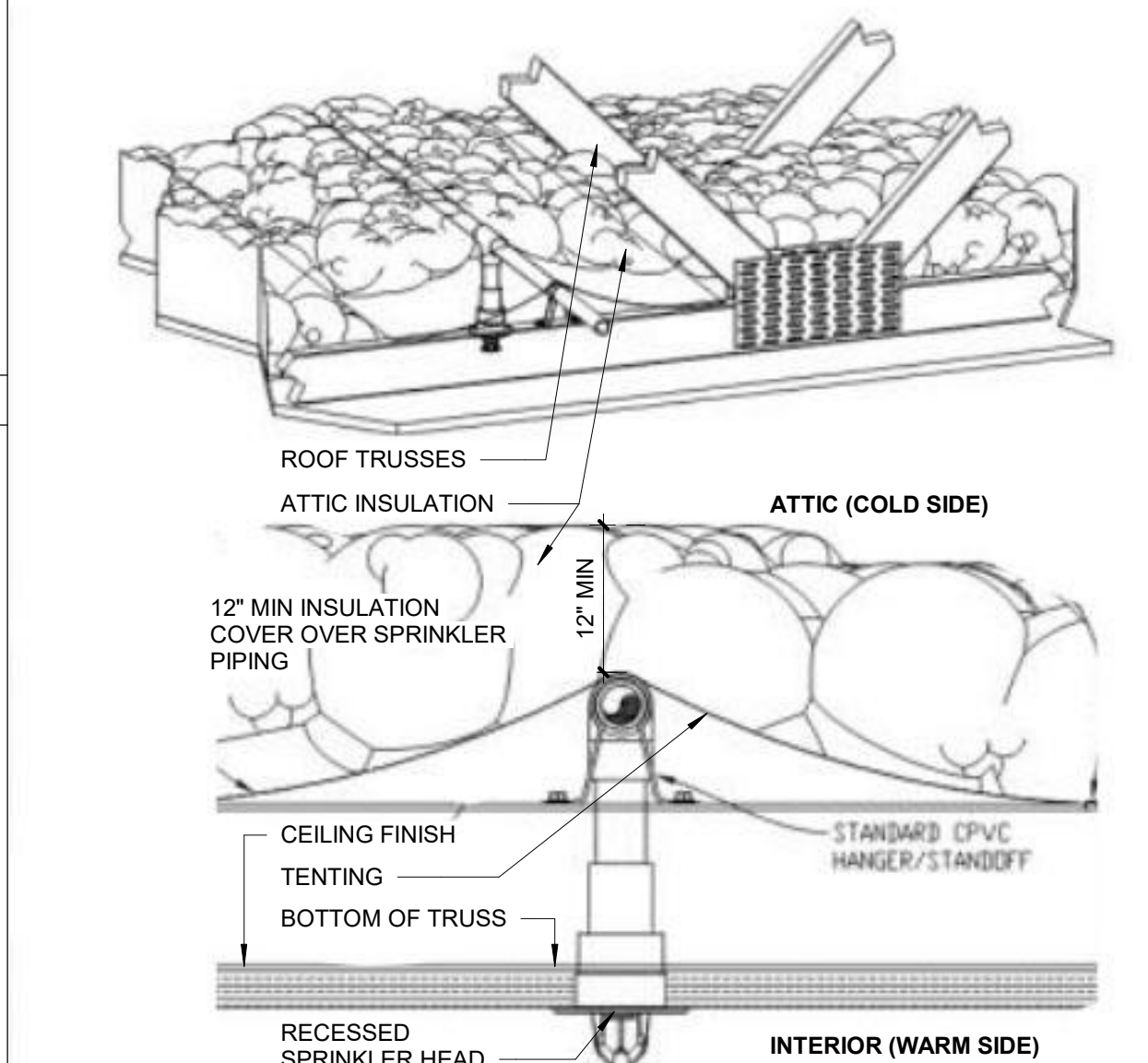


1 TYP FIREPLACE SECTION
SCALE: 1/2" = 1'-0"

7 CEILING ACCESS PANEL
SCALE: 1" = 1'-0"

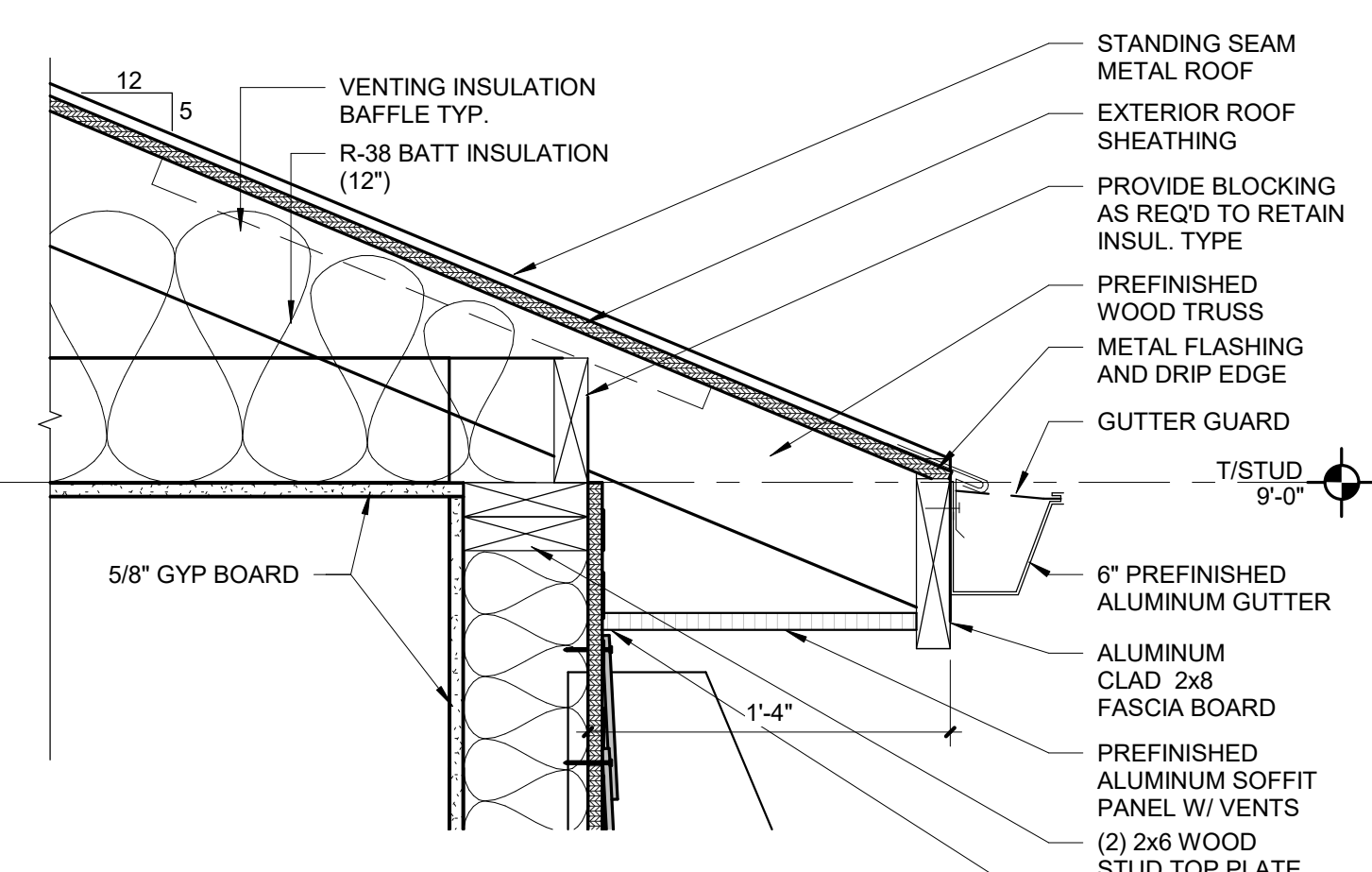


6 Column Wrap Detail
SCALE: 1 1/2" = 1'-0"

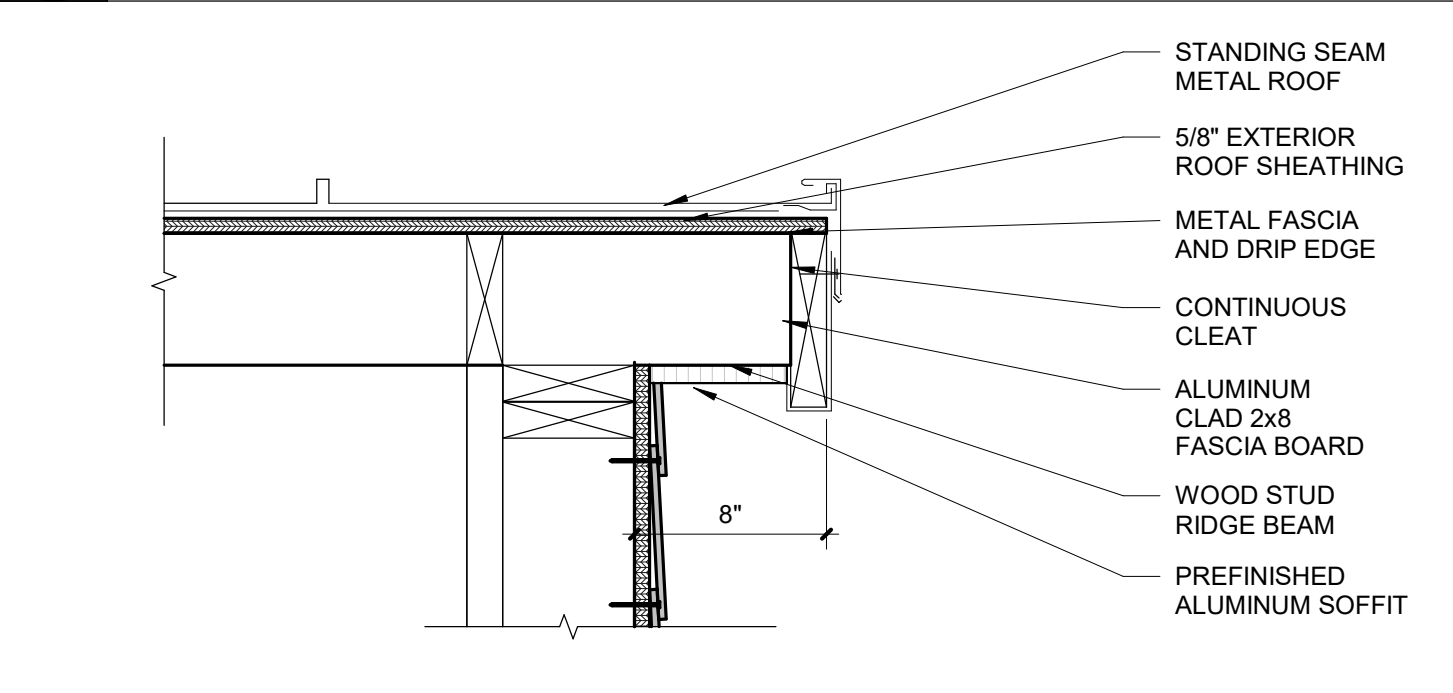


5 CEILING SPRINKLER DETAIL
SCALE: 1/2" = 1'-0"

11 OUTSIDE CORNER
SCALE: 3" = 1'-0"

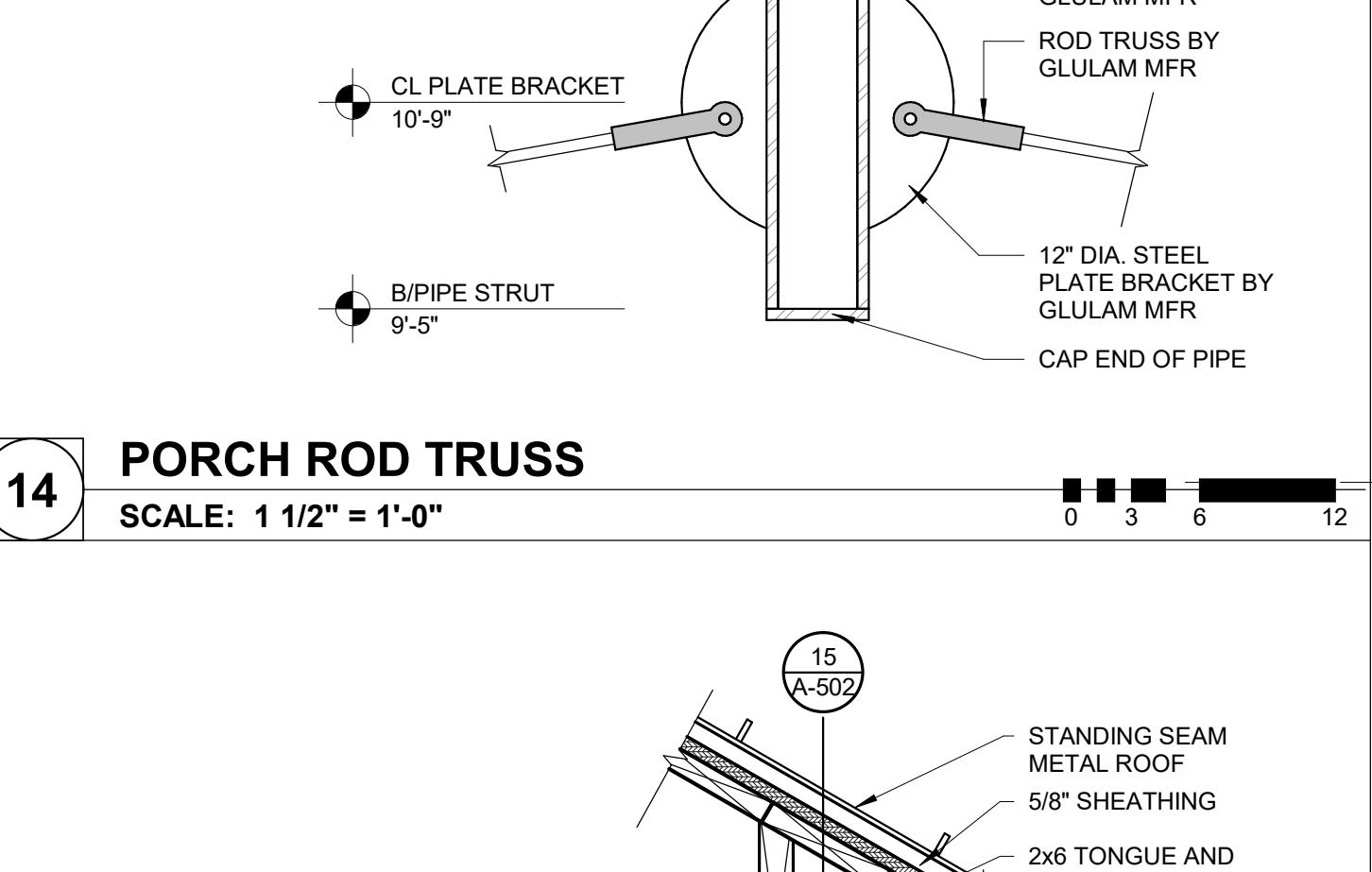


10 EXT SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"

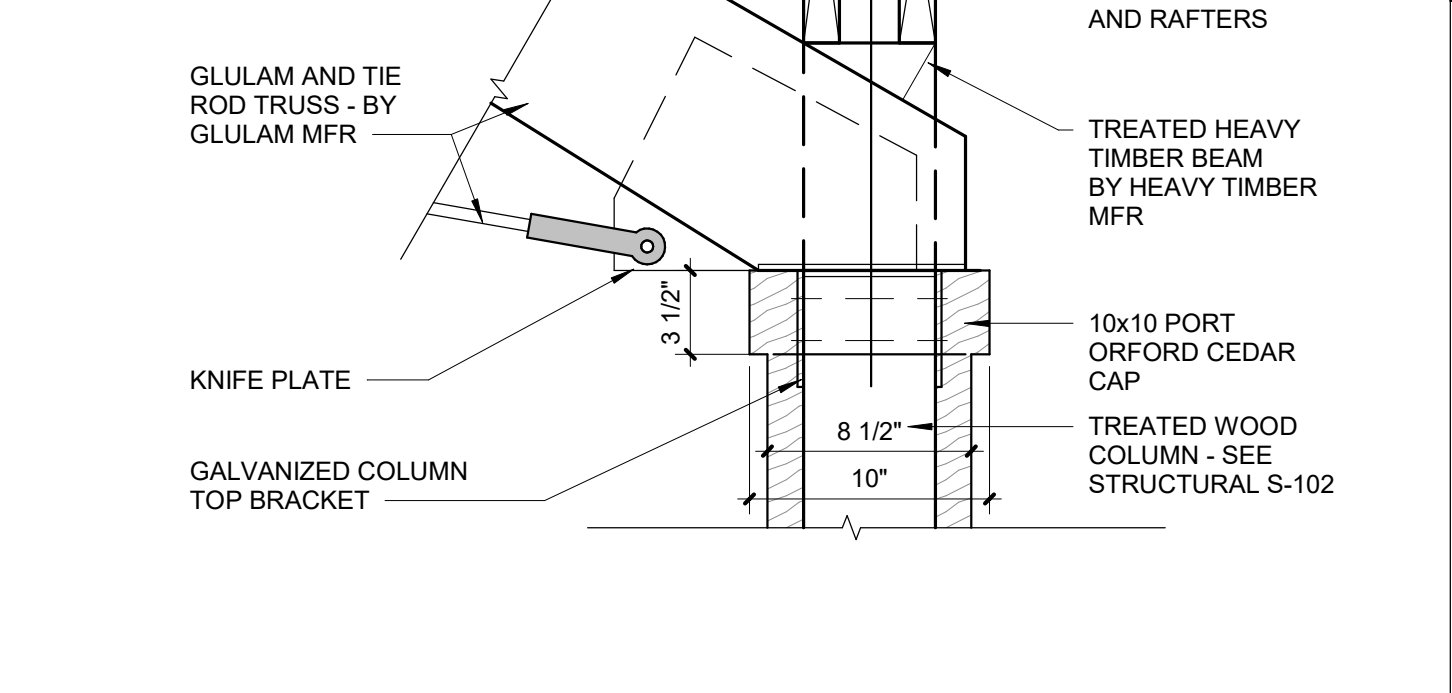


9 ROOF GABLE END RAKE DETAIL
SCALE: 1 1/2" = 1'-0"

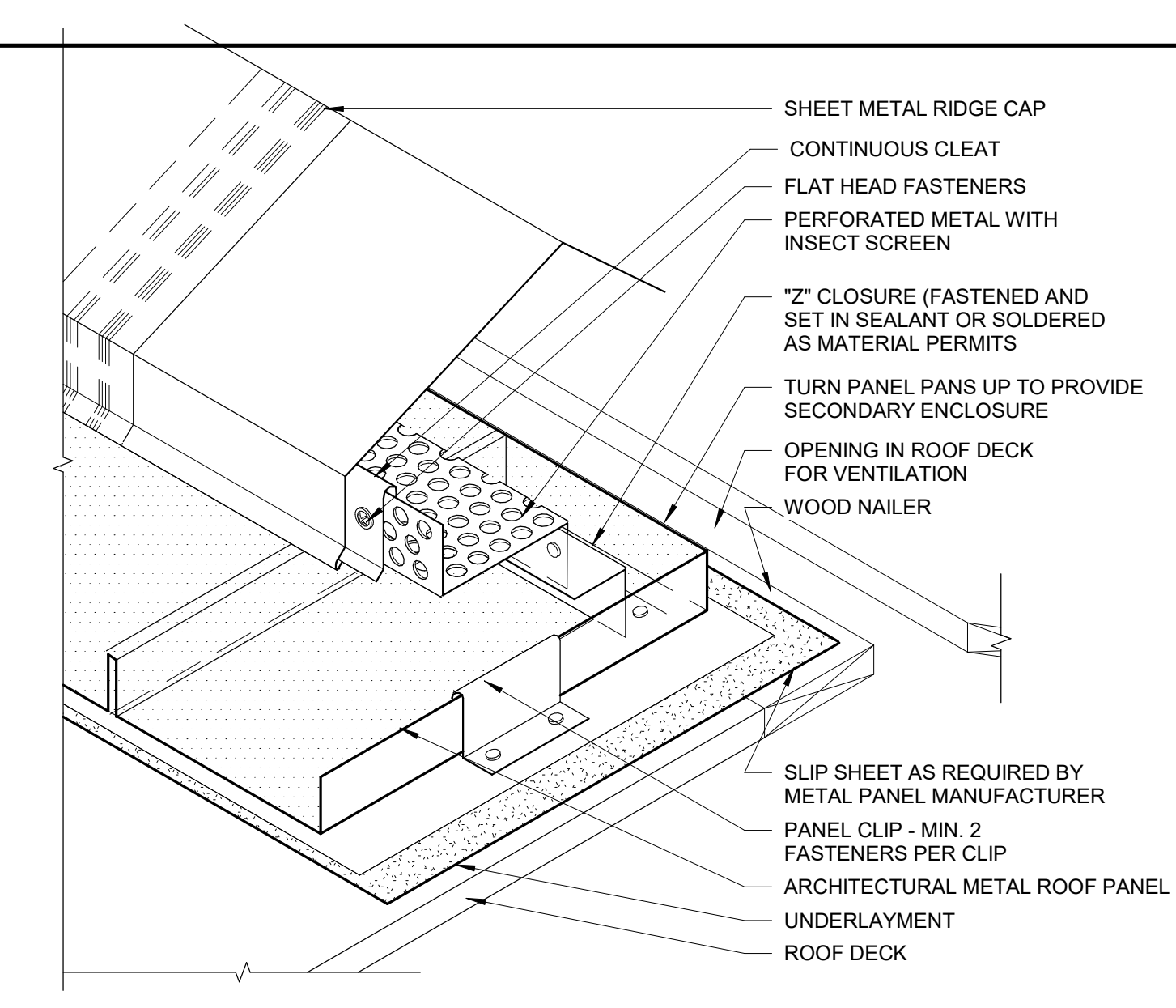
15 PORCH RAFTER TO COLUMN CONNECTION
SCALE: 1 1/2" = 1'-0"



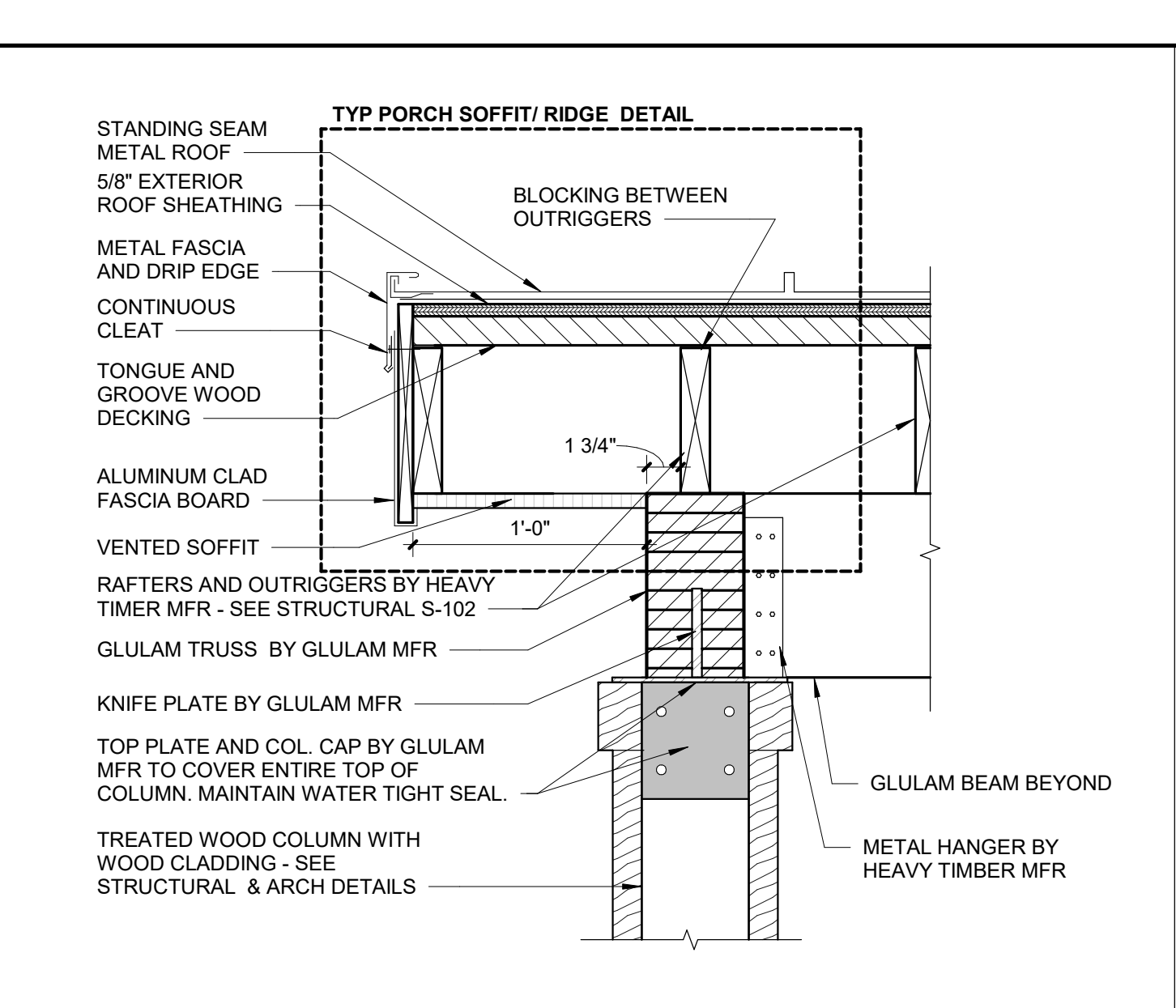
14 PORCH ROD TRUSS
SCALE: 1 1/2" = 1'-0"



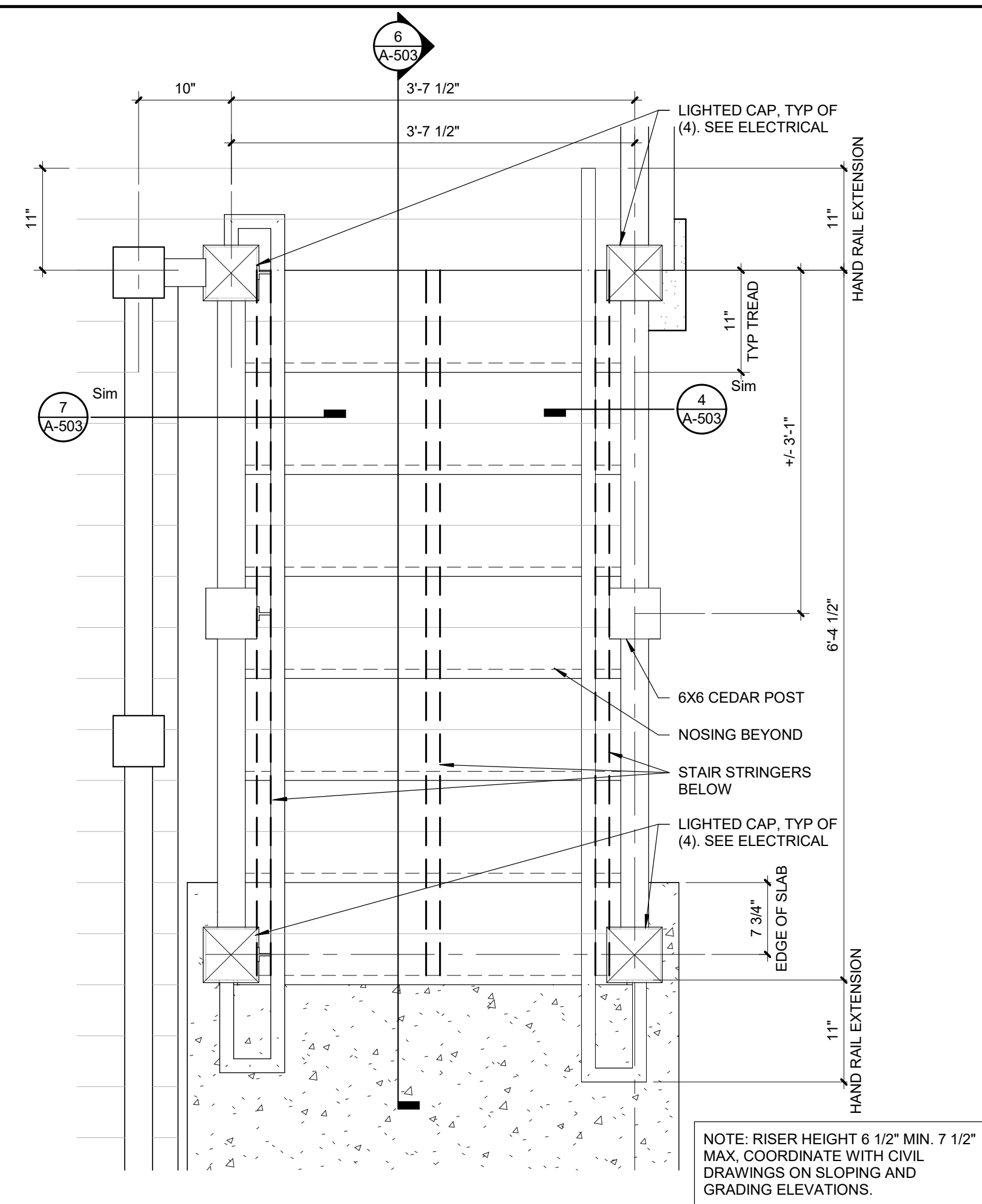
13 PORCH TRUSS CONNECTION
SCALE: 1 1/2" = 1'-0"



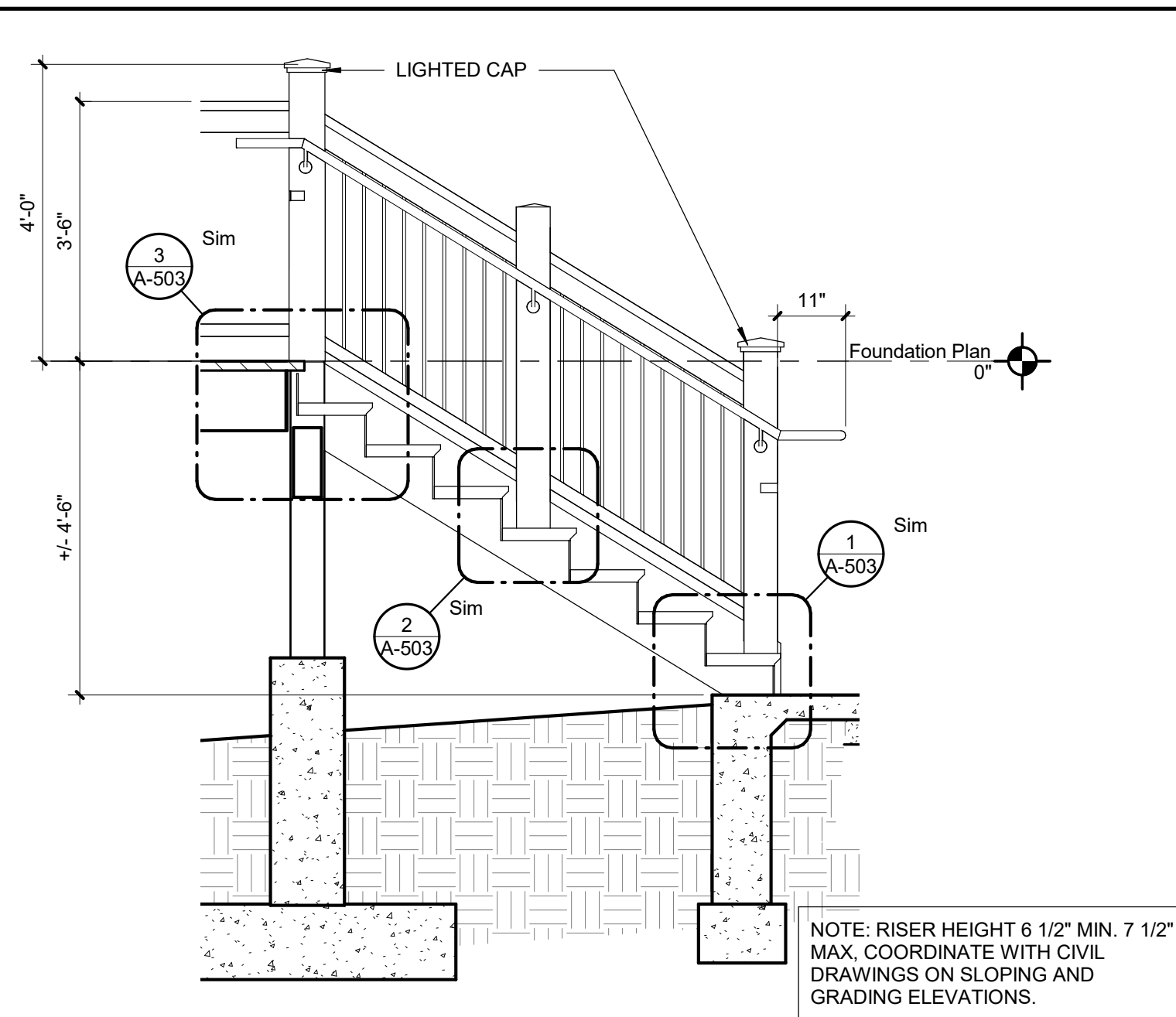
12 VENTED RIDGE CAP DETAIL
SCALE: 3" = 1'-0"



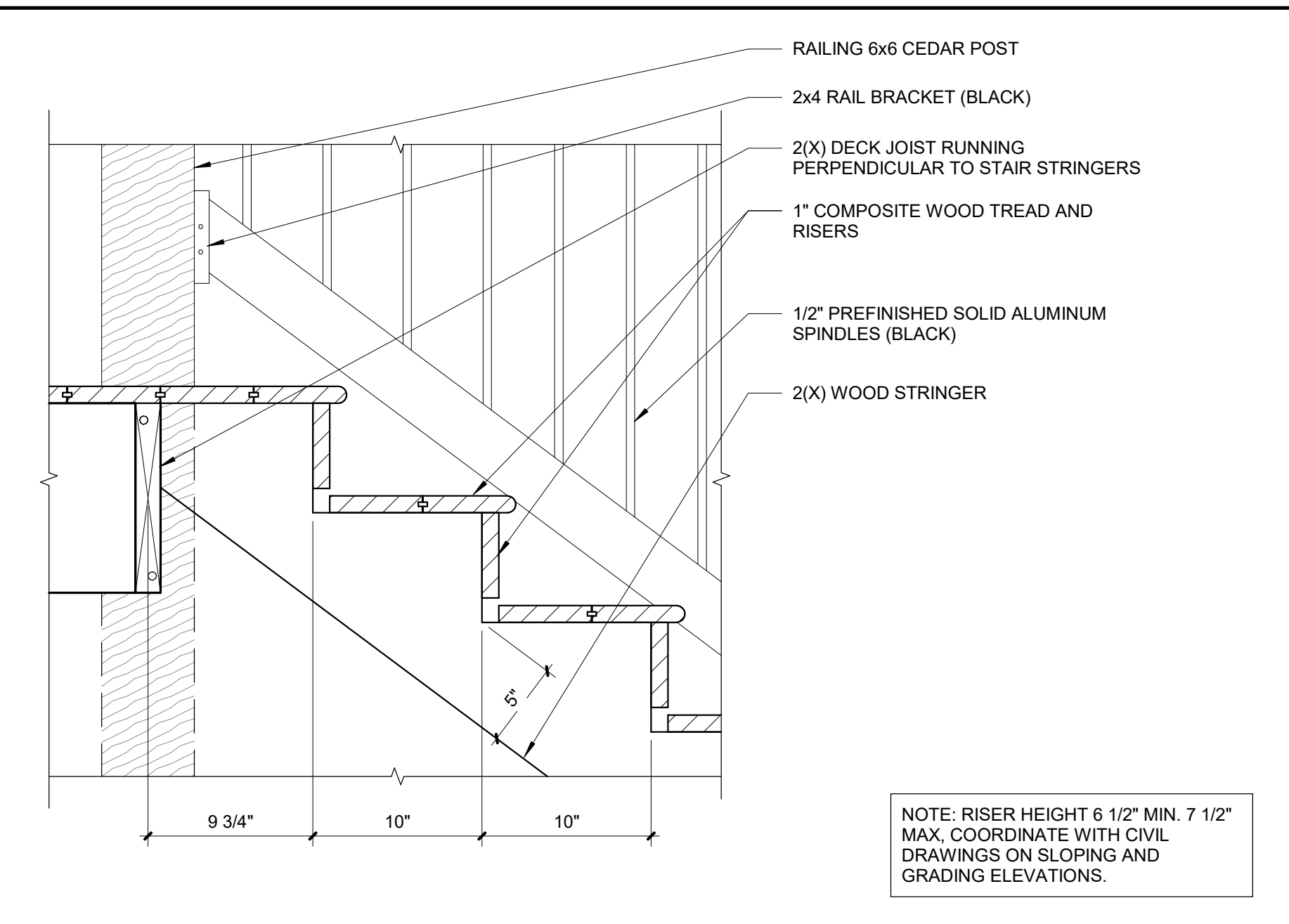
15 TYP PORCH SOFFIT/RIDGE DETAIL
SCALE: 1 1/2" = 1'-0"



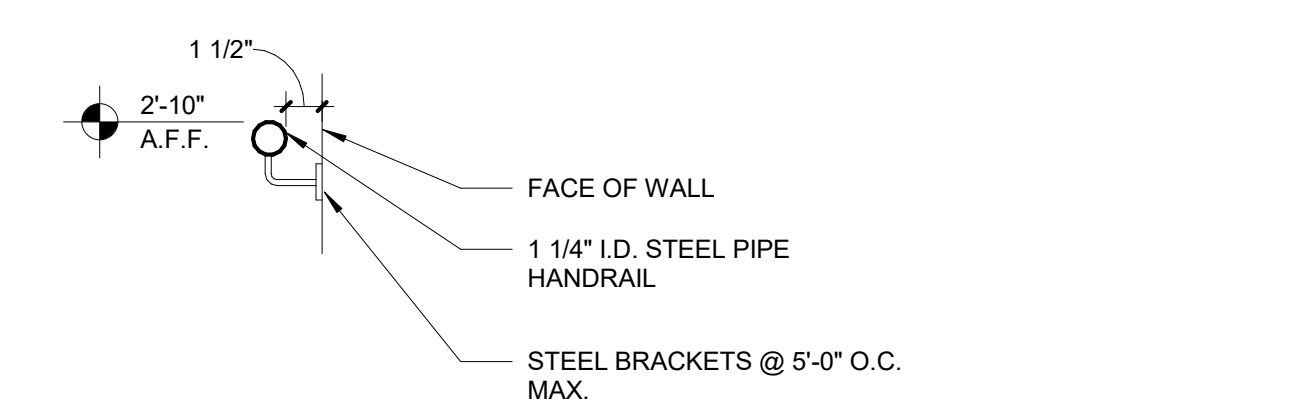
8 ENLARGED DECK STAIR PLAN
SCALE: 1" = 1'-0"



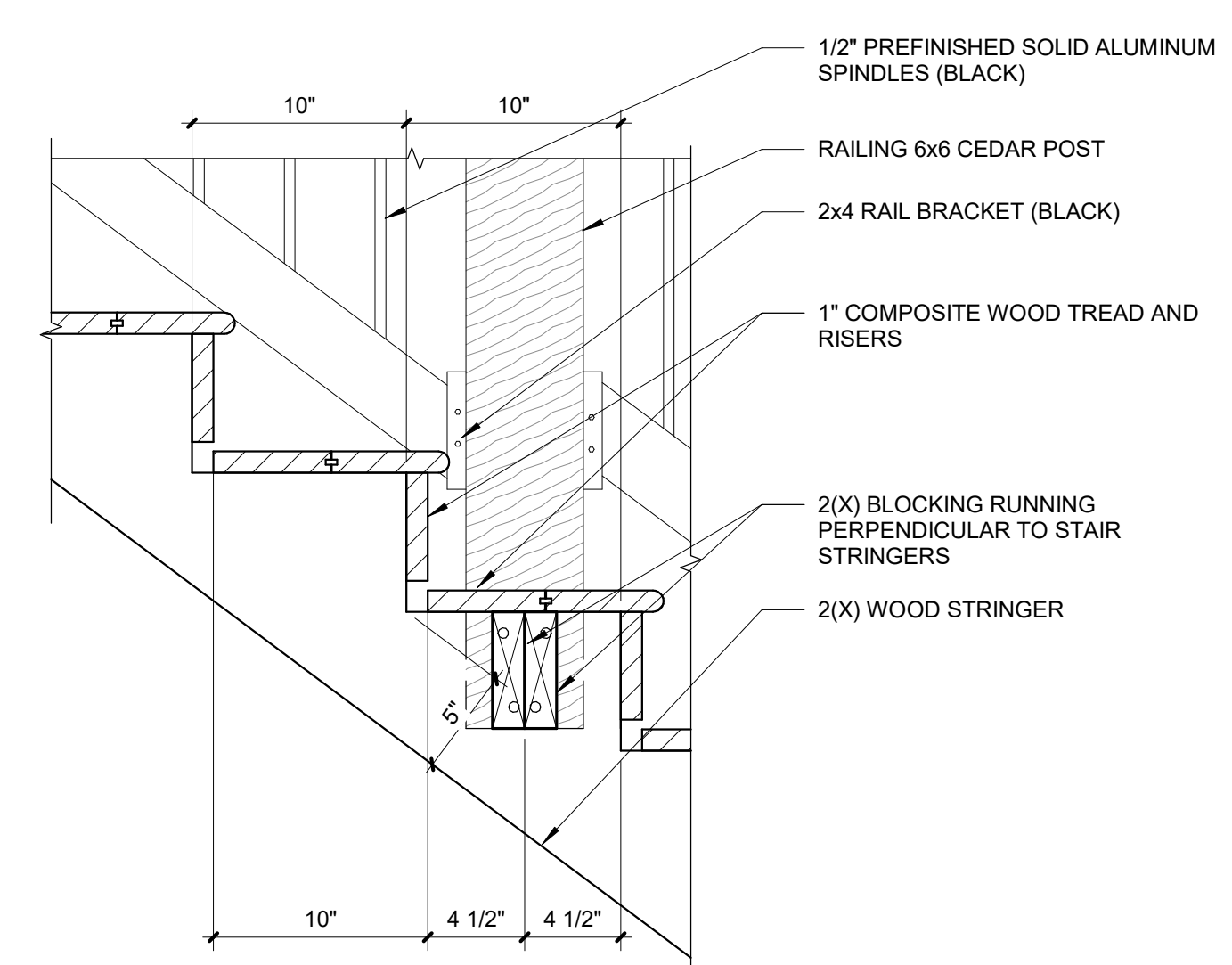
6 STAIR SECTION
SCALE: 1/2" = 1'-0"



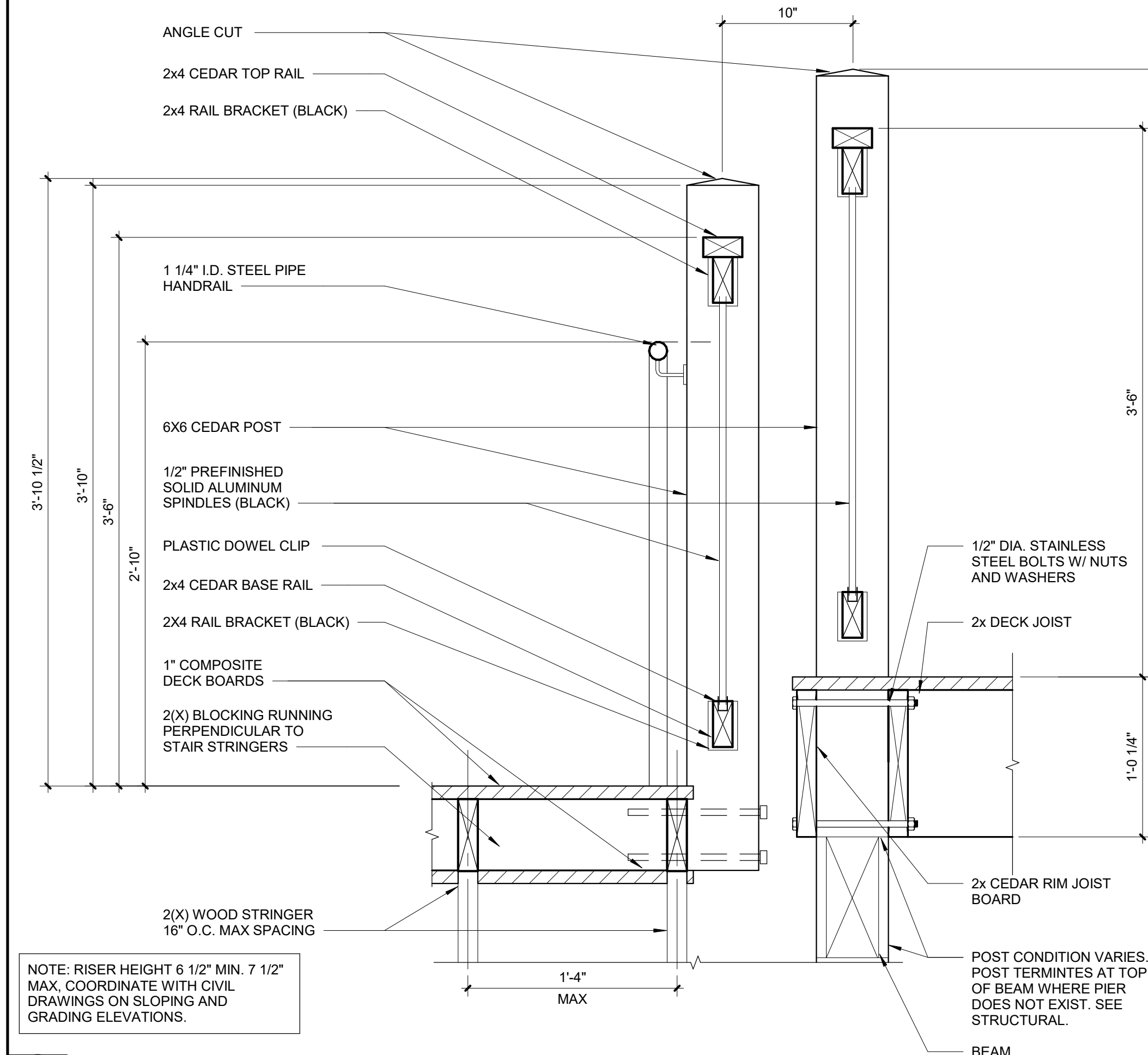
3 COMPOSITE WOOD - TOP STAIR DETAIL
SCALE: 1 1/2" = 1'-0"



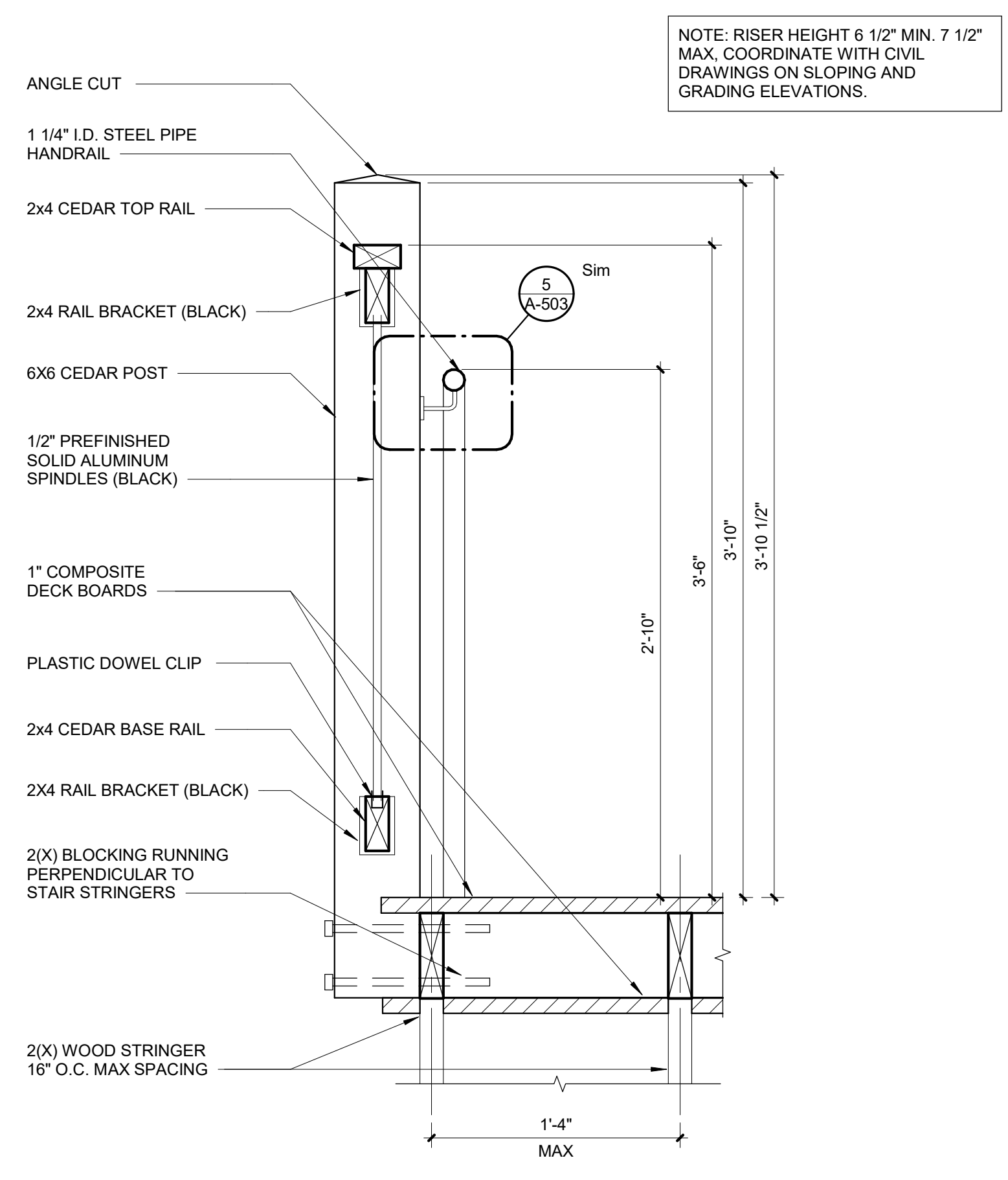
5 WALL MOUNTED HANDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"



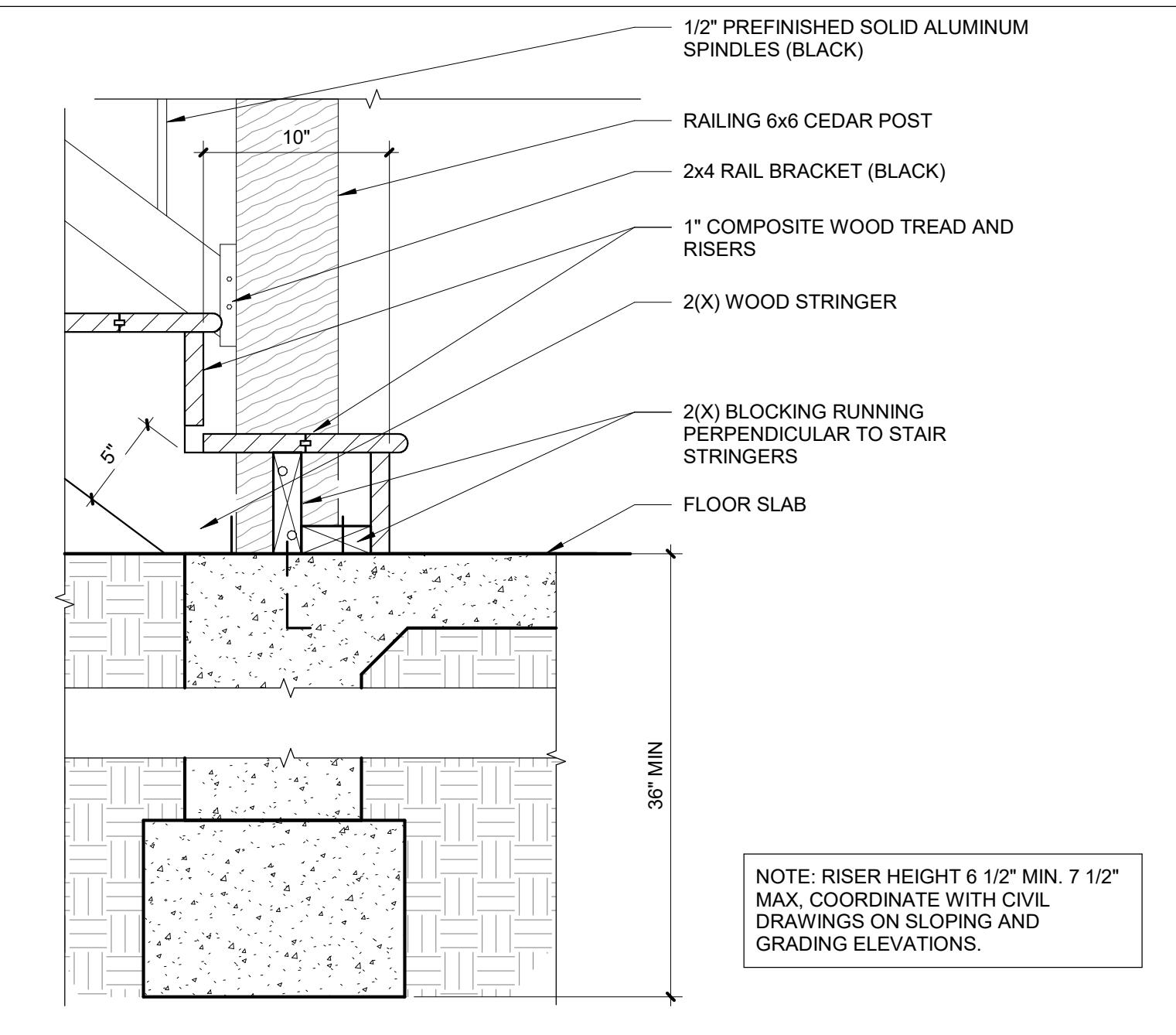
2 COMPOSITE WOOD - TYPICAL STAIR DETAIL
SCALE: 1 1/2" = 1'-0"



7 STAIR STRINGER/DECK GUARDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"



4 GUARDRAIL @ COMPOSITE WOOD STAIR DETAIL
SCALE: 1 1/2" = 1'-0"



1 COMPOSITE WOOD - BASE STAIR DETAIL
SCALE: 1 1/2" = 1'-0"



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

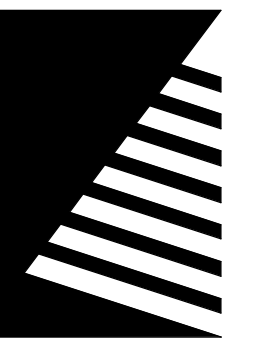
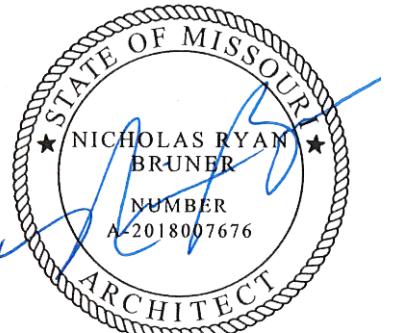
Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:
**GENERAL STAIR
DETAILS**

SHEET NUMBER:

A-503



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PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

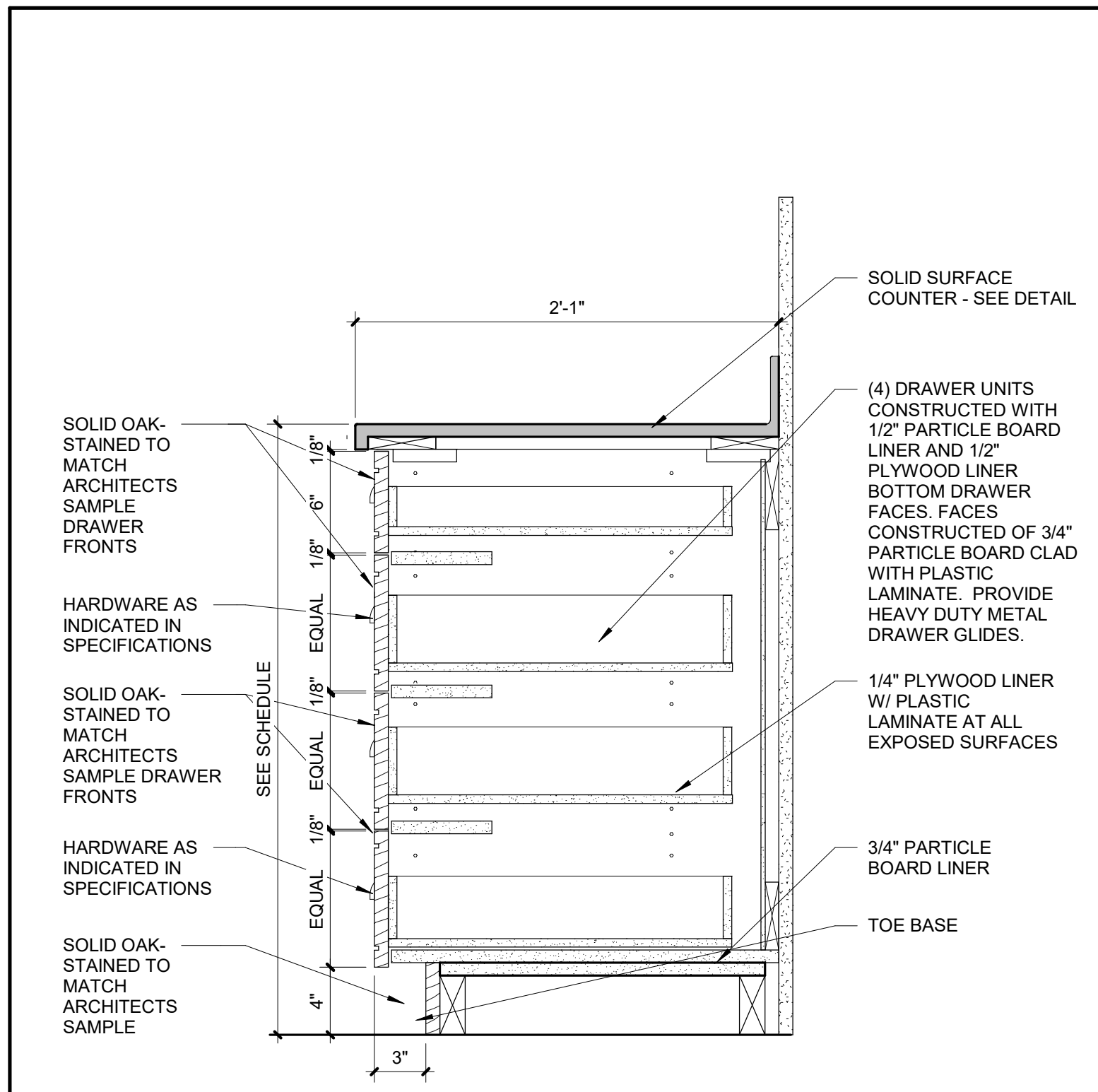
DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:
**GENERAL
CASEWORK DETAILS**

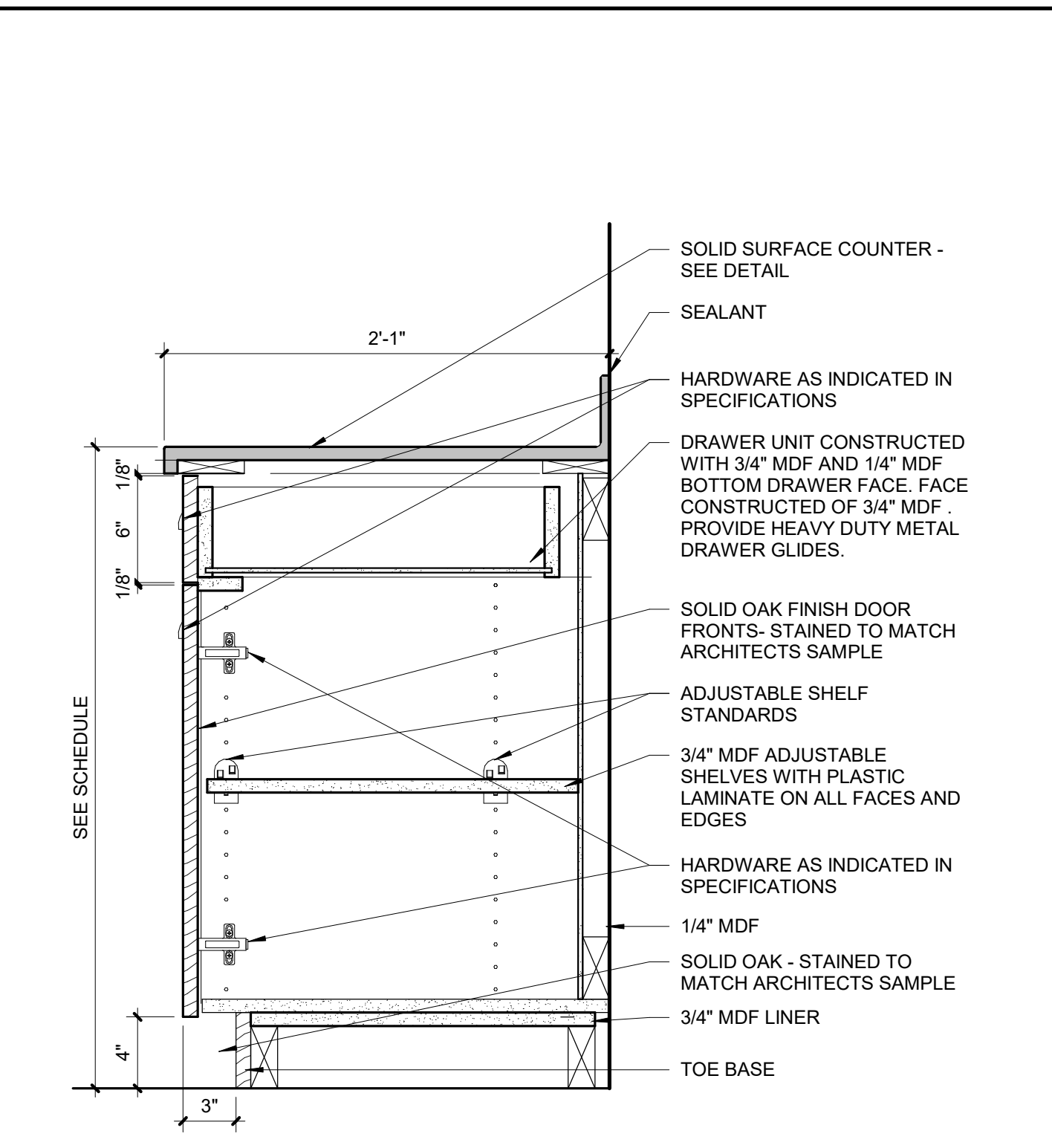
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A-504

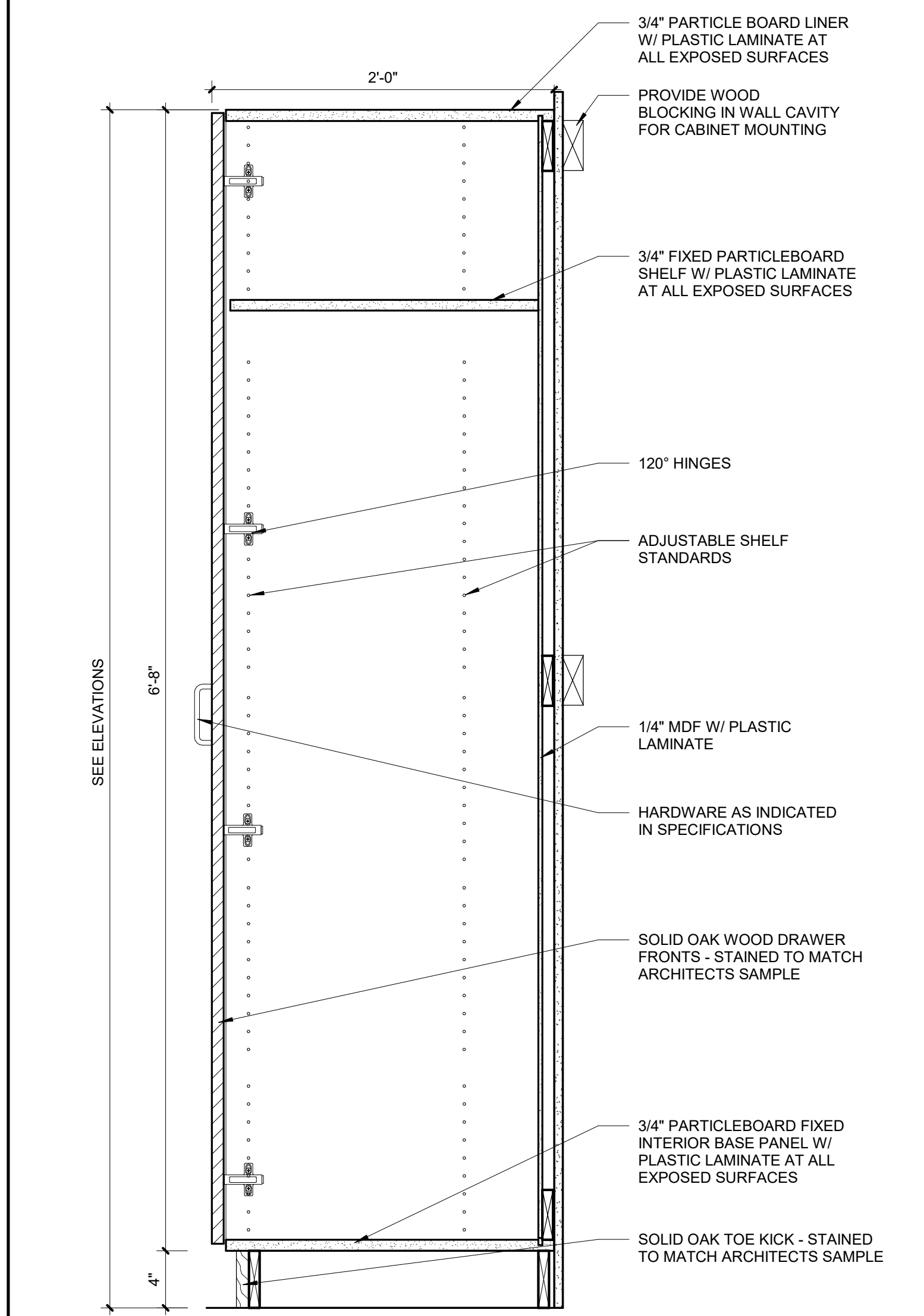
SHEET 42 of 75
ISSUE DATE: 03/02/2023



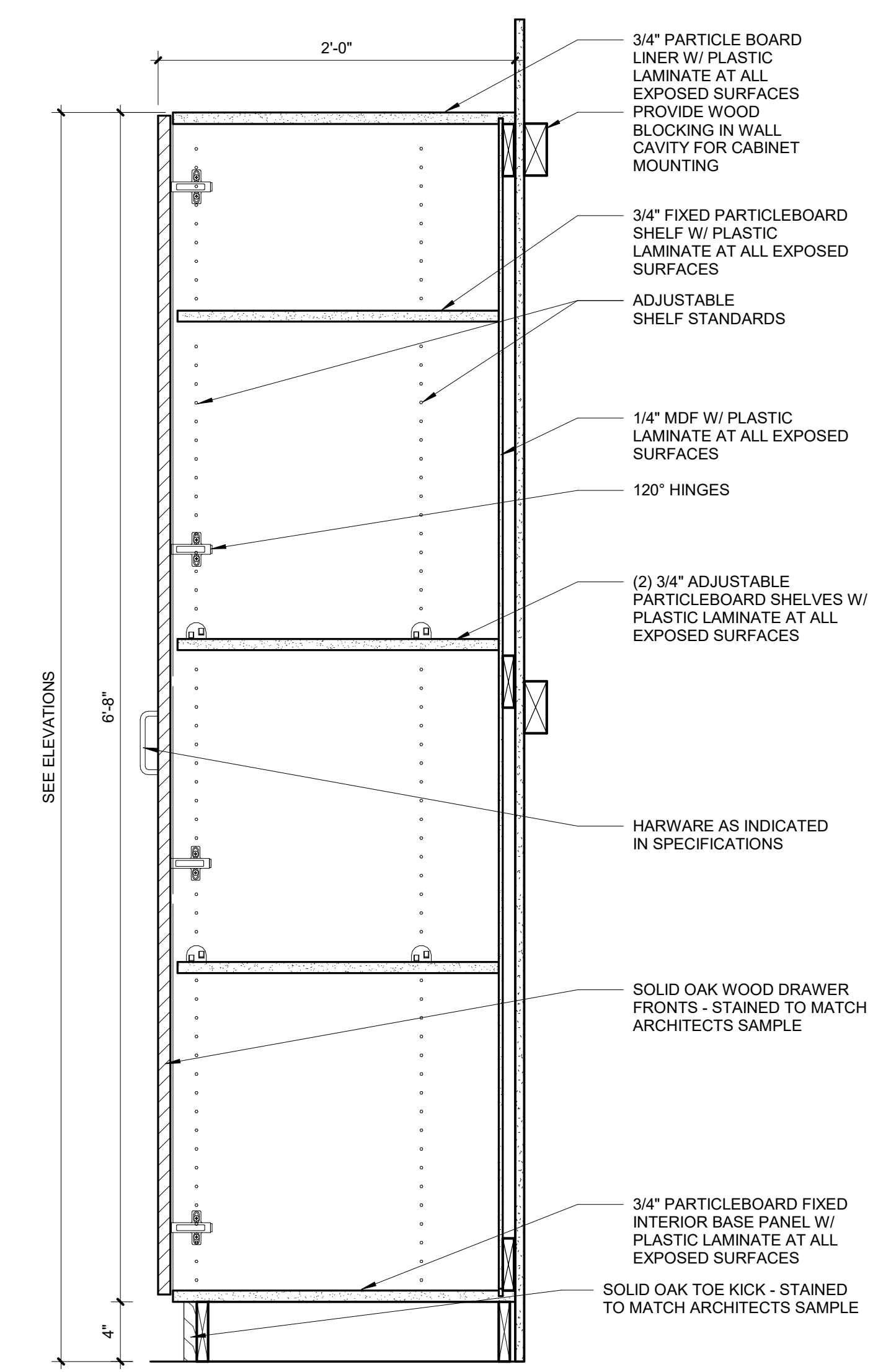
10 CASEWORK - 4 DRAWER BASE
SCALE: 1 1/2" = 1'-0"



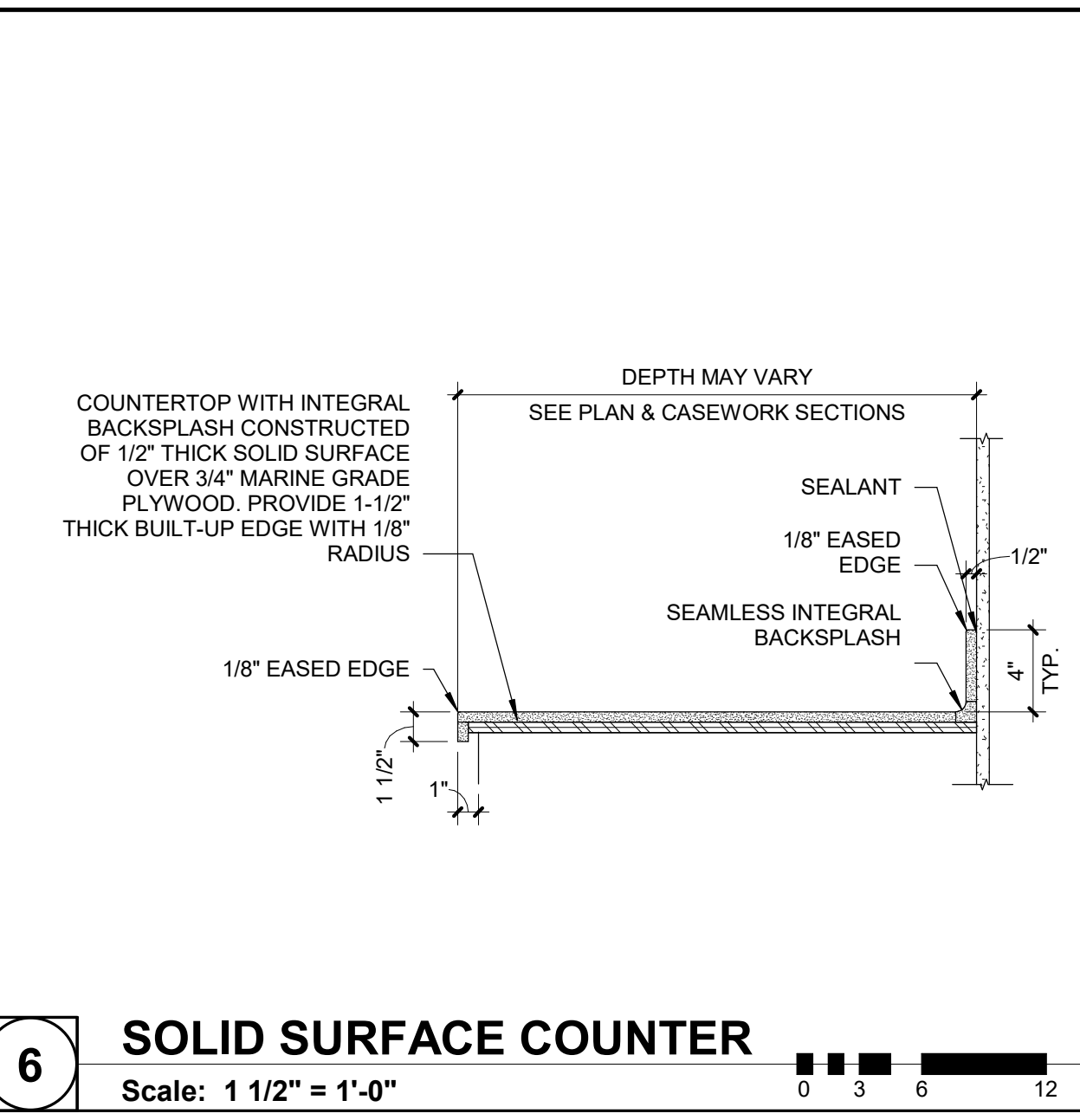
8 CASEWORK - TYPICAL BASE
SCALE: 1 1/2" = 1'-0"



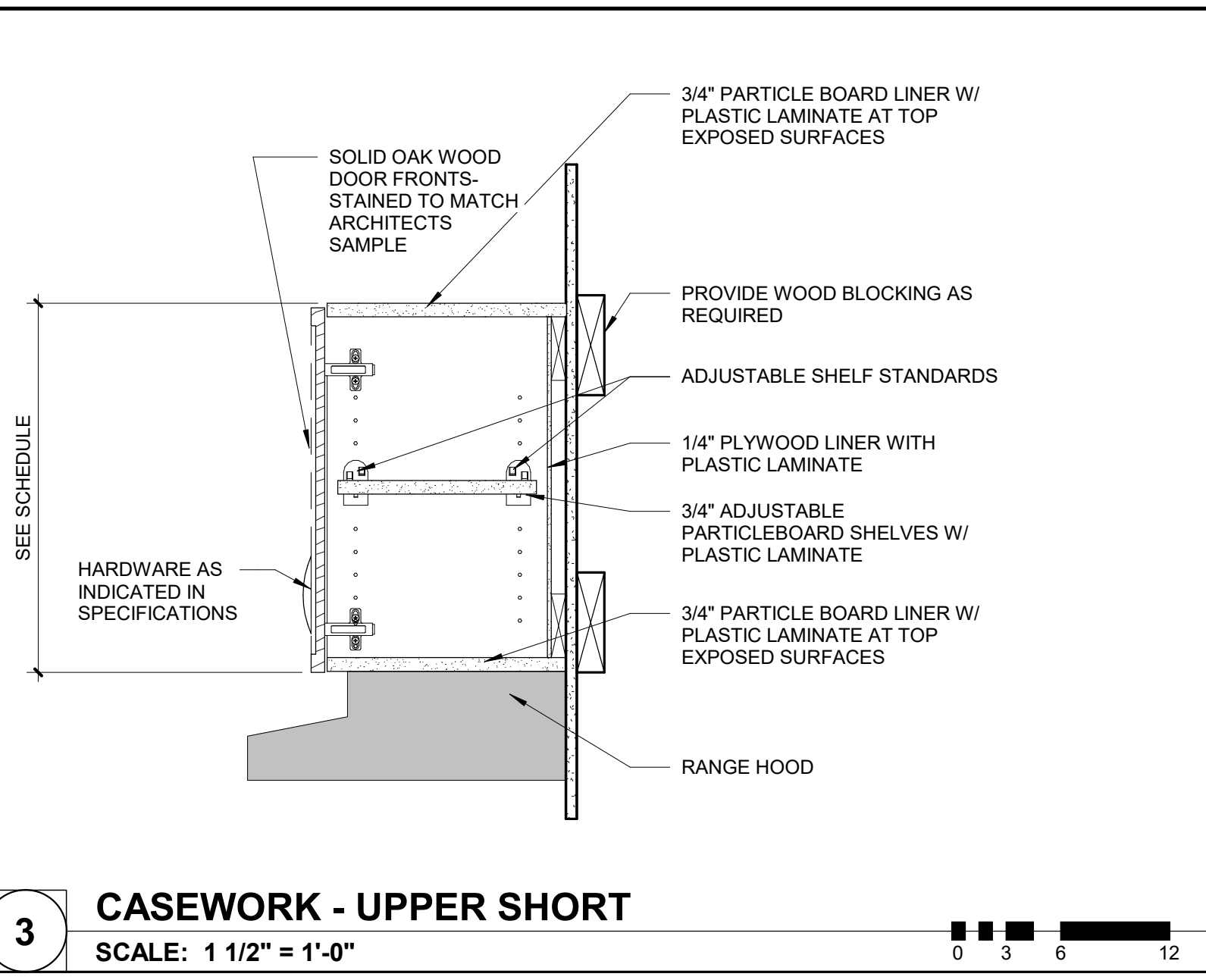
9 CASEWORK - TALL (B)
SCALE: 1 1/2" = 1'-0"



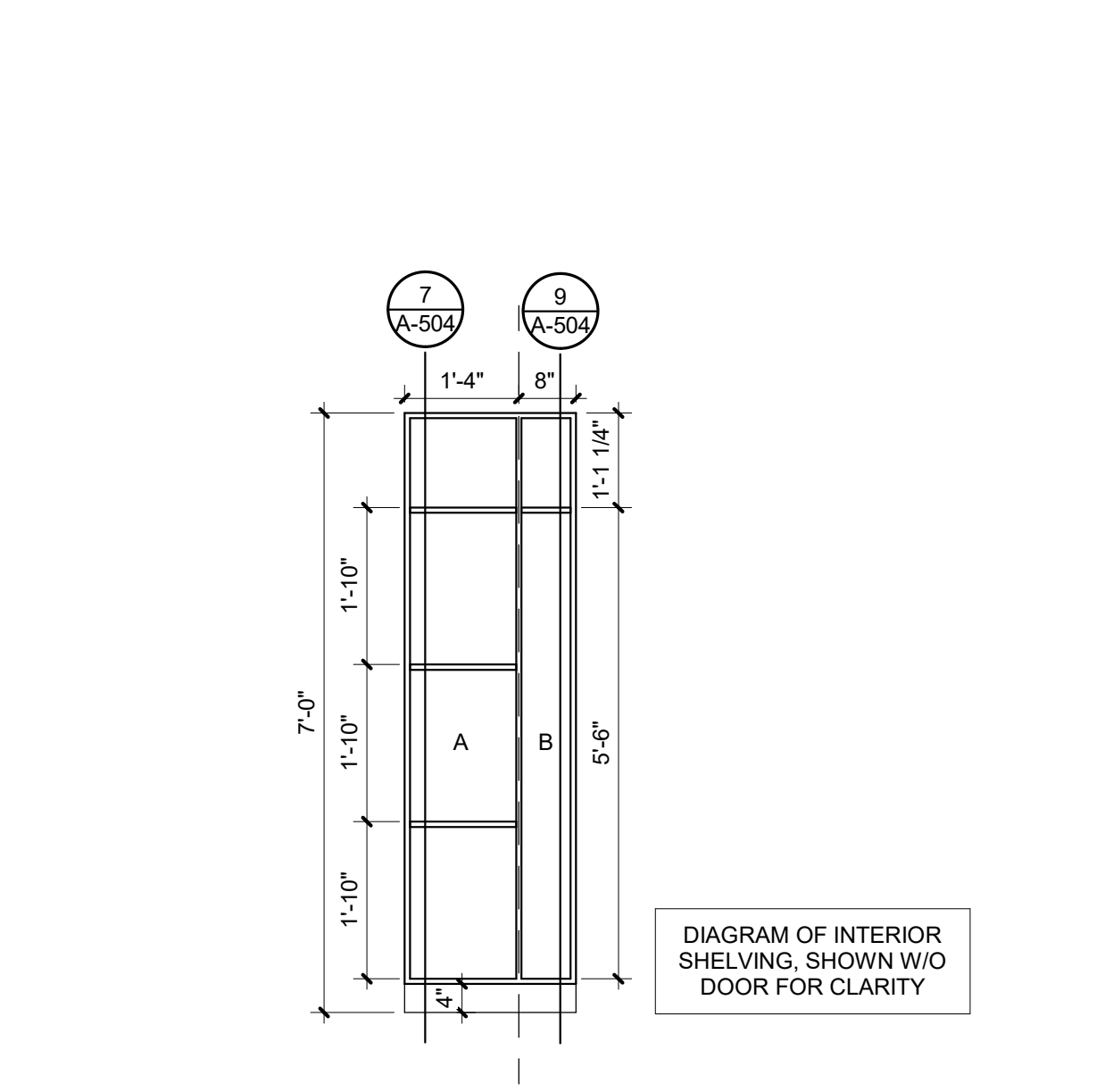
7 CASEWORK - TALL (A)
SCALE: 1 1/2" = 1'-0"



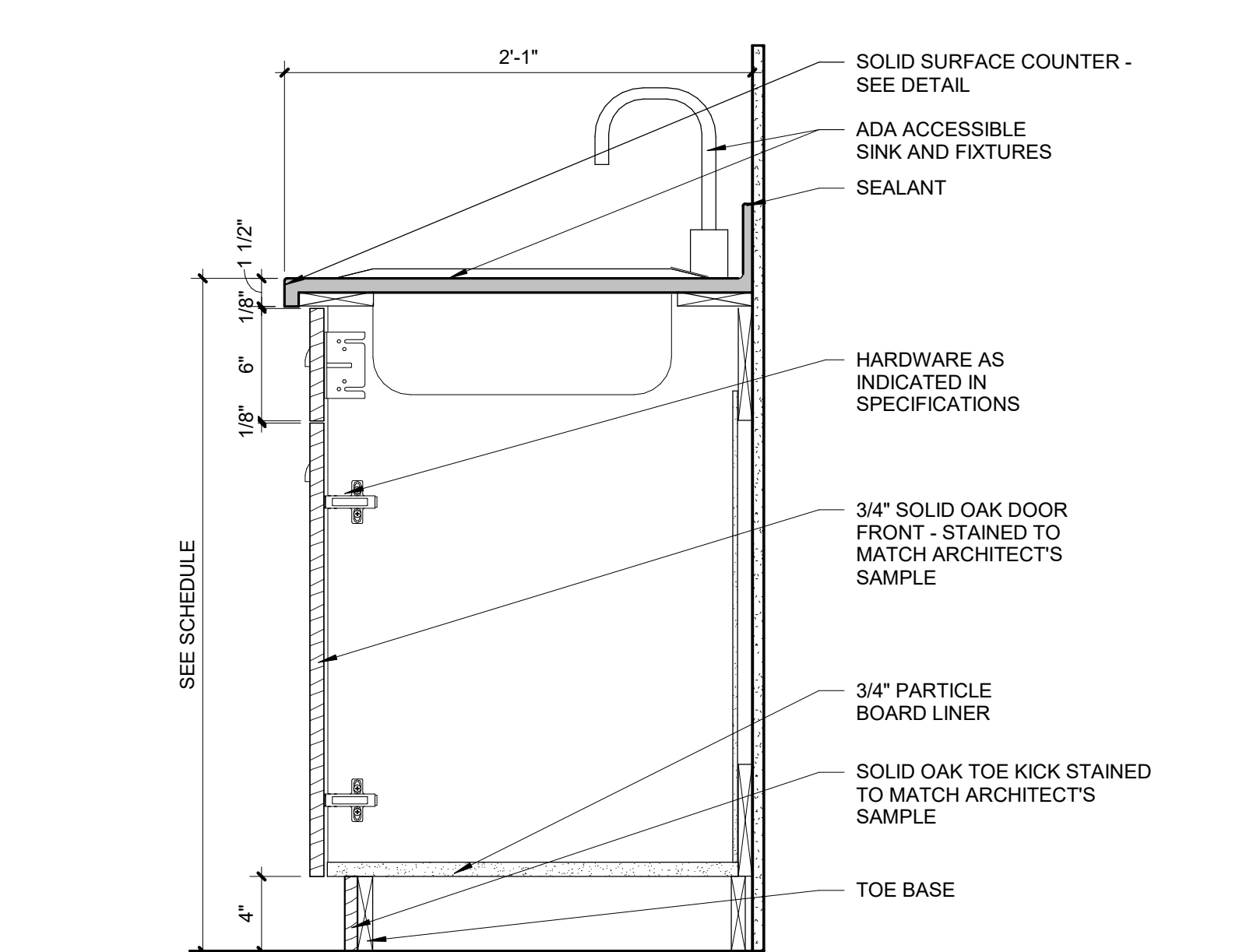
6 SOLID SURFACE COUNTER
SCALE: 1 1/2" = 1'-0"



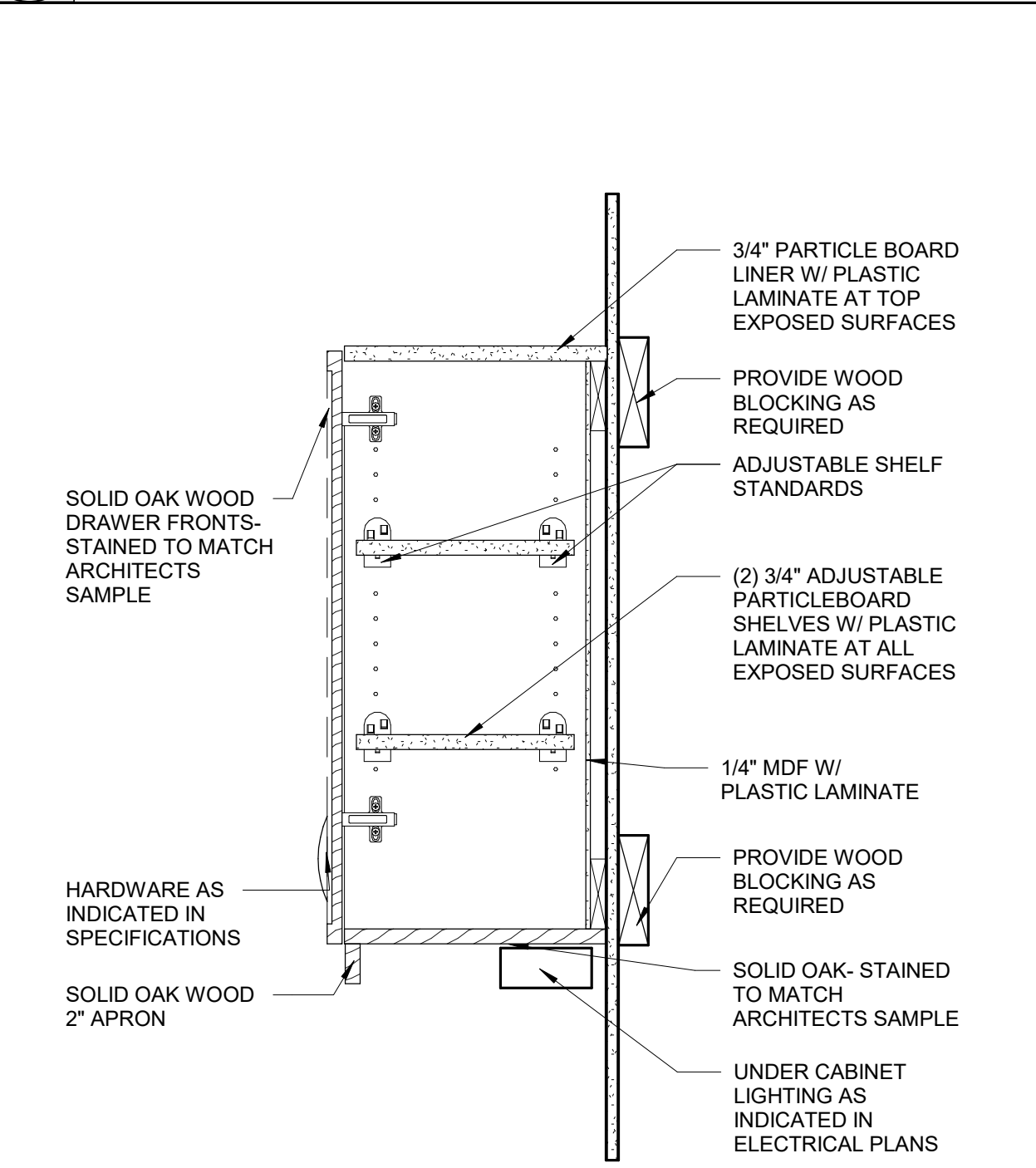
3 CASEWORK - UPPER SHORT
SCALE: 1 1/2" = 1'-0"



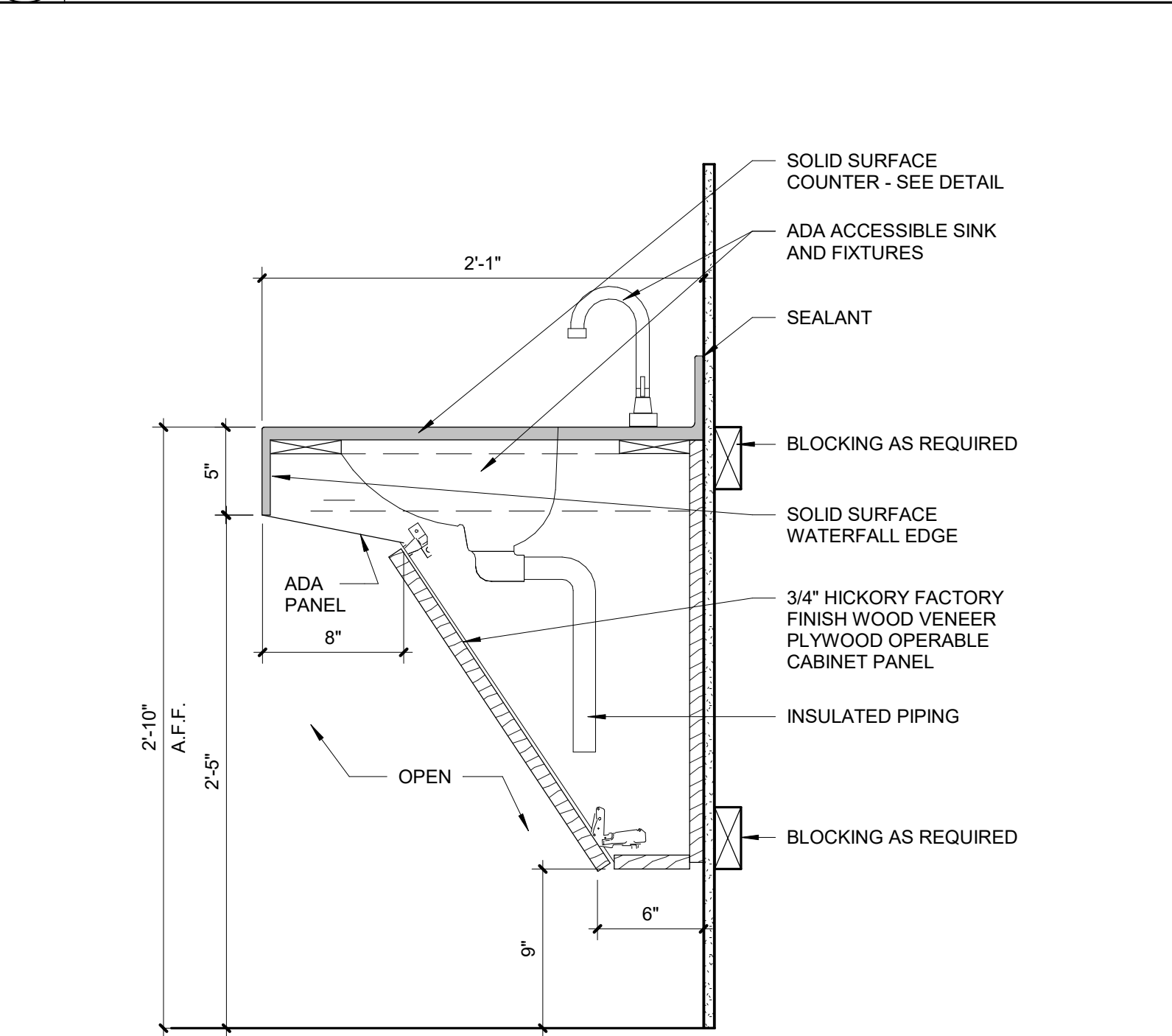
5 TALL CASEWORK FRONT ELEVATION
SCALE: 1/2" = 1'-0"



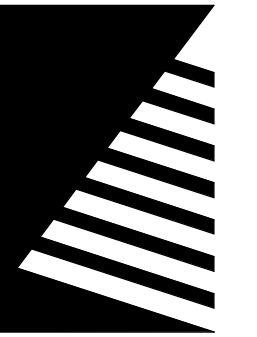
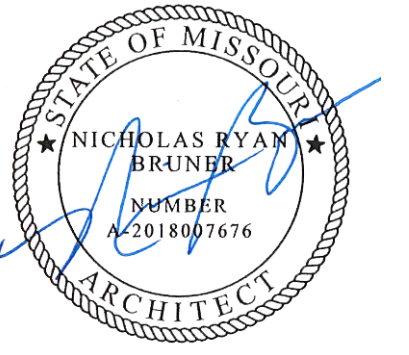
2 CASEWORK - SINK BASE
SCALE: 1 1/2" = 1'-0"



4 CASEWORK - UPPER
SCALE: 1 1/2" = 1'-0"



1 CASEWORK - ADA BATHROOM SINK BASE
SCALE: 1 1/2" = 1'-0"



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ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

GENERAL CABIN SCHEDULES AND DIAGRAMS

SHEET NUMBER:

A-601

SHEET 43 of 75

ISSUE DATE: 03/02/2023

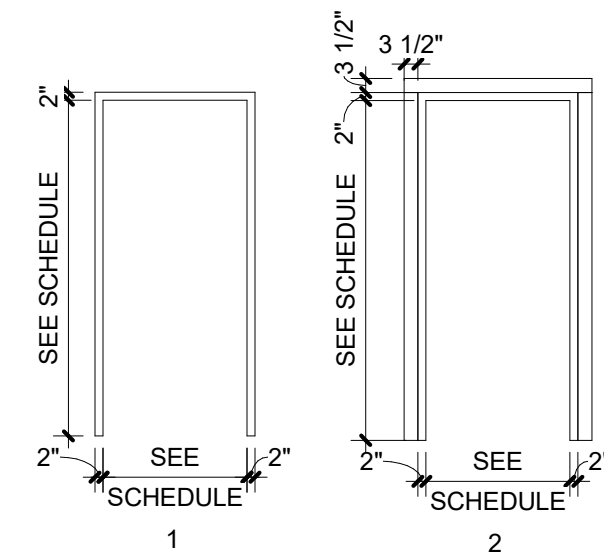
DOOR SCHEDULE															
NO.	DOOR					DOOR FRAME			HEAD DETAIL NO.	JAMB DETAIL NO.	THRESH. DETAIL NO.	LBL	HDWR SET	REMARKS	
	WIDTH	HEIGHT	THICKNESS	MAT'L	FINISH	ELEV	MAT'L	FINIS H							ELEV
TWO BEDROOM															
201-1	3'-0"	6'-8"	1 3/4"	ALCW	PF	FG	ALCW	PF	2	9/A-501	8/A-501	6/A-501		1	1
202-1	3'-0"	6'-8"	1 3/4"	ALCW	PF	FG-W	ALCW	PF	2	9/A-501	8/A-501	7/A-501		4	
203-1	3'-0"	6'-8"	1 3/4"	HM	PNT	F	HM	PNT	2	2/A-502	1/A-502	7/A-501		3	
205-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
206-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
207-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
FOUR BEDROOM															
401-1	3'-0"	6'-8"	1 3/4"	ALCW	PF	FG	ALCW	PF	2	9/A-501	8/A-501	6/A-501		1	
402-1	3'-0"	6'-8"	1 3/4"	HM	PNT	F	HM	PNT	2	2/A-501	1/A-501	7/A-501		4	
403-1	3'-0"	6'-8"	1 3/4"	HM	PNT	F	HM	PNT	2	2/A-501	1/A-501	7/A-501		3	
405-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
406-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
407-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
408-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
409-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
410-1	3'-0"	6'-8"	1 3/4"	WD	STN	P	WD	STN	1	14/A-501	13/A-501	--		2	
413-1	4'-0"	6'-8"	1 3/8"	WD	STN	CP	WD	STN	1	4/A-501	5/A-501	--		N/A	
414-1	3'-0"	6'-8"	1 3/4"	HM	PNT	F	HM	PNT	2	2/A-501	1/A-501	7/A-501		3	

ABBREVIATIONS

ALCW ALUMINUM CLAD WOOD
WD WOOD
PF PREFINISHED
STN STAIN
HM HOLLOW METAL
PNT PAINT

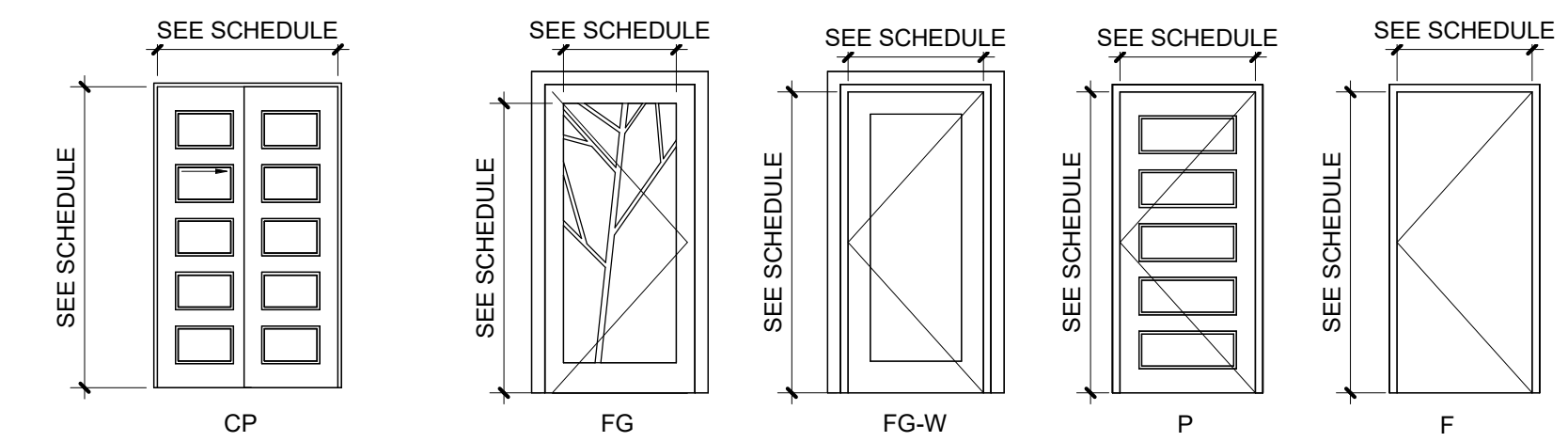
HARDWARE SET

1. HOTEL ENTRANCE ELECTRONIC DOOR LOCK
2. PRIVACY LOCK
3. STOREROOM LOCK
4. ENTRY LOCK



FRAME ELEVATIONS

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

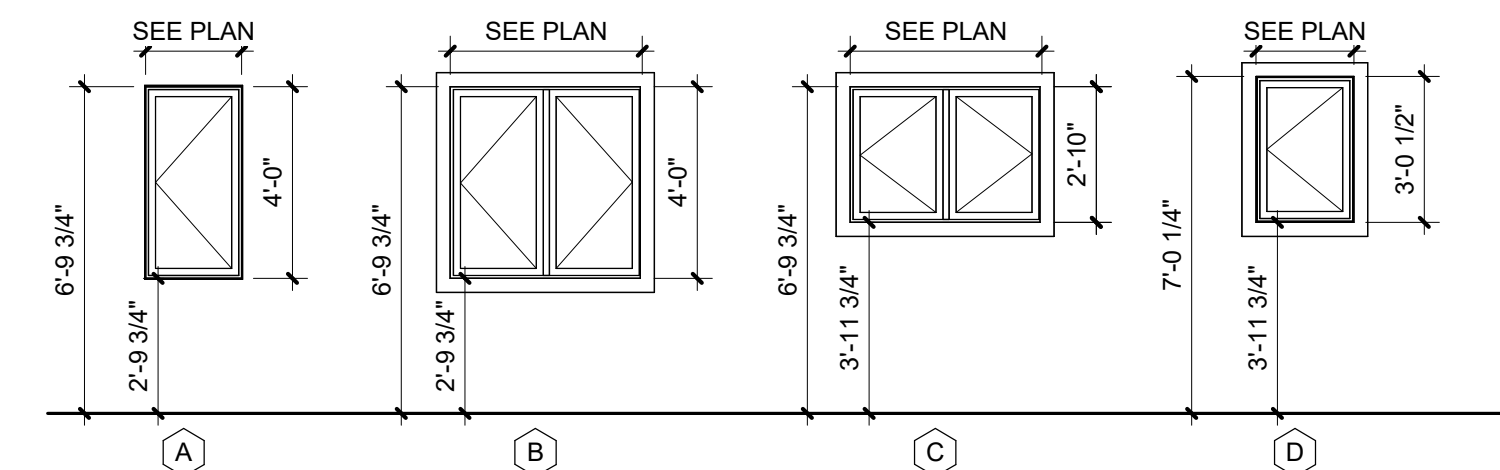


NOTES:

- ALL EXTERIOR GLASS SHALL BE INSULATED
- ALL GLASS MUST BE TEMPERED

DOOR ELEVATIONS

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



NOTES:

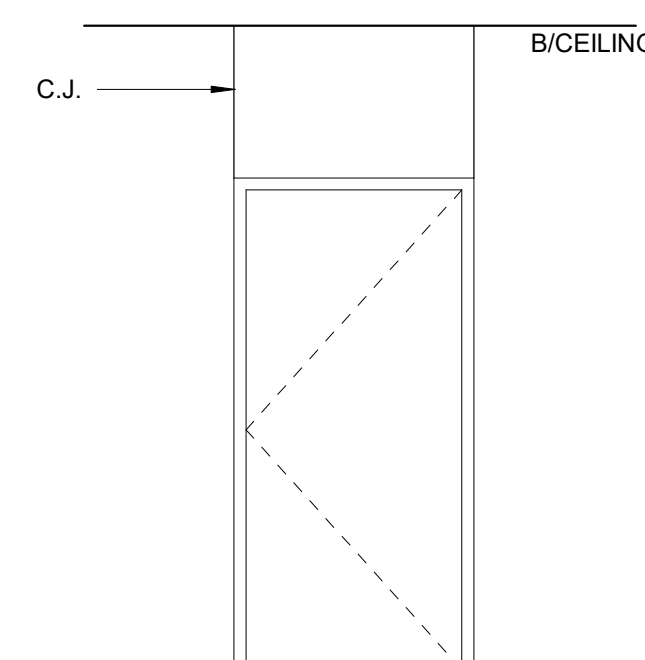
- ALL EXTERIOR GLASS SHALL BE INSULATED
- ALL GLASS MUST BE TEMPERED

WINDOW LEGEND

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

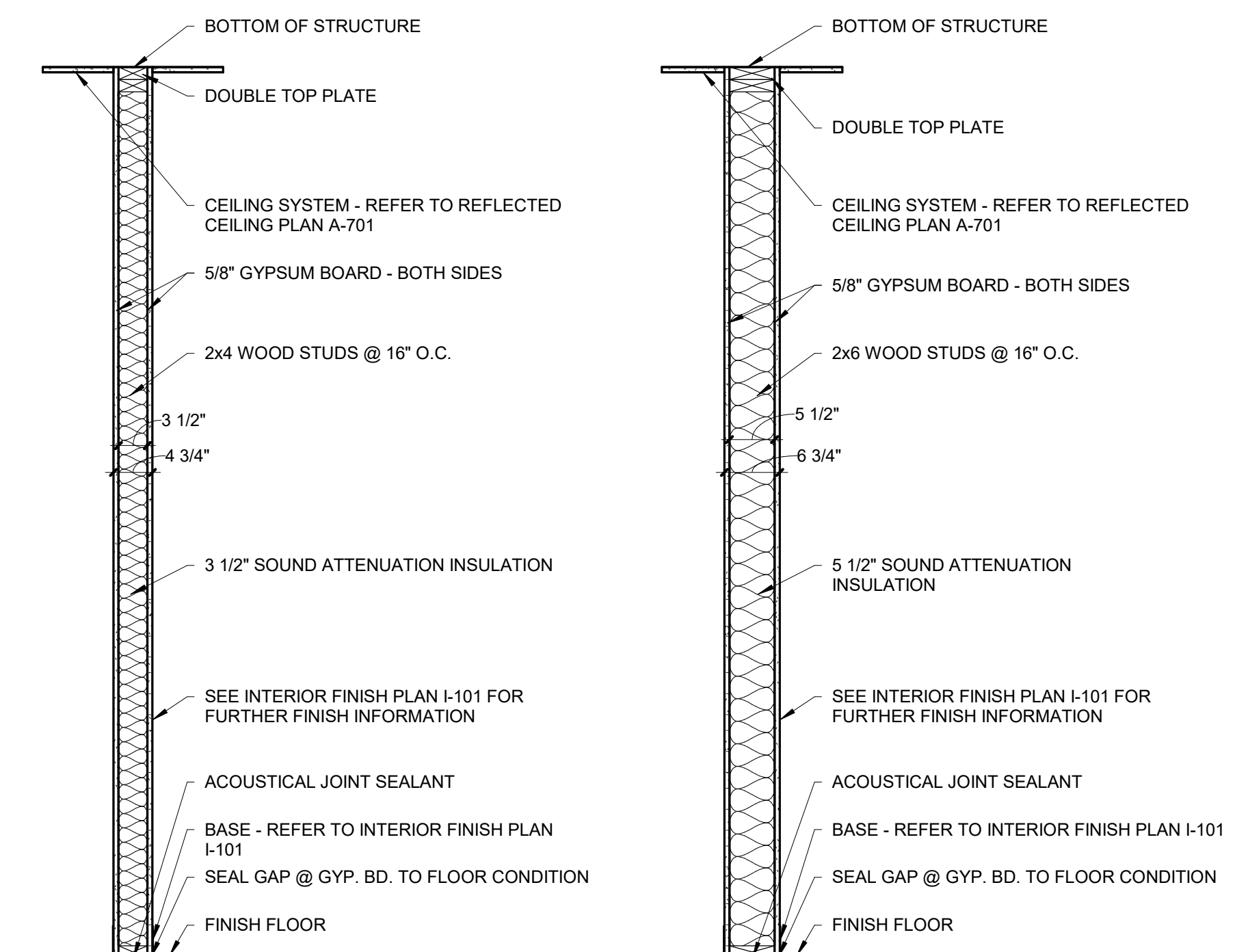
PARTITION TYPE NOTES

- CONTROL JOINTS SHALL BE INSTALLED AT ALL CONSTRUCTION CHANGES WITHIN A PLANE OF PARTITION OR CEILING, AT PARTITION RUNS THAT EXCEED 30'-0" IN LENGTH, CEILING DIMENSIONS THAT EXCEED 50' IN EITHER DIRECTION WITH PERIMETER RELIEF AND 30" WITHOUT, AT WINGS OF "L", "U" AND "T" SHAPED CEILING AREAS, AT BUILDING EXPANSION OR CONTROL JOINTS. CONTROL JOINTS SHALL BE INSTALLED AT EACH DOOR FROM OUTSIDE CORNER OF THE TOP OF DOOR JAMB TO ABOVE CEILING. REFER TO PUBLISHED CONTROL JOINT DETAILS IN GA 600-900 FIRE RESISTANCE DESIGN MANUAL.
- AT THE BASE AND HEAD OF ALL WALLS REQUIRING SOUND ATTENUATION INSULATION, ENSURE THAT THE GYPSUM WALL PANELS ARE NOT OFFSET FROM THE SUBFLOOR OR THE STRUCTURE ABOVE MORE THAN 1/2". IF CONSTRUCTION CONDITIONS REQUIRE THE GYPSUM WALL PANELS TO BE OFFSET MORE THAN 1/2", PROVIDE A CONTINUOUS BEAD OF BACKER ROD AND SEALANT TO PREVENT THE WALL BASE FROM DEFLECTING INTO THE CAVITY.
- PROVIDE RED ROSIN PAPER OR SIMILAR MATERIAL BETWEEN DISSIMILAR MATERIALS
- PROVIDE SOUND ATTENUATION INSULATION IN ALL INTERIOR BATHROOM, BEDROOM, AND STORAGE/MECHANICAL ROOM WALLS UNLESS OTHERWISE NOTED OR SHOWN.
- PROVIDE 5/8" FIRE RATED MOISTURE RESISTANT/MOLD RESISTANT GYPSUM BOARD AT ALL LOCATIONS WHERE WATER PRODUCING DEVICES MAY BE PRESENT OR SPLASHED ONTO THE WALL SURFACE (I.E. WATER COOLERS, SINKS, LAVATORIES, HOSE BIBS, ETC.). EXTEND GYPSUM BOARD A MINIMUM OF 4'-0" IN EACH DIRECTION FROM CENTER OF DEVICE.
- PROVIDE CEMENTITIOUS TILE BACKER BOARD AT AREAS TO RECEIVE CERAMIC TILE FINISH



CONTROL JOINT DETAIL

SCALE: 3/8" = 1'-0"



1 2X4 WOOD STUD WALL

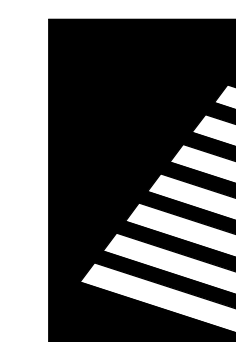
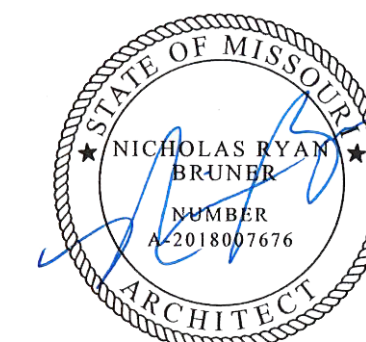
1 2X4 WOOD STUD WALL W/ TILE: SIM. TO PARTITION TYPE 2 - TILE AS SEEN ON INTERIOR ELEVATIONS AT BATHROOMS AND KITCHEN BACKSPLASH. PROVIDE 5/8" MR GYP BD AT ALL TILED AREAS EXCLUDING WALLS AT TUB. PROVIDE 5/8" GLASS MAT CEMENTITIOUS BACKER BOARD ON TUB SIDE AREA ONLY.

2 2X6 WOOD STUD WALL

2A 2X6 WOOD STUD WALL W/ TILE: SIM. TO PARTITION TYPE 2 - TILE AS SEEN ON INTERIOR ELEVATIONS AT BATHROOMS AND KITCHEN BACKSPLASH. PROVIDE 5/8" MR GYP BD AT ALL TILED AREAS EXCLUDING WALLS AT TUB. PROVIDE 5/8" GLASS MAT CEMENTITIOUS BACKER BOARD ON TUB SIDE AREA ONLY.

PARTITION TYPES

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



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MANAGEMENT, DESIGN
AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: SLV
CHECKED BY: NRB
DESIGNED BY: NRB

SHEET TITLE:
**TWO BEDROOM
CABIN REFLECTED
CEILING PLAN**

SHEET NUMBER:

A-701

SHEET 44 of 75
ISSUE DATE: 03/02/2023

GENERAL CEILING NOTES

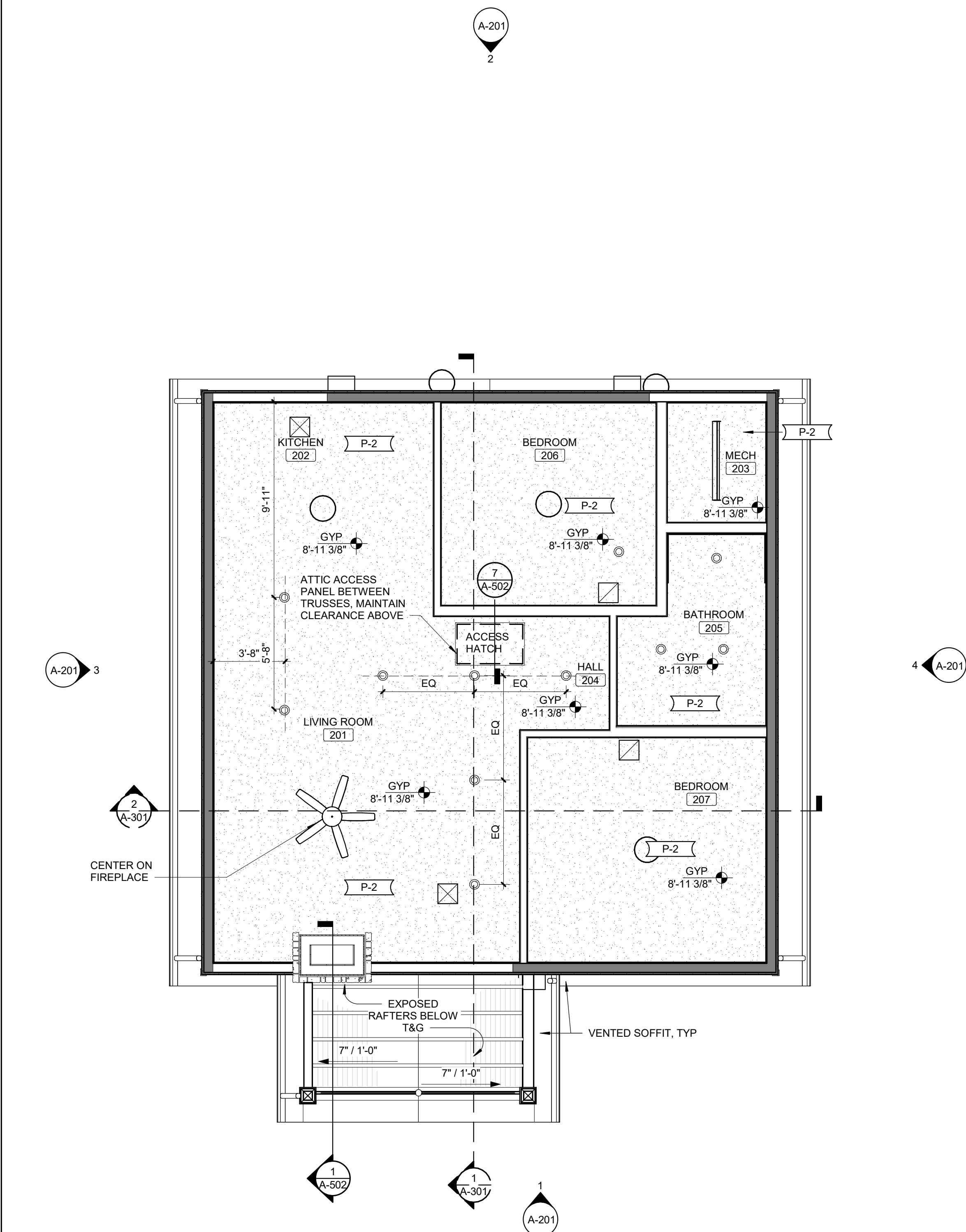
- ACCESS PANELS ARE NOT PERMITTED IN SOFFITS, CHECK ALL VALVES, FIRE DAMPERS, REHEAT BOXES, ETC. FOR ACCESS POINTS. ARRANGE FIRE AND SMOKE DAMPER ACCESS FROM NON-CORRIDOR SIDE
- COORDINATE WITH MECHANICAL AND ELECTRICAL SHEETS FOR CEILING MOUNTED DEVICES
- CONTRACTOR TO REVIEW CEILING LAYOUT AS SHOWN AND NOTIFY ARCHITECT OF ANY CONFLICTS BEFORE PROCEEDING WITH CONSTRUCTION
- SEE INTERIORS PLANS AND SCHEDULES FOR PRODUCT INFORMATION.

X-# CEILING FINISH NOTES

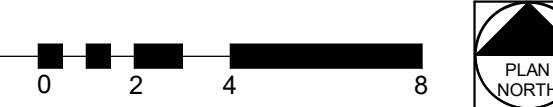
- PAINT GYPSUM CEILINGS P-2. SEE PRODUCT FINISH SCHEDULE ON I-001 FOR DETAILS.

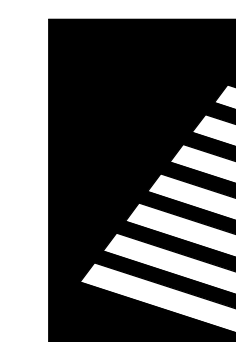
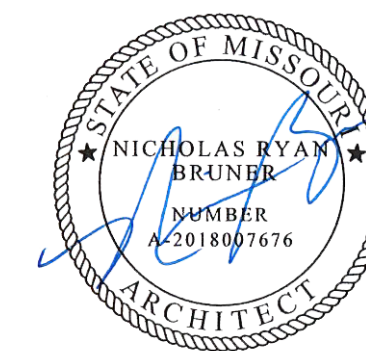
REFLECTED CEILING LEGEND

- GYPSUM BOARD CEILING
- EXPOSED STAINED WOOD PLANKING SOFFIT
- EXIT SIGN
- AIR SUPPLY
- RETURN AIR SUPPLY
- RETURN EXHUAST
- ROUND DUCT
- RECESSED CAN LIGHT
- SURFACED MOUNTED DECORATIVE LIGHT
- CEILING FAN
- STRIP LIGHT



1 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"





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PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: SLV

CHECKED BY: NRB

DESIGNED BY: NRB

SHEET TITLE:

**FOUR BEDROOM
CABIN REFLECTED
CEILING PLAN**

SHEET NUMBER:

A-702

SHEET 45 of 75

ISSUE DATE: 03/02/2023

GENERAL CEILING NOTES

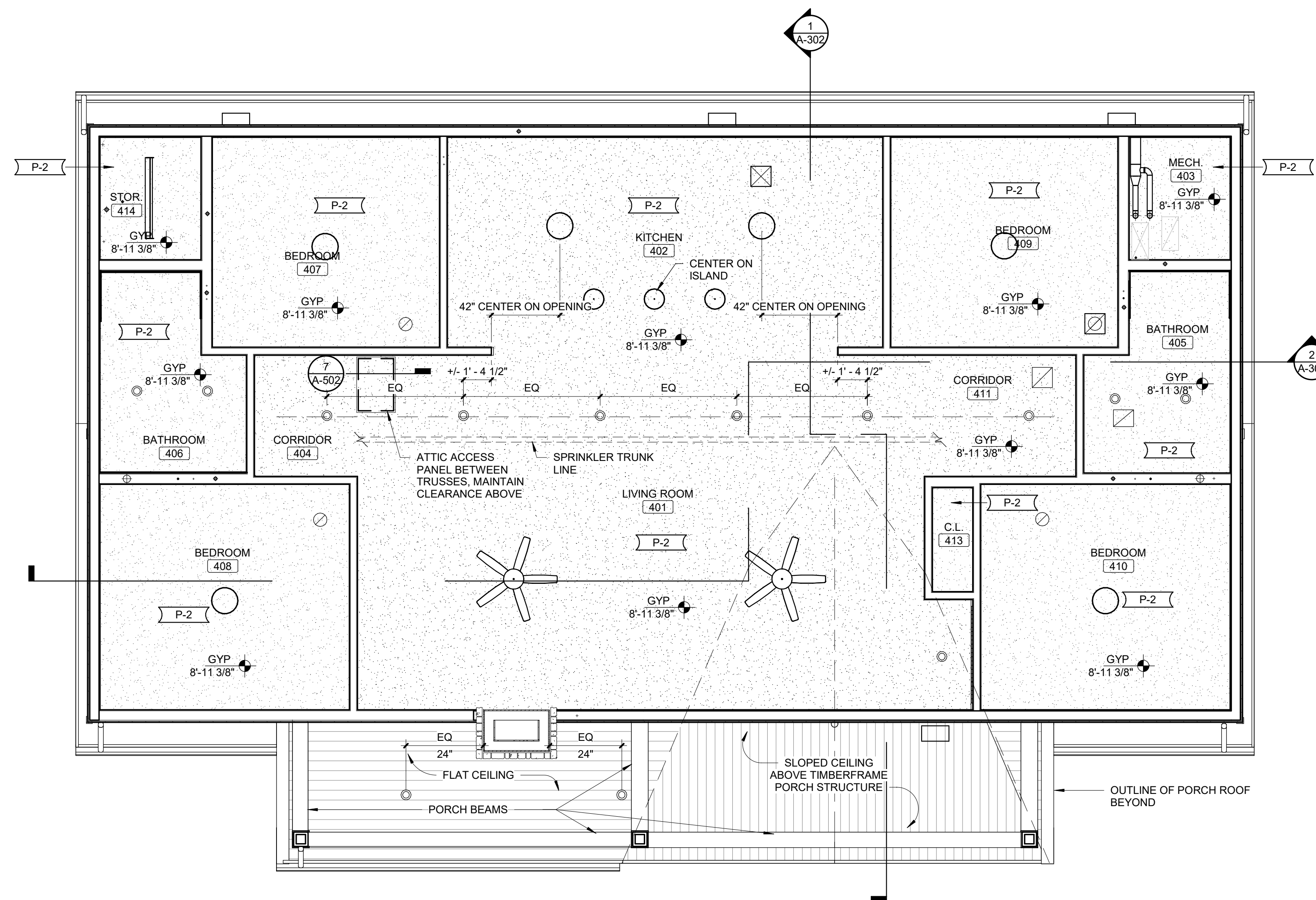
- COORDINATE WITH MECHANICAL AND ELECTRICAL SHEETS FOR CEILING MOUNTED DEVICES.
- CONTRACTOR TO REVIEW CEILING LAYOUT AS SHOWN AND NOTIFY ARCHITECT OF ANY CONFLICTS BEFORE PROCEEDING WITH CONSTRUCTION.
- SEE SECTIONS FOR CEILING HEIGHTS.
- RECESSED SPRINKLER HEAD AT CEILING PER NFPA. SEE GENERAL DETAILS AND FIRE PROTECTION DRAWINGS.

X-# CEILING FINISH NOTES

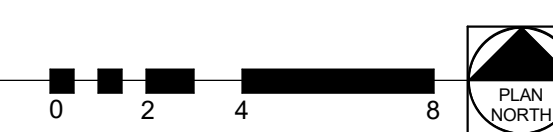
- PAINT GYPSUM CEILINGS P-2. SEE PRODUCT FINISH SCHEDULE ON I-001 FOR DETAILS.

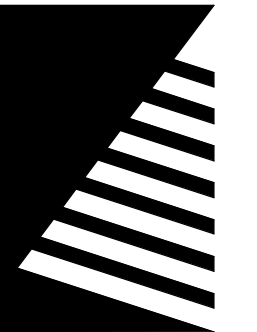
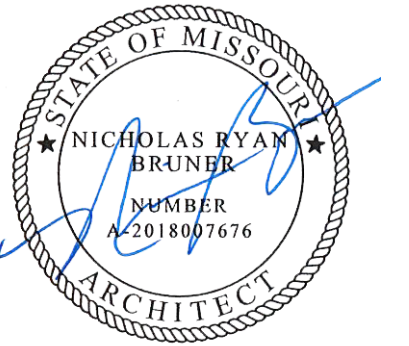
REFLECTED CEILING LEGEND

- GYPSUM BOARD CEILING
- EXPOSED STAINED WOOD PLANKING SOFFIT
- EXIT SIGN
- AIR SUPPLY
- RETURN AIR SUPPLY
- RETURN EXHAUST
- ROUND DUCT
- RECESSED CAN LIGHT
- SURFACED MOUNTED DECORATIVE LIGHT
- CEILING FAN
- STRIP LIGHT



1 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"





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PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #.: X2208-01

SITE #.: 5235

FACILITY #.: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: JDP

CHECKED BY: NRB

DESIGNED BY: JDP

SHEET TITLE:

GENERAL FINISH INFORMATION AND SYMBOL LEGENDS

SHEET NUMBER:

I-001

SHEET 46 of 75

ISSUE DATE: 03/02/2023

PROJECT GENERAL FINISH NOTES

- DRAWINGS & SPECIFICATIONS ARE COMPLEMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS OR OMISSIONS ARE DISCOVERED.
- DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED AND NOT FOUND, NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION.
- U.N.O. ALL DIMENSIONS ARE TO COLUMN CENTERLINES OR FACE OF FINISHED WALLS OR SURFACES.
- ALL CONTRACTORS TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO WORK.
- BASIS-OF-DESIGN PRODUCT: WHERE SPECIFICATIONS OR DRAWINGS NAME A PRODUCT AND MANUFACTURER, PROVIDE THE SPECIFIED PRODUCT / MANUFACTURER OR SUBMIT AN ALTERNATE REQUEST AS OUTLINED IN PROJECT SPECIFICATIONS. ALTERNATE PRODUCTS TO RESEMBLE BASIS-OF-DESIGN PRODUCT IN APPEARANCE, SIZE, PROFILE, DIMENSIONS, COLOR AND OTHER CHARACTERISTICS.
- REFER TO INTERIORS GENERAL INFORMATION SHEET (I0.1) FOR FINISH SYMBOLS AND ABBREVIATIONS.
- REFER TO FINISH PLANS, FINISH SCHEDULE AND DETAILS FOR FINISH INFORMATION AND LOCATION. REFER TO INTERIOR FINISH & ARCHITECTURAL ELEVATIONS FOR ADDITIONAL FINISH INFORMATION OR WHERE MULTIPLE FINISHES ARE INDICATED ON PLAN FOR THE SAME LOCATION.
- REFER TO GENERAL INFORMATION SHEET (G-002) FOR STANDARD MOUNTING HEIGHTS.
- NOTES COLUMN ON PRODUCT FINISH SCHEDULE INDICATES GENERAL COMMENTS ONLY. SEE INTERIOR FINISH PLANS AND SPECIFICATIONS FOR LOCATIONS AND DETAILS.
- U.N.O. DISSIMILAR FLOOR MATERIALS SHALL MEET UNDER CENTER OF DOOR LEAF WHEN IN CLOSED POSITION.
- ALL FINISHES OF SAME TYPE SHALL BE ORDERED IN TIMELY MANNER SO AS TO ADHERE TO PROJECT SCHEDULE. ALL FINISHES OF SAME TYPE SHALL BE ORDERED FROM ONLY ONE (1) DYE LOT. A SAMPLE FROM THE SAME DYE LOT TO BE SUBMITTED TO ARCHITECT FOR APPROVAL. WHERE MORE THAN ONE DYE LOT IS REQUIRED, NOTIFY ARCHITECT IMMEDIATELY AND SUBMIT SECOND VERIFICATION SAMPLE FROM OTHER DYE LOT FOR APPROVAL.
- U.N.O. ALIGN TILE GROUT JOINTS WITH WALL / WALL BASE AND FLOOR TILES AT ALL 90° CONDITIONS.
- U.N.O. ALL LIGHT SWITCH AND OUTLET COVER PLATES TO BE WHITE.
- U.N.O. ALL MECHANICAL DIFFUSER/AIR GRILLES AND ELECTRICAL PANELS TO BE PAINTED TO MATCH ADJACENT WALL FINISH.
- U.N.O. ALL WOOD SHALL BE OF SAME SPECIES AND SAME CUT OF WOOD. ALL HARDWOOD TO BE PLAIN SLICED WHITE BIRCH.
- U.N.O. PAINT ALL STEEL DOORS, DOOR FRAMES, INTERIOR BORROW LITE FRAMES, LINTELS AND OTHER EXPOSED METAL ITEMS.
- EXISTING CONDITION INFORMATION SHOWN WITHIN THE PROJECT AREA IS BASED ON FIELD OBSERVATION AND EXISTING DRAWING DOCUMENTATION. ALL EXISTING CONDITION INFORMATION SHOWN OUTSIDE THE PROJECT AREA IS PROVIDED FOR REFERENCE ONLY AND HAS NOT BEEN FIELD VERIFIED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY NEW WORK AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF THE DESIGN PROFESSIONAL PRIOR TO DEMOLITION AND CONSTRUCTION.
- REFER TO PRODUCT REPRESENTATIVES CONTACT LIST TO COORDINATE PRODUCT PRICING AND AVAILABILITY.

SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS

	CEILING FINISH
	WALL FINISH
	ACCENT WALL FINISH
	WALL BASE FINISH
	FLOOR FINISH
	CASEWORK COUNTER/TRANSITION TOP FINISH
	CASEWORK BASE AND UPPER CABINET FINISH
	MISCELLANEOUS FINISH
	SIGNAGE / ARTWORK FINISH
	WINDOW TREATMENT FINISH
	CORNER GUARD
	DRAPERY / CURTICLE CURTAIN
	ROLLER SHADE
	VALANCE / CORNICE
	FINISH KEYNOTE
	FINISH MATERIAL TRANSITION
	ALIGN FINISH WITH ADJACENT ITEM
	FINISH PATTERN/LINEAR DIRECTION
	ROOM DESIGNATION
	BREAK LINE
	REVISION NOTE

ABBREVIATIONS

AB	ALUMINUM WALL BASE	GFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
ACB	ACOUSTICAL CEILING BAFFLE	GFOI	CONTRACTOR INSTALLED
ACC	ACOUSTICAL CEILING CLOUD		OWNER FURNISHED, CONTRACTOR INSTALLED BY OTHERS
ACT	ACOUSTICAL CEILING TILE		
ADJ	ADJACENT	P	PAINT
AF	ARCHITECTURAL FILM	PFN	PREFINISHED
AFF	ABOVE FINISHED FLOOR	PL	PLASTIC LAMINATE
AL	ALUMINUM	QTZ	QUARTZ
AP	ACOUSTIC PANEL	RB	RESILIENT WALL BASE
ART	ARTWORK	RF	RESINOUS POURED FLOORING
BBT	BIBBLES RESILIENT TILE	RS	ROLLER SHADE
BR	BRICK / VENEER BRICK	RS	ROLLER SHADE
CC	CUBICLE CURTAIN	RUB	RUBBER SHEET / TILE
CCT	CUBICLE CURTAIN TRACK	RV	DRYWALL MILLWORK REVEAL
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	S	SIGNAGE
CGO	CORNER GUARD	SC	SHOWER CURTAIN
CJ	CONTROL JOINT	SCR	SHOWER CURTAIN ROD
CMU	CONCRETE MASONRY UNIT	SD	STATIC DISSIPATIVE FLOORING
CON	CONCRETE FLOORING / FINISH	SFT	SQUARE FEET (FOOT)
CPT	CARPET	SHT	SHUTTER
CR	CRASH RAIL	SS	SOLID SURFACE
CS	CULTURED STONE	SST	STAINLESS STEEL
CUR	DECORATIVE CURTAIN / ROD	SSV	SPECIALTY SHEET VINYL
D	DOOR	ST	STAIN
DG	DOOR FRAME GUARD	SV	SHEET VINYL
EG	END WALL GUARD	SVT	SPECIALTY VINYL TILE
EM	ENTRY MAT SYSTEM	SY	SQUARE YARD(S)
EWD	ENGINEERED WOOD PLANK	T	TILE FLOORING / WALL / WALL BASE / CERAMIC PORCELAIN GLASS
EX	EXISTING	TP	TILE PARTITION
EXJ	EXPANSION JOINT	TR	TRIM / CROWN / BASE MOLDING
EXP	EXPOSED	TS	TRANSITION STRIP
F	FABRIC	TYP	TYPICAL
FRP	FIBERGLASS REINFORCED PANEL(S)	TZ	TERAZO FLOORING
G	GLASS / GLAZING	UNO	UNFINISHED
GR	GROUT	UNO	UNLESS NOTED OTHERWISE
GYP	GYPSUM WALL BOARD	VAL	VALANCE
HBL	HORIZONTAL BLINDS	VBL	VERTICAL BLINDS
HR	HAND RAIL	VCT	VINYL COMPOSITION TILE
LF	LINEAR FEET (FOOT)	VET	VINYL ENCHANCED TILE
LN	LINOLEUM SHEET / TILE	VIF	VERIFY IN FIELD
LVT	LUXURY VINYL TILE	WC	WALL COVERING
MB	MOLDED WALL BASE	WCT	WOOD CEILING TILE / PLANK
MTL	METAL	WD	WOOD (VENEER, PANELING, WAINSCOT FLOORING)
MSC	MISCELLANEOUS	WF	WINDOW FILM
MP	METAL PANEL	WP	WALL PROTECTION
NA	NOT APPLICABLE	WR	WRITEROCK
NS	NATURAL STONE		

CEILING FINISH SCHEDULE

TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	SUPPLIER / INSTALLER	NOTES
P-2	BASIS OF DESIGN: SHERWIN WILLIAMS	SEE SPECIFICATIONS	-	SW 7562 ROMAN COLUMN	SEE SPECIFICATIONS	CFCI	-

WALL FINISH SCHEDULE

TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	GROUT		SUPPLIER / INSTALLER	NOTES
						TYPE	COLOR		
P-1	BASIS OF DESIGN: SHERWIN WILLIAMS	SEE SPECIFICATIONS	-	SW 7548 PORTICO	SEE SPECIFICATIONS	-	-	CFCI	-
T-1	BASIS OF DESIGN: VIRGINIA TILE / ANATOLIA	GLASS & STONE BLEND MOSAIC, RANDOM LINEAR TILE	RANDOM, 12" X 12" SHEET	CAPPUCCINO	-	BASIS OF DESIGN: MAPEI FLEXCOLOR CQ	TBD	CFCI	-
T-2	BASIS OF DESIGN: VIRGINIA TILE / ATLAS CONCORDE	FRAY	12" X 24"	SAND	-	BASIS OF DESIGN: MAPEI FLEXCOLOR CQ	TBD	CFCI	INSTALLATION METHOD: TBD
T-3	BASIS OF DESIGN: VIRGINIA TILE / EDIMAX CERAMICHE	MORE DECO	4" X 12"	NUT	-	BASIS OF DESIGN: MAPEI FLEXCOLOR CQ	TBD	CFCI	INSTALLATION METHOD: TBD

WALL BASE FINISH SCHEDULE

TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	GROUT		SUPPLIER / INSTALLER	NOTES
						TYPE	COLOR		
T-4	BASIS OF DESIGN: VIRGINIA TILE / MILESTONE TILE	PIER	6" X 36"	NAVY	-	BASIS OF DESIGN: MAPEI KERAPOXY CQ	TBD	CFCI	-
WD-1	-	WOOD WALL BASE WITH DECORATIVE REVEAL	4"H	STAINED AND VARNISHED TO MATCH ARCHITECT'S SAMPLE	-	-	-	CFCI	COORDINATE WITH WOOD TILE FINISH

FLOOR FINISH SCHEDULE

TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	GROUT		SUPPLIER / INSTALLER	NOTES
						TYPE	COLOR		
CPT-1	BASIS OF DESIGN: TARKETT	TUNDRA FLOWER #11663	18" X 36"	PIGMENTED SEPIA 65410	-	-	-	CFCI	INSTALLATION METHOD: VERTICAL ASHLAR
PLY-1	-	PLYWOOD SUBFLOOR	-	-	NONE	-	-	CFCI	-
T-4	BASIS OF DESIGN: VIRGINIA TILE / MILESTONE TILE	PIER	6" X 36"	NAVY	-	BASIS OF DESIGN: MAPEI KERAPOXY CQ	TBD	CFCI	INSTALLATION METHOD: STAGGERED, 30% MINIMUM OFFSET WITH 3/16" MINIMUM GROUT JOINT

CASEWORK HORIZONTAL FINISH SCHEDULE

TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	SUPPLIER / INSTALLER	NOTES
SS-1	BASIS OF DESIGN: CORIAN	SOLID SURFACE	1/2" THICK	WITCH HAZEL	-	CFCI	-

CASEWORK HORIZONTAL FINISH SCHEDULE

TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	SUPPLIER / INSTALLER	NOTES
WD-2	-	CUSTOM WOOD VENEER CABINETS WITH DECORATIVE HARDWARE	4"H	STAINED AND VARNISHED TO MATCH ARCHITECT'S SAMPLE	SATIN	CFCI	-

MISCELLANEOUS FINISH SCHEDULE

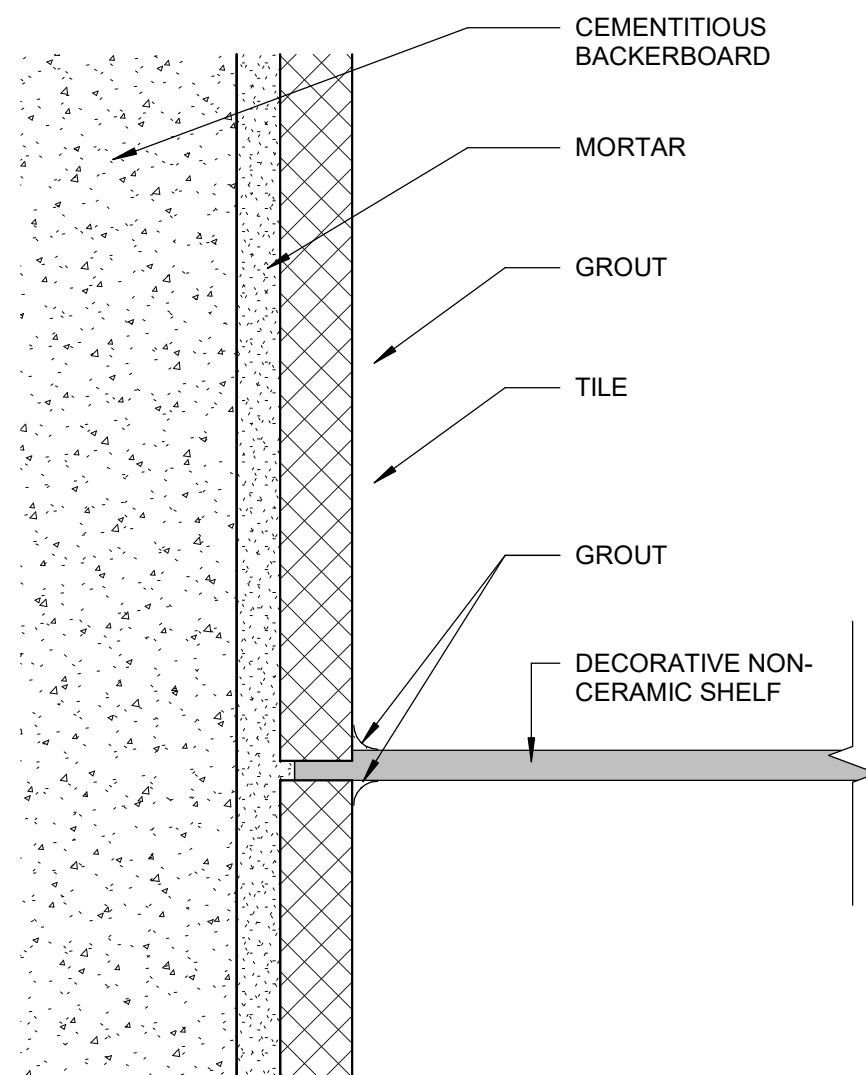
TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	SUPPLIER / INSTALLER	NOTES
SH-1	SCHLUTER SYSTEMS	SHELF-E, WAVE #SES2 D10 EB	7-11/16" X 7-11/16" X 5/32" THICK	-	BRUSHED STAINLESS STEEL	CFCI	-

SIGNAGE / ARTWORK SCHEDULE

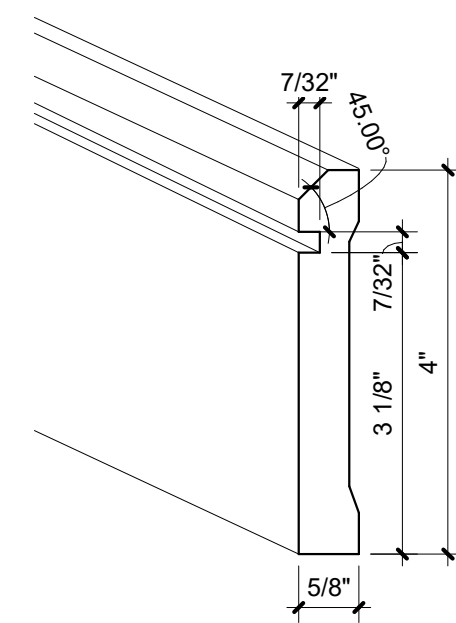
TAG	MANUFACTURER	PRODUCT LINE	SIZE	COLOR	FINISH	SUPPLIER / INSTALLER	NOTES
S-1	BASIS OF DESIGN: ASI SIGNAGE	SIGNETCH II, COMMERCIAL BRONZE PLAQUE	1/8" THICK X 7" H X 15" W	BACKGROUND: 28-0019 ANTIQUED BRASS; COPY: SC-922 BONE	BRUSHED	CFCI	MECHANICALLY FASTENED
S-2	BASIS OF DESIGN: ASI SIGNAGE	EXTERIOR CUT VINYL LETTERS	2" H	SC-922 BONE	OPAQUE, MATTE	CFCI	-
S-3	BASIS OF DESIGN: ASI SIGNAGE	INTAC, PHOTOPOLYMER SIGN WITH SUBSURFACE SILKSCREEN GRAPHIC AND COPY	1/8" THICK X 7" H X 5" W	BACKGROUND: TOMATO RED SC-203; COPY/GRAPHIC: WHITE SC-901	OPAQUE, MATTE	CFCI	DOUBLE STICK ADHESIVE TAPE
S-4	BASIS OF DESIGN: ASI SIGNAGE	INTAC, PHOTOPOLYMER SIGN WITH SUBSURFACE SILKSCREEN COPY AND OCCUPANCY SLIDER	1/4" THICK X 3" H X 10" W	BACKGROUND COLORS: KELLY GREEN MX79 AND TOMATO RED SC-203; COPY COLOR: BONE SC-922	OPAQUE, MATTE	CFCI	MECHANICALLY FASTENED

FINISH PRODUCT REPRESENTATIVE CONTACT LIST

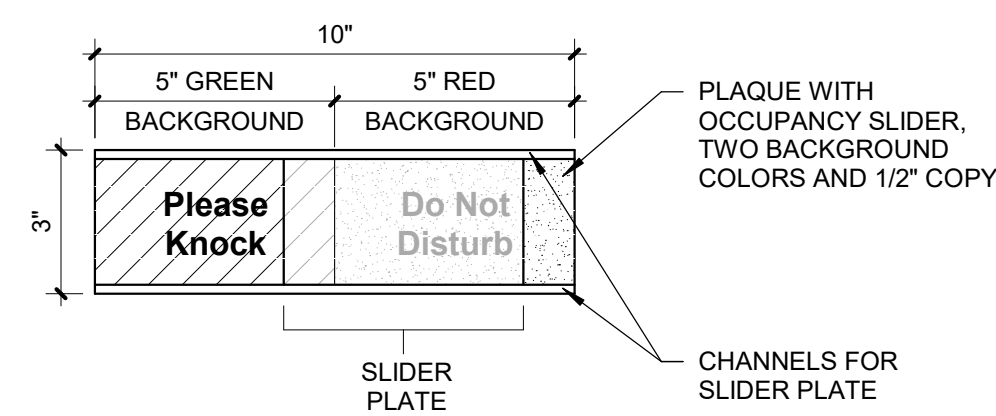
MANUFACTURER	ACCOUNT REPRESENTATIVE		
	NAME	PHONE NUMBER	EMAIL
ASI SIGNAGE	TOM WILCOXEN	815-673-4353	TOM.WILCOXEN@ASISIGNAGE.COM
CORIAN	KRISTY RINNE	314-520-0781	KRINNE@HLLMARK.COM
MAPEI	KATHLEEN MCGINLEY	630-808-9944	KMCGINLEY@MAPEI.COM
SCHLUTER SYSTEMS	JEREMY GHENT	612-505-5669	JGHENT@SCHLUTER.COM
SHERWIN WILLIAMS	HANK MEINKING	314-281-7485	HANK.MEINKING@SHERWIN.COM
TARKETT	BRIAN AYRES	314-324-0086	BRIAN.AYRES@TARKETT.COM
VIRGINIA TILE (ALL LINES)	DARLENE COZZI	847-561-9582	DARLENE.COZZI@VIRGINIATILE.COM



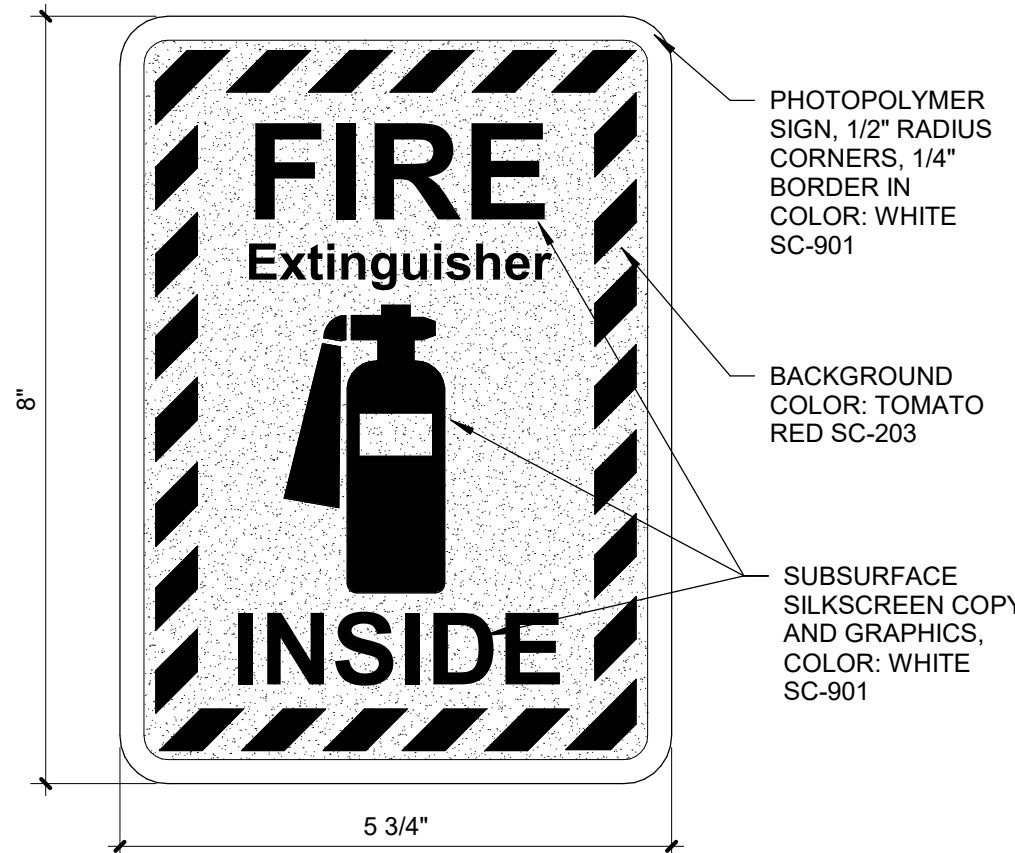
9 SHOWER SHELF, TYP.
SCALE: NOT TO SCALE



7 WOOD WALL BASE, TYP.
SCALE: 6" = 1'-0"



8 SIGN TYPE S-4
SCALE: 3" = 1'-0"



6 SIGN TYPE S-3
SCALE: 6" = 1'-0"

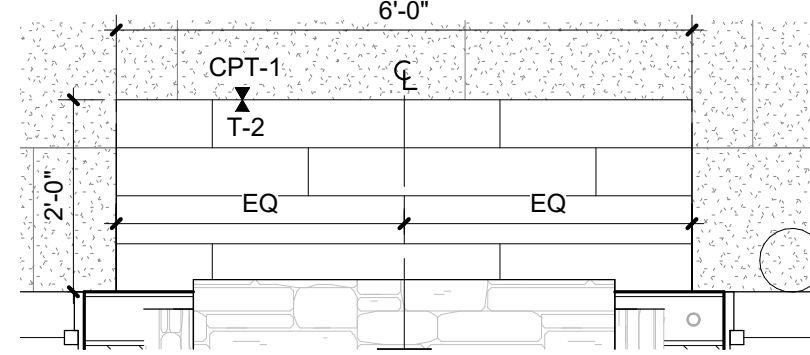
STORAGE MECHANICAL

EXTERIOR CUT VINYL LETTERS - CONFIRM COPY WITH OWNER; FONT: ARIAL BOLD

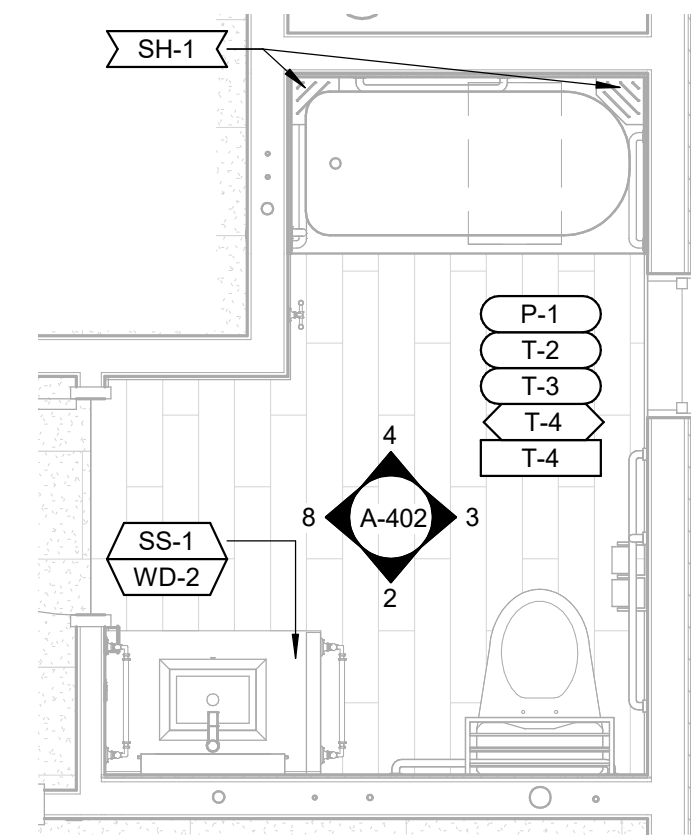
5 SIGN TYPE S-2
SCALE: 3" = 1'-0"



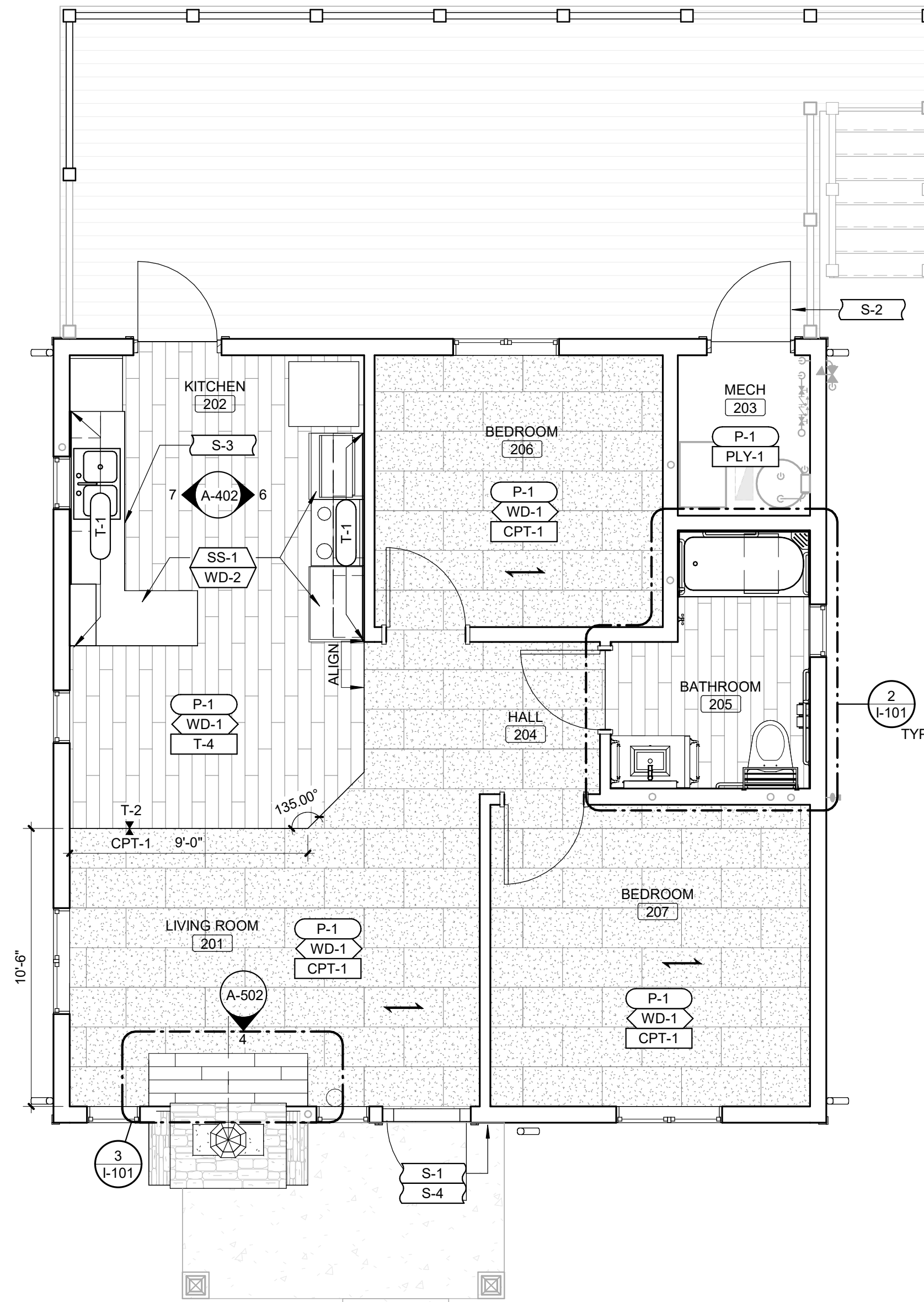
4 SIGN TYPE S-1
SCALE: 3" = 1'-0"



3 ENLARGED FIREPLACE HEARTH
SCALE: 1/2" = 1'-0"



2 ENLARGED BATHROOM FINISH PLAN
SCALE: 3/8" = 1'-0"



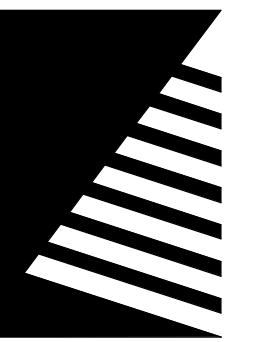
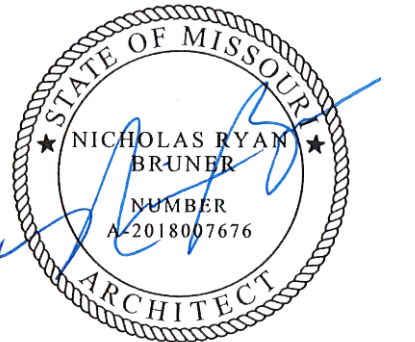
1 TWO BEDROOM CABIN FINISH PLAN
SCALE: 1/4" = 1'-0"

FINISH PLAN GENERAL NOTES

- A. ALL FLOOR TRANSITIONS THAT CHANGE MATERIALS AND/OR CHANGE THICKNESS TO RECEIVE TRANSITION STRIP TO BE APPROVED BY ARCHITECT.
- B. U.N.O. ALL PARTITIONS TO RECEIVE PAINT P-1.
- C. U.N.O. ALL WINDOW SILLS TO RECEIVE SOLID SURFACE SILLS, SS-1.
- D. MECHANICAL AND STORAGE ROOMS TO HAVE UNFINISHED PLYWOOD FLOOR, NO WALL BASE AND PAINT AS PER SPECIFICATIONS.

FINISH KEYNOTES

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

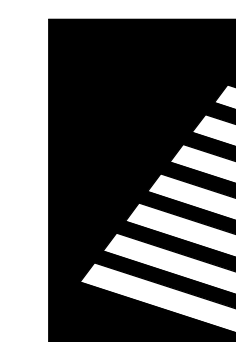
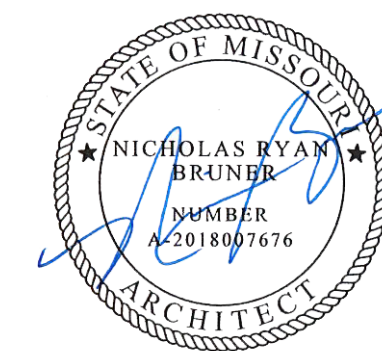
DRAWN BY: JDP
CHECKED BY: NRB
DESIGNED BY: JDP

SHEET TITLE:
**TWO BEDROOM
CABIN INTERIOR
FINISH PLAN**

SHEET NUMBER:

I-101

SHEET 47 of 75
ISSUE DATE: 03/02/2023



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: JDP
CHECKED BY: NRB
DESIGNED BY: JDP

SHEET TITLE:

**FOUR BEDROOM
CABIN INTERIOR
FINISH PLAN**

SHEET NUMBER:

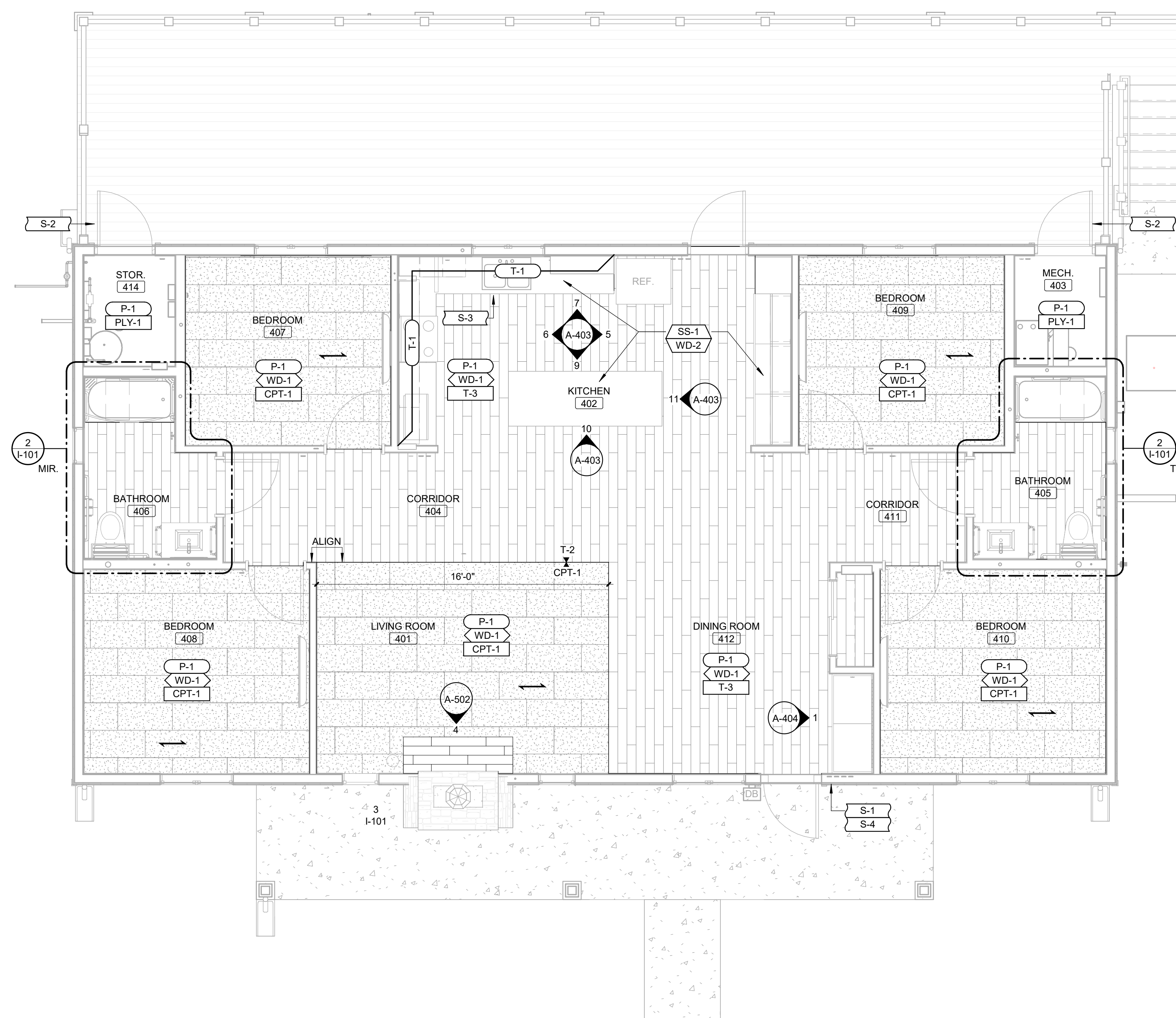
I-102

SHEET 48 of 75
ISSUE DATE: 03/02/2023

FINISH PLAN GENERAL NOTES

- A. ALL FLOOR TRANSITIONS THAT CHANGE MATERIALS AND/OR CHANGE THICKNESS TO RECEIVE TRANSITION STRIP TO BE APPROVED BY ARCHITECT.
- B. U.N.O. ALL PARTITIONS TO RECEIVE PAINT P-1.
- C. U.N.O. ALL WINDOW SILLS TO RECEIVE SOLID SURFACE SILLS, SS-1.
- D. MECHANICAL AND STORAGE ROOMS TO HAVE UNFINISHED PLYWOOD FLOOR, NO WALL BASE AND PAINT AS PER SPECIFICATIONS.

FINISH KEYNOTES



20/03/2023 10:44:15 AM

1 FOUR BEDROOM CABIN FINISH PLAN
SCALE: 1/4" = 1'-0"



SYMBOLS LEGEND AND ABBREVIATIONS

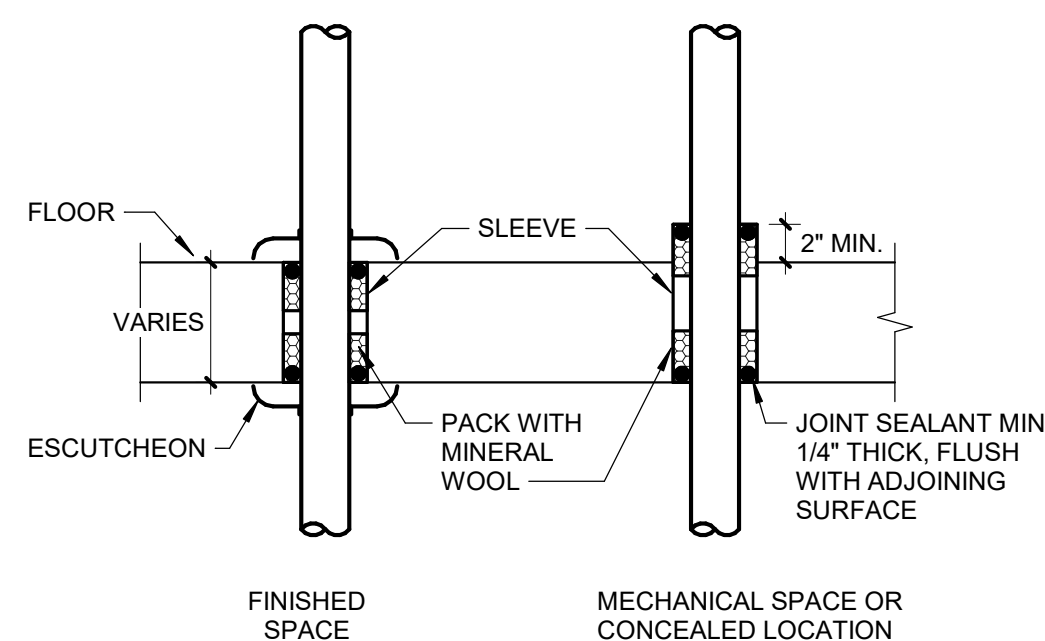
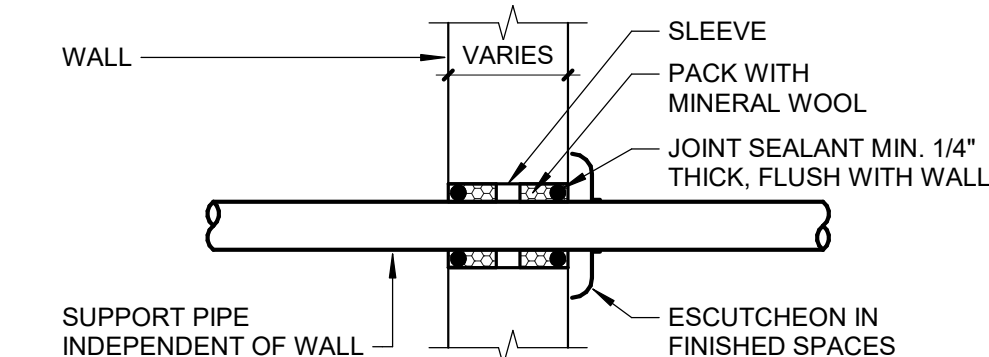
NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS

—FL—	FIRE LINE	EC	ELECTRICAL CONTRACTOR
○	UPRIGHT SPRINKLER HEAD	FPC	FIRE PROTECTION CONTRACTOR
◉	SEMI-RECESSED SPRINKLER HEAD	MC	MECHANICAL CONTRACTOR
⊙	CONCEALED SPRINKLER HEAD	PC	PLUMBING CONTRACTOR
●	PENDANT SPRINKLER HEAD	⚡	BACKFLOW PREVENTER
◀	SIDEWALL SPRINKLER HEAD	⌵	CHECK VALVE
▨	ORDINARY HAZARD GROUP 1 OCCUPANCY	⌵	GATE VALVE
▩	ORDINARY HAZARD GROUP 2 OCCUPANCY	T&D	TEST AND DRAIN ASSEMBLY
#	KEYNOTE	TS	TAMPER SWITCH
#	DETAIL OR SECTION MARK	FS	FLOW SWITCH
##	DETAIL #	FDC	FIRE DEPARTMENT CONNECTION (FDC)
#	SHEET #	●	POINT OF NEW CONNECTION
		●	POINT OF TERMINATION/CAP

GENERAL NOTES

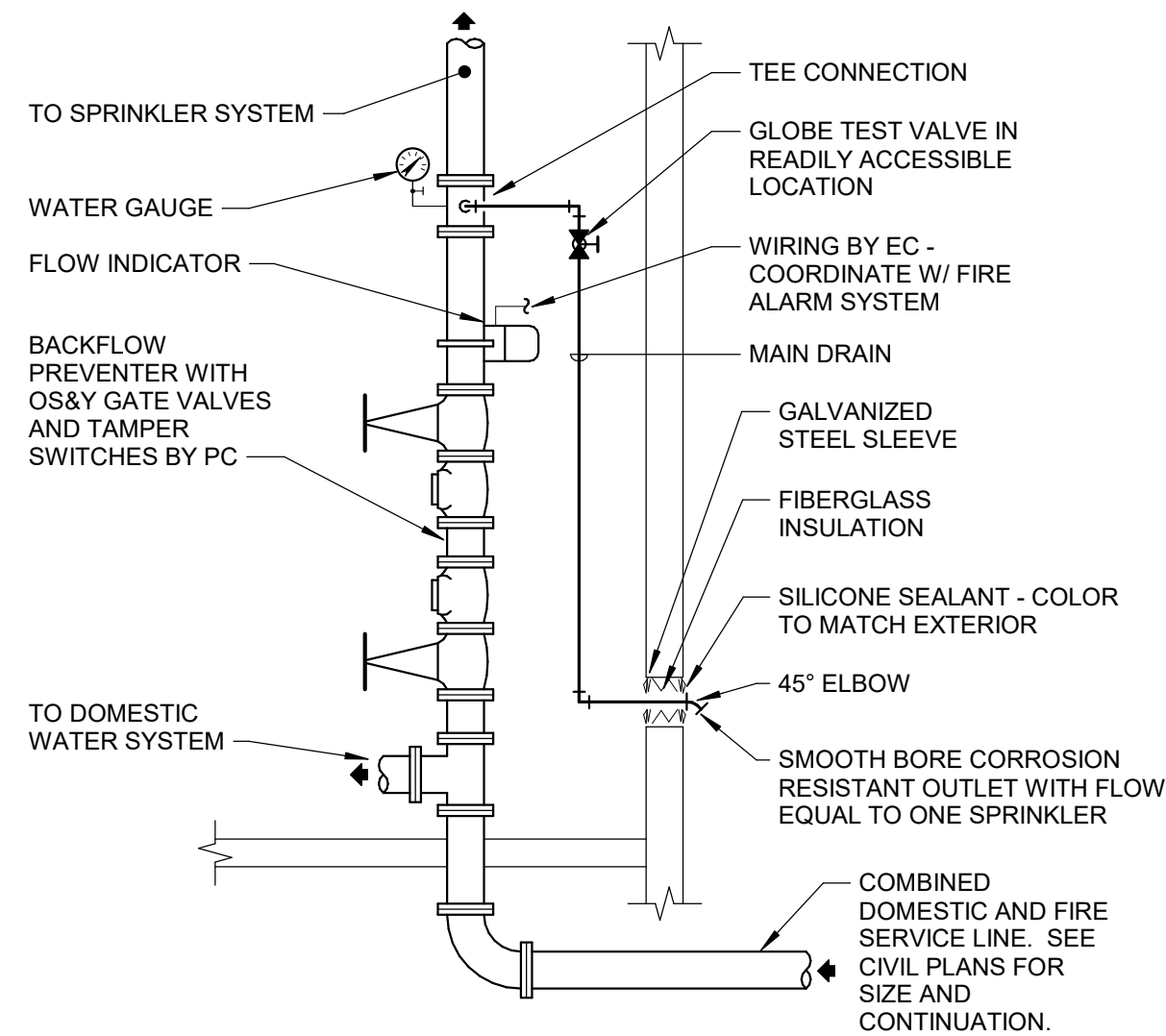
COMMON REQUIREMENTS

- A. PLAN AND CALCULATION WORK SHALL BE PREPARED UNDER THE RESPONSIBLE CHARGE OF, AND SEALED BY, A LICENSED ENGINEER (OR A NICET LEVEL III OR IV TECHNICIAN CERTIFIED IN WATER BASED FIRE PROTECTION SYSTEM LAYOUT) AS REQUIRED BY THE STATE OF MISSOURI.
- B. MATERIALS, INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF STATE AND LOCAL CODE PROCEDURES, METHODS AND REQUIREMENTS, INCLUDING THE MOST STRINGENT OF HEALTH AND SAFETY STANDARDS REQUIRED AND AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
 "INTERNATIONAL FIRE CODE" (CURRENT EDITION)
 "INTERNATIONAL BUILDING CODE" (CURRENT EDITION)
 "NFPA 13D" (CURRENT EDITION)
 "NFPA 25" (CURRENT EDITION)
 "INTERNATIONAL PLUMBING CODE" (CURRENT EDITION)
 APPLICABLE LOCAL AND MUNICIPAL CODES AND ORDINANCES.
- C. MEANING AND INTENT OF DRAWINGS, DRAWINGS ARE DIAGRAMMATIC AND FIRE PROTECTION SYSTEMS ARE SHOWN IN SCHEMATIC FORM. DRAWINGS DO NOT SHOW EVERY FIRE PROTECTION SYSTEM COMPONENT AND SHOULD BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT. DESIGN THE SYSTEM AND ROUTE PIPING AS REQUIRED FOR CONFORMANCE WITH THE DRAWINGS, ACTUAL BUILDING CONDITIONS, AND COMPLIANCE OF APPLICABLE CODES AND STANDARDS TO MEET THE INTENT AND MEANING OF THE DRAWINGS AND TO PROVIDE A COMPLETE AND OPERATIONAL FIRE PROTECTION SYSTEM. WHERE APPLICABLE, THE FIRE PROTECTION CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO SYSTEM DESIGN. REPORT ANY QUESTIONS, OR CONCERNS TO THE ARCHITECT/ENGINEER IN WRITING PRIOR TO PROCEEDING WITH WORK. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. MINOR CHANGES IN LOCATIONS OF FIRE PROTECTION EQUIPMENT, AND/OR SYSTEMS FROM THOSE INDICATED ON DRAWINGS SHALL BE MADE WITHOUT EXTRA COST.
- D. INCLUDE IN BID, ALL LICENSE, PERMIT, INSPECTION, AND OTHER FEES REQUIRED BY UTILITY COMPANIES OR AUTHORITIES HAVING JURISDICTION REQUIRED FOR COMPLETION OF WORK SO NO ADDITIONAL EXPENSES ARE INTRODUCED TO THE OWNER.
- E. ANY COSTS RESULTING FROM ANY DEVIATIONS IN THE CONTRACT DOCUMENTS FROM REQUIREMENTS OF LOCAL UTILITIES, MUNICIPALITIES, STATE OR FEDERAL LAWS AND REGULATIONS SHALL BE INCLUDED IN BID.
- F. THE FIRE PROTECTION CONTRACTOR SHALL USE NFPA-13D, AS A GUIDELINE WHEN PREPARING SUBMITTALS FOR REVIEW. DISREGARD ONLY THOSE ITEMS NOT APPLICABLE TO THE INDIVIDUAL BUILDING SYSTEM. FIRE PROTECTION MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA-13D (STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS FOR ONE AND TWO FAMILY DWELLINGS AND MANUFACTURED HOMES).
- G. EACH CABIN SHALL BE A SPRINKLERED BUILDING WITH A WET PIPE SYSTEM AS OUTLINED IN THE REQUIREMENTS OF NFPA-13D.
- H. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HYDRAULICALLY CALCULATE SPRINKLER REQUIREMENTS PER THE APPROPRIATE HAZARD OCCUPANCY AND PROVIDE ACTUAL NUMBER OF HEADS, REQUIRED SPACING AND PIPE ROUTING AS REQUIRED FOR CLEARANCE WITH STRUCTURAL CONDITIONS AND OTHER TRADES TO PROVIDE A COMPLETE AND OPERABLE SYSTEM IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS.
- I. FIRE PROTECTION CONTRACTOR SHALL DESIGN THE SYSTEM AND ROUTE PIPING AS REQUIRED FOR CONFORMANCE WITH ACTUAL BUILDING CONDITIONS AND NFPA REQUIREMENTS. COORDINATE SPRINKLER WORK WITH ALL OTHER TRADES TO AVOID CONFLICT.
- J. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING ALL SUPPORTS ARE SECURELY ANCHORED OR ATTACHED TO BUILDING ELEMENTS ADEQUATE FOR THE INTENDED FIRE PROTECTION SYSTEM OR EQUIPMENT.
- K. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS. SEAL PENETRATIONS WITH FIRESTOP MATERIALS. REVIEW ARCHITECTURAL PLANS PRIOR TO BIDDING.
- L. SYSTEM MONITORS (SUCH AS FLOW, TAMPER SWITCHES, ETC.) SHALL BE FURNISHED AND INSTALLED BY FIRE PROTECTION CONTRACTOR. ANY ASSOCIATED CONTROL WIRING SHALL BE BY THE FIRE PROTECTION CONTRACTOR AND ANY ASSOCIATED POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.
- M. WATER SERVICE AND DETECTOR TYPE REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER TO BE PROVIDED, INSTALLED AND TESTED BY PLUMBING CONTRACTOR. FIRE PROTECTION CONTRACTOR IS TO INCORPORATE ASSOCIATED PRESSURE DROP OF SELECTED BACKFLOW PREVENTER DEVICE IN HYDRAULIC CALCULATIONS. A DETECTOR TYPE DOUBLE CHECK BACKFLOW PREVENTER MAY BE UTILIZED WITH APPROVAL OF THE AUTHORITY HAVING JURISDICTION.
- N. THE FIRE PROTECTION CONTRACTOR SHALL CLEAN WORK AREA OF DUST AND DEBRIS GENERATED BY THEIR WORK AT THE END OF EACH WORKDAY.
- O. MAINTAIN A MINIMUM CLEARANCE IN FRONT OF AND FROM EITHER SIDE OF ELECTRICAL PANELS, EQUIPMENT, ETC., AS OUTLINED IN NEC STANDARDS. PIPE SYSTEMS SHALL NOT BE ROUTED DIRECTLY OVER PANELS, EQUIPMENT, ETC.
- P. FIRE PROTECTION CONTRACTOR SHALL SUBMIT ONE COMPLETE SET OF AUTOMATIC SPRINKLER SYSTEM DRAWINGS, HYDRAULIC CALCULATIONS, CURRENT WATER FLOW TEST, AND THE EQUIPMENT DATA BROCHURES PREPARED BY OR UNDER THE SUPERVISION OF, AND SEALED BY, A PROFESSIONAL ENGINEER. THE SUBMITTAL SHALL BE SENT TO ENGINEER FOR APPROVAL PRIOR TO BEING RELEASED TO ALL AUTHORITIES HAVING JURISDICTION FOR REVIEW AND APPROVAL.
- Q. REFER TO SPECIFICATION SECTIONS IN DIVISION 21 FOR ADDITIONAL INFORMATION PERTAINING TO THE FIRE PROTECTION SYSTEM.



PIPE PENETRATION FOR NON-RATED WALLS AND FLOORS

2 SCALE: No Scale

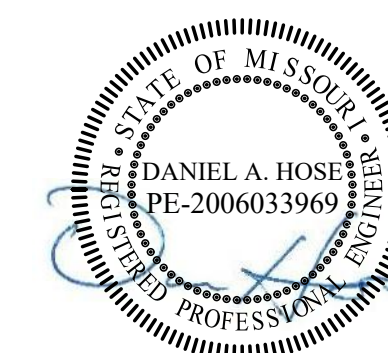


SPRINKLER RISER W/VERTICALLY MOUNTED BFP

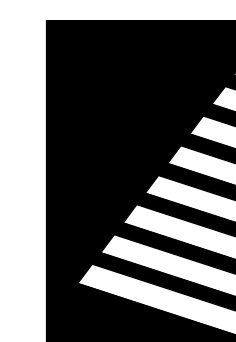
1 SCALE: No Scale

THE FIRE PROTECTION DRAWING IS DESIGNED TO BE IN CONFORMANCE WITH NFPA 13D. IT IS A PERFORMANCE BASED DRAWING INDICATING THE EXTENT OF FIRE PROTECTION WORK FOR THE AREA THAT THIS DRAWING REPRESENTS. THIS DRAWING IS "FOR INFORMATION ONLY", AS A REFERENCE FOR THE FIRE PROTECTION CONTRACTOR TO BASE THE DESIGN OF THE FIRE PROTECTION SYSTEM ON. THE CONTRACTOR SHALL VERIFY THE EXACT CONDITIONS THAT THIS DRAWING REPRESENTS, INCLUDING ANY PERCEIVED CONCEALED SPACES, AND THE BUILDING TYPE AND CONSTRUCTION AS OUTLINED IN THE INTERNATIONAL BUILDING CODE, PRIOR TO THE START OF WORK. REFER TO THE INTERNATIONAL BUILDING CODE, ESPECIALLY CHAPTERS 6 (TYPES OF CONSTRUCTION) AND CHAPTER 9 (FIRE PROTECTION SYSTEMS), NFPA 13D, AND THE PROJECT SPECIFICATIONS FOR OTHER FIRE PROTECTION REQUIREMENTS.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP. 12/31/2024



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: CJA
CHECKED BY: DAH
DESIGNED BY: EJJ

SHEET TITLE:

GENERAL INFORMATION

SHEET NUMBER:

F-001

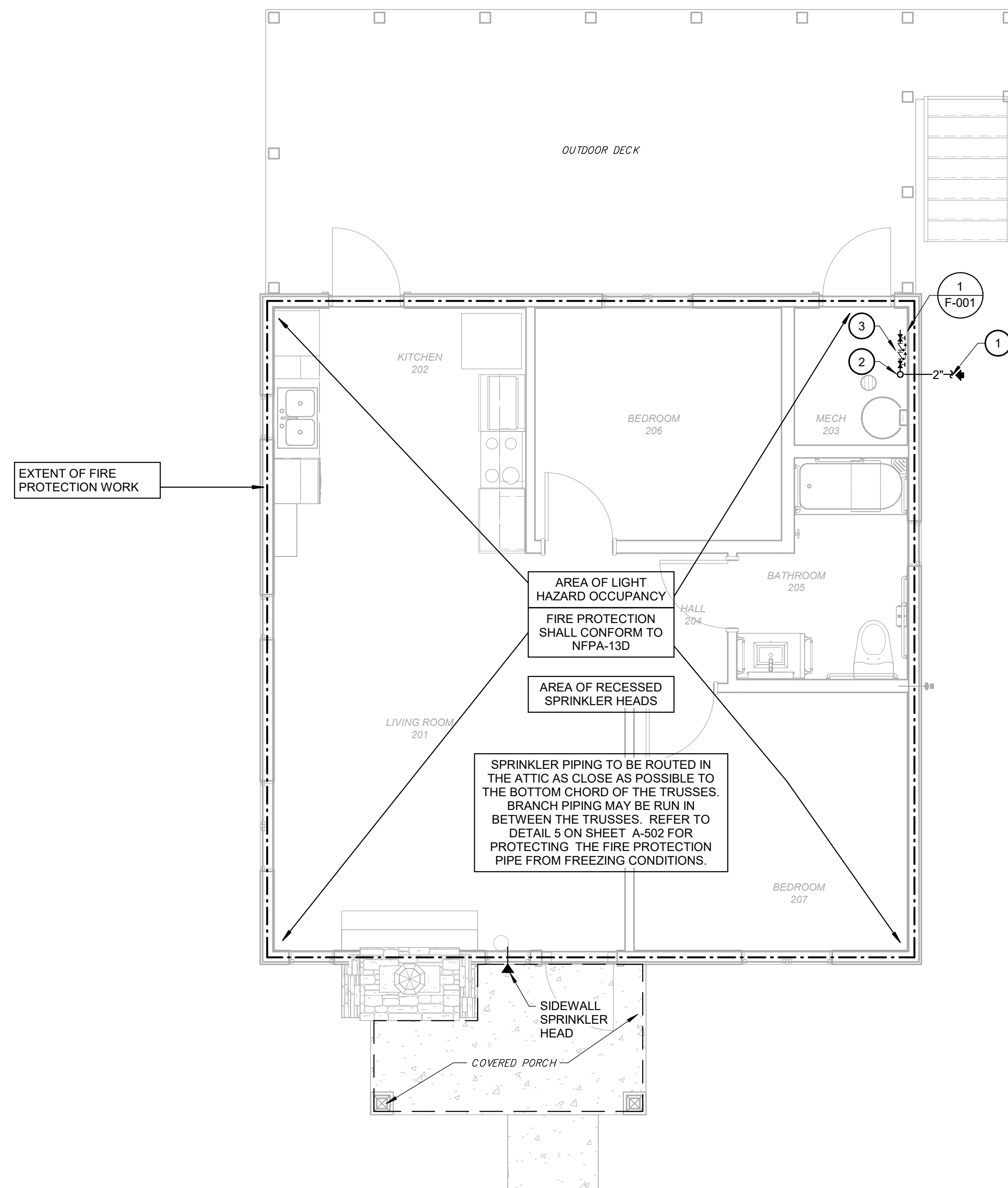
SHEET 49 of 75
ISSUE DATE: 03/02/2023

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FIRST FLOOR FIRE PROTECTION PLAN

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



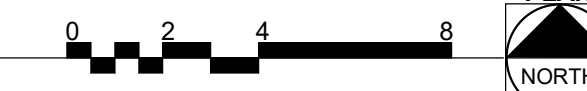
KEYNOTES

- 2" COMBINED WATER SERVICE FOR DOMESTIC AND FIRE PROTECTION SERVICE. COORDINATE EXACT LOCATION WITH CIVIL. SEE CIVIL SITE PLANS FOR CONTINUATION.
- PROVIDE 2" VERTICAL BACKFLOW PREVENTER FOR THE FIRE PROTECTION SERVICE AND INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND LOCAL AHJ REQUIREMENTS.
- BACKFLOW PREVENTER FOR DOMESTIC SERVICE. SEE PLUMBING DRAWINGS.

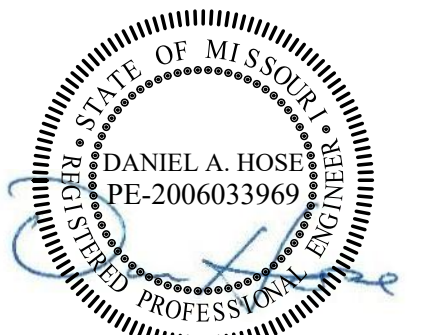
GENERAL NOTES

- FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SPRINKLER REQUIREMENTS PER THE APPROPRIATE LIGHT HAZARD OCCUPANCY AND NFPA 13D.
- PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, ETC. REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE, NFPA 13D AND THE AUTHORITY HAVING JURISDICTION (AHJ).
- THE FIRE PROTECTION CONTRACTOR SHALL DESIGN THE SYSTEM, LOCATE SPRINKLER HEADS AND ROUTE PIPING AS REQUIRED TO CONFORM WITH ACTUAL BUILDING CONDITIONS AND NFPA 13D REQUIREMENTS. COORDINATE SPRINKLER WORK WITH ALL OTHER TRADES TO AVOID CONFLICT.
- QUALITY ASSURANCE:
 - INSTALLER QUALIFICATIONS INCLUDE DESIGNING, FABRICATING, AND INSTALLING SPRINKLER SYSTEMS AND PROVIDING PROFESSIONAL ENGINEERING SERVICES NEEDED TO ASSUME ENGINEERING RESPONSIBILITY. WELDING QUALIFICATIONS, QUALIFY PROCEDURES AND OPERATORS ACCORDING TO ASME BOILER AND PRESSURE VESSEL CODE.
 - ELECTRICAL COMPONENTS, DEVICES AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
 - NFPA STANDARDS: SPRINKLER SYSTEM EQUIPMENT, SPECIALTIES, ACCESSORIES, INSTALLATION AND TESTING SHALL COMPLY WITH NFPA 13 "INSTALLATION OF SPRINKLER SYSTEMS".
- FIRE PROTECTION PIPING, JOINTS AND FITTINGS: AS LISTED IN NFPA 13D, CHAPTER 5 AND APPROVED BY LOCAL AHJ.
- LISTED FIRE PROTECTION VALVES:
 - GENERAL REQUIREMENTS: VALVES SHALL BE UL LISTED OR FM APPROVED FOR A MINIMUM PRESSURE RATING FOR STANDARD PRESSURE PIPING OF 175 PSIG.
- SPRINKLERS: RESIDENTIAL STYLE SPRINKLERS.

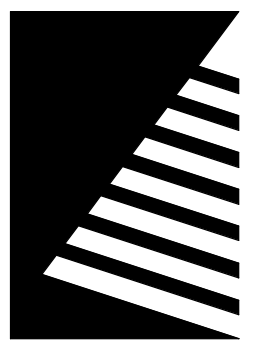
THE FIRE PROTECTION DRAWING IS DESIGNED TO BE IN CONFORMANCE WITH NFPA 13D. IT IS A PERFORMANCE BASED DRAWING INDICATING THE EXTENT OF FIRE PROTECTION WORK FOR THE AREA THAT THIS DRAWING REPRESENTS. THIS DRAWING IS "FOR INFORMATION ONLY", AS A REFERENCE FOR THE FIRE PROTECTION CONTRACTOR TO BASE THE DESIGN OF THE FIRE PROTECTION SYSTEM ON. THE CONTRACTOR SHALL VERIFY THE EXACT CONDITIONS THAT THIS DRAWING REPRESENTS, INCLUDING ANY PERCEIVED CONCEALED SPACES, AND THE BUILDING TYPE AND CONSTRUCTION AS OUTLINED IN THE INTERNATIONAL BUILDING CODE, PRIOR TO THE START OF WORK. REFER TO THE INTERNATIONAL BUILDING CODE, ESPECIALLY CHAPTERS 6 (TYPES OF CONSTRUCTION) AND CHAPTER 9 (FIRE PROTECTION SYSTEMS), NFPA 13D, AND THE PROJECT SPECIFICATIONS FOR OTHER FIRE PROTECTION REQUIREMENTS.



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02/03/2023
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PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: CJA

CHECKED BY: DAH

DESIGNED BY: EJG

SHEET TITLE:

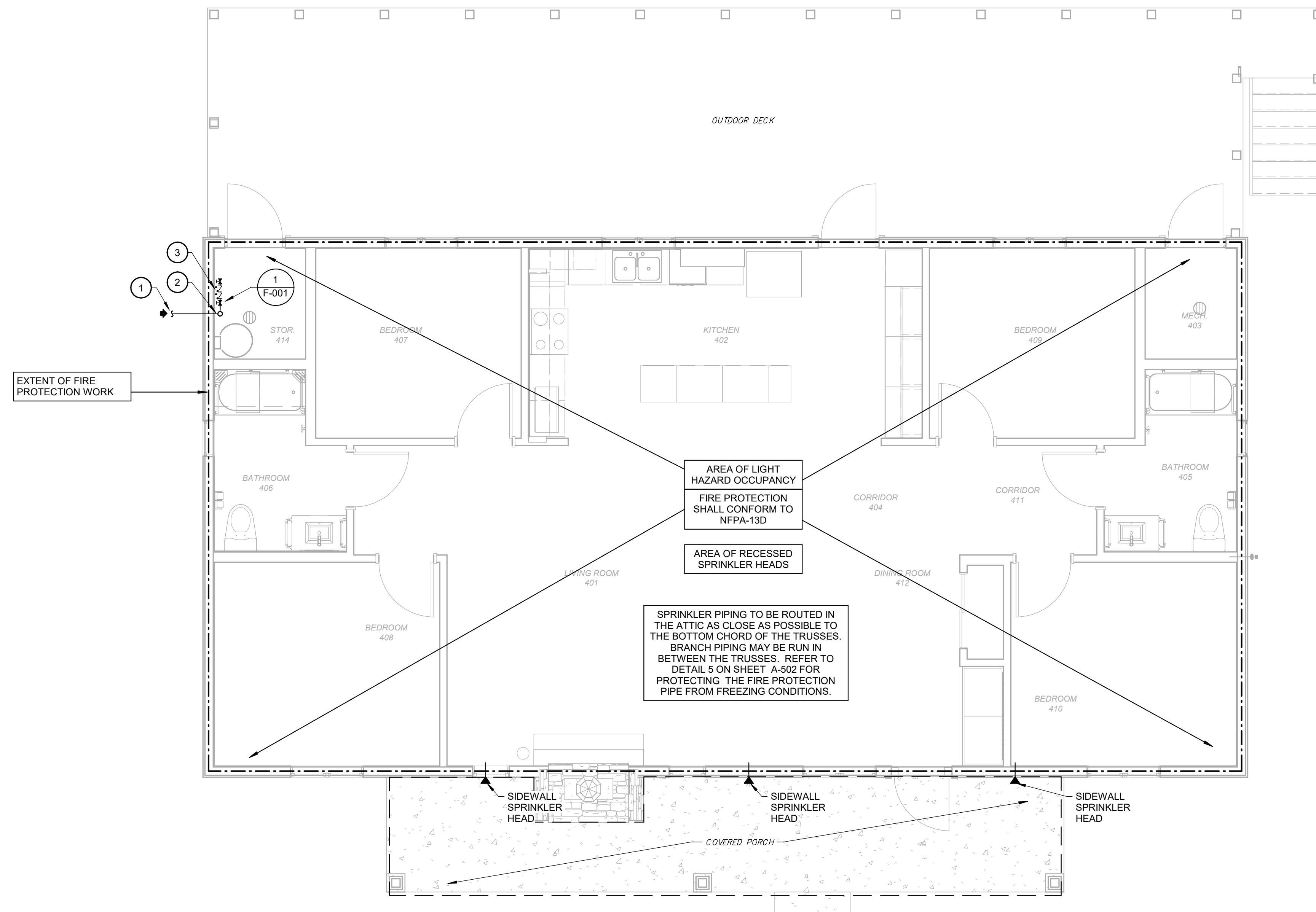
TWO BEDROOM CABIN FIRE PROTECTION PLAN

SHEET NUMBER:

F-101

SHEET 50 of 75

ISSUE DATE: 03/02/2023



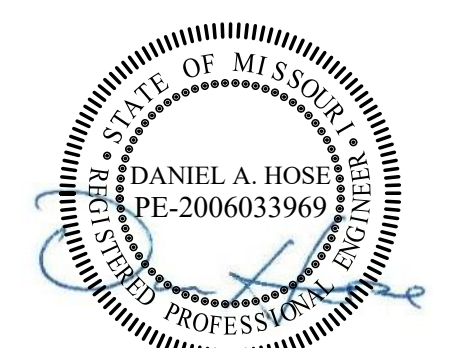
KEYNOTES #

- 1 2" COMBINED WATER SERVICE FOR DOMESTIC AND FIRE PROTECTION SERVICE. COORDINATE EXACT LOCATION WITH CIVIL. SEE CIVIL SITE PLANS FOR CONTINUATION.
- 2 PROVIDE 2" VERTICAL BACKFLOW PREVENTER FOR THE FIRE PROTECTION SERVICE AND INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND LOCAL AHJ REQUIREMENTS.
- 3 BACKFLOW PREVENTER FOR DOMESTIC SERVICE. SEE PLUMBING DRAWINGS.

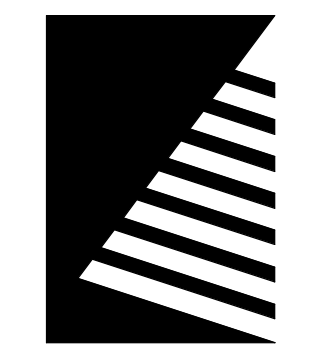
GENERAL NOTES

1. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SPRINKLER REQUIREMENTS PER THE APPROPRIATE LIGHT HAZARD OCCUPANCY AND NFPA 13D.
2. PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, ETC. REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE, NFPA 13D AND THE AUTHORITY HAVING JURISDICTION (AHJ).
3. THE FIRE PROTECTION CONTRACTOR SHALL DESIGN THE SYSTEM, LOCATE SPRINKLER HEADS AND ROUTE PIPING AS REQUIRED TO CONFORM WITH ACTUAL BUILDING CONDITIONS AND NFPA 13D REQUIREMENTS. COORDINATE SPRINKLER WORK WITH ALL OTHER TRADES TO AVOID CONFLICT.
4. QUALITY ASSURANCE:
 - INSTALLER QUALIFICATIONS INCLUDE DESIGNING, FABRICATING, AND INSTALLING SPRINKLER SYSTEMS AND PROVIDING PROFESSIONAL ENGINEERING SERVICES NEEDED TO ASSUME ENGINEERING RESPONSIBILITY. WELDING QUALIFICATIONS, QUALIFY PROCEDURES AND OPERATORS ACCORDING TO ASME BOILER AND PRESSURE VESSEL CODE.
 - ELECTRICAL COMPONENTS, DEVICES AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
 - NFPA STANDARDS: SPRINKLER SYSTEM EQUIPMENT, SPECIALTIES, ACCESSORIES, INSTALLATION AND TESTING SHALL COMPLY WITH NFPA 13 "INSTALLATION OF SPRINKLER SYSTEMS".
5. FIRE PROTECTION PIPING, JOINTS AND FITTINGS: AS LISTED IN NFPA 13D, CHAPTER 5 AND APPROVED BY LOCAL AHJ.
6. LISTED FIRE PROTECTION VALVES:
 - GENERAL REQUIREMENTS: VALVES SHALL BE UL LISTED OR FM APPROVED FOR A MINIMUM PRESSURE RATING FOR STANDARD PRESSURE PIPING OF 175 PSIG.
7. SPRINKLERS: RESIDENTIAL STYLE SPRINKLERS.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP. 12/31/2024



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DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: CJA
CHECKED BY: DAH
DESIGNED BY: EJJ

SHEET TITLE:
**FOUR BEDROOM
CABIN FIRE
PROTECTION PLAN**

SHEET NUMBER:
F-102

SHEET 51 of 75
ISSUE DATE: 03/02/2023

THE FIRE PROTECTION DRAWING IS DESIGNED TO BE IN CONFORMANCE WITH NFPA 13D. IT IS A PERFORMANCE BASED DRAWING INDICATING THE EXTENT OF FIRE PROTECTION WORK FOR THE AREA THAT THIS DRAWING REPRESENTS. THIS DRAWING IS "FOR INFORMATION ONLY", AS A REFERENCE FOR THE FIRE PROTECTION CONTRACTOR TO BASE THE DESIGN OF THE FIRE PROTECTION SYSTEM ON. THE CONTRACTOR SHALL VERIFY THE EXACT CONDITIONS THAT THIS DRAWING REPRESENTS, INCLUDING ANY PERCEIVED CONCEALED SPACES, AND THE BUILDING TYPE AND CONSTRUCTION AS OUTLINED IN THE INTERNATIONAL BUILDING CODE, PRIOR TO THE START OF WORK. REFER TO THE INTERNATIONAL BUILDING CODE, ESPECIALLY CHAPTERS 8 (TYPES OF CONSTRUCTION) AND CHAPTER 9 (FIRE PROTECTION SYSTEMS), NFPA 13D, AND THE PROJECT SPECIFICATIONS FOR OTHER FIRE PROTECTION REQUIREMENTS.



SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS

PIPING

	PIPE SLOPE ARROW
	FLOW ARROW
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	3-WAY CONTROL VALVE
	ANGLE GATE VALVE
	ANGLE GLOBE VALVE
	BALANCING/SHUTOFF VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CALIBRATED BALANCING VALVE
	CHECK VALVE
	CONTROL VALVE
	EXPANSION VALVE
	GAS COCK
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	PRESSURE REDUCING VALVE (WATER)
	PRESSURE REGULATOR (GAS)
	QUICK OPEN VALVE
	SAFETY RELIEF VALVE
	SOLENOID VALVE
	VACUUM RELIEF VALVE
	BACKFLOW PREVENTER
	HOSE BIBB / SILLCOCK
	AUTOMATIC AIR VENT
	PRESSURE GAUGE
	THERMOMETER
	FLOW SWITCH
	PRESSURE SWITCH
	TEMPERATURE SWITCH
	PIPE UNION
	WYE STRAINER
	WYE STRAINER W/DRAIN VALVE
	PUMP
	FLOOR DRAIN - ROUND OR SQUARE
	FLOOR CLEANOUT - ROUND OR SQUARE
	SUSPENDED CLEANOUT
	WALL CLEANOUT
	PIPE CAP
	PIPE TURNING DOWN
	PIPE TURNING UP
	TEE UP
	TEE DOWN
	DROP AND RUN
	DROP AND TURN
	TEE OFF TOP
	TEE OFF BOTTOM
	CROSS AND RISER
	PLAN 90° ELBOW
	PIPE TEE
	FLEXIBLE PIPE CONNECTOR
	PIPE ANCHOR
	PIPE GUIDES
	WATER METER

GENERAL

	DETAIL OR SECTION MARK
	SHEET #
	POINT OF NEW CONNECTION
	POINT OF TERMINATION/CAP
	PLUMBING EQUIPMENT DESIGNATION
	PLUMBING KEYNOTE
	KITCHEN EQUIPMENT DESIGNATION
	NEW BOLD TEXT INDICATES NEW ITEM
	<i>EXISTING</i> ITALIC TEXT INDICATES EXISTING ITEM
	----- LINE STYLE INDICATES DEMOLISHED ITEM

PIPING SYSTEM

AW	ACID WASTE
CA	COMPRESSED AIR
CD	CONDENSATE DRAIN
CO2	CARBON DIOXIDE
G	NATURAL GAS
GW	GREASE WASTE
MA	MEDICAL AIR
N2	NITROGEN
N2O	NITROUS OXIDE
OST	OVERFLOW STORM
OW	OIL WASTE
O2	OXYGEN
PD	PUMP DISCHARGE
ST	STORM
VAC	VACUUM
WAGD	WASTE ANESTHETIC GAS DISPOSAL
W	SANITARY WASTE
AV	ACID VENT
OV	OIL VENT
V	SANITARY VENT
CW	DOMESTIC COLD WATER
DI	DE-IONIZED WATER
FCW	FILTERED COLD WATER
LCW	LAB COLD WATER
NPCW	NONPOTABLE COLD WATER
RO	REVERSE OSMOSIS WATER
SCW	SOFTENED COLD WATER
HW	DOMESTIC HOT WATER
HW (-)	DOMESTIC HOT WATER (OTHER TEMP)
LHW	LAB HOT WATER
TW	TEPID WATER
HWC	DOMESTIC HW RECIRCULATION
LHWC	LAB HW RECIRCULATION

ABBREVIATIONS

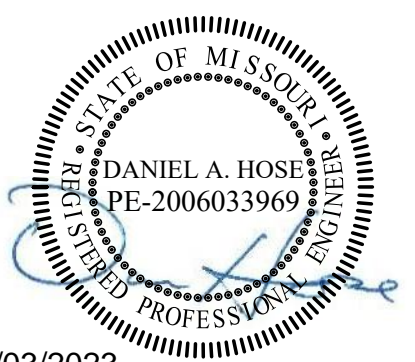
AC	ABOVE CEILING
AD	AREA DRAIN
AF	ABOVE FINISHED FLOOR
BAS	BUILDING AUTOMATION SYSTEM
BF	BELOW FLOOR
BG	BELOW GRADE
BH	BOOSTER HEATER
BFP	BACKFLOW PREVENTION DEVICE
BJ	BETWEEN JOISTS
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
CF	COMBINATION FIXTURE
COND	CONDENSATE
CP	CONDENSATE PUMP
CSS	CLINICAL SERVICE SINK
CV	CONTROL VALVE
DF	DRINKING FOUNTAIN
DN	DOWN
DS	DOWNSPOUT NOZZLE
DW	DISHWASHER
EC	ELECTRICAL CONTRACTOR
EEW	EMERGENCY EYE WASH
ESH	COMB. EMERGENCY EYE WASH/SHOWER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
FA	FROM ABOVE
FB	FROM BELOW
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FPC	FIRE PROTECTION SUBCONTRACTOR
FS	FLOOR SINK
FT	FILL TANK
GD	GARBAGE DISPOSAL
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
GC	GENERAL CONTRACTOR
HAP	HIGH AS POSSIBLE
HB	HOSE BIBB (INTERIOR)
HS	HOSE STATION
HWCP	HOT WATER RECIRCULATION PUMP
IM	ICE MAKER
L	LAVATORY
LT	LAUNDRY TUB
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MSB	MOP SINK BASIN
NTS	NOT TO SCALE
ORD	OVERFLOW ROOF DRAIN
P	PUMP
PC	PLUMBING CONTRACTOR
PRV	PRESSURE RELIEF VALVE
RD	ROOF DRAIN
SC	SILLCOCK (EXTERIOR)
SE	SEWAGE EJECTOR
SF	SQUARE FOOT
SH	SHOWER
SK	SINK
SP	SUMP PUMP
SS	SERVICE SINK
TFA	TO FLOOR ABOVE
TB	TO BELOW
TFB	TO FLOOR BELOW
TMV	THERMOSTATIC MIXING VALVE
TOP	TOP OF PIPE
UR	URINAL
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
WB	WASHER BOX
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WFL	WATER FILTER
WS	WATER SOFTENER
YCO	YARD CLEANOUT

GENERAL NOTES

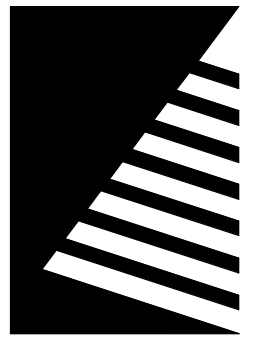
COMMON REQUIREMENTS

- A. WORK SHALL BE PERFORMED BY A LICENSED PLUMBER OF THE STATE OF MISSOURI.
- B. MATERIALS, INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF STATE AND LOCAL CODE PROCEDURES, METHODS AND REQUIREMENTS, INCLUDING THE MOST STRINGENT OF HEALTH AND SAFETY STANDARDS AS REQUIRED AND AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
 "INTERNATIONAL PLUMBING CODE"
 "INTERNATIONAL FUEL GAS CODE"
 "NFPA 54 - NATIONAL FUEL GAS CODE"
 APPLICABLE LOCAL AND MUNICIPAL CODES AND ORDINANCES.
- C. **MEANING AND INTENT OF DRAWINGS:** DRAWINGS ARE DIAGRAMMATIC AND PLUMBING SYSTEMS ARE SHOWN IN SCHEMATIC FORM. DRAWINGS DO NOT SHOW EVERY PLUMBING SYSTEM COMPONENT AND SHOULD BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT. PLUMBING SYSTEM INSTALLATIONS RELATED TO THIS PROJECT SHALL BE PROVIDED TO MEET THE INTENT AND MEANING OF THE DRAWINGS IN COMPLIANCE WITH APPLICABLE CODES, AND STANDARDS. WHERE APPLICABLE THE PLUMBING CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO INSTALLATION. REPORT ANY QUESTIONS, OR CONCERNS TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH WORK. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. MINOR CHANGES IN LOCATIONS OF PLUMBING EQUIPMENT, &OR SYSTEMS FROM THOSE INDICATED ON DRAWINGS SHALL BE MADE WITHOUT EXTRA COST. A COMPLETE AND OPERATIONAL PLUMBING SYSTEM SHALL BE PROVIDED.
- D. THE PLUMBING CONTRACTOR SHALL REFER TO BOTH DRAWINGS AND SPECIFICATIONS FOR ALL PLUMBING CRITERIA REQUIRED FOR THIS PROJECT.
- E. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING UTILITY SERVICES FROM 5'-0" OUTSIDE BUILDING FOUNDATION WALL TO WITHIN THE BUILDING UNLESS NOTED OTHERWISE ON PLANS. SEE CIVIL SITE UTILITY PLANS FOR RELATED SITE UTILITY WORK BY OTHERS.
- F. COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES AND STRUCTURAL CONDITIONS TO AVOID ANY ROUTING CONFLICTS OR SERVICE INTERFERENCES.
- G. MAINTAIN A MINIMUM CLEARANCE IN FRONT OF AND FROM EITHER SIDE OF ELECTRICAL PANELS, EQUIPMENT, ETC., AS OUTLINED IN NEC STANDARDS. PIPE SYSTEMS SHALL NOT BE ROUTED DIRECTLY OVER PANELS, EQUIPMENT, ETC.
- H. INCLUDE IN BID, ALL LICENSE, PERMIT, INSPECTION AND OTHER FEES REQUIRED BY AUTHORITIES HAVING JURISDICTION REQUIRED FOR COMPLETION OF WORK SO THAT NO UNEXPECTED ADDITIONAL EXPENSES ARE INTRODUCED TO OWNER.
- I. ALL VALVES, WATER HAMMER ARRESTORS, ETC. ARE TO BE ACCESSIBLE. EXTEND PIPING AND COORDINATE ACCESS PANEL SIZE AND LOCATION AS NECESSARY.
- J. PLUMBING CONTRACTOR SHALL CLEAN WORK AREA OF ALL DUST AND DEBRIS GENERATED BY THEIR WORK AT THE END OF EACH WORK DAY.
- K. ALL PLUMBING SYSTEM VALVES SHALL BE INSTALLED IN A LOCATION AND ORIENTATION THAT WILL PERMIT INTENDED USE.
- L. PROVIDE STOPS AND/OR ISOLATION VALVES TO EACH INDIVIDUAL FIXTURE OR PIECE OF EQUIPMENT PER APPLICABLE CODES TO ALLOW FOR INDIVIDUAL SERVICING UNLESS NOTED OTHERWISE ON PLANS.
- M. SANITARY WASTE PIPING SHALL BE SLOPED AT 1/8-INCH PER FOOT MINIMUM FOR ALL PIPING 4-INCH AND LARGER AND AT 1/4-INCH PER FOOT MINIMUM FOR ALL PIPING 3-INCH AND SMALLER.
- N. INDIRECT DRAIN PIPING FROM EQUIPMENT SHALL BE ROUTED TO FLOOR DRAIN OR OTHER APPROVED RECEPTACLE AND TERMINATED WITH AN AIR GAP 2 TIMES THE DIAMETER OF THE DRAIN PIPING, BUT NOT LESS THAN 1 INCH GAP. SUPPORT PIPING SO DRAIN PIPING CANNOT BE DEFLECTED FROM DRAIN SOURCE.
- O. ALL VENTS FROM HORIZONTAL SOIL OR WASTE PIPE SHALL COME OFF TOP OR AT 45 DEGREE VERTICALLY FROM CENTER OF PIPE BEFORE OFFSETTING HORIZONTALLY TO RISE.
- P. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING ALL SUPPORTS ARE SECURELY ANCHORED OR ATTACHED TO BUILDING ELEMENTS ADEQUATE FOR INTENDED PLUMBING SYSTEM OR EQUIPMENT.
- Q. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL NAIL PLATES WHERE PIPING PASSES THROUGH STUD(S) WITHIN 2" OF NAILING SURFACE TO PROTECT PIPE FROM NAILS OR DRYWALL SCREWS.
- R. ALL P-TRAPS FOR FLOOR DRAINS SHALL BE DEEP SEAL TYPE. TRAPS SHALL MAINTAIN THE SEWER GAS SEALS.
- S. PLUMBING CONTRACTOR TO INSTALL, TEST, AND FIELD BALANCE APPROVED EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP. 12/31/2024



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RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

EMINENCE, MISSOURI

PROJECT #.: X2208-01

SITE #.: 5235

FACILITY #.: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: CJA
CHECKED BY: DAH
DESIGNED BY: EJG

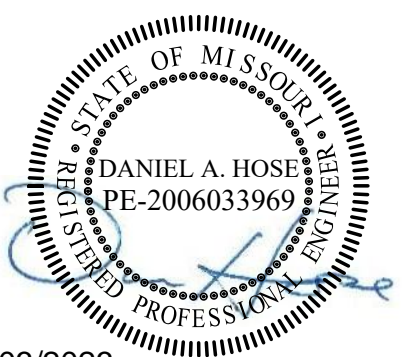
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**GENERAL
INFORMATION**

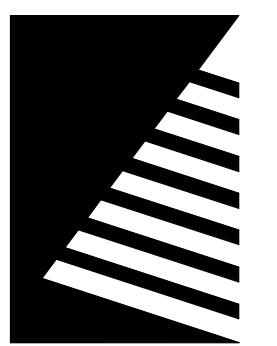
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SHEET 52 of 75
ISSUE DATE: 03/02/2023



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7815235023 - Cabin 505	X

DRAWN BY: CJA
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DESIGNED BY: EJJ

SHEET TITLE:
**TWO BEDROOM
CABIN PLUMBING
PLANS**

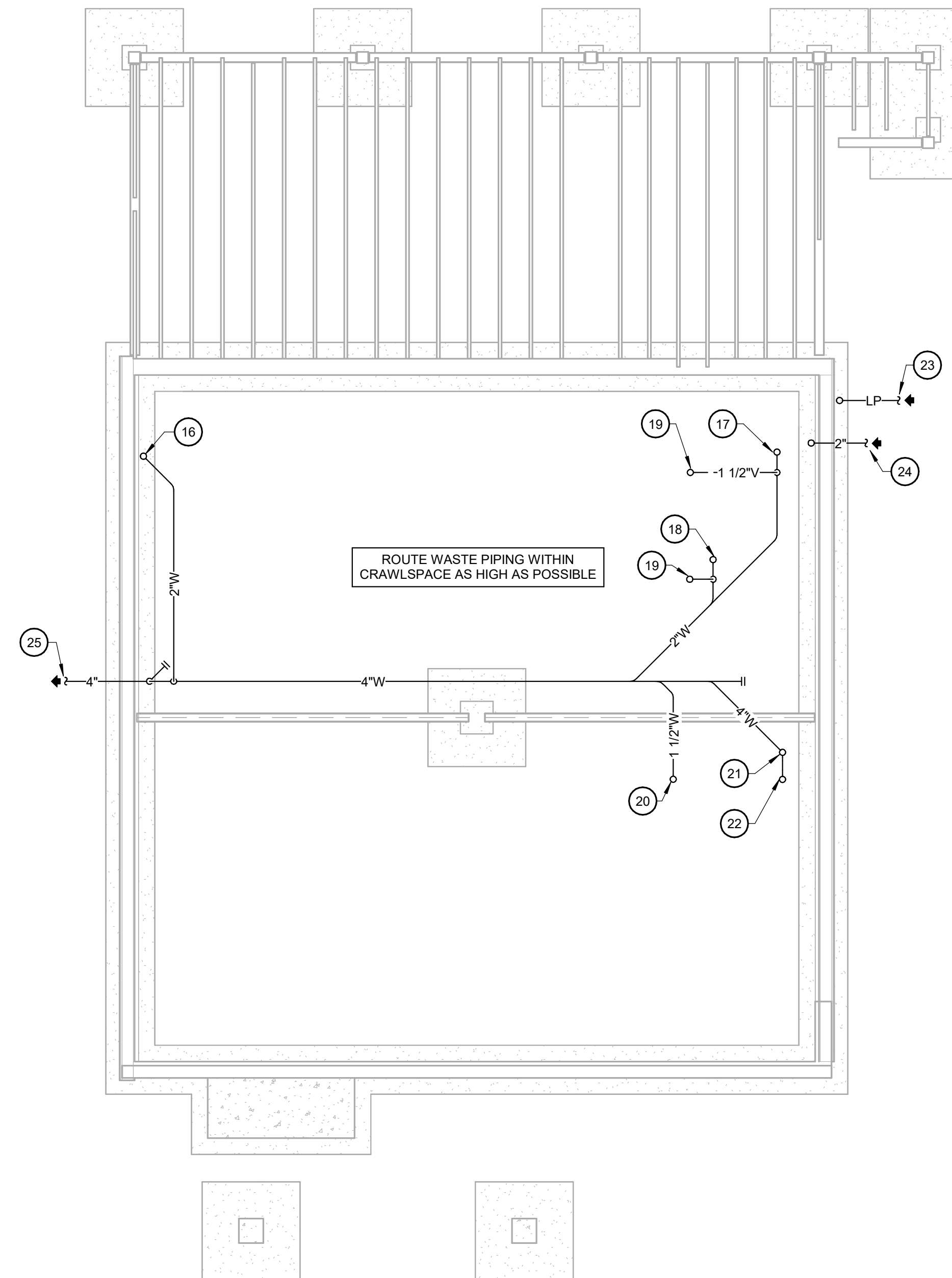
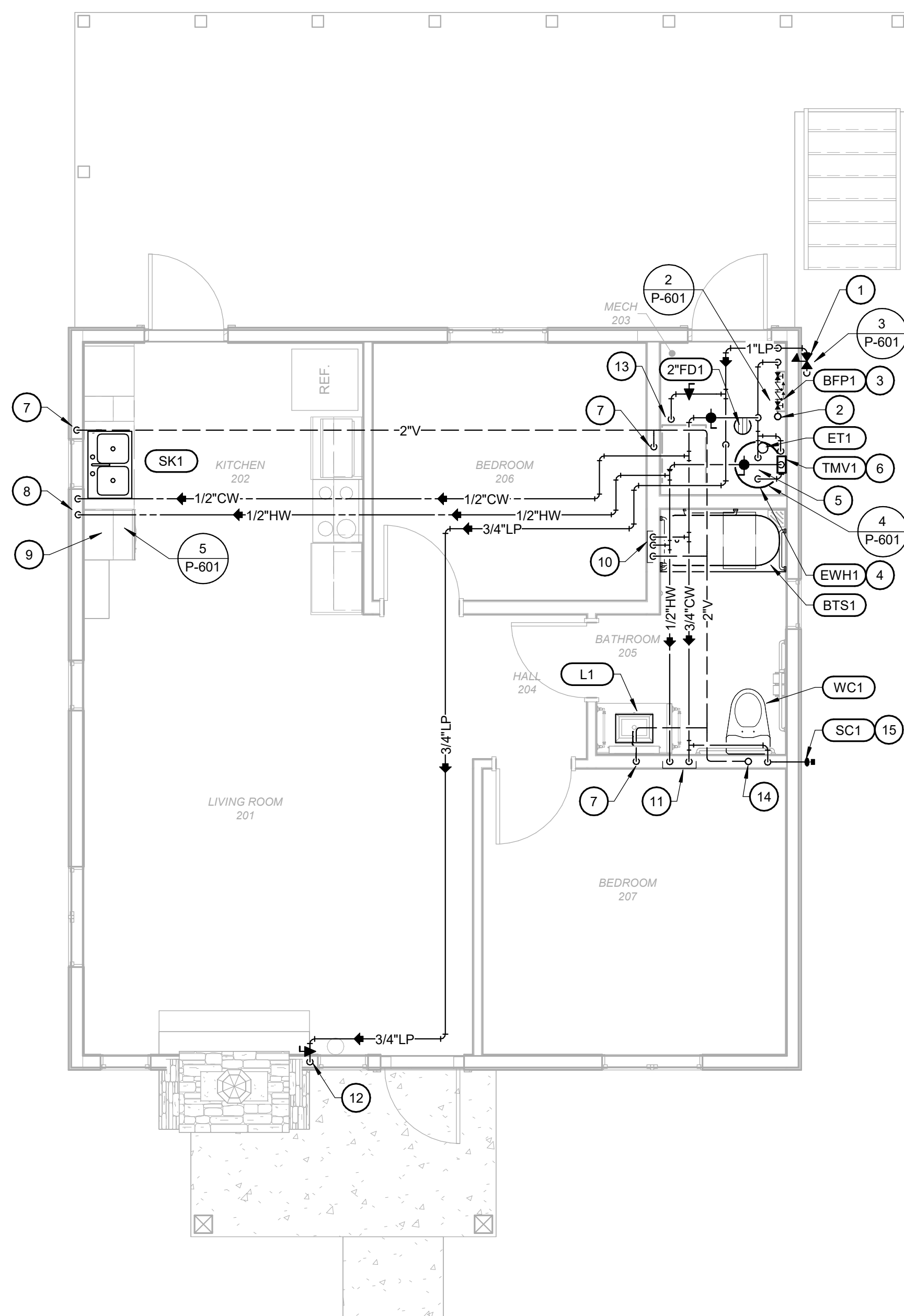
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P-101

SHEET 53 of 75
ISSUE DATE: 03/02/2023

KEYNOTES #

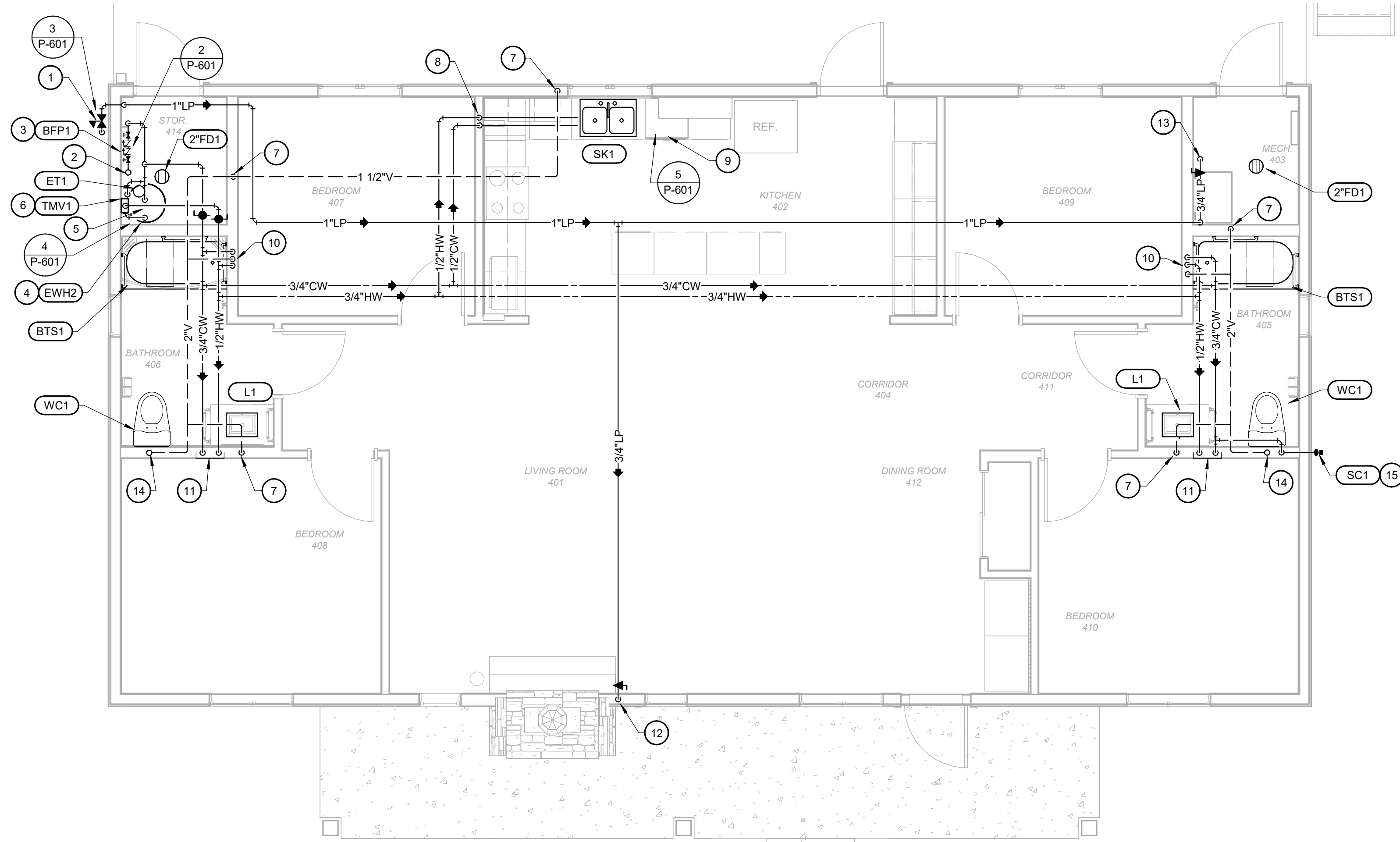
- 1 PROVIDE GAS REGULATOR AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO SCHEDULE AND DETAIL FOR MORE INFORMATION.
- 2 2 INCH COMBINED DOMESTIC WATER AND FIRE PROTECTION SERVICE LINE UP FROM BELOW.
- 3 PROVIDE 3/4 INCH BACKFLOW PREVENTER FOR THE DOMESTIC WATER SERVICE AND INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND LOCAL AHJ REQUIREMENTS.
- 4 INSTALL WATER HEATER AND ASSOCIATED PIPING PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS. ROUTE P&T DRAIN TO DISCHARGE INTO FLOOR DRAIN. REFER TO SCHEDULE AND DETAIL FOR MORE INFORMATION.
- 5 3/4 INCH HOT WATER AND COLD WATER TO ELECTRIC WATER HEATER.
- 6 INSTALL MIXING VALVE AND ASSOCIATED PIPING PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND MOUNT AT 5'-0" AFF. REFER TO THE DETAIL FOR MORE INFORMATION.
- 7 1 1/2 INCH VENT DOWN.
- 8 1/2 INCH HOT WATER AND COLD WATER DOWN IN WALL TO SINK.
- 9 PROVIDE 1/2"HW PIPING WITH SHUTOFF VALVE ROUTED THROUGH CABINET SPACE AND CONNECT TO DISHWASHER. PROVIDE SANITARY DRAIN HOSE FROM DISHWASHER AND CONNECT TO AIR GAP FITTING IN HOLE ON SINK. EXTEND DRAIN HOSE TO SINK TAILPIECE. SEE DETAIL FOR MORE INFORMATION.
- 10 1/2 INCH HOT AND COLD WATER, 1 1/2 INCH VENT IN WALL TO TUB/ SHOWER.
- 11 1/2 INCH HOT AND COLD WATER DOWN IN WALL. EXTEND TO EACH PLUMBING FIXTURE REQUIRING HOT AND COLD WATER.
- 12 3/4 INCH LP GAS PIPING DOWN TO FIREPLACE UNIT. PROVIDE SHUT OFF VALVE AND CONNECT GAS PIPING PER MANUFACTURER'S WRITTEN INSTRUCTIONS (22 CFH PROJECTED LOAD).
- 13 3/4 INCH LP GAS PIPE DOWN TO FURNACE (84 CFH PROJECTED LOAD).
- 14 3" VENT UP TO 4" VENT THROUGH ROOF. REFER TO SPECIFICATION SECTION 074112 (STANDING SEAM METAL ROOF PANELS).
- 15 MOUNT SILLCOCK AT 0'-6" ABOVE FINISHED CABIN FLOOR.
- 16 2" UP TO SINK.
- 17 2" UP TO FLOOR DRAIN.
- 18 2" UP TO SHOWER.
- 19 1 1/2" VENT UP.
- 20 1 1/2" UP TO LAVATORY.
- 21 4" UP TO WATER CLOSET.
- 22 3" VENT UP.
- 23 LP GAS SERVICE. COORDINATE EXACT LOCATION WITH SITE UTILITIES PLAN. SEE CIVIL DRAWINGS FOR CONTINUATION.
- 24 2" COMBINED WATER SERVICE. COORDINATE EXACT LOCATION WITH SITE UTILITIES PLAN. SEE CIVIL DRAWINGS FOR CONTINUATION.
- 25 4" SANITARY SERVICE. COORDINATE INVERT AND EXACT LOCATION WITH SITE UTILITIES PLAN. SEE CIVIL DRAWINGS FOR CONTINUATION.



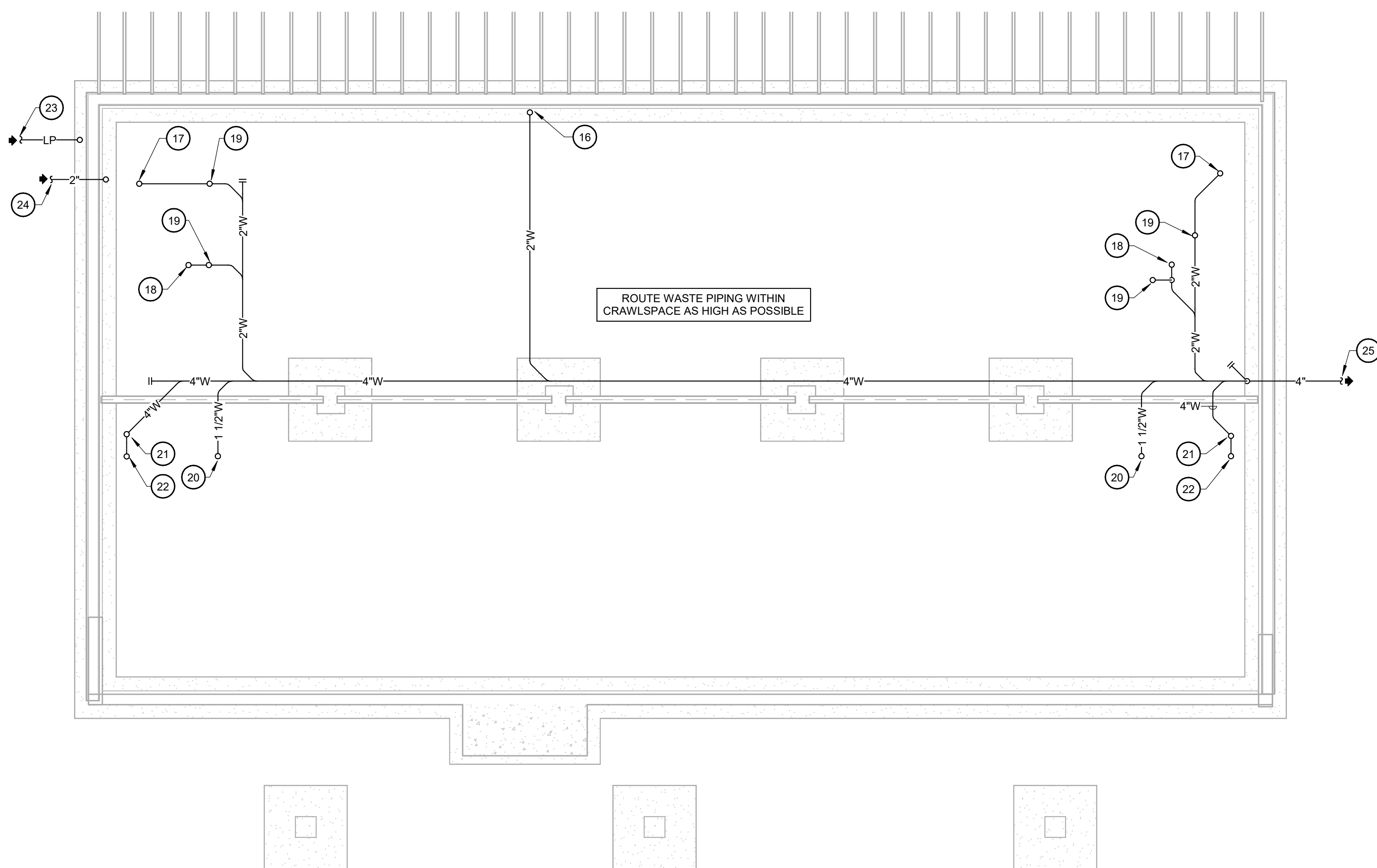
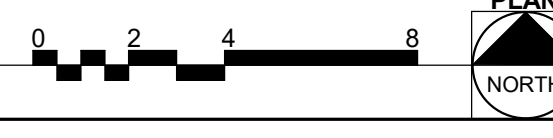
2 FIRST FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"

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

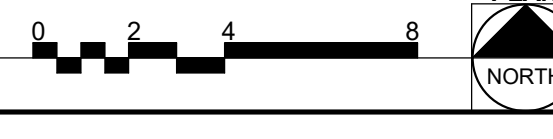
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2 FIRST FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"



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

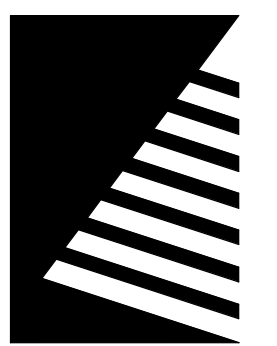


- KEYNOTES** #
- 1 PROVIDE GAS REGULATOR AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO SCHEDULE AND DETAIL FOR MORE INFORMATION.
 - 2 2 INCH COMBINED DOMESTIC WATER AND FIRE PROTECTION SERVICE LINE UP FROM BELOW.
 - 3 PROVIDE 3/4 INCH BACKFLOW PREVENTER FOR THE DOMESTIC WATER SERVICE AND INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND LOCAL AHJ REQUIREMENTS.
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 - 7 1 1/2 INCH VENT DOWN.
 - 8 1/2 INCH HOT WATER AND COLD WATER DOWN IN WALL TO SINK.
 - 9 PROVIDE 1/2\"/>

STATE OF MISSOURI
MICHAEL L. PARSON,
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02/03/2023
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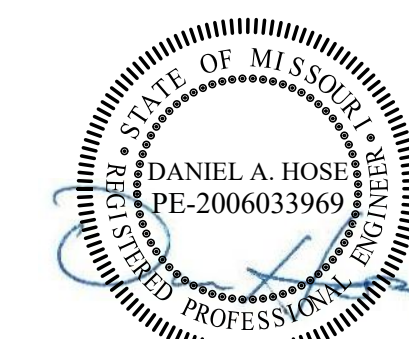
DRAWN BY: CJA
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DESIGNED BY: EJG

SHEET TITLE:
**FOUR BEDROOM
CABIN PLUMBING
PLANS**

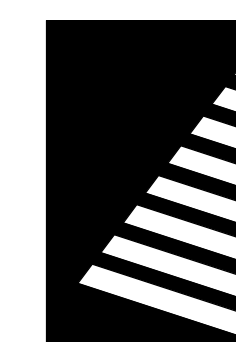
SHEET NUMBER:
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ISSUE DATE: 03/02/2023

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EXP. 12/31/2024



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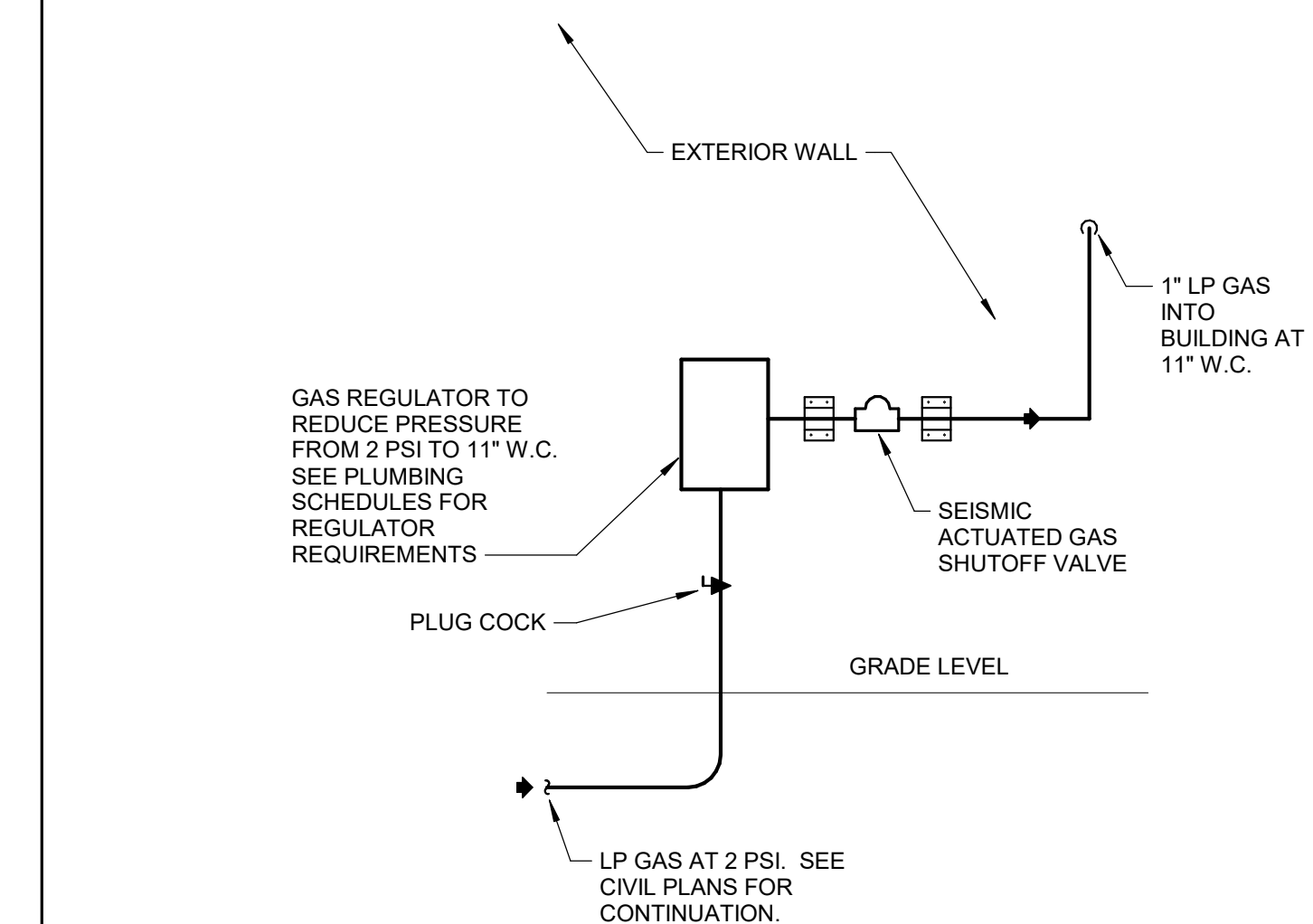
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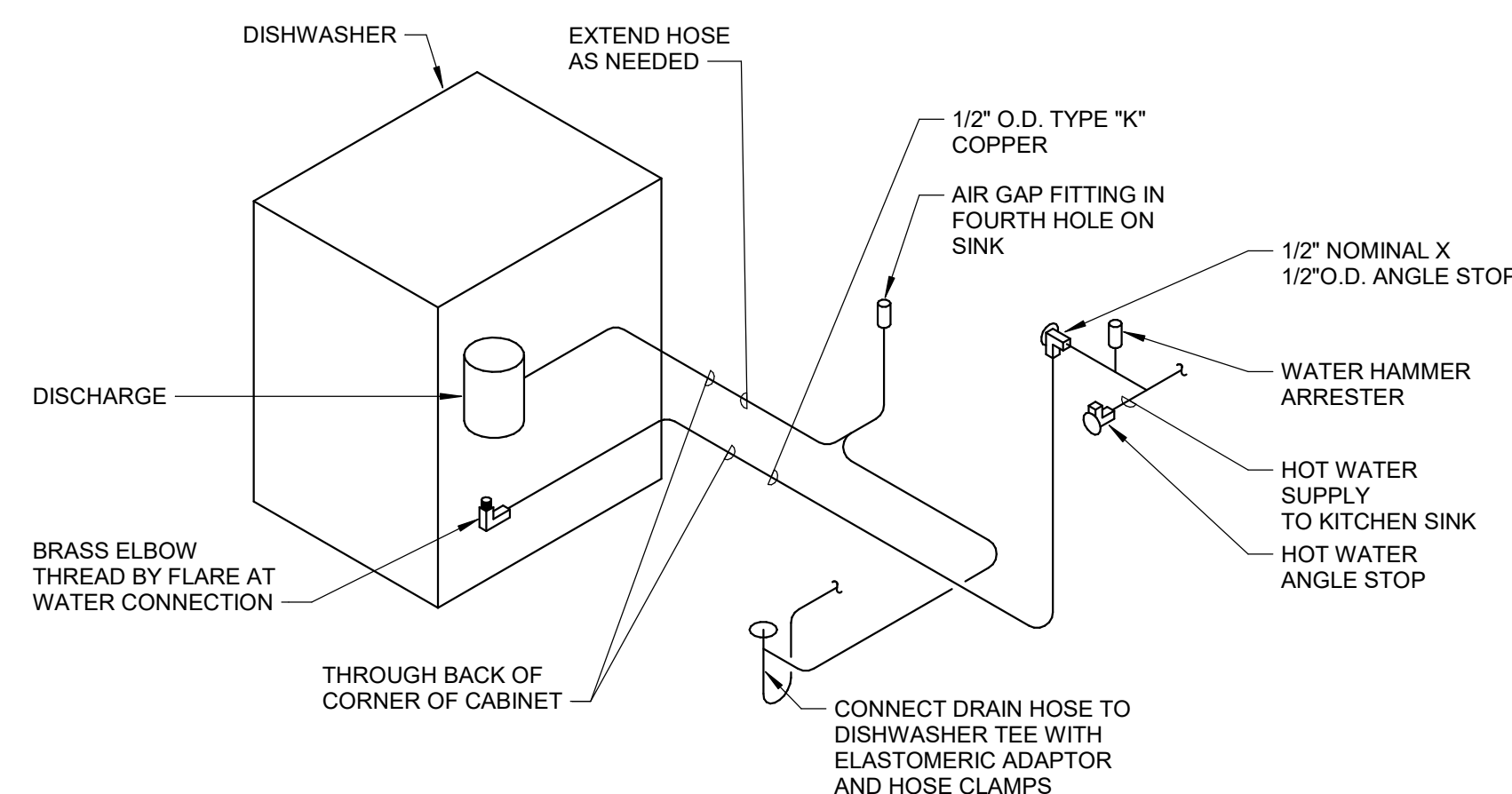
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P-601

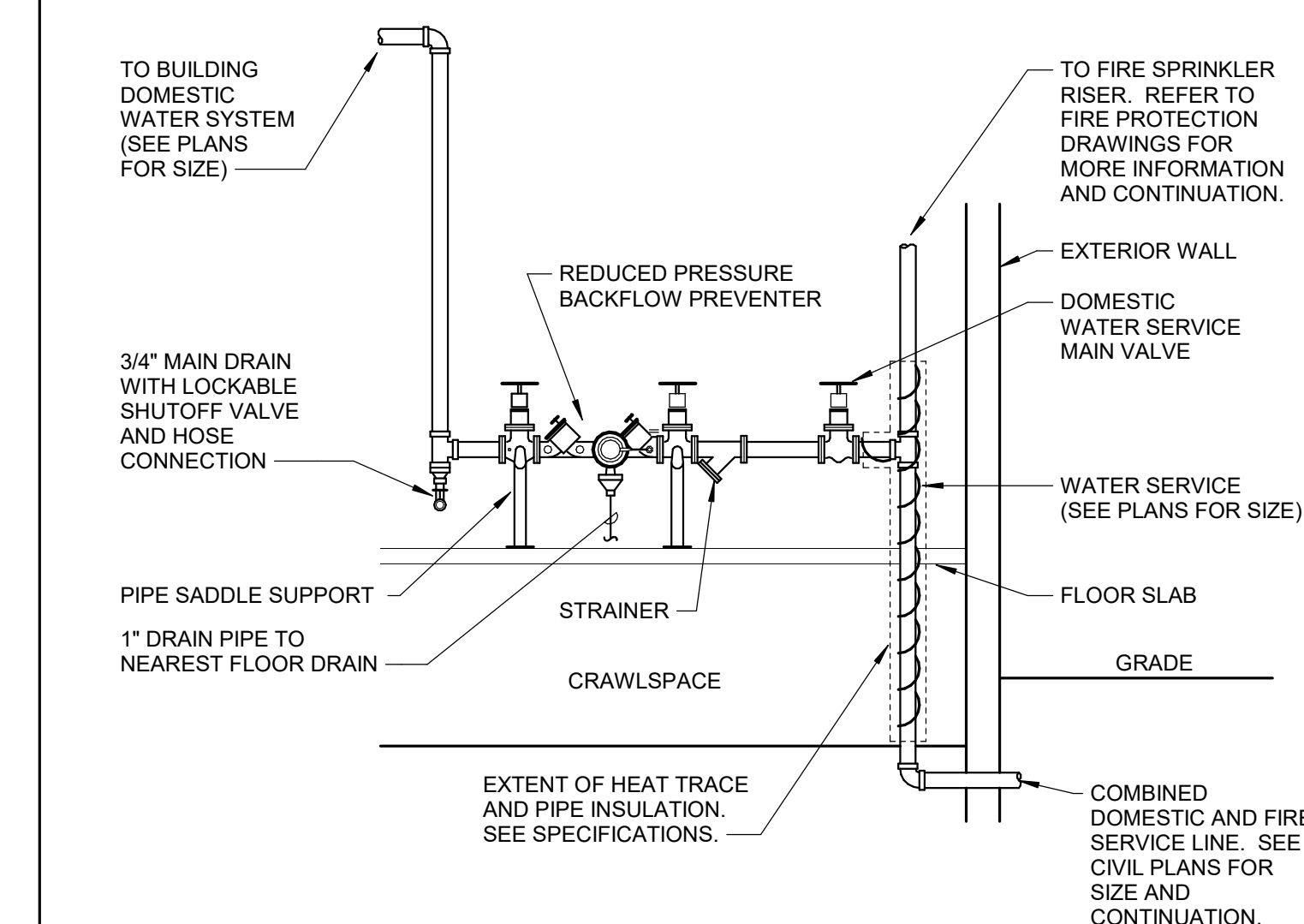
SHEET 55 of 75
ISSUE DATE: 03/02/2023



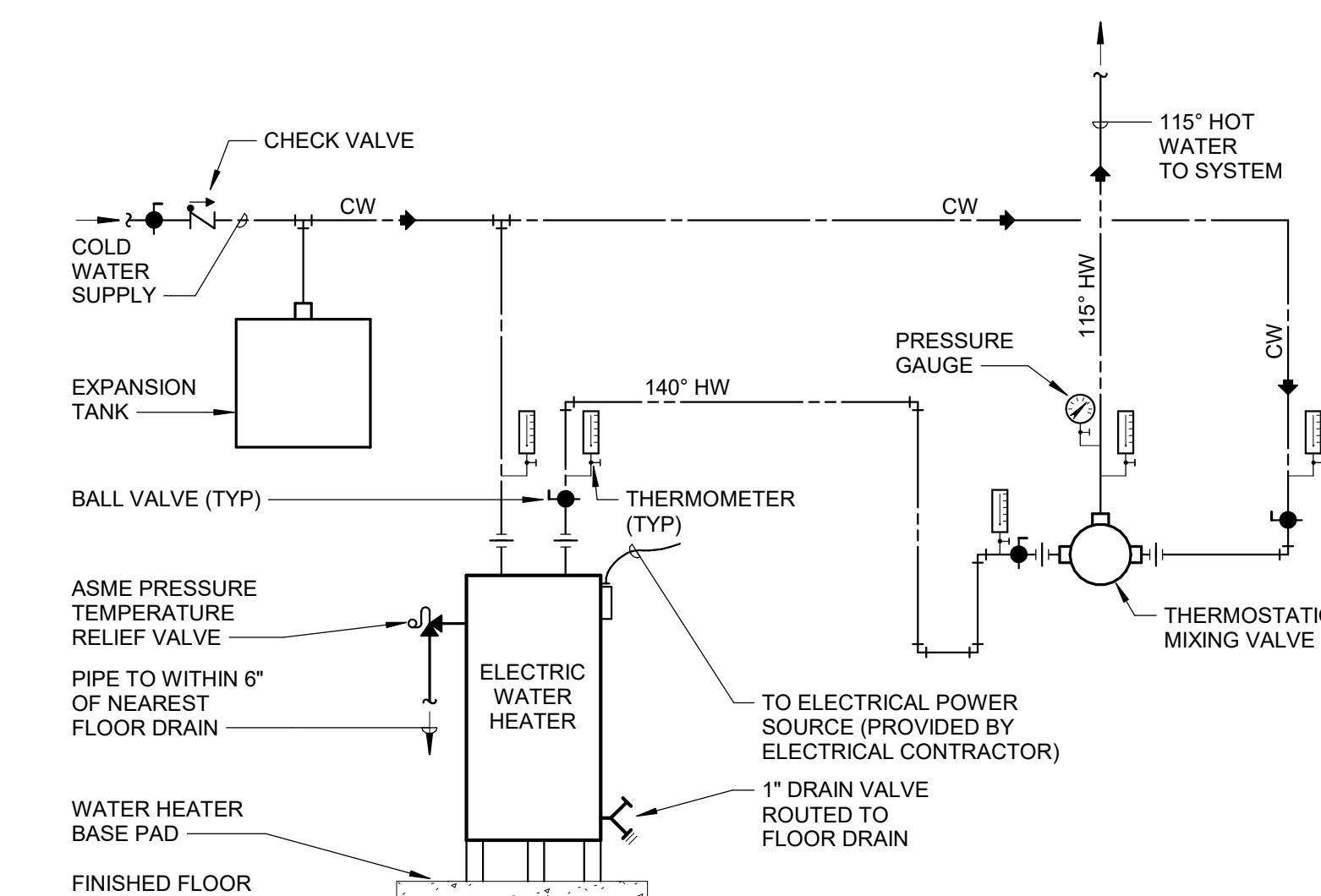
3 GAS SERVICE
SCALE: No Scale



5 DISHWASHER PIPING
SCALE: No Scale



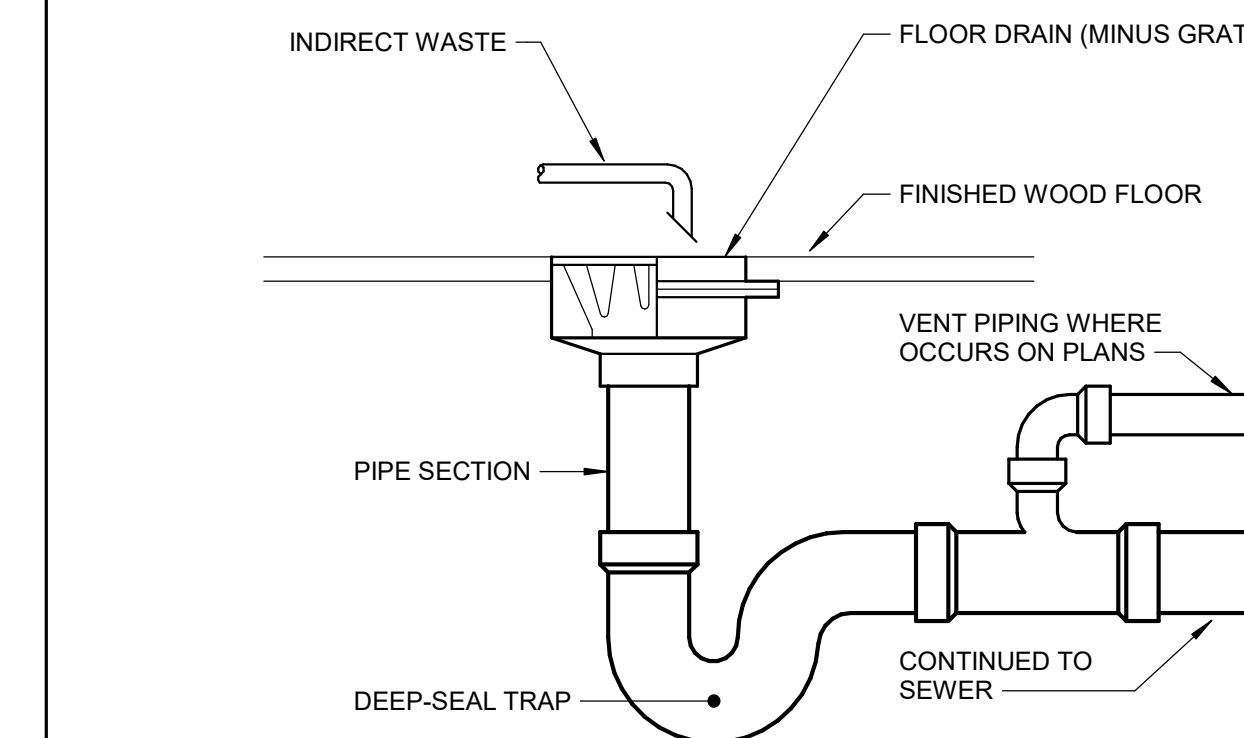
2 DOMESTIC WATER SERVICE
SCALE: No Scale



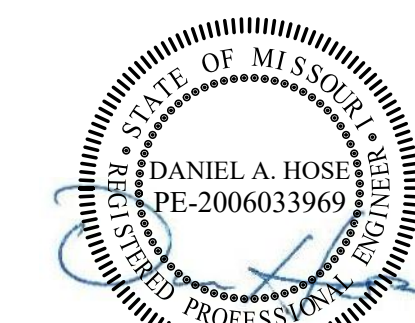
4 ELECTRIC WATER HEATER W/ TMV PIPING
SCALE: No Scale

NOTES:
1. MOUNT THERMOSTATIC MIXING VALVE AT AN ACCESSIBLE HEIGHT.
2. PIPING SHOWN IS FOR SYMMONS VALVE. FOR OTHER VALVES, PIPE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS

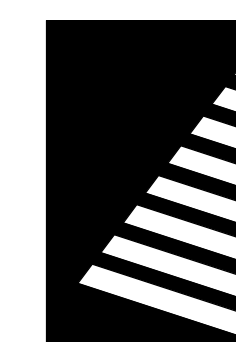
SEISMIC NOTE:
CONTRACTOR SHALL SECURE THE WATER HEATER TO SUSTAIN SEISMIC FORCES, CATEGORY "C", IF COMPONENT IMPORTANCE FACTOR IS MORE THAN 1.



1 FLOOR DRAIN
SCALE: No Scale



02/03/2023
EXP. 12/31/2024



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CONSTRUCTION DOCUMENTS

OFFICE OF
ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT, DESIGN
AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: CJA
CHECKED BY: DAH
DESIGNED BY: EJJ

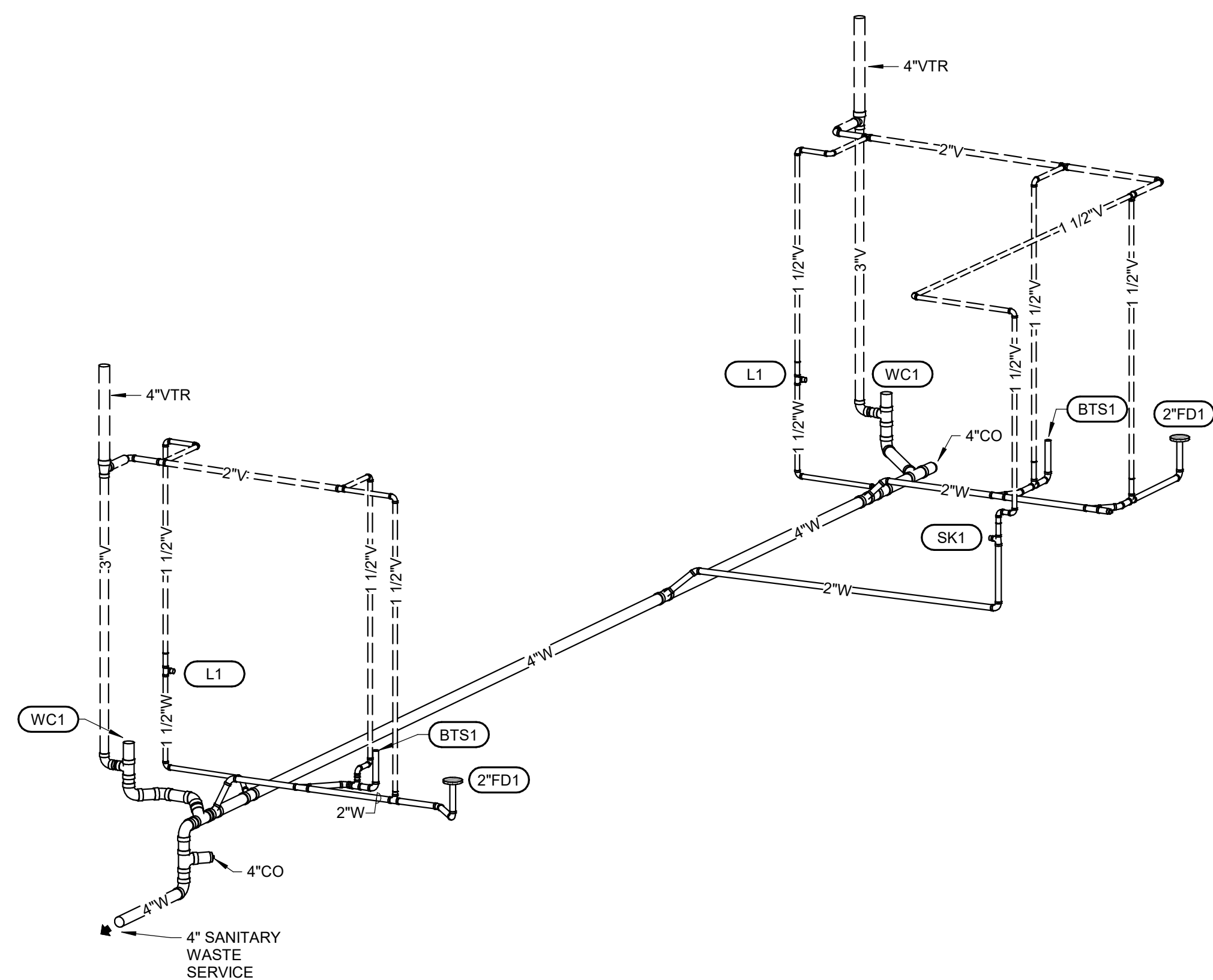
SHEET TITLE:

DIAGRAMS

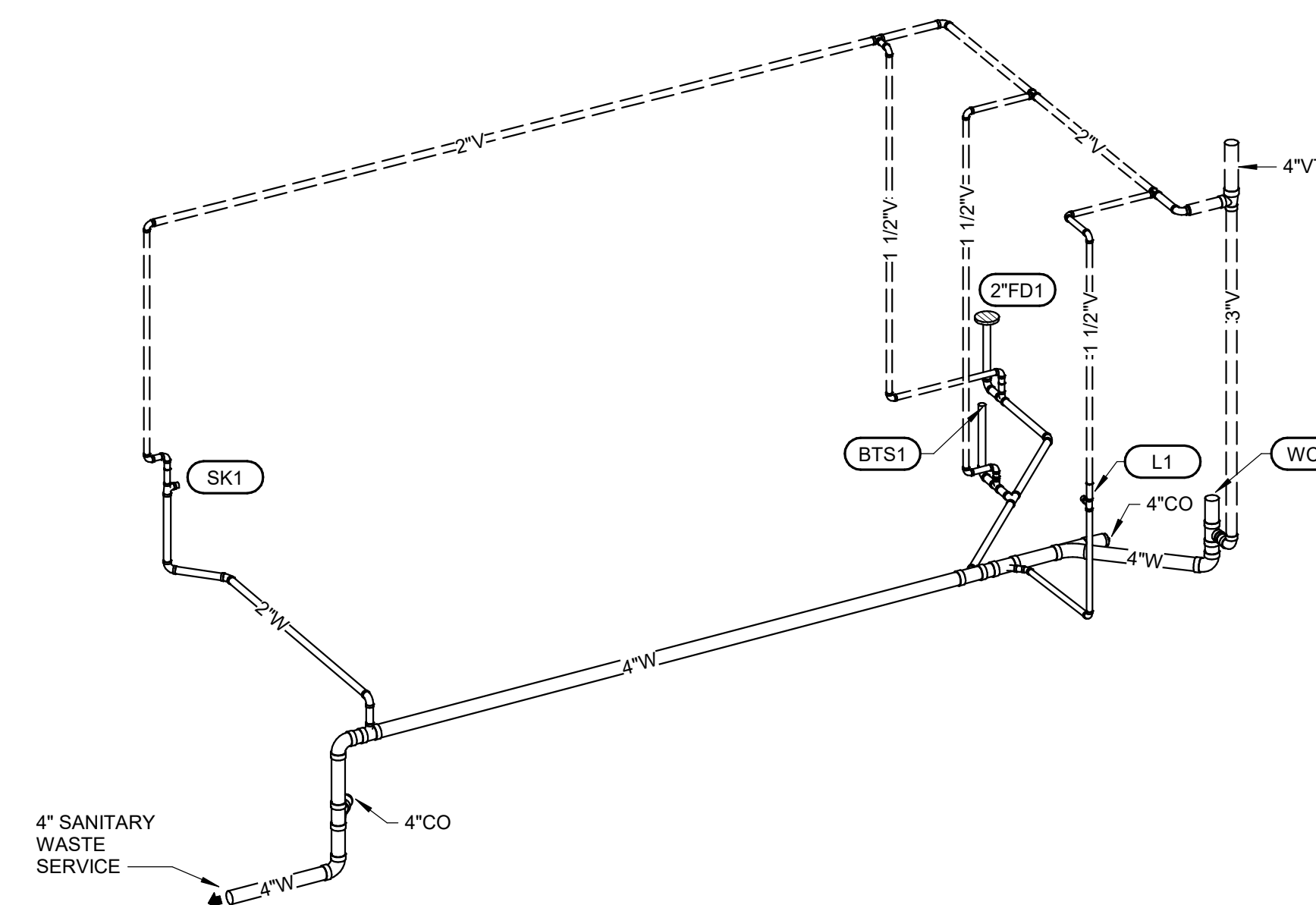
SHEET NUMBER:

P-602

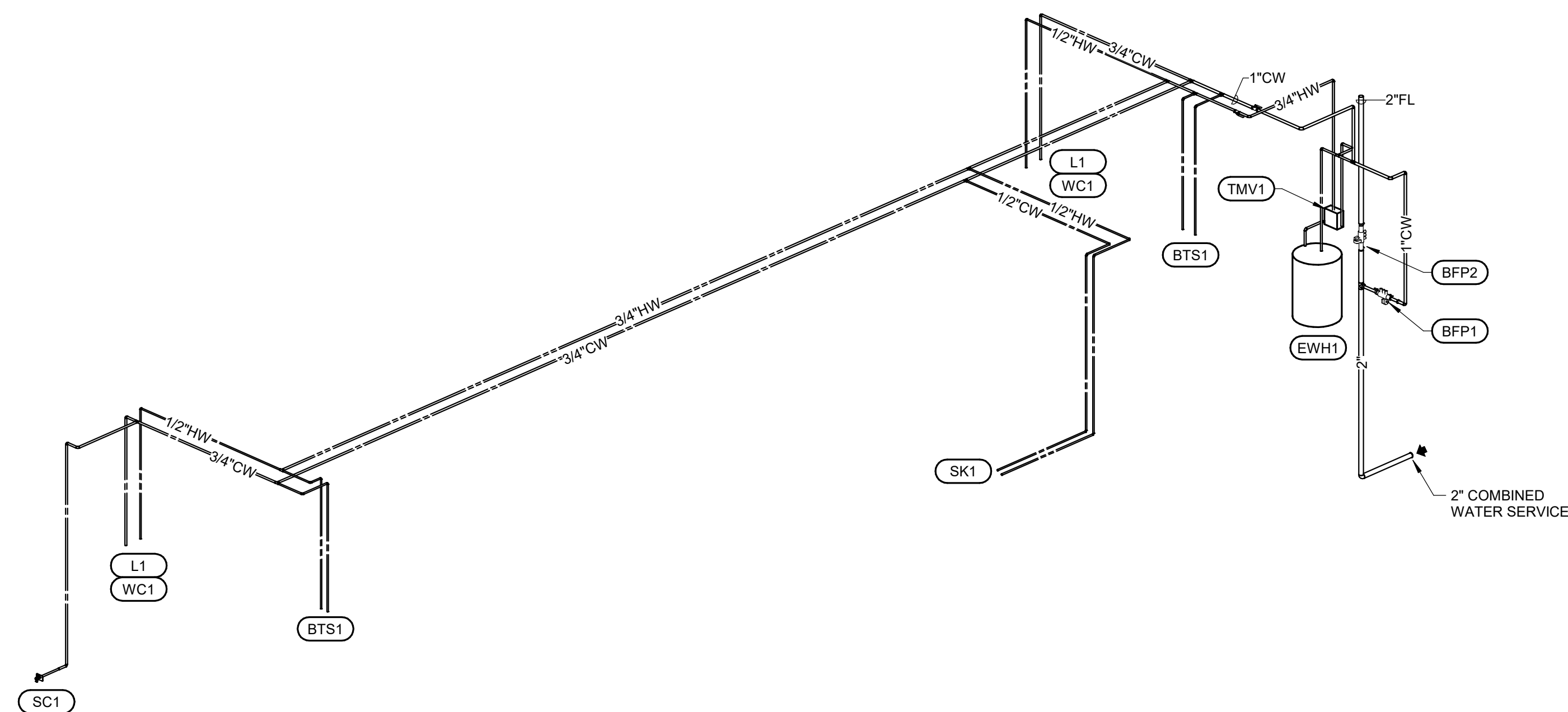
SHEET 56 of 75
ISSUE DATE: 03/02/2023



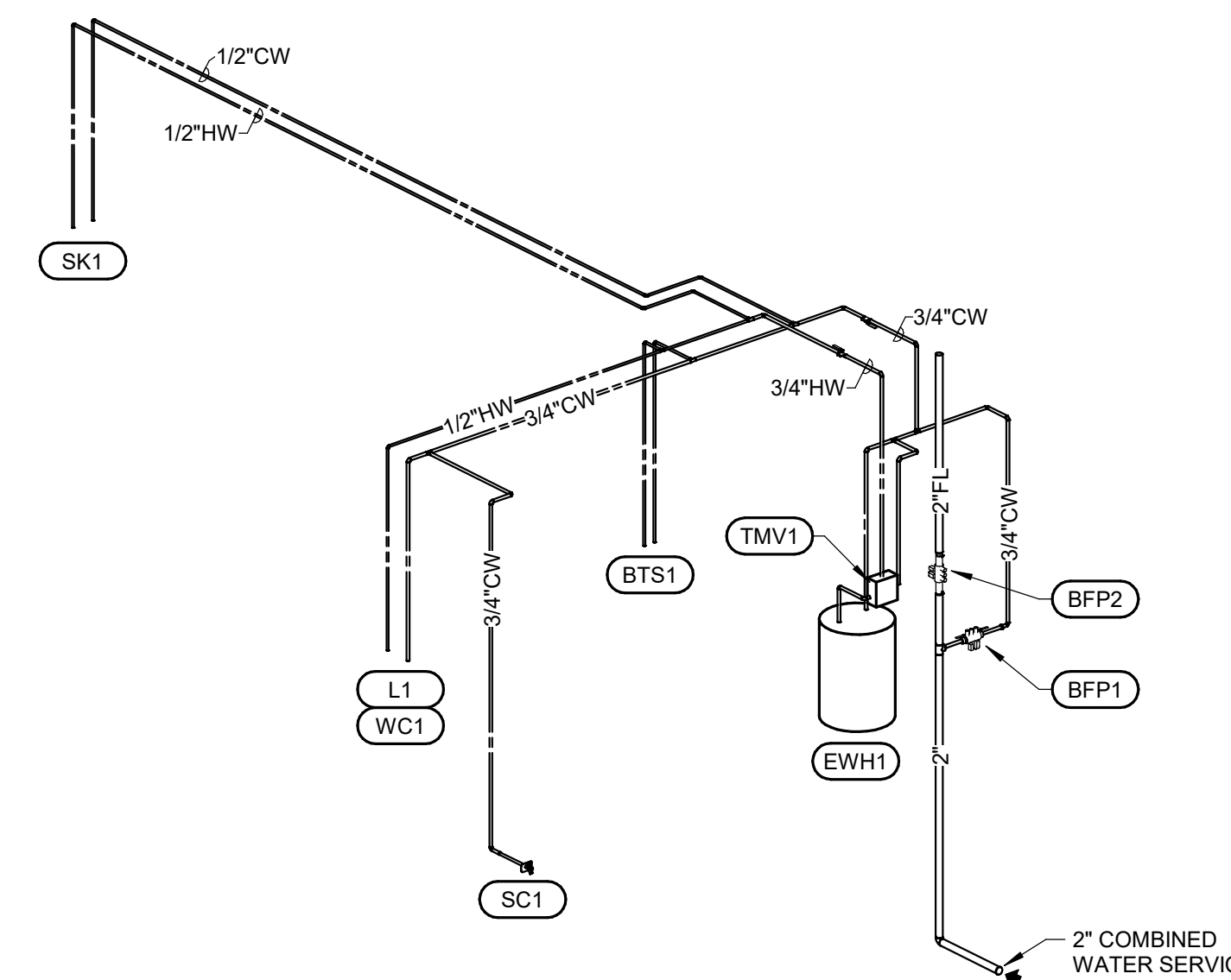
4 FOUR BEDROOM CABIN WASTE AND VENT
SCALE: NOT TO SCALE



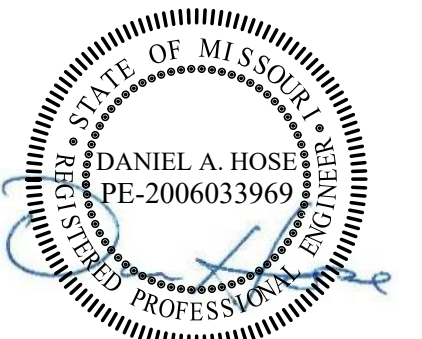
2 TWO BEDROOM CABIN WASTE AND VENT
SCALE: NOT TO SCALE



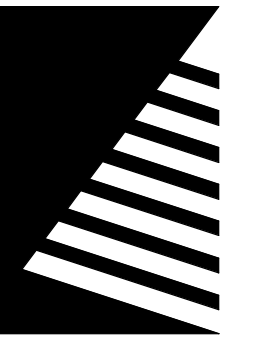
3 FOUR BEDROOM CABIN DOMESTIC WATER
SCALE: NOT TO SCALE



1 TWO BEDROOM CABIN DOMESTIC WATER
SCALE: NOT TO SCALE



02/03/2023
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ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

EMINENCE, MISSOURI

PROJECT #.: X2208-01

SITE #.: 5235

FACILITY #.: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: CJA
CHECKED BY: DAH
DESIGNED BY: EJJ

SHEET TITLE:
SCHEDULES

SHEET NUMBER:

P-603

SHEET 57 of 75
ISSUE DATE: 03/02/2023

BACKFLOW PREVENTER SCHEDULE

PLAN MARK	MAKE/MODEL	DESCRIPTION REMARKS
BFP1	WATTS LF009M2QTS WILKINS CONBRACO (2" & Smaller)	(LEAD FREE) REDUCED PRESSURE ZONE BACKFLOW PREVENTER, TWO INDEPENDENT CHECK VALVES, INTERMEDIATE RELIEF VALVE, SHUT-OFF VALVES, BALL TYPE TEST COCKS AND WYE STRAINER. (DOMESTIC WATER SERVICE) ASSE 1013
BFP2	WATTS LF007 WILKINS CONBRACO (Fire Suppression)	DOUBLE CHECK, TWO INDEPENDENT CHECK VALVES, INTERMEDIATE RELIEF VALVE, SHUT-OFF VALVES, OSY GATE VALVES, BALL TYPE TEST COCKS. (FIRE SUPPRESSION SYSTEM) ASSE1047. INSTALL IN VERTICAL POSITION.

OTHER ACCEPTABLE MANUFACTURER'S SHALL BE: AMES, FEBCO

CLEANOUT SCHEDULE

PLAN MARK	MAKE/MODEL	LOCATION	REMARKS
CO	WADE 8590-B WATTS J.R. SMITH JOSAM ZURN	END OF LINE EXPOSED OR ABOVE CEILING	FOR SUSPENDED PIPE. COUNTERSUNK CLEANOUT PLUG WITH RAISED HEAD.

DRAIN SCHEDULE

PLAN MARK	MAKE/MODEL	DESCRIPTION REMARKS
FD1	WADE 1100-STD J.R. SMITH ZURN	CAST IRON FLOOR DRAIN WITH SEEPAGE FLANGE, FLASHING RING AND CLAMPING COLLAR. 5" DIAMETER OPENING MINUS GRATE, ADJUSTABLE RIM. SEPARATE DEEP-SEAL TRAP. OUTLET SIZE AS INDICATED ON DRAWINGS. (MECHANICAL ROOM)

THERMOSTATIC MIXING VALVE SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	GPM	INLET	OUTLET	MOUNTING	REMARKS
TMV1	WILKINS/ZURN BRADLEY	ZW1070XLHT S59-2025	0.5-6	1/2"-1" *2-5.5	1/2"-1" 3/4"	WALL	(LEAD FREE) HIGH TEMP MIXING VALVE. PROVIDE WITH UNION ENDS, INLET CHECK VALVES, SET TO 110 DEGREES. ASSE 1016, 1070 (MULTIPLE FAUCET)

DESIGN FLOWS BASED ON 5 PSI PRESSURE DROP MAXIMUM.

* 0.5 GPM MINIMUM FLOW RATE CAN BE ACHIEVED WHEN PROPERLY INSTALLED WITH A RECIRCULATION SYSTEM AND RECIRCULATION PUMP AND PIPED PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

NOTE: OTHER ACCEPTABLE MANUFACTURER'S SHALL BE: BRADLEY, SIMMONS, POWERS, LEONARD, WILKINS, ZURN.

PRESSURE REGULATOR SPECIFICATIONS FOR PROPANE GAS

MANUFACTURER MODEL	CONNECTION SIZE	CAPACITY CFH	INLET PRESSURE	OUTLET PRESSURE	SPRING COLOR-RANGE-ORIFACE
ITRON B-31 SERIES	3/4" x 3/4"	UP TO 150	2 PSIG	11 INCHES W.C.	BLUE-8.0 TO 12 INCHES W.C.-1/4"

NOTES:
1. REGULATORS ARE FULL CAPACITY INTERNAL RELIEF TYPE BY ITRON.
2. REGULATORS TO BE INSTALLED WITH RELIEF VENT IN POSITION TO PREVENT ENTRANCE OF WATER, SNOW, MOISTURE OR FOREIGN PARTICLES. (PROVIDE SCREENED VENT ELBOW AS REQUIRED). VENT OPENING TO BE LOCATED 22" MIN. ABOVE GRADE LEVEL AND ABOVE SNOW LEVEL.
3. TAG REGULATOR WITH INLET AND OUTLET SETTINGS, AFFIX WARNING 'DO NOT REMOVE'.

PLUMBING FIXTURE SCHEDULE

PLAN MARK	FIXTURE DESCRIPTION AND REMARKS	MINIMUM INDIVIDUAL LINE SIZES			
		COLD WATER	HOT WATER	WASTE	VENT
BATHTUB	60 INCH x 30-1/4 INCH ALCOVE BATH, LEFT DRAIN, WHITE ENAMELED CAST IRON BATH AND SHOWER BASE. INTEGRAL FLANGE AND APRON, 2 INCH BUILT-IN POP-UP DRAIN OUTLET, SLIP RESISTANT BOTTOM. ACCEPTABLE MANUFACTURERS: BASIS OF DESIGN: KOHLER (K-837). BATH TUB & SHOWER TRIM: PRESSURE BALANCED MIXING VALVE (CAST BRASS BODY, OIL-RUBBED EXTERIOR FINISH, FLUSH MOUNT WITH CONCEALED PIPING, SINGLE LEVER AND INTEGRAL STOPS. SET LIMITS TO 110 DEGREES F. FLOWISE SHOWER HEAD WITH PRESSURE COMPENSATED CONTROL VALVE. PROVIDE WITH TUB SPOUT. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD (COPELAND WITH 1660.811 FLOWISE SHOWERHEAD), LEONARD, SYMMONS, BRADLEY, OR ACORN.	1/2"	1/2"	1 1/2"	1 1/2"
L1	LAVATORY - RECTANGULAR UNDERMOUNTED, WHITE VITREOUS CHINA, UNGLAZED RIM WITH FRONT OVERFLOW, 20-1/4 INCH x 16 INCH x 6 INCH DEEP BASIN WITH FRONT. ACCEPTABLE MANUFACTURERS: LAVATORY TRIM: CAST BRASS SINGLE CONTROL FAUCET AT 0.5 GPM WITH METAL LEVER HANDLE AND CERAMIC DISC VALVE CARTRIDGE, OIL-RUBBED EXTERIOR FINISH, VANDAL RESISTANT AERATOR, CAST BRASS DRAIN PLUG WITH POP-UP DRAIN, ANGLE STOPS BY BRASSCRAFT OR MCGUIRE, 17 GAUGE 1 1/4 INCH O.D. TAILPIECE AND 17 GAUGE 1 1/4 INCH P-TRAP BY BRASSCRAFT, MCGUIRE, OR DEARBORN AND 5 INCH SPOUT. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD (TOWN SQUARE 2555.101), CHICAGO FAUCET, T&S BRASS, DELTA COMMERCIAL, SPEAKMAN ACCESSORIES: VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS. EXPOSED TRIM SHALL BE HEAVILY CHROME PLATED. MOUNT FOR HANDICAPPED ACCESSIBILITY.	1/2"	1/2"	1 1/4"	1 1/2"
SC1	SILLCOCK - SATIN NICKEL BRONZE FLUSH MOUNTED FACE, STRAIGHT INLET CONNECTION WITH ALL BRASS INTERIOR PARTS, INTEGRAL ANTI-SIPHON, NON-FREEZE VACUUM BREAKER AND WALL CLAMP. ACCEPTABLE MANUFACTURERS: WOODFORD (67), WADE, JOSAM, ZURN. LENGTH OF WALL CLAMP AS REQUIRED BY WALL CONSTRUCTION AND ALL OTHER MOUNTING AS REQUIRED BY MANUFACTURER.	3/4"	N/A	N/A	N/A
SK1 (HC)	SINK - SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL 33 INCH x 22 INCH x 6 INCH DEEP DOUBLE COMPARTMENT, UNDERCOATED AND THREE HOLE DRILLING FOR FAUCETS, 4TH HOLE DRILLED FOR AIR GAP FITTING. ACCEPTABLE MANUFACTURERS: ELKAY (LRAD332260), JUST, GERBER. SINK TRIM: 8 INCH SUPPLY FITTINGS, SINGLE LEVER-TYPE HANDLE, AERATOR, BASKET STRAINER, ANGLE STOPS BY BRASSCRAFT OR MCGUIRE, 17 GAUGE 1 1/2 INCH O.D. TAILPIECE AND 17 GAUGE 1 1/2 INCH P-TRAP BY BRASSCRAFT, MCGUIRE, OR DEARBORN, AND 8 INCH LONG SWING SPOUT. ACCEPTABLE MANUFACTURERS: DELTA (100-ELT), CAMBRIDGE, MOEN. VERIFY EQUIPMENT LOCATION AND ROUGH IN REQUIREMENTS. ALL EXPOSED TRIM SHALL BE HEAVILY CHROME PLATED.	1/2"	1/2"	1 1/2"	1 1/2"
WC1 (HC)	WATER CLOSET - FLOOR MOUNTED 17 1/2 INCHES HIGH FOR HANDICAPPED ACCESSIBILITY, FLOOR OUTLET, WHITE VITREOUS CHINA, SIPHON JET CLOSET WITH ELONGATED BOWL, CLOSE COUPLED INSULATED PRESSURE ASSISTED TANK WITH FLUSHING HANDLE ON WIDE SIDE OF TOILET AREA, COVER AND ANTI-SIPHON BALL COCK. WATER CLOSET SHALL FLUSH ON 1.0 GALLONS OF WATER OR LESS. ACCEPTABLE MANUFACTURERS: ZURN (Z5561), KOHLER, AMERICAN STANDARD, ELJER, CRANE, GERBER. ACCESSORIES: PROVIDE WITH WHITE ANTI-MICROBIAL OPEN FRONT SEAT WITHOUT COVER, LOOSE KEY ANGLE STOP AND ESCUTCHEON. VERIFY EQUIPMENT LOCATION AND ROUGH IN REQUIREMENTS.	1/2"	N/A	4"	2"

ALL NOTED FIXTURES SHALL BE ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES IN ACCORDANCE WITH THE "AMERICANS WITH DISABILITIES ACT OF 2010". FIXTURES AND THEIR INSTALLATION SHALL ALSO COMPLY WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATION A117.1 - "PROVIDING ACCESSIBILITY AND USABILITY FOR PHYSICALLY HANDICAPPED PEOPLE" AND/OR GOVERNING CODE.
ALL PLUMBING FIXTURES, EQUIPMENT, TRIM, AND FITTINGS SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, INCLUDING, BUT NOT LIMITED TO, WATER AND ENERGY CONSERVATION CODES. THE SCHEDULED AND/OR SPECIFIED PLUMBING FIXTURES OR EQUIPMENT REPRESENT THE MINIMUM CRITERIA AND SHALL BE THE BASIS FOR THE CONTRACTOR'S BASE BID. IF THE SCHEDULED OR SPECIFIED FIXTURES OR EQUIPMENT DO NOT COMPLY WITH GOVERNING CODES OR REGULATIONS IN ALL RESPECTS, THE CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR COMPLYING FIXTURES, EQUIPMENT, TRIM, OR FITTINGS. THE ABSENCE OF AN ALTERNATE BID SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR'S BID INCLUDES ALL COSTS NECESSARY TO MEET ALL REGULATIONS AND CODES.

ELECTRIC WATER HEATER SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	LOCATION	STORAGE IN GALLONS	RECOVERY GPH @ 100 DEG.	NUMBER OF ELEMENTS	ELECTRICAL DATA		PHYSICAL DATA			REMARKS
							KW INPUT	V/PH	H (IN.)	DIA. (IN.)	OPER. WT. (LB.)	
EW1	A.O. SMITH	DEL-30	2 BEDROOM CABIN	30	25	2	6	240/1	31	22	350	1
EW2	A.O. SMITH	DEL-40	4 BEDROOM CABIN	40	25	2	6	240/1	32.3	23.3	545	1

NOTES: 1. SET TO 140 DEGREES

PLUMBING EXPANSION TANK SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	MAX PRESSURE P.S.I.	MAX TEMP DEG. F	TANK VOLUME GALLONS	TANK ACCEPTANCE GALLONS	AIR PRE-CHARGE P.S.I.	CONNECTION SIZE (IN.)	DIAMETER (IN.)	HEIGHT (IN.)	WEIGHT (LBS.)	REMARKS
ET1	AMTROL WATTS ZURN/WILKINS	ST-12-C DETA-12 WTTA-12	150	240	5	3.1	40	3/4"	12"	14"	28	ASME SECTION VIII

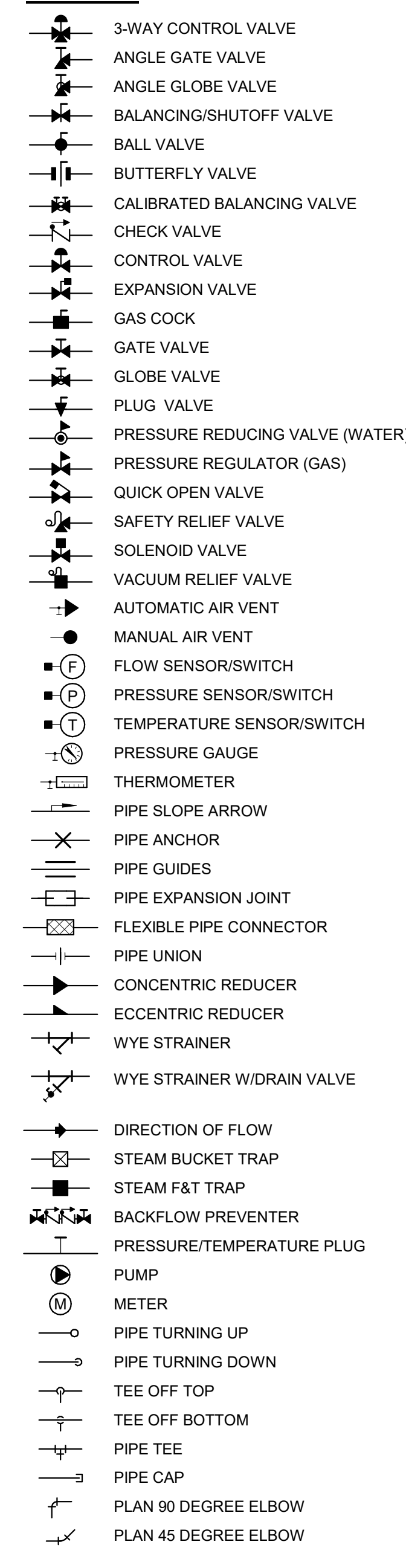
DESIGN BASED ON THE FOLLOWING:
SUPPLY PRESSURE = 60 P.S.I.
WATER VOLUME INCREASE OF 2% FROM 40 - 140

OTHER ACCEPTABLE MANUFACTURER'S ARE:
BELL & GOSSETT, STATE, FLEXCON, WESSELS

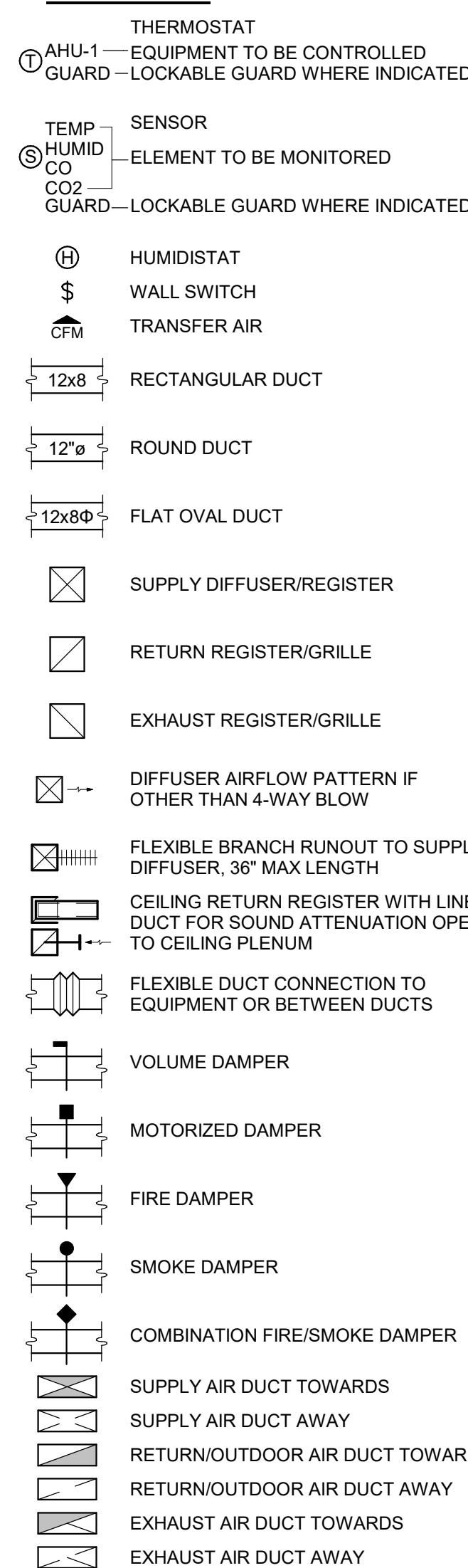
SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS

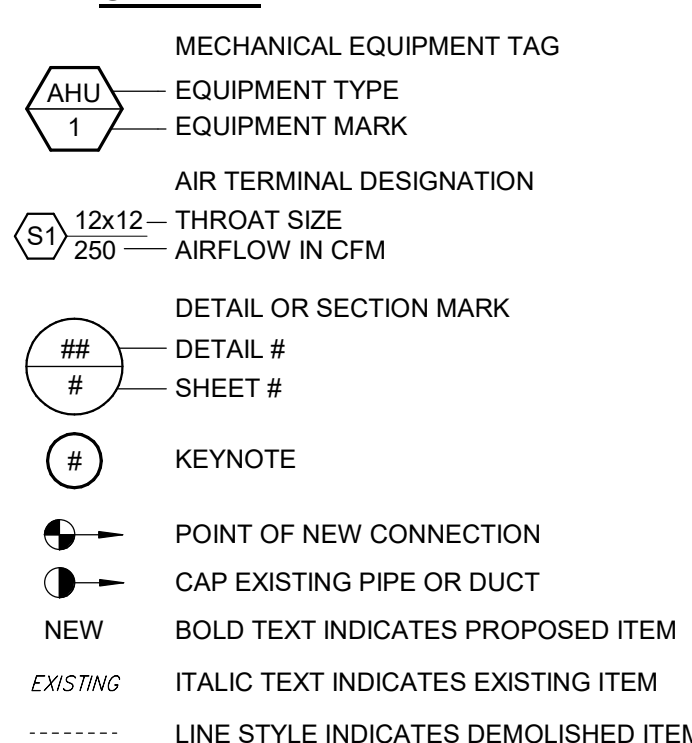
HYDRONIC



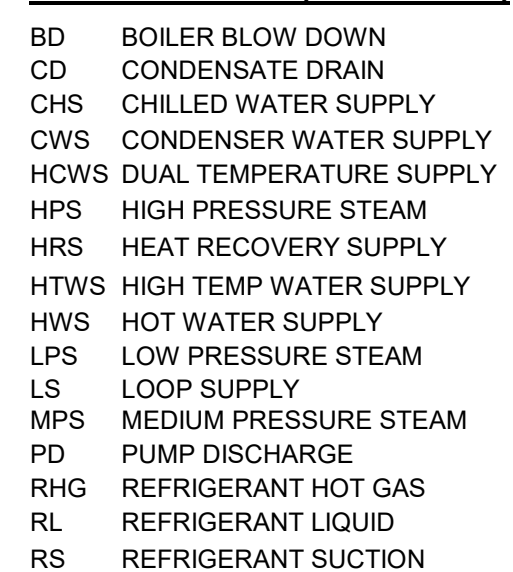
VENTILATION



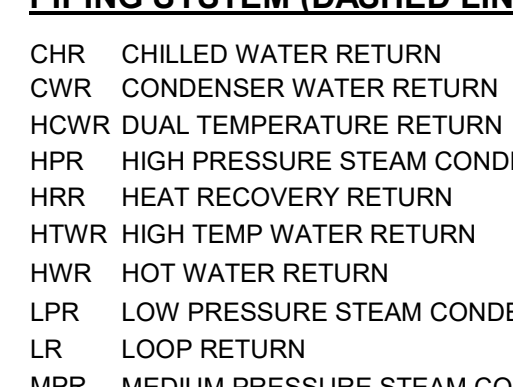
GENERAL



PIPING SYSTEM (SOLID LINE)



PIPING SYSTEM (DASHED LINE)



ABBREVIATIONS

AC	ABOVE CEILING/AIR CONDITIONER	GRH	GAS RADIANT HEATER
ACC	AIR COOLED CONDENSER	GS	GLYCOL SUPPLY
AF	AIR FILTER	GUH	GAS UNIT HEATER
AFF	ABOVE FINISHED FLOOR	HU	HUMIDIFIER
AHU	AIR HANDLING UNIT	HC	HEATING COIL
AL	ALUMINUM	HCWR	DUAL TEMPERATURE RETURN
AMS	AIR MEASURING STATION	HCWS	DUAL TEMPERATURE SUPPLY
AS	AIR SEPARATOR	HP	HEAT PUMP
AV	AUTOMATIC AIR VENT	HPR	HIGH PRESSURE STEAM RETURN
B	BOILER	HPS	HIGH PRESSURE STEAM SUPPLY
BAS	BUILDING AUTOMATION SYSTEM	HRC	HEAT RECOVERY COIL
BDD	BACKDRAFT DAMPER	HRV	HEAT RECOVERY VENTILATOR (SENSIBLE)
BFC	BELOW FINISHED CEILING	HS	HUMIDITY SENSOR
BFP	BACKFLOW PREVENTION DEVICE	HWP	HOT WATER PUMP
BJ	BETWEEN JOISTS	HWR	HOT WATER RETURN
BOD	BOTTOM OF DUCT	HWS	HOT WATER SUPPLY
BOP	BOTTOM OF PIPE	HX	HEAT EXCHANGER
BTUH	BRITISH THERMAL UNITS PER HOUR	ISP	INTERNAL STATIC PRESSURE
CA	COMPRESSED AIR	KH	KITCHEN HOOD - COMMERCIAL
CBS	COUNTER BALANCED SHUTTER	L	LOUVER
CC	COOLING COIL	LPR	LOW PRESSURE STEAM RETURN
CF	CEILING / CIRCULATING FAN	LPS	LOW PRESSURE STEAM SUPPLY
CFM	CUBIC FEET PER MINUTE	MA	MIXED AIR
CH	CHILLER	MAU	MAKEUP AIR UNIT
CHP	CHILLED WATER PUMP	MBH	THOUSANDS OF BTU PER HOUR
CHR	CHILLED WATER RETURN	MC	MECHANICAL CONTRACTOR
CHS	CHILLED WATER SUPPLY	MD	MOTORIZED DAMPER
CNV	CONVECTOR	MS	MOTORIZED SHUTTER
COND	CONDENSATE	NTS	NOT TO SCALE
CP	CONDENSATE PUMP	OA	OUTDOOR AIR
CRAC	COMPUTER ROOM AIR CONDITIONER	OBD	OPPOSED BLADE DAMPER
CT	COOLING TOWER	P	PUMP
CU	CONDENSING UNIT	PC	PLUMBING CONTRACTOR
CUH	CABINET UNIT HEATER	PBD	PARALLEL BLADE DAMPER
CV	CONTROL VALVE	PDH	POOL ROOM DEHUMIDIFIER
CW	DOMESTIC COLD WATER	PRV	PRESSURE RELIEF VALVE
CWP	CONDENSER WATER PUMP	PS	PRESSURE SWITCH
CWR	CONDENSER WATER RETURN	PSI	POUNDS PER SQUARE INCH
CWS	CONDENSER WATER SUPPLY	PTAC	PACKAGED TERMINAL AIR CONDITIONER
DAC	DOOR AIR CURTAIN	RA	RETURN AIR
DC	DRY COOLER	RF	RETURN AIR FAN
DH	DEHUMIDIFIER	RG	RETURN GRILLE (LESS DAMPER)
DN	DOWN	RH	ROOF HOOD
DOAS	DEDICATED OUTDOOR AIR SYSTEM	RHC	REHEAT COIL
DP	DIFFERENTIAL PRESSURE	RLFA	RELIEF AIR
DS	DUCT SILENCER	RP	RADIANT PANEL
DSU	DUCTLESS SPLIT UNIT	RPZ	REDUCED PRESSURE BFP
DX	DX COOLING COIL	RR	RETURN REGISTER (WITH DAMPER)
EA	EXHAUST AIR	RTU	ROOFTOP AIR HANDLING UNIT
EBB	ELECTRIC BASEBOARD HEATER	SA	SUPPLY AIR
EC	ELECTRICAL CONTRACTOR	SAS	SELF-ACTING SHUTTER
EF	EXHAUST FAN	SD	SUPPLY DIFFUSER/SMOKE DAMPER
EG	EXHAUST GRILLE (LESS DAMPER)	SF	SUPPLY FAN / SQUARE FOOT
EHC	ELECTRIC HEATING COIL	SFD	SMOKE/FIRE DAMPER
EL	ELEVATION	SG	SUPPLY GRILLE
ER	EXHAUST REGISTER	SR	SUPPLY REGISTER
ERP	ELECTRIC RADIANT PANEL	TCAC	TEMP. CONTROL AIR COMPRESSOR
ERV	ENERGY RECOVERY VENTILATOR	TCAD	TEMP. CONTROL AIR DRYER
ESP	EXTERNAL STATIC PRESSURE	TDV	TRIPLE DUTY VALVE
ET	EXPANSION TANK	TFA	TO FLOOR ABOVE
EUH	ELECTRIC UNIT HEATER	TFB	TO FLOOR BELOW
FA	FRESH AIR	TJ	THROUGH JOISTS
FCU	FAN COIL UNIT	TOD	TOP OF DUCT
FD	FIRE DAMPER	TOP	TOP OF PIPE
FDC	FLEXIBLE DUCT CONNECTION	TSP	TOTAL STATIC PRESSURE
FFA	FROM FLOOR ABOVE	UC	UNIT COOLER
FFB	FROM FLOOR BELOW	UFD	UNDERFLOOR DUCT
FPC	FLEXIBLE PIPE CONNECTION	UFT	UNDERFLOOR FAN TERMINAL
FPT	FAN POWERED AIR TERMINAL	UH	UNIT HEATER
FT	FINNED TUBE RADIATION	UV	UNIT VENTILATOR
GC	GENERAL CONTRACTOR	VAV	VARIABLE AIR VOLUME TERMINAL
GF	GAS FURNACE	VD	VOLUME DAMPER
GIH	GRAVITY INTAKE HOOD	VFD	VARIABLE FREQUENCY DRIVE
GPM	GALLONS PER MINUTE	VRP	VERTICAL RADIANT PANEL
GR	GLYCOL RETURN	WAC	WINDOW / WALL AIR CONDITIONER

GENERAL NOTES

COMMON REQUIREMENTS

- THIS FACILITY HAS BEEN DESIGNATED A "SMOKE-FREE" ENVIRONMENT. NO MECHANICAL VENTILATION PROVISIONS HAVE BEEN MADE TO ACCOMMODATE TOBACCO USAGE BY THE BUILDING OCCUPANTS
 - ALL MECHANICAL SYSTEMS SHALL BE INSTALLED TO THE SATISFACTION OF THE LOCAL CODE AUTHORITIES HAVING JURISDICTION
 - EVERY ATTEMPT HAS BEEN MADE TO COORDINATE THE ROUTING OF DUCTWORK WITHIN THE WOOD TRUSSED ATTIC SPACE. ACTUAL LOCATION OF TRUSS WEBS HOWEVER CAN NOT BE DETERMINED UNTIL FABRICATION DRAWINGS ARE SUBMITTED FOR REVIEW. WHERE POSSIBLE, REFRAIN FROM PREFABRICATING DUCTWORK DESIGNATED FOR INSTALLATION WITHIN THE ATTIC UNTIL ROOF FRAMING IS IN PLACE AND ACTUAL STRUCTURAL CONDITIONS CAN BE FIELD VERIFIED.
- MECHANICAL EQUIPMENT INSTALLATION**
- INSTALL EQUIPMENT TO ALLOW MAXIMUM POSSIBLE HEADROOM UNLESS SPECIFIC MOUNTING HEIGHTS ARE INDICATED
 - INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS IN EXPOSED INTERIOR SPACES, UNLESS OTHERWISE INDICATED
 - INSTALL HVAC EQUIPMENT TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS. CONNECT EQUIPMENT FOR EASE OF REMOVAL, WITH MINIMUM INTERFERENCE TO OTHER INSTALLATIONS
 - ALL MECHANICAL EQUIPMENT WITH THE EXCEPTION OF AIR HANDLING UNITS, SUPPORTED FROM ROOF STRUCTURE SHALL BE MOUNTED ON 4" THICK CONCRETE HOUSEKEEPING PADS UNLESS NOTED OTHERWISE. AIR-HANDLING UNITS SHALL BE MOUNTED ON 6" THICK CONCRETE HOUSEKEEPING PADS TO ACCOMMODATE PROPER TRAPPING OF THE CONDENSATE DRAIN
 - AIR FILTERS SHALL BE REPLACED IN ALL AIR HANDLING EQUIPMENT EMPLOYING SUCH PRIOR TO FINAL COMPLETION AND OWNER OCCUPANCY
 - THE INSTALLING CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ALL MECHANICAL EQUIPMENT PUT INTO OPERATION PRIOR TO THE INSTALLATION OF A WORKING CONTROL SYSTEM, TESTING, AND BALANCING, AND SUBSTANTIAL COMPLETION. ALL RETURN AND EXHAUST DUCT OPENINGS SHALL BE COVERED WITH ROLL TYPE FILTER MEDIA DURING SUCH TEMPORARY OPERATION. OPERATION OF THE MECHANICAL EQUIPMENT PRIOR TO FINAL COMPLETION SHALL NOT IMPACT THE EQUIPMENT WARRANTY. MINIMUM 1-YEAR FROM SUBSTANTIAL COMPLETION UNLESS SPECIFIED OTHERWISE
 - PROVIDE FLEXIBLE DUCT CONNECTION BETWEEN MOTOR DRIVEN MECHANICAL UNITS AND SHEET METAL SUPPLY, OUTDOOR AIR, EXHAUST, AND/OR RETURN AIR DUCTWORK CONNECTIONS
 - PROVIDE FLEXIBLE PIPE CONNECTION BETWEEN MOTOR DRIVEN MECHANICAL UNITS AND CONNECTING PIPING
 - BASIS OF DESIGN MECHANICAL EQUIPMENT IS AS SCHEDULED ON THE DRAWINGS. INSTALLING CONTRACTOR ASSUMES RESPONSIBILITY FOR COORDINATING PHYSICAL SPACE REQUIREMENTS OF EQUIVALENT CAPACITY MECHANICAL EQUIPMENT DEEMED ACCEPTABLE BY THE ENGINEER
 - MECHANICAL EQUIPMENT FACTORY FINISH DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION PRIOR TO FINAL ACCEPTANCE

DUCTWORK REQUIREMENTS

- DUCTWORK IS SHOWN IN SCHEMATIC FORM. ALL REQUIRED DUCT RISERS AND DROPS TO ALLOW GENERAL ROUTING DEPICTED MAY NOT BE SHOWN. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES AND FIELD CONDITIONS. EXACT LOCATION OF THE DUCTWORK MAY VARY ACCORDING TO THE COORDINATED SPACE REQUIREMENTS. EACH TRADE SHALL BE TOTALLY RESPONSIBLE FOR COORDINATION WITH OTHER TRADES. NOTIFY ENGINEER OF CONDITIONS REPRESENTING SIGNIFICANT CHANGES TO THE DESIGNED ROUTING
- COMPLY WITH NFPA 90A, "INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS," UNLESS OTHERWISE INDICATED
- COMPLY WITH NFPA 90B, "INSTALLATION OF WARM AIR HEATING AND AIR CONDITIONING SYSTEMS," UNLESS OTHERWISE INDICATED
- FABRICATE RECTANGULAR DUCTS, ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS, AND OTHER CONSTRUCTION WITH GALVANIZED, SHEET STEEL, ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE." COMPLY WITH REQUIREMENTS FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE-ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS
- COORDINATE SIZE, QUANTITY, AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCT AND PIPE PENETRATIONS THROUGH WALLS, FLOORS, AND ROOFS, WITH CONTRACTOR RESPONSIBLE FOR ROUGH FRAMING. COORDINATE LOCATION OF AIR INTAKES WITH EXHAUST AND PLUMBING VENTS SO THAT INTAKES ARE A MINIMUM OF 10 FEET FROM EXHAUST OPENINGS OR PLUMBING VENTS
- INSTALL DUCTS IN LONGEST LENGTH POSSIBLE AND FEWEST POSSIBLE JOINTS. INSTALL FABRICATED FITTINGS FOR CHANGES IN DIRECTIONS, CHANGES IN SIZE AND SHAPE, AND CONNECTIONS
- INSTALL DUCTS, UNLESS OTHERWISE INDICATED, VERTICALLY AND HORIZONTALLY, PARALLEL AND PERPENDICULAR TO BUILDING LINES; AVOID DIAGONAL RUNS UNLESS SPECIFICALLY INDICATED ON DRAWINGS
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED DEVICES. COORDINATE MECHANICAL CEILING DEVICES SUCH AS DIFFUSERS AND REGISTERS WITH LIGHT FIXTURES, SPEAKERS, SPRINKLER HEADS, ETC.
- ELECTRICAL EQUIPMENT SPACES: ROUTE DUCTWORK TO AVOID PASSING THROUGH TRANSFORMER VAULTS AND ELECTRICAL EQUIPMENT SPACES AND ENCLOSURES. AVOID ROUTING DUCTWORK DIRECTLY ABOVE ELECTRICAL EQUIPMENT UNLESS SPECIFICALLY INDICATED ON THE MECHANICAL DRAWINGS
- NON-FIRE-RATED PARTITION PENETRATIONS: WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS AND ARE EXPOSED TO VIEW IN MECHANICAL ROOMS, CONCEAL SPACE BETWEEN CONSTRUCTION OPENING AND DUCT OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME METAL THICKNESS AS DUCT. OVERLAP OPENING ON FOUR SIDES BY AT LEAST 1-1/2 INCHES UNLESS INDICATED OTHERWISE
- FIRE-RATED PARTITION PENETRATIONS: WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS, INSTALL APPROPRIATELY RATED FIRE DAMPER. FIRE DAMPER INSTALLATION MUST STRICTLY ADHERE TO MANUFACTURER'S WRITTEN INSTRUCTIONS

PIPING SYSTEM REQUIREMENTS

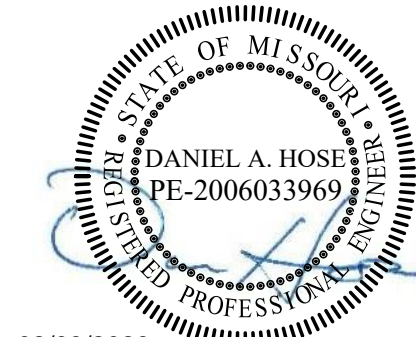
- DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PIPING SYSTEMS. INDICATED LOCATIONS AND ARRANGEMENTS WERE USED TO SIZE PIPE AND CALCULATE FRICTION LOSS, EXPANSION, PUMP SIZING, AND OTHER DESIGN CONSIDERATIONS. INSTALL PIPING AS INDICATED UNLESS DEVIATIONS TO LAYOUT ARE APPROVED BY ENGINEER
- DELIVER PIPES AND TUBES WITH FACTORY-APPLIED END CAPS. MAINTAIN END CAPS THROUGH SHIPPING, STORAGE, AND HANDLING TO PREVENT PIPE END DAMAGE AND TO PREVENT ENTRANCE OF DIRT, DEBRIS, AND MOISTURE
- COORDINATE PIPE ROUTINGS, CHASES, AND OPENINGS IN BUILDING STRUCTURE WITH ALL TRADES DURING PROGRESS OF CONSTRUCTION. COORDINATE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SET SLEEVES IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS AS THEY ARE CONSTRUCTED
- INSTALL PIPING IN CONCEALED LOCATIONS, UNLESS OTHERWISE INDICATED AND EXCEPT IN EQUIPMENT ROOMS AND SERVICE AREAS. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE
- INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL
- INSTALL PIPING TO PERMIT VALVE SERVICING
- INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS
- INSTALL PIPING TO ALLOW APPLICATION OF INSULATION
- INSTALL ESCUTCHEONS FOR PENETRATIONS OF FINISHED WALLS, CEILINGS, AND FLOORS
- SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES.
- PERMANENT SLEEVES ARE NOT REQUIRED FOR HOLES FORMED BY REMOVABLE PE SLEEVES
- INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS AND CONCRETE FLOOR AND ROOF SLABS
- UNDERGROUND, EXTERIOR-WALL PIPE PENETRATIONS: INSTALL CAST-IRON "WALL PIPES" FOR SLEEVES. SEAL PIPE PENETRATIONS USING MECHANICAL SLEEVE SEALS. SELECT SLEEVE SIZE TO ALLOW FOR 1-INCH ANNUAL CLEAR SPACE BETWEEN PIPE AND SLEEVE FOR INSTALLING MECHANICAL SLEEVE SEALS
- FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS.
- VERIFY FINAL EQUIPMENT LOCATIONS FOR ROUGHING-IN.

DESIGN CONDITIONS

HVAC DESIGN LOAD CALCULATIONS ARE BASED ON THE FOLLOWING CLIMATE DATA:
 CITY AND STATE: ROLLA, MO
 2013 ASHRAE 99% DESIGN CONDITIONS:
 WINTER OUTDOOR AMBIENT DB: 11.2 F DB
 SUMMER OUTDOOR AMBIENT DB/WB: 91.5 F DB/ 75.1 F WB

MECHANICAL SYSTEMS HAVE BEEN DESIGNED BASED UPON THE 20XX INTERNATIONAL MECHANICAL CODE, 2015 INTERNATIONAL ENERGY CONSERVATION CODE, NATIONAL FIRE PROTECTION (NFPA) STANDARDS, AND ACCEPTED AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS (ASHRAE) ACCEPTED STANDARDS AND PRACTICES

STATE OF MISSOURI
 MICHAEL L. PARSON,
 GOVERNOR



02/03/2023
 EXP. 12/31/2024



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DEPARTMENT OF NATURAL
 RESOURCES DIVISION OF STATE
 PARKS

**Echo Bluff State Park
 Construct Six New
 Cabins**

Eminence, Missouri

PROJECT #.: X-2208-01

SITE #.: 01

FACILITY #.: xxxx

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: ERW
 CHECKED BY: DAH
 DESIGNED BY: DAH

SHEET TITLE:

GENERAL INFORMATION

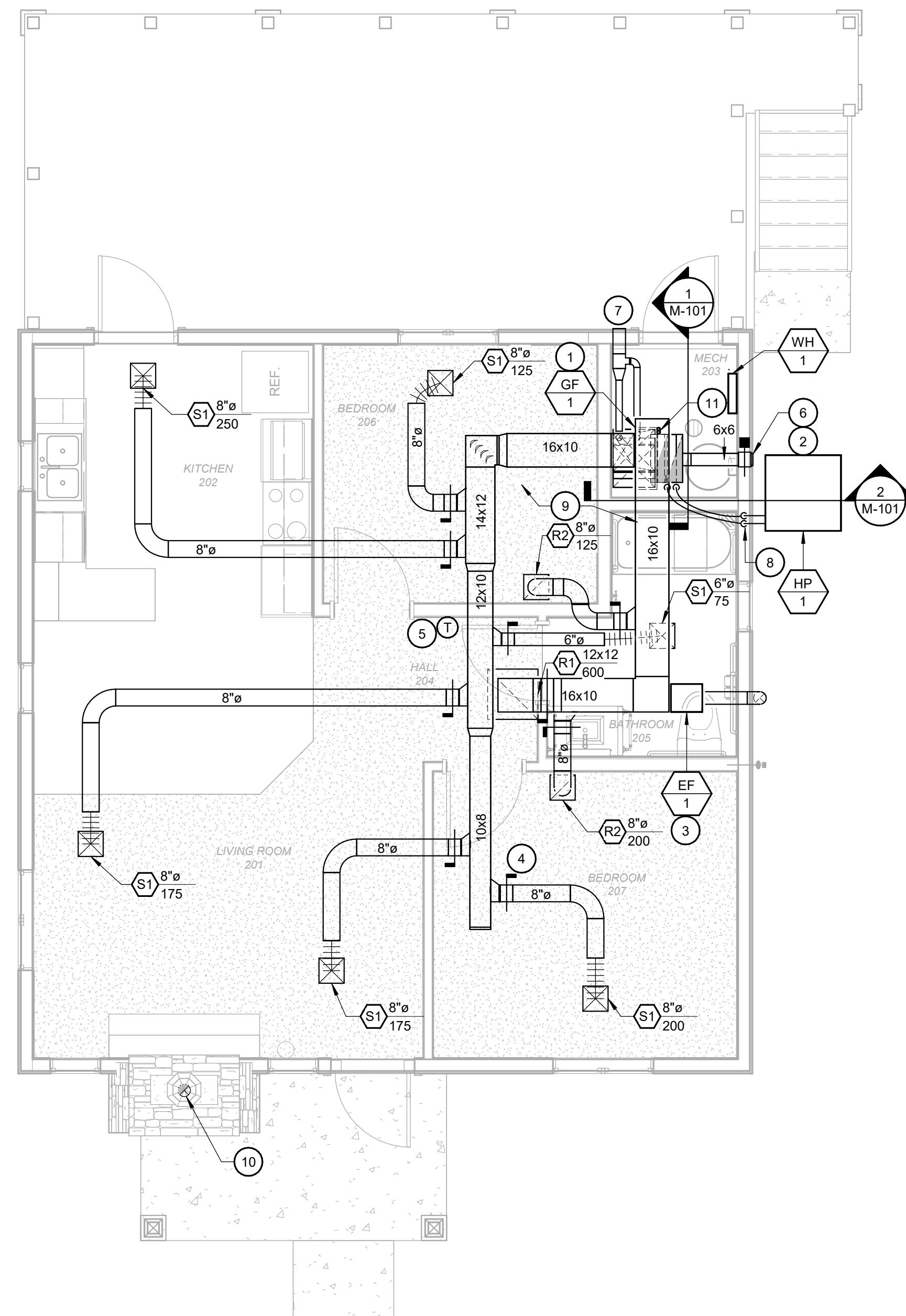
SHEET NUMBER:

M-001

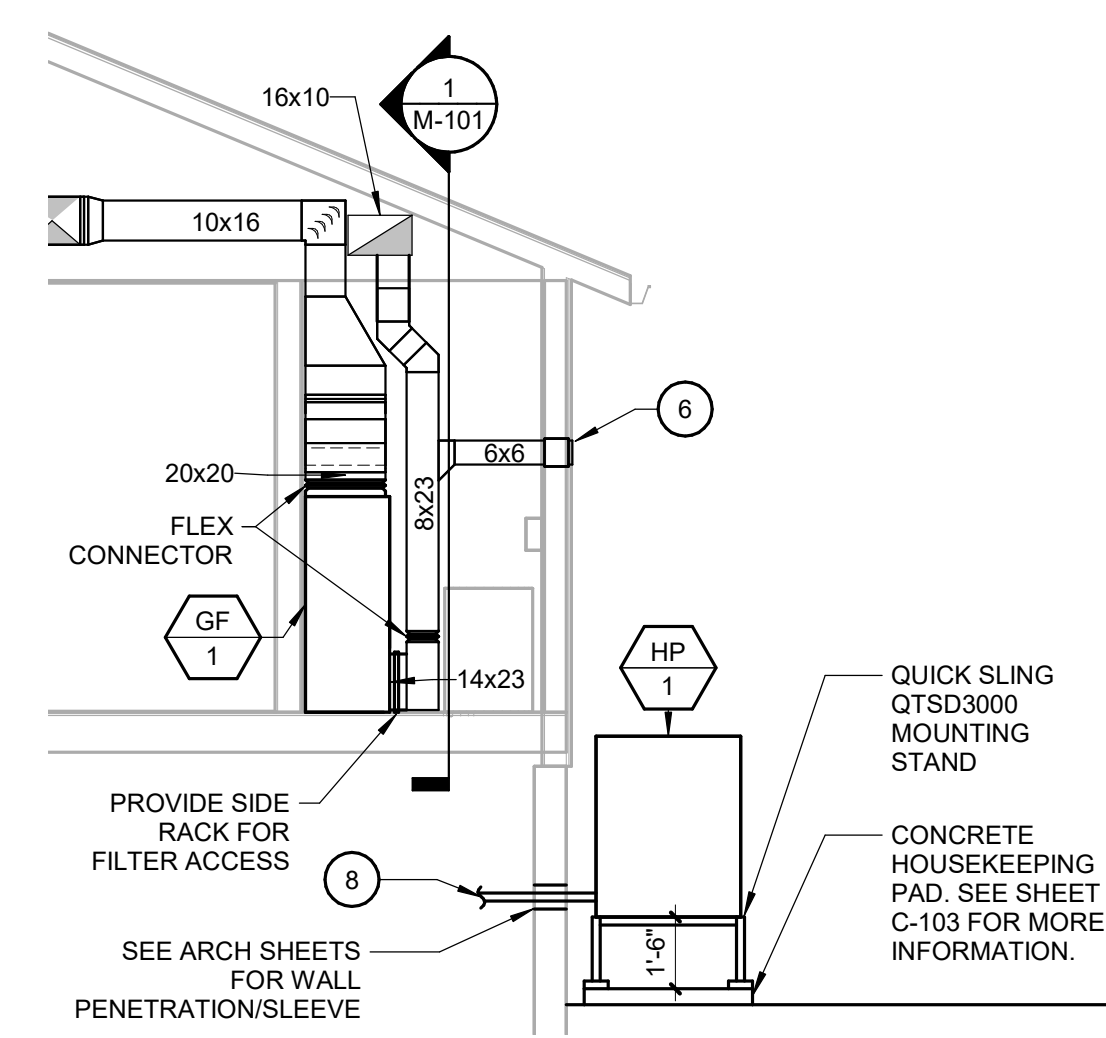
SHEET 58 of 75
 ISSUE DATE: 03/02/2023

2023/02/11 10:10 AM

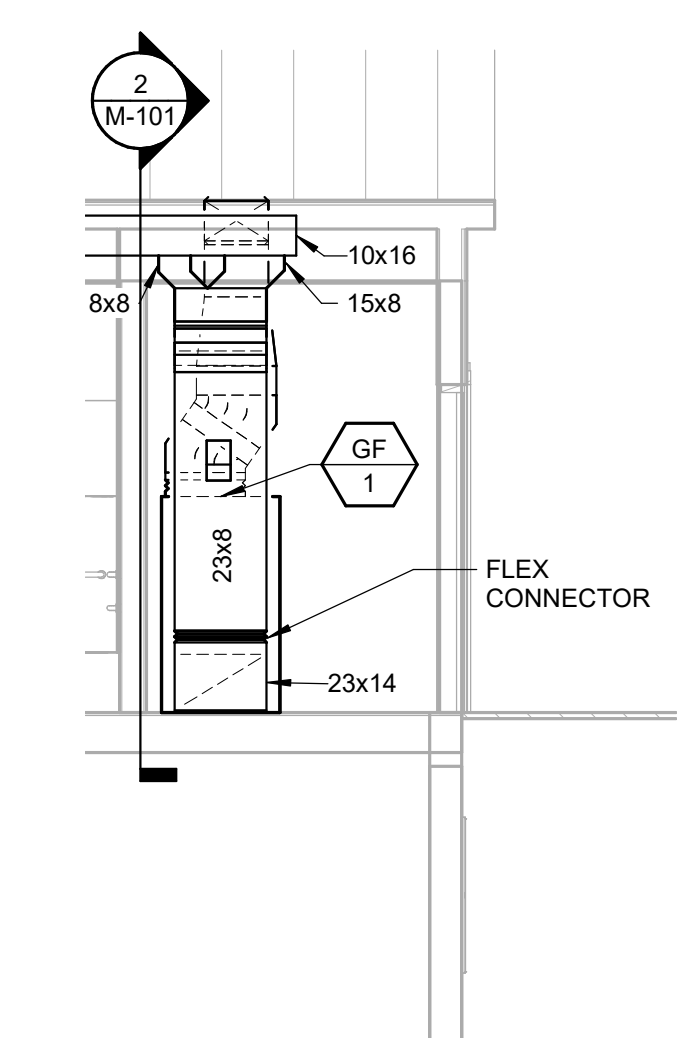
3 FIRST FLOOR MECHANICAL PLAN SCALE: 1/4" = 1'-0"



2 MECHANICAL ROOM 203 - NORTH ELEVATION SCALE: 1/4" = 1'-0"



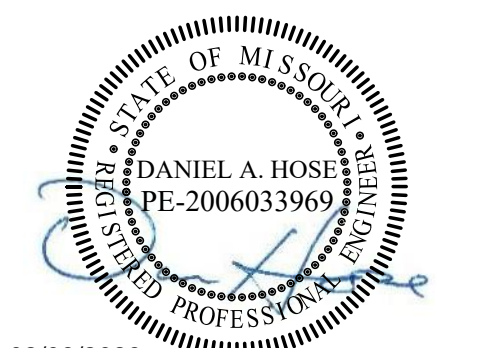
1 MECHANICAL ROOM 203 - EAST ELEVATION SCALE: 1/4" = 1'-0"



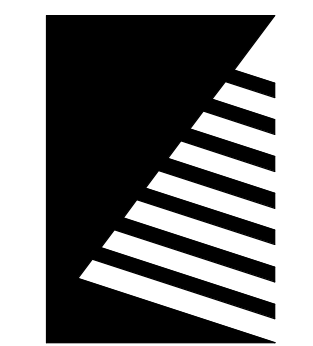
KEYNOTES

1. INSTALL PROPANE GAS FURNACE, COIL AND CONNECT DUCT, GAS AND FLUE PIPING PER MANUFACTURER'S INSTRUCTIONS.
2. INSTALL HEAT PUMP CONDENSING UNIT AND ASSOCIATED PIPING 0'-6" FROM EXTERIOR WALL OR AS RECOMMENDED BY THE MANUFACTURER. MOUNT UNIT ON QUICK-SLING MODEL QSTD3000 STAND AND CONCRETE HOUSEKEEPING PAD. SEE CIVIL SHEET C-103 FOR MORE INFORMATION.
3. INSTALL CEILING EXHAUST FAN WITH ASSOCIATED DUCTWORK PER MANUFACTURER'S INSTRUCTIONS. EXTEND DUCT TO DISCHARGE THRU THE SOFFIT USING UNDER EAVE VENT, GIBRALTAR BUILDING PRODUCTS MODEL LTS141. REFER TO DETAIL #3 ON SHEET M-601 FOR MORE INFORMATION.
4. PROVIDE VOLUME DAMPER ON EACH BRANCH AND AS SHOWN ON THE PLAN TO BALANCE THE AIR FLOW. TYPICAL.
5. PROVIDE PROGRAMMABLE HEAT PUMP T-STAT WITH AN OCCUPANCY SENSOR AND MOUNT AT 48" AFF.
6. PROVIDE OUTSIDE AIR DUCT WITH HOODED CAP, INSECT SCREEN AND 115 VOLTS MOTORIZED DAMPER AND EXTEND TO CONNECT TO RETURN DUCT. MOTORIZED DAMPER TO BE INTERLOCKED WITH FURNACE BLOWER.
7. PROVIDE CONCENTRIC CONNECTION KIT AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO DETAIL #2 ON SHEET M-601 FOR MORE INFORMATION.
8. EXTEND REFRIGERANT LINES THROUGH CRAWL SPACE AND ROUTE TO AC COIL. COORDINATE ROUTING WITH OTHER TRADES.
9. LOCATE AND ROUTE DUCTWORK IN THE ATTIC. DUCTWORK SHALL BE SEALED AIR TIGHT AND PROVIDED WITH INSULATION OF A MINIMUM OF R-VALUE OF 8.
10. PROVIDE VENT PIPING AND INSTALL PER MANUFACTURER'S INSTRUCTIONS AND MECHANICAL CODE REQUIREMENTS. REFER TO DETAIL #1 ON SHEET M-601 FOR MORE INFORMATION AND TO ARCH FOR DECORATIVE TERMINATION CAP.
11. ROUTE FURNACE AND AC CONDENSATE DRAIN PIPING TO NEAREST FLOOR DRAIN.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP. 12/31/2024



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AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

Echo Bluff State Park Construct Six New Cabins

Eminence, Missouri

PROJECT #: X-2208-01
SITE #: 01
FACILITY #: xxxx
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: ERW
CHECKED BY: DAH
DESIGNED BY: DAH

SHEET TITLE: TWO BEDROOM CABIN MECHANICAL PLAN

SHEET NUMBER:

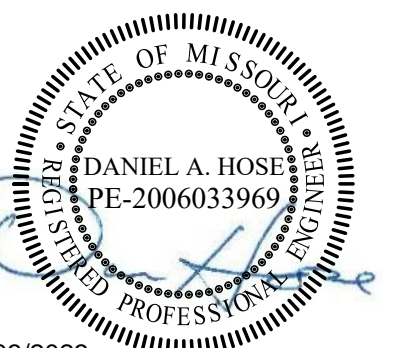
M-101

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ISSUE DATE: 03/02/2023

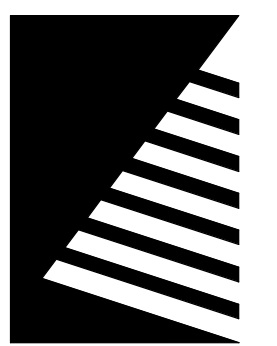
KEYNOTES #

1. INSTALL PROPANE GAS FURNACE, COIL AND CONNECT DUCT, GAS AND FLUE PIPING PER MANUFACTURER'S INSTRUCTIONS.
2. INSTALL HEAT PUMP CONDENSING UNIT AND ASSOCIATED PIPING 0'-6" FROM EXTERIOR WALL OR AS RECOMMENDED BY THE MANUFACTURER. MOUNT UNIT ON QUICK-SLING MODEL QSTD3000 STAND AND CONCRETE HOUSEKEEPING PAD. SEE CIVIL SHEET C-103 FOR MORE INFORMATION.
3. INSTALL CEILING EXHAUST FAN WITH ASSOCIATED DUCTWORK PER MANUFACTURER'S INSTRUCTIONS. EXTEND DUCT TO DISCHARGE THRU THE EXTERIOR WALL WITH HOODED CAP AND BIRD SCREEN. REFER TO DETAIL #3 ON SHEET M-601 FOR MORE INFORMATION.
4. PROVIDE VOLUME DAMPER ON EACH BRANCH AND AS SHOWN ON THE PLAN TO BALANCE THE AIR FLOW. TYPICAL.
5. PROVIDE PROGRAMMABLE HEAT PUMP T-STAT WITH AN OCCUPANCY SENSOR AND MOUNT AT 48" AFF.
6. PROVIDE OUTSIDE AIR DUCT WITH HOODED CAP, INSECT SCREEN AND 115 VOLTS MOTORIZED DAMPER AND EXTEND TO CONNECT TO RETURN DUCT. MOTORIZED DAMPER TO BE INTERLOCKED WITH FURNACE BLOWER.
7. PROVIDE CONCENTRIC CONNECTION KIT AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO DETAIL #2 ON SHEET M-601 FOR MORE INFORMATION.
8. EXTEND REFRIGERANT LINES THROUGH CRAWL SPACE AND ROUTE TO AC COIL. COORDINATE ROUTING WITH OTHER TRADES.
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10. PROVIDE VENT PIPING AND INSTALL PER MANUFACTURER'S INSTRUCTIONS AND MECHANICAL CODE REQUIREMENTS. REFER TO DETAIL #1 ON SHEET M-601 FOR MORE INFORMATION AND TO ARCH FOR DECORATIVE TERMINATION CAP.
11. ROUTE FURNACE AND AC CONDENSATE DRAIN PIPING TO NEAREST FLOOR DRAIN.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP. 12/31/2024



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RESOURCES DIVISION OF STATE
PARKS

**Echo Bluff State Park
Construct Six New
Cabins**

Eminence, Missouri

PROJECT #: X-2208-01
SITE #: 01
FACILITY #: xxxx
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

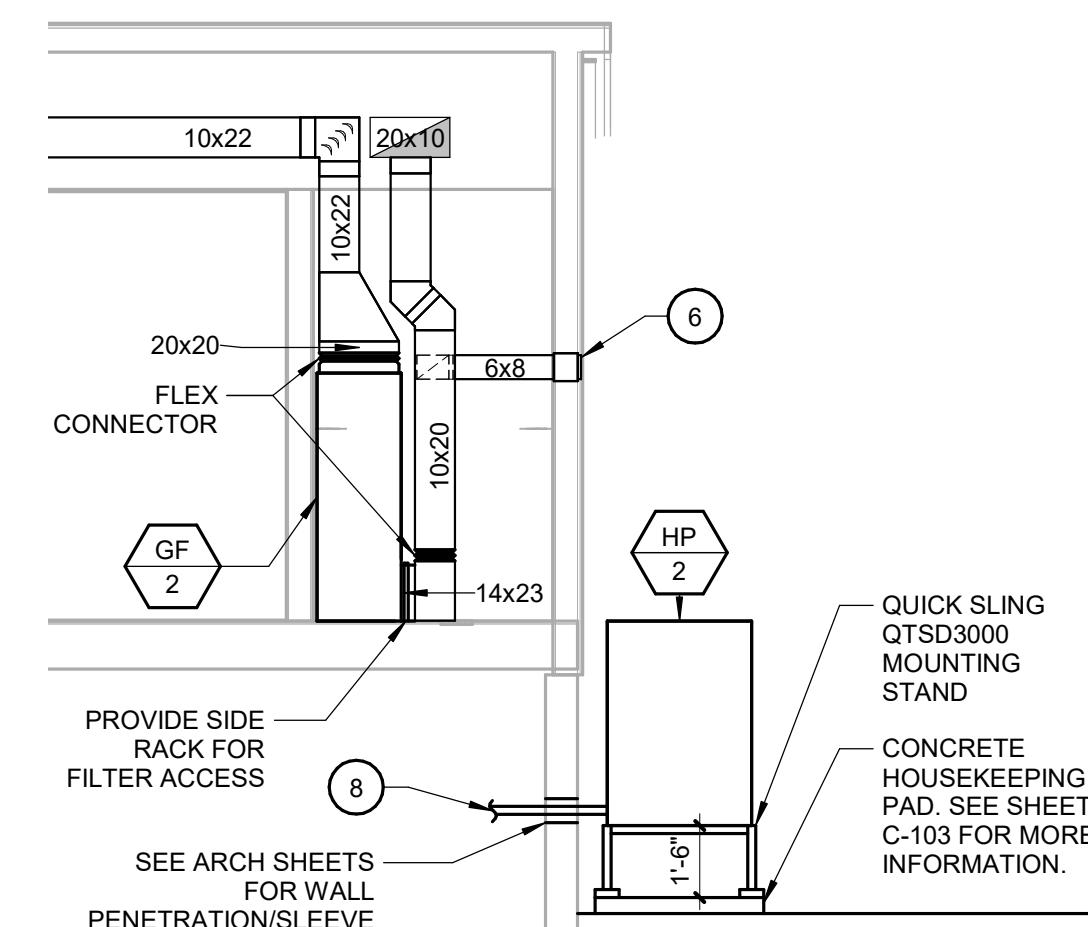
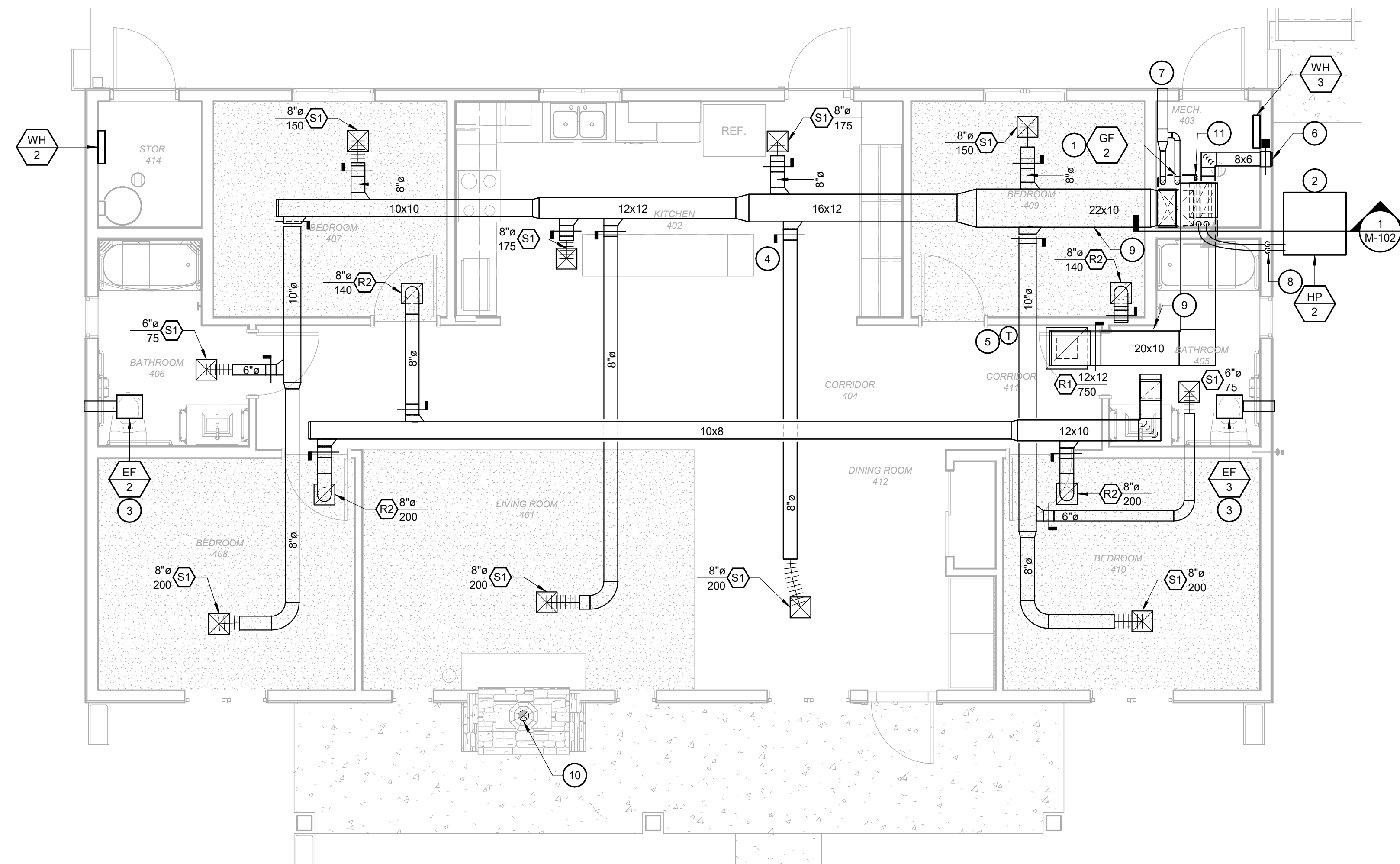
DRAWN BY: ERW
CHECKED BY: DAH
DESIGNED BY: DAH

SHEET TITLE:
**FOUR BEDROOM
CABIN MECHANICAL
PLAN**

SHEET NUMBER:

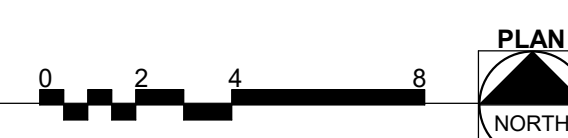
M-102

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ISSUE DATE: 03/02/2023



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2 FIRST FLOOR MECHANICAL PLAN
SCALE: 1/4" = 1'-0"



1 MECHANICAL ROOM 403
SCALE: 1/4" = 1'-0"

EXHAUST FANS SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	DRIVE	SERVICE/LOCATION	CFM	TSP (IN. W.C.)	FAN MOTOR HP	SONES	DAMPER	ROOF OPENING		ELECTRICAL DATA			PHYSICAL DATA				REMARKS
											L (IN.)	W (IN.)	WATTS	V/PH	AMPS	L (IN.)	W (IN.)	H (IN.)	WT. (LBS.)	
EF1	GREENHECK	SP-B90	CENT.	DIRECT	TWO BEDROOM CABINS - 205 BATH	75	0.25	-	2.5	YES	-	-	49.7 W	120/1	0.65	13 7/8	11 1/2	7	12	1
EF2	GREENHECK	SP-B90	CENT.	DIRECT	FOUR BEDROOM CABINS - 406 BATH	75	0.25	-	2.5	YES	-	-	49.7 W	120/1	0.65	13 7/8	11 1/2	7	12	1
EF3	GREENHECK	SP-B90	CENT.	DIRECT	FOUR BEDROOM CABINS - 405 BATH	75	0.25	-	2.5	YES	-	-	49.7 W	120/1	0.65	13 7/8	11 1/2	7	12	1

NOTES:
1. PROVIDE FROSTED LENS/GRILLE, BACKDRAFT DAMPER, BIRD SCREEN AND HOODED WALL CAP WITH ROUND CONNECTION.

APPROVED MANUFACTURERS: COOK, BROAN-NUTONE, CARNES & JENCOFAN

AIR DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	MAX. N.C. (IN.)	MAX. AIR P.D. (IN. W.C.)	MODULE SIZE	FRAME	FINISH	MATERIAL	REMARKS
S1	TITUS	300RS	SUPPLY	30	0.1	12x12	SURFACE	WHITE	STEEL	3/4" BLADE SPACING, DOUBLE DEFLECTION WITH OPPOSED-BLADE DAMPER, AND PLASTER FRAME.
R1	TITUS	355FL	RETURN	30	0.1	24x24	SURFACE	WHITE	STEEL	1/2" BLADE SPACING, SINGLE DEFLECTION WITH PLASTER FRAME.
R2	TITUS	355FL	RETURN	30	0.1	12x12	SURFACE	WHITE	STEEL	1/2" BLADE SPACING, SINGLE DEFLECTION WITH PLASTER FRAME.

APPROVED MANUFACTURERS: KRUEGER, METAL AIRE, INC. PRICE & NAILOR INDUSTRIES INC.

PROPANE GAS FURNACE SCHEDULE

MARK	MANUFACTURER	MODEL/COIL	LOCATION	COND. UNIT MARK	OUTSIDE AIR (CFM)	BLOWER			HEATING SECTION				HP HEATING				COOLING COIL SECTION				SENS. CAP. (MBH)	COND. DRAIN SIZE (IN.)	FILTER	ELECTRICAL DATA				FURNACE PHYSICAL DATA				REMARKS					
						CFM	ESP (IN. W.C.)	DRIVE	WATT	FUEL	INPUT (MBH)	OUTPUT (MBH)	AMB (°F)	EDB (°F)	LDB (°F)	CAP (MBH)	COP	AMB (°F)	EDB (°F)	EWB (°F)				TTL. CAP. (MBH)	V/PH	FLA	MCA	MOCPP	L (IN.)	W (IN.)	H (IN.)		WT. (LBS.)				
GF1	RHEEM	R96VA0602317MSA/RCF3621MEA	TWO BEDROOM CABINS	HP1	70	1000	0.75	DIRECT	117	PROPANE	56	55	11.2	67.7	96.1	14.1	4.5	91.5	78.8	72.2	31.6	14.3	22	21	28	78	3/4	1" FIBER-GLASS	115/1	5.1	13	20	29	21	34	118	1
GF2	RHEEM	R96VA0852521MSB/RCF8021SEA	FOUR BEDROOM CABINS	HP2	140	1600	0.75	DIRECT	260	PROPANE	84	82	11.2	66.7	76	15.1	4.56	91.5	79.2	72.3	48.9	24.5	22	21	34.5	78	3/4	1" FIBER-GLASS	115/1	8.8	15	20	29	21	34	136	1

NOTES:
1. PROVIDE UNIT WITH CONCENTRIC VENTING KIT FOR THE FLUE AND COMBUSTION AIR NEEDS.
APPROVED MANUFACTURER: TRANE.

HEAT PUMP CONDENSING UNIT SCHEDULE

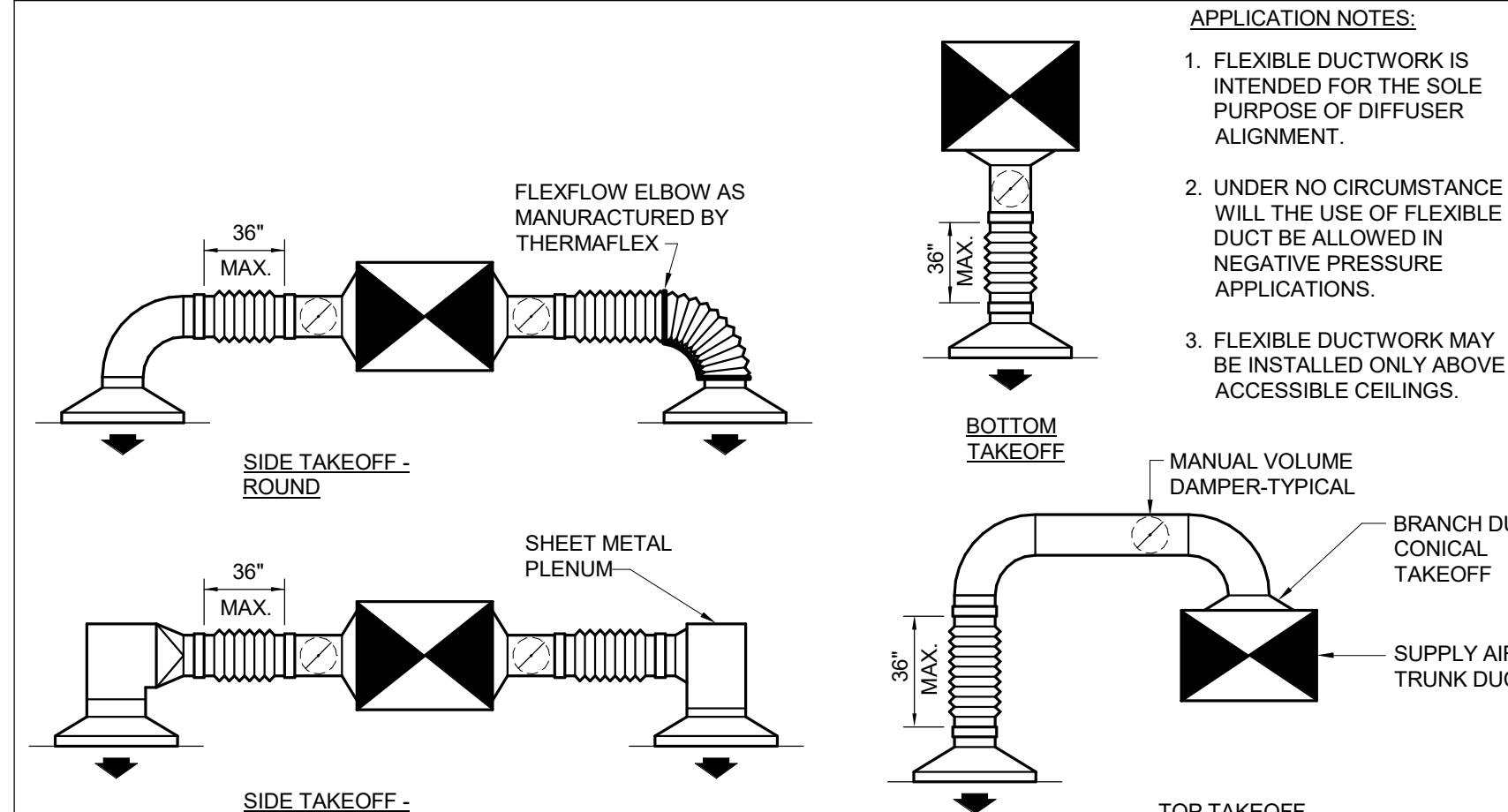
MARK	MANUFACTURER	MODEL	AMBIENT TEMP. (°F)	REFRIG. TYPE	COOLING PERFORMANCE			HEATING PERFORMANCE			ELECTRICAL DATA				PHYSICAL DATA				REMARKS
					TOTAL (TONS)	SENSIBLE (MBTH)	SEER	TOTAL (MBTH)	COP	V/PH	MCA	MOCPP	L (IN.)	W (IN.)	H (IN.)	WT. (LBS.)			
HP1	RHEEM	13PJL30A01	95	8	410-A	2.5	30.2	22.7	13	27.8	3.4	208/1	19	30	28	27	28	162	1
HP2	RHEEM	13PJL48A01	95	8	410-A	4	46.5	35.4	13	46	3.58	208/1	29	50	32	36	36	205	1

NOTES:
1. UNIT TO BE PROVIDED WITH R410A COIL, N STYLE, AND PLATFORM TO MOUNT THE UNIT AT 24" ABOVE FINISHED GRADE.
APPROVED MANUFACTURERS: LENNOX, TRANE, YORK & CARRIER

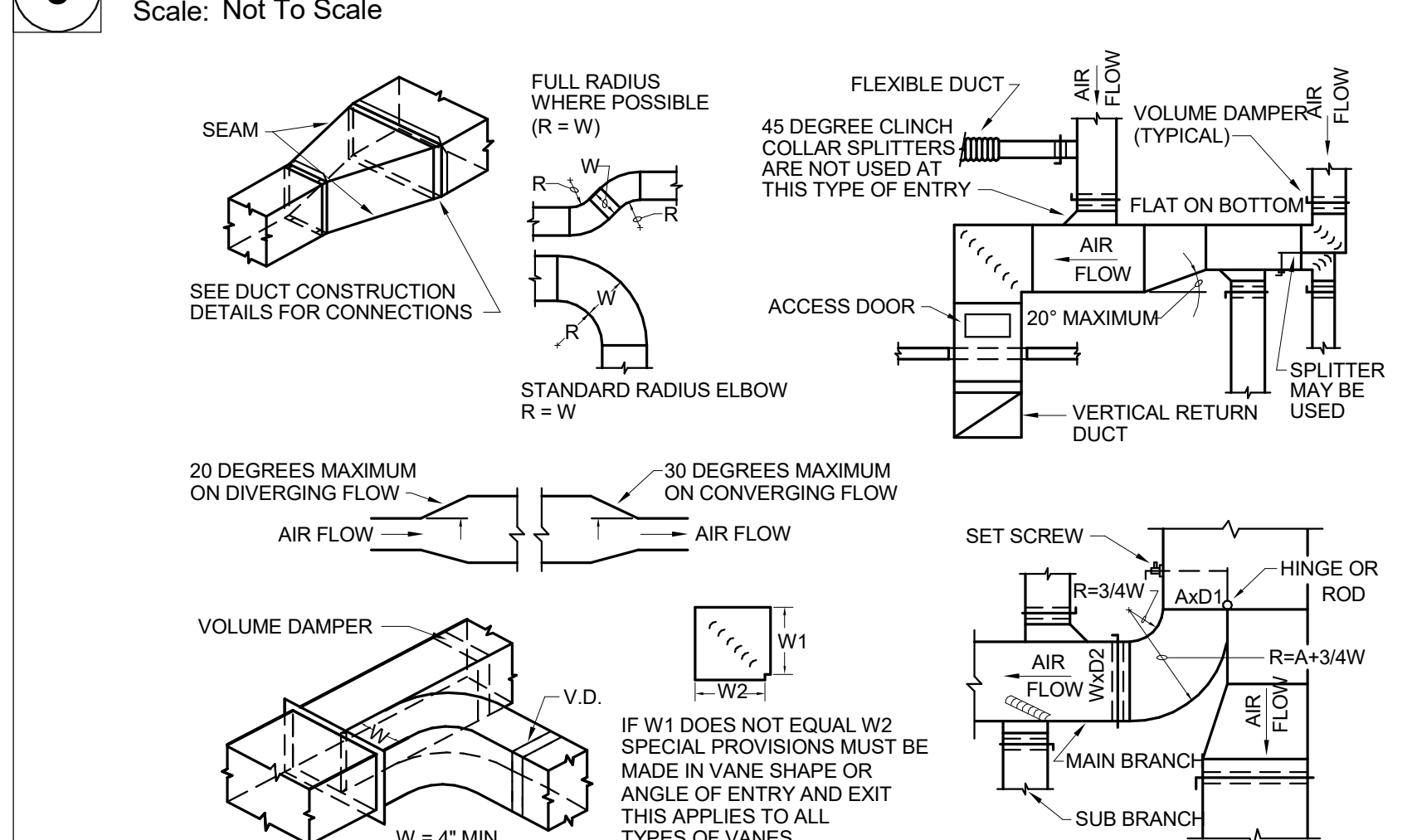
ELECTRIC UNIT HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	LOCATION	FAN		ELECTRICAL DATA				PHYSICAL DATA				REMARKS		
				CFM	HP	TOTAL CAP. (MBH)	KW	FLA	V/PH	MCA	MOCPP	L (IN.)	W (IN.)		H (IN.)	WT. (LBS.)
WH1	QMARK	CWH3504	TWO BEDROOM CABINS - 203 MECH	100	-	16.4	4.8	20.0	240/1	-	-	19	16	4	-	1
WH2	QMARK	CWH3504	FOUR BEDROOM CABINS - 414 STORAGE	100	-	16.4	4.8	20.0	240/1	-	-	19	16	4	-	1
WH3	QMARK	CWH3504	FOUR BEDROOM CABINS - 403 STORAGE	100	-	16.4	4.8	20.0	240/1	-	-	19	16	4	-	1

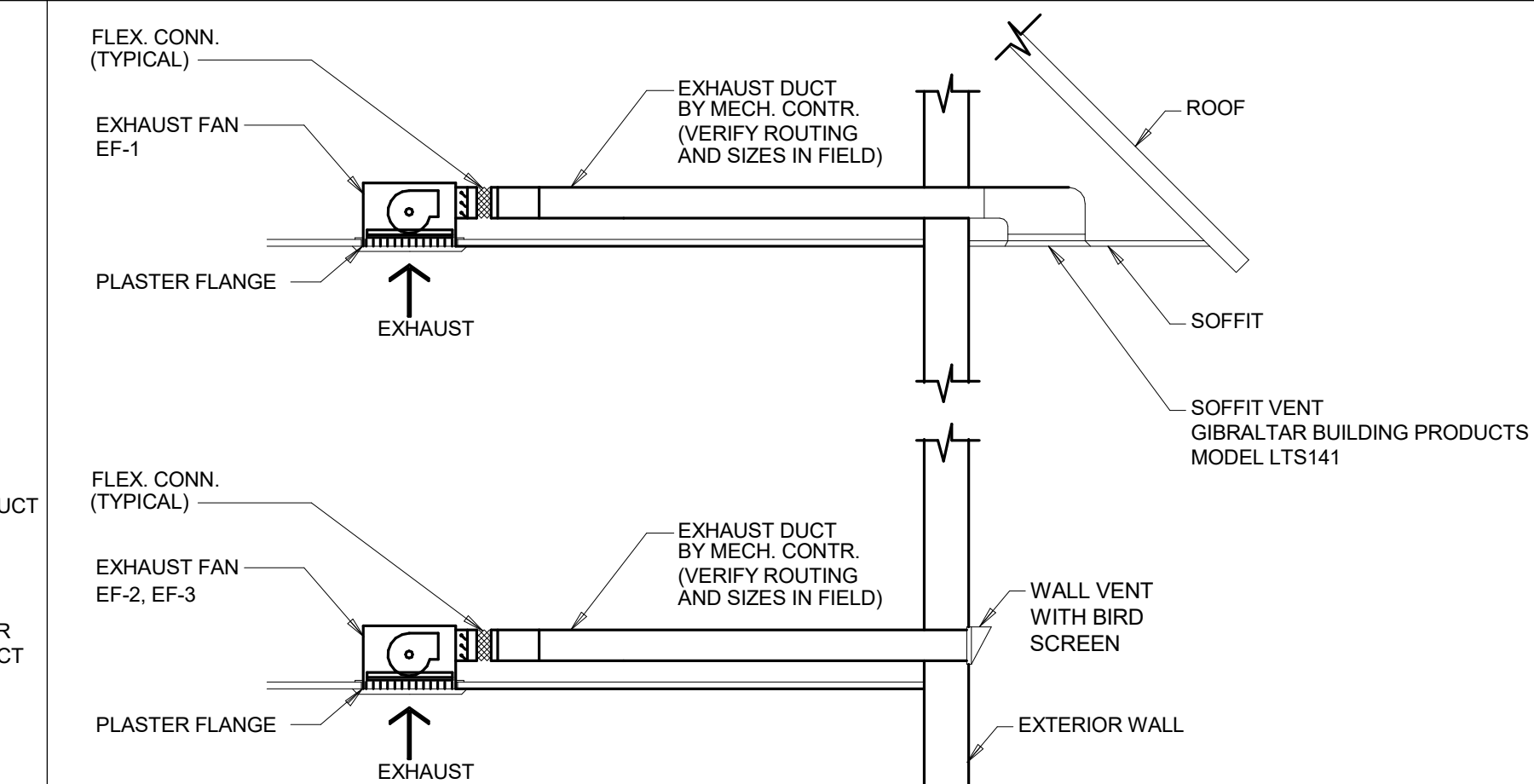
NOTES:
1. PROVIDE UNIT WITH 2" DEEP SURFACE MOUNTING SLEEVE FOR RECESSED INSTALLATION, DISCONNECT SWITCH, AND INTERNAL THERMOSTAT.



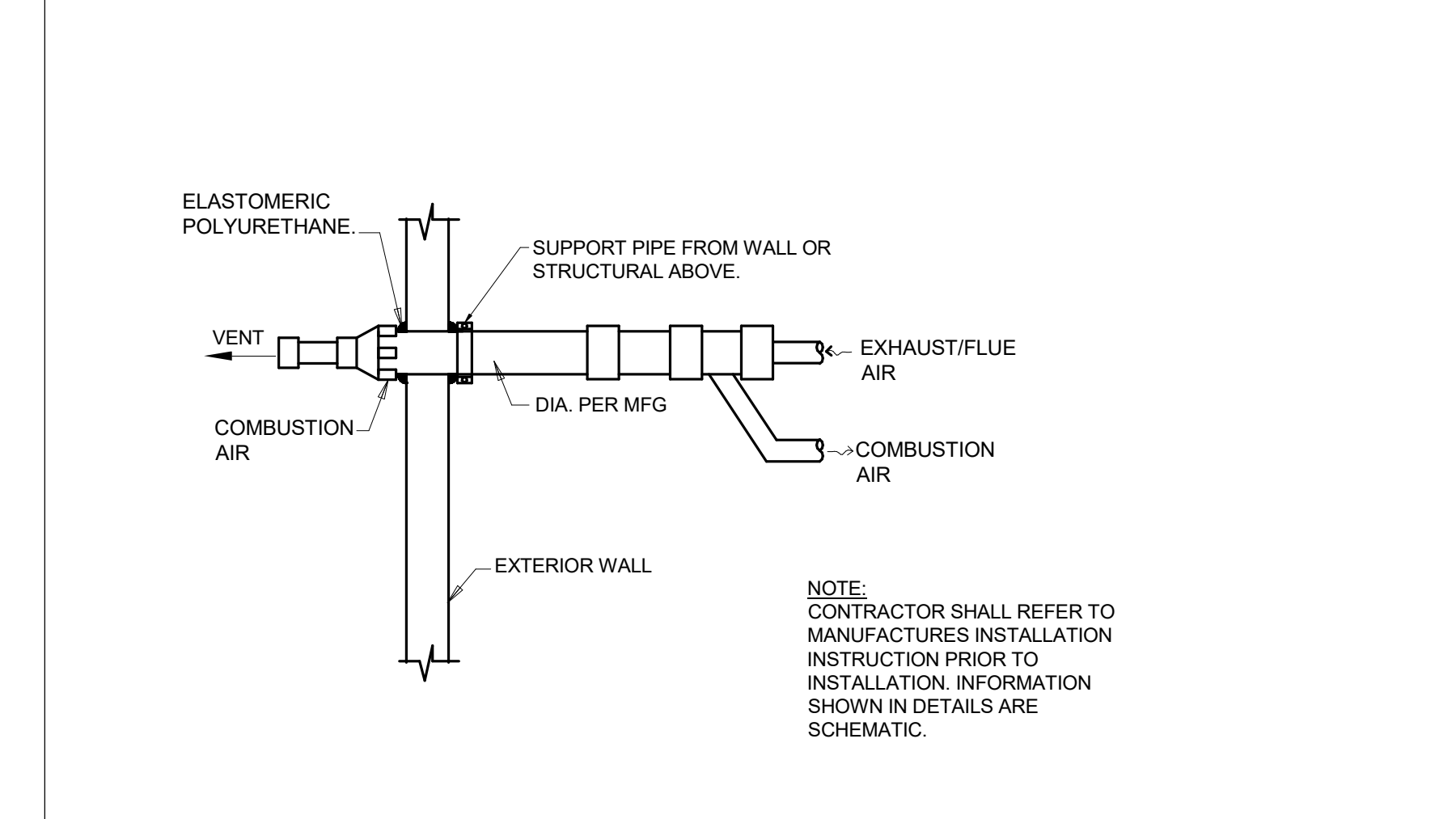
5 Typical Connection to Diffuser
Scale: Not To Scale



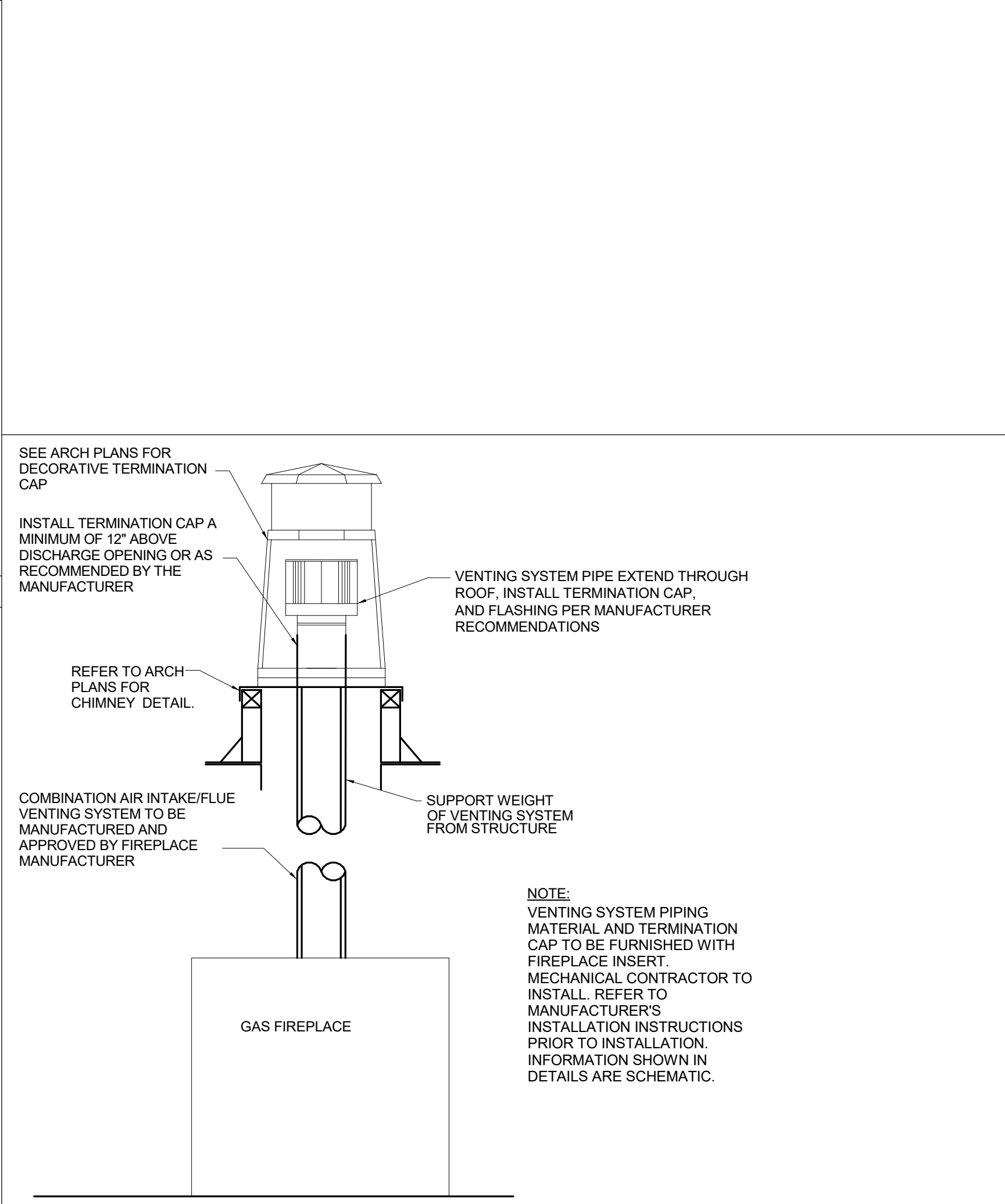
4 Typical Duct Construction
Scale: Not To Scale



3 Ceiling Exhaust Fan Detail
Scale: Not To Scale

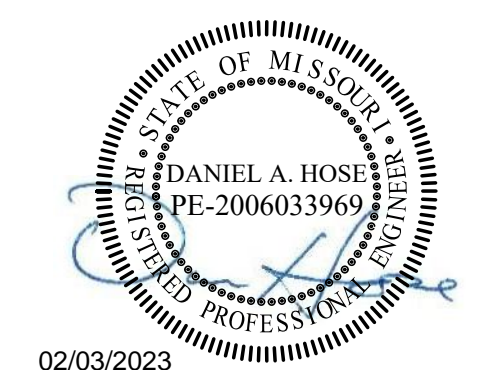


2 Concentric Vent Details
Scale: Not To Scale

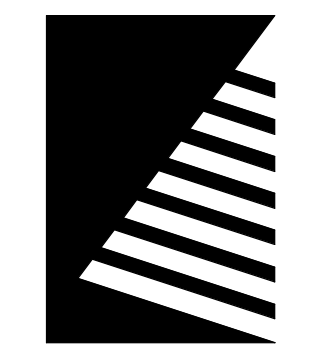


1 Gas Fireplace Venting System Detail
Scale: Not To Scale

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



02/03/2023
EXP. 12/31/2024



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CONSTRUCTION DOCUMENTS

OFFICE OF
ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT, DESIGN
AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

Echo Bluff State Park Construct Six New Cabins

Eminence, Missouri

PROJECT #: X-2208-01
SITE #: 01
FACILITY #: xxxx
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: JMB
CHECKED BY: DAH
DESIGNED BY: DAH

SHEET TITLE: SCHEDULES

SHEET NUMBER:

M-601

SHEET 61 of 75
ISSUE DATE: 03/02/2023

SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS

GENERAL

	MECHANICAL EQUIPMENT CALL-OUT: REFER TO THE EQUIPMENT DATA SCHEDULE FOR DETAILS
	PLUMBING EQUIPMENT CALL-OUT: REFER TO THE EQUIPMENT DATA SCHEDULE FOR DETAILS
	KEYNOTE
	FEEDER CALL-OUT
	FOOD SERVICE EQUIPMENT DESIGNATION
	ROOM NUMBER
	REVISION CALL-OUT
	NEW EQUIPMENT (TYPICAL)
	EXISTING EQUIPMENT (TYPICAL)
	DEMOLITION EQUIPMENT (TYPICAL)
	WALL MOUNT BRACKET (TYPICAL)

WIRING AND CONDUITS

	CONDUIT - CONCEALED IN SUSPENDED CEILING OR WALL
	CONDUIT - EXPOSED
	CONDUIT - CONCEALED BELOW SLAB OR GRADE
	CONDUIT - TURNING UP
	CONDUIT - TURNING DOWN
	CONDUIT - UP AND DOWN (CHANGE IN ELEVATION)
	CONDUIT - CONTINUED
	CONDUIT - FLEXIBLE
	CONDUIT - CAPPED
	JUNCTION BOX
	JUNCTION BOX - EMERGENCY POWER
	CONDUIT FITTING (CONDULET)
	EXPANSION FITTING
	SEALING FITTING
	CABLE TRAY

COMMUNICATIONS (FOR ROUGH-IN ONLY WITH 1" CONDUIT TO ACCESSIBLE CEILING)

	TELEPHONE TERMINAL BACKBOARD (PROVIDE WITH 3/4" FIRE RATED PLYWOOD)
	TELEPHONE OUTLET - WALL MOUNTED
	TELEPHONE OUTLET - CEILING MOUNTED
	TELEPHONE OUTLET - ABOVE COUNTER
	TELEPHONE OUTLET - FLUSH FLOOR MOUNTED
	TELEPHONE OUTLET - WALL MOUNTED
	TELEPHONE OUTLET - CEILING MOUNTED
	TELEPHONE OUTLET - ABOVE COUNTER
	TELEPHONE OUTLET - FLUSH FLOOR MOUNTED
	TELEPHONE OUTLET - CEILING MOUNTED
	COMBINATION TELEPHONE/DATA OUTLET - WALL MOUNTED
	COMBINATION TELEPHONE/DATA OUTLET - ABOVE COUNTER
	COMBINATION TELEPHONE/DATA OUTLET - FLUSH FLOOR MOUNTED
	COMBINATION TELEPHONE/DATA OUTLET - CEILING MOUNTED
	WIRELESS ACCESS POINT

POWER

	BRANCH CIRCUIT PANELBOARD - SURFACE MOUNTED
	BRANCH CIRCUIT PANELBOARD - FLUSH MOUNTED
	DISTRIBUTION PANELBOARD OR SWITCHBOARD
	TRANSFORMER
	POLE MOUNTED TRANSFORMER
	MOTOR CONTROL CENTER
	CONTROL PANEL
	GROUND BAR
	UTILITY KILOWATT-HOUR METER
	SAFETY SWITCH - NON-FUSIBLE
	SAFETY SWITCH - FUSIBLE
	ENCLOSED CIRCUIT BREAKER
	MAGNETIC STARTER
	COMBINATION STARTER VFD VARIABLE FREQUENCY DRIVE
	EQUIPMENT - MOTOR
	DUPLEX RECEPTACLE (NEMA 5-20R)
	DUPLEX RECEPTACLE - ABOVE COUNTER
	DUPLEX RECEPTACLE - SPLIT WIRED
	DUPLEX RECEPTACLE - EMERGENCY POWER
	DUPLEX RECEPTACLE - CEILING MOUNTED
	DUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED
	QUADRUPLEX RECEPTACLE
	QUADRUPLEX RECEPTACLE - ABOVE COUNTER
	QUADRUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED
	SINGLE RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE - CEILING MOUNTED
	SPECIAL PURPOSE RECEPTACLE - FLUSH FLOOR MOUNTED
	FLOOR BOX - SEE SPECS OR KEYED NOTES ON PLAN FOR DETAILS
	POWER POLE
	CEILING FAN
	HAND DRYER
	GENERATOR ANNUNCIATOR PANEL
	DEAD FRONT GFI WIRING DEVICE

LIGHTING

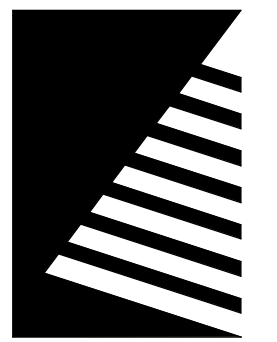
	LUMINAIRE TYPE
	LUMINAIRE - RECESSED (REFER TO LUMINAIRE SCHEDULE)
	CONNECTED FOR NIGHT LIGHT USE (LUMINAIRES ARE CONTROLLED BY LOCAL SWITCH UNLESS DESIGNATION GIVEN)
	LUMINAIRE - SURFACE MOUNTED
	RECESSED LUMINAIRE CONNECTED TO THE EMERGENCY POWER SYSTEM OR BALLAST/DRIVER
	OPEN INDUSTRIAL LUMINAIRE
	OPEN INDUSTRIAL LUMINAIRE EMERGENCY POWER SYSTEM OR BALLAST/DRIVER
	WALL MOUNTED LUMINAIRE
	RECESSED DOWNLIGHT - CEILING MOUNTED
	RECESSED DOWNLIGHT w/ EMERGENCY BALLAST/DRIVER - CEILING MTD.
	SURFACE MOUNTED DOWNLIGHT
	RECESSED ADJUSTABLE/WALLWASH - CEILING MOUNTED
	POLE MOUNTED SITE LIGHTING - SINGLE HEAD
	POLE MOUNTED SITE LIGHTING - DUAL HEAD
	POLE MOUNTED SITE LIGHTING - TRIPLE HEAD
	POLE MOUNTED SITE LIGHTING - QUAD HEAD
	LINEAR PENDANT
	PENDANT
	TRACK LIGHTING
	EXIT SIGN - SINGLE FACE, CEILING MOUNTED
	EXIT SIGN - SINGLE FACE, WALL MOUNTED
	EXIT SIGN - DUAL FACE, CEILING MOUNTED
	EXIT SIGN - DUAL FACE, WALL MOUNTED
	EXIT SIGN WITH EMERGENCY LIGHT
	EMERGENCY LIGHT
	TOGGLE SWITCH
	DOUBLE-POLE SINGLE-THROW (DPST)
	3-WAY
	4-WAY
	LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
	DIMMER (WALL BOX TYPE)
	FAN SPEED CONTROLLER
	KEY OPERATED
	LOW VOLTAGE SWITCH
	MOMENTARY CONTACT SWITCH
	WALL BOX OCCUPANCY SENSOR
	WALL BOX OCCUPANCY SENSOR FOR TWO LEVEL SWITCHING
	PILOT LIGHT
	TIMER
	TEACHER CONTROLS STATION
	TEACHER ENTRY STATION
	WALL BOX VACANCY SENSOR
	WEATHERPROOF
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
	CEILING MOUNTED DAYLIGHT SENSOR
	CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR
	PHOTOCELL
	ROOM CONTROLLER
	LIGHTING CONTACTOR
	LIGHTING RELAY PANEL
	INVERTER

FIRE ALARM

	PANEL NAME-CIRCUIT NUMBER
	MAIN CONTROL PANEL (FCP)
	F/A MAIN CONTROL PANEL
	FIRE SYSTEM ANNUNCIATOR
	F/A TRANSPONDER OR TRANSMITTER
	ELEVATOR STATUS RECALL
	F/A RELAY PANEL
	F/A COMMUNICATOR
	FIRE ALARM ANNUNCIATION CIRCUIT POWER SUPPLY
	IPCS IP AND GLOBAL SYSTEM COMMUNICATION PANEL
	DIGITAL ALARM COMMUNICATOR TRANSMITTER
	MANUAL PULL STATION
	SMOKE DETECTOR
	PHOTOELECTRIC
	PLENUM SMOKE DETECTOR
	SOUNDER BASE
	DUCT DETECTOR HOUSING AND SAMPLING TUBE
	THERMAL (HEAT) DETECTOR
	RATE OF RISE ONLY
	FIXED TEMPERATURE
	LINE TYPE FIXED TEMPERATURE CABLE
	ALL HEAT DETECTORS SHALL BE 135°, COMBINATION TYPE UNLESS INDICATED OTHERWISE.
	SUPERVISORY SWITCH - DRY-PIPE PRESSURE SWITCH
	SUPERVISORY SWITCH - TAMPER SWITCH
	SUPERVISORY SWITCH - WATER FLOW SWITCH
	CONTROL DEVICE - DOOR HOLD OPEN
	ADDRESSABLE INTERFACE MODULE
	CONTROL
	MONITORING
	SIGNALLING
	SOLENOID VALVE
	NOTIFICATION APPLIANCE
	CHIME
	HORN
	LOW FREQUENCY
	NOTIFICATION APPLIANCE - STROBE ONLY
	CANDELA VALUE AS SHOWN MINIMUM
	NOTIFICATION APPLIANCE WITH STROBE
	CANDELA VALUE AS SHOWN MINIMUM
	CHIME
	HORN
	LOW FREQUENCY
	SHUNT TRIP PUSH BUTTON
	NOTIFICATION APPLIANCE (CEILING)
	CHIME STROBE
	HORN STROBE
	LOW FREQUENCY
	CANDELA VALUE AS SHOWN MINIMUM
	CARBON MONOXIDE DETECTOR
	CEILING MOUNTED COMBINATION VOICE EVACUATION SPEAKER AND STROBE
	CANDELA VALUE AS SHOWN MINIMUM
	COMBINATION VOICE EVACUATION SPEAKER AND STROBE
	NOTIFICATION APPLIANCE
	CANDELA VALUE AS SHOWN MINIMUM
	CEILING MOUNTED VOICE EVACUATION SPEAKER
	VOICE EVACUATION SPEAKER NOTIFICATION APPLIANCE
	REMOTE TEST SWITCH
	PANEL NAME-CIRCUIT NUMBER
	ACCESS CONTROL CONTROL PANEL
	DVR AND RACK
	CARD READER - WITH 3/4" CONDUIT
	WITH KEY PAD
	ELECTRIC STRIKE WITH 3/4" CONDUIT
	ELECTRO-MAGNETIC LOCK WITH 3/4" CONDUIT
	VIDEO MONITOR, FLAT SCREEN LCD WITH 3/4" CONDUIT
	DOOR STATUS SWITCH WITH 3/4" CONDUIT
	MOTION DETECTOR WITH 3/4" CONDUIT
	POWER SUPPLY FOR PTZ CAMERA WITH 3/4" CONDUIT
	4-CHANNEL CAMERA POWER SUPPLY WITH 3/4" CONDUIT
	INDOOR FIXED CAMERA WITH 3/4" CONDUIT
	PTZ PAN TILT ZOOM
	WEATHERPROOF
	TV OUTLET WITH 3/4" CONDUIT
	HANDICAP DOOR OPERATORS - SEE ARCHITECTURALS WITH 3/4" CONDUIT
	GLASS BREAK SENSOR WITH 3/4" CONDUIT
	VOLUME CONTROLLER - WITH 3/4" CONDUIT
	CEILING MOUNTED SPEAKER
	WALL MOUNTED SPEAKER
	INTERCOM MASTER STATION
	INTERCOM REMOTE STATION
	PEDESTAL MOUNT
	HIGH SECURITY
	GENERAL USE
	PUSH BUTTON
	DOOR BELL SPEAKER/ CHIME
	CLOCK
	REQUEST TO EXIT

ONE-LINE DIAGRAM

	SERVICE DROP
	PANELBOARD
	DELTA-WYE TRANSFORMER
	GENERATOR
	AUTOMATIC TRANSFER SWITCH
	GROUND
	CIRCUIT BREAKER
	DRAWOUT CIRCUIT BREAKER
	METER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	GROUND FAULT PROTECTED BREAKER
	SHUNT TRIP BREAKER
	SWITCH
	FUSE
	CONTACTOR
	THERMAL OVERLOAD
	ELECTRONIC OVERLOAD
	SURGE PROTECTION DEVICE
	VARIABLE FREQUENCY DRIVE
	KIRK KEY INTERLOCK
	DIGITAL POWER METER



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AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

Eminence, Missouri

PROJECT #.: X2208-01

SITE #.: 5235

FACILITY #.: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: KES

CHECKED BY: DFM

DESIGNED BY: TLA

SHEET TITLE:

GENERAL INFORMATION

SHEET NUMBER:

E-001

SHEET 62 of 75

ISSUE DATE: 03/02/2023

GENERAL NOTES

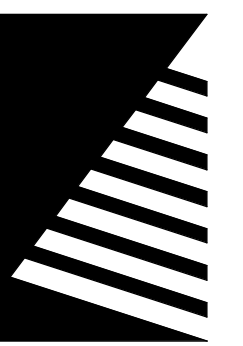
COMMON REQUIREMENTS:

- A. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, ELEVATIONS, AND BUILDING DETAILS. VERIFY LOCATION OF ALL WALL OUTLETS, SWITCHES, ETC., WITH ARCHITECTURAL DRAWINGS AND ACTUAL CONDITIONS.
- B. PRIOR TO ROUGH-IN AND FINAL CONNECTION OF EQUIPMENT, VERIFY ELECTRICAL REQUIREMENTS OF EQUIPMENT WITH OTHER TRADES CONSTRUCTION DOCUMENTS AND FINALIZED SHOP DRAWINGS. VERIFICATION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: VOLTAGE, AMPERAGE, TOTAL LOAD, OVER-CURRENT PROTECTION REQUIREMENTS, MOUNTING HEIGHT OF ELECTRICAL CONNECTION, CABLE TYPE AND SIZE, WIRING DIAGRAMS.
- C. COORDINATE SCHEDULE OF CONSTRUCTION WITH THE OWNER, OTHER TRADES AND UTILITIES INVOLVED BEFORE TRENCHING AND INSTALLATION OF UNDERGROUND CONDUIT. USE EXTREME CAUTION DURING EXCAVATION TO LOCATE EXISTING UNDERGROUND PIPING, CONDUITS, ETC. LOCATE AND PROTECT ANY BURIED UTILITIES IN AREAS OF EXCAVATION.
- D. GROUT AND SEAL ALL CONDUIT PENETRATIONS OF WALLS AND FLOOR SLABS TO PRESERVE FIRE RATING AND WATERTIGHT INTEGRITY.
- E. THE CONTRACTOR SHALL CONTACT AND OBTAIN FROM THE UTILITY COMPANY ALL INFORMATION, REQUIREMENTS, THEIR CONSTRUCTION DRAWINGS AND SPECIFICATIONS TO COMPLETE THE ELECTRICAL PRIMARY/SECONDARY SERVICE TO THIS PROJECT. INCLUDE IN BASE BID, BUT NOT LIMIT TO, TRENCHING, BACKFILL, TRANSFORMER CONCRETE PAD, CONDUITS, METERING REQUIREMENTS, AND PROVIDE COMPLIANT EQUIPMENT IN THE CORRECT SEQUENCE, CONTRIBUTION COSTS, ENGINEERING FEE AND SERVICE CHARGES FOR ALL ELECTRICAL SERVICES TO THIS PROJECT.
- F. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LAYOUT OF LUMINAIRES AND CEILING TYPES. VERIFY CEILING TYPES PRIOR TO ORDERING LUMINAIRES.
- G. REFER TO ARCHITECTURAL PLANS TO CONFIRM ALL FIRE-RATED CEILINGS AND WALLS.
 - 1. ALL PENETRATIONS OF FIRE-RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAILS THAT CONFORM TO UNDERWRITERS' LABORATORIES LISTINGS FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS." THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS, FURNISHED BY THE MANUFACTURER OF THE FIRE STOP MATERIAL, WHICH SHOW COMPLETE CONFORMANCE TO THE UL LISTING AND SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED. THESE FINAL AND APPROVED DRAWINGS SHALL BE READILY AVAILABLE TO THE LOCAL INSPECTORS AT ALL TIMES AT THE PROJECT SITE.
- H. ALL LIGHT FIXTURES SHALL BE EQUIPPED WITH A GREEN GROUND WIRE BONDED TO THE HOUSING.
- I. FINISH OF ALL LIGHTING FIXTURES IS SUBJECT TO ARCHITECT'S APPROVAL. SUBMIT SAMPLES IF REQUESTED.
- J. ALL LUMINAIRES WITH EMERGENCY BATTERIES SHALL HAVE THE BATTERY CHARGER CIRCUITED TO THE AMBIENT LIGHTING CIRCUIT IN THE SPACE BUT SHALL BE UNSWITCHED. IF THE LUMINAIRE IS INDICATED AS SWITCHED, ONLY THE LUMINAIRE SHALL BE CONTROLLED BY THE SWITCHED CONDUCTORS (BATTERY CHARGER SHALL REMAIN UNSWITCHED).
- K. THE ELECTRICAL CONTRACTOR SHALL BE HELD FINANCIALLY RESPONSIBLE FOR ANY AND ALL COSTS OF THE ENGINEERS TIME REQUIRED TO REVIEW AND RESEARCH NON-SPECIFIED EQUIPMENT SUBMITTED FOR SUBSTITUTION BY THE ELECTRICAL CONTRACTOR. THESE COSTS SHALL BE AUTOMATICALLY INVOICED TO THE CONTRACTOR UNLESS SUCH SUBSTITUTIONS FOLLOW THE GUIDELINES FOR SUBSTITUTION AND ARE WITHIN THE PROPER TIME FRAME AS OUTLINED IN OTHER SECTIONS OF THIS SPECIFICATION.
- L. PROVIDE AND INSTALL IN EACH PANEL, TYPEWRITTEN NEAT TWO-COLUMN CIRCUIT INDEX CARD SET UNDER PLASTIC COVERS ON INSIDE OF DOORS. EACH ODD-NUMBERED CIRCUIT SHALL BE IN SEQUENCE ON ONE COLUMN AND THE EVEN-NUMBERED CIRCUITS ON THE OTHER COLUMN (E.G. 1,3,5...2,4,6...). EACH CIRCUIT SHALL BE IDENTIFIED AS TO THE USE AND ROOM NAME(S) OR AREA(S). THE CONTRACTOR SHALL CONFIRM ROOM NAMES AND/OR ROOM NUMBERS WITH THE ARCHITECT PRIOR TO PROJECT COMPLETION.
- M. FROM EACH FLUSH MOUNTED PANEL STUB (2) 3/4" AND (1) 1" INTO NEAREST ACCESSIBLE CEILING SPACE.
- N. PRIOR TO SUBMITTING BID PROPOSAL, BIDDER SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND VISIT CONSTRUCTION SITE TO BE FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH THEY WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.
- O. CONTRACTOR SHALL NOT SCALE DRAWING FOR QUANTITIES. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL MEASUREMENTS.
- P. IF POSSIBLE, ALL NEWLY INSTALLED RECEPTACLES SHALL BE INSTALLED IN SEPARATE OR ADJACENT STUD SPACES; TO AVOID SOUND TRANSMISSION AND WALL INTEGRITY ISSUES. ALL NEWLY INSTALLED RECEPTACLES LOCATED IN COMMON STUD SPACES OF FIRE-RESISTANT WALLS SHALL BE EQUIPPED WITH FIRE-RESISTANT PUTTY PADS AT THE BACK OF EACH BOX IN ACCORDANCE WITH NEC.
- Q. SECURE ALL LOW VOLTAGE DATA, SIGNALING AND CONTROL WIRING TO THE STRUCTURE AT INTERVALS NO MORE THAN 4 FEET.
- R. ALL FLOOR MOUNTED SWITCH GEAR, BOXES AND TRANSFORMERS LARGER THAN 75 KVA SHALL BE INSTALLED ON A NOMINAL 4" HOUSEKEEPING PAD. PAD SHALL EXTEND FROM ELECTRICAL EQUIPMENT 6" IN ANY DIRECTION.
- S. WHERE CONDUIT AND WIRING RUNS ARE NOT SHOWN ON FLOOR PLANS, THE CONTRACTOR SHALL DETERMINE AND PROVIDE THE REQUIRED CONDUIT AND WIRING FOR SPECIFIED CIRCUITING IN ACCORDANCE WITH NEC AND THE FOLLOWING MINIMUM REQUIREMENTS:
 - 1. MINIMUM CONDUIT SIZE SHALL BE 3/4".
 - 2. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG. #10 AWG SHALL BE USED FOR HOME RUNS OF 20 AMP BRANCH CIRCUITS OVER 100 FEET IN LENGTH.
 - 3. EACH RACEWAY SHALL CONTAIN AN INSULATED EQUIPMENT GROUNDING CONDUCTOR PER NEC.
 - 4. DERATING OF CONDUCTOR AMPACITY SHALL BE APPLIED PER NEC.
 - 5. NO SHARING OF NEUTRALS ALLOWED. CIRCUIT SHALL HAVE DEDICATED NEUTRAL CONDUCTORS. ONE CIRCUIT, ONE NEUTRAL.
 - 6. MAXIMUM SIX FOOT FLEXIBLE LUMINAIRE WHIP SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES INSTALLED IN LAY-IN CEILINGS. MAXIMUM FOUR LUMINAIRE WHIPS SHALL BE CONNECTED FROM ONE JUNCTION BOX. FEED THRU BETWEEN LUMINAIRES SHALL NOT BE ALLOWED.
 - a. EXCEPTION: ALL RECESSED LUMINAIRES IN HARD CEILINGS SHALL HAVE FEED-THRU JUNCTION BOXES.
- T. INSTALL CARBON MONOXIDE DETECTORS IN DWELLING UNITS OF GROUP E OCCUPANCY PER IFC 915.

ABBREVIATIONS

%Z	IMPEDANCE	MCC	MOTOR CONTROL CENTER
(E)	EXISTING (ALSO COVERED BY TEXT WEIGHT)	MCP	MOTOR CIRCUIT PROTECTOR
(F)	FUTURE	MDF	MAIN DISTRIBUTION FRAME
(PART)	PARTIAL CIRCUIT	MDP	MAIN DISTRIBUTION PANEL
(R)	RELOCATE	MEPFP	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION
A	AMPERES	MGB	MASTER GROUND BAR
AC	6" ABOVE COUNTER	MH	METAL HALIDE
ADA	AMERICANS WITH DISABILITIES ACT	MIN	MINIMUM
AF	AMPERES FRAME	MLO	MAIN LUG ONLY
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MOCPP	MAXIMUM OVERCURRENT PROTECTION
AFF	ABOVE FINISHED FLOOR	MSB	MAIN SWITCHBOARD
AFG	ABOVE FINISHED GRADE	MTG	MOUNTING
AHJ	AUTHORITY HAVING JURISDICTION	MTS	MANUAL TRANSFER SWITCH
AIC	AMPERES INTERRUPTION CAPACITY	MVA	MEGAVOLT-AMPERES
AL	ALUMINUM	MW	MEGAWATT
AT	AMPERES TRIP	MWH	MEGAWATT-HOURS
ATS	AUTOMATIC TRANSFER SWITCH	N	NEUTRAL
AWG	AMERICAN WIRE GAUGE	NA	NOT APPLICABLE
BMS	BUILDING MANAGEMENT SYSTEM	NC	NORMALLY CLOSED
C	CONDUIT	NEC	NATIONAL ELECTRIC CODE
CAM	CAMERA	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CB	CIRCUIT BREAKER	NF	NON-FUSED
CCTV	CLOSED CIRCUIT TELEVISION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CCW	COUNTER CLOCKWISE	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NL	NIGHT LIGHT
CL	CENTER LINE	NO	NORMALLY OPEN
CLG	CEILING	NP	NAMEPLATE
CO	CONDUIT ONLY	NTS	NOT TO SCALE
CRI	COLOR RENDERING INDEX	OC	ON CENTER
CT	CURRENT TRANSFORMER	OD	OUTSIDE DIAMETER
CU	COPPER	OH	OVERHEAD
CW	CLOCKWISE	OWN	OWNER
D	DEDICATED	P	POLE
DIA	DIAMETER	PA	PUBLIC ADDRESS
DISC	DISCONNECT	PB	PULL BOX
DIST	DISTRIBUTION	PC	PLUMBING CONTRACTOR
DPDT	DOUBLE POLE DOUBLE THROW	PF	POWER FACTOR
DPST	DOUBLE POLE SINGLE THROW	PH	PHASE
DR	DRUPLEX RECEPTACLE	PIR	PASSIVE INFRARED
DWG	DRAWING(S)	PLC	PROGRAMMABLE LOGIC CONTROLLER
EC	ELECTRICAL CONTRACTOR	PNL	PANEL
ELC	ELEVATOR CONTRACTOR	PR	PAIR
ELEC	ELECTRICAL/ELECTRICAL	PRI	PRIMARY
EM	EMERGENCY	PT	POTENTIAL TRANSFORMER
EMT	ELECTRICAL METALLIC TUBING	PV	PHOTOVOLTAIC
EQUIP	EQUIPMENT	PVC	POLYVINYL CHLORIDE
EWC	ELECTRIC WATER COOLER	PWC	PRE-WIRED CONTROLS
F	FUSED	PWR	POWER
FA	FIRE ALARM	RCPT	RECEPTACLE
FAA	FIRE ALARM ANNUNCIATOR	REQD	REQUIRED
FACP	FIRE ALARM CONTROL PANEL	RF	RADIO FREQUENCY
FC	FOOTCANDLE	RM	ROOM
FLA	FULL LOAD AMPERES	RMC	RIGID METAL CONDUIT
FMC	FLEXIBLE METAL CONDUIT	RNC	RIGID NON-METALLIC CONDUIT (SCH 40)
FO	FIBER OPTIC	RVAT	REDUCED VOLTAGE - AUTOTRANSFORMER
FPC	FIRE PROTECTION CONTRACTOR	SC	SHORT CIRCUIT
FS	FUSED SWITCH	SCC	SHORT CIRCUIT CURRENT RATING
FSC	FOOD SERVICE CONTRACTOR	SDP	SUBDISTRIBUTION PANEL
FSD	FIRE/SMOKE DAMPER	SEC	SECONDARY
FT	FOOT/FEET	SHLD	SHIELD(ED) (AS IN CABLE)
FVNR	FULL VOLTAGE, NON-REVERSING	SHT	SHEET
FVR	FULL VOLTAGE, REVERSING	SPD	SURGE-PROTECTIVE DEVICE
G/GND	GROUND/GROUNDING	SPDT	SINGLE POLE DOUBLE THROW
GC	GENERAL CONTRACTOR	SPST	SINGLE POLE SINGLE THROW
GEN	GENERATOR	SR	SINGLE RECEPTACLE
GF	GROUND FAULT	SS	SURGE SUPPRESSOR (ISOLATED GROUND TYPE)
GF/GFCI	GROUND FAULT INTERRUPTER	ST	SHUNT TRIP
H	HORIZONTALLY MOUNTED	SW	SWITCH
HG	HOSPITAL GRADE	SWBD	SWITCHBOARD
HH	HANDHOLE	SWGR	SWITCHGEAR
HID	HIGH INTENSITY DISCHARGE	TBD	TO BE DETERMINED
HOA	HAND-OFF-AUTO	TC	TIMECLOCK
HP	HORSEPOWER	TCC	TEMPERATURE CONTROLS CONTRACTOR
HPS	HIGH PRESSURE SODIUM	TEMP	TEMPERATURE
HZ	FREQUENCY	TR	TAMPER RESISTANT
I/O	INPUT/OUTPUT	TT	THERMAL TRIP SWITCH
ID	INSIDE DIAMETER	TTB	TELEPHONE TERMINAL BOARD
IDF	INTERMEDIATE DISTRIBUTION FRAME	TYP	TYPICAL
IG	ISOLATED GROUND	U	UTILITY
IMC	INTERMEDIATE METAL CONDUIT	UG	UNDERGROUND
ISC	SHORT CIRCUIT CURRENT	UL	UNDERWRITERS LABORATORY
JB	JUNCTION BOX	UON	UNLESS OTHERWISE NOTED
K	KELVIN (COLOR TEMPERATURE)	UPS	UNINTERRUPTABLE POWER SUPPLY
KCMIL	1000 CIRCULAR MILS	USB	STANDARD DUPLEX WITH 2 USB PORTS
KV	KILOVOLTS	V	VOLTS
KVA	KILOVOLT-AMPERES	VA	VOLT-AMPERES
KW	KILOWATTS	VAC	VOLTS ALTERNATING CURRENT
KWH	KILOWATT-HOUR	VDC	VOLTS DIRECT CURRENT
LAN	LOCAL AREA NETWORK	VFD	VARIABLE FREQUENCY DRIVE
LC	LIGHTING CONTRACTOR	VND	VENDOR
LCP	LIGHTING CONTROL PANEL	W	WATTS
LED	LIGHT EMITTING DIODE	W	WIRE
LF	LINEAR FOOT	WHM	WATTHOUR METER
LFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT	WP	WEATHERPROOF
LM	LUMEN	XFMR	TRANSFORMER
LTG	LIGHTING	XP	EXPLOSION PROOF
LV	LOW VOLTAGE		
MAX	MAXIMUM		
MC	MECHANICAL CONTRACTOR		
MCA	MINIMUM CIRCUIT AMPERES		
MCB	MAIN CIRCUIT BREAKER		

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MICHAEL L. PARSON,
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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #.: X2208-01
SITE #.: 5235
FACILITY #.: 7815230517

#	DATE:	DESCRIPTION:
Facility#		Relevant to Sheet:
7815235017	- Cabin 500	X
7815235019	- Cabin 501	X
7815235020	- Cabin 502	X
7815235021	- Cabin 503	X
7815235022	- Cabin 504	X
7815235023	- Cabin 505	X

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
GENERAL INFORMATION

SHEET NUMBER:

E-002

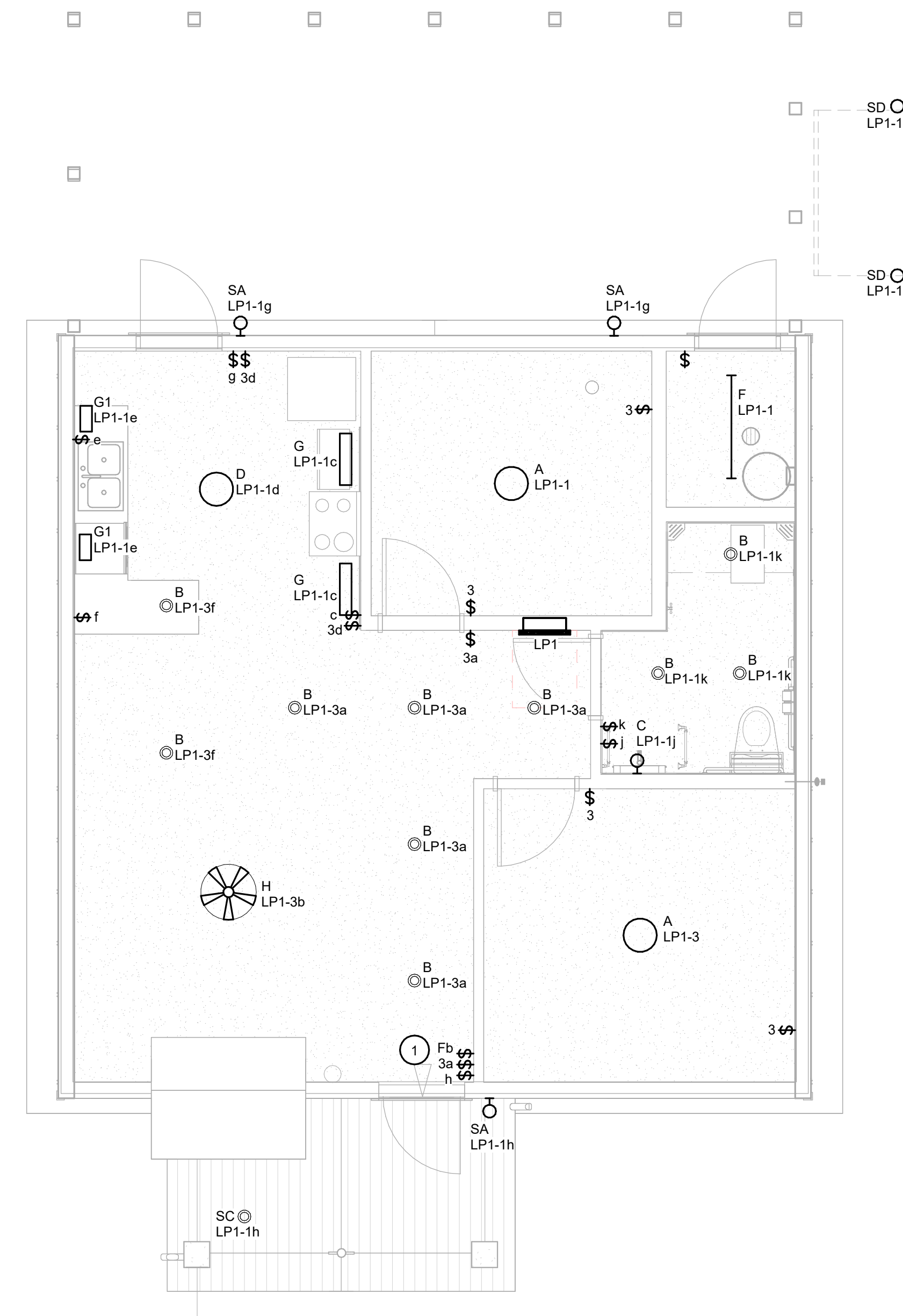
SHEET 63 of 75
ISSUE DATE: 03/02/2023

GENERAL NOTES

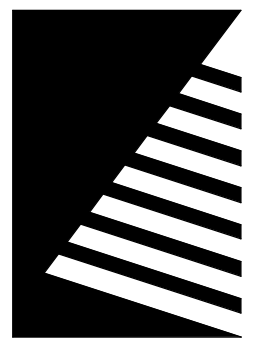
A. NOT USED

KEYNOTES #

1 ROTARY WALL SWITCH FOR FAN SPEED CONTROL WITH PUSH BUTTON ON/OFF FOR FAN LIGHTING CONTROL.



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:

**FLOOR PLAN -
LIGHTING - TWO
BEDROOM CABIN**

SHEET NUMBER:

E-101

SHEET 64 of 75
ISSUE DATE: 03/02/2023

2/23/2023 4:15 PM

1

FLOOR PLAN - LIGHTING - TWO BEDROOM CABIN

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

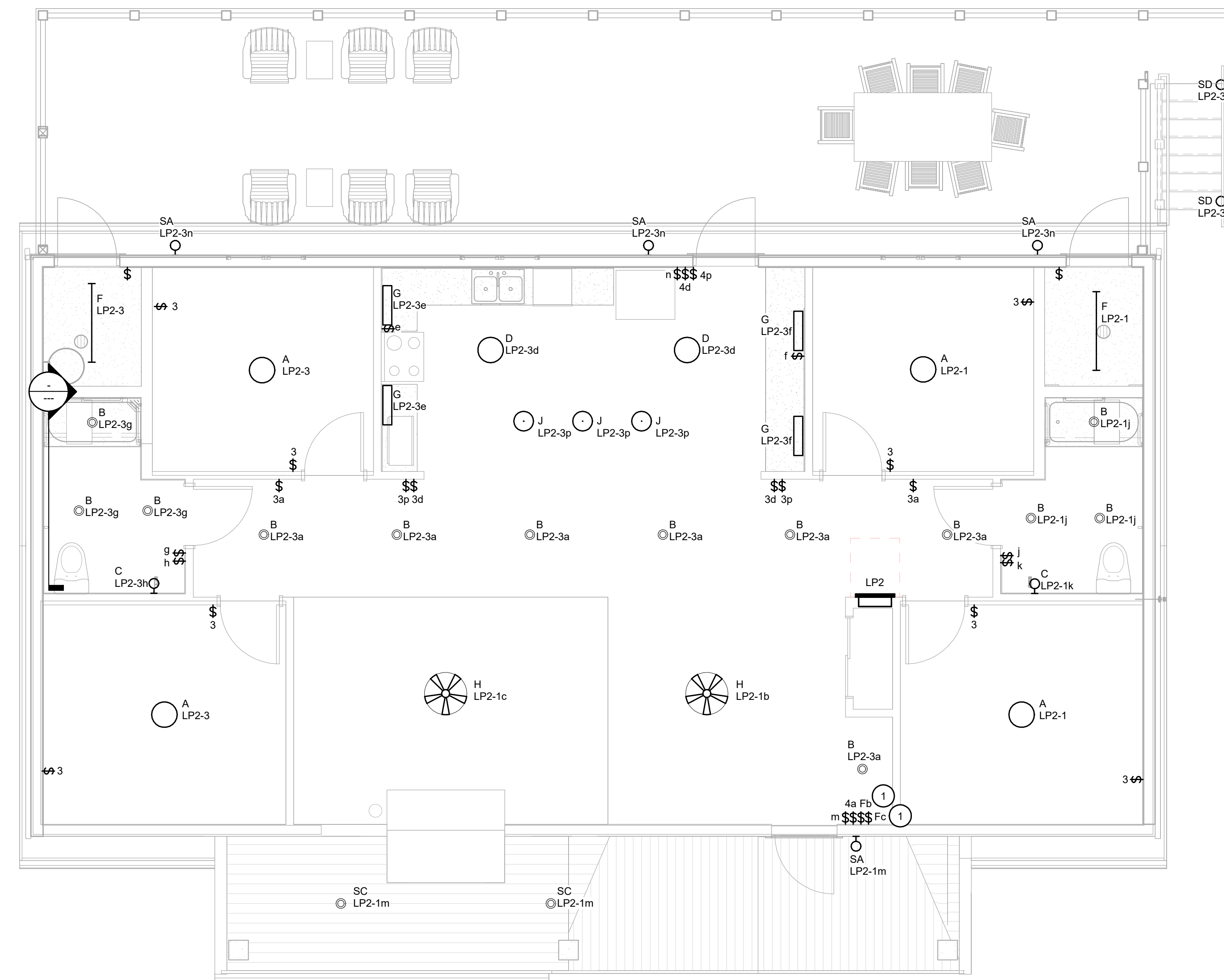


GENERAL NOTES

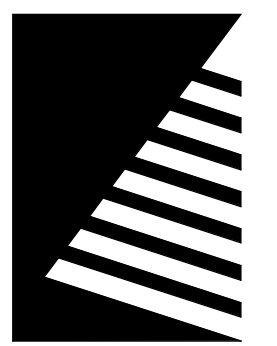
A. NOT USED

KEYNOTES #

1 ROTARY WALL SWITCH FOR FAN SPEED CONTROL WITH PUSH BUTTON ON/OFF FOR FAN LIGHTING CONTROL.



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
**FLOOR PLAN -
LIGHTING - FOUR
BEDROOM CABIN**

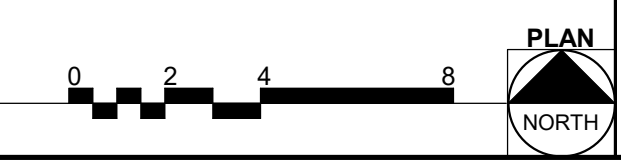
SHEET NUMBER:

E-102

SHEET 65 of 75
ISSUE DATE: 03/02/2023

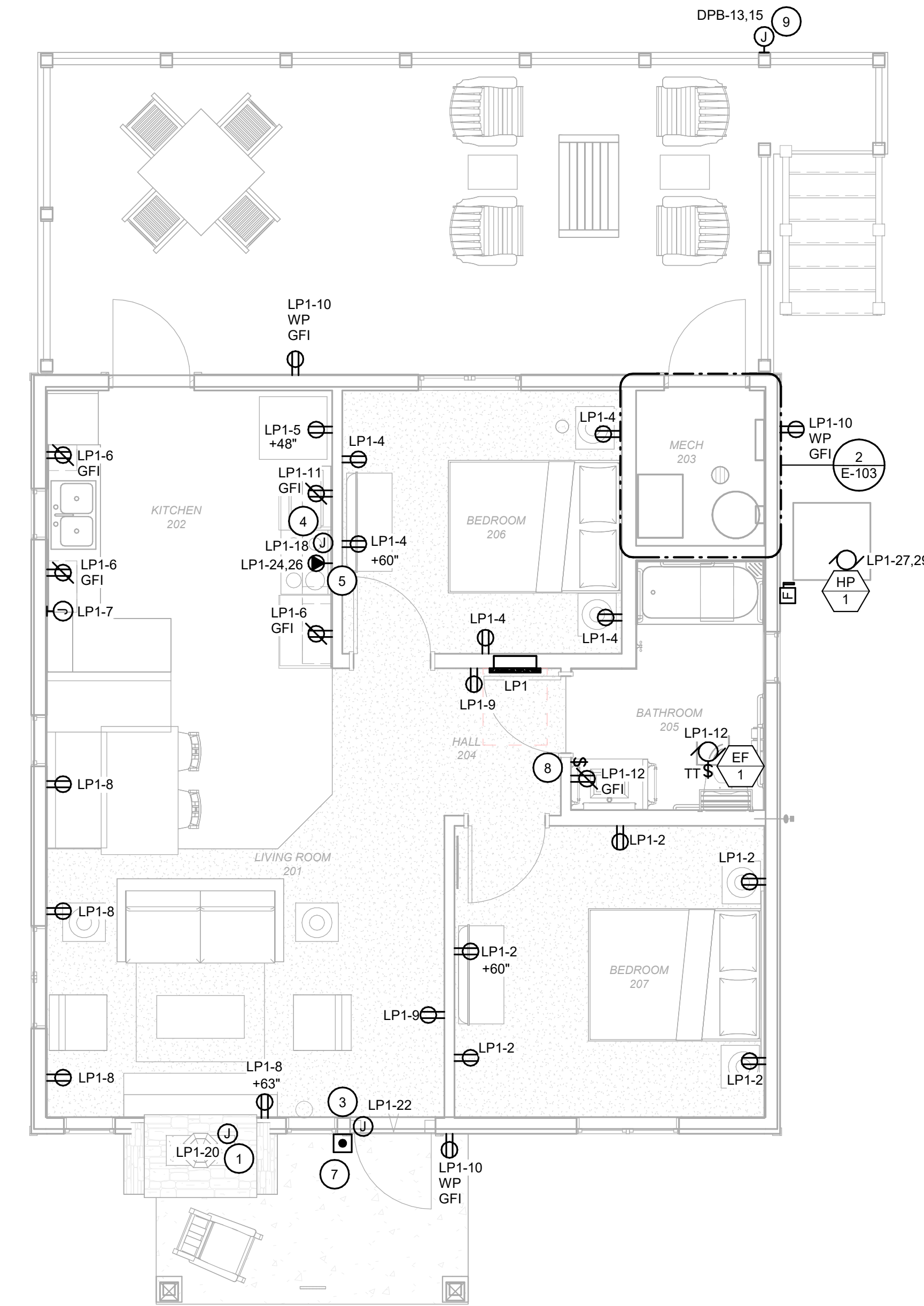
2/24/2023 3:30:12 PM

1 FLOOR PLAN - LIGHTING - FOUR BEDROOM CABIN
SCALE: 1/4" = 1'-0"

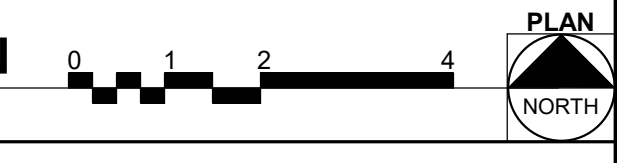
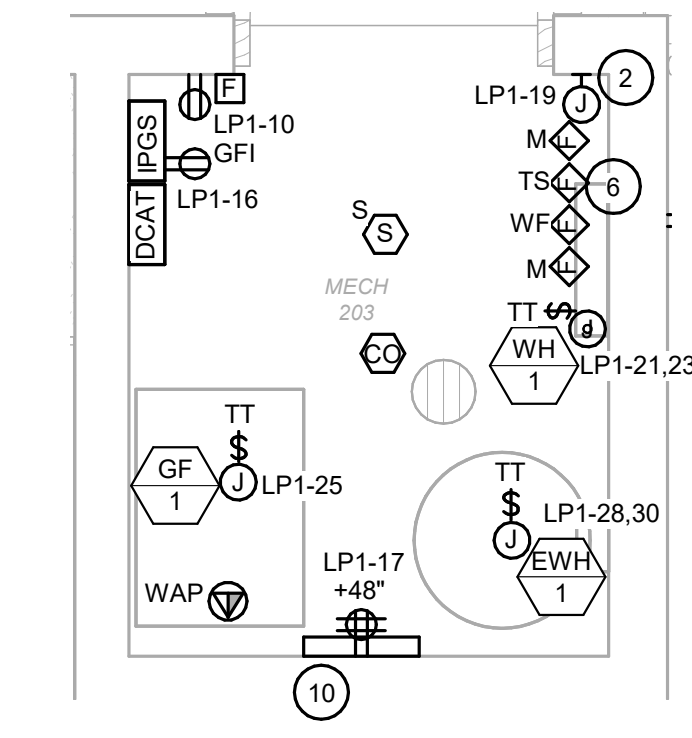


2/20/2023 4:29:05 PM

1 FLOOR PLAN - POWER - TWO BEDROOM CABIN
SCALE: 1/4" = 1'-0"



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



GENERAL NOTES

- A. NOT USED
- KEYNOTES** (circled numbers 1-10)
- 1 PROVIDE CONNECTION TO GAS FIRED FIREPLACE INSERT. COORDINATE EXACT LOCATION AND CONNECTION TYPE WITH ARCHITECTURAL TRADE AND VENDOR.
 - 2 PROVIDE A DEDICATED CIRCUIT FOR WATER SUPPLY HEAT TRACE LOCATED IN CRAWL SPACE. COORDINATE EXACT LOCATION WITH PLUMBING TRADE.
 - 3 PROVIDE CONNECTION TO ACCESS CONTROL SYSTEM CARD READER. COORDINATE EXACT REQUIREMENTS WITH OWNER'S VENDOR.
 - 4 PROVIDE CONNECTION TO OVERHEAD RANGE HOOD. COORDINATE EXACT LOCATION AND CONNECTION TYPE WITH ARCHITECTURAL TRADE AND VENDOR.
 - 5 PROVIDE A NEMA 14-50 RECEPTACLE FOR ELECTRIC RANGE.
 - 6 PROVIDE A MONITOR MODULES FOR SPRINKLER RISER.
 - 7 PROVIDE A WIRELESS DOORBELL NOTIFICATION SYSTEM. CENTRALALERT MODEL CA-360 SHALL BE CONSIDERED AS BASIS OF DESIGN. THE SYSTEM SHALL INCLUDE: 1 ALARM CLOCK MASTER UNITS WITH INTEGRATED FLASHER AND AUDIBLE ALARM. RECHARGABLE BATTERIES FOR ALL MASTER UNITS. 1 WIRELESS DOORBELL, AND 1 BED SHAKER UNIT. PROVIDE CENTRAL ALERT MODEL CA-RX AS SUB-MASTER TO BE PLACED ON LIVING ROOM END TABLE. LOCATE MASTER UNIT ON ACCESSIBLE BEDROOM NIGHT STAND. KROWN KA1000 AND CLARITY AL10 SHALL BE CONSIDERED APPROVED MODELS WHEN PROVIDED WITH PERIPHERAL DEVICES. AS REQUIRED FOR BASIS OF DESIGN. CONTRACTOR SHALL SUBMIT PRODUCT DATA SHEETS.
 - 8 PROVIDE SWITCH FOR EXHAUST FAN CONTROL.
 - 9 PROVIDE CONNECTION TO LIFT STATION CONTROL PANEL, LSCP1. COORDINATE EXACT LOCATION WITH CIVIL TRADE. PROVIDE CONDUIT AND WIRE FROM LIFT STATION CONTROL PANEL TO PUMPS AS REQUIRED BY VENDOR. SEE SHEET ES1.1 FOR MORE INFORMATION.
 - 10 PROVIDE A TELEPHONE/DATA 8 PORT PATCH PANEL.

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517

#	DATE:	DESCRIPTION:

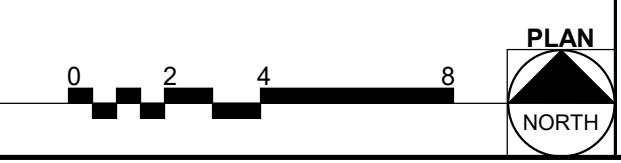
Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

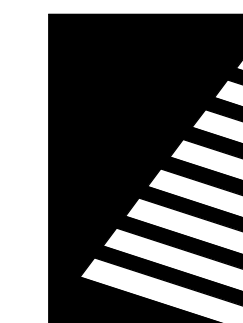
DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
**FLOOR PLAN -
POWER - TWO
BEDROOM CABIN**

SHEET NUMBER:
E-103

SHEET 66 of 75
ISSUE DATE: 03/02/2023





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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
**FLOOR PLAN -
POWER - FOUR
BEDROOM CABIN**

SHEET NUMBER:

E-104

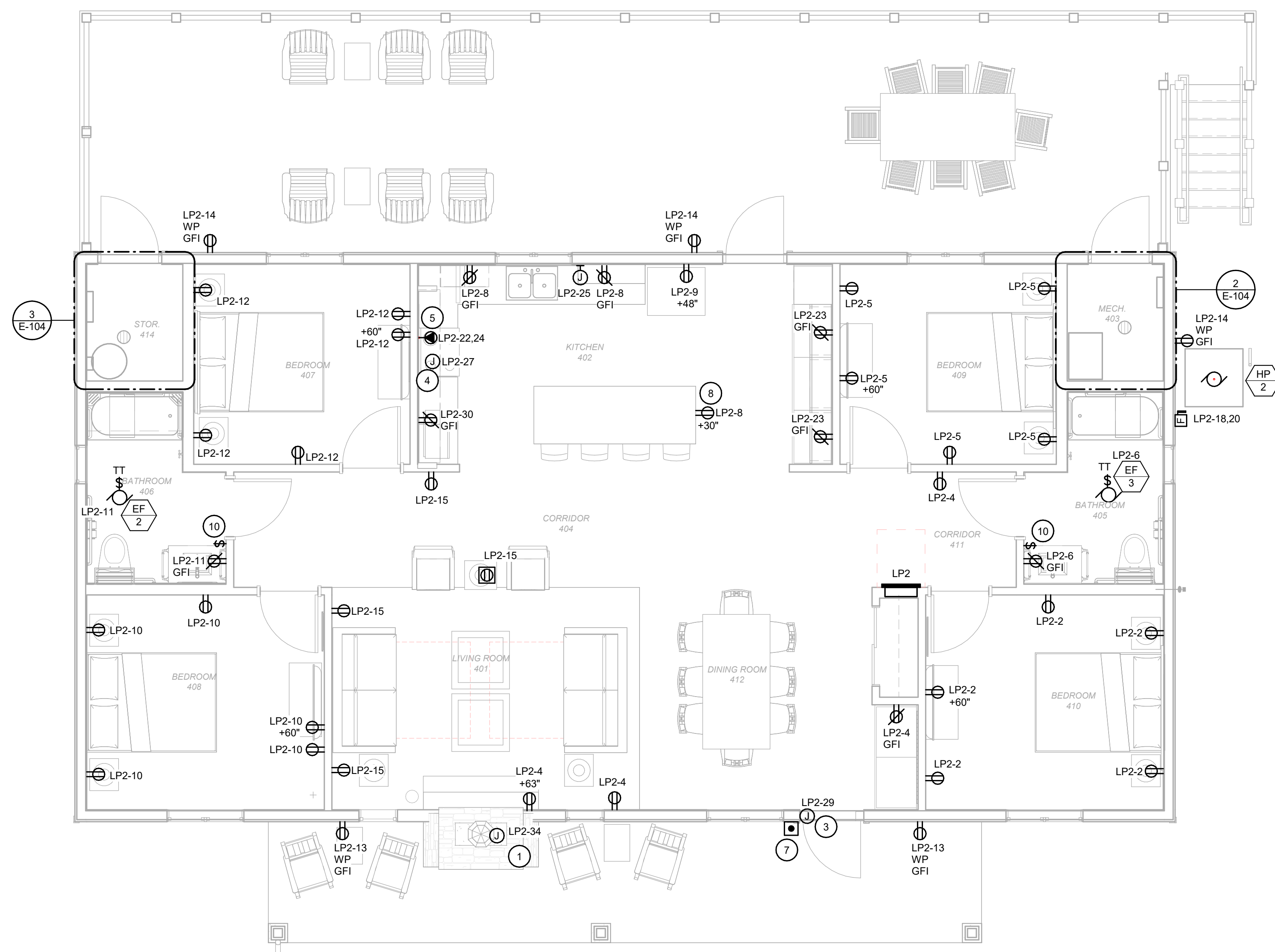
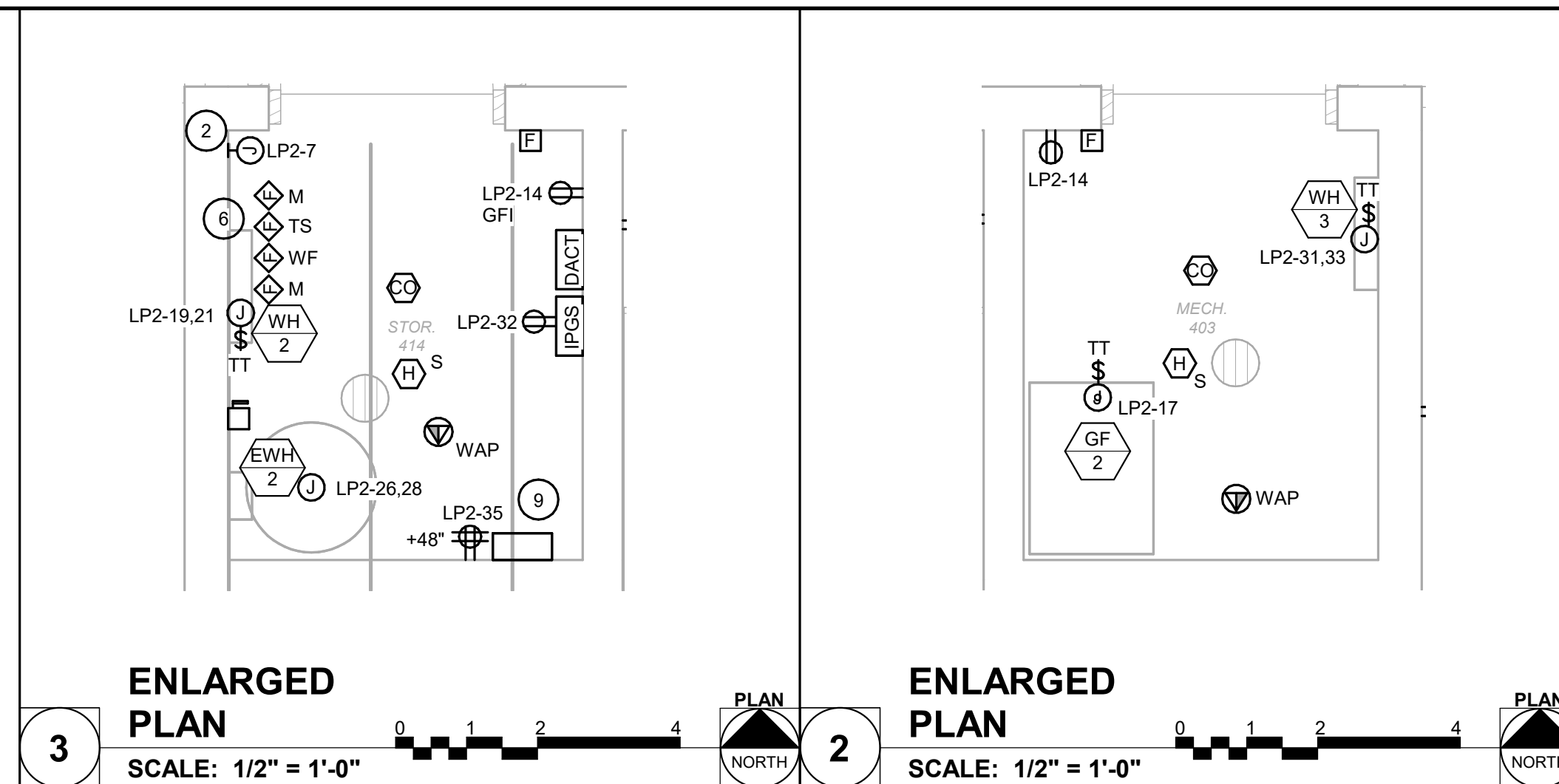
SHEET 67 of 75
ISSUE DATE: 03/02/2023

GENERAL NOTES

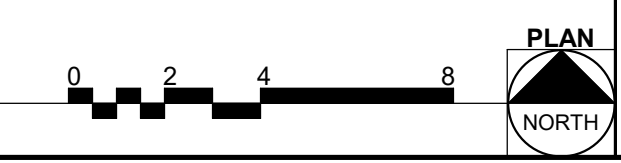
A. NOT USED

KEYNOTES

- 1 PROVIDE CONNECTION TO GAS FIRED FIREPLACE INSERT. COORDINATE EXACT LOCATION AND CONNECTION TYPE WITH ARCHITECTURAL TRADE AND VENDOR.
- 2 PROVIDE A DEDICATED CIRCUIT FOR WATER SUPPLY HEAT TRACE LOCATED IN CRAWL SPACE. COORDINATE EXACT LOCATION WITH PLUMBING TRADE.
- 3 PROVIDE CONNECTION TO ACCESS CONTROL SYSTEM CARD READER. COORDINATE EXACT REQUIREMENTS WITH OWNER'S VENDOR.
- 4 PROVIDE A JUNCTION BOX FOR OVERHEAD RANGE HOOD.
- 5 PROVIDE A NEMA 14-50 RECEPTACLE FOR ELECTRICAL RANGE.
- 6 PROVIDE MONITOR MODULES FOR SPRINKLER RISER.
- 7 PROVIDE A WIRELESS DOORBELL NOTIFICATION SYSTEM. CENTRALALERT MODEL CA-360 SHALL BE CONSIDERED AS BASIS OF DESIGN. THE SYSTEM SHALL INCLUDE: 1 ALARM CLOCK MASTER UNITS WITH INTEGRATED FLASHER AND AUDIBLE ALARM, RECHARGABLE BATTERIES FOR ALL MASTER UNITS. 1 WIRELESS DOORBELL AND 1 BED SHAKER UNIT. PROVIDE CENTRAL ALERT MODEL CA-RX AS SUB-MASTER TO BE PLACED ON LIVING ROOM END TABLE. LOCATE MASTER UNIT ON ACCESSIBLE BEDROOM NIGHT STAND. KROWN KA1000 AND CLARITY AL10 SHALL BE CONSIDERED APPROVED MODELS WHEN PROVIDED WITH PERIPHERAL DEVICES AS REQUIRED FOR BASIS OF DESIGN. CONTRACTOR SHALL SUBMIT PRODUCT DATA SHEETS.
- 8 PROVIDE DUPLEX RECEPTACLE MOUNTED HORIZONTALLY.
- 9 PROVIDE A TELEPHONE/DATA 8 PORT PATCH PANEL.
- 10 PROVIDE SWITCH FOR EXHAUST FAN CONTROL.



1 FLOOR PLAN - POWER - FOUR BEDROOM CABIN
SCALE: 1/4" = 1'-0"

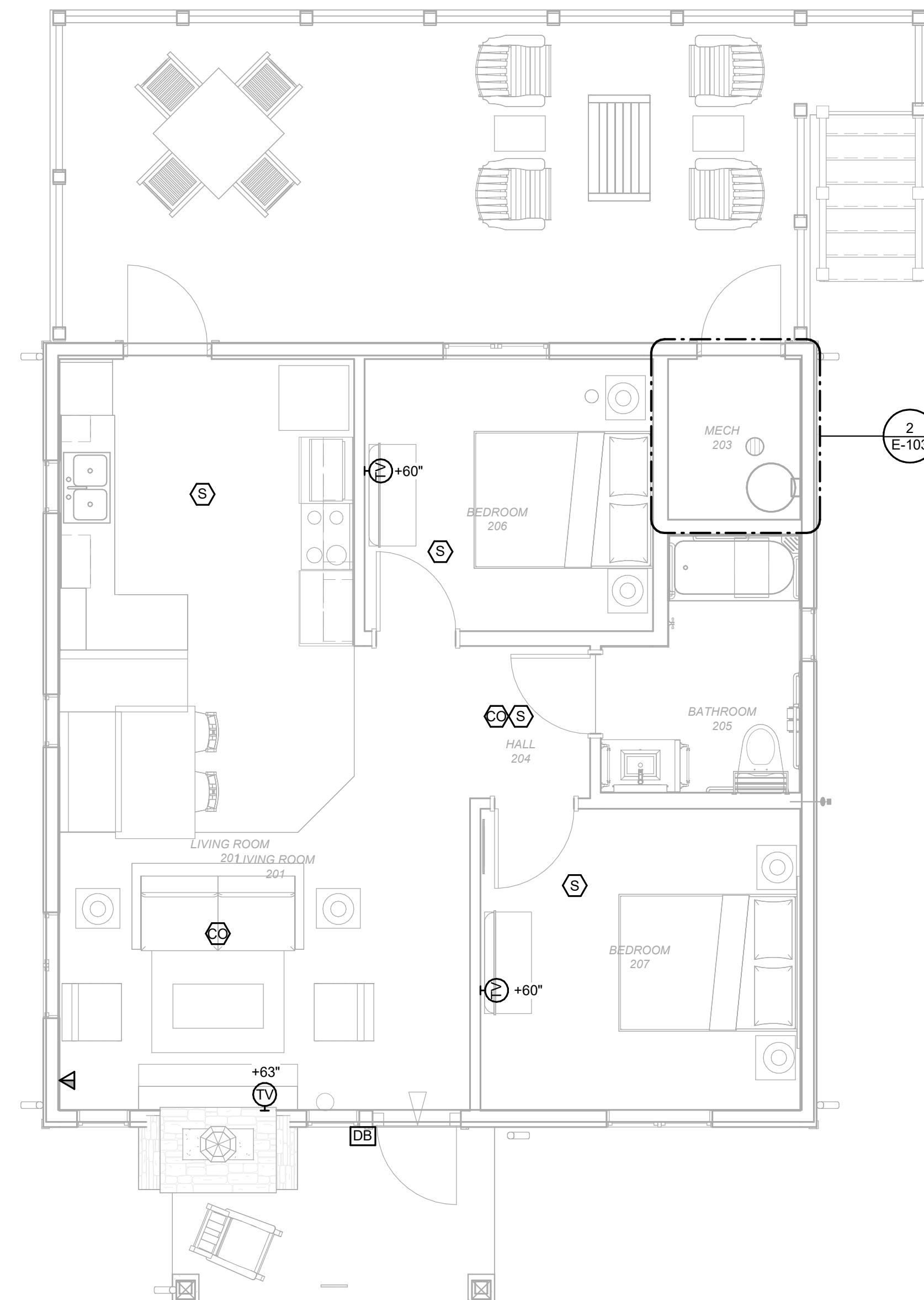


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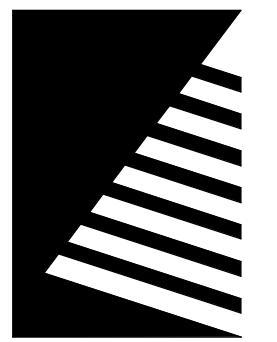
GENERAL NOTES

A. NOT USED

KEYNOTES #



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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	
7815235023 - Cabin 505	X

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:

**FLOOR PLAN -
SYSTEMS - TWO
BEDROOM CABIN**

SHEET NUMBER:

E-105

SHEET 68 of 75
ISSUE DATE: 03/02/2023

2/15/2023 4:29:05 PM

1

FLOOR PLAN - SYSTEMS - TWO BEDROOM CABIN

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

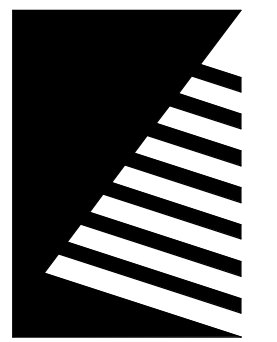


GENERAL NOTES

A. NOT USED

KEYNOTES Ⓝ

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	
7815235019 - Cabin 501	X
7815235020 - Cabin 502	
7815235021 - Cabin 503	
7815235022 - Cabin 504	X
7815235023 - Cabin 505	

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:

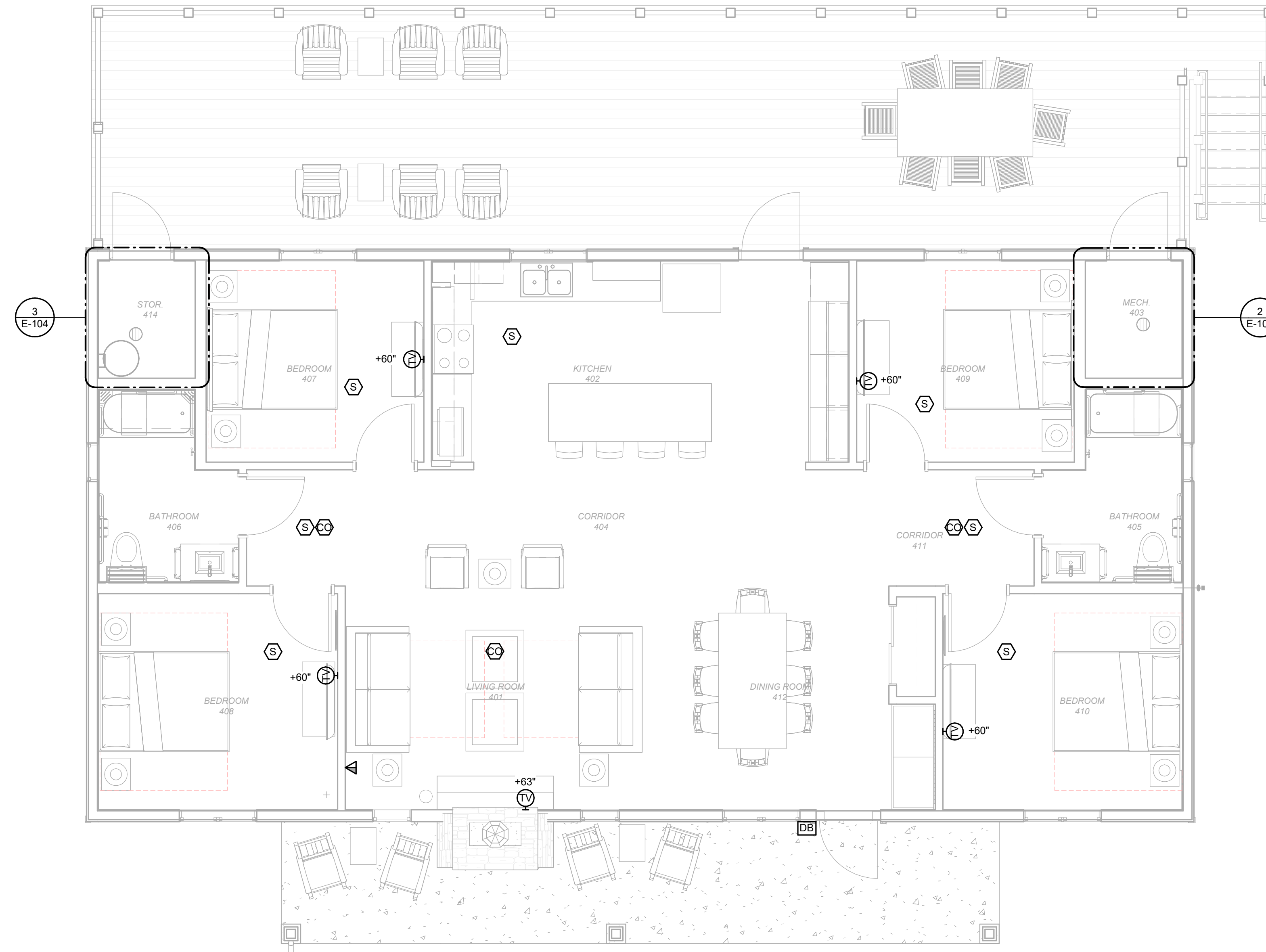
**FLOOR PLAN -
SYSTEMS - FOUR
BEDROOM CABIN**

SHEET NUMBER:

E-106

SHEET 69 of 75

ISSUE DATE: 03/02/2023

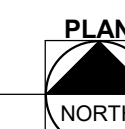


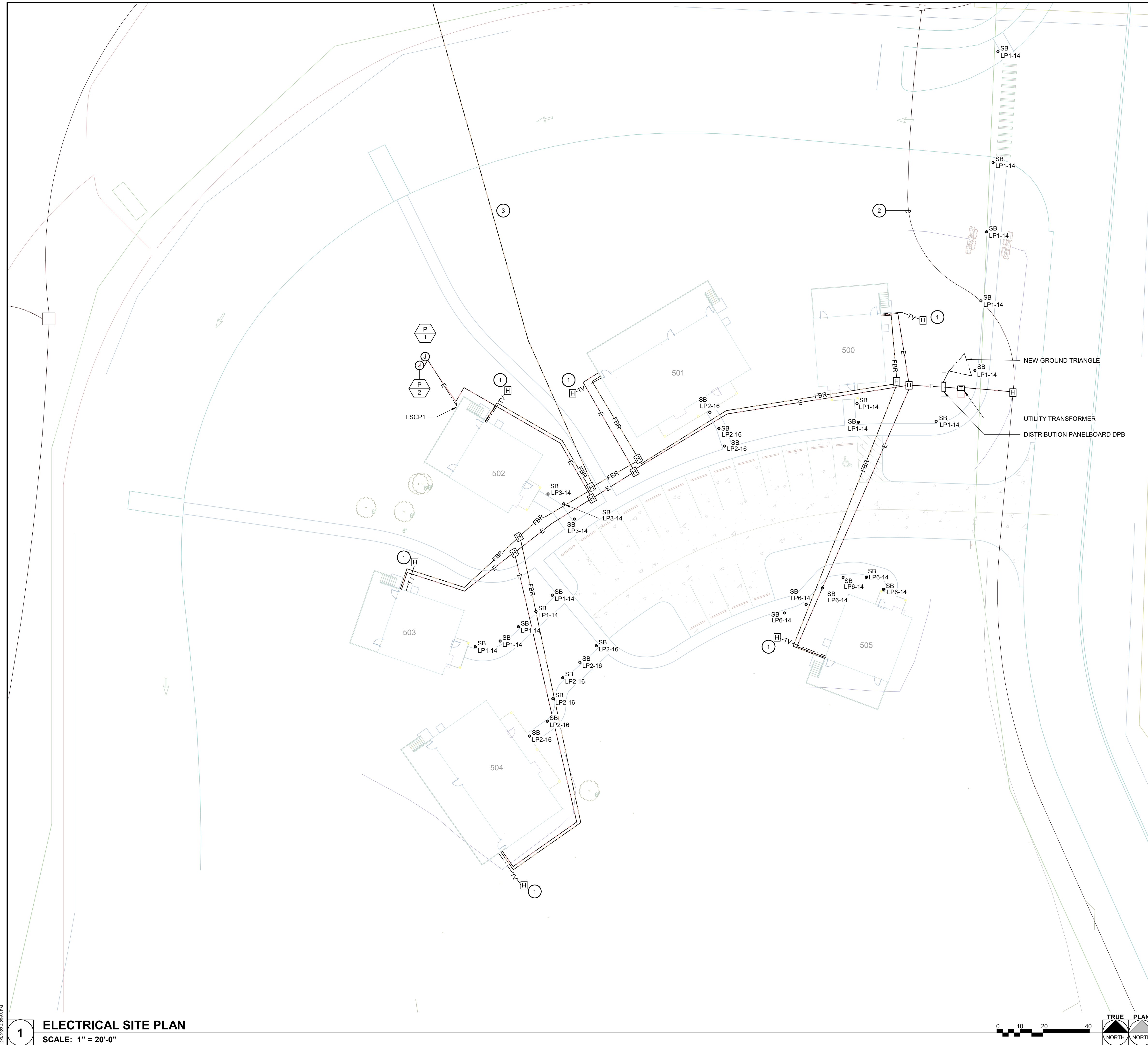
2/20/2023 4:29:05 PM

1

FLOOR PLAN - SYSTEMS - FOUR BEDROOM CABIN

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





GENERAL NOTES

A. UTILITY COMPANY: HOWELL OREGON COOPERATIVE 417-256-2131

KEYNOTES #

- APPROXIMATE LOCATION OF SATELLITE DISH. COORDINATE EXACT LOCATION WITH TV SERVICE PROVIDER AND CIVIL. PROVIDE A 2" RGS CONDUIT FROM SATELLITE DISH (MOUNTED ON A POLE) GOING TO EXTERIOR 4"x4" JUNCTION BOX ON CABIN.
- PRIMARY ELECTRICAL CONDUCTORS AND CONDUIT BY UTILITY. CONNECT TO EXISTING PRIMARY CONDUCTORS IN THIS AREA. COORDINATE EXACT LOCATIONS AND CONNECTIONS WITH UTILITY COMPANY.
- PROVIDE (6) 2-STRAND MULTI-MODE FIBER OPTIC CABLES. RATED FOR OUTDOOR WET LOCATIONS IN 4°C FROM EXISTING MAIN FIBER CONNECTION IN LODGE. FIBER OPTIC CABLE TO TERMINATE IN FIBER PATCH PANEL IN MECHANICAL ROOM FOR EACH CABIN.

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

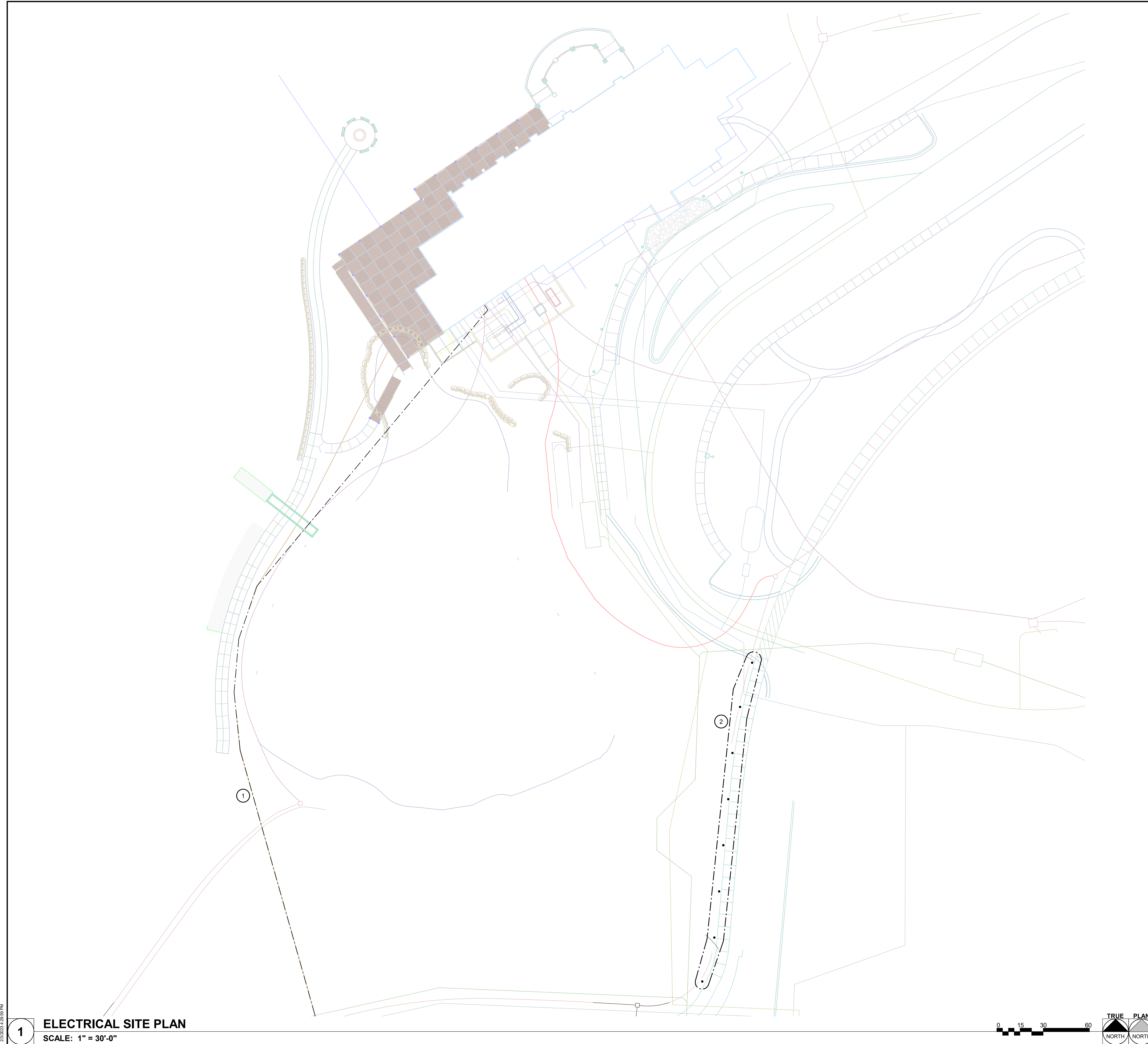
DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
**ELECTRICAL SITE
PLAN**

SHEET NUMBER:
E-401

SHEET 70 of 75
ISSUE DATE: 03/02/2023





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

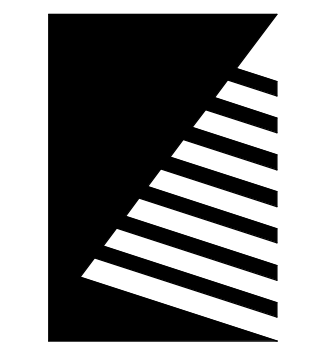
GENERAL NOTES

A.

KEYNOTES #

- 1 PROVIDE(6) 2-STRAND MULTI-MODE FIBER OPTIC CABLES, RATED FOR OUTDOOR WET LOCATIONS IN 4" C FROM EXISTING MAIN FIBER CONNECTION IN LODGE WITH ONE CABLE DEDICATED TO EACH NEW CABIN SITE SHOWN ON SHEET E-401.
- 2 ALL FIXTURES IN THIS AREA ARE FIXTURE TYPE SB, CIRCUITED TO LP1-14. SPACING FOR THESE FIXTURES IS 30'0".

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

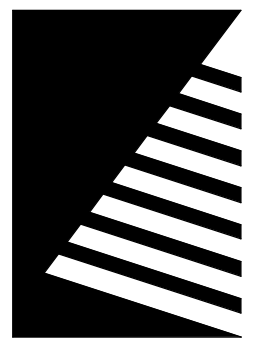
Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
**ELECTRICAL SITE
PLAN**

SHEET NUMBER:
E-402

SHEET 71 of 75
ISSUE DATE: 03/02/2023



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SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

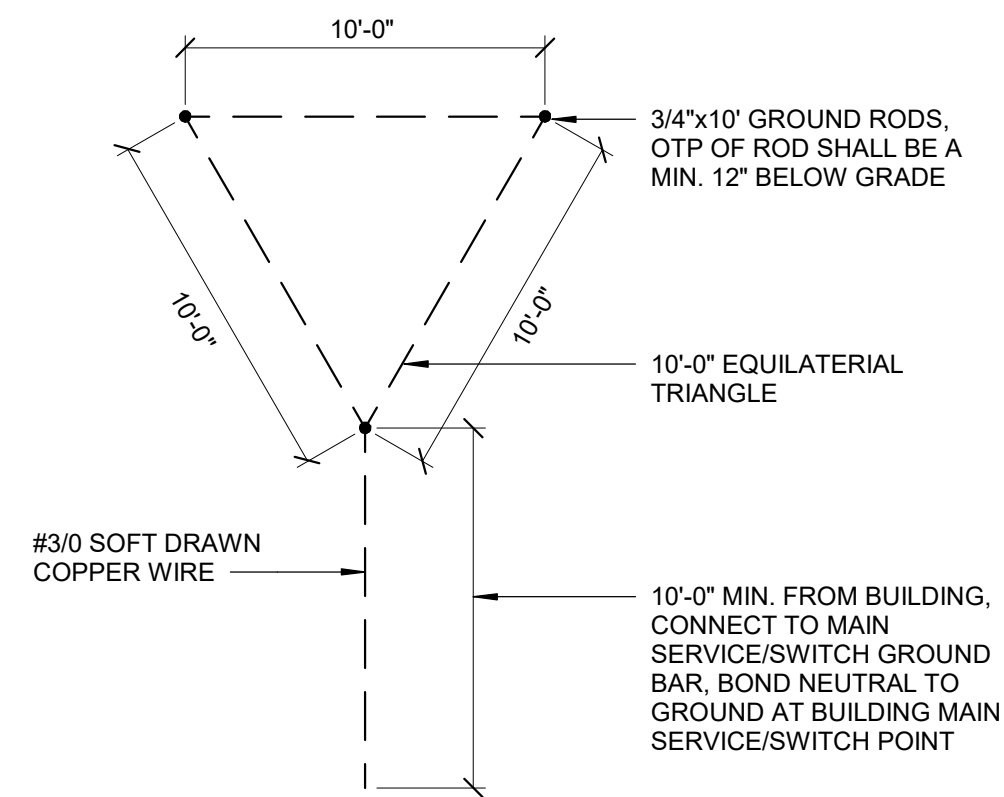
SHEET TITLE:

DETAILS

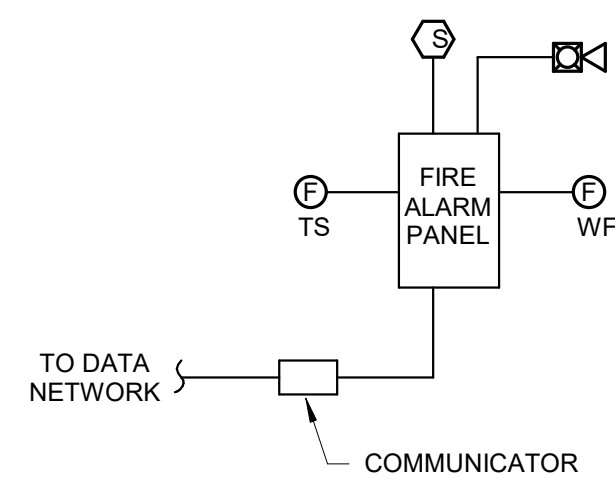
SHEET NUMBER:

E-501

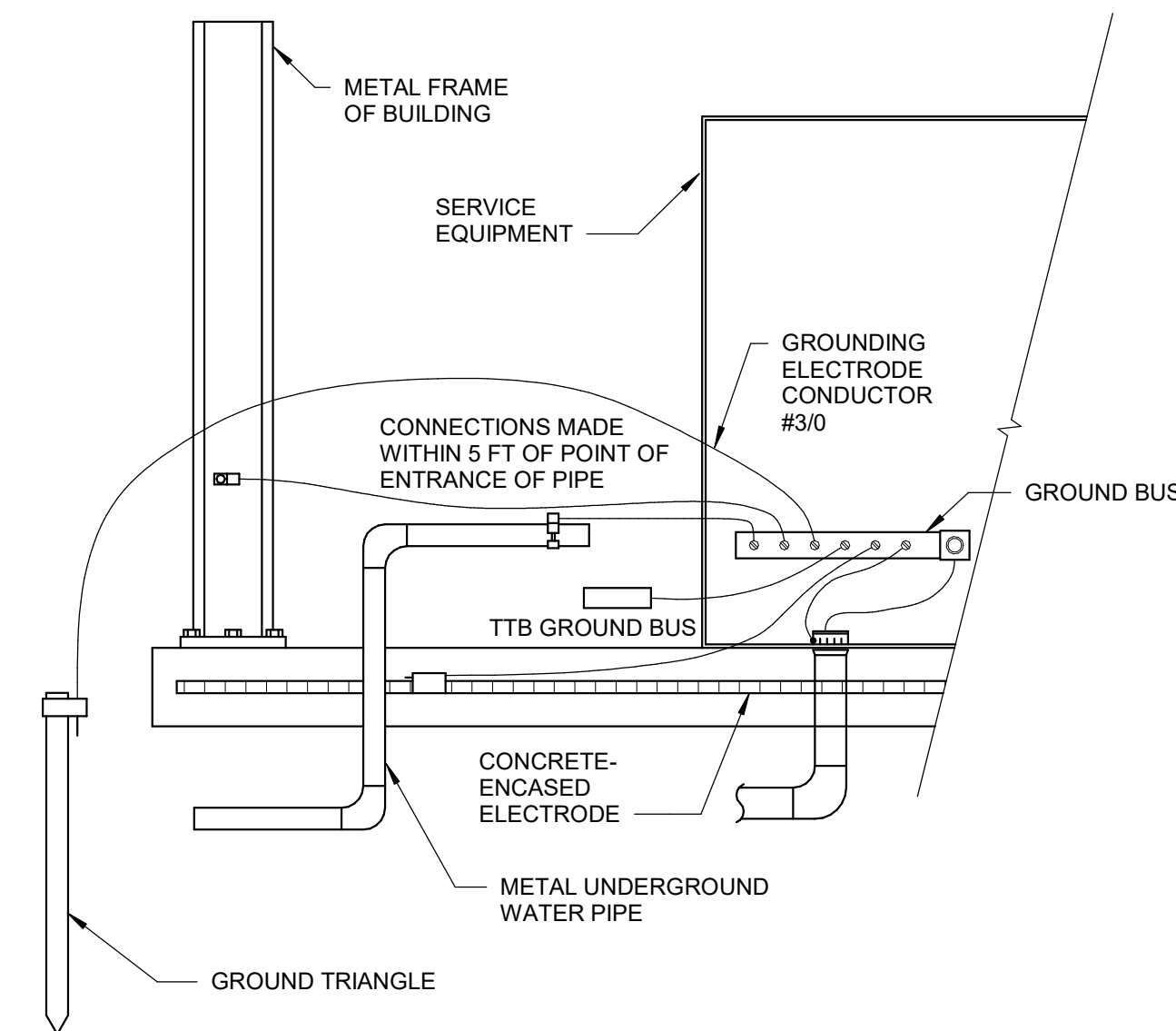
SHEET 72 of 75
ISSUE DATE: 03/02/2023



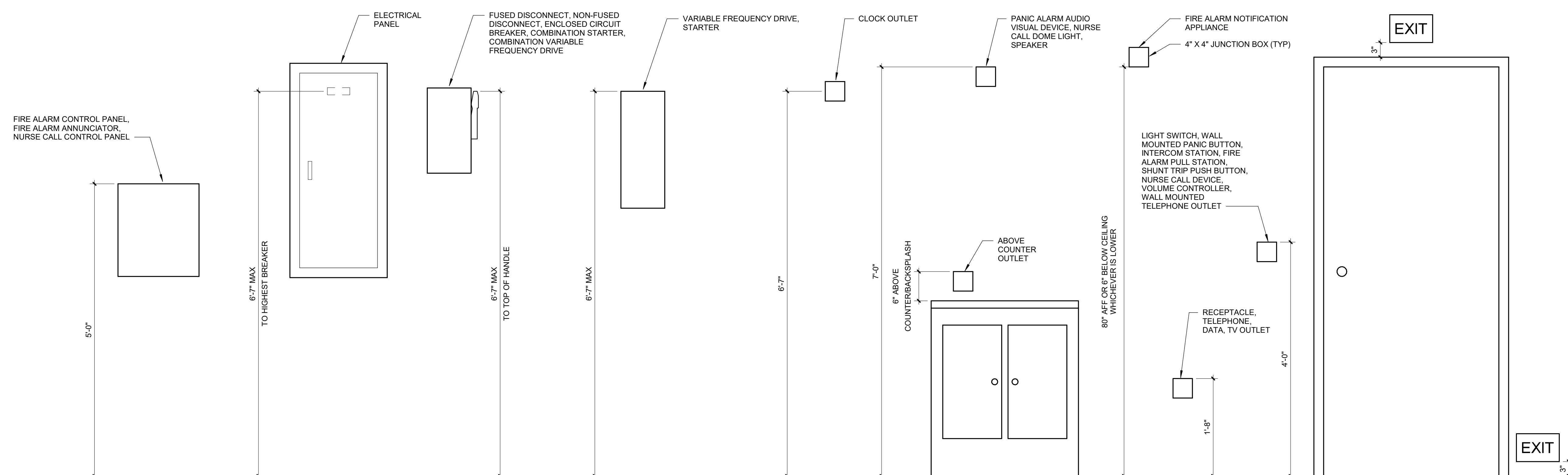
3 GROUNDING TRIANGLE DETAIL
SCALE: NOT TO SCALE



4 FIRE ALARM RISER
SCALE: NOT TO SCALE



2 SERVICE ENTRANCE GROUNDING DETAIL
SCALE: NOT TO SCALE

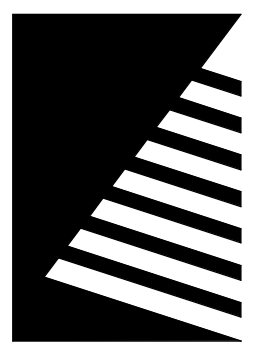


1 TYPICAL MOUNTING HEIGHT DETAIL
SCALE: NOT TO SCALE

WITH REGARDS TO SPECIFICATION FOR POWER SYSTEMS STUDIES (260573), THE FOLLOWING TIMELINE OF SHOP DRAWINGS MUST BE STRICTLY ADHERED TO:

- A. BEFORE ANY ELECTRICAL DISTRIBUTION EQUIPMENT IS SUBMITTED FOR REVIEW, THE POWER SYSTEMS STUDY MUST BE SUBMITTED, REVIEWED, AND FULLY APPROVED.
- B. ELECTRICAL DISTRIBUTION EQUIPMENT IS DEFINED AS ANY EQUIPMENT THAT HAS AN AIC RATINGS THAT MAY BE AFFECTED BY THE POWER SYSTEMS STUDY. EQUIPMENT WITH DEVICES THAT HAVE ADJUSTABLE SETTINGS OR MAY NEED TO HAVE ADJUSTABILITY ADDED AS PART OF THE POWER SYSTEMS STUDY, AND EQUIPMENT THAT WILL HAVE AN ARC FLASH LABEL APPLIED.
- C. THE VENDOR(S) PROVIDING THE ELECTRICAL DISTRIBUTION EQUIPMENT WILL COORDINATE WITH THE PERSON COMPLETING THE POWER SYSTEMS STUDY SO THAT ELECTRICAL DISTRIBUTION EQUIPMENT IS IN STRICT ADHERENCE TO THE REQUIREMENTS OF THE POWER SYSTEMS STUDY.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

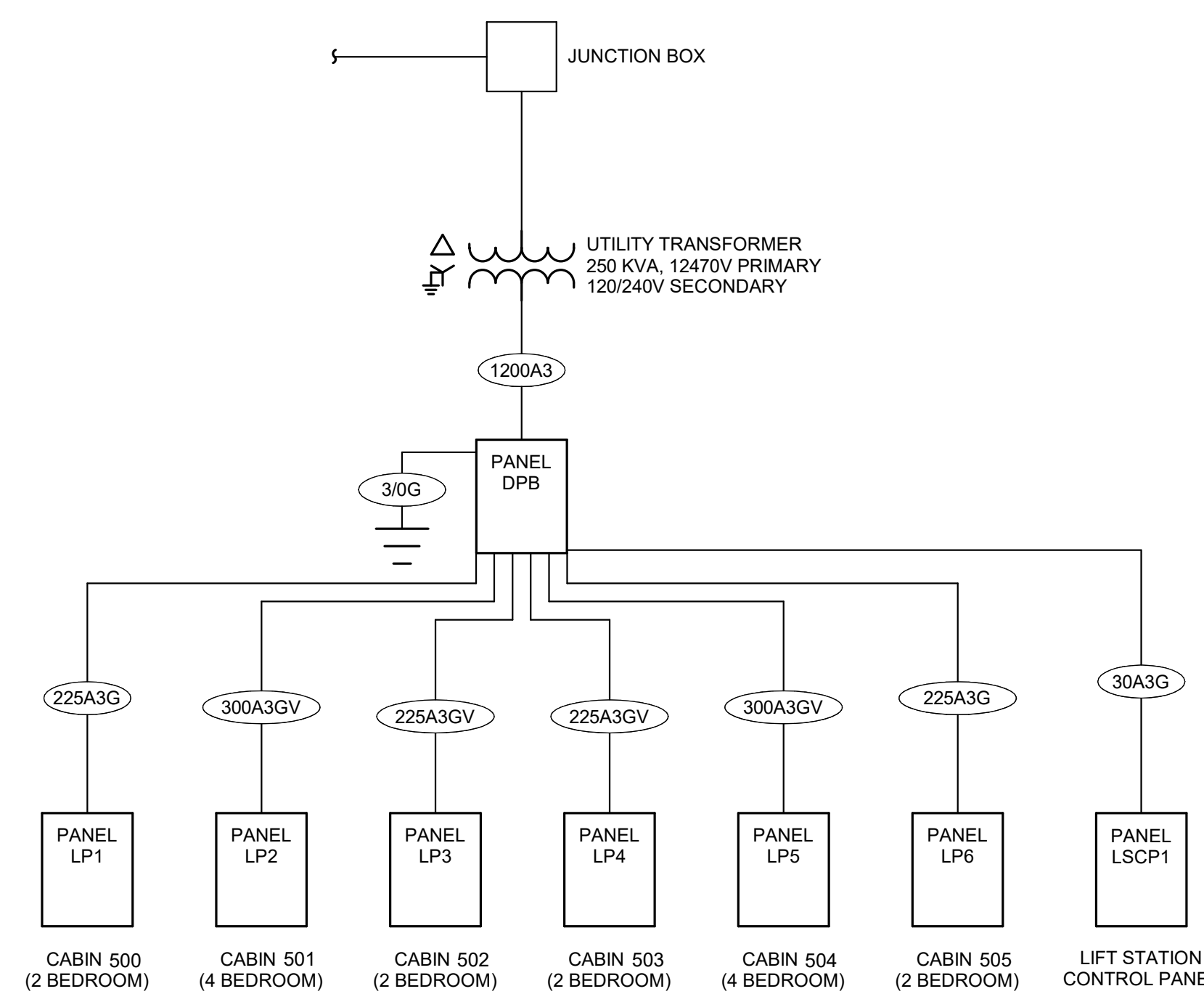
DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

**SHEET TITLE:
ONE-LINE DIAGRAM**

SHEET NUMBER:

E-601

SHEET 73 of 75
ISSUE DATE: 03/02/2023



NEW ELECTRICAL SERVICE RESPONSIBILITY SCHEDULE

ITEM	DESCRIPTION	FURNISHED BY	INSTALLED BY	REMARKS
A	TRANSFORMER SITE COMPACTION	EC	EC	-
B	NEW TRANSFORMER BASE	U	U	-
C	NEW TRANSFORMER	U	U	-
D	BUMPER POSTS (BOLLARDS)			-
E	TRENCHING FROM UTILITY POLE TO TRANSFORMER	N/A	N/A	-
F	PRIMARY CONDUIT(S) & DUCT BANK	EC	EC	-
G	MANHOLES	EC	EC	-
H	PRIMARY CONDUCTORS	U	U	-
I	SECONDARY CONDUIT(S) TO MAIN SWITCHBOARD	EC	EC	-
J	SECONDARY CONDUCTORS TO MAIN SWITCHBOARD	EC	EC	-
K	C.T.'S	U	U	-
L	C.T. CABINETS	EC	EC	-
M	METERS	U	U	-
N	METER SOCKETS	EC	EC	-
O	CONDUIT FROM TRANSFORMER TO METER	EC	EC	-
P	WIRING TERMINATIONS AT METERING EQUIPMENT	EC	EC	-
Q	EUSERC CABINET	N/A	N/A	-
R	MAIN SWITCHBOARD	EC	EC	-

REMARKS:

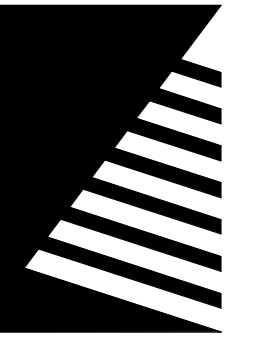
FEEDER SCHEDULE

MARK	CONDUIT & CONDUCTORS (SEE NOTE 1)	REMARKS
3/0G	1#3/0G, 3/4"C	1
30A3G	3#10, 1#10G, 3/4"C	1
225A3G	3#250, 1#4G, 2"C	1
225A3GV	3#500, 1#3G, 4"C	1.2
300A3GV	2 SETS (3#350, 1#2G, 2-1/2"C)	1.2
1200A3	4 SETS (3#350, 2-1/2"C)	1

- REMARKS:
- THIS FEEDER SCHEDULE IS BASED ON 80 DEGREE CENTIGRADE (TYPE TW) WIRE AND TERMINATIONS FOR SIZES #12 TO #1, AND 75 DEGREE CENTIGRADE (TYPE THHN/THWN) WIRE AND TERMINATIONS FOR SIZES #1/0 AND LARGER. UNLESS NOTED OTHERWISE, CONDUIT IS SIZED BASED ON TYPE EMT CONDUIT. USE OF OTHER CONDUIT TYPES REQUIRES RESIZING OF CONDUIT.
 - FEEDERS MARKED WITH A "V" ARE SIZED LARGER TO PREVENT EXCESSIVE VOLTAGE DROP. IF THE INSTALLED CONDUIT TYPE AND CONDUCTOR TYPE ARE DIFFERENT THAN THE INDICATED TYPES, RE-EVALUATE CONDUCTOR AND CONDUIT SIZE FOR VOLTAGE DROP AND RESIZE IF REQUIRED. EVALUATE VOLTAGE DROP AT THE FARTHEST OUTLET OF POWER, HEATING AND LIGHTING LOADS, OR COMBINATIONS OF SUCH LOADS; SIZE CONDUCTORS FOR FEEDERS TO PREVENT A VOLTAGE DROP EXCEEDING 2 PERCENT; SIZE CONDUCTORS FOR BRANCH CIRCUITS TO PREVENT A VOLTAGE DROP EXCEEDING 3 PERCENT. THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST OUTLET SHALL NOT EXCEED 5 PERCENT.

2/20/2023 4:50:00 PM

1 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE



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DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

Eminence, Missouri

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:

SCHEDULES

SHEET NUMBER:

E-602

SHEET 74 of 75
ISSUE DATE: 03/02/2023

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMP DESCRIPTION	VOLTAGE	LOAD (VA)	FINISH	MOUNTING	DESCRIPTION
A	AFX	CAF142400L30MVRB	LED	120 V	27	OIL RUBBED	SURFACE	14" FLUSH MOUNT LED DROP LENS
B	LITHONIA	65BEMW-HI LED-30K-90CRI-L7XLED T24-LC6-IC21	LED	120 V	14	WHITE	RECESSED	6" RECESSED LED DOWNLIGHT. PROVIDE HOUSING AS REQUIRED BY MANUFACTURER.
C	AFX	JNNV2209MBBK	LED	120 V	15	BLACK	WALL	VANITY FIXTURE, MOUNT W/GLOBES FACING DOWN, USE LED BULBS, 3000K
D	AFX	CAF182900L30MVRB	LED	120 V	27	OIL RUBBED	SURFACE	18" FLUSH MOUNT LED DROP LENS
F	LITHONIA	ZL2N-L48-3000LM-L-LENS-MVOLT-40K-80CRI-WH	LED	120 V	25	WHITE	SURFACE	4 FOOT LED STRIP LIGHT
G	LITHONIA	UCLD024-WH	LED	120 V	100	WHITE	SURFACE	24" LED UNDER-CABINET STRIP LIGHT, SWITCH PROVIDED WITH LUMINAIRE ON FIXTURE
G1	LITHONIA	UCLD012-WH	LED	120 V	64	WHITE	SURFACE	12" LED UNDER-CABINET STRIP LIGHT, SWITCH PROVIDED WITH LUMINAIRE ON FIXTURE
H	SEAGULL HUNTER WESTINGHOUSE	15030-829 (WITH LIGHT KIT #16 120B-6058) 53172 SONORA NEW BRONZE 7879965 BETHANY RUSTIC BRONZE	LED	120 V	600	WHITE	SURFACE	52" DECORATIVE CEILING FAN WITH LIGHT KIT. PROVIDE 3000K, MIN. 80 CRI, 300 LUMEN LED LAMPS
J	GENERATION	3190303-778	LED	120 V	10	OIL RUBBED	PENDANT	GLASS SHADE, USE LED BULBS, 3000K, MOUNT AT 67" TO BOTTOM
SA	AFX	LNNW0914MBBK	LED	120 V	15	BLACK	WALL	WATER GLASS LANTERN WALL SCONCE, USE LED BULBS, 3000K, SEE ARCH FOR MOUNTING HEIGHT
SB	HADCO	RL9 A S7 LED2W	LED	120 V	2	BLACK	POST	ASTM B117 DIE CAST ALUMINUM 16" TALL
SC	JUNO	6RLD-G4-10LM-30K-90CRI-12-FRPC-WWH	LED	120 V	12	WHITE	RECESSED	6" RECESSED WET LOCATION LED DOWNLIGHT. PROVIDE HOUSING AS REQUIRED BY MANUFACTURER.
SD	KICHLER	15765BKT30R	LED	120 V	2	BLACK	POST	MOUNT TO SIDE OF RAILING POST, JUST UNDER CAP. CONCEAL WIRING IN POST AND UNDER STAIR. MOUNT DRIVER UNDER STAIR.

NOTES:
A. REMOVE ALL FINGER PRINTS FROM LENSES, REFLECTORS, AND LOUVERS FOLLOWING LIGHT FIXTURE INSTALLATION.
B. FOR CONTINUOUS FIXTURES, COORDINATE WITH SUPPLIER ON LENGTH AND REQUIRED FITTINGS, AND INSTALL WITH UNIFORM ILLUMINATION ALONG FIXTURE INCLUDING CORNERS.
C. FOR APPROVAL OF FIXTURES FROM MANUFACTURERS OTHER THAN THOSE LISTED, PROPOSED FIXTURES SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER TEN BUSINESS DAYS PRIOR TO BID FOR REVIEW. FINAL DETERMINATION OF 'EQUAL' STATUS FOR BIDDING SHALL BE THE SOLE DETERMINATION OF THE ARCHITECT/ENGINEER.
D. PROVIDE ALL HOLLOW POLES WITH VIBRATION DAMPERS BY THE FACTORY.

EQUIPMENT DATA SCHEDULE

MARK	EQUIPMENT	DESCRIPTION		LOCATION	LOAD DATA		STARTER						DISCONNECT AT EQUIP.				WIRE & CONDUIT	REMARKS			
		FURNISHED BY	INSTALLED BY		LOAD	VOLTAGE	PHASE	TYPE	NEMA SIZE	DISC. TYPE	DISC. SIZE	FURNISHED BY	INSTALLED BY	CONTROL WIRING	DISC. TYPE	DISC. SIZE			FURNISHED BY	INSTALLED BY	
EF 1	EXHAUST FAN	MC	MC	BATHROOM 205	50 W	120 V	1	-	-	-	-	-	-	-	-	SW	15	EC	EC	2#12, 1#12G IN 3/4"C	
EF 2	EXHAUST FAN	MC	MC	BATHROOM 406	50 W	120 V	1	-	-	-	-	-	-	-	-	SW	15	EC	EC	2#12, 1#12G IN 3/4"C	
EF 3	EXHAUST FAN	MC	MC	BATHROOM 405	50 W	120 V	1	-	-	-	-	-	-	-	-	SW	15	EC	EC	2#12, 1#12G IN 3/4"C	
EW 1	ELECTRIC WATER HEATER	PC	PC	MECH 203	6000 W	240 V	1	-	-	-	-	-	-	-	VND	TT	30	EC	EC	2#8, 1#10G IN 3/4"C	
EW 2	ELECTRIC WATER HEATER	PC	PC	STORAGE 414	6000 W	240 V	1	-	-	-	-	-	-	-	VND	TT	30	EC	EC	2#8, 1#10G IN 3/4"C	
GF 1	PROPANE GAS FURNACE	MC	MC	MECH 203	746 W	120 V	1	-	-	-	-	-	-	-	TCC	TT	30	EC	EC	2#12, 1#12G IN 3/4"C	
GF 2	PROPANE GAS FURNACE	MC	MC	MECH 403	746 W	120 V	1	-	-	-	-	-	-	-	TCC	TT	30	EC	EC	2#12, 1#12G IN 3/4"C	
HP 1	HEAT PUMP	MC	MC	EXTERIOR - 2 BDRM	28 MCA	230 V	1	-	-	-	-	-	-	-	TCC	FS	30	EC	EC	2#10, 1#10G IN 3/4"C	
HP 2	HEAT PUMP	MC	MC	EXTERIOR - 4 BDRM	33 MCA	230 V	1	-	-	-	-	-	-	-	TCC	FS	60	EC	EC	2#6, 1#8G IN 1"C	
P 1	LIFT STATION PUMPS	VND	VND	LIFT STATION	.5 HP	230 V	1	-	-	-	-	-	-	-	VND					2#12, 1#12G IN 3/4"C	
P 2	LIFT STATION PUMPS	VND	VND	LIFT STATION	.5 HP	230 V	1	-	-	-	-	-	-	-	VND					2#12, 1#12G IN 3/4"C	
WH 1	WALL HEATER	MC	MC	MECH 203	4800	240 V	1	-	-	-	-	-	-	-	TT	VND	VND	VND	VND	2#10, 1#12G IN 3/4"C	
WH 2	WALL HEATER	MC	MC	STORAGE 414	4800	240 V	1	-	-	-	-	-	-	-	TT	VND	VND	VND	VND	2#10, 1#12G IN 3/4"C	
WH 3	WALL HEATER	MC	MC	MECH 403	4800	240 V	1	-	-	-	-	-	-	-	TT	VND	VND	VND	VND	2#10, 1#12G IN 3/4"C	

EQUIPMENT DATA NOTES:
GENERAL NOTES:
A.
REMARKS:
1. INSTALL DISCONNECT SWITCH ON THE SIDE OF THE EQUIPMENT HOUSING.
2. PROVIDE DISCONNECT LOCKABLE IN ACCORDANCE WITH NEC 110.25.
3. FUSE PER MANUFACTURER'S RECOMMENDATIONS.

PANELBOARD DPB												
VOLTAGE:		240/120V		CONNECTED LOAD PER PHASE				ISOLATED GROUND BUS (Y/N):				N
PHASE/WIRE:		1Ø / 3W		PHASE				BUSSING:				SEE SPEC
RATED AMPERAGE:		1200 A		MOUNTING:				SURFACE				
MAIN:		1200 A MLO		MCB GROUND FAULT PROTECTION (Y/N):				N				
SCC RATING (SYM):		42,000		MCB SHUNT TRIP (Y/N):				N				
				MCB 100% RATED (Y/N):				N				
CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT	
1	PANEL LP1 (2 BR)		225 A	2	18668	28575				PANEL LP2 (4 BR)	2	
3						21820	23885				4	
5	PANEL LP3 (2 BR)		225 A	2	16292	16292				PANEL LP4 (2 BR)	6	
7						19420	19420				8	
9	PANEL LP5 (4 BR)		300 A	2	28575	16292				PANEL LP6 (2 BR)	10	
11						22695	19420				12	
13	PANEL LSCP1		20 A	2	1500						14	
15						1500					16	
17											18	
19											20	
Load Classification		Connected Load	Demand Factor	Demand Load	PANEL TOTALS							
Motor		1560 VA	108.33%	1690 VA	TOTAL CONNECTED LOAD: 254354 VA							
Lighting - Continuous		3478 VA	125.00%	4348 VA	TOTAL DEMAND: 248859 VA							
Receptacle		14580 VA	84.29%	12290 VA	TOTAL CONNECTED CURRENT: 1060 A							
Appliance - Dwelling Unit		29300 VA	75.00%	21975 VA	TOTAL DEMAND CURRENT: 1037 A							
Other Continuous Load		12480 VA	125.00%	15600 VA								
Other Non-Continuous Load		31550 VA	100.00%	31550 VA								

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCL, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES, 6 = LSI, 7 = LSIG.

PANELBOARD LP1 (TYPICAL FOR CABINS 500, 502, 503, & 505)												
VOLTAGE:		240/120V		CONNECTED LOAD PER PHASE				ISOLATED GROUND BUS (Y/N):				N
PHASE/WIRE:		1Ø / 3W		PHASE				BUSSING:				SEE SPEC
RATED AMPERAGE:		225 A		MOUNTING:				RECESSED				
MAIN:		225 A MCB		MCB GROUND FAULT PROTECTION (Y/N):				N				
SCC RATING (SYM):		22,000		MCB SHUNT TRIP (Y/N):				N				
				MCB 100% RATED (Y/N):				N				
CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT	
1	LTG 202,203,205,206,EXTERIOR		20 A	1	551	900				RCPT - RM 207	2	
3	LTG 201,204,207		20 A	1		725	900			RCPT - RM 206	4	
5	REFRIGERATOR		20 A	1	1000	540				RCPT - RM 202	6	
7	DISHWASHER		20 A	1		2200	720			RCPT - RM 201	8	
9	RCPT - RM 201,204 EXHAUST FAN		20 A	1	360	720				RCPT - RM 203, EXTERIOR	10	
11	MICROWAVE		20 A	1		1500	700			RCPT - RM 206, EXHAUST FAN	12	
13	SPARE		20 A	1	0	22				LTG EXTERIOR PATH	14	
15	SPARE		20 A	1		0	1200			FIRE ALARM PANEL	16	
17	PATCH PANEL		20 A	1	500	200				RANGE HOOD	18	
19	HEAT TRACE		30 A	1		500	200			FIREPLACE	20	
21					2400	200				ACCESS CONTROL	22	
23	ELECTRIC WALL HEATER (WH1)		25 A	2		2400	4800				24	
25	GAS FURNACE (GF1)		20 A	1	500	4800				RANGE	26	
27	HEAT PUMP CONDENSING UNIT (HP1)		40 A	2		3335	2640				28	
29			20 A	1	3335	2640				ELECTRIC WATER HEATER (EWH1)	30	
31	SPARE		20 A	1		0	0			SPARE	32	
33	SPARE		20 A	1	0	0				SPARE	34	
35	SPARE		20 A	1		0	0			SPARE	36	
37	SPARE									SPARE	38	
39	SPARE									SPARE	40	
41	SPARE									SPARE	42	
Load Classification		Connected Load	Demand Factor	Demand Load	PANEL TOTALS							
Motor		520 VA	125.00%	650 VA	TOTAL CONNECTED LOAD: 40488 VA							
Lighting - Continuous		1298 VA	125.00%	1623 VA	TOTAL DEMAND: 38938 VA							
Receptacle		4820 VA	100.00%	4820 VA	TOTAL CONNECTED CURRENT: 169 A							
Appliance - Dwelling Unit		14500 VA	75.00%	10875 VA	TOTAL DEMAND CURRENT: 162 A							
Other Continuous Load		6480 VA	125.00%	8100 VA								
Other Non-Continuous Load		12870 VA	100.00%	12870 VA								

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCL, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES, 6 = LSI, 7 = LSIG.

PANELBOARD LP2 (TYPICAL FOR CABINS 501 & 504)												
VOLTAGE:		240/120V		CONNECTED LOAD PER PHASE				ISOLATED GROUND BUS (Y/N):				N
PHASE/WIRE:		1Ø / 3W		PHASE				BUSSING:				SEE SPEC
RATED AMPERAGE:		400 A		MOUNTING:				RECESSED				
MAIN:		300 A MCB		MCB GROUND FAULT PROTECTION (Y/N):				N				
SCC RATING (SYM):		22,000		MCB SHUNT TRIP (Y/N):				N				
				MCB 100% RATED (Y/N):				N				
CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT	
1	LTG-401,403,405,409,410,412,EXT		20 A	1	1375	900				RCPT - RM 410	2	
3	LTG-402,404,406,407,408,411,412		20 A	1		793	720			RCPT - RM 401,411,412	4	
5	RCPT - RM 409		20 A	1	900	700				RCPT - RM 405, EXHAUST FAN	6	
7	HEAT TRACE		30 A	1		500	540			RCPT - RM 402	8	
9	REFRIGERATOR		20 A	1	1000	900				RCPT - RM 408	10	
11	RCPT - RM 406, EXHAUST FAN		20 A	1		700	900			RCPT - RM 407	12	
13	RCPT - EXTERIOR		20 A	1	360	900				RCPT - RM 403, EXTERIOR	14	
15	RCPT - RM 401,404		20 A	1		720	12			LTG EXTERIOR PATH	16	
17	GAS FURNACE (GF1)		20 A	1	1000	3840				HEAT PUMP CONDENSING UNIT (HP2)	18	
19						2400	3840				20	
21	ELECTRIC WALL HEATER (WH2)		25 A	2		2400	4800			RANGE	22	
23	RCPT - RM 402		20 A	1		360	4800				24	
25	DISHWASHER		20 A	1	2200	3000					26	
27	RANGE HOOD		20 A	1		500	3000			ELECTRIC WATER HEATER (EWH2)	28	
29	ACCESS CONTROL		20 A	1	200	1500				MICROWAVE	30	
31	ELECTRIC WALL HEATER (WH3)		25 A	2		2400	1200			FIRE ALARM PANEL	32	
33			20 A	1	2400	200				FIREPLACE	34	
35	PATCH PANEL		20 A	1		500	0			SPARE	36	
37	SPARE		20 A	1	0	0				SPARE	38	
39	SPARE		20 A	1		0	0			SPARE	40	
41	SPARE		20 A	1		0	0			SPARE	42	
Load Classification		Connected Load	Demand Factor	Demand Load	PANEL TOTALS							
Motor		1040 VA	112.50%	1170 VA	TOTAL CONNECTED LOAD: 52460 VA							
Lighting - Continuous		2180 VA	125.00%	2725 VA	TOTAL DEMAND: 50935 VA							
Receptacle		9760 VA	100.00%	9760 VA	TOTAL CONNECTED CURRENT: 219 A							
Appliance - Dwelling Unit		14800 VA	75.00%	11100 VA	TOTAL DEMAND CURRENT: 212 A							
Other Continuous Load		6000 VA	125.00%	7500 VA								
Other Non-Continuous Load		18680 VA	100.00%	18680 VA								

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCL, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES, 6 = LSI, 7 = LSIG.



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Engineers | Architects | Surveyors | Scientists

CONSTRUCTION DOCUMENTS

OFFICE OF
ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT, DESIGN
AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:

Facility#	Relevant to Sheet:
7815235017 - Cabin 500	X
7815235019 - Cabin 501	X
7815235020 - Cabin 502	X
7815235021 - Cabin 503	X
7815235022 - Cabin 504	X
7815235023 - Cabin 505	X

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE: SCHEDULES

SHEET NUMBER:

E-603