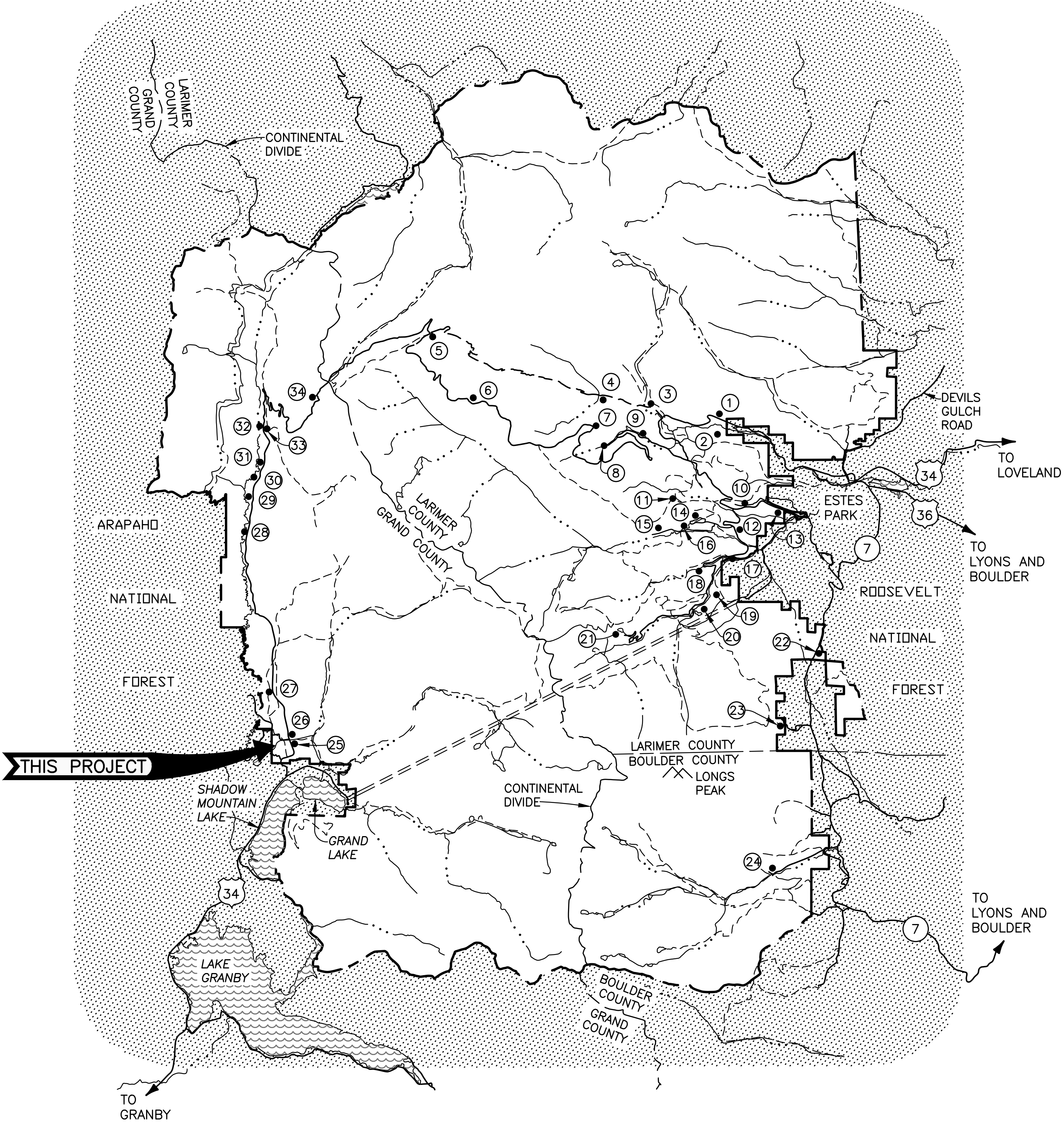


LEGEND

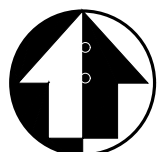
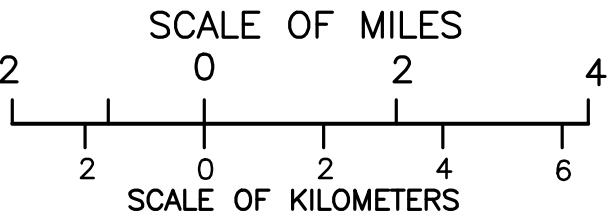
- PARK BOUNDARY
- STATE LINE
- COUNTY LINE
- PAVED ROAD
- UNPAVED ROAD
- TRAIL
- CREEK OR RIVER
- ALVA B. ADAMS TUNNEL


FACILITY LEGEND							
FACILITY LOCATION	ENTRANCE STATION	RANGER STATION	PICNIC AREA	CAMPGROUND	RESTROOMS	MUSEUM	LIVERY
	VISITOR CENTER						
1 FALL RIVER	●	●					
2 ASPENGLLEN				●			
3 LAWN LAKE					●		
4 ENDOVALLEY			●				
5 ALPINE		●			●		●
6 TUNDRA					●		
7 RAINBOW CURVE					●		
8 HIDDEN VALLEY			●				
9			●				
10 BEAVER MEADOWS	●	●					
11 UPPER BEAVER MEADOWS			●				
12 MORAINE PARK					●	●	
13 PARK HEADQUARTERS		●			●		●
14 MORAINE PARK				●			
15 CUB LAKE TRAILHEAD			●				
16 MORAINE PARK STABLES							●
17 MORAINE PARK MUSEUM			●				
18 HOLLOWELL PARK			●				
19 GLACIER BASIN				●			
20 SPRAGUE LAKE			●		●		●
21 BEAR LAKE					●		
22 LILY LAKE		●			●		●
23 LONGS PEAK		●	●	●			
24 WILD BASIN		●	●		●		
25 KAWUNEECHE		●			●		●
26 GRAND LAKE	●	●					
27 ONAHU CREEK TRAILHEAD			●				
28 BOWEN/BAKER			●				
29 NEVER SUMMER RANCH			●				
30 TIMBER CREEK				●			
31			●				
32 COLORADO RIVER			●				
33 TIMBER LAKE			●		●		
34 LAKE IRENE			●		●		



ROCKY MOUNTAIN NATIONAL PARK

PMIS # 316223





100% FINAL CD SET

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
ROCK MOUNTAIN NATIONAL PARK

TITLE OF DRAWING
CONSTRUCT COLORADO RIVER DISTRICT
BARN & TACK SHED
LOCATION WITHIN PARK
GRAND LAKE ENTRANCE
NAME OF PARK
ROCKY MOUNTAIN NATIONAL PARK
REGION
INTERMOUNTAIN
COUNTY
GRAND
STATE
COLORADO

DRAWING NO.
121
175143
PKG. NO.
SHEET
1
OF 104

2/20/23 12:41 MKAISER R24 P:\DENVER\NPS ROMO BARN-2071A\8_DRAFT_FINAL_CD\CAD\LA\GO-0_INDEX.DWG XREFS: ..\BASES\XL-TITLE INFO.DWG;

SHEET	SUB SHEET	TITLE OF SHEET
1.		COVER SHEET
2.	G0.1	INDEX AND ABBREVIATIONS
3.	G0.2	TOPOGRAPHIC EXHIBIT COVER PAGE
4.	G0.3	TOPOGRAPHIC EXHIBIT
5.	G0.4	SITE CONSTRUCTION ACCESS PLAN
6.	G0.5	EXISTING CONDITIONS
7.	C0.0	LEGEND, NOTES, & ABBREVIATIONS
8.	C0.1	DEMOLITION PLAN
9.	C1.0	GRADING, DRAINAGE, AND EROSION CONTROL PLAN
10.	C1.1	GRADING, DRAINAGE, AND EROSION CONTROL DETAILS
11.	C1.2	GRADING, DRAINAGE, AND EROSION CONTROL DETAILS
12.	C2.0	UTILITY PLAN
13.	C2.1	UTILITY DETAILS
14.	C2.2	UTILITY DETAILS
15.	C2.3	OWTS DETAILS
16.	C2.4	OWTS DETAILS
17.	C3.0	HORIZONTAL CONTROL PLAN
18.	C3.1	HORIZONTAL CONTROL DETAILS
19.	L1.0	SITE FURNISHINGS & REVEGETATION PLAN
20.	G1.0	SYMBOLS, LEGENDS & ABBREVIATIONS
21.	G2.0	GENERAL NOTES LEGEND
22.	G3.0	CODE PLAN
23.	G4.0	ABAAS & CODE REQUIREMENTS
24.	G5.0	ABAAS REQUIREMENTS
25.	G6.0	ABAAS REQUIREMENTS
26.	G7.0	ABAAS REQUIREMENTS
27.	A0.1	WALL ASSEMBLY TYPES
28.	A0.2	FLOOR AND ROOF ASSEMBLY TYPES
29.	A1.1	OVERALL FLOOR PLANS
30.	A1.2	ANNOTATED FLOOR PLAN
31.	A1.3	DIMENSION FLOOR PLAN
32.	A1.4	FINISH FLOOR PLAN
33.	A1.5	REFLECTED CEILING PLAN
34.	A1.6	ROOF PLAN
35.	A1.8	HAY STORAGE – FLOOR PLANS
36.	A2.0	BUILDING ELEVATIONS
37.	A2.1	BUILDING SECTIONS
38.	A2.3	BUILDING ELEVATIONS & SECTIONS – HAY STORAGE
39.	A2.4	BARN & HAY ELEVATIONS RELATIONSHIP
40.	A3.1	WALL SECTIONS
41.	A3.2	WALL SECTIONS
42.	A3.3	WALL SECTIONS
43.	A4.1	ENLARGED PLANS – INTERIOR ELEVATIONS
44.	A4.2	ENLARGED PLANS – INTERIOR ELEVATIONS
45.	A4.3	ENLARGED PLANS – INTERIOR ELEVATIONS
46.	A4.4	ENLARGED PLANS – INTERIOR ELEVATIONS
47.	A4.5	ENLARGED PLANS – INTERIOR ELEVATIONS
48.	A5.1	DETAILS – ROOF
49.	A5.2	SECTION DETAILS
50.	A5.3	SECTION DETAILS
51.	A5.5	DETAILS – WINDOWS
52.	A5.6	DETAILS – DOORS

SHEET	SUB SHEET	TITLE OF SHEET
53.	A5.7	DETAILS – CASEWORK
54.	A5.8	DETAILS – FINISH
55.	A5.9	DETAILS – UNIT SKYLIGHT
56.	A6.0	DOOR & WINDOW SCHEDULE
57.	A6.1	FINISH & ACCESSORY SCHEDULE
58.	S0.1	GENERAL NOTES
59.	S0.2	GENERAL NOTES
60.	S0.3	GENERAL NOTES
61.	S0.4	ABBREVIATIONS & SYMBOLS
62.	S0.5	3D VIEW
63.	S1.1	FOUNDATION PLAN
64.	S1.2	ROOF FRAMING PLAN
65.	S5.01	TYPICAL CONCRETE DETAILS
66.	S5.02	TYPICAL STEEL & MASONRY DETAILS
67.	S5.03	TYPICAL WOOD DETAILS
68.	S5.04	TYPICAL WOOD DETAILS
69.	S5.11	FOUNDATION SECTIONS
70.	S5.12	FOUNDATION SECTIONS
71.	S5.21	ROOF FRAMING SECTIONS
72.	S5.22	ROOF FRAMING SECTIONS
73.	M0.0	MECHANICAL COVER SHEET
74.	M0.1	MECHANICAL SCHEDULES
75.	M0.2	MECHANICAL DETAILS
76.	M0.3	MECHANICAL SEQUENCE OF OPERATIONS
77.	M0.4	COMCHECK
78.	M1.0	BARN FIRST FLOOR MECHANICAL PLAN
79.	M1.1	BARN ROOF MECHANICAL PLAN
80.	M2.0	HAY STORAGE MECHANICAL PLAN
81.	P0.0	PLUMBING COVER SHEET
82.	P0.1	PLUMBING SCHEDULES
83.	P0.2	PLUMBING DETAILS
84.	P1.0	BARN DOMESTIC WATER PLAN
85.	P1.1	BARN SANITARY PLAN
86.	P1.2	BARN ROOF SANITARY PLAN
87.	E0.0	ELECTRICAL COVER SHEET
88.	E0.1	ELECTRICAL COVER SHEET
89.	E0.2	ELECTRICAL SITE PLAN
90.	E1.0	ELECTRICAL POWER PLAN
91.	E2.0	ELECTRICAL LIGHTING PLAN
92.	E3.0	ELECTRICAL ROOF PLAN
93.	E6.0	ELECTRICAL ONE LINE DIAGRAM
94.	E7.0	ELECTRICAL SCHEDULES
95.	E7.1	ELECTRICAL PANEL SCHEDULES
96.	E8.0	ELECTRICAL LIGHTING SCHEDULES
97.	E8.1	ELECTRICAL LIGHTING CONTROLS SCHEDULES
98.	T0.0	TECHNOLOGY COVER SHEET
99.	T0.1	TECHNOLOGY RESPONSIBILITY MATRIX
100.	T0.2	TECHNOLOGY SITE PLAN
101.	T1.0	TECHNOLOGY PLAN
102.	T5.0	TECHNOLOGY SCHEDULES
103.	T6.0	TECHNOLOGY DETAILS
104.	T6.1	TECHNOLOGY DETAILS

ABBREVIATIONS:

&	AND
@	AT
°	DEGREES
'	FEET
”	INCHES
%	PERCENT
±	PLUS OR MINUS
#	NUMBER
ABAAS	ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARDS
ABBREV	ABBREVIATIONS
ARCH	ARCHITECTURE
BMP	BEST MANAGEMENT PRACTICES
BW	BOTTOM OF WALL
CIP	CAST IN PLACE
CLIN	CONTRACT LINE ITEM NUMBER
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CRD	COLORADO RIVER DISTRICT
DEMO	DEMOLITION
ELEC	ELECTRICAL
EX	EXISTING
HT	HEIGHT
HP	HIGH POINT
LP	LOW POINT
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
NPS	NATIONAL PARK SERVICE
ORAR	OUTDOOR RECREATION ACCESS ROUTE
QTY	QUANTITY
RD	ROAD
RE:	REFERENCE
RV	RECREATIONAL VEHICLE
SF	SQUARE FEET
STR	STRUCTURAL
TRAILS	TRAILS ACCESS ROUTE
TYP	TYPICAL
TW	TOP OF WALL
W/	WITH

CONTRACT LINE ITEMS:

REFERENCE SECTION 01 27 00 DEFINITION OF CONTRACT LINE ITEMS FOR A DESCRIPTION OF EACH CLIN.


PROJECT DOCUMENTS & SPECIFICATIONS ARE FOR THE FOLLOWING BASE BID AND BID OPTIONS;

BASE BID:

CLIN #1 HAY STORAGE
CLIN #2 CRD BARN AND TACK SHED
CLIN #3 SITE WORK

BID OPTIONS:

BID OPTION A, CLIN #4 LIGHTNING PROTECTION
BID OPTION B, CLIN #5 PHOTOVOLTAIC SYSTEM
BID OPTION C, CLIN #6 HEAVY DUTY CONCRETE PAVING

DESIGNED: MK  JS TECH. REVIEW: EK DATE: 2.27.2023	SUB SHEET NO. G0.1	TITLE OF SHEET INDEX AND ABBREVIATIONS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 2 of 104
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TOPOGRAPHIC EXHIBIT

PORTION OF LAND LOCATED IN ROCKY MOUNTAIN NATIONAL PARK,
LOCATED IN SECTION 30, TOWNSHIP 4 NORTH, RANGE 75 WEST OF THE 6TH P.M.,
COUNTY OF GRAND, STATE OF COLORADO
(DRAWING No. 121/175143, PMIS No. 316223)

LEGEND

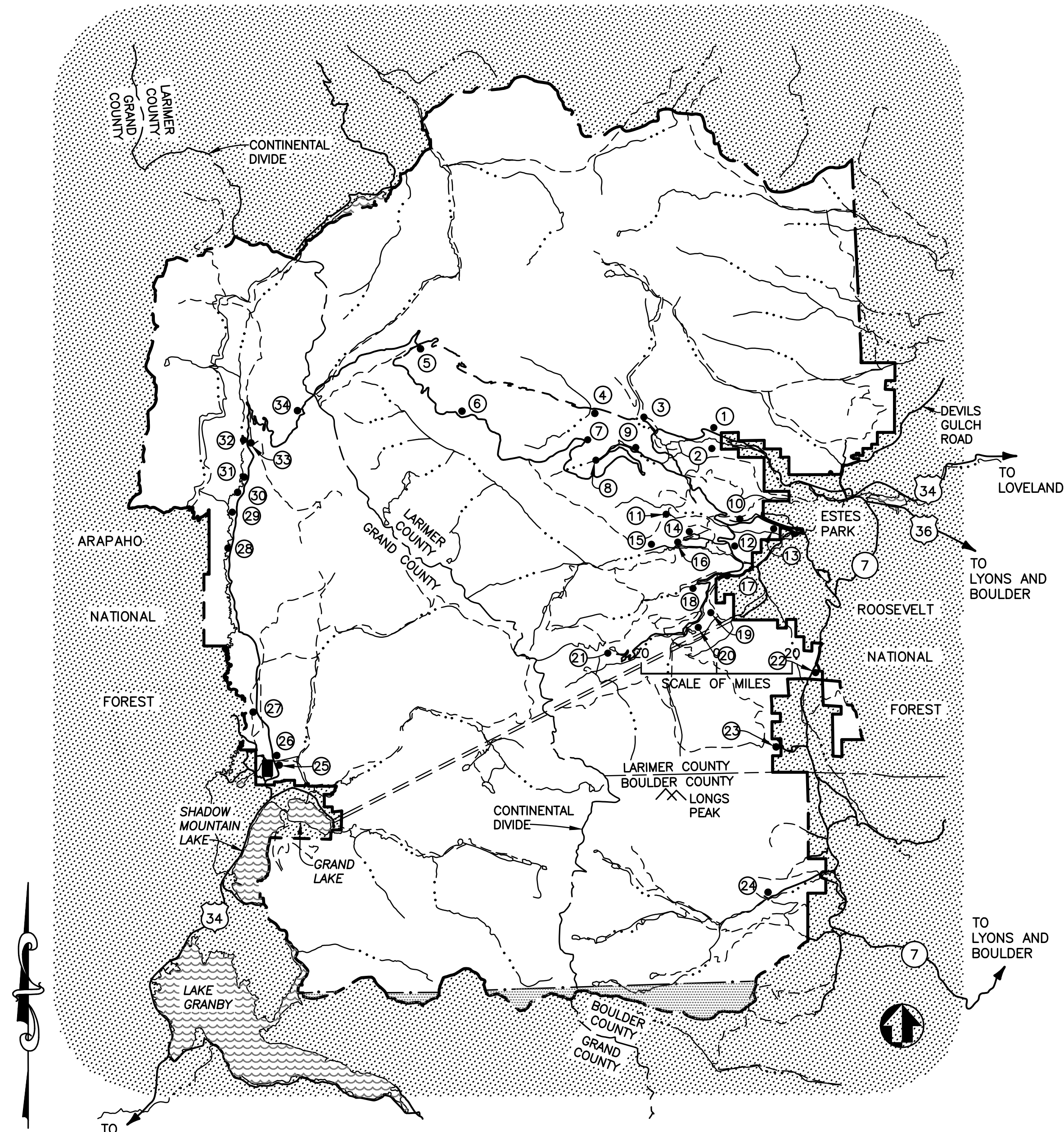
- PARK BOUNDARY
- WILDERNESS AREA
- STATE LINE
- COUNTY LINE
- PAVED ROAD
- UNPAVED ROAD
- TRAIL
- CREEK OR RIVER
- ===== ALVA B. ADAMS TUNNEL

FACILITY LEGEND

	ENTRANCE STATION	RANGER STATION	PICNIC AREA	CAMPGROUND	RESTROOMS	MUSEUM	LIVERY	VISITOR CENTER
FACILITY LOCATION								
1 FALL RIVER	●	●						
2 ASPENGLÉN			●					
3 LAWN LAKE				●				
4 ENDOVALLEY			●					
5 ALPINE		●			●			●
6 TUNDRA					●			
7 RAINBOW CURVE					●			
8 HIDDEN VALLEY			●					
9			●					
10 BEAVER MEADOWS	●	●						
11 UPPER BEAVER MEADOWS			●					
12 MORaine PARK					●	●		
13 PARK HEADQUARTERS		●			●			●
14 MORaine PARK				●				
15 CUB LAKE TRAILHEAD			●					
16 MORaine PARK STABLES							●	
17 MORaine PARK MUSEUM			●					
18 HOLLOWELL PARK			●					
19 GLACIER BASIN				●				
20 SPRAGUE LAKE			●		●		●	
21 BEAR LAKE					●			
22 LILY LAKE		●			●			●
23 LONGS PEAK		●	●	●				
24 WILD BASIN		●	●		●			
25 KAWUNEECHE		●			●			●
26 GRAND LAKE	●	●						
27 ONAHU CREEK TRAILHEAD			●					
28 BOWEN/BAKER			●					
29 NEVER SUMMER RANCH			●					
30 TIMBER CREEK				●				
31			●					
32 COLORADO RIVER			●					
33 TIMBER LAKE			●		●			
34 LAKE IRENE			●		●			

UNDERGROUND UTILITY LOCATIONS SHOWN ARE BASED UPON VARIOUS RECORD UTILITY MAPS IN CONJUNCTION WITH VISIBLE EVIDENCE GATHERED DURING THE TIME THE FIELD SURVEY WAS PERFORMED. THEREFORE, ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.

THIS DRAWING ONLY REFLECTS AND VERIFIES THE FIELD SURVEY DATA OF THOSE FEATURES AND CONDITIONS PRESENT AS OF OCTOBER 8 2021.



ROCKY MOUNTAIN NATIONAL PARK

Survey Narrative

THE PURPOSE OF THE EXHIBIT IS TO PROVIDE TOPOGRAPHIC MAPPING FOR DESIGN PURPOSES. BOUNDARY SURVEYING WAS NOT A PART OF THE SCOPE. NO ISSUES WERE NOTED DURING THE SURVEY EXCEPT AS SHOWN HEREON.

Surveyor's Statement

I, EDGAR T. BRISTOW, A LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, HEREBY STATE FOR AND ON BEHALF OF FLATIRONS, INC., TO NATIONAL PARK SERVICE, THAT THIS TOPOGRAPHIC EXHIBIT WAS PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, IS IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE AND IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED. SAID EXHIBIT AND THE RELATIVE ELEVATIONS SHOWN HEREON ARE ACCURATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

EDGAR T. BRISTOW COLORADO P.L.S. #19588
PRESIDENT, FLATIRONS, INC.

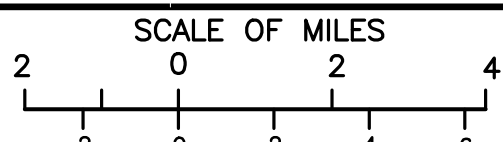
FSI JOB NO. 21-77,358

REVISIONS

BY

DATE

HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 [NAD83(2011)]
US STATE PLANE COORDINATE SYSTEM, COLORADO NORTH ZONE 0501
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
INTERMOUNTAIN REGION

FLATIRONS, INC.
655 FOURTH AVE.
LONGMONT, CO, 80501
CONTRACT NUMBER:
140P1220D0004

FIELD WORK:
10/07/2021
DRAWN:11/11/21
E. DAVIS

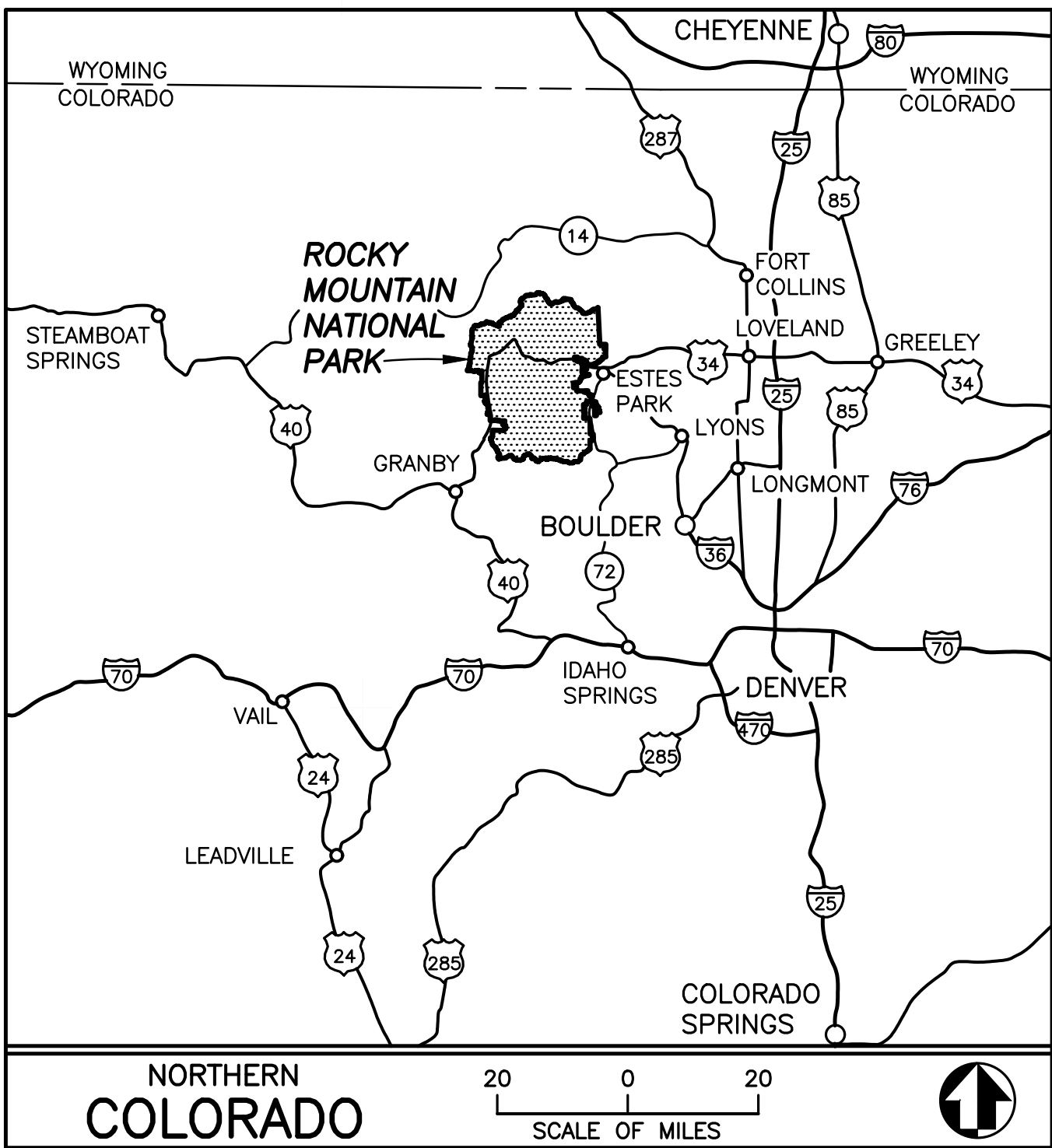
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JK/WW/JZG

TITLE OF SHEET
TOPOGRAPHIC EXHIBIT
COVER PAGE

PKG.
NO.
316223

GO.2

DRAWING NO.
121
175143
SHEET
3 OF 104



NOTES:

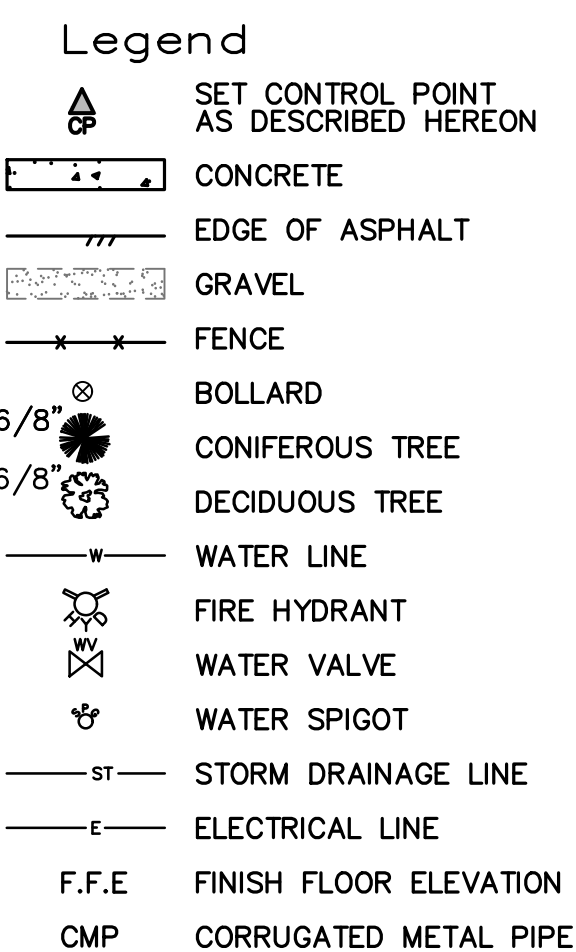
- THIS EXHIBIT WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT AND DOES NOT CONSTITUTE A TITLE SEARCH BY FLATIRONS, INC. TO DETERMINE TITLE OR EASEMENTS OF RECORD. THIS EXHIBIT DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT REAL ESTATE: EASEMENTS, OTHER THAN POSSIBLE EASEMENTS THAT WERE VISIBLE AT THE TIME OF MAKING THIS EXHIBIT; BUILDING SETBACK LINES; RESTRICTIVE COVENANTS; SUBDIVISION RESTRICTIONS; ZONING OR OTHER LAND-USE REGULATIONS; AND ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
- YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS EXHIBIT WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS EXHIBIT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
- THIS EXHIBIT WAS PREPARED FOR THE EXCLUSIVE USE OF NATIONAL PARK SERVICE, NAMED IN THE STATEMENT HEREON. SAID STATEMENT DOES NOT EXTEND TO ANY UNNAMED PERSON WITHOUT AN EXPRESS STATEMENT BY THE SURVEYOR NAMING SAID PERSON.
- THIS EXHIBIT IS VALID ONLY IF PRINT HAS SEAL AND SIGNATURE OF SURVEYOR.
- SOURCE INFORMATION FROM PLANS AND MARKINGS HAVE BEEN COMBINED WITH OBSERVED EVIDENCE OF UTILITIES TO DEVELOP A VIEW OF THOSE UNDERGROUND UTILITIES. HOWEVER LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS EXHIBIT TO LOCATE BURIED UTILITIES AND STRUCTURES. ALL UNDERGROUND UTILITIES MUST BE FIELD LOCATED BY THE APPROPRIATE AGENCY OR UTILITY COMPANY PRIOR TO ANY EXCAVATION, PURSUANT TO C.R.S. SEC. 9-1.5-103.
- THE DISTANCE MEASUREMENTS SHOWN HEREON ARE U.S. SURVEY FOOT.
- THE CONTOURS REPRESENTED HEREON WERE INTERPOLATED BY AUTOCAD CIVIL 3D (DIGITAL TERRAIN MODELING) SOFTWARE BETWEEN ACTUAL MEASURED SPOT ELEVATIONS. DEPENDING ON THE DISTANCE FROM A MEASURED SPOT ELEVATION AND LOCAL VARIATIONS IN TOPOGRAPHY, THE CONTOUR SHOWN MAY NOT BE AN EXACT REPRESENTATION OF THE SITE TOPOGRAPHY. THE PURPOSE OF THIS TOPOGRAPHIC MAP IS FOR SITE EVALUATION AND TO SHOW SURFACE DRAINAGE FEATURES. ADDITIONAL TOPOGRAPHIC OBSERVATIONS MAY BE NECESSARY IN SPECIFIC AREAS OF DESIGN. TOPOGRAPHY SHOWN HEREON COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS.
- BENCHMARK INFORMATION: SMARTNET NORTH AMERICA CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) NETWORK WAS USED TO ESTABLISH A GPS DERIVED ELEVATION ON AN ON-SITE BENCHMARK EAST OF THE PARKING LOT, BEING A SET NO. 6 REBAR WITH 3-1/4" ALUMINUM CAP, STAMPED "FLATIRONS SURVEYING LS 19588 CP 200 2021" WITH AN ELEVATION OF 8693.85 FEET (NAVD 88). NGS POINT T 36 BEING A NGS LOGO CAP IN ROCK, STAMPED "T36" LOCATED 0.3 MILES TO THE SOUTHWEST OF SURVEYED SITE, OFF CR 491, WITH A PUBLISHED ELEVATION OF 8692.12 FEET, WAS CHECKED INTO WITH AN AS-MEASURED ELEVATION OF 8692.07 FEET. NO DIFFERENTIAL LEVELING WAS PERFORMED TO ESTABLISH THE ELEVATION OF THE ON-SITE BENCHMARK.
- HORIZONTAL DATUM: COORDINATE VALUES AND DISTANCES SHOWN HEREON ARE STATE PLANE, US STATE PLANE COORDINATE SYSTEM, COLORADO NORTH ZONE 0501, NORTH AMERICAN DATUM 1983 [NAD83(2011)].
- FLOOD INFORMATION: THE SUBJECT PROPERTY IS LOCATED IN ZONE D, AREAS IN WHICH FLOOD HAZARDS ARE UNDETERMINED, BUT POSSIBLE ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAP; COMMUNITY-PANEL NO. 08049C-0314 C, DATED JANUARY 2, 2008. FLOOD INFORMATION IS SUBJECT TO CHANGE.
- DATES OF FIELDWORK: OCTOBER 7, 2021 (CREW CHIEF T. HOLDEN)
- BOUNDARY DETERMINATION IS NOT A PART OF THIS EXHIBIT. THIS IS NOT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS EXHIBIT IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND AND THAT IT IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OF A FENCE, BUILDING OR OTHER FUTURE IMPROVEMENT LINES. PARCEL LINES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE DRAWN FROM RECORD INFORMATION AVAILABLE DURING THE PREPARATION OF THIS EXHIBIT. AN IMPROVEMENT SURVEY PLAT IS RECOMMENDED TO DEPICT MORE PRECISELY THE LOCATIONS OF THE IMPROVEMENTS SHOWN HEREON.



Flatirons, Inc.
Surveying, Engineering & Geomatics
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BOULDER, CO 80301
PH: (303) 443-7001
FAX: (303) 443-9830
www.FlatironsInc.com



655 FOURTH AVE
LONGMONT, CO 80501
PH: (303) 776-1733
FAX: (303) 776-4355




THIS DRAWING ONLY REFLECTS AND
VERIFIES THE FIELD SURVEY
DATA OF THOSE FEATURES AND
CONDITIONS PRESENT AS OF
OCTOBER 8 2021.






Flatirons, Inc.
Surveying, Engineering & Geomatics

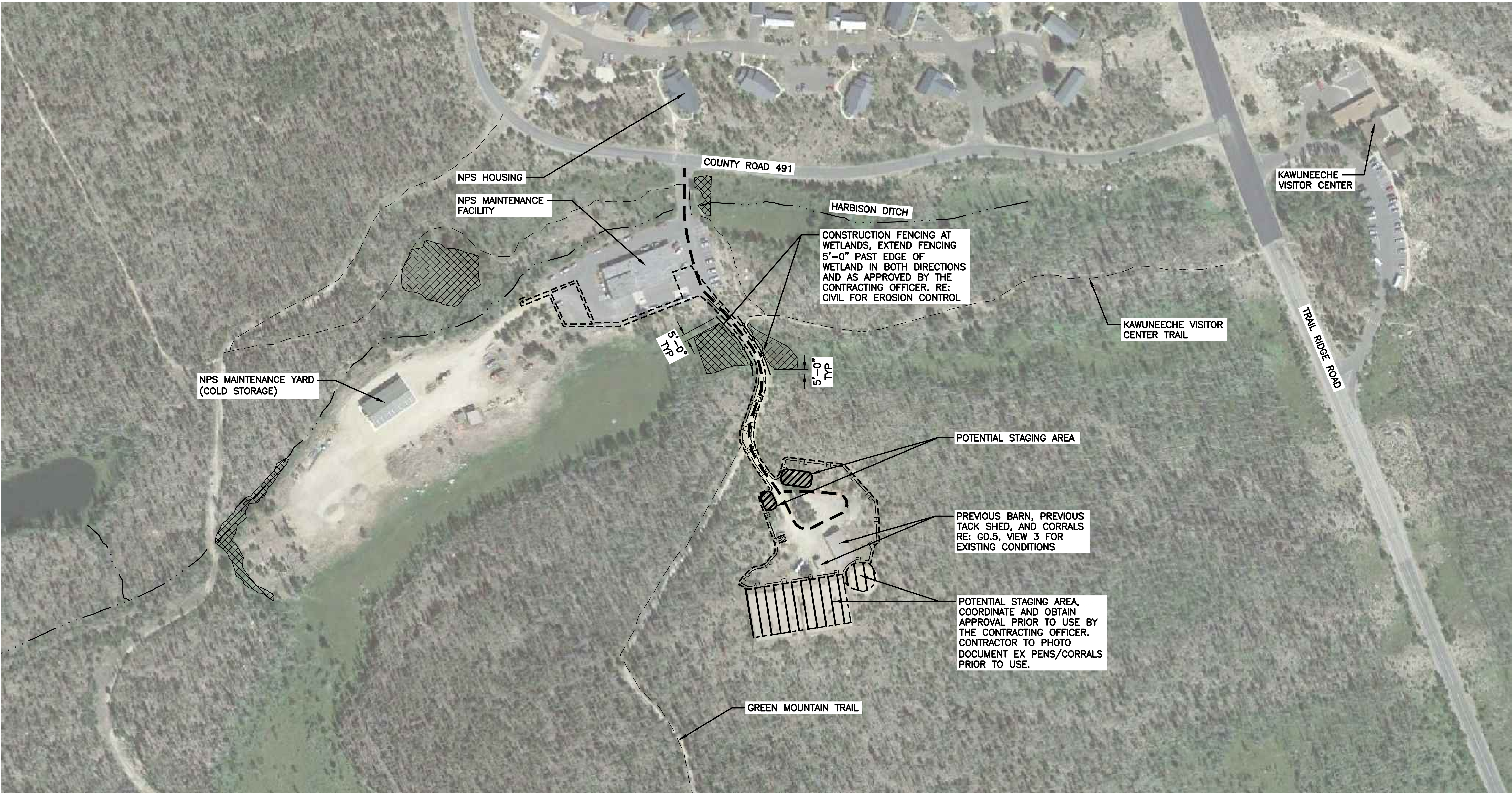
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655 FOURTH AVE
LONGMONT, CO 80501
PH: (303) 776-1733
FAX: (303) 776-4355

REVISIONS	BY	DATE	HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 [NAD83(2011)] US STATE PLANE COORDINATE SYSTEM, COLORADO NORTH ZONE 0501 VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)	 GRAPHIC SCALE 1" = 40' CONTOUR INTERVAL = 1 FOOT		UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE INTERMOUNTAIN REGION	FLATIRON, INC. 655 FOURTH AVE. LONGMONT CO, 80501 CONTRACT NUMBER: 140P12200004	FIELD WORK: 10/07/2021 DRAWN: 11/11/21 E. DAVIS	CHECKED: JK/WW/JZG	TITLE OF SHEET TOPOGRAPHIC EXHIBIT	PKG. NO. 316223		DRAWING NO. 121 175143 SHEET 4. OF 104
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1/19/23 15:02 MK:USER R23 P:\DENVER\NPS ROMO BARN-2071\A.8. DRAFT_FINAL_CD\CAO\A.G0-4-EX.COND.WMG.XBREFS:\BASES\VI-USTE.DWG:\BASES\VI-WETLANDS.DWG:\BASES\VI-YTOPO.DWG;
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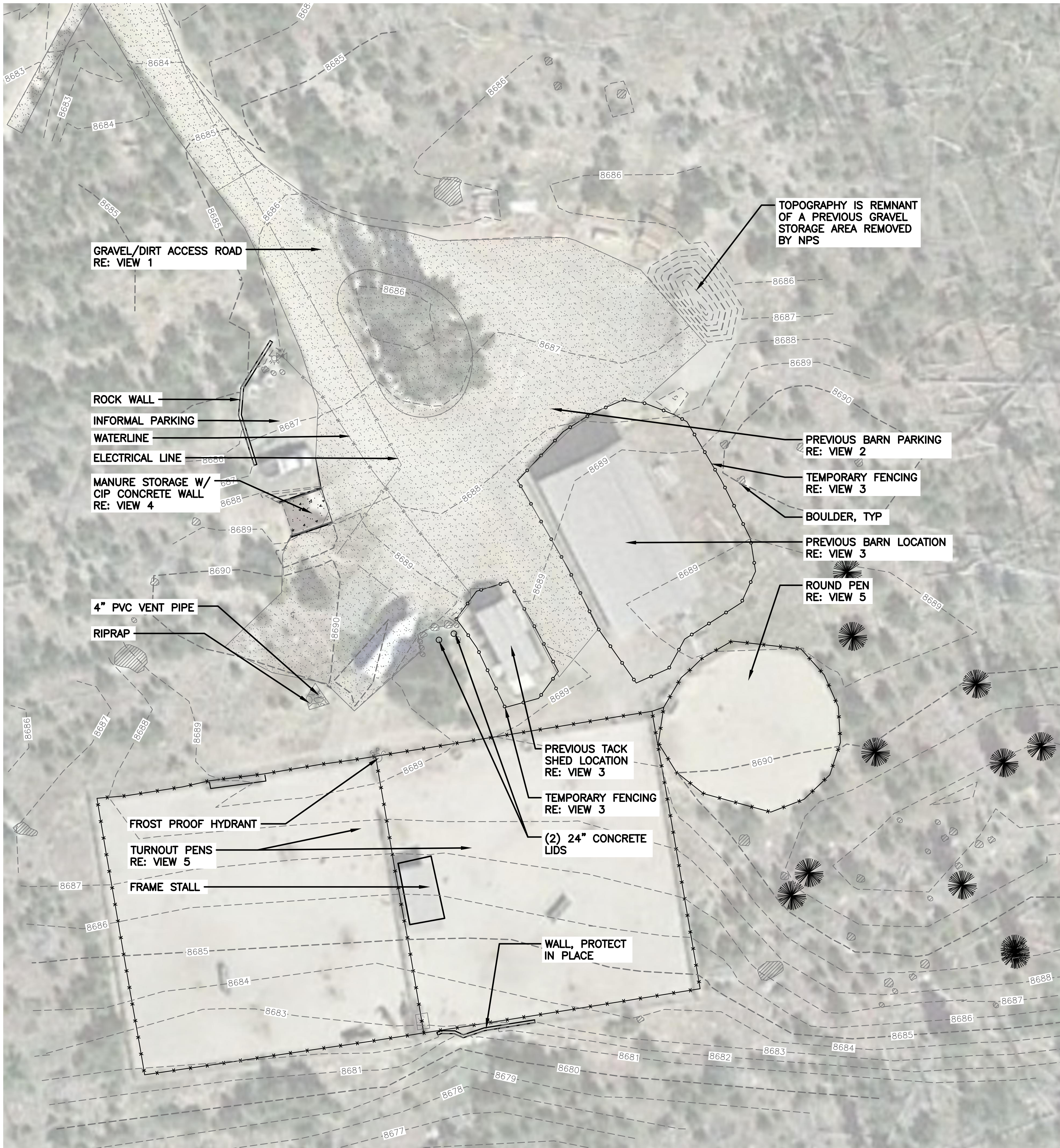
LEGEND	
	POTENTIAL STAGING AREA
	POTENTIAL STAGING AREA, PRE-APPROVED BY THE CONTRACTING OFFICER
	WETLANDS
	HARBISON DITCH
	TRAIL
	CONSTRUCTION ACCESS ROUTE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCING
	CONSTRUCTION FLAGGING

- NOTES:
1. RE: G0.1 FOR INDEX AND ABBREVIATIONS.
 2. RE: CIVIL FOR ALL EROSION CONTROL PLANS, NOTES AND DETAILS, UTILITY AND DRAINAGE PLANS.
 3. PRIOR TO CONSTRUCTION, CONTRACTOR TO PROVIDE A TRAFFIC CONTROL PLAN, IDENTIFYING VEHICULAR AND PEDESTRIAN DETOURS.
 4. LIMITS OF DISTURBANCE SHALL BE FLAGGED AND APPROVED BY THE CONTRACTING OFFICER, RE: SPECIFICATIONS.
 5. DO NOT EXCAVATE OR DISTURB BEYOND WHAT IS REQUIRED FOR STAGING UNLESS APPROVED BY THE CONTRACTING OFFICER.
 6. IMPACTS TO MAPPED WETLANDS SHOULD BE AVOIDED. TO AVOID IMPACTS, FIELD IDENTIFY AND FLAG/FENCE WETLAND BOUNDARY ADJACENT TO THE ROAD. INCORPORATE BMPS INCLUDING SILT FENCING WHERE APPROPRIATE TO LIMIT SEDIMENTATION IN OR ADJACENT TO MAPPED WETLANDS, RE: CIVIL.
 7. DAMAGE TO NATURAL AREAS, EXISTING GRADES, VEGETATION, PAVEMENTS, UNDERGROUND UTILITIES, AND OTHER AREAS IDENTIFIED TO BE PROTECTED IN PLACE, SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE GOVERNMENT.



DESIGNED: MK JS	SUB SHEET NO. G0.4	TITLE OF SHEET SITE CONSTRUCTION ACCESS PLAN CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 5 OF 104
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1/19/23 15:02 IKAUSER R23 P:\DENVER NPS ROMO BARN-20714\8. DRAFT_FINAL_CD\CAO\LA GO-4-EX COND.DWG XREFS: \BASES\VI--SITE.DWG; \BASES\VI--WETLANDS.DWG; \BASES\VI--TOPO.DWG;
IMAGES: \IMAGES\Aerial-2.jpg; \IMAGES\Barn-20714\8_Draft_Final_CD\CAO\IMAGES\Barn_Cleanup_North.jpg; \IMAGES\Barn_Cleanup_South.jpg; \IMAGES\Barn_Cleanup_South2.jpg



LEGEND	
---8690---	MAJOR CONTOUR
---8689---	MINOR CONTOUR
---E---	ELEC LINE
---W---	WATER LINE
[Pattern]	GRAVEL/DIRT
[Pattern]	RIP RAP
[Pattern]	CONCRETE
[Symbol]	ROCK WALL
[Symbol]	CIP CONCRETE WALL
[Symbol]	FENCING
[Symbol]	TEMPORARY FENCING
[Symbol]	TREE
[Symbol]	BOULDER



VIEW 1: GRAVEL/DIRT ACCESS ROAD



VIEW 2: PREVIOUS BARN PARKING



VIEW 3: PREVIOUS BARN & TACK SHED LOCATION AND TEMPORARY FENCING



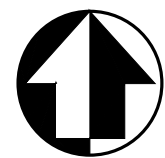
VIEW 4: MANURE STORAGE W/ CIP CONCRETE WALL



VIEW 5: TURNOUT & ROUND PENS, PROTECT IN PLACE



DESIGNED: MK JS	SUB SHEET NO. G0.5	TITLE OF SHEET EXISTING CONDITIONS	DRAWING NO. 121 175143
TECH. REVIEW: EK		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	PMIS/PKG NO. 316223
DATE: 2.27.2023			SHEET 6 OF 104



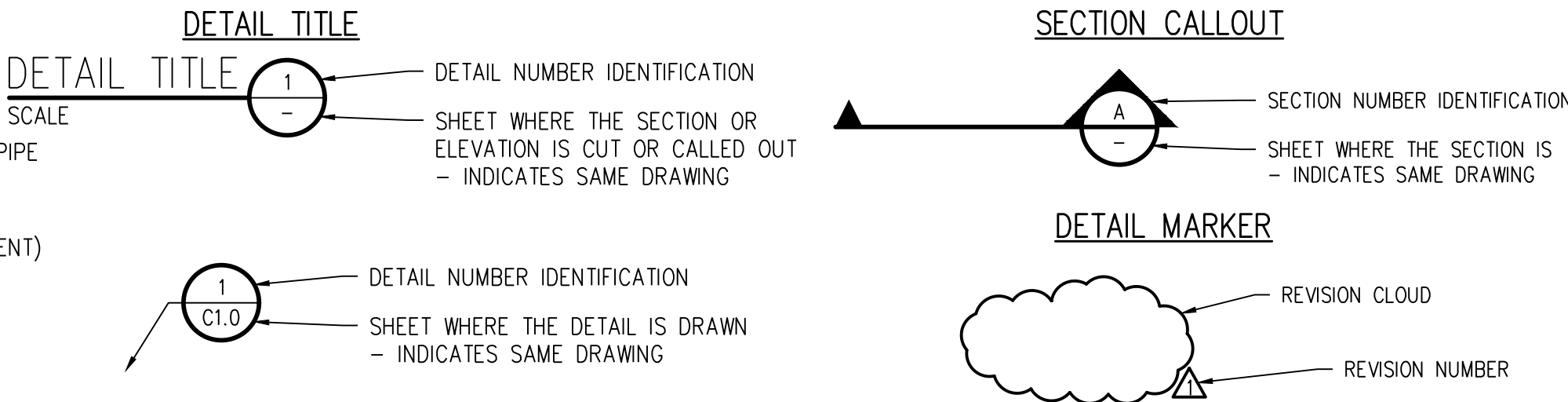
2/6/2023 2:01:25 PM - Autodesct Civi 3D 2022 - k:\3503.1c and 3503.3c--ROMO Barn and Tack Shed\Drawings\3503.1c--00--LNA--01.dwg - x3503.1c--csite.dwg, x3503.1c--xsite, x3503.1c--TB--NPS--22x34

ABBREVIATIONS

AASHTO	AMERICAN ASSOC. OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	IN	INLET
ABAN	ABANDON	INSUL	INSULATION
AC	ASPHALTIC CONCRETE PAVING	INV	INVERT
ADDL	ADDITIONAL	IRR	IRRIGATION
ADDM	ADJUSTABLE	JTS	JOINTS
ADJ	ADJUSTABLE		
AL	ALUMINUM	KO	KNOCKOUT
ALT	ALTERNATE	KPL	KICK PLATE
AMT	AMOUNT	KWY	KEYWAY
APPROX	APPROXIMATE		
ARCH	ARCHITECT(URAL)	L	LEFT OR LITER
ARV	AIR RELIEF VALVE	LSCAPE	LANDSCAPE(ING)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LF	LINEAR FOOT
ASPH	ASPHALT	LP	LOW POINT
ASSY	ASSEMBLY	LT	LIGHT
ASYM	ASYMMETRICAL	LWL	LOW WATER LEVEL
AUTO	AUTOMATIC		
AVG	AVERAGE	MAINT	MAINTENANCE
AWWA	AMERICAN WATER WORKS ASSOC.	MAN	MANHOLE
		MATL	MATERIAL
BC	BACK OF CURB	MAX	MAXIMUM
BFV	BUTTERFLY VALVE	ME	MATCH EXISTING
BG	FINISHED GRADE ADJACENT TO BOTTOM OF WALL	MECH	MECHANICAL
BLDG	BUILDING	MFR	MANUFACTURER
BLK	BLOCK	MH	MANHOLE
BMS	BENCH MARK	MIN	MINIMUM
BMP	BEST MANAGEMENT PRACTICE	MISC	MISCELLANEOUS
BS	BACKSIGHT	MJ	MECHANICAL JOINT
BOS	BOTTOM OF STEP		
BOT	BOTTOM	N	NORTH
BSMT	BASEMENT	NA	NOT APPLICABLE
BVCE	BEGIN VERTICAL CURVE ELEVATION	NIC	NOT IN CONTRACT
BVCS	BEGIN VERTICAL CURVE STATION	NPT	NATIONAL PIPE THREAD
BW	BOTTOM OF WALL	NTS	NOT TO SCALE
		OS	OFFSET
CB	CATCH BASIN	OC	ON CENTER
CDW	COLORADO DEPARTMENT OF TRANSPORTATION	OD	OUTSIDE DIAMETER
CIP	CAST IRON PIPE	OPP	OPPOSITE
CJ	CONSTRUCTION JOINT	OPT	OPTIONAL
CL	CENTER LINE OR CHAIN LINK		
CLR	CLEAR	PC	POINT OF CURVATURE
CMP	CORRUGATED METAL PIPE	PCO	PRESSURE CLEAN OUT
CMU	CONCRETE MASONRY UNIT	PCR	POINT OF CURVE RETURN
CO	CLEANOUT	PI	POINT OF INTERSECTION
CONC	CONCRETE	PVI	POINT OF VERTICAL INTERSECTION
CONST	CONSTRUCTION	PL	PROPERTY LINE
CONT	CONTINUOUS(ATION)	PE	POLYETHYLENE
CR	CORNER	PREFAB	PREFABRICATED
CRD	CENTERLINE REDUCER	PRELIM	PRELIMINARY
CTR	CENTER	PREP	PREPARATION
CY	CUBIC YARDS	PROP	PROPOSED
		PRV	PRESSURE REDUCING VALVE OR PRESSURE RELIEF VALVE
DEMO	DEMOLITION	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIAG	DIAGONAL	PT	POINT OF TANGENCY
DIP	DUCTILE IRON PIPE	PV	PLUG VALVE
DOM	DOMESTIC	PVC	POLYVINYL CHLORIDE OR POINT OF VERTICAL CURVATURE
DN	DOWN	PVMT	PAVEMENT
DR	DRAIN		
DWG	DRAWING	QTY	QUANTITY
DWL	DOWEL		
		R	RIGHT
E	EAST	RAD	RADIUS
EA	EACH	RCP	REINFORCED CONCRETE PIPE
ECC	ECCENTRIC	RD	ROOF DRAIN
EJ	EXPANSION JT	RE	REFERENCE
ELB	ELEVATION	RECT	RECTANGULAR
ELC	ELECTRICAL	REINF	REINFORCE (D) (ING) (MENT)
ENGR	ENGINEER	REQD	REQUIRED
EOP	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
EQ	EQUAL		
EQUIP	EQUIPMENT	SAN	SANITARY
EQUIV	EQUIVALENT	SAWCUT	SAWCUT
ESMT	EASEMENT	SD	STORM DRAIN
EST	ESTIMATE	SECT	SECTION
EVCE	END VERTICAL CURVE ELEVATION	SPD	STANDARD PROCTOR DENSITY
EVCS	END VERTICAL CURVE STATION	SPEC	SPECIFICATION
EW	EACH WAY	SQ	SQUARE
EXP JT	EXPANSION JOINT	SQ IN	SQUARE INCH
EXIST	EXISTING	SQ FT	SQUARE FOOT
		SQ YD	SQUARE YARD
FND	FOUNDATION	SS	SANITARY SEWER
FES	FLARED END SECTION	SST	STAINLESS STEEL
FF	FINISH FLOOR	STA	STATION
FG	FINISH GRADE	STD	STANDARD
FL	FIRE HYDRANT	STL	STEEL
FLB	FLOW LINE	STRUCT	STRUCTURAL
FN	FENCE	SVC	SERVICE
FOC	FACE OF CONCRETE	SWMP	STORMWATER MANAGEMENT PLAN
FSM	FEET PER MINUTE	SYM	SYMMETRICAL
FPS	FEET PER SECOND		
FT	FEET	TB	THRUST BLOCK
FTG	FOOTING OR FITTING	TBC	TOP BACK OF CURB
		TBM	TEMPORARY BENCH MARK
G	GAS	TEMP	TEMPORARY
G	GAUGE	THK	THICK
GAL	GALLON	TJB	TOP OF BANK
GALV	GALVANIZED	TOS	TOP OF CONCRETE OR TOP OF CURB
GO	GRADE CLEANOUT	TOT	TOP OF STEP
GIP	GALVANIZED IRON PIPE	TOT	TOTAL
GND	GROUND	TW	TOP OF WALL OR CAP OF WALL
GPD	GALLONS PER DAY	TY	TYPICAL
GPM	GALLONS PER MINUTE		
GR	GRATE	UBC	UNIFORM BUILDING CODE
GRTG	GRATING	UGE	UNDERGROUND ELECTRIC
GSP	GALVANIZED STEEL PIPE	UTIL	UTILITY
GV	GATE VALVE		
		VERT	VERTICAL
H	HIGH	VC	POINT OF VERTICAL CURVATURE
HB	HOSE BIB	VCP	VITRIFIED CLAY PIPE
HE	HORIZONTAL ELLIPTICAL		
HDWL	HEADWALL	W	WIDE OR WIDTH
HNDRL	HAND RAIL	W/	WITH
HORIZ	HORIZONTAL	W/O	WITHOUT
HP	HIGH POINT	WQCE	WATER QUALITY CONTROL ELEVATION
HR	HOOR	WSE	WATER SURFACE ELEVATION
HVAC	HEATING, VENTILATION, AIR CONDITIONING	WW	WASTEWATER
HWY	HIGHWAY	X SECT	CROSS SECTION
HWL	HIGH WATER LINE	XFMR	ELECTRONIC TRANSFORMER
HYD	HYDRANT	YH	YARD HYDRANT
INCL	INCLUDED		
ID	INSIDE DIAMETER		

DESIGN LEGEND

	BENCHMARK		FENCE
	MANHOLE		FLOW LINE OF DITCH OR WASH
	AREA DRAIN		SLOPE ARROW
	COMBINATION INLET		PROPOSED SPOT ELEVATION
	TYPE R INLET		EXIST SPOT ELEVATION
	TYPE 13 FIELD INLET		EXIST INDEX CONTOUR
	FLARED END SECTION W/ RIPRAP		EXIST INTERMEDIATE CONTOUR
	TEE W/ THRUST BLOCK		PROPOSED INDEX CONTOUR
	BEND W/ THRUST BLOCK		PROPOSED INTERMEDIATE CONTOUR
	END CAP W/ THRUST BLOCK		
	GATE VALVE		
	REDUCER/INCREASER		CURB AND GUTTER
	WATER METER		SPILL/CATCH CURB TRANSITION
	FIRE HYDRANT		SIGN W/ POST
	STORM - 12" AND SMALLER		CURB RAMP
	STORM - LARGER THAN 12"		SIDEWALK CHASE
	ROOF DRAIN		SIDEWALK
	TRENCH DRAIN		LIGHT DUTY CONCRETE PAVING
	UNDERDRAIN		HEAVY DUTY CONCRETE PAVING
	SANITARY SEWER		HEAVY DUTY ASPHALT PAVING
	FORCE MAIN		LIGHT DUTY ASPHALT PAVING
	WATER - 10" AND SMALLER		GRAVEL
	WATER - LARGER THAN 10"		PROPOSED BUILDING
	NON POTABLE WATER		BUILDING ACCESS
	POTABLE WATER		RETAINING WALL
	IRRIGATION - 12" AND SMALLER		BOULDER/ROCK WALL
	IRRIGATION - LARGER THAN 12"		LIMITS OF SAWCUT
	CABLE TV		LIMITS OF WORK
	DRAIN		EASEMENT LINE
	ELECTRIC		PROPERTY LINE
	UNDERGROUND ELECTRIC		ADJACENT PROPERTY LINE/ROW
	OVERHEAD ELECTRIC		MATCHLINE
	TELEPHONE		
	FIBER OPTIC		
	FUEL		
	GAS		
	PVC PIPE (MISC)		



SURVEY LEGEND

	WATER LINE		BENCHMARK AS DESCRIBED
	WATER VALVE		FOUND MONUMENT
	WATER METER		FOUND MONUMENT
	FIRE HYDRANT		TEST CP
	SANITARY SEWER LINE		UTILITY LOCATED FROM MAP
	SANITARY SEWER MANHOLE		AS MEASURED AT TIME OF SURVEY
	STORM DRAINAGE LINE		CALCULATED FROM RECORD AND AS MEASURED INFORMATION
	STORM DRAINAGE MANHOLE		PLAT
	CURB INLET		RECORDED
	UNDERGROUND ELECTRICAL LINE		MAILBOX
	OVERHEAD ELECTRICAL LINE		CONCRETE
	ELECTRICAL POLE		EDGE OF ASPHALT
	GUY WIRE		GRAVEL
	ELECTRICAL TRANSFORMER		FENCE
	ELECTRICAL RISER		GUARDRAIL
	ELECTRIC VAULT		BOLLARD
	LIGHT POLE		SIGN
	DECORATIVE LIGHT		CONIFEROUS TREE (TRUNK DIAMETER/DRIP LINE RADIUS)
	FIBEROPTIC LINE		DECIDUOUS TREE (TRUNK DIAMETER/DRIP LINE RADIUS)
	TELEPHONE LINE		BOULDER
	TELEPHONE RISER		
	GAS LINE		
	INDICATION OF ACCESS		
	BUILDING		

GENERAL NOTES

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE NATIONAL PARK SERVICE, GRAND COUNTY, GRAND LAKE FIRE PROTECTION DISTRICT REQUIREMENTS, AND APPLICABLE STATE AND LOCAL STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL HAVE IN POSSESSION AT THE JOB SITE AT ALL TIMES ONE (1) SIGNED COPY OF APPROVED PLANS, STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN EMERGENCY ACCESS ROUTES TO THE SITE AND STRUCTURE AT ALL TIMES PER THE APPLICABLE GRAND LAKE FIRE PROTECTION DISTRICT REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR ANY VARIANCE TO THE ABOVE DOCUMENTS. NOTIFY ENGINEER OF ANY CONFLICTING STANDARDS OR SPECIFICATIONS. IN THE EVENT OF ANY CONFLICTING STANDARD OR SPECIFICATION, THE MORE STRINGENT OR HIGHER QUALITY STANDARD, DETAIL OR SPECIFICATION SHALL APPLY.
- THE CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARD SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK, INCLUDING, BUT NOT LIMITED TO A LOCAL AND STATE GROUNDWATER DISCHARGE AND COLORADO DEPARTMENT OF HEALTH AND ENVIRONMENT (CDPHE) STORMWATER DISCHARGE PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE REQUIRED PARTY (GOVERNMENT, CONTRACTING OFFICER, ENGINEER, AND UTILITY OWNER) AT LEAST 48 HOURS PRIOR TO START OF ANY CONSTRUCTION, PRIOR TO BACKFILLING, AND AS REQUIRED BY JURISDICTIONAL AUTHORITY AND/OR PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL CONTINUE WITH NOTIFICATIONS THROUGHOUT THE PROJECT AS REQUIRED BY THE STANDARDS AND SPECIFICATIONS.
- THE LOCATIONS OF EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION BASED ON INFORMATION BY OTHERS. NOT ALL UTILITIES MAY BE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT SIZE, LOCATION AND TYPE OF ALL EXISTING UTILITIES WHETHER SHOWN OR NOT BEFORE COMMENCING WORK. THE ENGINEER AND/OR OWNER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS SHOWN ON PLANS. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES AND COSTS WHICH MIGHT OCCUR BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY COMPANIES AND DETERMINE THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO PROCEEDING WITH GRADING AND CONSTRUCTION. ALL WORK PERFORMED IN THE AREA OF UTILITIES SHALL BE PERFORMED AND INSPECTED ACCORDING TO THE REQUIREMENTS OF THE UTILITY OWNER. LIKEWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAPPING ANY EXISTING UTILITY (INCLUDING DEPTH) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION, AND FOR RELOCATING ENCOUNTERED UTILITIES AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL CONTACT AND RECEIVE APPROVAL FROM UTILITY OWNER, GOVERNMENT, AND ENGINEER BEFORE RELOCATING ANY ENCOUNTERED UTILITIES. CONTRACTOR RESPONSIBLE FOR SERVICE CONNECTIONS, AND RELOCATING AND RECONNECTING AFFECTED UTILITIES AS COORDINATED WITH UTILITY OWNER AND/OR ENGINEER, INCLUDING NON-MUNICIPAL UTILITIES (TELEPHONE, GAS, CABLE, ETC., WHICH SHALL BE COORDINATED WITH THE UTILITY OWNER). THE CONTRACTOR SHALL IMMEDIATELY CONTACT ENGINEER UPON DISCOVERY OF A UTILITY DISCREPANCY OR CONFLICT. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY NOTIFICATION CENTER OF COLORADO (1-800-922-1987, WWW.UCC.ORG). SEE SURVEY UTILITY LOCATION INFORMATION BELOW.
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN FOR CONTRACTING OFFICER APPROVAL AND PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FENCING, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR AGREES TO COMPLY WITH THE PROVISIONS OF THE TRAFFIC CONTROL PLAN AND THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," PART VI, FOR CONSTRUCTION SIGNAGE AND TRAFFIC CONTROL. ALL TEMPORARY AND PERMANENT TRAFFIC SIGNS SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) WITH REGARD TO SIGN SHAPE, COLOR, SIZE, LETTERING, ETC. UNLESS OTHERWISE SPECIFIED AND SHALL BE REPLACED ON TRIPODS. IF APPLICABLE, PART NUMBERS ON SIGNAGE DETAILS REFER TO MUTCD SIGN NUMBERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS NOR EROSION ON ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. GROUNDWATER TO BE PUMPED SHALL BE TESTED, PERMITTED, AND PUMPED PER THE STATE OF COLORADO AND LOCAL GROUNDWATER DISCHARGING PERMIT REQUIREMENTS.
- RIM AND GRATE ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. THE CONTRACTOR SHALL ADJUST RIMS AND OTHER IMPROVEMENTS TO MATCH FINAL PAVEMENT AND FINISHED GRADE ELEVATIONS.
- THE EXISTING AND PROPOSED ELEVATIONS OF FLATWORK, SIDEWALKS, CURBS, THRESHOLDS, PAVING, ETC. AS SHOWN HEREON ARE BASED ON EXTRAPOLATION OF FIELD SURVEY DATA, EXISTING CONDITIONS, AND DATA PROVIDED BY OTHERS. AT CRITICAL AREAS AND SITE FEATURES, CONTRACTOR SHALL HAVE FORMWORK INSPECTED AND APPROVED BY CONTRACTING OFFICER PRIOR TO PLACING CONCRETE. MINOR ADJUSTMENTS, AS APPROVED, TO PROPOSED GRADES, INVERTS, ETC. MAY BE REQUIRED TO PREVENT PONDING OR SLOPE NOT IN CONFORMANCE WITH STANDARDS. ALL FLATWORK MUST PREVENT PONDING AND PROVIDE POSITIVE DRAINAGE AWAY FROM EXISTING AND PROPOSED BUILDINGS, WALLS, ROOF DRAIN OUTFALLS, ACROSS DRIVES AND WALKS, ETC., TOWARDS THE PROPOSED INTENDED DRAINAGE FEATURES AND CONVEYANCES. VERIFICATION OF ADEQUATE SLOPE TO ADHERE TO DRAWINGS, BUILDING CODES, AND ABA STANDARDS MAY BE PERFORMED USING 2 FOOT SMART LEVEL. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OF ANY CONCRETE PROVEN TO BE OUT OF CONFORMANCE IN THIS MANNER.
- FINAL LIMITS OF REQUIRED ASPHALT SAWCUTTING AND PATCHING MAY VARY FROM LIMITS SHOWN ON PLANS. CONTRACTOR TO PROVIDE SAWCUT AND PATCH WORK TO ACHIEVE POSITIVE DRAINAGE AND A SMOOTH TRANSITION TO EXISTING ASPHALT WITHIN SLOPES ACCEPTABLE TO THE ENGINEER AND WITHIN MUNICIPAL STANDARDS. CONTRACTOR SHALL PROVIDE ADDITIONAL SAWCUTTING AND PATCHING AT UTILITY WORK, CONNECTION POINTS TO EXISTING PAVEMENT AND FEATURES, ETC. THAT MAY NOT BE DELINEATED ON PLANS.
- ANY EXISTING MONITORING WELLS, CLEANOUTS, VALVE BOXES, ETC. TO BE PROTECTED AND TO REMAIN IN SERVICE. IF FEATURES EXIST, EXTEND OR LOWER TO FINAL SURFACE WITH LIKE KIND CAP WITH STANDARD CAST ACCESS LID WITH SAME MARKINGS. IN LANDSCAPED AREAS PROVIDE A CONCRETE COLLAR (18"x18"x6" THICK) AT ALL EXISTING AND PROPOSED MONITORING WELLS, CLEANOUTS, VALVE BOXES, ETC.
- CONTRACTING OFFICER TO APPROVE ALL PRIVATE CONCRETE FINISHING, JOINT PATTERNS AND COLORING REQUIREMENTS PRIOR TO CONSTRUCTION. SUBMIT JOINT LAYOUT PLAN TO CONTRACTING OFFICER FOR APPROVAL PRIOR TO CONSTRUCTION.
- PIPE LENGTHS AND HORIZONTAL CONTROL POINTS SHOWN ARE FROM CENTER OF STRUCTURES, END OF FLARED END SECTIONS, ETC. SEE STRUCTURE DETAILS FOR EXACT HORIZONTAL CONTROL LOCATION. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ACTUAL PIPE LENGTHS TO ACCOUNT FOR STRUCTURES AND LENGTH OF FLARED END SECTIONS.
- ALL SURPLUS MATERIALS, TOOLS, AND TEMPORARY STRUCTURES, FURNISHED BY THE CONTRACTOR, SHALL BE REMOVED FROM THE PROJECT SITE BY THE CONTRACTOR. ALL DEBRIS AND RUBBISH CAUSED BY THE OPERATIONS OF THE CONTRACTOR SHALL BE REMOVED, AND THE AREA OCCUPIED DURING CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ITS ORIGINAL CONDITION, WITHIN 48 HOURS OF PROJECT COMPLETION, UNLESS OTHERWISE DIRECTED BY THE MUNICIPALITY OR OWNER'S REPRESENTATIVE.
- THE CONTRACTOR IS REQUIRED TO PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE LOCAL JURISDICTION, THE STATE OF COLORADO, MILE HIGH FLOOD DISTRICT "URBAN STORM DRAINAGE CRITERIA MANUAL VOLUME 3", THE M-STANDARD PLANS OF THE COLORADO DEPARTMENT OF TRANSPORTATION, AND THE APPROVED EROSION CONTROL PLAN. JURISDICTIONAL AUTHORITY MAY REQUIRE THE CONTRACTOR TO PROVIDE ADDITIONAL EROSION CONTROL MEASURES AT THE CONTRACTOR'S EXPENSE DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE PLANS DO NOT FUNCTION AS INTENDED. THE CONTRACTOR IS RESPONSIBLE FOR PROHIBITING SILT AND DEBRIS LADEN RUNOFF FROM LEAVING THE SITE, AND FOR KEEPING ALL PUBLIC AREAS FREE OF MUD AND DEBRIS. THE CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING FINAL GRADES AND FOR REMOVING ACCUMULATED SEDIMENTATION FROM ALL AREAS INCLUDING SWALES AND DETENTION/WATER QUALITY AREAS. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AND REPAIR AREAS AS REQUIRED AFTER VEGETATION IS ESTABLISHED AND ACCEPTED BY CONTRACTING OFFICER.
- ABA COMPLIANCE: THE CROSS-SLOPE OF ALL WALKS MUST BE LESS THAN 1:66.6 (1.5%) PERPENDICULAR TO DIRECTION OF TRAVEL. RUNNING SLOPE OF ACCESSIBLE WALKS MUST BE NOT STEEPER THAN 1:25 (4.0%) IN DIRECTION OF TRAVEL. MAXIMUM GRADE OF ACCESSIBLE CURB RAMPS AND RAMPS IS 1:13.3 (7.5%). CURB RAMPS SHALL PROVIDE A LANDING AT THE TOP AND RAMP RUNS PROVIDE LANDINGS AT THE BOTTOM AND TOP OF EACH RAMP RUN AT A SLOPE NOT TO EXCEED 1:66.6. RAMPS RUNS EXCEEDING SIX INCHES SHALL INCLUDE HANDRAILS. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 1:66.6 IN ALL DIRECTIONS. CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER PRIOR TO PLACEMENT OF FLATWORK OF SITE CONDITIONS OR DISCREPANCIES WHICH PREVENT TYPICAL REQUIRED GRADES FROM BEING ACHIEVED. ALL RAMPS, STAIRS, EDGE PROTECTION, AND RAILINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ABA STANDARDS.
- LOCATIONS OF CLEANOUTS, LIGHTS, SIGNAGE, JUNCTION BOXES, AND OTHER SIGNIFICANT SITE FEATURES TO BE STAKED FOR ENGINEER AND OR OWNER APPROVAL PRIOR TO WORK. CLEANOUTS, JUNCTION BOXES, AND ADJACENT GRADES TO BE RAISED ONE-HALF INCH AT ASPHALT/CONCRETE (OR 1" AT LANDSCAPING) TO PROVIDE POSITIVE DRAINAGE AWAY FROM FEATURES.
- SURVEY INFORMATION:
 - BENCHMARK INFORMATION: TOPOGRAPHIC INFORMATION WAS PROVIDED BY FLATIRON'S SURVEYING, INC. SEE TOPOGRAPHIC EXHIBIT DATED OCTOBER 7, 2021. SEE REFERENCED SURVEY FOR BENCHMARK DESCRIPTION AND BASIS OF BEARINGS INFORMATION. THE DATUM IS NAVD 88 PER SURVEY. COORDINATE AND VERIFY ALL VERTICAL AND HORIZONTAL DATA SHOWN IN SURVEY AND REPORT ANY IRREGULARITIES OR DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.
 - HORIZONTAL CONTROL INFORMATION: HORIZONTAL CONTROL COORDINATES ARE BASED ON THE REFERENCED SURVEY AND ARE PROVIDED BY THE FOLLOWING POINTS AS SHOWN ON THE SURVEY AND PLANS:

BM N1339920.60	E2905985.64	ELEV 8693.85	"ON-SITE BENCHMARK EAST OF THE PARKING LOT, BEING A SET NO. 6 REBAR WITH 3-1/4" ALUMINUM CAP, STAMPED 'FLATIRON'S SURVEYING LS 19588 CP 200 2021' WITH AN ELEVATION OF 8693.85 FEET (NAVD 88)," PER SURVEY.
NGS POINT T36		ELEV 8692.07	"BEING A NGS LOGO CAP IN ROCK, STAMPED 'T36' LOCATED 0.3 MILES TO THE SOUTHWEST OF THE SURVEYED SITE, OFF CR 491, WITH A PUBLISHED ELEVATION OF 8692.12 FEET, WAS CHECKED INTO WITH AN AS-MEASURED ELEVATION OF 8692.07 FEET," PER SURVEY.
CP-1 N1339594.02		E2906184.42	"SET NO. 6 REBAR W/3-1/4" ALUMINUM CAP, STAMPED 'FLATIRON'S SURVEYING LS 19588 CP 201 2021' PIC. NO. 201," PER SURVEY.
 - SURVEY UTILITY LOCATION INFORMATION PER THE SURVEYOR: SUBSURFACE UTILITIES ARE SHOWN IN APPROXIMATE HORIZONTAL AND VERTICAL LOCATIONS CONSISTENT WITH ASCE 38-02 QUALITY LEVEL "C" (INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D; INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS), AND BASED ON FIELD MEASUREMENTS PROVIDED BY THE OWNER AND THE CONTRACTOR. SUBSURFACE UTILITIES ARE NOT DEPICTED TO THE EXTENT SET FORTH IN ASCE 38-02 QUALITY LEVELS "A" (INFORMATION OBTAINED THROUGH THE NONDESTRUCTIVE EXPOSURE OF UNDERGROUND UTILITIES, AND ALSO PROVIDES THE TYPE, SIZE, CONDITION, MATERIAL AND OTHER CHARACTERISTICS OF UNDERGROUND FEATURES.) OR "B" (INFORMATION OBTAINED BY THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND HORIZONTAL POSITION OF VIRTUALLY ALL UTILITIES WITHIN THE PROJECT LIMITS. THE INFORMATION OBTAINED IN THIS MANNER IS SURVEYED TO PROJECT CONTROL.), TO THE EXTENT DEEMED NECESSARY FOR THE PROTECTION OF PERSONS AND PROPERTY, POTHOLES OR OTHER PRECISE MAPPING SHOULD BE COMPLETED TO CONFIRM THE EXACT LOCATION OF ANY SUBSURFACE UTILITIES. NOTIFY OWNER AND ENGINEER WITH ALL UTILITY INFORMATION PRIOR TO CONSTRUCTION. VISIT [HTTPS://WWW.FHWA.DOT.GOV/PROGRAMADMIN/SUEINDEX.CFM](https://www.fhwa.dot.gov/programadmin/sueindex.cfm) FOR MORE INFORMATION.
- THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE SHALL FURNISH THE CONTRACTING OFFICER A COMPLETE SET OF CONSTRUCTION RECORD DRAWINGS ("AS-BUILTS") FOR THE CONSTRUCTED IMPROVEMENTS. THE AS-BUILT SET SHALL SHOW SUFFICIENT DIMENSION TIES TO PERMANENT SURFACE FEATURES OR NORTHING/EASTING POINTS FOR ALL BURIED FACILITIES TO ALLOW FOR FUTURE LOCATING. THE AS-BUILT SET SHALL SHOW AS-BUILT CONTOURS AND ELEVATIONS OF ASPHALT AND CONCRETE FLATWORK, FLOWLINES, GRADE BREAKS, STAIRS, CROSS-SLOPES, HIGH AND LOW POINTS, AND ADDITIONAL ELEVATIONS TO DEMONSTRATE IMPROVEMENTS WERE CONSTRUCTED PER PLANS. THE AS-BUILT SET SHALL SHOW ELEVATIONS OF ALL DETENTION/WATER QUALITY FACILITIES, INCLUDING BUT NOT LIMITED TO BERMS, SPILLWAYS, BASIN BOTTOM, PIPE INVERTS, AND CONTROL STRUCTURE FEATURES (AS SURVEYED AND STAMPED BY A CERTIFIED P.L.S.). THE AS-BUILT SET SHALL ALSO INCLUDE ELEVATIONS OF MANHOLES, PIPES, INLETS, GRATES, AND SIZES OF ALL UTILITIES. THE AS-BUILT SET SHALL SHOW ANY AND ALL VARIATIONS FROM THE APPROVED PLAN. ENGINEER WILL PRODUCE FINAL RECORD DRAWINGS.

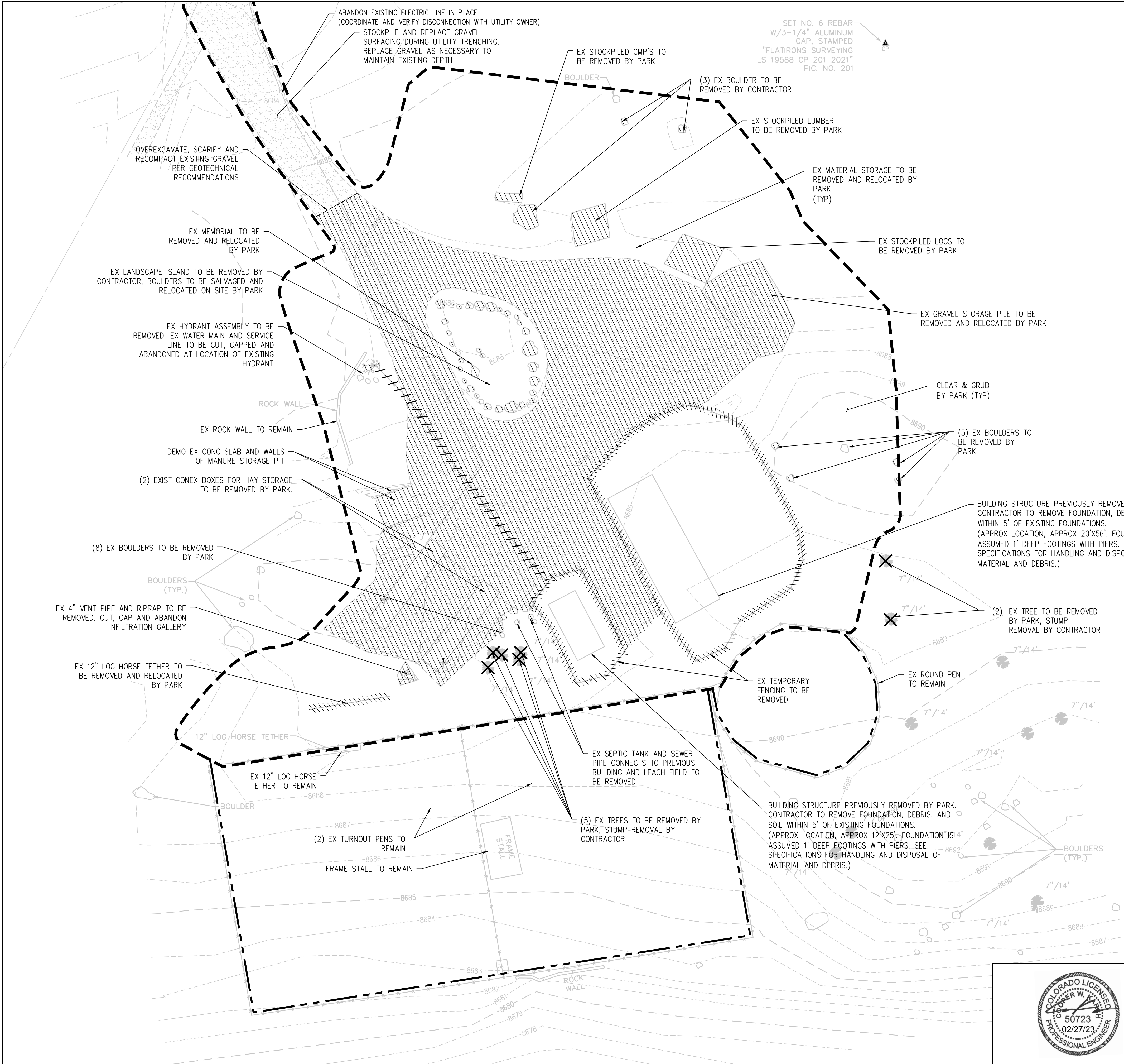


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CWK		LEGEND, NOTES & ABBREVIATIONS	121
ZEW			175143
TECH. REVIEW:			PMIS/PKG NO.
CWK			316223
DATE:			SHEET
2.27.2023			7 of 104
		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	

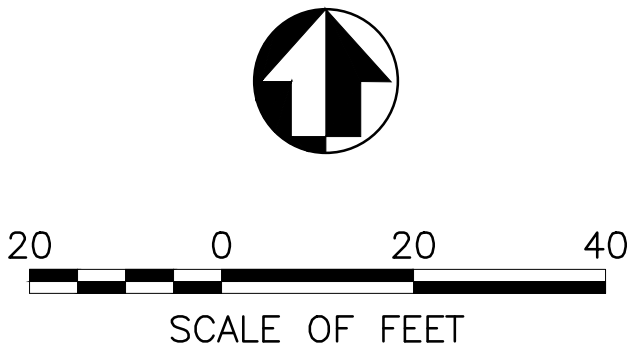
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- DEMOLITION NOTES:**
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
 2. CONTRACTOR TO STAKE OUT LIMITS OF DISTURBANCE AS SHOWN ON PLANS FOR APPROVAL BY CONTRACTING OFFICER PRIOR TO CONSTRUCTION ACTIVITIES.
 3. REPLACE EXISTING FLATWORK AT UTILITY TRENCHES AS REQUIRED.
 4. ALL SAWCUTTING AND PAVEMENT REMOVAL SHOULD BE TO THE NEAREST JOINT.
 5. ALL DRY UTILITY AND ELECTRIC DEMOLITION OR RELOCATION SHOULD BE COORDINATED WITH CONTRACTING OFFICER, UTILITY OWNER, MECHANICAL ENGINEER, AND ARCHITECT PRIOR TO CONSTRUCTION.
 6. ALL NECESSARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION.
 7. CONTRACTOR TO MAINTAIN SAFE PEDESTRIAN ACCESS. PROVIDE TEMPORARY ROUTE BEYOND LIMITS OF ALL POTENTIAL HAZARDS AND SIGNAGE AS NEEDED.
 8. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN SERVICES DURING CONSTRUCTION.
 9. CONTRACTOR TO REPAIR/REPLACE ALL DAMAGE TO EXISTING FLATWORK OR SITE FEATURES NOT INTENDED FOR DEMOLITION.
 10. REFER TO EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION RELATED TO RECENT WORK PERFORMED AND CURRENT SITE CONDITIONS.

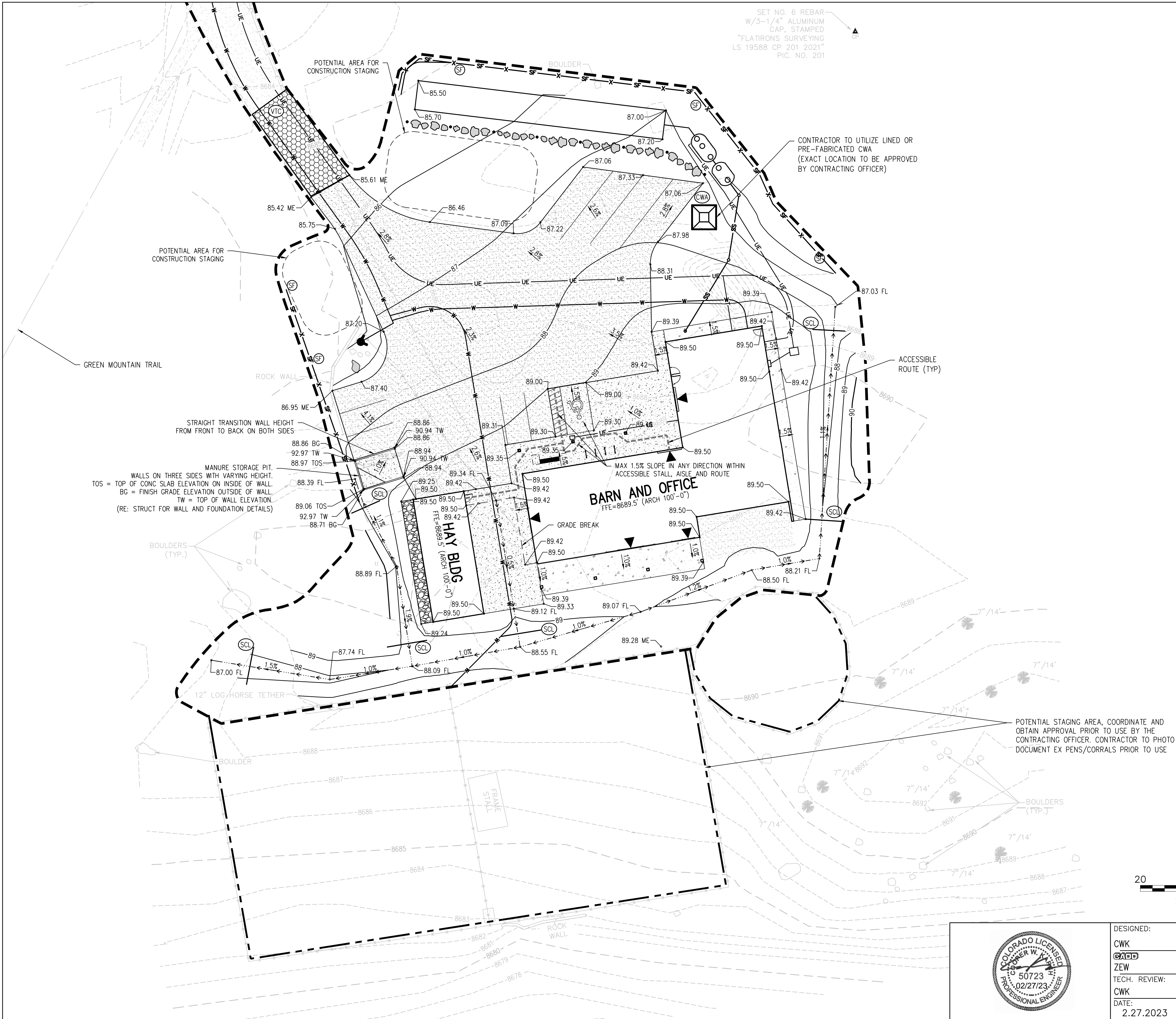
DEMOLITION LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- LIMITS OF DISTURBANCE
- POTENTIAL STAGING AREA
- LIMITS OF SAWCUT
- DEMO SUBSURFACE FEATURE
- DEMO SURFACE FEATURE
- DEMO BUILDING
- ABANDON SUBSURFACE FEATURE
- REMOVE EXISTING TREE
- PROTECT EXISTING TREE



DESIGNED: CWK ZEW TECH. REVIEW: CWK DATE: 2.27.2023	SUB SHEET NO. C0.1	TITLE OF SHEET DEMOLITION PLAN CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 8 of 104
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GRADING AND DRAINAGE NOTES:

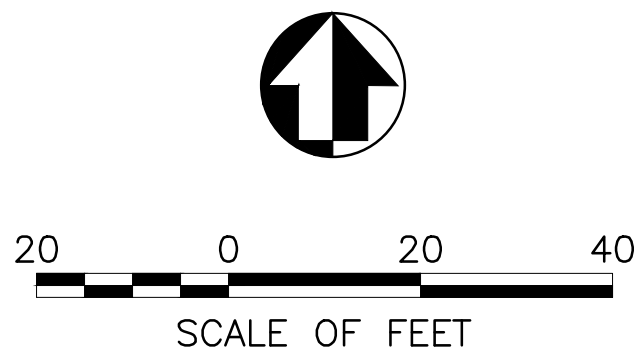
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
3. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS, UNLESS OTHERWISE NOTED.
4. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
5. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. TOS DENOTES TOP OF CONC SLAB. REFER TO STRUCTURAL PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

EROSION AND SEDIMENTATION NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL CONTROLS DURING INITIAL, INTERIM, AND FINAL CONDITIONS.

EROSION CONTROL LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- LIMITS OF DISTURBANCE
- POTENTIAL STAGING AREA
- POTENTIAL STAGING AREA (INSIDE LIMITS OF DISTURBANCE)
- ACCESSIBLE ROUTE
- VEHICLE TRACKING CONTROL
- SILT FENCE
- SEDIMENT CONTROL LOG
- CONCRETE WASHOUT AREA



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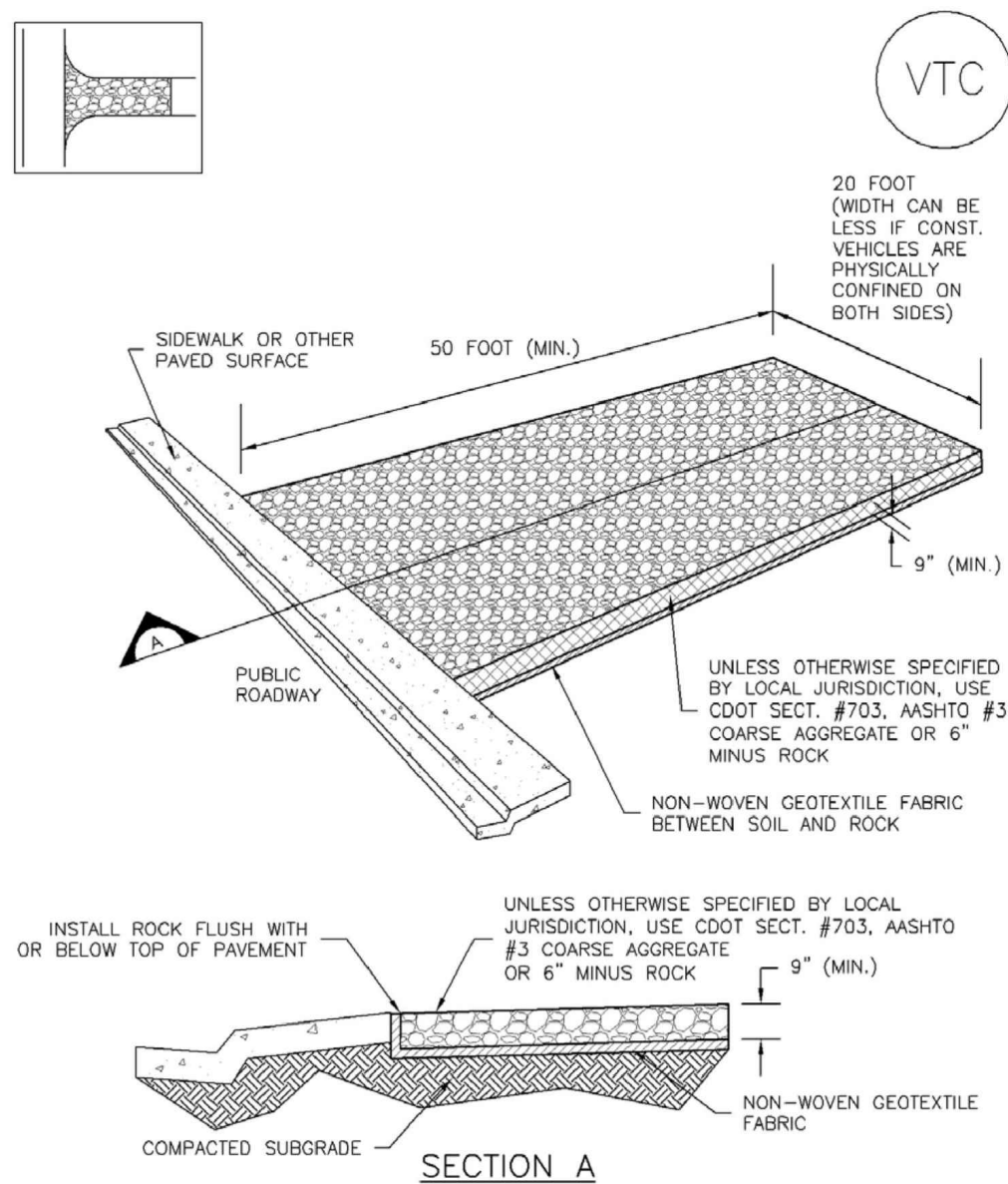
SUB SHEET NO.
C1.0

TITLE OF SHEET
**GRADING, DRAINAGE, AND
EROSION CONTROL PLAN**
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
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PMIS/PKG NO.
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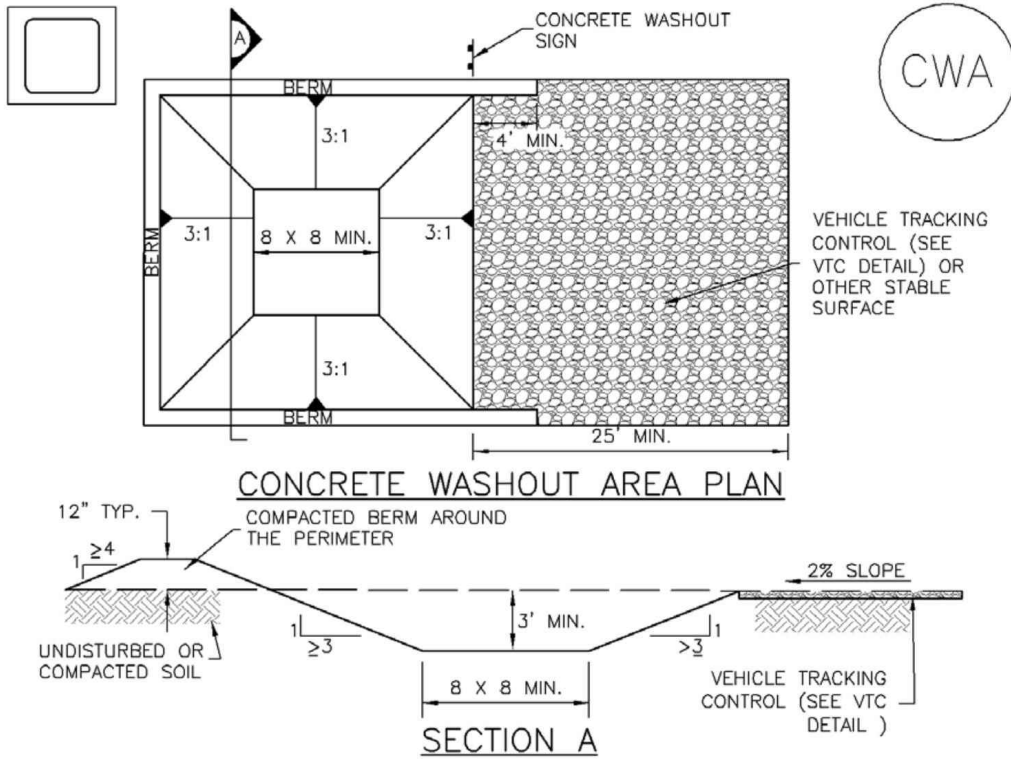
Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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Concrete Washout Area (CWA) MM-1



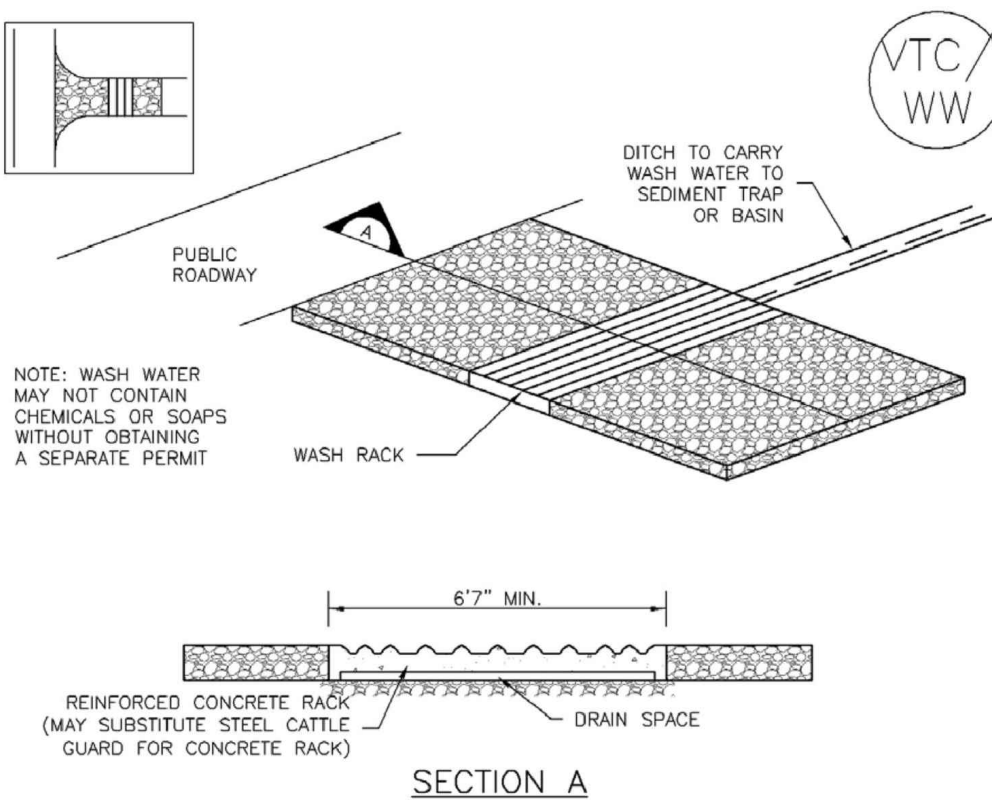
CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 6' BY 6' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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SM-4 Vehicle Tracking Control (VTC)



VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

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MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

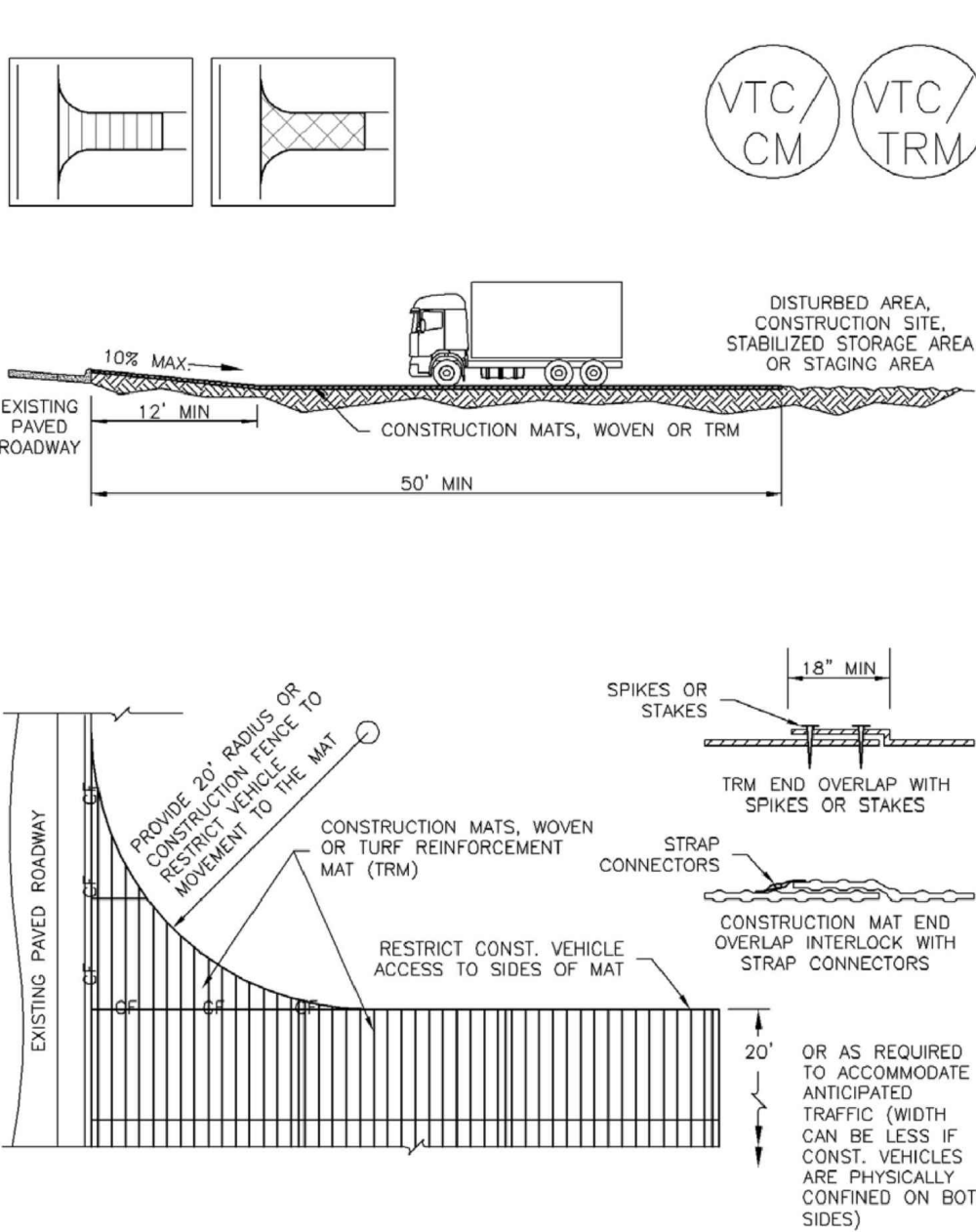
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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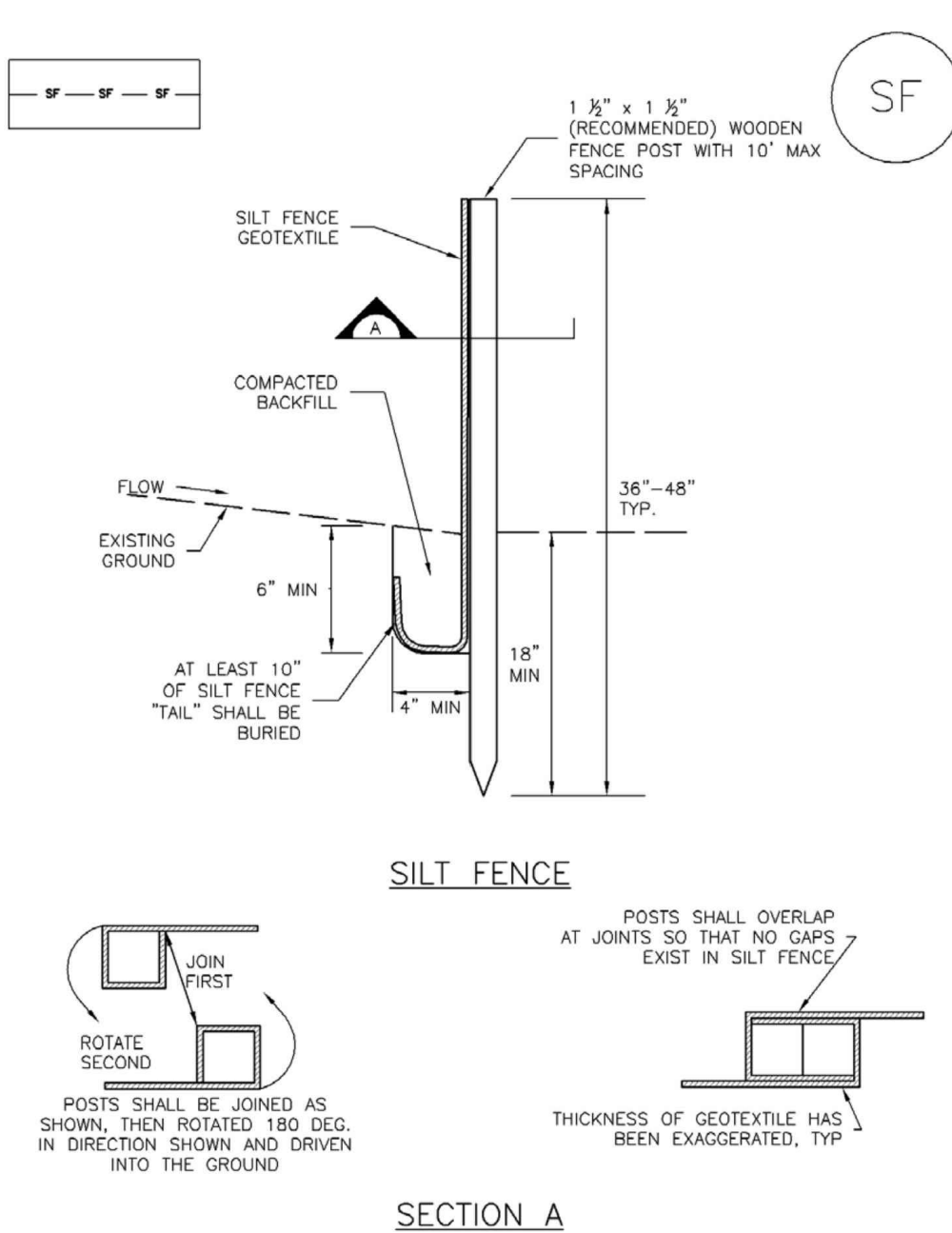
Vehicle Tracking Control (VTC) SM-4



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

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Silt Fence (SF) SC-1



SF-1. SILT FENCE

November 2010 Urban Drainage and Flood Control District SF-3
Urban Storm Drainage Criteria Manual Volume 3

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

- SEE PLAN VIEW FOR:
-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
- CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
 - SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

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SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6' X 4' ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3' ALONG THE FABRIC DOWN THE STAKE.
- AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
- SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
- WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDING AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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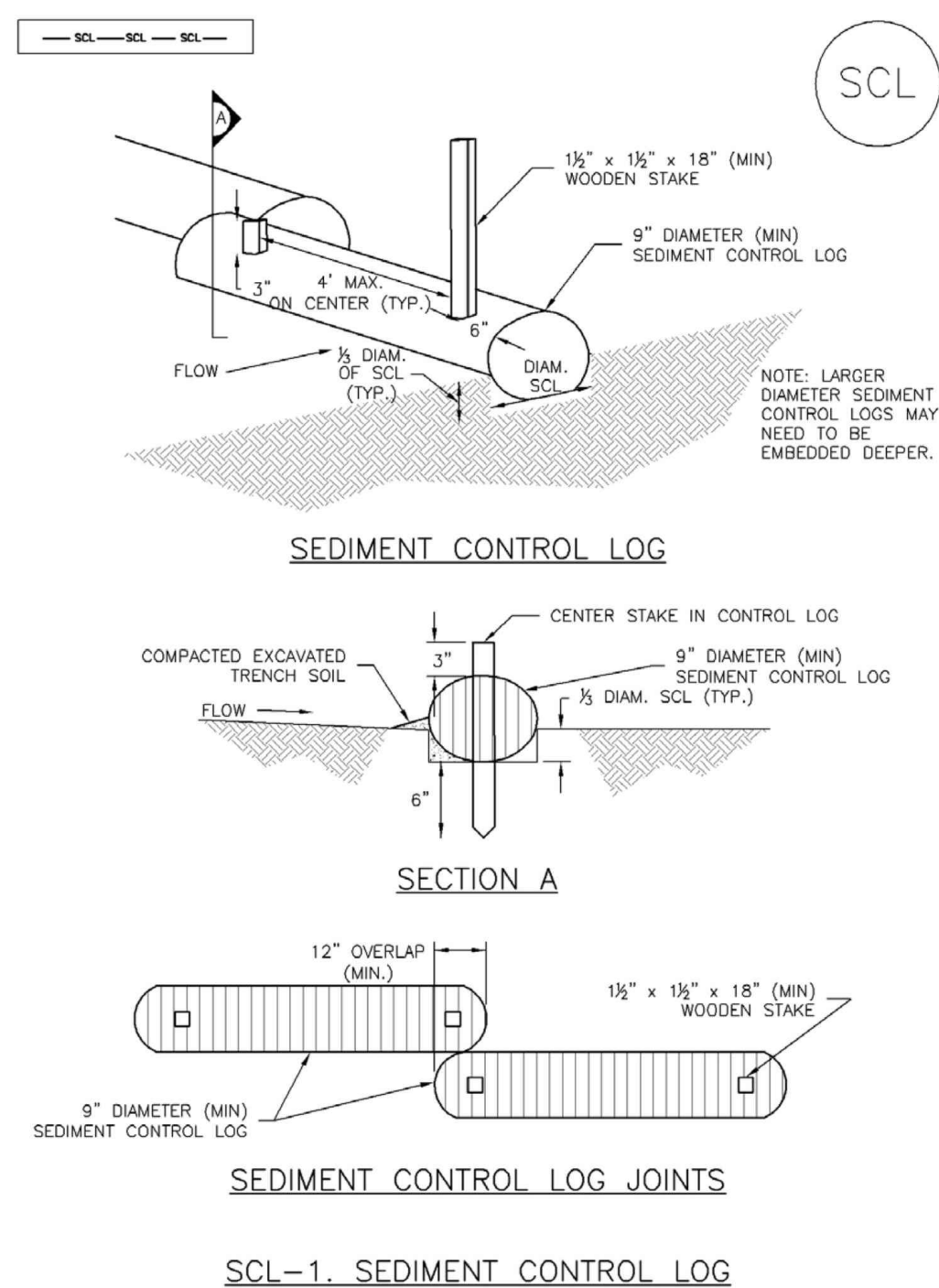
SUB SHEET NO.

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TITLE OF SHEET
**GRADING, DRAINAGE, AND
EROSION CONTROL
DETAILS**
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

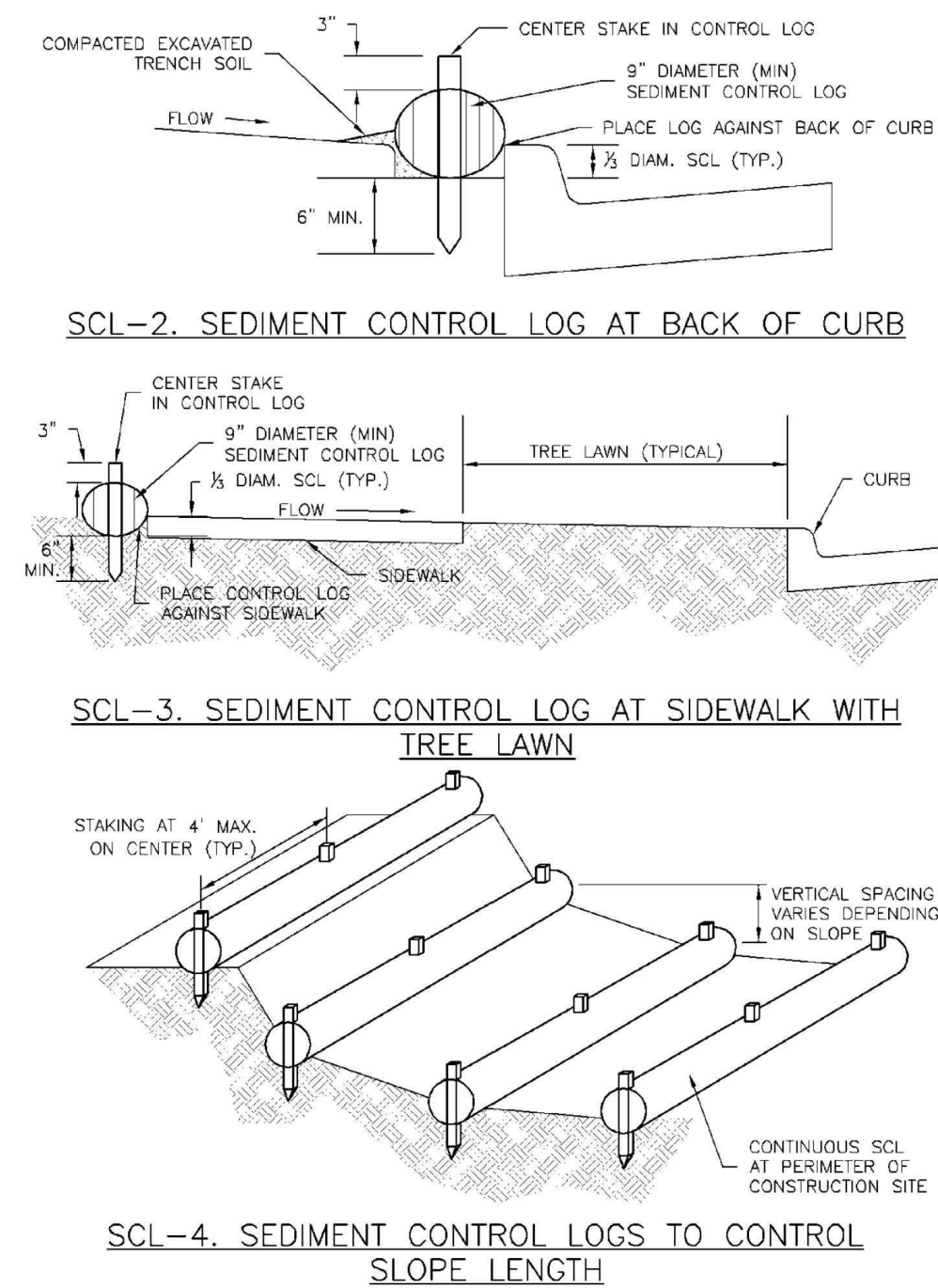
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Sediment Control Log (SCL)



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SC-2 Sediment Control Log (SCL)



SCL-4
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Urban Storm Drainage Criteria Manual Volume 3
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Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

2. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
3. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADE/LAND-DISTURBING ACTIVITIES.
4. ASPEN EXCISOR
SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COWP, COIR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WED SEEDS OR DEFECTS INCLUDING RIPS, HOLDS AND OBVIOUS WEAR.
5. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGEWAYS.
6. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DISTURBE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING.
7. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER.
8. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED AT 10' CENTERS AND EMBEDDED A MINIMUM 12" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

SEDIMENT CONTROL LOG MAINTENANCE NOTES


3. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM ANY NECESSARY MAINTENANCE.
4. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE FUNCTION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
5. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
6. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY $\frac{1}{2}$ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
7. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDS AND MULCH, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

November 2010
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3
SCL-5



DESIGNED:
CWK

ZEW
TECH. REVIEW:
CWK
DATE:
2.27.2023

SUB SHEET NO.

C1.2

TITLE OF SHEET

**GRADING, DRAINAGE, AND
EROSION CONTROL
DETAILS**

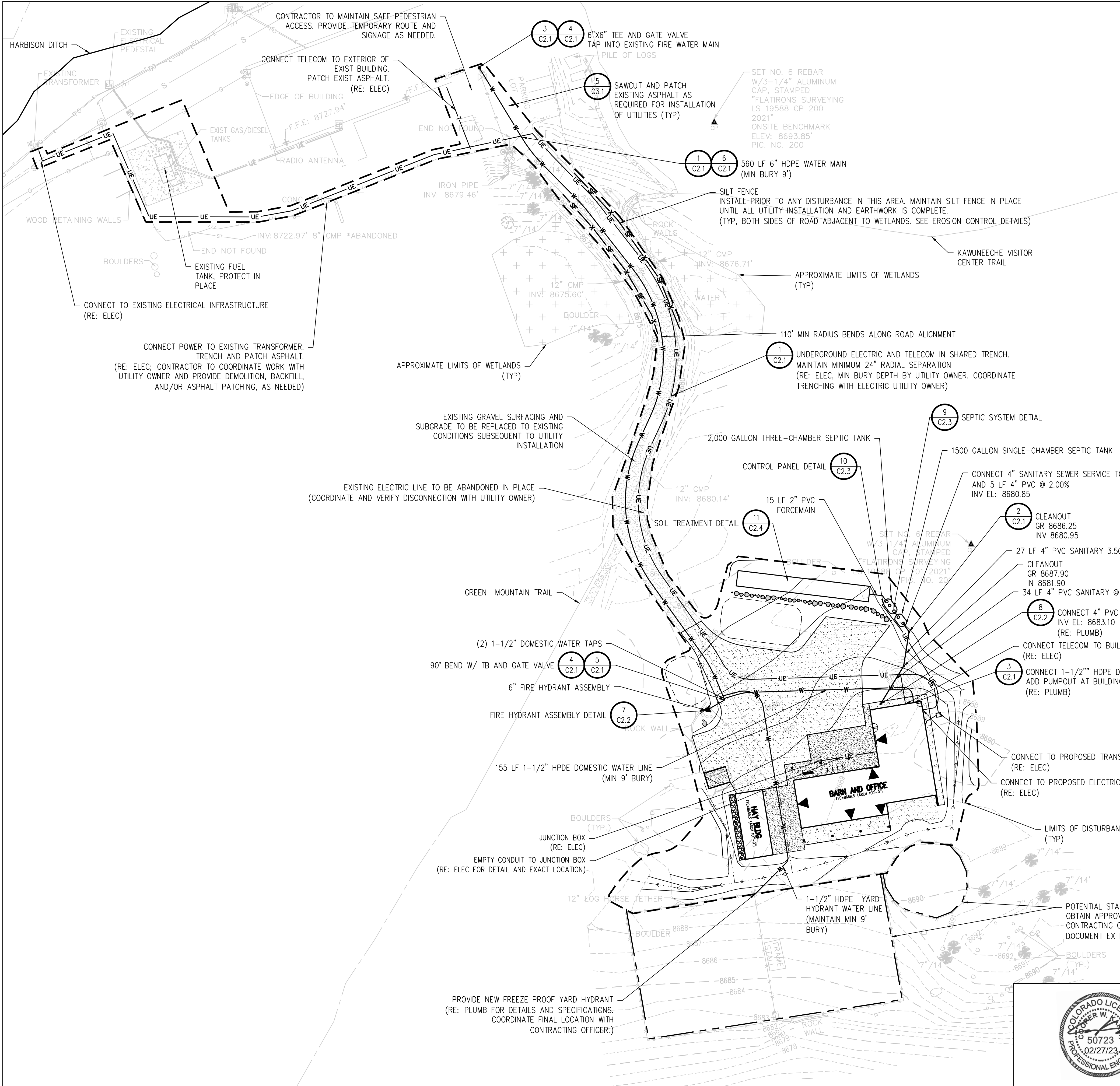
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
 175143

PMIS/PKG NO.
 316223

SHEET
11 OF 104

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ONSITE WASTEWATER TREATMENT SYSTEM DESIGN CALCULATIONS

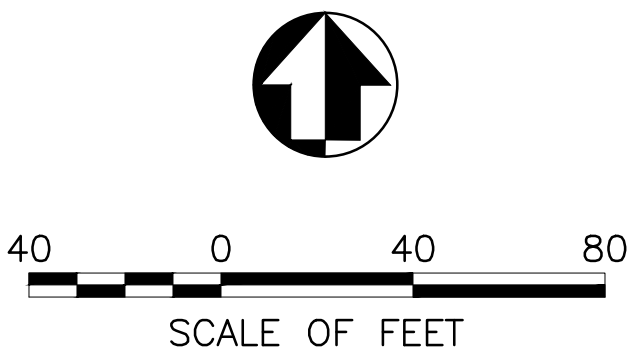
DESIGN CAPACITY	
NUMBER OF PERMANENT STAFF:	3
NUMBER OF EIGHT HOUR SHIFTS:	1
PER CAPITA FLOW RATE:	15 GPCD/SHIFT (OFFICE BUILDINGS/EMPLOYEE/SHIFT)
NUMBER OF SEASONAL STAFF:	13
PER CAPITA FLOW RATE:	5 GPCD (TRANSIENT VISITORS)
NUMBER OF HORSES:	13
NUMBER OF WASHES PER DAY:	2
PER CAPITA FLOW RATE:	48 GPCD (4 MINUTES PER WASH W/ 12 GPM HOSE)
DESIGN CAPACITY OF OWTS:	1,358 GPD

PRIMARY TREATMENT	
REQUIRED VOLUME:	48-HR DETENTION TIME 1,358 GPD * 2 DAY = 2,716 GAL
SEPTIC TANK 1:	1,500 GAL SINGLE COMPARTMENT SEPTIC TANK
SEPTIC TANK 2:	2,000 GAL THREE COMPARTMENT SEPTIC TANK 1ST COMPARTMENT VOLUME = 1,000 GALLONS 2ND COMPARTMENT VOLUME = 500 GALLONS 3RD COMPARTMENT VOLUME = 500 GALLONS
DOSING CHAMBER PUMP:	66 GPM @ 24' TDH

SOIL TREATMENT AREA (STA) CALCULATIONS	
SOIL TYPE:	R-0
TYPE OF STA:	UNLINED SAND FILTER WITH THREE FEET OF SECONDARY SAND
TREATMENT LEVEL:	TL-1
LONG TERM ACCEPTANCE RATE (LTAR):	0.8 GPD/SF (SECONDARY SAND MEDIA)
PRELIMINARY FOOTPRINT OF STA:	= 1,358/0.8 = 1,698 SF
ADJUSTMENT FACTORS FOR STA:	0.7 (INFILTRATION CHAMBERS) 1.0 (PRESSURE DOSED BED)
MIN ADJUSTED FOOTPRINT OF STA:	1,189 SF

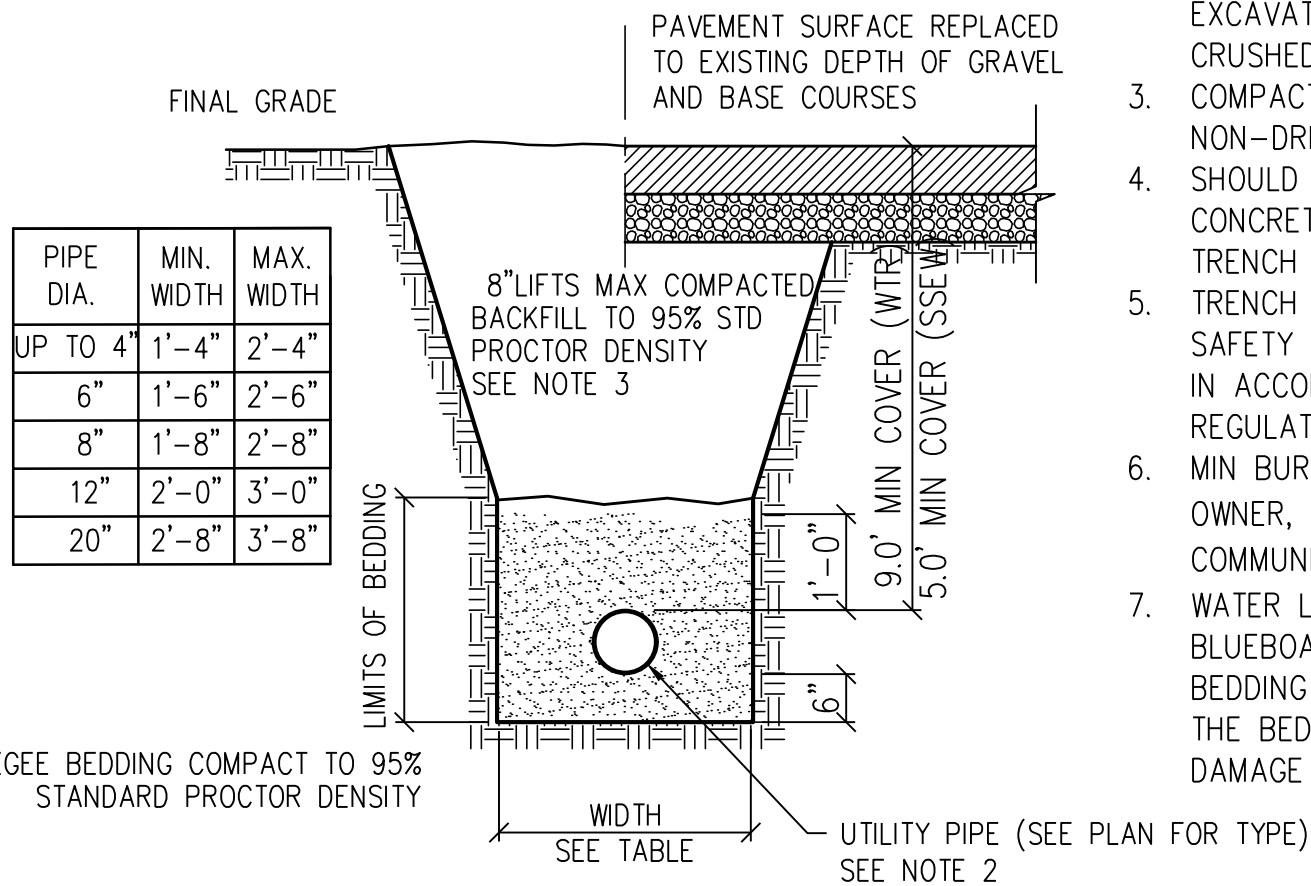
SOIL TREATMENT AREA (STA) DESIGN	
FOOTPRINT PER INFILTRATOR:	12 SF
TOTAL NUMBER OF INFILTRATORS:	100 INFILTRATORS, 1 BED WITH 4 ROWS BY 25 INFILTRATORS LONG
DESIGN FOOTPRINT OF STA:	1,200 SF

CONTROL PANEL	
MANUFACTURER:	ORENCO
MODEL:	MVP



DESIGNED: CWK ZEW	SUB SHEET NO. C2.0	TITLE OF SHEET UTILITY PLAN	DRAWING NO. 121 175143
TECH. REVIEW: CWK			PMIS/PKG NO. 316223
DATE: 2.27.2023		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	SHEET 12 of 104

2/6/2023 1:55:22 PM - Autocad Cw 3D 2022 - k:\35031c and 3503.3c-ROMO Barn and Tack Shed\Drawings\3503.1c-02-UTP-DET-01.dwg - x3503.1c-csite.dwg, x3503.1c-xsite, x3503.1c-TB-NPS-22x34



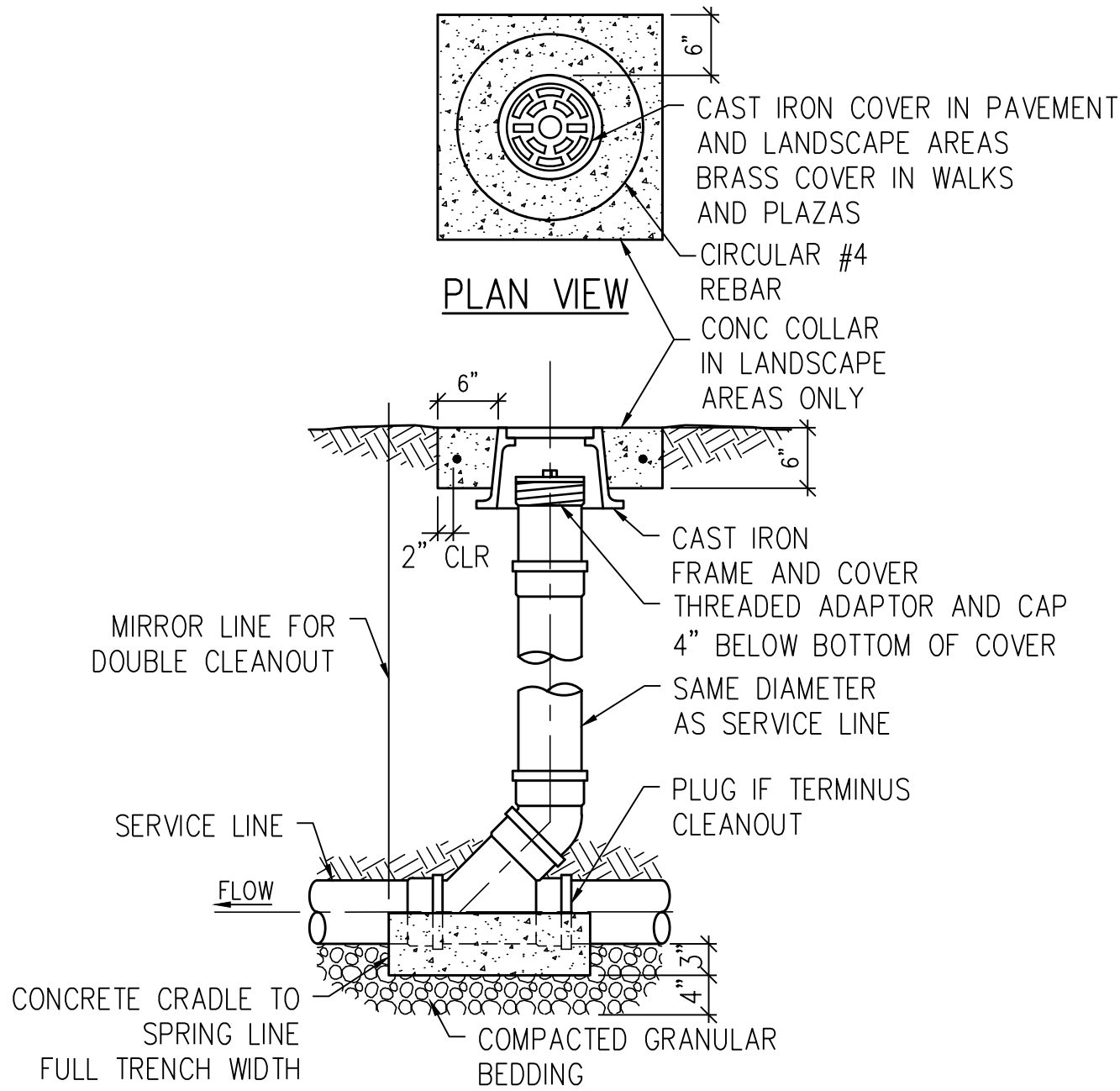
SANITARY SEWER & WATER PIPE TRENCH DETAIL

NTS

1
C2.0

NOTES:

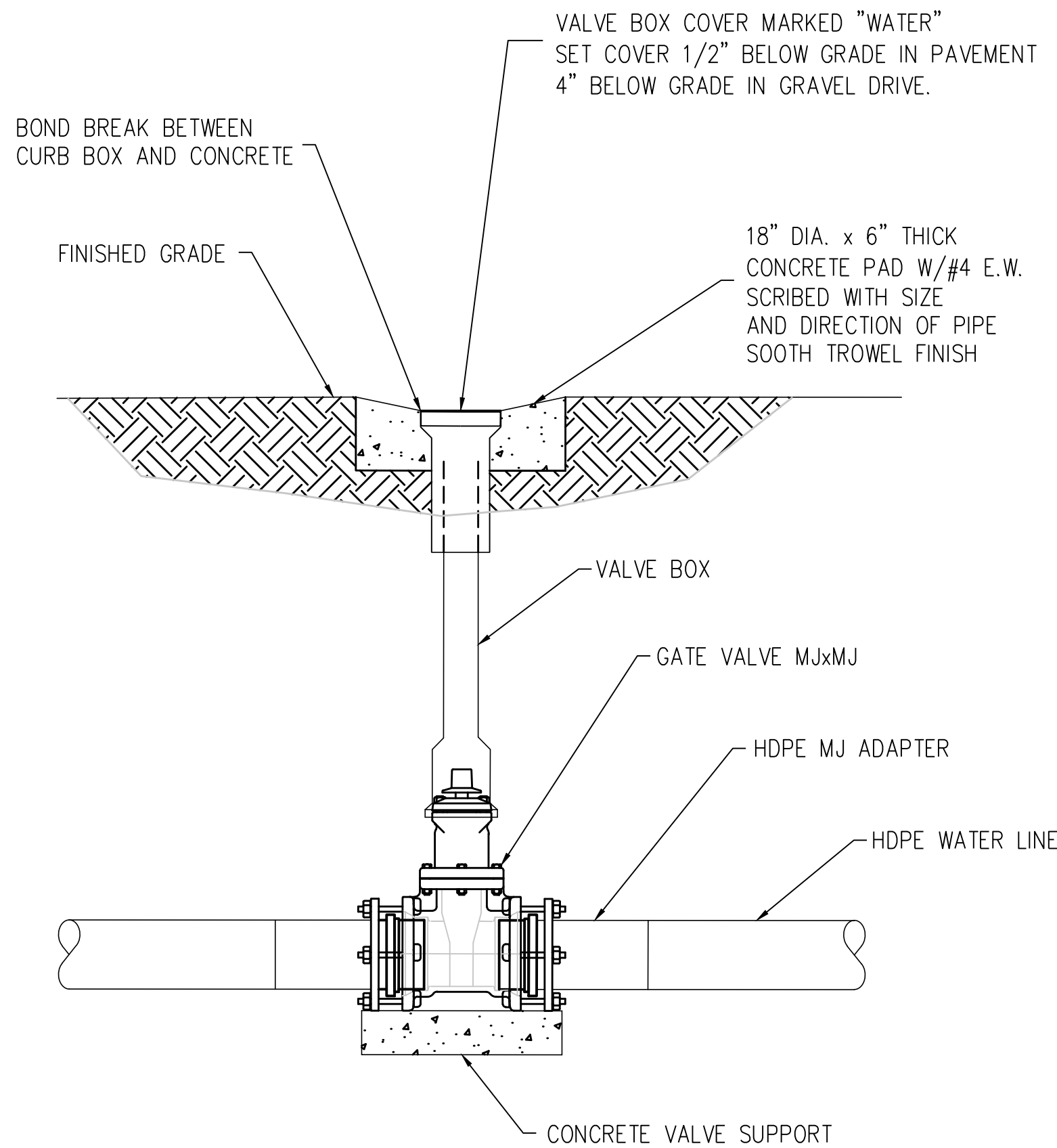
- CONTRACTOR TO STORE AND REUSE EXISTING SURFACE AND BASE COURSES ALONG EXISTING GRAVEL ROADS. MATERIALS TO BE REPLACED TO EXISTING DEPTHS. CONTRACTOR TO SUPPLEMENT ADDITIONAL MATERIALS AS NEEDED. COMPACT ALL SOILS PER SPECIFICATIONS.
- IF UNSTABLE MATERIALS ARE FOUND IN TRENCH BOTTOM, OVER EXCAVATE 12" BELOW STD EMBEDMENT AND FILL WITH 3/4" CRUSHED ROCK, COMPACTED TO 95%
- COMPACTED BACKFILL TO 90% STD PROCTOR DENSITY IN NON-DRIVING SURFACES AND 95% UNDER PAVEMENT
- SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED A CONCRETE CRADLE SHALL BE PLACED WITH 2500PSI CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE
- TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKERS AND THE PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH LOCAL STATE AND FEDERAL SAFETY REGULATIONS
- MIN BURY DEPTH OF ELECTRIC AND COMMUNICATIONS BY UTILITY OWNER, OR 30" MIN, WHICHEVER IS GREATER. ELECTRIC AND COMMUNICATIONS LINES SHALL ALSO MAINTAIN 12" OF SEPARATION
- WATER LINE MAY BE INSTALLED BETWEEN 7' AND 9' DEEP IF 2" OF BLUEBOARD INSULATION IS PLACED ACROSS THE TOP OF THE BEDDING MATERIAL. INSULATION SHALL BE PROTECTED FROM DAMAGE DURING BACKFILL COMPACTION.



SANITARY CLEANOUT DETAIL

NTS

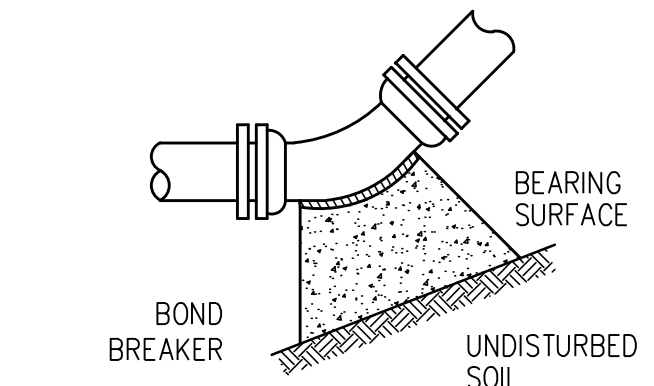
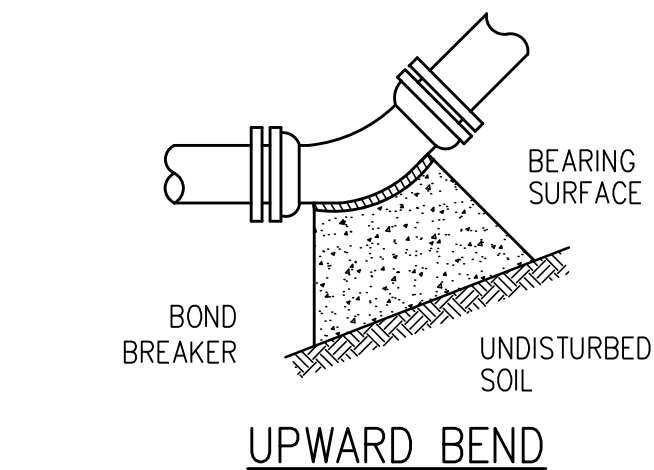
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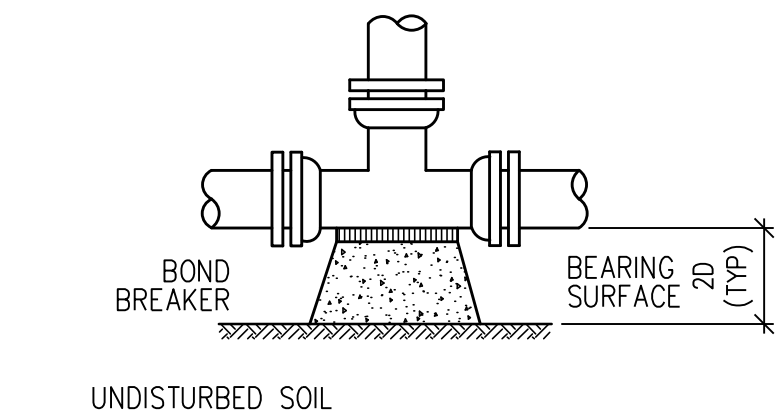
GATE VALVE DETAIL

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11-1/4", 22-1/2", 45° & 90° BENDS



TEE

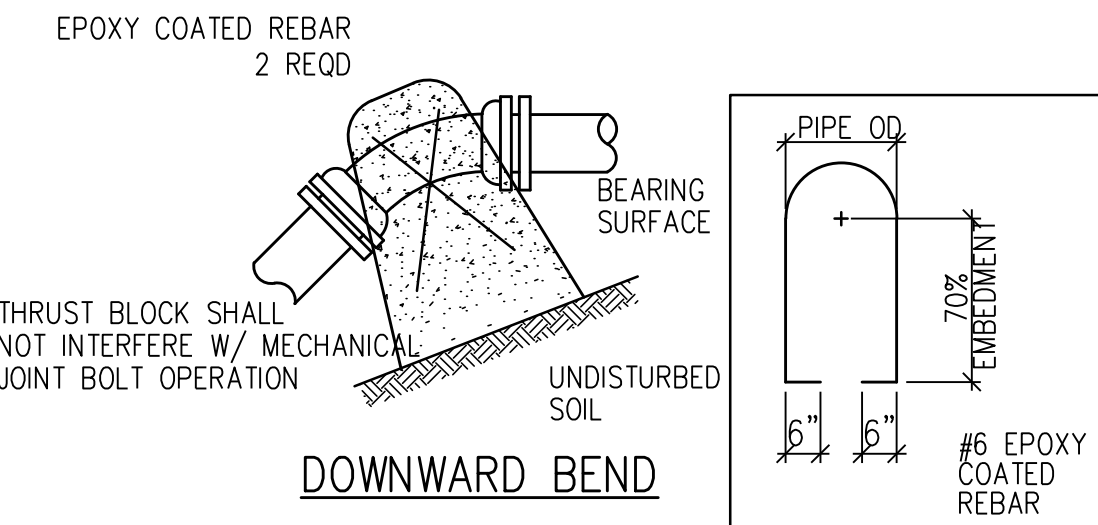
SIZE OF PIPE	TEE OR DEAD END	SURFACE AREA (SQ FT)					CONC VOL (CU YD)
		11-1/4"	22-1/2"	45°	90°	VERT 45°	
4"	1.50	1.00	1.00	1.00	2.0	0.34	
6"	3.00	1.00	1.25	2.25	4.5	0.71	
8"	5.25	1.00	2.00	4.00	8.0	1.22	
12"	11.25	2.25	4.50	8.75	17.0	1.83	
16"	19.00	3.50	7.50	14.50	27.00	2.59	
20"	25.00	5.00	10.00	19.50	35.50	6.93	
24"	36.00	6.50	14.00	27.75	51.00	9.88	

MINIMUM BEARING SURFACE AREA (IN SQUARE FEET)

CONCRETE THRUST BLOCK DETAIL

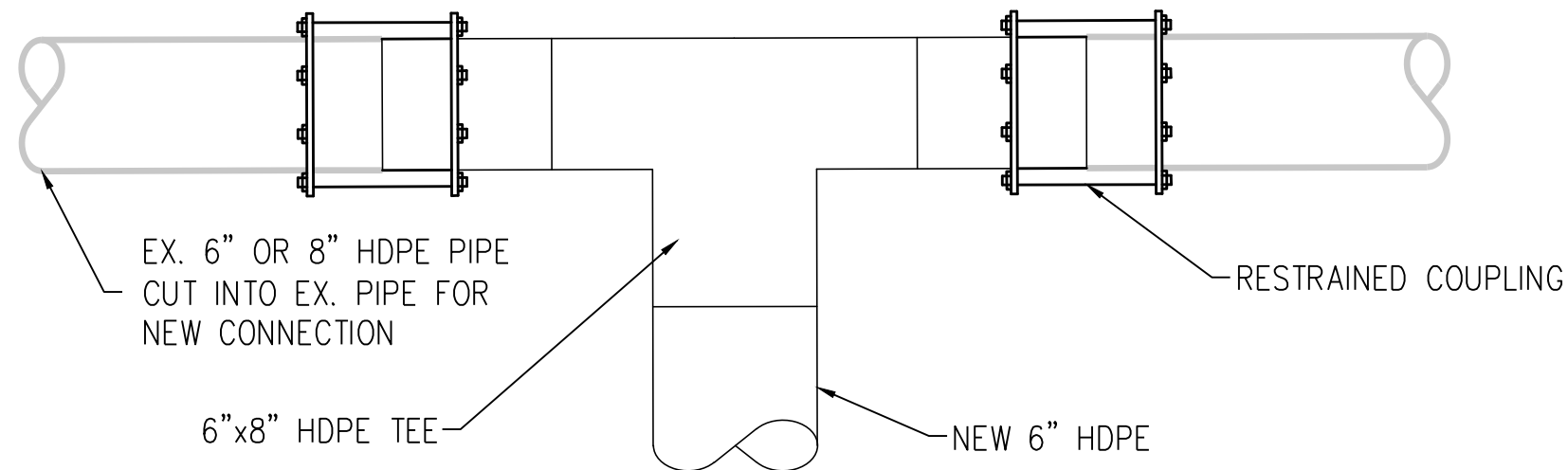
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NOTES:

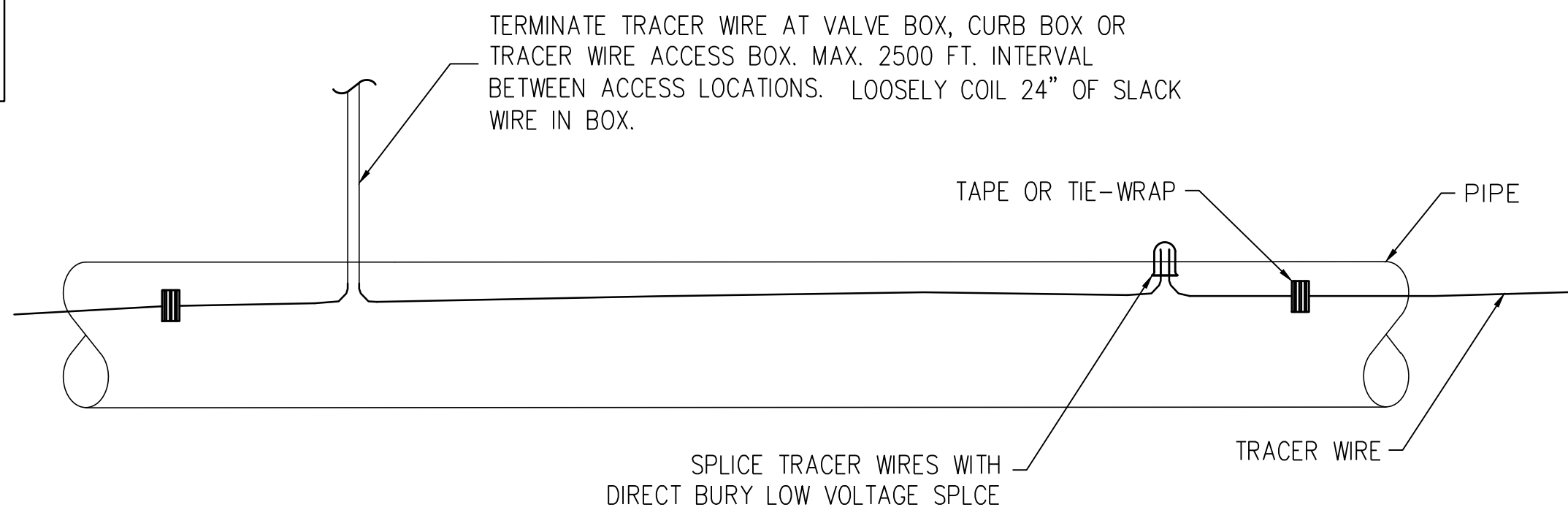
- BEARING SURFACES SHOWN IN CHART ARE MINIMUM SQUARE FEET
- BASED ON 150 PSI INTERNAL PIPE PRESSURE PLUS WATER HAMMER. 4", 6", 8", & 12" WATER HAMMER = 110 PSI 16", 20" AND 24" WATER HAMMER = 70 PSI
- BASED ON 3000psf SOIL BEARING CAPACITY
- USE TYPE II PORTLAND CEMENT 3000 PSI CONCRETE
- ALL VALVES, TEES, BENDS AND PLUGS SHALL BE RESTRAINED AND KICKBLOCKED



TEE TO EXISTING HDPE DETAIL

NTS

3
C2.0



TRACER WIRE DETAIL

NTS

6
C2.0



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DATE:
2.27.2023

SUB SHEET NO.

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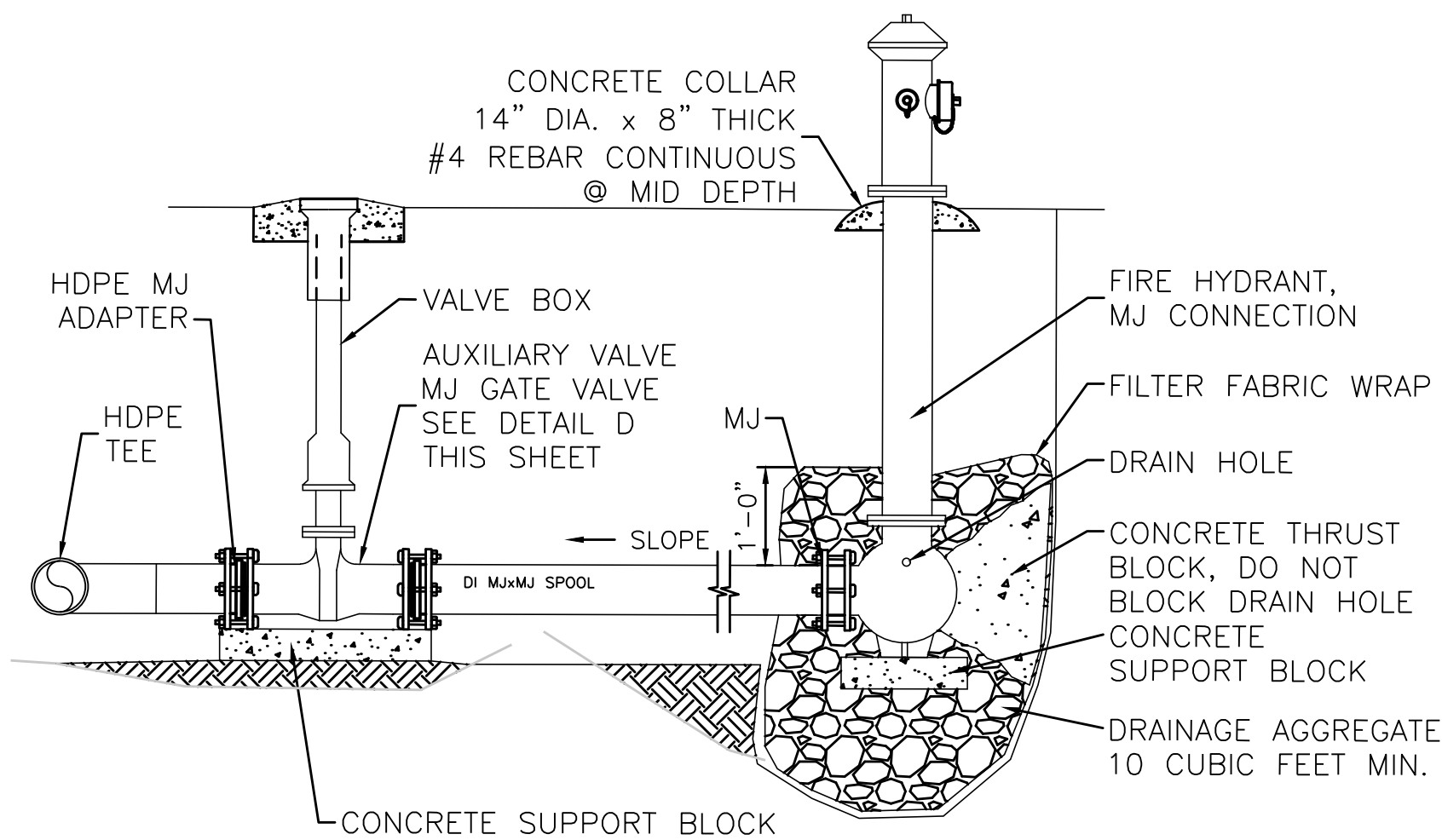
TITLE OF SHEET

UTILITY DETAILS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
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316223
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13 of 104

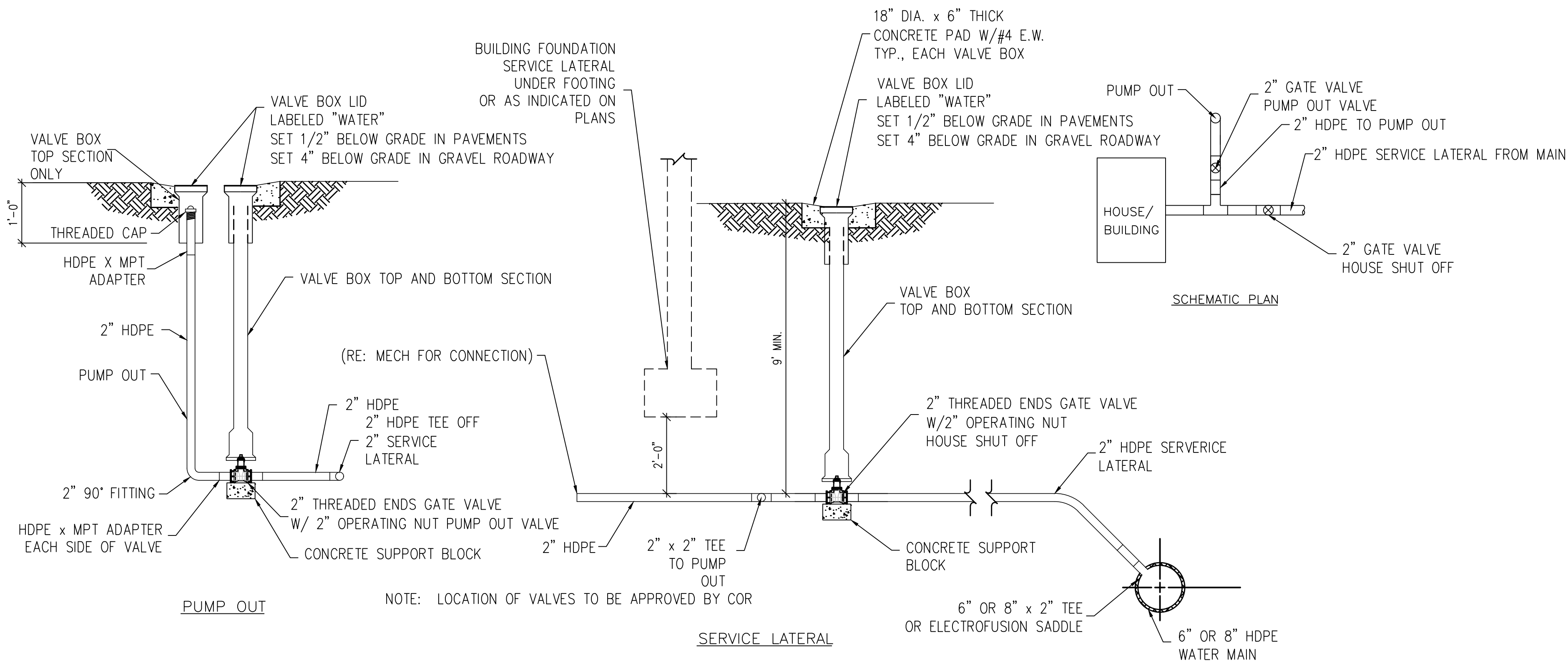
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FIRE HYDRANT ASSEMBLY DETAIL

NTS

7
C2.0



TYPICAL SERVICE CONNECTION/PUMP OUT

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DATE:
2.27.2023

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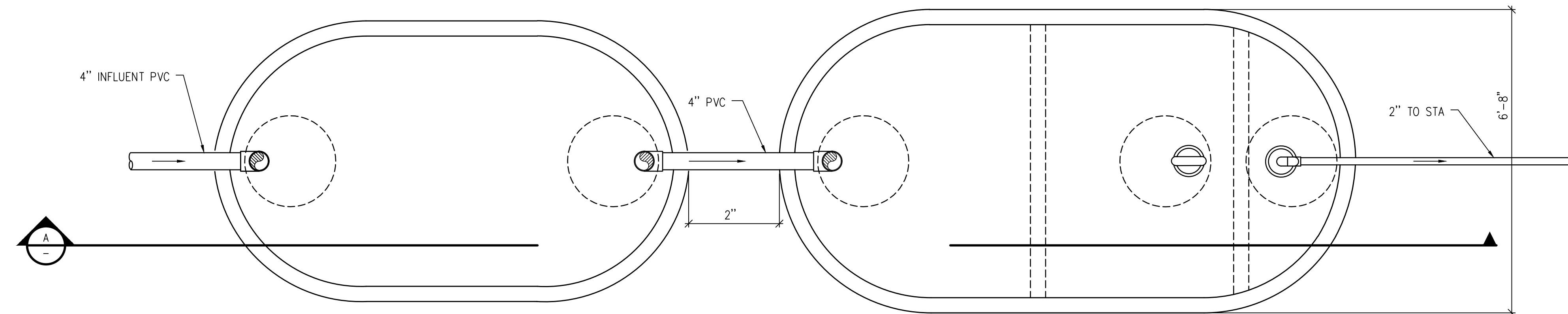
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TITLE OF SHEET

UTILITY DETAILS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

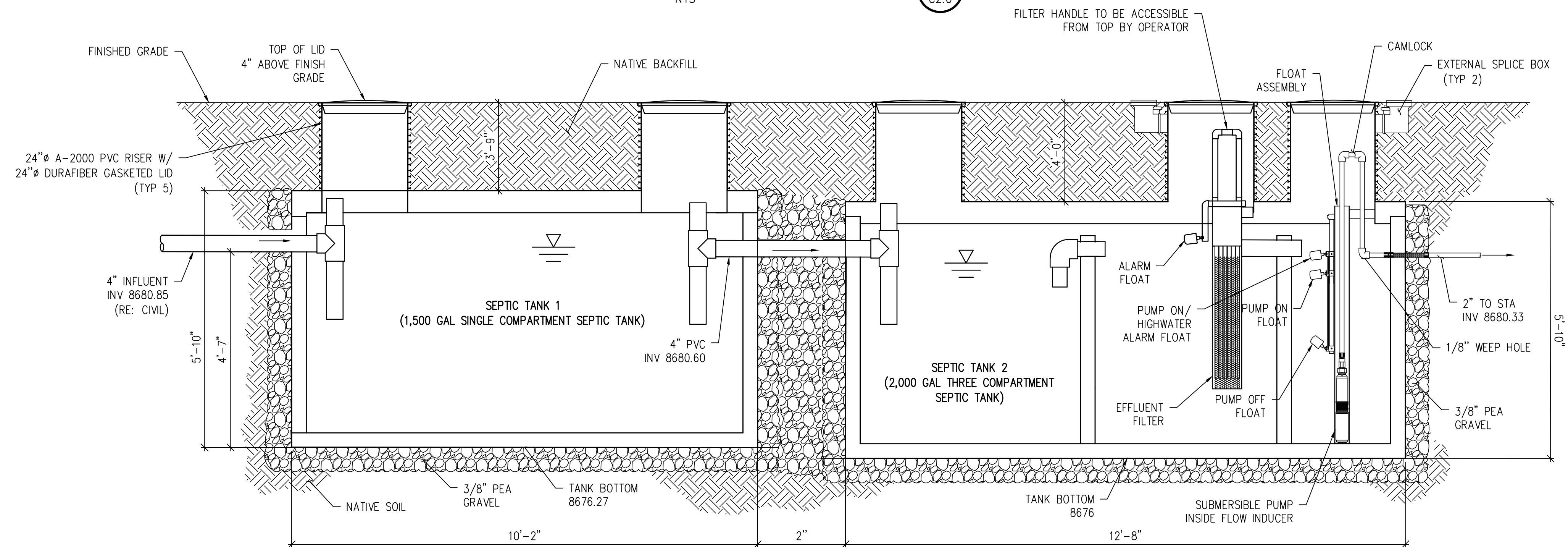
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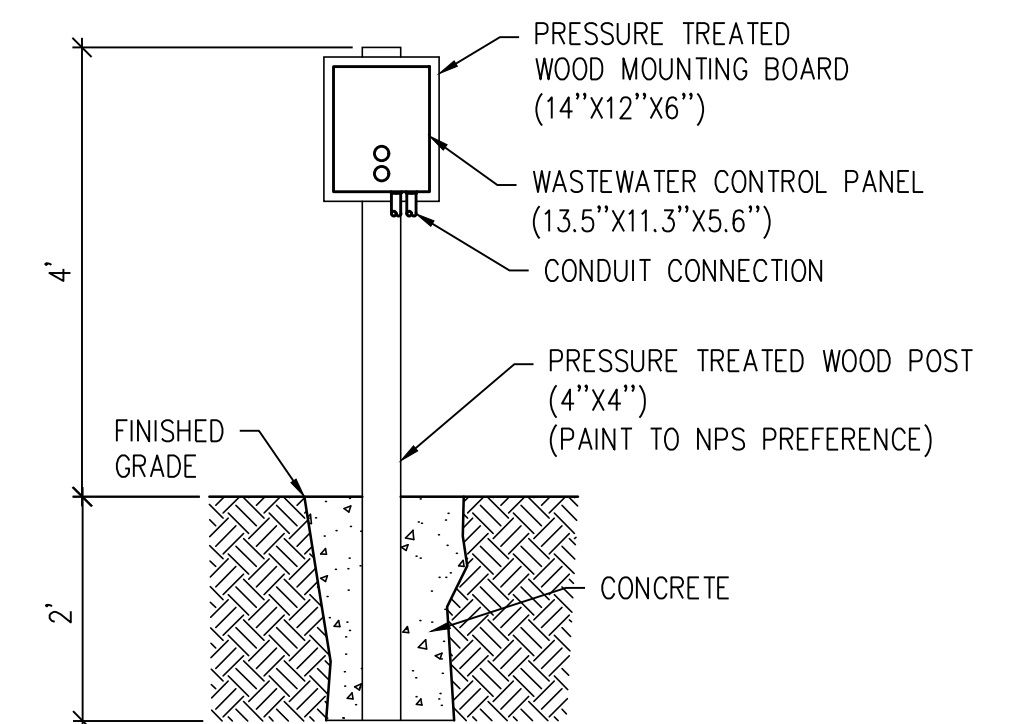
SEPTIC SYSTEM PLAN

NTS

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C2.0



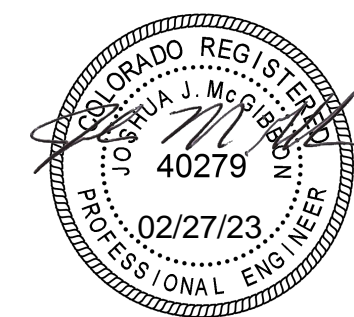
SECTION A
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CONTROL PANEL DETAIL

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SUB SHEET NO.

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TITLE OF SHEET

OWTS DETAILS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.

121

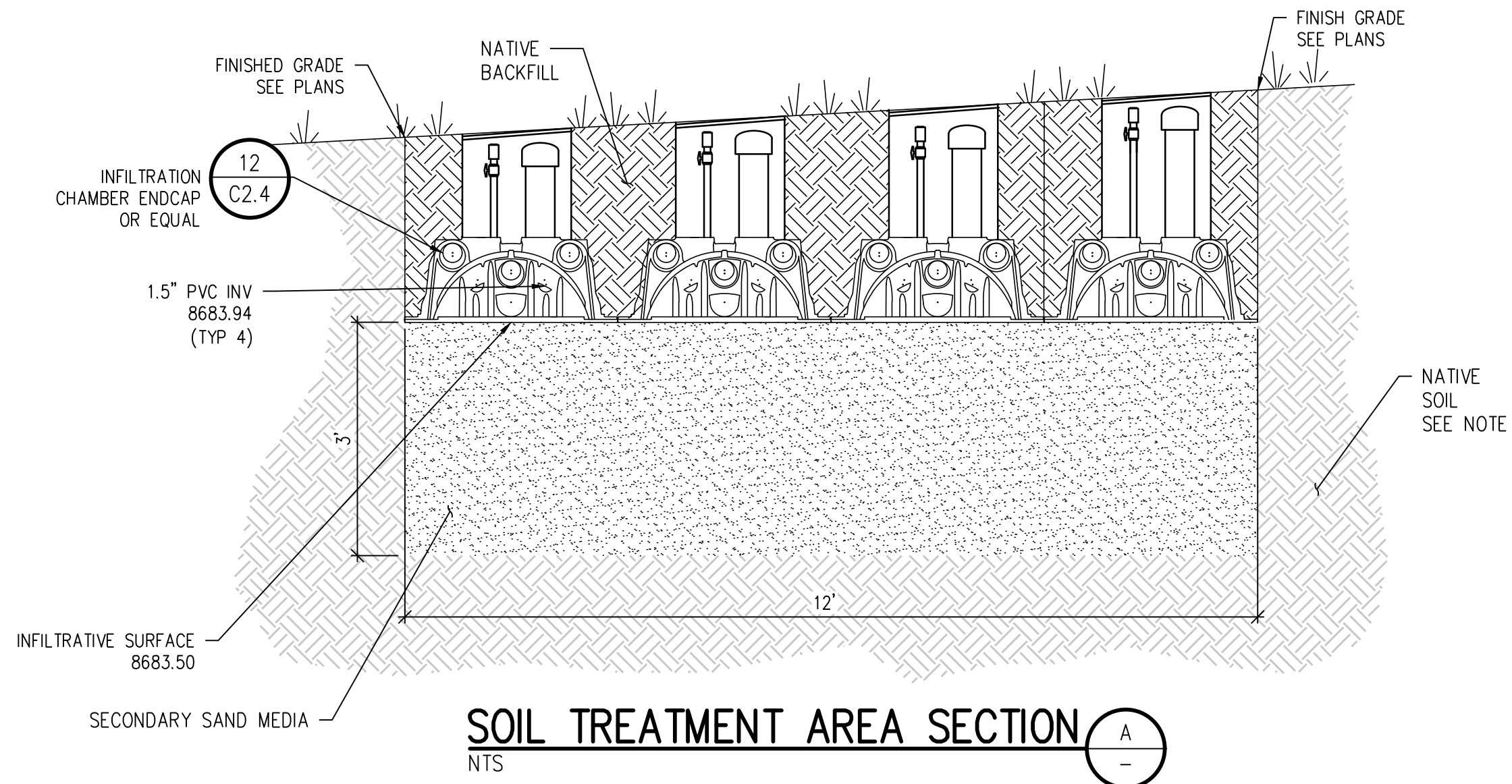
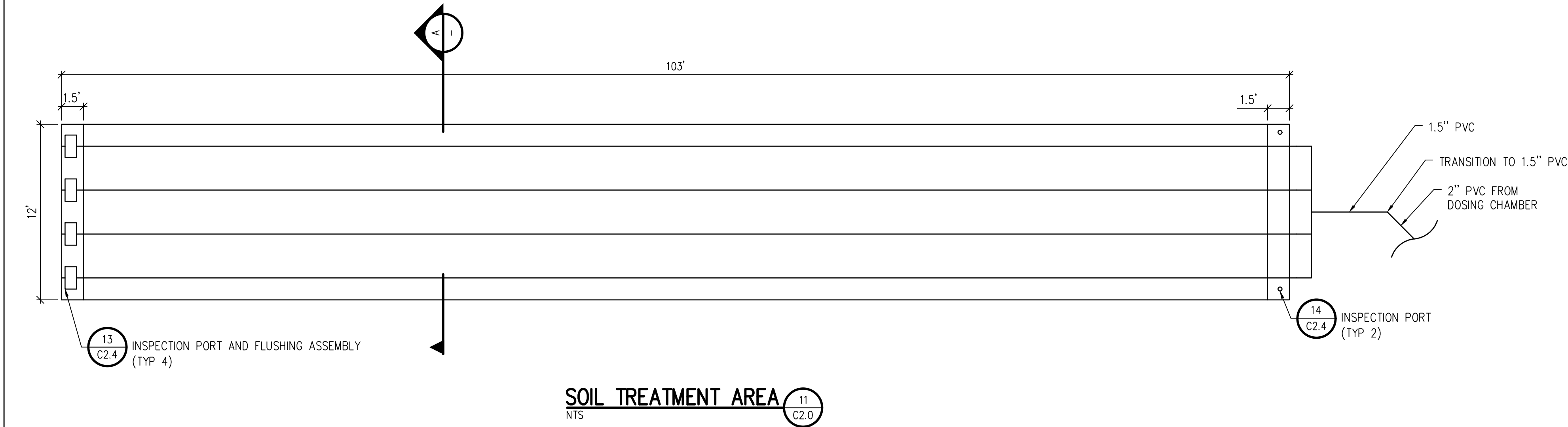
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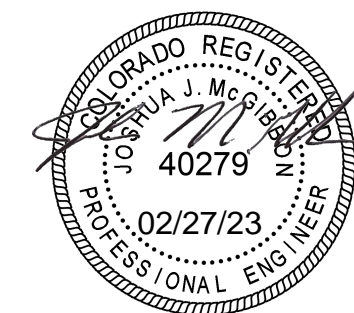
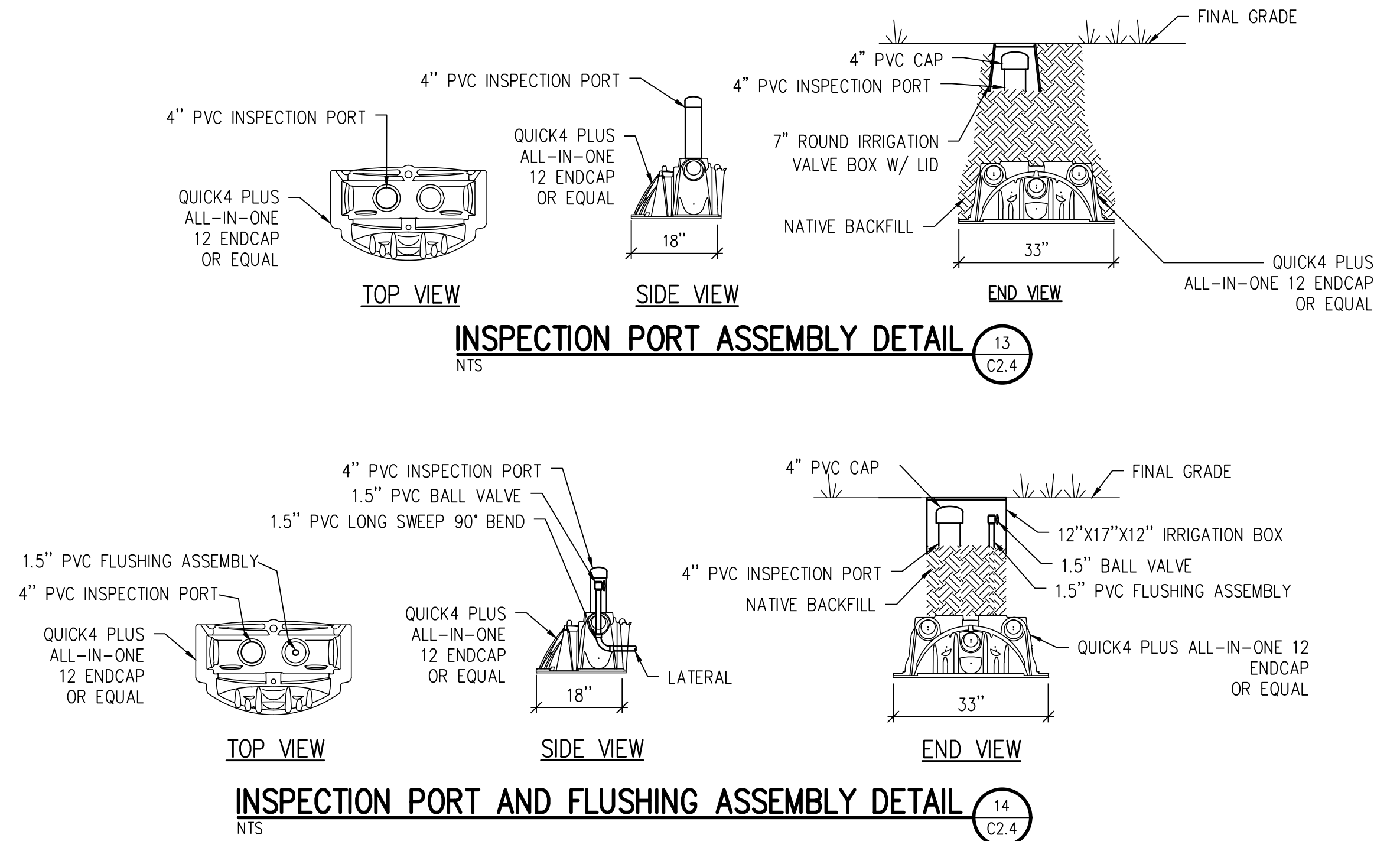
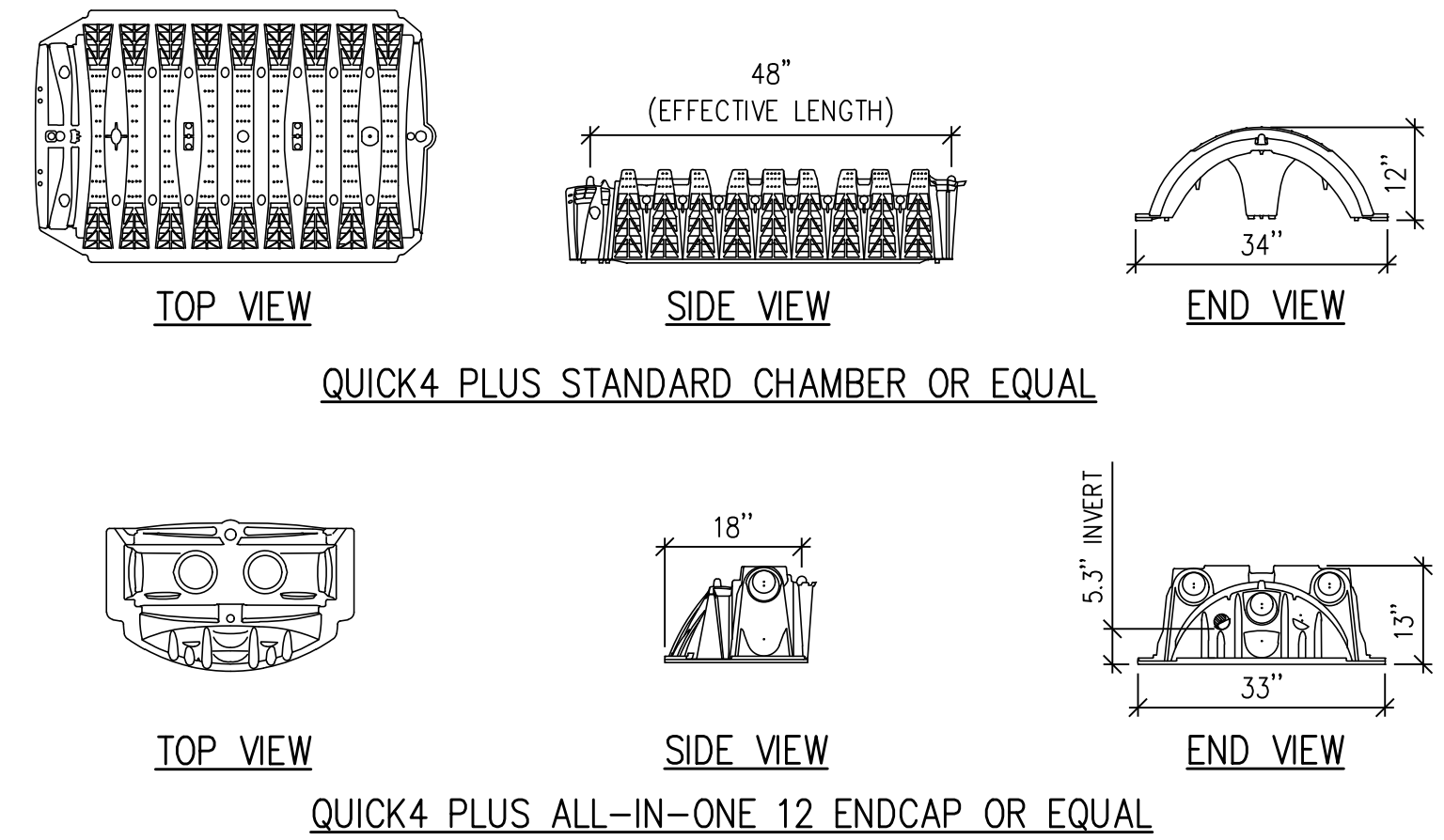
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NOTE:
1. CONTRACTOR TO COORDINATE WITH CONTRACTING OFFICER PRIOR TO INSTALLATION OF THE OWTS TO CONFIRM SOIL CONDITIONS

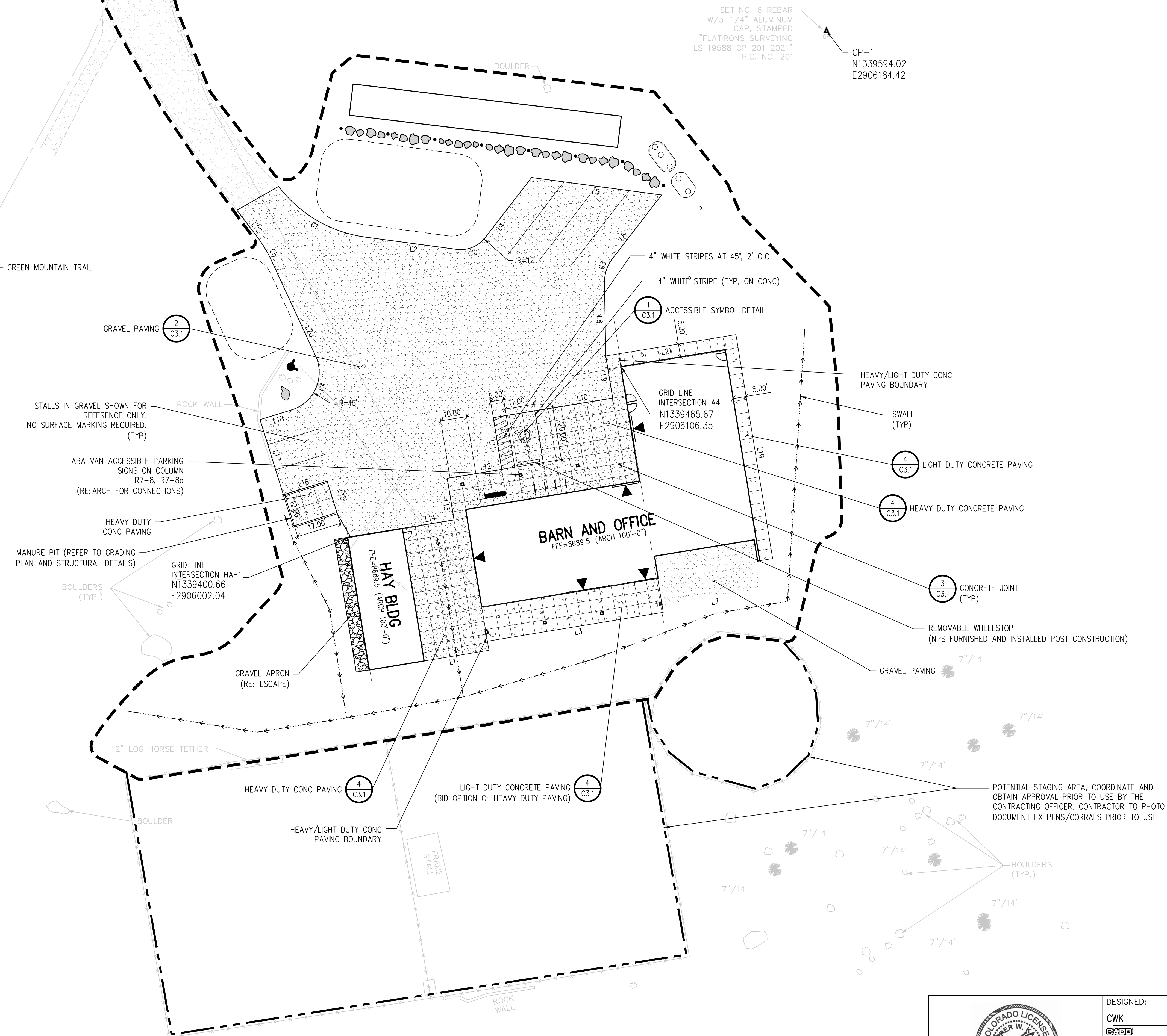


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TITLE OF SHEET
OWTS DETAILS
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
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HORIZONTAL CONTROL NOTES:

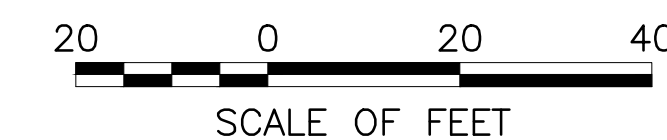
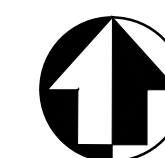
1. ALL DIMENSIONS AND RADII ARE TO FACE OF CURB, FACE OF BUILDING AND EDGE OF WALK UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO REPAIR/REPLACE ALL DAMAGE TO EXISTING FLATWORK OR SITE FEATURES NOT INTENDED FOR DEMOLITION.
3. REFER TO GRADING AND DRAINAGE PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD LEN	START (N. E)
C1	39.39	50.00	45°08'31"	N59°45'11"W	38.38	(1339515.37, 2906008.67)
C2	12.57	12.00	60°00'00"	S67°40'33"W	12.00	(1339515.27, 2906054.34)
C3	10.13	15.00	38°41'01"	N18°20'02"E	9.94	(1339497.85, 2906099.74)
C4	25.55	15.00	97°34'39"	S23°57'50"W	22.57	(1339470.09, 2905989.61)
C5	10.78	50.00	12°21'27"	S31°00'13"E	10.76	(1339515.49, 2905967.33)

LINE TABLE

LINE	LENGTH	DIRECTION	START (N, E)
L1	25.03	N80° 41' 24"E	(1339353.74, 2906031.00)
L2	34.88	N82° 19' 27"W	(1339510.71, 2906043.24)
L3	67.92	N80° 41' 24"E	(1339361.26, 2906055.14)
L4	28.85	S37° 40' 33"W	(1339538.10, 2906071.97)
L5	50.00	N82° 19' 27"W	(1339531.42, 2906121.52)
L6	30.51	N37° 40' 33"E	(1339507.28, 2906102.87)
L7	38.48	N80° 17' 22"E	(1339374.92, 2906121.73)
L8	27.79	N1° 00' 28"W	(1339470.06, 2906100.23)
L9	16.28	N9° 18' 36"W	(1339453.99, 2906102.87)
L10	46.09	N80° 41' 38"E	(1339446.54, 2906057.38)
L11	20.00	N9° 18' 20"W	(1339426.80, 2906060.62)
L12	21.07	N80° 41' 24"E	(1339423.39, 2906039.82)
L13	16.08	N9° 18' 36"W	(1339407.53, 2906042.43)
L14	19.97	N80° 41' 14"E	(1339404.30, 2906022.72)
L15	12.50	S17° 19' 31"E	(1339422.36, 2905995.97)
L16	19.36	N72° 45' 10"E	(1339417.09, 2905977.33)
L17	30.00	S17° 14' 50"E	(1339445.74, 2905968.44)
L18	12.57	S72° 45' 10"W	(1339449.47, 2905980.45)
L19	86.57	N9° 18' 36"W	(1339392.77, 2906163.89)
L20	39.86	S24° 49' 29"E	(1339506.27, 2905972.88)
L21	50.31	S80° 41' 24"W	(1339478.20, 2906149.88)
L22	12.74	S37° 10' 56"E	(1339525.64, 2905959.64)



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SUB SHEET NO.

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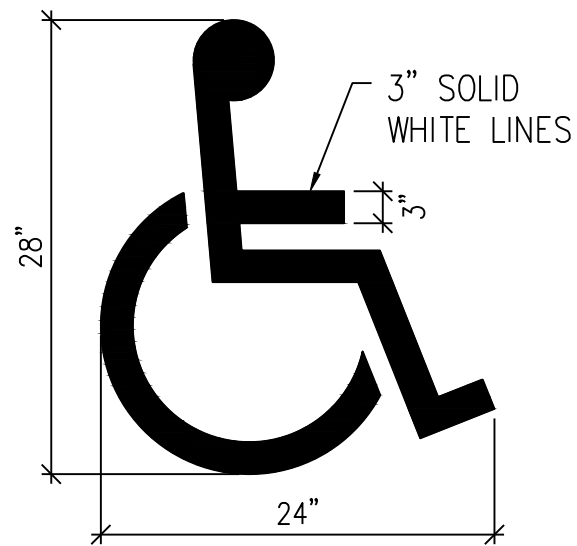
TITLE OF SHEET

**HORIZONTAL CONTROL
PLAN**

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

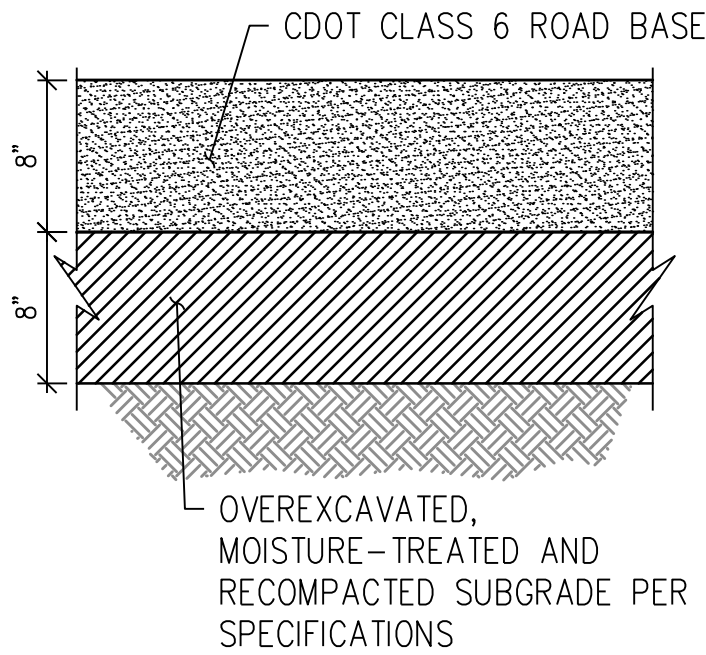
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SHEET	316223
	17 OF 104

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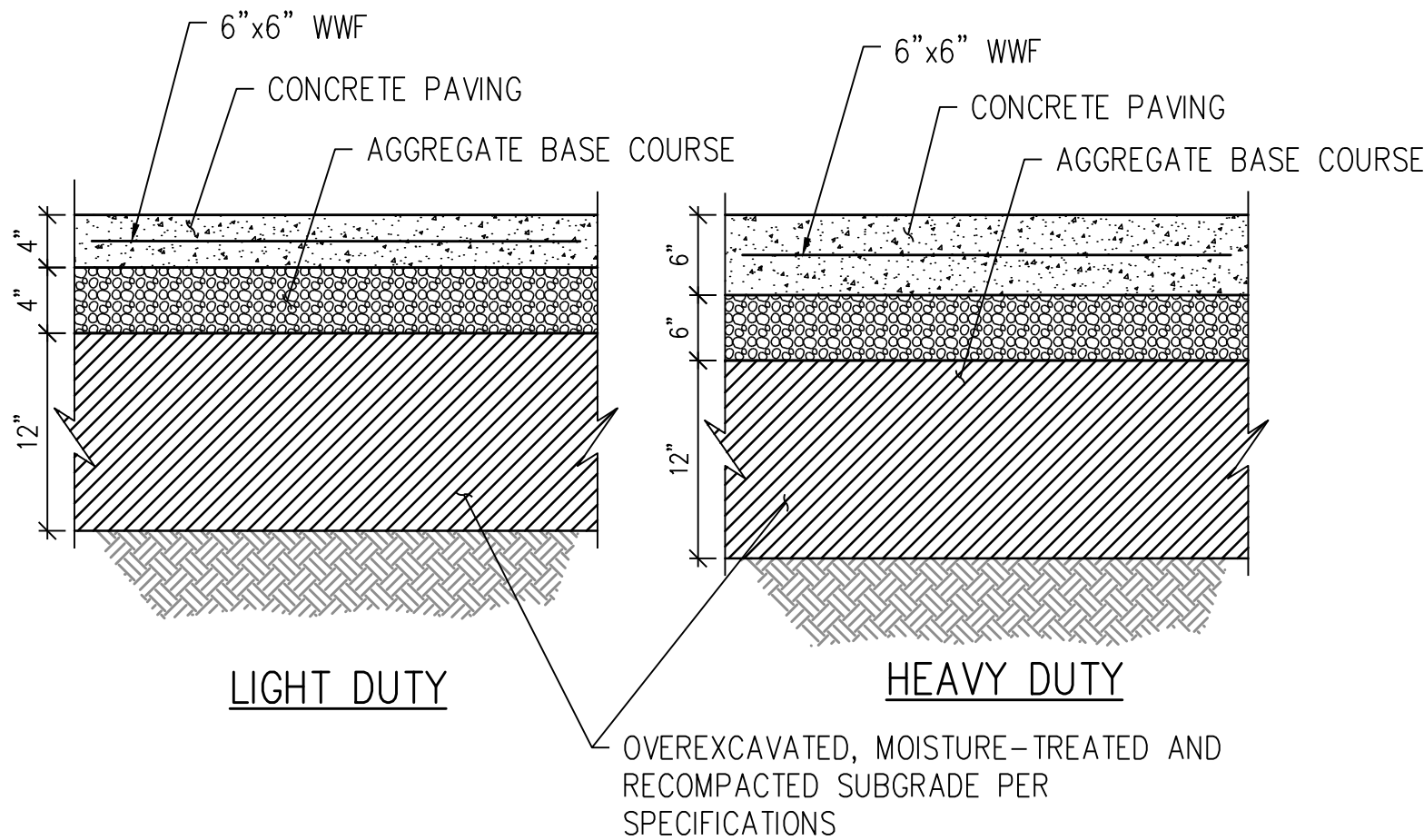
- NOTES:**
1. INCLUDE BLUE SURROUND AND INFILL PER CURRENT MUTCD STANDARDS.

ACCESSIBLE SYMBOL DETAIL 1
NTS C3.0



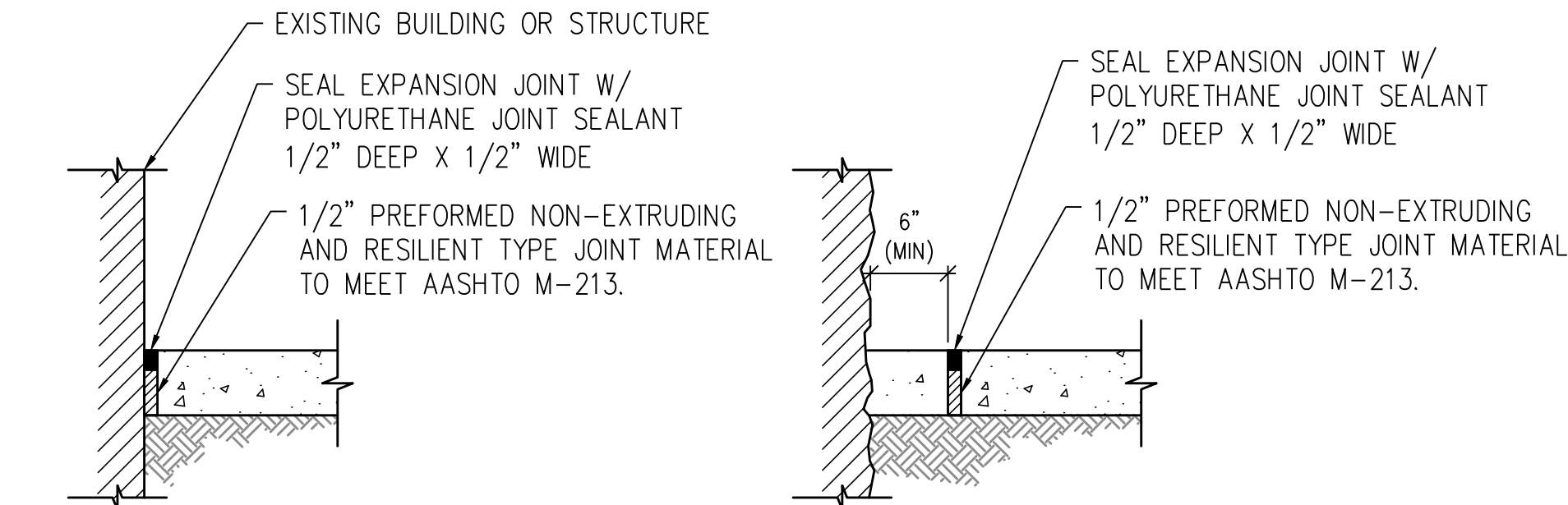
- NOTES:**
1. ROAD BASE TO BE BROWN OR GRAY IN COLOR. RED MATERIAL WILL NOT BE ACCEPTABLE.

GRAVEL PAVING SECTION DETAIL 2
NTS C3.0



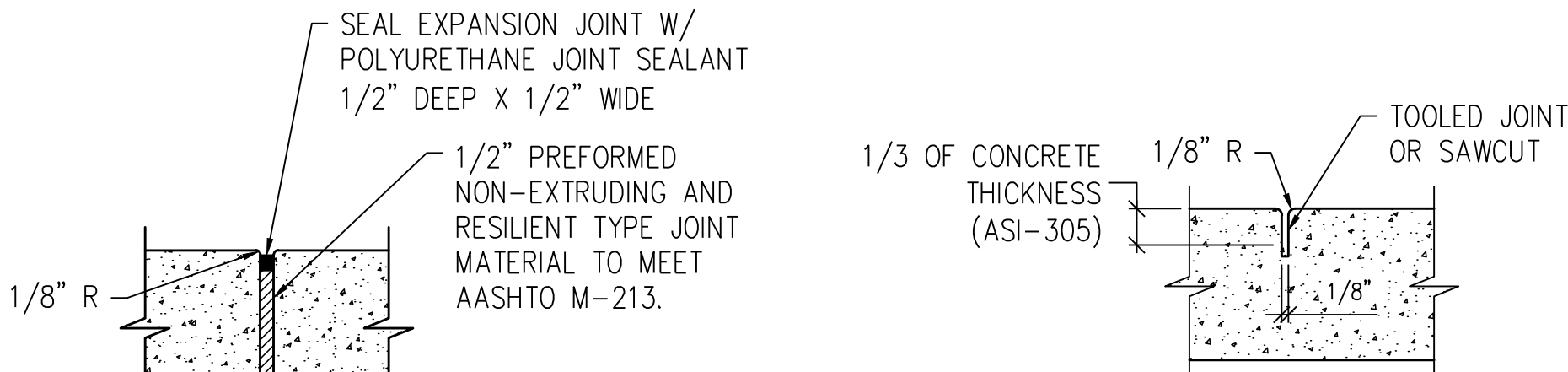
- NOTES:**
1. SEE SPECIFICATIONS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS
 2. SEE CONTRACTION JOINT AND EXPANSION JOINT DETAILS
 3. ALL CONCRETE PAVING TO BE YOSEMITE BROWN. PROVIDE MOCKUPS PER SPECIFICATIONS.

COMPOSITE CONCRETE PAVEMENT SECTION DETAIL 4
NTS C3.0



EXPANSION JOINT AGAINST STRUCTURE

EXPANSION JOINT AGAINST NON-UNIFORM SURFACE



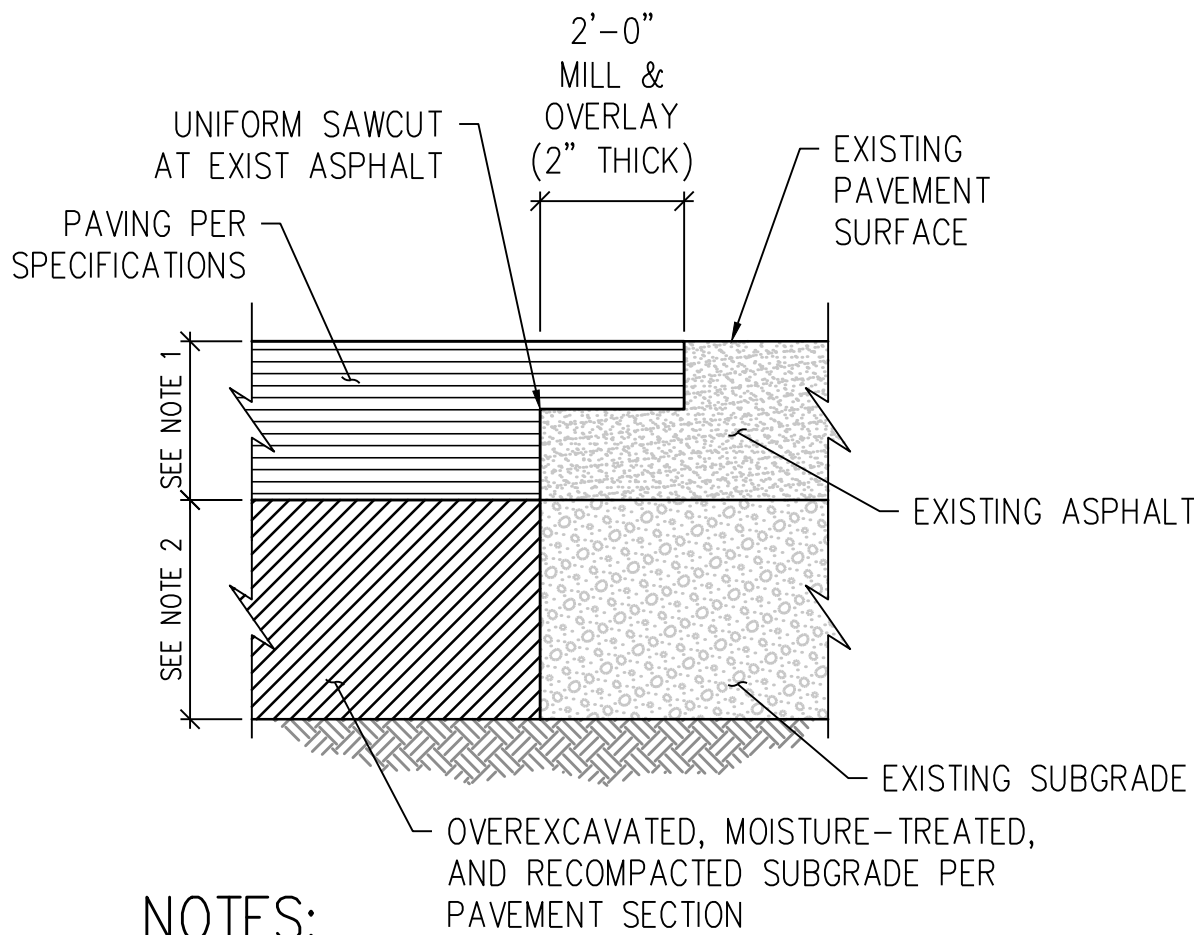
EXPANSION JOINT AT SIDEWALK

- NOTE:**
1. CONTRACTION JOINTS AT INTERVAL TO MATCH WIDTH OF SIDEWALK (TYP).

CONTRACTION/CONTROL JOINT

- NOTES:**
1. CURB EXPANSION JOINTS EVERY 100' MAX AND WHEREVER SIDEWALK ABUTS EXISTING & PROPOSED CONCRETE STRUCTURES (TYP) - SEE PLAN
 2. REMOVE PLASTIC FORMING MATERIAL ("ZIP STRIPS") FROM PREFORMED JOINT MATERIAL PRIOR TO PLACING SEALANT
 3. CONTRACTOR SHALL SUBMIT SCORING PLAN MODIFICATIONS FOR APPROVAL.

CONCRETE JOINT DETAIL 3
NTS C3.0



- NOTES:**
1. MATCH EXISTING DEPTH +1"
 2. MATCH EXIST SUBGRADE DEPTH UNLESS OTHERWISE SPECIFIED
 3. APPLY TACKIFIER AT SAWCUT AND MILL PRIOR TO PAVING.

ASPHALT "T" PATCH DETAIL 5
NTS C2.0



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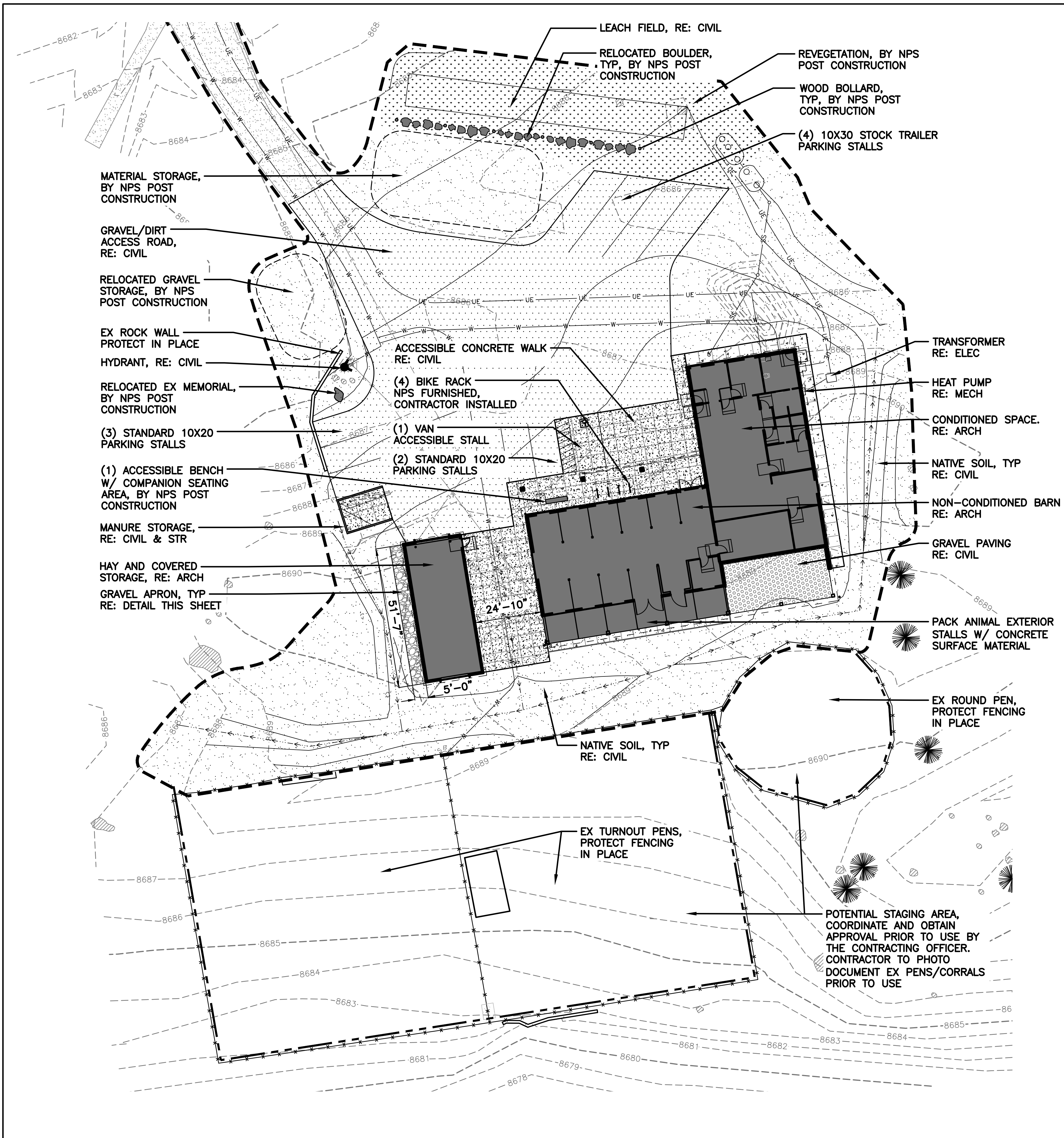
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TITLE OF SHEET
HORIZONTAL CONTROL DETAILS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
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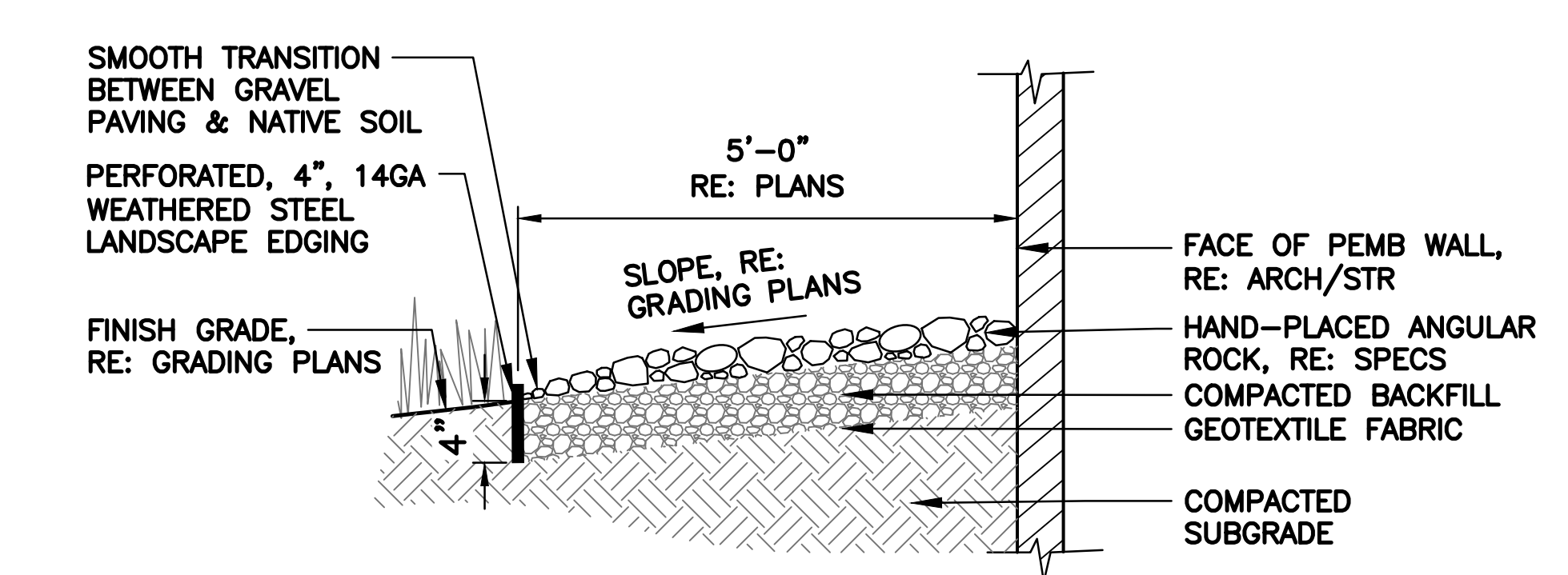


NOTES:

- CONTRACTOR SHALL PREPARE AREA FOR REVEGETATION BY DECOMPACTING SOIL AND INSTALLING MULCH FOR TEMPORARY STABILIZATION DURING CONSTRUCTION, RE: SPECIFICATIONS. REVEGETATION AREA IS APPROXIMATELY 3,500 SF. SEEDING WILL BE COMPLETED BY NPS POST CONSTRUCTION.
- BIKE RACK TO BE NPS PROVIDED AND CONTRACTOR INSTALLED. FOR INSTALLATION:
 - COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED. COMPLETE FIELD ASSEMBLY OF SITE FURNISHINGS WHERE REQUIRED.
 - UNLESS OTHERWISE INDICATED, INSTALL SITE FURNISHINGS AFTER LANDSCAPING AND PAVING HAVE BEEN COMPLETED.
 - INSTALL SITE FURNISHINGS LEVEL, PLUMB, TRUE, AND POSITIONED AT LOCATIONS INDICATED ON DRAWINGS AND AS APPROVED BY THE CONTRACTING OFFICER.

LEGEND

- LIMIT OF DISTURBANCE
- - - - - POTENTIAL STAGING AREA
- - - - - EX MAJOR CONTOUR
- - - - - EX MINOR CONTOUR
- - - - - EX ELEC LINE
- - - - - EX WATER LINE
- EX GRAVEL/DIRT
- EX ROCK WALL
- EX FENCING
- EX TREE
- EX BOULDER
- EX MEMORIAL
- WATER LINE, RE: CIVIL
- UNDERGROUND ELECTRIC LINE, RE: ELEC
- 6" SANITARY SEWER PIPE, RE: CIVIL
- 8" STORM PIPE, RE: CIVIL
- MANURE STORAGE, RE: CIVIL
- ACCESSIBLE CONCRETE WALK, RE: CIVIL
- GRAVEL/DIRT, RE: CIVIL
- GRAVEL APRON
- GRAVEL PAVING
- NATIVE SOIL
- RELOCATED MATERIAL STORAGE, BY NPS
- RELOCATED BOULDER, BY NPS
- ACCESSIBLE BENCH W/ COMPANION SEATING AREA, BY NPS POST CONSTRUCTION
- BIKE RACK, NPS FURNISHED, CONTRACTOR INSTALLED
- WOOD BOLLARD, BY NPS
- REVEGETATION, BY NPS POST CONSTRUCTION



GRAVEL APRON DETAIL

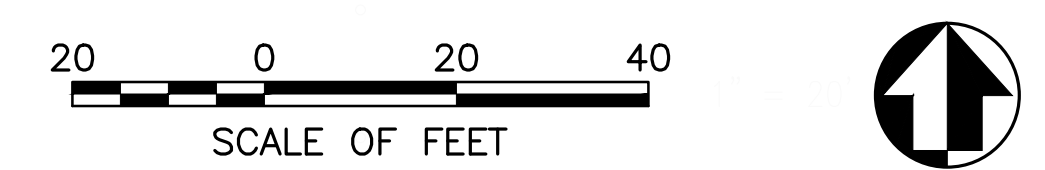
NOTES:

- ANGULAR COBBLE LOCATION AS SHOWN ON THE SITE PLAN OR AS DETERMINED BY THE CONTRACTING OFFICER.
- REFER TO THE SPECIFICATIONS FOR MATERIALS.

SCALE: NTS



DESIGNED: MK JS TECH. REVIEW: EK DATE: 2.27.2023	SUB SHEET NO. L1.0	TITLE OF SHEET SITE FURNISHINGS & REVEGETATION PLAN	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 19 OF 104
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CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

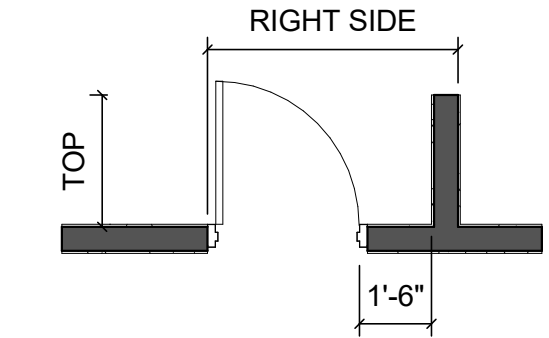
ABBREVIATIONS

ABBREV	ABBREVIATION (S)	FDN	FOUNDATION	PROJ	PROJECTION
ABB	ABBREVIATION (S)	FH	FULL HEIGHT	QT	QUARRY TILE
A.F.F.	ABOVE FINISHED FLOOR	FS	FULL SIZE		
AD	ACCESS DOOR	FSD	FULL SIZE DETAIL		
ACOUS	ACOUSTICAL			REF	FREFERENCE
A/C	AIR CONDITIONING	GALV OR	GALVANIZED	R OR RAD	RADIUS
ALUM	ALUMINUM	GV		REDW'D	REDWOOD
AB	ANCHOR BOLT	GA	GAUGE	REFL	REFLECTED
APPR	APPROVED	GC	GENERAL CONTRACTOR	RCP	REFLECTED CEILING PLAN
AC	ASPHALT CONCRETE	GL	GLASS		
		GFRC	GLASS FIBER REINFORCED CONCRETE	REINF	REINFORCE
BM	BEAM			REQ'D	REQUIRED
BLK	BLOCK			RES	RESILIENT
BD	BOARD	GR	GRADE	RR	RESTROOM(S)
BOT	BOTTOM	GYP. BD.	GYPSPUM BOARD	R	RISER
B.O.B.	BOTTOM OF BEAM			RD	ROOF DRAIN
BLDG	BUILDING	HDWD	HARDWOOD	RTU	ROOF TOP UNIT
		H	HIGH	RM	ROOM
		HP	HIGH POINT	R.O.	ROUGH OPENING
		HM	HOLLOW METAL		
		HORIZ	HORIZONTAL	SECT	SECTION
CLG	CEILING			SHT	SHEET
CH	CEILING HEIGHT			SIM	SIMILAR
CEM	CEMENT	ID	INSIDE DIAMETER	SPECS	SPECIFICATIONS
C/C	CENTER TO CENTER	INSUL	INSULATION	SQ	SQUARE
CER	CERAMIC	INT	INTERIOR	SS	STAINLESS STEEL
CLR	CLEAR			STD	STANDARD
CLOS	CLOSET	JAN	JANITOR	STA	STATION
COL	COLUMN			STL	STEEL
COMPO	COMPOSITION	LAV	LAVATORY	STG	STORAGE
CONC	CONCRETE	LEV	LEVEL	STRUCT	STRUCTURAL
CMU	CONCRETE MASONRY UNIT	LTWT	LIGHT WEIGHT	SIMUL	SUMULATED
CONN	CONNECTION	LTG	LIGHTING	SUSP	SUSPENDED
CONT	CONTINUOUS			SYM	SYMMETRICAL
CORD	COORDINATE	MAINT	MAINTENANCE		
CORR	CORRIDOR	MFG	MANUFACTURER	TEL	TELEPHONE
CSK	COUNTERSINK	MO	MASONRY OPENING	TEMP	TEMPERED
		MAT'L	MATERIAL	THK	THICK
DEL	DELETE	MAX	MAXIMUM	T&G	TONGUE & GROOVE
DEMO	DEMOLITION	MECH	MECHANICAL	TBC	TOP BACK OF CURB
DET	DETAIL	MB	MECHANICAL BOLT	T.O.C.	TOP OF CONCRETE OR CURB
DIAG	DIAGONAL	MET	METAL		
DIA	DIAMETER	MEZZ	MEZZANINE	T.O.F	TOP OF FOOTING
DIM	DIMENSION	MIN	MINIMUM	T.O.P.	TOP OF PARAPET
DIR	DIRECTION	MISC	MISCELLANEOUS	T.O.S.	TOP OF STEEL
DR	DOOR	MULL	MULLION	T.O.W.	TOP OF WALL
DO	DOOR OPENING			TDC	TRAFFIC DECK COVERING
DBL	DOUBLE			T	TREAD
DF	DOUGLAS FIR	(N)	NEW	TYP	TYPICAL
DN	DOWN	NR	NON-RATED		
DS	DOWNSPOUT	N.I.C.	NOT IN CONTRACT	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING	N.T.S.	NOT TO SCALE		
DF	DRINKING FOUNTAIN	NO.	NUMBER		
EA	EACH	OFF	OFFICE		
EW	ELECTRIC WATER COOLER	OC	ON CENTER	V.I.F.	VERIFY IN FIELD
ELEC	ELECTRICAL	OPN'G	OPENING	VER	VERTICAL
ELEV OR EL	ELEVATION	OCC	OPERATOR CONTROL CENTER		
ELEV	ELEVATOR	OPP	OPPOSITE	WC	WATER CLOSET
EQ	EQUAL	OH	OPPOSITE HAND	WL	WATER LEVEL
EQUIP	EQUIPMENT	OD	OUTSIDE DIAMETER	WP	WATERPROOFING
EXIST	EXISTING	OF	OVERFLOW	W	WIDE
EJ	EXPANSION JOINT	OFI	OWNER FURNISH ITEM	W/	WITH
EXT	EXTERIOR	OFOI	OWNER FURNISHED OWNER INSTALLED	WD	WOOD
				WP	WORKING POINT
				WI	WROUGHT IRON
FOC	FACE OF CONCRETE	PR	PAIR		
FOS	FACE OF STUD	PLAS	PLASTIC		
FOW	FACE OF WALL	PL	PLATE		
FT	FEET	PLWD	PLYWOOD		
FRP	FIBER REINFORCED PLASTIC	PC	PORTLAND CEMENT		
		PREP	PREPARATION		
FIN	FINISH	PT	PRESSURE TREATED		
FF	FINISH FLOOR	PTDF	PRESSURE TREATED DOUGLAS FIR		
FO	FINISHED OPENING				
FHC	FIRE HOSE CABINET				
FLR	FLOOR				
FD	FLOOR DRAIN				
FS	FLOOR SINK				

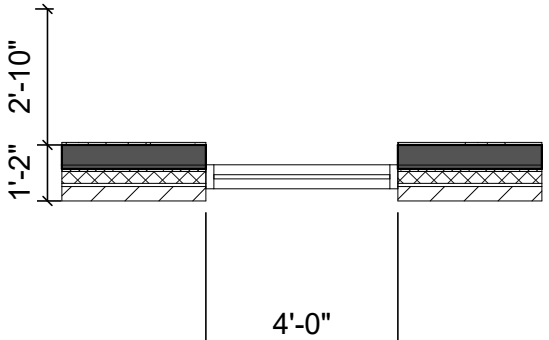
DIMENSIONING LEGEND

NEW CONSTRUCTION

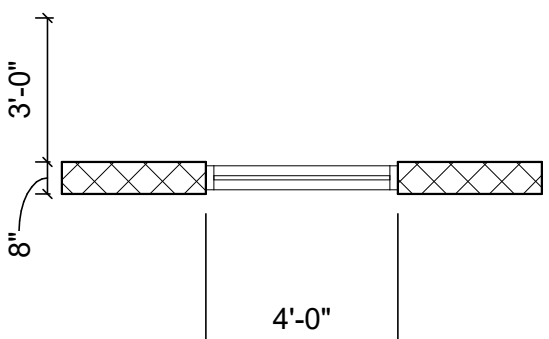
ALL NEW CONSTRUCTION IS SHOWN HATCHED & SHADED AS ILLUSTRATED BELOW.
ALL NEW CONSTRUCTION IS FULLY NOTED AS SHOWN BELOW.
ALL WORK IS NEW UNLESS LABELED "EXISTING"



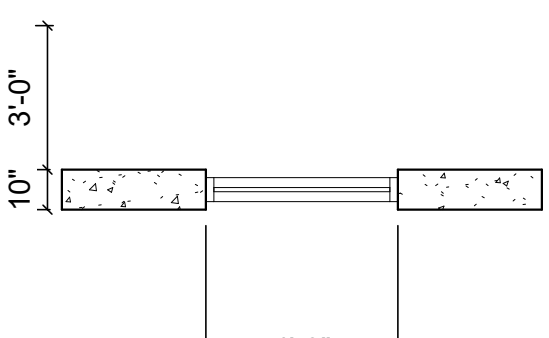
- METAL OR WOOD STUD FRAMED WALL**
- WALL TYPE DESIGNATES WIDTH OF WALL
 - WIDTH OF WALL DIMENSIONED ONLY AT 1/4"=1' OR LARGER SCALE
 - DOORS DIMENSIONED TO WIDTH OF NOMINAL OPENING
 - WINDOWS DIMENSIONED TO NOMINAL FRAME SIZE - NOT ROUGH OPENING.



- METAL OR WOOD STUD FRAMED WALL W/ MASONRY OR STONE VENEER**
- WIDTH OF WALL DIMENSIONED FROM FACE OF MASONRY.
 - WIDTH OF MASONRY WALL SIMENSIONED FROM FACE OF STUD.
 - DOORS DIMENSIONED TO WIDTH OF NOMINAL OPENING.
 - WINDOWS DIMENSIONED TO NOMINAL FRAME SIZE - NOT ROUGH OPENING.



- MASONRY WALL**
- WIDTH OF WALL DIMENSIONED TO NOMINAL SIZE.
 - DOORS DIMENSIONED TO CENTERLINE OF NOMINAL OPENING.
 - WINDOWS DIMENSIONED TO NOMINAL FRAME SIZE - NOT MASONRY OPENING.

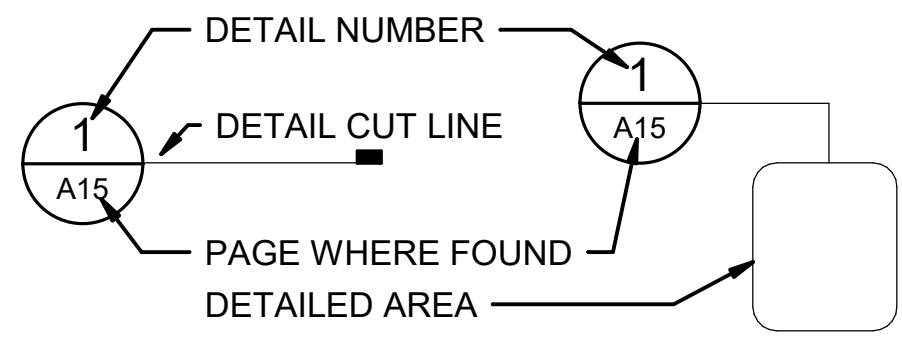


- CONCRETE WALL**
- ACTUAL WIDTH OF WALL DIMENSIONED
 - DOORS DIMENSIONED TO CENTERLINE OF NOMINAL OPENING.
 - WINDOWS DIMENSIONED TO NOMINAL FRAME SIZE - NOT ROUGH OPENING.

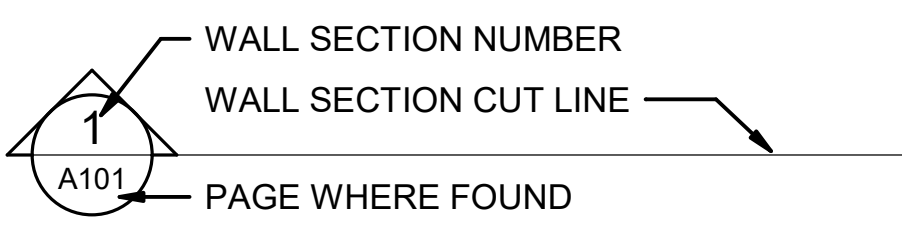
SYMBOLS

- | | | | |
|---|-------------|-----|--------------------------------|
| ⊕ | CENTER LINE | ⊕ | WORK POINT OR ELEV. BENCH MARK |
| # | NUMBER | ∅ | DIAMETER OR ROUND |
| ° | DEGREE | (A) | GRID HEAD |
| & | AND | | |
| @ | AT | ↑ | NORTH ARROW |

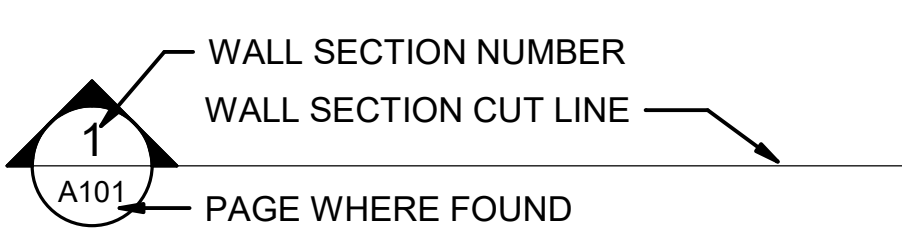
DETAIL TAGS



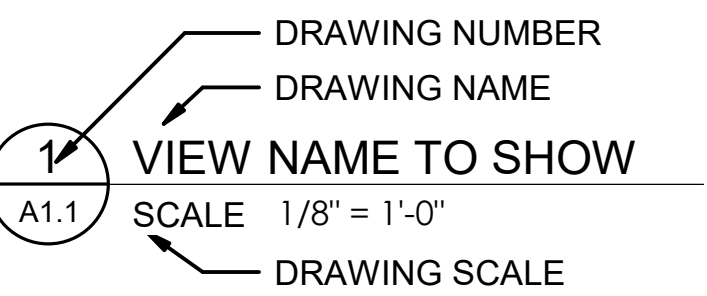
WALL SECTION TAG



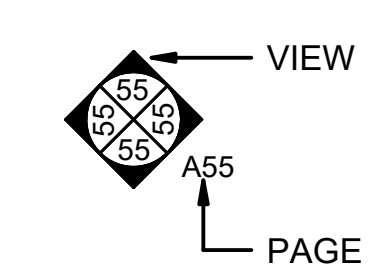
BUILDING SECTION TAG



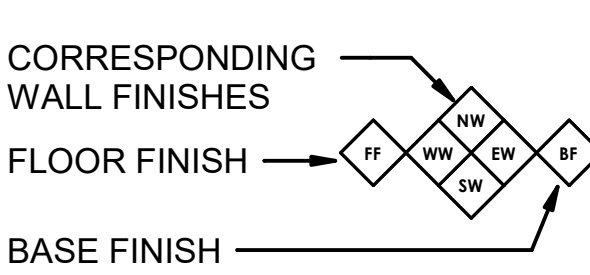
DRAWING TITLE



ELEVATION TAGS



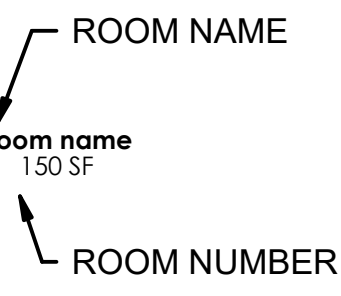
ROOM FINISH TAG



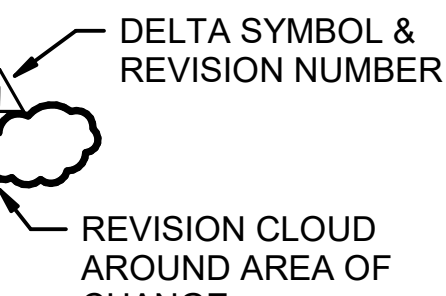
MISCELLANEOUS KEYED NOTE SYMBOLS

- ⬢ WINDOW/CURTAIN WALL DESIGNATION. SEE WINDOW SCHEDULE.
- Ⓢ KEYNOTE.
- Ⓢ GLAZING MODIFIER
- Ⓢ GLAZING DESIGNATION.
- Ⓢ DOOR DESIGNATION. SEE DOOR SCHEDULE
- Ⓢ WALL, FLOOR, CEILING, ROOF TYPE DESIGNATION. SEE APPROPRIATE TYPE SHEETS.
- Ⓢ WALL, FLOOR, BASE, CEILING FINISH TAG. THIS SYMBOL WHEN ATTACHED TO A WALL SHALL INDICATE THIS FINISH FOR ENTIRE LENGTH OF WALL FROM ONE INTERSECTION TO THE NEXT AND NOT BE TERMINATED BY WINDOWS OR DOORS UNO.

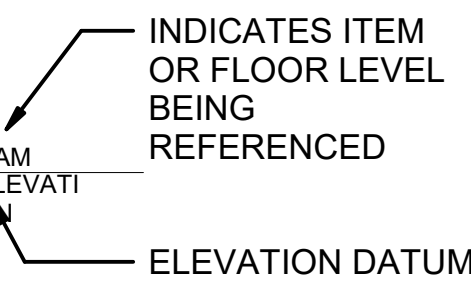
ROOM NAME TAG



REVISION CLOUD & TAG



DATUM TAG



DESIGNED:
HS
SP
TECH. REVIEW:
KR
DATE:
2.27.2023

SUB SHEET NO.

G1.0

TITLE OF SHEET
SYMBOLS, LEGENDS & ABBREVIATIONS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
20 OF 104

GENERAL NOTES

- 1

THE GENERAL CONTRACTOR SHALL HEREAFTER BE REFERRED TO AS "GENERAL CONTRACTOR" OR "GC". THE OWNER MAY HEREAFTER BE REFERRED TO AS "CONTRACTING OFFICER".
- 2

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK REGARDLESS OF THE LOCATION OF THE INFORMATION IN THE DOCUMENTS. THE GENERAL CONTRACTOR SHALL UTILIZE THE COMPLETE & ENTIRE CONSTRUCTION DRAWINGS AND WRITTEN SPECIFICATIONS FOR ALL REQUIRED INFORMATION TO PROVIDE COMPLETE CONSTRUCTION OF THIS PROJECT AND IS RESPONSIBLE TO COORDINATE ALL DRAWINGS AND SPECIFICATIONS WITH ALL SUBCONTRACTORS REGARDLESS OF LOCATION IN CONTRACT DOCUMENTS. ITEMS LISTED IN DRAWINGS MAY NOT BE INCLUDED IN SPECIFICATIONS. ITEMS LISTED IN SPECIFICATIONS MAY NOT BE INCLUDED IN DRAWINGS.
- 3

UNLESS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS AS BEING NOT IN CONTRACT (N.I.C.) OR EXISTING, ALL ITEMS, MATERIALS AND INSTALLATION OF SAME ARE PART OF THE CONTRACT AS DEFINED BY THE ENTIRE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. THE GC SHALL PROVIDE AND INSTALL ALL ACCESSORIES, COMPONENTS AND ASSEMBLIES REQUIRED FOR THE WORK DEPICTED OR SPECIFIED.
- 4

THE GENERAL CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. THE GC SHALL ACCEPT PREMISES AS FOUND. CONTRACTING OFFICER WILL MAINTAIN THE EXISTING CONDITION OF THE SITE AND EXISTING STRUCTURES AT THE TIME OF BIDDING.
- 5

DISCREPANCIES BETWEEN PORTIONS OF THE CONTRACT DOCUMENTS ARE NOT INTENDED. THE GENERAL CONTRACTOR IS TO CLARIFY WITH THE CONTRACTING OFFICER ANY SUCH DISCREPANCIES DURING BIDDING AND PRIOR TO COMMENCING WORK.
- 6

DIMENSIONS TAKE PRECEDENCE OVER DRAWINGS: DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATIONS. CONTRACTING OFFICER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO CONTINUING WITH WORK. CHANGES IN THE WORK TO BE DOCUMENTED IN WRITING AND APPROVED IN WRITING PRIOR TO BEING STARTED - (IMPLEMENTED)
- 7

ALL PLAN DIMENSIONS ARE FROM GRIDLINE OR FACE OF STUD OR FACE OF BLOCK UNLESS OTHERWISE INDICATED. SEE SECTION ON "DIMENSIONING" (G1.0).
- 8

THE CONTRACTOR SHALL REPORT TO THE CONTRACTING OFFICER ALL CONDITIONS REQUIRING COORDINATION/ CHANGES WITH THE CONTRACT DOCUMENTS. COORDINATION / APPROVAL SHALL TAKE PLACE BEFORE THE WORK BEGINS. ALL CHANGES TO THE CONTRACT COST SHALL BE APPROVED THROUGH A CHANGE ORDER.
- 9

DETAILED DRAWINGS AND LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS.
- 10

THE CONTRACTING OFFICER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH DESIGN CONCEPT OF THE PROJECT. THE CONTRACTING OFFICER REVIEW OF A SEPARATE ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY IN WHICH THE ITEM FUNCTIONS. THE CONTRACTING OFFICER WILL NOT REVIEW SHOP DRAWINGS UNTIL THE GC HAS REVIEWED AND STAMPED THE SHOP DRAWING/SUBMITTAL. THE GC IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS SHOWN ON THE SHOP DRAWINGS. THE CONTRACTING OFFICER REVIEW OF THE SHOP DRAWINGS SHALL NOT OVERRIDE THE CONDITIONS DESCRIBED IN THE CONTRACT DOCUMENTS UNLESS SPECIFICALLY NOTED OTHERWISE BY THE CONTRACTING OFFICER. WORK SHALL NOT PROCEED WITHOUT RETURNED REVIEWED SUBMITTALS.
- 11

FOR CONSTRUCTION DETAILS NOT SHOWN, USE THE MANUFACTURER'S STANDARD DETAILS OR APPROVED SHOP DRAWINGS / DATA SHEETS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

- 12

ALL WORK, MATERIALS AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION. THE GENERAL CONTRACTOR MUST COMPLY WITH THE CONTRACTOR REGISTRATION REQUIREMENTS OF ALL GOVERNING AUTHORITIES.
- 13

ALL PROJECT CONSTRUCTION SHALL CONFORM WITH ABAAS STANDARDS 2015 (ARCHITECTURAL BARRIERS ACT).
- 14

THE GENERAL CONTRACTOR SHALL NOTIFY ALL APPLICABLE LOCAL GOVERNING AUTHORITIES AND UTILITIES PRIOR TO COVERING UP ANY WORK REQUIRING INSPECTION.
- 15

THE GENERAL CONTRACTOR SHALL MAINTAIN ALL REQUIRED EXITS AND FIRE LANES IN WORKING ORDER.
- 16

A GENERAL BUILDING PERMIT IS NOT REQUIRED. PERMITTING BY GOVERNMENT. ALL PERMITS AND CONNECTION FEES SHALL BE SECURED BY THE GENERAL CONTRACTOR AND REIMBURSED THROUGH THE GOVERNMENT.
- 17

THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL FIRE EXTINGUISHERS WHERE SHOWN ON PLAN.
- 18

MINIMUM FLAME SPREAD CLASSIFICATION OF INTERIOR FINISH SHALL CONFORM TO THE BUILDING CODE AND LOCAL GOVERNING BUILDING CODES/ORDINANCES. SEE CODE SUMMARY, SHEET G3.0.
- 19

THE GENERAL CONTRACTOR SHALL PROVIDE AND IS SOLELY RESPONSIBLE AND LIABLE FOR PUBLIC AND EMPLOYEE PROTECTION AS NECESSARY AND AS REQUIRED BY THE CODES, INCLUDING EXTERIOR AND INTERIOR PEDESTRIAN TRAFFIC BARRIERS. ALL WORK SHALL CONFORM TO THE ORDINANCES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT.
- 20

ALL DEBRIS SHALL BE REMOVED FROM PREMISES AND ALL AREAS SHALL BE LEFT IN A CLEAN (BROOM) CONDITION DAILY.
- 21

APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE GENERAL CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS, ON THE PREMISES AT ALL TIMES. THESE ARE TO BE KEPT UNDER THE CARE OF THE JOB SUPERINTENDENT.
- 22

THE GENERAL CONTRACTOR IS TO PROVIDE BLOCKING AS REQUIRED FOR MOUNTING OF WALL MOUNTED HC GRAB BARS AND PARTITION BRACES AND ALL OTHER ITEMS IDENTIFIED ON THE EQUIPMENT OR ACCESSORY SCHEDULE. BLOCKING SHALL BE FIRE TREATED WHERE REQUIRED BY THE BUILDING CODE.
- 23

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR RECEIVING, UNLOADING, UNCRATING, INSTALLATION AND HOOK-UP OF ALL CONTRACTING OFFICER FURNISHED ITEMS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 24

PROVIDE GALVANIC PROTECTION BETWEEN DISSIMILAR MATERIALS WHERE REQUIRED.
- 25

PROVIDE METAL TRIM OR CASING AT ALL EDGES OF PLASTER AND DRYWALL SURFACES WHERE IT TERMINATES OR MEETS ANY OTHER MATERIAL, UNLESS NOTED OTHERWISE.
- 26

PROVIDE METAL CORNER TRIM AT ALL OUTSIDE CORNERS OF PLASTER AND DRYWALL SURFACES.
- 27

ALL PENETRATIONS THROUGH ANY SURFACE SHALL BE THOROUGHLY SEALED WITH APPROPRIATE SEALANT MATERIAL.
- 28

UNLESS OTHERWISE NOTED, ALL EXTERIOR AND INTERIOR METAL, TRIM, TREILLAGE, RAILINGS, MOLDINGS, FRAMES, CASTING ETC., SHALL BE PAINTED.

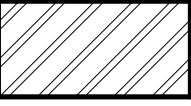
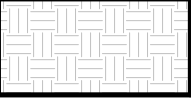

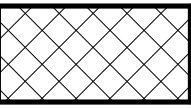
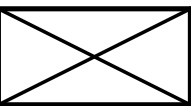
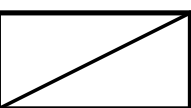


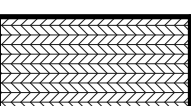
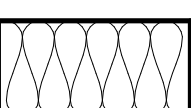
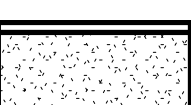
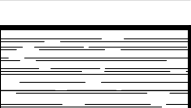
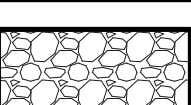
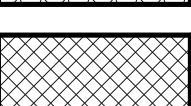
- 29

FOR PLUMBING AND ELECTRICAL SYSTEMS, PROVIDE APPROVED ASSEMBLIES WITH SELF CLOSING DEVICES FOR ANY PENETRATIONS IN RATED CONSTRUCTION.
- 30



THE GC SHALL VERIFY LOCATIONS OF ALL CEILING& WALL ACCESS PANELS WITH MECHANICAL AND PLUMBING PLANS. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED WITH A FIRE RATING EQUAL TO THE WALL OR CEILING ASSEMBLY INTO WHICH THEY ARE TO BE INSTALLED. FINISH AND LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER.
- 31

THE GC SHALL VERIFY DIMENSIONS OF ALL EQUIPMENT PADS & BASES WITH EQUIPMENT MANUFACTURERS & SHALL VERIFY ALL SIZES AND LOCATIONS OF DUCT OPENINGS ON ROOF AND INTERIOR SHAFTS.

SECTION MATERIALS LEGEND

	METAL
	EARTH
	CONCRETE
	CONCRETE MASONRY UNIT
	CONTINUOUS WOOD MEMBER
	WOOD BLOCKING
	PLASTER OR STUCCO
	FINISHED WOOD MEMBER
	PLYWOOD / SHEATHING
	BATT INSULATION
	GYP. BOARD
	MINERAL WOOL INSULATION
	GRAVEL
	RIGID INSULATION

BID OPTIONS:
A: LIGHTNING PROTECTION
B: PHOTOVOLTAIC SYSTEM
C: HEAVY DUTY CONCRETE PAVING

	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET GENERAL NOTES LEGEND	DRAWING NO. 121	
	HS			175143	
				PMIS/PKG NO. 316223	
	SP			SHEET	
	TECH. REVIEW:			G2.0	CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO
	KR				
DATE:	21 OF 104				
2.27.2023					

BUILDING CODE SUMMARY:

INTERNATIONAL BUILDING CODE (IBC)	2021
INTERNATIONAL RESIDENTIAL CODE (IRC)	2021
INTERNATIONAL BUILDING CODE (IBC)	2021
INTERNATIONAL MECHANICAL CODE (IMC)	2021
INTERNATIONAL PLUMBING CODE (IPC)	2021
NATIONAL ELECTRICAL CODE (NEC)	2020
INTERNATIONAL FUEL GAS CODE	2021
INTERNATIONAL ENERGY CONSERVATION CODE	2021
ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARDS (ABAAS)	MOST RECENT
INTERNATIONAL FIRE CODE (IFC)	2021

OCCUPANCY CLASSIFICATION – IBC CHAPTER 3 SECTION 310.4
'U' - UTILITY

TYPE OF CONSTRUCTION – IBC CHAPTER 6
TYPE V-B NON-SPRINKLED

BUILDING AREA SUMMARY

ALLOWABLE BUILDING HEIGHT – IBC CHAPTER 5, TABLE

TYPE V-B I	'U'
ALLOWED:	40 FEET
ACTUAL:	20 ± FEET

ALLOWABLE STORIES ABOVE GRADE PLANE – IBC CHAPTER 5, TABLE

TYPE V-B I	'U'
ALLOWED:	1 STORIES
ACTUAL:	1 STORIES

ALLOWABLE BUILDING AREA – IBC CHAPTER 5, TABLE

TYPE V-B I	'U'
ALLOWED:	5,500 S.F.
ACTUAL:	4,236 S.F.

LIFE SAFETY SUMMARY

FIRE RESISTIVE REQUIREMENTS – IBC CHAPTER 6, TABLE 601

	TYPE V – B
STRUCTURAL FRAME	0.0 HOUR RATING
EXTERIOR	0.0 HOUR RATING
INTERIOR	0.0 HOUR RATING
EXTERIOR NONBEARING WALLS	0.0 HOUR RATING
INTERIOR NONBEARING WALLS	0.0 HOUR RATING
FLOOR (INCLUDING SUPPORTING BEAM AND JOISTS)	0.0 HOUR RATING
ROOF (INCLUDING SUPPORTING BEAM AND JOISTS)	0.0 HOUR RATING

CORRIDORS – IBC TABLE 1020.2;

'U' - UTILITY	NON-SPRINKLED 0 HRS
---------------	------------------------

TRAVEL DISTANCE – IBC TABLE 1017.2

'U' - UTILITY	NON-SPRINKLED 300 FEET
---------------	---------------------------

EXIT SEPARATION – IBC SECTION 1007.1.1

- SEPARATION OF EXITS SHALL BE 1/2 THE LENGTH OF THE MAXIMUM DIAGONAL DIMENSION.

COMMON PATH OF EGRESS TRAVEL (Space) – IBC Table 1006.2.1

'U' - UTILITY	NON-SPRINKLED 75 FEET
---------------	--------------------------

NUMBER OF REQUIRED EXITS – IBC TABLE 1006.2.1

	REQUIRED	1	PROVIDED
EXITS REQUIRED PER STORY	2		3

OCCUPANCY LOADS – IBC TABLE 1004.5

AGRICULTURE, STORAGE, UTILITY SPACES, ETC.	300 GROSS
OFFICES	150 GROSS

TOTAL OCCUPANTS 34

EGRESS WIDTH PER PERSON SERVED - IBC 1005.3

	'U' - UTILITY
0.2 IN/OC	REQUIRED 4.8 INCHES PROVIDED 72 INCHES

PORTABLE FIRE EXTINGUISHERS: SECTION 906

MAXIMUM DISTANCE OF TRAVEL TO EXTINGUISHER 75 FEET

INTERIOR WALL AND CEILING FINISH – IBC TABLE 803.13

'U' - UTILITY	NONE
---------------	------

ACCESSIBILITY REQUIREMENTS

ACCESSIBLE – IBC CHAPTER 11

- ACCESSIBLE ENTRANCES 1105.1: AT LEAST 60 % OF ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE.
- IBC SECTION 1109.2.2 – EACH RESTROOM WILL NEED TO HAVE 5% (AT LEAST ONE) ACCESSIBLE WATER CLOSET.
- IBC SECTION 1109.3 – EACH RESTROOM WILL NEED TO HAVE 5% (AT LEAST ONE) ACCESSIBLE SINK.
- IBC SECTION 1111.1 – REQUIRED ACCESSIBLE ELEMENTS SHALL BE IDENTIFIED USING THE INTERNATIONAL SYMBOLS OF ACCESSIBILITY.

ENVELOPE REQUIREMENTS

CLIMATE ZONE 7

MINIMUM ROOF COVERING CLASSIFICATION - TABLE 1505.1

TYPE V-B CLASS C

OPAQUE THERMAL ELEMENTS - IECC TABLE R402.1.3

	INSULATION MIN. R-VALUE
ROOFS	R-60
WALLS	
ABOVE GRADE	R-30 OR R-20 + R-5 ci OR R-13+10ci OR R0+ 20 ci
BELOW GRADE	R-15 ci
FLOORS	R-38
SLABS ON GRADE	10ci FOR 48" BELOW
CRAWL SPACE	15ci OR 19 OR R-13+5ci

ENVELOPE FENESTRATIONS (IECC TABLE C402.4)

	U-FACTOR	SHGC
WINDOWS	MAX U-FACTOR	
FIXED	0.30	NR
OPERABLE	0.30	NR
ENTRANCE DOORS	0.30	NR

PLUMBING FIXTURE REQUIREMENTS

PLUMBING FIXTURE REQUIREMENTS – IBC CHAPTER 29

'U' OCCUPANCY – NOT REQUIRED*

*2902.3 EMPLOYEE FACILITIES SHALL BE PROVIDED

REQUIRED:

WATER CLOSET	LAVATORIES	TUB/SHOWER	OTHER
1	1	0	1 SERVICE SINK

PROVIDED:

WATER CLOSET	LAVATORIES	TUB/SHOWER	OTHER
2	2	0	1 SERVICE SINK

KEYED NOTES:

- 60" ABOVE FINISHED FLOOR STEEL PIPE RAILING, PAINTED. TYP.
- ABA LEVEL DRINKING FOUNTAIN WITH WATER BOTTLE FILL STATION

GENERAL NOTES:

- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
- SEE SHEET G2.0 FOR GENERAL NOTES.
- DO NOT SCALE DRAWINGS.
- CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

CODE PLAN LEGEND:

	'U' UTILITY AND MISC. - 7,000 ± S.F. @ 300 GROSS OCCUPANCY LOAD FACTOR (OLF) = 34 OCCUPANTS
	EXTERIOR SPACE - NO OCCUPANCY CLASSIFICATION
	ABA FLOOR AREA CLEARANCE
FE	FIRE EXTINGUISHER
180 / 13 EXIT	EXIT MAX. / ACTUAL DISCHARGE
---	EXIT TRAVEL DISTANCE
---	ACCESSIBLE PATH OF TRAVEL

UL NOTES

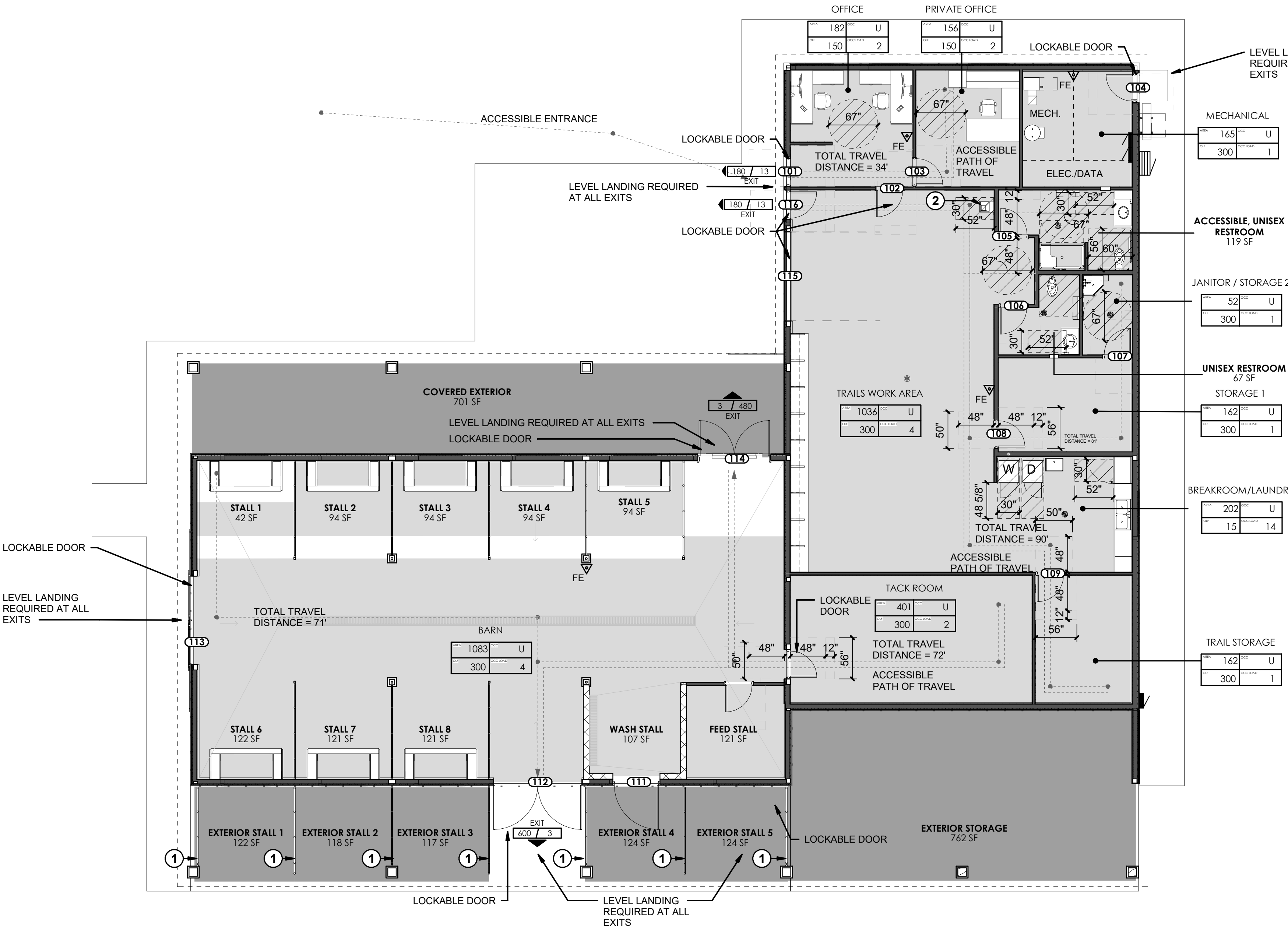
REFERENCES:

- UL FIRE RESISTANCE DIRECTORY: CURRENT EDITION.
- ALL GOVERNING LOCAL AND REGIONAL BUILDING CODES

FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF ASTM E1966 (UL 2079) TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF THE SURROUNDING CONSTRUCTION.

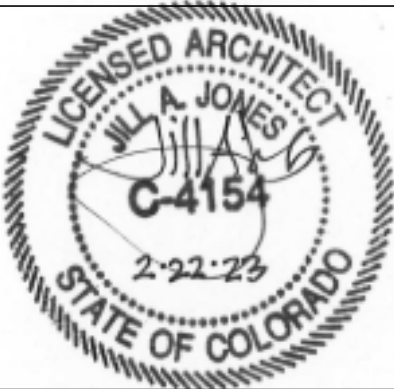
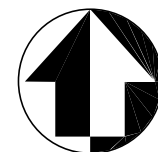
FIRE PROTECTION NOTES

- NEW CONSTRUCTION SHALL NOT COMMENCE UNTIL FIRE DEPARTMENT ACCESS ROADS ARE INSTALLED WITHIN 100 FEET OF ALL EXTERIOR WALLS OF THE FIRST FLOOR AND FIRE HYDRANTS ARE INSTALLED, AND REQUIRED FIRE FLOW IS PROVIDED. AS REQUIRED IN INTERNATIONAL FIRE CODE (IFC) SECTION 331.1
- REQUIRED MEANS OF EGRESS AND FIRE PROTECTION SYSTEMS SHALL BE MAINTAINED DURING CONSTRUCTION AND DEMOLITION, REMODELING OR ALTERATIONS AND ADDITIONS TO THE BUILDING. FIRE PREVENTION BUREAU STAFF SHALL APPROVE REVIEW OF ANY EXITING ALTERATIONS. AS REQUIRED IN IFC SECTION 3312
- AUTOMATIC FIRE SPRINKLER, FIRE SUPPRESSION AND FIRE ALARM SYSTEMS WHEN TAKEN OUT OF SERVICE ARE REQUIRED TO HAVE THE FIRE PREVENTION BUREAU NOTIFIED. THE DURATION OF TIME AND THE DATE MUST BE STATED TO INCLUDE THE DATE WHICH THE FIRE PROTECTION EQUIPMENT WILL BE PLACED IN SERVICE. AS REQUIRED IN IFC CHAPTER 33.
- ALL DEFERRED (IBC 107.3.4.1) SUBMITTAL ITEM(S) NEED TO BE SUBMITTED WITHIN A TIMELY MANNER (30 CALENDAR DAYS OF THE ORIGINAL BUILDING PERMIT ISSUANCE DATE). THE FINAL INSPECTION APPROVAL (IBC 110.3.10) CANNOT BE ISSUED AND NO BUILDING OR STRUCTURE CAN BE USED OR OCCUPIED (IBC 111.1) UNTIL ALL THE DEFERRED SUBMITTED ITEMS ARE APPROVED BY THE BUILDING OFFICIAL.
- ACOUSTICAL CEILING PANELS SHALL BE LISTED AND TESTED AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) E 84 AND HAVE A FLAME SPREAD OF 0-25 AND A SMOKE INDEX OF 0-450. IF THE CEILING TILE IS A COMPONENT PART OF A PLENUM SYSTEM THEN IT SHALL BE LISTED AND TESTED AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) E 84 AND HAVE A FLAME SPREAD OF 0-25 AND A SMOKE INDEX OF 0-50.



1 CODE FLOOR PLAN - LEVEL 01
G3.0 SCALE 1/8" = 1'-0"

1/8" = 1'-0"
8 0 8 16
SCALE OF FEET



DESIGNED:

HS

SP

TECH. REVIEW:

KR

DATE:

2.27.2023

SUB SHEET NO.

TITLE OF SHEET
CODE PLAN

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.

121

175143

PMIS/PKG NO.

316223

SHEET

22 OF 104

GENERAL NOTES:

1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
2. SEE SHEET G2.0 FOR GENERAL NOTES.
3. DO NOT SCALE DRAWINGS.
4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

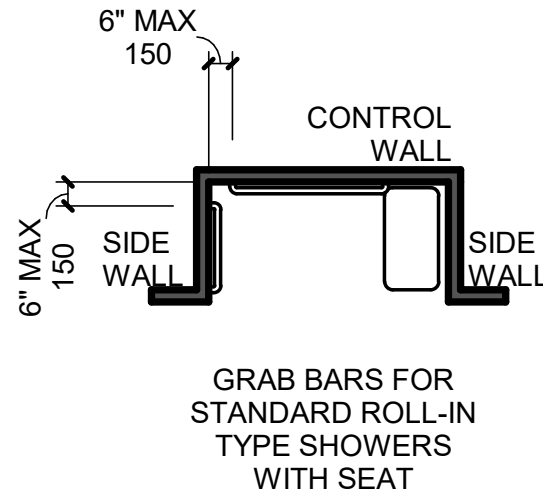
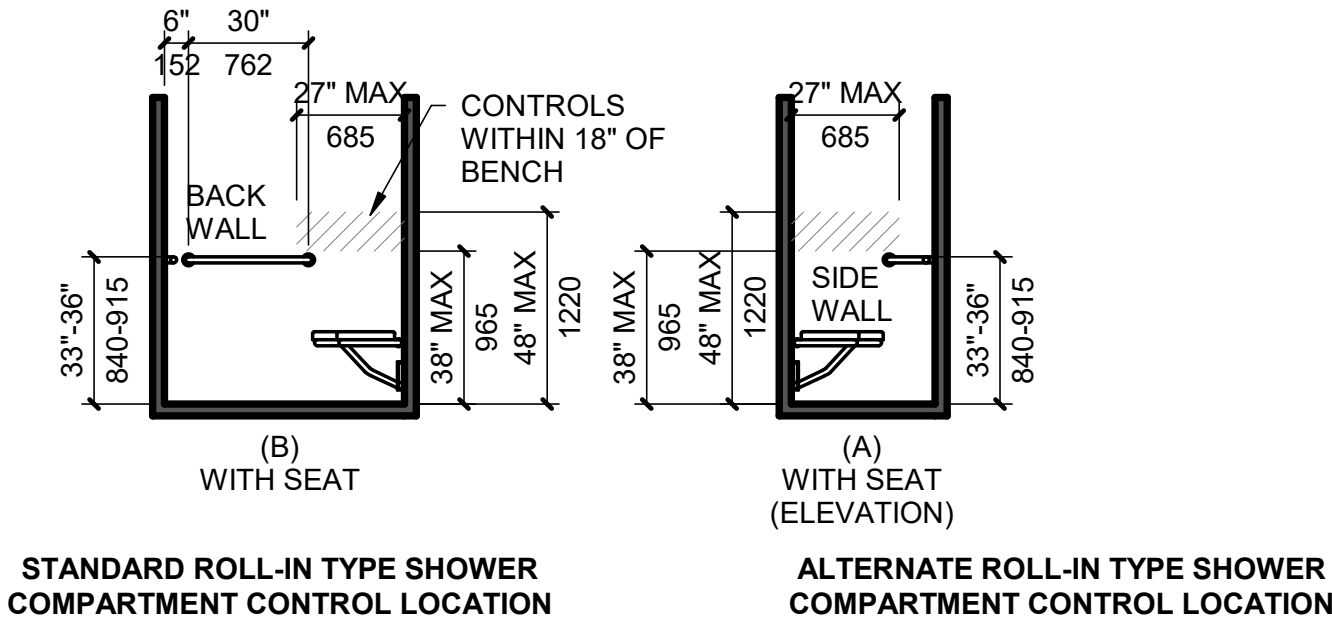
ABAAS 2015
(ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARDS)

F213.3 PLUMBING FIXTURES AND ACCESSORIES.

F213.3.6 BATHING FACILITIES. WHERE BATHTUBS OR SHOWERS ARE PROVIDED, AT LEAST ONE BATHTUB COMPLYING WITH 607 OR AT LEAST ONE SHOWER COMPLYING WITH 608 SHALL BE PROVIDED.

SHOWER COUNT:

	REQUIRED	PROVIDED
UNISEX ABA	1	1



ROLL-IN TYPE SHOWER CLEARANCES
ABAAS 608.3.2

1 SHOWER CLEARANCES
G4.0 SCALE 1/4" = 1'-0"

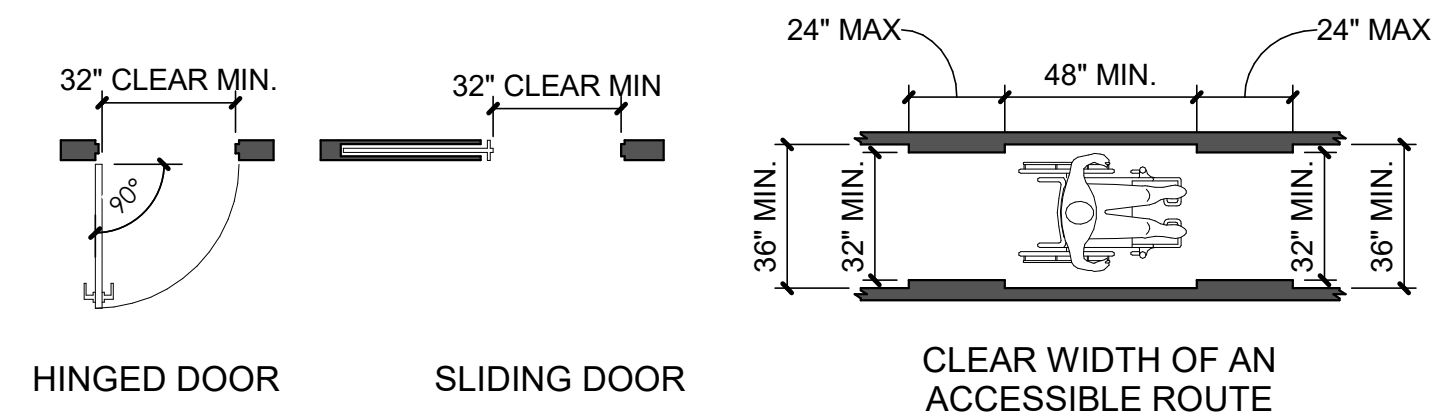
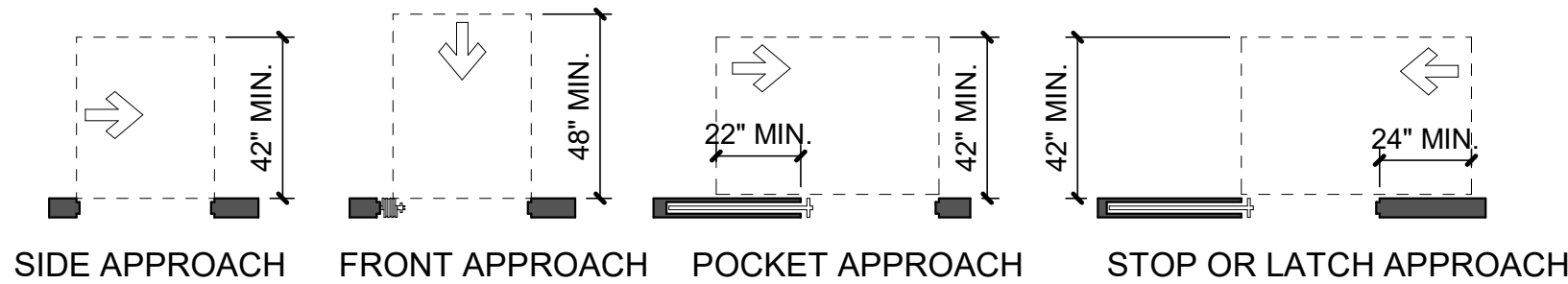


DESIGNED:
HS
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TECH. REVIEW:
KR
DATE:
2.27.2023

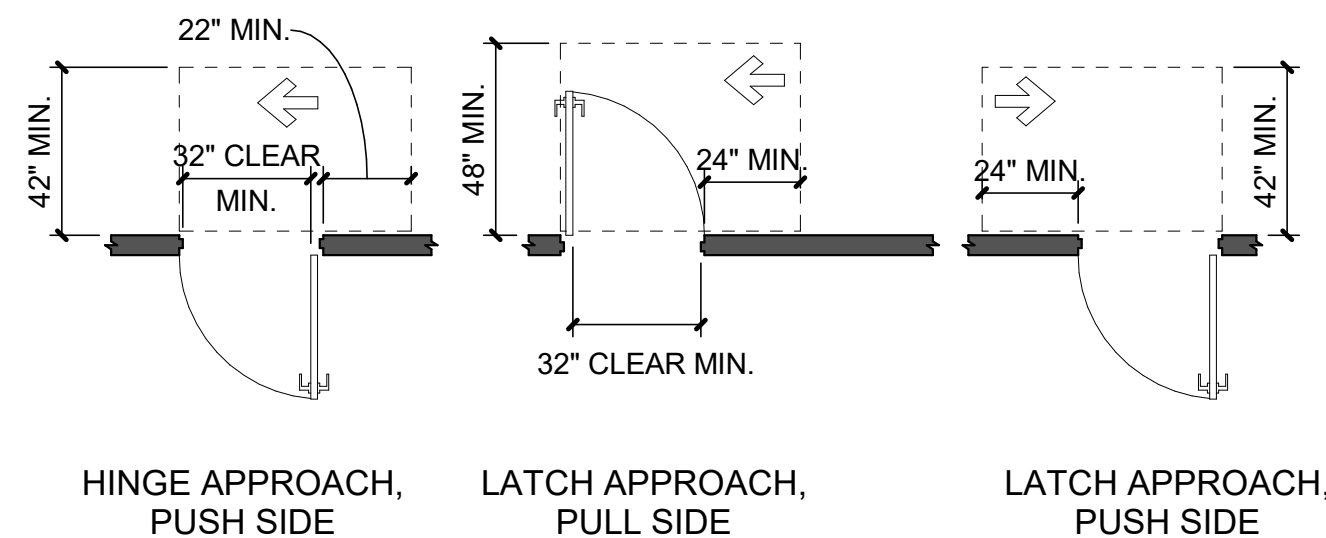
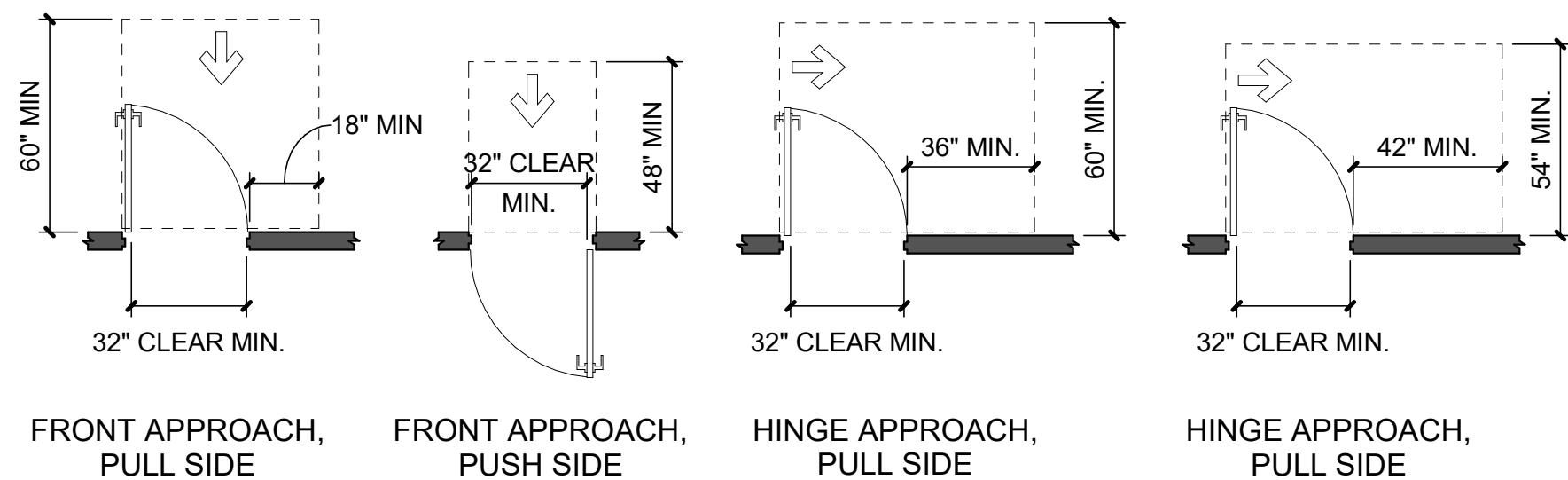
SUB SHEET NO.
G4.0

TITLE OF SHEET
ABAAS & CODE REQUIREMENTS
CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
23 OF 104



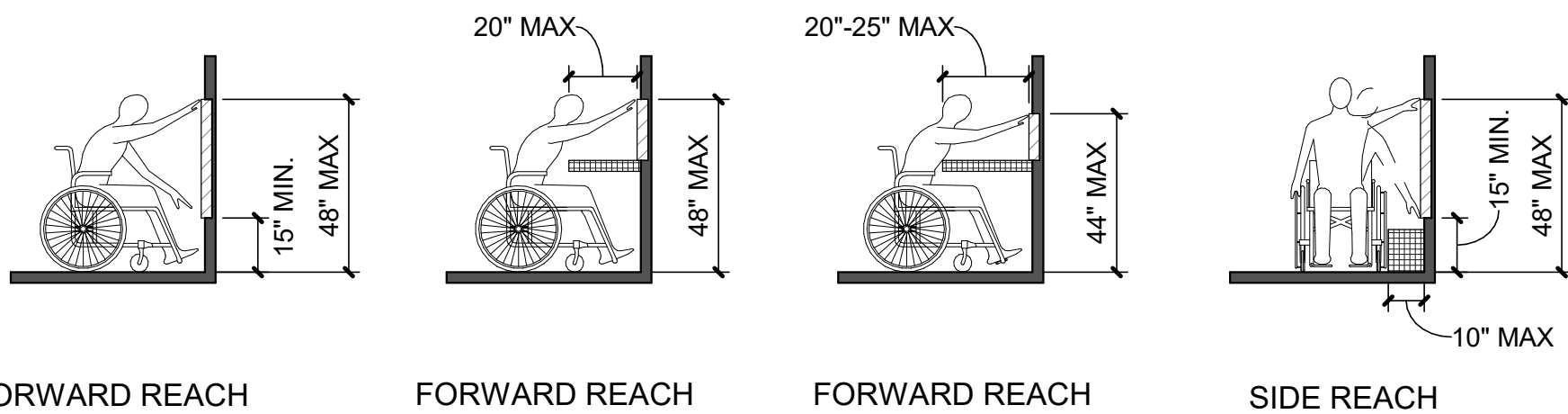
MANEUVERING CLEARANCES AT SLIDING, FOLDING DOORS, DOORWAYS AND CLEAR WIDTH AT DOORWAYS



MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS

- CODE REFERENCED:**
- 01. ABAAS 403 WALKING SURFACES
 - A. ABAAS 403.5.1 CLEAR WIDTH
 - 02. ABAAS 404 DOORS, DOORWAYS, & GATES
 - A. ABAAS 404.2 MANUAL DOORS, DOORWAYS, & MANUAL GATES
 - i. ABAAS 404.2.3 CLEAR WIDTH
 - ii. ABAAS 404.2.4 MANEUVERING CLEARANCES

3 ABAAS DOOR CLEAR. REQUIREMENTS
SCALE 1/4" = 1'-0"



UNOBSTRUCTED REACH

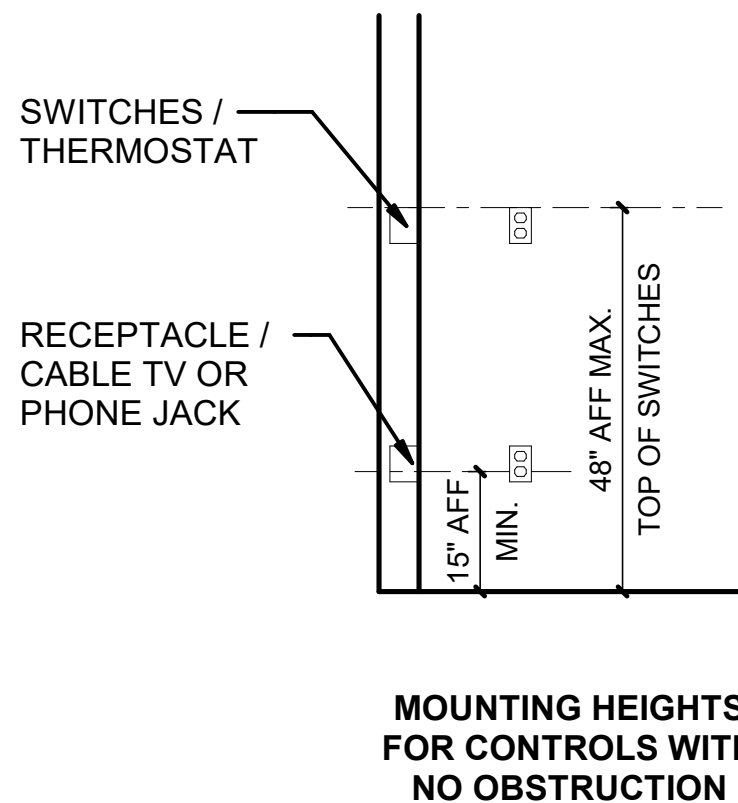
OBSTRUCTED HIGH REACH

UNOBSTRUCTED REACH

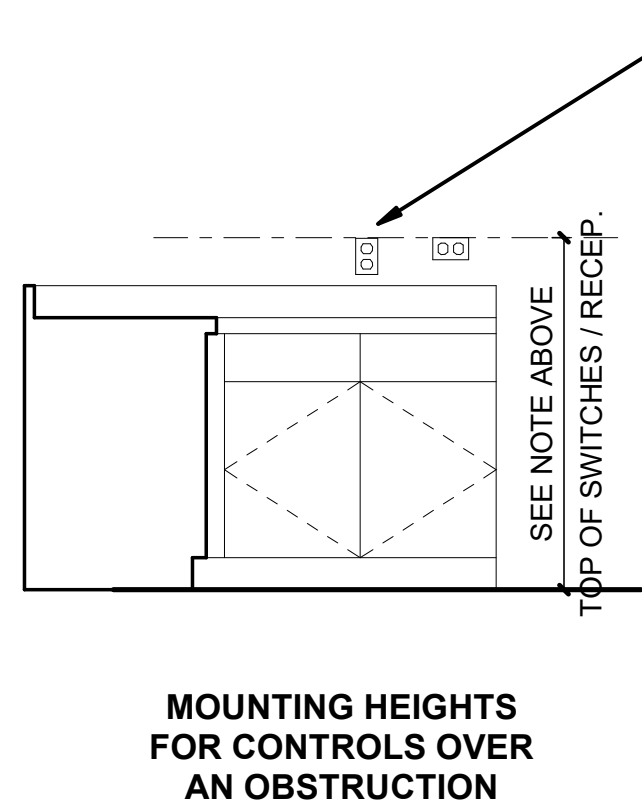
OBSTRUCTED HIGH REACH

- CODE REFERENCED:**
- 01. ABAAS CH 3 BUILDING BLOCKS

2 ABAAS REACH, TOE, AND KNEE CLEARANCES
SCALE 1/4" = 1'-0"



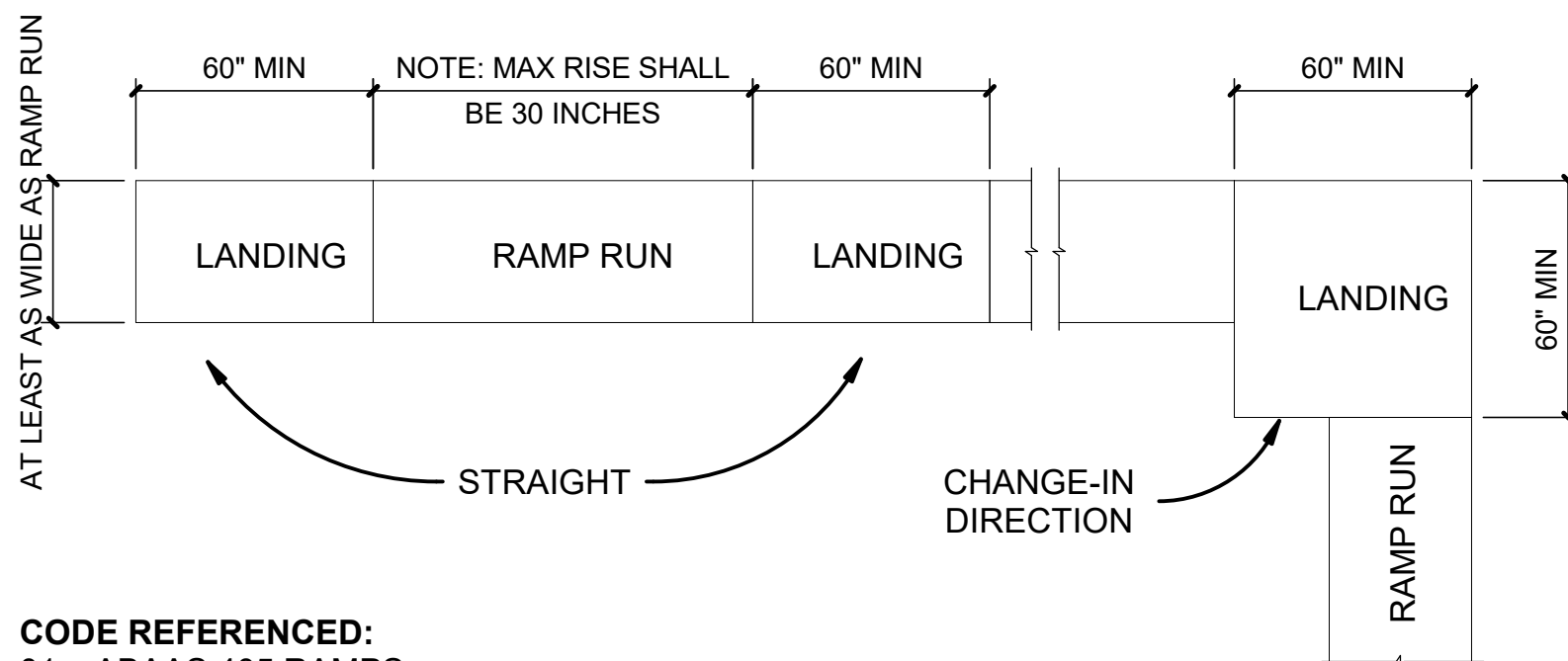
**MOUNTING HEIGHTS
FOR CONTROLS WITH
NO OBSTRUCTION**



**MOUNTING HEIGHTS
FOR CONTROLS OVER
AN OBSTRUCTION**

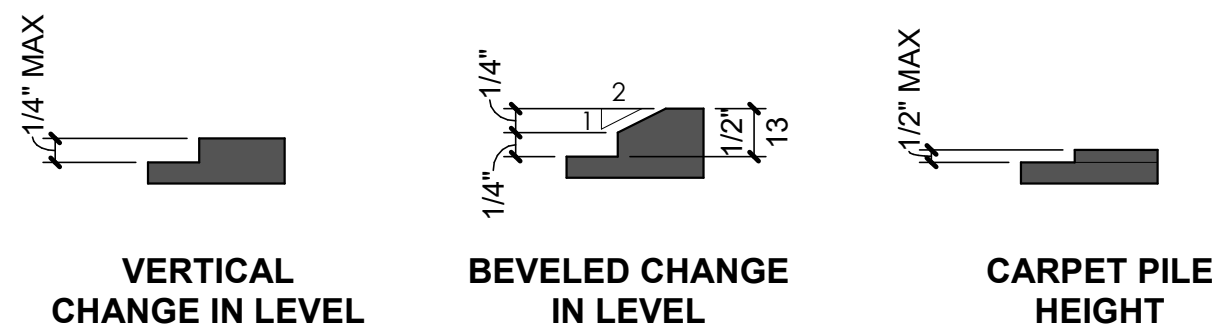
- 48" AFF MAX. WHEN COUNTER/OBSTACLE IS A DEPTH OF 20" MAX.
(MEASUREMENTS GO TO T.O. SWITCH OR OUTLET PLUG)
- 44" AFF MAX. WHEN COUNTER/OBSTACLE IS A DEPTH OF 20"-25" MAX.
(MEASUREMENTS GO TO T.O. SWITCH OR OUTLET PLUG)
- CODE REFERENCED:**
- 01. ABAAS 305 CLEAR FLOOR OR GROUND SPACE
 - 02. ABAAS 308 REACH RANGES
 - A. ABAAS 308.2 FORWARD REACH
 - i. ABAAS 308.2.2 OBSTRUCTED HIGH REACH

8 ABAAS CONTROL AND OUTLET HEIGHTS
SCALE 1/2" = 1'-0"



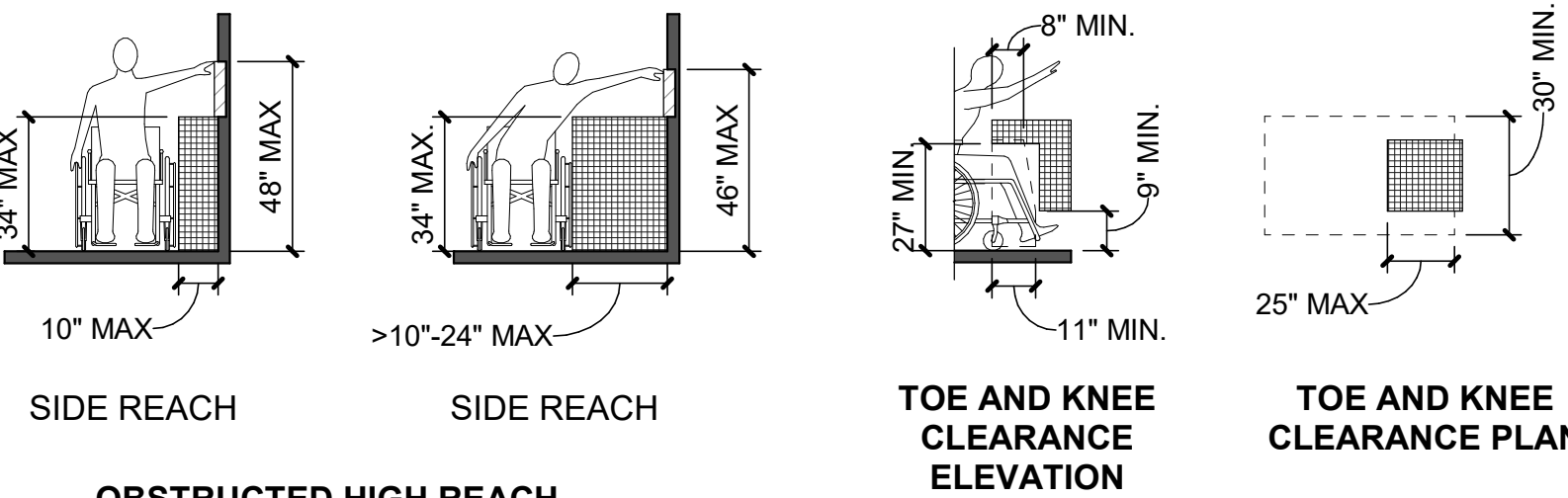
- CODE REFERENCED:**
- 01. ABAAS 405 RAMPS

7 ABAAS RAMP LANDINGS
SCALE 1/4" = 1'-0"



- CODE REFERENCED:**
- 01. ABAAS 303 CHANGES IN LEVEL

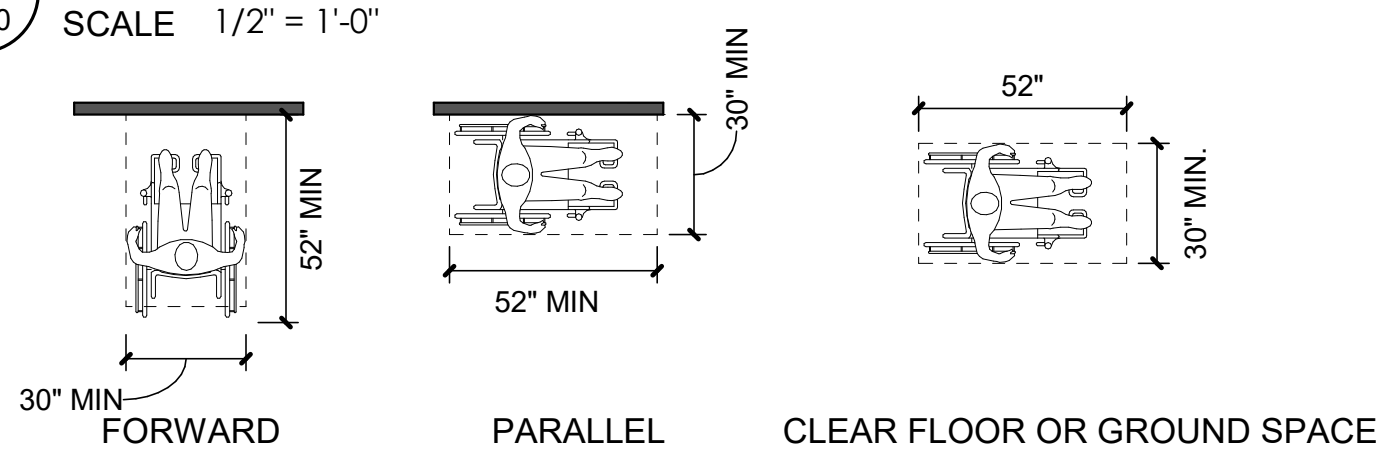
4 ABAAS LEVEL CHANGE
SCALE 6" = 1'-0"



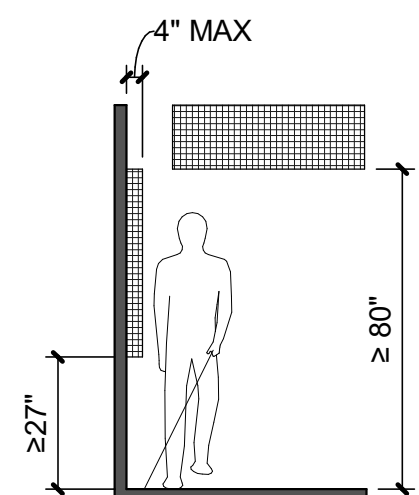
**TOE AND KNEE
CLEARANCE
ELEVATION**

**TOE AND KNEE
CLEARANCE PLAN**

5 ABAAS CLOSET MOUNTING HEIGHTS
SCALE 1/2" = 1'-0"

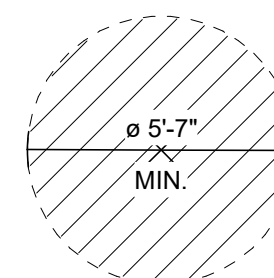


POSITION OF CLEAR FLOOR OR GROUND SPACE



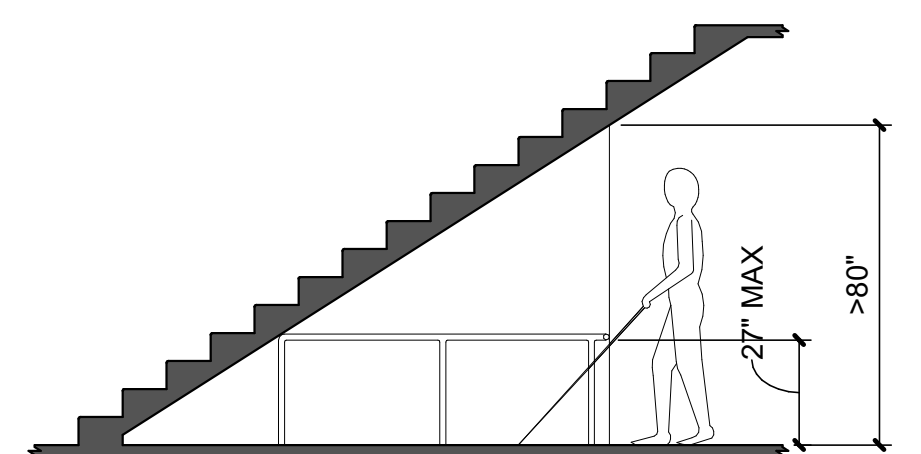
**LIMITS OF PROTRUDING
OBJECTS**

- CODE REFERENCED:**
- 01. ABAAS CH 3 BUILDING BLOCKS



CIRCULAR TURNING SPACE

6 ABAAS PARKING SIGNAGE
SCALE 1/4" = 1'-0"

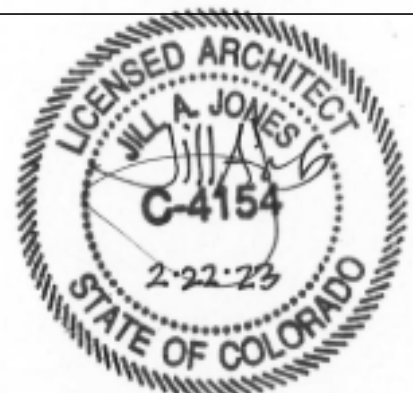


VERTICAL CLEARANCE

**ACCESSIBLE PARKING SIGN
MOUNTING HEIGHT**

- CODE REFERENCED:**
- 01. ABAAS 502.3.1 WIDTH
 - 02. ABAAS 502.3.2 LENGTH
 - 03. ABAAS 502.3.3 MARKING: ADVISORY 502.3.3 MARKING. THE METHOD AND COLOR OF MARKING ARE NOT SPECIFIED BY THESE REQUIREMENTS. BECAUSE THESE REQUIREMENTS PERMIT THE VAN ACCESS AISLE TO BE AS WIDE AS A PARKING SPACE, IT IS IMPORTANT THAT THE AISLE BE CLEARLY MARKED.

- GENERAL NOTES:**
- REFER TO DOOR HARDWARE SPECIFICATIONS FOR DOOR HARDWARE ABAAS REQUIREMENTS AND STANDARDS.
 - REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL DEVICES ABAAS MOUNTING HEIGHT REQUIREMENTS.
 - REFER TO SITE PLAN FOR ACCESSIBLE ROUTE REQUIREMENTS AND DETAIL REFERENCES. (NOT APPLICABLE TO ALL PROJECTS.)
 - UNLESS NOTED AS "MIN." OR "MAX" DIMENSIONS SHOWN ARE ABSOLUTE. DIMENSIONS SHOWN HERE SHALL GOVERN THE INSTALLATION OF ALL ACCESSIBLE FIXTURES AND ACCESSORIES. UNLESS MORE SPECIFIC DIMENSIONS ARE SHOWN ELSEWHERE IN THE CONTRACT DOCUMENTS THAT ARE WITHIN THE PERMISSIBLE LIMITS SHOWN HERE.
 - MOUNTING HEIGHTS OF RESTROOM FIXTURES AND ACCESSORIES. PROVIDE BACKING AT ALL WALL MOUNTED FIXTURES AND EQUIPMENT.



DESIGNED:
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TECH. REVIEW:
KR
DATE:
2.27.2023

SUB SHEET NO.
G5.0

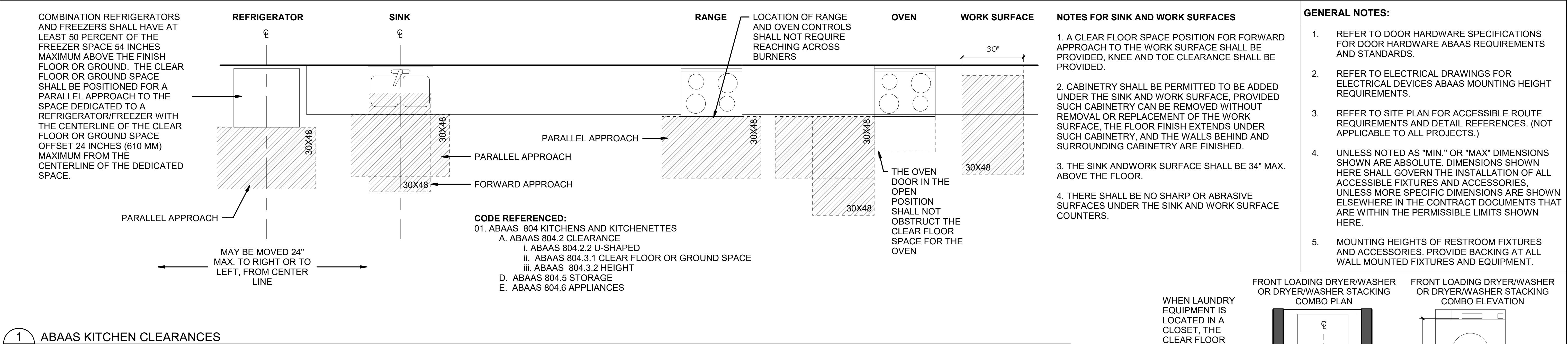
TITLE OF SHEET
ABAAS REQUIREMENTS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143

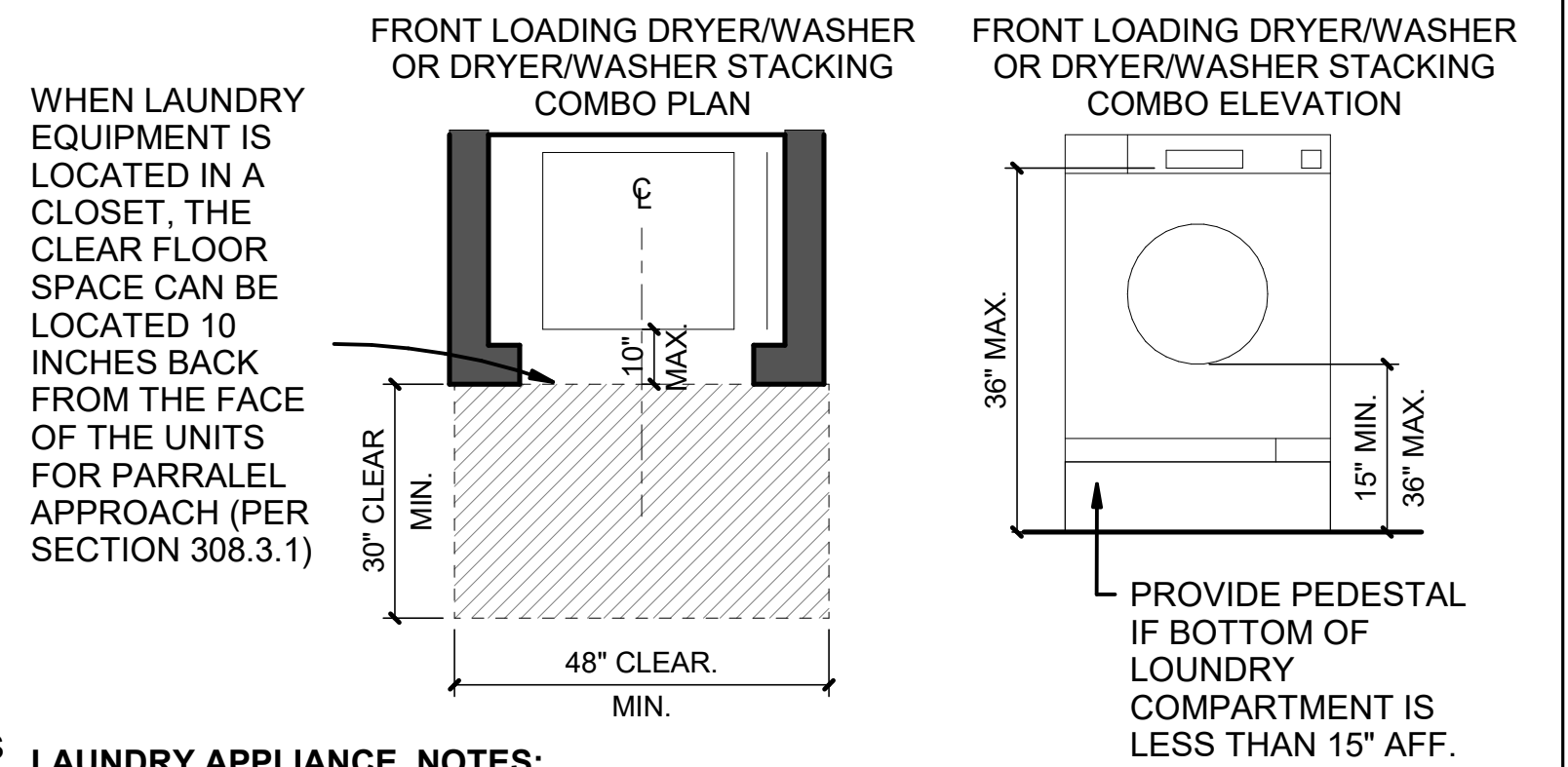
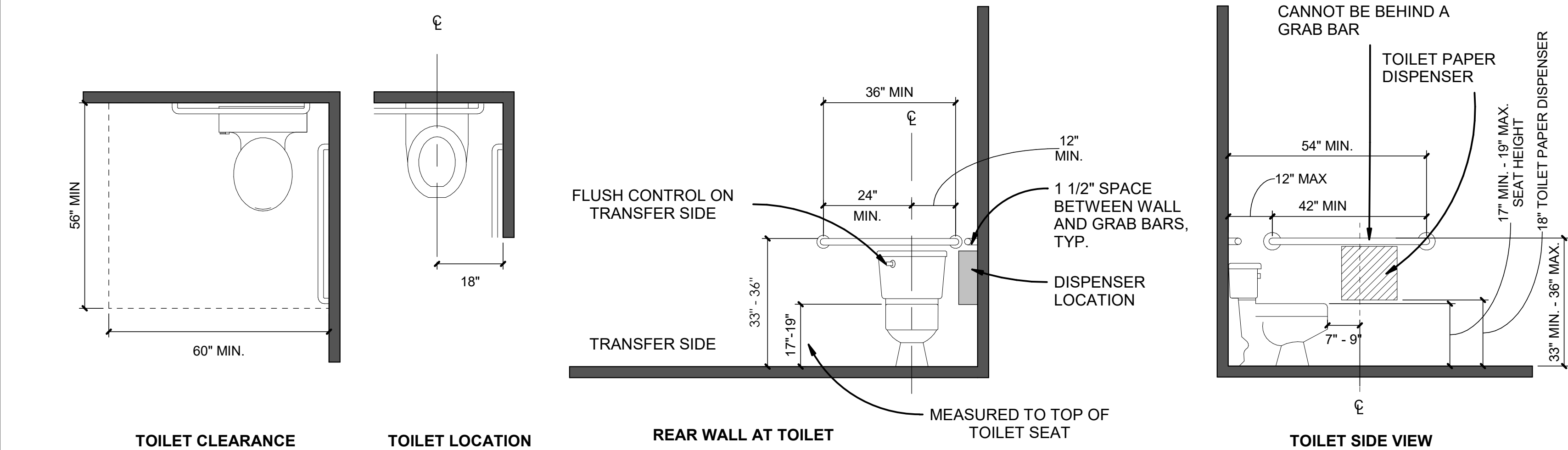
PMIS/PKG NO.
316223

SHEET
24 OF **104**



1 ABAAS KITCHEN CLEARANCES

G6.0 SCALE 1/2" = 1'-0"

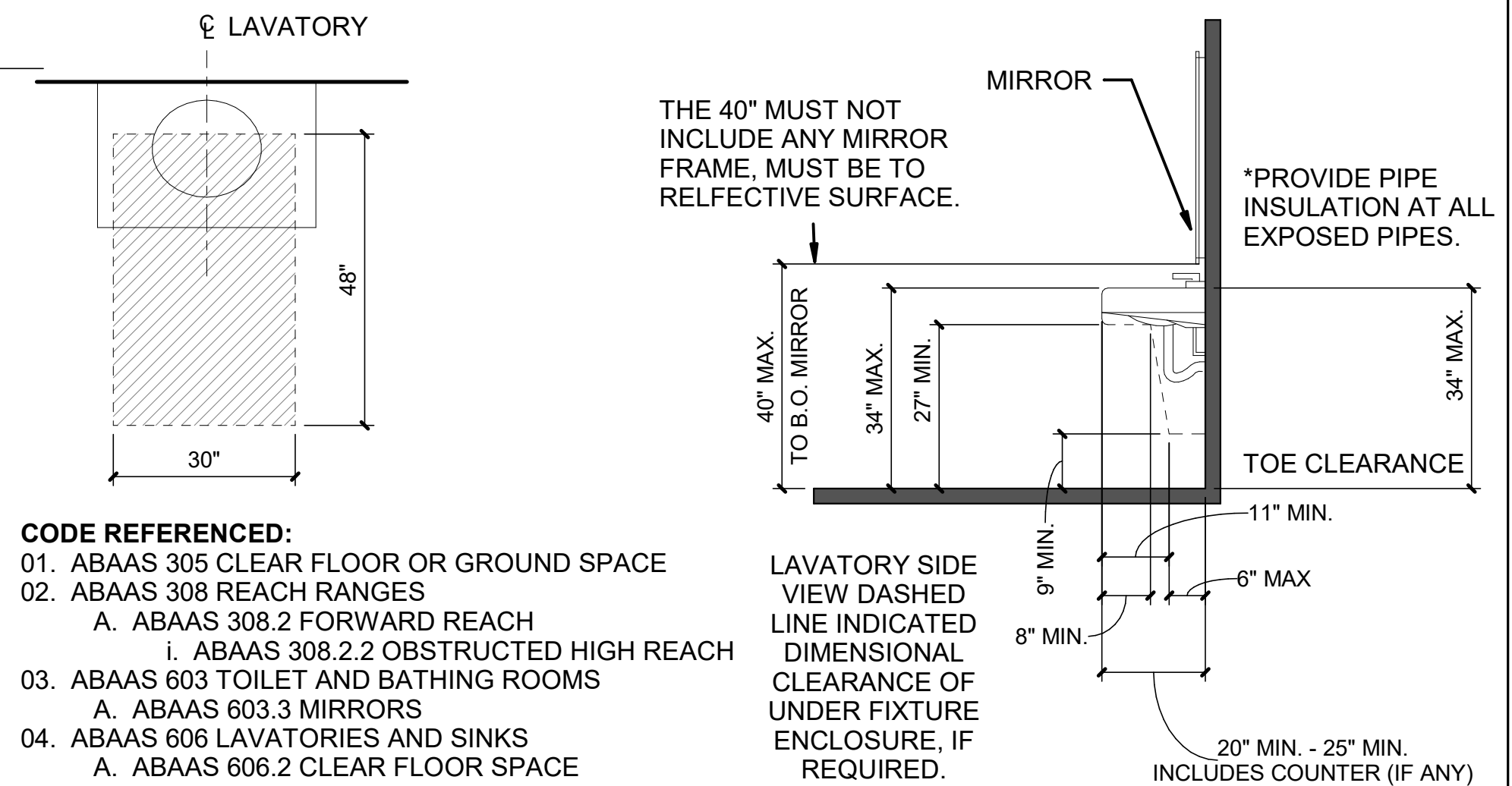
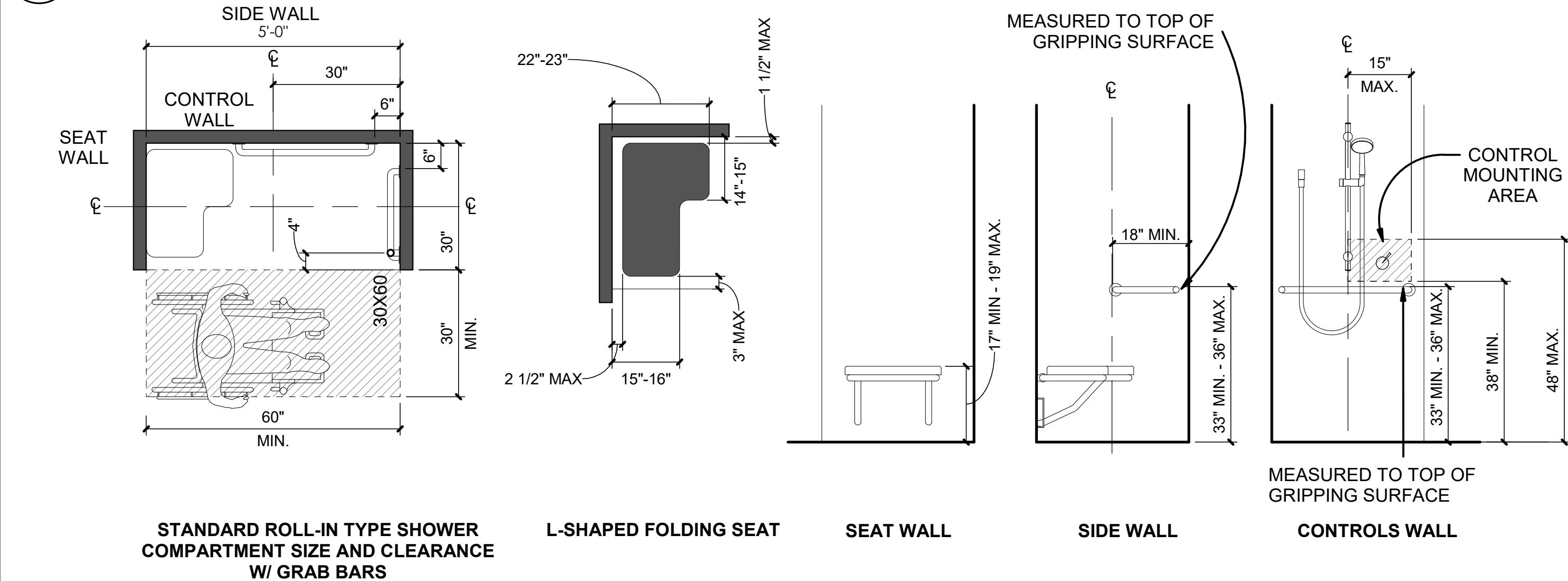


5 ABAAS LAUNDRY CLEARANCES

G6.0 SCALE 1/2" = 1'-0"

2 ABAAS TOILET CLEAR.'S & GRAB BARS

G6.0 SCALE 1/2" = 1'-0"

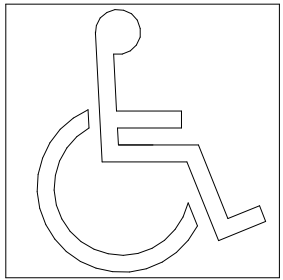


4 ABAAS LAVATORY CLEARANCE

G6.0 SCALE 1/2" = 1'-0"

3 ABAAS SHOWER CLR.'S & GRAB BARS

G6.0 SCALE 1/2" = 1'-0"



INTERNATIONAL
SYMBOL OF
ACCESSIBILITY

LETTERS AND NUMBERS:

- LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS-SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE. (ABAAS 703.2.1 DEPTH)
- MIN. CHARACTER HEIGHT: 5/8". MAX. CHARACTER HEIGHT: 2".
- PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES MINIMUM. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD. (ANSI A117.1-17, 703.6.3)
- CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". (ANSI A117.1-17, 703.3.5)
- PICTOGRAMS AND THEIR FIELD SHALL HAVE A NON-GLARE FINISH. PICTOGRAMS SHALL CONTRAST WITH THEIR FIELD WITH EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR A DARK PICTOGRAM ON A LIGHT FIELD. (ANSI A117.1-17, 703.6.2)
- CHARACTERS AND NUMBERS ON SIGNS SHALL BE SIZED ACCORDING TO THE VIEWING DISTANCE FROM WHICH THEY ARE TO BE READ. THE MINIMUM HEIGHT IS MEASURED USING AN UPPER CASE "I". LOWER CASE CHARACTERS ARE PERMITTED. REFER TO TABLE ANSI A117.1-17, 703.2.4 VISUAL CHARACTER HEIGHT FOR MINIMUM CHARACTER HEIGHTS. CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE SYMBOLS ARE SPECIFICALLY REQUIRED IN OTHER PORTIONS OF THESE REGULATIONS. REFER TO TABLE ANSI A117.1-17, 703.4.3 BRAILLE DIMENSIONS FOR ACCEPTABLE LAYOUT AND SPACING OF BRAILLE CHARACTERS.
-

SIGN LOCATIONS:

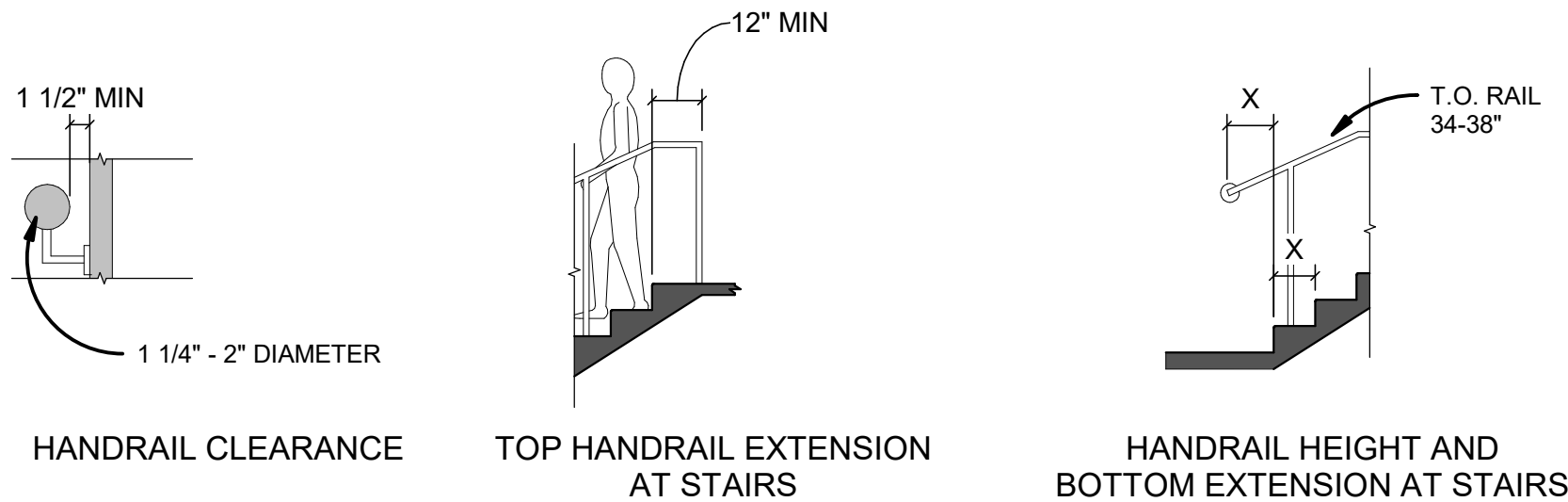
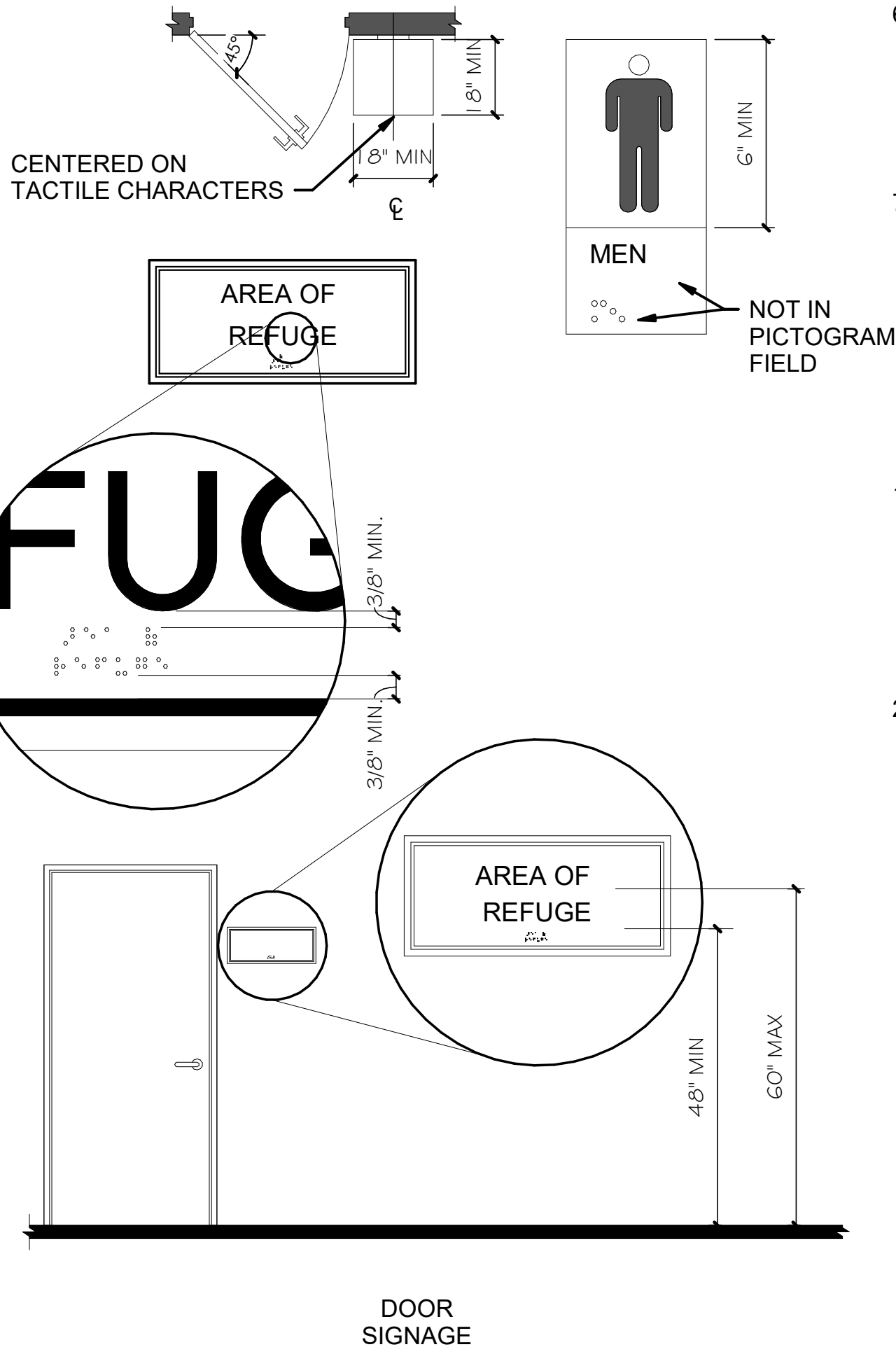
- ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USABLE BY PERSONS WITH DISABILITIES AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AN ACCESSIBLE ROUTE OF TRAVEL SHALL BE IDENTIFIED WITH A SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, TO BE VISIBLE TO PERSONS ALONG APPROACHING PEDESTRIAN WAYS.
- WHEN PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, RAISED LETTERS SHALL BE PROVIDED AND SHALL BE ACCOMPANIED BY BRAILLE IN CONFORMANCE WITH SECTION ABAAS 703.3 BRAILLE. WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES MINIMUM BY 18 INCHES MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. EXCEPTION: SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.
- ADDITIONAL DIRECTIONAL SIGNS ALONG ACCESSIBLE PATH OF TRAVEL ARE REQUIRED.
- BUILDINGS REMODELED TO PROVIDE ACCESSIBLE SANITARY FACILITIES FOR PUBLIC USE SHALL HAVE INFORMATION POSTED IN THE LOBBY AS PART OF THE BUILDING DIRECTORY.

INTERNATIONAL SYMBOL OF ACCESSIBILITY:

- STANDARD USED TO IDENTIFY ACCESSIBLE FACILITIES.
- WHITE FIGURE ON BLUE BACKGROUND, COLOR # 15090 ON FEDERAL STANDARD # 595A.
- WHEN ENFORCING AGENCY DETERMINES, IF APPROPRIATE, SPECIAL DESIGNS AND COLORS MAY BE APPROVED.

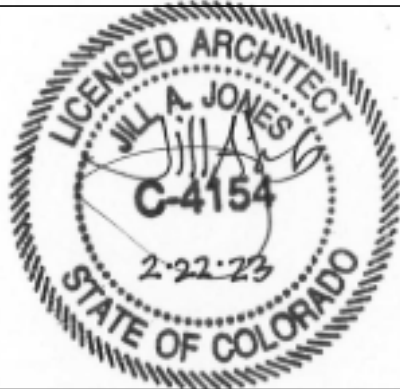
GENERAL NOTES:

- REFER TO DOOR HARDWARE SPECIFICATIONS FOR DOOR HARDWARE ABAAS REQUIREMENTS AND STANDARDS.
- REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL DEVICES ABAAS MOUNTING HEIGHT REQUIREMENTS.
- REFER TO SITE PLAN FOR ACCESSIBLE ROUTE REQUIREMENTS AND DETAIL REFERENCES. (NOT APPLICABLE TO ALL PROJECTS.)
- UNLESS NOTED AS "MIN." OR "MAX" DIMENSIONS SHOWN ARE ABSOLUTE. DIMENSIONS SHOWN HERE SHALL GOVERN THE INSTALLATION OF ALL ACCESSIBLE FIXTURES AND ACCESSORIES, UNLESS MORE SPECIFIC DIMENSIONS ARE SHOWN ELSEWHERE IN THE CONTRACT DOCUMENTS THAT ARE WITHIN THE PERMISSIBLE LIMITS SHOWN HERE.
- MOUNTING HEIGHTS OF RESTROOM FIXTURES AND ACCESSORIES. PROVIDE BACKING AT ALL WALL MOUNTED FIXTURES AND EQUIPMENT.



CODE REFERENCED:
01. ABAAS 505 HANDRAILS

2 ABAAS HANDRAILS
G7.0 SCALE 1/4" = 1'-0"



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TECH. REVIEW:
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DATE:
2.27.2023

SUB SHEET NO.

G7.0

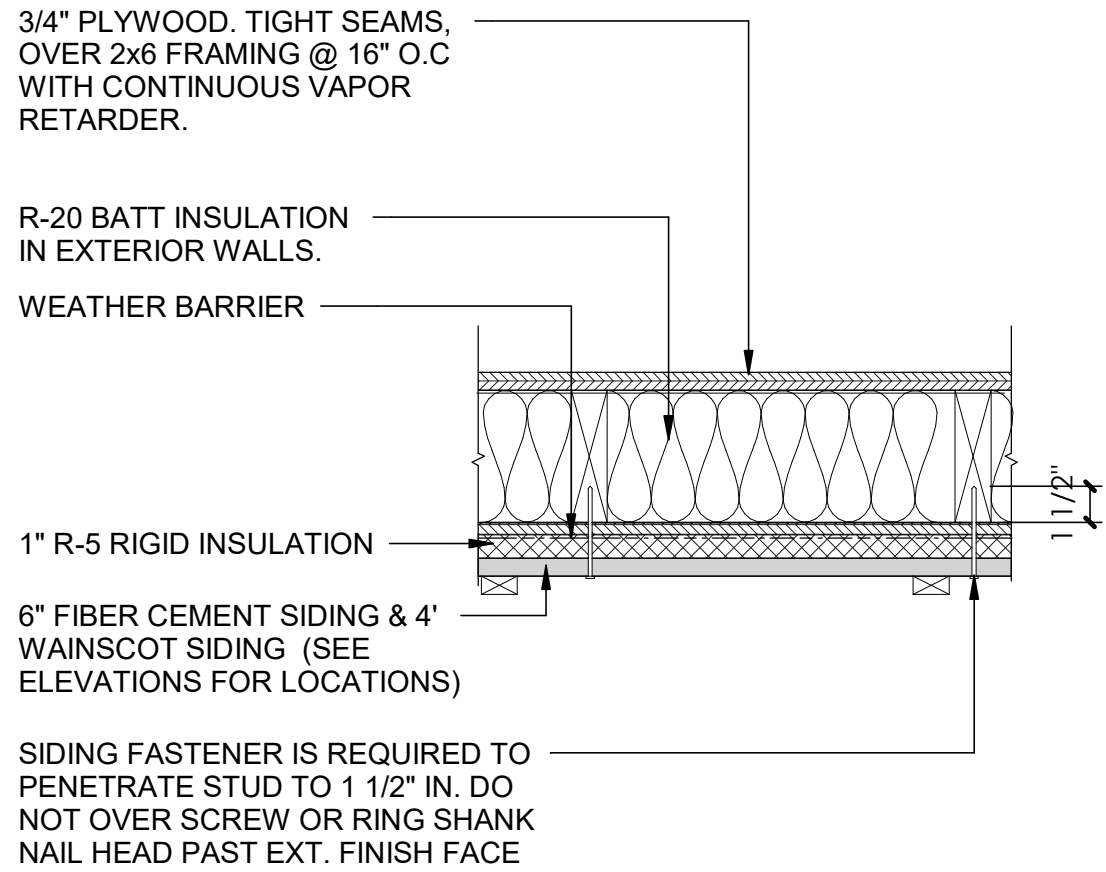
TITLE OF SHEET
ABAAS REQUIREMENTS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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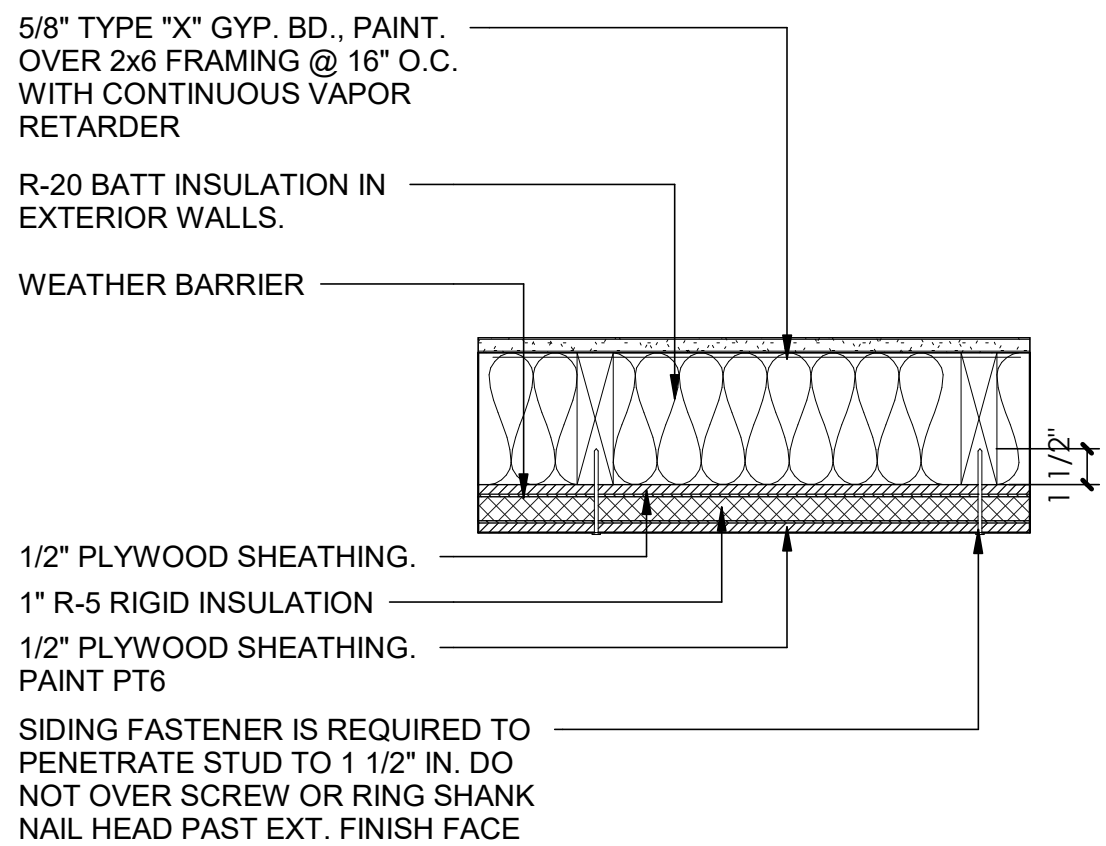
1 ANSI A117.1-17 SIGNAGE
G7.0 SCALE 1 1/2" = 1'-0"

EXTERIOR WALLS

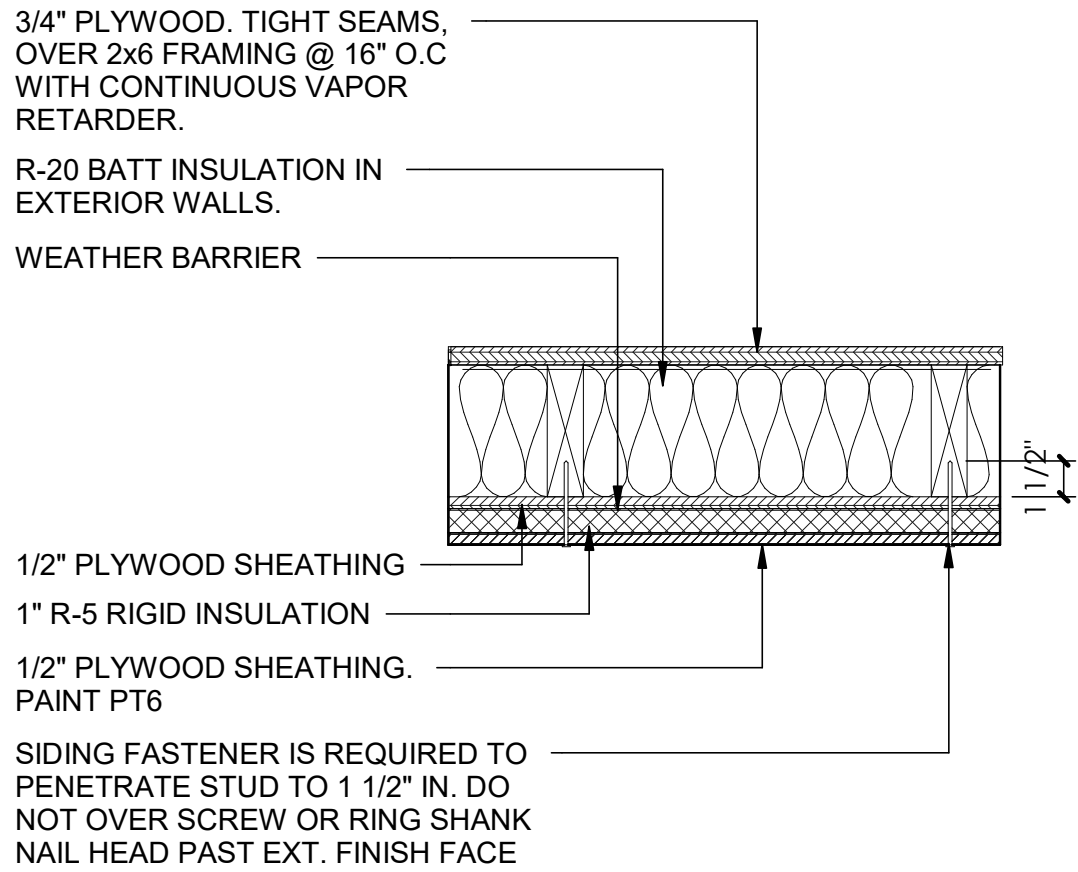


EXT - WOOD STUD 2X6 PLY INT. W/ SHIP LAP SIDING INS.

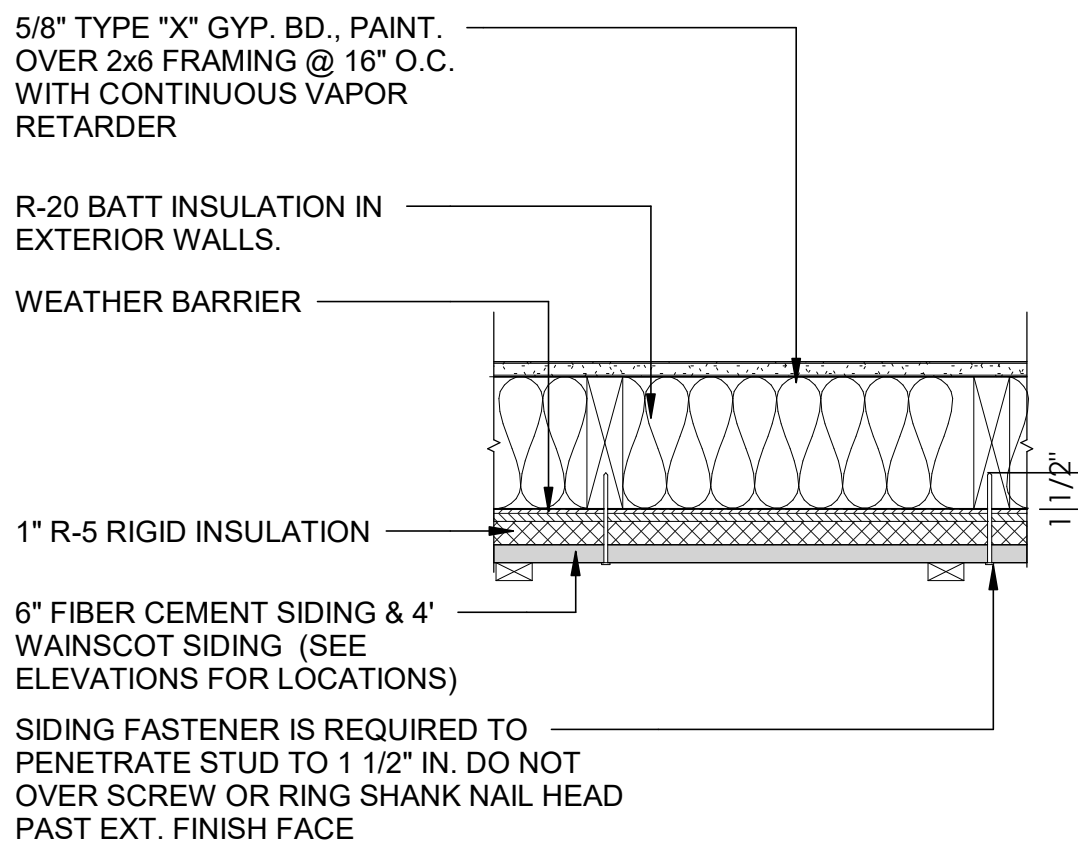
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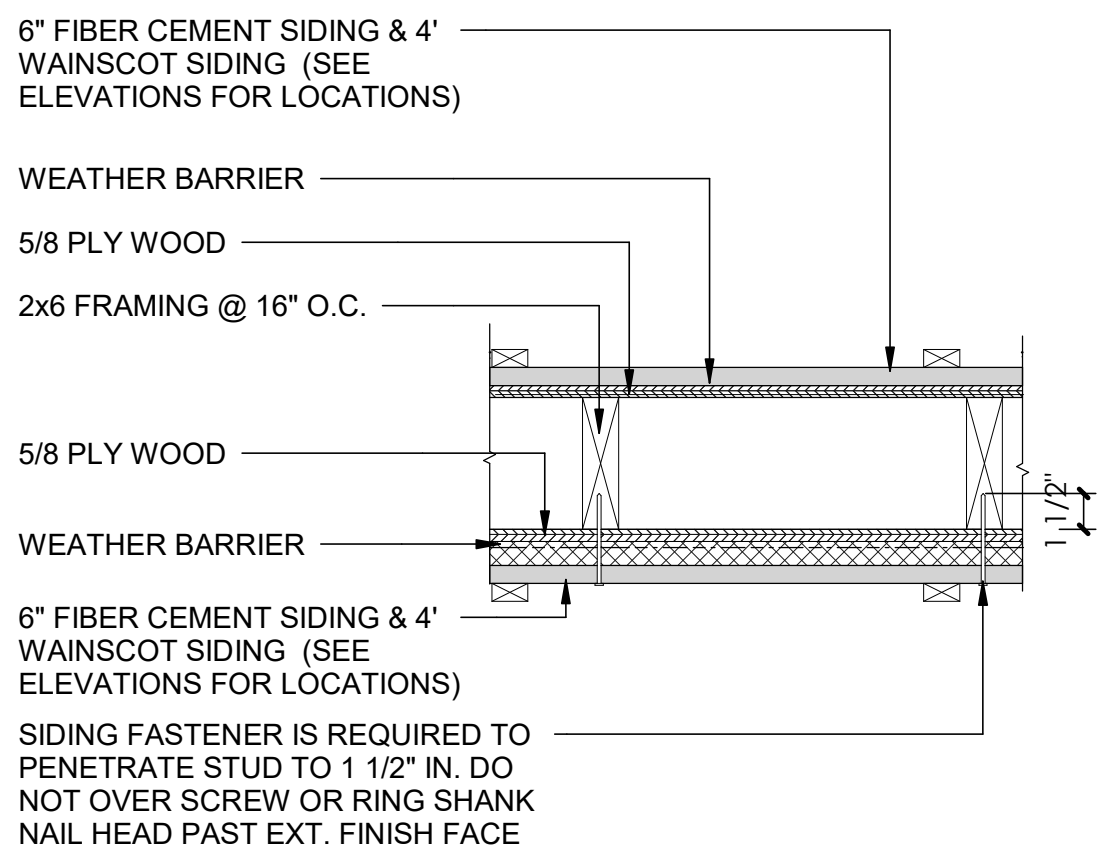
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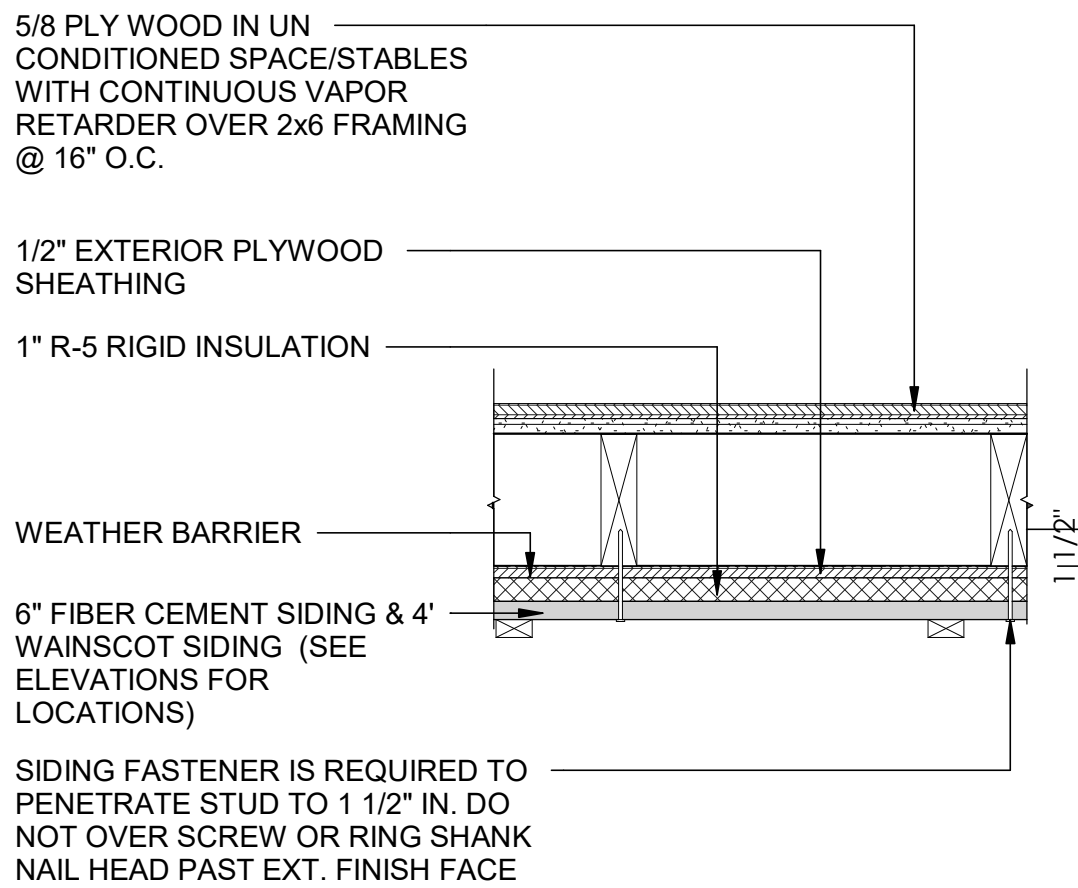
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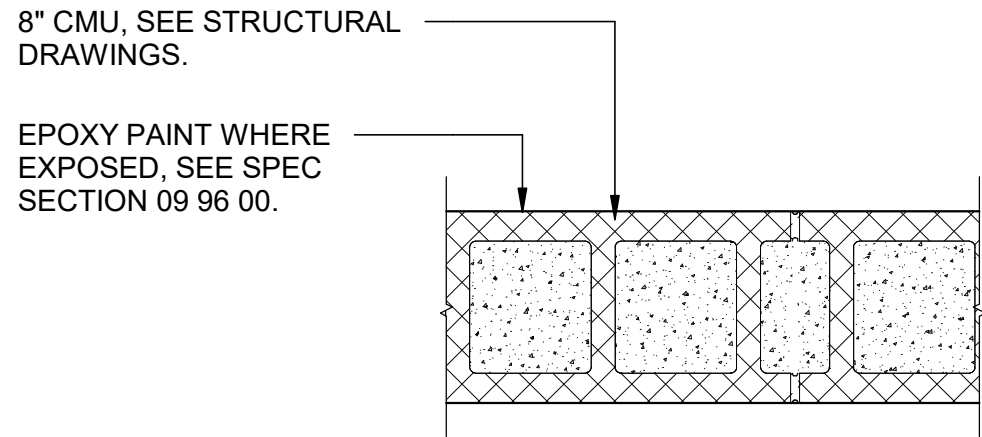
EXT - WOOD STUD 2X6 W/ SHIP LAP SIDING



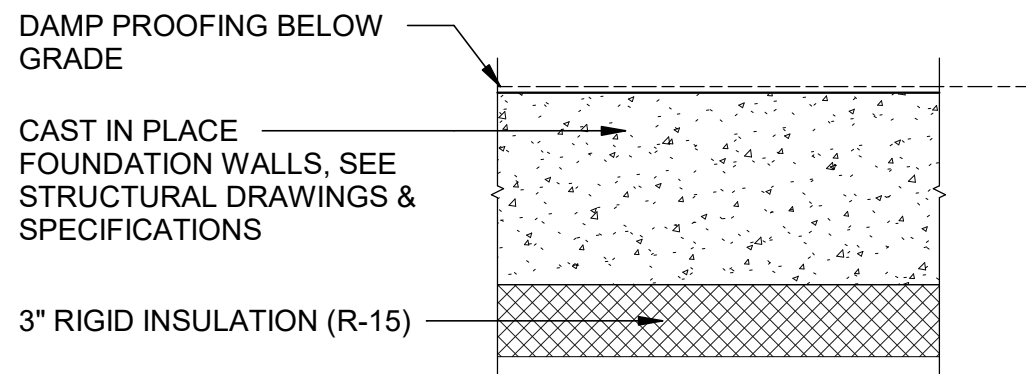
EXT - WOOD STUD 2X6 DBL. SIDED



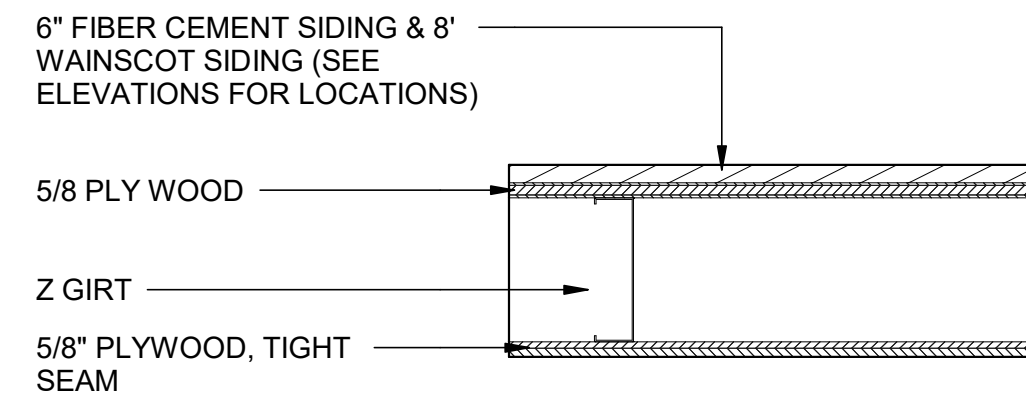
EXT - WOOD STUD 2X6 BARN - NO INS.



CMU WASH WALL



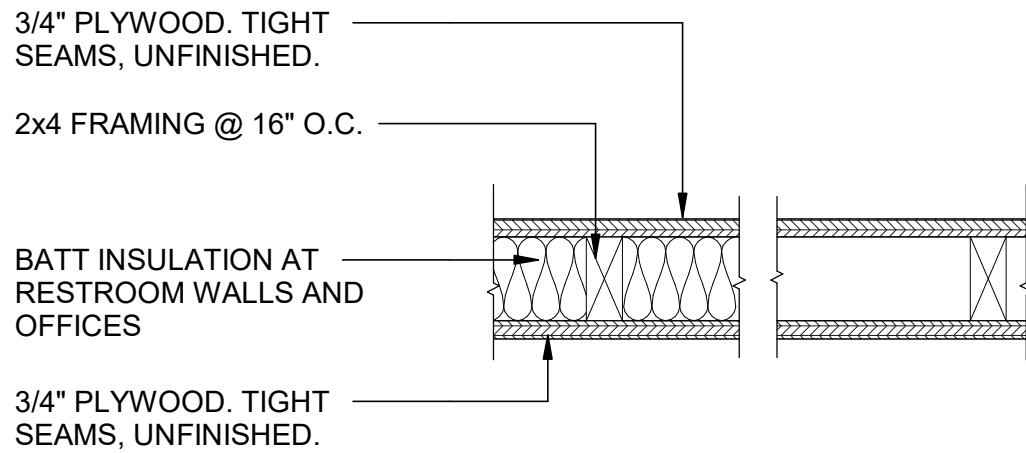
EXT - CONCRETE 8"



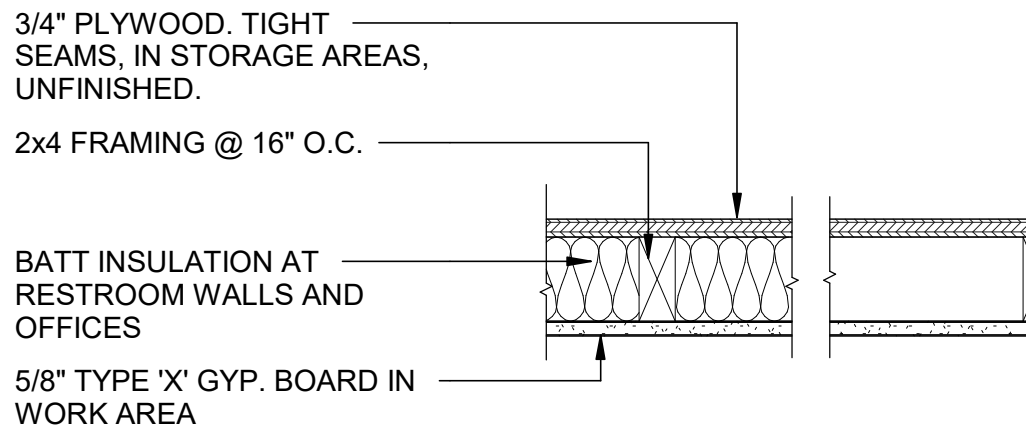
EXT - PRE-MFG. METAL SHED

INTERIOR WALLS

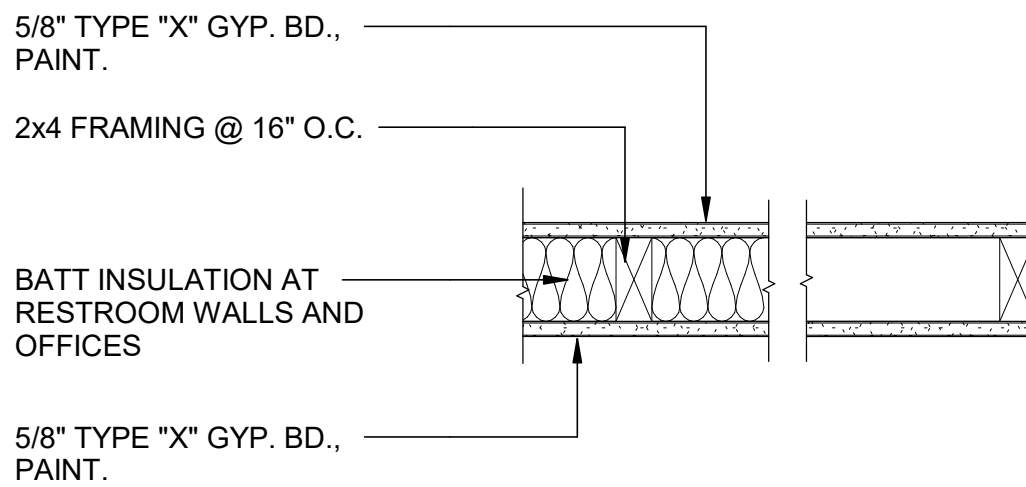
FOR INTERIOR WALLS: PROVIDE W.R. TYPE GYP. BD. AT WET WALLS W/ EPOXY PAINT



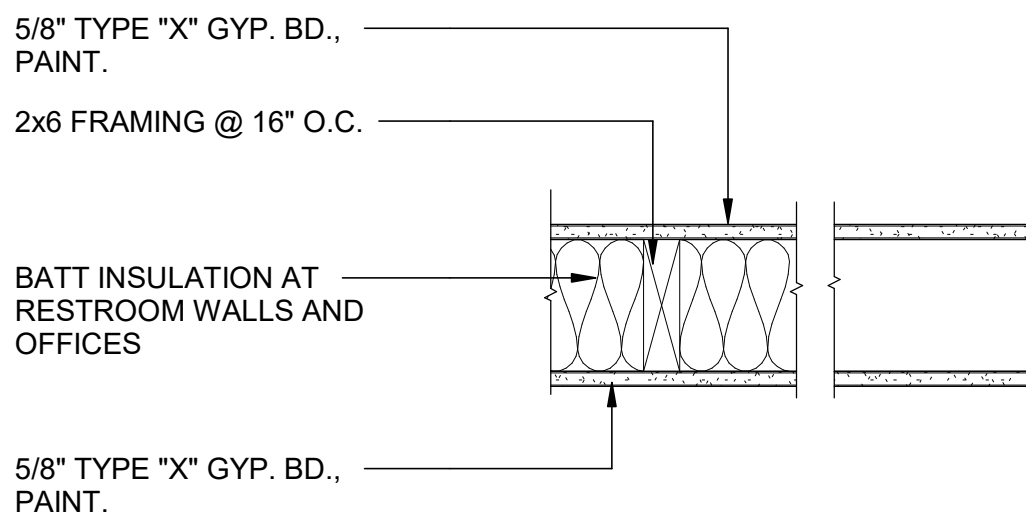
INT - WOOD STUD 2X4 - PLYWOOD BOTH SIDES



INT - WOOD STUD 2X4 - PLYWOOD / GYP



INT - WOOD STUD 2X4 - GYP BD BOTH SIDES



INT - WOOD STUD 2X6 - GYP BD BOTH SIDES



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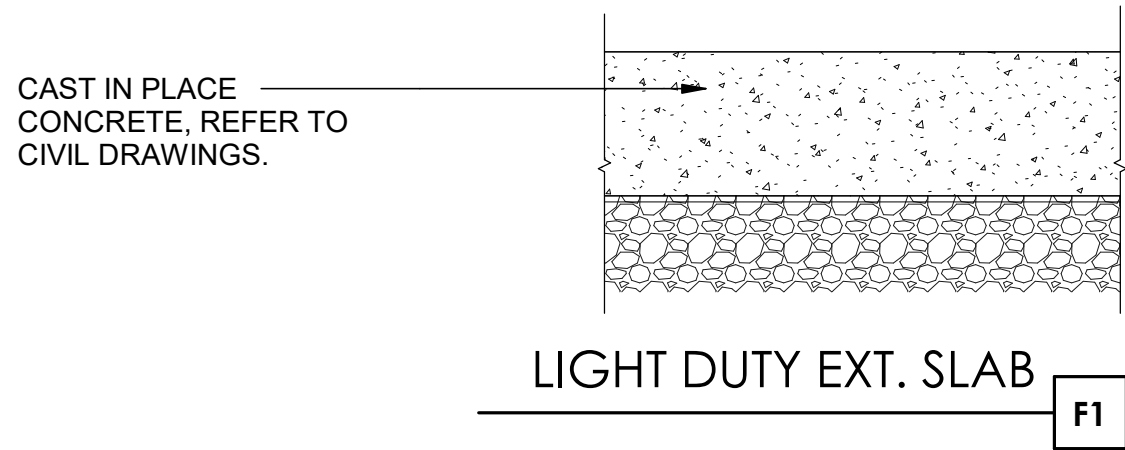
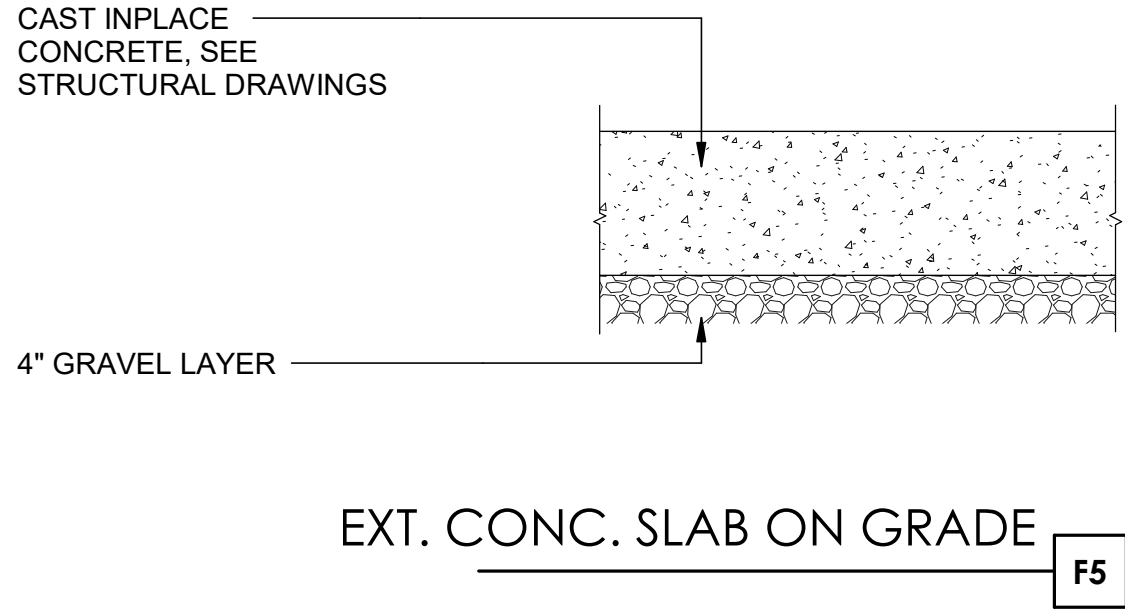
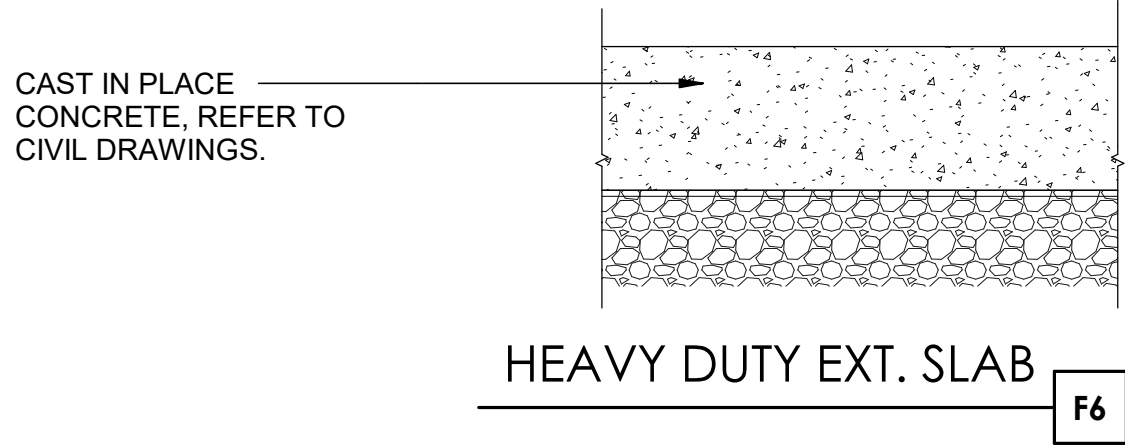
A0.1

TITLE OF SHEET
WALL ASSEMBLY TYPES

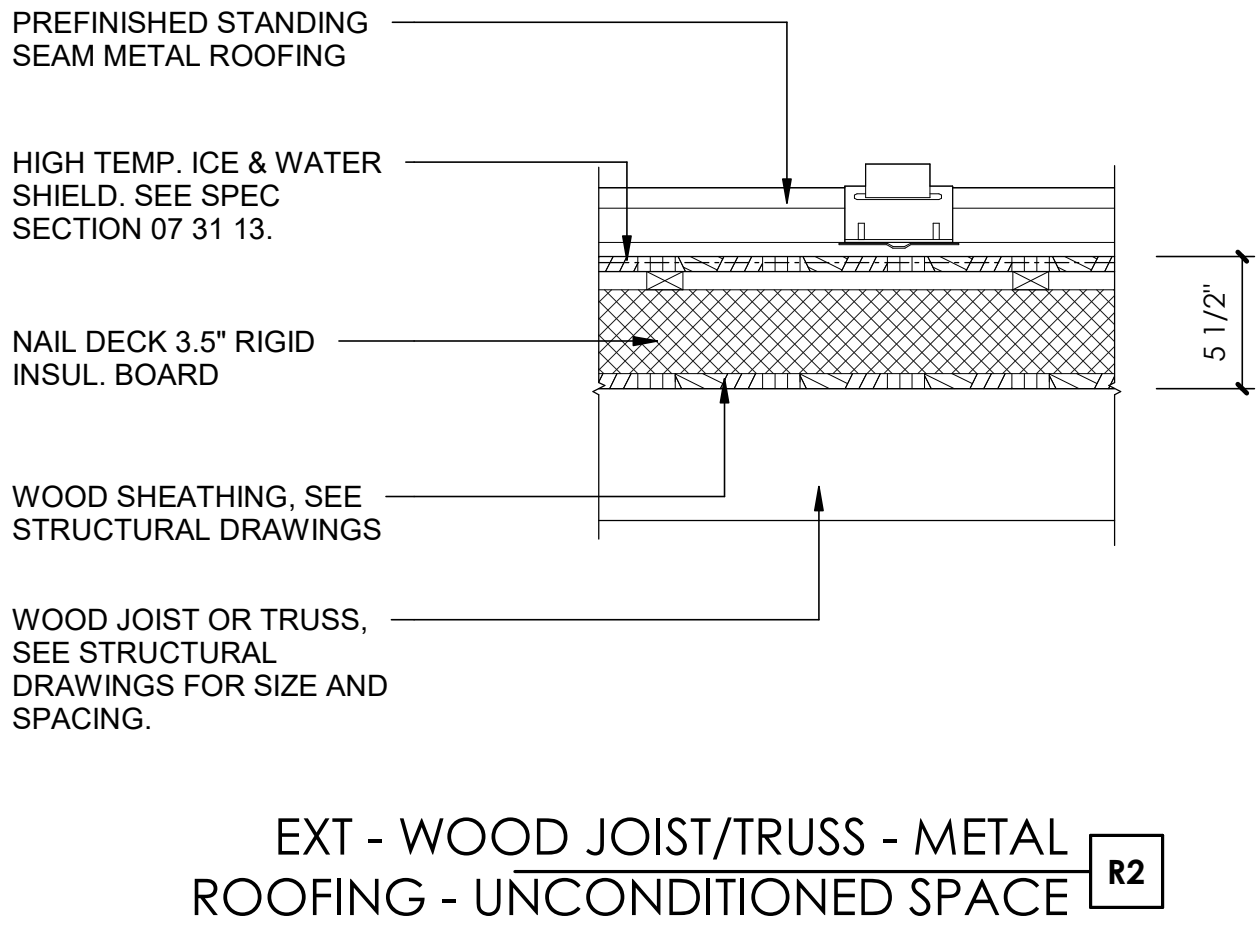
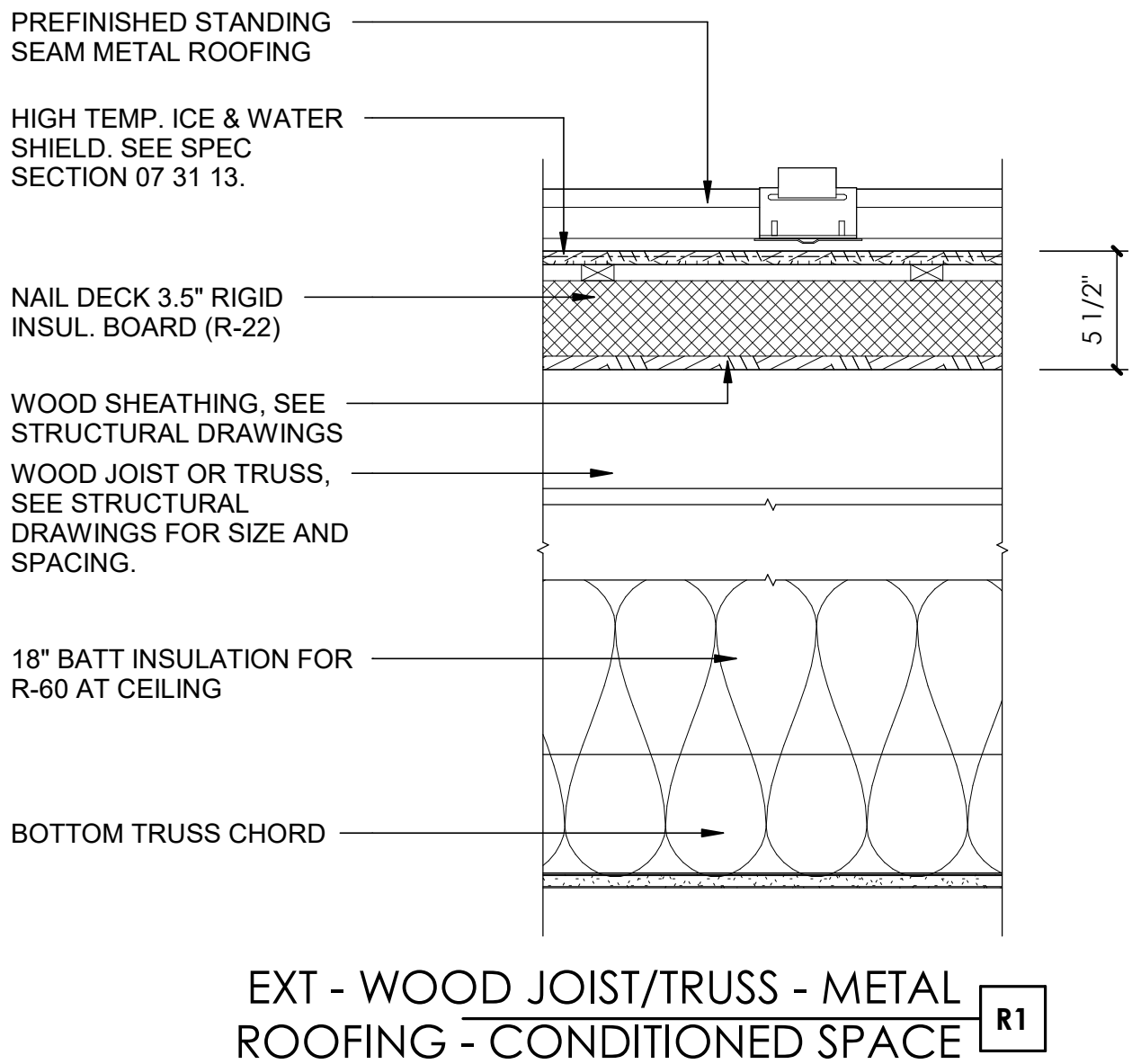
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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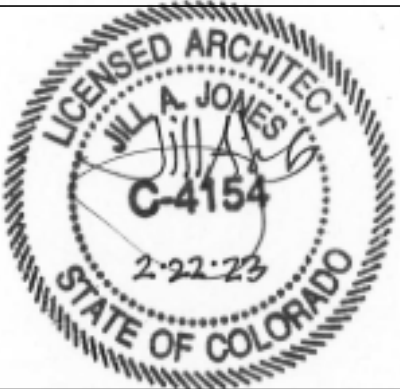
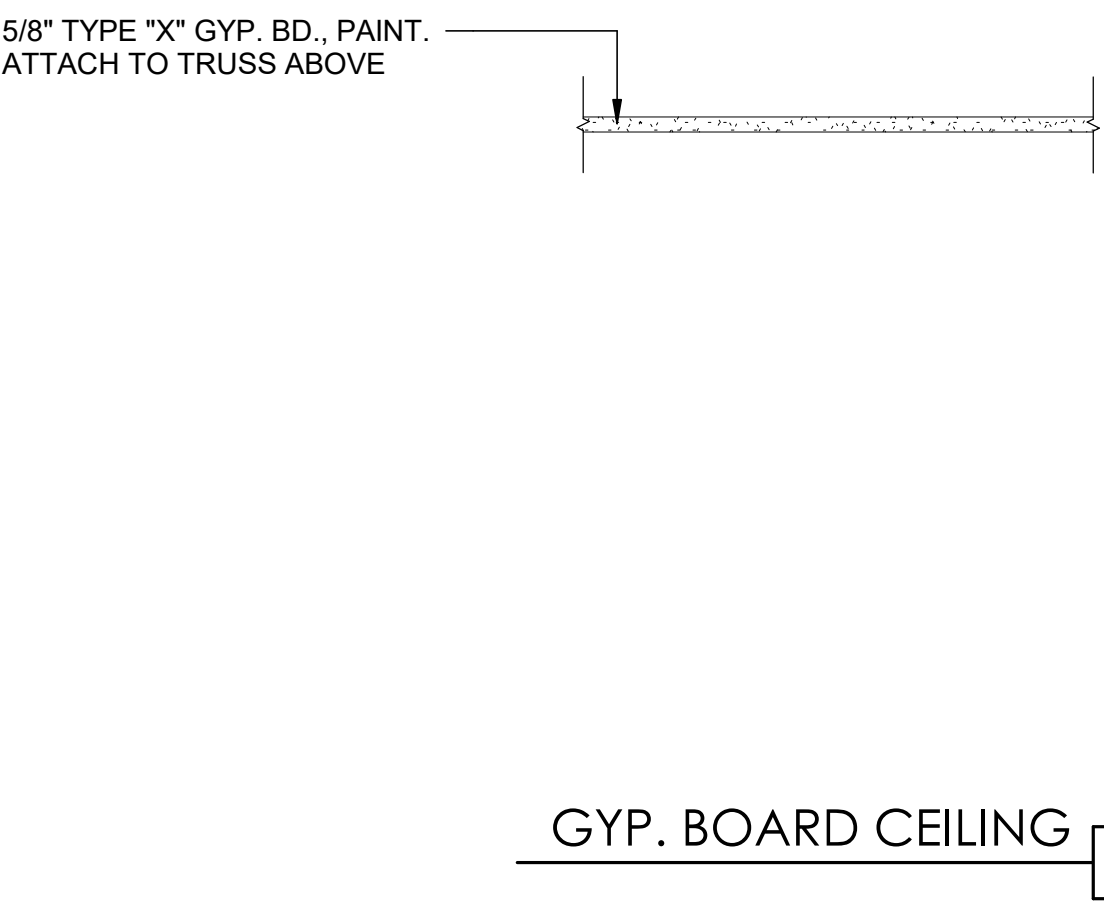
FLOORS



ROOFS



CEILING



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2.27.2023

SUB SHEET NO.

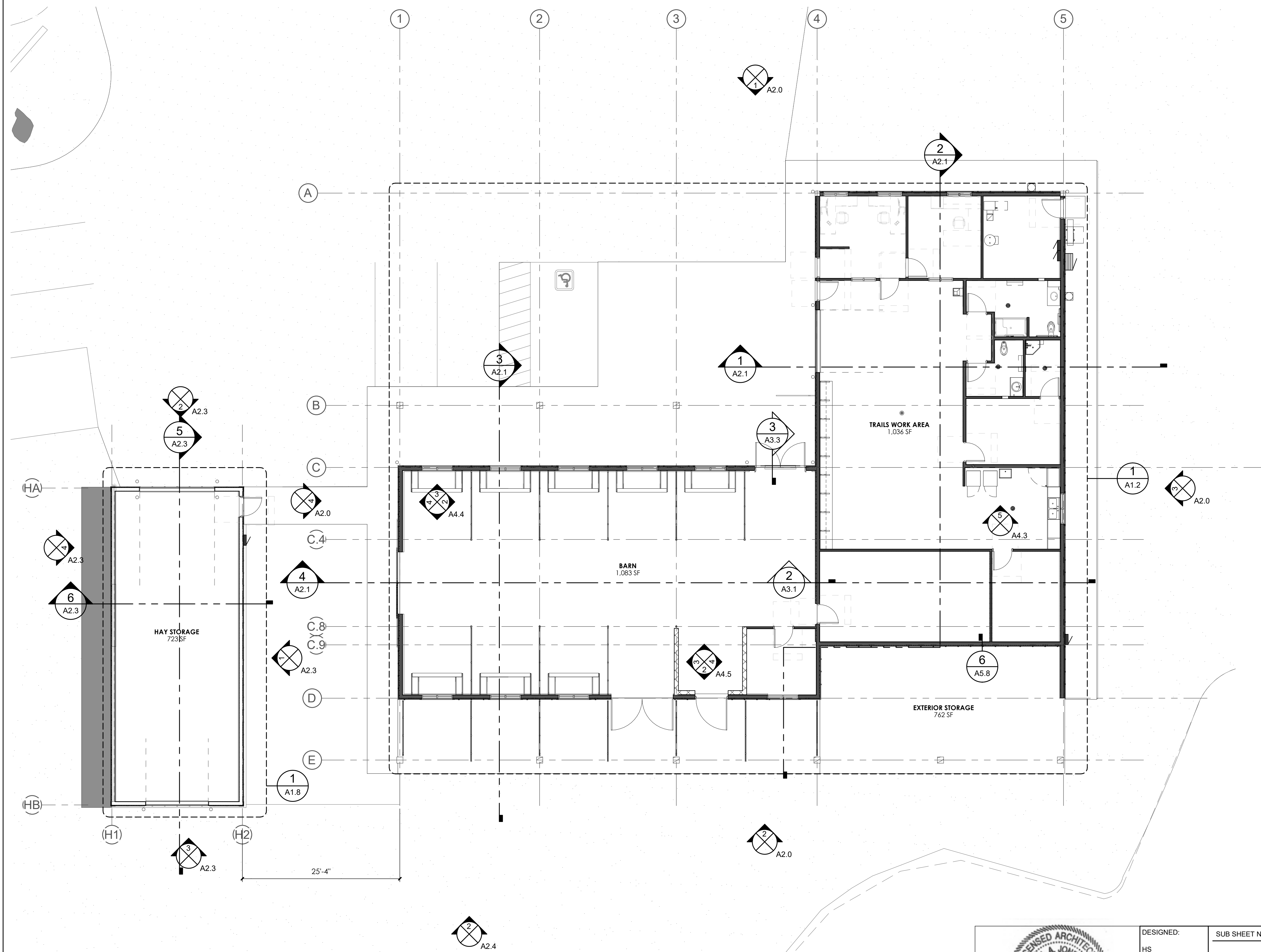
A0.2

TITLE OF SHEET
**FLOOR AND ROOF
ASSEMBLY TYPES**

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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- GENERAL NOTES:**
- 1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - 2. SEE SHEET G2.0 FOR GENERAL NOTES.
 - 3. DO NOT SCALE DRAWINGS.
 - 4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.



1 OVERALL FLOOR PLANS
SCALE 1/8" = 1'-0"



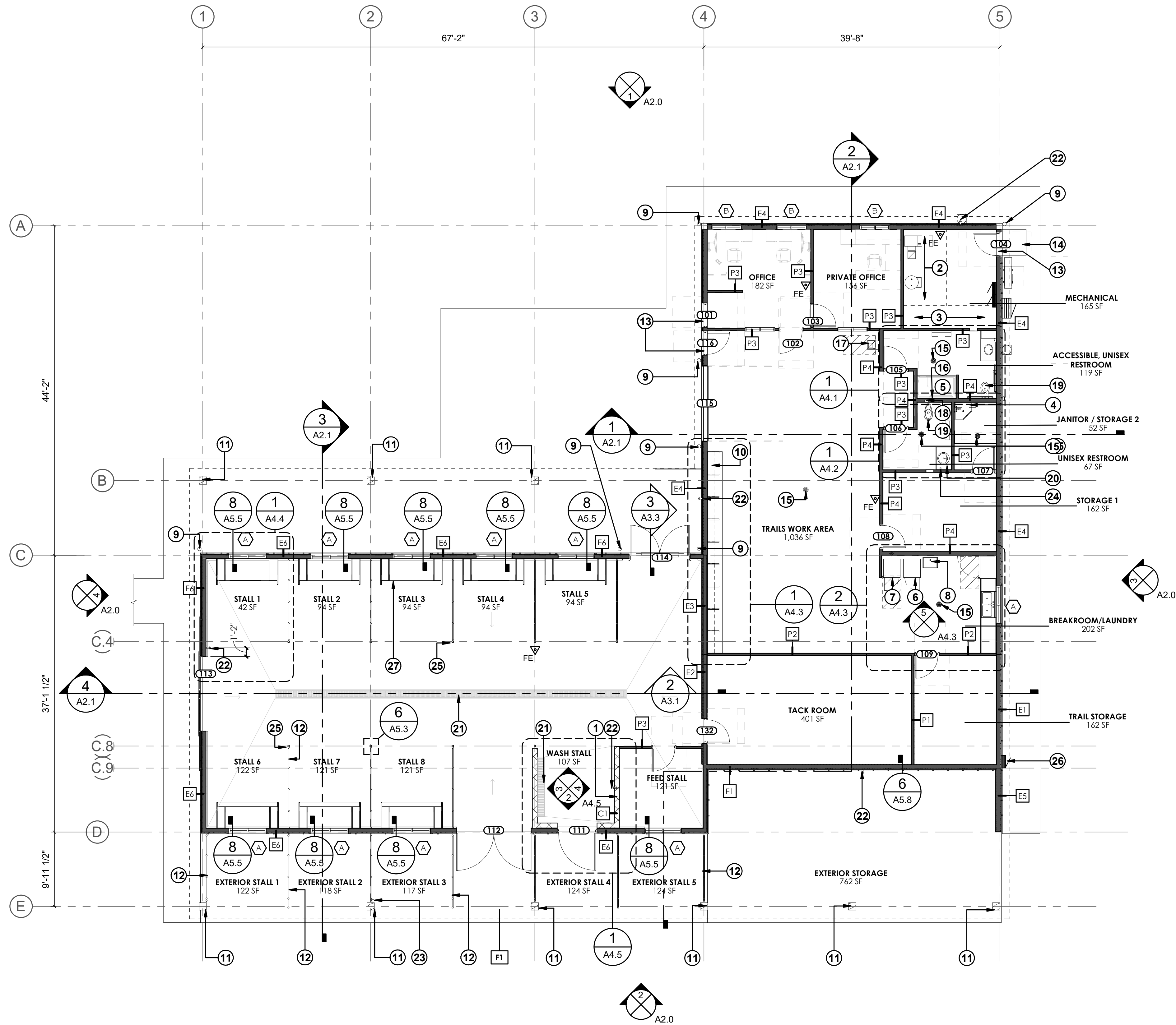
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DATE:
2.27.2023

SUB SHEET NO.
A1.1

TITLE OF SHEET
OVERALL FLOOR PLANS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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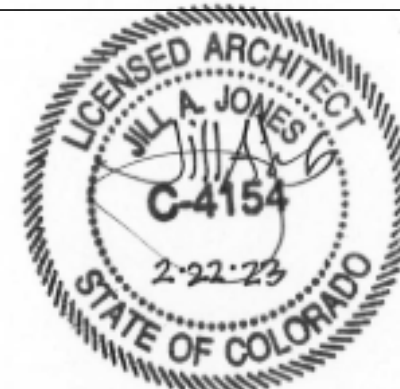
1 ANNOTATED FLOOR PLAN - LEVEL 01
SCALE 1/8" = 1'-0"

GENERAL NOTES:

1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
2. SEE SHEET G2.0 FOR GENERAL NOTES.
3. DO NOT SCALE DRAWINGS.
4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.
5. SEE A1.3 FOR DIM.'S NOT SHOWN ON THIS SHEET

KEYED NOTES:

- 1 8" CMU W/ BLOCK FILLER WASH STALL WALL, EPOXY PAINTED, SEE SPEC SECTION 09 96 00.
- 2 MECHANICAL EQUIPMENT LOCATION
- 3 ELECTRICAL AND DATA EQUIPMENT LOCATION (LOCKED CABINET WITHIN THE SECURE ROOM)
- 4 CORNER MOP SERVICE SINK
- 5 ABA ACCESSIBLE, UNISEX ROLL-IN SHOWER
- 6 COMMERCIAL GRADE, ELECTRIC DRYER. NPS FURNISHED, CONTRACTOR INSTALLED.
- 7 COMMERCIAL GRADE WASHER. NPS FURNISHED, CONTRACTOR INSTALLED.
- 8 UTILITY SINK
- 9 STEEL BOLLARDS
- 10 WORKBENCH WITH UPPER CABINETS
- 11 HEAVY TIMBER WOOD COLUMN, SEE STRUCTURAL DRAWINGS, STAIN ST1
- 12 60" ABOVE FINISHED FLOOR STEEL PIPE RAILING, PAINTED. TYP.
- 13 EXTERIOR INSULATED HOLLOW METAL DOOR, PAINTED.
- 14 LEVEL LANDING, SEE SITE PLAN
- 15 FLOOR DRAIN
- 16 ABA SHOWER CONTROLS, SEE PLUMBING DRAWINGS.
- 17 ABA LEVEL DRINKING FOUNTAIN WITH WATER BOTTLE FILL STATION
- 18 WATER HAMMER ARRESTOR, SEE PLUMBING DRAWINGS
- 19 ABA TOILET, SEE PLUMBING DRAWINGS
- 20 SINK AND FAUCET, SEE PLUMBING DRAWINGS.
- 21 TRENCH DRAIN, SEE PLUMBING DRAWINGS.
- 22 RECESSED WALL HYDRANT, SEE PLUMBING DRAWINGS.
- 23 36" A.F.F. YARD HYDRANT, SEE PLUMBING DRAWINGS.
- 24 SOAP DISPENSER. NPS FURNISHED AND INSTALLED.
- 25 H.S.S. COLUMN, SEE STRUCTURAL
- 26 ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
- 27 STALL FEEDER - CONTRACTOR PROVIDED, CONTRACTOR CONSTRUCTED



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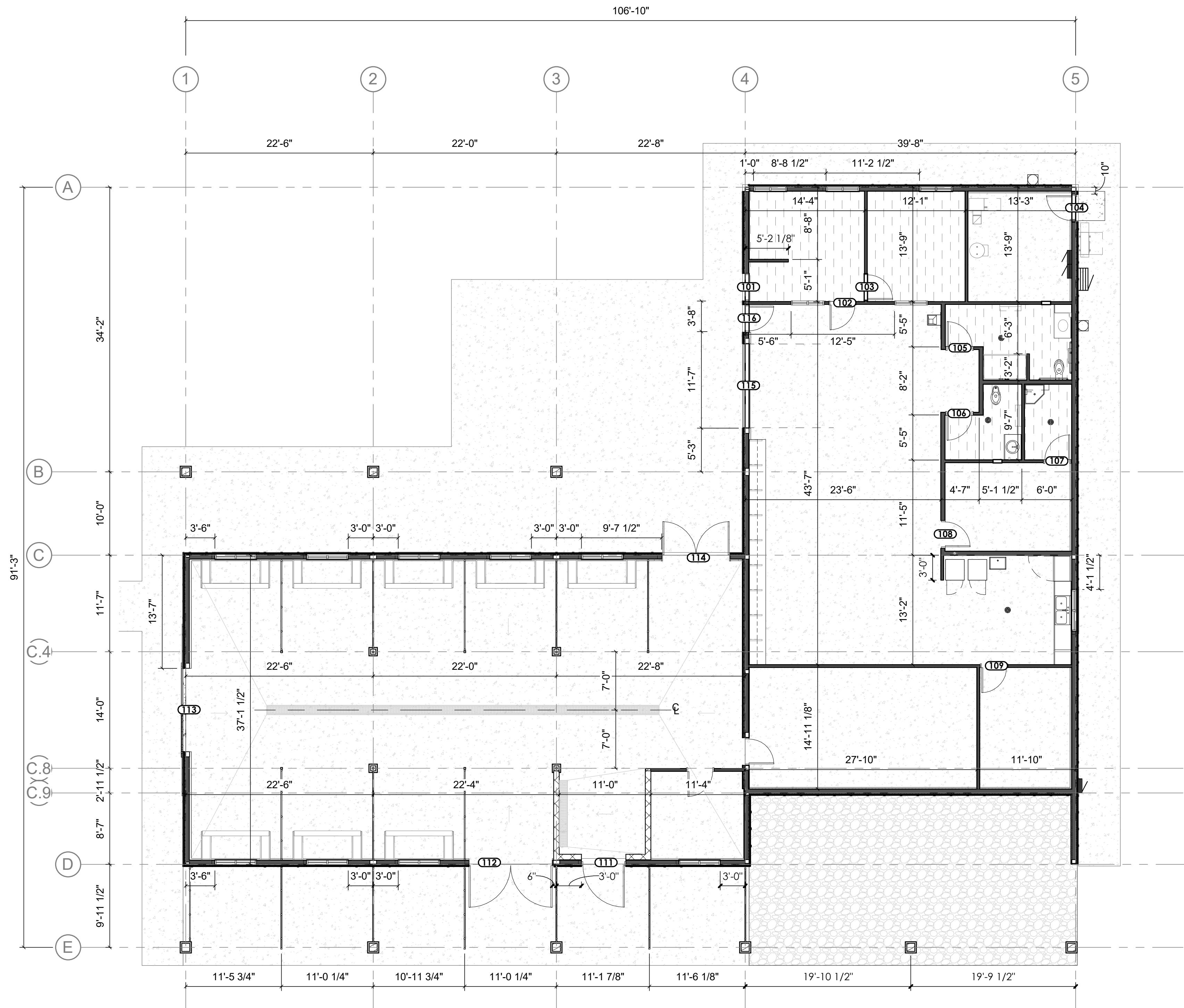
SUB SHEET NO.

A1.2

TITLE OF SHEET
ANNOTATED FLOOR PLAN

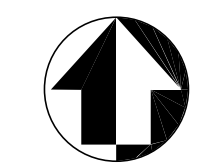
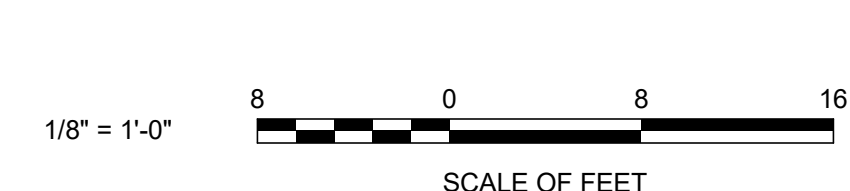
CONSTRUCT COLORADO RIVER DISTRICT
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1 DIMENSION FLOOR PLAN - LEVEL 01
A1.3 SCALE 1/8" = 1'-0"

- GENERAL NOTES:
1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 2. SEE SHEET G2.0 FOR GENERAL NOTES.
 3. DO NOT SCALE DRAWINGS.
 4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.
 5. SEE A1.2 & ENLARGED PLANS FOR DIM.'S NOT SHOWN ON THIS SHEET



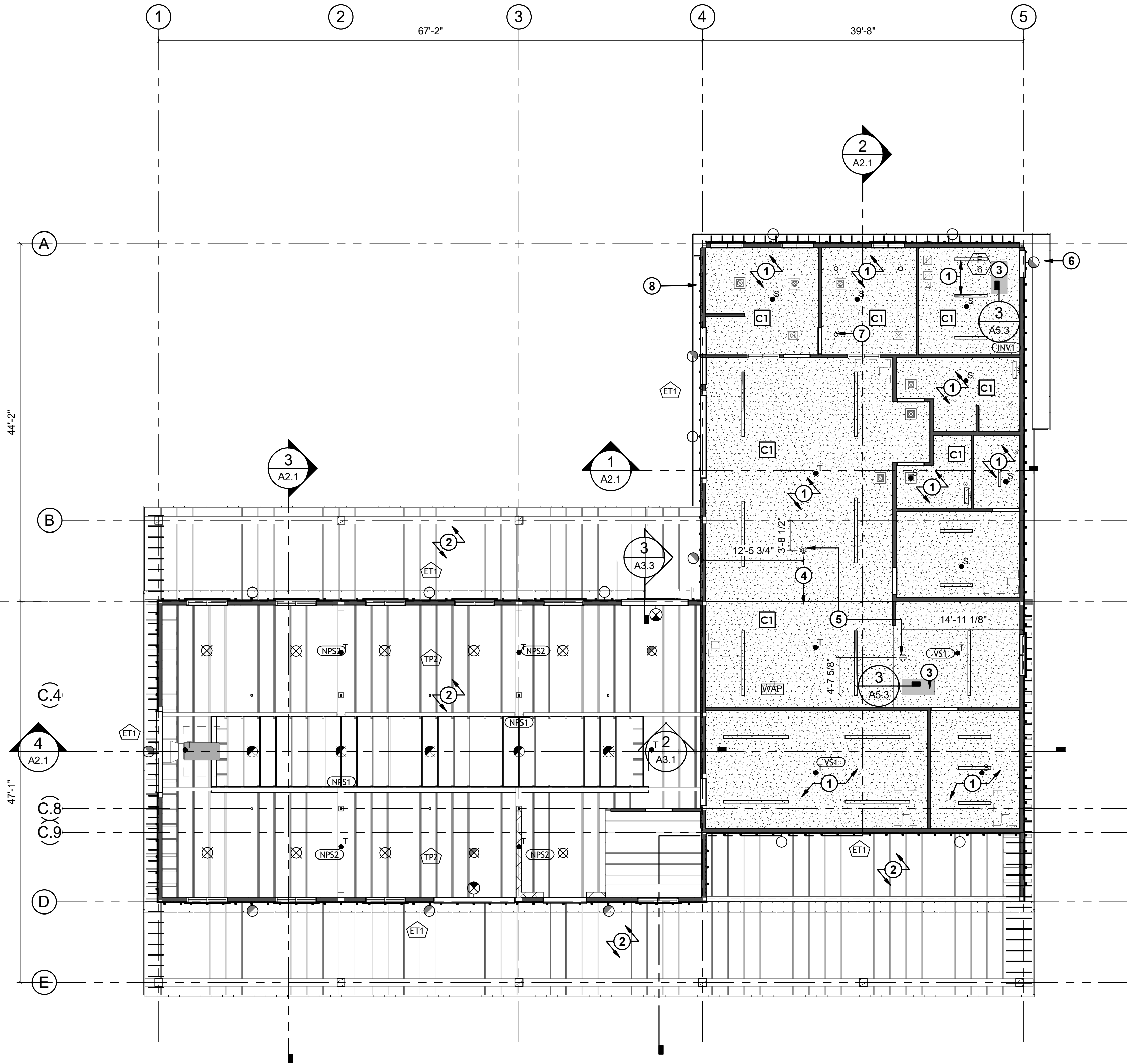
DESIGNED:	SUB SHEET NO. <
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1 REFLECTED CEILING PLAN
A1.5 SCALE 1/8" = 1'-0"

CEILING NOTES AND LEGEND

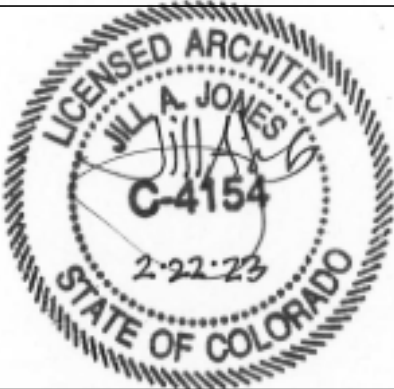
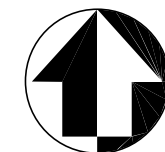
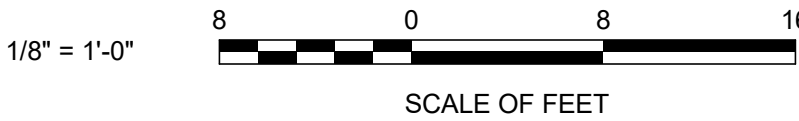
- SEE SHEET G2 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
- SEE SHEET G3 FOR GENERAL NOTES.
- DO NOT SCALE DRAWINGS.
- CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.
- THIS IS A REFLECTED CEILING PLAN AND IS NOT TO BE INTENDED TO BE A LIGHTING PLAN. NO WALL MOUNTED LIGHTING FIXTURES OR OTHER WALL MOUNTED APPURTENANCES ARE SHOWN. SEE THE LIGHTING PLAN FOR ALL LIGHTING AND EGRESS SIGNS, SIZE AND TYPES OF ELECTRICAL FIXTURES ETC. SEE MECHANICAL PLANS FOR ALL CEILING MOUNTED DIFFUSERS/GRILLES ETC.

REFLECTED CEILING LEGEND

FRAMED GYP. CEILING PAINT PT2	
EXPOSED EXISTING STRUCTURE TO REMAIN. SEMI-TRANSPARENT STAIN.	
LED DOWNLIGHT	
EXTERIOR THROW LIGHT	
LINEAR LED LIGHT	
SMOKE DETECTOR	
MECHANICAL RETURN	
MECHANICAL EXHAUST	
MECHANICAL SUPPLY	
OCCUPANCY SENSOR	
ADA HORN / STROBE	

KEYED NOTES:

- GYP. CEILING, SEE SECTIONS FOR HEIGHT, PAINT.
- EXPOSED STRUCTURE, SEE STRUCTURAL DRAWINGS FOR ROOF FRAMING, STAIN ST1
- ATTIC ACCESS PANEL
- GIRDER ABOVE, SEE STRUCTURE ROOF FRAMING PLAN.
- TUBULAR SKYLIGHTS
- ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
- INTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS.
- PERFORATED FIBER CEMENT SOFFIT WITH VENTS.



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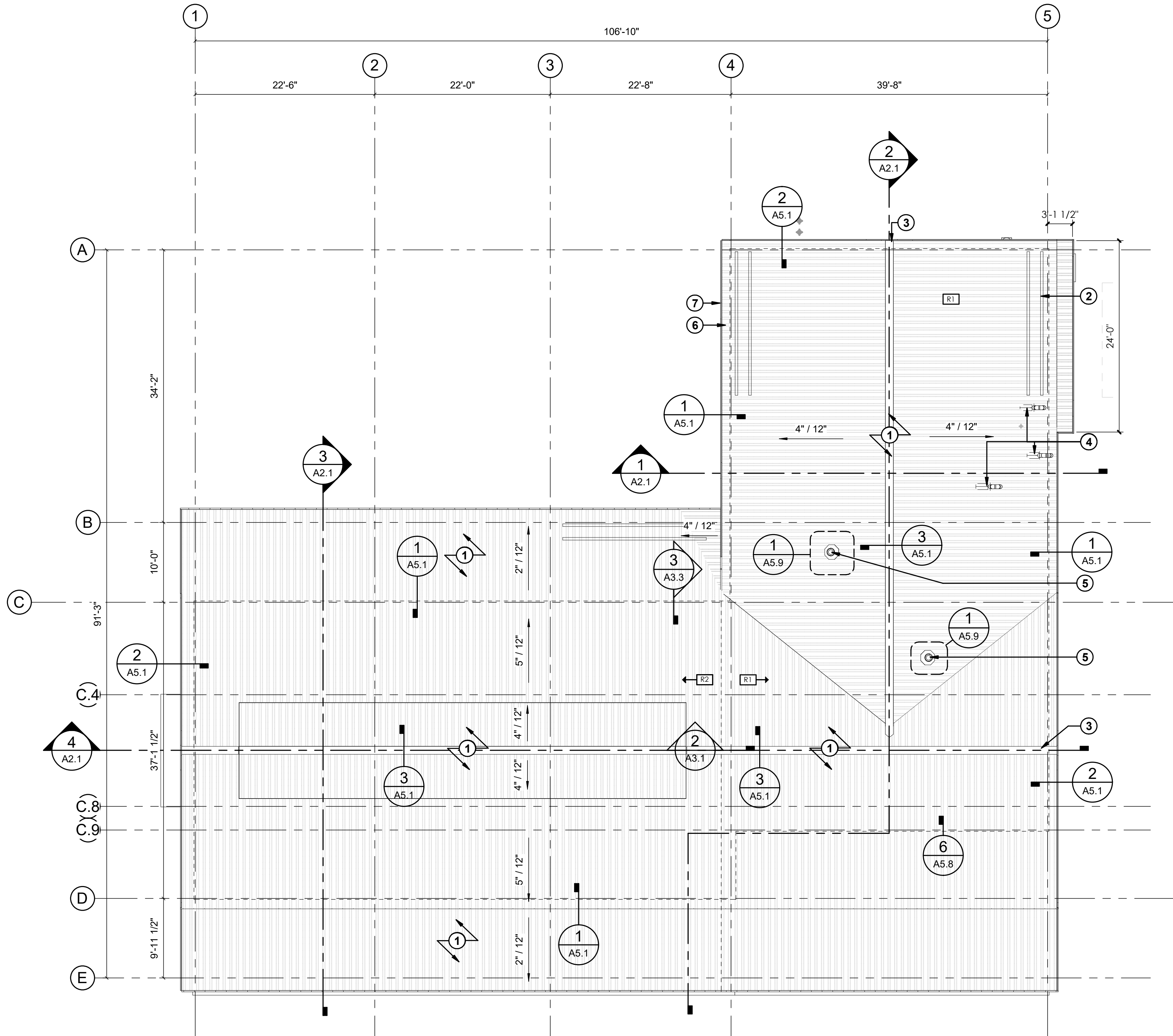
SUB SHEET NO.

A1.5

TITLE OF SHEET
REFLECTED CEILING PLAN

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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1 ROOF PLAN - STANDING SEAM
A1.6 SCALE 1/8" = 1'-0"

- GENERAL NOTES:**
- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - SEE SHEET G2.0 FOR GENERAL NOTES.
 - DO NOT SCALE DRAWINGS.
 - CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

- KEYED NOTES:**
- PREFINISHED STANDING SEAM METAL ROOFING
 - ROOF SNOW GUARDS AT OVERHEAD DOOR(S) & MAN DOOR(S) LOCATION, PREFIN. MTL.
 - PREFIN. MTL. RIDGE VENT, CONT. MATCH ROOFING COLOR
 - PROVIDE FLASHING AT ALL ROOF PENETRATIONS.
 - SOLATUBE SKYLIGHT - SEE SPEC SECTION 08 62 00.
 - PERFORATED FIBER CEMENT SOFFIT WITH VENTS.
 - PRE-FINISHED METAL FASCIA

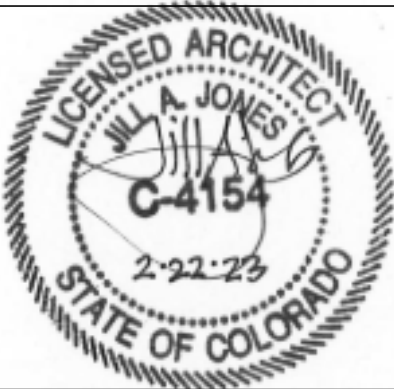
REQUIRED ATTIC VENTILATION

R806.2 - EXCEPTION FOR CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING

- (A) ATTIC AREA (SQUARE FEET).
- (B) DIVIDE (A) BY 300 AND MULTIPLY BY 1.44 TO CALCULATE THE TOTAL REQUIRED NET FREE VENTING AREA IN SQUARE INCHES.
- (C) TOTAL SQUARE INCHES OF NET FREE VENTILATING AREA PROVIDED BY GABLE END ATTIC VENTS (LOUVERS)
- (D) TOTAL SQUARE INCHES OF NET FREE VENTILATING AREA PROVIDED BY ROOF VENTILATORS. (ATTIC VENTS)
- (E) TOTAL SQUARE INCHES OF NET FREE VENTILATING AREA PROVIDED BY UNDER EAVE VENTS.

	A	B	C	D	E	TOTAL
	ATTIC AREA	REQUIRED VENTING	GABLE END VENTS	ATTIC VENTS (RIDGE VENTS)	EAVE VENTS	PROVIDED VENTING
BARN ROOF	2501	2400.96 S.I.	S.I.	2400 S.I.	S.I.	2400 S.I.
OFFICE AND STORAGE ROOF	3241	3111.36 S.I.	S.I.	3150 S.I.	S.I.	3150 S.I.

- NOTES**
- ALL VENT OPENINGS SHALL BE COVERED AT THE INSIDE OF THE ATTIC W/ 1/4" CORROSION RESISTANT METAL MESH.
 - FRAMER SHALL BE RESPONSIBLE FOR COORDINATING W/ TRUSS MFR. TO ACCOMMODATE ALL ATTIC VENTS
 - ALL VENTS SHALL BE INSTALLED SO AS TO MAKE THEM WATER-PROOF AND WALL MOUNTED LOUVERS SHALL BE SEALED AND FLASHED.
 - PROVIDE APPROVED INSULATION DAMS (BAFFLES) WHERE BLOCKING IS USED BETWEEN ROOF FRAMING MEMBERS TO PREVENT VENT HOLES FROM BEING BLOCKED BY INSULATION.



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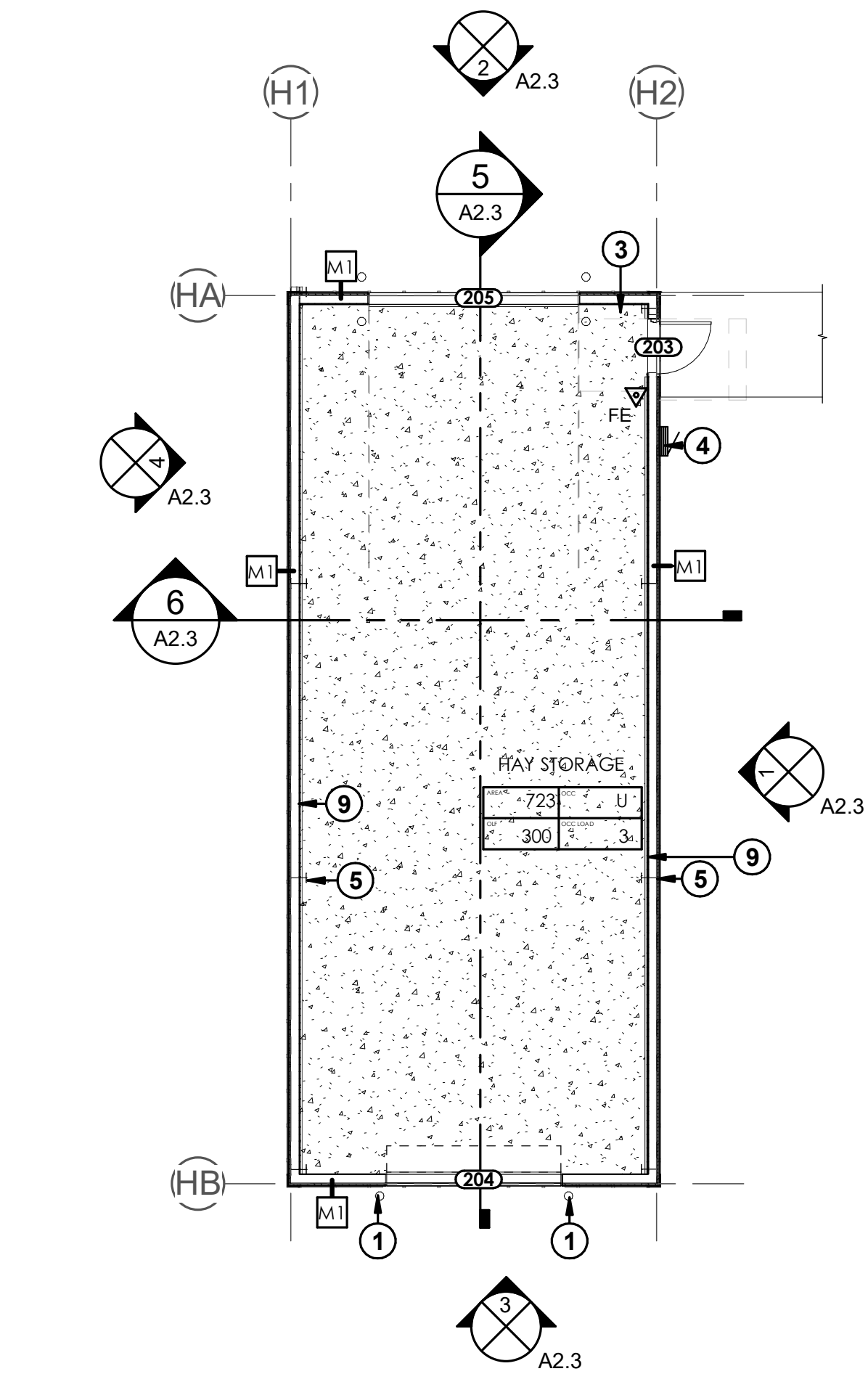
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A1.6

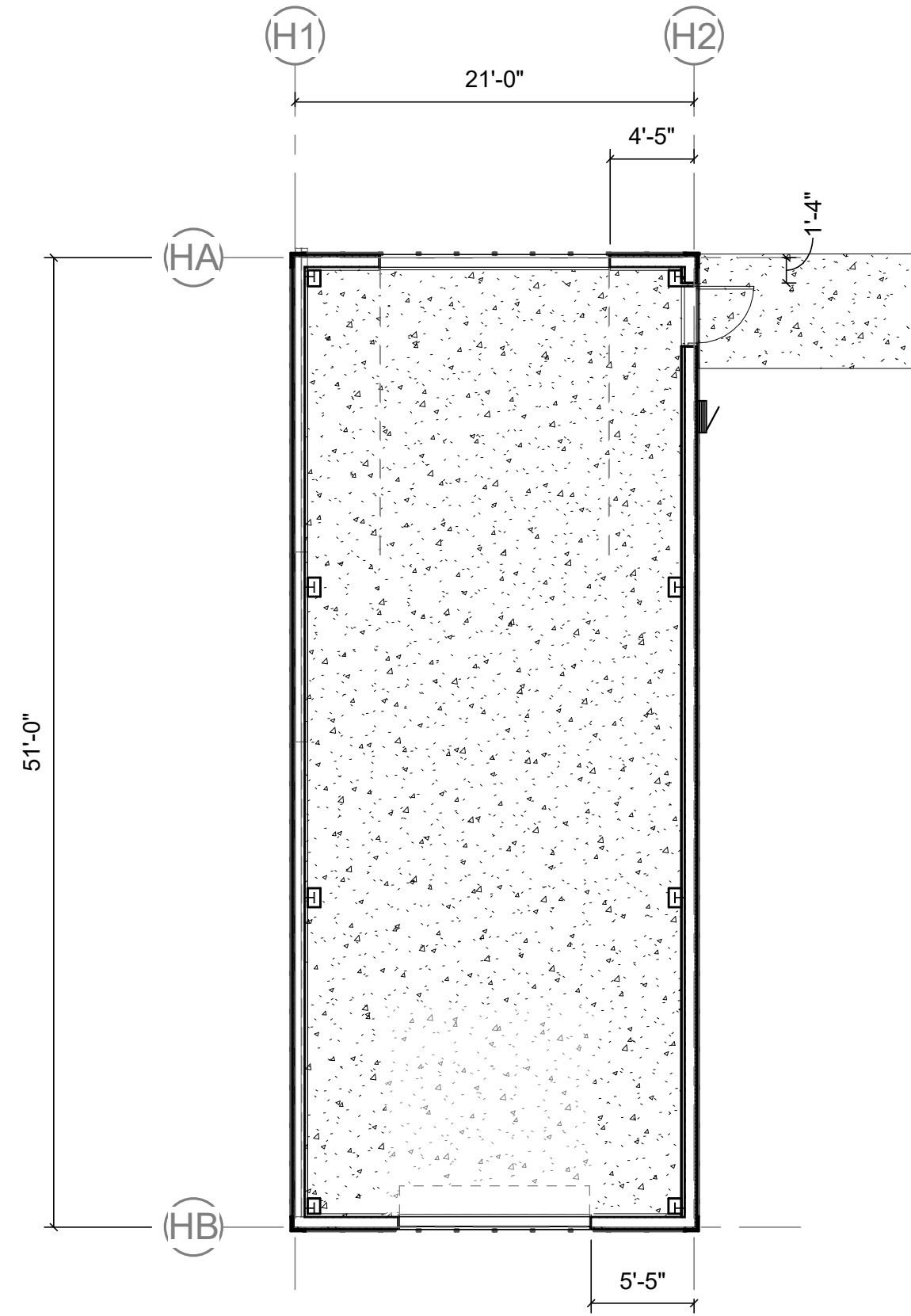
TITLE OF SHEET
ROOF PLAN

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

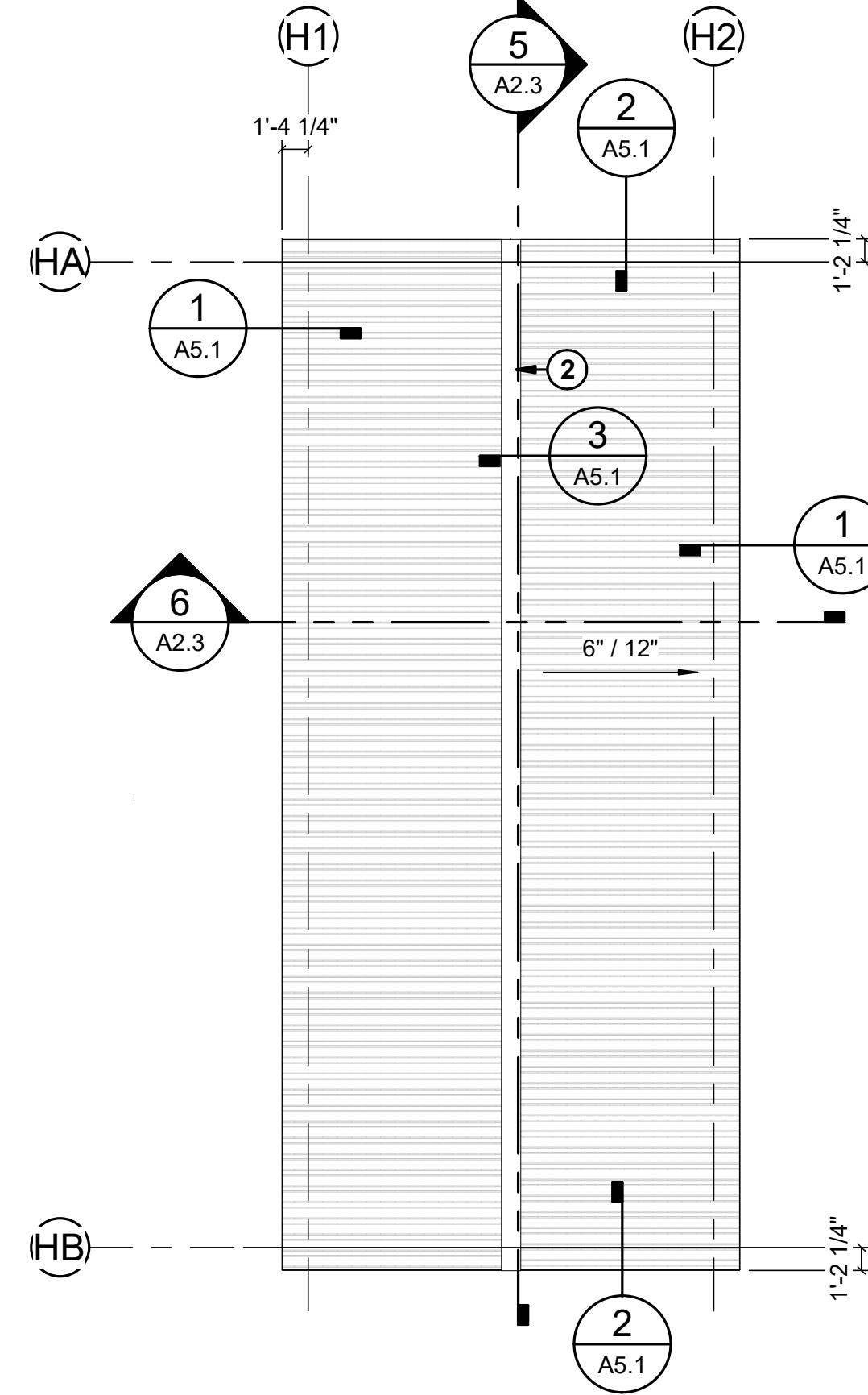
DRAWING NO.
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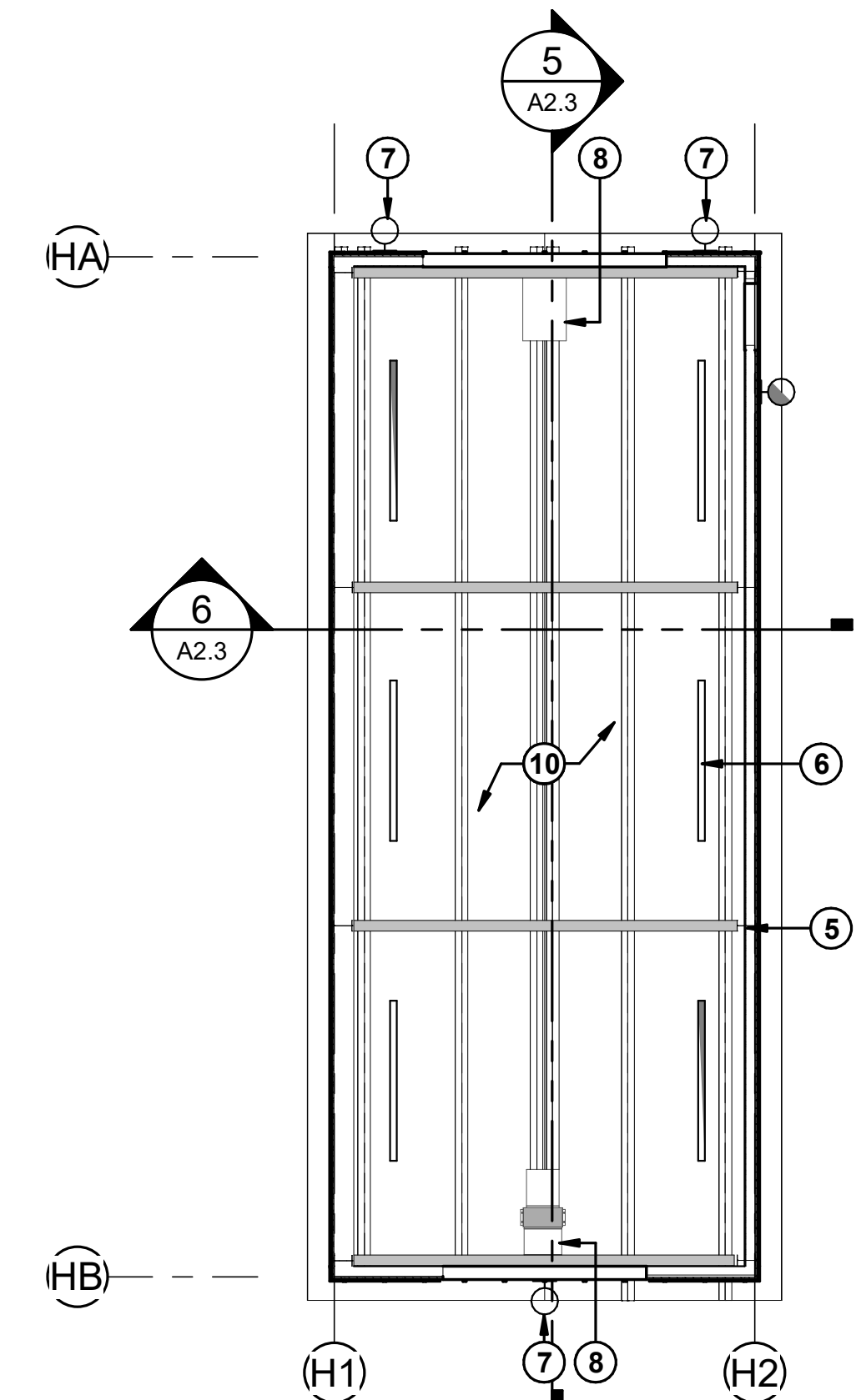
1 ANNOTATED FLOOR PLAN - HAY STORAGE BUILDING
SCALE 1/8" = 1'-0"



2 DIMENSION FLOOR PLAN - HAY STORAGE BUILDING
SCALE 1/8" = 1'-0"



3 ROOF PLAN - HAY STORAGE BUILDING
SCALE 1/8" = 1'-0"



4 REFLECTED CEILING PLAN - HAY STORAGE BUILDING
SCALE 1/8" = 1'-0"

GENERAL NOTES:

- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
- SEE SHEET G2.0 FOR GENERAL NOTES.
- DO NOT SCALE DRAWINGS.
- CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

KEYED NOTES:

- STEEL BOLLARDS
- RIDGE VENT
- LEVEL LANDING, SEE SITE PLAN
- ELECTRICAL FIXTURE, SEE ELECTRICAL DRAWINGS.
- STEEL COLUMN, SEE STRUCTURAL DRAWINGS.
- INTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS.
- EXTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS.
- MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS.
- 1/2" - FULL HEIGHT PLYWOOD SHEATHING ATTACHED TO STEEL GIRTHS
- EXPOSED STRUCTURE. PAINT PT7

HAY STORAGE FINISH LEGEND

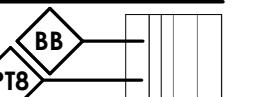
STANDING SEAM ROOF



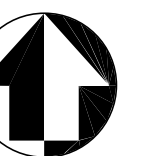
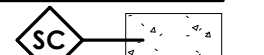
6" FIBER CEMENT HORIZONTAL SIDING - PAINT, PT8



FIBER CEMENT VERTICAL BOARD & BATTEN - PAINT, PT8



SEALED CONCRETE



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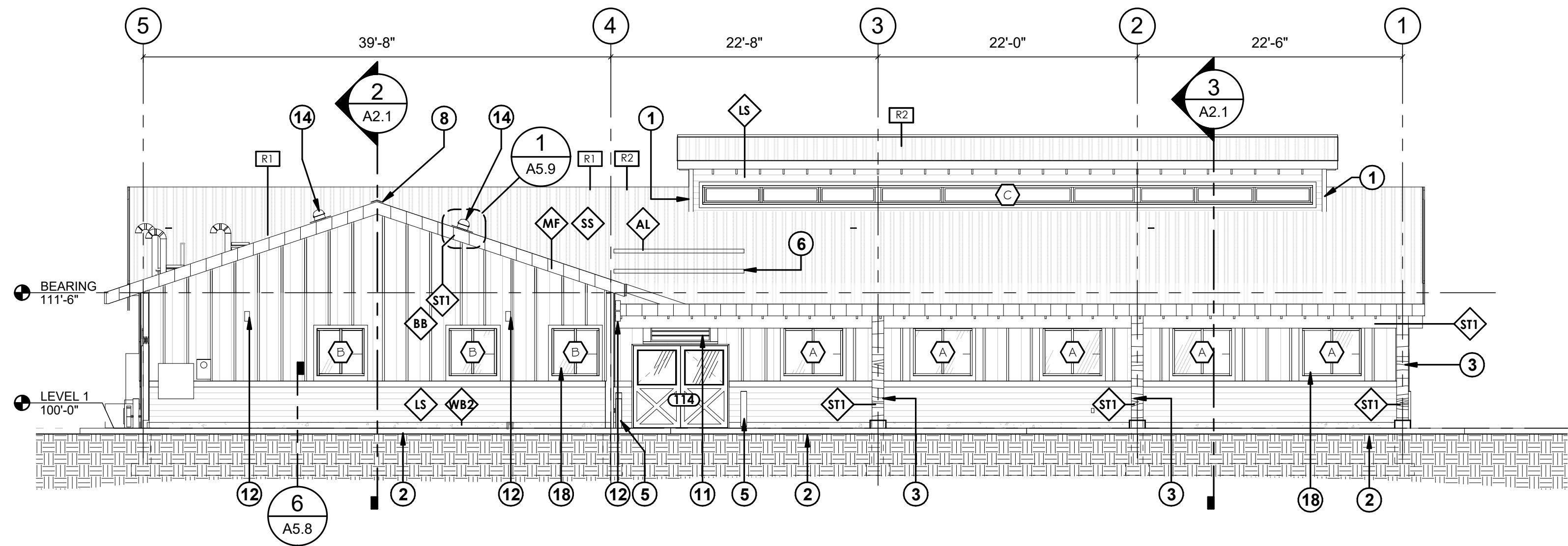
SUB SHEET NO.

A1.8

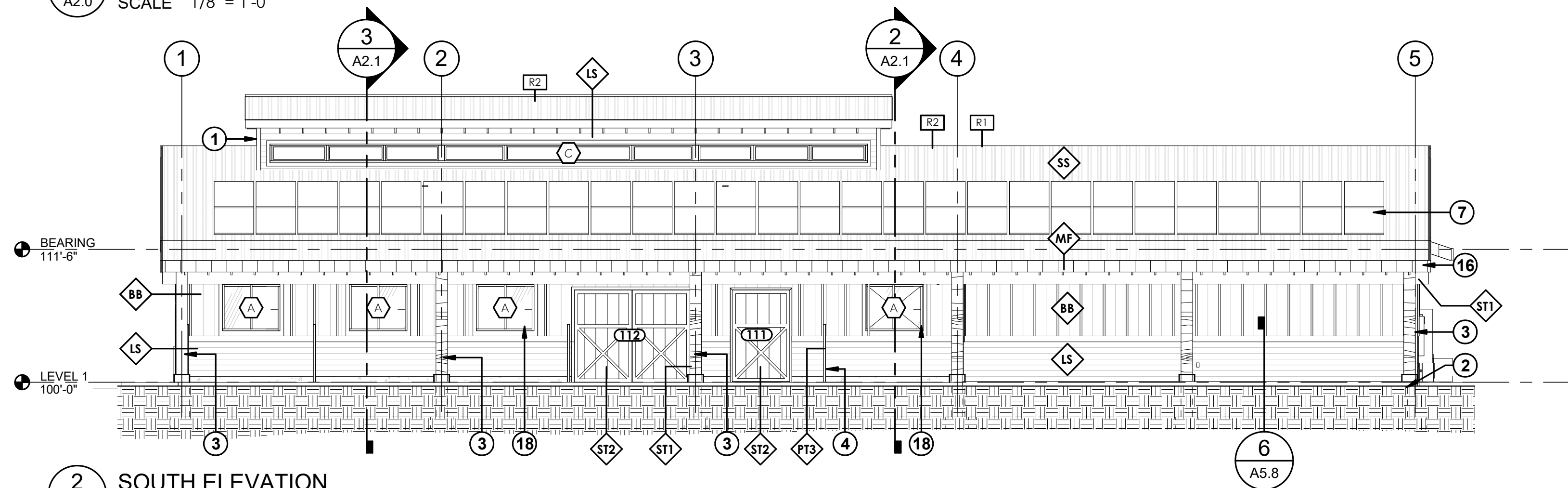
TITLE OF SHEET
HAY STORAGE - FLOOR PLANS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

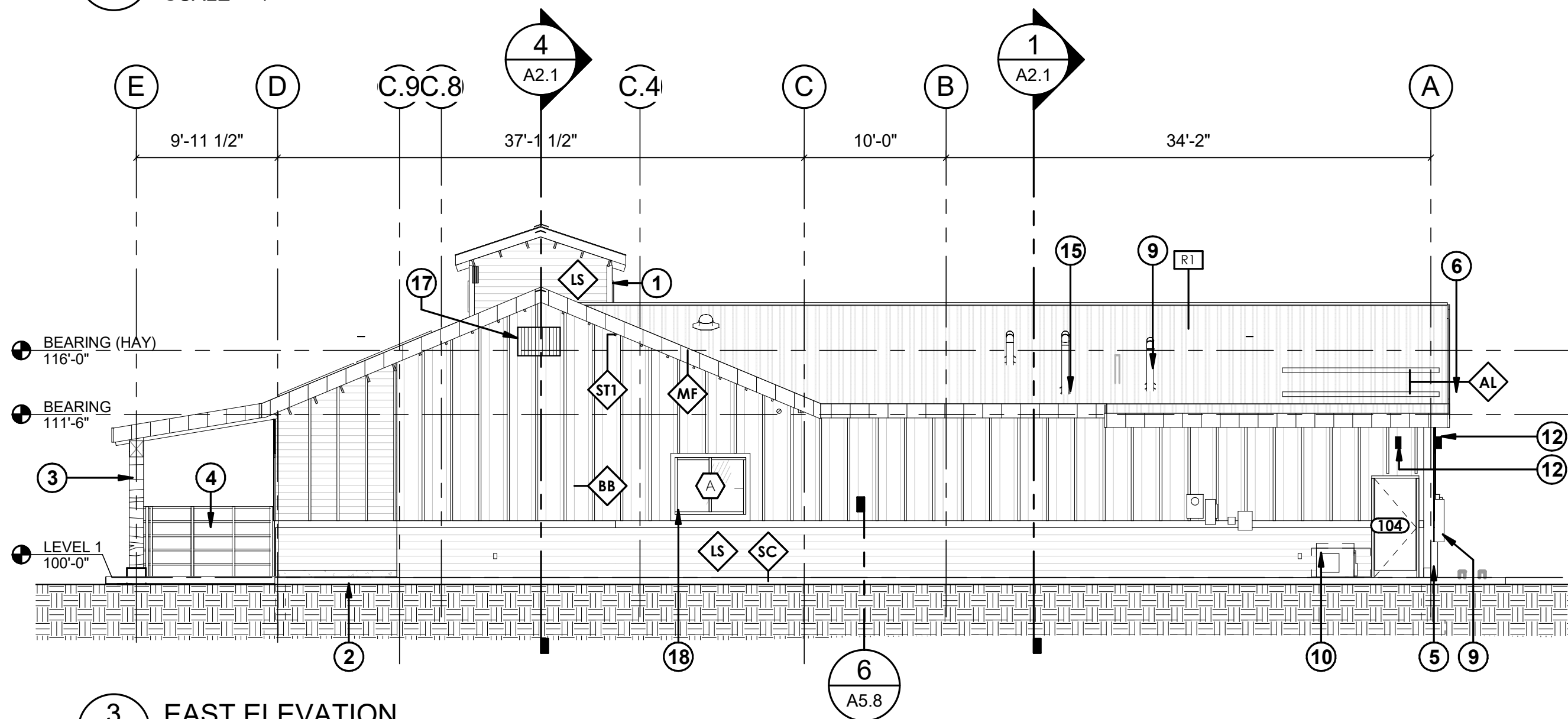
DRAWING NO.
121
175143
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316223
SHEET
35 OF 104



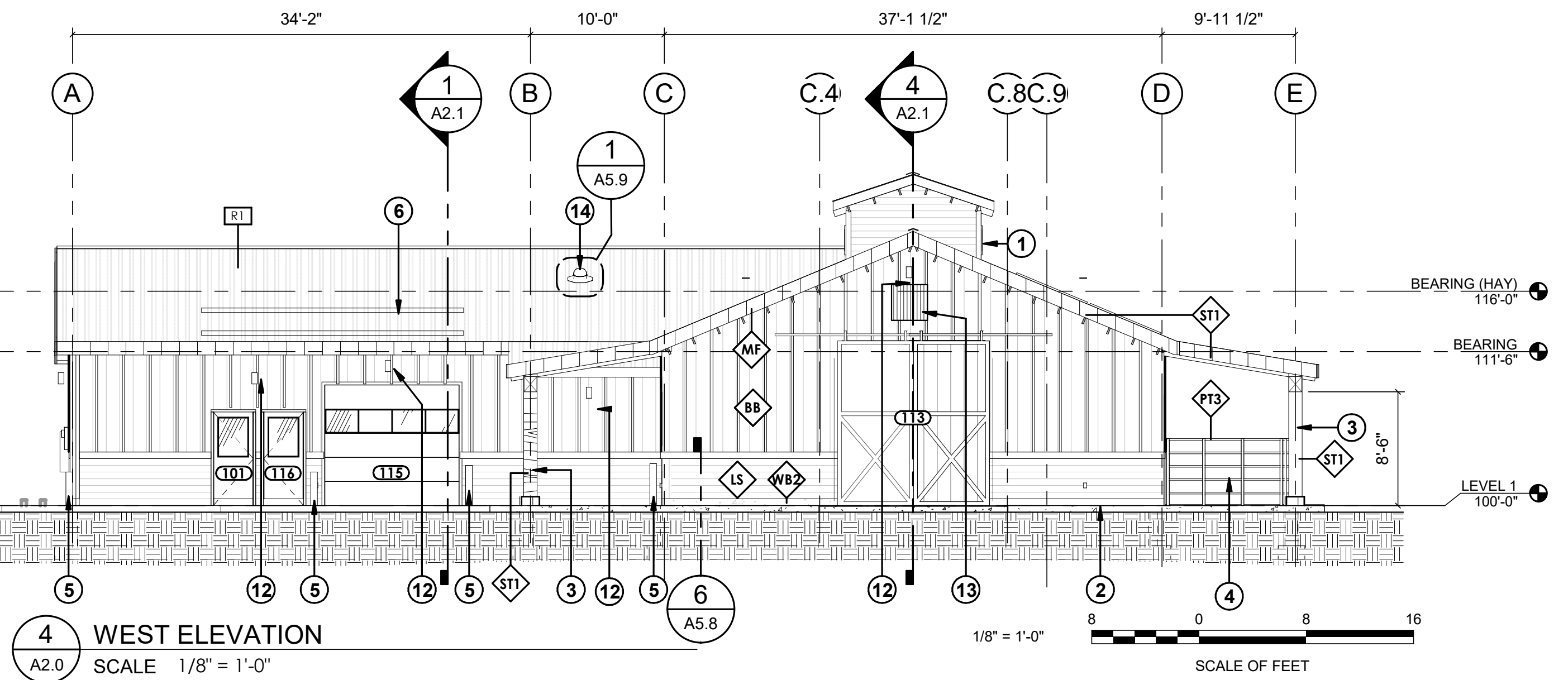
1 NORTH ELEVATION
A2.0 SCALE 1/8" = 1'-0"



2 SOUTH ELEVATION
A2.0 SCALE 1/8" = 1'-0"



3 EAST ELEVATION
A2.0 SCALE 1/8" = 1'-0"



4 WEST ELEVATION
A2.0 SCALE 1/8" = 1'-0"

KEYED NOTES:

- 1 PREFINISHED CORNER EXTERIOR TRIM TO MATCH EXTERIOR CEMENTITIOUS SIDING.
- 2 6" MIN OF EXPOSED FOUNDATION WALL
- 3 HEAVY TIMBER WOOD COLUMN, SEE STRUCTURAL DRAWINGS, STAIN ST1
- 4 60" ABOVE FINISHED FLOOR STEEL PIPE RAILING, PAINTED, TYP.
- 5 STEEL BOLLARDS
- 6 ROOF SNOW GUARDS AT OVERHEAD DOOR(S) & MAN DOOR(S) LOCATION, PREFIN. MTL.
- 7 PHOTOVOLTAIC SYSTEM, BID OPTION B
- 8 RIDGE VENT
- 9 MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS.
- 10 ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
- 11 L-1 LOUVER SEE MECH.
- 12 ELECTRICAL FIXTURE, SEE ELECTRICAL DRAWINGS.
- 13 MECHANICAL LOUVER, SEE MECHANICAL DRAWINGS.
- 14 SOLATUBE SKYLIGHT - SEE SPEC SECTION 08 62 00.
- 15 PROVIDE FLASHING AT ALL ROOF PENETRATIONS.
- 16 BEAM, SEE STRUCTURAL DRAWINGS.
- 17 MECHANICAL DUCT, SEE MECHANICAL DRAWINGS.
- 18 PROVIDE WINDOW SCREENS AT ALL OPERABLE WINDOWS

GENERAL NOTES:

1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
2. SEE SHEET G2.0 FOR GENERAL NOTES.
3. DO NOT SCALE DRAWINGS.
4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

ELEVATION FINISHES

STANDING SEAM ROOF

6" FIBER CEMENT HORIZONTAL SIDING - PAINT, PT8

FIBER CEMENT VERTICAL BOARD & BATTEN - PAINT, PT8

ALUMINUM - SNOW GUARDS, SEE SPEC SECTION 07 72 53

STAIN - EXPOSED FRAMING

PREFINISHED METAL FACIA



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TECH. REVIEW:
KR
DATE:
2.27.2023

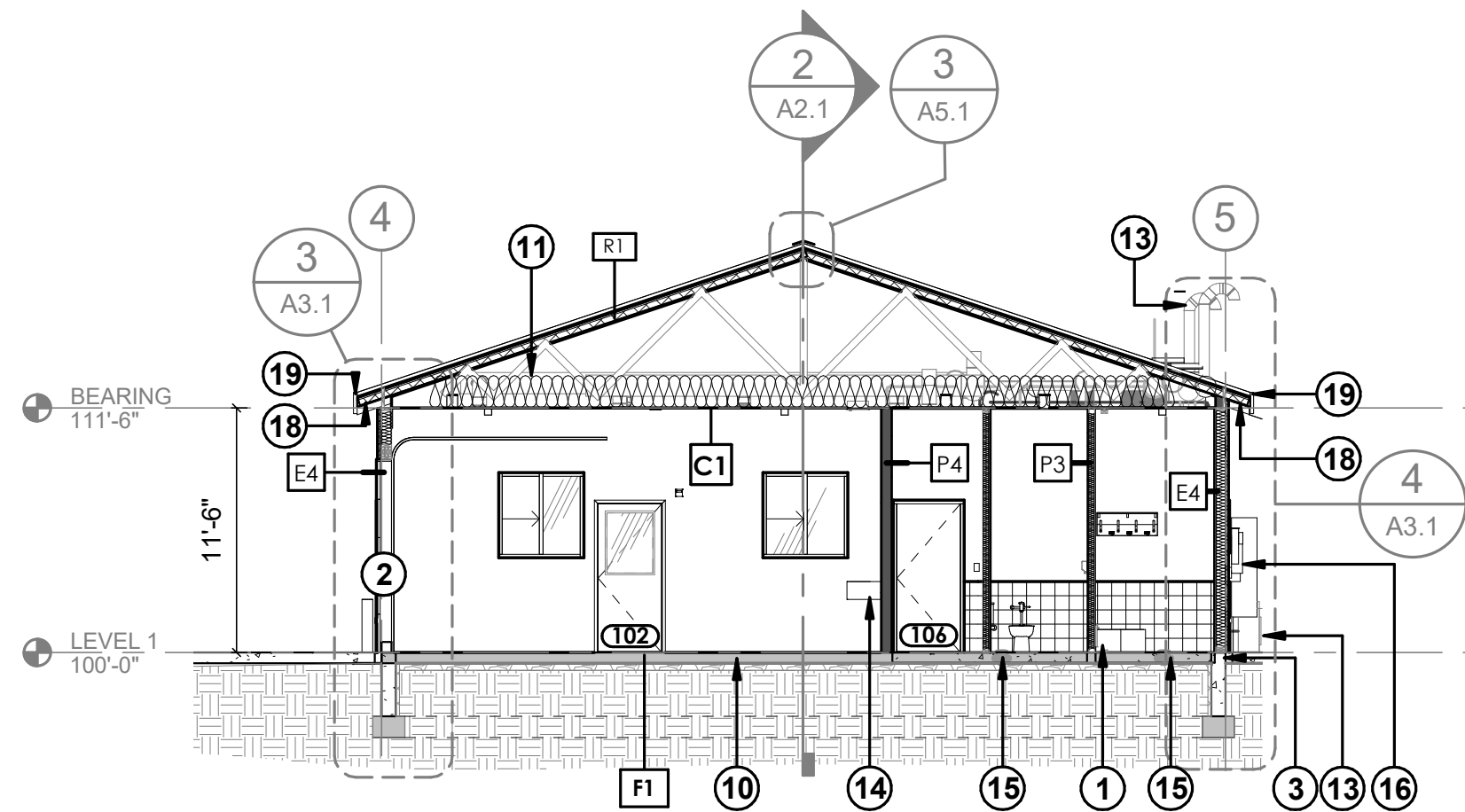
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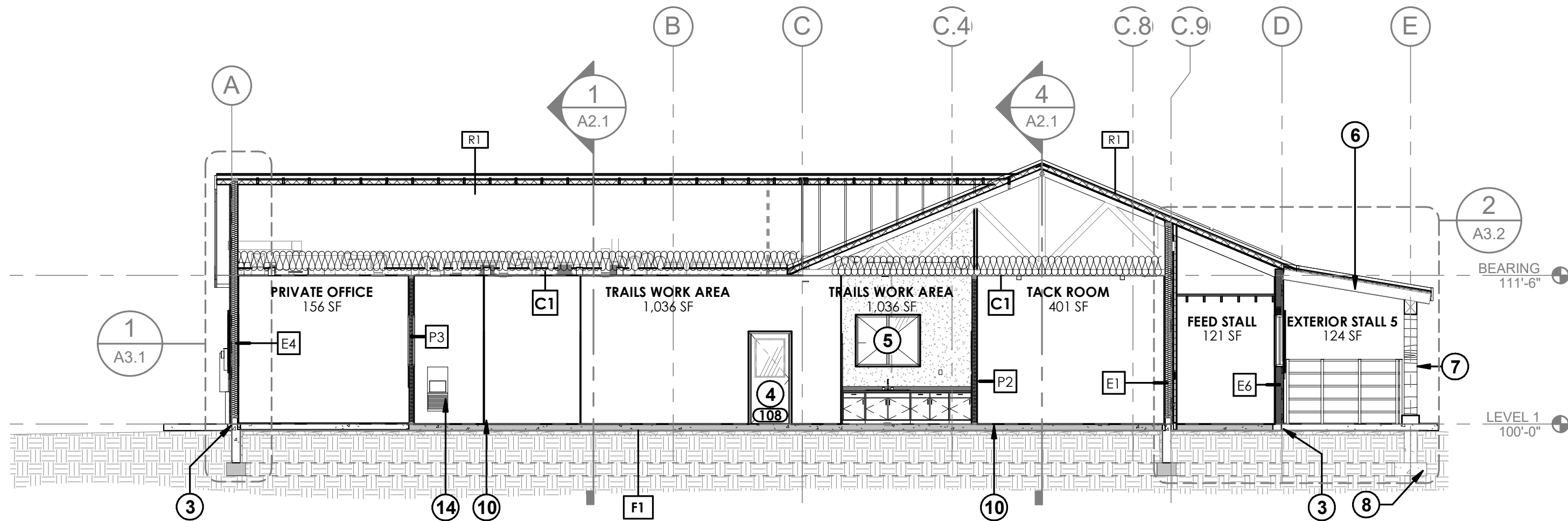
TITLE OF SHEET
BUILDING ELEVATIONS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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1 SECTION - OFFICE E-W
A2.1 SCALE 1/8" = 1'-0"



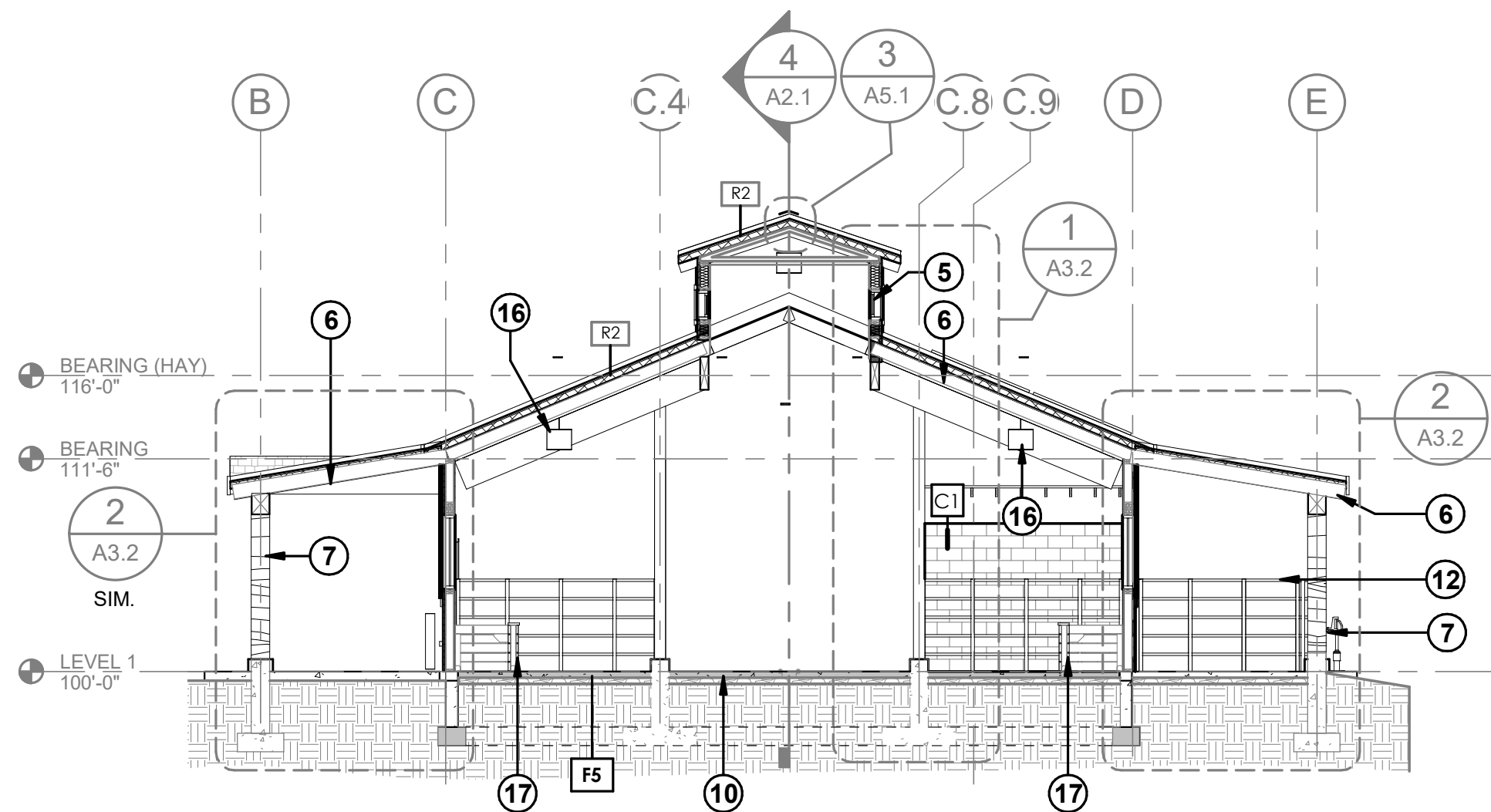
2 SECTION - OFFICE N-S
A2.1 SCALE 1/8" = 1'-0"

GENERAL NOTES:

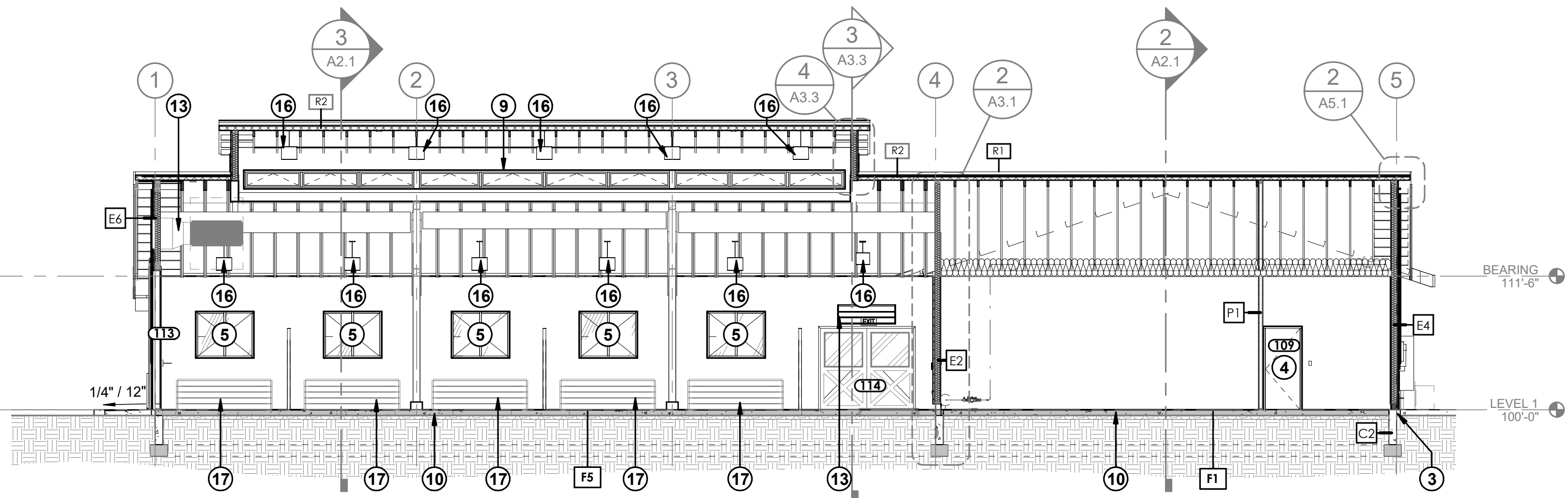
1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
2. SEE SHEET G2.0 FOR GENERAL NOTES.
3. DO NOT SCALE DRAWINGS.
4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

KEYED NOTES:

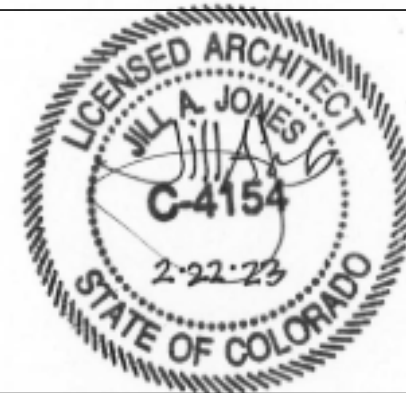
- 1 CORNER MOP SERVICE SINK
- 2 9" INSULATED OVERHEAD DOOR
- 3 6" MIN OF EXPOSED FOUNDATION WALL
- 4 EXTERIOR INSULATED HOLLOW METAL DOOR, PAINTED.
- 5 60"x48" OPERABLE WINDOW WITH PREFINISHED EXTERIOR TRIM TO MATCH EXTERIOR CEMENTITIOUS SIDING.
- 6 WOOD STRUCTURAL JOIST, SEE STRUCTURAL DRAWINGS
- 7 HEAVY TIMBER WOOD COLUMN, SEE STRUCTURAL DRAWINGS, STAIN ST1
- 8 CAST IN PLACE FOOTINGS, SEE STRUCTURAL DRAWINGS & SPECIFICATIONS
- 9 CLEARSTORY WINDOW WITH PREFINISHED EXTERIOR TRIM TO MATCH EXTERIOR CEMENTITIOUS SIDING.
- 10 6" CONCRETE SLAB
- 11 R-49 BATT INSULATION
- 12 60" ABOVE FINISHED FLOOR STEEL PIPE RAILING, PAINTED. TYP.
- 13 MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS.
- 14 ABA LEVEL DRINKING FOUNTAIN WITH WATER BOTTLE FILL STATION
- 15 FLOOR DRAIN
- 16 ELECTRICAL FIXTURE, SEE ELECTRICAL DRAWINGS.
- 17 STALL FEEDER - CONTRACTOR PROVIDED, CONTRACTOR CONSTRUCTED
- 18 PERFORATED FIBER CEMENT SOFFIT WITH VENTS.
- 19 PRE-FINISHED METAL FASCIA



3 SECTION - BARN N-S
A2.1 SCALE 1/8" = 1'-0"



4 SECTION - BARN E-W
A2.1 SCALE 1/8" = 1'-0"



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DATE:
2.27.2023

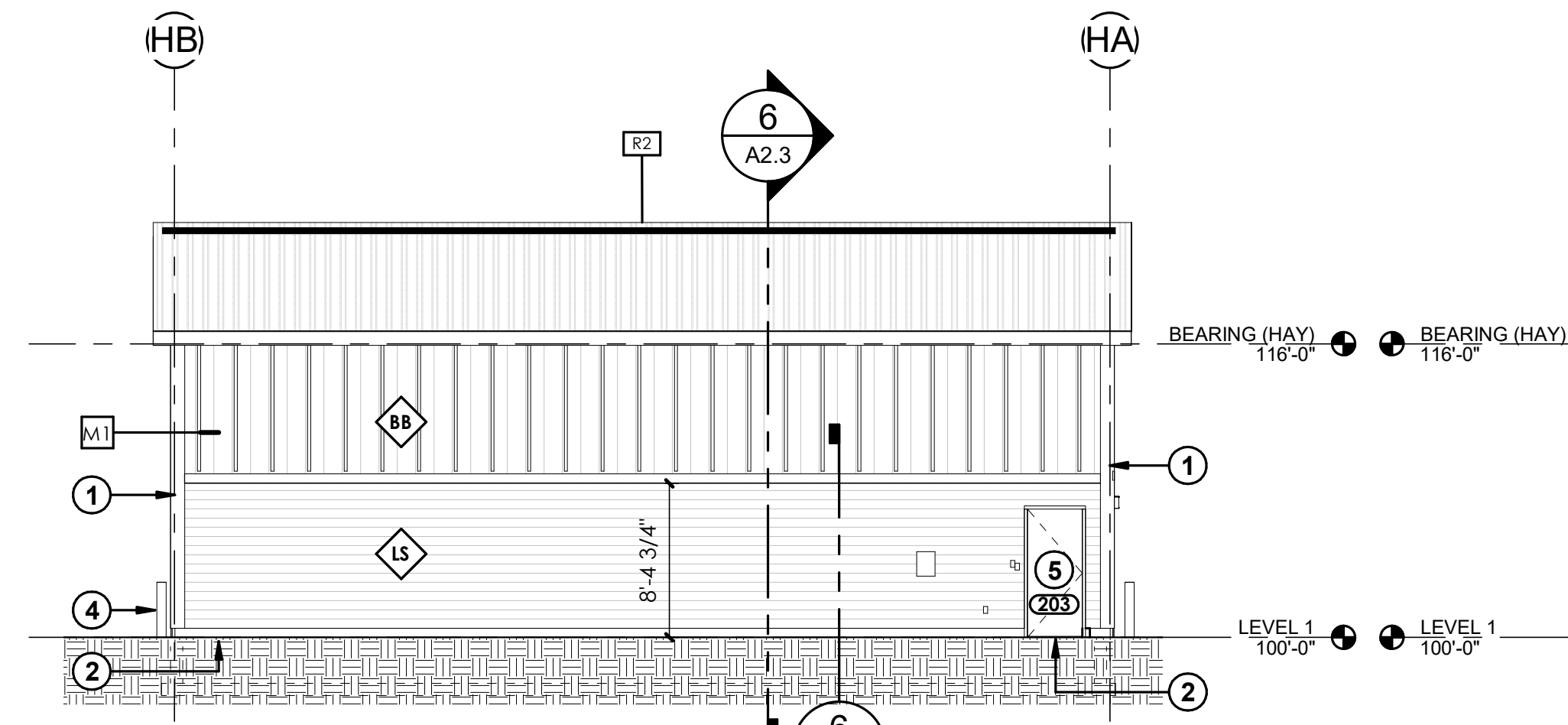
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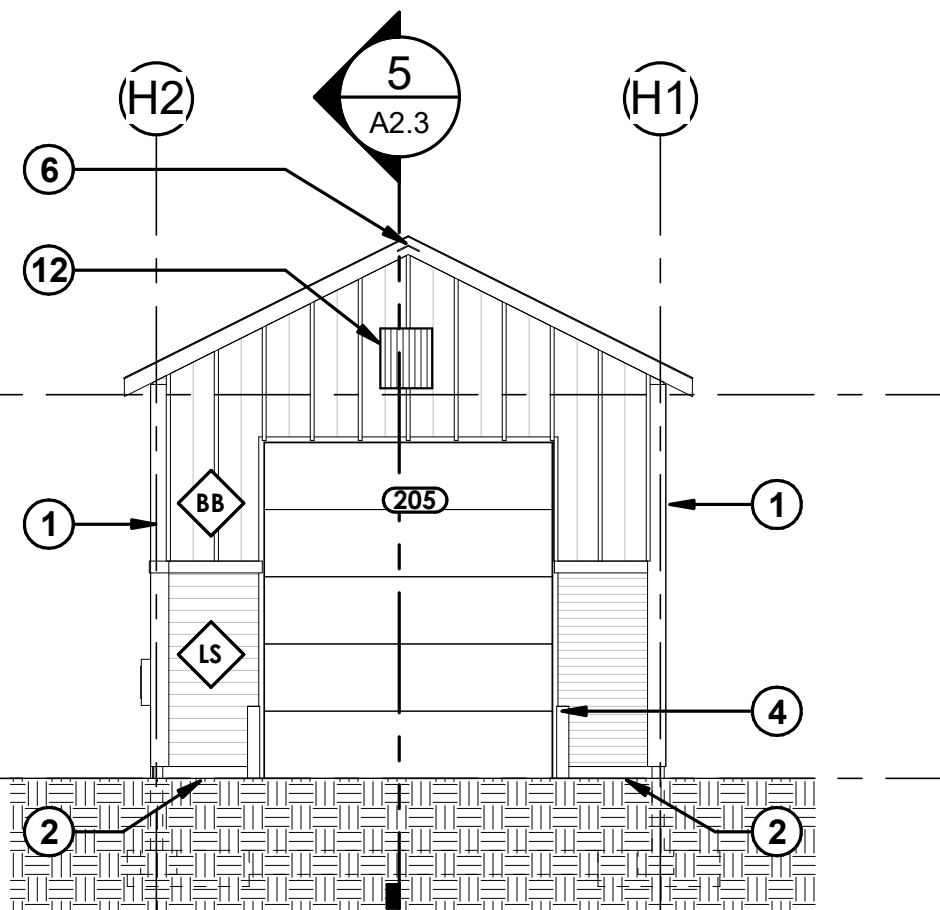
TITLE OF SHEET
BUILDING SECTIONS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

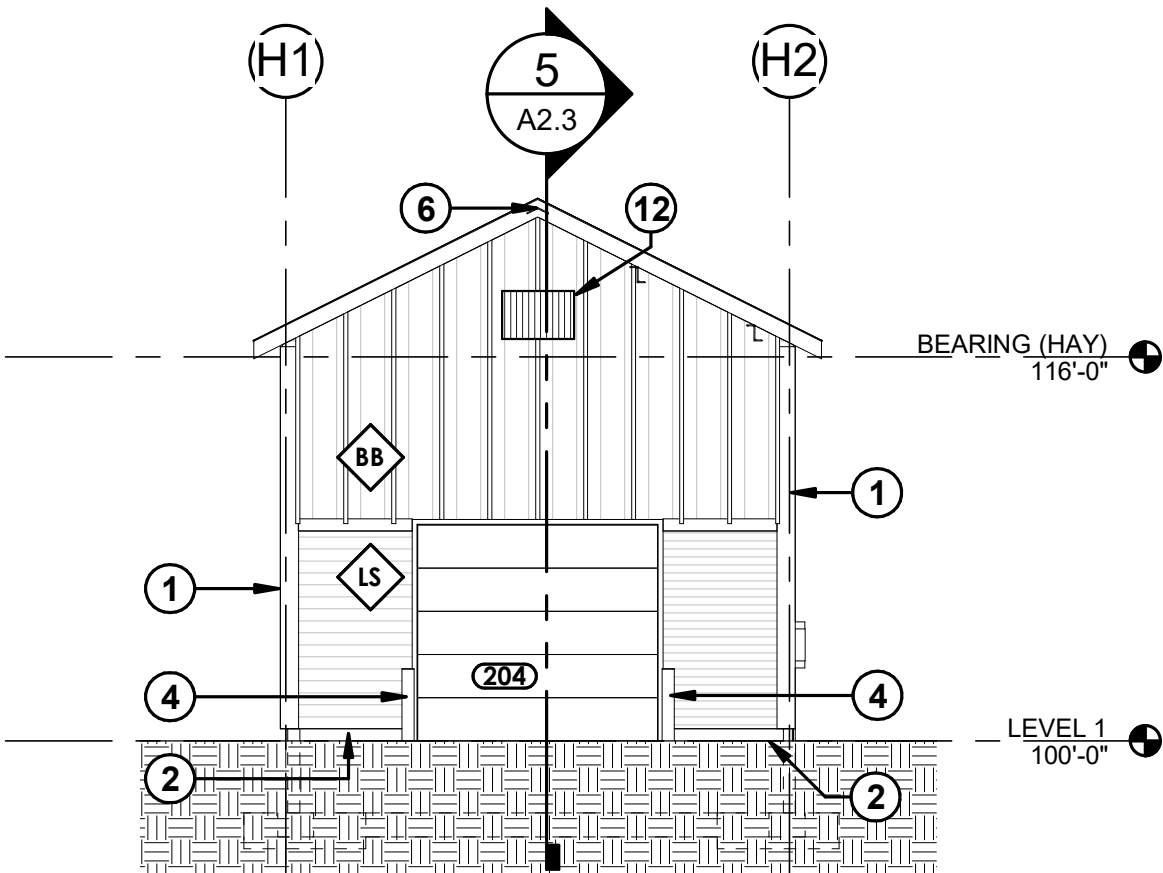
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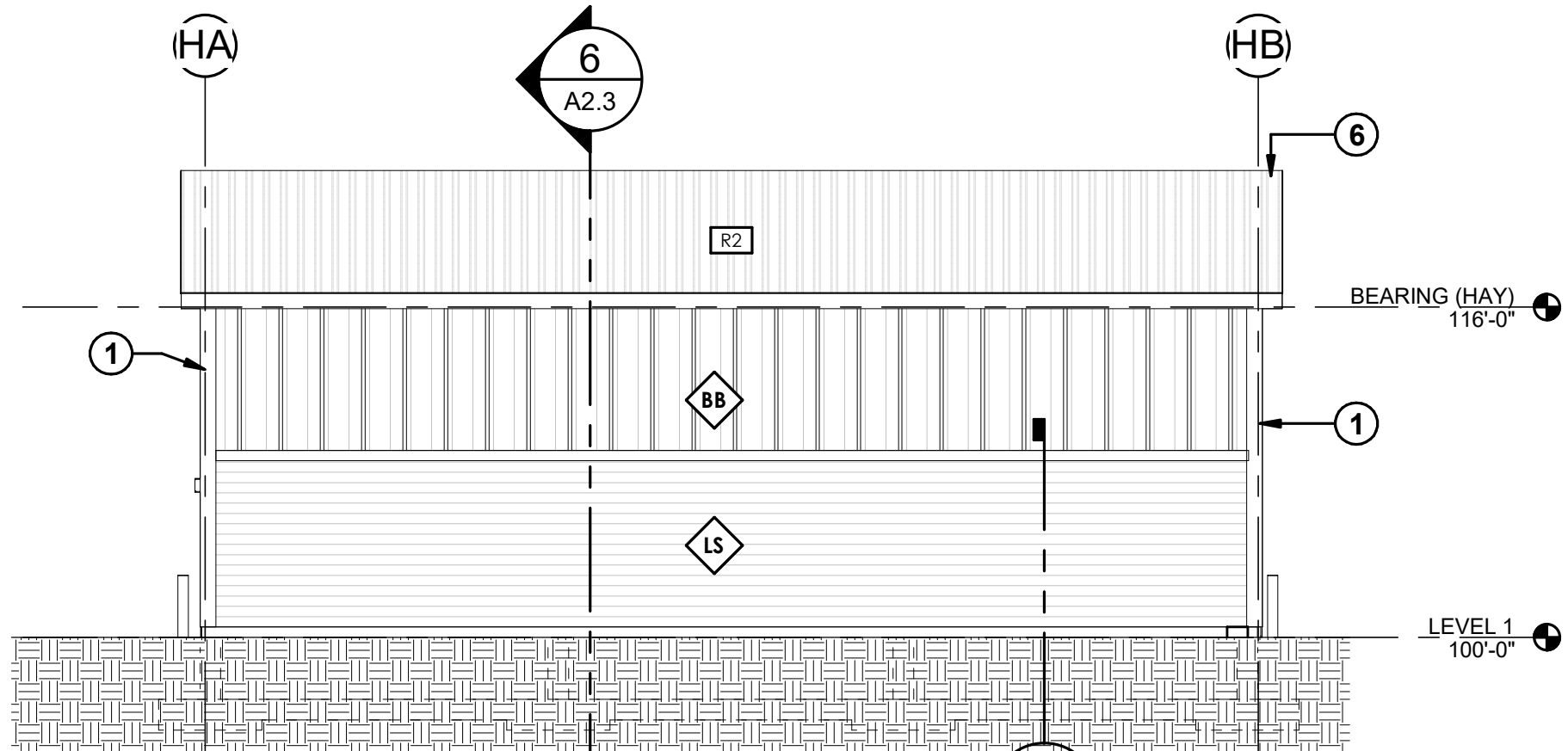
1 EAST ELEVATION - HAY STORAGE
A2.3 SCALE 1/8" = 1'-0"



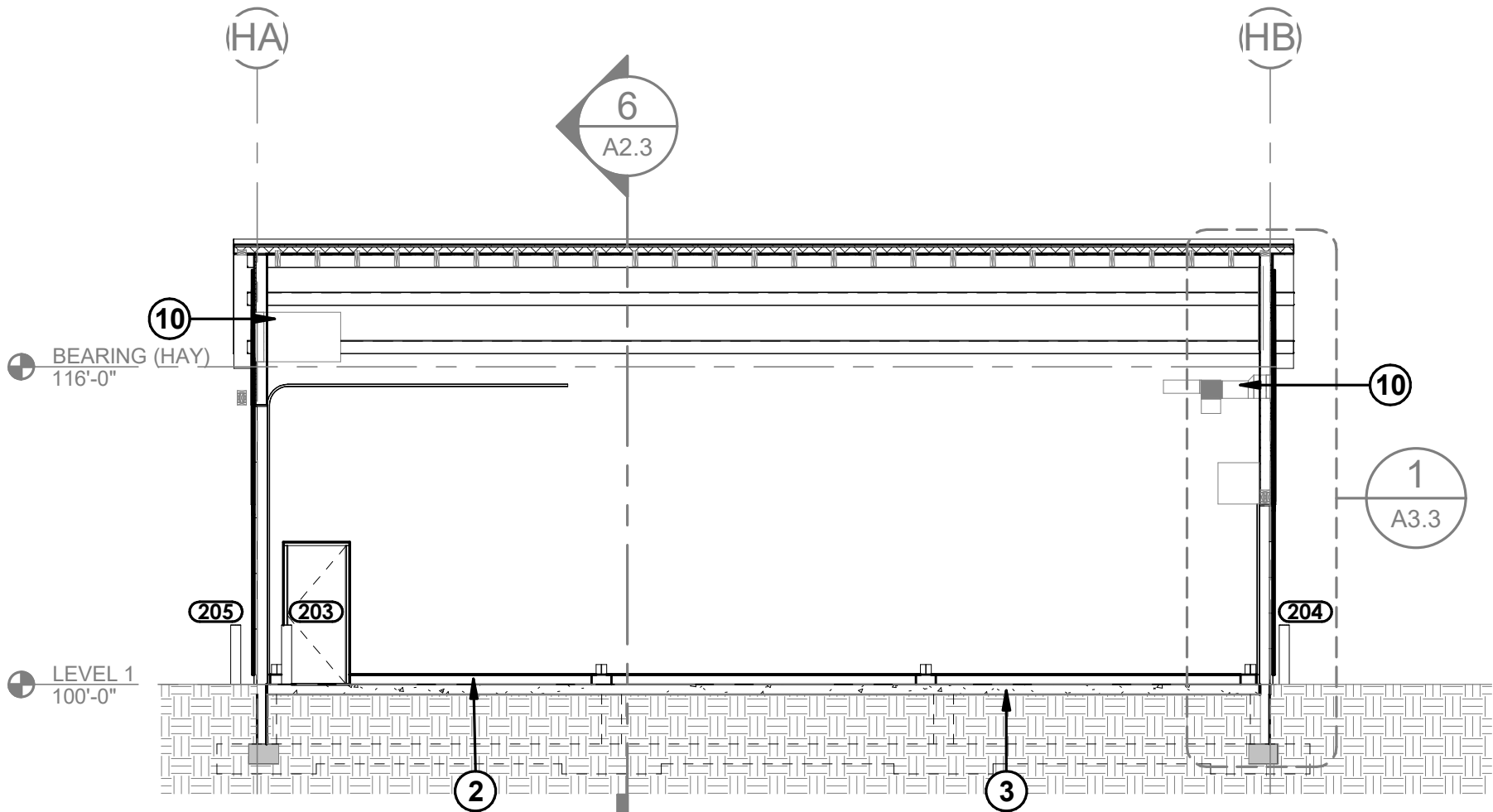
2 NORTH ELEVATION - HAY STORAGE
A2.3 SCALE 1/8" = 1'-0"



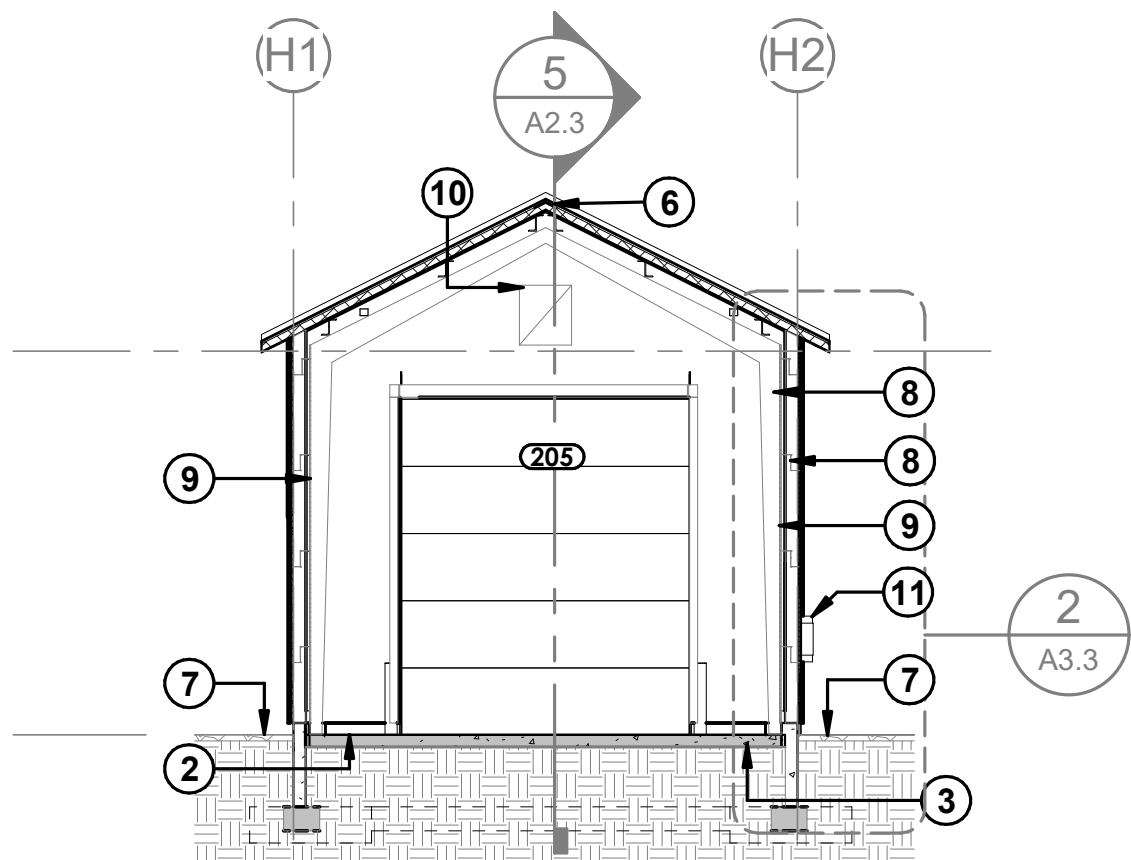
3 SOUTH ELEVATION - HAY STORAGE
A2.3 SCALE 1/8" = 1'-0"



4 WEST ELEVATION - HAY STORAGE
A2.3 SCALE 1/8" = 1'-0"



5 SECTION 1 - HAY STORAGE
A2.3 SCALE 1/8" = 1'-0"

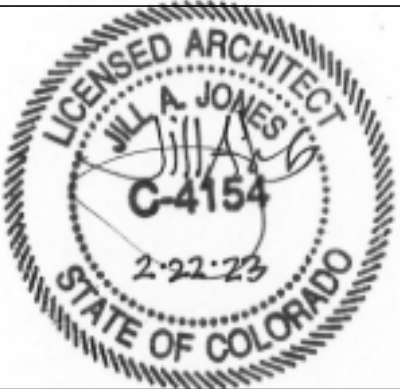
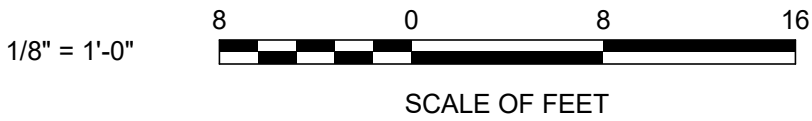


6 SECTION 2 - HAY STORAGE
A2.3 SCALE 1/8" = 1'-0"

- GENERAL NOTES:
- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - SEE SHEET G2.0 FOR GENERAL NOTES.
 - DO NOT SCALE DRAWINGS.
 - CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

ELEVATION FINISHES	
COMPOSITE ASPHALT SHINGLES ROOFING	SS
FIBER CEMENT LAP HORIZONTAL SIDING	LS
FIBER CEMENT BOARD & BATTEN	BB
STAIN - EXPOSED FRAMING	

- KEYED NOTES:
- PREFINISHED CORNER EXTERIOR TRIM TO MATCH EXTERIOR CEMENTITIOUS SIDING.
 - 6" MIN OF EXPOSED FOUNDATION WALL
 - 6" CONCRETE SLAB
 - STEEL BOLLARDS
 - EXTERIOR INSULATED HOLLOW METAL DOOR, PAINTED.
 - RIDGE VENT
 - CONCRETE APRON ON WEST SIDE OF BUILDING, SEE LANDSCAPE DRAWINGS.
 - STRUCTURAL STEEL FRAMING, SEE STRUCTURAL DRAWINGS. PAINT
 - 1/2" - FULL HEIGHT PLYWOOD SHEATHING ATTACHED TO STEEL GIRTHS
 - MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS.
 - ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
 - MECHANICAL LOUVER, SEE MECHANICAL DRAWINGS.



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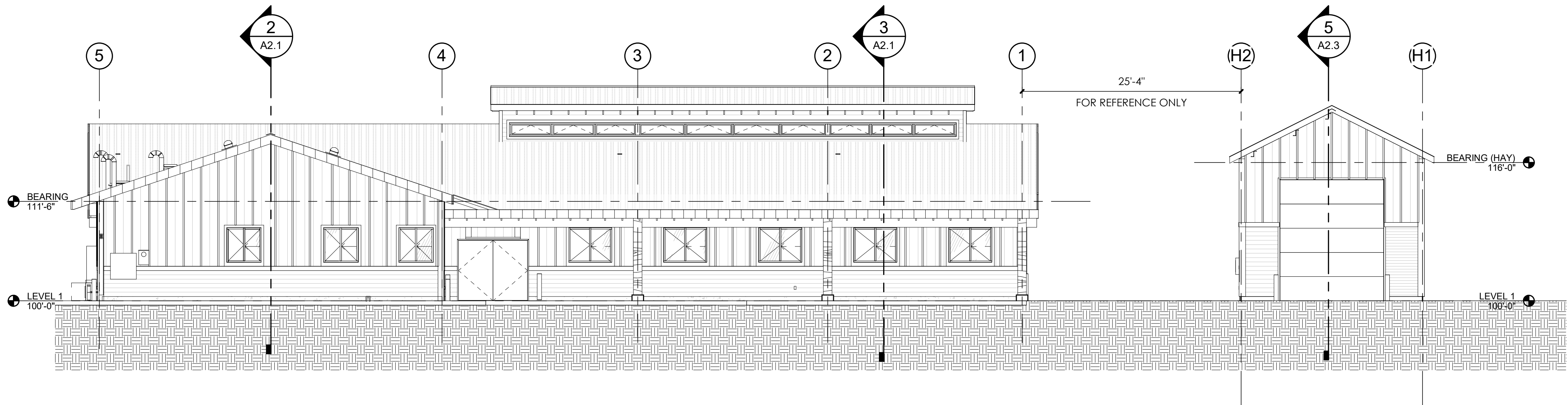
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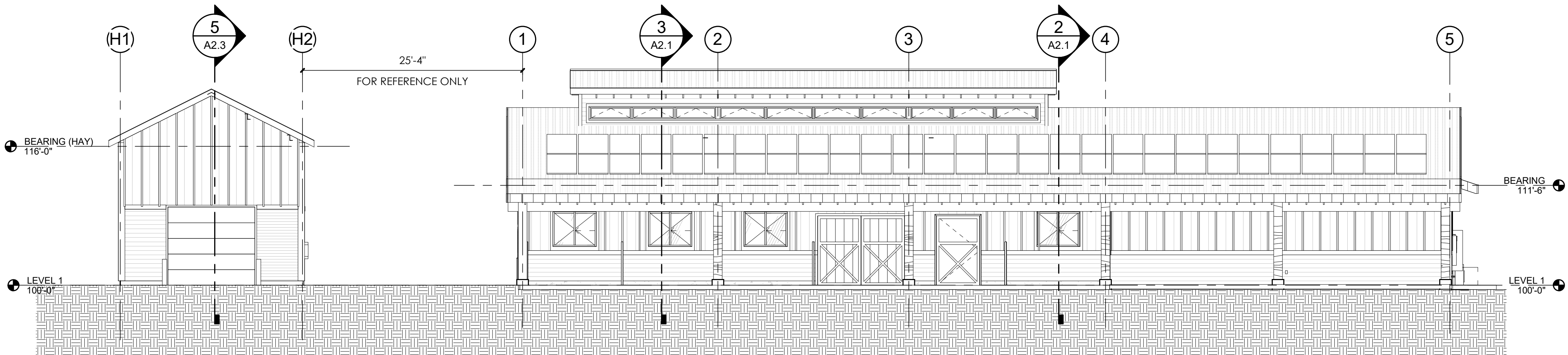
TITLE OF SHEET
**BUILDING ELEVATIONS &
SECTIONS - HAY
STOARGE**
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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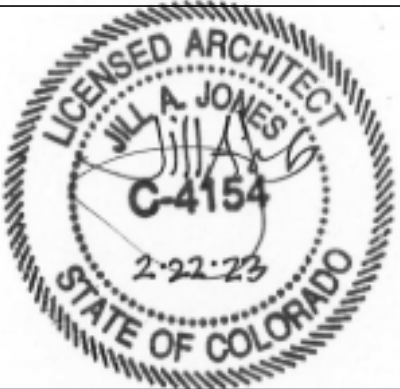
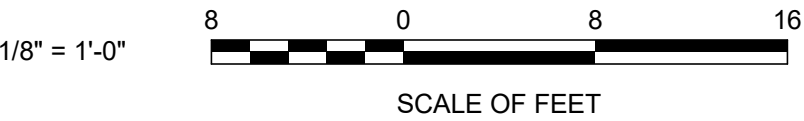
- GENERAL NOTES:
- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - SEE SHEET G2.0 FOR GENERAL NOTES.
 - DO NOT SCALE DRAWINGS.
 - CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.



1 BARN & HAY STORAGE NORTH RELATIONSHIP
SCALE 1/8" = 1'-0"



2 BARN & HAY STORAGE SOUTH RELATIONSHIP
SCALE 1/8" = 1'-0"



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2.27.2023

SUB SHEET NO.

A2.4

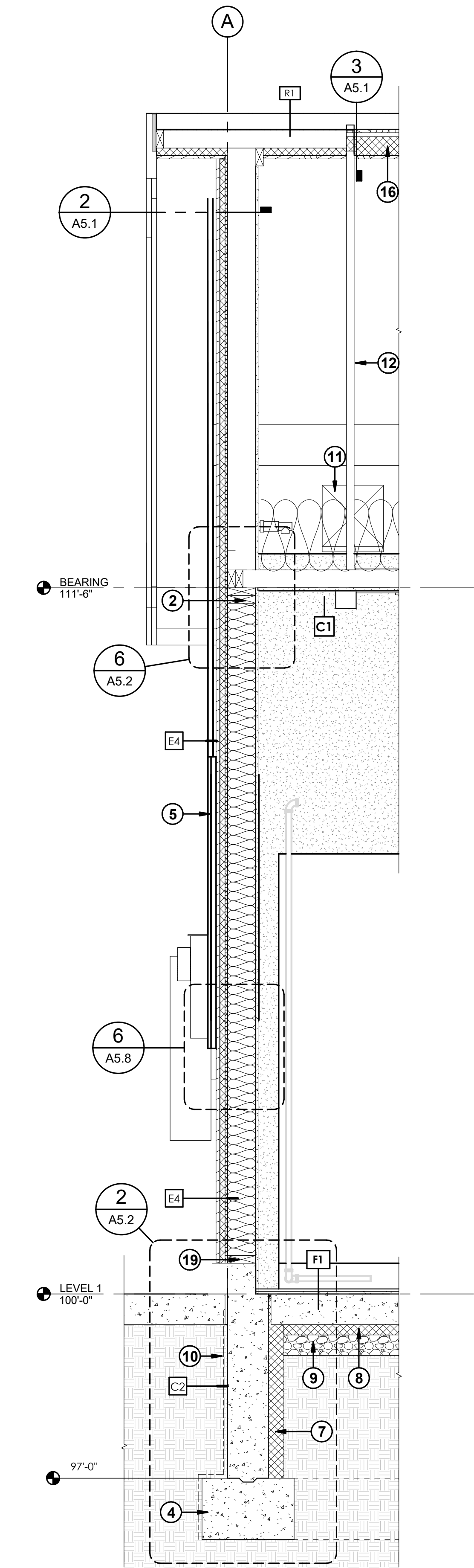
TITLE OF SHEET
BARN & HAY
ELEVATIONS
RELATIONSHIP

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

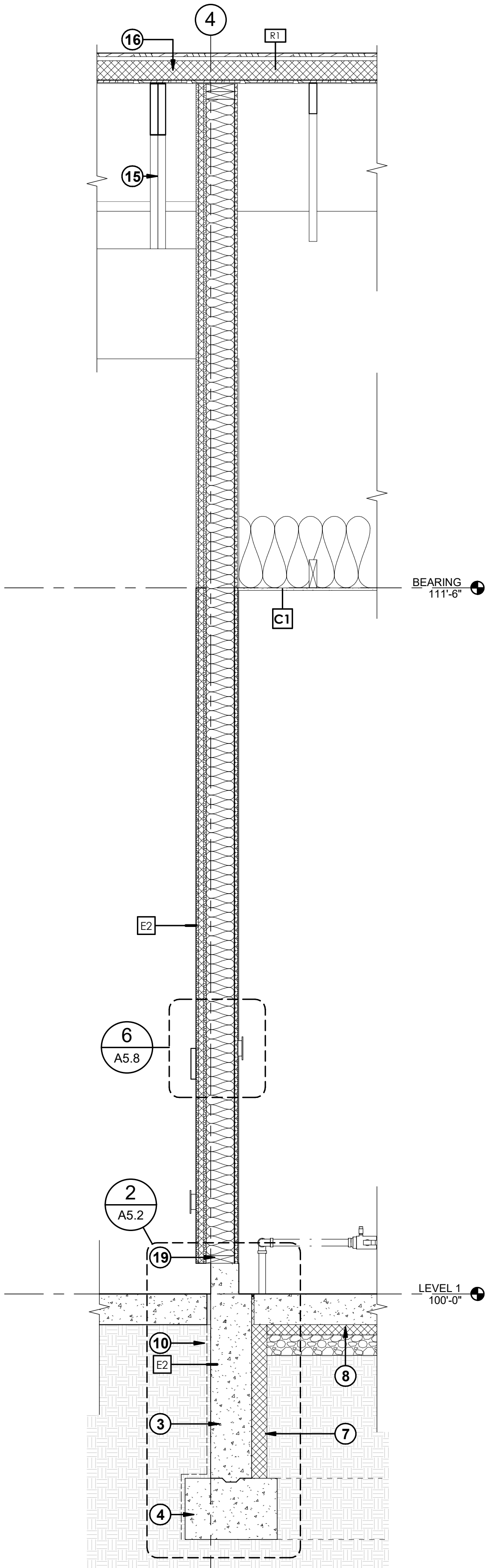
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175143
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316223
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- GENERAL NOTES:**
- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - SEE SHEET G2.0 FOR GENERAL NOTES.
 - DO NOT SCALE DRAWINGS.
 - CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

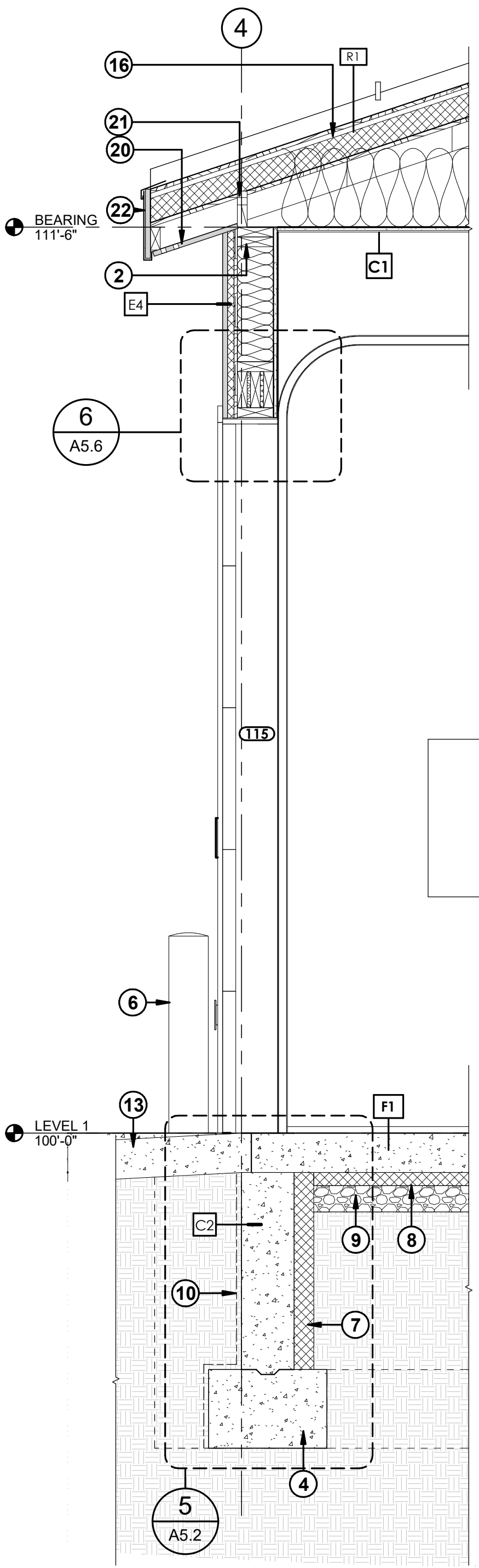
- KEYED NOTES:**
- 2X6 FRAMING @ 24" O.C.
 - DOUBLE TOP PLATE
 - 6" MIN OF EXPOSED FOUNDATION WALL
 - CAST IN PLACE FOOTINGS, SEE STRUCTURAL DRAWINGS & SPECIFICATIONS
 - BOARD AND BATTEN SIDING, SEE ELEVATIONS
 - STEEL BOLLARDS
 - 3" CONTINUOUS EPS FOAM INSULATION BOARD BELOW GRADE
 - 2" CONTINUOUS EPS FOAM INSULATION BOARD
 - FREE DRAINING GRANULAR FILL. SEE STRUCTURAL DRAWINGS.
 - CONTINUOUS EXTERIOR DAMPPROOFING BELOW GRADE, TYP.
 - MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS.
 - WOOD TRUSS
 - EXT SLAB ON GRADE, SEE CIVIL
 - ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
 - EXPOSED STRUCTURE, SEE STRUCTURAL DRAWINGS FOR ROOF FRAMING, STAIN ST1
 - VENTED INSULATED NAIL BASE W/ 3.5" POLYISO R-20
 - ATTIC INSULATION
 - SNOW GUARDS WHERE OCCURS, SEE A2.0 FOR LOCATIONS
 - PRESSURE TREATED SILL PLATE W/ FOAM SILL SEALER
 - PERFORATED FIBER CEMENT SOFFIT WITH VENTS.
 - NOTCH BLOCKING FOR ATTIC VENTILATION AS REQUIRED
 - PREFINISHED METAL FLASHING & PREFINISHED METAL FASCIA



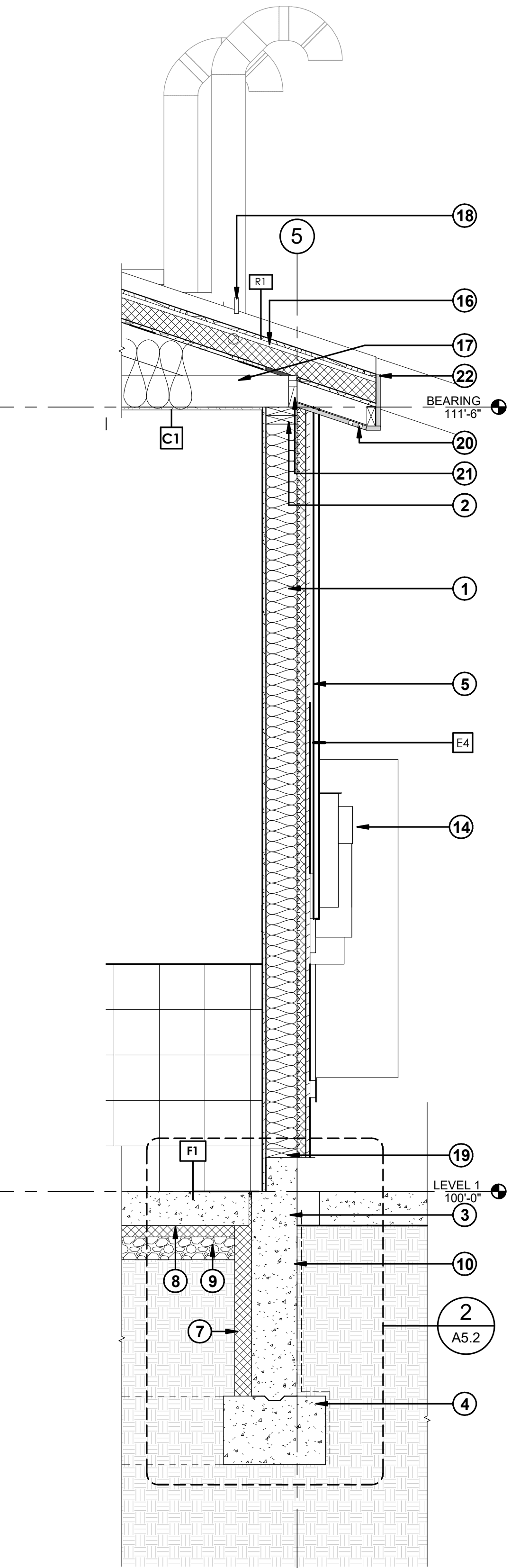
1 WALL SECTION - GRID A
A3.1 SCALE 3/4" = 1'-0"



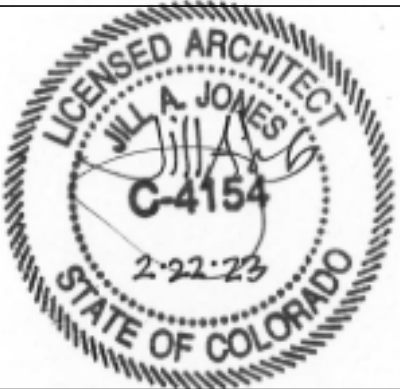
2 WALL SECTION AT GRID 4
A3.1 SCALE 3/4" = 1'-0"



3 WALL SECTION - GRID 4&B
A3.1 SCALE 3/4" = 1'-0"



4 WALL SECTION - GRID 5&B
A3.1 SCALE 3/4" = 1'-0"



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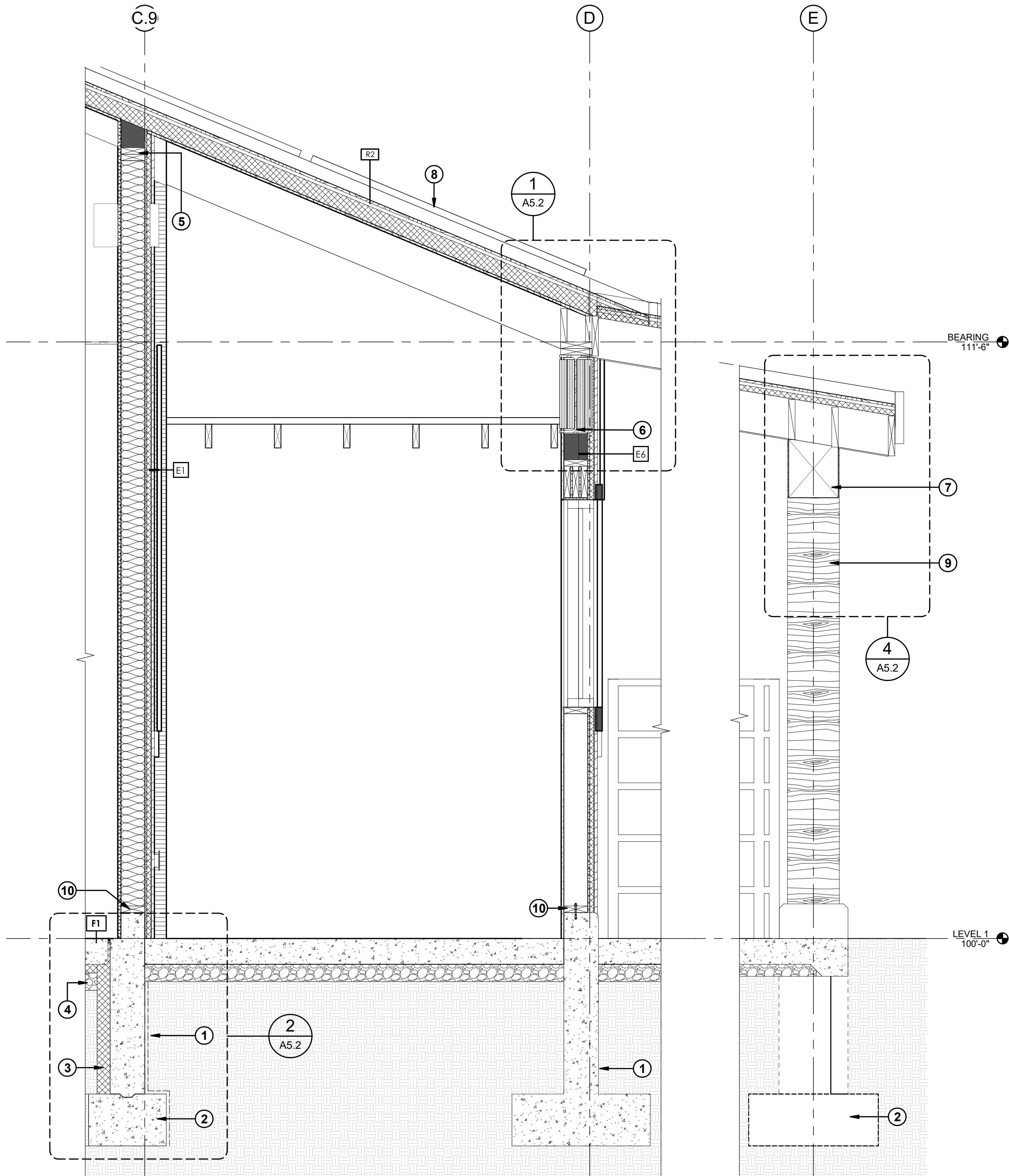
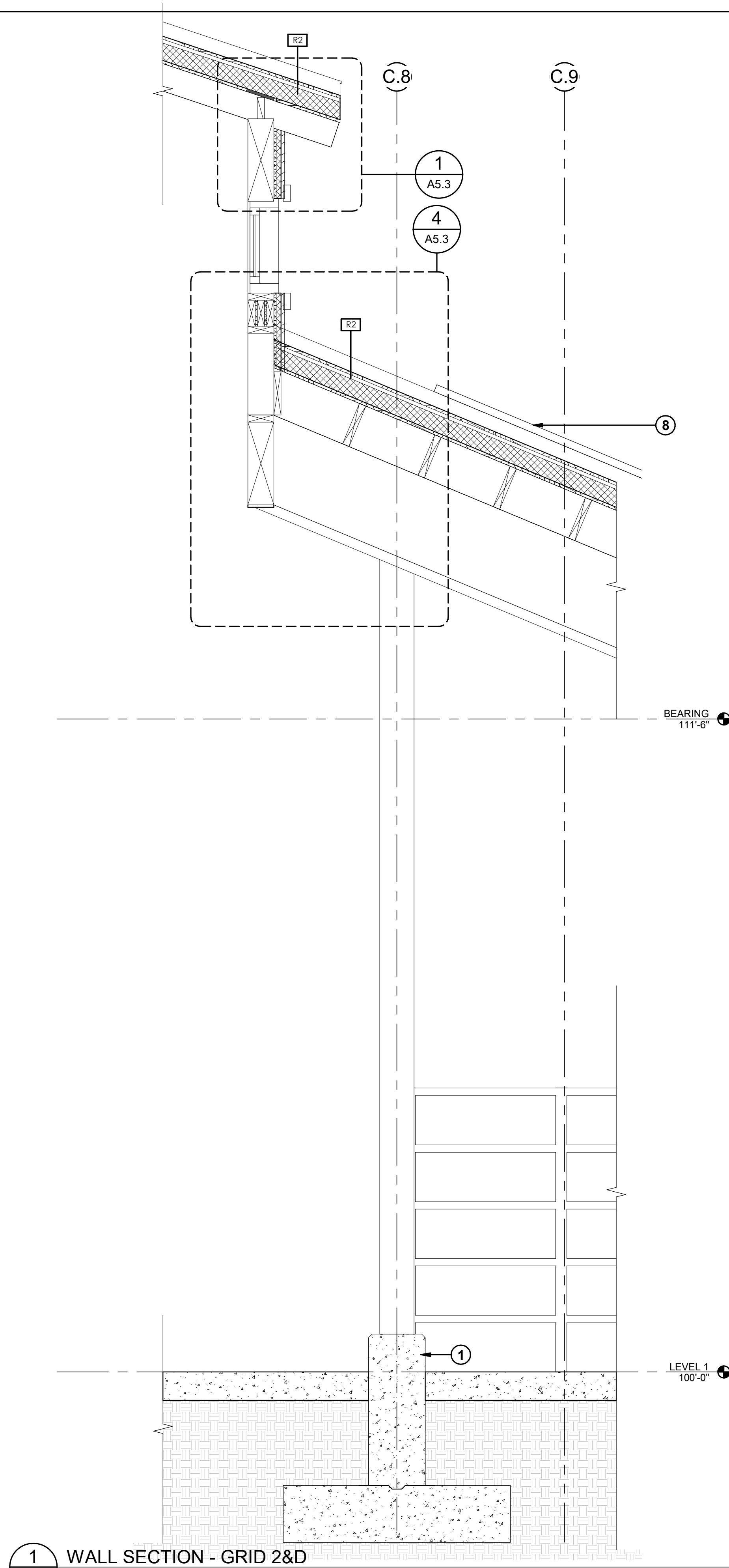
SUB SHEET NO.

A3.1

TITLE OF SHEET
WALL SECTIONS

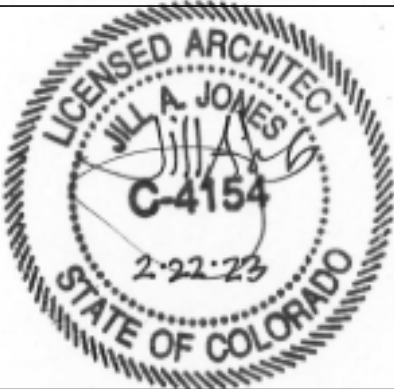
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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121
175143
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316223
SHEET
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- GENERAL NOTES:**
1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 2. SEE SHEET G2.0 FOR GENERAL NOTES.
 3. DO NOT SCALE DRAWINGS.
 4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

- KEYED NOTES:**
- 1 CONTINUOUS EXTERIOR DAMPPROOFING BELOW GRADE, TYP.
 - 2 CAST IN PLACE FOOTINGS, SEE STRUCTURAL DRAWINGS & SPECIFICATIONS
 - 3 3" CONTINUOUS EPS FOAM INSULATION BOARD BELOW GRADE
 - 4 FREE DRAINING GRANULAR FILL. SEE STRUCTURAL DRAWINGS.
 - 5 DOUBLE TOP PLATE
 - 6 STEEL JOIST, SEE STRUCTURAL DRAWINGS.
 - 7 BEAM, SEE STRUCTURAL DRAWINGS.
 - 8 PHOTOVOLTAIC SYSTEM, BID OPTION B
 - 9 HEAVY TIMBER WOOD COLUMN, SEE STRUCTURAL DRAWINGS, STAIN ST1
 - 10 PRESSURE TREATED SILL PLATE W/ FOAM SILL SEALER



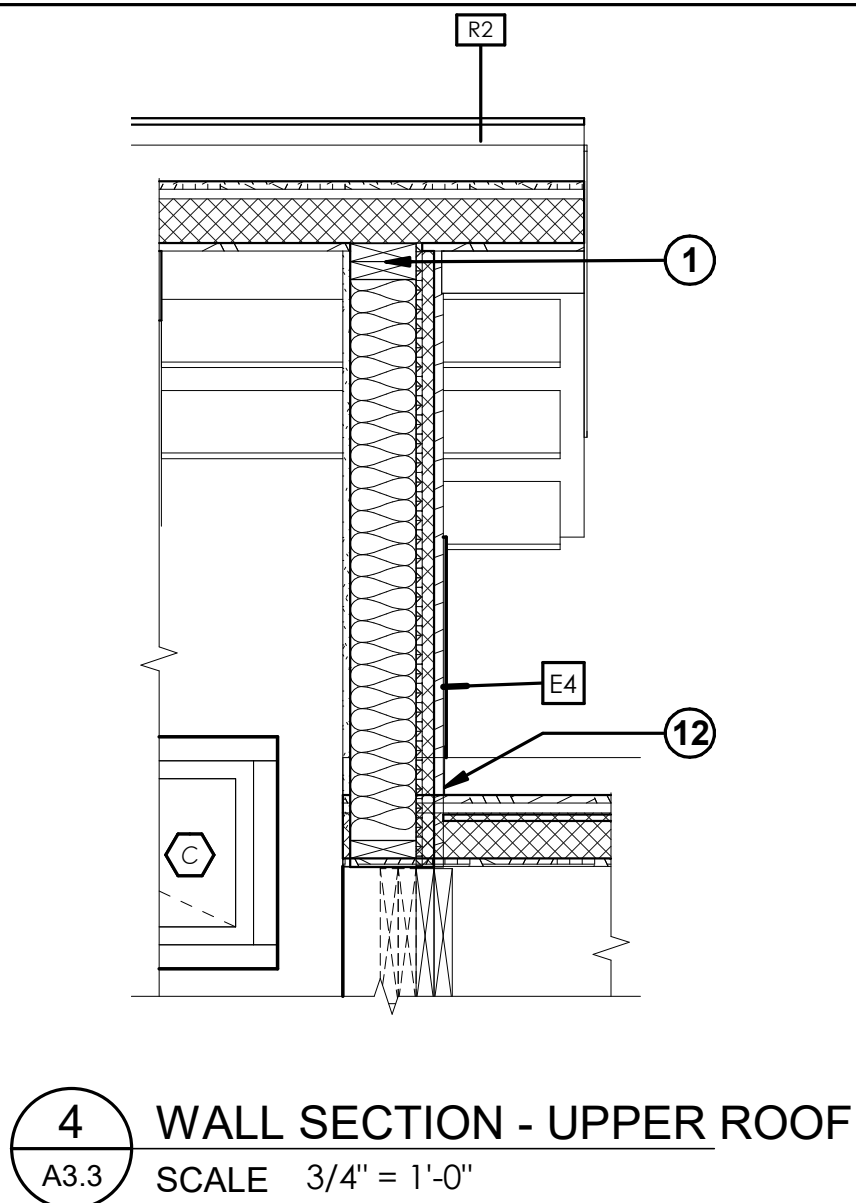
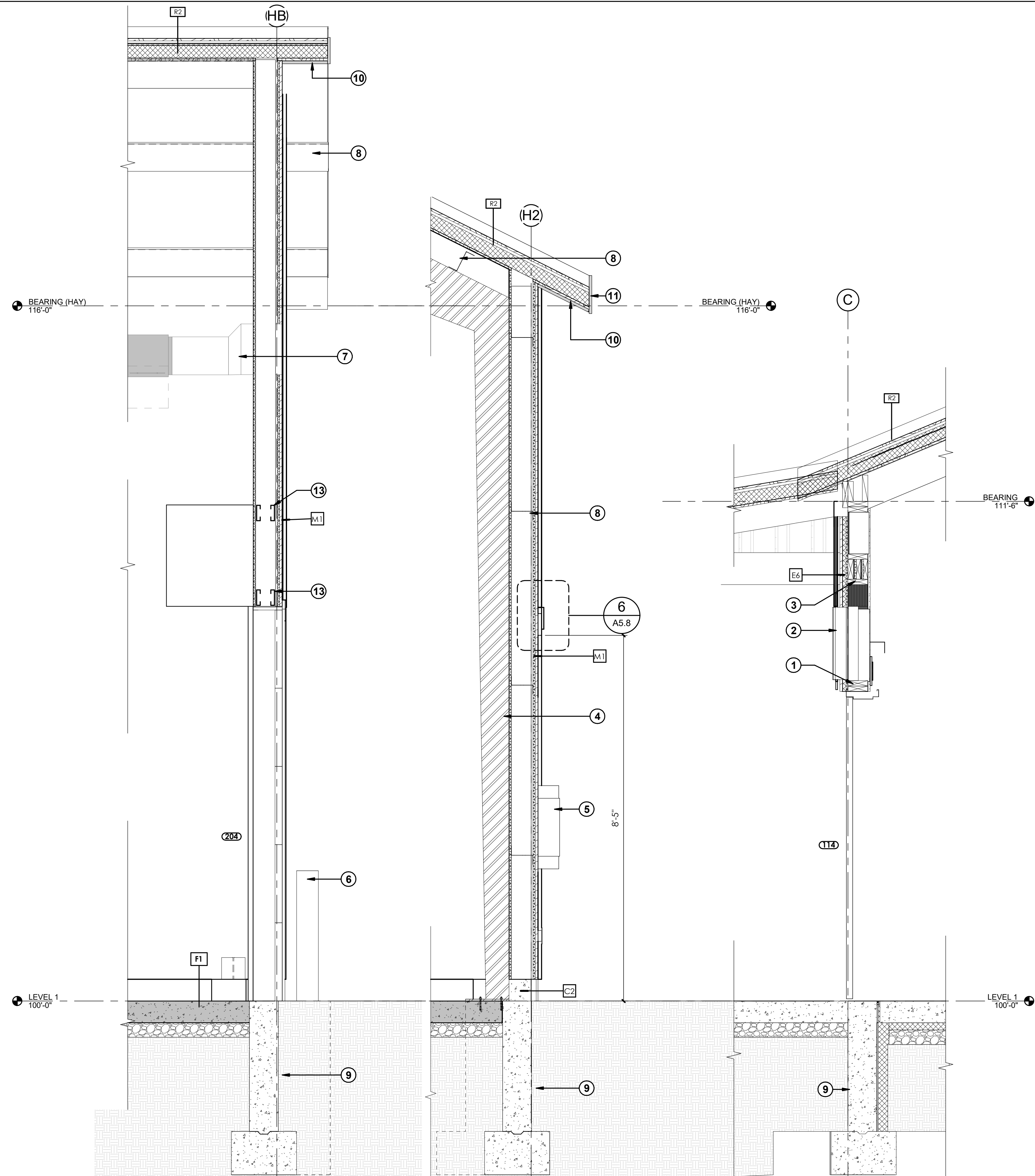
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TECH. REVIEW:
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DATE:
2.27.2023

SUB SHEET NO.
A3.2

TITLE OF SHEET
WALL SECTIONS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

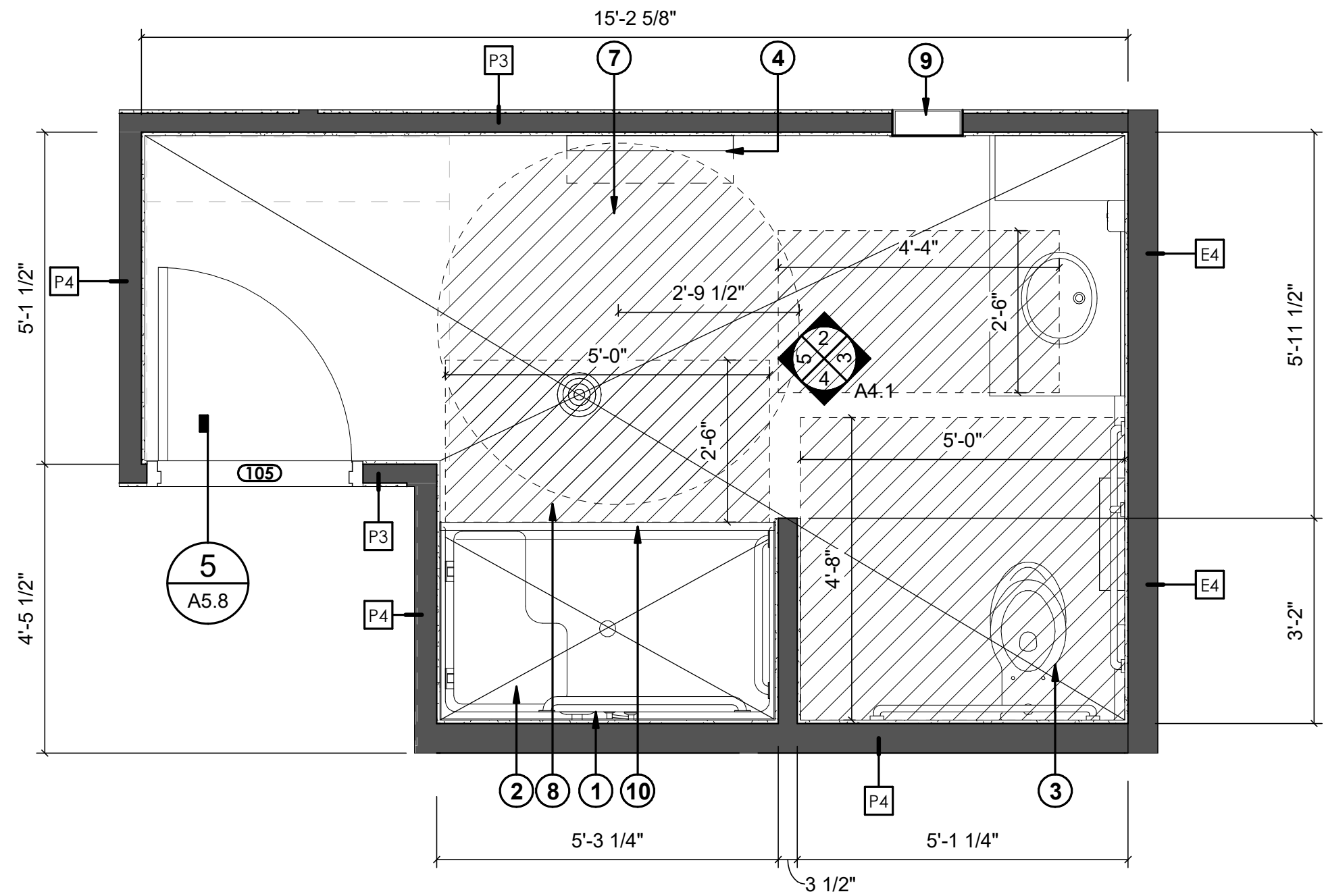
DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
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- GENERAL NOTES:**
- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - SEE SHEET G2.0 FOR GENERAL NOTES.
 - DO NOT SCALE DRAWINGS.
 - CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

- KEYED NOTES:**
- DOUBLE TOP PLATE
 - MECHANICAL LOUVER, SEE MECHANICAL DRAWINGS.
 - HEADER, SEE STRUCTURAL DRAWINGS FOR SIZE
 - PRE-MFG. STEEL PURLIN
 - ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
 - STEEL BOLLARDS
 - MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS.
 - STRUCTURAL STEEL FRAMING, SEE STRUCTURAL DRAWINGS. PAINT
 - CONTINUOUS EXTERIOR DAMPPROOFING BELOW GRADE, TYP.
 - FIBER CEMENT SOFFIT.
 - PREFINISHED METAL FLASHING & PREFINISHED METAL FASCIA
 - PREFINISHED METAL FLASHING & COUNTERFLASHING
 - BOX HEADER

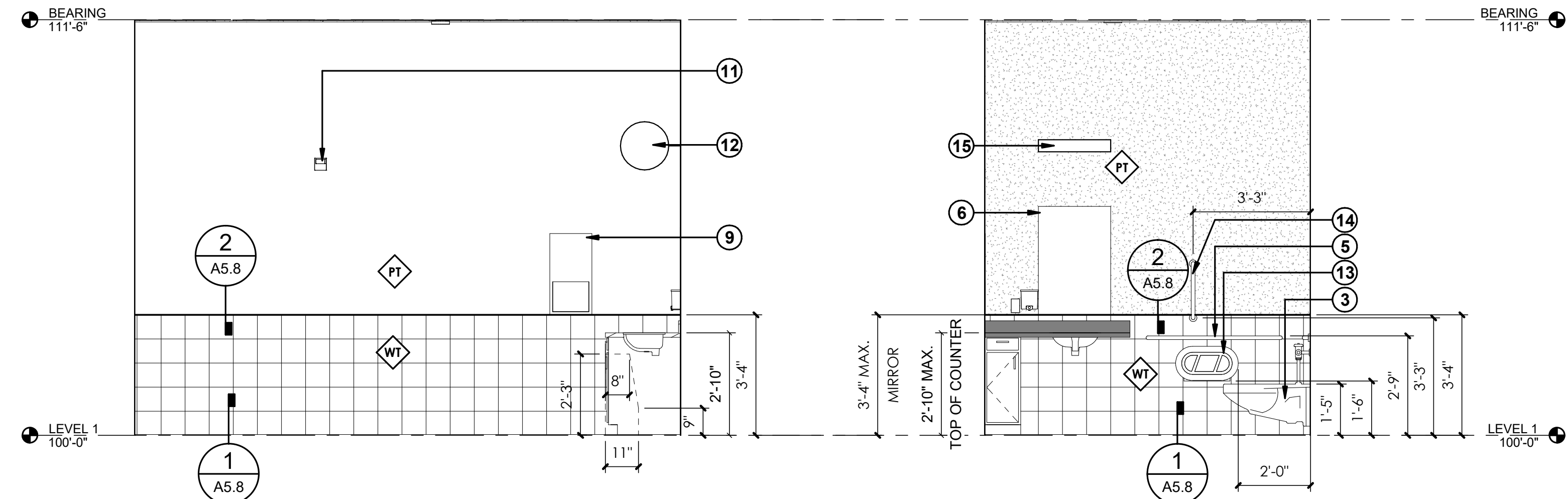
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	TECH. REVIEW:	SP				121
	DATE:	KR				175143
	2.27.2023					PMIS/PKG NO.
A3.3			SHEET			
CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO			42 OF 104			



1 ENLARGED PLAN - ACCESSIBLE RESTROOM
SCALE 1/2" = 1'-0"

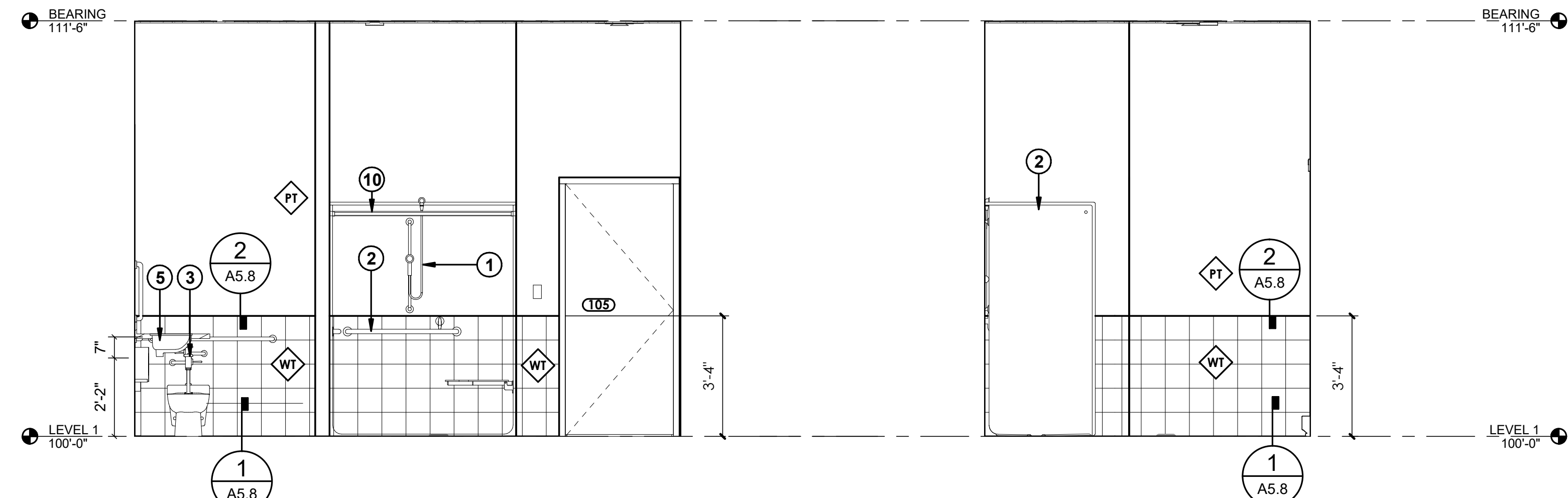
- GENERAL NOTES:**
- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - SEE SHEET G2.0 FOR GENERAL NOTES.
 - DO NOT SCALE DRAWINGS.
 - CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

- KEYED NOTES:**
- ABA SHOWER CONTROLS, SEE PLUMBING DRAWINGS.
 - ABA ACCESSIBLE, UNISEX ROLL-IN SHOWER
 - ABA TOILET, SEE PLUMBING DRAWINGS
 - MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS.
 - GRAB BAR
 - MIRROR, SEE ACCESSORY LEGEND
 - ABAAS 67" TURNING RADIUS
 - ABAAS CLEAR SHOWER SPACE CLEARANCE
 - PAPER TOWEL DISPENSER
 - SHOWER CURTAIN ROD, SEE ACCESSORY SCHEDULE.
 - ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
 - ELECTRICAL FIXTURE, SEE ELECTRICAL DRAWINGS.
 - TOILET TISSUE DISPENSER, SEE ACCESSORY SCHEDULE.
 - 18" VERTICAL S.S. GRAB BAR, SEE ACCESSORY SCHEDULE.
 - INTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS.



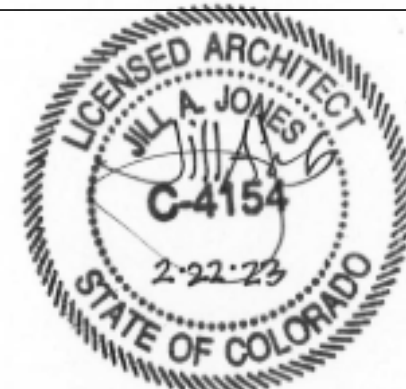
2 INTERIOR ELEVATION - ACCESSIBLE RESTROOM - NORTH
SCALE 3/8" = 1'-0"

3 INTERIOR ELEVATION - ACCESSIBLE RESTROOM - EAST
SCALE 3/8" = 1'-0"

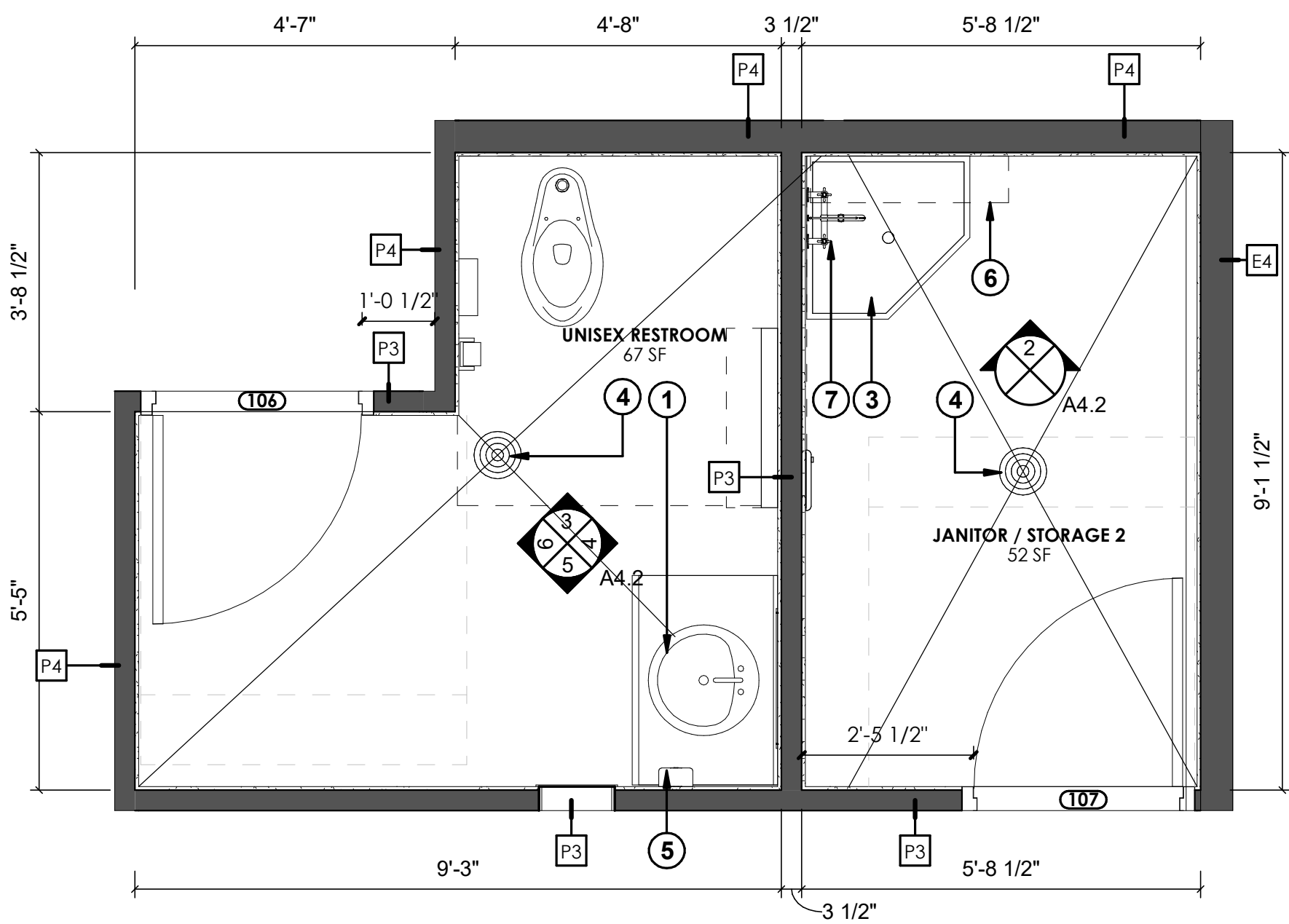


4 INTERIOR ELEVATION - ACCESSIBLE RESTROOM - SOUTH
SCALE 3/8" = 1'-0"

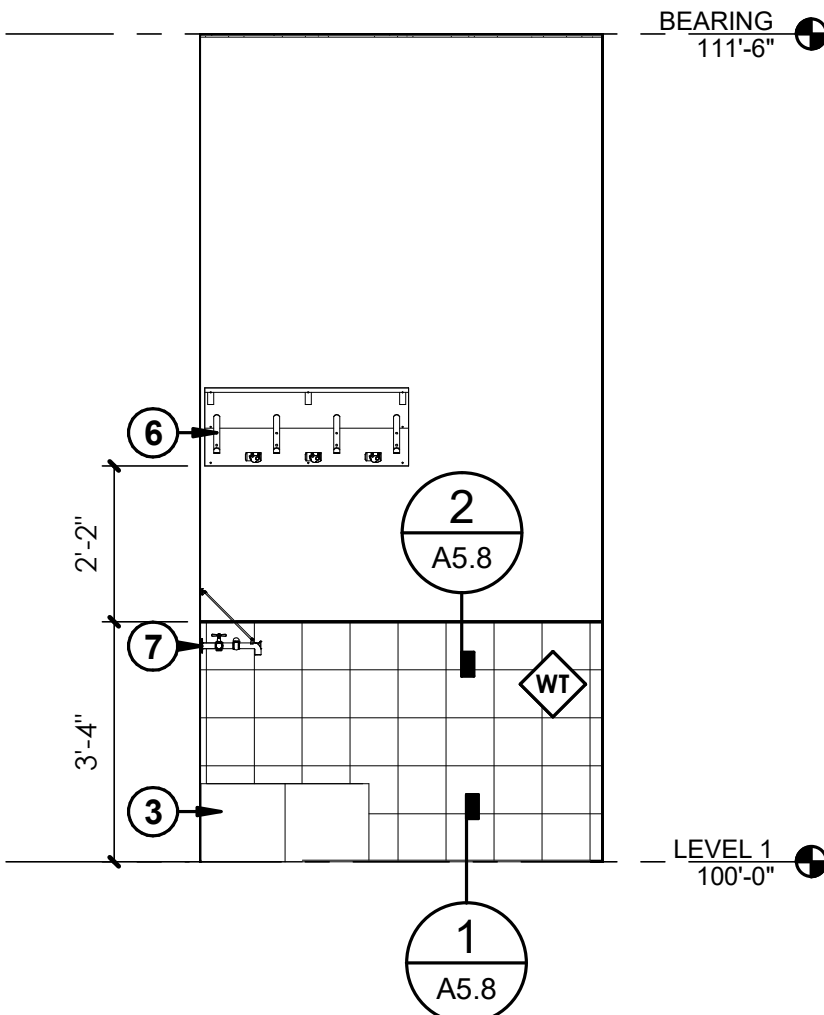
5 INTERIOR ELEVATION - ACCESSIBLE RESTROOM - WEST
SCALE 3/8" = 1'-0"



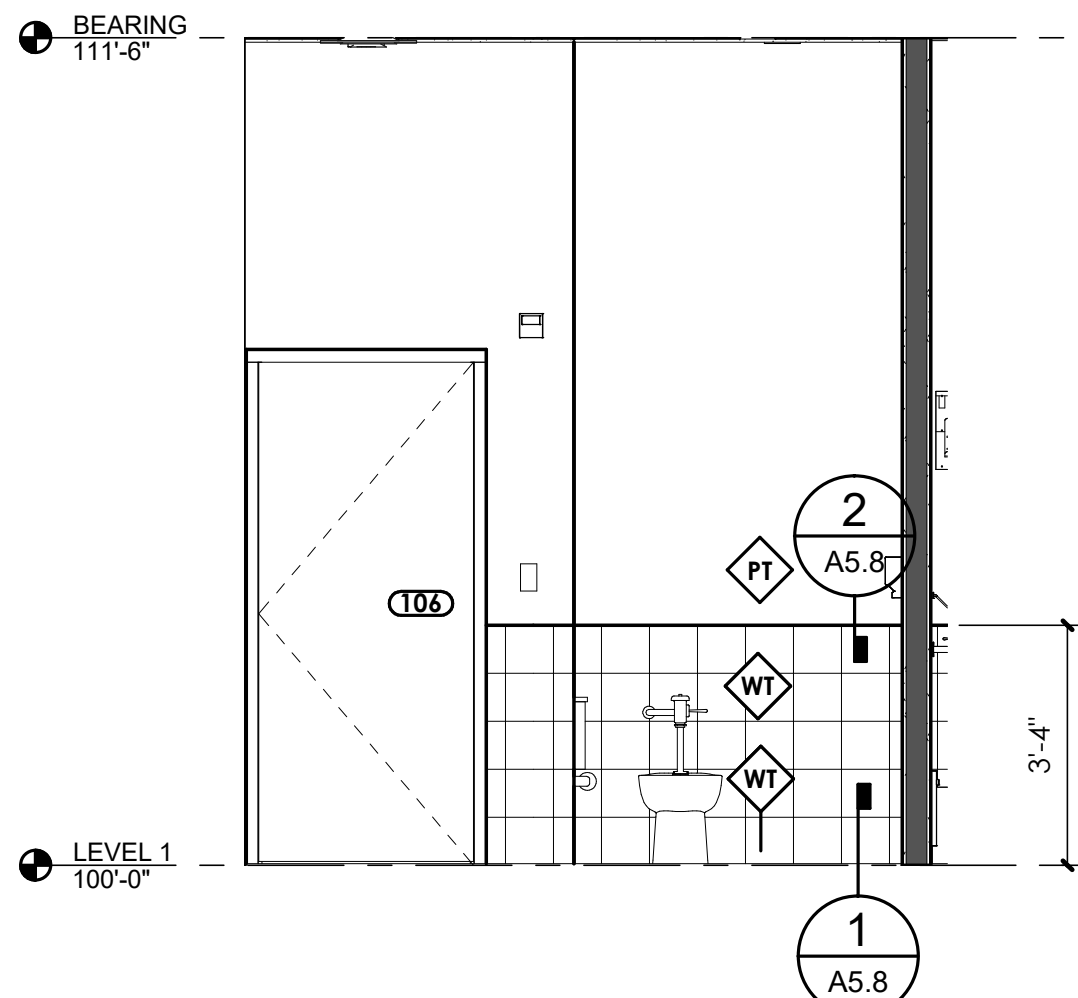
DESIGNED: HS CADD SP TECH. REVIEW: KR DATE: 2.27.2023	SUB SHEET NO. A4.1	TITLE OF SHEET ENLARGED PLANS - INTERIOR ELEVATIONS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 43 OF 104
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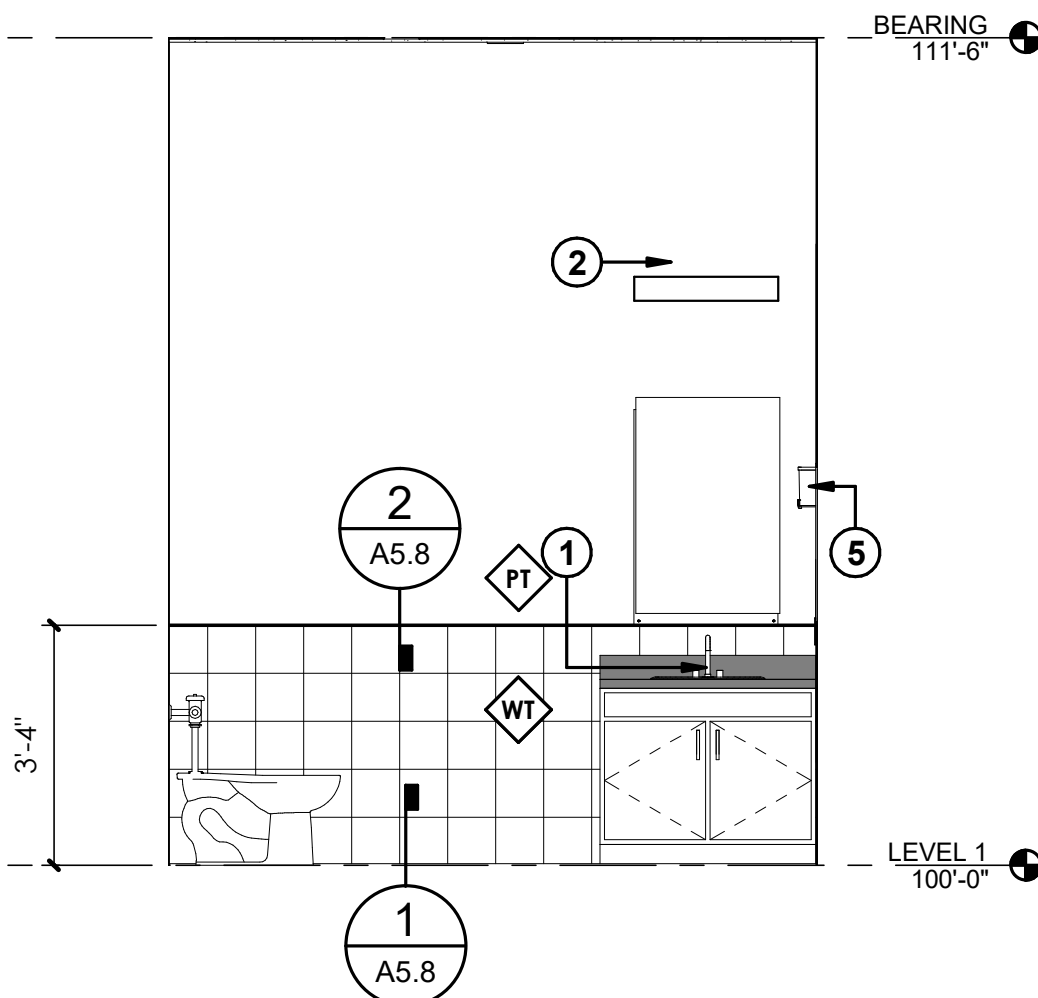
1 ENLARGED PLAN - UNISEX RESTROOM
SCALE 1/2" = 1'-0"



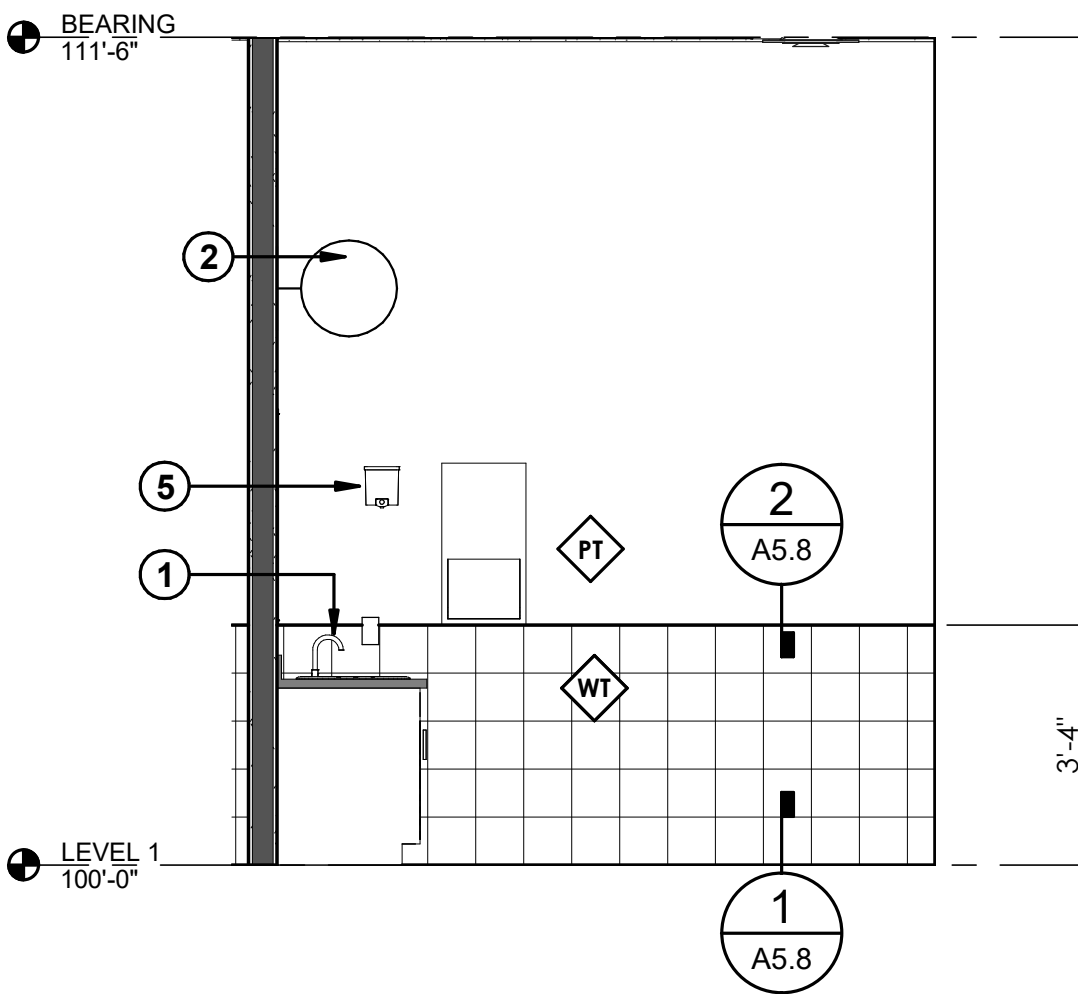
2 INTERIOR ELEVATION - JANITOR/STORAGE - NORTH
SCALE 3/8" = 1'-0"



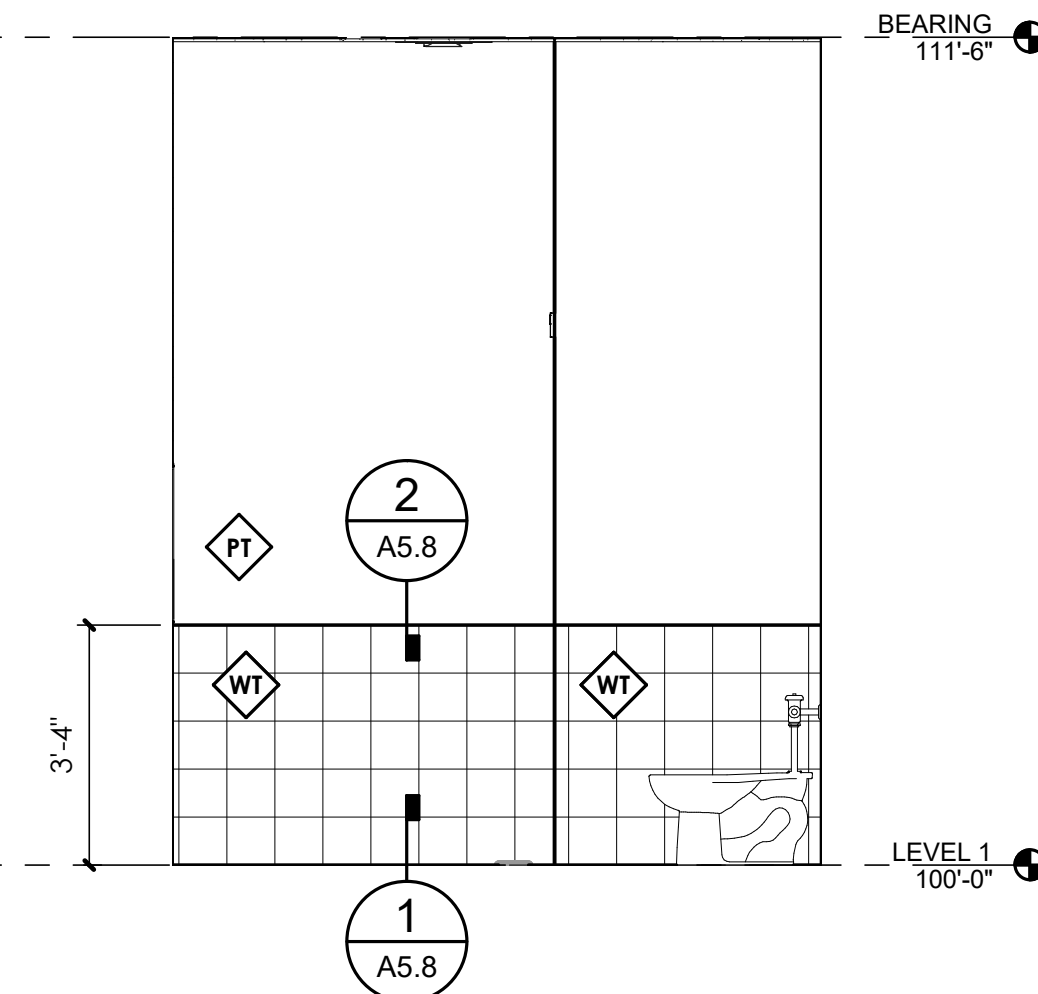
3 INTERIOR ELEVATION - UNISEX RESTROOM - NORTH
SCALE 3/8" = 1'-0"



4 INTERIOR ELEVATION - UNISEX RESTROOM - EAST
SCALE 3/8" = 1'-0"



5 INTERIOR ELEVATION - UNISEX RESTROOM - SOUTH
SCALE 3/8" = 1'-0"



6 INTERIOR ELEVATION - UNISEX RESTROOM - WEST
SCALE 3/8" = 1'-0"

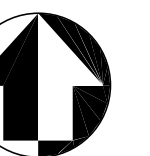
GENERAL NOTES:

1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
2. SEE SHEET G2.0 FOR GENERAL NOTES.
3. DO NOT SCALE DRAWINGS.
4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

KEYED NOTES:

- 1 SINK AND FAUCET, SEE PLUMBING DRAWINGS.
- 2 ELECTRICAL FIXTURE, SEE ELECTRICAL DRAWINGS.
- 3 CORNER MOP SERVICE SINK
- 4 FLOOR DRAIN
- 5 SOAP DISPENSER. NPS FURNISHED AND INSTALLED.
- 6 MOP & BROOM HOLDER WITH SHELF, SEE ACCESSORY SCHEDULE
- 7 SERVICE SINK FAUCET, SEE PLUMBING DRAWINGS

1/2" = 1'-0"

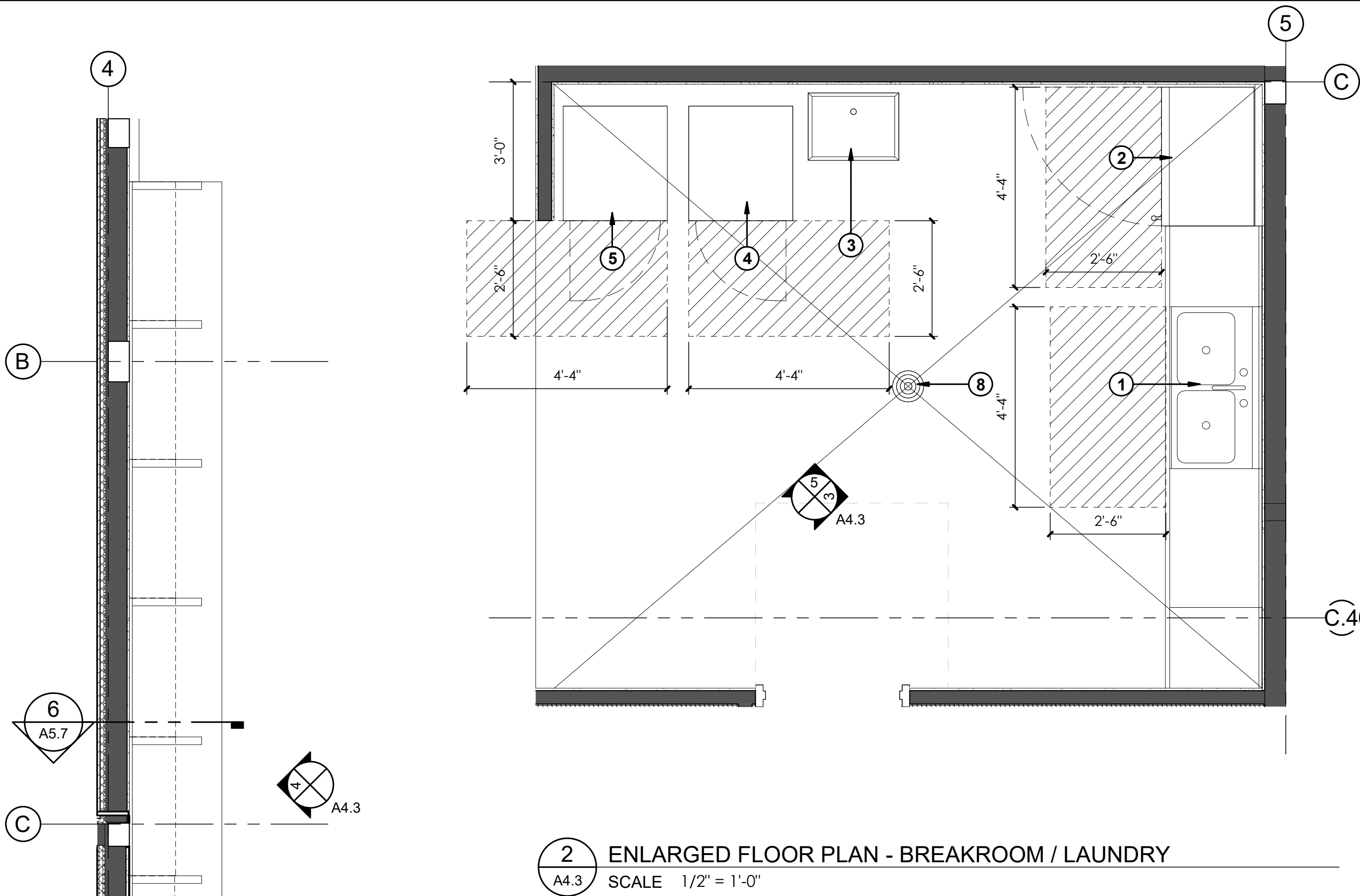


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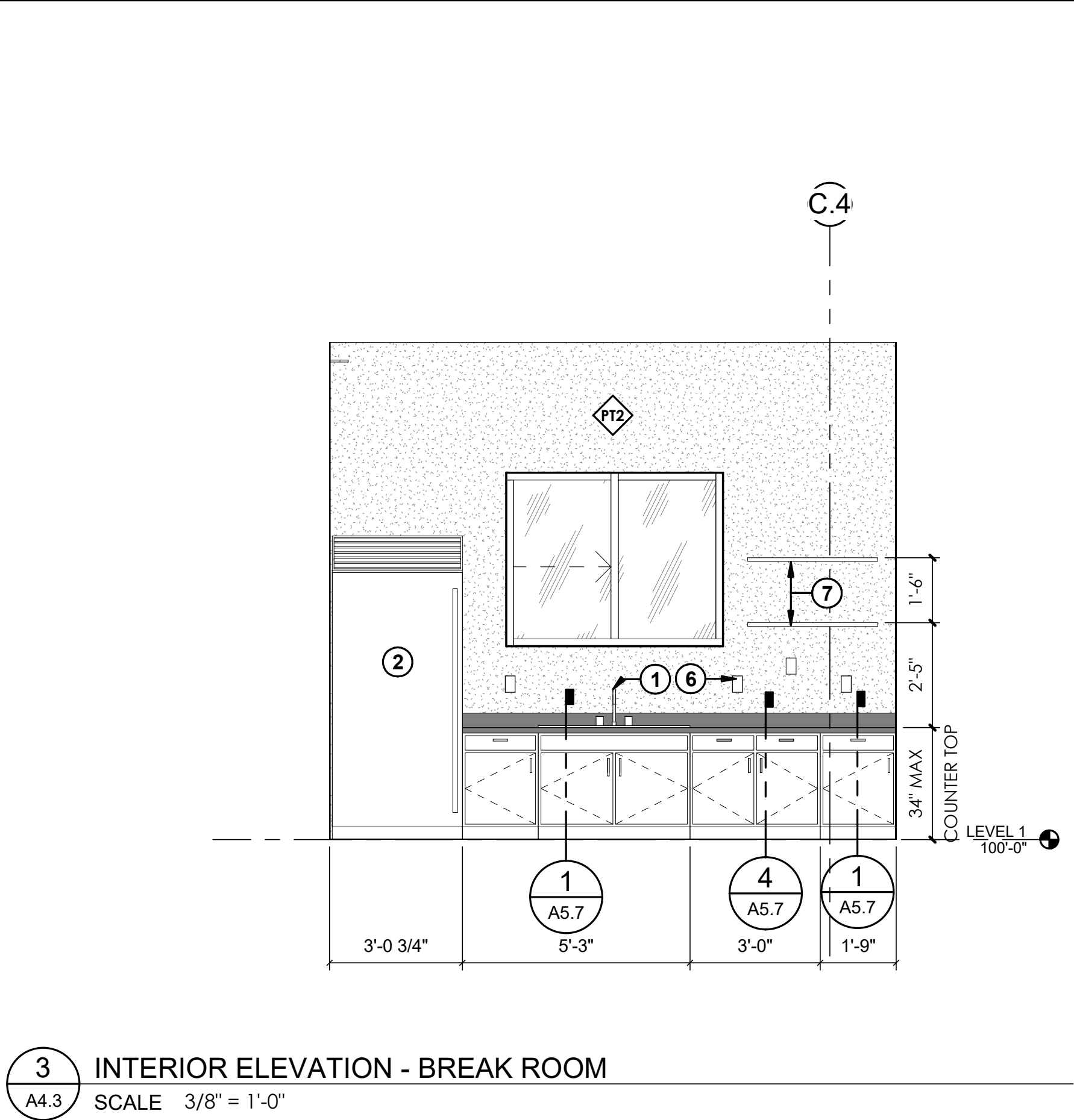
SUB SHEET NO.
A4.2

TITLE OF SHEET
**ENLARGED PLANS -
INTERIOR ELEVATIONS**
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

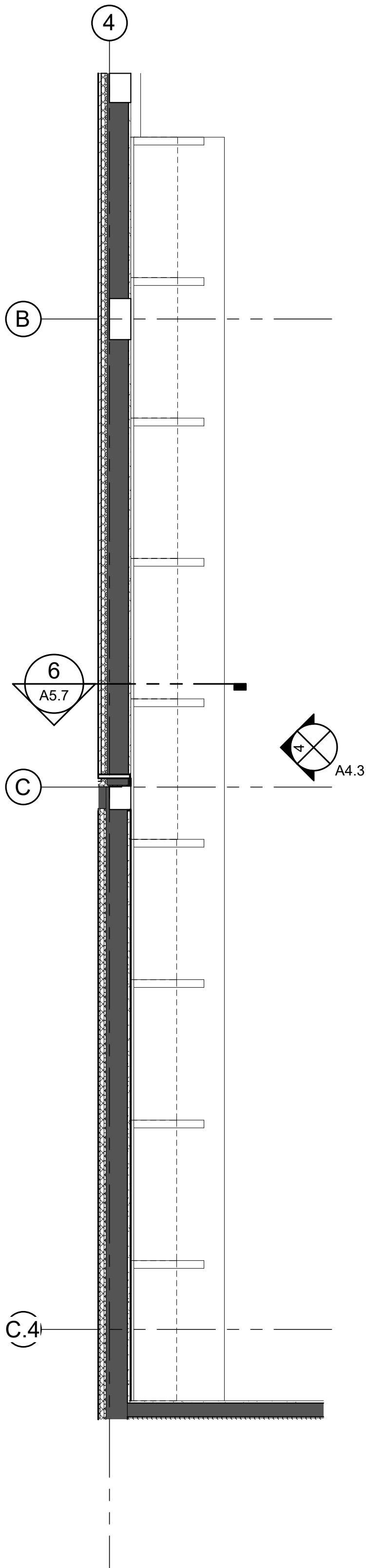
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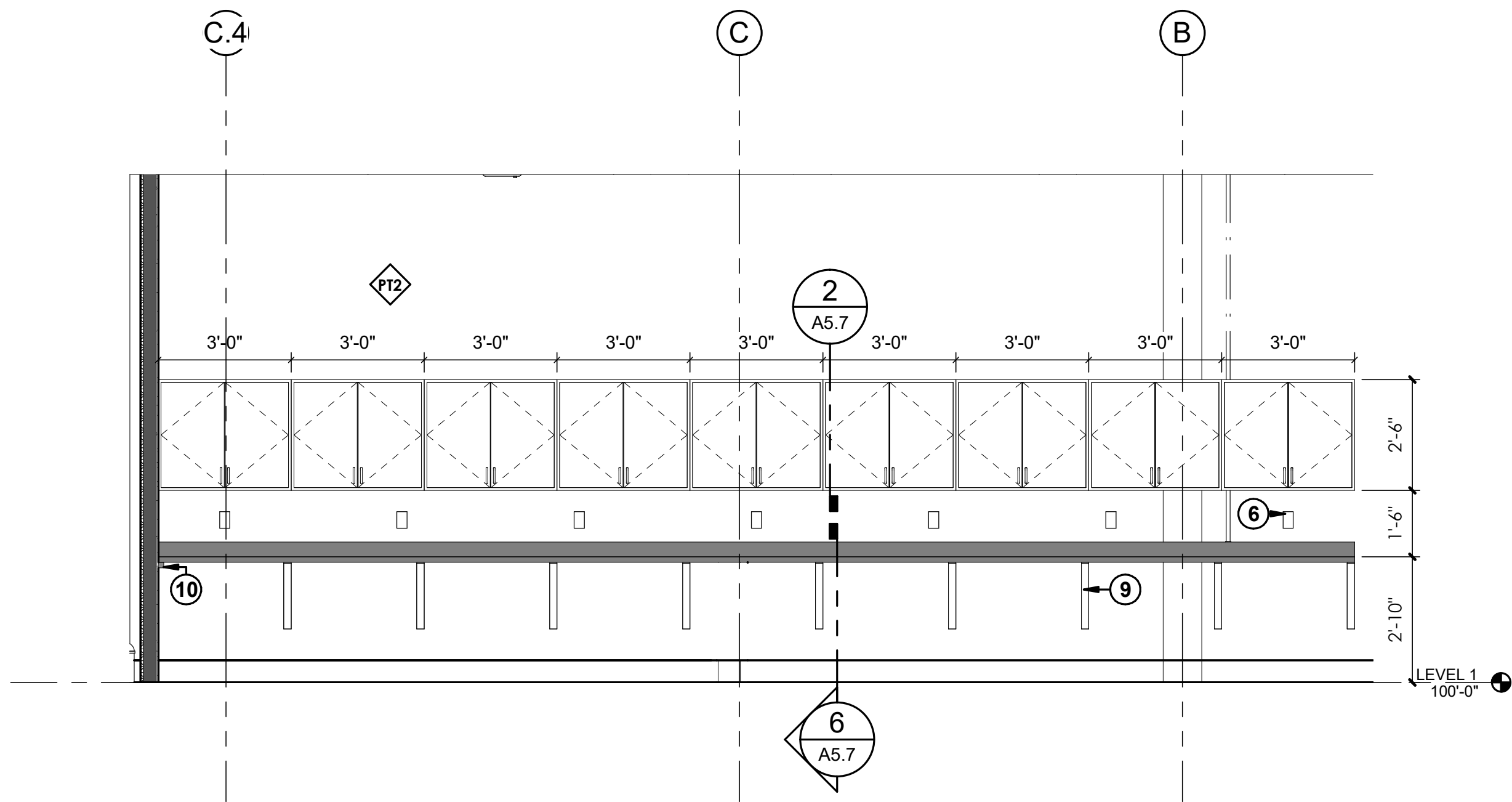
2 ENLARGED FLOOR PLAN - BREAKROOM / LAUNDRY
A4.3 SCALE 1/2" = 1'-0"



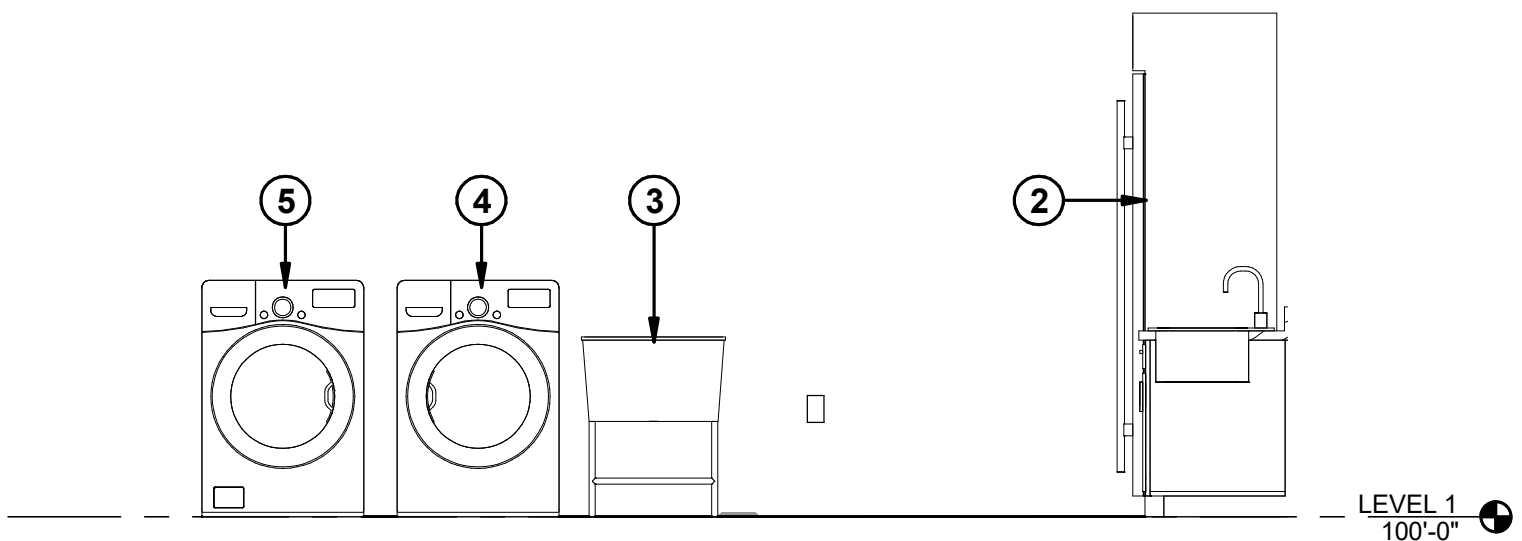
3 INTERIOR ELEVATION - BREAK ROOM
A4.3 SCALE 3/8" = 1'-0"



1 ENLARGED FLOOR PLAN - WORK BENCH
A4.3 SCALE 1/2" = 1'-0"



4 INTERIOR ELEVATION - WORK BENCH
A4.3 SCALE 3/8" = 1'-0"



5 INTERIOR ELEVATION - LAUNDRY
A4.3 SCALE 3/8" = 1'-0"

GENERAL NOTES:

1. SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
2. SEE SHEET G2.0 FOR GENERAL NOTES.
3. DO NOT SCALE DRAWINGS.
4. CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

KEYED NOTES:

- 1 BREAK ROOM KITCHEN LAYOUT (FRIDGE, SINK, & COUNTER SPACE FOR A MICROWAVE), REMOVABLE CASEWORK PER ACCESSIBILITY REQUIREMENTS.
- 2 REFRIGERATOR.
- 3 UTILITY SINK
- 4 COMMERCIAL GRADE, ELECTRIC DRYER. NPS FURNISHED, CONTRACTOR INSTALLED.
- 5 COMMERCIAL GRADE WASHER. NPS FURNISHED, CONTRACTOR INSTALLED.
- 6 ELECTRICAL EQUIPMENT, SEE ELECTRICAL DRAWINGS.
- 7 SHELF. CONTRACTOR PROVIDED AND INSTALLED, PROVIDE BLOCKING AS NECESSARY.
- 8 FLOOR DRAIN
- 9 18" X 18" MTL. SUPPORT BRACKET AT 36" O.C. SEE SPEC SECTION 05 50 00
- 10 WALL CLEAT



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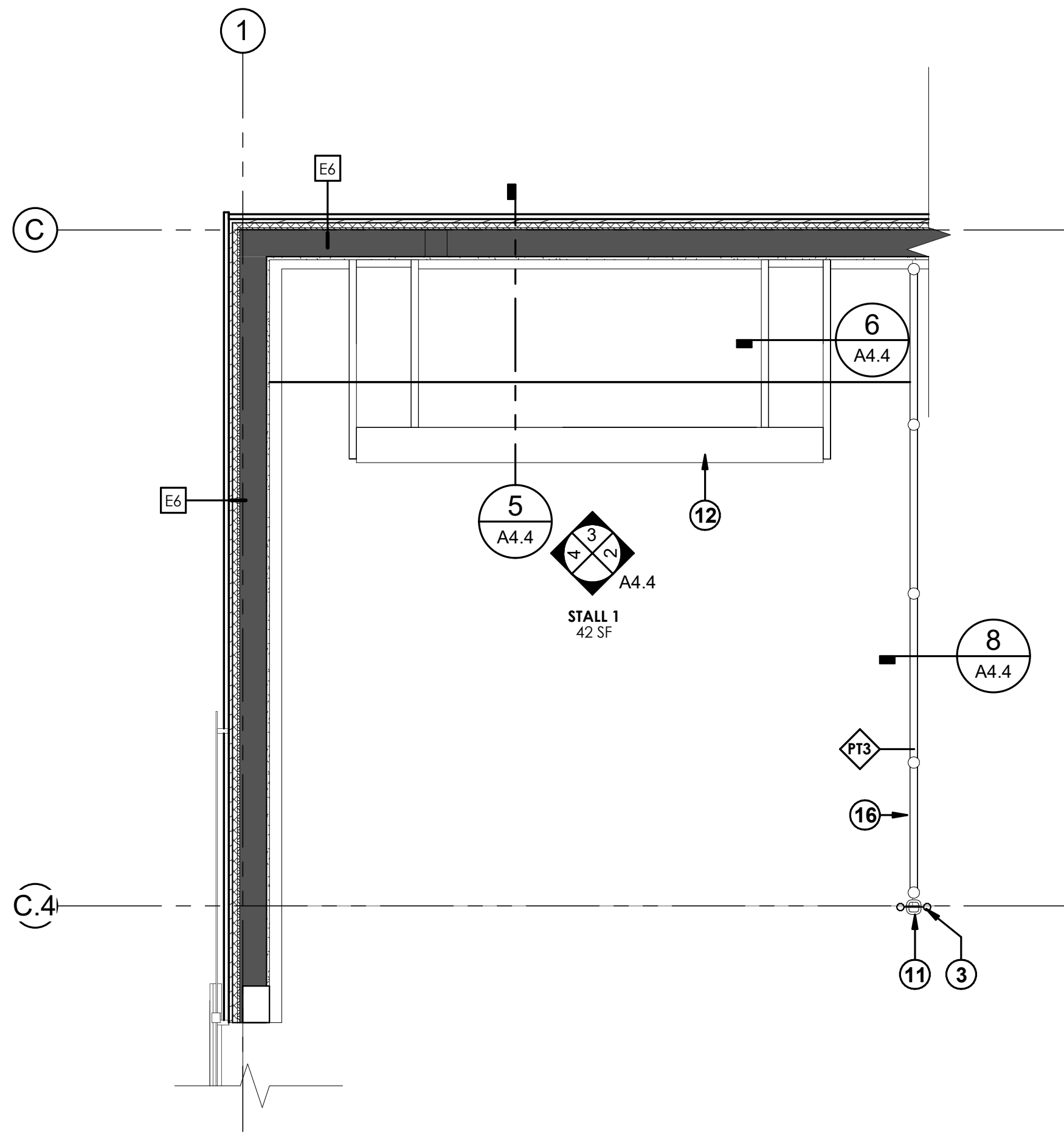
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A4.3

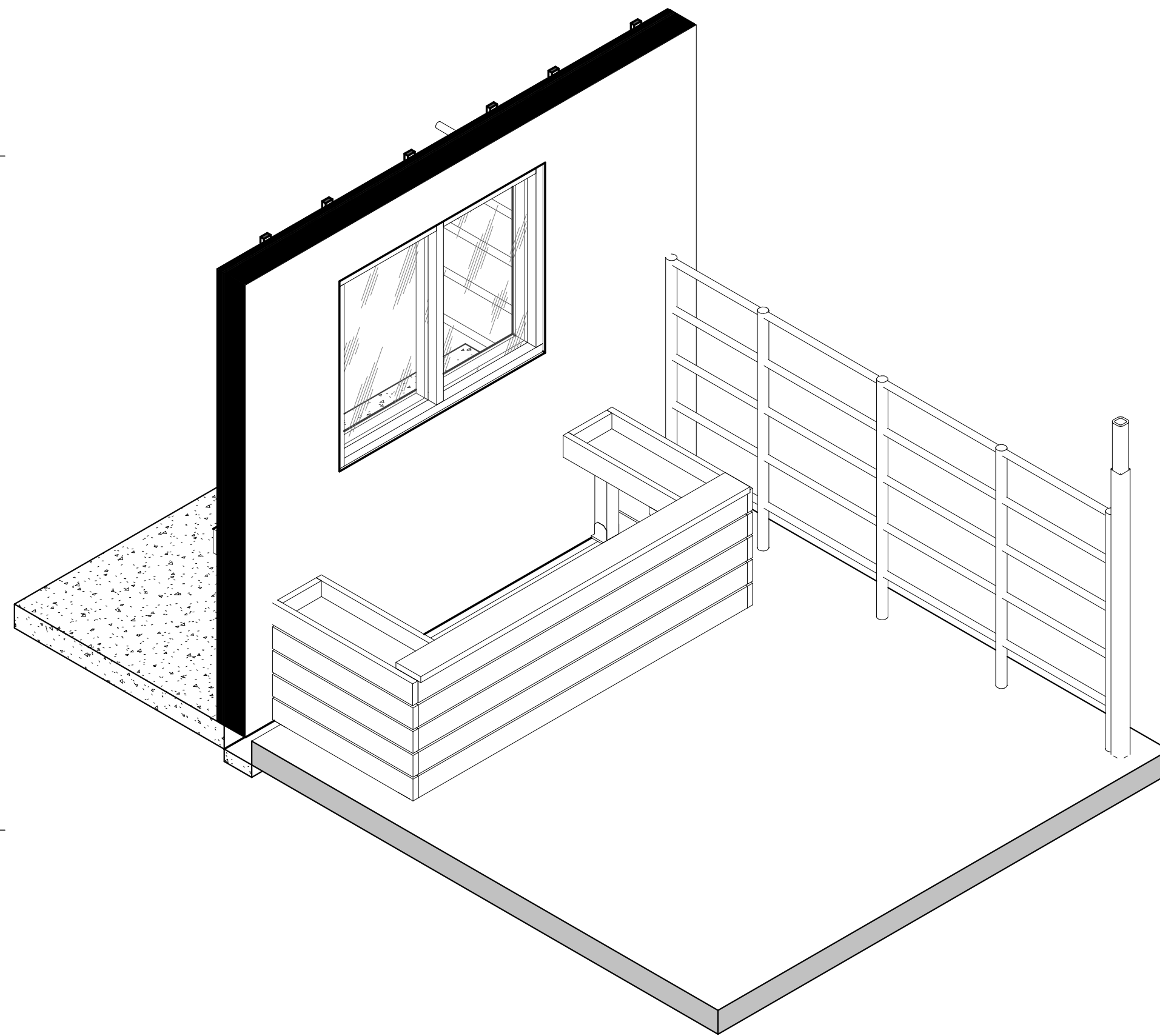
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**ENLARGED PLANS -
INTERIOR ELEVATIONS**

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

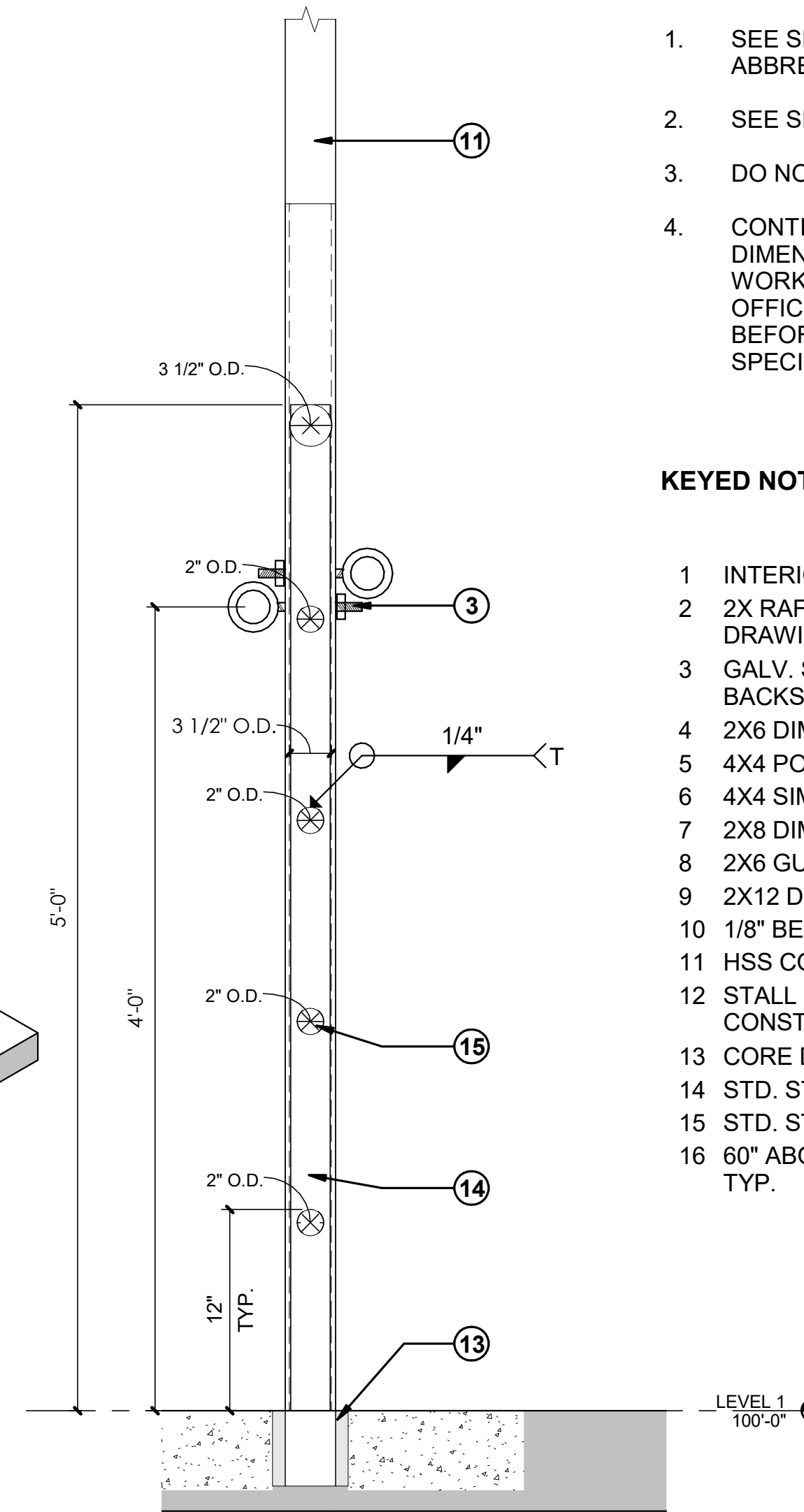
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1 ENLARGED PLAN - STALL (TYP.)
A4.4 SCALE 1/2" = 1'-0"



7 FEEDER ISOMETRIC
A4.4 SCALE



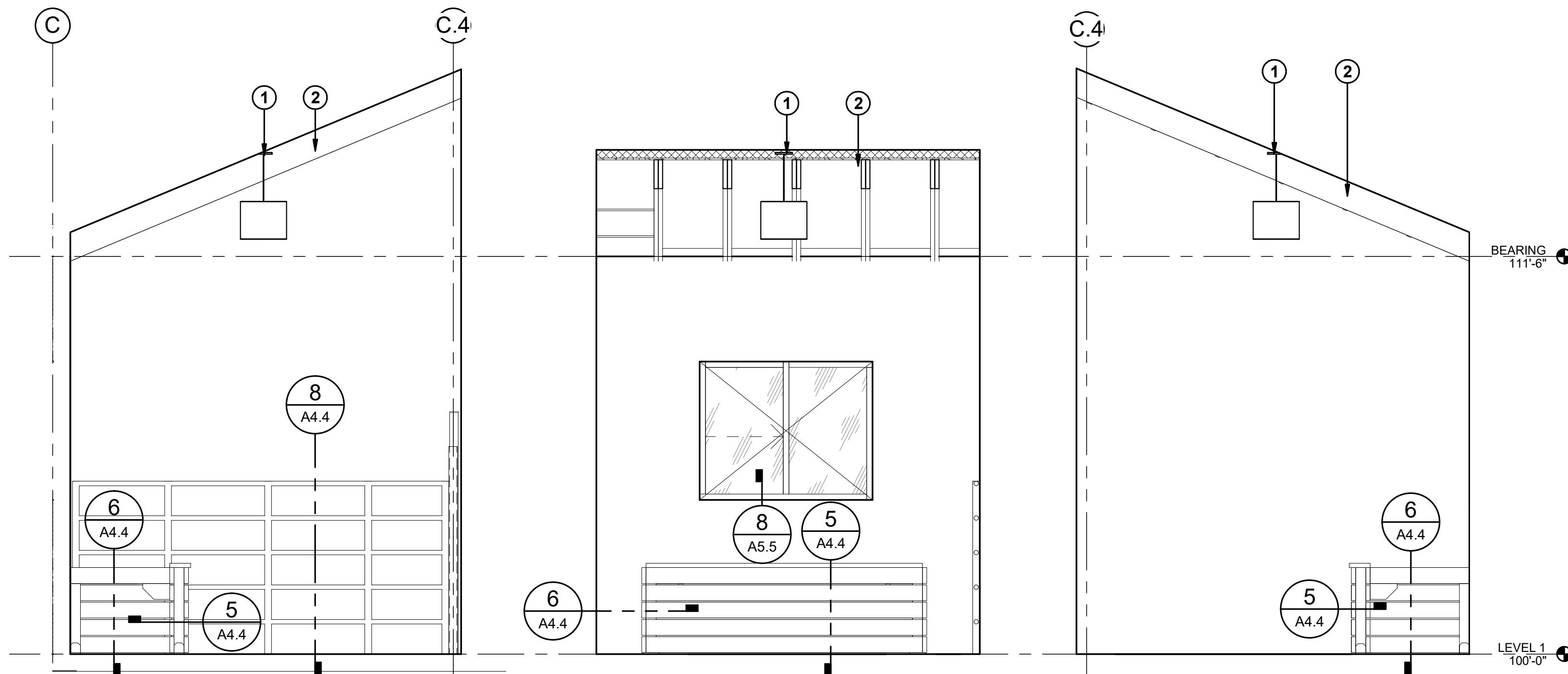
8 DETAIL - STEEL PIPE RAILING
A4.4 SCALE 1 1/2" = 1'-0"

GENERAL NOTES:

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2. SEE SHEET G2.0 FOR GENERAL NOTES.
3. DO NOT SCALE DRAWINGS.
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KEYED NOTES:

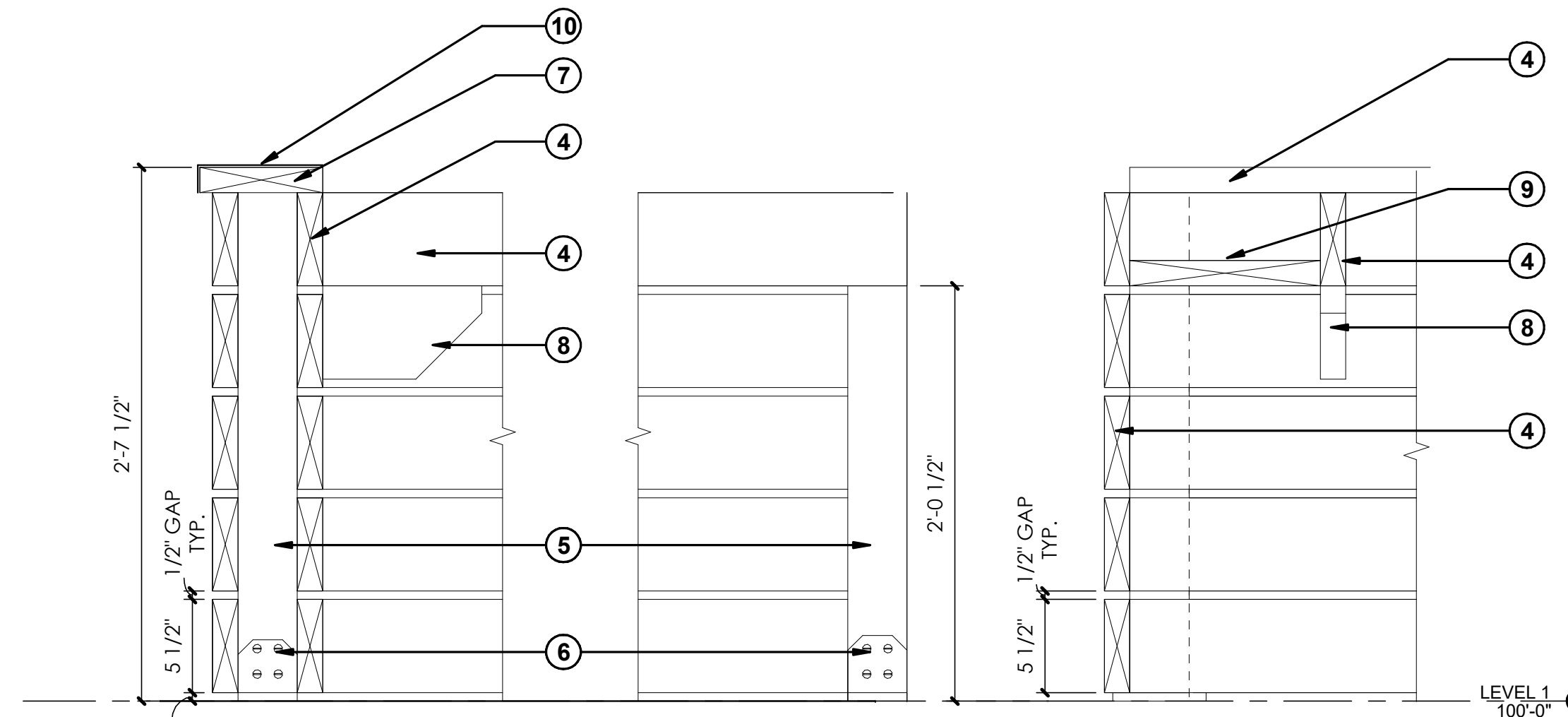
- 1 INTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS.
- 2 2X RAFTERS, EXPOSED AND STAIN ST1. SEE STRUCTURAL DRAWINGS
- 3 GALV. STEEL 2" D. 3/4" X 4 1/2" EYE-BOLTS FOR HORSE TIE BACKS @ 48" HIGH
- 4 2X6 DIMENSIONAL LUMBER
- 5 4X4 POST
- 6 4X4 SIMPSON ABU POST BASE
- 7 2X8 DIMENSIONAL LUMBER
- 8 2X6 GUSSET EACH END
- 9 2X12 DIMENSIONAL LUMBER
- 10 1/8" BENT STEEL PLATE TO PROTECT FROM HORSE
- 11 HSS COLUMN, SEE STRUCTURAL
- 12 STALL FEEDER - CONTRACTOR PROVIDED, CONTRACTOR CONSTRUCTED
- 13 CORE DRILL & SET POSTS W/ NON-SHRINK GROUT
- 14 STD. STL. PIPE POSTS 3 1/2" O.D. @ 32" HORIZ.
- 15 STD. STL. PIPE RAILS 2" O.D. @ 12" O.C. HORIZ. WELDED
- 16 60" ABOVE FINISHED FLOOR STEEL PIPE RAILING, PAINTED. TYP.



2 Elevation 1 - b
A4.4 SCALE 3/8" = 1'-0"

3 Elevation 1 - a
A4.4 SCALE 3/8" = 1'-0"

4 Elevation 1 - d
A4.4 SCALE 3/8" = 1'-0"



5 Section 5
A4.4 SCALE 1 1/2" = 1'-0"

6 Detail 0
A4.4 SCALE 1 1/2" = 1'-0"



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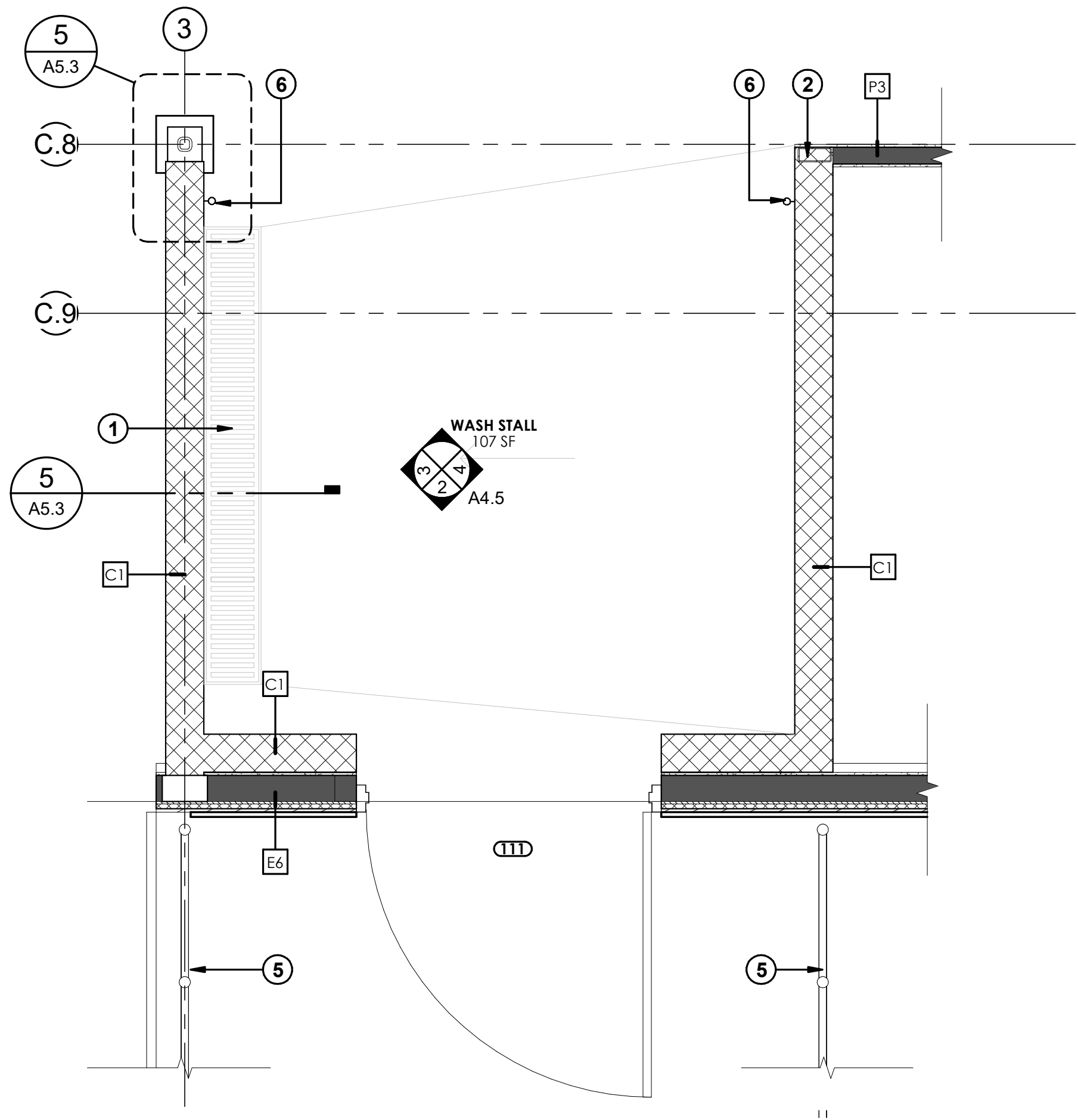
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TITLE OF SHEET
ENLARGED PLANS - INTERIOR ELEVATIONS
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

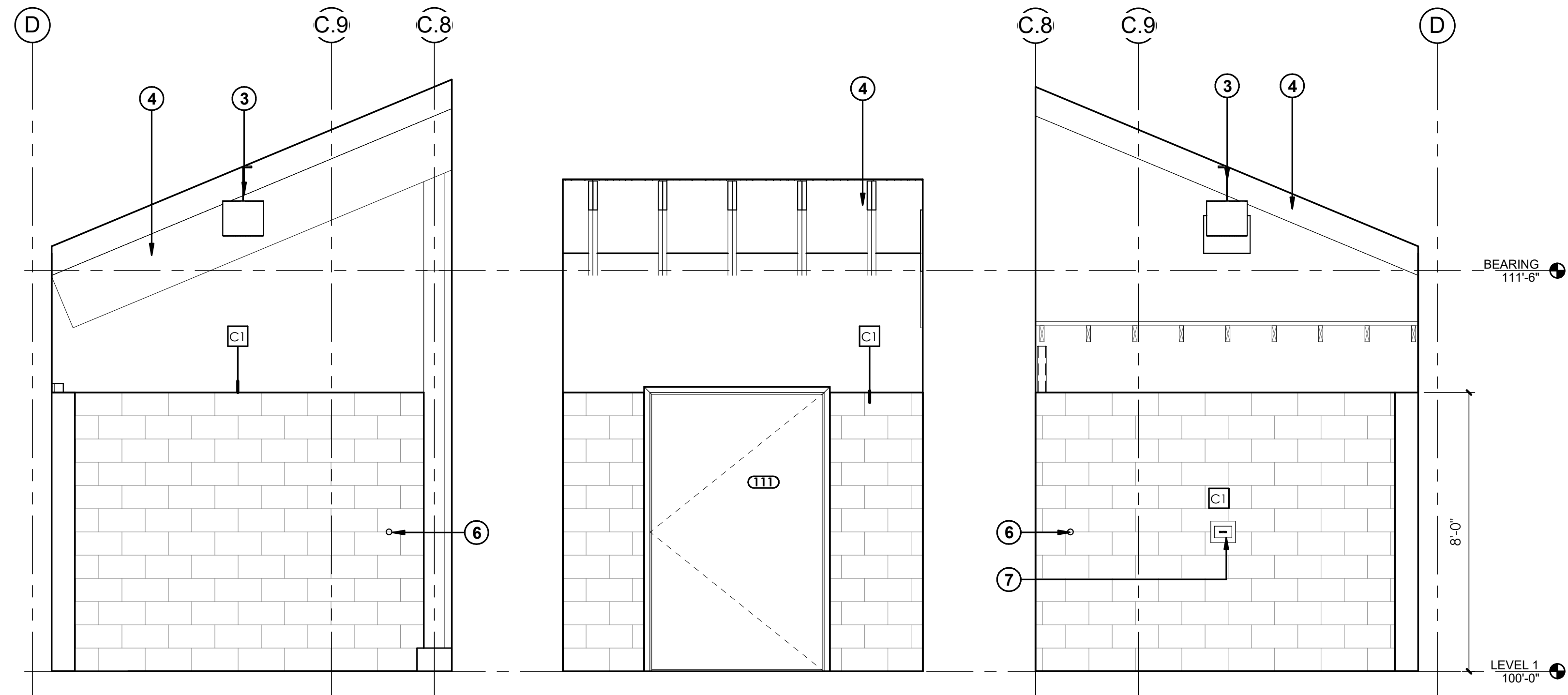
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- GENERAL NOTES:**
- SEE SHEET G1.0 FOR SYMBOLS LEGEND AND ABBREVIATIONS.
 - SEE SHEET G2.0 FOR GENERAL NOTES.
 - DO NOT SCALE DRAWINGS.
 - CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE CONTRACTING OFFICER ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

- KEYED NOTES:**
- TRENCH DRAIN, SEE PLUMBING DRAWINGS.
 - STEEL COLUMN, SEE STRUCTURAL DRAWINGS.
 - INTERIOR LIGHTING, SEE ELECTRICAL DRAWINGS.
 - EXPOSED STRUCTURE, SEE STRUCTURAL DRAWINGS FOR ROOF FRAMING, STAIN ST1
 - 60" ABOVE FINISHED FLOOR STEEL PIPE RAILING, PAINTED. TYP.
 - GALV. STEEL 2" D. 3/4" X 4 1/2" EYE-BOLTS FOR HORSE TIE BACKS @ 48" HIGH
 - RECESSED WALL HYDRANT, SEE PLUMBING DRAWINGS.



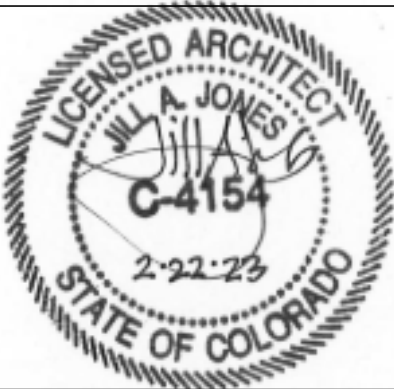
1
A4.5
ENLARGED PLAN - WASH STALL
SCALE 1/2" = 1'-0"



3
A4.5
Elevation 2 - b
SCALE 3/8" = 1'-0"

2
A4.5
Elevation 2 - a
SCALE 3/8" = 1'-0"

4
A4.5
Elevation 2 - d
SCALE 3/8" = 1'-0"



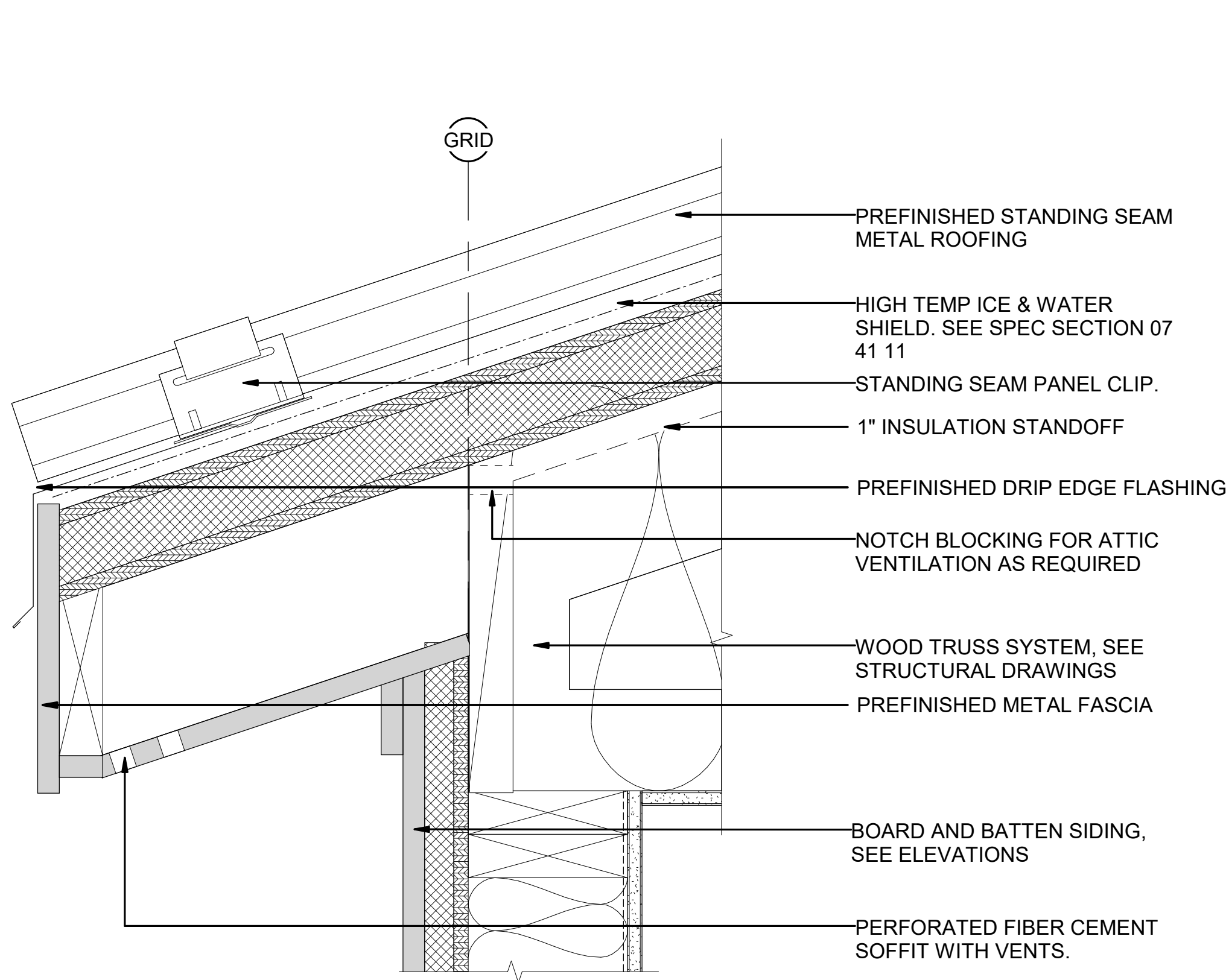
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SUB SHEET NO.
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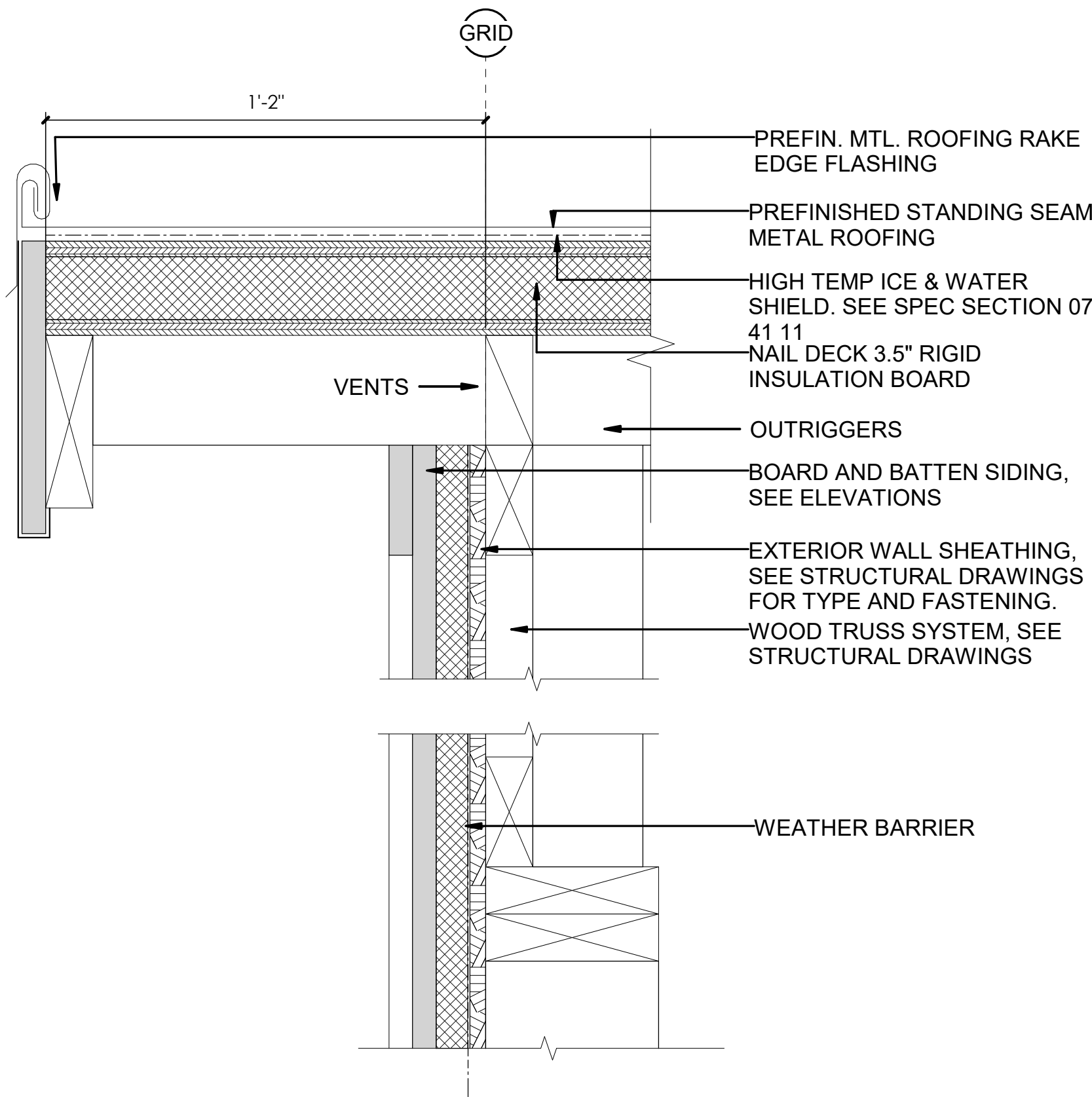
TITLE OF SHEET
ENLARGED PLANS - INTERIOR ELEVATIONS
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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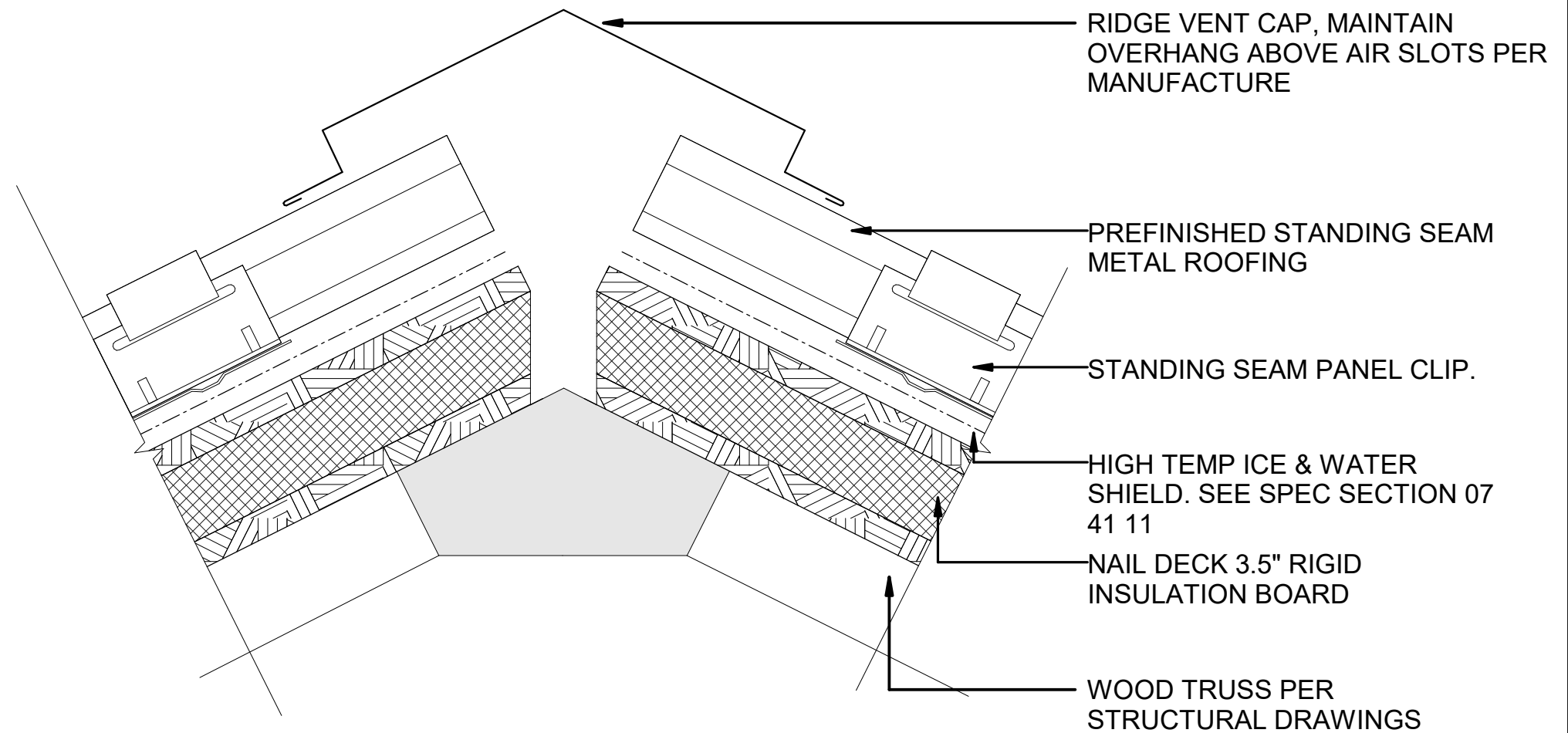
- Notes:
1. All exterior openings including vents in soffit, walls, or ridge, shall have insect screens.



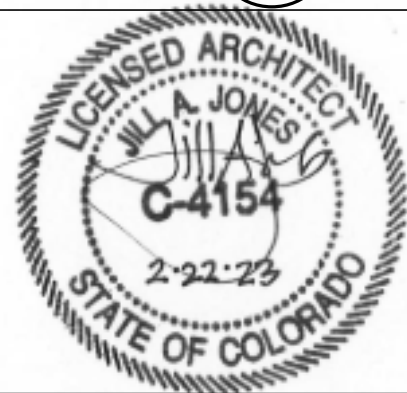
1 TYPICAL SOFFIT - STANDING SEAM
A5.1 SCALE 3" = 1'-0"



2 SOFFIT AT GABLE END - STANDING SEAM
A5.1 SCALE 3" = 1'-0"



3 RIDGE VENT - STANDING SEAM
A5.1 SCALE 3" = 1'-0"



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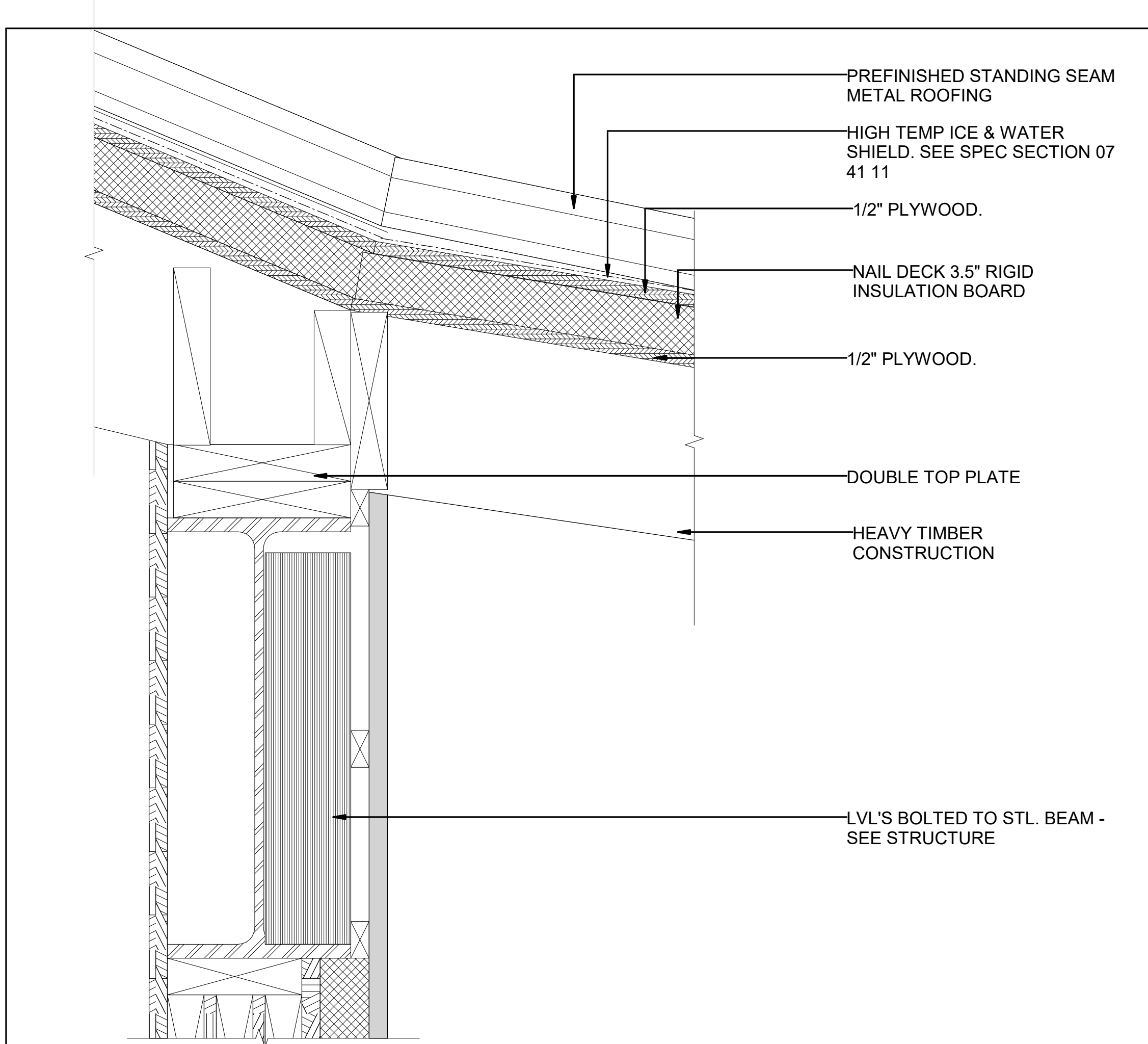
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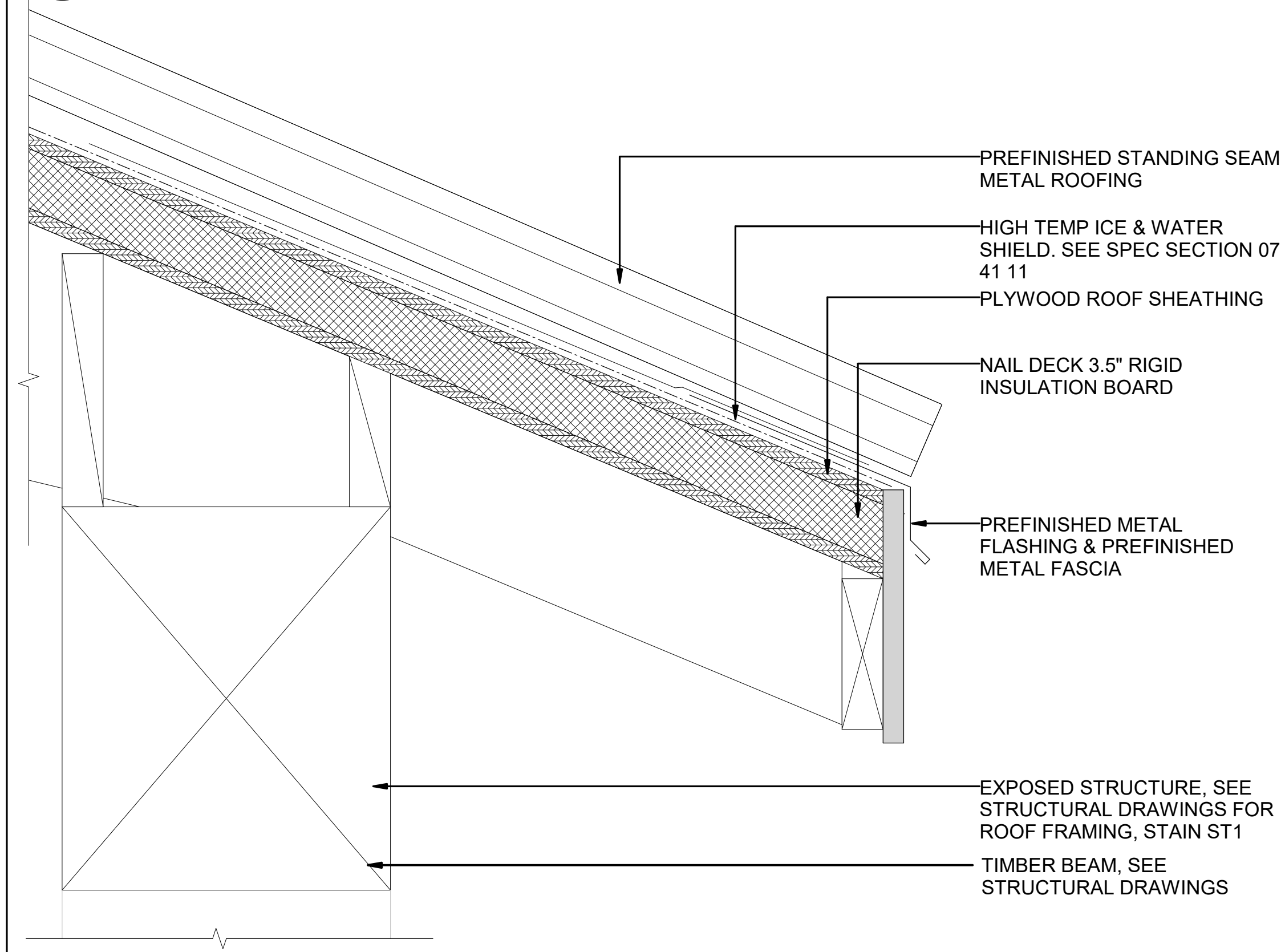
TITLE OF SHEET
DETAILS - ROOF

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

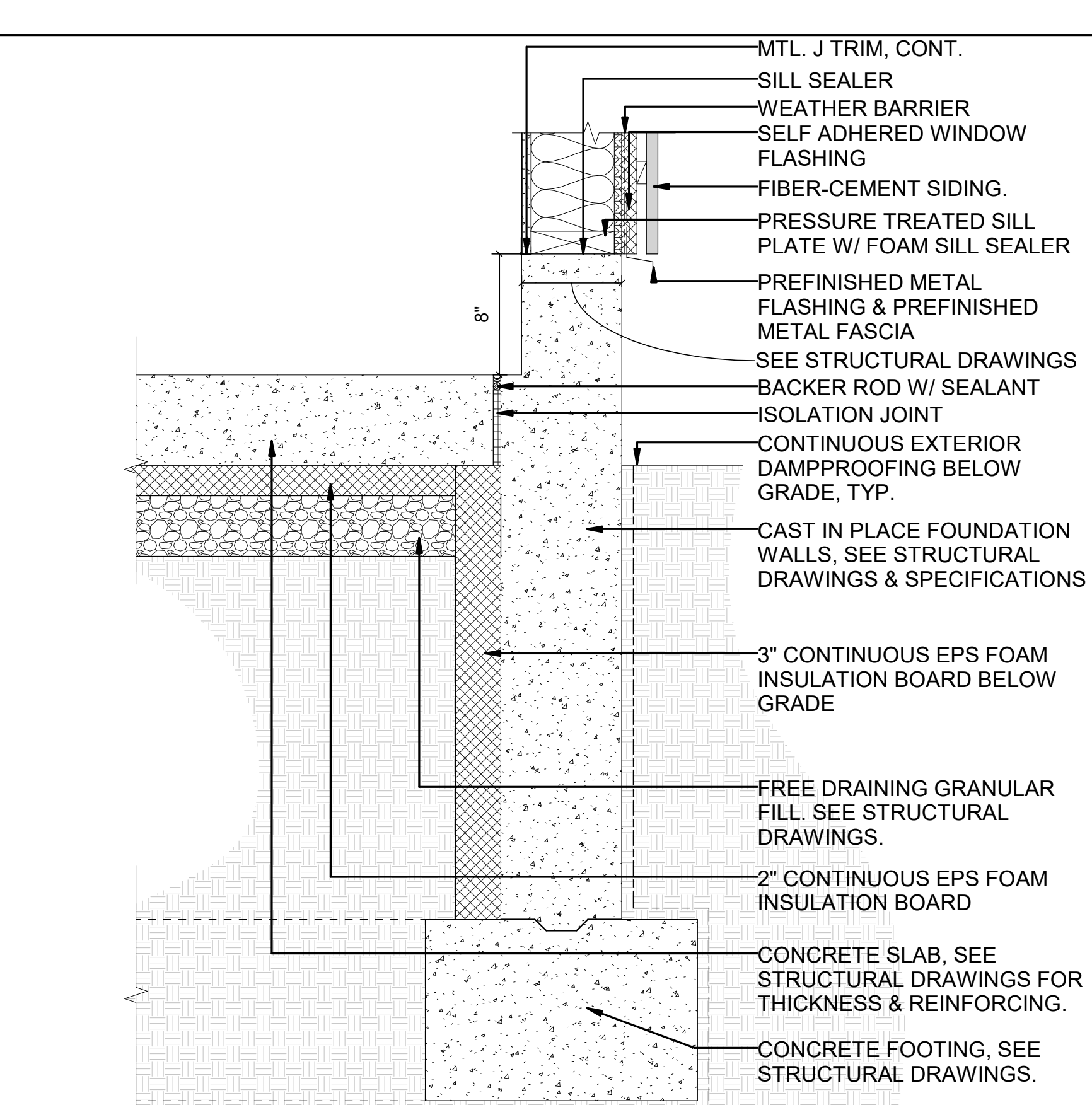
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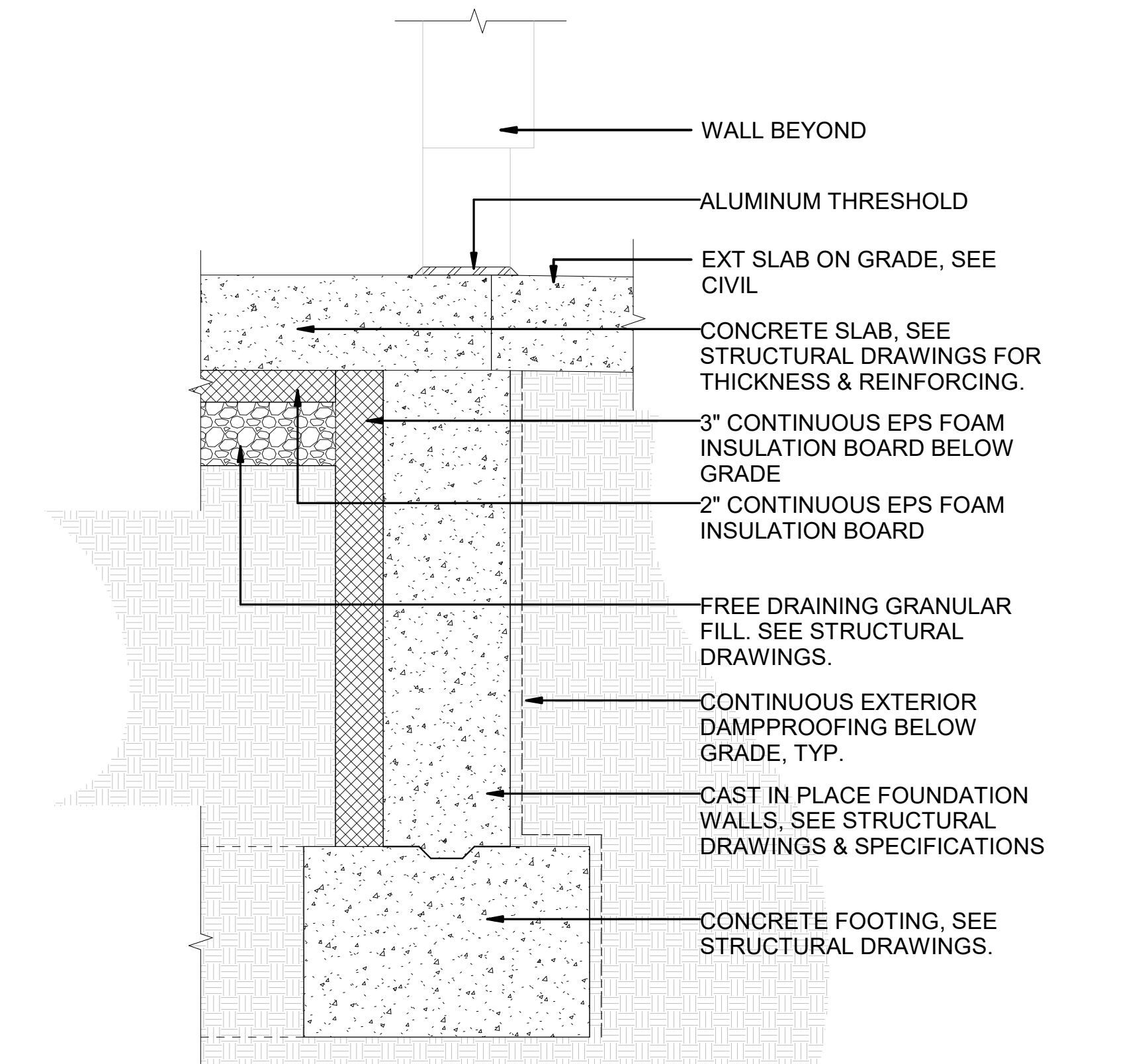
1 EXT WALL & ROOF STEP
SCALE 3" = 1'-0"



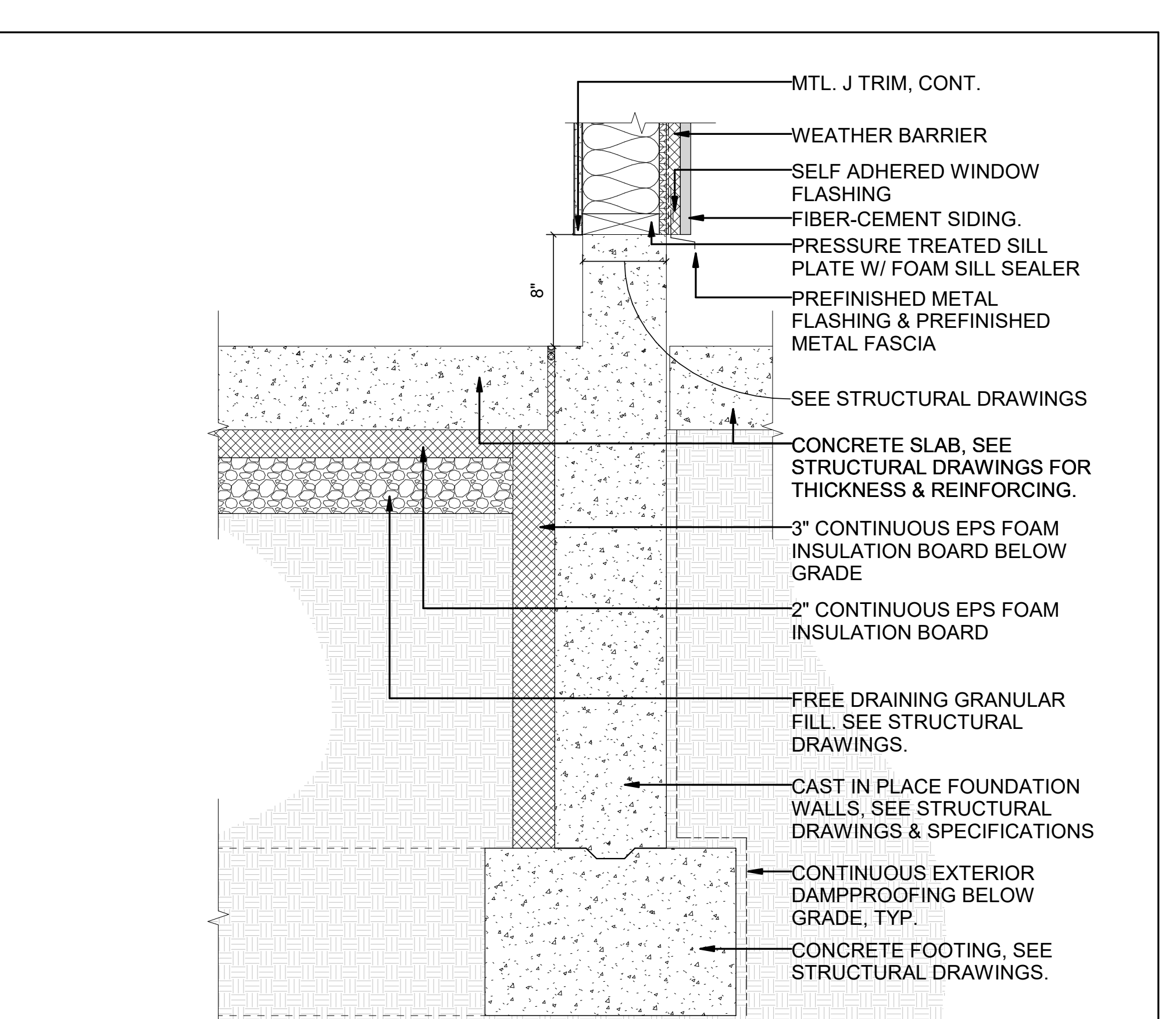
4 RAFTER AT DROPPED BEAM
SCALE 3" = 1'-0"



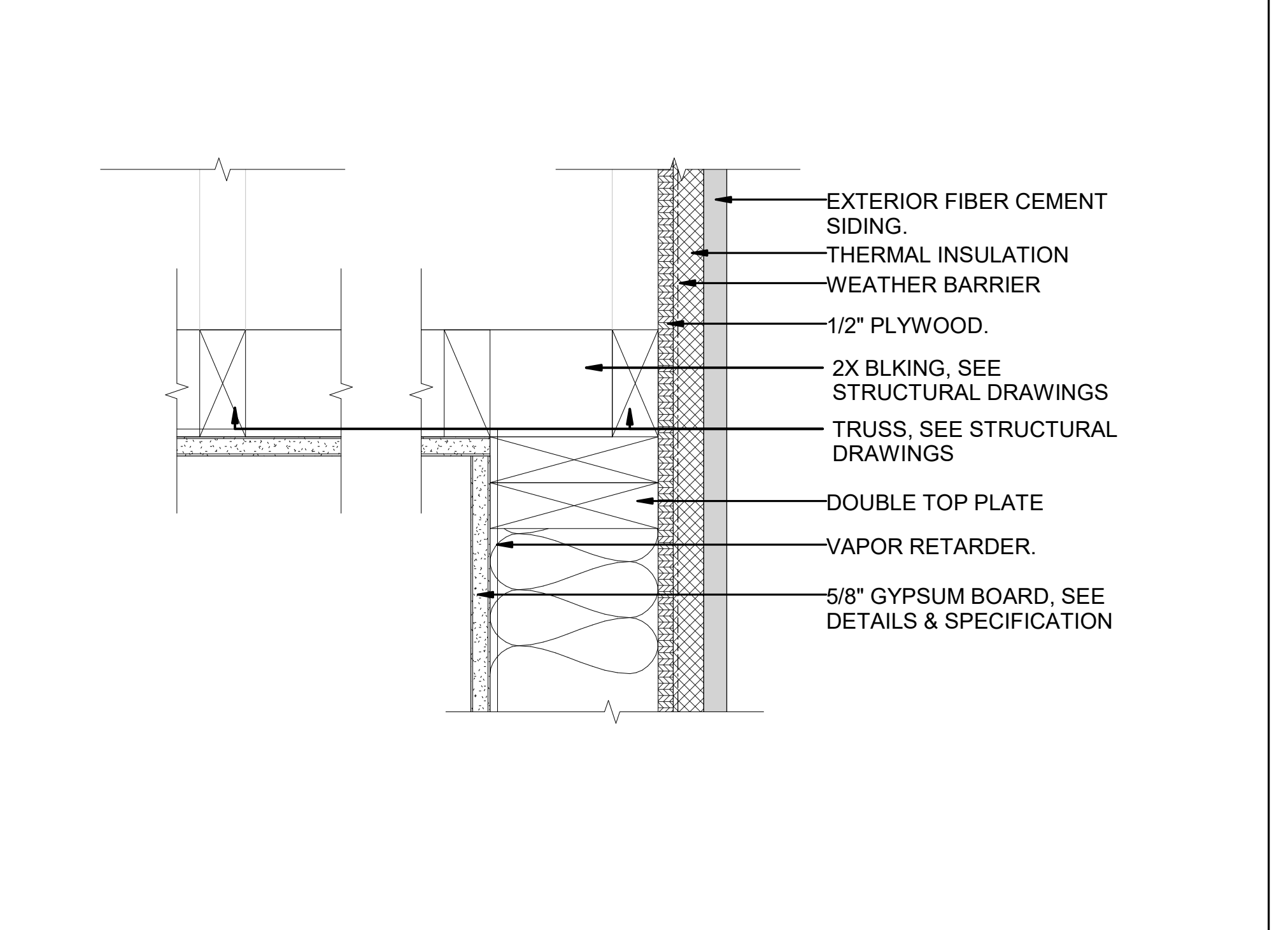
2 FOOTING AND FOUNDATION DETAIL
SCALE 1 1/2" = 1'-0"



5 FOOTING AND FOUNDATION DETAIL AT THRESHOLD
SCALE 1 1/2" = 1'-0"

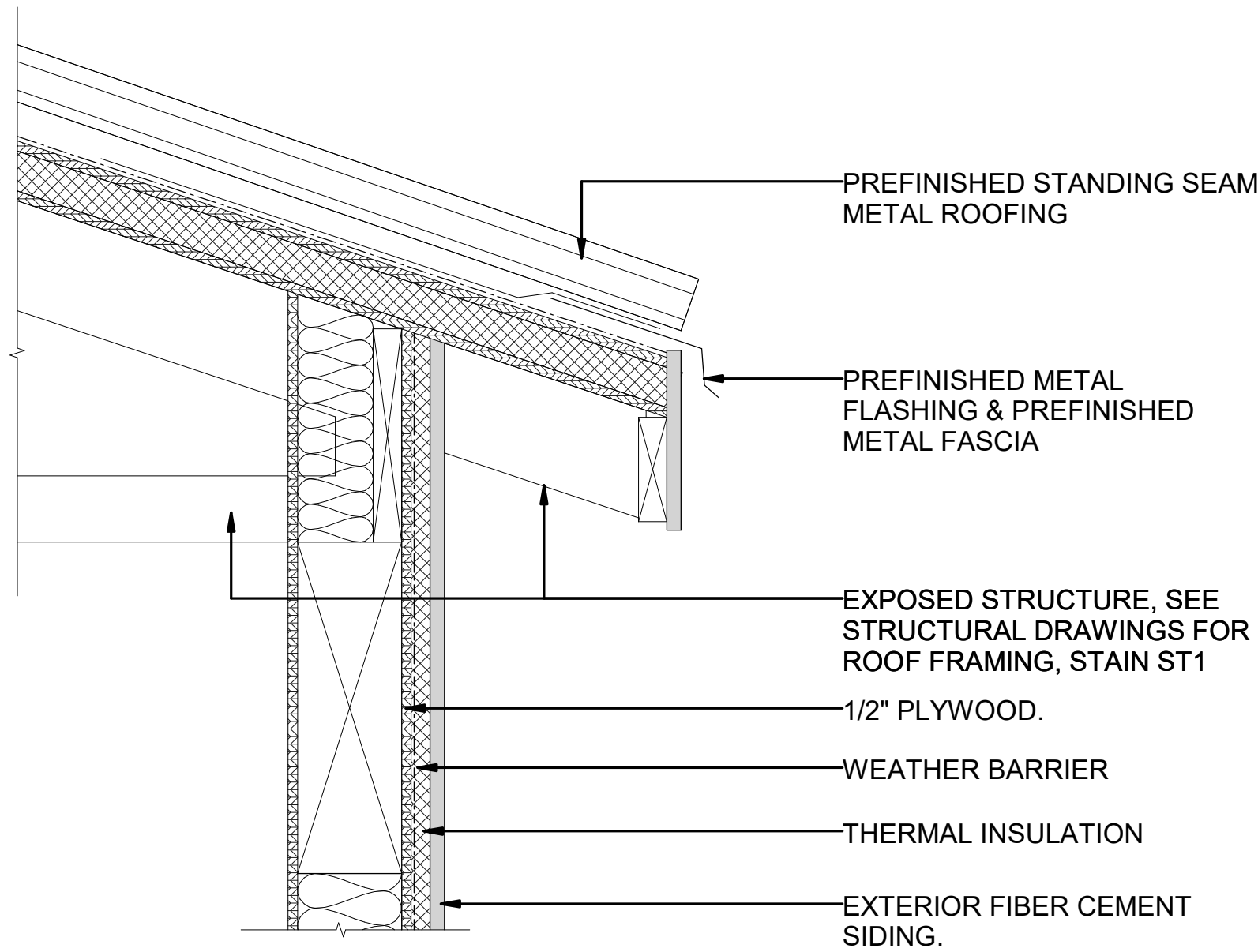


3 INTERIOR FOOTING AND FOUNDATION DETAIL
SCALE 1 1/2" = 1'-0"

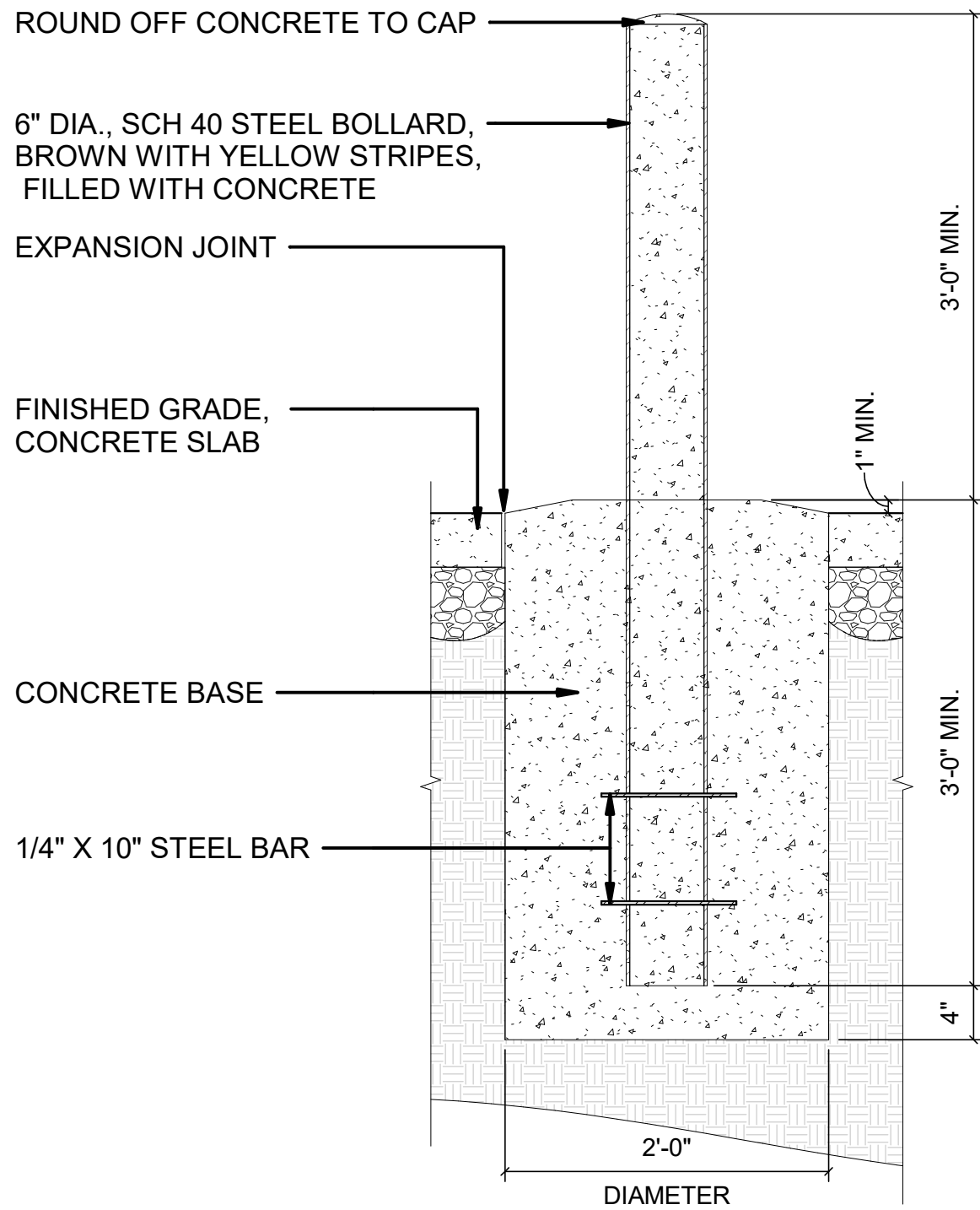


6 EXTERIOR WALL AT BOTTOM OF TRUSS
SCALE 3" = 1'-0"

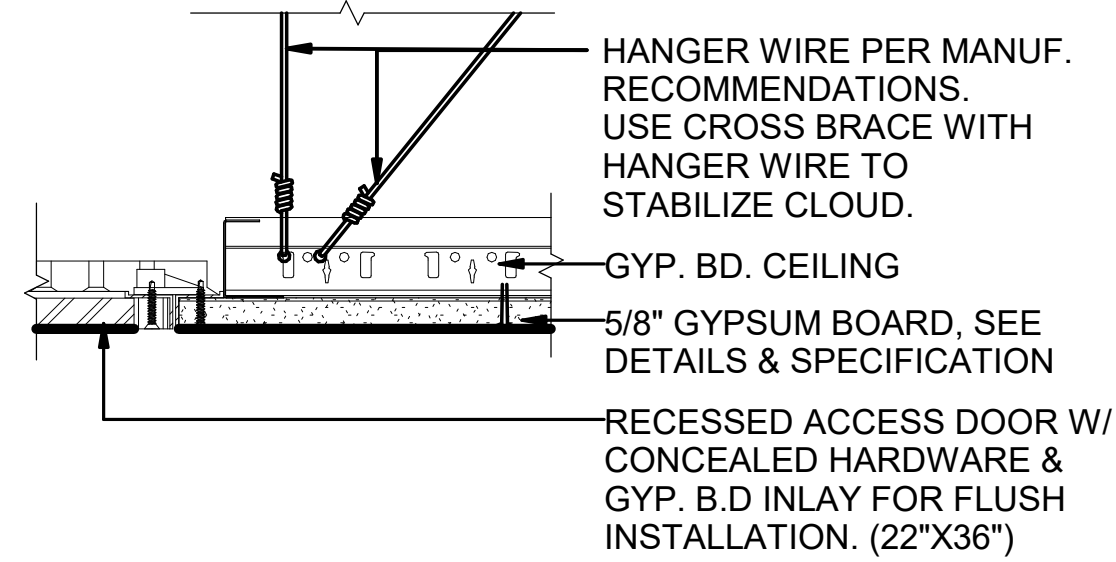
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	SP	SP			175143
	TECH. REVIEW:	KR			PMIS/PKG NO. 316223
	DATE:	2.27.2023			SHEET
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CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO					



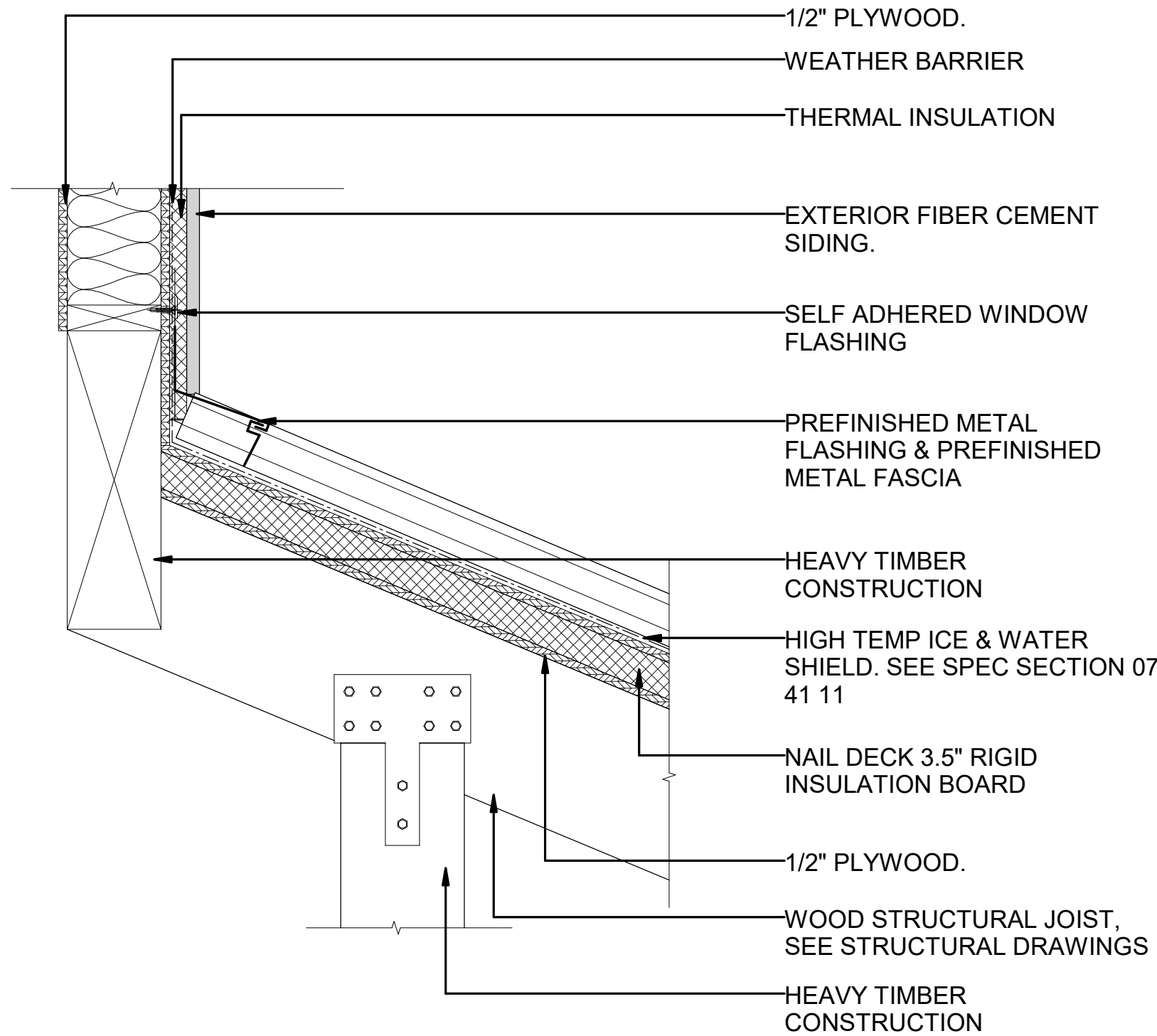
1 HIGH ROOF GABLE
A5.3 SCALE 1 1/2" = 1'-0"



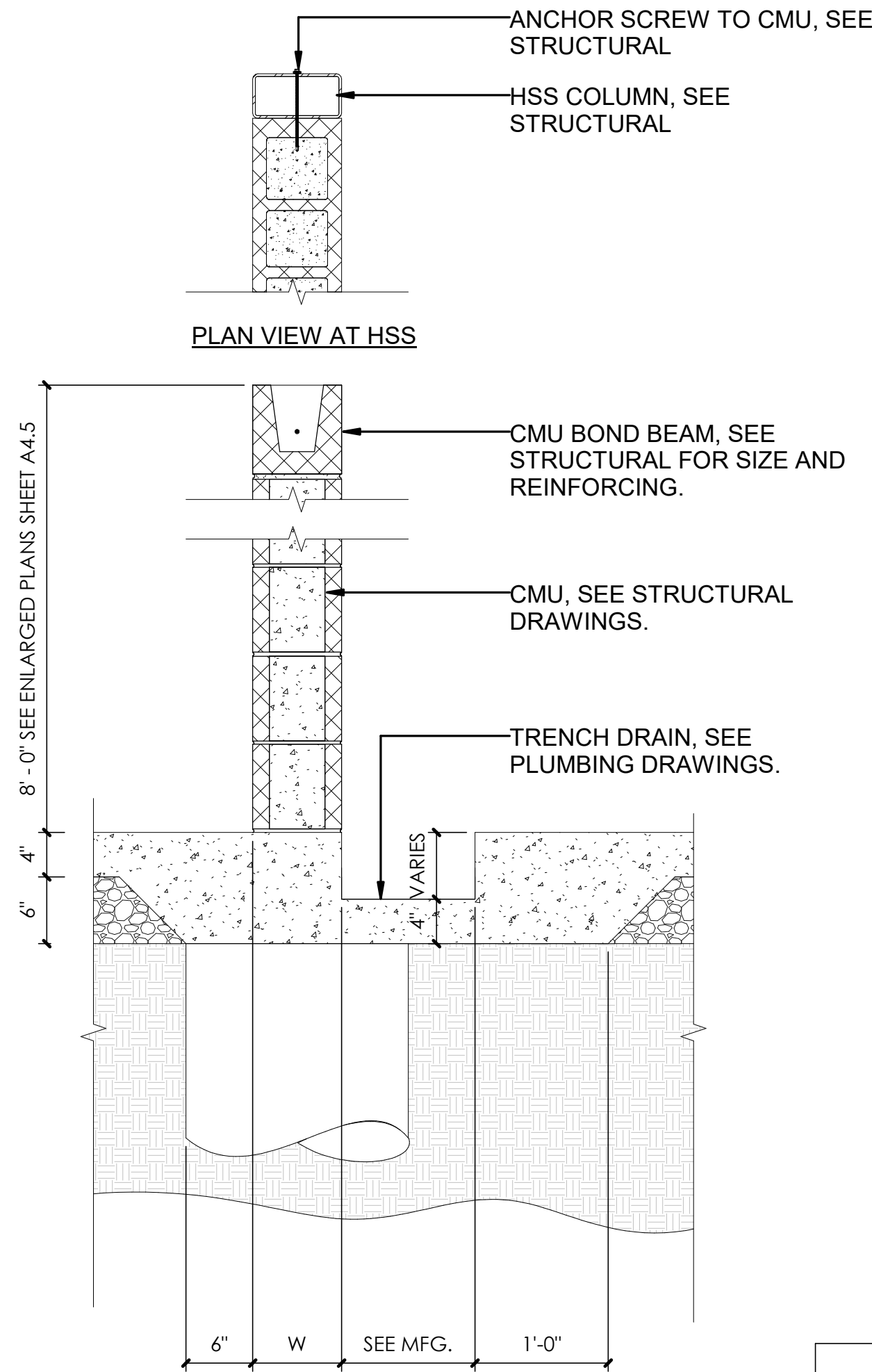
2 BOLLARD WITHIN CONCRETE SLAB DETAIL
A5.3 SCALE 1" = 1'-0"



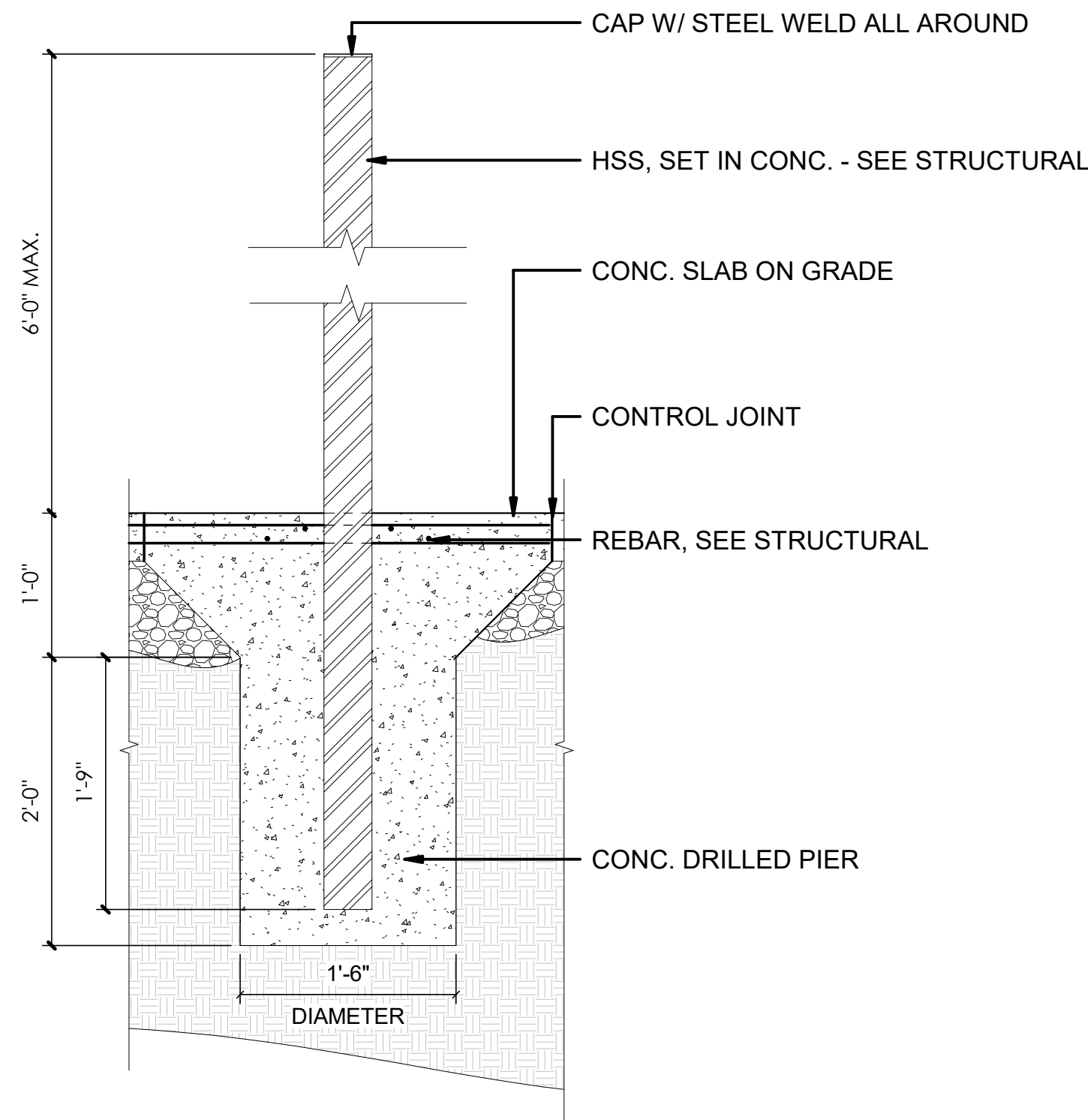
3 TYP. ACCESS PANEL DETAIL
A5.3 SCALE 3" = 1'-0"



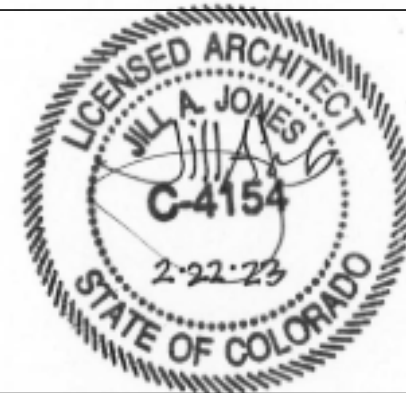
4 LOW ROOF TO HIGH ROOF
A5.3 SCALE 1 1/2" = 1'-0"



5 THICKENED SLAB AT NON-LOAD-BEARING CMU
A5.3 SCALE 1" = 1'-0"



6 STALL POST DETAIL
A5.3 SCALE 1" = 1'-0"



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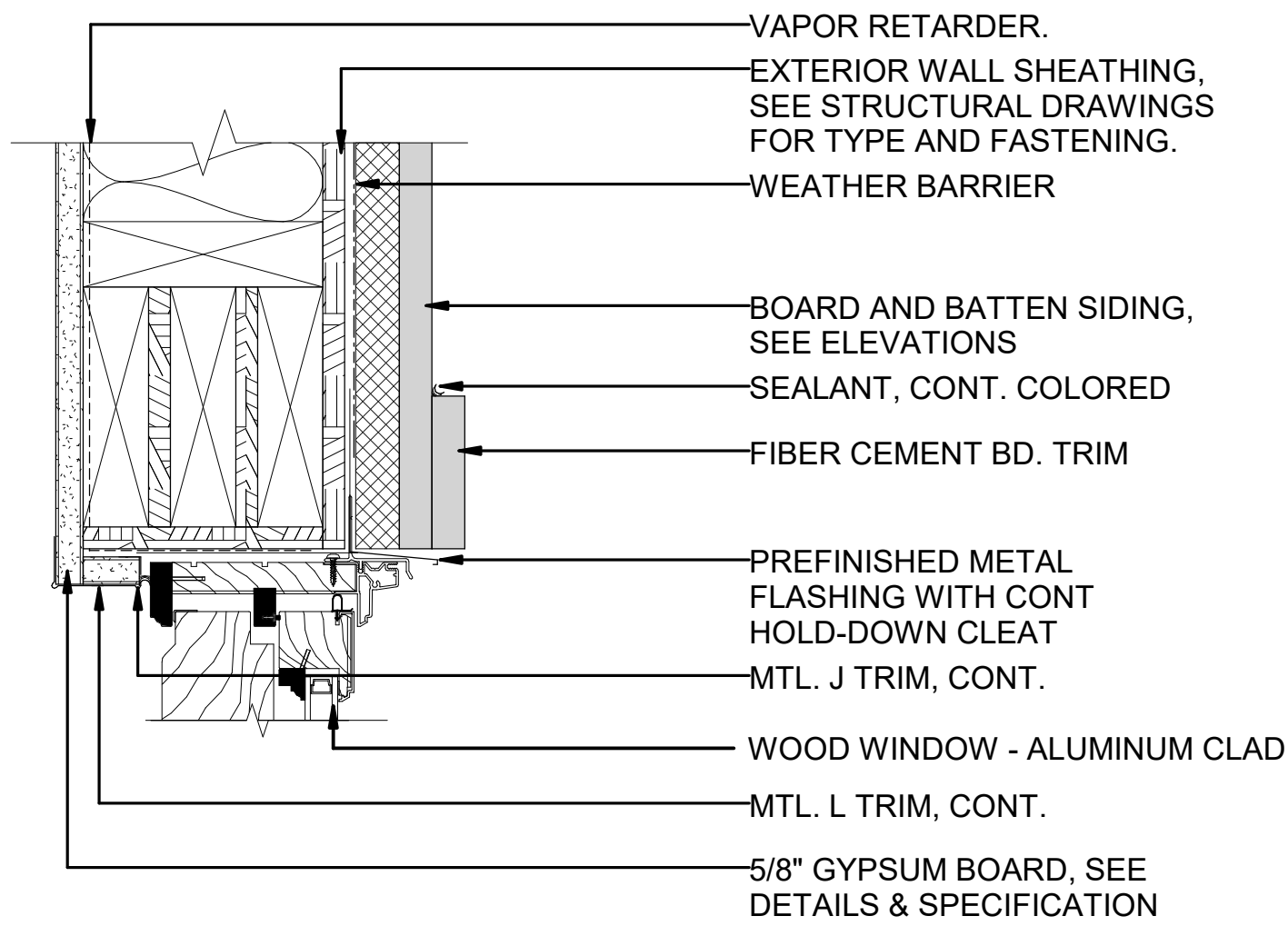
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A5.3

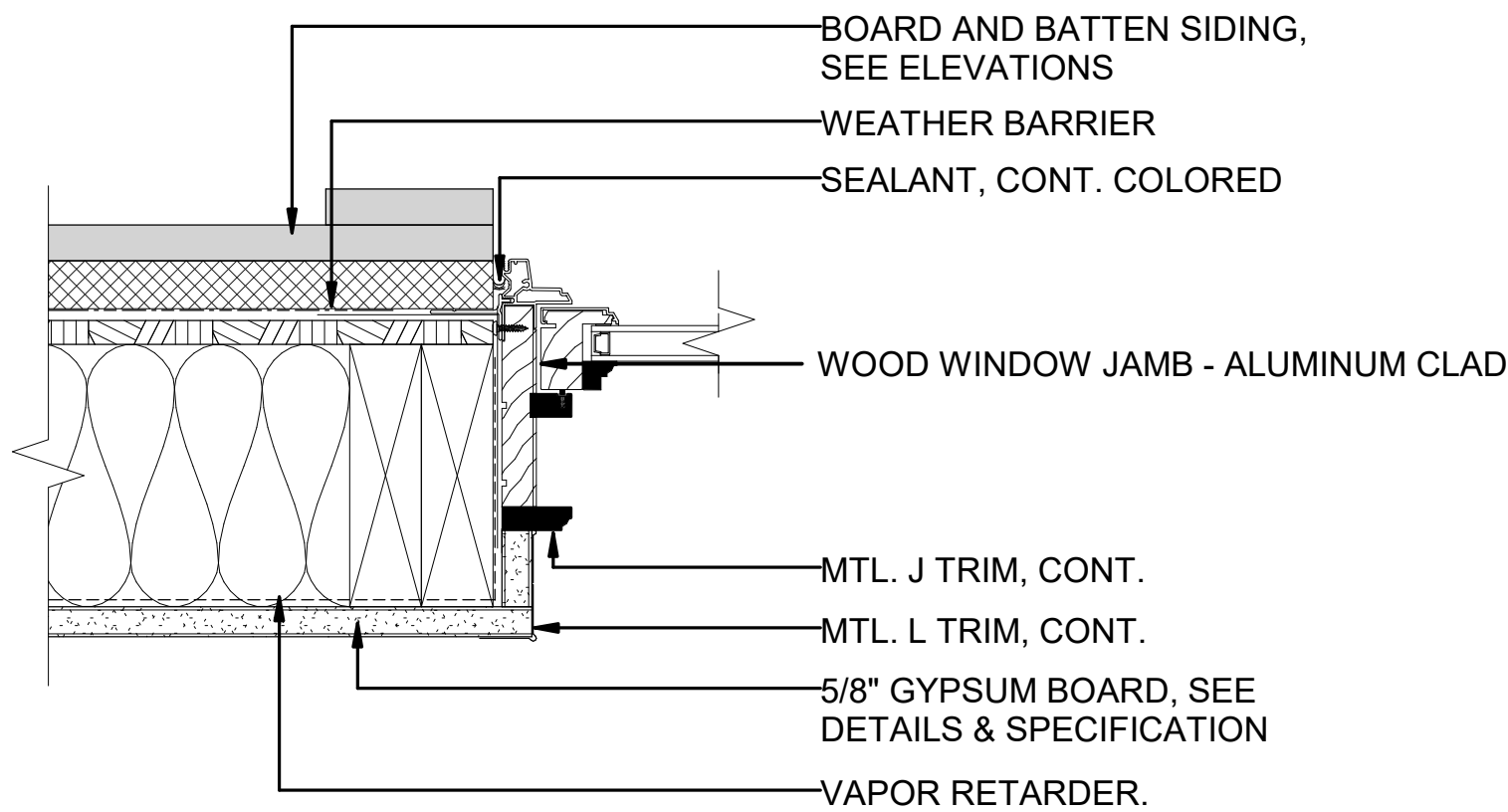
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SECTION DETAILS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

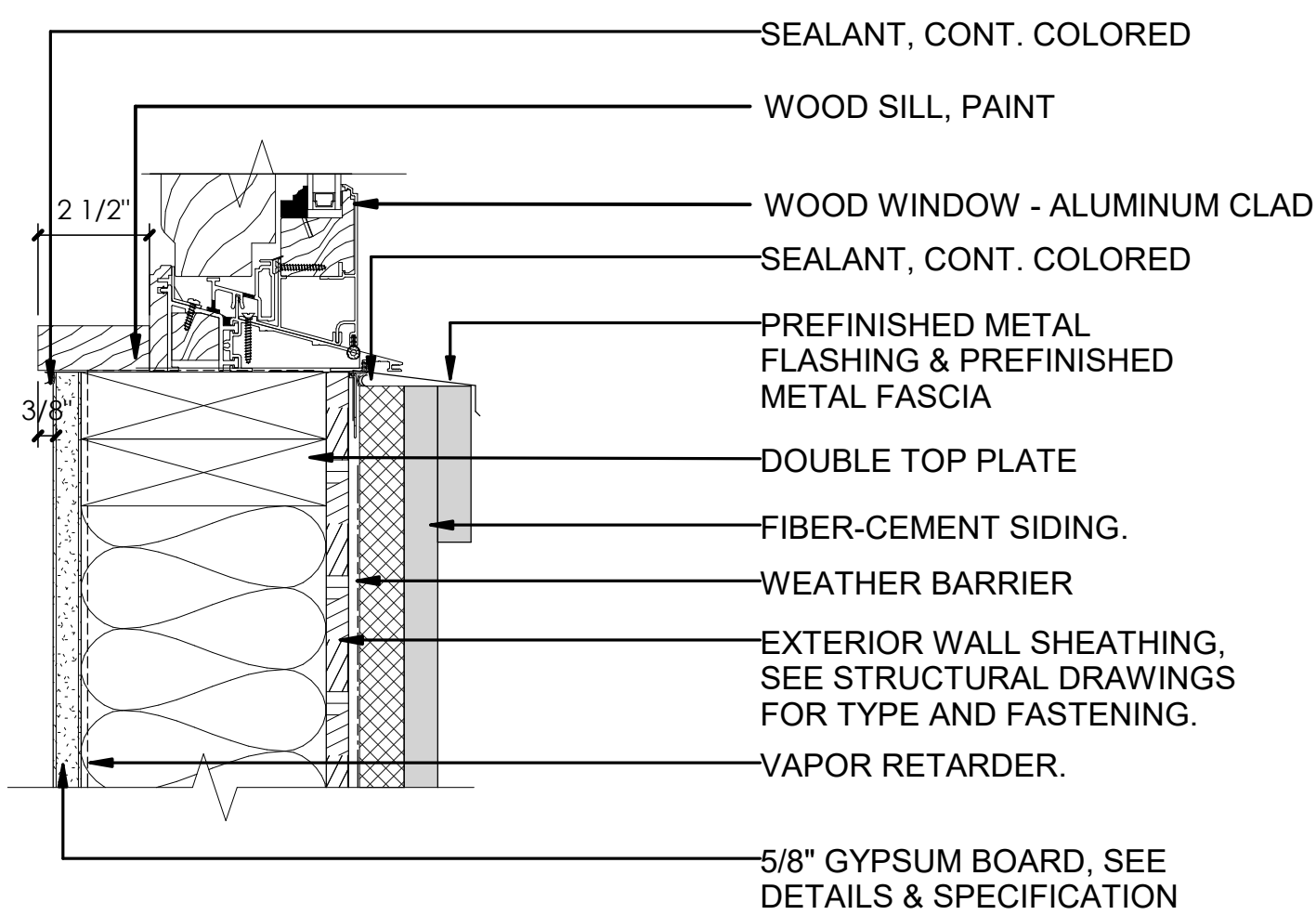
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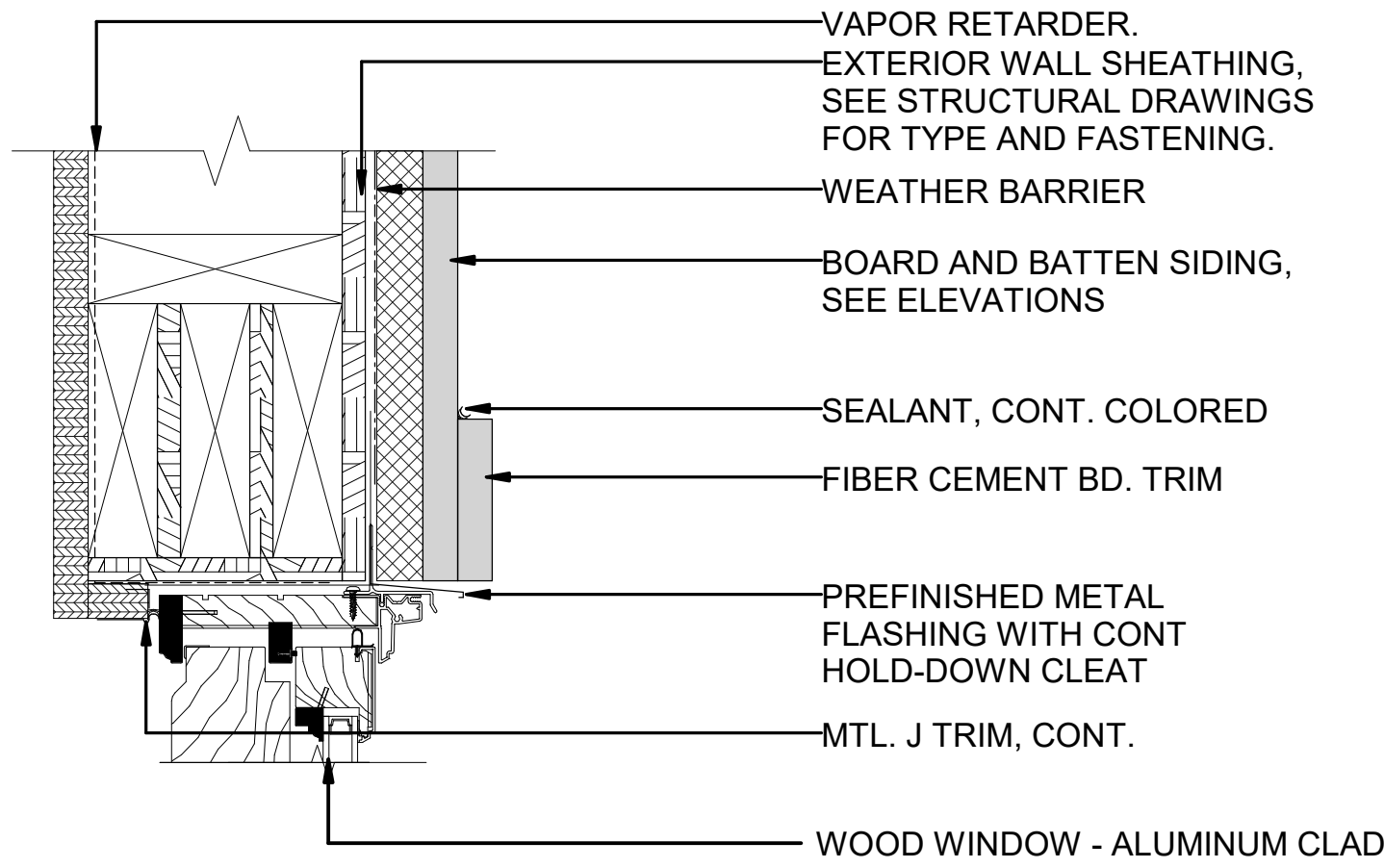
1 WOOD WINDOW ALUMINUM CLAD - HEAD
A5.5 SCALE 3" = 1'-0"



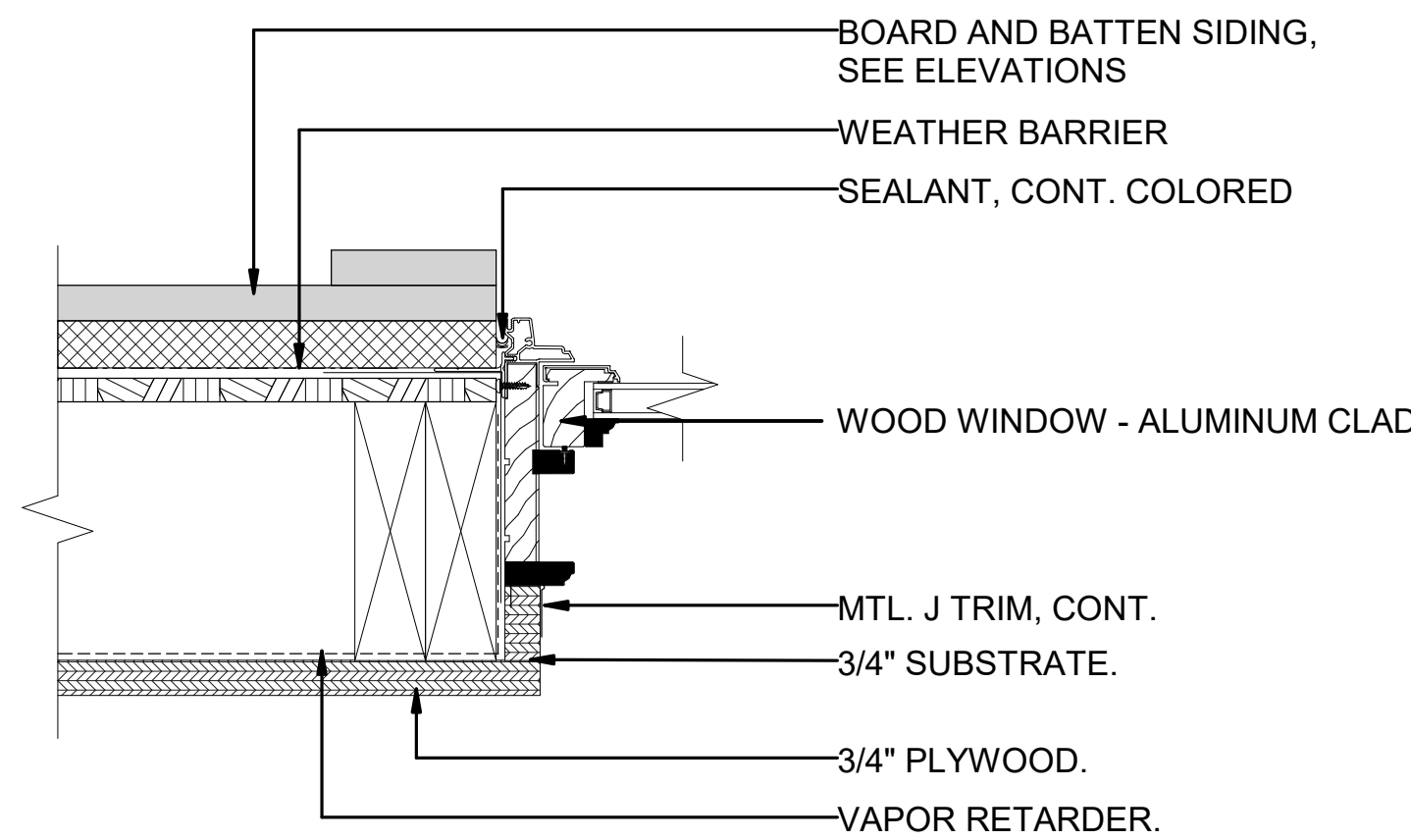
4 WOOD WINDOW ALUMINUM CLAD - JAMB - GYP BOARD
A5.5 SCALE 3" = 1'-0"



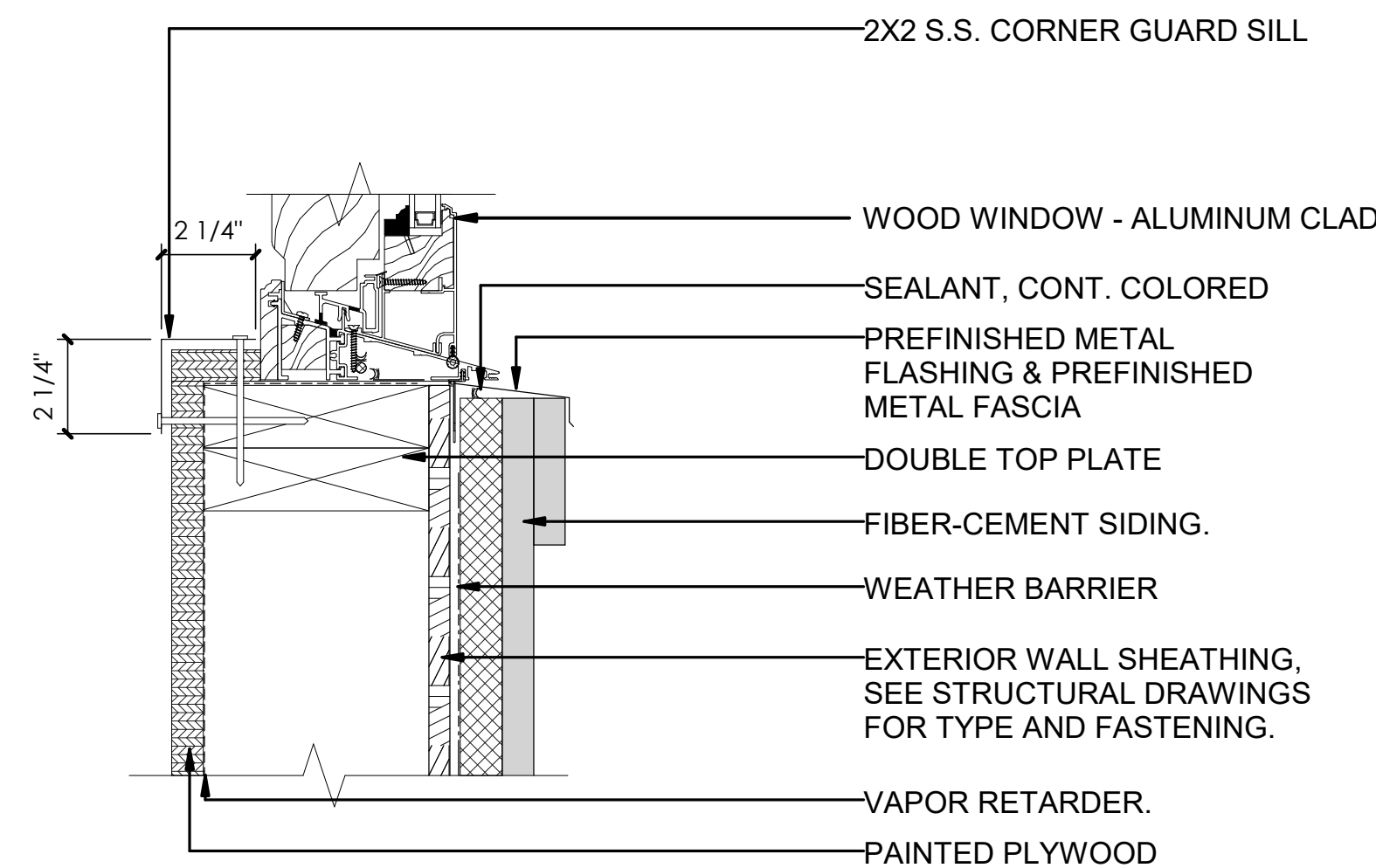
7 WOOD WINDOW ALUMINUM CLAD - SILL
A5.5 SCALE 3" = 1'-0"



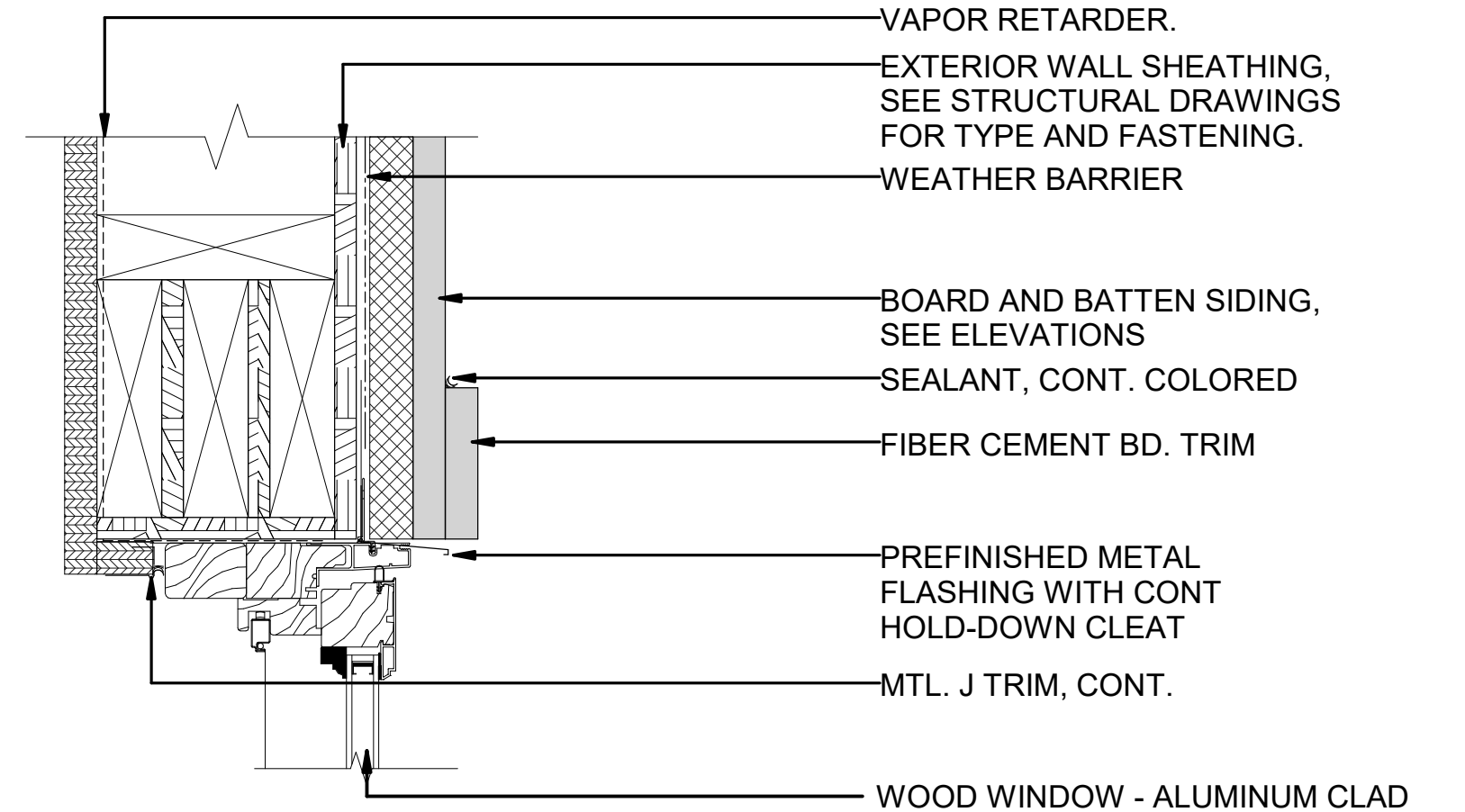
2 WOOD WINDOW ALUMINUM CLAD - HEAD - AT BARN
A5.5 SCALE 3" = 1'-0"



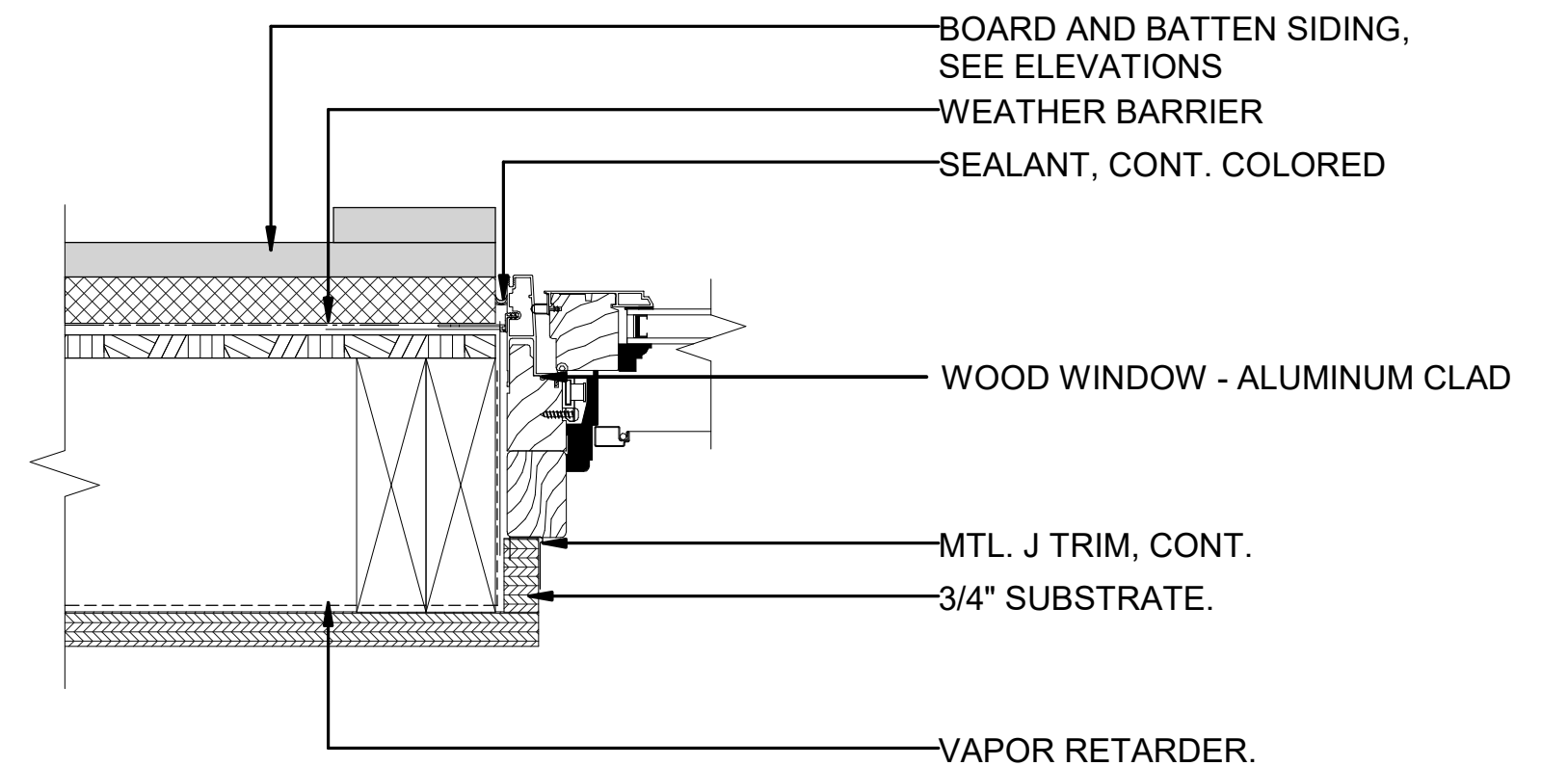
5 WOOD WINDOW ALUMINUM CLAD - JAMB - AT BARN
A5.5 SCALE 3" = 1'-0"



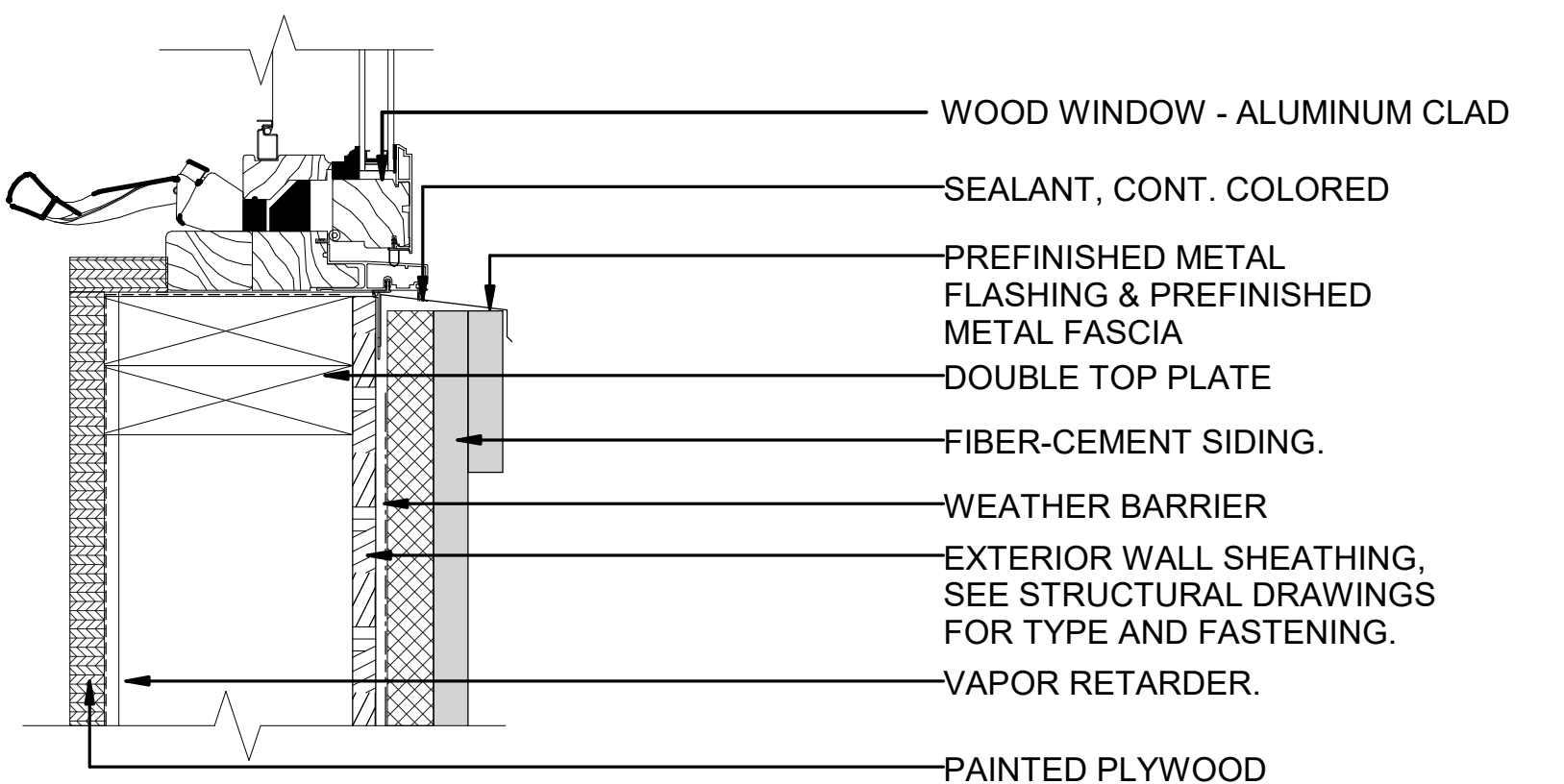
8 WOOD WINDOW ALUMINUM CLAD - SILL - AT BARN
A5.5 SCALE 3" = 1'-0"



3 WOOD WINDOW ALUMINUM CLAD - AWNING HEAD
A5.5 SCALE 3" = 1'-0"



6 WOOD WINDOW ALUMINUM CLAD - AWNING JAMB
A5.5 SCALE 3" = 1'-0"



9 WOOD WINDOW ALUMINUM CLAD - AWNING SILL
A5.5 SCALE 3" = 1'-0"



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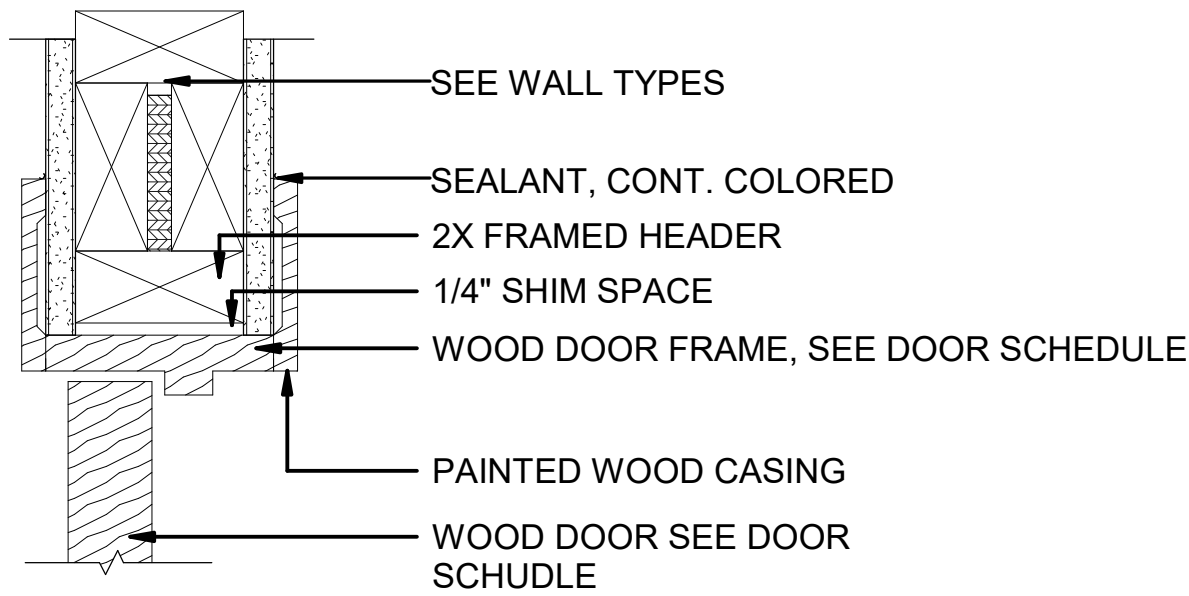
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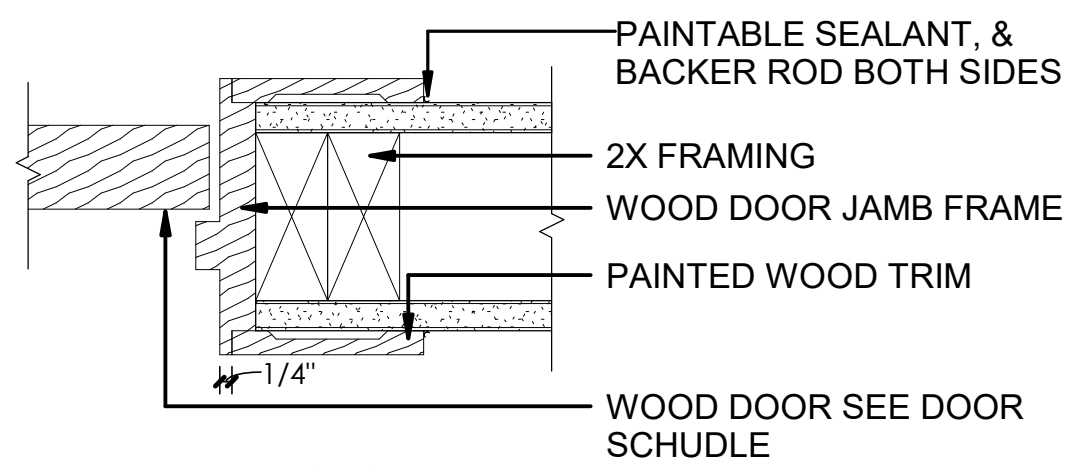
TITLE OF SHEET
DETAILS - WINDOWS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

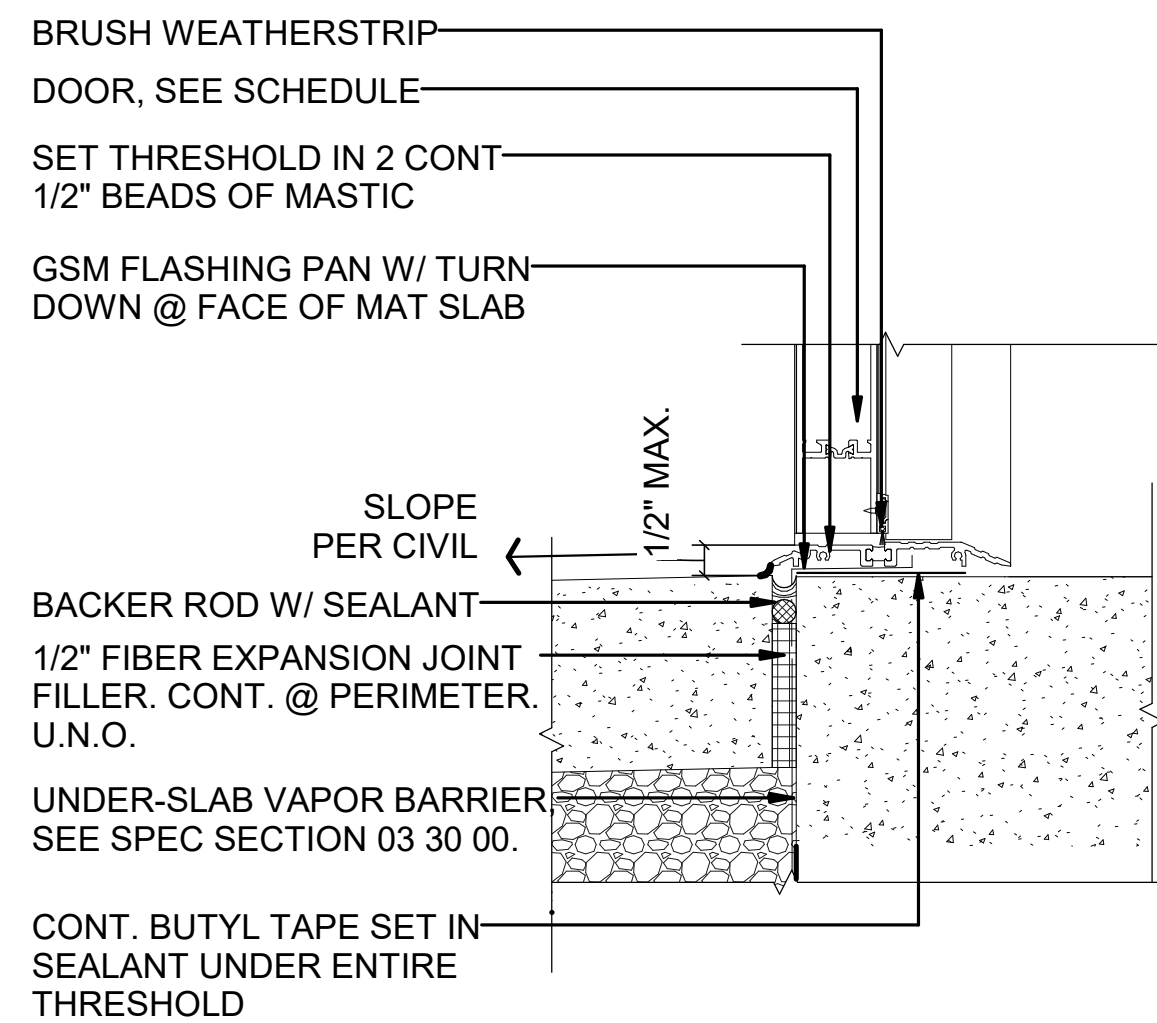
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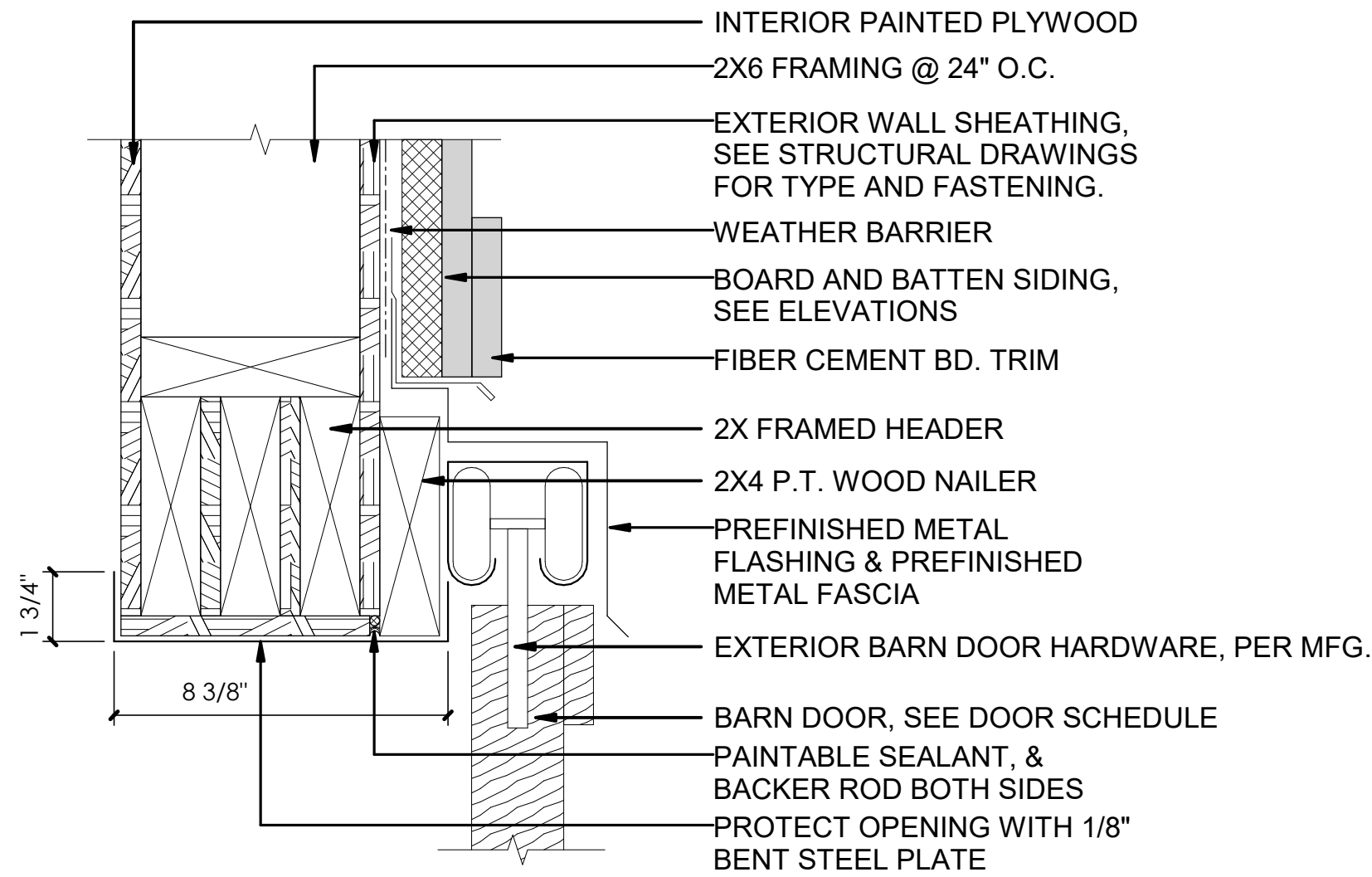
1 DOOR - WD HEAD @ GYP BD
A5.6 SCALE 3" = 1'-0"



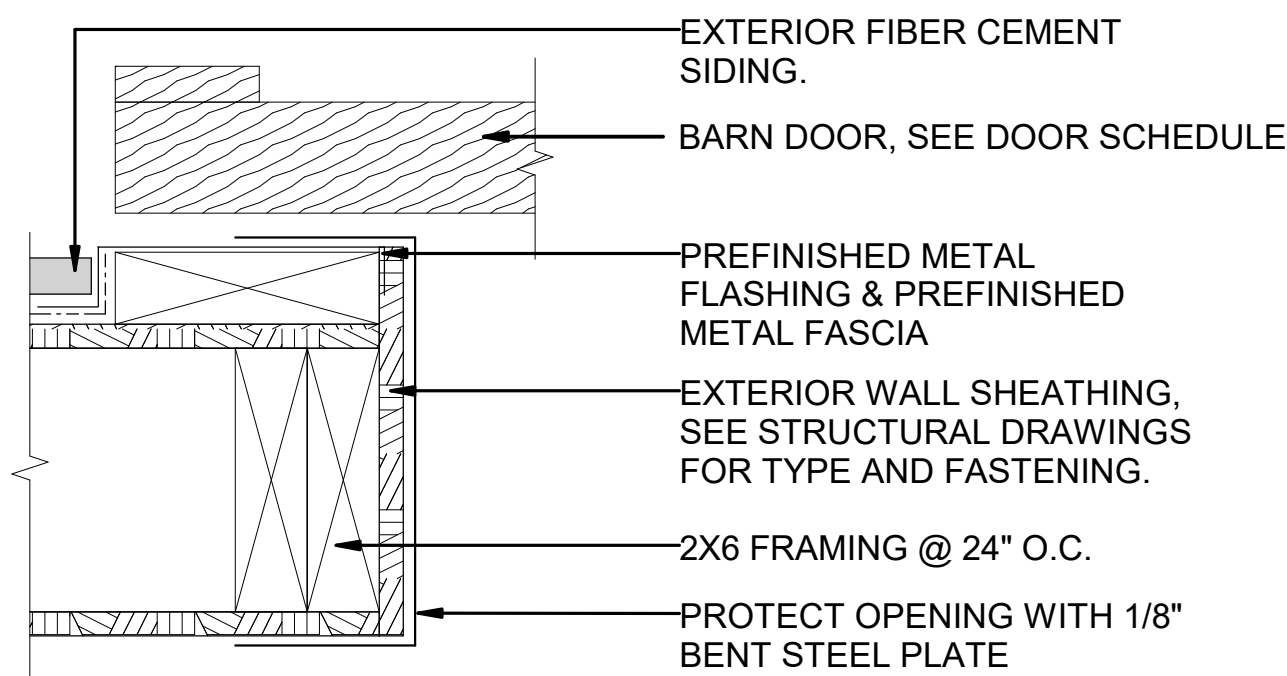
4 DOOR - HM JAMB @ GYP BD
A5.6 SCALE 3" = 1'-0"



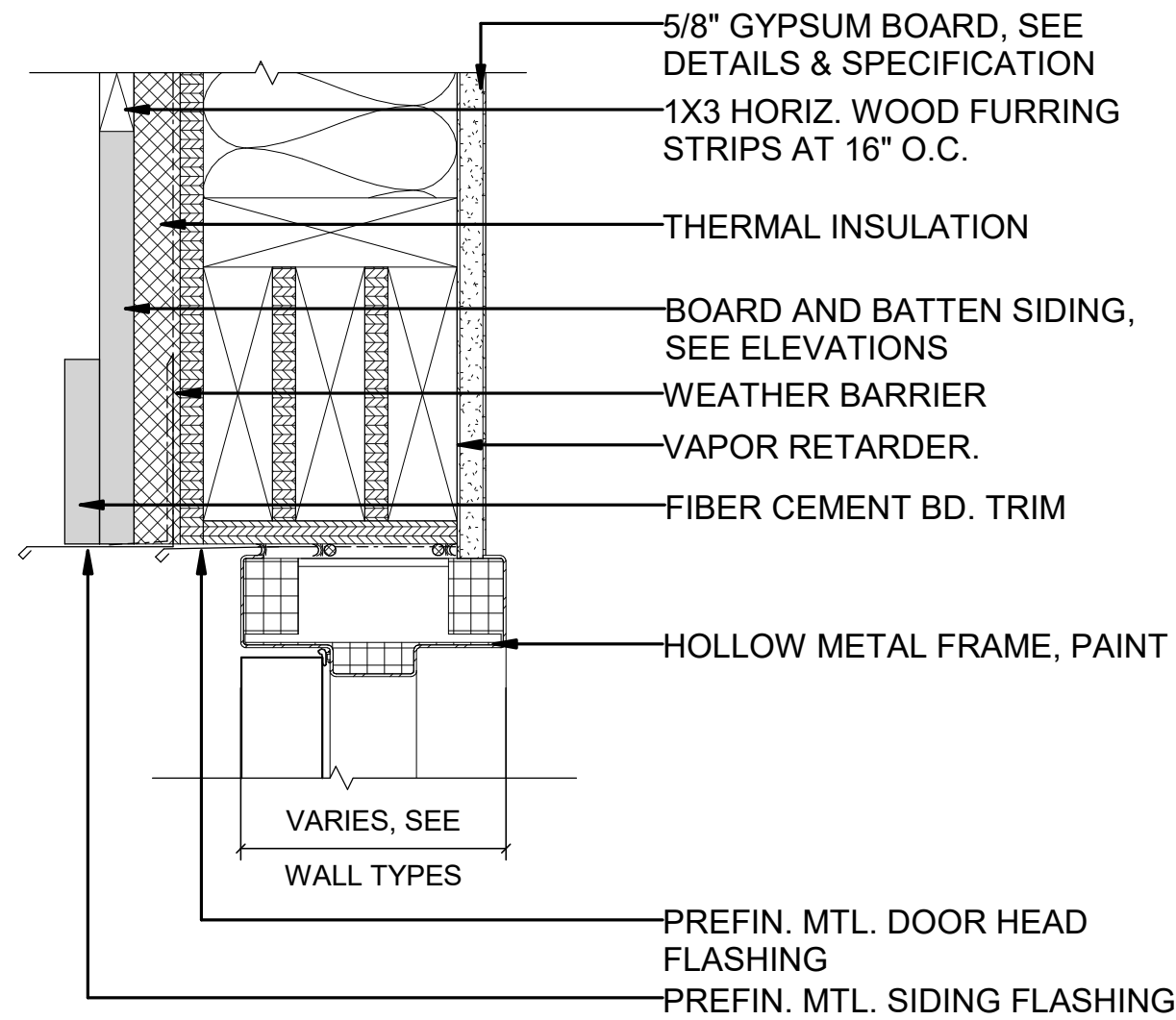
7 DOOR THRESHOLD DETAIL
A5.6 SCALE 3" = 1'-0"



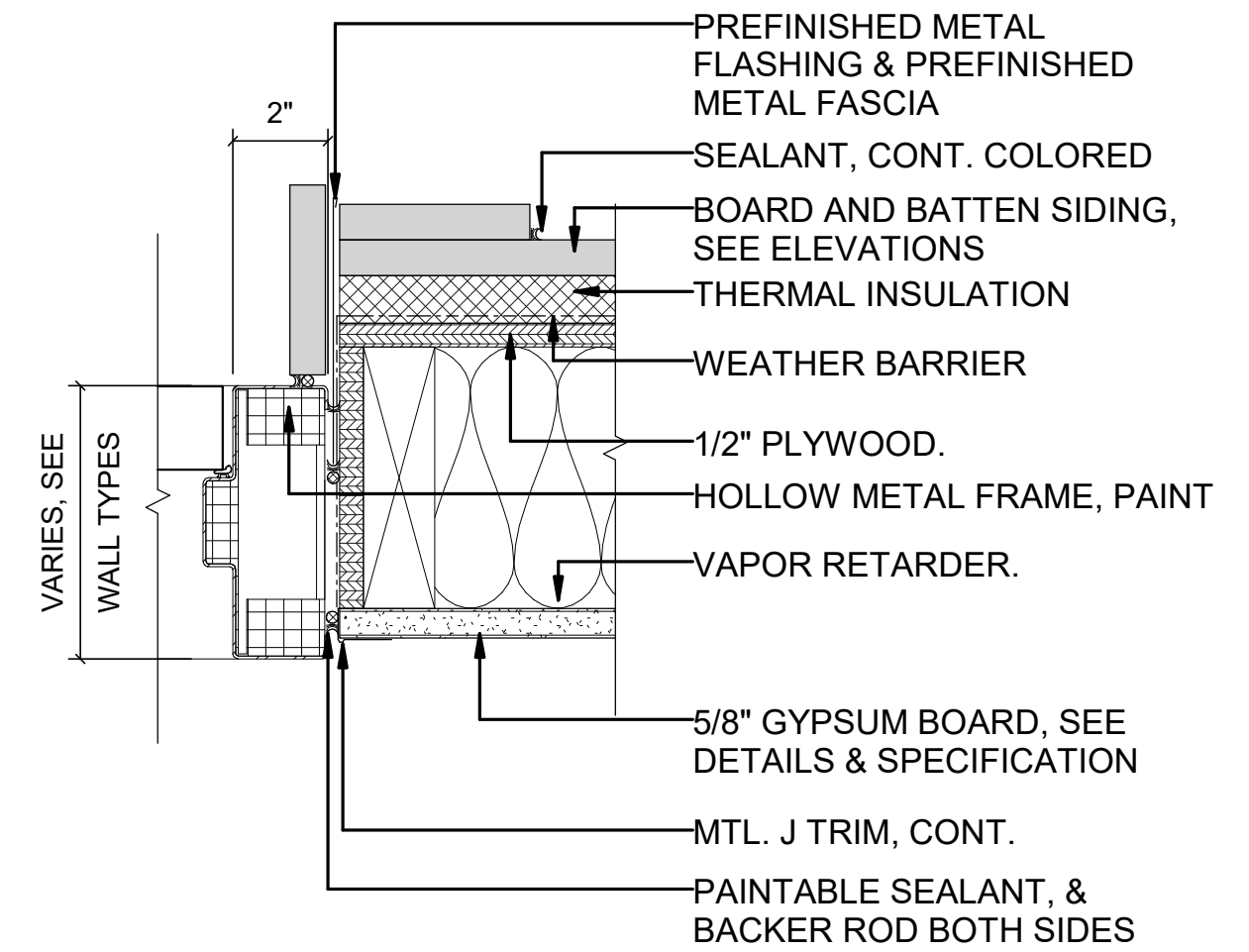
2 DOOR - BARN DOOR HEAD
A5.6 SCALE 3" = 1'-0"



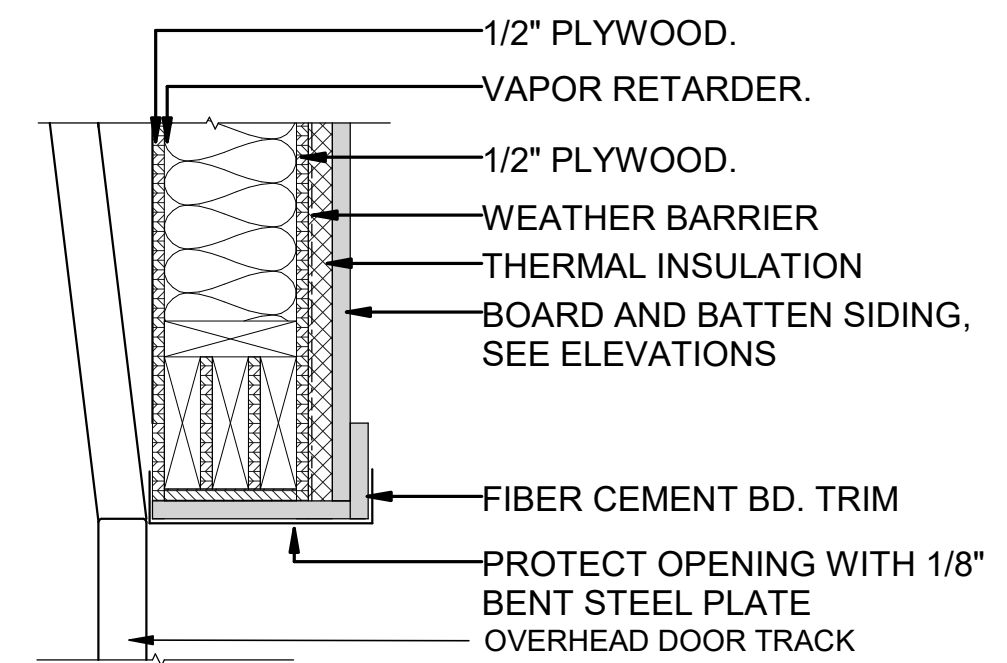
5 DOOR - BARN DOOR JAMB
A5.6 SCALE 3" = 1'-0"



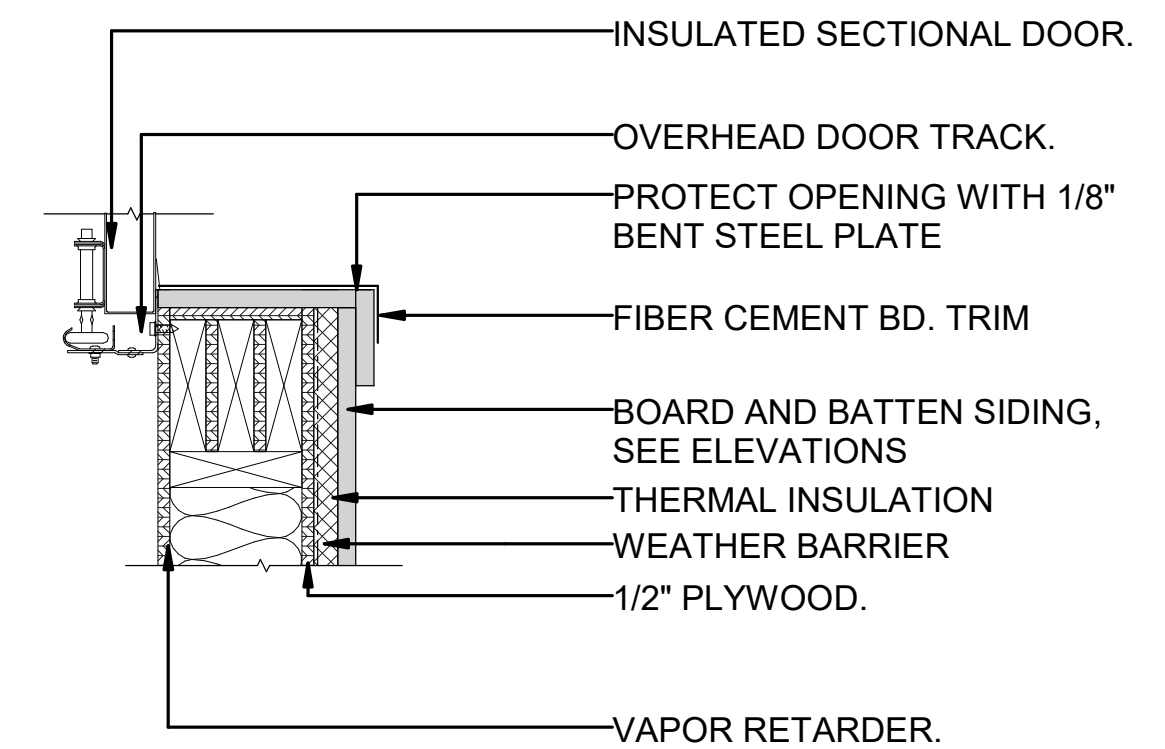
8 DOOR - HM HEAD
A5.6 SCALE 3" = 1'-0"



3 DOOR - HM JAMB
A5.6 SCALE 3" = 1'-0"



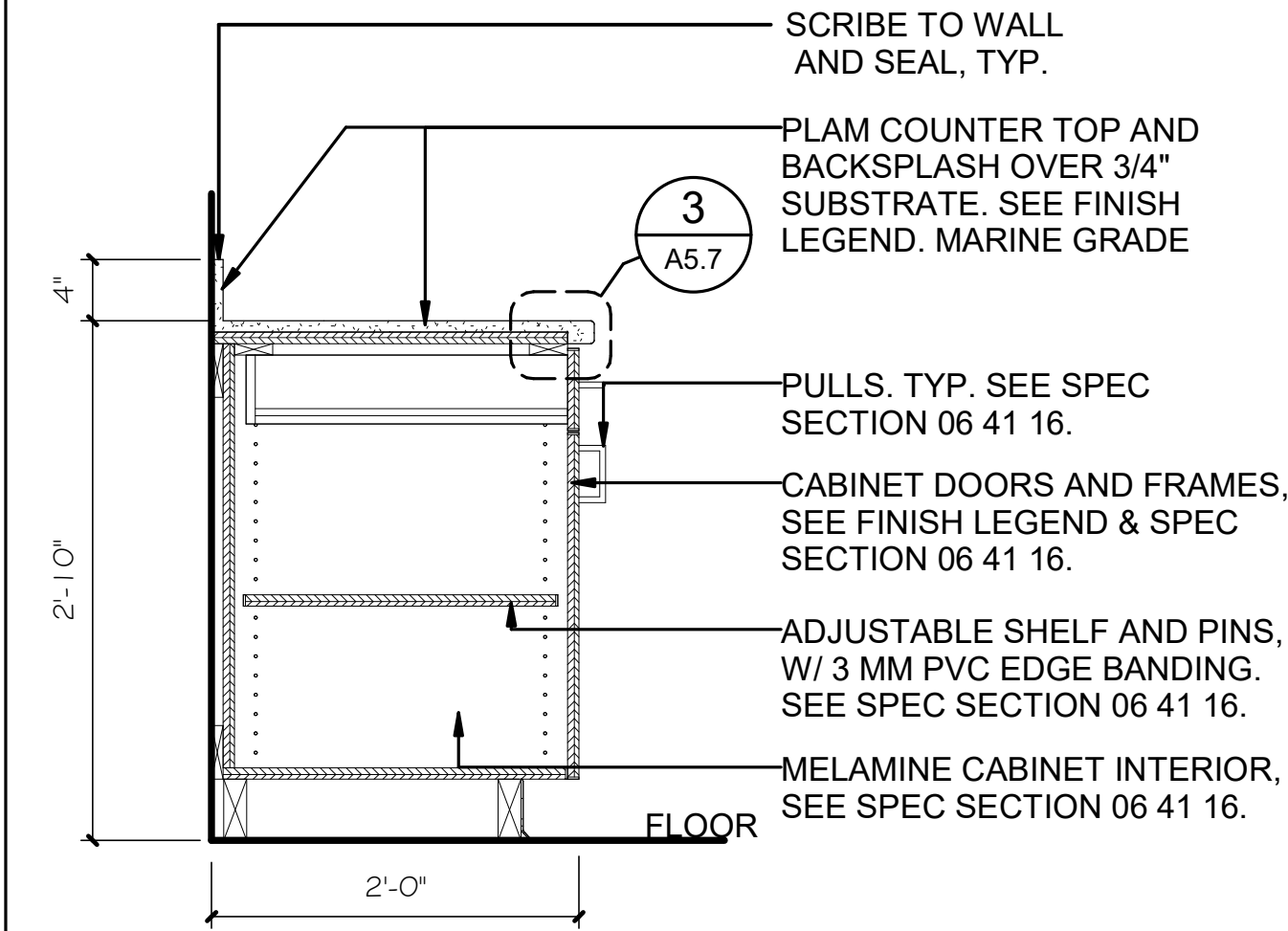
6 OH DOOR HEAD
A5.6 SCALE 1 1/2" = 1'-0"



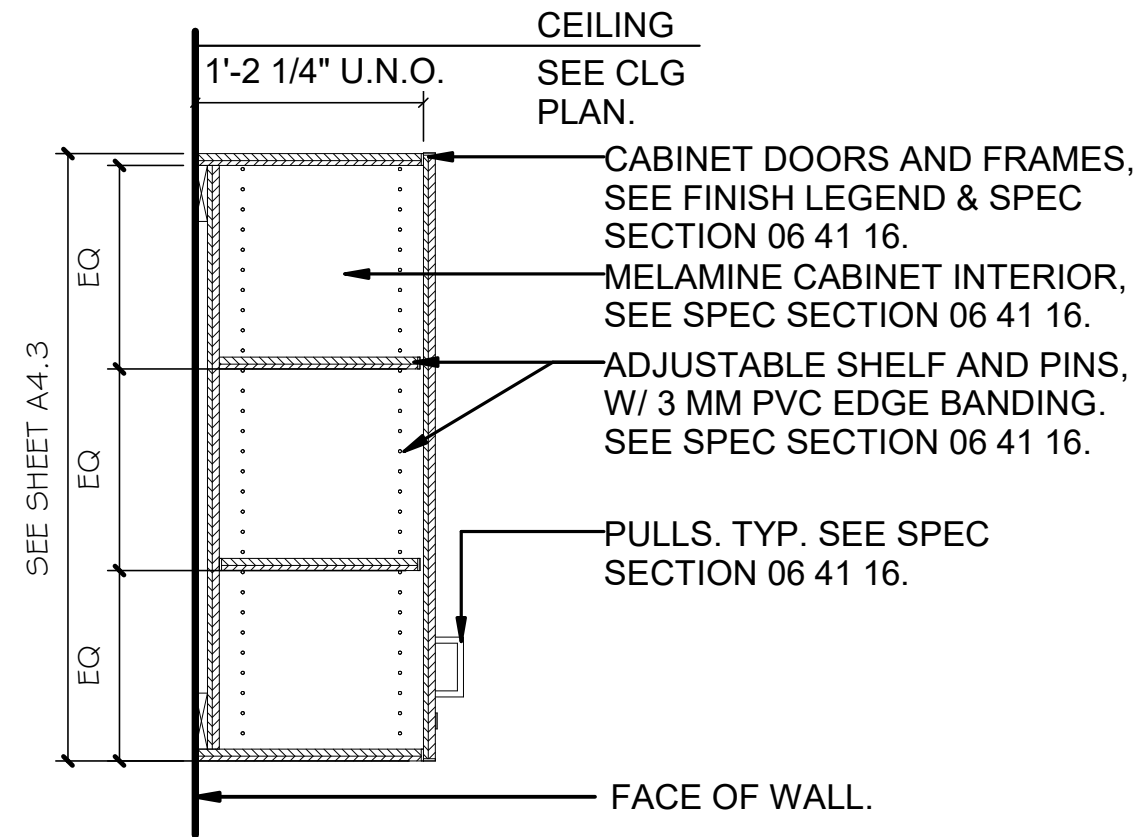
9 OH DOOR JAMB
A5.6 SCALE 1 1/2" = 1'-0"



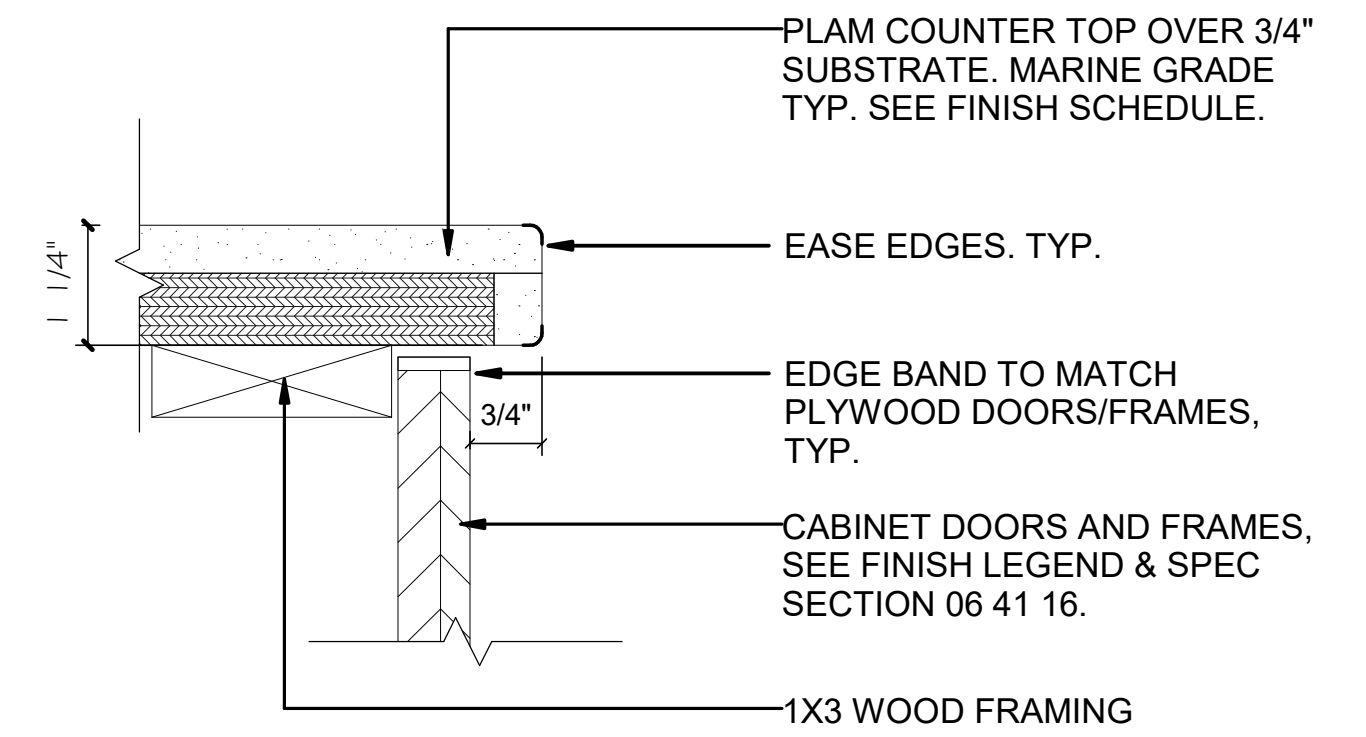
DESIGNED: HS CADD SP	SUB SHEET NO. A5.6	TITLE OF SHEET DETAILS - DOORS	DRAWING NO. 121 175143
TECH. REVIEW: KR		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	PMIS/PKG NO. 316223
DATE: 2.27.2023			SHEET 52 OF 104



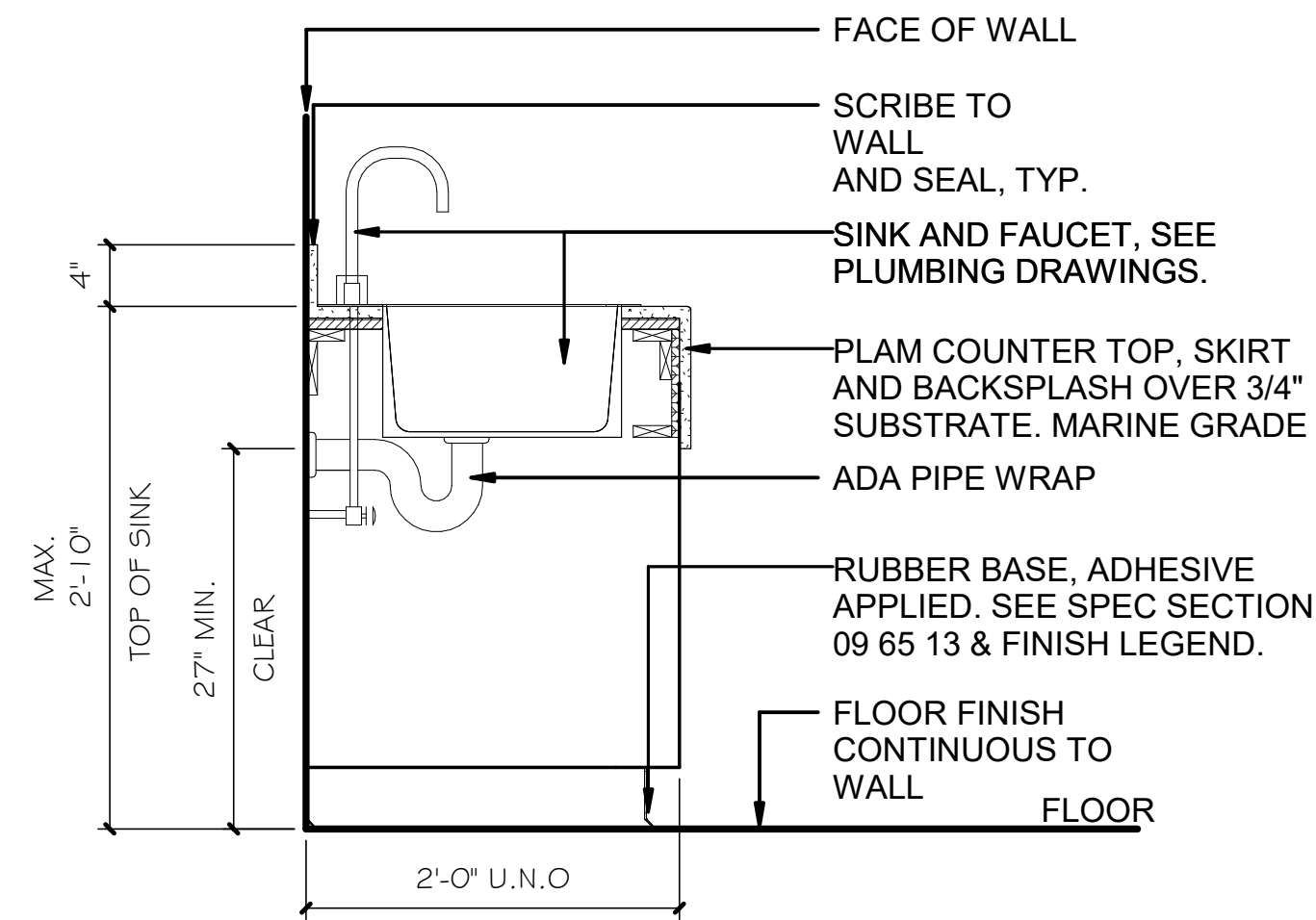
1 CABINET - BASE
A5.7 SCALE 1" = 1'-0"



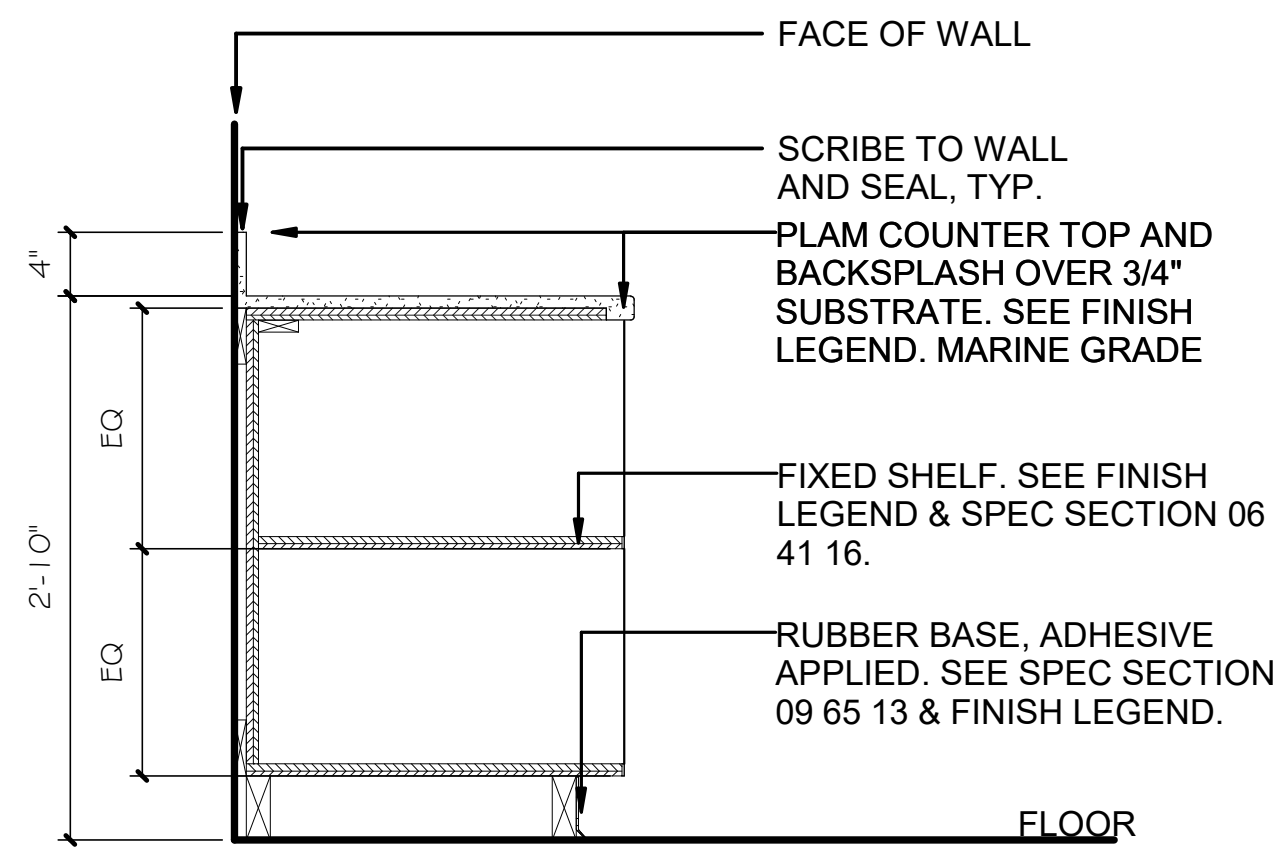
2 CABINET - UPPER
A5.7 SCALE 1" = 1'-0"



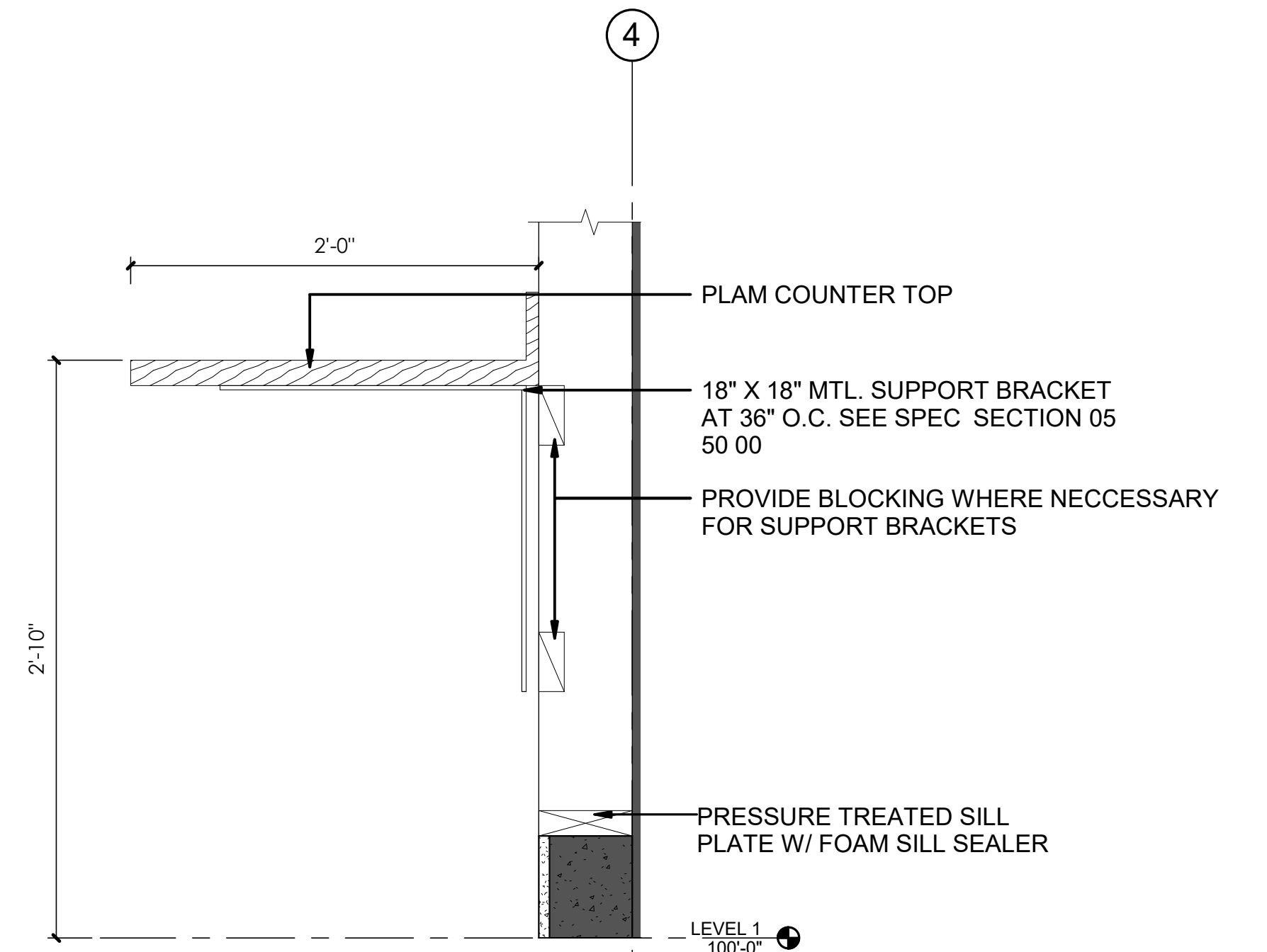
3 CABINET - SOLID SURFACE NOSING
A5.7 SCALE 6" = 1'-0"



4 CABINET - OPEN W/ SINK
A5.7 SCALE 1" = 1'-0"



5 CABINET - CUBBY 2FT 10IN
A5.7 SCALE 1" = 1'-0"



6 SOLID SURFACE COUNTER TOP SUPPORT
A5.7 SCALE 1 1/2" = 1'-0"



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DATE:
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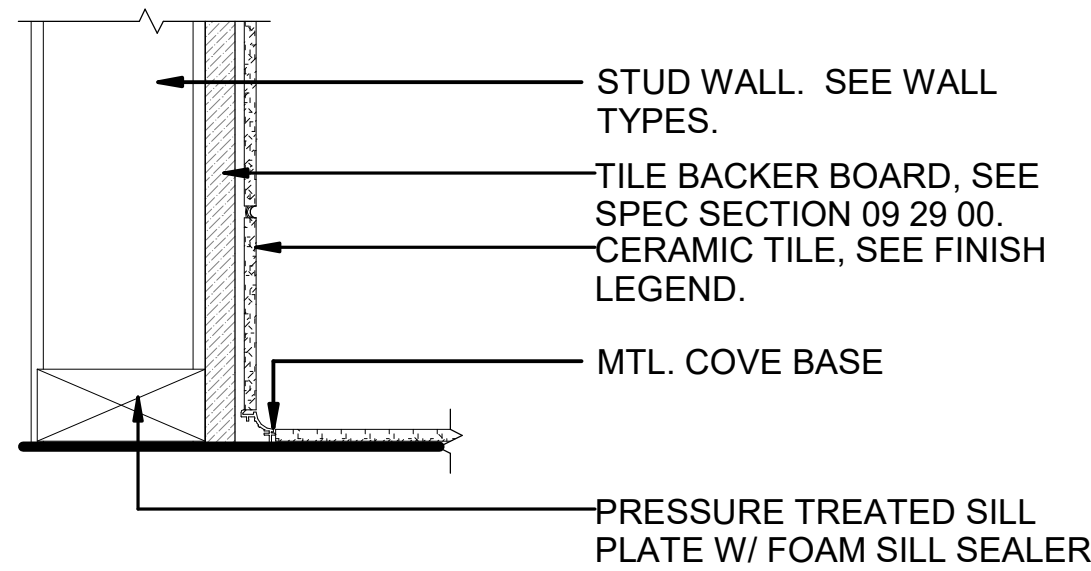
SUB SHEET NO.

A5.7

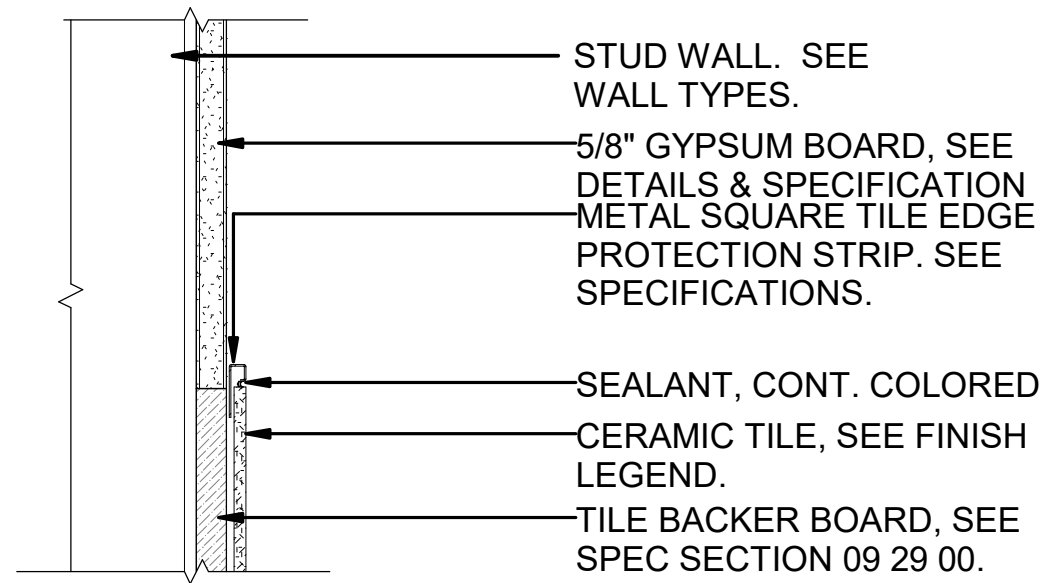
TITLE OF SHEET
DETAILS - CASEWORK

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

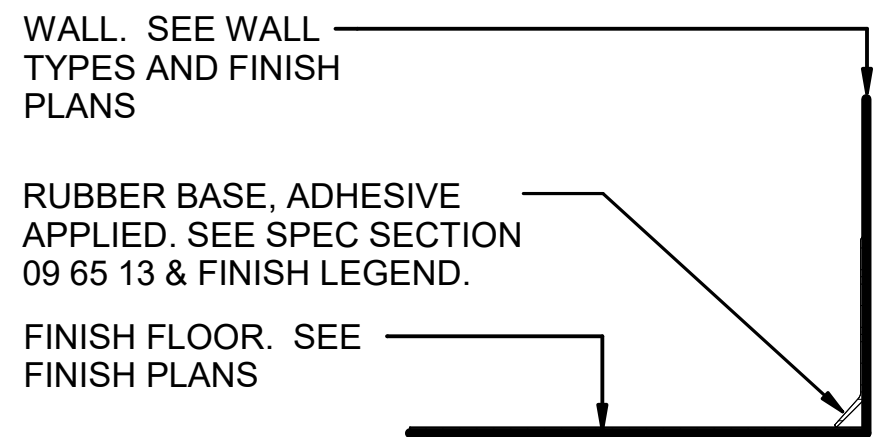
DRAWING NO.
121
175143
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316223
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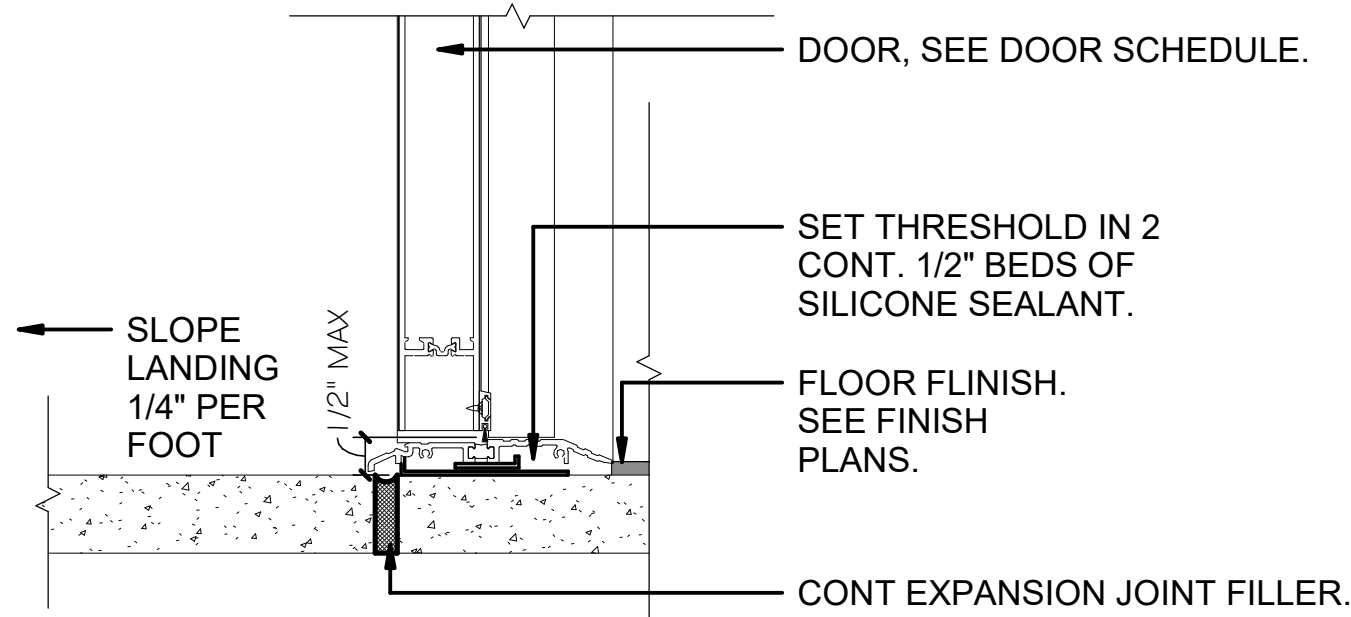
1 TILE - METAL COVE BASE
A5.8 SCALE 3" = 1'-0"



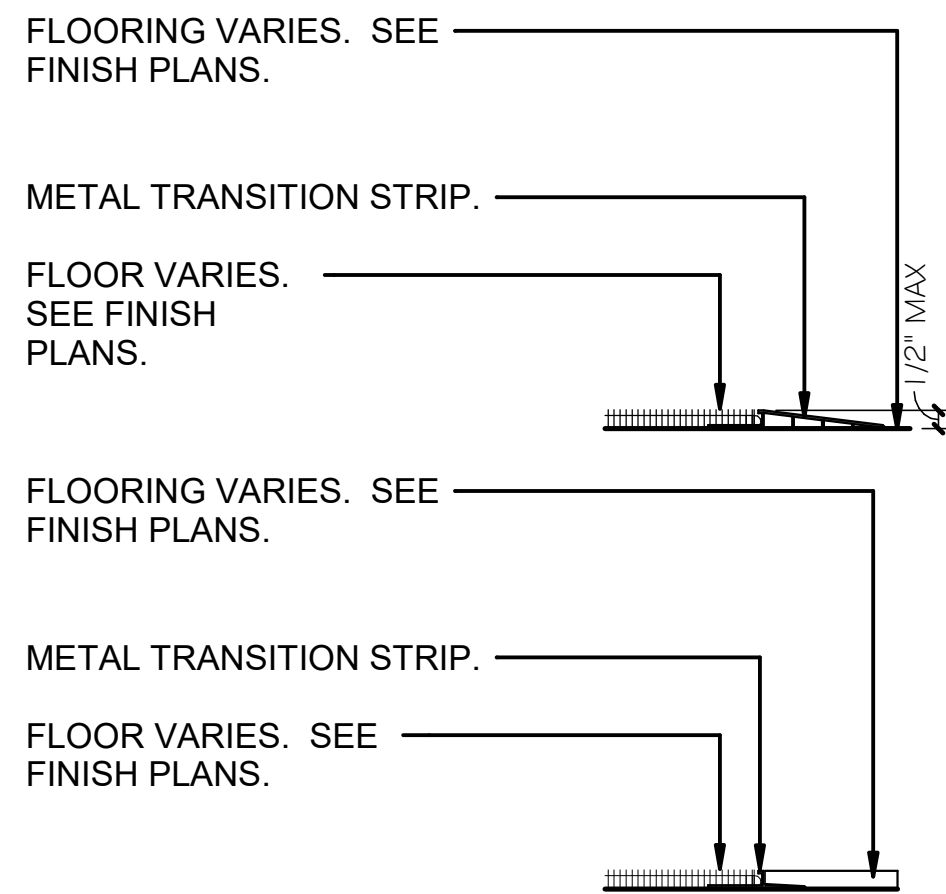
2 TILE TO GYPSUM TRANSITION
A5.8 SCALE 3" = 1'-0"



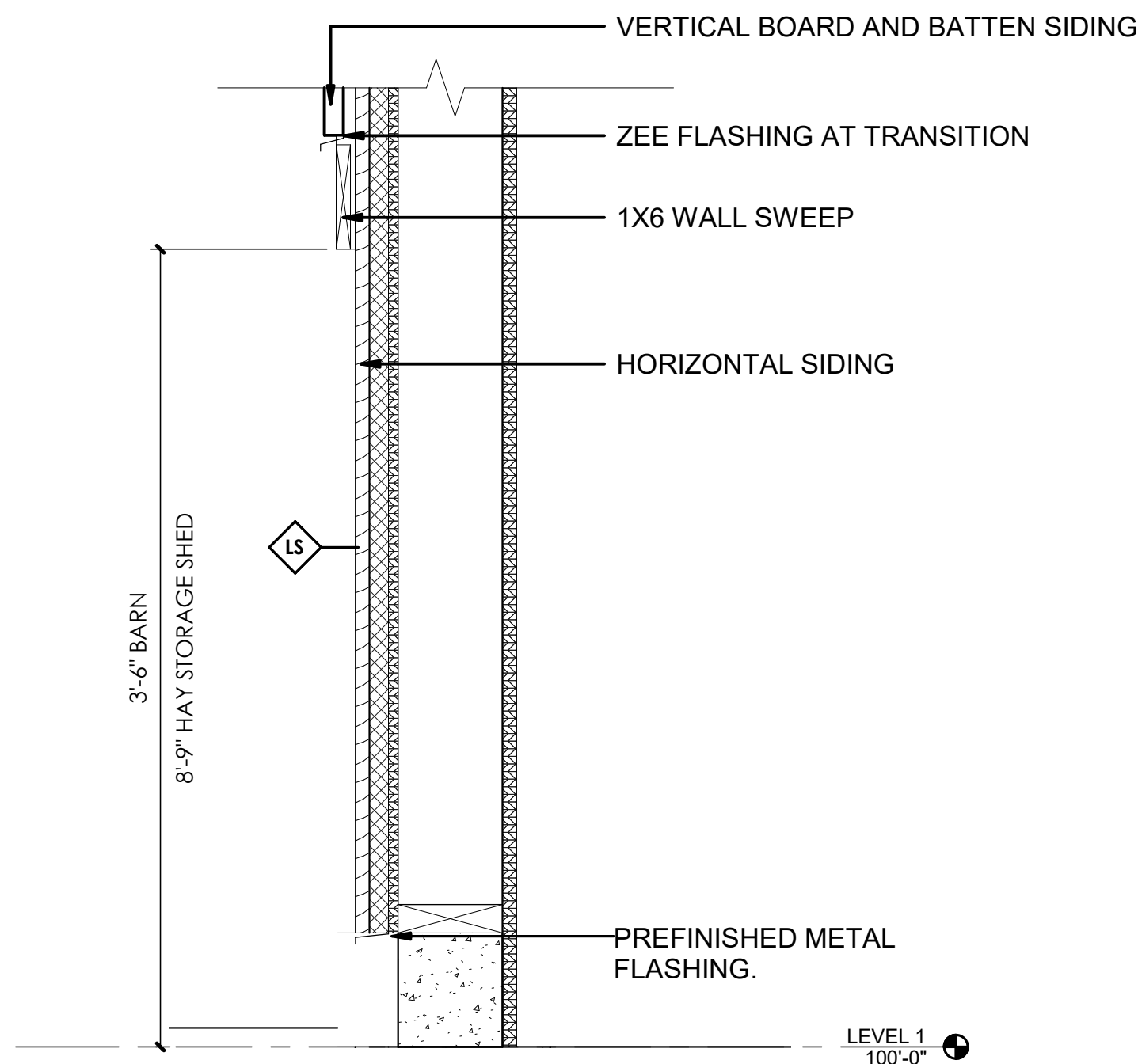
3 BASE - RUBBER
A5.8 SCALE 3" = 1'-0"



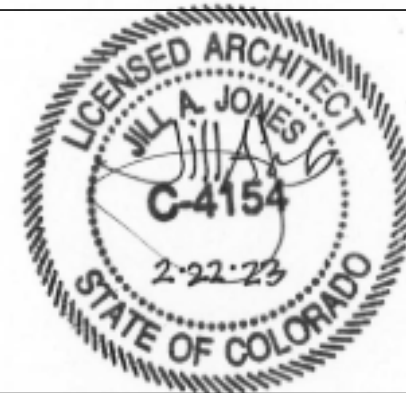
4 ALUMINUM THRESHOLD
A5.8 SCALE 3" = 1'-0"



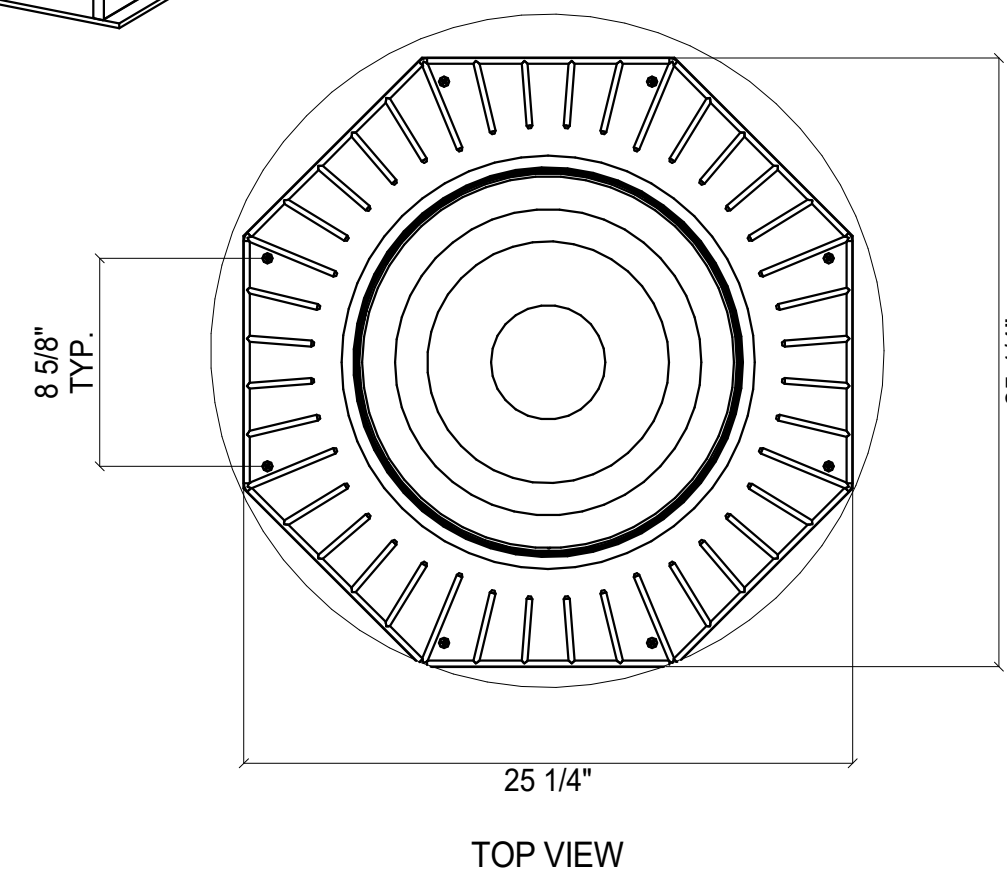
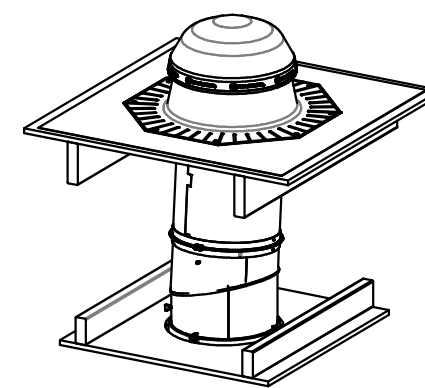
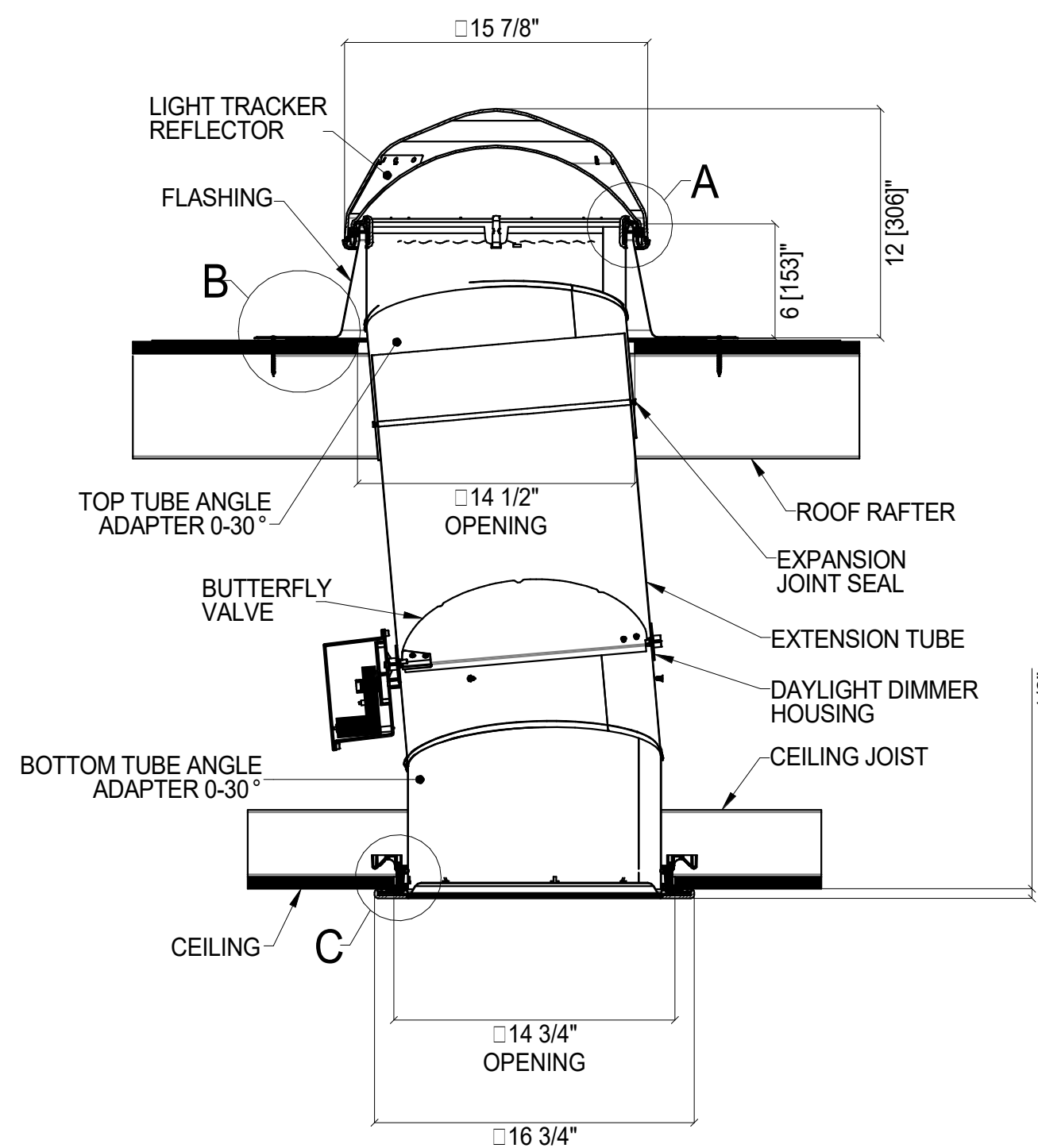
5 METAL TRANSITION STRIP
A5.8 SCALE 3" = 1'-0"



6 HORIZONTAL SIDING TO BOARD AND BATTEN TRANSITION
A5.8 SCALE 1 1/2" = 1'-0"

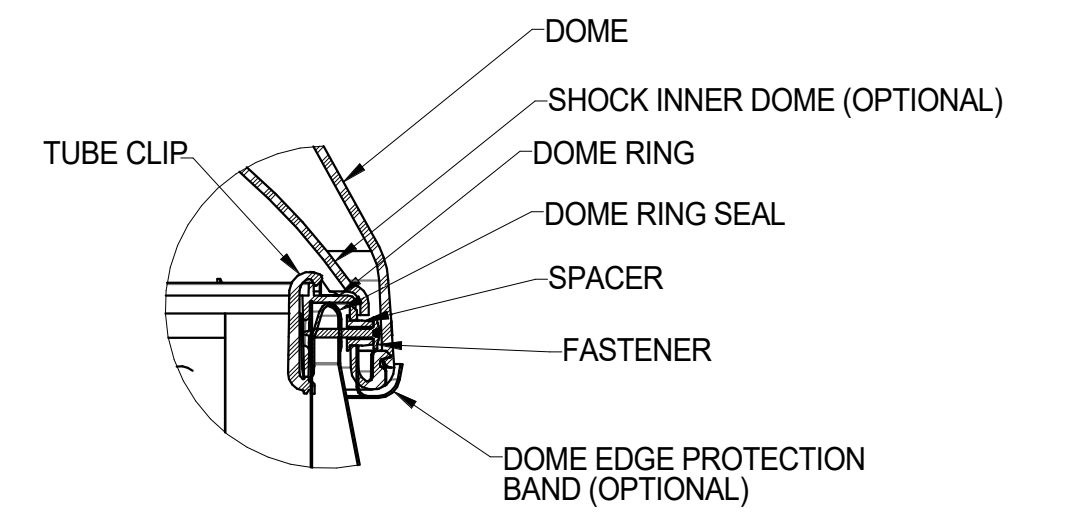


DESIGNED:	SUB SHEET NO.	TITLE OF SHEET DETAILS - FINISH CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143
HS			PMIS/PKG NO. 316223
CADD			
SP			
TECH. REVIEW:			A5.8
KR	54 OF 104		
DATE: 2.27.2023			

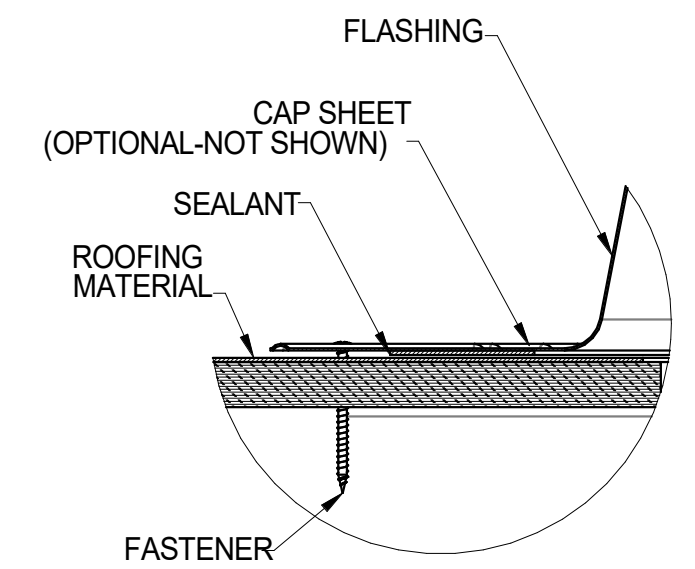


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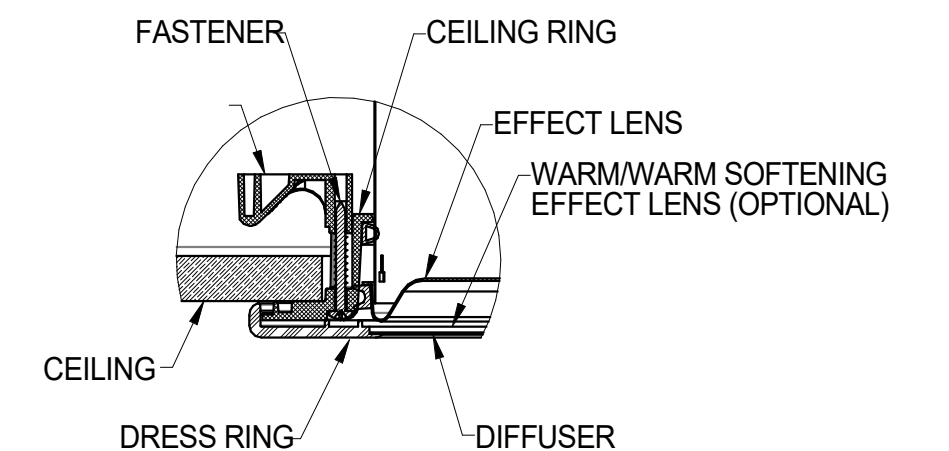
1. STRUCTURAL ELEMENTS (PLYWOOD, RAFTERS, DRYWALL ETC. BY OTHERS & SHOWN FOR REFERENCE ONLY.
2. ALL TUBE JOINTS & SEAMS TAPED WITH 2" FOIL TAPE (NOT SHOWN).
3. DIMENSIONS IN BRACKETS ARE METRIC UNLESS OTHERWISE SPECIFIED.
4. 6" MIN CLEARANCE SHOULD BE MAINTAINED FROM ALL SOLATUBE COMPONENTS AND OTHER PLENUM COMPONENTS.



2 DETAIL - UNIT SKYLIGHT - A
SCALE 1 1/2" = 1'-0"



3 DETAIL - UNIT SKYLIGHT - B
SCALE 1 1/2" = 1'-0"



4 DETAIL - UNIT SKYLIGHT - C
SCALE 1 1/2" = 1'-0"

1 DETAIL - UNIT SKYLIGHT - SECTION & PLAN
SCALE 1 1/2" = 1'-0"

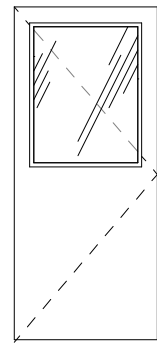


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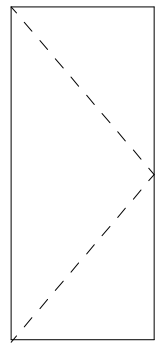
SUB SHEET NO.
A5.9

TITLE OF SHEET
DETAILS - UNIT SKYLIGHT
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

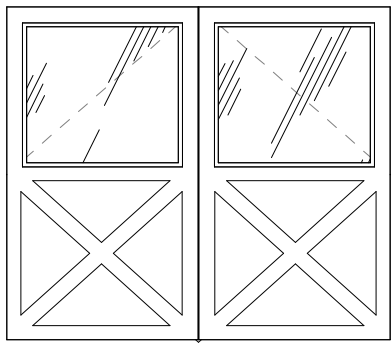
DRAWING NO.
121
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316223
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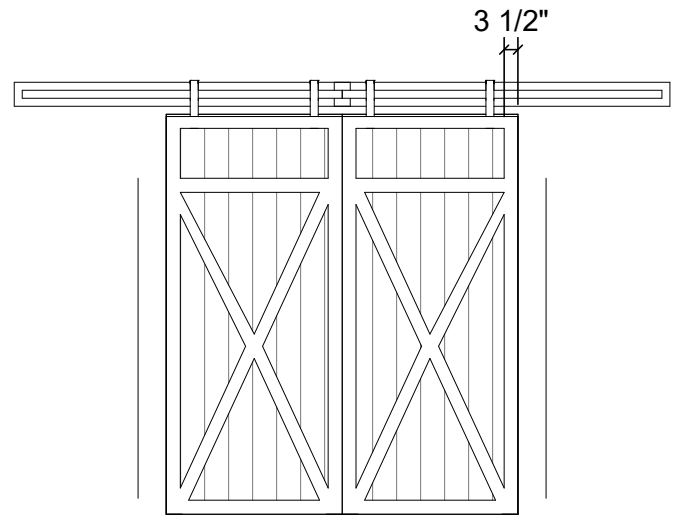
HM1
HOLLOW METAL PANEL,
FACTORY FINISHED,
INSULATE @ EXTERIOR W/
HALF LITE



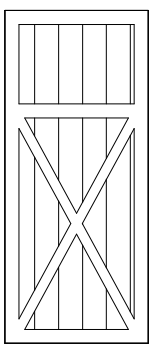
HM
HOLLOW METAL PANEL,
FACTORY FINISH, INSULATE
@ EXTERIOR



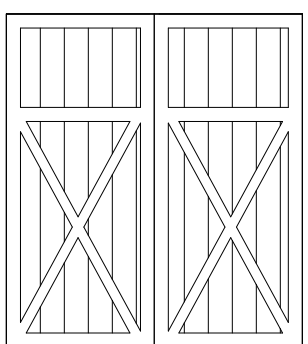
PHM
HOLLOW METAL PANEL,
PAINT, INSULATE @
EXTERIOR W/ HALF LITES



BD
PREFINISHED WOOD BARN
DOOR



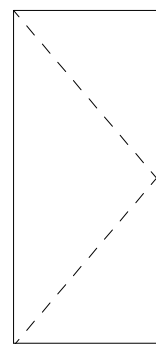
WD-EXT
WOOD EXTERIOR DOOR,
PAINT



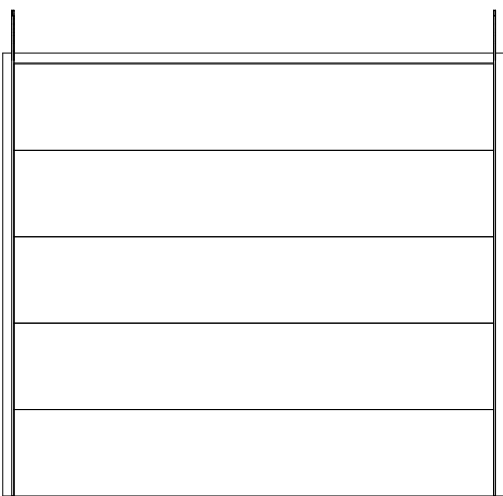
DWD
WOOD EXTERIOR DOUBLE
DOOR W/ VISION LITES,
PAINT



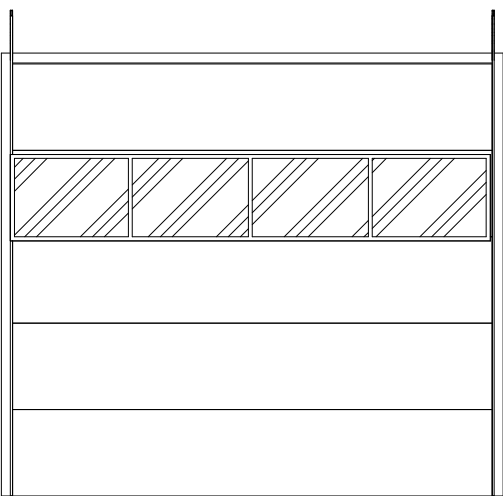
WDHL
WOOD INTERIOR DOOR
W/ HALF LITE



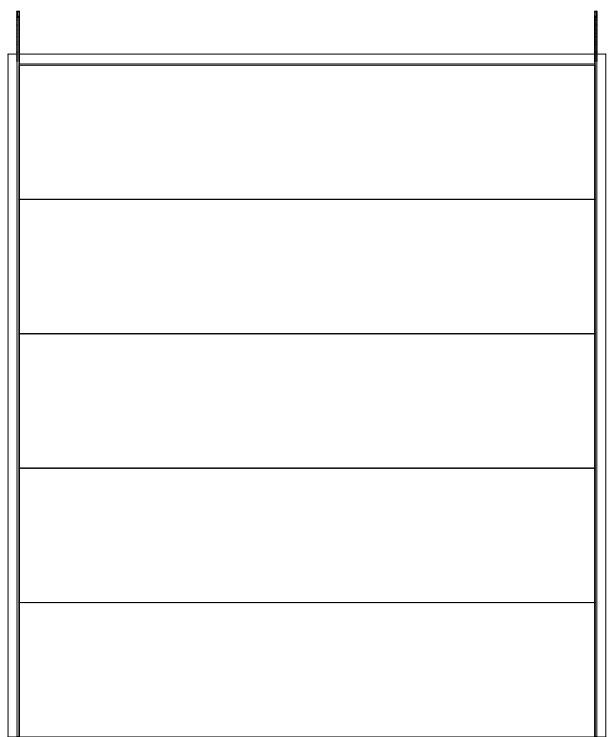
WD
WOOD INTERIOR DOOR



CD
COILING SECTIONAL
DOOR, FACTORY FINISH



OH
OVERHEAD SECTIONAL
DOOR, FACTORY FINISH,
VISION LIGHTS



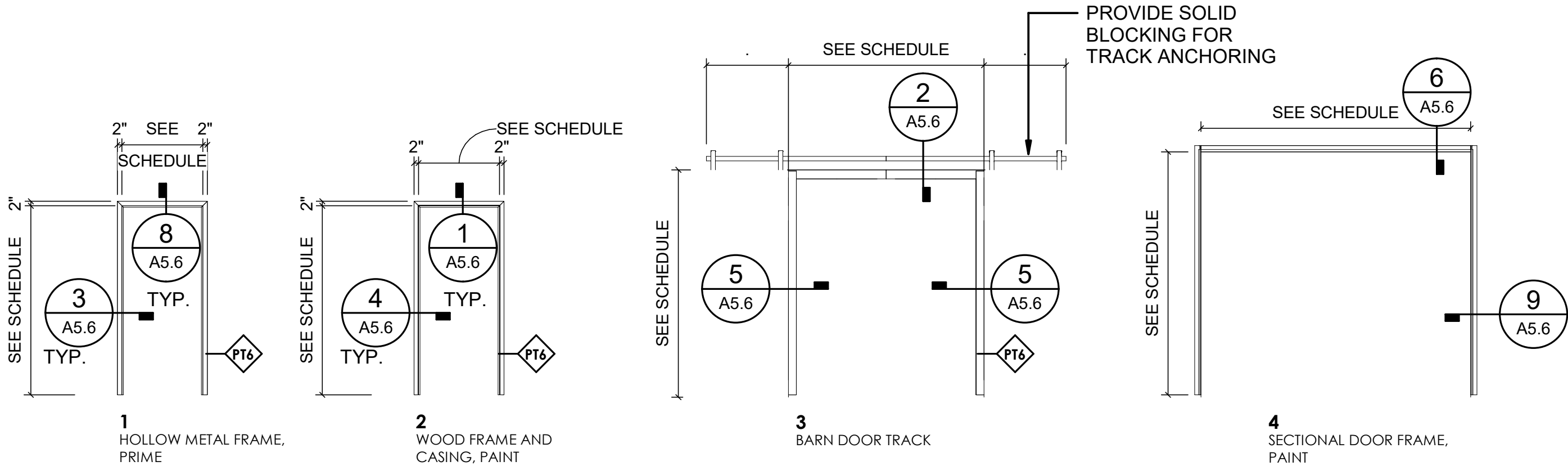
OH1
OVERHEAD SECTIONAL
DOOR, FACTORY FINISH

DOOR & FRAME SCHEDULE						
DOOR NO.	DOOR SIZE		FIRE RATING	DOOR	FRAME	COMMENTS
	WIDTH	HEIGHT		TYPE	TYPE	
101	3'-0"	7'-0"		HM	1	INSULATED HOLLOW METAL DOOR, LOCKABLE
102	3'-0"	7'-0"		WDHL	2	LOCKABLE
103	3'-0"	7'-0"		WDHL	2	LOCKABLE
104	3'-0"	7'-0"		HM	1	INSULATED HOLLOW METAL DOOR, LOCKABLE
105	3'-0"	7'-0"		HM	1	LOCKABLE
106	3'-0"	7'-0"		HM	1	LOCKABLE
107	3'-0"	7'-0"		HM	1	
108	3'-0"	7'-0"		HM	1	
109	3'-0"	7'-0"		HM	1	
111	5'-0"	8'-0"		HM	1	LOCKABLE
112	10'-0"	8'-0"		DWD	2	LOCKABLE
113	5'-0"	12'-0"		BD	3	LOCKABLE
114	8'-0"	7'-0"		PHM	2	INSULATED MANUAL OVERHEAD DOOR, LOCKABLE
115	10'-0"	9'-0"		OH	4	INSULATED MANUAL OVERHEAD DOOR, LOCKABLE
116	3'-0"	7'-0"		HM1	1	INSULATED HOLLOW METAL DOOR, LOCKABLE
132	3'-0"	7'-0"		HM	1	
135	3'-0"	7'-0"		HM	1	
203	3'-0"	7'-0"		HM	1	
204	10'-0"	9'-0"		CD	4	
205	12'-0"	14'-0"		OH1	4	

GLAZING TYPE	
SYM.	DESCRIPTION
G1	CLEAR LOW "E" INSULATED GLAZING

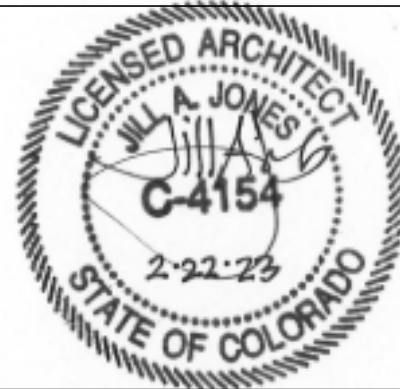
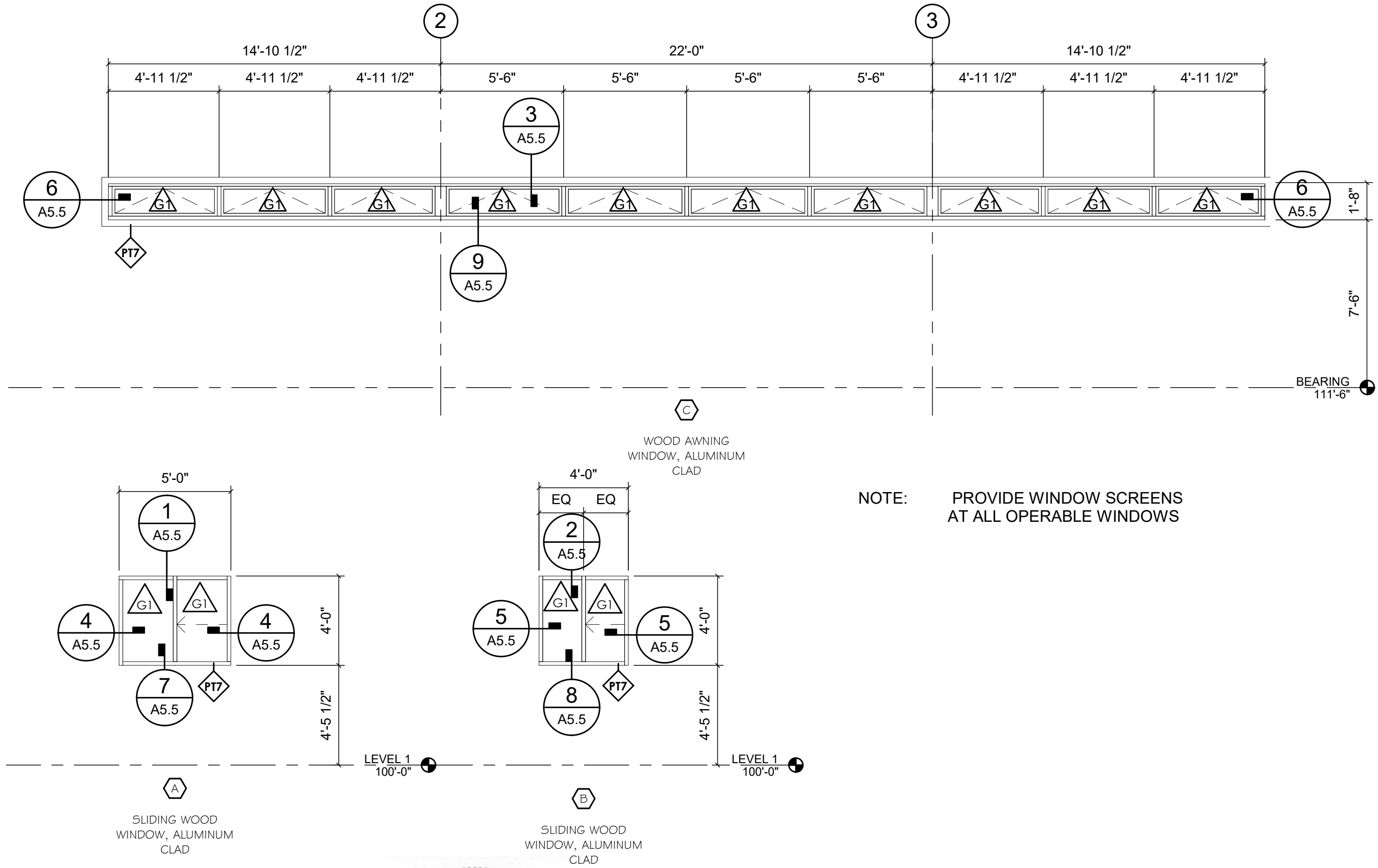
1 DOOR TYPES

SCALE 1/4" = 1'-0"



2 FRAME TYPES

SCALE 1/4" = 1'-0"



DESIGNED:
HS
SP
TECH. REVIEW:
KR
DATE:
2.27.2023

SUB SHEET NO.
A6.0

DOOR & WINDOW SCHEDULE

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
56 OF 104

FINISH LEGEND			
SYMBOL	DESCRIPTION		
		MANUFACTURER	STYLE/COLOR

BASE

WB1	RUBBER WALL BASE	ROPPE	BURNT UMBER
WB2	BOARD FORMED CONCRETE BASE	SEE SPEC SECTION 03 30 00	--
WB3	TILE BASE		

CASEWORK

PLM	PLAM. COUNTERTOPS	SEE SPEC SECTION 06 41 16	SELECTED BY CONTRACTING OFFICER
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EXTERIOR

AL	METAL - SNOW GUARDS	SEE SPEC SECTION 07 72 53	ALUMINUM MATCH ROOFING COLOR
BB	FIBER CEMENT VERTICAL BOARD AND BATTEN	HARDIE	AURA PAINT "HISTORIC DARK BROWN"
LS	FIBER CEMENT LAP HORIZONTAL SIDING	HARDIE	AURA PAINT "HISTORIC DARK BROWN"
MF	METAL FACIA	SEE SPEC SECTION 13 34 19	DARK BRONZE
MS	METAL SOFFIT	SEE SPEC SECTION 13 34 19	DARK BRONZE
SS	STANDING SEAM ROOF	SEE SPEC SECTION 07 41 13.16	DARK BRONZE

FLOOR

FT1	PORCELAIN FLOOR TILE	SEE SPEC SECTION 09 30 13	SMALL FORMAT. SEE SPEC SECTION 09 30 13
MM	LINOLEUM SHEET FLOORING	FORBO	MARMOLIUM / SMOOTH
SC	TROWEL FINISH, CLEAR SEALED CONCRETE FLOOR	SEE SPECS	

GLAZING

G1	CLEAR LOW "E" INSULATED GLAZING		
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PAINT

PT	PAINT - GYPSUM BOARD SUBSTRATE IN BATHROOMS	SEE SPEC SECTION 09 91 00	MOISTURE RESISTANT SYSTEM
PT2	PAINT - GYPSUM BOARD SUBSTRATE	SEE SPEC SECTION 09 91 00	ACRYLIC LATEX SYSTEM
PT3	PAINT - STEEL	SEE SPEC SECTION 09 91 00	ALKYD SYSTEM. SEMI-GLOSS SHEEN
PT4	PAINT - WOOD SUBSTRATES	SEE SPEC SECTION 09 91 00	ACRYLIC LATEX SYSTEM FOR INTERIOR WOOD
PT5	PAINT - CMU SUBSTRATES	SEE SPEC SECTION 09 91 00	EPOXY SYSTEM
PT6	PAINT - DOOR FRAMES AND OTHER EXPOSED WOODWORK	SEE SPEC SECTION 09 91 00	ACRYLIC SYSTEM ENAMEL OVER LATEX PRIMER / CUSTOM COLOR TO MATCH PARK STANDARD AS SELECTED BY CONTRACTING OFFICER
PT7	PAINT - EXPOSED EXTERIOR HOLLOW METAL WORK	SEE SPEC SECTION 09 91 00	ACRYLIC ENAMEL SYSTEM / CUSTOM COLOR TO MATCH PARK STANDARD AS SELECTED BY CONTRACTING OFFICER
PT8	PAINT - FIBER CEMENT EXTERIOR	SEE SPEC SECTION 09 91 00	ACRYLIC LATEX SYSTEM / CUSTOM COLOR TO MATCH PARK STANDARD AS SELECTED BY CONTRACTING OFFICER

STAIN

ST1	STAIN - EXPOSED FRAMING	SEE SPEC SECTION 09 93 00	SOLVENT BASED, SEMITRANSSPARENT
ST2	STAIN - WOOD SUBSTRATES - DOORS	SEE SPEC SECTION 09 93 00	SOLVENT BASED, SEMITRANSSPARENT

WALL

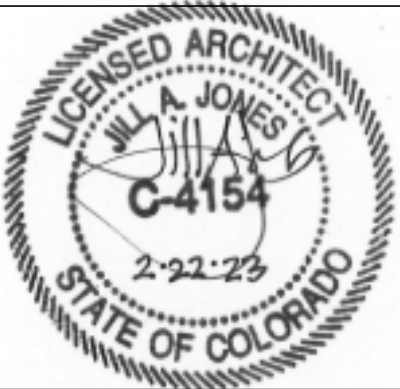
PW	3/4" PLYWOOD	SEE SPECS	TIGHT SEAM, UNFINISHED 3/4" PLYWOOD
WT	WALL TILE 8X8	DALTILE	BISCUIT

ACCESSORY SCHEDULE			
QTY	ACCESSORY	DESCRIPTION	MANUFAC TURER

2	PRIVATE-USE TOILET TISSUE DISPENSER	SINGLE-ROLL DISPENSER WITH THE FOLLOWING FEATURES: SURFACE MOUNTED, DESIGNED FOR 4-1/2 - 5" DIAMETER TISSUE ROLLS, STAINLESS STEEL, ASTM A480/A480M NO. 4 FINISH	
1	PRIVATE-USE SHOWER CURTAIN ROD, CURTAIN AND HOOKS	1-1/4" OUTSIDE DIAMETER, STRAIGHT ROD, STAINLESS STEEL, ASTM A480M NO. 4 FINISH	
1	PRIVATE-USE FOLDING SHOWER SEAT	RECTANGULAR SEAT, PHENOLIC OR POLYMERIC COMPOSITE OF SLAT TYPE OR ONE PIECE CONSTRUCTION IN COLOR AS SELECTED BY CONTRACTING OFFICER	
2	UNDERLAVATORY GUARD	INSULATING PIPE COVERING FOR SUPPLE AND DRAIN PIPING ASSEMBLIES THAT PREVENTS CONTACT WITH AND BRUNS FROM PIPING, ALLOW SERVICE ACCESS WITHOUT REMOVING COVERINGS.	
1	CUSTODIAL UTILITY SHELF	WITH EXPOSED EDGES TURNED DOWN NOT LESS THAN 1/2" AND SUPPORTED BY TWO TRIANGULAR BRACKETS WELDED TO SHELF UNDERSIDE. 16" LONG 6" DEEP.	

APPLIANCE SCHEDULE		
QTY.	APPLIANCE	COMMENTS

1	DRYER	COMMERCIAL GRADE. FURNISHED BY PARK
1	WASHER	COMMERCIAL GRADE. FURNISHED BY PARK
1	REFRIDGERATOR	FURNISHED BY PARK



DESIGNED:
HS
SP
TECH. REVIEW:
KR
DATE:
2.27.2023

SUB SHEET NO.

A6.1

TITLE OF SHEET
FINISH, APPLIANCE &
ACCESSORY SCHEDULE

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
57 OF 104

STRUCTURAL GENERAL NOTES

A. DESIGN LOADS:

1. AUTHORITY HAVING JURISDICTION: UNITED STATES GOVERNMENT
2. DESIGN LOADS BASED ON: 2021 INTERNATIONAL BUILDING CODE, ASCE 7-16, AND REFERENCED DOCUMENTS
3. RISK CATEGORIES: II STANDARD (BARN/OFFICE), I LOW RISK (HAY STORAGE)
4. SITE LOCATION:

A. ELEVATION8,700 FT

B. COORDINATES40.2646 N, 105.8369 W

5. ROOF LOADS

A. ROOF PV SUPERIMPOSED5 PSF (BARN/OFFICE, BID OPTION B)

B. ROOF LIVE LOAD20 PSF, 300 LBS

C. GROUND SNOW LOAD, P_g77 PSF (PER 2016 SEAC SNOW LOADS, , K = 11.7, A = 8.70)

D. FLAT-ROOF SNOW LOAD, P_f54 PSF (OFFICE), 65 PSF (BARN/EXTERIOR), 52 PSF (HAY STORAGE)

E. SNOW EXPOSURE FACTOR, C_e1.0

F. SNOW IMPORTANCE FACTOR, I_s1.0 (BARN/OFFICE), 0.8 (HAY STORAGE, UNOCCUPIED)

G. THERMAL FACTOR, C_t1.0 (OFFICE), 1.2 (BARN/HAY STORAGE, NOT HEATED)

6. FLOOR LIVE LOADS:

OCCUPANCY OR USE	UNIFORMLY DISTRIBUTED (PSF)	CONCENTRATED LOAD (LBS)	LIVE LOAD REDUCTION
OFFICE	50	2,000	YES
ASSEMBLY / PUBLIC	100	2,000	NO
STORAGE	125	N/A	NO

7. WIND:

A. BASIC DESIGN WIND SPEED, V_{ULT}, (3-SEC GUST)110 MPH (BARN/OFFICE), 105 MPH (HAY STORAGE)

B. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}, (3-SEC GUST)85 MPH (BARN/OFFICE), 80 MPH (HAY STORAGE)

C. INTERNAL PRESSURE COEFFICIENT0.55 (PARTIALLY ENCLOSED)

D. WIND EXPOSUREC

E. AIR DENSITY COEFFICIENT0.77

F. COMPONENTS AND CLADDING ULTIMATE DESIGN WIND PRESSURES

1. WALLS:

a. WITHIN 6 FEET OF CORNERS+28 PSF-35 PSF (BARN/OFFICE)+25 PSF-32 PSF (HAY STORAGE)

b. AWAY FROM CORNERS+28 PSF-30 PSF (BARN/OFFICE)+25 PSF-27 PSF (HAY STORAGE)

2. ROOFS:

a. WITHIN 6 FEET OF CORNERS+19 PSF-56 PSF (BARN/OFFICE)+25 PSF-51 PSF (HAY STORAGE)

b. WITHIN 6 FEET OF EDGES+19 PSF-40 PSF (BARN/OFFICE)+25 PSF-37 PSF (HAY STORAGE)

c. AWAY FROM EDGES+19 PSF-26 PSF (BARN/OFFICE)+25 PSF-24 PSF (HAY STORAGE)

3. OVERHANGS:

a. WITHIN 6 FEET OF CORNERS+28 PSF-76 PSF (BARN/OFFICE)+25 PSF-69 PSF (HAY STORAGE)

b. AWAY FROM CORNERS+28 PSF-49 PSF (BARN/OFFICE)+25 PSF-45 PSF (HAY STORAGE)

4. PRESSURES MAY BE REDUCED FOR EFFECTIVE WIND AREAS LARGER THAN 10 SQUARE FEET, BUT NOT BELOW 16 PSF.

8. SEISMIC:

A. SPECTRAL RESPONSE ACCELERATION PARAMETERS

1. SHORT PERIOD

a. S_s0.279 g

b. S_{DS}0.293 g

2. ONE SECOND

a. S₁0.071 g

b. S_{D1}N/A

B. SOILS SITE CLASSD

C. SEISMIC IMPORTANCE FACTOR1.0

D. SEISMIC DESIGN CATEGORYB

E. BASIC SEISMIC-FORCE-RESISTING SYSTEMS

a. LIGHT FRAMED WOOD WALLS WITH WOOD SHEATHING (WOOD SW), BARN/OFFICE

b. STEEL ORDINARY MOMENT FRAME (SOMF), HAY STORAGE

F. DESIGN BASE SHEAR12 KIPS (BARN/OFFICE), 3 KIPS (HAY STORAGE)

G. SEISMIC RESPONSE COEFFICIENTS, C_s0.05 (WOOD SW), 0.08 (SOMF)

H. RESPONSE MODIFICATION COEFFICIENTS, R6.5 (WOOD SW), 3.5 (SOMF)

I. ANALYSIS PROCEDUREEQUIVALENT LATERAL FORCE

B. FOUNDATION DESIGN:

1. REFER TO GEOTECHNICAL EVALUATION NO 221-282 BY YEH AND ASSOCIATES INC, DATED APRIL 1, 2022.
2. GEOTECHNICAL ENGINEER OR SPECIAL INSPECTOR (EMPLOYED BY THE CONTRACTOR) SHALL VERIFY SOIL CONDITIONS AND TYPES DURING EXCAVATION AND PRIOR TO PLACEMENT OF FORMWORK OR CONCRETE.
3. MINIMUM FROST DEPTH SHALL BE 3'-0" BELOW EXTERIOR GRADE.

C. FOOTINGS:

1. DESIGN OF FOOTINGS IS BASED ON
- A. MAXIMUM ALLOWABLE BEARING PRESSURE3,000 PSF
- B. MAXIMUM ALLOWABLE BEARING PRESSURE, SHORT TERM4,000 PSF
2. BEAR ON 12" MINIMUM DEPTH OF SCARIFIED AND RECOMPACTED SUBGRADE, EXTERIOR FOOTINGS SHALL BEAR BELOW FROST DEPTH.

D. REINFORCED CONCRETE:

1. DESIGN IS BASED ON ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
2. CONCRETE WORK SHALL CONFORM TO ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE."
3. STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

INTENDED USE	EXPOSURE CLASS	f _c , PSI 28 DAYS	MAX W/CM RATIO	MAXIMUM AGGREGATE	SLUMP, INCHES (±1")	AIR CONTENT PERCENT (±1.5%)	CEMENT TYPE	ADMIXTURES / COMMENTS
FOOTINGS	F0-S0-W0-C1	3000	0.52	3/4" STONE	5	N/A	I/II	15% MIN, 25% MAX FLY ASH
STEM WALLS	F2-S0-W0-C1	4500	0.45	3/4" STONE	4	6%	I/II	15% MIN, 25% MAX FLY ASH
INTERIOR SLAB ON GRADE	F0-S0-W0-C0	4000	0.45	3/4" STONE	4	N/P	I/II	15% MIN, 25% MAX FLY ASH
EXTERIOR PAVING - SEE CIVIL DRAWINGS & SPEC SECTION 32 13 00								

4. CONCRETE MIX TABLE NOTES:

A. SLUMP VALUES INDICATED ARE SUGGESTED BASED ON USE AND TYPICAL PLACEMENT METHODS. CONTRACTOR MAY ADJUST SLUMP AS NECESSARY FOR FIELD CONDITIONS AND INSTALLATION METHOD USED PROVIDED REMAINING REQUIREMENTS ARE MET.

B. AIR CONTENT:

a. N/P: AIR ENTRAINING ADMIXTURES NOT PERMITTED, ENTRAPPED AIR ONLY

b. N/A: NOT APPLICABLE, NO STRUCTURAL AIR CONTENT REQUIREMENTS

5. DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."

6. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT #3 OR #4 TIES SHALL BE GRADE 40.

7. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, LAP BARS PER THE CONCRETE LAP SPLICE SCHEDULE.

8. AT CORNERS AND INTERSECTIONS, MAKE HORIZONTAL BARS CONTINUOUS OR PROVIDE MATCHING CORNER BARS FOR EACH LAYER OF REINFORCEMENT.

9. TRIM OPENINGS IN WALLS AND SLABS WITH (2)-#5 FOR EACH LAYER OF REINFORCEMENT, FULLY DEVELOPED BY EXTENSION OR HOOK.

10. FORM INTERMITTENT SHEAR KEYS AT ALL CONSTRUCTION JOINTS AND AS SHOWN ON THE STRUCTURAL DRAWINGS.

11. EXCEPT AS NOTED ON THE DRAWINGS, CONCRETE PROTECTION FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:

A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:3"

1. EXPOSED TO EARTH OR WEATHER:

a. #6 THROUGH #18 BARS2"

b. #5 BAR, W31 OR D31 WIRE, AND SMALLER1-1/2"

B. NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:

1. SLABS, WALLS, JOISTS: #11 BARS AND SMALLER3/4"

2. BEAMS AND COLUMNS:

a. PRIMARY REINFORCEMENT1-1/2"

b. STIRRUPS, TIES, SPIRALS1-1/2"

12. ANCHOR BOLTS AND RODS FOR BEAM AND COLUMN-BEARING PLATES SHALL BE PLACED WITH SETTING TEMPLATES.

E. POST-INSTALLED ANCHORS

1. ALL CAST IN PLACE ANCHORS DESIGNED IN ACCORDANCE WITH ACI 318.
2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CONTRACTING OFFICER PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
3. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. EXISTING REINFORCING BARS SHALL NOT BE CUT UNLESS APPROVED BY THE CONTRACTING OFFICER.
4. ALL ANCHORS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MPII.
5. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CONTRACTING OFFICER ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER; REGISTRATION MUST BE IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO THE ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE CONTRACTING OFFICER/ SPECIAL INSPECTOR AS REQUESTED.
7. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI (ACI 318 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318 17.1.2)
9. ALL POST INSTALLED ANCHORS SHALL BE INSTALLED IN DRY HOLES THAT HAVE BEEN DRILLED, CLEANED, AND PREPARED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION AND THE RESPECTIVE ICC-ES EVALUATION REPORTS.
10. PROVIDE SPECIAL INSPECTION (EMPLOYED BY THE CONTRACTOR) FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC TABLE 1705.3 NOTE B).
11. ALL PRODUCTS SHALL CONFORM TO THE "BUY AMERICA ACT".

CONCRETE POST INSTALLED ANCHORS			
ANCHOR TYPE	DEWALT	HILTI	SIMPSON
EXPANSION	POWER-STUD+ SD2 (ICC ESR-2502)	KWIK BOLT TZ (ICC ESR-1917)	STRONG-BOLT 2 (ICC ESR-3037)
CONCRETE SCREW	SCREW-BOLT+ (ICC ESR 3889)	KWIK HUS-EZ (ICC ESR-3027)	TITEN HD (ICC ESR 2713)
ADHESIVE	AC200+ (ICC ESR-4027)	HIT-HY 200 (ICC ESR-3187)	AT-XP (UES ER-263)

MASONRY POST INSTALLED ANCHORS			
ANCHOR TYPE	DEWALT	HILTI	SIMPSON
EXPANSION	POWER-STUD+ SD1 (ICC ESR-2966)	KWIK BOLT 3 (ICC ESR-1385)	WEDGE-ALL (ICC ESR-1396)
SCREW	SCREW-BOLT+ (ICC ESR-4042)	HUS-EZ (ICC ESR-3056)	TITEN HD (ICC ESR-1056)
ADHESIVE	AC100+ GOLD (ICC ESR-3200)	HIT HY-270 (ICC ESR-4143 / 4144)	AT-XP (UES ER-281)

STRUCTURAL DRAWING LIST	
S0.1	GENERAL NOTES
S0.2	GENERAL NOTES
S0.3	GENERAL NOTES
S0.4	ABBREVIATIONS & SYMBOLS
S0.5	3D VIEW
S1.1	FOUNDATION PLAN
S1.2	ROOF FRAMING PLAN
S5.01	TYPICAL CONCRETE DETAILS
S5.02	TYPICAL STEEL & MASONRY DETAILS
S5.03	TYPICAL WOOD DETAILS
S5.04	TYPICAL WOOD DETAILS
S5.11	FOUNDATION SECTIONS
S5.12	FOUNDATION SECTIONS
S5.21	ROOF FRAMING SECTIONS
S5.22	ROOF FRAMING SECTIONS



DESIGNED: JSS	SUB SHEET NO. S0.1	TITLE OF SHEET GENERAL NOTES CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121
CHIEF JSS			175143
TECH REVIEW: TSS			PMIS/PKG NO. 316223
DATE: 02.27.2023			SHEET
			58 OF 104

F. STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360) AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. STRUCTURAL STEEL WIDE FLANGE BEAMS AND WT SHAPES SHALL CONFORM TO ASTM A992, 50 KSI YIELD.
3. OTHER ROLLED SHAPES, INCLUDING PLATES, CHANNELS, AND ANGLES SHALL CONFORM TO ASTM A36, 36 KSI YIELD.
4. HOLLOW STRUCTURAL SECTION (HSS) RECTANGULAR SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 50 KSI YIELD.
5. HSS ROUND SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 46 KSI YIELD.
6. PIPE SHAPES SHALL CONFORM TO ASTM A53, GRADE B, 35 KSI YIELD.
7. EXCEPT AS NOTED, FRAMED BEAM CONNECTIONS SHALL BE BEARING-TYPE WITH 3/4" DIAMETER, SNUG TIGHT, ASTM F3125 GRADE A325 BOLTS, DETAILED IN CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE "STEEL CONSTRUCTION MANUAL" BY THE AISC. INSTALL BOLTS IN ACCORDANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
8. ALL BEAMS SHALL HAVE FULL DEPTH WEB STIFFENERS EACH SIDE OF WEBS ABOVE AND BELOW COLUMNS.
9. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36 OR 55, AS NOTED ON THE CONSTRUCTION DRAWINGS WITH WELDABILITY SUPPLEMENT S1.
10. HEADED ANCHOR STUDS (HAS) AND WELDED THREADED STUDS (WTS) SHALL CONFORM TO ASTM A108 AND SHALL BE CONNECTED TO STRUCTURAL STEEL WITH EQUIPMENT APPROVED BY THE STUD MANUFACTURER ACCORDING TO THE STUD MANUFACTURER'S RECOMMENDATIONS.
11. WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH THE AISC DOCUMENTS LISTED ABOVE, THE AMERICAN WELDING SOCIETY (AWS) D1.1: STRUCTURAL WELDING CODE, AND THE RECOMMENDATIONS FOR USE OF WELD E70 ELECTRODES. WHERE NOT SPECIFICALLY NOTED, MINIMUM WELD SHALL BE 3/16" FILLET BY LENGTH OF CONTACT EDGE.
12. GROUT BENEATH COLUMN BASE AND BEAM BEARING PLATES SHALL HAVE A MINIMUM 28-DAY, COMPRESSIVE STRENGTH OF 7,500 PSI AND SHALL BE NON-SHRINK, NON-METALLIC, AND TESTED IN ACCORDANCE WITH ASTM C1107.

G. CORROSION CONTROL:

1. ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 UNLESS SPECIFICALLY NOTED AS "SELF-WEATHERING".
2. FASTENERS AND HARDWARE EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR ASTM B695 CLASS 50 UNLESS SPECIFICALLY NOTED AS "SELF-WEATHERING". STAINLESS STEEL FASTENERS AND HARDWARE MAY ALSO BE USED IN LIEU OF HOT DIPPED GALVANIZED.
3. ALL FIELD CUT OR DAMAGED SURFACES AND FIELD WELDED AREAS AT GALVANIZED CONSTRUCTION SHALL BE REPAIRED WITH (2) COATS OF A 95% ZINC RICH PAINT PER ASTM A780 (ZRC PREFERRED).
4. WHERE NOTED AS " ", BID OPTION: STEEL MEMBERS AND ALL CONNECTING PLATES AND BOLTS SHALL BE "SELF-WEATHERING":
 - A. WIDE FLANGE BEAMS SHALL BE ASTM A588, 50 KSI YIELD.
 - B. PLATES SHALL BE ASTM A588, 50 KSI YIELD.
 - C. HSS RECTANGULAR SHAPES SHALL BE ASTM A847, 50 KSI YIELD.
 - D. BOLTS SHALL BE GRADE A325 TYPE 3.

H. STRUCTURAL WOOD FRAMING:

1. IN-GRADE BASE VALUES HAVE BEEN USED FOR DESIGN.
2. DIMENSIONAL LUMBER FRAMING SHALL BE S4S DOUGLAS FIR-LARCH NO. 2 OR BETTER UNO.
3. SOLID TIMBER BEAMS AND POSTS SHALL BE DOUGLAS FIR-LARCH NO. 1 OR BETTER UNO.
4. STUDS SHALL BE DOUGLAS FIR-LARCH NO. 2 GRADE OR BETTER UNO.
5. TOP AND BOTTOM PLATES SHALL BE DOUGLAS FIR-LARCH NO. 2 OR BETTER UNO.
6. ALL LUMBER SHALL BE 19% MAXIMUM MOISTURE CONTENT AT THE TIME OF INSTALLATION.
7. ALL WOOD EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR-LARCH OR SOUTHERN YELLOW PINE. PRESERVATIVE-TREATED WOOD SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARDS U1 AND M4. TREATMENTS SHALL HAVE NO AMMONIA ADDED AND SHALL HAVE THE FOLLOWING USE CATEGORY:
 - A. UC2 AT INTERIOR
 - B. UC3B AT EXTERIOR WITH NO GROUND CONTACT
 - C. UC4B AT EXTERIOR WITH GROUND CONTACT
8. FASTENERS FOR USE WITH TREATED WOOD SHALL BE CORROSION RESISTANT IN ACCORDANCE WITH SECTION 2304.10.5 OF THE IBC.
9. ALL CONNECTORS USED WITH PRESSURE-TREATED MATERIAL SHALL BE STAINLESS STEEL ASTM 304 OR 316, OR HAVE A SIMPSON Z-MAX (G185) OR HDG COATING. STANDARD COATING (G90) IS ACCEPTABLE AT INTERIOR CONDITIONS WITH NON PRESSURE-TREATED LUMBER ONLY. CONNECTORS ARE TO BE IN ACCORDANCE WITH ASTM A653 OR ASTM 123.
10. ALL IRON AND STEEL PRODUCTS ATTACHED TO TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 OR SHALL BE TYPE 304 OR 316 STAINLESS STEEL.
11. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED OR DETAILED ON THE STRUCTURAL DRAWINGS.
12. ALL BOLTS SHALL BE RE-TIGHTENED PRIOR TO CLOSING IN OF WALLS, FLOORS, AND ROOFS.
13. ALL BOLTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS UNDER HEAD AND/OR NUT, UNO.
14. METAL FRAMING ANCHORS SHOWN OR REQUIRED, SHALL BE SIMPSON STRONG-TIE OR EQUAL CODE APPROVED CONNECTORS AND INSTALLED WITH ALL HOLES FILLED (ROUND AND TRIANGULAR) WITH THE MAXIMUM SIZE NAIL RECOMMENDED BY THE MANUFACTURER TO DEVELOP THE MAXIMUM RATED CAPACITY.
15. CONNECTOR BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307, GRADE A AND ANSI/ASME B18.2.1.
16. NAILS AND SPIKES SHALL CONFORM TO ASTM F1667.
17. WOOD SCREWS SHALL CONFORM TO ANSI/ASME B18.6.1.
18. LEAD HOLES FOR LAG SCREWS SHALL BE 40%-70% OF THE SHANK DIAMETER AT THE THREADED SECTION AND EQUAL TO THE SHANK DIAMETER AT THE UNTHREADED SECTION.
19. CONVENTIONAL LIGHT FRAMING SHALL COMPLY WITH IBC SECTION 2308.
20. 2X BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS, UNO.
21. CROSS-BRIDGING OR SOLID BLOCKING SHALL BE PROVIDED AT 8'-0" MAX. FOR ALL JOISTS AND RAFTERS MORE THAN 10" IN DEPTH, 2X3 OR APPROVED METAL TYPE BRIDGING MAY BE USED.
22. PROVIDE A MINIMUM OF (3) STUDS AT EACH CORNER, UNO.
23. ALL JOISTS AND BEAMS (EXCLUDING I-JOISTS) SHALL BE SEAT-CUT FOR FULL UNIFORM BEARING AT SUPPORTS, SEATS, CAPS, ETC.
24. VENTING IS REQUIRED IN ALL ENCLOSED ROOF AND CRAWL SPACE FRAMING CAVITIES, PER THE CONSTRUCTION DRAWINGS.
25. EXCEPT AS NOTED OTHERWISE, MINIMUM NAILING SHALL BE PROVIDED AS SPECIFIED IN TABLE 2304.10.1 "FASTENING SCHEDULE" OF THE IBC.
26. ALL MULTIPLE MEMBER BEAMS SHALL BE NAILED TOGETHER WITH MAX NUMBER OF 10D NAILS VERTICALLY @ 3" AND HORIZONTALLY @ 12" PER PLY, UNO.
27. ALL ROOF RAFTERS AND TRUSSES SHALL BE ANCHORED TO SUPPORTS WITH H2.5A METAL FRAMING ANCHORS AS SHOWN IN THE DETAILS.

I. WOOD SHEATHING:

1. PLYWOOD AND ORIENTED STRAND BOARD (OSB) FLOOR AND ROOF SHEATHING SHALL BE APA RATED WITH STAMP INCLUDING APA TRADEMARK AND PANEL SPAN RATING.
 - A. MINIMUM ROOF SHEATHING: 19/32" OSB OR CDX PLYWOOD, APA 40/20, NAILED.
 - B. MINIMUM WALL SHEATHING: 7/16" OSB OR CDX PLYWOOD, APA 24/16, BLOCKED AND NAILED.
2. NAIL WALL SHEATHING WITH MINIMUM 8D COMMON OR 10D BOX AT 6" AT PANEL EDGES, AND 12" AT INTERMEDIATE FRAMING EXCEPT AS NOTED. BLOCK AND NAIL ALL EDGES BETWEEN STUDS.
3. NAIL ALL SHEATHING TO PLATES USING EDGE NAIL SPACING INDICATED.
4. SHEATH ALL EXTERIOR WALLS.
5. SHEATHING SHALL BE CONTINUOUS FROM BOTTOM PLATE TO TOP PLATE. CUT IN "L" AND "T" SHAPES AROUND OPENINGS.
6. ALL SHEATHING SHEETS SHALL HAVE 1/8" GAP AT ALL EDGES AND JOINTS.
7. PROVIDE (1) PANEL SHEATHING CLIP AT ALL UNSUPPORTED ROOF SHEATHING PANEL EDGES.

J. LIGHT-METAL-PLATE-CONNECTED WOOD TRUSSES:

1. TRUSS MANUFACTURER SHALL COMPLY WITH ALL REQUIREMENTS AS STATED IN SECTION 2303.4 OF THE IBC.
2. ALL PRE-ENGINEERED GABLE END TRUSSES SHALL BE DESIGNED FOR WIND FORCES PERPENDICULAR TO THE TRUSS.
3. ALL PRE-ENGINEERED TRUSSES SHALL BE FABRICATED SUCH THAT THEY INCORPORATE ALL ROOF PLANES. AT CONTRACTOR'S OPTION, STANDARD SHAPE TRUSSES MAY BE USED IN CONJUNCTION WITH OVERFRAMING.
4. FULL HEIGHT BLOCKING SHALL BE PLACED BETWEEN TRUSSES AT ALL SUPPORTS.
5. CROSS BRIDGING DESIGN SHALL BE PROVIDED BY TRUSS MANUFACTURER AS REQUIRED FOR LATERAL EFFECTS.
6. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN APPROVAL OF A REGISTERED DESIGN PROFESSIONAL.
7. MANUFACTURE AND INSTALLATION OF METAL PLATED WOOD TRUSSES SHALL COMPLY WITH ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION," BCSI (BUILDING COMPONENT SAFETY INFORMATION) "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES," AND DSB-89 "RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
8. PRE-ENGINEERED, PREFABRICATED TRUSSES SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE IN WHICH TO PROJECT IS LOCATED TO CARRY THE LOADS INDICATED ON THE CONSTRUCTION DRAWINGS IN WHICH THE PROJECT IS LOCATED.
9. TRUSSES SHALL BE DESIGNED TO SUPPORT THE FULL DEAD LOADS AND THE SUPERIMPOSED DESIGN LOADS NOTED ABOVE OR ON THE DRAWINGS.
10. STRESSES SHALL NOT EXCEED THOSE LISTED IN THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (AF&PA NDS). NO INCREASES IN STRESS ARE ALLOWED FOR DURATION OF LOAD.
11. SCISSOR TYPE TRUSSES SHALL BE DESIGNED FOR A MAXIMUM OF 1/2" TOTAL HORIZONTAL DEFLECTION UNDER DEAD PLUS LIVE LOADS.
12. THE FABRICATOR SHALL DETERMINE TRUSS WEB ARRANGEMENTS AND MEMBER FORCES.
13. TRUSS TO TRUSS CONNECTIONS SPECIFIED SHALL BE BY TRUSS SUPPLIER, UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS.
14. TRUSSES SHALL BE DESIGNED IN BEARING TO NOT EXCEED THE PERPENDICULAR TO GRAIN BEARING VALUES FOR THE TOP PLATE GRADES INDICATED IN THE "STRUCTURAL WOOD FRAMING" GENERAL NOTES. WHERE TRUSS BEARING EXCEED THIS VALUE THE TRUSS MANUFACTURER SHALL PROVIDE BEARING ENHANCERS TO COMPENSATE FOR OVERSTRESSES. TRUSS MANUFACTURER SHALL SPECIFY SIZE, SPECIES, AND NAILING FOR BEARING BLOCKS.
15. TRUSS FABRICATOR SHALL SPECIFY ALL FLOOR AND ROOF TRUSS BRACING AND BRIDGING.
16. CALCULATIONS AND SHOP DRAWINGS, INCLUDING MEMBER SIZES, LUMBER SPECIES AND GRADES, AND SUBSTANTIATING DATA FOR CONNECTOR CAPACITIES, SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR REVIEW PRIOR TO FABRICATION.
17. TRUSS DESIGN SHALL INCLUDE A 250 LBS LOAD PER NFPA TO SUPPORT SPRINKLER LOADS LOCATED ANYWHERE ALONG THE BOTTOM CHORD OF THE TRUSS.
18. DEFLECTION LIMITS FOR TRUSSES SHALL NOT EXCEED THE FOLLOWING DEFLECTION CRITERIA:
 - A. ROOF LIVE LOAD = L/360
 - B. ROOF TOTAL LOAD = L/240 (1" MAXIMUM)

K. ENGINEERED LUMBER:

1. STRUCTURAL CAPACITIES OF STRUCTURAL COMPOSITE LUMBER SHALL BE IN CONFORMANCE WITH SECTION 2303.10.1 OF THE IBC.
2. MANUFACTURER OF STRUCTURAL COMPOSITE LUMBER PRODUCTS SHALL HAVE PROPER CODE EVALUATION REPORTS FOR ALL PRODUCTS AND SHALL BE APPROVED BY THE CONTRACTING OFFICER.
3. THE CONTRACTOR SHALL NOT CUT, NOTCH, OR OTHERWISE ALTER STRUCTURAL COMPOSITE LUMBER MEMBERS WITHOUT WRITTEN PERMISSION OF THE CONTRACTING OFFICER AND THE MANUFACTURER; HOWEVER, HOLES MAY BE CUT IN MEMBERS IN ACCORDANCE WITH THE MANUFACTURER'S ALLOWABLE HOLE CHART.
4. MEMBERS NOTED AS LVL (LAMINATED VENEER LUMBER) ON PLAN SHALL BE 1-3/4" WIDE X DEPTH INDICATED, PLANT-FABRICATED, AND HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:
 - A. $F_b = 2600$ PSI
 - B. $F_v = 285$ PSI
 - C. $F_{cPAR} = 2460$ PSI
 - D. $F_{cPERP} = 750$ PSI
 - E. $E = 1900$ KSI
5. MEMBERS NOTED AS LSL (LAMINATED STRAND LUMBER) ON PLAN SHALL BE PLANT-FABRICATED AND HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:
 - A. $F_b = 1700$ PSI
 - B. $F_v = 400$ PSI
 - C. $F_{cPAR} = 1400$ PSI
 - D. $F_{cPERP} = 680$ PSI
 - E. $E = 1300$ KSI
6. BRIDGING AND BLOCKING SHALL BE INSTALLED ACCORDING TO THE FABRICATOR'S REQUIREMENTS.

L. NON-STRUCTURAL MASONRY:

1. GENERAL CONTRACTOR SHALL HOLD A MASONRY PRECONSTRUCTION MEETING AT THE PROJECT SITE WITH REPRESENTATION FROM THE GC, MASON, TESTING AGENCY AND CONTRACTING OFFICER.
2. GENERAL CONTRACTOR SHALL SUBMIT COORDINATED ELEVATION DRAWINGS FOR REVIEW OF ALL MASONRY WALLS.
3. DESIGN IS BASED ON ACI 530/ASCE 5/TMS 402, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"
4. 28-DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY USED FOR DESIGN IS 2,000 PSI, BASED ON NET-BEDDED AREA.
5. MASONRY LINTELS SHALL USE STANDARD LINTEL UNITS. BOND BEAMS SHALL USE UNITS PRODUCED FROM STANDARD VERTICALLY VOIDED UNITS WITH PRE-CUT KNOCKOUT CROSS WALLS.
6. HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS (CMU) SHALL BE LIGHTWEIGHT, 85 TO 105 PCF DENSITY, CONFORMING TO ASTM C90, WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,000 PSI BASED ON AVERAGE NET AREA.
7. MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270.
8. MASONRY CEMENT SHALL NOT BE USED UNLESS PART OF A PRE-PACKAGED MORTAR OR GROUT MIX APPROVED BY THE CONTRACTING OFFICER.
9. ADMIXTURES SHALL NOT BE USED UNLESS APPROVED BY THE ARCHITECT AND/OR CONTRACTING OFFICER.
10. GROUT USED IN MASONRY WALLS AND BLOCK CELLS SHALL BE COARSE GROUT, AS DEFINED BY ARTICLE 2.2 OF TMS 602/ACI530.1/ASCE 6, WITH A MINIMUM CUBE STRENGTH = 2,000 PSI OR 3,000 PSI CONCRETE USING 3/8" DIAMETER AGGREGATE AND PLACED BY VIBRATING UNLESS AN APPROVED SELF-CONSOLIDATING MIX IS USED.
11. PLACEMENT OF MORTAR, GROUT, MASONRY UNITS AND WALL TIES SHALL COMPLY WITH TMS 602 / ACI 530.1 / ASCE 6.
12. PROVIDE MORTAR FOR FULL THICKNESS OF SHELL IN ALL HEAD AND BED JOINTS.
13. 'LOW-LIFT' GROUTING SHALL NOT EXCEED 5 FEET IN HEIGHT UNLESS ACI 530.1 'HIGH-LIFT' GROUTING PROCEDURES ARE REVIEWED AND APPROVED BY THE ARCHITECT AND CONTRACTING OFFICER.
14. VERTICALLY SPACE CONTINUOUS HORIZONTAL JOINT REINFORCING AT 16" MAXIMUM IN ALL CMU WALLS. JOINT REINFORCING SHALL BE WELDED TYPE WITH 9 GAGE SIDE RODS AND 9 GAGE LADDER CROSS RODS. IN EXTERIOR WALLS, JOINT REINFORCEMENT SHALL BE STAINLESS STEEL OR HOT-DIP GALVANIZED. ALL OTHER JOINT REINFORCEMENT SHALL BE MILL GALVANIZED, HOT-DIP GALVANIZED, OR STAINLESS STEEL.
15. REINFORCING BARS SHALL HAVE MATERIAL PROPERTIES AS SPECIFIED FOR REINFORCED CONCRETE. LAP BARS 48 DIAMETERS MINIMUM UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS.
16. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY WIRE BAR LOCATORS OR OTHER SUITABLE DEVICES AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS OR 10 FEET.
17. REINFORCE AND GROUT VERTICAL CELLS AT CORNERS, ENDS OF WALLS, JAMBS OF OPENINGS, EACH SIDE OF VERTICAL CONTROL JOINTS, AND AT SPACING SHOWN ON DRAWINGS.



DESIGNED:	SUB SHEET NO.	TITLE OF SHEET <h1>GENERAL NOTES</h1>	DRAWING NO.
JSS			121
ADD			175143
JSS			PMIS/PKG NO.
TECH REVIEW:			316223
TSS	S0.2	CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	SHEET
DATE:			59 OF 104
02.27.2023			

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M. SHOP DRAWINGS:

- THE CONSTRUCTION DRAWINGS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS. USE OF THE GOVERNMENT'S ELECTRONIC FILES AS THE BASIS FOR SHOP DRAWINGS REQUIRES PRIOR APPROVAL BY THE CONTRACTING OFFICER. A SIGNED RELEASE OF LIABILITY BY THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS, AND DELETION OF THE TITLEBLOCK FROM ALL SHEETS TO BE USED.
- THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONSTRUCTION DRAWINGS OR PROJECT SPECIFICATIONS.
- ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED (AFTER HAVING BEEN CHECKED) BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR THE CONTRACTING OFFICER'S REVIEW; SHOP DRAWING SUBMITTALS NOT CHECKED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE CONTRACTING OFFICER WILL BE RETURNED WITHOUT REVIEW.
- FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE CONTRACTING OFFICER FOR REVIEW PRIOR TO FABRICATION FOR:
 - CONCRETE MIX DESIGNS
 - CONCRETE REINFORCING STEEL
 - STRUCTURAL STEEL
 - PLANT FABRICATED WOOD LUMBER
 - PRE-ENGINEERED WOOD TRUSSES
 - PRE-ENGINEERED METAL BUILDING
- SUBMIT IN A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE CONTRACTING OFFICER.
- SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "REQUEST FOR CHANGE IN WRITING" UNLESS SPECIFIC SUGGESTED CHANGES ARE CLEARLY MARKED. IN ANY EVENT, CHANGES MADE BY MEANS OF THE SHOP DRAWING SUBMITTAL PROCESS BECOME THE RESPONSIBILITY OF THE ONE INITIATING THE CHANGE.

N. STRUCTURAL ERECTION AND BRACING REQUIREMENTS:

- THE CONSTRUCTION DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED.
- THE CONSTRUCTION DRAWINGS ILLUSTRATE TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE GENERAL CONTRACTOR. DETAILS SHOWN APPLY AT ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT EVERY DETAIL IS ILLUSTRATED AND NOT EVERY EXCEPTIONAL CONDITION IS ADDRESSED.
- ALL PROPRIETARY CONNECTIONS AND ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
- ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE APPLICABLE CODES AND LOCAL ORDINANCES.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK, INCLUDING LAYOUT AND DIMENSION VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF SUBCONTRACTORS. ANY DISCREPANCIES OR OMISSIONS DISCOVERED IN THE COURSE OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE CONTRACTING OFFICER FOR RESOLUTION.
- CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE CONTRACTING OFFICER FROM ALL CONSEQUENCES. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE CONSTRUCTION DRAWINGS DO NOT DESCRIBE METHODS OF CONSTRUCTION.
- THE GENERAL CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO TEMPORARY BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
- DO NOT BACKFILL AGAINST STEM WALLS UNTIL REACHING FULL STRENGTH, BACKFILL EQUALLY BOTH SIDES TO AVOID UNBALANCED LATERAL SOIL PRESSURE THAT EXERTS OVERTURNING LOADS ONTO FOOTINGS, EXCEPT WHERE GRADE SPECIFICALLY SHOWN TO BE IMBALANCED.
- TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND ANY OTHER SUPPORTING ELEMENTS ARE IN PLACE.
- THE CONTRACTING OFFICER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTIONS OF THESE ITEMS.

O. PRECAUTIONARY NOTES ON STRUCTURAL BEHAVIOR:

- INTERIOR ARCHITECTURAL FINISH DETAILING MUST ACCOMMODATE THE RELATIVE DIFFERENTIAL MOVEMENTS OF SUPPORTING STRUCTURAL ELEMENTS.
- WHERE THE ROOF FRAMING ELEMENT SPANS ARE LONG, APPLIED LOADING WILL NATURALLY CAUSE SUBSTANTIAL DEFLECTION. INTERIOR ELEMENTS HUNG FROM THE ROOF STRUCTURE WILL DEFLECT WITH THE ROOF.
- THE FLOOR IS A FLOATING CONCRETE SLAB-ON-GRADE AND MAY EXPERIENCE MOVEMENTS INDEPENDENT OF THE STRUCTURAL FOUNDATIONS. INTERIOR ELEMENTS SUPPORTED ON THE SLAB-ON-GRADE FLOOR WILL MOVE WITH THE FLOOR. INTERIOR ELEMENTS SUPPORTED ON FOUNDATIONS AND COLUMNS WILL NOT EXPERIENCE SIMILAR OR MEASURABLE MOVEMENTS.
- EXTERIOR/PERIMETER WALL ASSEMBLIES HUNG FROM THE EDGE OF THE BUILDING STRUCTURE WILL BE DIRECTLY AFFECTED (TO SOME DEGREE) BY CHANGES IN EXTERNAL TEMPERATURE AND FLOOR DEFLECTION.
- EXTERIOR/PERIMETER AND INTERIOR ARCHITECTURAL FINISH DETAILS SHOULD ALLOW FOR RELATIVE MOVEMENTS BETWEEN ELEMENTS WITH DIFFERENT SUPPORT CONDITIONS.

P. DEFERRED SUBMITTALS:

- PORTIONS OF THE STRUCTURE HAVE ELEMENTS OF PROPRIETARY DESIGN AND FABRICATION, WHICH SHALL BE SUBMITTED BY THE SUPPLIER FOR APPROVAL AFTER AWARD OF CONTRACT.
- THESE ITEMS SHALL CONFORM TO THE LOAD, CAPACITY, SIZE, GEOMETRY, CONNECTION, AND SUPPORT CRITERIA NOTED ON THE STRUCTURAL DRAWINGS.
- SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY AN ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. FINAL SHOP DRAWING SUBMITTALS SHALL BE STAMPED AND SIGNED.
- FURNISH DEFERRED SUBMITTALS FOR:
 - SUPPLIER ENGINEERED OPEN-WEB WOOD TRUSSES
 - PRE-ENGINEERED METAL BUILDING
- SUBMITTALS WILL BE REVIEWED BY THE CONTRACTING OFFICER FOR COMPLIANCE WITH THE SPECIFIED DESIGN REQUIREMENTS.
- DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN CALCULATIONS AND DRAWINGS HAVE BEEN REVIEWED BY THE CONTRACTING OFFICER.

Q. SPECIAL INSPECTIONS:


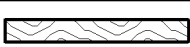





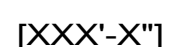

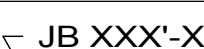
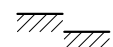
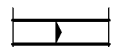

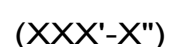

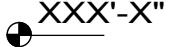

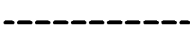

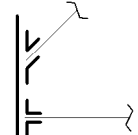
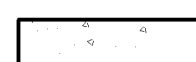
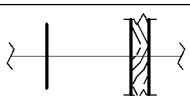



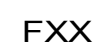

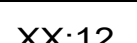


- FOR THE DETAILED LIST OF REQUIRED INSPECTIONS, REFER TO THE "STATEMENT OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS" REFERENCED IN SECTION 01 40 00 QUALITY REQUIREMENTS OF THE SPECIFICATIONS. THE FOLLOWING SPECIAL INSPECTIONS AND TESTING LIST IS SHOWN HERE FOR REFERENCE ONLY AND SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR, EMPLOYED BY THE CONTRACTOR, IN ACCORDANCE WITH CHAPTER 17 OF THE IBC:
 - SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTIONS:
 - 1704.2 SPECIAL INSPECTIONS AND TESTS
 - 1704.3 STATEMENT OF SPECIAL INSPECTIONS
 - SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
 - 1705.1.1 SPECIAL CASES (POST-INSTALLED ANCHORS)
 - 1705.2 STEEL CONSTRUCTION
 - 1705.3 CONCRETE CONSTRUCTION
 - 1705.6 SOILS
- THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE CONTRACTING OFFICER, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE APPROVED INSPECTOR MUST BE INDEPENDENT FROM THE CONTRACTOR RESPONSIBLE FOR THE WORK BEING INSPECTED.
- DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO INSPECT AND/OR TEST THE WORK OUTLINED ABOVE AND WITHIN THE STATEMENT OF SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
- ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTING OFFICER FOR CORRECTION.
- PER SECTION 1704.2.4 THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE CONTRACTING OFFICER. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, CORRECTION OF PREVIOUSLY REPORTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE CONTRACTING OFFICER. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN 10 DAYS OF THE FINAL SPECIAL INSPECTION STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
- THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE CONTRACTING OFFICER PRIOR TO THE COMMENCEMENT OF WORK ON A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM PER SECTION 1704.4. THE STATEMENT SHALL ACKNOWLEDGE THE AWARENESS OF THE SPECIAL LISTED REQUIREMENTS OF DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT IN THE STATEMENT OF SPECIAL INSPECTIONS PER SECTION 1705.
- EXCEPT AS NOTED, THE SPECIAL INSPECTIONS OUTLINED ABOVE ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1704.5.




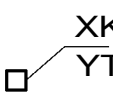
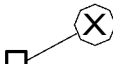
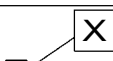





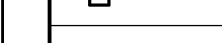
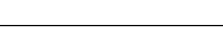




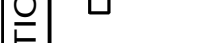




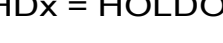
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GADD			175143
JSS			PMIS/PKG NO. 316223
TECH REVIEW: TSS			SHEET
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ABBREVIATIONS									
(E)	EXISTING	DEV	DEVELOP	HAS	HEADED ANCHOR STUD	PC	PRECAST	STL	STEEL
(N)	NEW	DIAG	DIAGONAL	HDG	HOT-DIP GALVANIZED	PCF	POUNDS PER CUBIC FOOT	STRUCT	STRUCTURE, -AL
(R)	REMOVE	DIM	DIMENSION	HDR	HEADER	PE	PRE-ENGINEERED	SUPT	SUPPORT
@	ON CENTER SPACING	DL	DEAD LOAD	HORIZ	HORIZONTAL	PEMB	PRE-ENGINEERED METAL BUILDING	SY	SQUARE YARD
AB	ANCHOR ROD (BOLT)	DN	DOWN	HP	HIGH POINT	PEN	PENETRATION	SYM	SYMMETRICAL
ADDL	ADDITIONAL	DP	DRILLED PIER	HT	HEIGHT	PERP	PERPENDICULAR	T&B	TOP AND BOTTOM
ADJ	ADJUSTABLE	DT	DOUBLE TEE	ID	INSIDE DIAMETER	PJP	PARTIAL JOINT PENETRATION	T&G	TOUNGE AND GROOVE
AESS	ARCH EXPOSED STRUCTURAL STEEL	DWG	DRAWING	IF	INSIDE FACE	PL	PLATE	TB	TOP OF BEAM
AFF	ABOVE FINISHED FLOOR	DWL	DOWEL	INT	INTERIOR, INTERMEDIATE	PLF	POUND PER LINEAR FOOT	TC	TOP OF CONCRETE
ALT	ALTERNATE	E-E	END TO END	IT	INVERTED TEE	PNL	PANEL	TCA	TORQUE-CONTROLLED ANCHOR
AMT	AMOUNT	E-W	EAST TO WEST	JB	JOIST BEARING	PP	PANEL POINT	TD	TOP OF DECK
ANCH	ANCHOR, ANCHORAGE	EA	EACH	JST	JOIST	PS	PRESTRESSED	THD	THREAD
APPROX	APPROXIMATE	ECC	ECCENTRIC	JT	JOINT	PSF	POUNDS PER SQUARE FOOT	THK	THICK, -NESS
ARCH	ARCHITECT, -URAL	EF	EACH FACE	K	KIPP (1,000 LBS)	PSI	POUNDS PER SQUARE INCH	TJ	TOP OF JOIST
ATR	ALL THREAD ROD	EJ	EXPANSION JOINT	LGS	LIGHT GAGE STEEL	PSL	PARALLEL STRAND LUMBER	TL	TOTAL LOAD
AVG	AVERAGE	EL	ELEVATION	LL	LIVE LOAD	PT	POST TENSIONED, PRESSURE TREATED	TPG	TOPPING
BC	BOTTOM OF CONCRETE	ELEC	ELECTRIC, ELECTRICAL	LLH	LONG LEG HORIZONTAL	PTN	PARTITION	TRANS	TRANSVERSE
BL	BRICK LEDGE	EMBED	EMBEDMENT	LLV	LONG LEG VERTICAL	PWD	PLYWOOD	TW	TOP OF WALL
BLK	BLOCK	ENGR	ENGINEER	LOC	LOCATION	QTY	QUANTITY	TYP	TYPICAL
BLKG	BLOCKING	EQ	EQUAL	LP	LOW POINT	R	RADIUS	ULT	ULTIMATE
BM	BEAM	EQUIP	EQUIPMENT	LSL	LAMINATED STRAND LUMBER	RE	REFERENCE, REFER TO	UNO	UNLESS OTHERWISE NOTED
BOT	BOTTOM	EQUIV	EQUIVALENT	LT	LIGHT	RECT	RECTANGLE	VERT	VERTICAL
BRG	BEARING	ES	EACH SIDE	LVL	LAMINATED VENEER LUMBER	REINF	REINFORCE, -ED, -ING	VIF	VERIFY IN FIELD
BW	BOTTOM OF WALL	EST	ESTIMATE	MACH	MACHINE	REQ	REQUIRED	WP	WORK POINT
CB	COUNTERBORE	EXC	EXCAVATE	MASY	MASONRY	REQMT	REQUIREMENT	WT	WEIGHT
CF	CUBIC FOOT	EXP	EXPANSION	MATL	MATERIAL	RET	RETAINING	WTS	WELDED THREADED STUD
CFS	COLD FORMED STEEL	EXT	EXTERIOR	MAX	MAXIMUM	RM	ROOM	WWF	WELDED WIRE FABRIC
CG	CENTER OF GRAVITY	F-F	FACE TO FACE	MB	MACHINE BOLT	RMO	ROUGH MASONRY OPENING	XS	EXTRA STRONG
CIP	CAST-IN-PLACE	FD	FLOOR DRAIN	MECH	MECHANICAL	RO	ROUGH OPENING	XSECT	CROSS SECTION
CJ	CONSTRUCTION JOINT, CONTROL JOINT	FDN	FOUNDATION	MEZZ	MEZZANINE	SC	SLIP-CRITICAL	XXS	DOUBLE EXTRA STRONG
CJP	COMPLETE JOINT PENETRATION	FF	FINISHED FLOOR, FAR FACE	MFR	MANUFACTURE, -ER, -ED	SCH	SCHEDULE		
CL	CENTER LINE	FIG	FIGURE	MIN	MINIMUM	SDST	SELF-DRILLING/SELF-TAPPING		
CLG	CEILING	FL	FLUSH	ML	MICROLLAM (TRUS-JOIST BRAND LVL)	SECT	SECTION		
CLR	CLEAR	FLG	FLANGE	MO	MASONRY OPENING	SF	SQUARE FEET, SUB-FLOOR		
CM	CONSTRUCTION MANAGER, -MENT	FLR	FLOOR	MTL	METAL	SFRS	SEISMIC FORCE-RESISTING SYSTEM		
CMU	CONCRETE MASONRY UNIT	FO	FACE OF	N-S	NORTH TO SOUTH	SHT	SHEET		
COL	COLUMN	FP	FULL PENETRATION	NF	NEAR FACE	SHTG	SHEATHING		
COM	COMMON	FS	FOOTING STEP, FAR SIDE	NIC	NOT IN CONTRACT	SIM	SIMILAR		
COMB	COMBINATION	FTG	FOOTING	NS	NEAR SIDE	SLH	SHORT LEG HORIZONTAL		
CONC	CONCRETE	GA	GAGE, GAUGE	NTS	NOT TO SCALE	SLV	SHORT LEG VERTICAL		
CONN	CONNECTION	GALV	GALVANIZED	OCJ	OSHA COLUMN JOIST	SOG	SLAB ON GRADE		
CONT	CONTINUOUS, CONTINUE	GC	GENERAL CONTRACTOR	OD	OUTSIDE DIAMETER	SP	SPACES, SPACED		
COORD	COORDINATE, COORDINATION	GEN	GENERAL	OF	OUTSIDE FACE	SPEC	SPECIFICATIONS		
CS	COUNTERSINK	GL	GLUED LAMINATED, GLULAM	OH	OPPOSITE HAND	SQ	SQUARE		
CTR	CENTER	GND	GROUND	OPNG	OPENING	SSR	SHEAR STUD RAIL		
CY	CUBIC YARD	GR	GRADE	OPP	OPPOSITE	ST	SNUG-TIGHT		
DAB	DEFORMED ANCHOR BAR	GT	GIRDER TRUSS	OSB	ORIENTED STRAND BOARD	STD	STANDARD		
DET	DETAIL	GYP BD	GYPSUM BOARD	PAF	POWDER ACTUATED FASTENER	STIFF	STIFFENER		

SYMBOLS			
	DIRECTION OF DECK SPAN		WOOD BEARING WALL
	GRID DESIGNATION		WOOD SHEAR WALL
	REVISION		TOP OF CONCRETE OR MASONRY ELEVATION
	SHEAR WALL		TOP OF BEAM ELEVATION
	SHORING		JOIST BEARING ELEVATION
	STEP IN FLOOR ELEVATION		STEP TOP OF WALL
	CMU (CONCRETE MASONRY UNIT)		TOP OF FOOTING ELEVATION
	BRICK		TOP OF FLOOR ELEVATION
	CIP CONCRETE		WOOD HEADER
	PRECAST CONCRETE		WOOD JOIST OR BEAM SUPPORTED BY METAL HANGER
	EXISTING CONCRETE		WOOD JOIST CONTINUOUS OVER INTERMEDIATE SUPPORT
	EARTH		WOOD JOIST BEARING ON TOP OF SUPPORT
	ISOLATED SPREAD FOOTING MARK		
	SPREAD FOOTING MARK		
	STEP IN BOTTOM OF WALL/GRADE BEAM		
	ROOF SLOPE		
	DIRECTION OF SLOPE (DOWN)		
	STAIR OR RAMP DIRECTION		

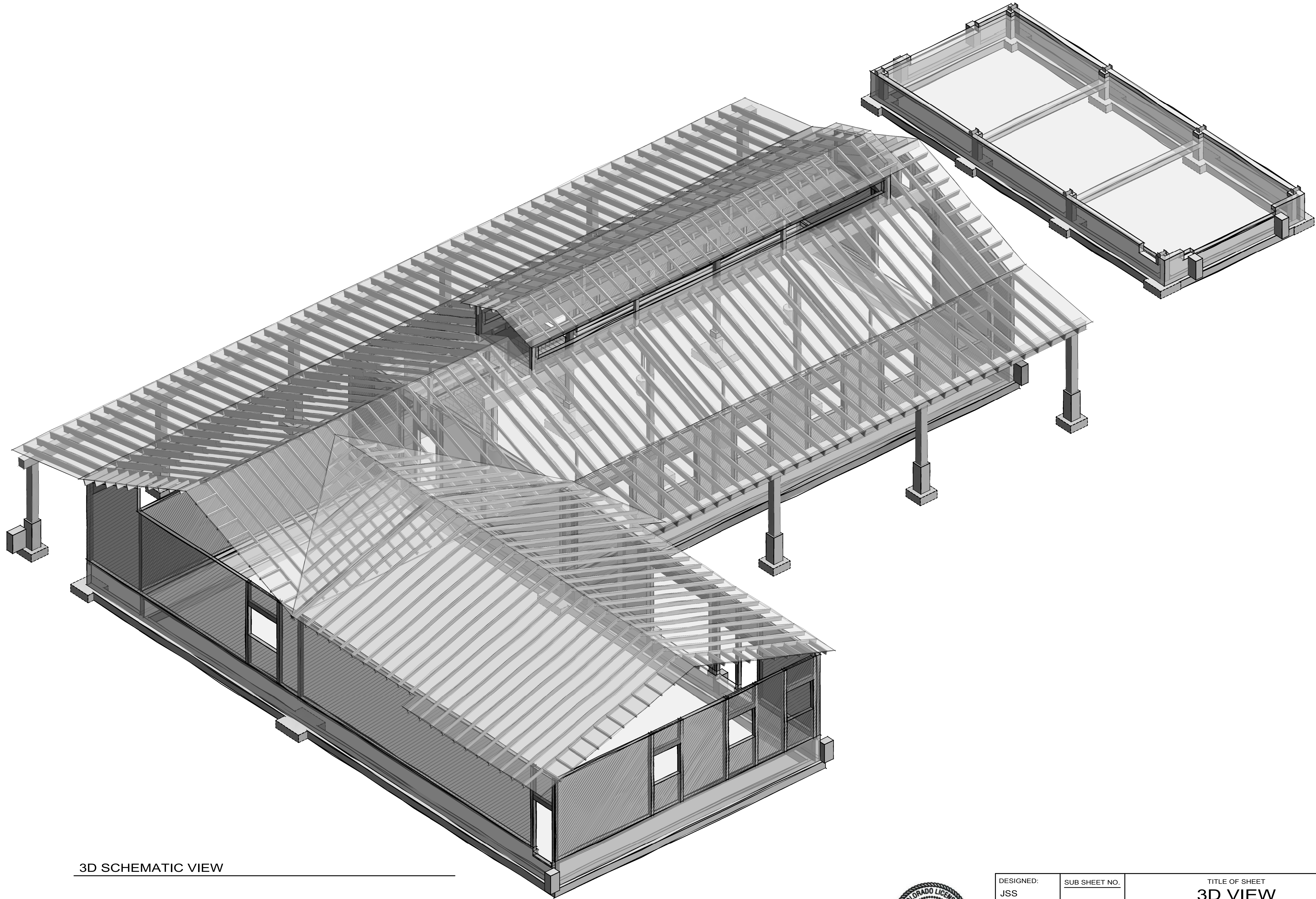
BUILDING COLUMN DESIGNATIONS		COLUMN <u>ABOVE</u>
		COLUMN OR OTHER ELEMENT <u>BELOW</u> SEE SCHEDULES & NOTES Cx = COLUMN BPx = BASE PLATE EPx = EMBED PLATE ABx = ANCHOR BOLT HDx = HOLDOWN
		COLUMN CONTINUOUS FROM LEVEL BELOW
		"X" NUMBER OF KING STUDS BELOW "Y" NUMBER OF TRIMMER STUDS BELOW
		"X" NUMBER OF BUILT-UP 2x6 STUDS IN COLUMN BELOW
		"X" NUMBER OF BUILT-UP 2x4 STUDS IN COLUMN BELOW
		HOLDOWN

BUILDING COLUMN DESIGNATIONS			
	A		COLUMN <u>ABOVE</u>
	XXX		COLUMN OR OTHER ELEMENT <u>BELOW</u> SEE SCHEDULES & NOTES Cx = COLUMN BPx = BASE PLATE EPx = EMBED PLATE ABx = ANCHOR BOLT HDx = HOLDOWN
	C		COLUMN CONTINUOUS FROM LEVEL BELOW
	XK YT		"X" NUMBER OF KING STUDS BELOW "Y" NUMBER OF TRIMMER STUDS BELOW
	X		"X" NUMBER OF BUILT-UP 2x6 STUDS IN COLUMN BELOW
	X		"X" NUMBER OF BUILT-UP 2x4 STUDS IN COLUMN BELOW
	HX		HOLDOWN



DESIGNED: JSS GAAD JSS TECH REVIEW: TSS DATE: 02.27.2023	SUB SHEET NO. S0.4	TITLE OF SHEET ABBREVIATIONS & SYMBOLS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 61 OF 104
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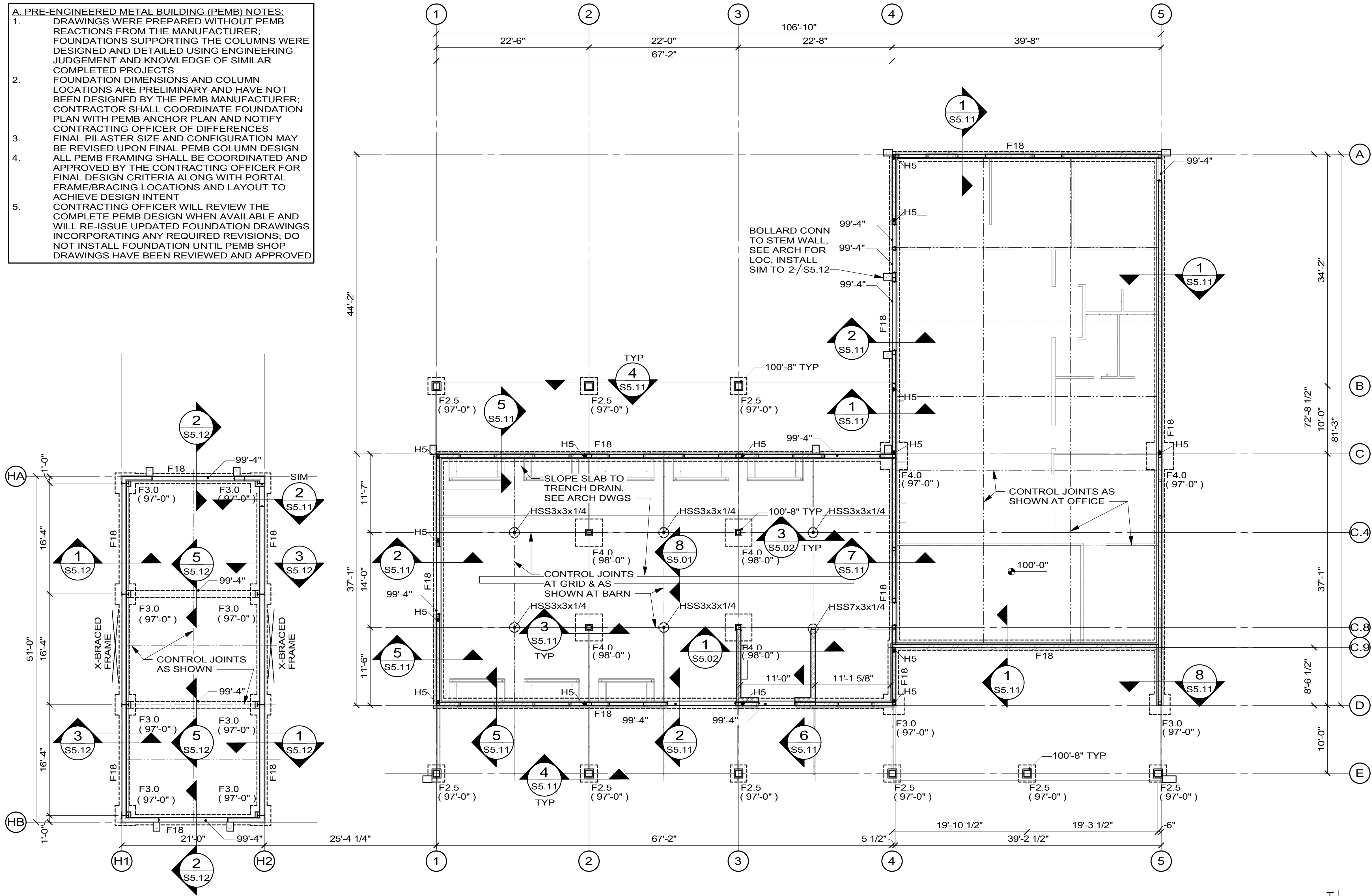
3D SCHEMATIC VIEW



DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 02.27.2023	SUB SHEET NO. S0.5	TITLE OF SHEET 3D VIEW CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 62 OF 104
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2/22/2023 5:38:23 PM BIM 360://2021-51 ROMO Barn & Tack/21039;1 JVA Structural S21.rvt

- A. PRE-ENGINEERED METAL BUILDING (PEMB) NOTES:**
- DRAWINGS WERE PREPARED WITHOUT PEMB REACTIONS FROM THE MANUFACTURER; FOUNDATIONS SUPPORTING THE COLUMNS WERE DESIGNED AND DETAILED USING ENGINEERING JUDGEMENT AND KNOWLEDGE OF SIMILAR COMPLETED PROJECTS
 - FOUNDATION DIMENSIONS AND COLUMN LOCATIONS ARE PRELIMINARY AND HAVE NOT BEEN DESIGNED BY THE PEMB MANUFACTURER; CONTRACTOR SHALL COORDINATE FOUNDATION PLAN WITH PEMB ANCHOR PLAN AND NOTIFY CONTRACTING OFFICER OF DIFFERENCES
 - FINAL PILASTER SIZE AND CONFIGURATION MAY BE REVISED UPON FINAL PEMB COLUMN DESIGN
 - ALL PEMB FRAMING SHALL BE COORDINATED AND APPROVED BY THE CONTRACTING OFFICER FOR FINAL DESIGN CRITERIA ALONG WITH PORTAL FRAME/BRACING LOCATIONS AND LAYOUT TO ACHIEVE DESIGN INTENT
 - CONTRACTING OFFICER WILL REVIEW THE COMPLETE PEMB DESIGN WHEN AVAILABLE AND WILL RE-ISSUE UPDATED FOUNDATION DRAWINGS INCORPORATING ANY REQUIRED REVISIONS; DO NOT INSTALL FOUNDATION UNTIL PEMB SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED



- B. HOLDOWN NOTES:**
- HOLDOWNS ARE INDICATED ON PLAN THUS: HX
 - HOLDOWNS INDICATED ARE LOCATED AT THE BOTTOM OF THE WALL
 - SEE HOLDOWN SCHEDULE, 2/S5.03

- C. BACKFILL NOTES:**
- BACKFILL AGAINST STEM WALLS IN EVEN LIFTS EACH SIDE SO THAT SOIL HEIGHT IS OFFSET NO MORE THAN 18" FROM ONE SIDE TO THE OTHER

- D. FOOTING NOTES:**
- FOOTINGS SHALL BE PLACED ON 12" MINIMUM DEPTH OF SCARIFIED AND RECOMPACTED SUBGRADE
 - CENTER FOOTINGS UNDER STEMWALLS & PILASTERS, TYPICAL UNLESS NOTED OTHERWISE
 - FOOTING WIDTHS SHALL NOT VARY IN THE FIELD FROM SIZES NOTED; OVERSIZE NOT ALLOWED
 - LAPPED BOARD FORMING NOT ALLOWED
 - TRENCH FORMING NOT ALLOWED
 - SEE FOOTING SCHEDULE, 2/S5.01

- E. TYPICAL INTERIOR SLAB ON GRADE:**
- 6" THICK CONCRETE SLAB ON VAPOR BARRIER ON RIGID INSULATION PER ARCH DWGS ON 4" GRAVEL AT BARN/OFFICE, 6" THICK SLAB ON 4" GRAVEL AT HAY STORAGE (NO VAPOR BARRIER OR RIGID INSULATION); 12" MINIMUM DEPTH OF SCARIFIED AND RECOMPACTED SUBGRADE PREPARATION AT SLABS; REINFORCE SLABS WITH #4 @ 16". EACH WAY, 3" CLEAR FROM BOTTOM; PROVIDE SAWCUT OR FORMED CONTROL JOINTS PER 8/S5.01 @ ±13'-6" IN EACH DIRECTION, SEE PLAN; ADD (2) #4 x 4'-6" DIAGONAL BARS 3" CLEAR FROM TOP OF SLAB AT ALL RE-ENTRANT CORNERS

FOOTING SCHEDULE				
MARK	WIDTH	LENGTH	DEPTH	REINFORCING
F2.5	2'-6"	2'-6"	1'-0"	(3) #5 EA WAY
F3.0	3'-0"	3'-0"	1'-0"	(4) #5 EA WAY
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EA WAY
F18	1'-6"		1'-0"	(2) #5 CONT

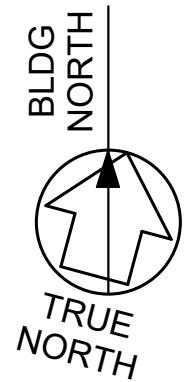
HOLDOWN SCHEDULE					
MARK	MODEL #	ANCHOR BOLTS	EMBEDMENT DEPTH	SCREWS OR NAILS	END STUDS
H5	HDU5-SDS2.5	5/8"Ø ASTM F1554-36 ATR	8"	(14) SDS25212	(2) 2x
HP	HDU2-SDS2.5	5/8"Ø x 8" LAG SCREW	N/A	(6) SDS25212	6x6 POST
HT	HDU2-SDS2.5	5/8"Ø ASTM F1554-36 ATR	N/A	(6) SDS25212	(3) PLY TRUSS

FOUNDATION PLAN

- 100'-0" = TOP OF INTERIOR FLOOR SLAB AT EACH BUILDING WITH USGS ELEVATIONS:
 - 8,689.5' = 100'-0" AT BARN/OFFICE
 - 8,689.5' = 100'-0" AT HAY STORAGE
- TOP OF INTERIOR FLOOR SLAB ELEVATION = 100'-0" UNLESS NOTED THUS: XXX'-X"
- TOP OF FOOTING ELEVATION = 97'-0" UNLESS NOTED THUS: (XXX'-X")
- FOOTING STEP PER 7/S5.01 NOTED THUS: FS
- TOP OF CONCRETE STEM WALL ELEVATION = 100'-6" AT EXTERIOR STUD WALL AND 99'-4" AT DOOR OPENINGS UNLESS NOTED: XXX'-X"
- EXTERIOR WOOD COLUMNS BEAR ON PILASTERS AT ELEVATION = 100'-8", TYPICAL UNLESS NOTED: XXX'-X"



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SCALE SCALE OF FEET

FOUNDATION PLAN

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
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SHEET
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- A. PRE-ENGINEERED METAL BUILDING (PEMB) NOTES:**
- DRAWINGS WERE PREPARED WITHOUT PEMB REACTIONS FROM THE MANUFACTURER; FOUNDATIONS SUPPORTING THE COLUMNS WERE DESIGNED AND DETAILED USING ENGINEERING JUDGEMENT AND KNOWLEDGE OF SIMILAR COMPLETED PROJECTS
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 - FINAL PILASTER SIZE AND CONFIGURATION MAY BE REVISED UPON FINAL PEMB COLUMN DESIGN
 - ALL PEMB FRAMING SHALL BE COORDINATED AND APPROVED BY THE CONTRACTING OFFICER FOR FINAL DESIGN CRITERIA ALONG WITH PORTAL FRAME/BRACING LOCATIONS AND LAYOUT TO ACHIEVE DESIGN INTENT
 - CONTRACTING OFFICER WILL REVIEW THE COMPLETE PEMB DESIGN WHEN AVAILABLE AND WILL RE-ISSUE UPDATED FOUNDATION DRAWINGS INCORPORATING ANY REQUIRED REVISIONS; DO NOT INSTALL FOUNDATION UNTIL PEMB SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED

DECORATIVE ANGLE
CLIP AT 2x RIM CORNERS
& TRANSITIONS, EQUIV
TO A35, TYP

MSTC28, DOWN TO
PL & UP TO TRUSS
LOCATE HDR TO
ACCOMMODATE
LOUVER ABOVE
DOOR, SEE
MECH DWGS

EAVE EXTENSION
OVER WALL
MOUNT EQUIP.
SEE ARCH DWGS



- B. TRUSS SUPPLIER NOTE:**
DESIGN ALL ROOF TRUSSES TO CLEAR SPAN TO BEARING WALLS/ BEAMS INDICATED ON PLAN, DESIGN LOADS ARE AS FOLLOWS:
DEAD LOAD BOTTOM CHORD = 10 PSF
DEAD LOAD TOP CHORD = 10 PSF
PV LOAD TOP CHORD = 5 PSF, BID OPTION B
SNOW LOAD TOP CHORD = 54 PSF
LIMIT DEFLECTION TO:
SPAN/360 FOR SNOW LOAD
SPAN/240 (LIMIT TO 1" MAXIMUM) FOR TOTAL LOAD
ALL TRUSS-TO-TRUSS CONNECTIONS TO BE DESIGNED AND SUPPLIED BY TRUSS MANUFACTURER. TRUSS FABRICATOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS STAMPED BY A COLORADO REGISTERED ENGINEER TO ARCHITECT FOR REVIEW BEFORE FABRICATION.


DO NOT ALTER TRUSS LAYOUT, BEARING DESIGN SHALL ASSUME DOUGLAS FIR WALL TOP PLATES (625 PSI). USE MULTIPLE PLIES, BEARING BLOCKS, OR BEARING ENHANCERS TO ACCOMMODATE 5-1/2" BEARING LENGTHS PER PLAN. THE USE OF END GRAIN BEARING IS NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE CONTRACTING OFFICER FOR THE PROJECT.

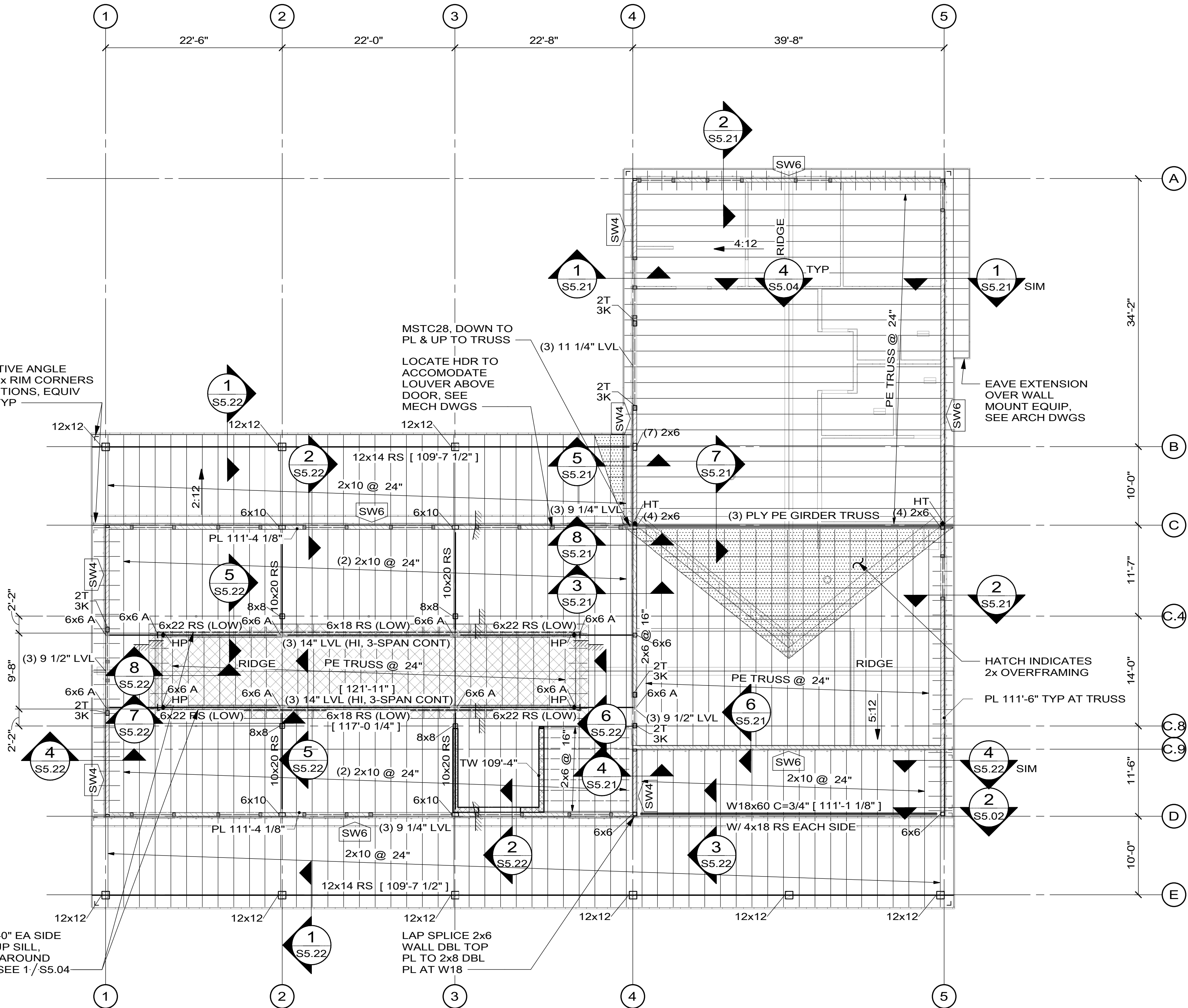
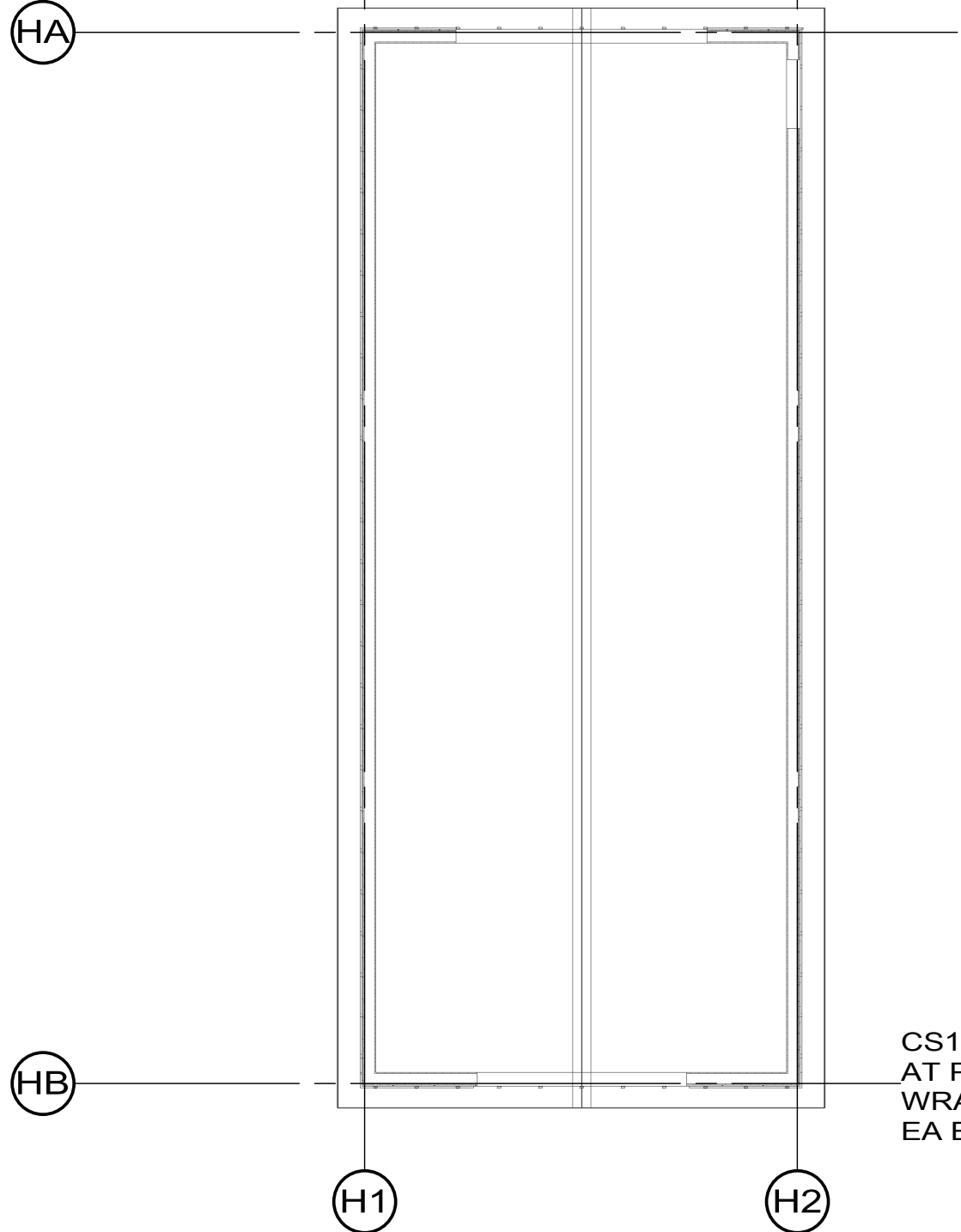
- C. COLUMNS:**
K INDICATES NUMBER OF 2x KING STUDS, T INDICATES NUMBER OF 2x TRIM STUDS (EQUAL TO WALL STUD WIDTH)
X INDICATES NUMBER OF 2x6 STUDS IN A STUDPACK

D. TYPICAL HEADERS AND TRIM / KING STUDS:
PROVIDE (3) 2x8 HEADERS W/ (2) KING STUDS (2K) AND (1) TRIM STUD (1T) AT ALL WOOD OPENINGS, TYPICAL UNO

E. WOOD ROOF OVERFRAMING:
HATCH PATTERN INDICATES OVERFRAMING WITH 2x6 RAFTERS @ 24" WITH 2x4 VERTS @ 48" DOWN TO TRUSS BELOW, SEE 7 / S5.04

- F. TYPICAL EXTERIOR WOOD FRAMED WALLS (UNO):**
- 2x6 STUDS @ 16" SHEATHED WITH 15/32" APA 32/16, EXPOSURE 1
 - NAIL WALL SHTG WITH 8d COM (0.131"Ø x 2 1/2")
 - BLOCK AND NAIL ALL EDGES BETWEEN STUDS
 - IF GUN NAILS ARE USED FOR NAILING, NAILS MUST BE AT A MINIMUM THE DIAMETER AND LENGTH NOTED ABOVE
 - SEE SHEAR WALL SCHEDULE FOR NAILING & CONNECTIONS.
 - ALL WALLS HATCHED THUS  ARE  UNO

G. TYPICAL ROOF SHEATHING:
19/32" APA 40/20 RATED SHEATHING FASTENED WITH 10d NAILS (0.128"Ø x 3") @ 6" ALONG PANEL EDGES AND @ 12" ALONG INTERMEDIATE FRAMING MEMBERS. LAY PANELS PERPENDICULAR TO FRAMING MEMBERS AND STAGGER PANEL JOINTS.
 CROSSHATCH PATTERN INDICATES REGION WITH BLOCKED PANEL EDGES BETWEEN FRAMING WITH 2x4 FLAT AND EDGE NAILING.

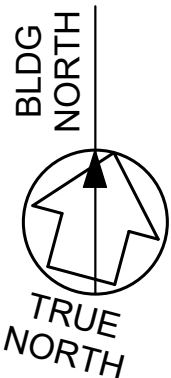



WALL WOOD SCHEDULE

MARK	STUDS	SHEATHING	SHEATHING NAILS	PANEL EDGE NAIL SPACING	10" ANCHOR BOLTS	WASHERS	A35 SPACING
SW4	2x6 @ 16" W/ (2) 2x6 @ 48" AT SHTG SPLICES	15/32" APA (32/16)	8d COM (0.131"Øx2 1/2")	4"	1/2"Ø @ 32"	0.229"x3" PL (BPS1/2-6)	1'-4"
SW6	2x6 @ 16"	15/32" APA (32/16)	8d COM (0.131"Øx2 1/2")	6"	1/2"Ø @ 48"	STD CUT WASHER	2'-0"

ROOF FRAMING PLAN

- 100'-0" DRAWING ELEVATION = USGS ELEVATIONS, SEE S1.1
- TOP OF PLATE ELEVATION = 111'-6" TYPICAL UNLESS THUS: PL XXX'-X" →
- ALL BEAMS ARE FLUSH, UNLESS NOTED OTHERWISE ON PLAN
- ALL HEADERS ARE DROPPED, UNLESS NOTED OTHERWISE ON PLAN
- ALL COLUMNS ARE BELOW
- TOP OF CONC OR CMU WALL ELEVATION INDICATED THUS: XXX'-X" →
- TOP OF BEAM INDICATED THUS: [XXX'-X"]
- STEEL BEAM CAMBER INDICATED THUS: C=X"



SCALE (A)  SCALE OF FEET



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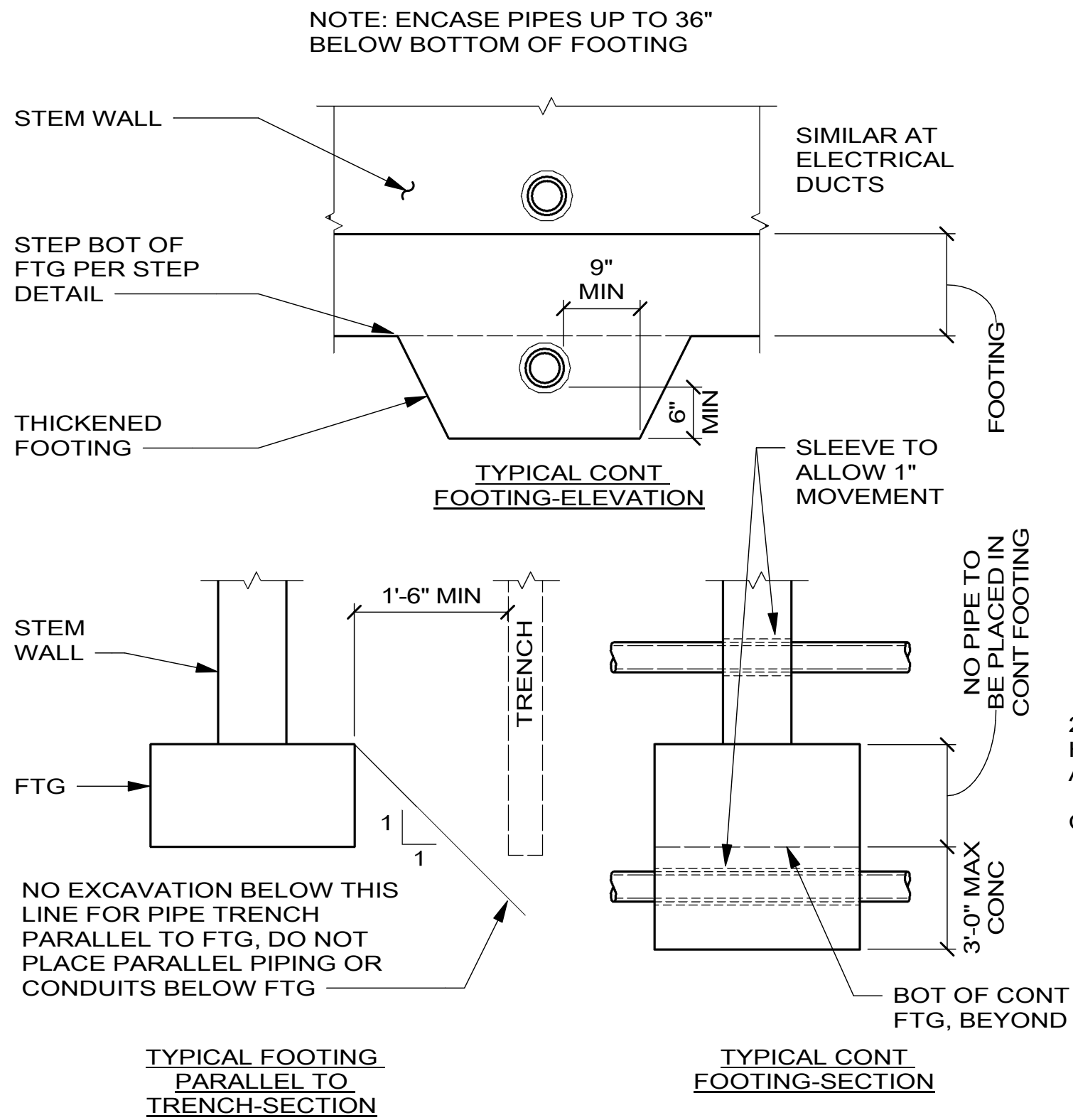
SUB SHEET NO.
S1.2

TITLE OF SHEET
ROOF FRAMING PLAN

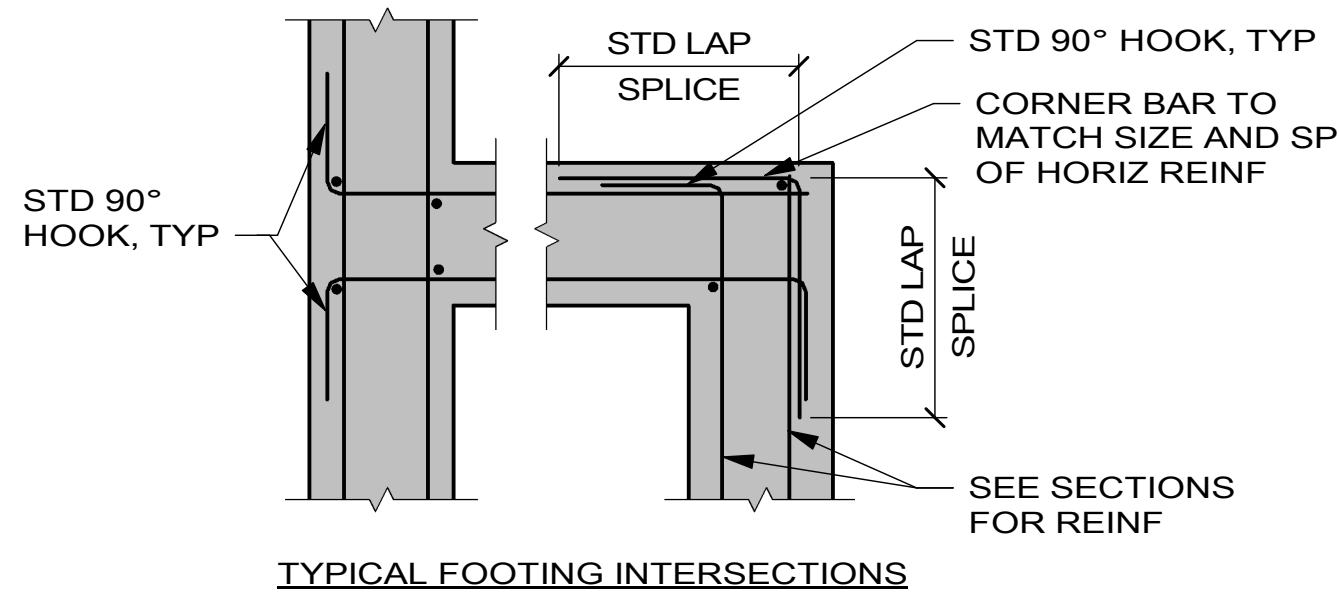
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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SHEET
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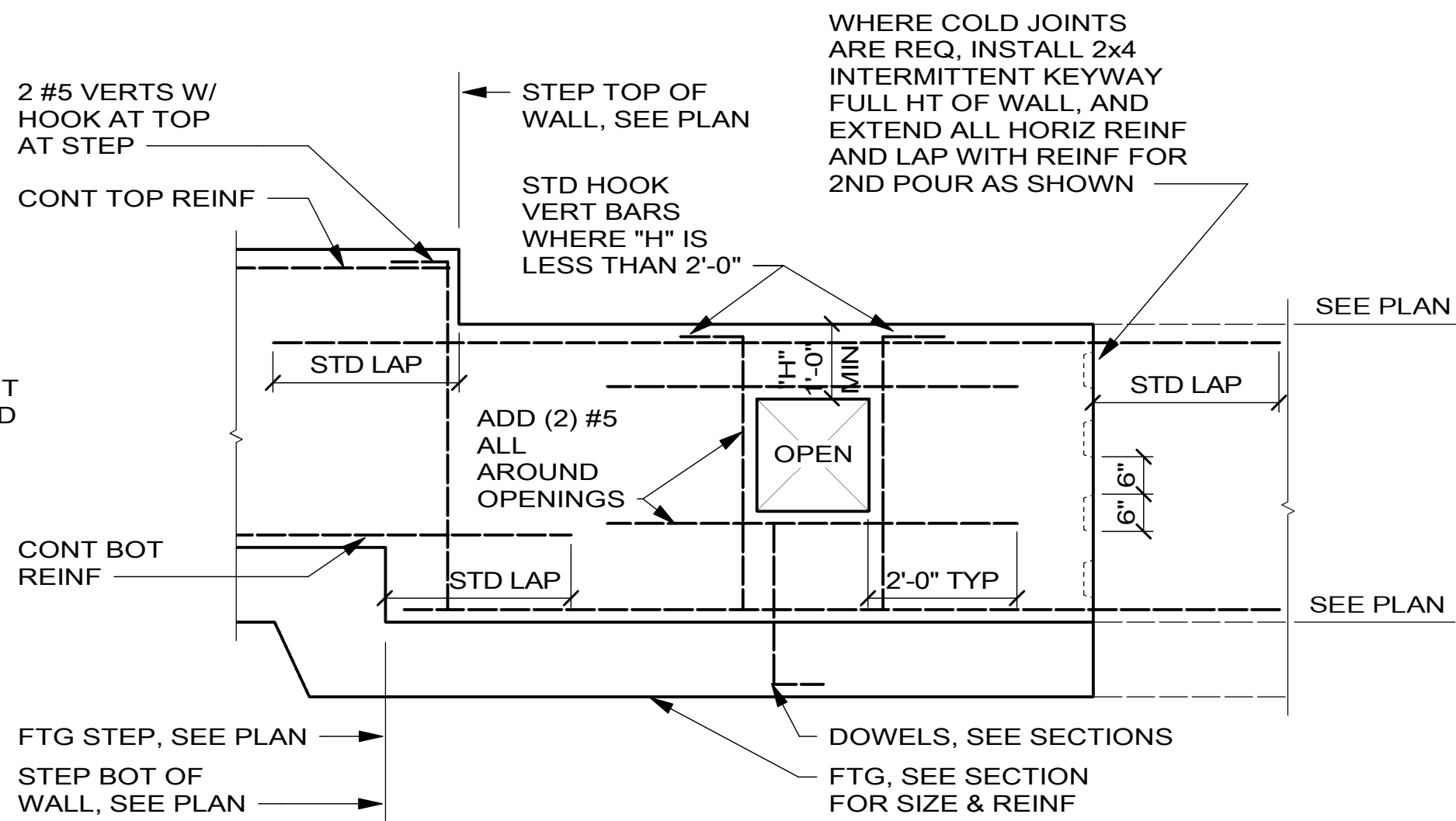
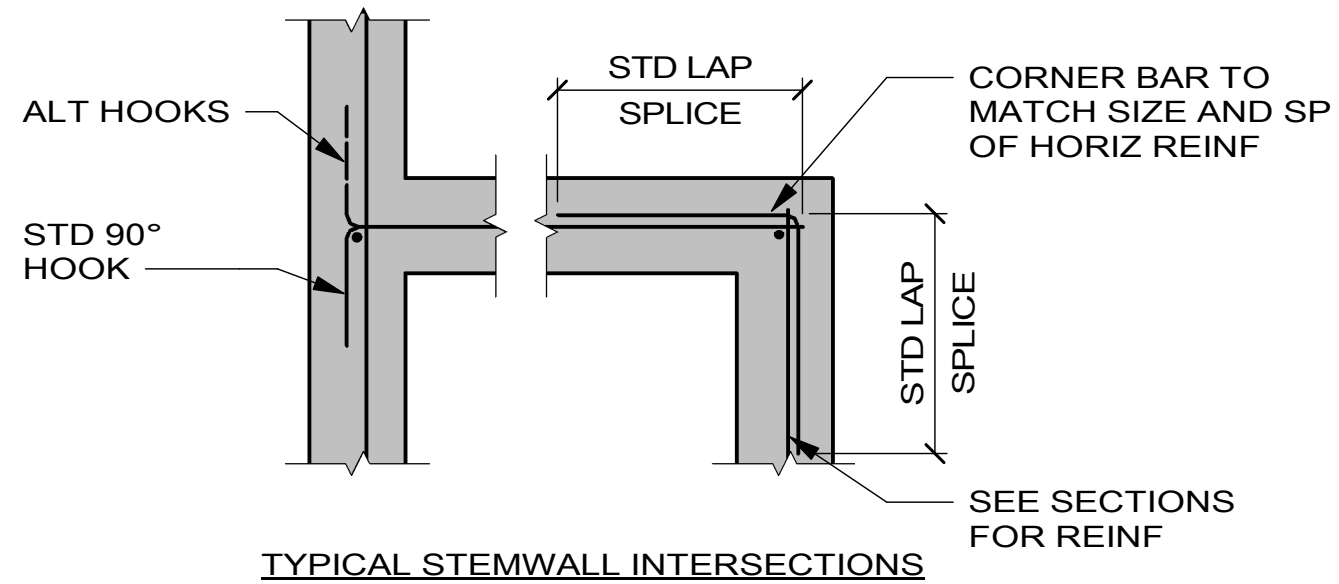
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5 PIPE AT FOOTING DETAIL
S5.01 SCALE A



1 CONC INTERSECTIONS PLAN DETAIL
S5.01 SCALE A



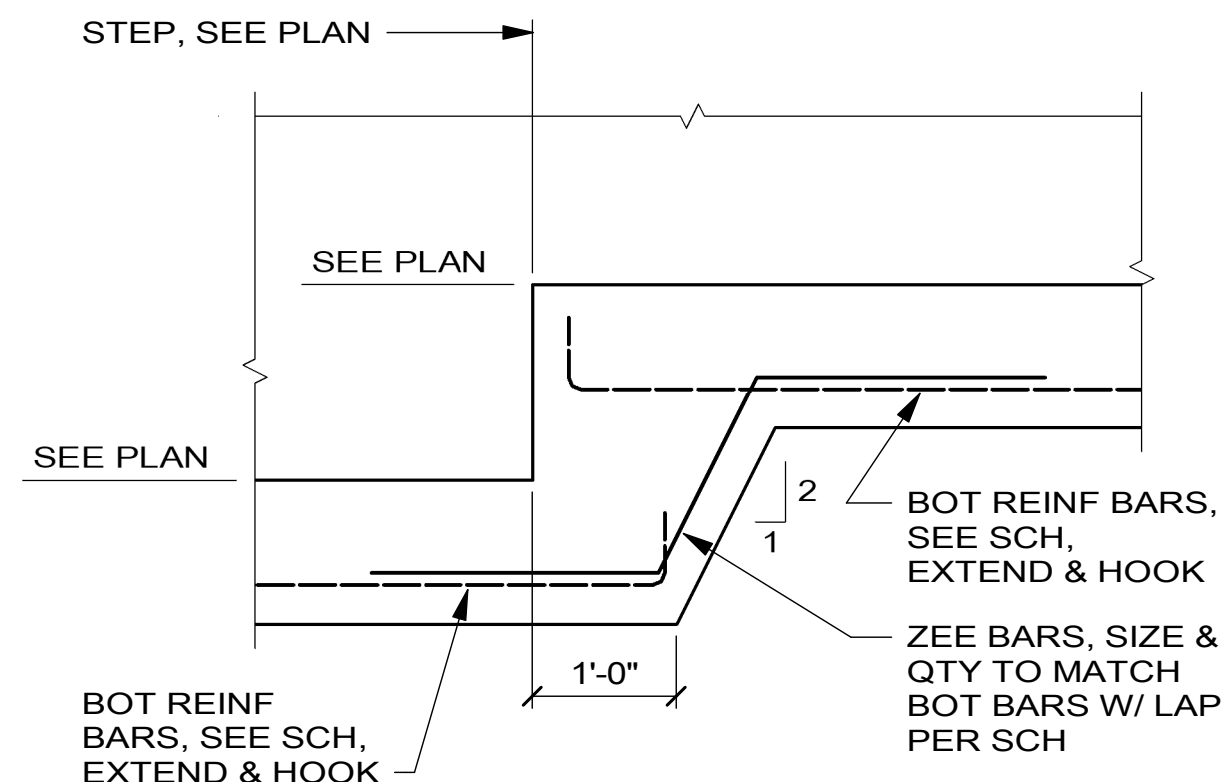
6 FOUNDATION STEP & OPENING DETAIL
S5.01 SCALE B

FOOTING SCHEDULE				
MARK	WIDTH	LENGTH	DEPTH	REINFORCING
F2.5	2'-6"	2'-6"	1'-0"	(3) #5 EA WAY
F3.0	3'-0"	3'-0"	1'-0"	(4) #5 EA WAY
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EA WAY
F18	1'-6"		1'-0"	(2) #5 CONT

FOOTING NOTES:

- FOOTINGS SHALL BE PLACED ON 3'-0" DEPTH MINIMUM COMPACTED ENGINEERED FILL PER SOILS REPORT
- CENTER FOOTINGS UNDER STEMWALLS & PILASTERS, TYPICAL UNLESS NOTED OTHERWISE
- LAPPED BOARD FORMING NOT ALLOWED
- TRENCH FORMING NOT ALLOWED

2 FOOTING SCHEDULE
S5.01 NO SCALE



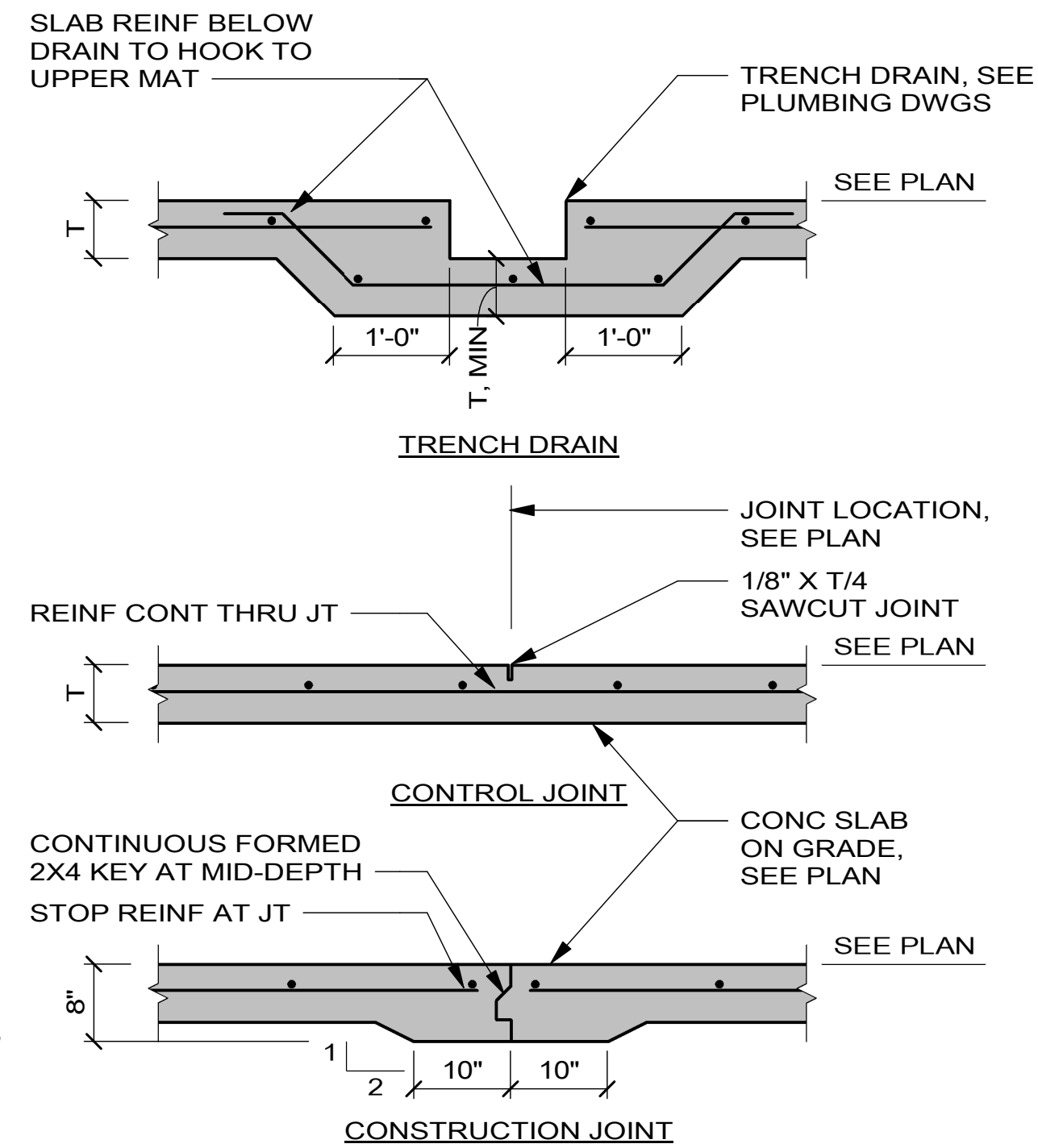
7 FOOTING STEP DETAIL
S5.01 SCALE A

TYPICAL CONCRETE REINFORCING LAP LENGTHS (UNO)							
BAR SIZE	TYPE	Fc = 3000 PSI (TOP)	Fc = 3000 PSI (OTHER)	Fc = 4000 PSI (TOP)	Fc = 4000 PSI (OTHER)	Fc = 5000 PSI (TOP)	Fc = 5000 PSI (OTHER)
#3	EMBED	22	17	19	15	17	13
#3	LAP	28	22	24	19	22	17
#4	EMBED	29	22	25	19	22	17
#4	LAP	37	29	32	25	29	22
#5	EMBED	36	28	31	24	28	22
#5	LAP	47	36	40	31	36	28
#6	EMBED	43	33	37	29	33	26
#6	LAP	56	43	48	37	43	33

NOTES:

- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW BAR
- TABULATED VALUES ARE BASED ON GRADE 60 NON-EPOXY-COATED REINFORCING BARS AND NORMAL WEIGHT CONCRETE
- VALUES ARE IN INCHES

3 REINF LAP SPLICE SCHEDULE
S5.01 NO SCALE

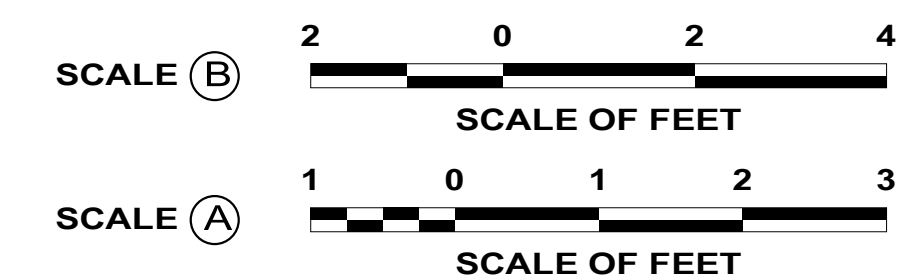


8 SLAB ON GRADE DETAILS
S5.01 SCALE A

STANDARD HOOKS				
BAR SIZE	D	180° (A OR G)	180° (J)	90° (A OR G)
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	1'-0"

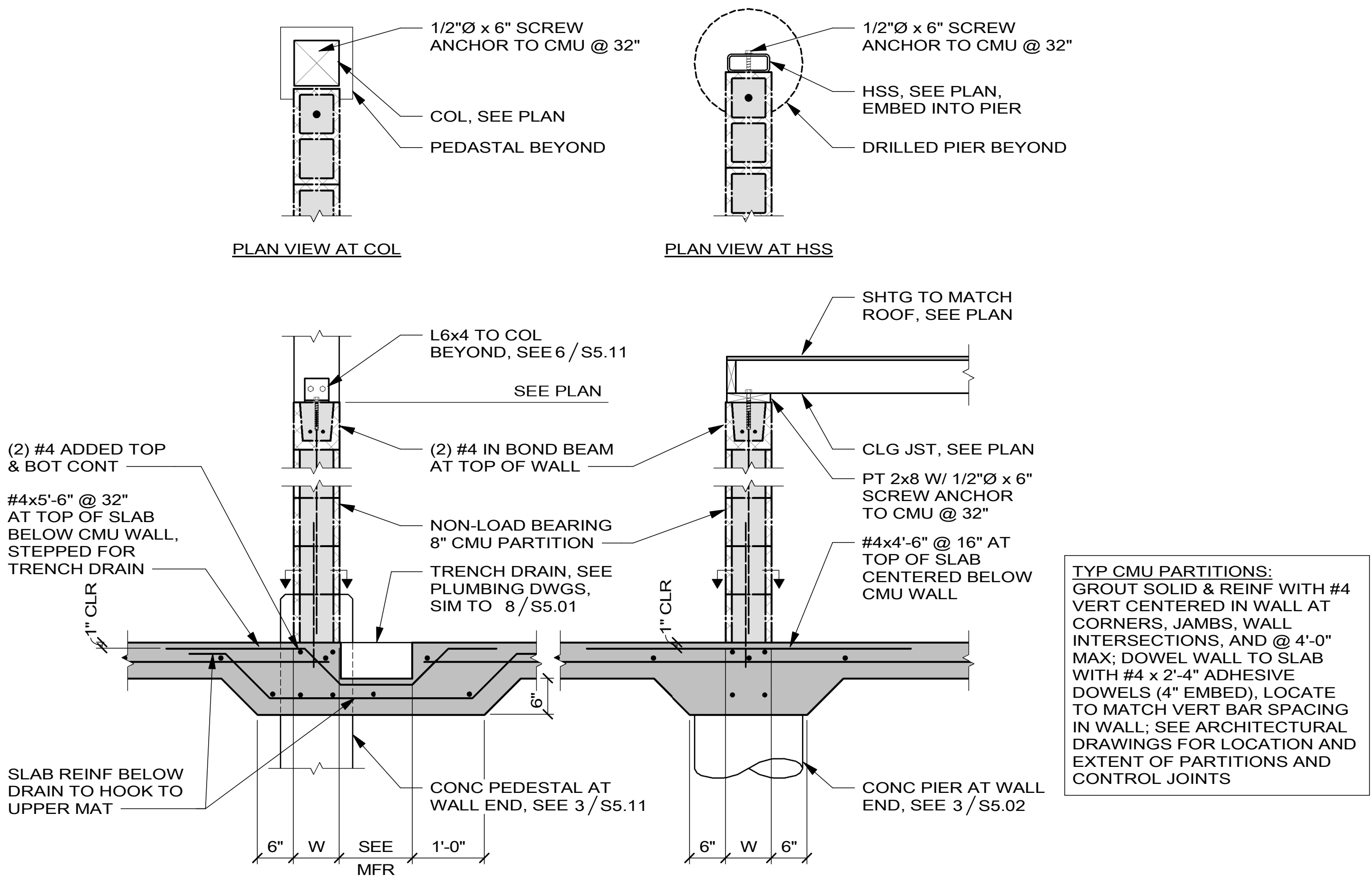
ALL GRADES OF STEEL
D = FINISHED INSIDE BEND Ø
db = NOMINAL BAR DIAMETER
MIN D = 6 db FOR #3 THROUGH #7

4 REINF HOOK SCHEDULE
S5.01 NO SCALE

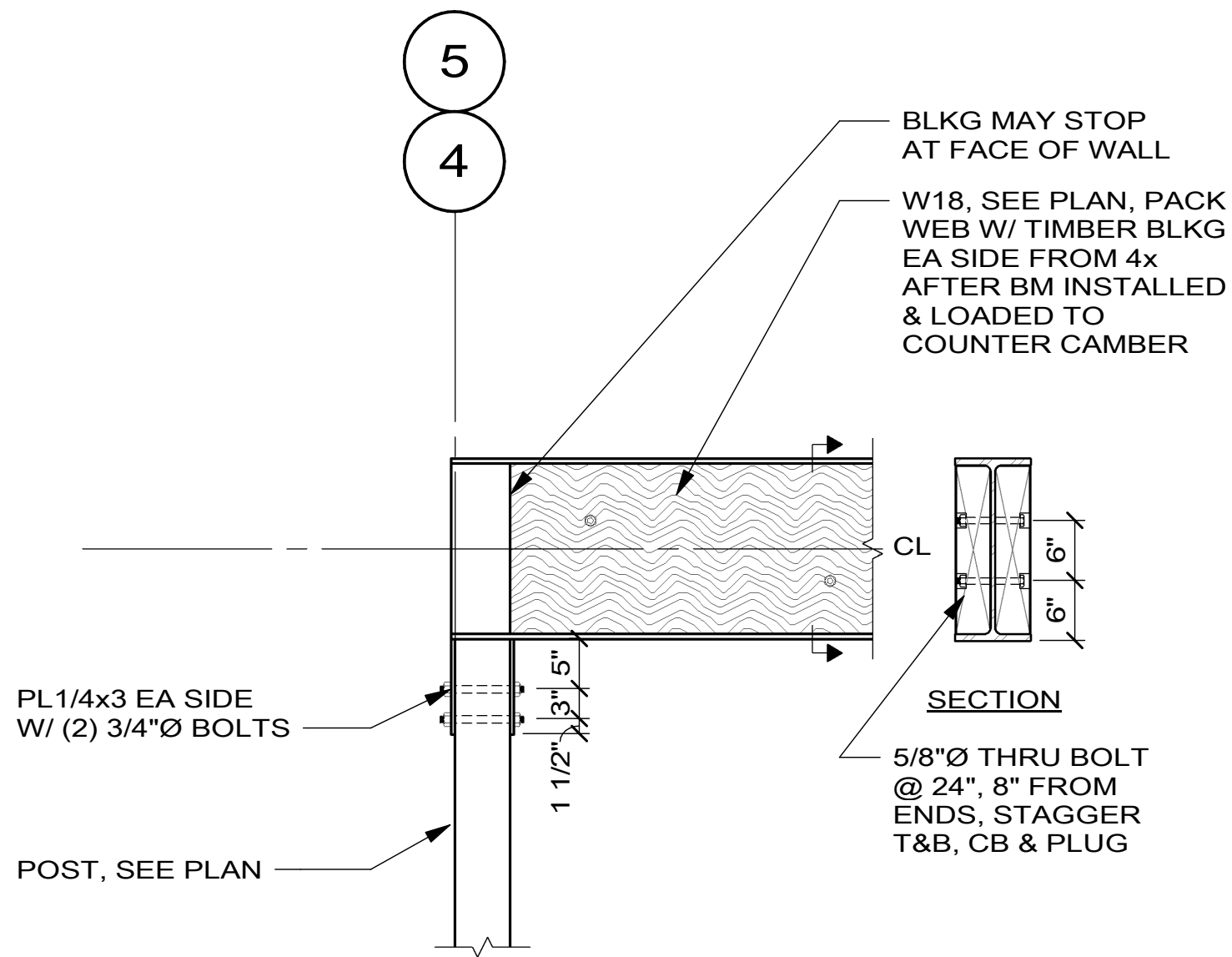


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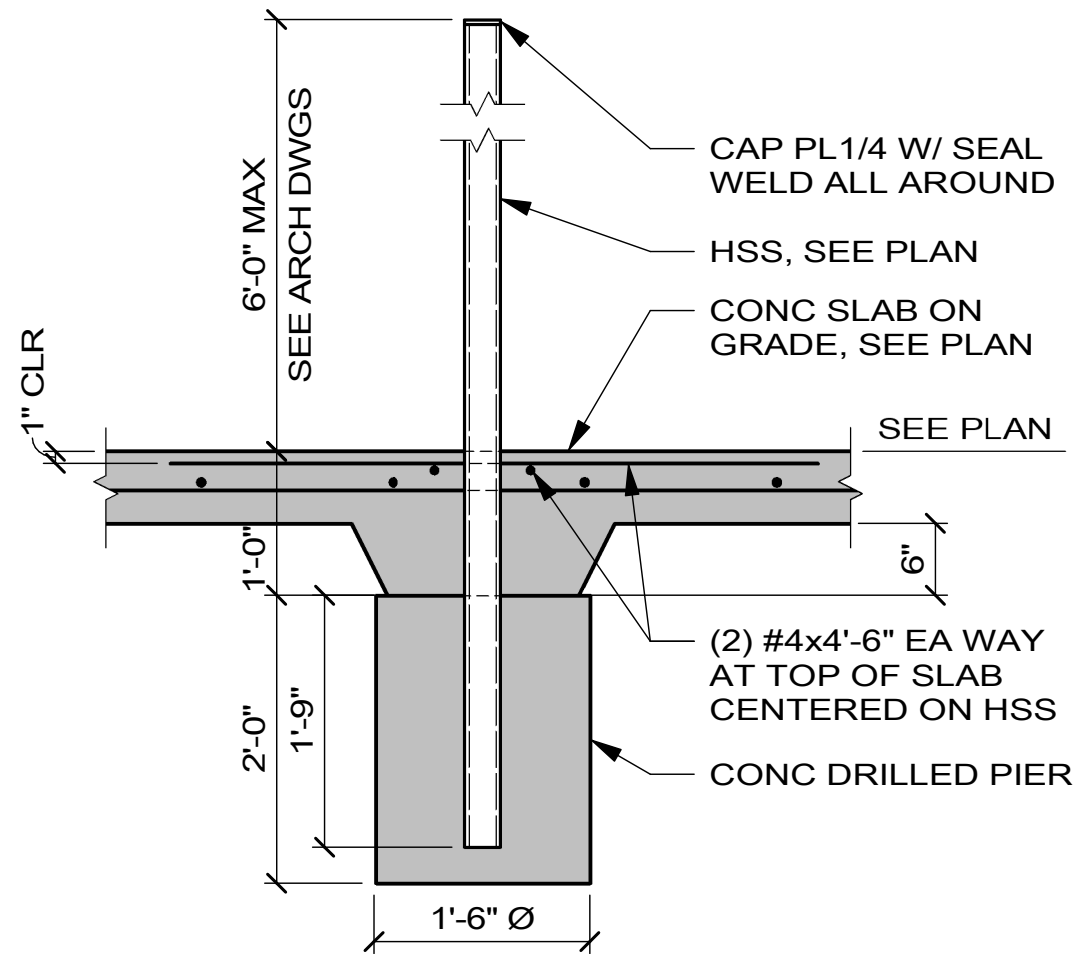
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1 THICKENED SLAB AT NON-LOAD-BEARING CMU
S5.02 SCALE (A)



2 STEEL BEAM AT ROOF
S5.02 SCALE (A)



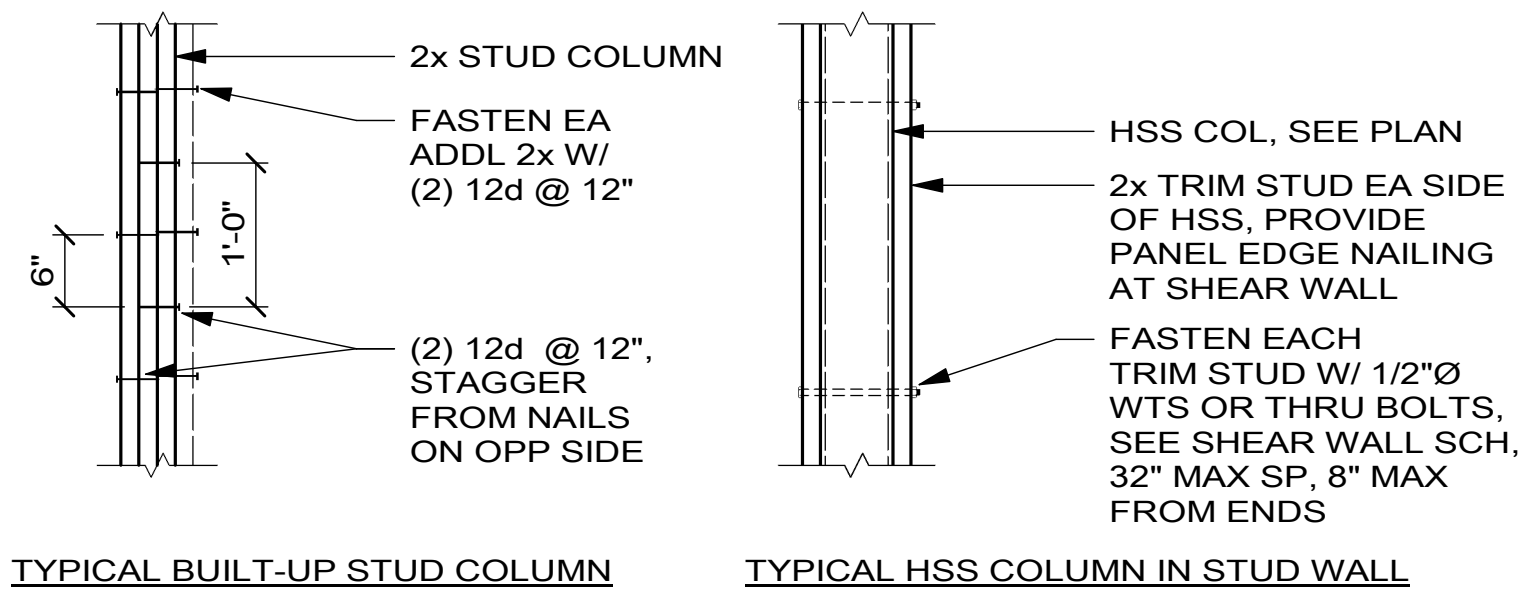
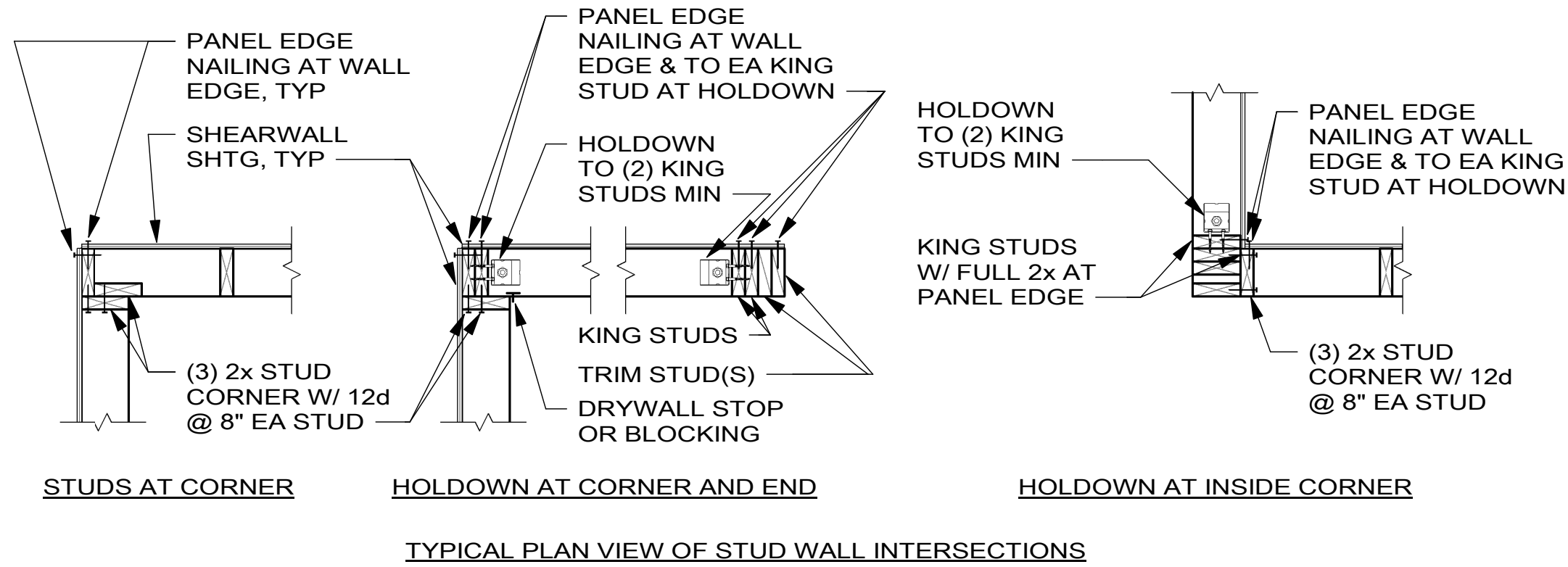
3 THICKENED SLAB AT STALL POST
S5.02 SCALE (A)

SCALE (A) 1 0 1 2 3
SCALE OF FEET



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ADD JSS			175143
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DATE: 02.27.2023			SHEET 66 OF 104
CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO			

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3 STUD WALL PLAN DETAILS
SCALE **A**

4 COLUMN DETAILS
SCALE **A**

WALL WOOD SHEAR SCHEDULE										
MARK	STUDS	SHEATHING	SHEATHING NAILS	PANEL EDGE NAIL SPACING	FIELD NAIL SPACING	10" ANCHOR BOLTS	WASHERS	SEISMIC CAPACITY	WIND CAPACITY	A35 SPACING
SW4	2x6 @ 16" W/ (2) 2x6 @ 48" AT SHTG SPLICES	15/32" APA (32/16)	8d COM (0.131"Øx2 1/2")	4"	12"	1/2"Ø @ 32"	0.229"x3" PL (BPS1/2-6)	380 PLF	530 PLF	1'-4"
SW6	2x6 @ 16"	15/32" APA (32/16)	8d COM (0.131"Øx2 1/2")	6"	12"	1/2"Ø @ 48"	STD CUT WASHER	260 PLF	365 PLF	2'-0"

EDGE NAIL EA STUD
16d @ SP TO MATCH EDGE NAILING
DBL STUD AT VERT EDGE SPLICES

AT VERT EDGES
PANEL EDGE NAILING DETAIL

2x FLAT BLKG AT HORIZ EDGE SPLICES

AT HORIZ EDGES

1/2" MAX

PL WASHER, DIAG SLOT HOLES ARE ACCEPTABLE UP TO 3/16" LARGER THAN HOLE DIAMETER, SLOT LENGTH NOT TO EXCEED 1 3/4". BP OR BPS MAY BE USED

0.229"x3" PLATE WASHER DETAIL

TYPICAL FOR ALL SHEAR WALL NAILING:
PER IBC / AWC SDPWS, SHEATHING NAILS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SURFACE OF THE SHEATHING. SHEATHING PANEL NAILING NOT CONFORMING TO THIS SECTION WILL NOT BE ACCEPTABLE AND WILL HAVE TO BE REINSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE NAIL GUNS USED FOR FASTENING ARE SET AT THE PROPER DEPTH AND/OR AIR PRESSURE TO ACHIEVE THE REQUIRED PENETRATION

GENERAL NOTES:
1. VALUES ARE BASED ON DOUGLAS FIR-LARCH FRAMING, SEE GENERAL NOTES
2. SEE PLAN FOR HOLDOWN TYPE AND LOCATION
3. UNLESS NOTED OTHERWISE, NUMBER OF STUDS AT EACH END OF SHEAR WALLS IS CALLED OUT ON PLAN
4. NO PENETRATIONS GREATER THAN 12"x12" IN SHEAR WALLS, BLOCK AND NAIL ALL EDGES
5. NO MECHANICAL OR PLUMBING PENETRATIONS IN TOP AND BOTTOM PLATES
6. ALL EDGES SHALL BE BLOCKED WITH 2x MEMBERS AT PLYWOOD/OSB SHEATHED WALLS
7. ALL WALLS HAVE (2) 2x TOP PLATES AND (1) 2x BOTTOM PLATE EQUAL TO WIDTH OF STUD SIZE, TYP UNO
8. MINIMUM WIDTH OF SHEATHING PANELS AT ENDS OF SHEAR WALLS SHALL BE 4'-0" TO ENSURE END STUDS ARE ENGAGED
9. SEE DETAILS FOR ATTACHMENT OF DIAPHRAGMS TO SHEARWALL PLATES, TYPICAL

1 SHEAR WALL SCHEDULE
SCALE **A**

HOLDOWN SCHEDULE					
MARK	MODEL #	ANCHOR BOLTS	EMBEDMENT DEPTH	SCREWS OR NAILS	END STUDS
H5	HDU5-SDS2.5	5/8"Ø ASTM F1554-36 ATR	8"	(14) SDS25212	(2) 2x
HP	HDU2-SDS2.5	5/8"Ø x 8" LAG SCREW	N/A	(6) SDS25212	6x6 POST
HT	HDU2-SDS2.5	5/8"Ø ASTM F1554-36 ATR	N/A	(6) SDS25212	(3) PLY TRUSS

HT HARDWARE TO FRAMING MEMBERS AT ROOF

GIRDER TRUSS, (2) PLY MIN
DBL 2x TOP PL
HDU W/ SCREWS TO STUDS
KING STUDS, (2) MIN
ATR, SEE SCH

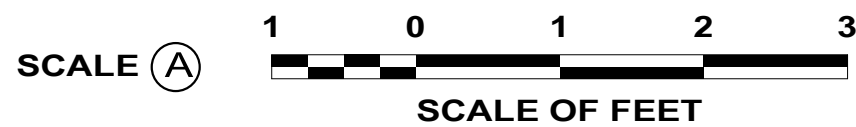
HP HARDWARE TO FRAMING MEMBERS AT ROOF

POST
HDU W/ SCREWS TO POST
TIMBER BM
LAG SCREW, SEE SCH

HX HARDWARE TO FRAMING MEMBERS AT FOUNDATION

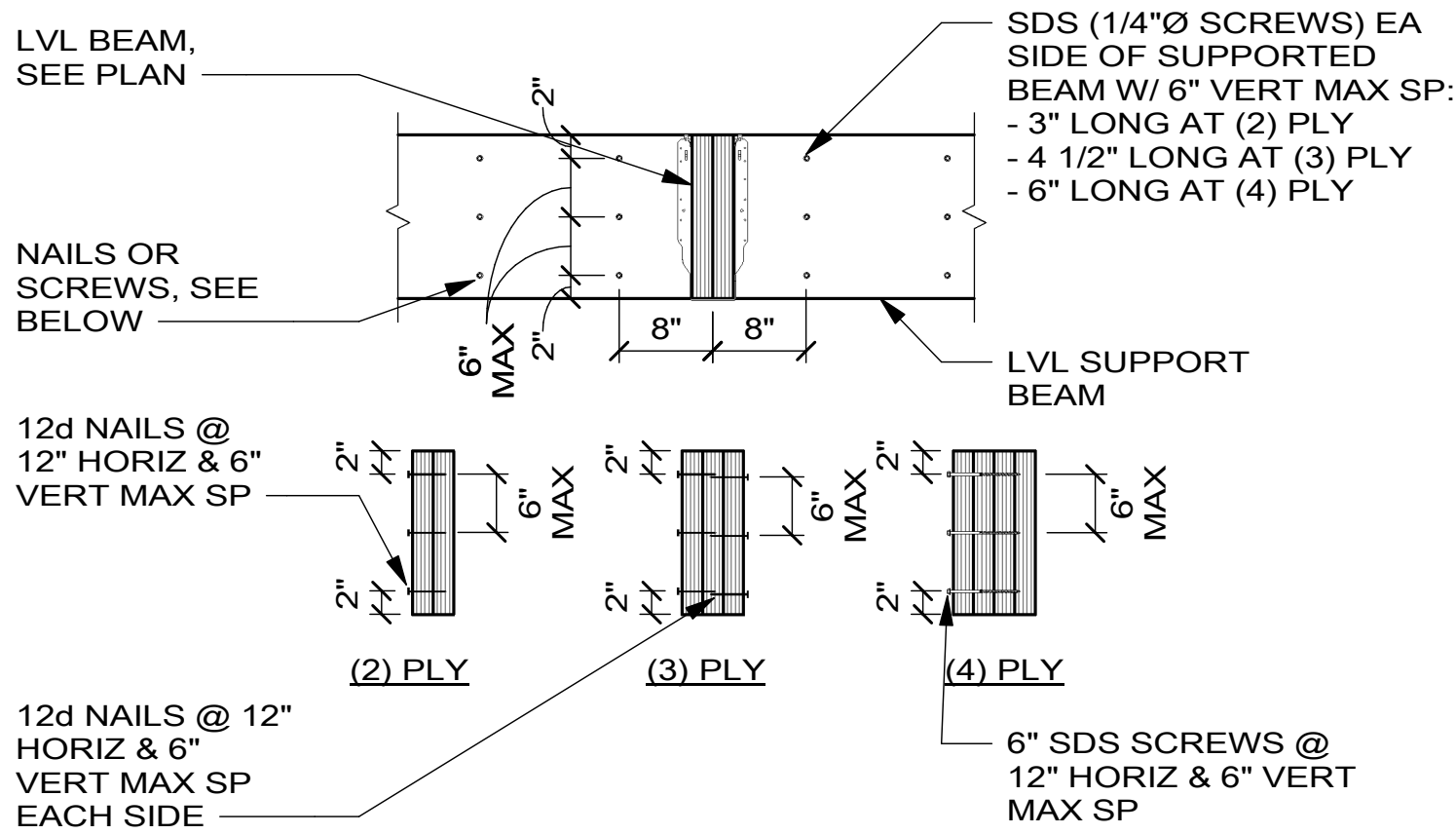
5" MIN PROJECTION
KING STUDS, (2) MIN
HDU HOLDOWN
PT 2x SILL PL
1" CLR
ADHESIVE ANCHOR, SEE SCH
CONC FOUNDATION WALL
EMBED DEPTH, SEE SCH

2 HOLDOWN SCHEDULE & DETAILS
SCALE **A**



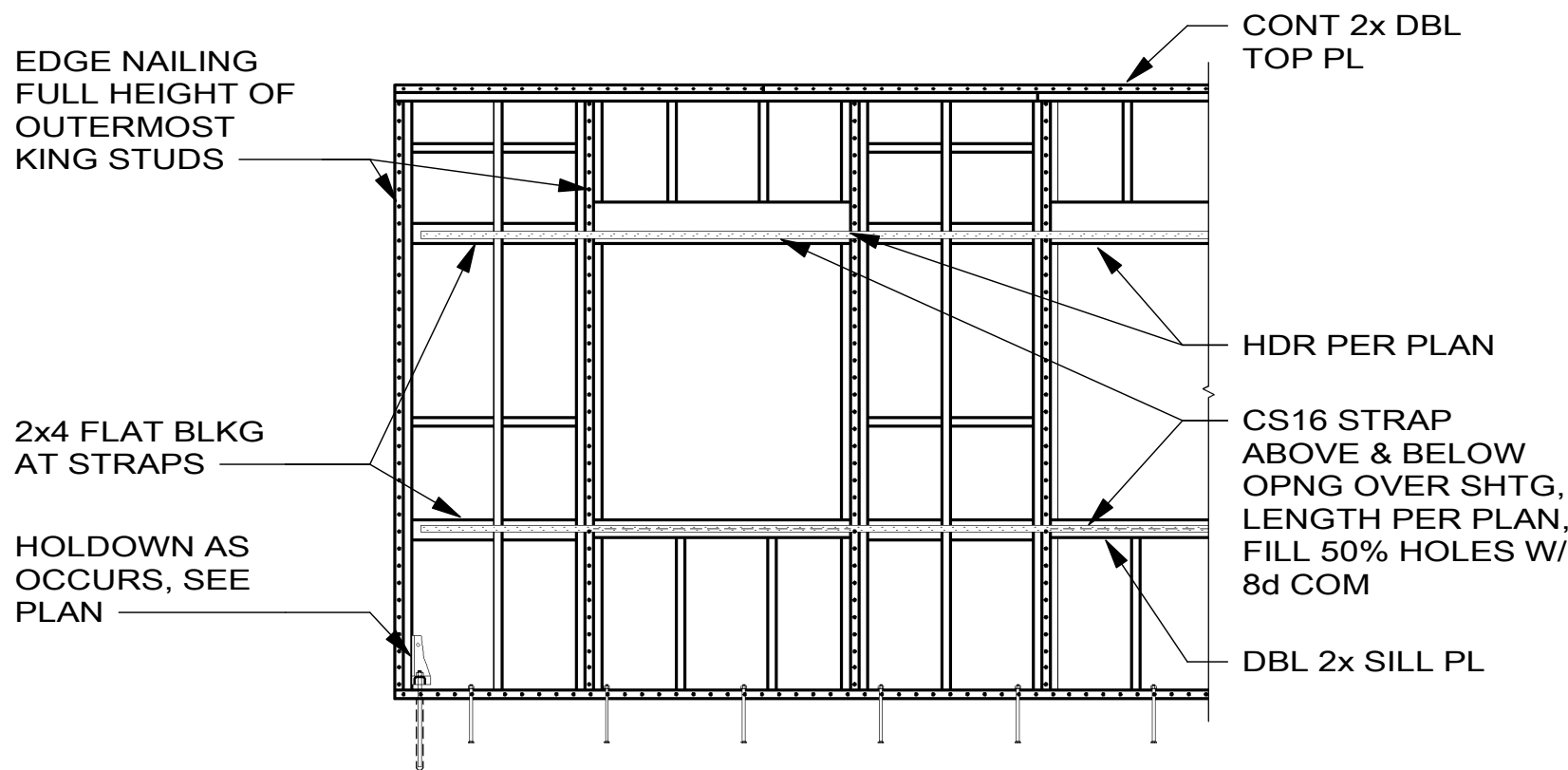
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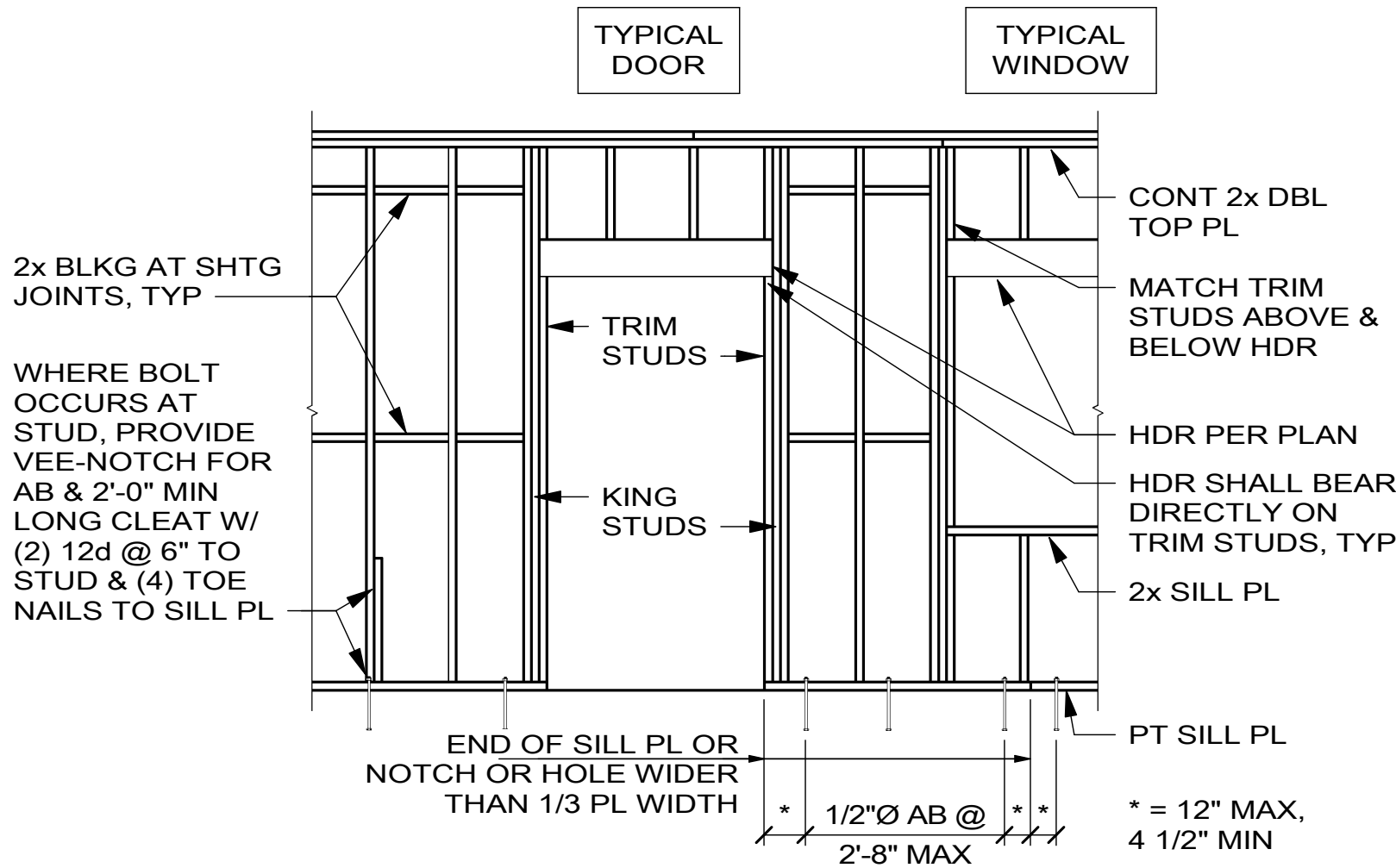


TYPICAL BUILT UP BEAM

5 BUILT UP BEAM DETAIL
S5.04 SCALE A

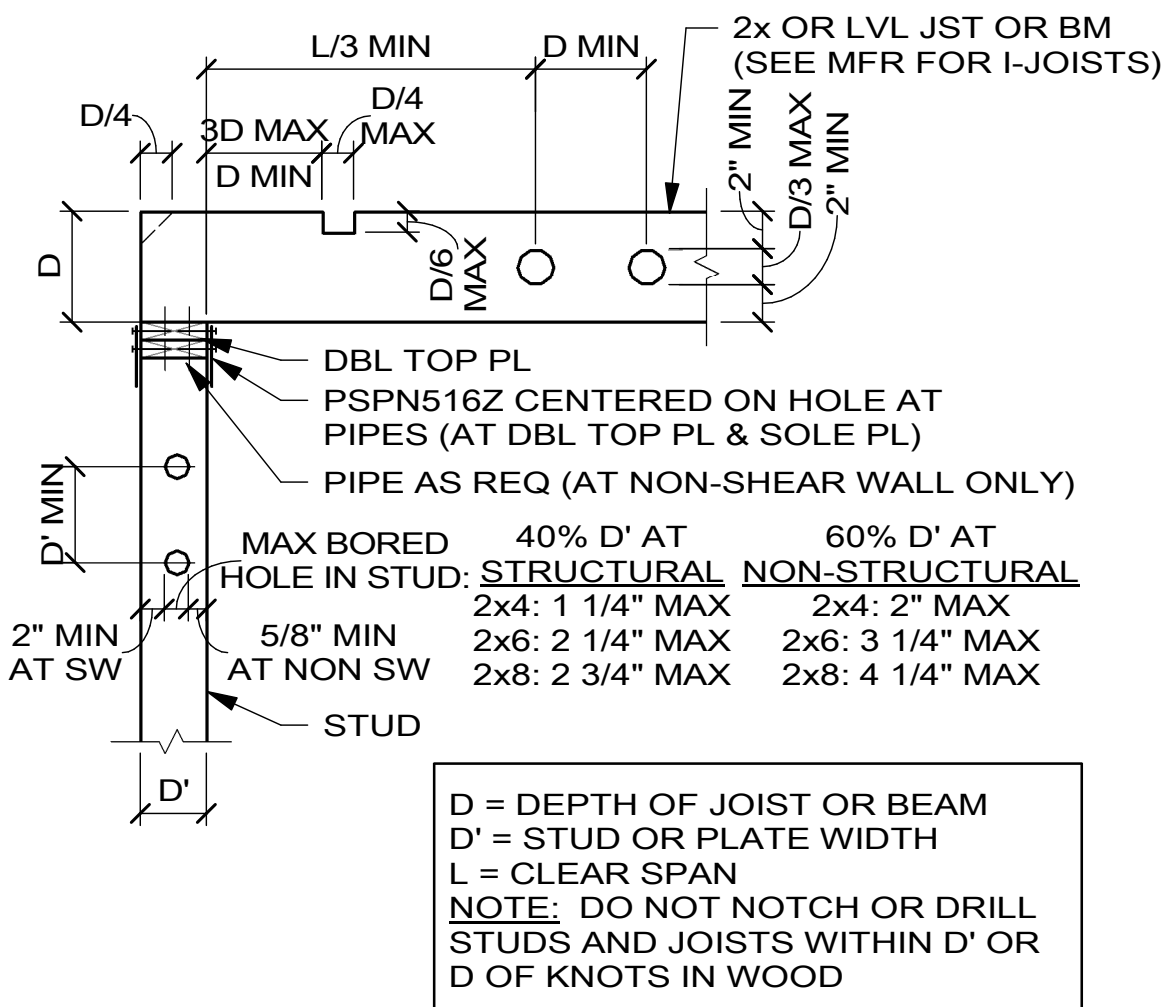


TYPICAL SCHEMATIC STRAPPED SHEAR WALL ELEVATION



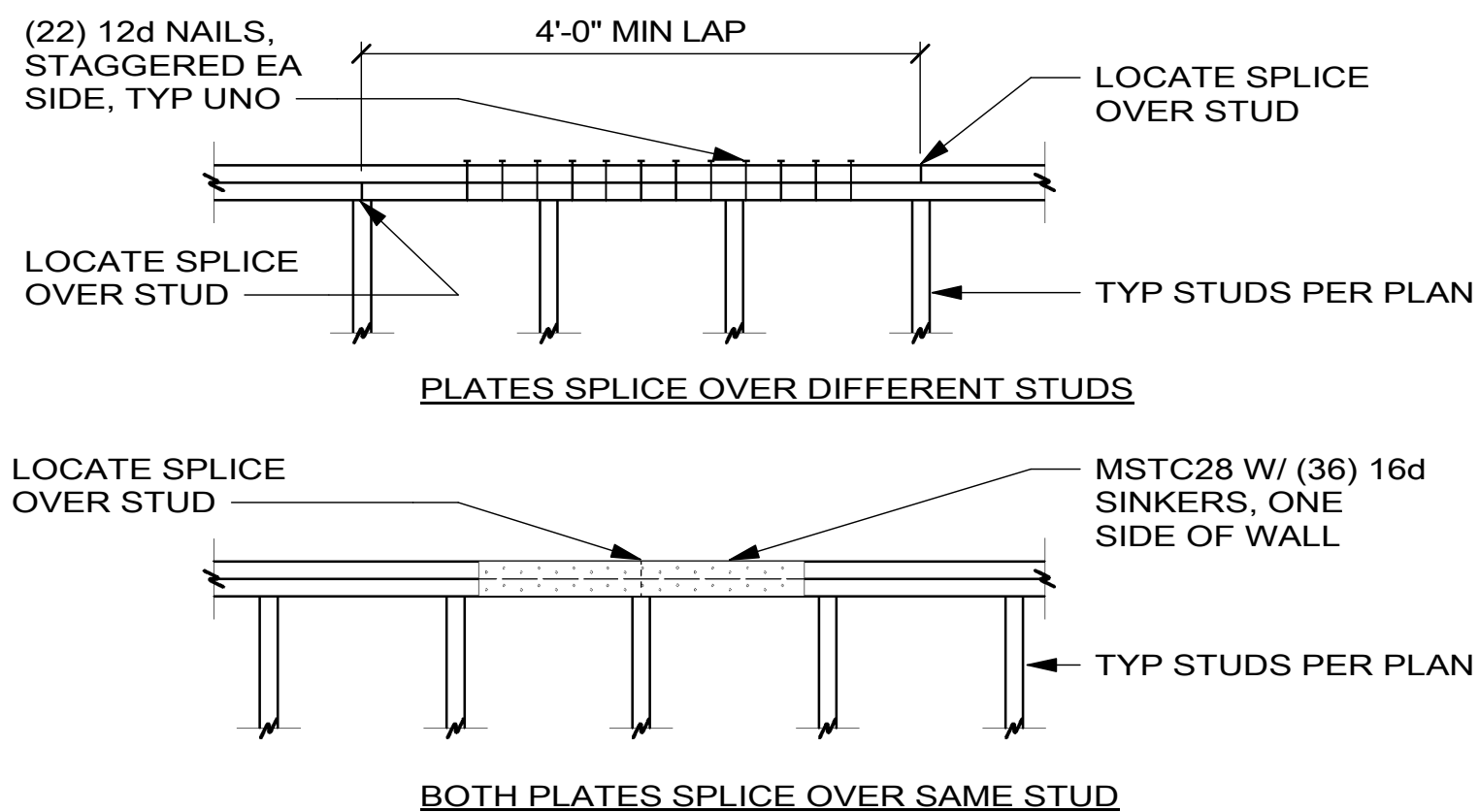
TYPICAL SCHEMATIC STUD WALL ELEVATION

1 STUD WALL ELEVATIONS
S5.04 NO SCALE



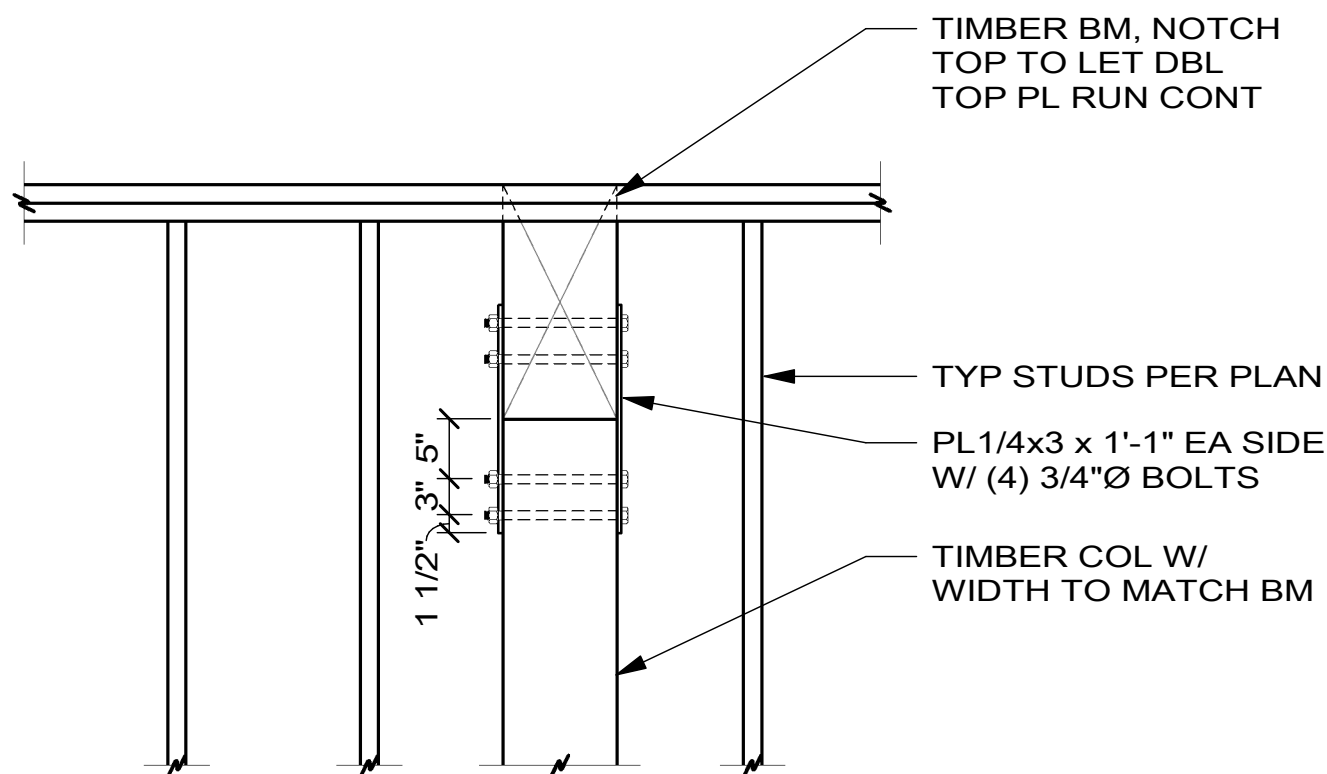
TYPICAL HOLES IN STUDS & JOISTS

6 STUD & JOIST HOLE DETAIL
S5.04 SCALE A



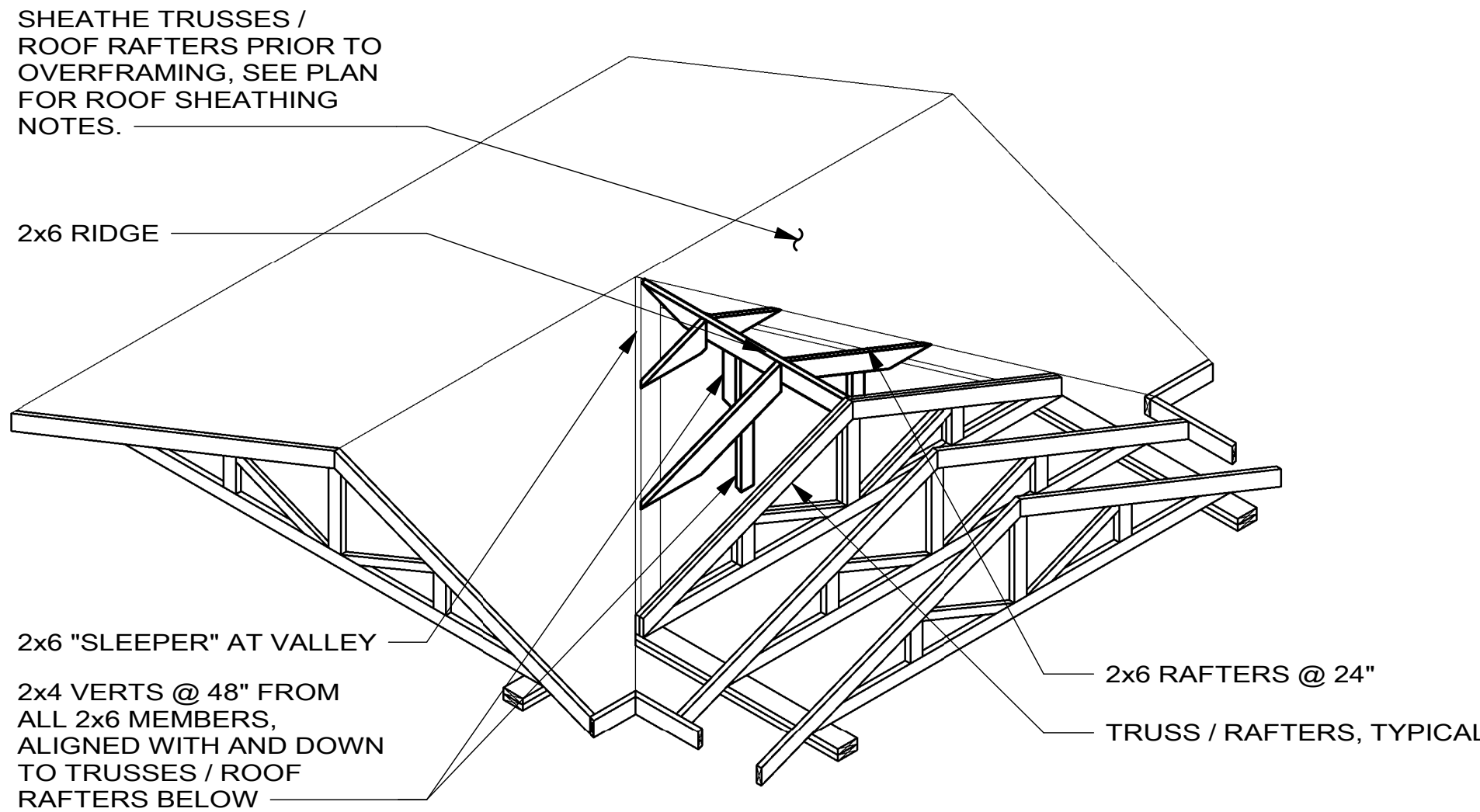
TYPICAL TOP PLATE SPLICE

3 DOUBLE TOP PLATE SPLICE DETAILS
S5.04 SCALE A



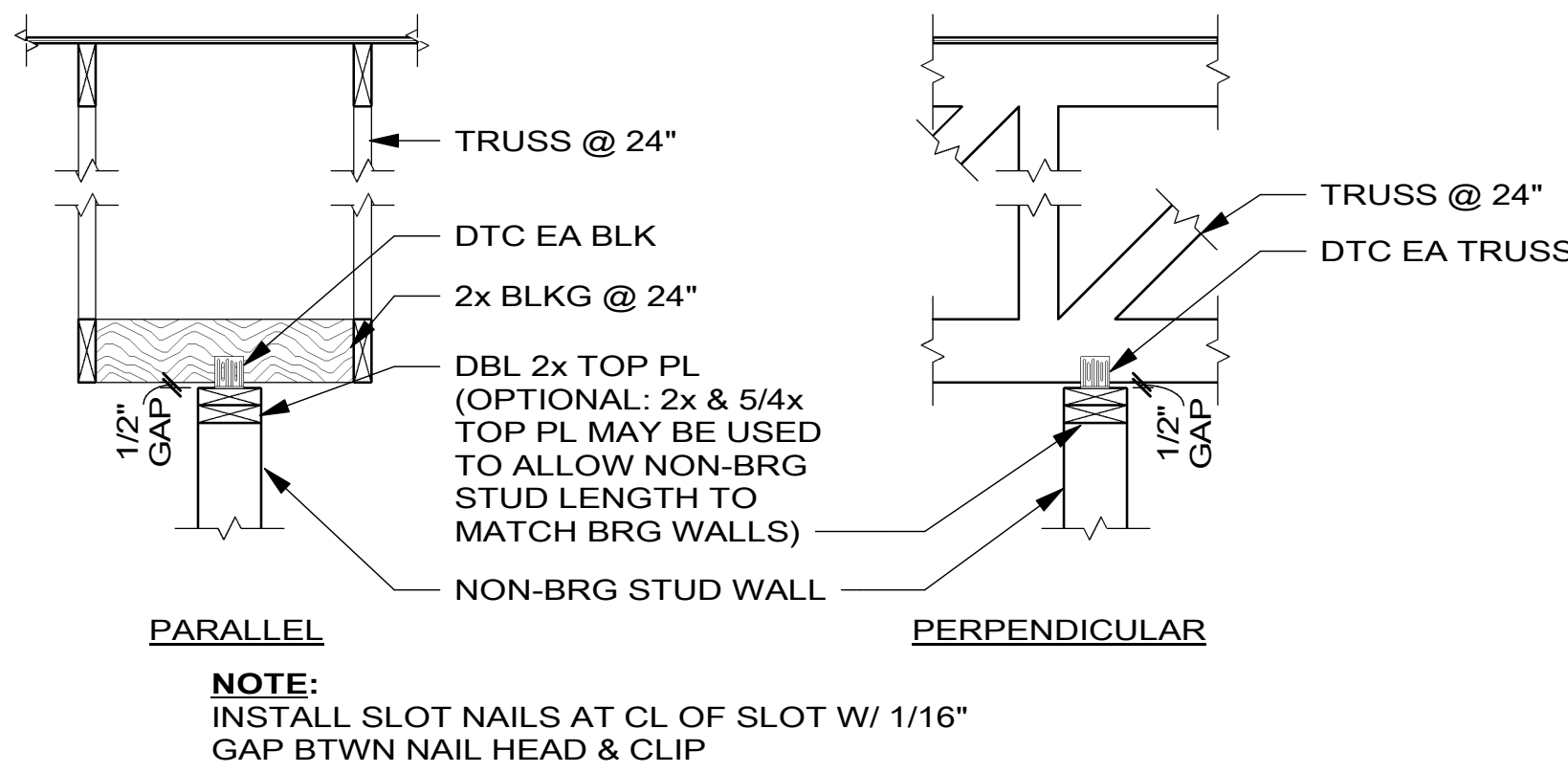
TYPICAL TOP PLATE AT TIMBER BM

2 DOUBLE TOP PLATE AT TIMBER BM
S5.04 SCALE A



TYPICAL ROOF OVERFRAMING

7 ROOF OVERFRAME DETAIL
S5.04 NO SCALE



TYPICAL NON-STRUCTURAL PARTITION TO ROOF FRAMING

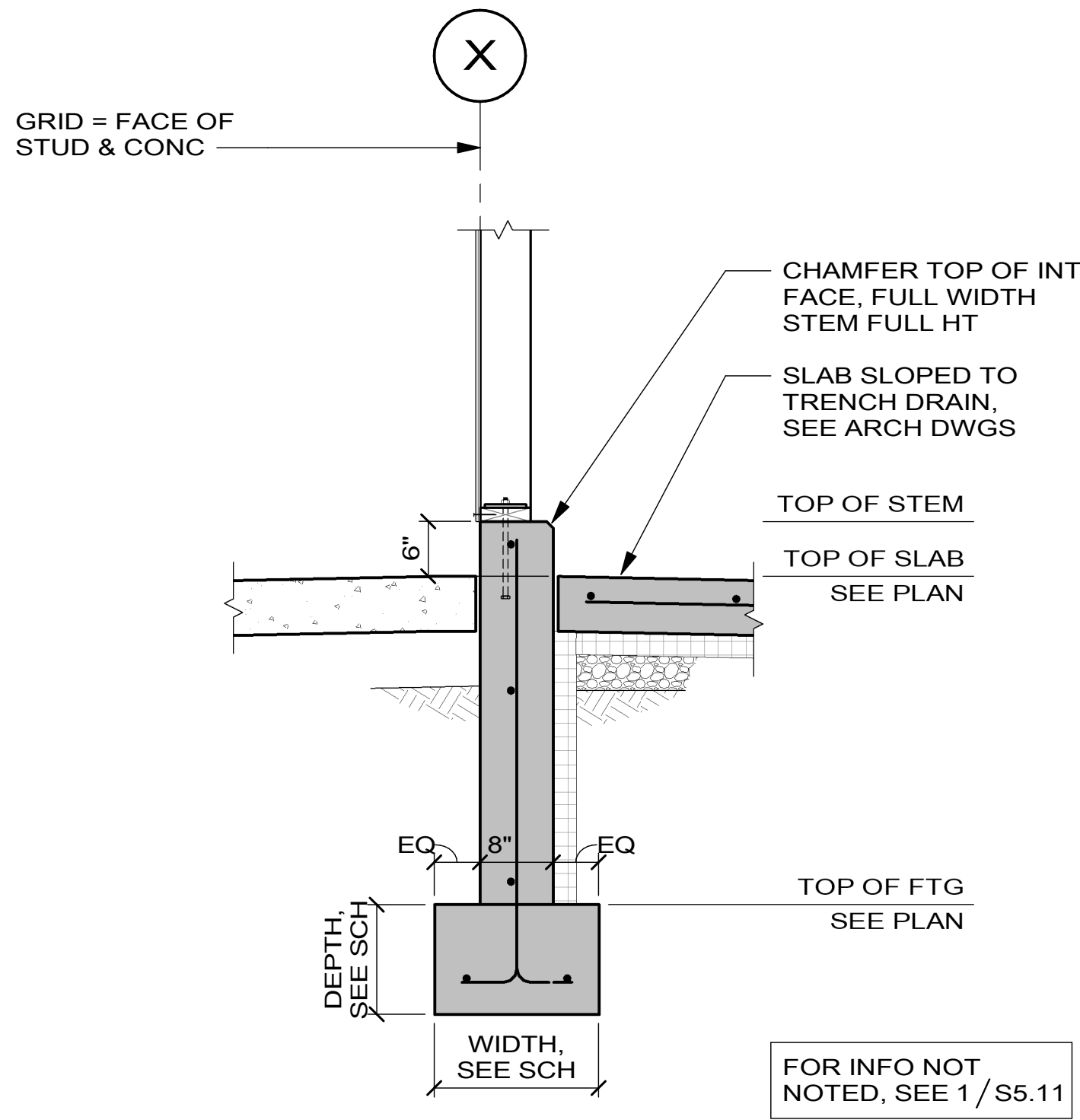
4 NON BEARING PARTITION DETAILS
S5.04 SCALE A

SCALE A 1 0 1 2 3
SCALE OF FEET

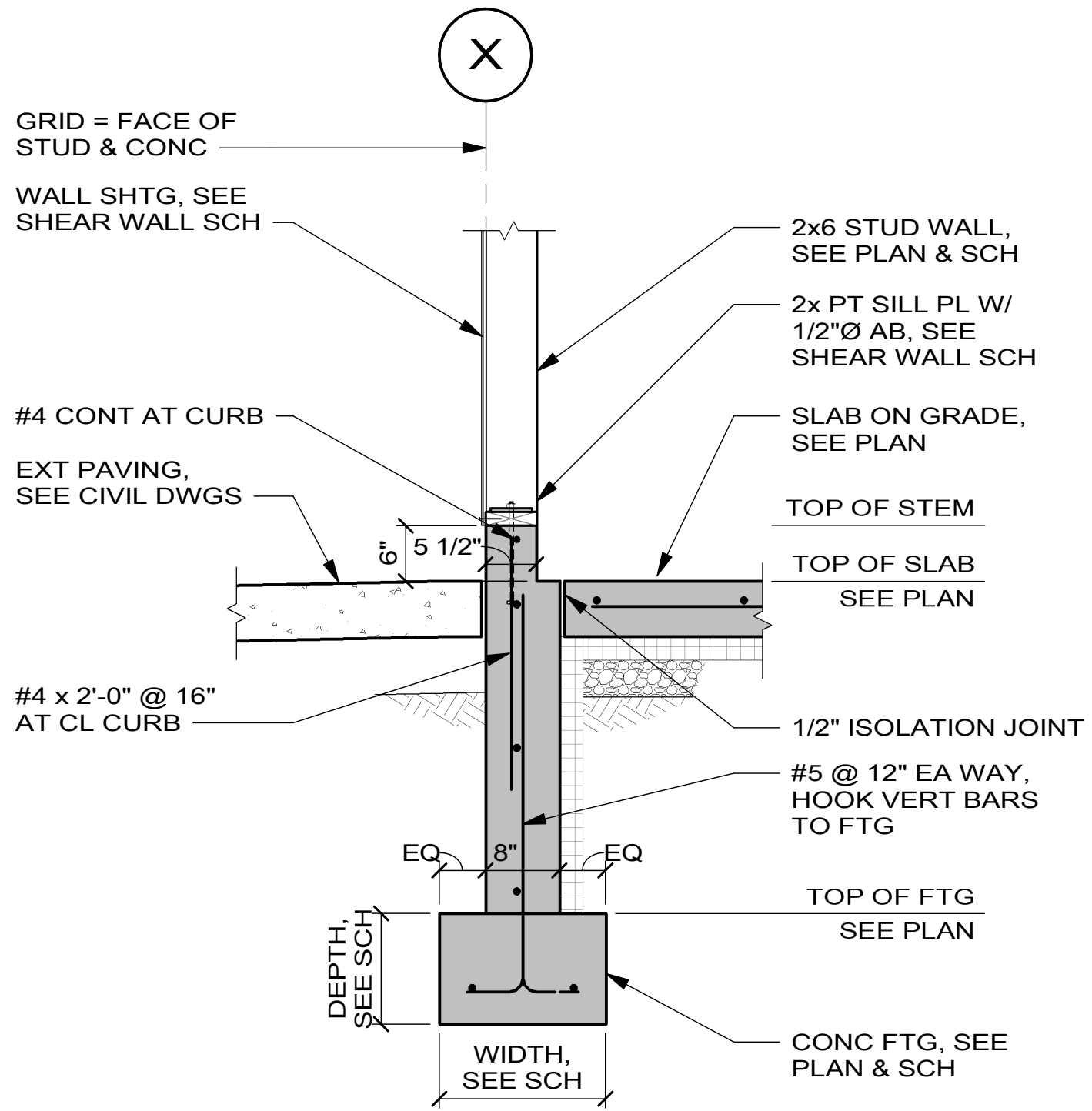


DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 02.27.2023	SUB SHEET NO. S5.04	TITLE OF SHEET TYPICAL WOOD DETAILS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 68 OF 104
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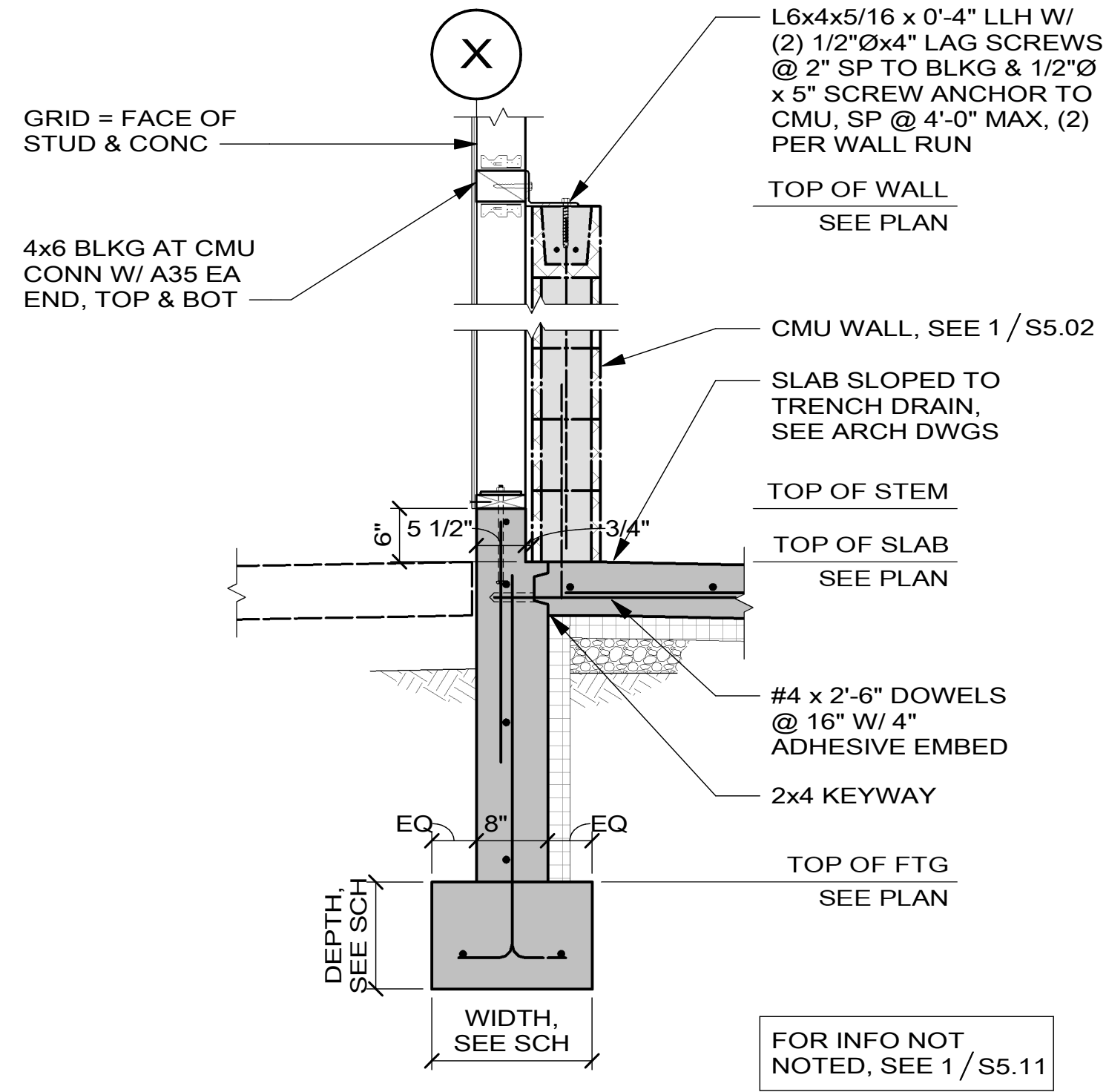
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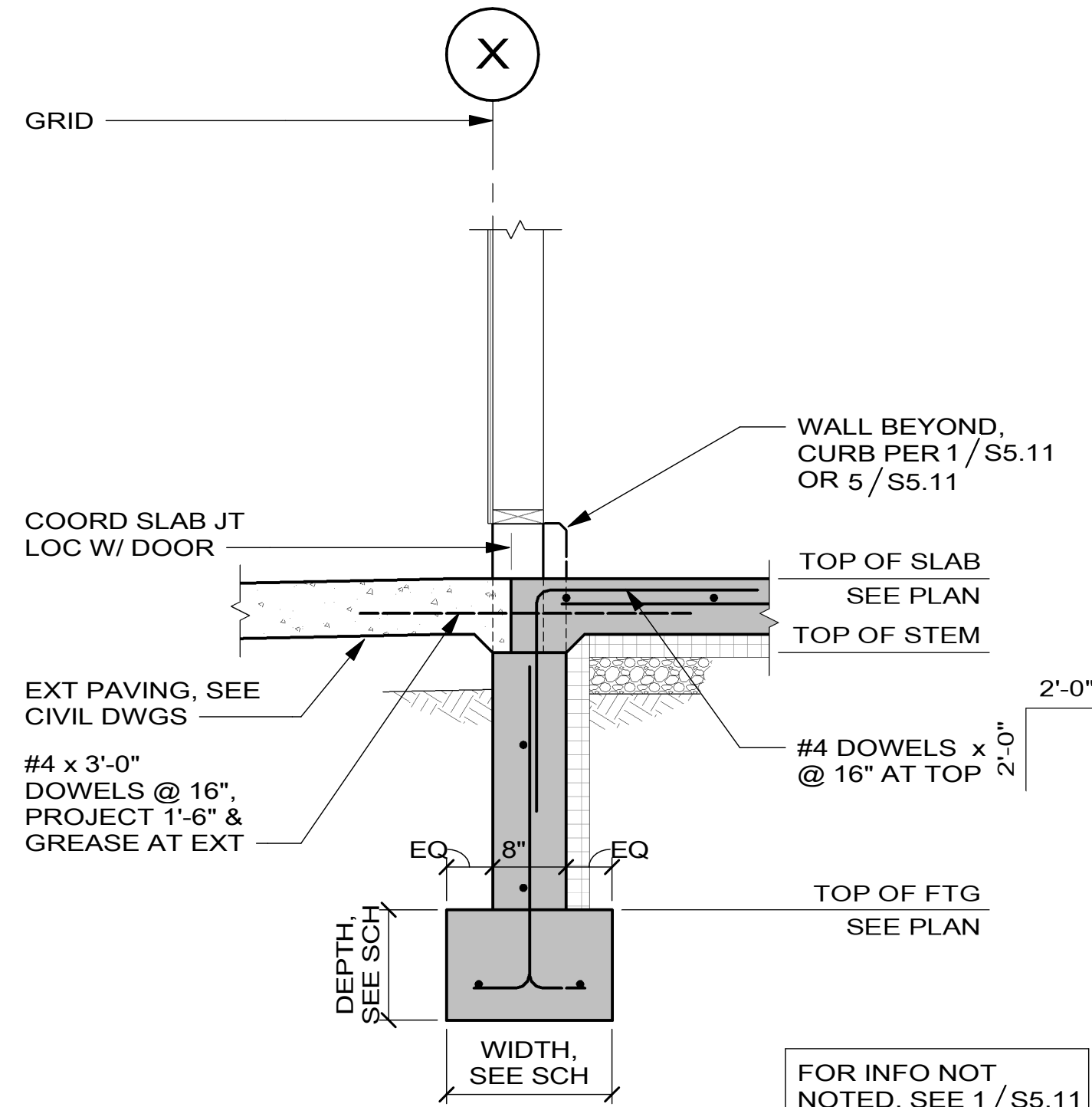
5 FOUNDATION AT BARN EXT WALL
S5.11 SCALE A



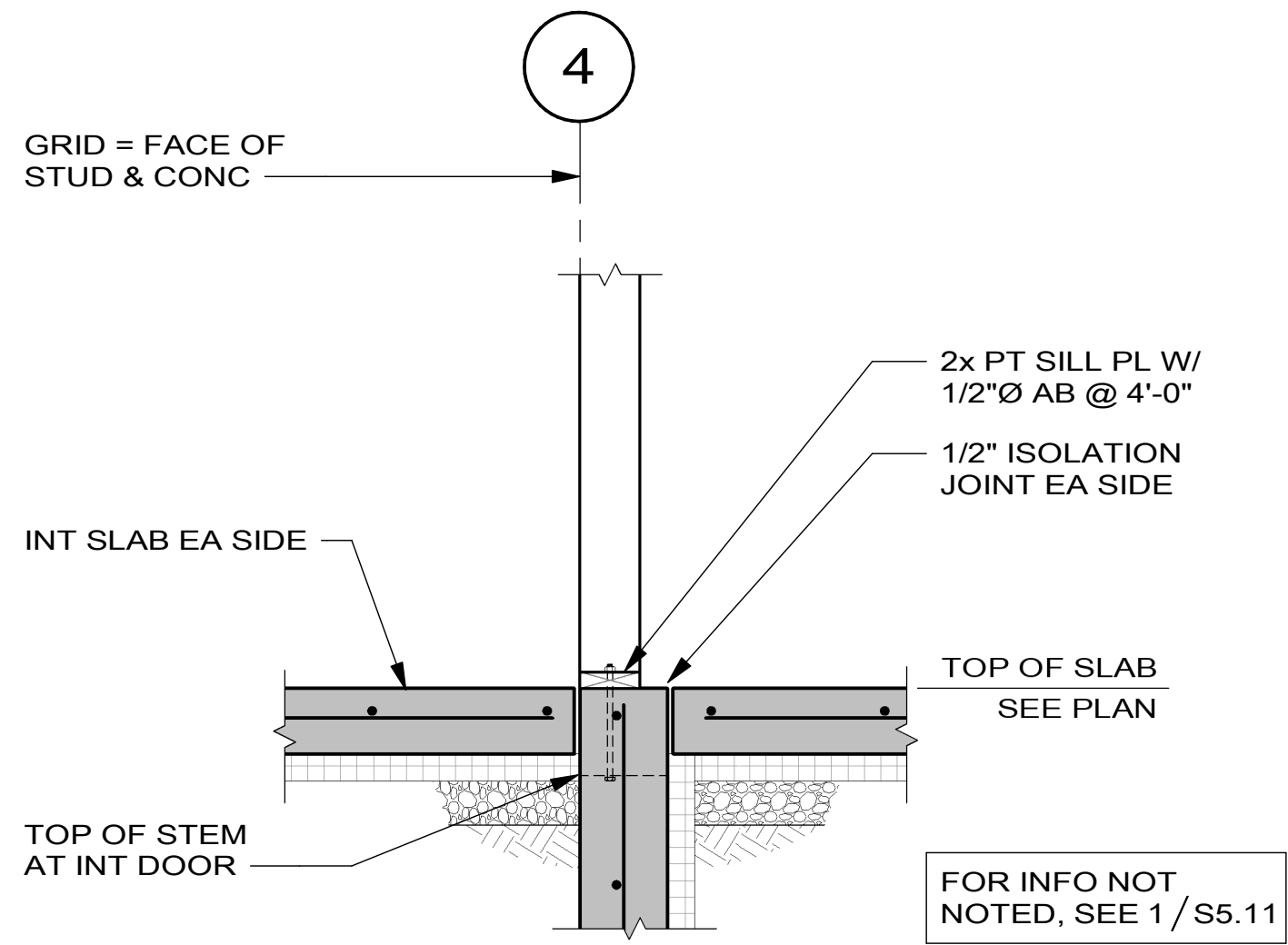
1 FOUNDATION AT OFFICE EXT WALL
S5.11 SCALE A



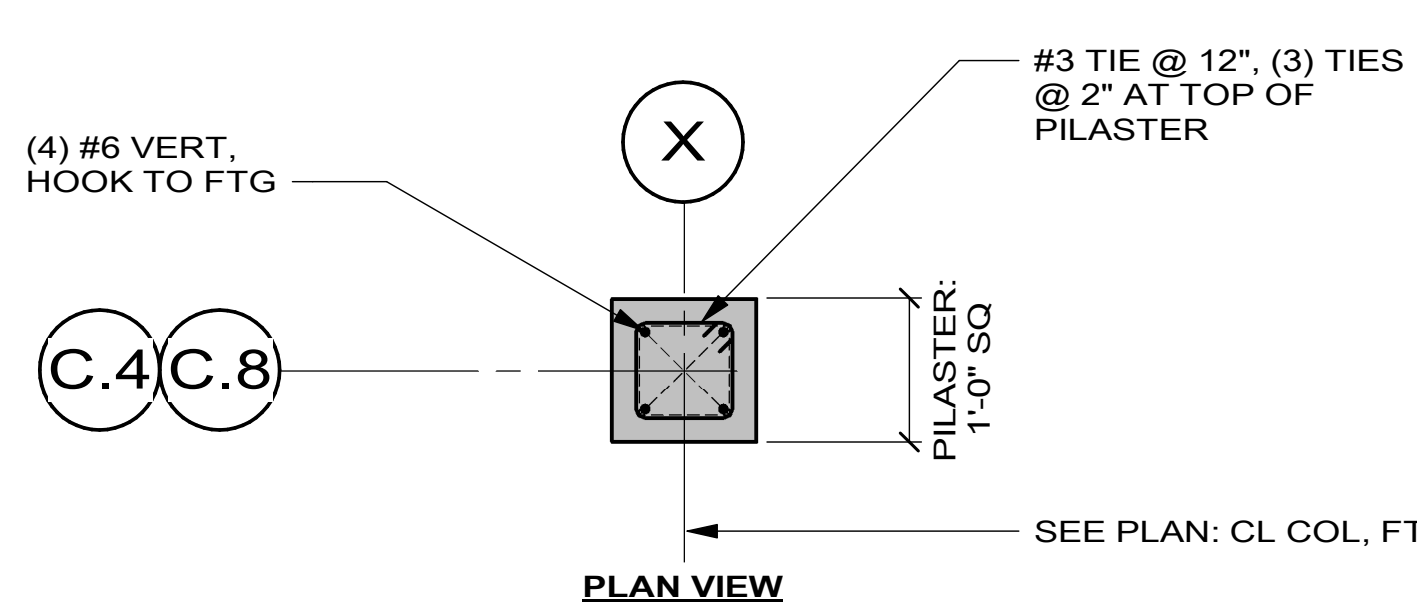
6 FOUNDATION AT EXT WALL & CMU
S5.11 SCALE A



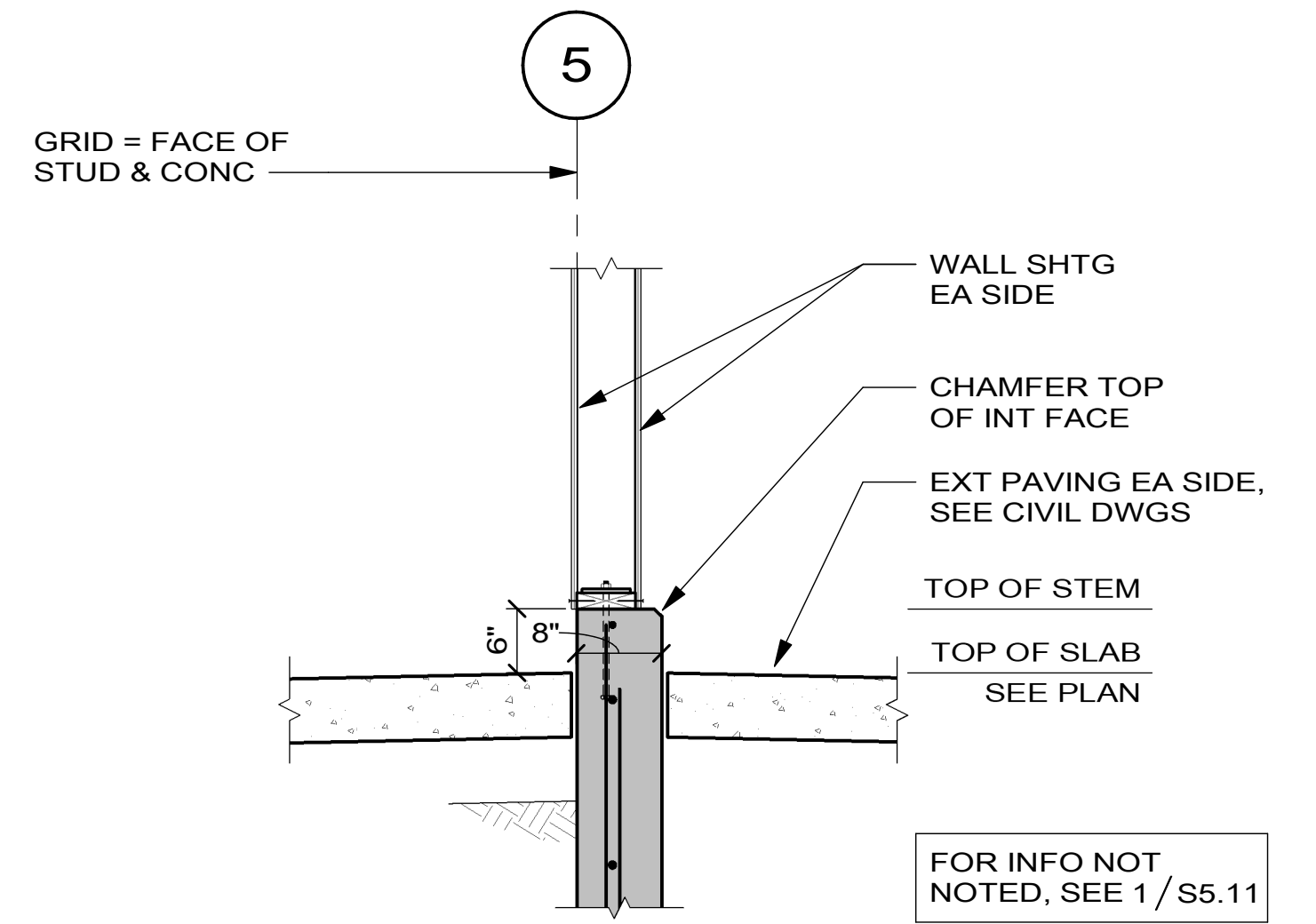
2 FOUNDATION AT EXT WALL DOOR
S5.11 SCALE A



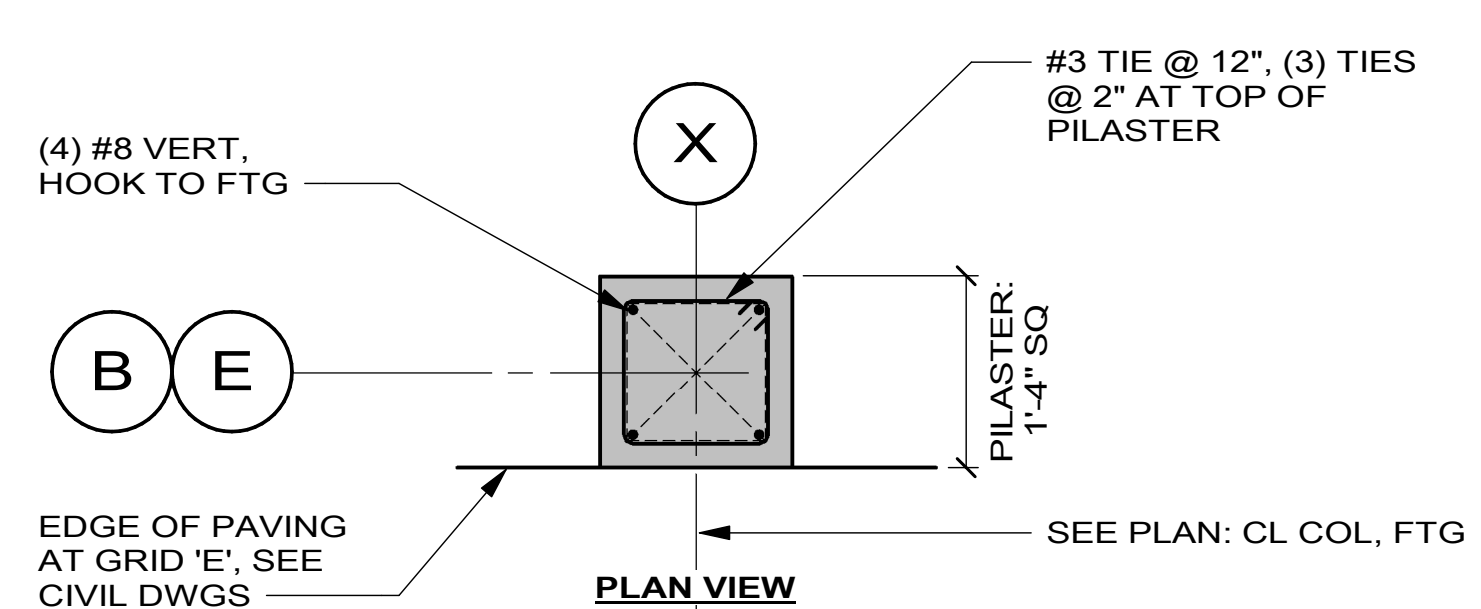
7 FOUNDATION AT INT WALL
S5.11 SCALE A



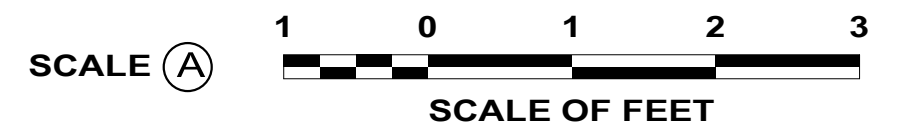
3 FOUNDATION AT INT COL
S5.11 SCALE A



8 FOUNDATION AT EXT FIN WALL
S5.11 SCALE A



4 FOUNDATION AT EXT COL
S5.11 SCALE A

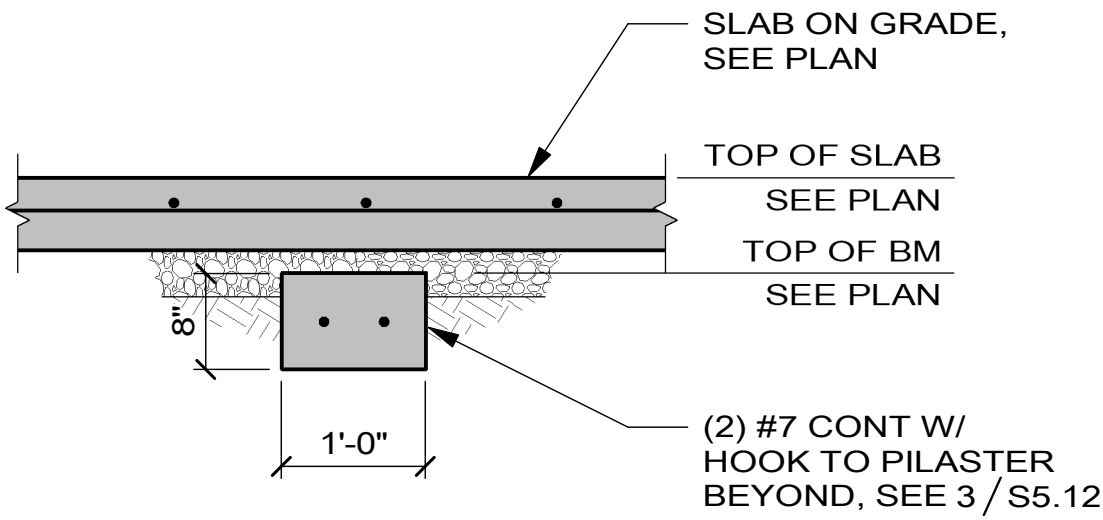


FOOTING SCHEDULE				
MARK	WIDTH	LENGTH	DEPTH	REINFORCING
F2.5	2'-6"	2'-6"	1'-0"	(3) #5 EA WAY
F3.0	3'-0"	3'-0"	1'-0"	(4) #5 EA WAY
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EA WAY
F18	1'-6"	1'-0"	1'-0"	(2) #5 CONT

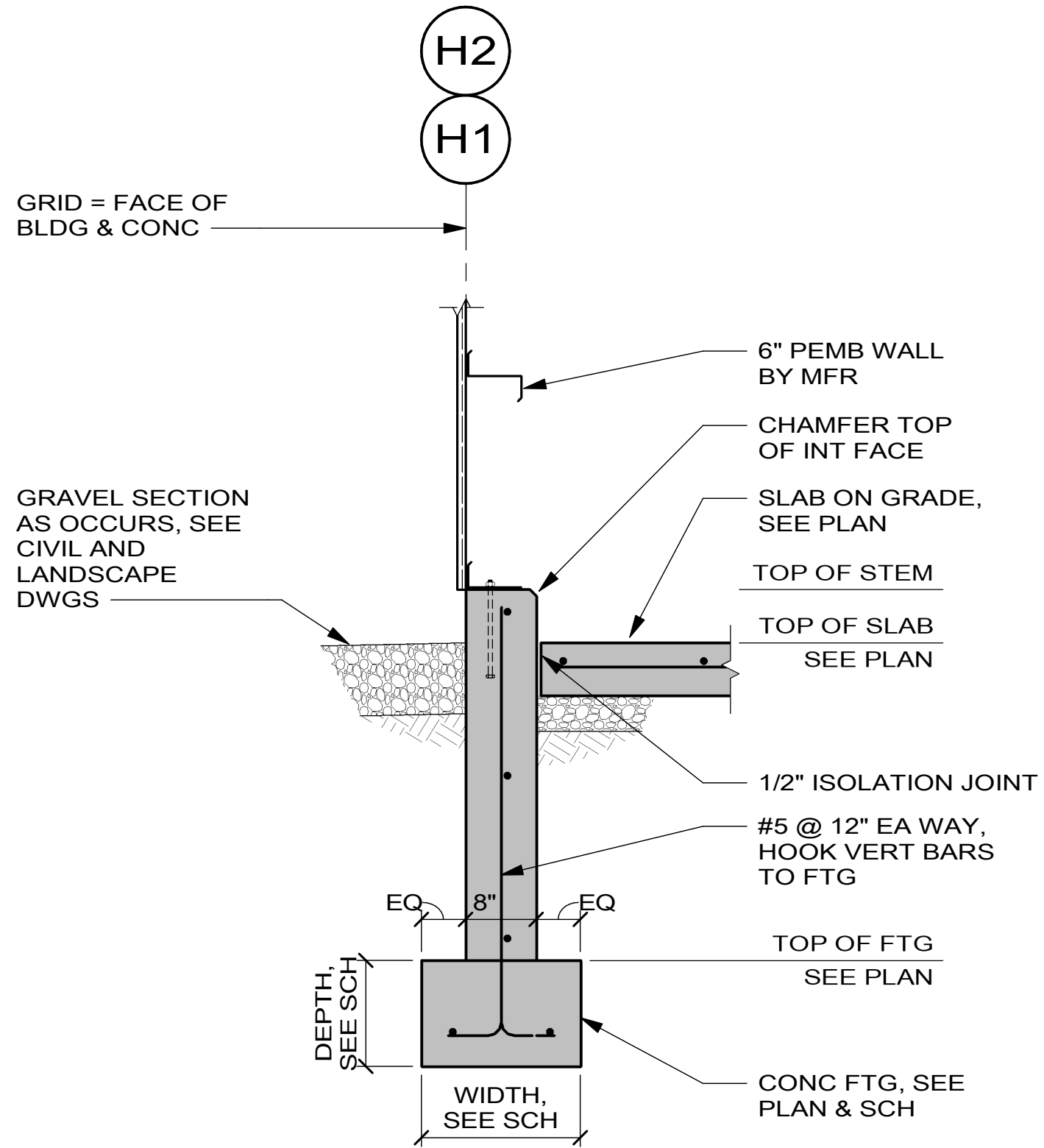


DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 02.27.2023	SUB SHEET NO. S5.11	TITLE OF SHEET FOUNDATION SECTIONS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 69 OF 104
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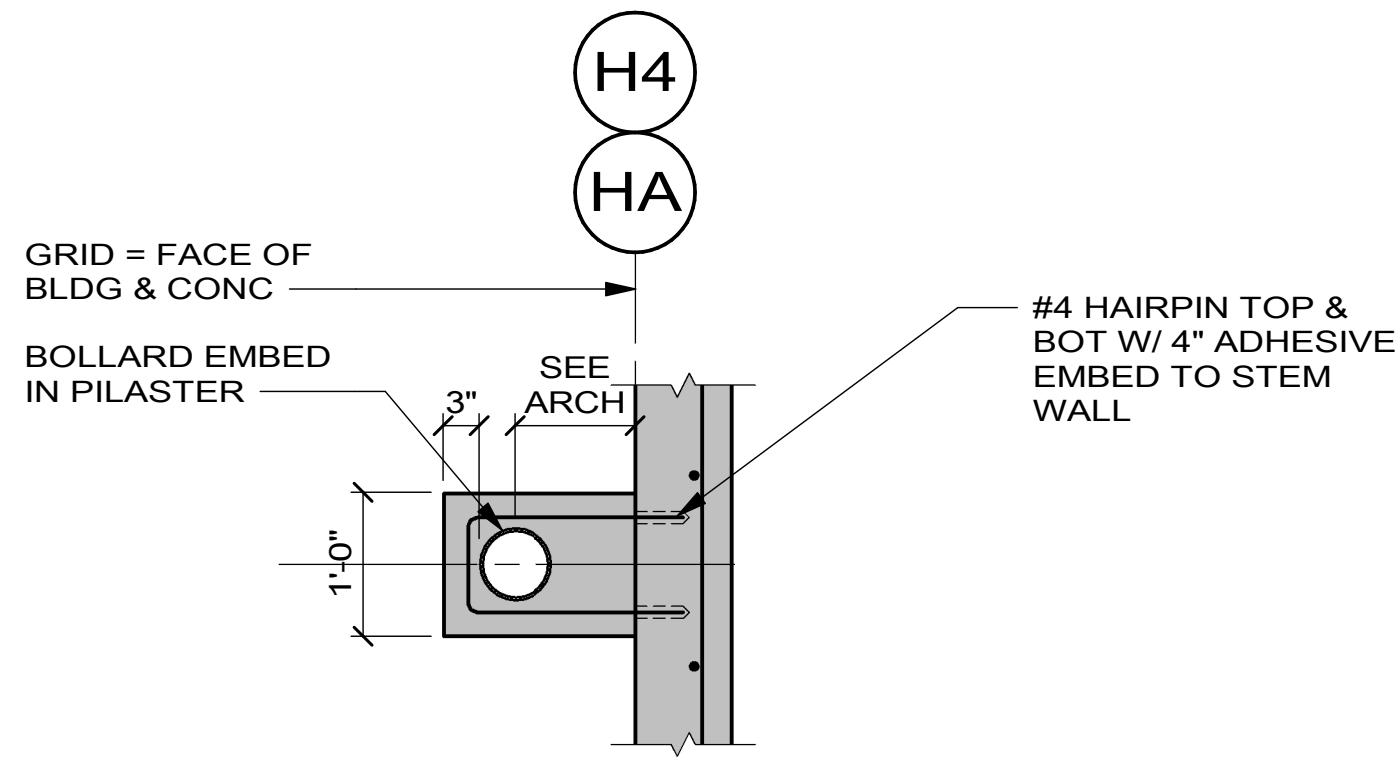
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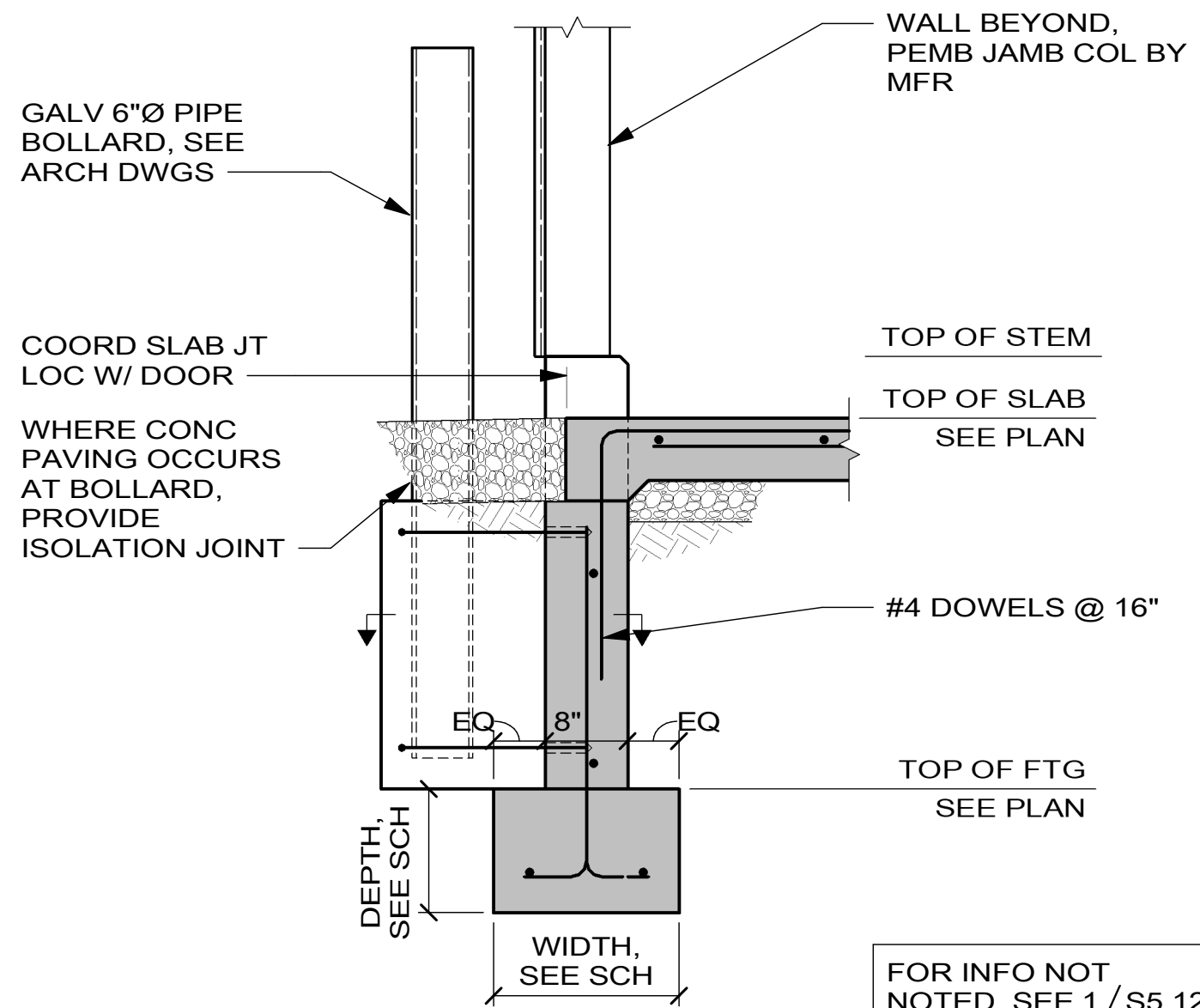
5 FOUNDATION AT PEMB TIE BEAM
SCALE A



1 FOUNDATION AT PEMB WALL
SCALE A

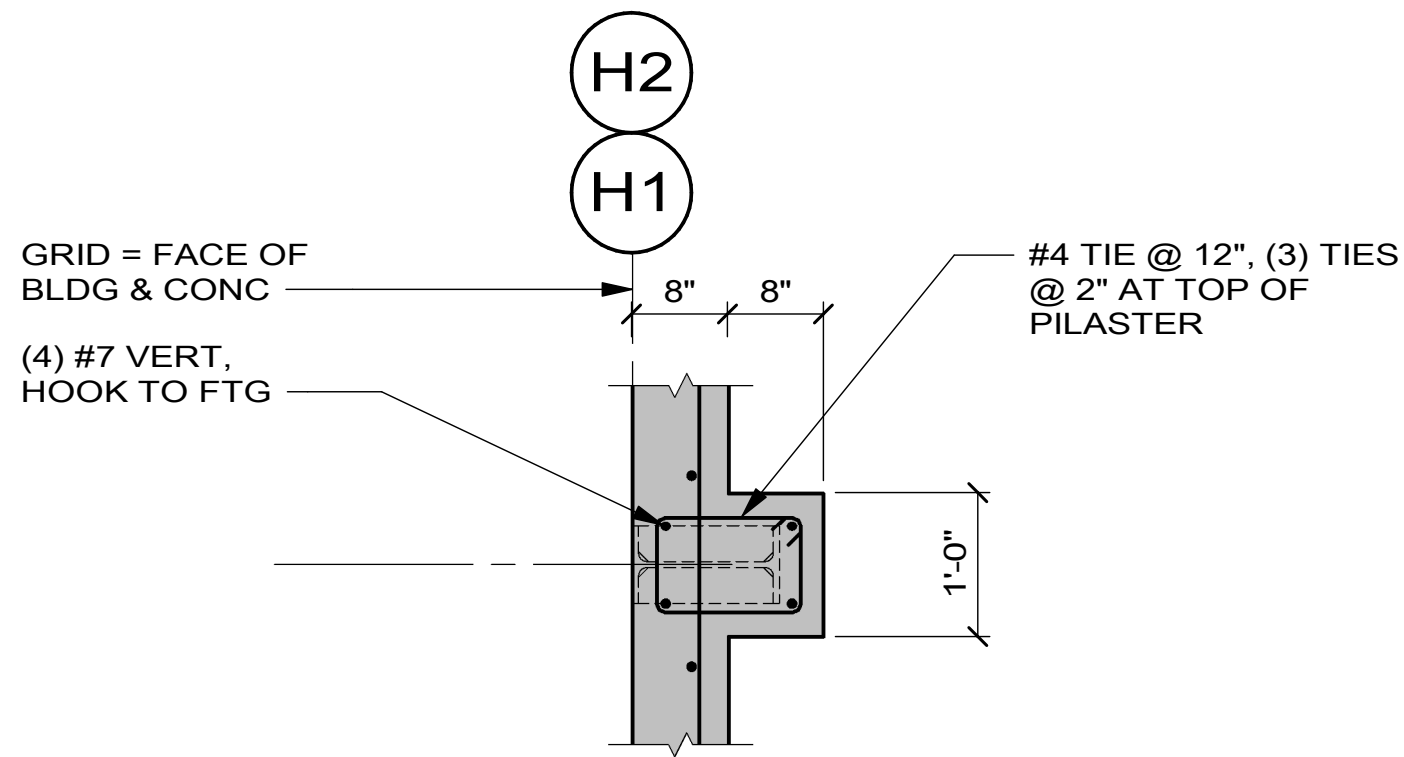


PLAN VIEW

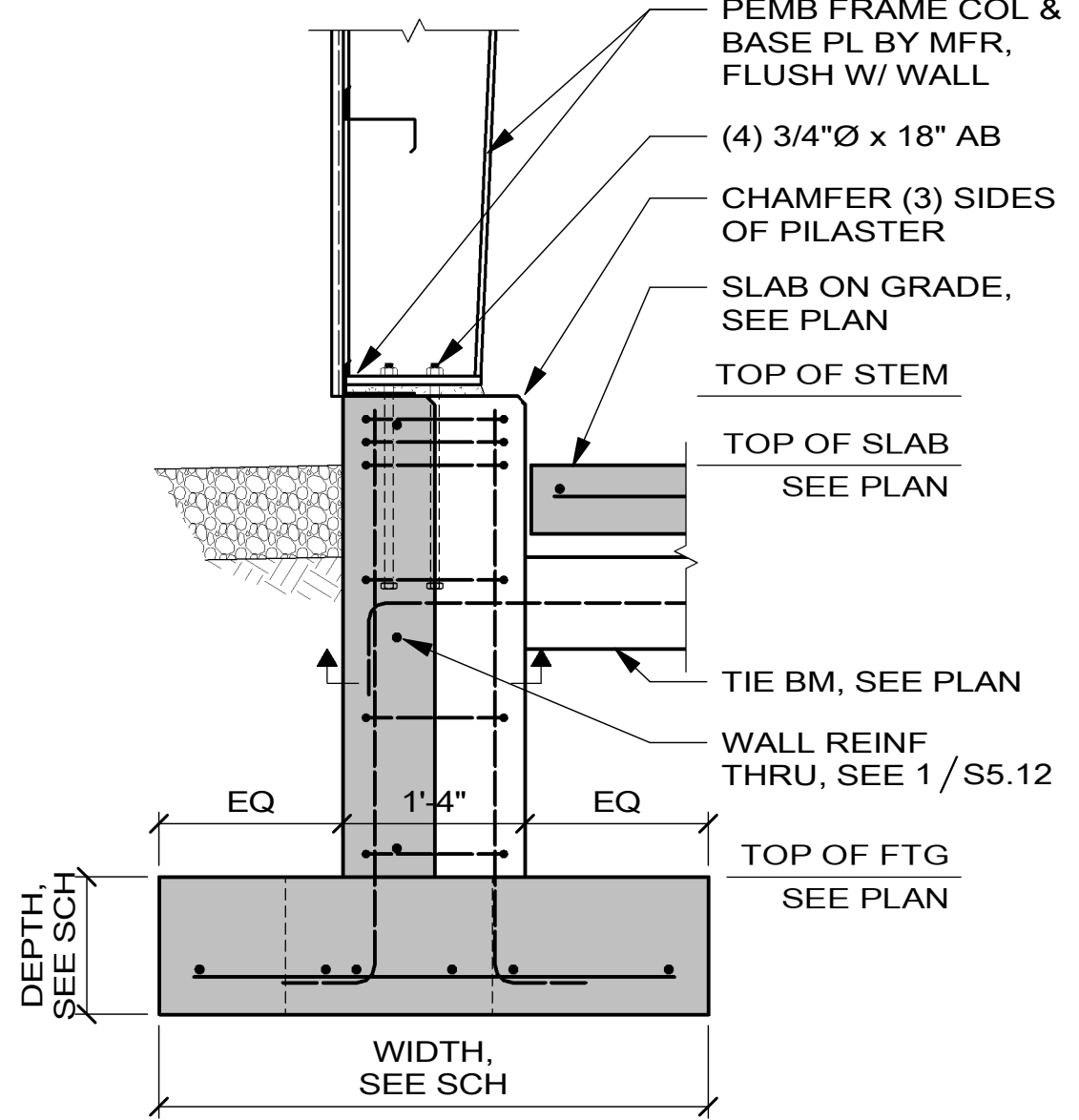


FOR INFO NOT NOTED, SEE 1 / S5.12

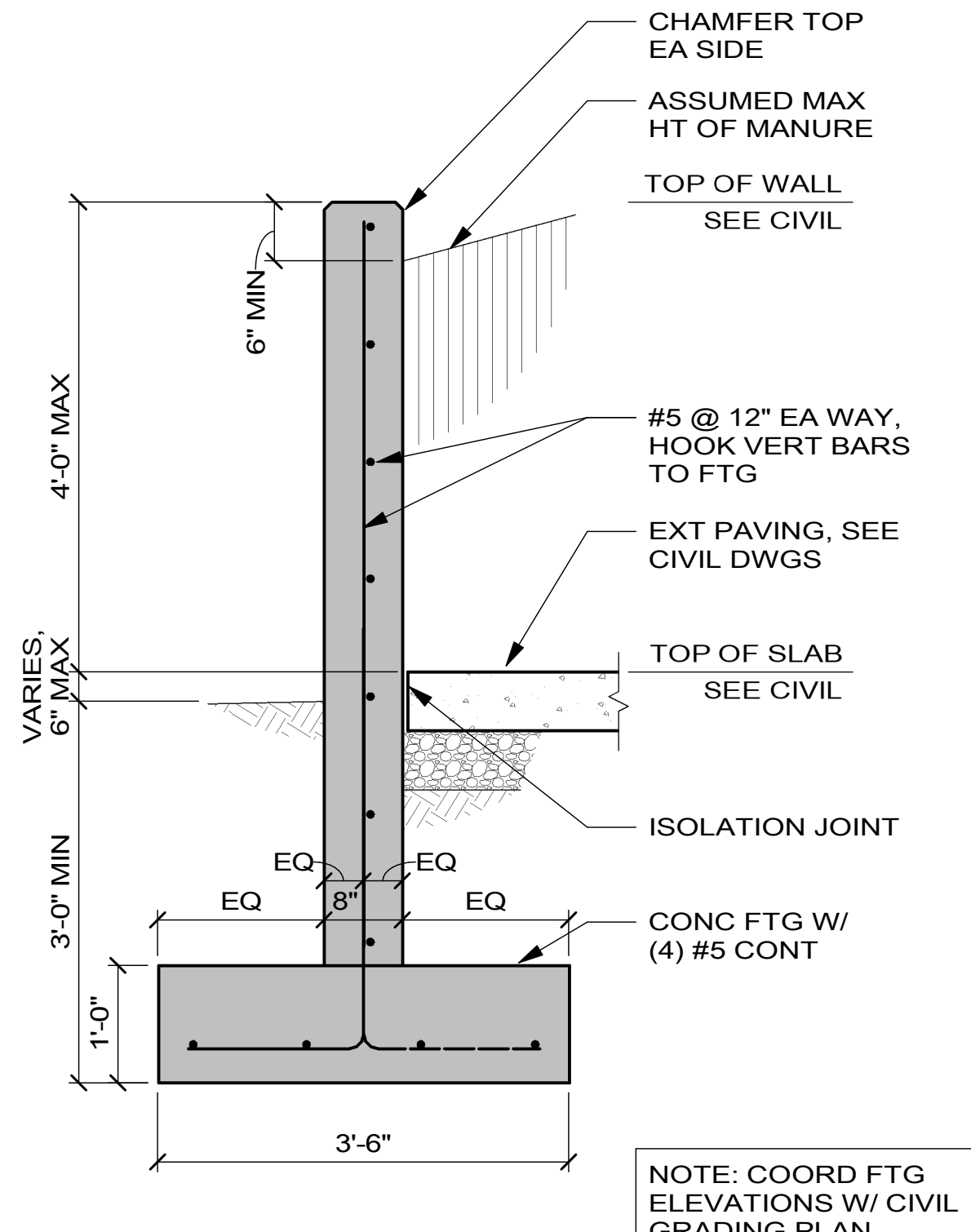
2 FOUNDATION AT PEMB DOOR
SCALE A



PLAN VIEW



3 FOUNDATION AT PEMB COL
SCALE A



4 FOUNDATION AT MANURE STORAGE WALL
SCALE A

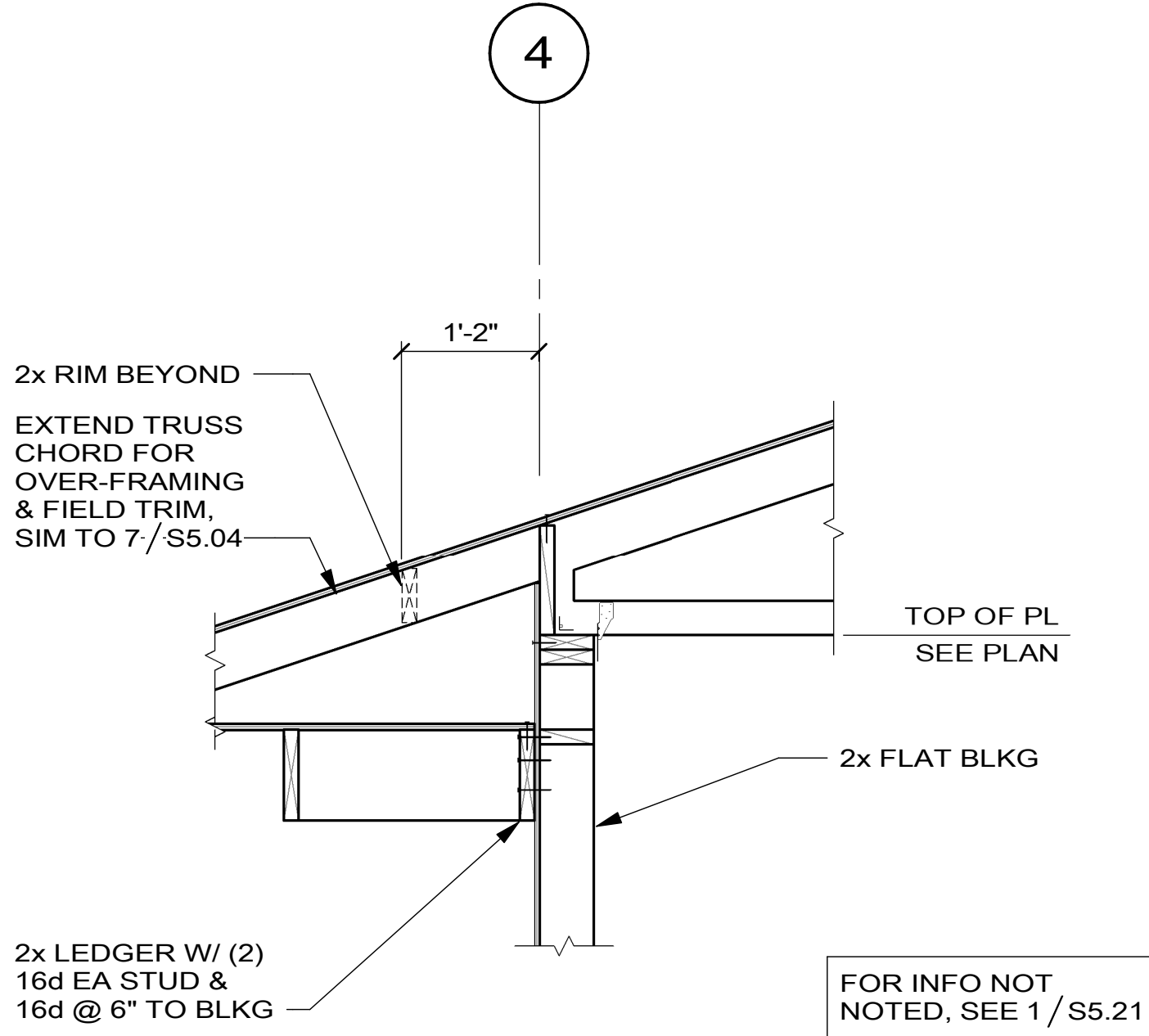
SCALE A 1 0 1 2 3
SCALE OF FEET

FOOTING SCHEDULE				
MARK	WIDTH	LENGTH	DEPTH	REINFORCING
F2.5	2'-6"	2'-6"	1'-0"	(3) #5 EA WAY
F3.0	3'-0"	3'-0"	1'-0"	(4) #5 EA WAY
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EA WAY
F18	1'-6"		1'-0"	(2) #5 CONT

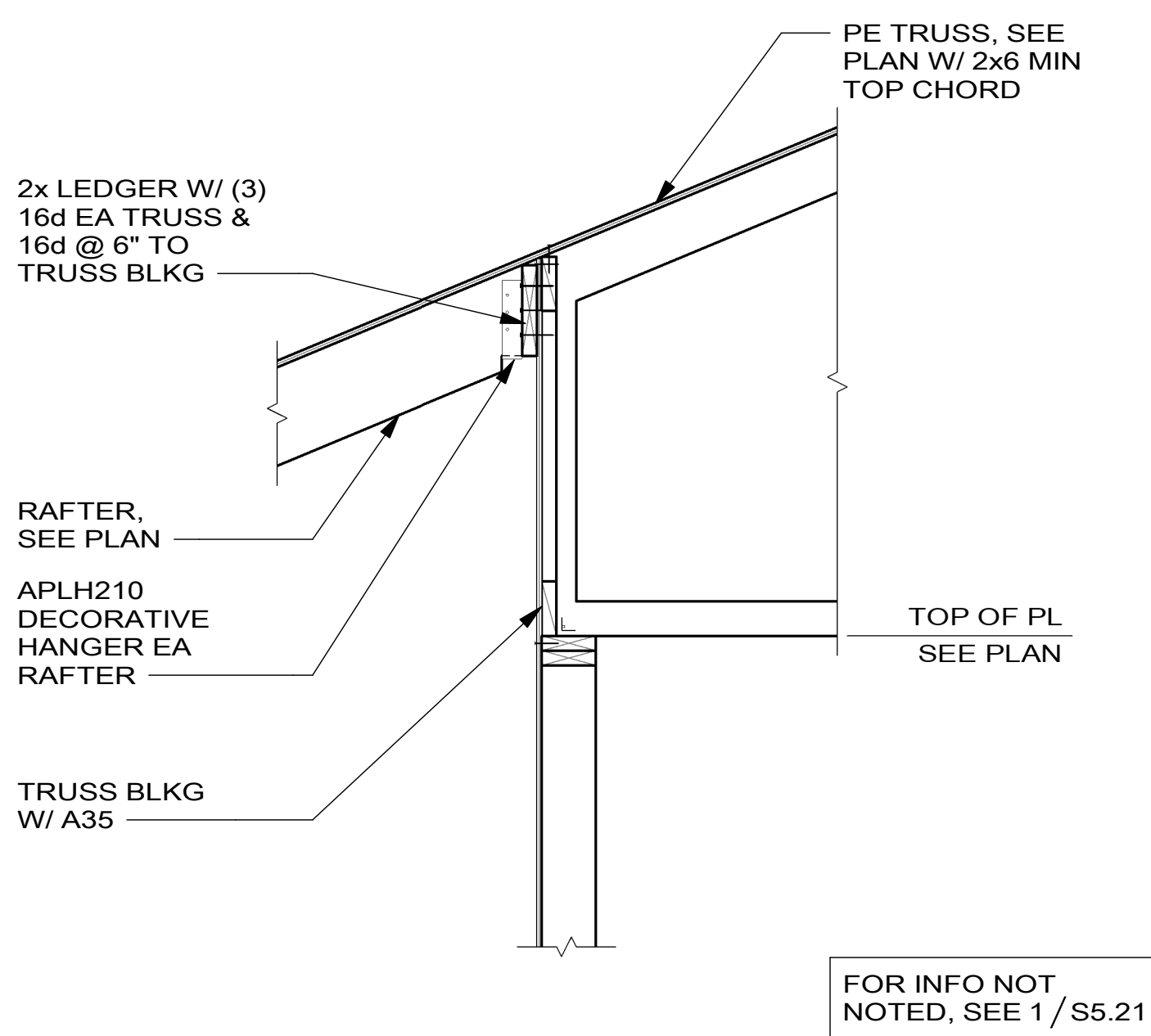


DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 02.27.2023	SUB SHEET NO. S5.12	TITLE OF SHEET FOUNDATION SECTIONS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 70 OF 104
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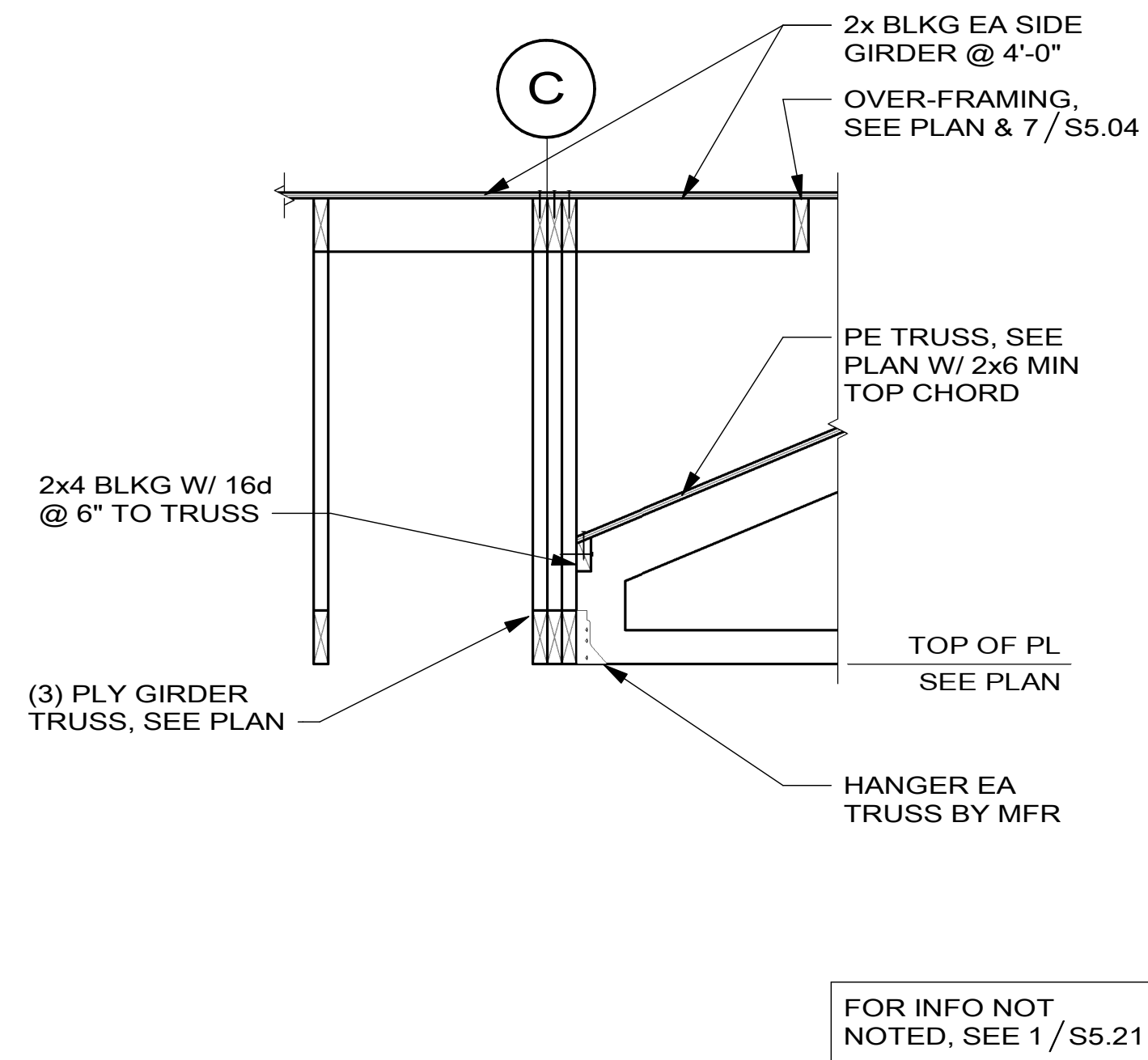
2/22/2023 5:38:43 PM BIM 360://2021-51 ROMO Barn & Tack/21039;1 JVA Structural S21.rvt



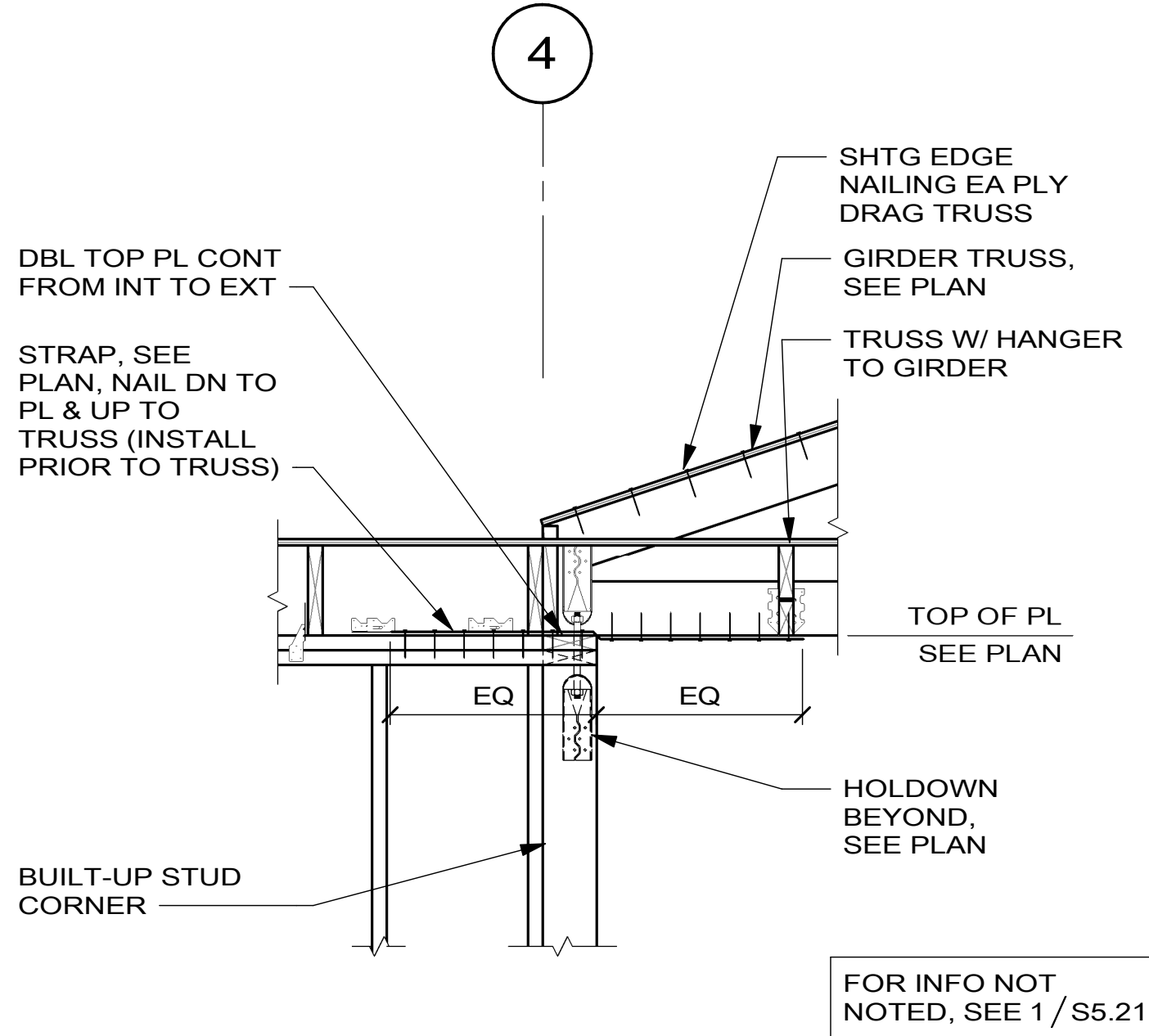
5 PERP ROOF TRUSS AT EXT WALL
S5.21 SCALE (A)



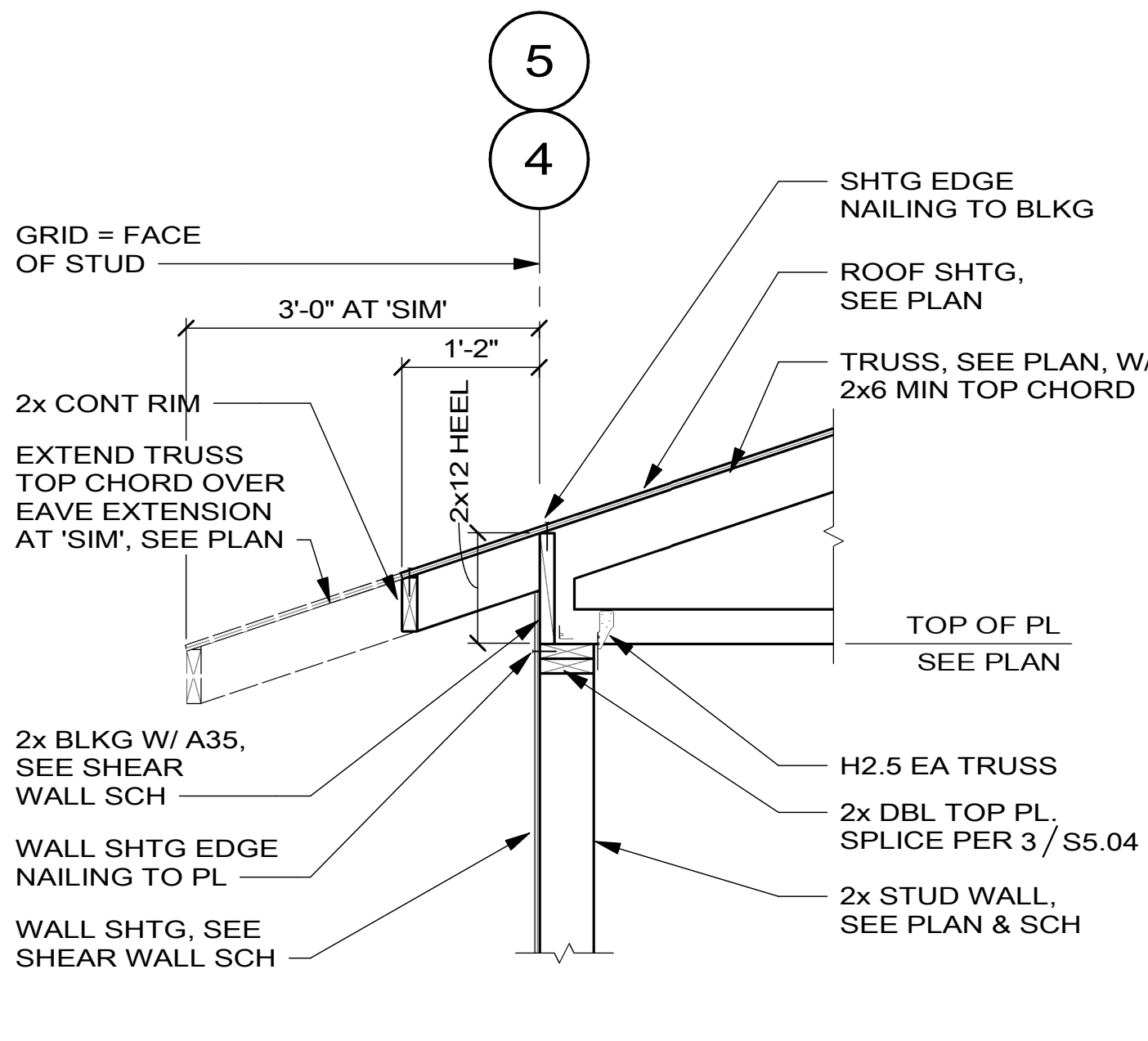
6 PERP ROOF SCISSOR TRUSS AT EXT WALL
S5.21 SCALE (A)



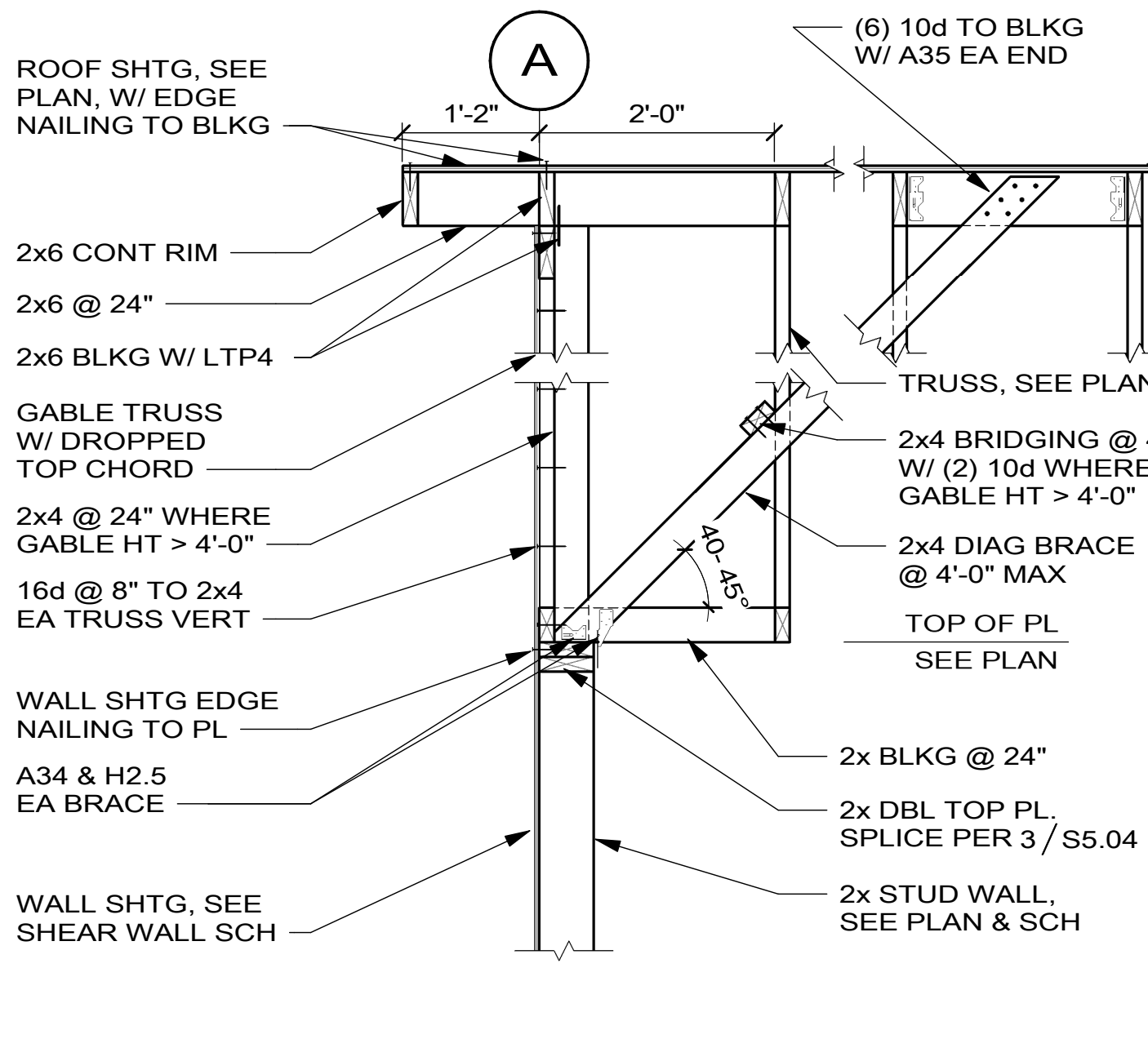
7 PERP ROOF SCISSOR TRUSS AT GIRDER
S5.21 SCALE (A)



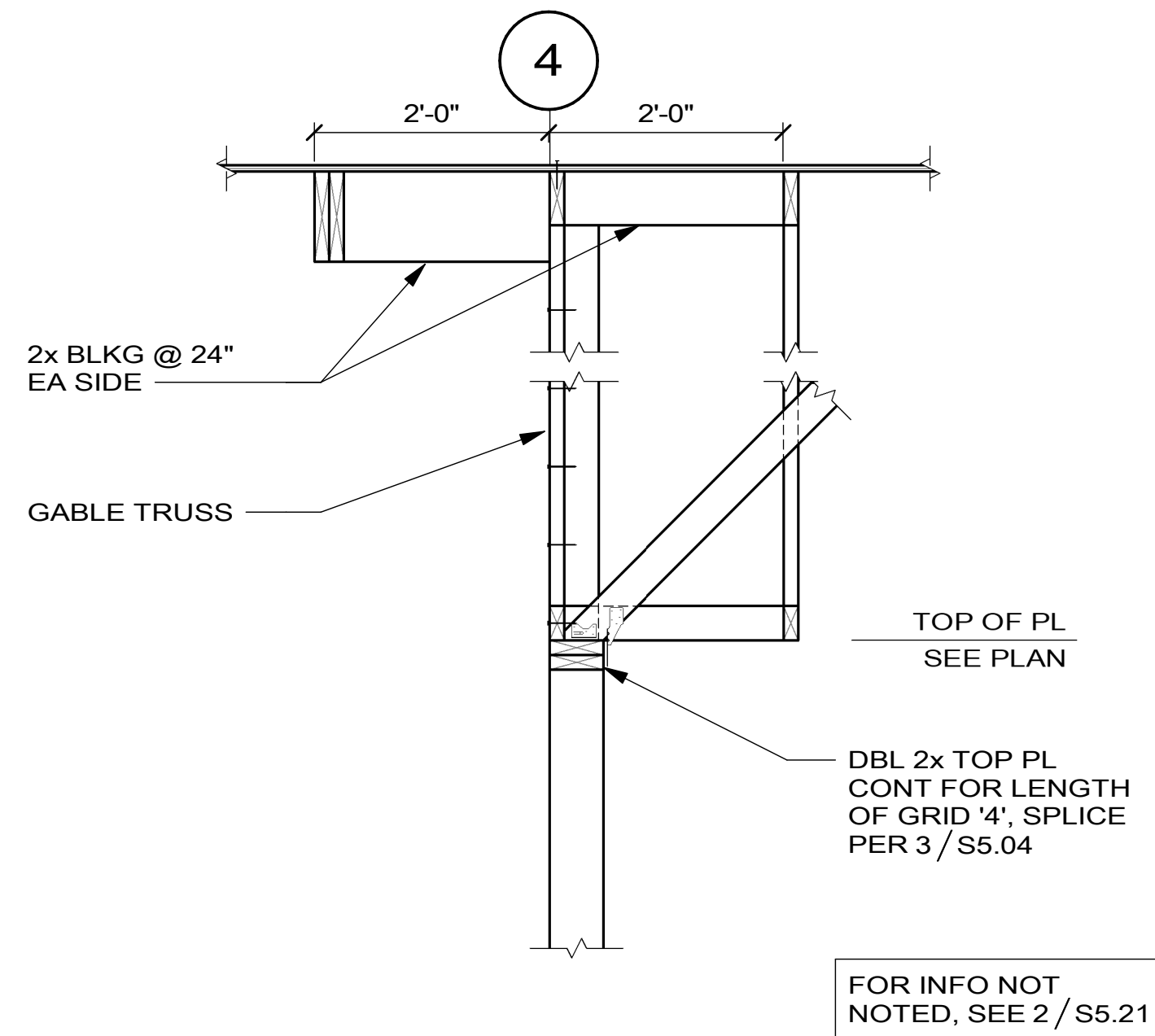
8 GIRDER TRUSS AT EXT WALL
S5.21 SCALE (A)



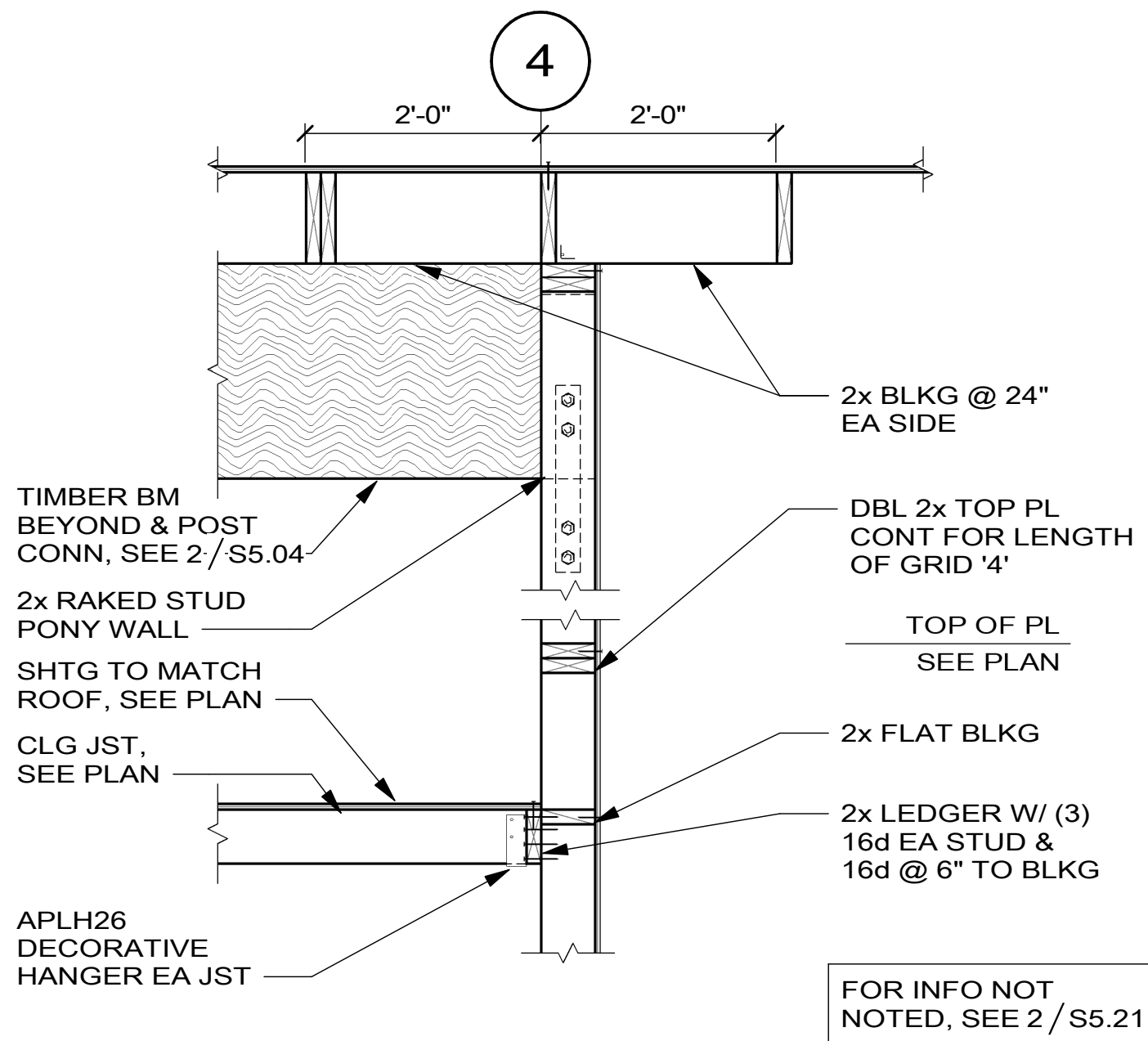
1 PERP ROOF TRUSS AT EXT WALL
S5.21 SCALE (A)



2 GABLE TRUSS AT EXT WALL
S5.21 SCALE (A)



3 FRAMING TRANSITION AT INT WALL
S5.21 SCALE (A)



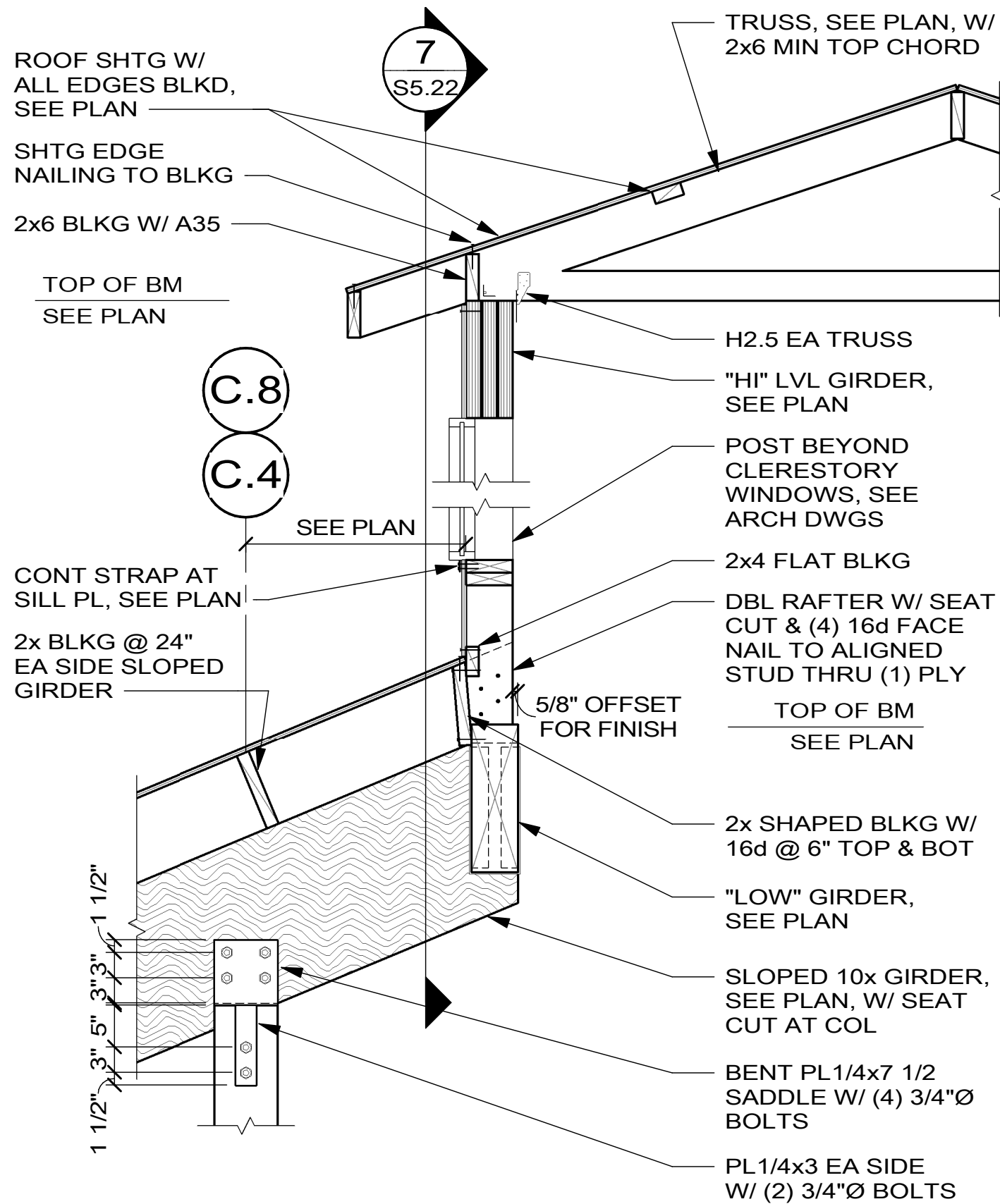
4 FRAMING TRANSITION AT INT WALL
S5.21 SCALE (A)

SCALE (A) 1 0 1 2 3
SCALE OF FEET

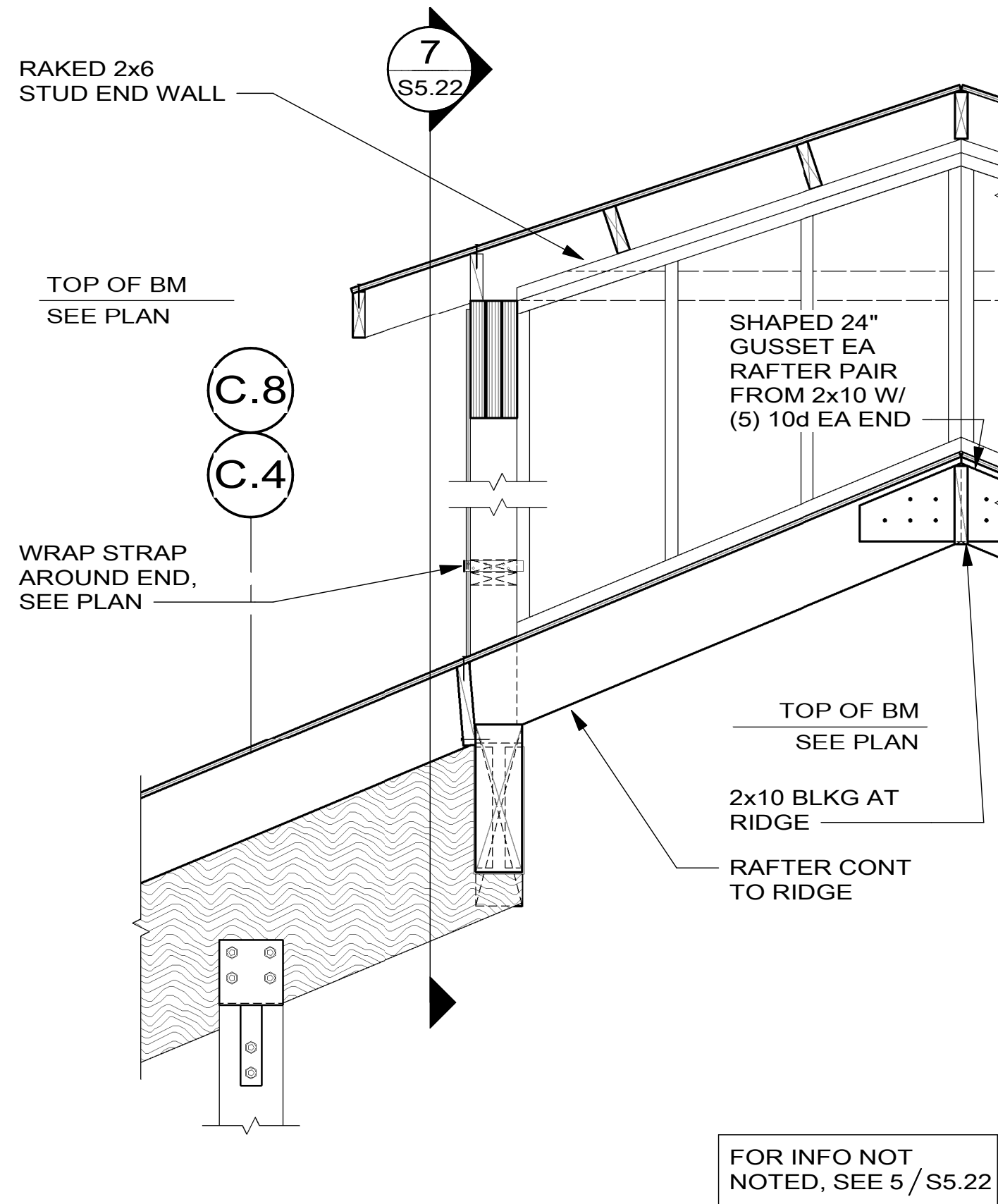


DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 02.27.2023	SUB SHEET NO. S5.21	TITLE OF SHEET ROOF FRAMING SECTIONS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 71 OF 104
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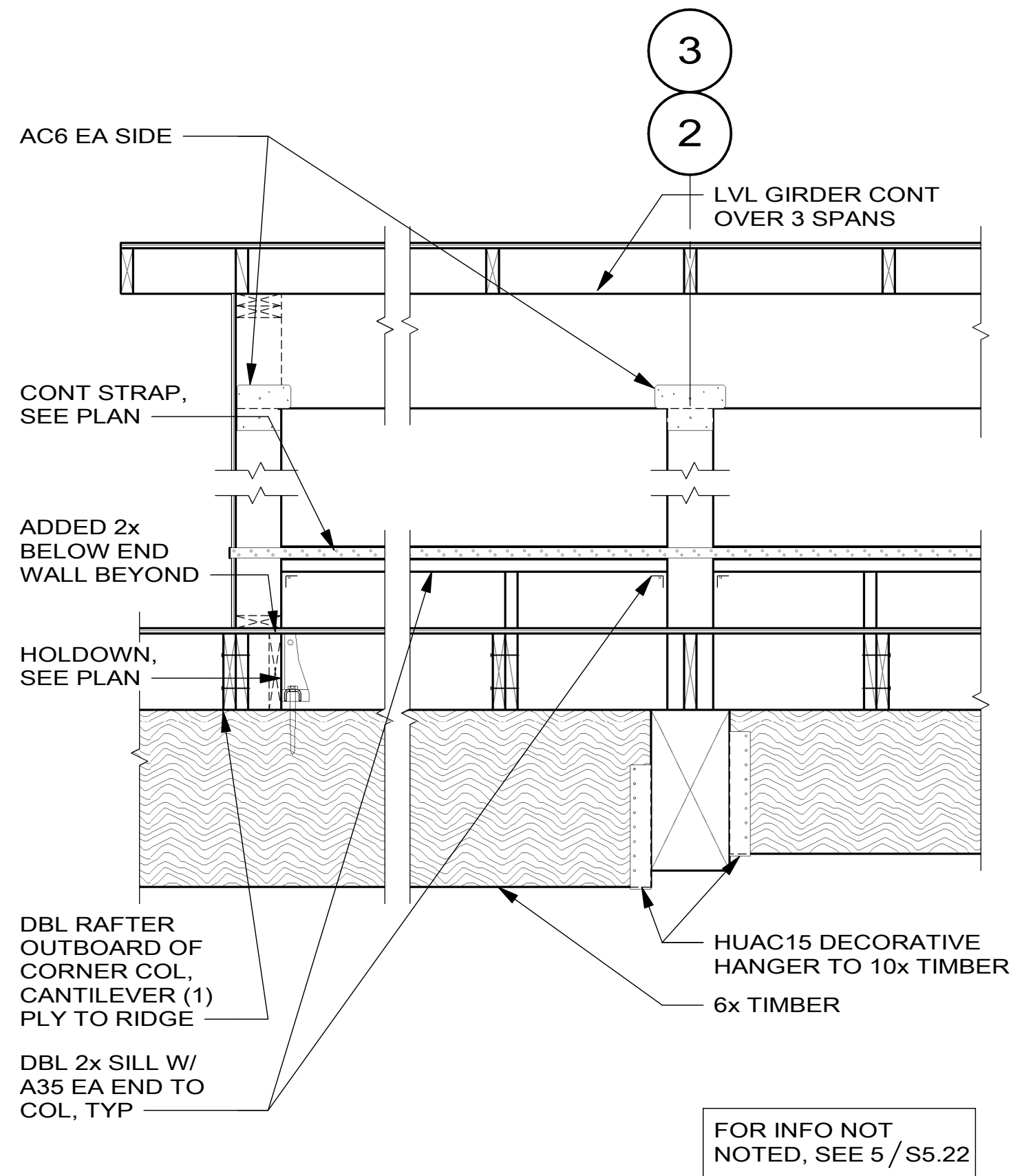
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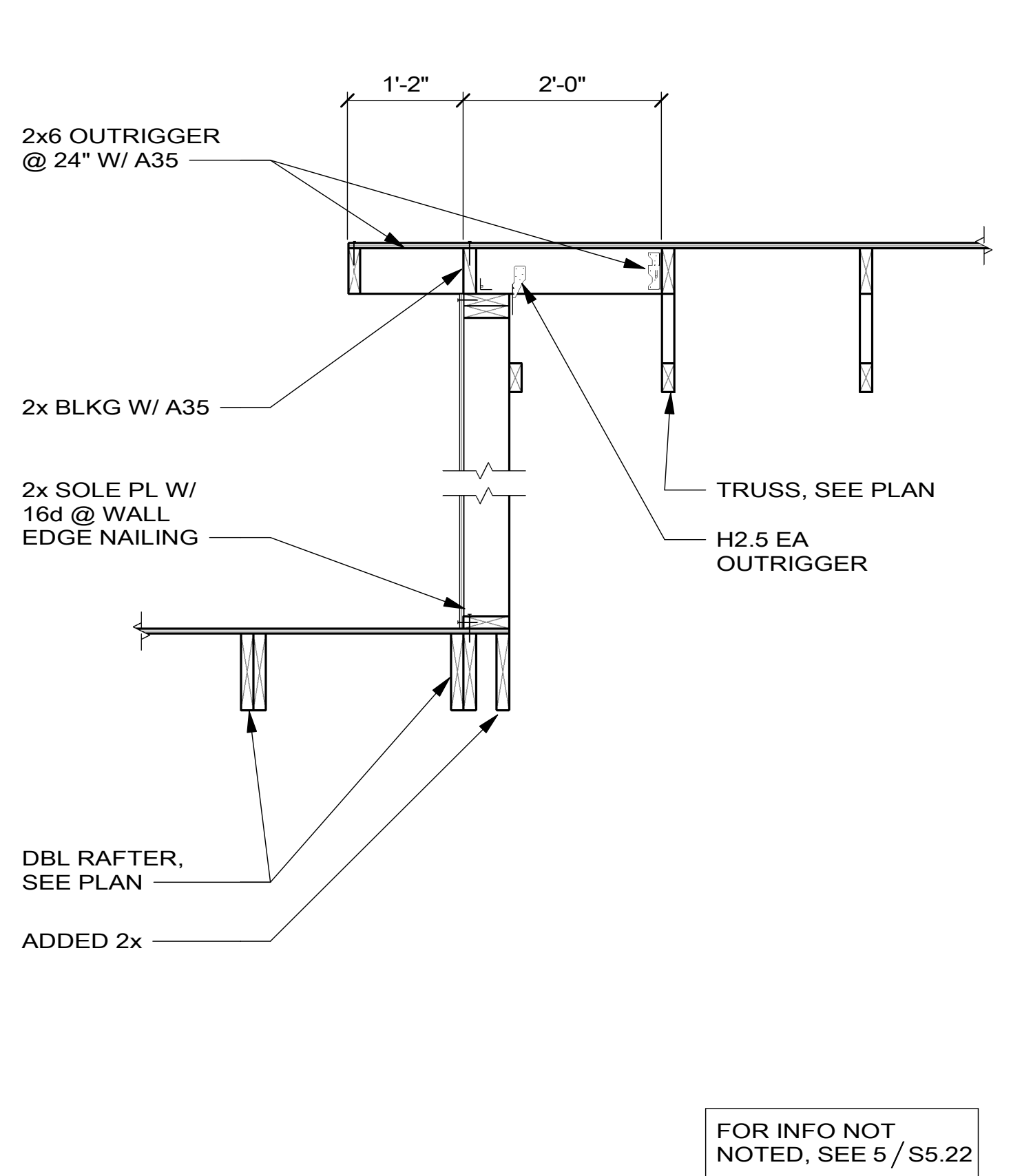
5 PERP ROOF TRUSS AT CLERESTORY
S5.22 SCALE A



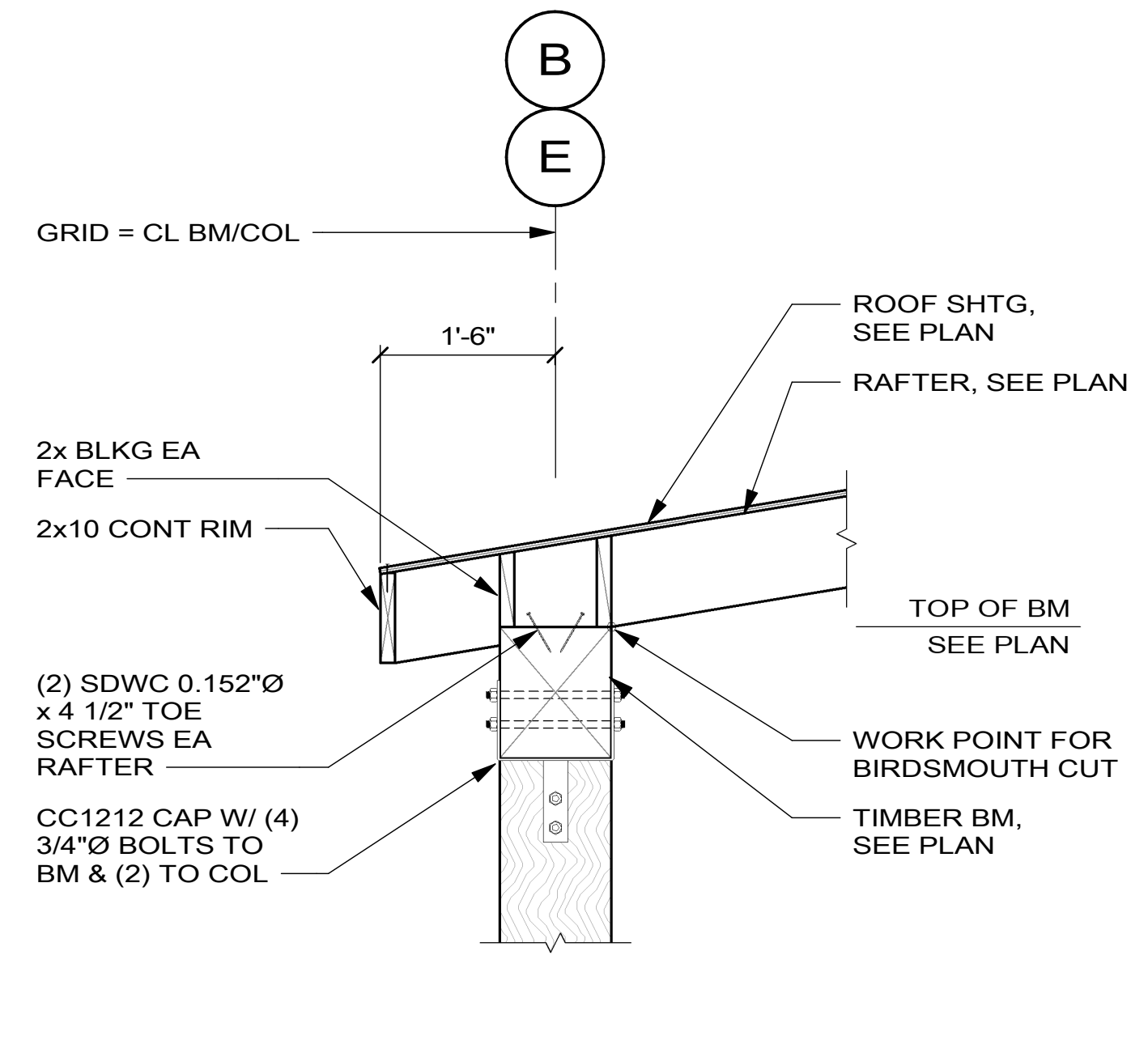
6 PERP RAFTER AT RIDGE
S5.22 SCALE A



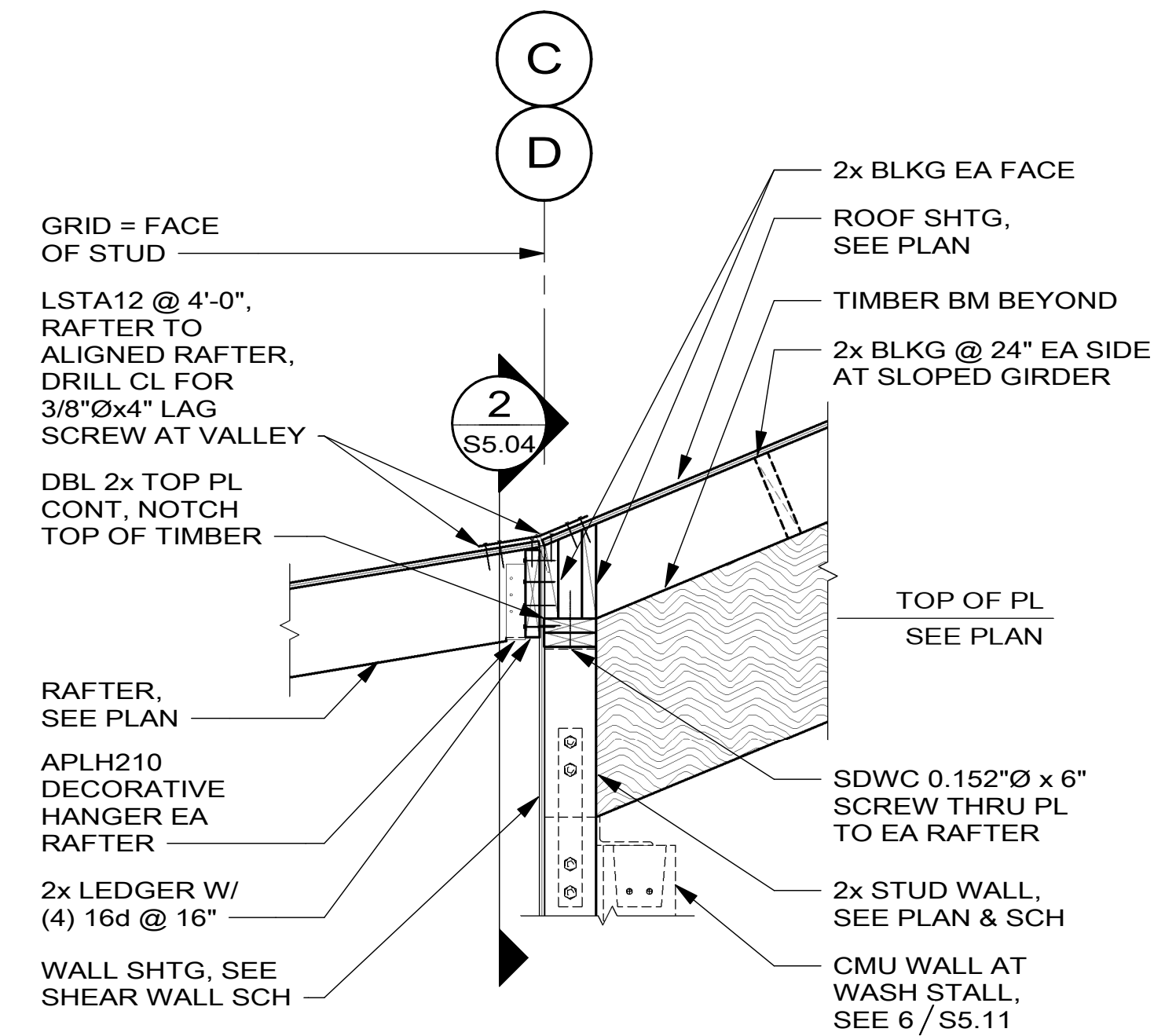
7 CLERESTORY WALL ELEVATION
S5.22 SCALE A



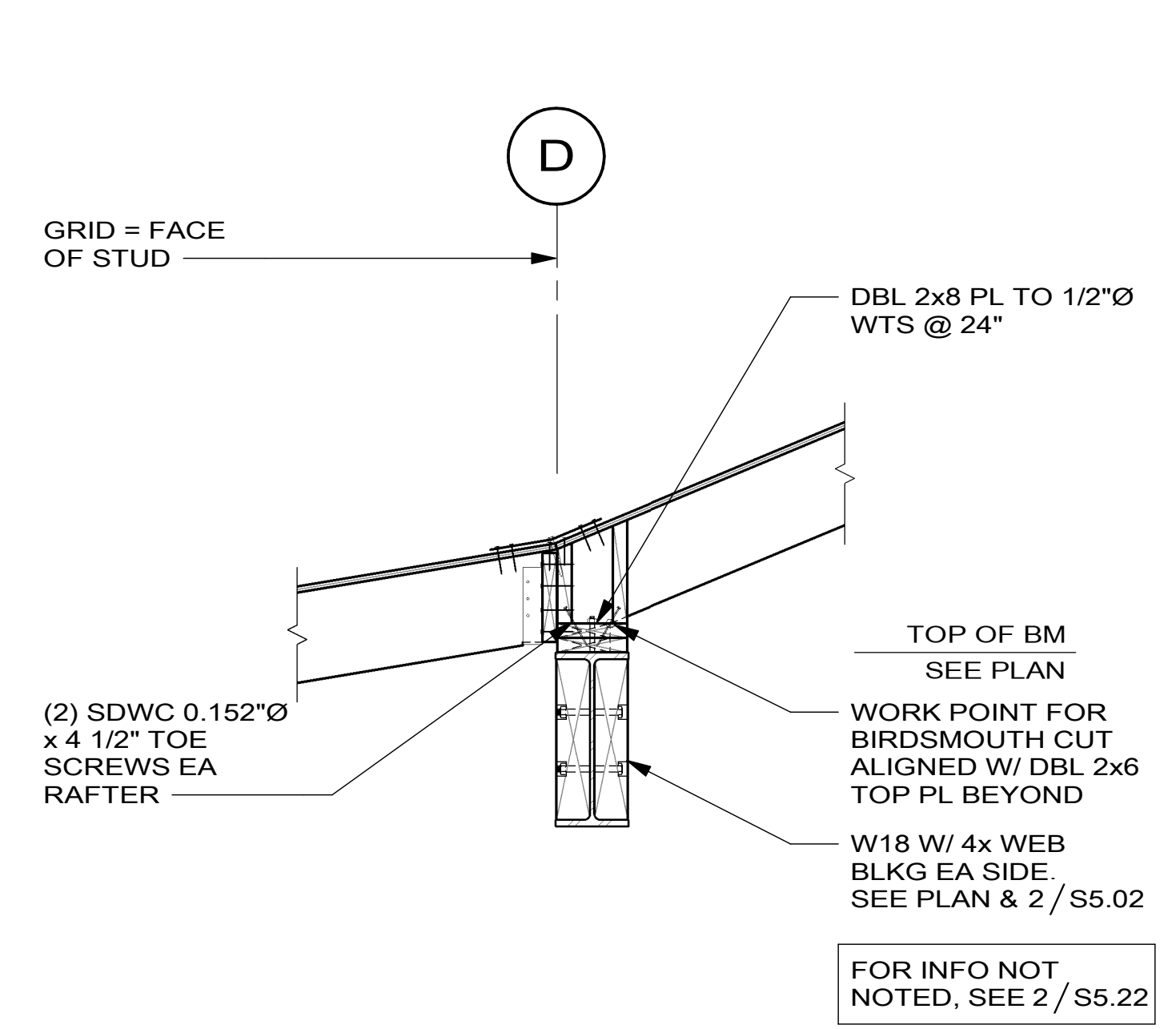
8 PARALLEL RAFTER AT CLERESTORY
S5.22 SCALE A



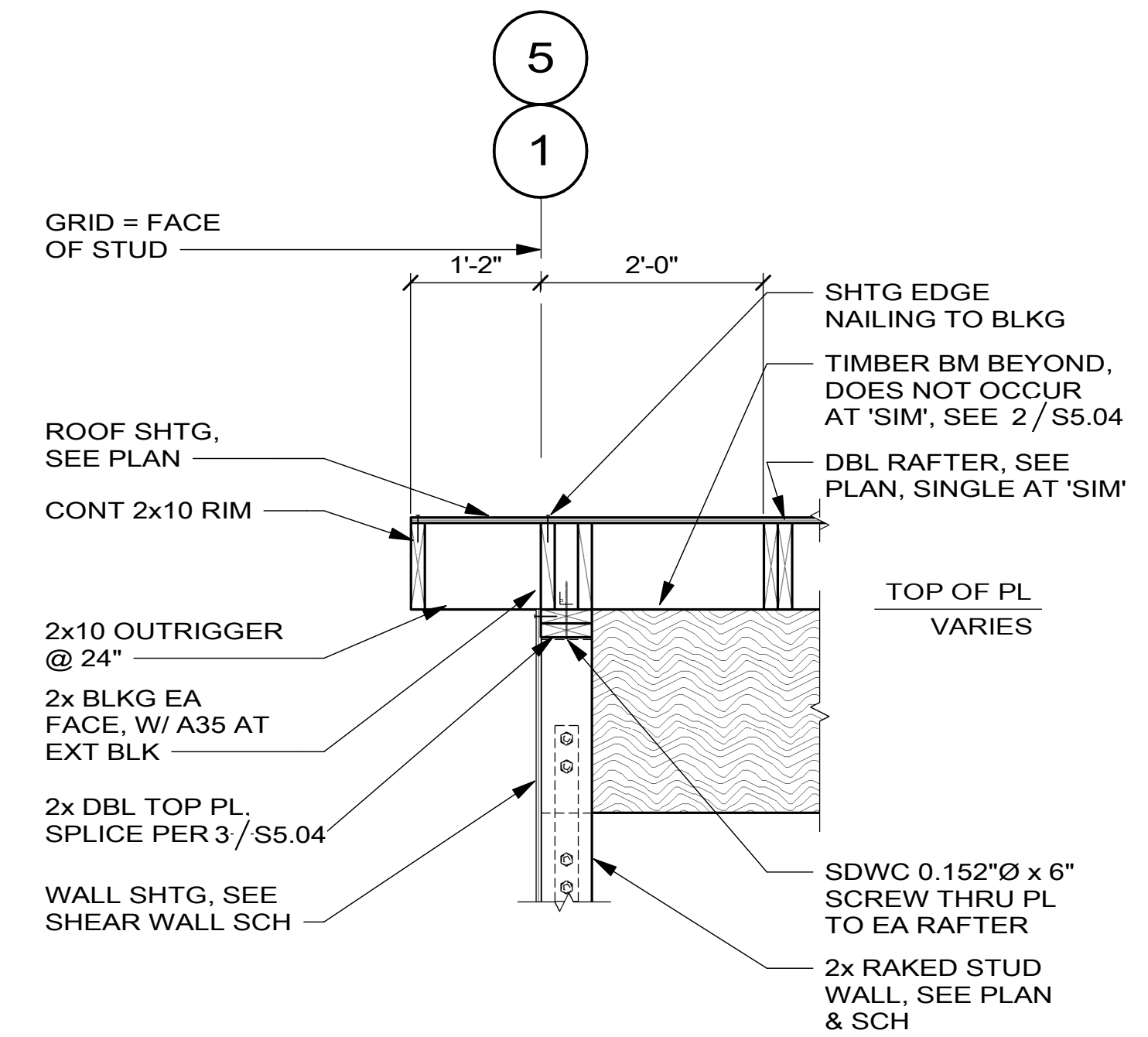
1 RAFTER AT EXT DROPPED BEAM
S5.22 SCALE A



2 PERP RAFTER AT EXT WALL & ROOF STEP
S5.22 SCALE A



3 PERP TRUSS AT EXT WALL & ROOF STEP
S5.22 SCALE A



4 PARALLEL RAFTER AT EXT WALL
S5.22 SCALE A

SCALE A 1 0 1 2 3
SCALE OF FEET



DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 02.27.2023	SUB SHEET NO. S5.22	TITLE OF SHEET ROOF FRAMING SECTIONS CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 72 OF 104
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MECHANICAL ABBREVIATIONS

AHU	AIR HANDLING UNIT
ADJ.	ADJUSTABLE
BBR	BASEBOARD RADIATOR
EF	EXHAUST FAN
F	FAN
HP	HEAT PUMP
HD	HOOD
L	LOUVER
NTS	NOT TO SCALE
TYP.	TYPICAL
UH	UNIT HEATER

MECHANICAL SYMBOLS

	DUCT. ALL DUCTS DIMENSIONS SHALL BE SHOWN IN INCHES AND ARE INSIDE DIMENSIONS
	THERMOSTAT
	HUMIDISTAT
	SUPPLY GRILLE
	RETURN GRILLE
	EXHAUST GRILLE
	CONDENSATE
	REFRIGERANT SUCTION/REFRIGERANT LIQUID
	PIPE DROP
	DIFFUSER TAG
	WALL SWITCH
	BALANCING DAMPER

NATURAL VENTILATION CALCULATION (CALCULATIONS BASED ON IMC TABLE 402.2)

ROOM NAME	SQUARE FEET	OPERABLE OPENING REQUIRED [SF]	OPERABLE OPENING PROVIDED [SF]
TRAILS WORK AREA*	1035	41	61
BREAKROOM/ LAUNDRY	202	16	24
STALL 1	123	10	10
STALL 2	122	10	10
STALL 3	122	10	10
STALL 4	122	10	10
STALL 5	122	10	10
STALL 6	122	10	10
STALL 7	121	10	10
STALL 8	121	10	10
WASH STALL	107	9	54
FEED STALL	120	10	10
BARN	1183	47	66

*UNOCCUPIED SPACE

OUTSIDE AIR CALCULATION (CALCULATIONS BASED ON IMC TABLE 403.3)

ROOM NAME	ROOM TYPE PER TABLE 6-1	AREA SQUARE FEET	OCCUPANT LOAD #/1000 SF	OA CFM/ PERSON	OA CFM/SF	AIR DIST. EFFECTIVENESS	OA PERCENTAGE	SA PROVIDED	OA PROVIDED	OA REQUIRED
OFFICE	Office spaces	182	5	5	0.06	0.8	12%	260	31	19.3
PRIVATE OFFICE	Office spaces	156	5	5	0.06	0.8	12%	140	17	16.6
ACCESSIBLE, UNISEX RESTROOM	Unoccupied	119	0	0	0.00	0.8	-	-	-	125 EA
UNISEX RESTROOM	Unoccupied	73	0	0	0.00	0.8	-	-	-	75 EA
JANITOR/ STORAGE 2	Unoccupied	46	0	0	0.00	0.8	-	-	-	75 EA
									48	35.9

LOAD AND EQUIPMENT SIZING CALCULATIONS

INDOOR DESIGN CONDITIONS

COOLING SETPOINT = 75.0 °F

HEATING SETPOINT = 70.0 °F

OUTDOOR DESIGN CONDITIONS

COOLING DRY BULB = 81.0 °F

COOLING WET BULB = 60.0 °F

HEATING DRY BULB = 2.3 °F

SYSTEM: NEW HEAT PUMP

CALCULATED COOLING LOAD = 7,926 BTUH

CALCULATE HEATING LOAD = 9,328 BTUH

SELECTED UNIT COOLING CAPACITY = 9,286 BTUH

SELECTED UNIT HEATING CAPACITY = 17,572 BTUH

NOTES:

1. EQUIPMENT SELECTED AS SMALL AS POSSIBLE WITHIN AVAILABLE EQUIPMENT OPTIONS
2. EQUIPMENT CAPACITY IS AT PERFORMANCE AT 8841'

MECHANICAL NOTES

I. GENERAL

- ALL WORK SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS AND SPECIFICATIONS, AND AUTHORITY HAVING JURISDICTION.
- THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO SHOW ALL TRANSITIONS, OFFSETS, ETC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND PROVIDE ALL NECESSARY FITTINGS TO COMPLETE THE INTENT OF THE DRAWINGS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE CONTRACTING OFFICER FOR RESOLUTION. CONTRACTOR MAY LOCATE MECHANICAL EQUIPMENT DIFFERENTLY THAN SHOWN ON DRAWINGS DUE TO CONFLICTS, AS LONG AS FUNCTION AND/OR APPEARANCE ARE NOT AFFECTED.
- COORDINATE SPACE REQUIREMENTS, SUPPORTS, AND INSTALLATION OF MECHANICAL WORK, WHICH ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. FOLLOW ROUTING SHOWN FOR PIPES AND DUCTS AS CLOSELY AS PRACTICABLE; PLACE RUNS PARALLEL WITH LINES OF BUILDING. UTILIZE SPACES EFFICIENTLY TO MAXIMIZE ACCESSIBILITY FOR OTHER INSTALLATIONS, FOR MAINTENANCE, AND FOR REPAIRS.
- COMPLY WITH MANUFACTURERS' INSTRUCTIONS INCLUDING EACH STEP IN SEQUENCE. SHOULD MANUFACTURERS' INSTRUCTIONS CONFLICT WITH THE DRAWINGS REQUEST CLARIFICATION FROM THE CONTRACTING OFFICER BEFORE PROCEEDING.
- DUCT SIZES ARE INSIDE DIMENSION.
- CONTRACTOR SHALL REVIEW THESE DOCUMENTS CAREFULLY. CONTRACTOR SHALL CONTACT THE CONTRACTING OFFICER, FOR RESOLUTION OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS, BEFORE BID DATE. IN THE EVENT THAT AN INTERPRETATION OF BID DOCUMENTS IS NECESSARY AFTER THE BID DATE, THE DECISION OF THE CONTRACTING OFFICER SHALL BE FINAL AND BINDING.
- PRODUCT DELIVERY, STORAGE, AND HANDLING: PROVIDE EQUIPMENT AND PERSONNEL TO HANDLE PRODUCTS BY METHODS TO PREVENT DAMAGE. PROMPTLY INSPECT SHIPMENTS TO ENSURE THAT PRODUCTS ARE UNDAMAGED. STORE AND PROTECT PRODUCTS IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COSTS OF ALL CHANGE ORDERS, WHICH THE CONTRACTING OFFICER AND NPS HAVE NOT APPROVED IN WRITING PRIOR TO THE EXECUTION OF THE ASSOCIATED WORK.
- IN THE CASE OF A CONFLICT, UNLESS OTHERWISE NOTED, KEYNOTES ON MECHANICAL PLANS SHALL SUPERCEDE ANY GENERAL NOTES ON THE PLANS.
- CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AND NOTIFY THE CONTRACTING OFFICER IF ANY CONFLICTS OCCUR.
- THERMOSTAT HEIGHTS SHALL BE 48" AFF TO MATCH LIGHTSWITCH HEIGHTS AND INSTALLED TO MEET ICC A117.1. CONTRACTOR TO CALIBRATE ALL THERMOSTATS SHOWN ON THIS PLAN.
- PROVIDE VOLUME DAMPERS AT ALL DIFFUSER TAKEOFFS.
- ALL TAKEOFFS, RUNOUTS, AND FLEX DUCTWORK TO DIFFUSERS SHALL BE THE SAME SIZE AS DIFFUSER INLET UNLESS OTHERWISE NOTED.
- THERMOSTAT CONTROL LINES SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 4'0".
- PROVIDE EXTERNAL INSULATION ON ALL NEW RIGID ROUND DUCTWORK.
- ALL PIPE AND DUCT PENETRATIONS THOUGH RATED WALLS SHALL BE SEALED PER 2021 IBC.



DESIGNED: ET 	SUB SHEET NO. M0.0	TITLE OF SHEET MECHANICAL COVER SHEET	DRAWING NO. 121 175143
TECH. REVIEW: BG		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	PMIS/PKG NO. 316223
DATE: 02/27/2023			SHEET 73 OF 104

OUTDOOR HEAT PUMP SCHEDULE																
GENERAL						ELECTRICAL								PHYSICAL DATA		NOTES
TAG	MANUFACTURER	MODEL	NOMINAL TONS	EER	HSPF	VOLTAGE [V]	PHASE	FREQ. [HZ]	MCA [A]	MOCp [A]	RLA [A]	FLA [A]	COMPRESSOR QUANTITY	L x W x H [IN]	WEIGHT [LBS]	
HP-1	TRANE	TRUA0121KA70NA	1	13.4	10.3	240	1	60	11	28	7	0.5	1	11-13/16 x 31-13/16 x 24-13/16	93	1,2,3,4,5,6,7,8
NOTES:																
1. PROVIDE WITH 6" CONCRETE PAD.								6. ALL REFRIGERANT PIPING, INCLUDING VALVES, FITTINGS, AND CONNECTIONS, TO BE PROVIDED AND ROUTED PER MANUFACTURER'S RECOMMENDATIONS.								
2. PROVIDE WITH HAIL / SNOW GUARD.								7. PROVIDE WITH WIND BAFFLES. [FOR PERFORMANCE DOWN TO 0°F]								
3. PROVIDE WITH SINGLE POWER POINT CONNECTION.								8. PROVIDE WITH 42" HEAT PUMP STAND.								
4. PROVIDE WITH FIELD-MOUNTED DISCONNECT BY E.C.																
5. PROVIDE ALUMINUM JACKETING FOR ALL EXTERIOR REFRIGERANT PIPING.																

INDOOR AIR HANDLING UNIT SCHEDULE																					
GENERAL					SUPPLY FAN DATA			ELECTRICAL			COIL DATA					FILTER DATA		PHYSICAL DATA		NOTES	
TAG	MANUFACTURER	MODEL	LOCATION	TYPE	TOTAL AIRFLOW [CFM]	ESP [IN. W.C.]	POWER [W]	VOLTAGE [V]	PHASE	FREQUENCY [HZ]	SERVICE	COIL AIRFLOW [CFM]	EAT DB [DEG. F]	LAT DB [DEG. F]	CAPACITY [MBH]	TYPE	FACE AREA [SQ. FT.]	L x W x H [IN]	WEIGHT [LBS]		
AHU-1	TRANE	TPVA0A0121AA70A	MECHANICAL ROOM	VERTICAL	400	0.05	890	240	1	60	COOLING	400	75.7	50.5	12.0	MERV 8	1,434.0	21-5/8 x 17 x 50-1/4	113		
												HEATING	400	64.3	110.9	12.0					
NOTES: 1. PROVIDE WITH 7 DAY PROGRAMMABLE THERMOSTAT. 2. POWERED BY HP-1. 3. PROVIDE WITH 5kW INTEGRAL BACK-UP ELECTRIC HEAT KIT, (TRANE EH05-MPA-SB OR EQUIVALENT). 4. PROVIDE WITH A 6" HOUSEKEEPING PAD 5. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND MAINTAIN ALL REQUIRED CLEARANCES. 6. PROVIDE WITH 18" STAND.																					

ELECTRIC HEAT SCHEDULE														
GENERAL						ELECTRICAL				PHYSICAL				REMARKS
TAG	MANUFACTURER	MODEL	LOCATION	ARRANGEMENT	AIR FLOW [CFM]	VOLTAGE [V]	PHASE	AMPS [A]	POWER [KW]	DEPTH [IN]	WIDTH [IN]	HEIGHT [IN]	WEIGHT [LBS]	
UH-1	QMARK	EFF4004	TRAIL MAINTENANCE	CEILING MOUNTED	150	240	1	16.7	4.0	19-1/8	14	12-1/2	24.0	1,2,3
UH-2	QMARK	EFF4004	TRAIL MAINTENANCE	CEILING MOUNTED	150	240	1	16.7	4.0	19-1/8	14	12-1/2	24.0	1,2,3
UH-3	QMARK	EFF1500	STORAGE 1	CEILING MOUNTED	150	120	1	12.5	1.5	19-1/8	14	12-1/2	24.0	1,2,3
UH-4	QMARK	EFF1500	TRAIL STORAGE	CEILING MOUNTED	150	120	1	12.5	1.5	19-1/8	14	12-1/2	24.0	1,2,3
UH-5	QMARK	CWH1101DSF	JANITOR/ STORAGE 2	WALL-MOUNTED	65	120	1	4.2	0.5	4	10-5/8"	12-1/8"	12.0	1,2,3,4
UH-6	QMARK	EFF1500	MECHANICAL	CEILING MOUNTED	150	120	1	12.5	1.5	19-1/8	14	12-1/2	24.0	1,2,3
UH-7	QMARK	EFF4007	TACK ROOM	CEILING MOUNTED	150	240	1	12.5	3.0	19-1/8	14	12-1/2	24.0	1,2,3
BBR-1	QMARK	QMKC2514W	ACCESSIBLE, UNISEX RESTROOM	HORIZONTAL	-	120	1	8.3	1.0	2-7/8"	4'	6-3/4"	11.5	1,3,5
BBR-2	QMARK	QMKC2514W	UNISEX RESTROOM	HORIZONTAL	-	120	1	8.3	1.0	2-7/8"	4'	6-3/4"	12	1,3,5
NOTES: 1. PROVIDE WITH SEPARATE LINE VOLTAGE THERMOSTAT 2. PROVIDE WITH INTEGRAL ELECTRICAL DISCONNECT 3. PROVIDE WITH MANUFACTURER'S MOUNTING BRACKET AND HARDWARE 4. PROVIDE WITH NECESSARY EQUIPMENT TO ALLOW SEMI-RECESSED INSTALLATION. 5. PROVIDE WITH NECESSARY EQUIPMENT TO ALLOW FLOOR MOUNTED INSTALLATION.														

FAN SCHEDULE																				
GENERAL						PERFORMANCE (@ 5,300 FT)						ELECTRICAL				PHYSICAL				NOTES
TAG	MANUFACTURER	MODEL	LOCATION	SERVICE	TYPE	AIRFLOW [CFM]	ESP [IN. W.C.]	SPEED [RPM]	POWER [W]	SIZE [HP]	SOUND [SONES]	VOLTAGE [V]	Ø	FREQ. [HZ]	FLA [A]	LENGTH [IN]	WIDTH [IN]	HEIGHT [IN]	WEIGHT [LBS]	
F-1	GREENHECK	CSP-A700-VG	HAY STORAGE	INTAKE	INLINE	500	0.25	799	35	-	1	115	60	1	4	12	34	12	39	1,2,3,4,5
EF-2	GREENHECK	SP-A90-130-VG	148 ACCESSIBLE, UNISEX RESTROOM	EXHAUST	CEILING	125	0.11	1041	12	-	1.4	115	60	1	0.29	11	13	9	12	2,3,4,6
EF-3	GREENHECK	SP-A50-90-VG	133 UNISEX RESTROOM	EXHAUST	CEILING	75	0.14	887	6	-	0.6	115	60	1	0.29	11	13	9	12	2,3,4,6
F-4	GREENHECK	SQ-160-VG	BARN	INTAKE	INLINE	2500	0.25	919	-	0.75	9.3	115	60	1	10.0	29	26	26.0	136.0	1,2,3,4,5
EF-5	GREENHECK	SP-A50-90-VG	153 JANITOR/ STORAGE 2	EXHAUST	CEILING	75	0.14	887	6	-	0.6	115	60	1	0.29	11	13	9	12	1,3,4,6
F-6	GREENHECK	SP-A90	ATTIC	VENTILATION	CEILING	82	0.19	900	13	-	0.4	115	60	1	0.17	11	13	9	12	1,2,3,4,7
NOTES:																				
1. PROVIDE WITH PLEATED FILTER.																				
2. PROVIDE WITH BACKDRAFT DAMPER																				
3. UNIT WEIGHT DOES NOT INCLUDE ACCESSORIES																				
4. PROVIDE WITH SPRING ISOLATORS																				
5. CONTROLLED BY MANUAL WALL SWITCH.																				
6. INTERLOCKED WITH LIGHT SWITCH.																				
7. CONTROLLED BY HUMIDISTAT.																				

LOUVER SCHEDULE														
GENERAL					PERFORMANCE				PHYSICAL				NOTES	
TAG	MANUFACTURER	MODEL	LOCATION	SERVICE	AIRFLOW [CFM]	FREE AREA [SF]	FACE VELOCITY [FT/MIN]	PRESSURE DROP [IN. W.C.]	HEIGHT [IN]	WIDTH [IN]	DEPTH [IN]	WEIGHT [LBS]		
L-1	GREENHECK	ECD-401	HAY STORAGE	INTAKE	500	0.7	683	0.07	14	22	4	6	1,2,4,5,6	
L-2	GREENHECK	FDS-602	HAY STORAGE	RELIEF	500	2.3	221	0.01	26	30	6	28	1,2,3,4,6	
L-3	GREENHECK	ESJ-602	BARN	INTAKE	2500	3.5	711	0.08	32	32	6	22	1,2,4,5,6	
L-4	GREENHECK	ECD-401	BARN	RELIEF	2500	3.4	739	0.08	20	60	4	34	1,2,3,4,6	
L-5	GREENHECK	ESD-202	MECHANICAL	OUTSIDE AIR	48	0.1	446	0.03	8	10	2	1	1,2,4,5,6	
L-6	GREENHECK	ESD-202	ATTIC	RELIEF	82	0.2	468	0.03	12	10	2	2	1,2,4	
NOTES: <div>1. PROVIDE WITH STAINLESS STEEL INSECT SCREEN 2. PROVIDE WITH 2 COATS OF KYNAR PAINT. COORDINATE FINAL COLOR SELECTION WITH ARCHITECT PRIOR TO ORDERING 3. PROVIDE WITH BACKDRAFT DAMPER MOUNTED IN DUCT, GREENHECK MODEL EM-30, MATCH LOUVER SIZE 4. PROVIDE WITH EXTENDED SILL, FLANGED FRAME, AND WELDED CONSTRUCTION 5. PROVIDE WITH CONTROL DAMPER AND NORMALLY OPEN 2-POS ACTUATOR AND END SWITCH, GREENHECK MODEL VCD-23, MATCH LOUVER SIZE. CONTROLLED VIA WALL SWITCH. 6. PROVIDE WITH 120V TO 24V TRANSFORMER.</div>														

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE						
TAG	MANUFACTURER	MODEL	SERVICE	MATERIAL	FACE SIZE	REMARKS
A	PRICE	SCD	SUPPLY	ALUMINUM	12"X12"	1,2
B	PRICE	PDDR	RETURN	ALUMINUM	12"X12"	1
C	PRICE	PDDR	TRANSER	ALUMINUM	12"X12"	1
NOTES: <div>1. PROVIDE WITH GYPSUM BOARD MOUNTING FRAME. 2. PROVIDE WITH BALANCING DAMPER AT FACE OF DIFFUSER.</div>						



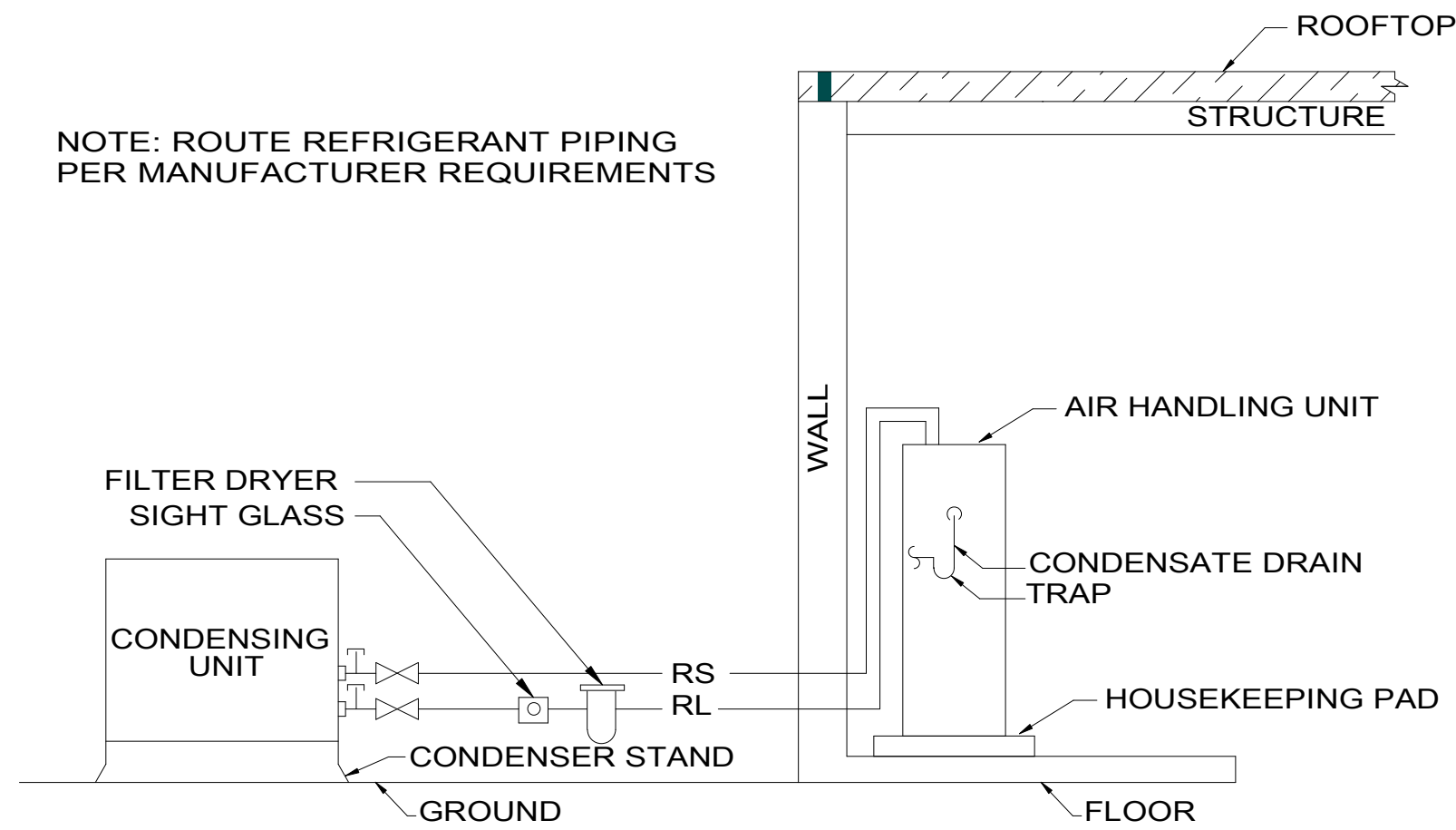
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TECH. REVIEW:	
BG	
DATE:	
02/27/2023	

M0.1

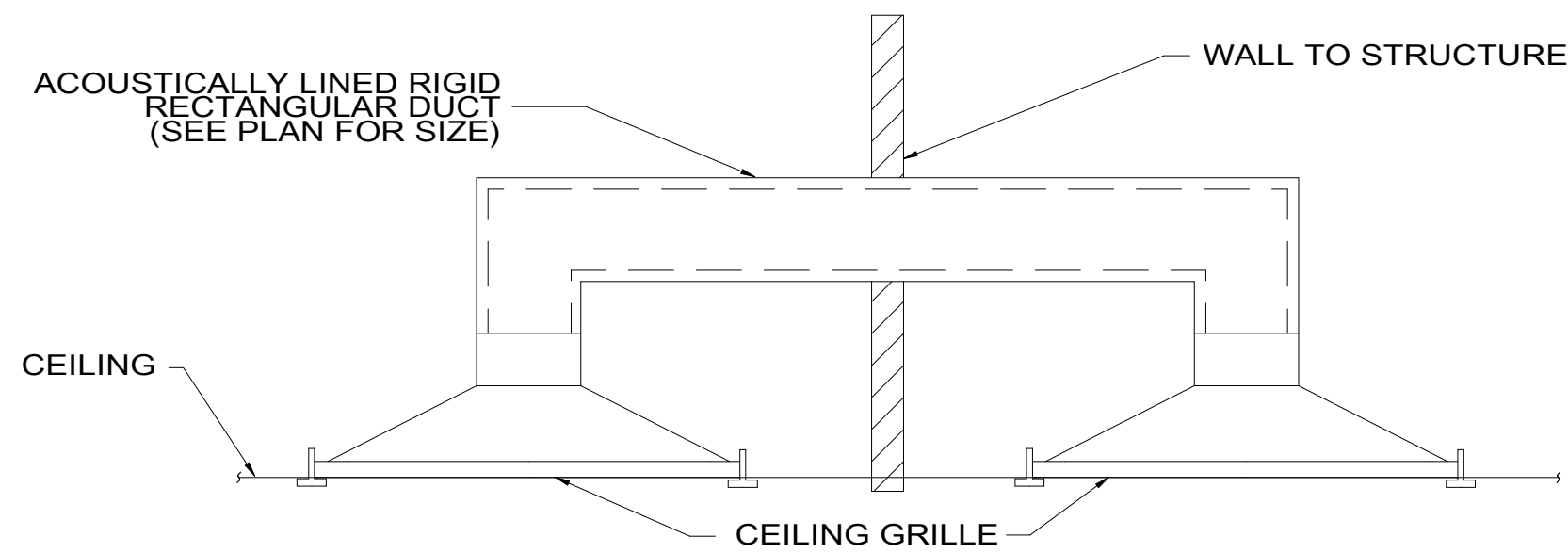
MECHANICAL SCHEDULES

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

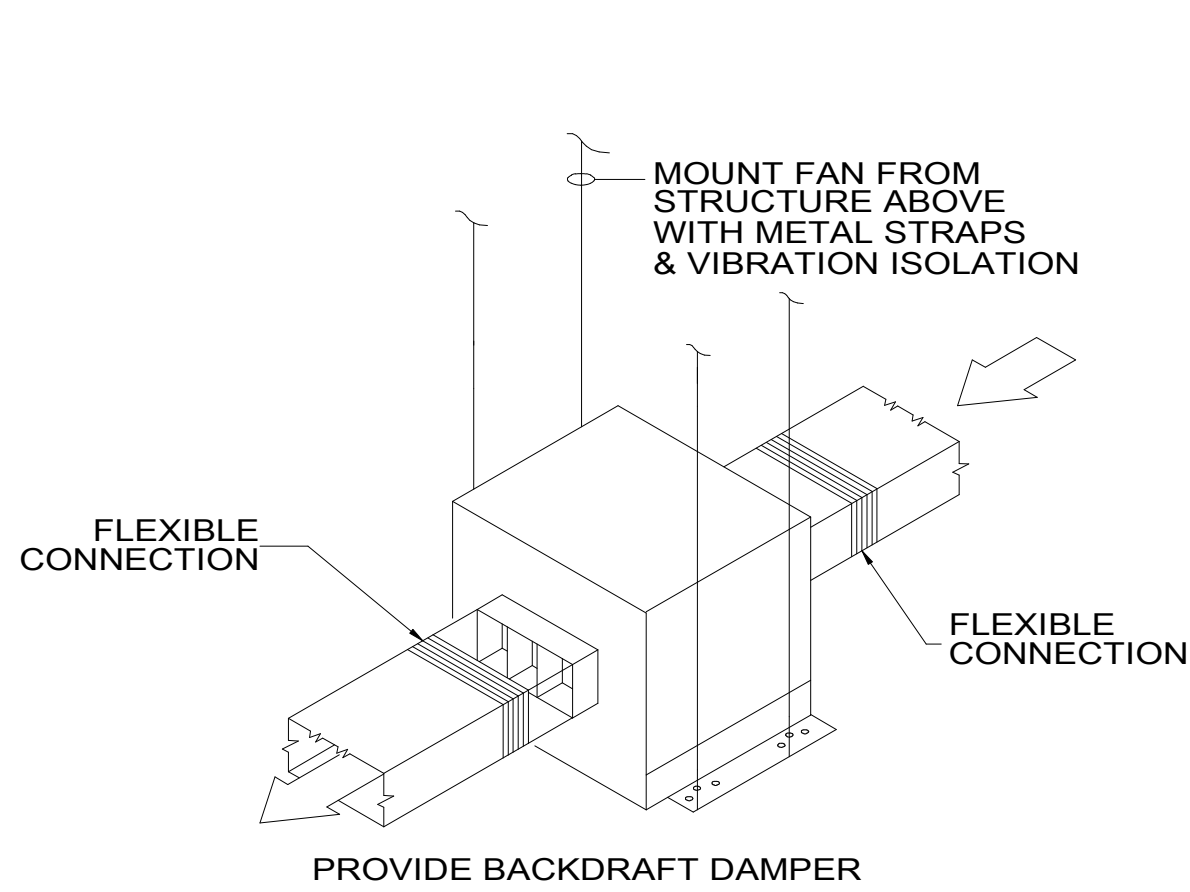
DRAWING NO.	121
	175143
PMIS/PKG NO.	316223
SHEET	
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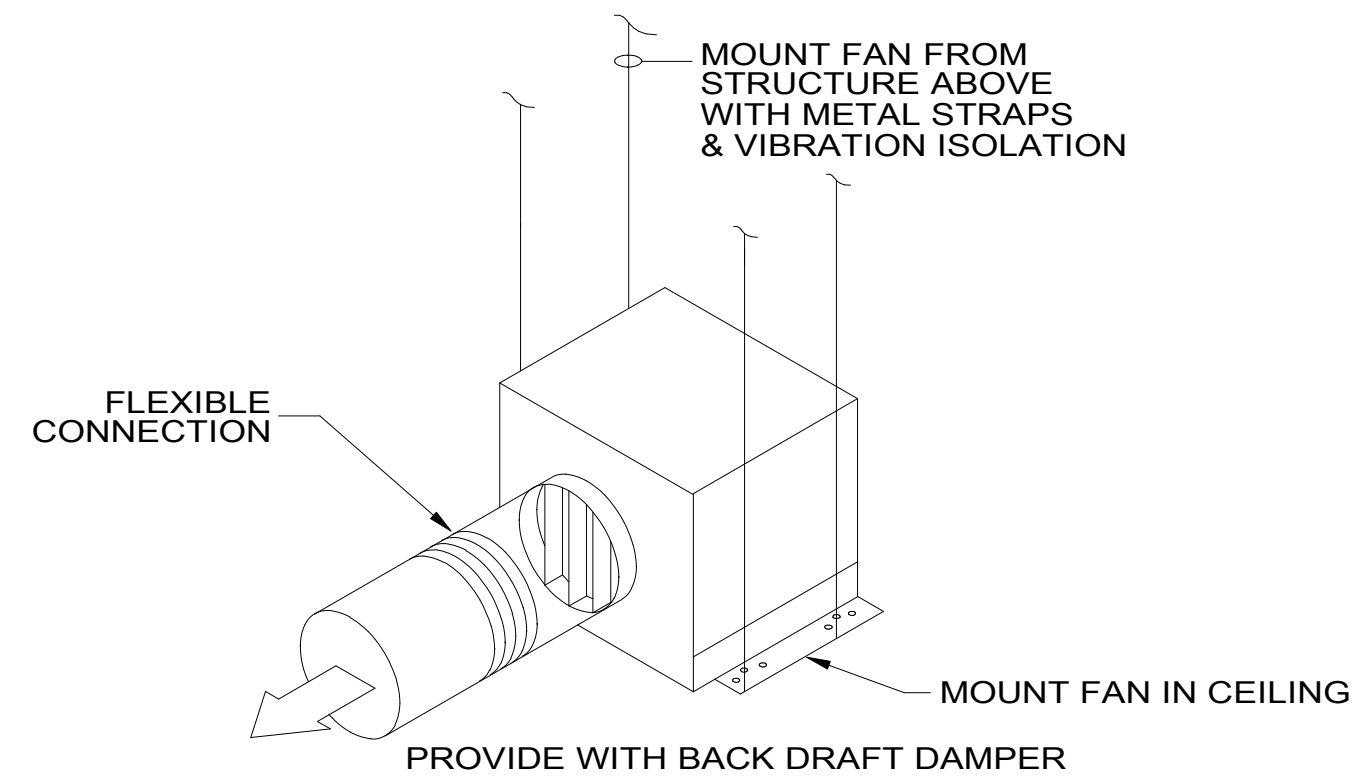
1 SPLIT SYSTEM DETAIL
M0.2 SCALE: NTS



2 TRANSFER AIR DUCT DETAIL
M0.2 SCALE: NTS



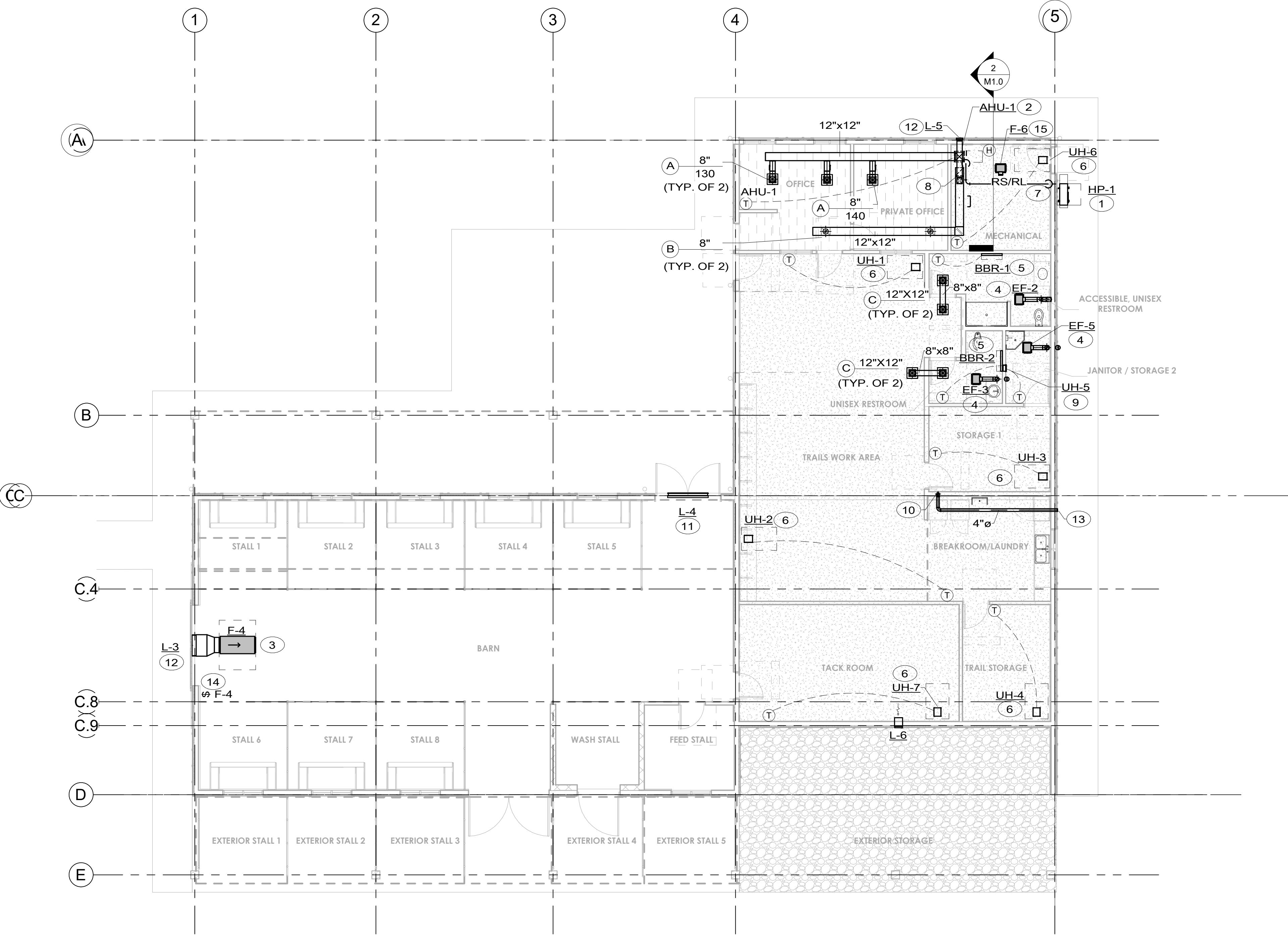
4 INLINE FAN DETAIL
M0.2 SCALE: NTS



3 CEILING MOUNTED EXHAUST FAN DETAIL
M0.2 SCALE: NTS

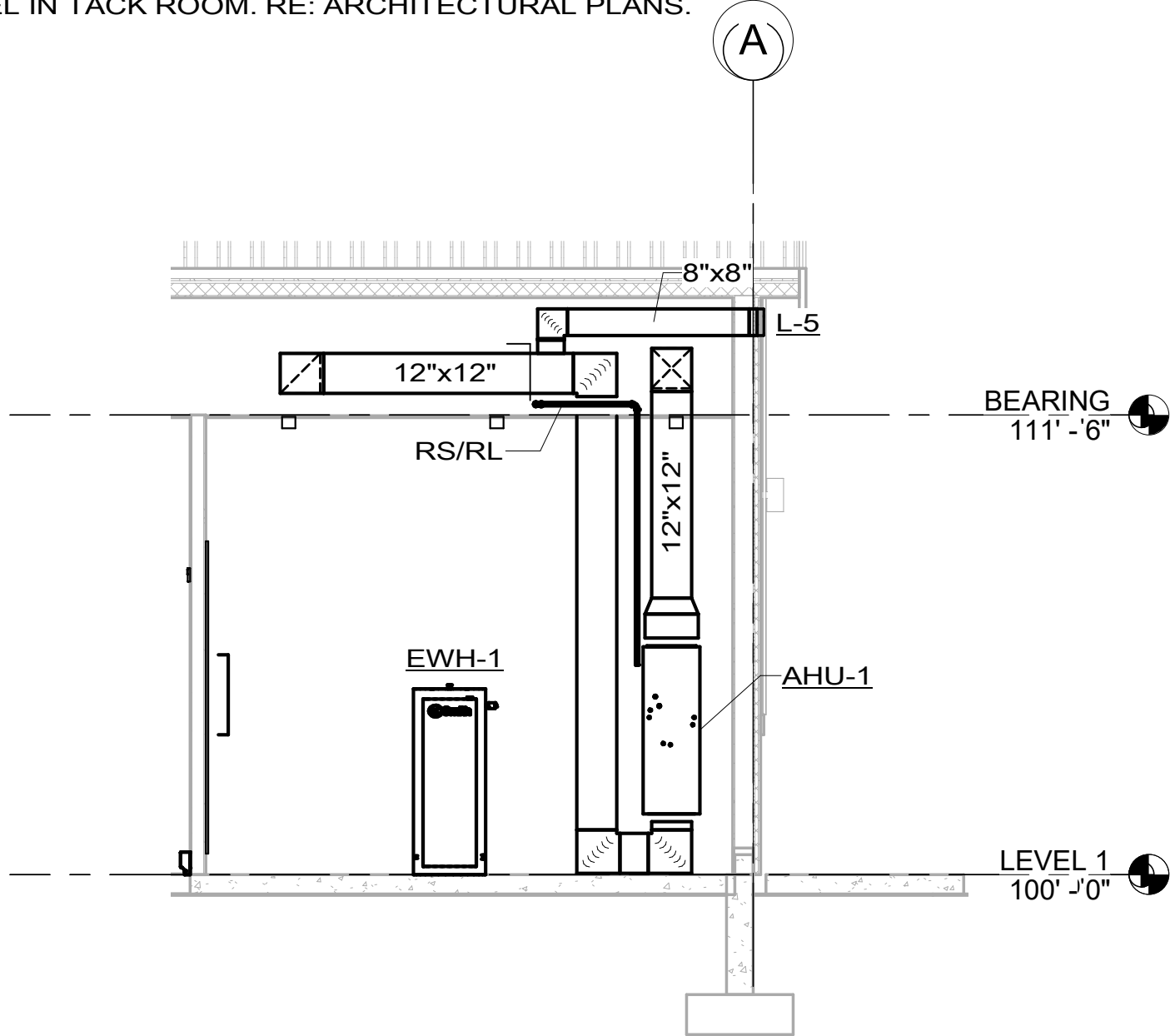


DESIGNED: ET BG	SUB SHEET NO. M0.2	TITLE OF SHEET MECHANICAL DETAILS	DRAWING NO. 121 175143
TECH. REVIEW: BG			PMIS/PKG NO. 316223
DATE: 02/27/2023		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	SHEET 75 OF 104

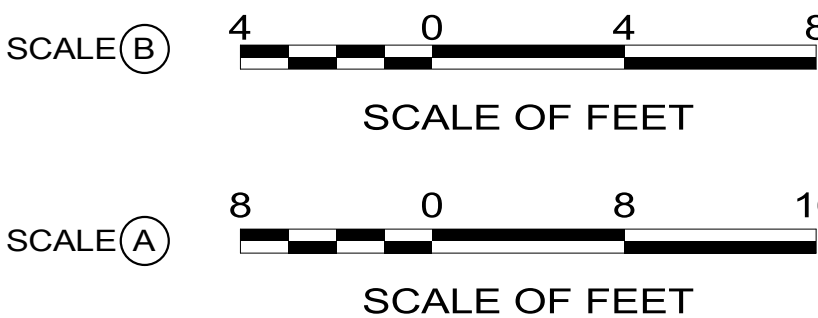


1 BARN MECHANICAL PLAN
M1.0 SCALE (A)

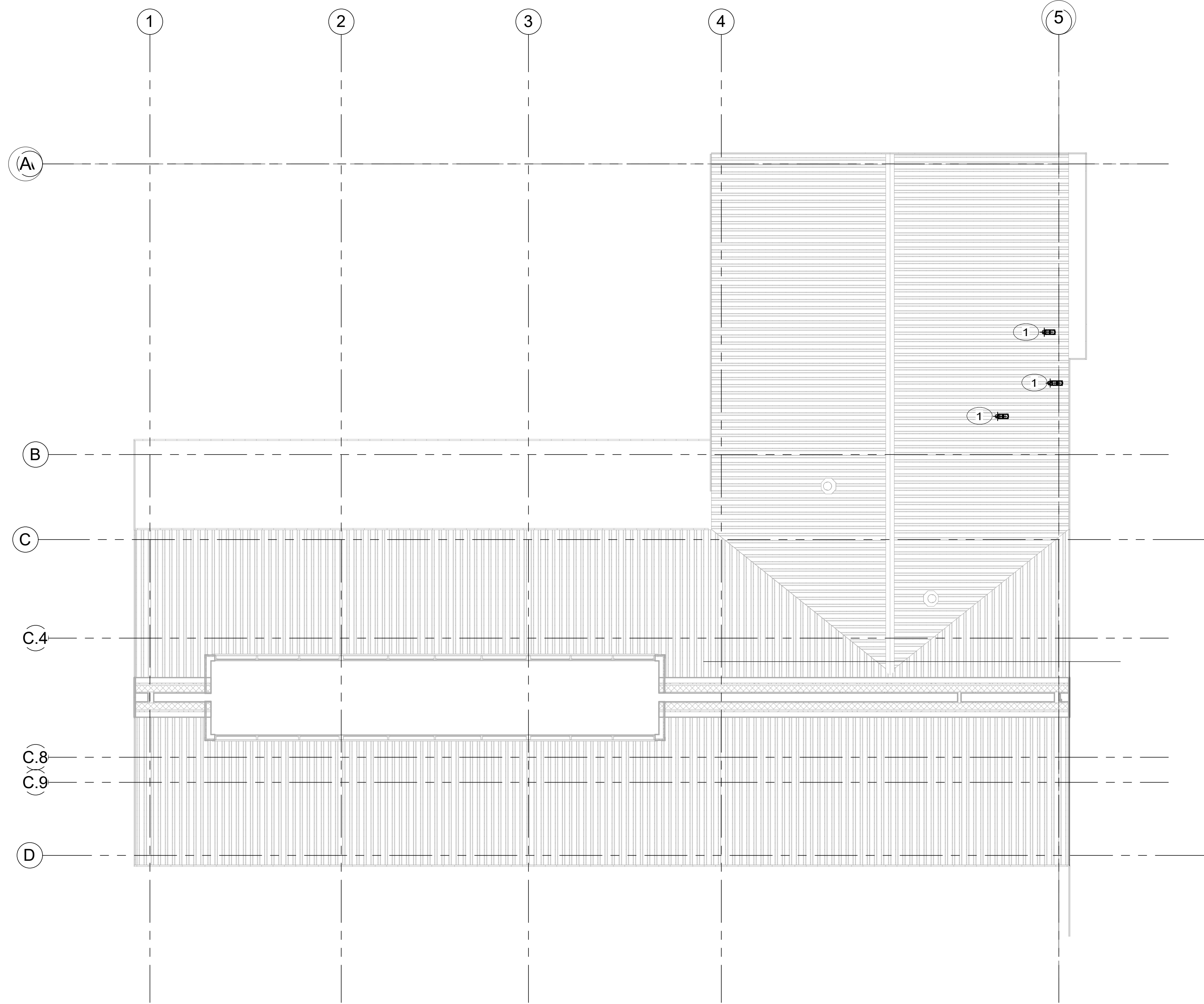
- KEY NOTES:
- 1 PROVIDE AND INSTALL NEW OUTDOOR HEAT PUMP. DASHED LINES REPRESENT CLEARANCES.
 - 2 PROVIDE AND INSTALL NEW AIR HANDLING UNIT. DASHED LINES REPRESENT CLEARANCES. SUPPLY DUCT TO CONNECT TO THE TOP OF UNIT. RETURN DUCT TO CONNECT TO BOTTOM OF UNIT.
 - 3 PROVIDE AND INSTALL NEW INTAKE FAN. DASHED LINES REPRESENT CLEARANCES. INTAKE FAN TO BE MOUNTED FROM ROOF STRUCTURE. RE: STRUCTURAL PLANS.
 - 4 PROVIDE AND INSTALL NEW EXHAUST FAN. ROUTE EXHAUST DUCT THROUGH THE ROOF TO A GOOSENECK WITH STAINLESS STEEL BIRD SCREEN.
 - 5 PROVIDE AND INSTALL NEW BASEBOARD RADIATOR. DASHED LINES REPRESENT CLEARANCES.
 - 6 PROVIDE AND INSTALL NEW UNIT HEATER. DASHED LINES REPRESENT CLEARANCES.
 - 7 ROUTE REFRIGERANT PIPING FROM HP-1 TO AHU-1. PIPING TO PENETRATE INTO MECHANICAL ROOM LOW THEN ROUTE HIGH ABOVE CEILING.
 - 8 ROUTE 8"x8" OUTSIDE AIR DUCT TO LOUVER ON EXTERIOR WALL.
 - 9 PROVIDE AND INSTALL NEW UNIT HEATER.
 - 10 PROVIDE AND INSTALL WALL RECESSED DRYER VENT BOX AT DRYER (THE DRYER BOX DB-350, OR EQUIVALENT), ROUTE 4" ROUND RIGID DUCTWORK FROM DRYER CONNECTION TO SIDEWALL DRYER VENT EXHAUST HOOD. FOLLOW RECOMMENDED MANUFACTURER'S INSTRUCTIONS FOR CONNECTING VENT DUCT TO DRYER.
 - 11 PROVIDE AND INSTALL NEW LOUVER. LOUVER SERVES AS RELIEF AIR OUTLET. RE: ARCHITECTURAL PLANS FOR INSTALLATION HEIGHT.
 - 12 PROVIDE AND INSTALL NEW LOUVER. LOUVER SERVES AS INTAKE AIR. RE: ARCHITECTURAL PLANS FOR INSTALLATION HEIGHT.
 - 13 PROVIDE AND INSTALL EXHAUST VENT CAP (IMPERIAL VT0548) AT DRYER VENT PENETRATION THROUGH WALL.
 - 14 MOUNT SWITCH ON WALL TO CONTROL F-4. WALL SWITCH TO OPEN DAMPERS IN L-3.
 - 15 PROVIDE AND INSTALL NEW FAN FOR ATTIC VENTILATION. FAN TO BE CONTROLLED VIA HUMIDISTAT. MOUNT HUMIDISTAT ON WALL IN ATTIC. PROVIDE FAN WITH 14" BY 14" ACCESS PANEL IN TACK ROOM. RE: ARCHITECTURAL PLANS.



2 MECHANICAL ROOM SECTION
M1.0 SCALE (B)



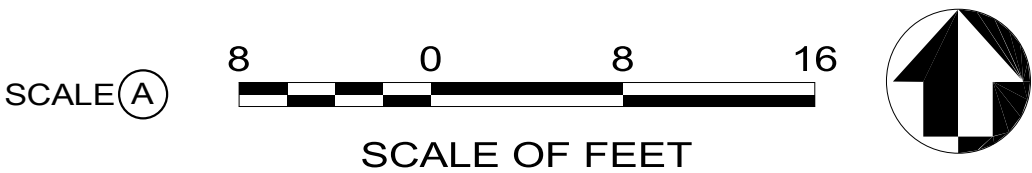
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TECH. REVIEW: BG		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	PMIS/PKG NO. 316223
DATE: 02/27/2023			SHEET 78 OF 104



KEY NOTES:

1 EXHAUST DUCT TO DISCHARGE TO GOOSENECK WITH STAINLESS STEEL BIRD SCREEN.

1 BARN ROOF MECHANICAL PLAN
M1.1 SCALE (A)



DESIGNED:
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02/27/2023

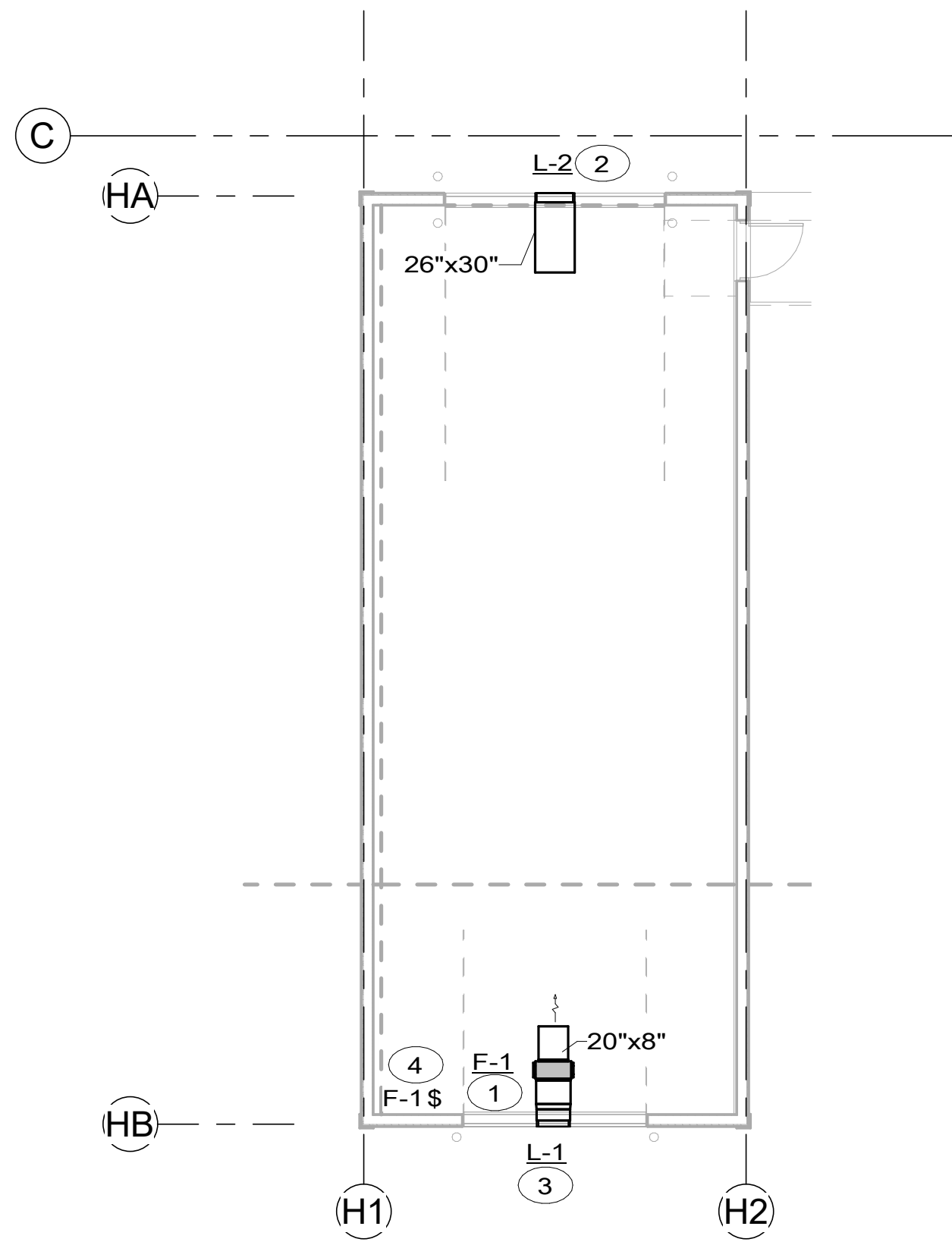
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M1.1

TITLE OF SHEET
**BARN ROOF
MECHANICAL PLAN**

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

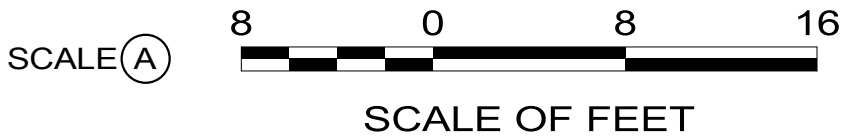
DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
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KEY NOTES:

- 1 PROVIDE AND INSTALL NEW INATKE FAN. DASHED LINES REPRESENT CLEARANCES. INTAKE FAN TO BE MOUNTED FROM ROOF STRUCTURE. RE: STRUCTURAL PLANS.
- 2 PROVIDE AND INSTALL NEW LOUVER. LOUVER SERVES AS RELIEF AIR OUTLET.
- 3 PROVIDE AND INSTALL NEW LOUVER. LOUVER SERVES AS INTAKE AIR.
- 4 MOUNT SWITCH ON WALL TO CONTROL F-1. SWITCH TO OPEN DAMPERS IN L-1.

1 HAY STORAGE MECHANICAL PLAN
M2.0 SCALE (A)



DESIGNED: ET CABD ET	SUB SHEET NO. M2.0	TITLE OF SHEET HAY STORAGE MECHANICAL PLAN CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	DRAWING NO. 121 175143 PMIS/PKG NO. 316223 SHEET 80 OF 104
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PLUMBING ABBREVIATIONS

BFP	BACKFLOW PREVENTER
CO	CLEAN OUT
CP	RECIRCULATION PUMP
EWC	ELECTRIC WATER COOLER
EWB	ELECTRIC WATER HEATER
FD	FLOOR DRAIN
FS	FLOOR SINK
HT	HEAT TRACE
L	LAVATORY
MSB	MOP SERVICE BASIN
S	SINK
SH	SHOWER
TD	TRENCH DRAIN
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WH	WALL HYDRANT
YH	YARD HYDRANT

PLUMBING LEGEND

---	COLD WATER (CW)
---	HOT WATER (HW)
---	HOT WATER RECIRCULATION (HWC)
---	VENT (V)
---	WASTE BELOW (W)
---	COMBINATION WASTE AND VENT (CWV)
○	PIPE RISE
○	PIPE DROP
○	BALL VALVE
○	FLOOR CLEAN OUT
—	WALL CLEAN OUT

PLUMBING NOTES

I. GENERAL

- THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO SHOW ALL TRANSITIONS, OFFSETS, ETC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND PROVIDE ALL NECESSARY FITTINGS TO COMPLETE THE INTENT OF THE DRAWINGS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE CONTRACTING OFFICER FOR RESOLUTION.
- CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AND NOTIFY CONTRACTING OFFICER IF ANY CONFLICTS OCCUR.
- CONTRACTOR SHALL REVIEW THESE DOCUMENTS CAREFULLY. CONTRACTOR SHALL CONTACT THE CONTRACTING OFFICER, FOR RESOLUTION OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS, BEFORE BID DATE. IN THE EVENT THAT AN INTERPRETATION OF BID DOCUMENTS IS NECESSARY AFTER THE BID DATE, THE DECISION OF THE CONTRACTING OFFICER SHALL BE FINAL AND BINDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS OF ALL CHANGE ORDERS, WHICH THE CONTRACTING OFFICER AND NPS HAVE NOT APPROVED IN WRITING PRIOR TO THE EXECUTION OF THE ASSOCIATED WORK.
- IN THE CASE OF A CONFLICT, UNLESS OTHERWISE NOTED, KEYNOTES ON PLUMBING PLANS SHALL SUPERCEDE ANY GENERAL NOTES ON THE PLANS.

II. EXECUTION

- ALL PLUMBING WORK SHALL COMPLY WITH LOCAL CODES AND ORDINANCES.
- PITCH WASTE LINES NOT LESS THAN 1/4" PER FOOT. (UNLESS NOTED OTHERWISE).
- RUN ALL PIPING ON WARM SIDE OF BUILDING INSULATION. PIPE INSULATION IS NOT CONSIDERED FREEZE PROTECTION.
- PROVIDE DIELECTRIC UNIONS AT CONNECTIONS BETWEEN DISSIMILAR METALS, I.E., IRON VALVES AND COPPER TUBING.
- PROVIDE PIPE HANGERS OF THE SAME MATERIAL AS THE PIPING SYSTEM OR USE COATED HANGERS.
- SET FLOOR DRAINS SO THAT TOP WILL BE SLIGHTLY LOWER THAN SURROUNDING FLOOR.
- PROVIDE BALL VALVES AND UNIONS ON ALL LINES TO EQUIPMENT FOR ISOLATION AND REMOVAL.
- ALL PIPE PENETRATIONS THROUGH RATED WALLS SHALL BE SEALED PER 2021 IBC.
- PROVIDE ADHESIVE, MULTICOLOR PIPE LABELS FOR ALL SYSTEMS. PROVIDE EVERY 50 FEET, AND EVERY 25 FEET IN CONGESTED AREAS.

WATER SUPPLY FIXTURE UNIT CALCULATION (CALCULATIONS BASED ON 2021 IPC TABLE E103.3(2))

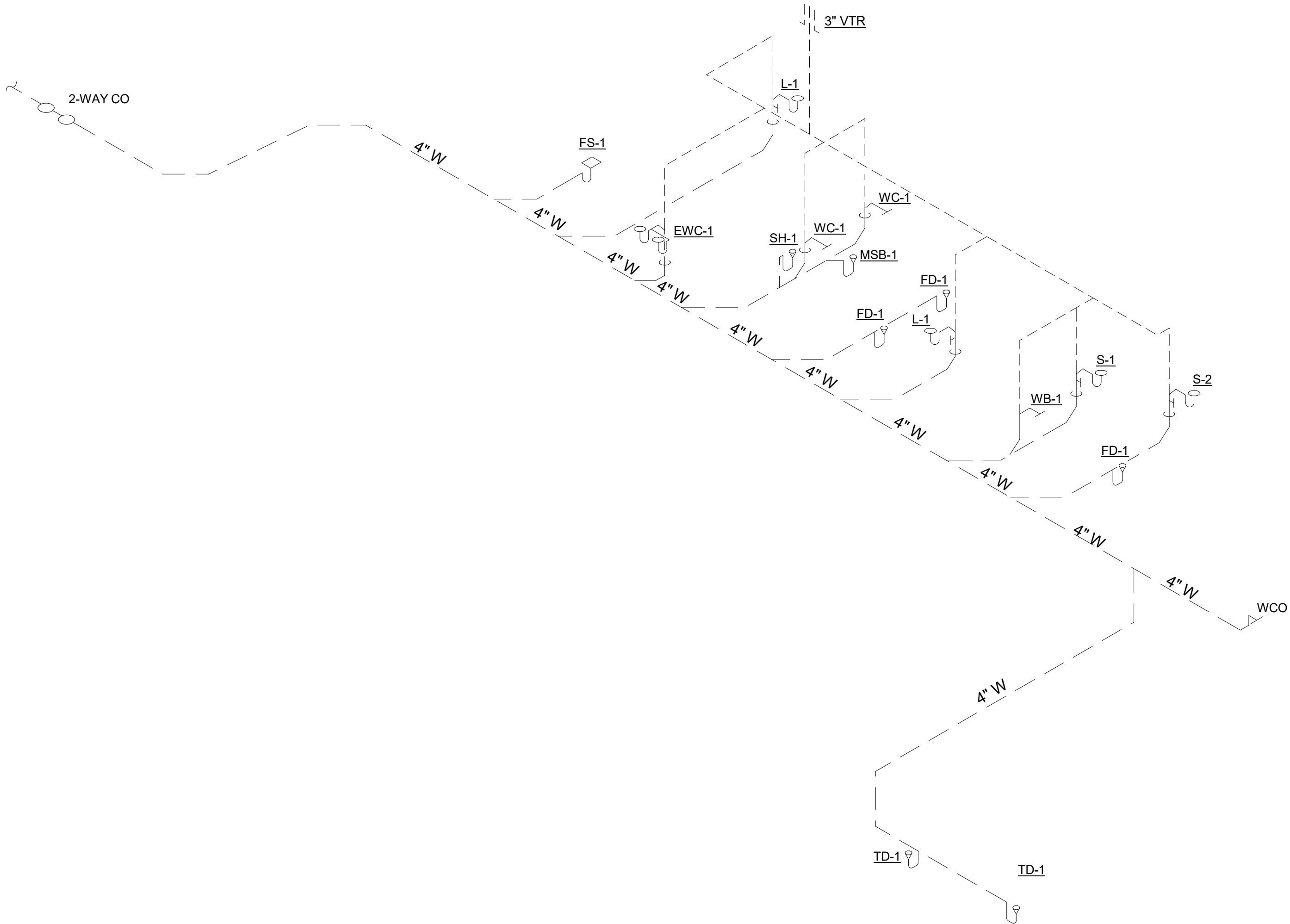
FIXTURE	NUMBER OF INSTANCES	COLD (WSFU)	HOT (WSFU)	TOTAL LOAD (WSFU)	TOTAL LOAD (WSFU)
WATER CLOSET (VALVE)	2	10	—	10	20
LAVATORY	2	1.5	1.5	2	4
MOP SERVICE SINK	1	3	3	3	3
SINK	2	3	3	4	8
DRINKING FOUNTAIN	1	0.25	—	0.25	0.25
WASHING MACHINE (15 LB)	1	3.0	3.0	4.0	4
SHOWER	1	3.0	3.0	4.0	4
HOSE BIBB/ WALL HYDRANT	3	5.0	—	5.0	15
TOTAL					58

58 WSFU TOTAL ->31.4 GPM. THE NEW SERVICE AND METER IS 1-1/2" AND CAN HANDLE A MAXIMUM FLOW RATE OF 55 GPM.

SANITARY DRAINAGE FIXTURE UNIT CALCULATION
(CALCULATIONS BASED ON 2021 IPC TABLE 710.1)

FIXTURE	NUMBER OF INSTANCES	DFU UNITS	TOTAL LOAD
WATER CLOSET (VALVE)	2	4	8
LAVATORY	2	1	2
MOP SERVICE SINK	1	2	2
SINK	2	2	4
DRINKING FOUNTAIN	1	0.5	0.5
WASHING MACHINE	1	3	3
SHOWER	1	2	2
FLOOR DRAIN	3	2	6
FLOOR SINK	1	2	2
TRENCH DRAIN	30	2	60
TOTAL			89.5

4" WASTE MAIN CAN ACCEPT A 216 DFU CAPACITY AT 1/4" PER FOOT SLOPE



DESIGNED: ET 03/27/23	SUB SHEET NO. P0.0	TITLE OF SHEET PLUMBING COVER SHEET	DRAWING NO. 121 175143
TECH. REVIEW: BG		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	PMIS/PKG NO. 316223
DATE: 02/27/2023			SHEET 81 OF 104


PLUMBING FIXTURE SCHEDULE										
TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	FINISH	MANUFACTURER	MODEL NUMBER	FINISH	GPM/GPF	ELECTRICAL	REMARKS
WC-1	WATER CLOSET- WALL MOUNTED (ABA)	AMERICAN STANDARD	3351	WHITE	SLOAN BEMIS	8111 1955CT	CHROME WHITE	1.28	-	1,2,13
L-1	LAVATORY- UNDERCOUNTER MOUNTED (ABA)	AMERICAN STANDARD	9482.000	WHITE	DELTA	581LF-HGM-PP	CHROME	0.5	-	3,5,8,21
MSB-1	MOP SERVICE BASIN	FIAT	SBC3636	WHITE	CHICAGO	445-897SRXKCCP	CHROME	2.2	-	4,14
S-1	UTILITY SINK	JUST	SB-124 (12/12)	STAINLESS STEEL (18 GA)	DELTA	9193-DST	CHROME	1.8	-	3,5,8,9
S-2	SINK- DOUBLE COMPARTMENT (ABA)	JUST	DL-ADA-1933-A-GR	STAINLESS STEEL (18 GA)	DELTA	9193-DST	CHROME	1.8	-	3,5,8,9
FD-1	FLOOR DRAIN	JAY R SMITH	2005-Y-A	NICKEL BRONZE	-	-	-	-	-	6,7
FS-1	FLOOR SINK- 8" SQUARE, 6" DEEP	JAY R SMITH	3410-Y	WHITE ACID RESISTANT	-	-	-	-	-	6,7,26
TD-1	TRENCH DRAIN	ZURN	Z895	STAINLESS STEEL	-	-	-	-	-	7,22,23,32
SH-1	SHOWER (ABA)	FIAT	ADATN6036 RECESS SLAB 2"	TERRAZZO	NIAGRA DELTA	LUXURY SPA R11000	CHROME	1.5	-	17,18,19,20
EWC-1	ELECTRIC WATER COOLER (ADA) RECESSED	ELKAY	LMABF8WSSK	STAINLESS	-	-	-	-	115/60/1	2,3,25
WH-1	WALL HYDRANT	WOODFORD	B67 3/4"	CHROME	-	-	-	-	-	15,29,30,31
WB-1	WASHER BOX	SIOUX CHIEF	696-G2303WR	WHITE	-	-	-	-	-	10,11,12,27
YH-1	YARD HYDRANT	FREEZE FLOW	2137E 7' BURY DEPTH	-	-	-	-	-	-	24
WM-1	WATER METER	BADGER	M2000 1-1/2"	-	-	-	-	-	-	33
BFP-1	REDUCED PRESSURE BACKFLOW PREVENTER DOMESTIC	APOLLO	RPLF4A 1-1/2"	-	-	-	-	-	-	16
BFP-2	REDUCED PRESSURE BACKFLOW PREVENTER DOMESTIC	APOLLO	RPLF4A 1"	-	-	-	-	-	-	16,28
REMARKS: <div><div><div>1. PROVIDE WATER CLOSET WITH MANUAL FLUSH VALVE</div><div>2. PROVIDE WITH CONCEALED FLOOR MOUNTED CARRIER (COORDINATE WITH WALL THICKNESS)</div><div>3. 17 GA. P-TRAP, LOOSE KEY ANGLE STOPS, STAINLESS STEEL BRAIDED SUPPLIES</div><div>4. PAIL HOOK, WALL BRACKET, THREAD END, VACUUM BREAKER, INTEGRAL CHECKS & SHUTOFF STOPS</div><div>5. PROVIDE LEONARD #270-LF MIXING VALVE UNDER FIXTURE. (ASSE 1070 RATED)</div><div>6. TRAP GUARD</div><div>7. MOUNT FLUSH WITH FLOOR</div><div>8. PROVIDE WITH TRUEBRO #103 E-Z P-TRAP AND SUPPLIES INSULATION KIT</div><div>9. 6" DEEP BOWL, REAR DRAIN LOCATION</div><div>10. PROVIDE WITH STANDARD PACK FRAME OPTION</div><div>11. MAX WORKING TEMPERATURE IS 200°F</div><div>12. PROVIDE WITH LEAD FREE BRASS VALVES</div><div>13. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHT</div><div>14. HOSE AND HOSE BRACKET, MOP HANGER, SS WALL GUARD.</div><div>15. VACUUM BREAKER</div><div>16. PROVIDE WITH STRAINER.</div><div>17. PROVIDE DELTA #51600-24" HEAVY DUTY BAR</div></div><div><div>18. PAUSE FLOW BY PRESSING BUTTON ON HANDLE. NOT A POSITIVE SHUT-OFF</div><div>19. PROVIDE WITH SHOWER STEM, AND TRIM FOR VALVE AND SHOWER HEAD (DELTA T14259-LHD)</div><div>20. PROVIDE WITH HANDHELD SHOWER (DELTA 59424-18-PK 1.5 GPM)</div><div>21. HARDWIRED FAUCET.</div><div>22. 5 FOOT SECTIONS.</div><div>23. CLOSED END CAP.</div><div>24. DUAL CHECK BACKFLOW PREVENTION</div><div>25. PROVIDE OWNER WITH 3-PACK OF FILTERS FOR OWNER STOCK</div><div>26. 1/2 GRATE, DOME STRAINER</div><div>27. PROVIDE WITH INTEGRAL "AA" WATER HAMMER ARRESTORS</div><div>28. PROVIDE WITH (2) TEST COCKS.</div><div>29. COORDINATE LENGTH WITH WALL.</div><div>30. ASSE 1052 RATED.</div><div>31. WITH ENCLOSED WALL MOUNTED BOX</div><div>32. HEEL-PROOF STAINLESS STEEL GRATE - CLASS B</div><div>33. PROVIDE WITH A MINIMUM OF 3 TIMES THE PIPE DIAMETER OF STRAIGHT PIPE AT THE INLET.</div></div></div>										

ELECTRIC WATER HEATER SCHEDULE										
TAG	MANUFACTURER & MODEL	RECOVERY AT 90°F RISE	GALLON CAPACITY	HEIGHT	DIAMETER	OPER. LBS.	ELECTRICAL			REMARKS
							VOLTAGE	PHASE	KW	
EWH-1	AO SMITH DRE-80-12	56	80	60-1/4"	25-1/2"	947	240	1	12.3	1,2
REMARKS: <div><div>1. PROVIDE WITH MAGNESIUM ANODE ROD</div><div>2. PROVIDE WITH EXPANSION TANK (PET-1)</div></div>										

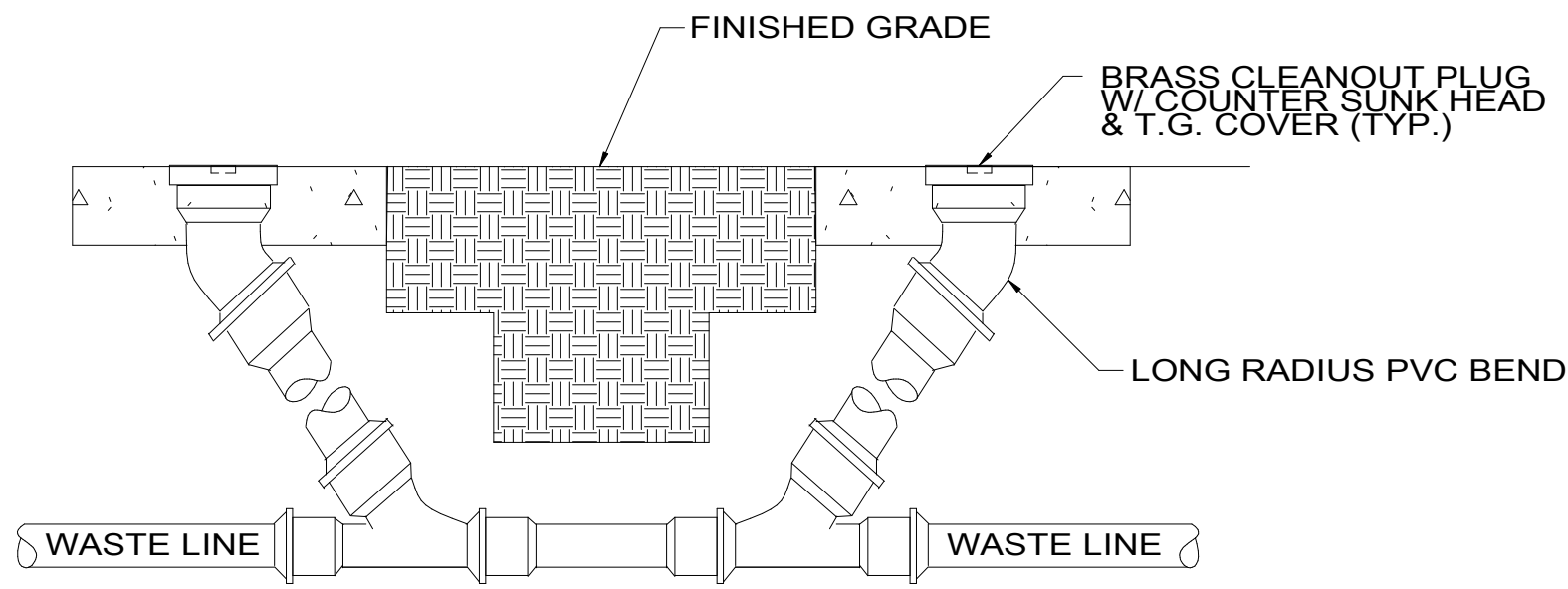
PLUMBING MISCELLANEOUS SCHEDULE				
TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	REMARKS
PET-1	PLUMBING EXPANSION TANK	ARMSTRONG	AST-5 ASME RATED	1
REMARKS: <div><div>1. 2.3 GALLONS ACCEPTANCE VOLUME</div></div>				

RECIRCULATION PUMP SCHEDULE											
GENERAL				PERFORMANCE		ELECTRICAL					NOTES
TAG	MANUFACTURER	MODEL#	SYSTEM	FLOW [GPM]	HEAD [FT.]	POWER [HP]	VOLTAGE [V]	PHASE	FREQUENCY [HZ]	SPEED [RPM]	
CP-1	BELL & GOSSETT	PL-30	EWH-1	2.5	20.1	1/12	115	1	60	2650	1,2
NOTES: <div><div>1. LEAD FREE BRONZE</div><div>2. PROVIDE WITH AQUASTAT AND TIMECLOCK TO RUN DURING OCCUPIED HOURS</div></div>											

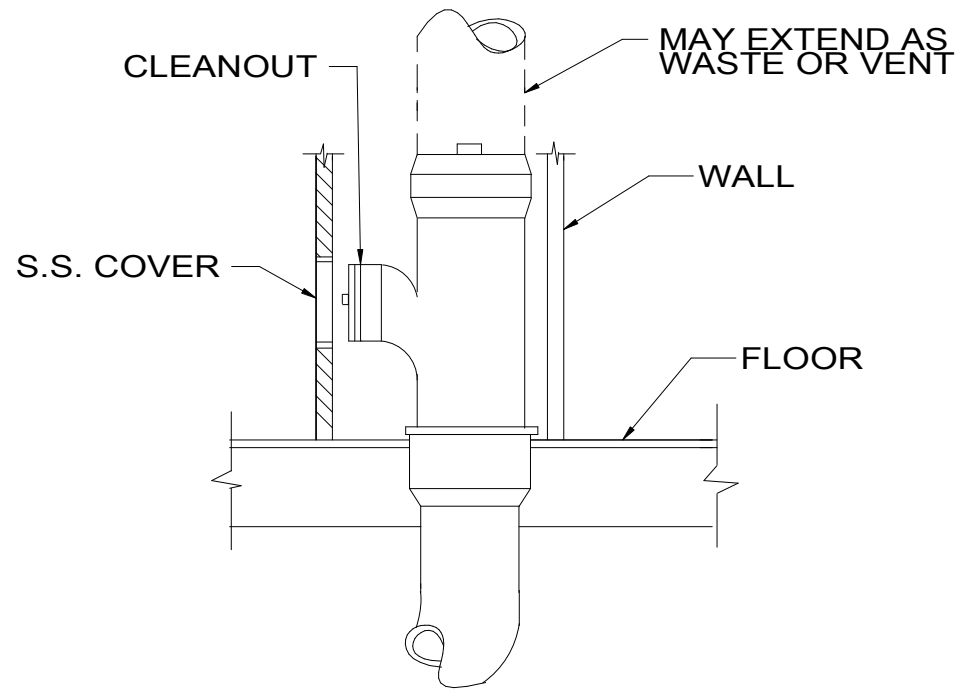
HEAT TRACE SCHEDULE								
TAG	MANUFACTURER	MODEL NUMBER	CATALOG NO.	ELECTRICAL			POWER OUTPUT	REMARKS
				VOLTAGE (V)	PHASE	FREQUENCY (HZ)		
HT-1	RAYCHEM	XL-TRACE	5XL1-CR	120	1	60	5W/FT	1,2,3,4
REMARKS: <div>1. CONTRACTOR TO DETERMINE CABLE LENGTH REQUIRED PER MANUFACTURER'S INSTRUCTIONS BASED ON PIPING INSTALLED IN FIELD.</div> <div>2. PLUMBING CONTRACTOR TO COORDINATE ELECTRICAL REQUIREMENTS FOR EACH CABLE WITH ELECTRICAL CONTRACTOR AFTER CABLE LENGTH DETERMINATION.</div> <div>3. PROVIDE WITH ALL CONNECTION KITS AND ACCESSORIES NECESSARY FOR INSTALLATION PER MANUFACTURER'S INSTRUCTIONS.</div> <div>4. PROVIDE WITH C910-485 CONTROLLER, RTD TEMPERATURE SENSOR, AND ALL ACCESSORIES NECESSARY FOR INSTALLATION PER MANUFACTURER'S INSTRUCTIONS.</div>								

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
ET		PLUMBING SCHEDULES	121
			175143
ET			PMIS/PKG NO.
TECH. REVIEW:			316223
BG			SHEET
DATE:			82 OF 104
02/27/2023		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	

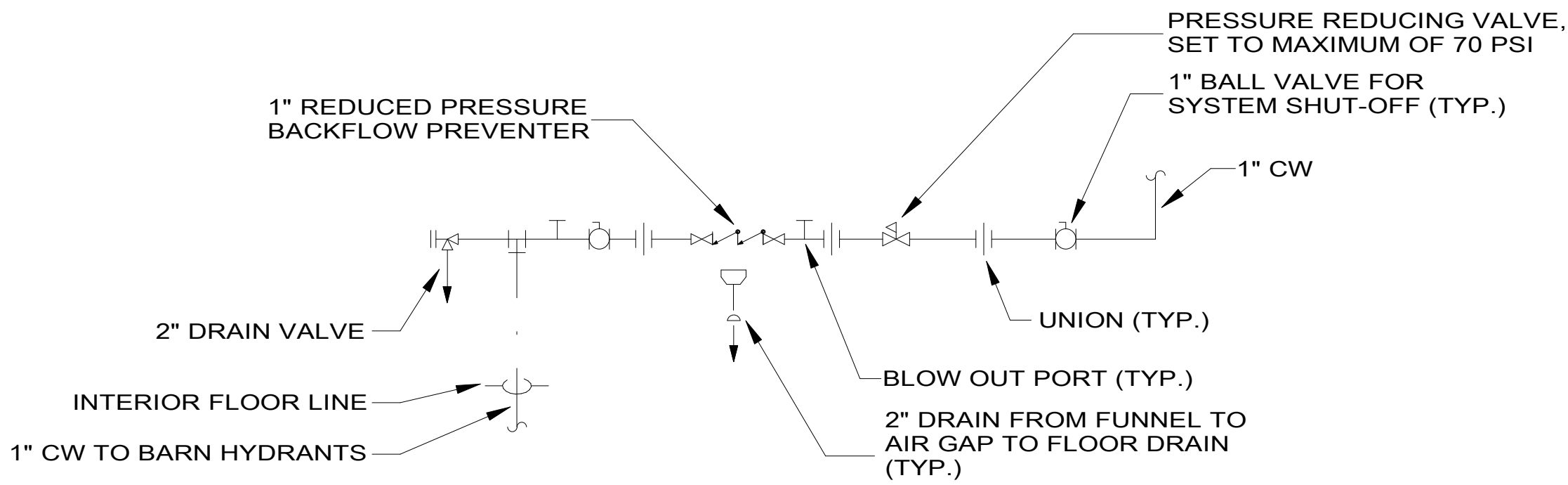




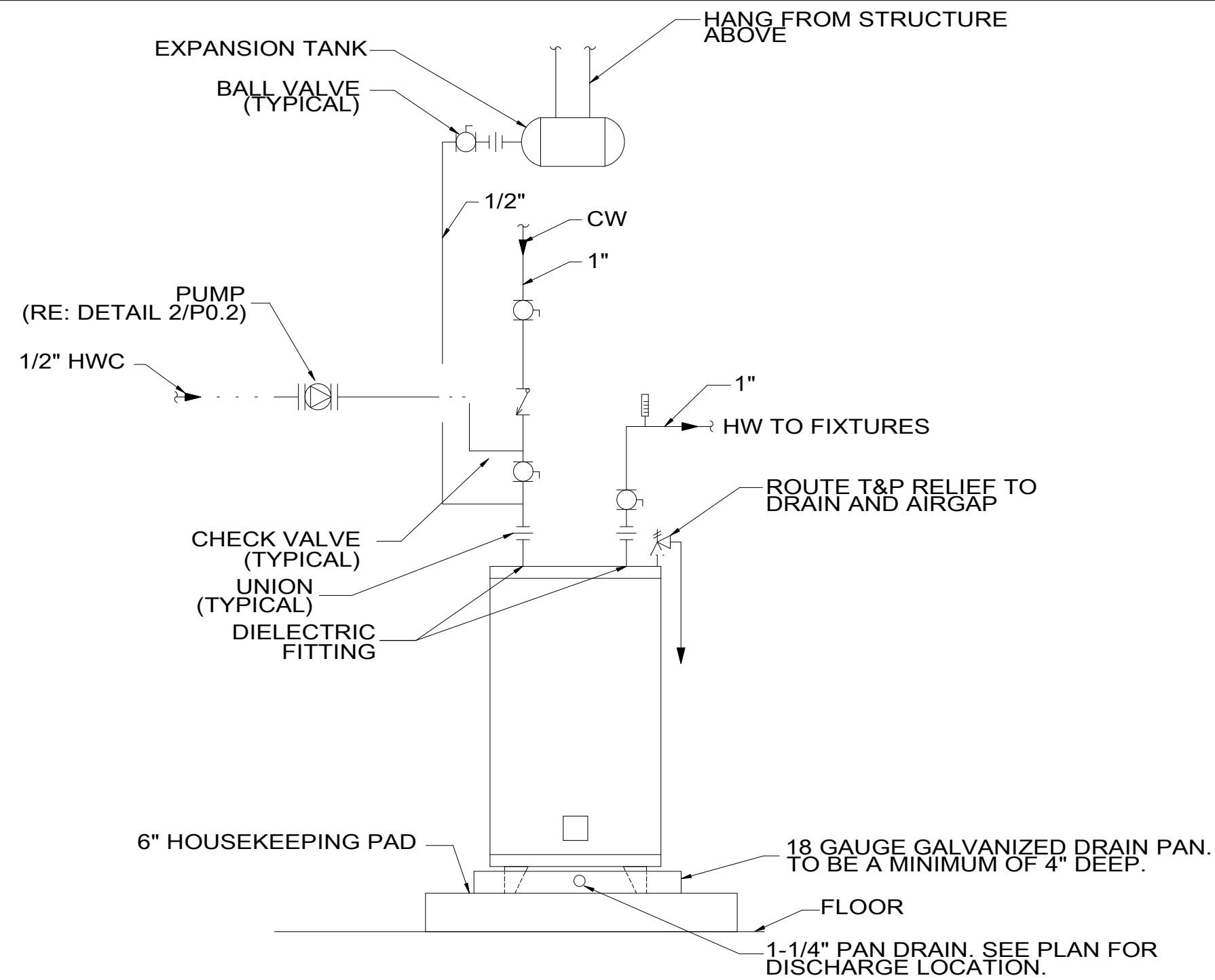
4 2-WAY GRADE CLEANOUT DETAIL
P0.2 SCALE: NTS



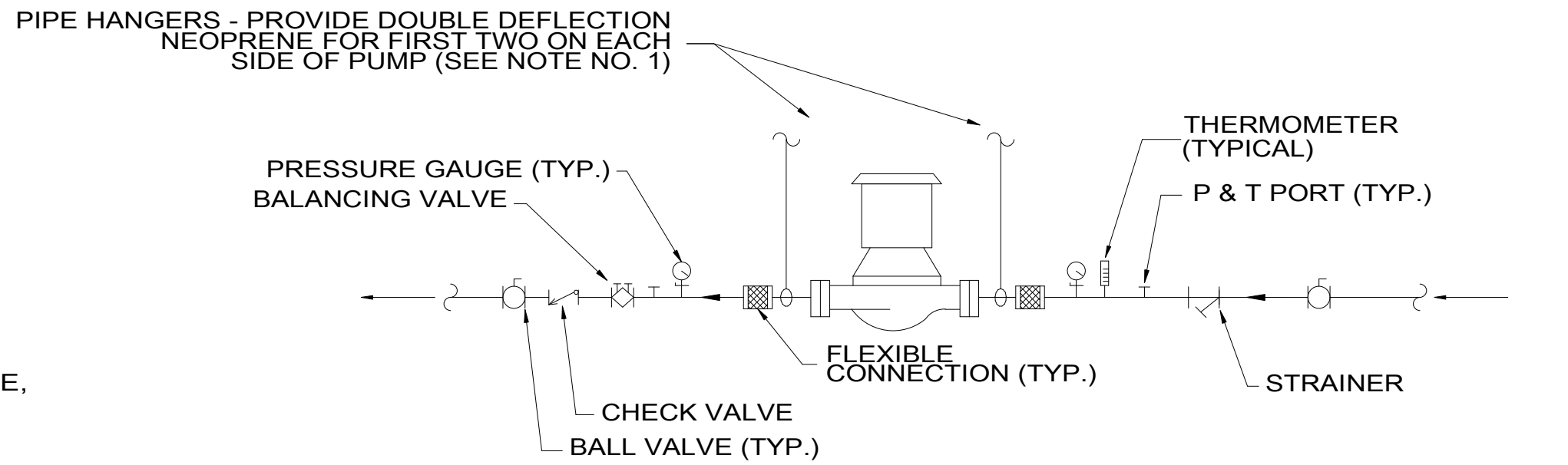
5 WALL CLEANOUT DETAIL
P0.2 SCALE: NTS



6 WALL AND YARD HYDRANT BACK FLOW PREVENTER PIPING DETAIL
P0.2 SCALE: NTS

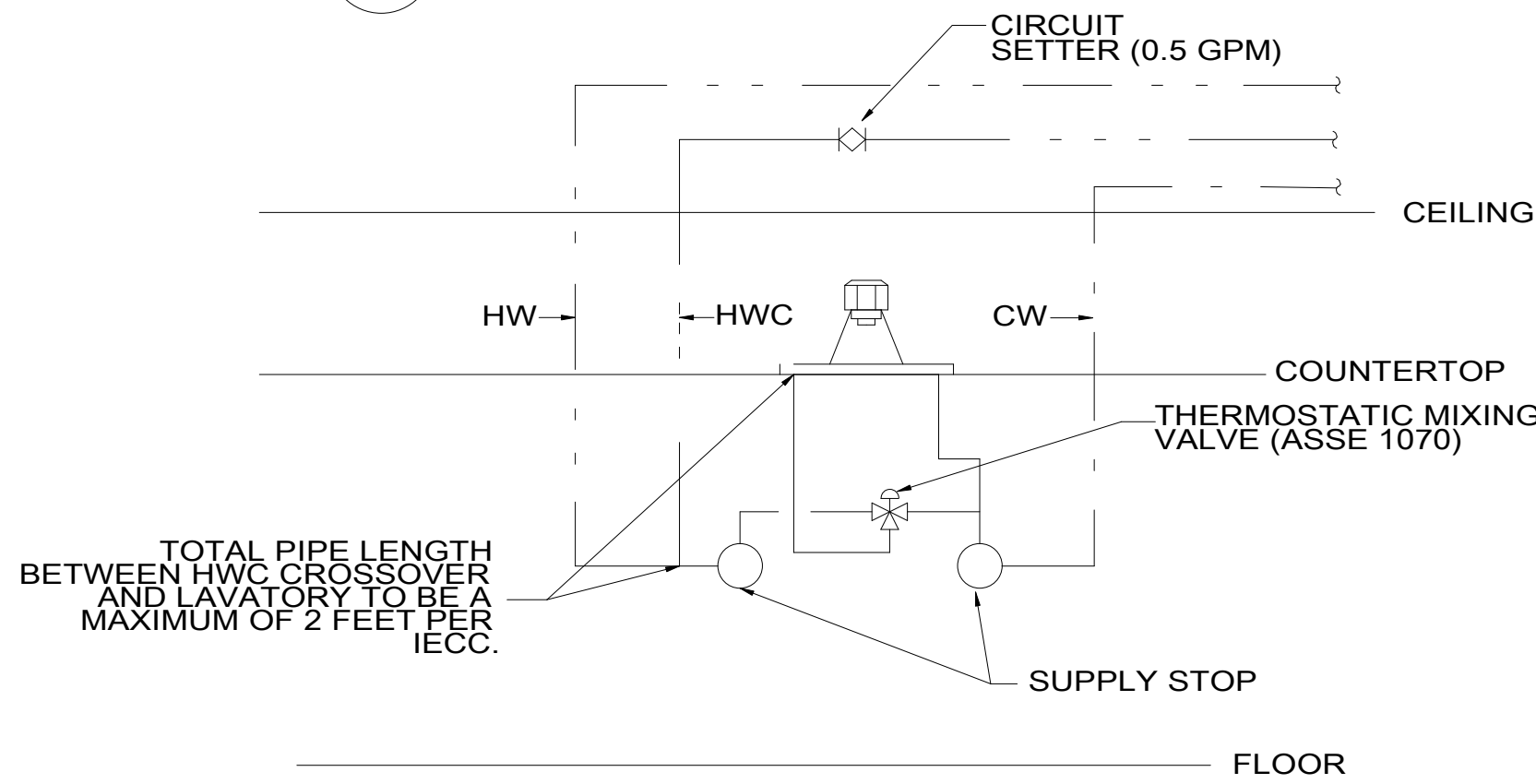


1 WATER HEATER INSTALLATION DETAIL
P0.2 SCALE: NTS



NOTES:
1. SUPPORT PUMP FROM PIPING ONLY. DO NOT SUPPORT PUMP FROM MOTOR.

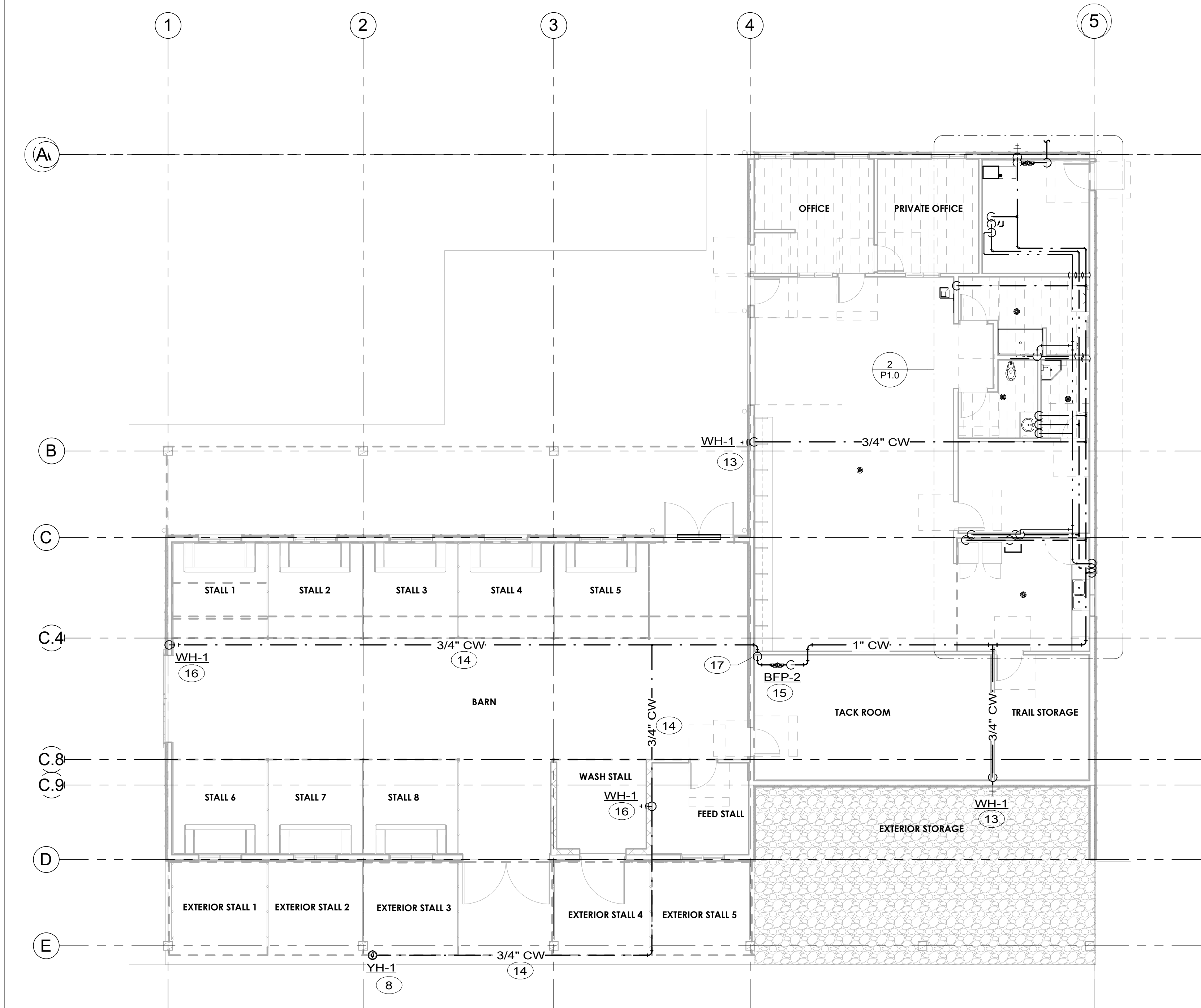
2 HORIZONTAL IN-LINE PUMP DETAIL
P0.2 SCALE: NTS



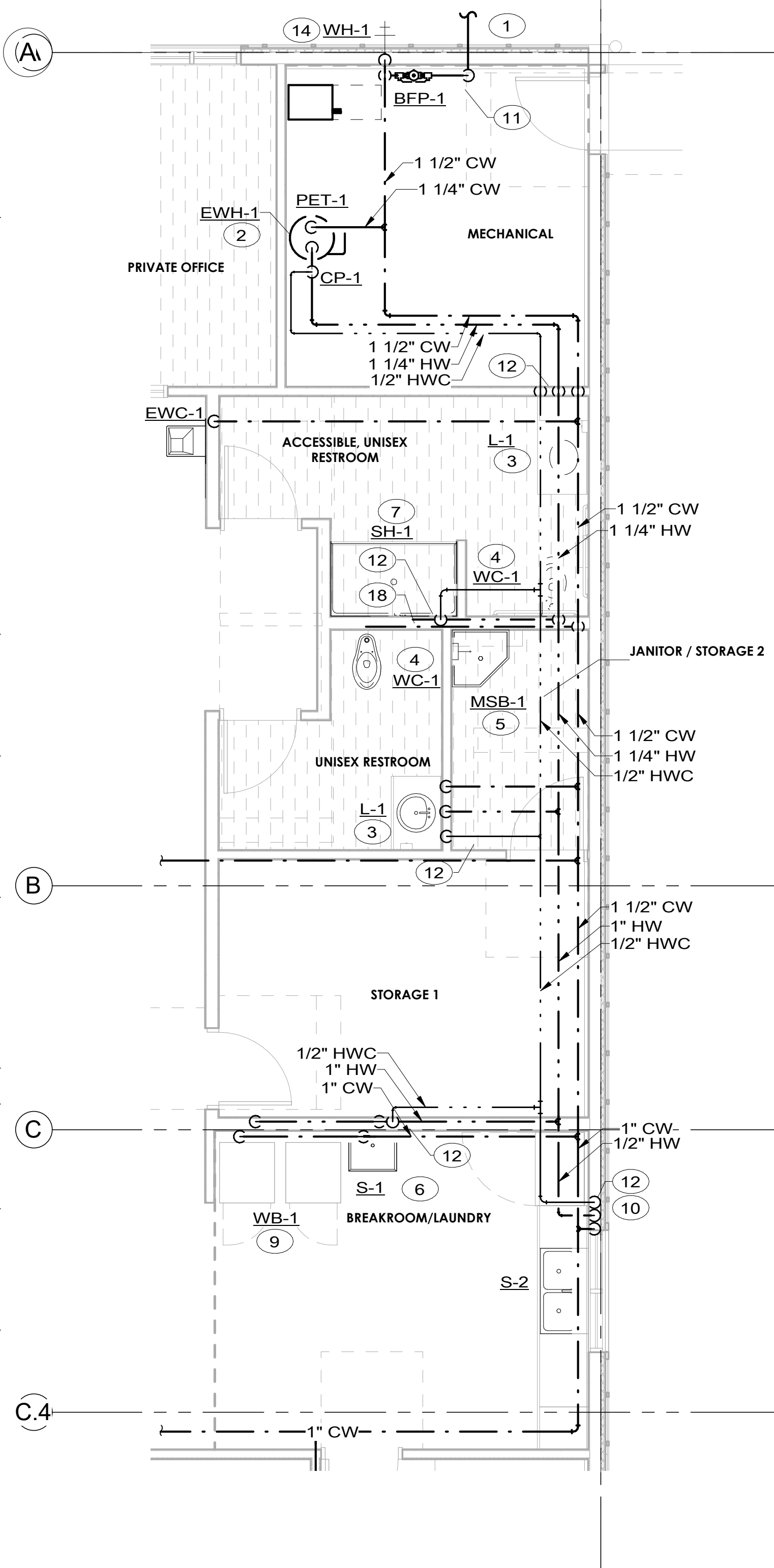
3 PUBLIC LAVATORY PIPING DETAIL
P0.2 SCALE: NTS



DESIGNED: ET CABD ET	SUB SHEET NO. P0.2	TITLE OF SHEET PLUMBING DETAILS	DRAWING NO. 121 175143
TECH. REVIEW: BG		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO	PMIS/PKG NO. 316223
DATE: 02/27/2023			SHEET 83 OF 104

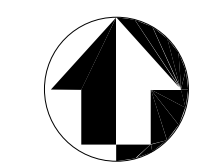
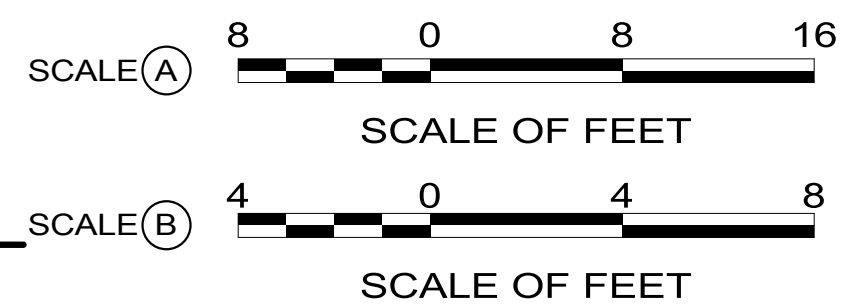


1 BARN DOMESTIC WATER PLAN
P1.0 SCALE (A)



2 BARN DOMESTIC WATER ENLARGED PLAN
P1.0 SCALE (B)

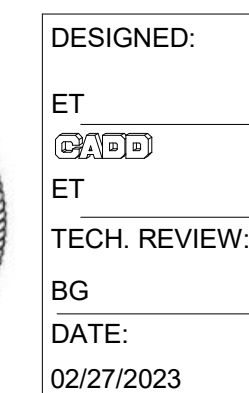
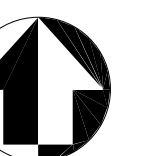
- KEY NOTES:**
- 1 PROVIDE AND INSTALL NEW 1-1/2" WATER ENTRY. RE: CIVIL FOR CONTINUATION.
 - 2 ROUTE 1-1/2" CW TO WATER HEATER AND 1-1/2" HW FROM WATER HEATER.
 - 3 ROUTE 1/2" COLD WATER, 1/2" HOT WATER, AND 1/2" HOT WATER RECIRCULATION TO LAVATORY.
 - 4 ROUTE 1" COLD WATER TO WATER CLOSET.
 - 5 ROUTE 1/2" COLD WATER AND 1/2" HOT WATER TO MOP SERVICE BASIN.
 - 6 ROUTE 1/2" COLD WATER, 1/2" HOT WATER, AND 1/2" HOT WATER RECIRCULATION TO SINK.
 - 7 ROUTE 1/2" COLD WATER, 1/2" HOT WATER, AND 1/2" HOT WATER RECIRCULATION TO SHOWER.
 - 8 ROUTE 3/4" COLD WATER TO YARD HYDRANT. RISE COLD WATER LINE FROM UNDERGROUND.
 - 9 ROUTE 1/2" COLD WATER AND 1/2" HOT WATER TO WASHER BOX.
 - 10 DROP 1/2" COLD WATER, 1/2" HOT WATER, AND 1/2" HOT WATER RECIRCULATION IN WALL ON WARM SIDE OF INSULATION AND ROUTE THROUGH CABINETRY TO SINK.
 - 11 PROVIDE AND INSTALL NEW WATER METER (WM-1 OR EQUIVALENT) PRIOR TO BACKFLOW PREVENTER WITH MANUAL CONSUMPTION MONITORING.
 - 12 PROVIDE AND INSTALL CIRCUIT SETTER ON HOT RECIRCULATION BRANCH. SET CIRCUIT SETTER TO 0.5 GPM.
 - 13 ROUTE 3/4" COLD WATER WALL HYDRANT. DROP COLD WATER LINE ON WARM SIDE OF INSULATION.
 - 14 WATER LINE ROUTED UNDER GRADE.
 - 15 PROVIDE AND INSTALL BACKFLOW PREVENTER, BFP-2, TO SERVE WALL AND YARD HYDRANT WATER LINES. RE: P02, DETAIL 6 FOR WALL AND YARD HYDRANT BACKFLOW PREVENTER DETAIL.
 - 16 ROUTE 3/4" COLD WATER WALL HYDRANT. RISE COLD WATER LINE UP FROM UNDERGROUND.
 - 17 ROUTE 1" COLD WATER 7' BELOW GRADE.
 - 18 PROVIDE AND INSTALL TYPE 'B' WATER HAMMER ARRESTOR BEFORE LAST FIXTURE.



DESIGNED: ET C.A.P.D. ET	SUB SHEET NO.	TITLE OF SHEET BARN DOMESTIC WATER PLAN	DRAWING NO. 121 175143
TECH. REVIEW: BG			PMIS/PKG NO. 316223
DATE: 02/27/2023			SHEET 84 OF 104

P1.0

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

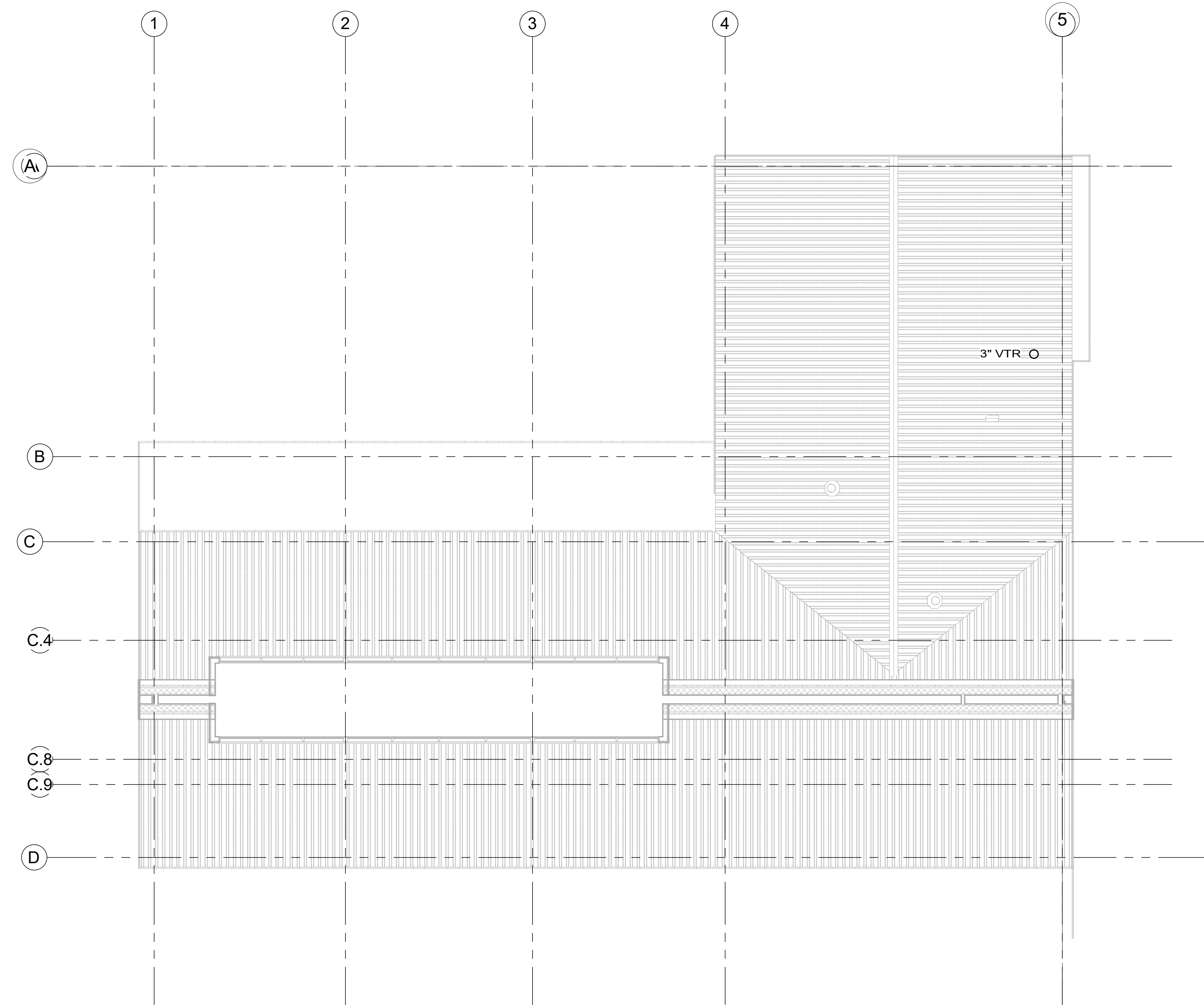


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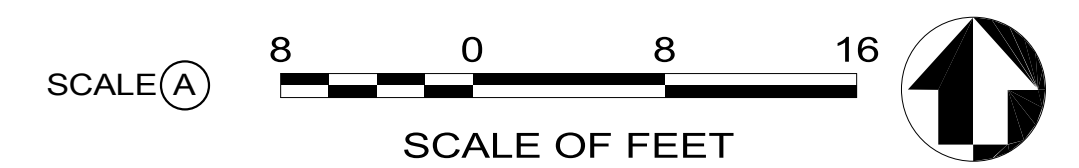
P1.1

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO. 121
175143
PMIS/PKG NO. 316223
SHEET 5 OF 104



1 BARN ROOF SANITARY PLAN
P1.2 SCALE (A)



DESIGNED:
ET
CABD
ET
TECH. REVIEW:
BG
DATE:
02/27/2023

SUB SHEET NO.


P1.2

TITLE OF SHEET
**BARN ROOF SANITARY
PLAN**

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
86 OF 104

COVERSHEET NOTES	
1.	THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
2.	MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
3.	MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
4.	ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS, EXCEPT AS NOTED OTHERWISE.
5.	THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
6.	THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
7.	THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS AND THOROUGHLY BECOME FAMILIAR WITH THE NPS STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
8.	ALL MATERIALS, AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
9.	ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT THEIR WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE CONTRACTING OFFICER.
10.	E.C. IS TO REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ALL FIRE RATED PENETRATION INSTALLATION REQUIREMENTS. E.C. IS TO NOTIFY CONTRACTING OFFICER PRIOR TO INSTALLING ANY FIXTURES WITHIN A FIRE RATED CEILING OR WALL. FIRE RATING MUST BE MAINTAINED FOR THIS TYPE OF INSTALLATION WITH DRYWALL TENTING.
11.	SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS, FOR EXAMPLE, ALL LIGHTING FIXTURES, PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
12.	CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO SUBMIT A COMPLETE CONSTRUCTION DRAWING SET TO THE ELECTRICAL UTILITY COMPANY WITHIN 10 DAYS OF AWARD OF CONTRACT. COORDINATE TIMELINE OF THE REVIEW, APPROVAL, ALL ASSOCIATED DOWN TIME, CONSTRUCTION SCHEDULING, DELIVERY, AND INSTALLATION OF THE UTILITY TRANSFORMER. NOTIFY CONTRACTING OFFICER OF SCHEDULING CONFLICTS.
13.	THE CONTRACTOR SHALL PROVIDE NEW TYPE WRITTEN PANEL DIRECTORIES FOR ALL NEW PANELS. PANELBOARD SHALL BE MARKED WHERE THE SOURCE OF POWER SUPPLY ORIGINATES, AND THEIR LISTED AMPERE RATING.
14.	DO NOT SHARE NEUTRAL CONDUCTORS FOR MULTIWIRED BRANCH CIRCUITS. WHERE SHARED NEUTRAL CONDUCTORS ARE REQUIRED (SUCH AS POWERED FURNITURE SYSTEMS), HANDLE TIES SHALL BE PROVIDED ON THE CIRCUIT BREAKERS, WITH SHARED NEUTRALS, SUCH THAT IT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS. ALL HANDLE TIES ARE REQUIRED TO BE INDICATED ON THE PANELBOARD SHOP DRAWINGS.
15.	SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE "AS-BUILT" DRAWINGS.
16.	ALL SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD BY THE ELECTRICAL CONTRACTOR WITH THE MAXIMUM AVAILABLE FAULT CURRENT AS INDICATED WITHIN THESE DOCUMENTS. THE FIELD MARKING(S) SHALL COMPLY WITH ELECTRICAL SPECIFICATIONS FOR READABILITY AND DURABILITY.
17.	ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SPECIAL OUTLET BOXES THAT MAY BE REQUIRED TO ENCLOSE RECEPTACLES.
18.	IN EXPOSED CEILING APPLICATIONS, ROUTE CONDUIT AS CLOSE TO STRUCTURAL SLAB OR DECK AS POSSIBLE, AND SUPPORT CONDUIT AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE.
19.	ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS. GENERAL CONTRACTOR SHALL PAINT CONDUIT TO MATCH ADJACENT FINISHES.
20.	ALL FACE PLATE AND DEVICE COLORS SHALL BE APPROVED BY CONTRACTING OFFICER.
21.	PROVIDE LUMINAIRES SHOWN AS SHADED WITH EMERGENCY BATTERY BACKUP POWER. EMERGENCY LUMINAIRES SHALL SENSE UNSWITCHED POWER TO THE SPACE AND OPERATE AUTOMATICALLY UPON LOSS OF NORMAL POWER. ALL SHADED LUMINAIRES WITH LED SOURCES SHALL BE PROVIDED WITH 90 MINUTES OF BATTERY BACKUP POWER. ALL EMERGENCY LUMINAIRES SHALL HAVE INTEGRAL OR REMOTE TEST SWITCHES AS INDICATED IN THE FIXTURE SCHEDULE AND VISIBLE INDICATING LIGHTS. CONNECT THE EMERGENCY BATTERY BALLAST/DRIVER TO THE UN-SWITCHED LEG OF THE LIGHTING CIRCUIT INDICATED.
22.	ALL DIMMED LIGHTING CIRCUITS ARE TO RECEIVE DEDICATED NEUTRALS. DO NOT SHARE NEUTRALS ON DIMMED LIGHTING CIRCUITS.
23.	THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHTING.
24.	ROUGH-IN FOR MECHANICAL EQUIPMENT SHALL ONLY OCCUR AFTER MECHANICAL EQUIPMENT SUBMITTALS ARE THOROUGHLY REVIEWED FOR CHANGES. NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES.
25.	FINAL LAYOUT AND QUANTITY OF ALL FIRE ALARM DEVICES SUBJECT TO APPROVAL OF LOCAL AUTHORITY HAVING JURISDICTION.
26.	THE POWER AND CONTROL REQUIREMENTS FOR ALL EQUIPMENT CONNECTIONS SHALL BE CONFIRMED WITH APPROVED SHOP DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN. FINAL POWER REQUIREMENTS, DIMENSIONED ROUGH-IN LOCATIONS, LOW VOLTAGE SYSTEM CONNECTIONS, ETC. SHALL BE CONFIRMED AND MODIFIED AS REQUIRED.
27.	ALL DEVICES IN OR ABOVE COUNTERS SHALL HAVE LOCATIONS AND MOUNTING HEIGHTS CONFIRMED WITH ARCHITECTURAL ELEVATIONS & CONTRACTING OFFICER PRIOR TO ROUGH-IN. ANY ADJUSTMENTS TO MOUNTING HEIGHTS REQUIRED BY LACK OF COORDINATION WILL BE AT THE CONTRACTOR'S EXPENSE.



DESIGNED:
BYF, CJC

BYF, CJC

TECH. REVIEW:
KMD

DATE:
02/27/2023

SUB SHEET NO.

E0.0

TITLE OF SHEET

ELECTRICAL COVER SHEET

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121

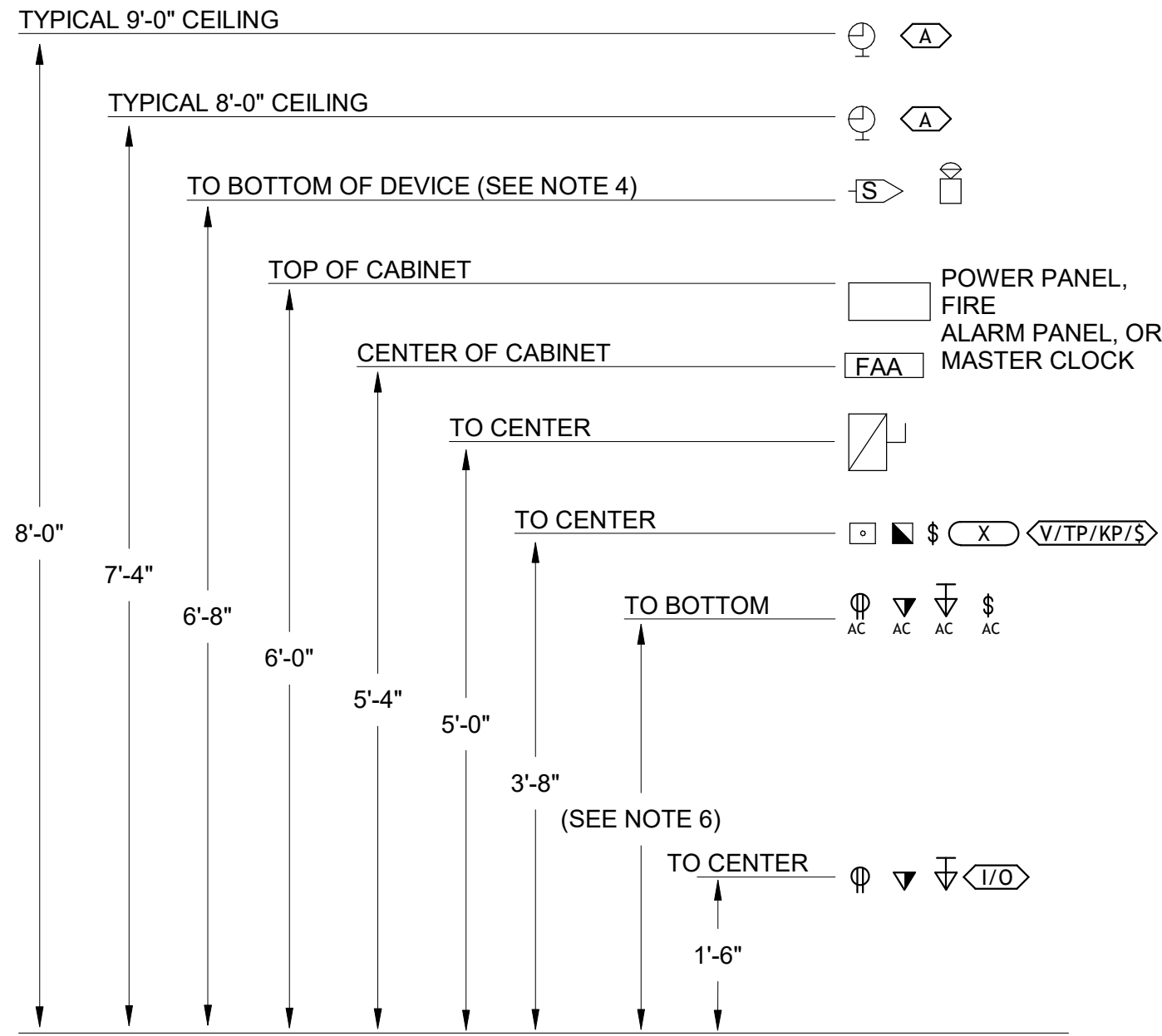
175143

PMIS/PKG NO.
316223

SHEET
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FIRE ALARM	
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR/GRAPHIC MAP
	FIRE ALARM REMOTE POWER SUPPLY
	CONTROL MODULE
	MONITOR MODULE
	MANUAL PULLDOWN STATION
	WALL MOUNTED ABA STROBE
	ABA HORN OR SPEAKER WITH STROBE
	MINI HORN / STROBE
	ELECTROMAGNETIC DOOR HOLD OPEN
	SPRINKLER FLOW SWITCH
	SPRINKLER TAMPER SWITCH
	THERMAL DETECTOR
	PHOTOELECTRIC SMOKE DETECTOR
	DUCT SMOKE DETECTOR, SUPPLY OR RETURN
	REMOTE INDICATING LIGHT (TEST SWITCH)
	120V. MOTORIZED SMOKE DAMPER
	RESCUE ASSISTANCE PHONE
	FIRE FIGHTERS PHONE JACK

SYSTEMS	
	TTB, MDF OR IDF SYSTEM BACKBOARD
	TELECOMMUNICATION OUTLET
	FLOOR MOUNTED TELECOMMUNICATION OUTLET
	TELEVISION OUTLET
	CABLE TRAY (LENGTH AS INDICATED ON DRAWINGS)



- NOTES:
- WHERE MULTIPLE LINE VOLTAGE DEVICES ARE SHOWN ADJACENT TO EACH OTHER, THEY ARE ALL TO SHARE THE SAME JUNCTION BOX, UP TO FOUR GANGS. WHERE MORE THAN FOUR DEVICES ARE SHOWN ADJACENT TO EACH OTHER, DEVICES ARE TO STACK VERTICALLY ABOVE ONE ANOTHER IN TWO ROWS IN AS SMALL OF GANG BOXES AS POSSIBLE. I.E. SIX DEVICES WILL USE TWO THREE GANG BOXES, FIVE DEVICES WILL USE ONE THREE GANG AND ONE TWO GANG BOX. WHEN DIMMERS ARE GANGED TOGETHER, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR DE-RATING.
 - BACK-TO-BACK JUNCTION BOXES IN COMMON WALLS ARE NOT PERMITTED. JUNCTION BOXES SHALL BE SEPARATED BY AT LEAST ONE STUD WHEREVER POSSIBLE.
 - AUDIBLE/VISUAL FIRE ALARM DEVICES SHOWN ARE TO BE MOUNTED AT 90° OR 6° BELOW CEILING, WHICHEVER IS LOWER. ABA STROBES TO BE MOUNTED AT 80° AFF OR 6° BELOW CEILING, WHICHEVER IS LOWER.
 - MAXIMUM ELEVATION FOR ALL LOAD CENTER CIRCUIT BREAKERS SHALL NOT EXCEED 48" AFF, WITHIN DWELLING UNITS.
 - THE E.C. SHALL REFER TO ARCHITECTURAL ELEVATIONS TO COORDINATE ALL COUNTER HEIGHTS. ALL "AC" DEVICES SHALL HAVE BOTTOM OF BACK-BOX MOUNTED 4" ABOVE THE BACK/SIDE SPLASH.

LIGHTING FIXTURES	
	LUMINAIRE TYPE, REFERENCING LUMINAIRE SCHEDULE, TYPICAL ALL FIXTURES. SUBSCRIPT, IF SHOWN, REFERENCES WALL SWITCH OR RELAY/ZONE CONTROL
	WALL MOUNTED LUMINAIRE
	SURFACE OR PENDANT MOUNTED LUMINAIRE
	RECESSED LUMINAIRE
	RECESSED DOWNLIGHT LUMINAIRE
	SURFACE CEILING LUMINAIRE
	PENDANT LUMINAIRE
	ARROW INDICATES DIRECTIONAL LUMINAIRE
	MONOPOINT LUMINAIRE
	SURFACE OR PENDANT TRACK LUMINAIRE REFER TO FIXTURE SCHEDULE FOR HEAD QTY.
	LED TAPE LUMINAIRE
	FESTOON LIGHTING
	RECESSED MULTI-HEAD LUMINAIRE
	FLOOR OR TABLE LAMP
	EXIT LUMINAIRE - SHADED INDICATES FACE / DIRECTIONAL ARROWS AS SHOWN
	BATTERY PACK EMERGENCY LUMINAIRE
	HATCH INDICATES EMERGENCY LUMINAIRE
	PORCELAIN KEYLESS LAMP HOLDER
	STEP LIGHT TYPE LUMINAIRE
	IN-GRADE UPLIGHT
	BOLLARD LUMINAIRE
	PEDESTRIAN POLE OR POST TOP LUMINAIRE
	EXTERIOR AREA LIGHT

WIRING DEVICES	
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE WITH USB PORTS
	FOUR PLEX RECEPTACLE
	FOUR PLEX RECEPTACLE WITH USB PORTS
	SINGLE RECEPTACLE
	COMBO RECEPTACLE/SWITCH
	SWITCHED DUPLEX RECEPTACLE
	EMERGENCY POWERED DUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE
	FLOOR MOUNTED RECEPTACLE DUPLEX/QUAD
	CEILING MOUNTED RECEPTACLE DUPLEX/QUAD
	SURFACE RACEWAY
	CLOCK RECEPTACLE
	JUNCTION BOX
	WALL MOUNTED J-BOX
	FLOOR MOUNTED JUNCTION BOX
	MOLDED CASE CIRCUIT BREAKER IN ENCLOSURE
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC CONTROLLER (STARTER)
	COMBINATION STARTER/DISCONNECT SWITCH
	MOTOR
	RELAY
	TIME CLOCK
	PHOTOCELL
	THERMAL OVERLOAD SWITCH
	SINGLE POLE SWITCH, LINE VOLTAGE
	3-WAY SWITCH, LINE VOLTAGE
	4-WAY SWITCH, LINE VOLTAGE
	KEY OPERATED SWITCH
	DIMMER SWITCH, LINE VOLTAGE
	RECESSED DOOR SWITCH
	LIGHTING CONTROL DEVICE, REFER TO DETAILS FOR CONTROL INTENT

LIGHTNING PROTECTION SYSTEM NOTES

BID OPTION A: ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A LIGHTNING PROTECTION SYSTEM WITH AN UNDERWRITER'S LABORATORIES LISTED MASTER C LABEL. REFER TO PERFORMANCE SPECIFICATION SECTION 26 4113 FOR SYSTEM REQUIREMENTS. COORDINATE ALL GROUND ROD LOCATIONS ON ROOF WITH CONTRACTING OFFICER WHILE DEVELOPING SUBMITTALS. COORDINATE ALL DOWN CONDUCTOR LOCATIONS WITH CONTRACTING OFFICER AND MANUFACTURER DURING SUBMITTALS. SUBMITTALS REQUIRE FULL ROOF PLANS WITH ALL GROUND ROD (AND ALL OTHER EQUIPMENT) TO BE INDICATED FOR REVIEW PRIOR TO SUBMITTAL APPROVAL.

ABBREVIATIONS AND SYMBOLS			
A	AMPERE(S)	MDP	MAIN DISTRIBUTION CENTER
AC	ABOVE COUNTER	MDF	MAIN DISTRIBUTION FACILITY
AFF	ABOVE FINISHED FLOOR	MLO	MAIN LUGS ONLY
AFG	ABOVE FINISHED GRADE	MTS	MANUAL TRANSFER SWITCH
AHJ	AUTHORITY HAVING JURISDICTION	MW	MICROWAVE
AIC	AMPERES INTERRUPTING CAPACITY	NC	NORMALLY CLOSED
ATS	AUTOMATIC TRANSFER SWITCH	NL	NIGHT LIGHT - SEE GENERAL NOTES
BFF	BELOW FINISHED FLOOR	NO	NORMALLY OPEN
BOF	BOTTOM OF FIXTURE	OAE	OR APPROVED EQUAL
C	CONDUIT	OFH	OVERALL FIXTURE HEIGHT
CATV	CABLE TELEVISION	OH	OVERHEAD
CB	CIRCUIT BREAKER	P	POLE
CCT	CORRELATED COLOR TEMPERATURE	PART	PARTIAL CIRCUIT
CLG	CEILING	PH	PHASE
CT	CURRENT TRANSFORMER	PNL	PANEL
DED	DEDICATED CIRCUIT	RCPT	RECEPTACLE
DISC	DISCONNECT	REF	REFRIGERATOR
DW	DISHWASHER	RFD	RECESSED FIXTURE DEPTH
DWG(S)	DRAWING(S)	(R)	EXISTING TO BE REMOVED
(E)	EXISTING TO REMAIN	(RL)	RELOCATED LOCATION
EC	ELECTRICAL CONTRACTOR	SPD	SURGE PROTECTION DEVICE
EF	EXHAUST FAN	TS	SPRINKLER TAMPER SWITCH
(ER)	EXISTING TO BE RELOCATED	UC	UNDER COUNTER/CABINET
EM	EMERGENCY	UG	UNDERGROUND
EPO	EMERGENCY POWER OFF	UON	UNLESS OTHERWISE NOTED
EWC	ELECTRIC WATER COOLER	USB	RECEPTACLE PROVIDE WITH USB PORTS.
F	FUSE	V	VOLT(S)
FLA	FULL LOAD AMPS	W	WATT(S) OR WIRE
FS	SPRINKLER FLOW SWITCH	WFD	WALL FIXTURE DEPTH
G	GROUND	WG	WIRE GUARD
GC	GENERAL CONTRACTOR	WP	WEATHERPROOF
GD	GARBAGE DISPOSAL	XFMR	TRANSFORMER
GFI	GROUND FAULT CIRCUIT INTERRUPTER		
GFP	GROUND FAULT PROTECTION		KITCHEN EQUIPMENT SCHEDULE NOTATION
HP	HORSEPOWER		MECHANICAL EQUIPMENT SCHEDULE NOTATION
IDF	INTERMEDIATE DISTRIBUTION FACILITY		
IG	ISOLATED GROUND		DETAIL NOTE
ISC	SHORT CIRCUIT CURRENT		DELTA REVISION NOTE
KVA	KILOVOLT AMPERE(S)		
KW	KILOWATT(S)		ELECTRICAL WIRE SIZE
LTG	LIGHTING		LIGHTING CONTROLS SEQUENCE OF OPERATION
MCA	MINIMUM CIRCUIT AMPERE(S)		
MCB	MAIN CIRCUIT BREAKER		

DISTRIBUTION AND RACEWAY

	MAIN DISTRIBUTION CENTER (MDC)
	SURFACE MTD PANELBOARD
	RECESSED PANELBOARD
	TRANSFORMER
	BRANCH CIRCUIT HOMERUN
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
	CONDUIT EXPOSED OR CONCEALED IN WALL OR CEILING
	RACEWAY UP
	RACEWAY DOWN
	CAPPED CONDUIT
	CURRENT TRANSFORMER
	CIRCUIT BREAKER SWITCH
	FUSED SWITCH
	GROUNDING ELECTRODE CONDUCTOR
	METER
	GROUND FAULT PROTECTION



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02/27/2023
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02/27/2023

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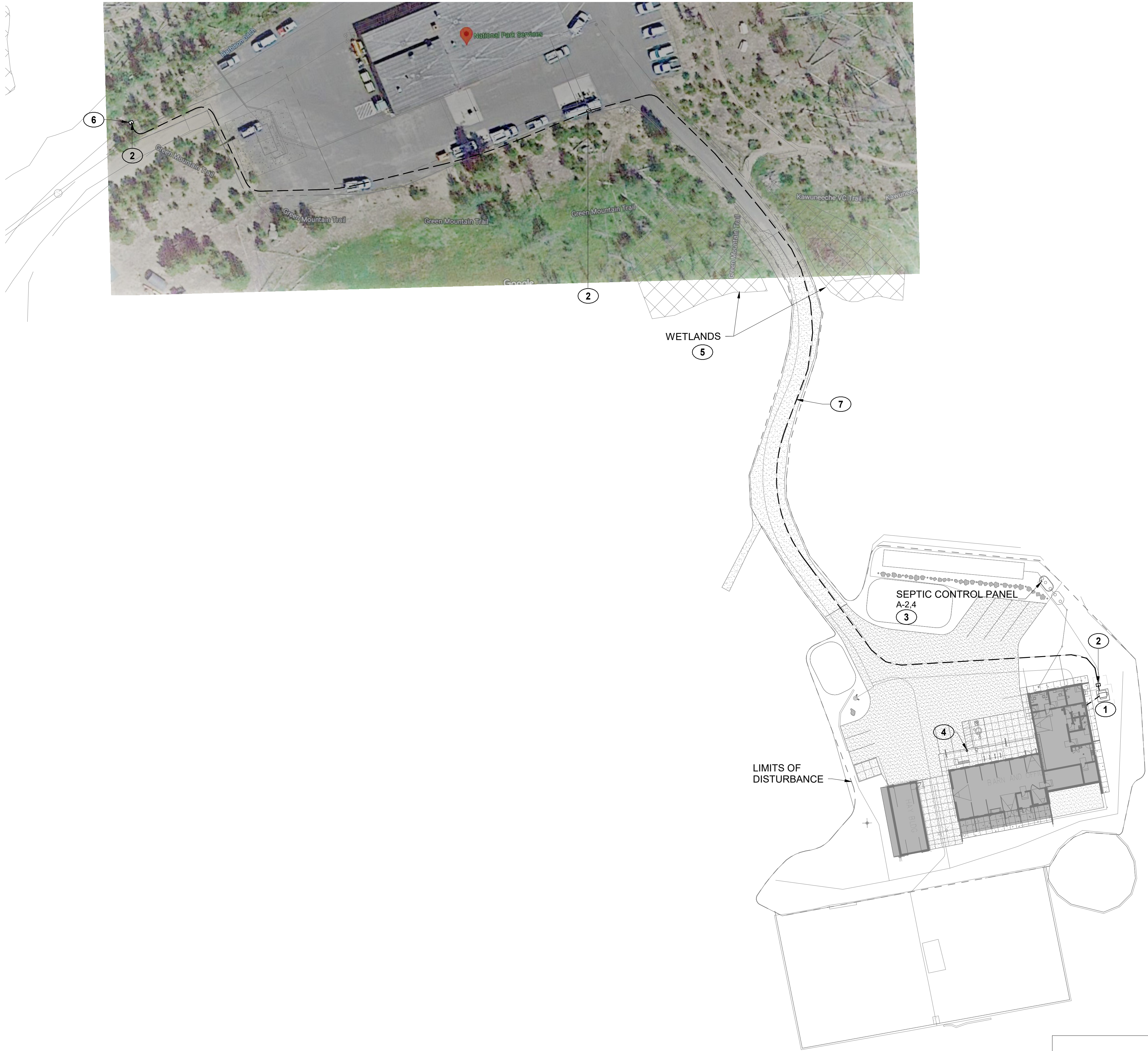
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TITLE OF SHEET
ELECTRICAL COVER SHEET

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
88 OF **104**

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SITE GENERAL NOTES

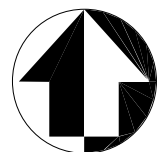
- PLEASE COORDINATE ALL UTILITY WORK WITH MOUNTAIN PARKS ELECTRIC, INC (MPEI). LOCAL CONTACT IS JEAN JOHNSTON (970-887-7065). ANY QUESTIONS PRIOR TO CONTRACT AWARD SHALL BE DIRECTED TO THE CO

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	APPROXIMATE LOCATION OF NEW 120/240V, 1-PHASE, PAD MOUNTED TRANSFORMER. THE TRANSFORMER SHALL BE LOCATED AT LEAST 10'-0" AWAY FROM BUILDING. THE EC SHALL COORDINATE ROUTING AND TERMINATION IN THE FIELD AS TO ACHIEVE BUILDING POWER ACTIVATION. MOUNTAIN PARKS ELECTRIC INC. (MPEI) SHALL FURNISH AND INSTALL TRANSFORMER AS WELL AS ALL PRIMARY CABLING BETWEEN THE UTILITY DISTRIBUTION POINT AND THE PRIMARY CONNECTION POINT AT THE TRANSFORMER. ALL PRIMARY TRENCHING/BACKFILLING BETWEEN UTILITY DISTRIBUTION POINT AND THE TRANSFORMER SHALL BE FURNISHED/INSTALLED BY MPEI. THE EC SHALL PERFORM ALL TRENCHING AND BACKFILLING ON THE SECONDARY SIDE OF THE TRANSFORMER. MPEI SHALL MAKE ALL CONNECTIONS OF SECONDARY CABLING AT THE TRANSFORMER LANDINGS. THE EC SHALL FURNISH AND INSTALL THE REQUIRED METER HOUSINGS AND ALL SECONDARY EQUIPMENT AND FEEDS AS COORDINATED WITH MPEI. MPEI SHALL FURNISH, INSTALL, AND CONNECT THE METER IN THAT HOUSING. ALL COSTS FOR WORK DESCRIBED ABOVE TO BE PERFORMED BY MPEI SHALL BE CARRIED AS PART OF THE PROJECT BUDGET. MPEI HAS PROVIDED A PRELIMINARY ESTIMATE OF \$97,267 FOR THEIR WORK HOWEVER MPEI WILL NEED TO UPDATE THIS ESTIMATE ONCE THEY ARE WITHIN 60 DAYS OF CONSTRUCTION/INSTALLATION
2	ANTICIPATED LOCATION OF UTILITY FLUSH MOUNTED VAULT PROVIDED BY AND INSTALLED BY MPEI. ANTICIPATED SIZE OF VAULT IS 4'X4-1/2'. COORDINATE EXACT LOCATION WITH MPEI PRIOR TO ROUTING OF ANY TRENCHING.
3	EC SHALL PROVIDE 120/240V, 20A ELECTRICAL CIRCUIT TO SEPTIC CONTROL PANEL. SEPTIC CONTROL PANEL SHALL BE FURNISHED AND INSTALLED BY CIVIL CONTRACTOR. PROVIDE 3#10, 1#10G IN 1" C. CONTROL POWER FOR CONTROL PANEL SHALL BE FED OFF OF SINGLE LEG OF 2-PHASE CIRCUIT. COORDINATE ALL INSTALLATION REQUIREMENTS WITH CIVIL CONTRACTOR.
4	EC SHALL PROVIDE A 12"X12" TIER 15 IN-GRADE JUNCTION BOX LOCATED BETWEEN PARKING LOT FOR FUTURE EV CHARGING STATION. ALSO PROVIDE 1-1/2" C FROM PANEL 'A' TO LOCATION SHOWN. COORDINATE EXACT LOCATION OF CONDUIT AND JUNCTION BOX WITH EV MANUFACTURER INSTALLATION GUIDE. USE CHARGEPOINT CT4000 SERIES DUAL PORT BOLLARD CHARGER AS BASIS OF DESIGN. THE INTENT OF THE JUNCTION BOX IS TO BE ABLE TO DEMOLISH THE BOX AT TIME OF CHARGER INSTALLATION AND BACKFILL HOLE WITH CONCRETE WHILE ROUTING CONDUIT INTO CHARGER PER MANUFACTURER INSTALLATION GUIDE. ALSO COORDINATE FINAL LOCATION WITH CONTRACTING OFFICER PRIOR TO INSTALLATION.
5	CONTRACTOR AND MPEI SHALL COORDINATE WORK AROUND EXISTING WETLANDS WITH CONTRACTING OFFICER. THERE SHALL BE NO DISTURBANCE TO EXISTING WETLANDS.
6	ANTICIPATED APPROXIMATE LOCATION FOR UTILITY PRIMARY TIE-IN.
7	ANTICIPATED ROUTING OF 3" CONDUIT FOR ELECTRICAL UTILITY PRIMARY CONDUCTORS. PRIMARY CONDUIT AND CONDUCTORS SHALL BE FURNISHED AND INSTALLED BY MPEI.

40 0 40 80

SCALE OF FEET



ELECTRICAL SITE PLAN

1

E0.2



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KMD
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02/27/2023

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ELECTRICAL SITE PLAN

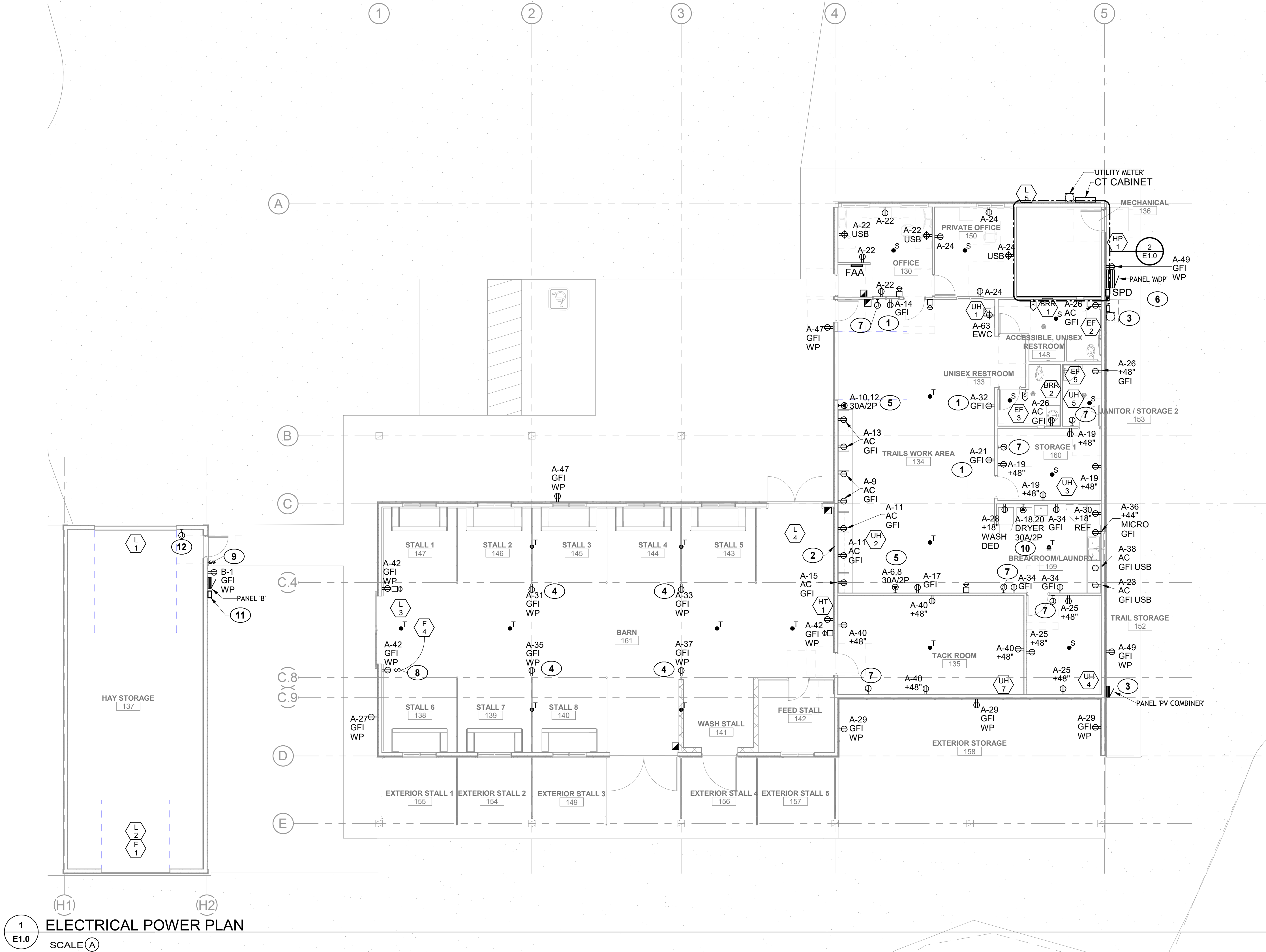
CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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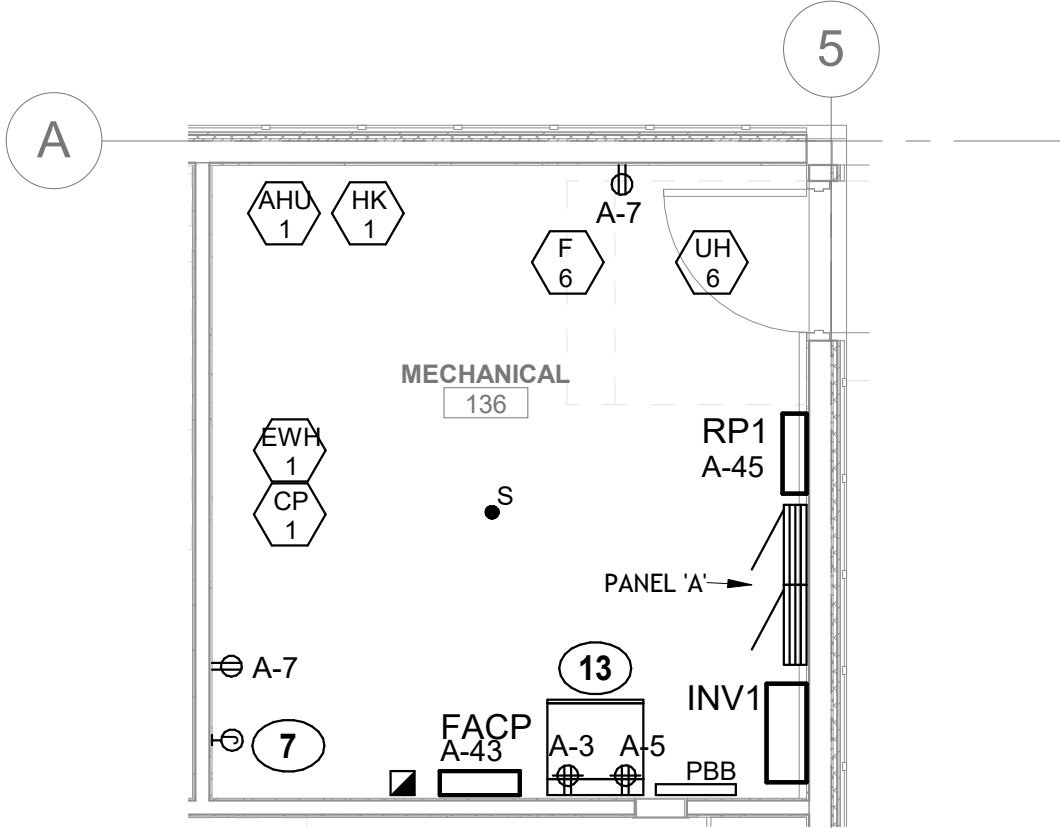
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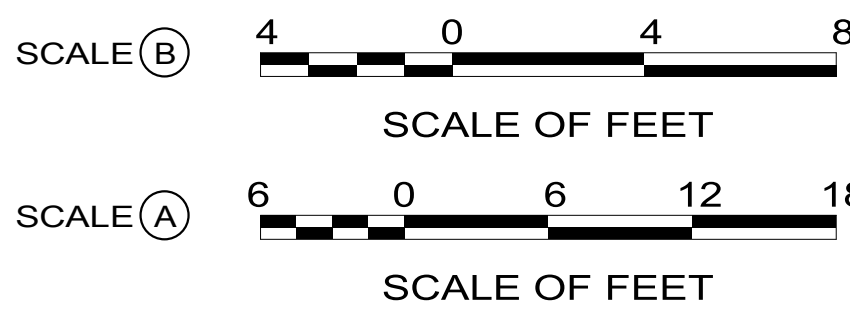
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E1.0
ELECTRICAL POWER PLAN
SCALE (A)

POWER GENERAL NOTES	
1.	UNLESS OTHERWISE NOTED, ALL CIRCUIT NUMBERS INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS BASED UPON THE FOLLOWING CONVENTION, (THIS SHEET ONLY): A = CIRCUIT TO PANEL 'A' B = CIRCUIT TO PANEL 'B'

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	RECEPTACLE RESERVED FOR POWER TOOLS. COORDINATE EXACT LOCATION OF TOOLS WITH CONTRACTING OFFICER
2	PROVIDE (4) 1" CONDUIT ROUTED FROM ELECTRICAL ROOM TO STUB-OUT IN BARN AREA AT 14'-0" AFF. CONDUIT SHALL BE PROVIDED WITH BUSHING AND PULL STRING FOR FUTURE CIRCUITS ROUTED TO BARN.
3	BASE SCOPE: RESERVE AREA FOR FUTURE PV DISCONNECT AND COMBINER PANEL. ROUTE CONDUIT TO AREA FROM PANEL 'A'. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION. BID OPTION B: PROVIDE PRICING FOR FULL INSTALLATION OF PV SYSTEM. REFER TO SHEET E3.0 AND E6.0 FOR MORE INFORMATION
4	CONDUIT SHALL BE RUN SURFACE MOUNTED ON COLUMN TERMINATING AT LOW PROFILE, SINGLE GANG JUNCTION BOX/RECEPTACLE. JUNCTION BOX SHALL BE MOUNTED SECURELY TO COLUMN AND PROVIDED WITH LOW PROFILE, METALLIC, WEATHERPROOF WHILE-IN-USE COVER. TAYMAC MX4280 SERIES OR APPROVED EQUAL. COORDINATE JUNCTION BOX REQUIREMENTS WITH COVER. THE INTENT IS TO PROVIDE POWER AS NEEDED, PROTECT THE RECEPTACLE FROM ANY HAZARDS WITH METALLIC COVERPLATE, AND MAINTAIN AS LOW PROFILE AS POSSIBLE TO AVOID ACCIDENTAL DAMAGE BY LIVESTOCK OR PEOPLE.
5	RECEPTACLE RESERVED FOR POWER TOOLS. RECEPTACLES SHALL BE NEMA 6-30R WITH 2#10, 1#10G, 3/4"C. VERIFY NEMA CONFIGURATION WITH TOOL AND COORDINATE EXACT LOCATION OF TOOLS WITH CONTRACTING OFFICER.
6	LOCATION OF DEMAND METER. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
7	CIRCUIT SHALL PASS THROUGH LINE VOLTAGE THERMOSTAT FOR CONTROL OF UNIT HEATER IN THIS SPACE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR.
8	COORDINATE EXACT LOCATION OF SWITCH CONTROL FOR F-4 WITH CONTRACTING OFFICER. LABEL SWITCH AS "INTAKE FAN".
9	PROVIDE WEATHER PROOF SWITCH AND COORDINATE EXACT LOCATION OF SWITCH CONTROL FOR F-1 WITH CONTRACTING OFFICER. LABEL SWITCH AS "INTAKE FAN".
10	RECEPTACLE SHALL BE NEMA 6-30R WITH 2#10, 1#10G, 3/4"C.
11	LIGHTING CONTACTOR FOR EXTERIOR LIGHTING FIXTURES AT HAY STORAGE. REFER TO LIGHTING PLANS FOR ADDITIONAL INFORMATION.
12	CONTRACTOR TO PROVIDE 4-SQUARE JUNCTION BOX WITH BLANK COVER AND (1) 3/4" CONDUIT BACK TO PANEL 'B' FOR FUTURE GARAGE DOOR OPENER USE. PROVIDE PULL STRING IN CONDUIT AND LOCATE NEAR DOOR OPENER GEAR BOX HIGH ON WALL.
13	PROVIDE (2) QUADRAPLEX RECEPTACLES AT RACK. EC SHALL COORDINATE ELEVATION OF RECEPTACLES WITH CONTRACTING OFFICER PRIOR TO ROUGH-IN.



2
E1.0
ELECTRICAL POWER PLAN - ENLARGED MECHANICAL ROOM
SCALE (B)



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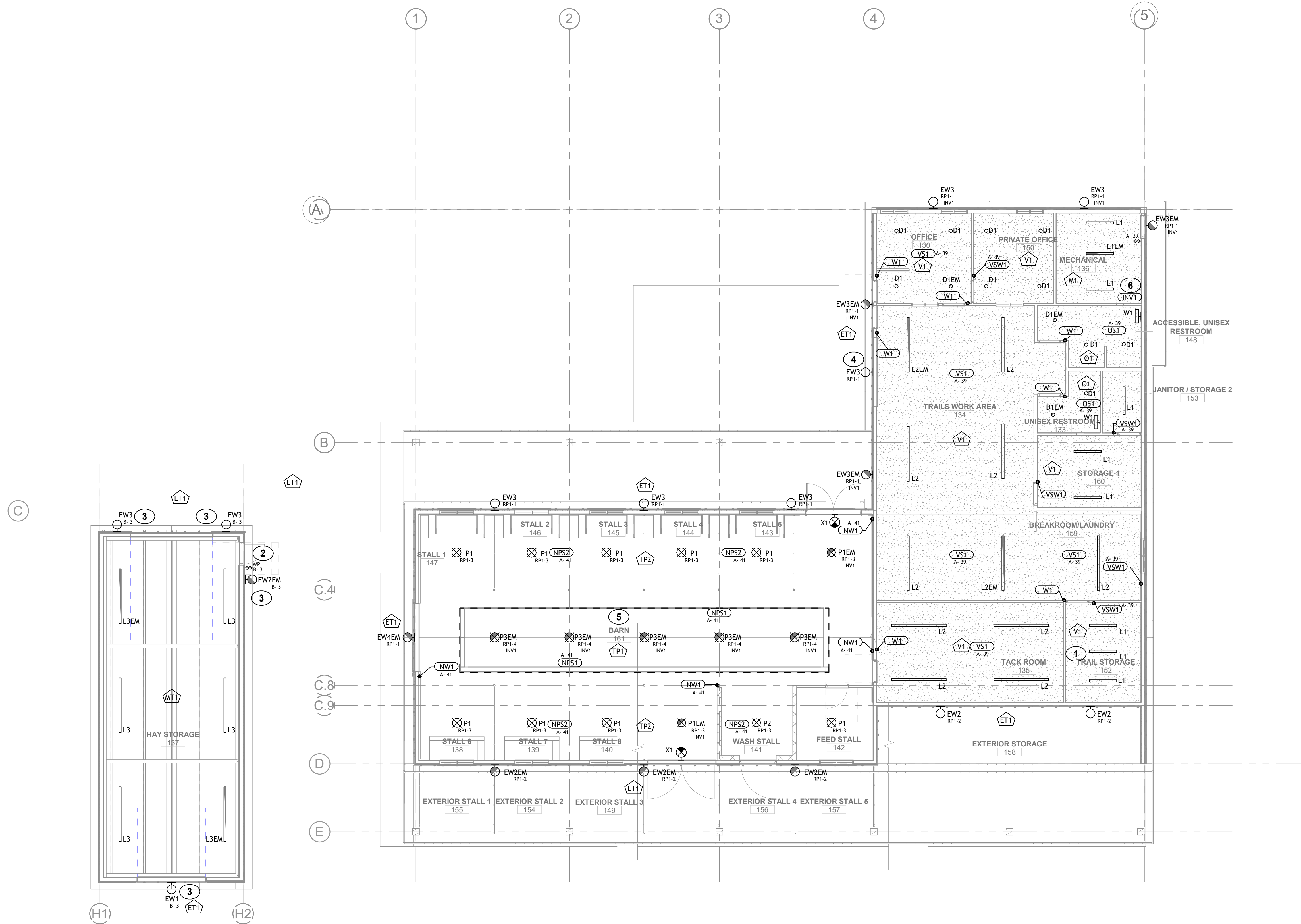
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TITLE OF SHEET
ELECTRICAL POWER PLAN

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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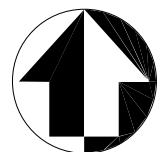


1 ELECTRICAL LIGHTING PLAN
E2.0

LIGHTING GENERAL NOTES	
1.	UNLESS OTHERWISE NOTED, ALL CIRCUIT NUMBER INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS OR RELAY PANELS BASED ON THE FOLLOWING CONVENTION, (THIS SHEET ONLY): A-# = CIRCUIT TO PANEL A B-# = CIRCUIT TO PANEL B
2.	DAYLIGHT PRIMARY AND SECONDARY ZONES ARE REQUIRED IN BARN AREA ONLY. SEE PLANS FOR CONTROL DESIGNATIONS AND REFER TO LIGHTING CONTROLS AND SCHEDULES FOR CONTROL REQUIREMENTS.

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	EC TO COORDINATE EXACT MOUNTING HEIGHTS OF PENDANTS TO SLANTED CEILING IN ORDER TO HAVE THE BOF HEIGHT OF FIXTURES AT 13' - 0" AFF.
2	HAY STORAGE LIGHT SWITCH CONTROLLING INTERIOR LIGHT FIXTURES SHALL BE TIMER, INTERMATIC E1400 SERIES OR APPROVED EQUAL. PROGRAM TIME TO 2-HOUR COUNTDOWN AND LOCK SETTING. LOCATE CONTROL ON EXTERIOR OF HAY STORAGE. PROVIDE TIMER IN WEATHERPROOF ENCLOSURE.
3	EXTERIOR FIXTURE FIXTURES SHALL BE CONTROLLED VIA ASTRONOMICAL TIMECLOCK/CONTACTOR. PROVIDE INTERMATIC ELECTRONIC TIMER CONTROL IN OUTDOOR METAL ENCLOSURE, ET90215CR, OR APPROVED EQUAL. REFER TO POWER PLANS FOR ADDITIONAL INFORMATION.
4	FIXTURE SHALL BE LOCATED ABOVE DOOR AT 10'-0" BOF.
5	FIXTURES WITHIN DASHED AREA AROUND UPPER BARN OPENING ARE IN PRIMARY DAYLIGHT ZONE. FIXTURES OUTSIDE THIS AREA ARE IN SECONDARY DAYLIGHT ZONE. CONTROLS/SEQUENCE OF OPERATION REQUIRED PER ASHRAE 90.1.
6	PROVIDE (1) 750W LED LIGHTING INVERTER (INV1), IOTA ILS 750 OR APPROVED EQUAL. INVERTER SHALL SERVE EMERGENCY FIXTURES THAT DO NOT HAVE INTEGRAL BATTERY PACKS SUCH AS SOME EXTERIOR FIXTURES AND BARN FIXTURES. REFER TO SHEET E8.1 - ELECTRICAL LIGHTING CONTROLS SCHEDULES FOR ADDITIONAL INFORMATION ON INVERTER AND CONNECTION TO UL924 DEVICES REQUIRED.

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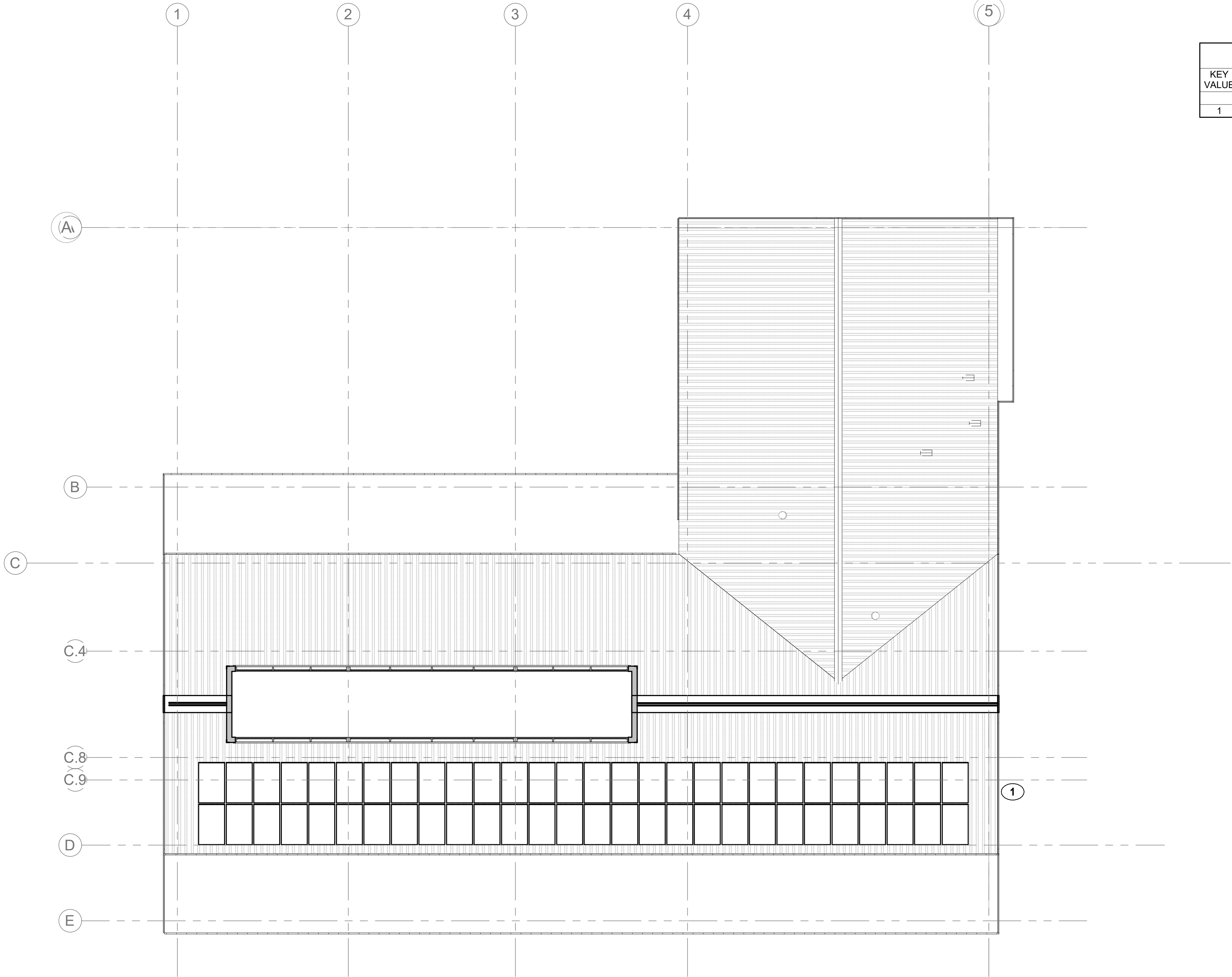
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TITLE OF SHEET
ELECTRICAL LIGHTING PLAN

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

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E3.0 ELECTRICAL ROOF PLAN

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	EC SHALL PROVIDE BID OPTION B PRICING FOR ALL PV EQUIPMENT.

SOLAR PV SPECIFICATION

PV SYSTEM SHALL BE PROVIDED AS A DESIGN/BUILD CONTRACT THROUGH A SEPARATE PV CONTRACTOR. PV CONTRACTOR SHALL PROVIDE ALL OF THE MATERIALS AND LABOR ASSOCIATED WITH THE INSTALLATION OF AN APPROXIMATELY 25KW (MAXIMUM PER UTILITY REQUIREMENTS) SOLAR PV ARRAY SYSTEM MOUNTED TO THE ROOF OF THE BARN STRUCTURE. WORK SHALL INCLUDE ALL REQUIRED WIRING CONNECTIONS BETWEEN PV COMBINER PANEL AND EACH ROOF MOUNTED PV ARRAY.

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT ROUGH-IN'S THROUGHOUT THE SYSTEM AND FEEDERS (BETWEEN THE PV DISCONNECT LOCATED AT THE BARN AND THE COMBINER PANEL). COORDINATE EXACT REQUIREMENTS WITH THE AWARDED PV CONTRACTOR, AND PER THE MANUFACTURER'S SPECIFICATIONS. PV SYSTEM SHALL CONNECT VIA 150A/2P CIRCUIT BREAKER MOUNTED INSIDE OF PANEL 'A'. REFER TO ELECTRICAL ONE-LINE DIAGRAM ON SHEET E6.0 FOR MORE INFORMATION.

BASIC SYSTEM SPECIFICATIONS:

PANELS

1. MATERIAL SHALL BE MONOCRYSTALINE.
2. MINIMUM EFFICIENCY SHALL BE GREATER THAN 19%.
3. 25 YEAR MINIMUM MANUFACTURER WARRANTY.
4. APPROPRIATE WIND/HAIL RATING FOR INSTALL ZONE.
5. UL-LISTED.
6. QUANTITY OF PANELS SHALL BE (56) RATED AT 440W, OR OTHER APPROVED ARRANGEMENT PROVIDING THE FINAL INSTALLED OUTPUT IS APPROXIMATELY 25KW.

RACKING

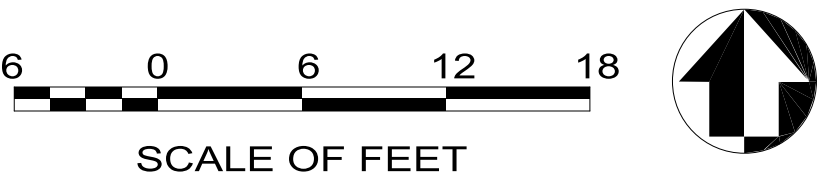
1. SYSTEM SHALL HAVE INTEGRAL GROUNDING.
2. APPROPRIATE STRUCTURAL/WIND RATING FOR INSTALL TYPE.
3. 10 YEAR MINIMUM MANUFACTURER WARRANTY.
4. UL-LISTED.
5. SYSTEM SHALL BE MOUNTED FLAT/FLUSH WITH ROOF, LOCATED ON THE SOUTH EAST FACING SLOPE.

MICROINVERTER

1. MINIMUM EFFICIENCY SHALL BE GREATER THAN 97%.
2. 25 YEAR MINIMUM MANUFACTURER WARRANTY.
3. UL-LISTED.
4. RAPID SHUTDOWN COMPLIANT
5. EXTERIOR GRADE

BASIC SYSTEM GENERAL NOTES:

1. ROOFING CONTRACTOR SHALL CONNECT/INSTALL THE PV RACKING SYSTEM TO THE ROOF, PROPERLY COORDINATING ALL STAND-OFF REQUIREMENTS, AND ENSURE ALL ROOF PENETRATIONS ARE SECURE AND SEALED APPROPRIATELY. REFER TO SPECIFIED RACKING SYSTEM MANUFACTURER'S SPECIFICATIONS, AND AWARDED PV CONTRACTOR FOR ADDITIONAL INFORMATION.
2. PV CONTRACTOR SHALL PROVIDE, INSTALL, AND CONNECT ALL ROOF PANELS, MICROINVERTERS AND REQUIRED GROUNDING.
3. COORDINATE FINAL TERMINATIONS WITH PV CONTRACTOR.
4. SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH INTERNATIONAL FIRE CODE, SECTION 1205.



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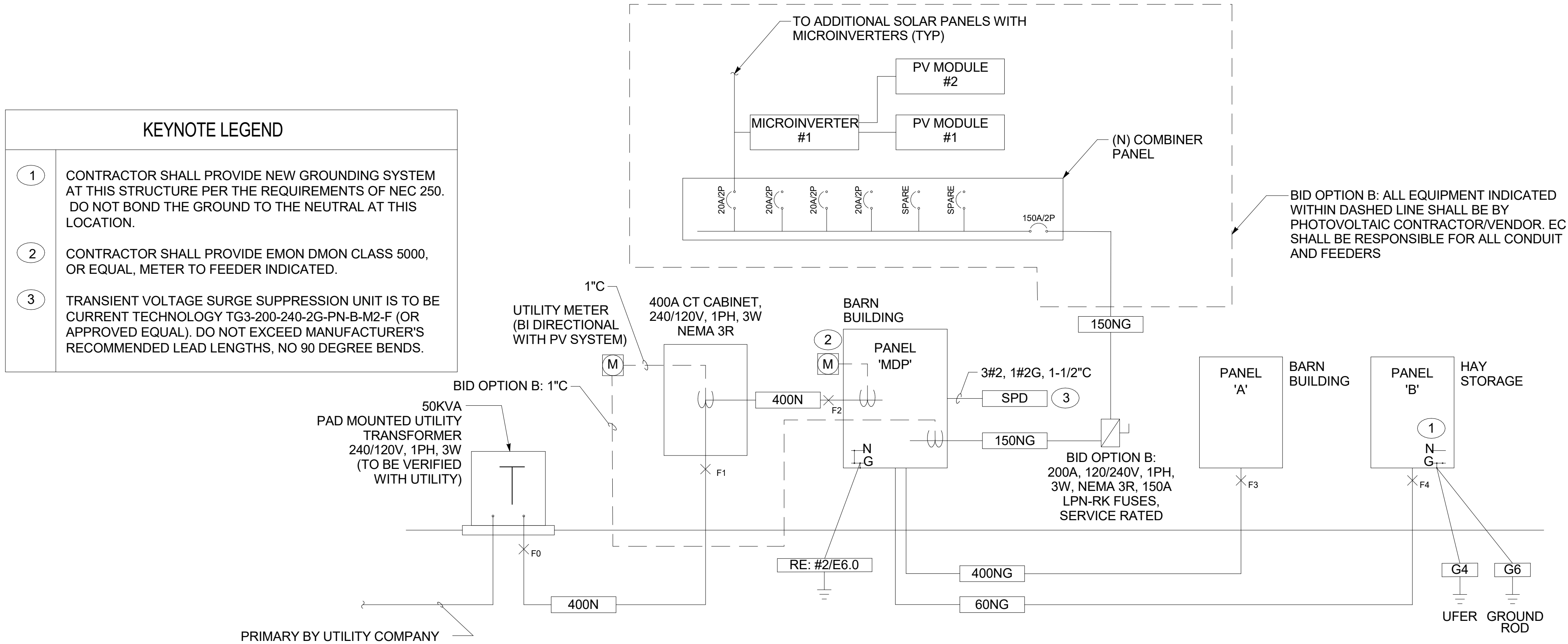
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TITLE OF SHEET
ELECTRICAL ROOF PLAN

CONSTRUCT COLORADO RIVER DISTRICT
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FEEDER SCHEDULE (SINGLE PHASE)			
KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS		
SERVICE ENTRANCE FEEDERS			
300N	3#350, 3"C		
400N	2[3#3/0, 2"C]		
EQUIPMENT FEEDERS			
20NG	3#12, #12G, 3/4"C	20G	2#12, #12G, 3/4"C
30NG	3#10, #10G, 3/4"C	30G	2#10, #10G, 3/4"C
40NG	3#8, #10G, 1"C	40G	2#8, #10G, 1"C
50NG	3#6, #10G, 1-1/4"C	50G	2#6, #10G, 1"C
60NG	3#4, #10G, 1-1/4"C	60G	2#4, #10G, 1"C
70NG	3#4, #8G, 1-1/4"C	70G	2#4, #8G, 1-1/4"C
80NG	3#3, #8G, 1-1/4"C	80G	2#3, #8G, 1-1/4"C
90NG	3#2, #8G, 1-1/2"C	90G	2#2, #8G, 1-1/4"C
100NG	3#1, #8G, 1-1/2"C	100G	2#1, #8G, 1-1/2"C
110NG	3#1, #6G, 2"C	110G	2#1, #6G, 1-1/2"C
125NG	3#1/0, #6G, 2"C	125G	2#1/0, #6G, 1-1/2"C
150NG	3#1/0, #6G, 2"C	150G	2#1/0, #6G, 1-1/2"C
175NG	3#2/0, #6G, 2"C	175G	2#2/0, #6G, 2"C
200NG	3#3/0, #6G, 2-1/2"C	200G	2#3/0, #6G, 2"C
225NG	3#4/0, #4G, 2-1/2"C	225G	2#4/0, #4G, 2"C
250NG	3#250, #4G, 3"C	250G	2#250, #4G, 2-1/2"C
300NG	3#350, #4G, 3"C	300G	2#350, #4G, 2-1/2"C
GROUNDING CONDUCTORS		ABBREVIATIONS	
G8	1#8, 3/4" C	MECH	SEE MECH SCHEDULE
G6	1#6, 3/4" C	XFMR	SEE XFMR SCHEDULE

NOTES:

- FEEDER FOR SECONDARY OF SEPARATELY DERIVED SYSTEM (SDS). GROUND SIZE PER NEC TABLE INCLUDED IN ARTICLE 250.66.
- ALL CONDUCTORS ARE SINGLE CONDUCTOR COPPER THWN UNLESS NOTED OTHERWISE. AMPACITY BASED ON THE NEC TABLE INCLUDED IN ARTICLE 310.
- ALL CONDUITS ARE EMT UNLESS NOTED OTHERWISE, FILL RATIOS BASED ON NEC ANNEX C TABLE C.1.

1
E6.0

ELECTRICAL ONE-LINE DIAGRAM

FAULT CURRENT CALCULATION SCHEDULE															
POINT	LOCATION DESCRIPTION	LENGTH (L) (ft)	VOLTAGE (EL-L)	VOLTAGE (EL-N)	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	C VALUE	# OF PARALLEL RUNS	Isc AVAILABLE UPSTREAM	Isc AT EQUIP (I3ph) OR (IL-L)	POINT
F0	UTILITY XFMR												--	21,900	F0
F1	SERVICE DISCONNECT	20	240	120	1	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	21,900	19,362	F1
F2	PANEL MDP	5	240	120	1	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	19,362	18,817	F2
F3	PANEL A	10	240	120	1	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	18,817	17,814	F3
F4	PANEL B	150	240	120	1	4	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	3825	1	18,817	2,632	F4

NOTES:

1. ALL CALCULATIONS WERE DONE USING BUSSMAN "POINT-TO-POINT" METHOD.

2. REFER TO PLANS FOR ASSUMED UTILITY TRANSFORMER SIZE UTILIZED FOR CALCULATIONS.

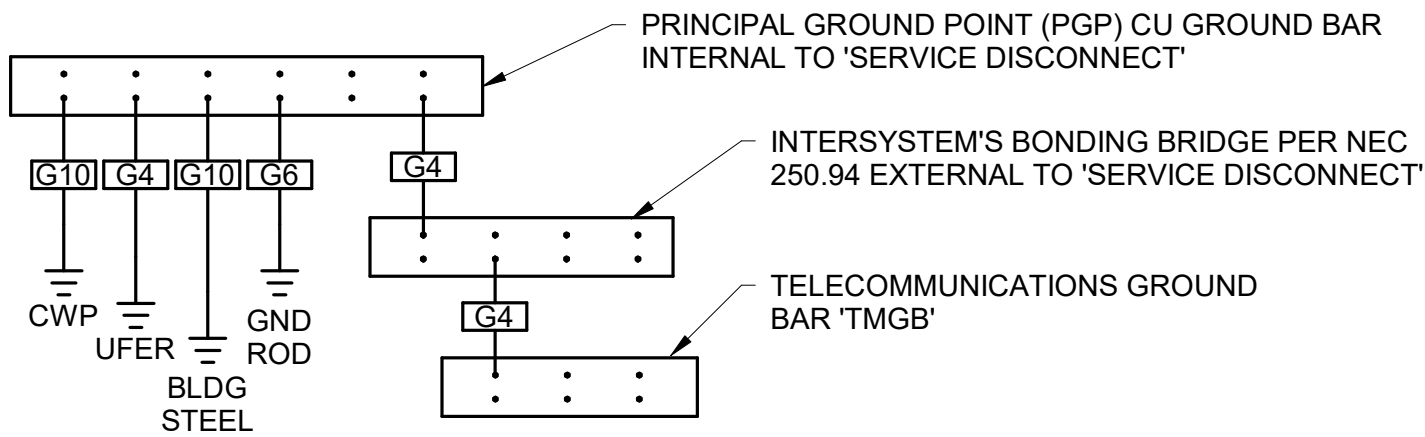
3. TRANSFORMER IMPEDANCES USED IN THE CALCULATIONS WERE TAKEN FROM EATON'S PUBLISHED IMPEDANCES FOR DOE 2016 DRY-TYPE TRANSFORMERS.

4. CONDUCTOR LENGTHS INDICATED IN THIS SCHEDULE ARE FOR THE PURPOSES OF FAULT CURRENT CALCULATIONS ONLY. THESE LENGTHS ASSUME WORST CASE SHORTEST DISTANCE CONDITIONS AND SHOULD NOT BE UTILIZED BY THE ELECTRICAL CONTRACTOR FOR BIDDING PURPOSES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ESTIMATING AND MEASURING ACTUAL FIELD CONDITION LENGTHS AS PART OF THE BID PROCESS.

GROUNDING ELECTRODE SYSTEMS NOTES	
1.	METAL UNDERGROUND WATER PIPE - MAKE CONNECTION TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10' OR AND ELECTRICALLY CONTINUOUS TO THE POINTS OF CONNECTION TO THE GROUNDING ELECTRODE CONDUCTOR AND BONDING CONDUCTORS. CONNECTION POINT TO BE AT A MAXIMUM OF 5' OF THE POINT OF ENTRANCE ON THE INTERIOR OF THE BUILDING.
2.	BUILDING STEEL - THE METAL FRAME OF THE BUILDING OR STRUCTURE, WHERE ANY OF THE FOLLOWING METHODS ARE USED TO MAKE AN EARTH CONNECTION: A. AT LEAST ONE STRUCTURAL METAL MEMBER THAT IS IN DIRECT CONTACT WITH THE EARTH FOR 10' OR MORE, WITH OR WITHOUT CONCRETE ENCASEMENT. B. HOLD-DOWN BOLTS SECURING THE STRUCTURAL STEEL COLUMN THAT ARE CONNECTED TO A CONCRETE ENCASED ELECTRODE THAT COMPLIES WITH 250.52(A)(3) AND IS LOCATED IN THE SUPPORT FOOTING OR FOUNDATION. THE HOLD-DOWN BOLTS SHALL BE CONNECTED TO THE CONCRETE-ENCASED ELECTRODE BY WELDING, EXOTHERMIC WELDING, THE USUAL STEEL TIE WIRES, OR OTHER APPROVED MEANS.
3.	UFER GROUND (CONCRETE-ENCASED ELECTRODE) - AN ELECTRODE ENCASED BY AT LEAST 2' OF CONCRETE, LOCATED WITHIN AND NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH EARTH, CONSISTING OF AT LEAST 20' OF ONE OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR RODS OF NOT LESS THAN 1/2" IN DIAMETER, OR CONSISTING OF AT LEAST 20' OF BARE COPPER CONDUCTOR NOT SMALLER THAN NO. 4 AWG. REINFORCING BARS SHALL BE PERMITTED TO BE BONDED TOGETHER BY THE USUAL STEEL TIE WIRES OR OTHER EFFECTIVE MEANS.
4.	GROUND ROD - ROD IS TO BE 8FT IN LENGTH AND SHALL BE MADE OF IRON OR STEEL AT LEAST 5/8" DIAMETER. INSTALLATION METHODS FOR GROUND ROD SHALL BE IN COMPLIANCE WITH THE NEC SUCH THAT AT LEAST 8' OF LENGTH IS IN CONTACT WITH THE EARTH.

2
E6.0

ELEC DISTRIBUTION GROUNDING ONE-LINE DIAGRAM & NOTES

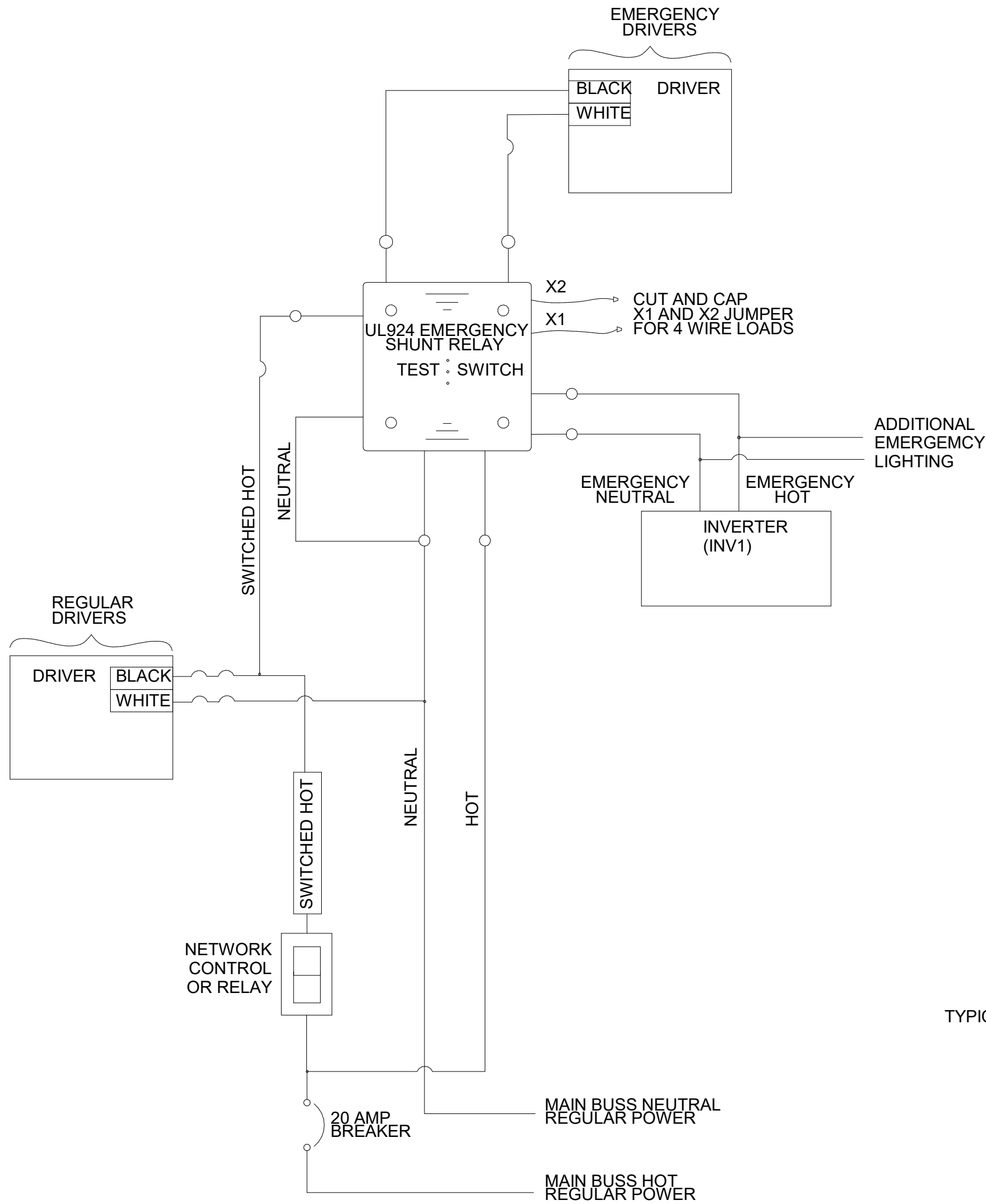


GENERAL GROUNDING NOTES	
1.	ALL CABLES TO BE TERMINATED ONTO BUS BAR WITH TWO HOLE COMPRESSION LUGS AND ATTACHED TO BUS BAR WITH TAB COMPRESSION BELLEVILLE WASHERS AND TORK BOLT ASSEMBLY.
2.	ALL GROUND CONNECTORS SHALL BE STRANDED.
3.	ALL BUS BARS SHALL BE ATTACHED TO SURFACE WITH NON-CONDUCTIVE STAND-OFFS.
4.	GROUND BUS BAR AND GROUNDING SYSTEM SHALL BE UL LISTED AND COMPLY WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.

DESIGNED: BYF, CJC 3/1/23 BYF, CJC TECH. REVIEW: KMD DATE: 02/27/2023	SUB SHEET NO.	TITLE OF SHEET ELECTRICAL ONE LINE DIAGRAM		DRAWING NO. 121 175143
		CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO		PMIS/PKG NO. 316223 SHEET 93 OF 104

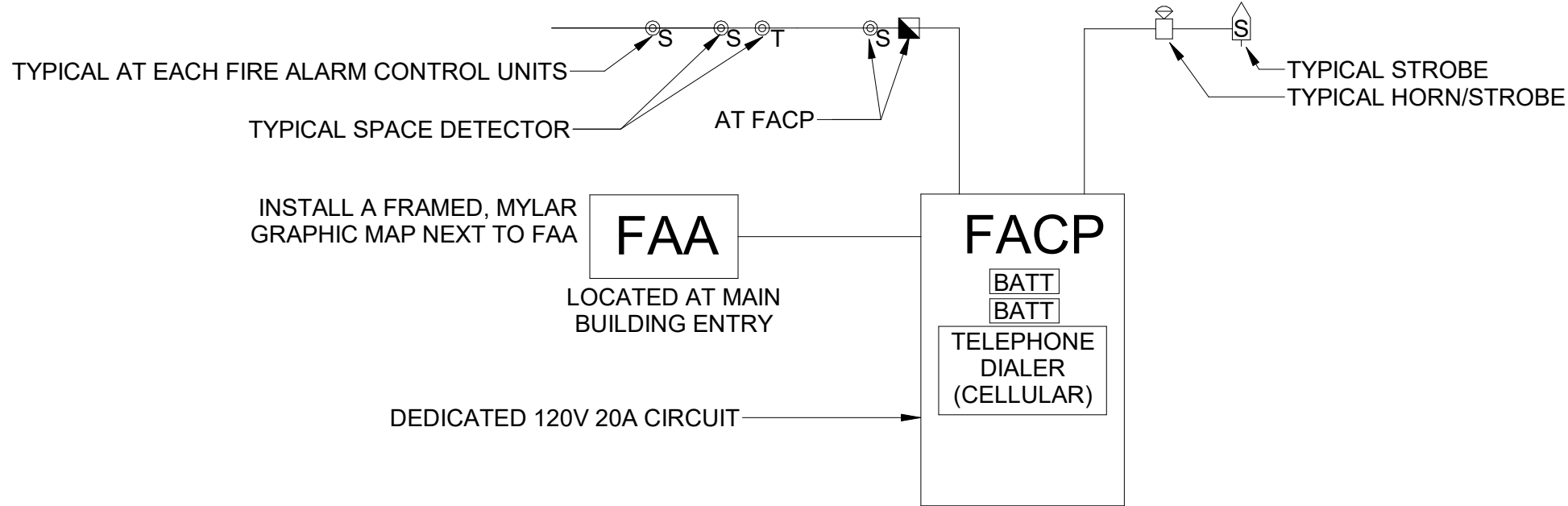
EMERGENCY CONTROL DEVICE DIAGRAM

1
E7.0



EMERGENCY LIGHTING CONTROL DEVICE GENERAL NOTES

1. USE WITH MANUFACTURER CONTROL TO DETERMINE THE SUITABILITY OF THE SPECIFIED CONTROL FOR SHUNT TRIP OPERATION.
2. EM SWITCHING DEVICE SHALL BE INSTALLED DOWNSTREAM OF THE EM LIGHTING INVERTER AND POWERED WITH THE SAME CIRCUIT AS THE ZONE IT IS CONTROLLING.
3. INVERTER DEVICE SHALL BE UL924 LISTED.



FIRE ALARM GENERAL NOTES:

1. THIS IS A FULLY ADDRESSABLE SYSTEM WITH EACH DEVICE HAVING A DISTINCT 'ADDRESS'.
2. PROVIDE NON-POWER LIMITING. PLENUM RATED WIRING. INSTALL IN EMT WHERE WIRING IS ROUTED THROUGH HAZARDOUS LOCATIONS, EXPOSED STRUCTURAL CEILINGS, INACCESSIBLE CEILINGS, AND BETWEEN AREAS SEPARATED BY MULTI-STORY ATRIUMS. ALL RACEWAY COMPONENTS SHALL BE PAINTED RED.
3. PROVIDE DUCT DETECTION FOR ALL AIR-HANDLING EQUIPMENT OPERATING WITH A RETURN CAPACITY EXCEEDING 2000CFM, SUPPLY CAPACITY EXCEEDING 15,000CFM WITH COMMON DUCT SERVING MULTIPLE FLOORS, AND ADDITION- ALLY AS REQUIRED BY LOCAL CODES.
4. PROVIDE 120V CIRCUIT AND LOW-VOLTAGE FIRE ALARM CONTROL CIRCUIT TO ALL SMOKE DAMPERS. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO BID.
5. COORDINATE ALL SEQUENCING OF OPERATIONS WITH NPS FIRE CODE OFFICIAL.
6. ALL DEVICES INSTALLED IN DAMP, WET OR EXTERIOR LOCATIONS SHALL BE FURNISHED WITH WP HOUSINGS. ALL DEVICES INSTALLED IN GYMNASIUMS SHALL BE FURNISHED WITH WIRE GUARD.
7. SYSTEM SHALL TRANSMIT REQUIRED FIRE ALARM SIGNALS TO CENTRAL MONITORING AGENCY (SELECTED BY NPS/CONTRACTING OFFICER) VIA DIALER PROVIDED IN FIRE ALARM CONTROL PANEL.
8. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID AN ADDITIONAL 10% SPARE STROBES AND HORN/STROBES, INCLUDING INSTALLATION, AS MAY BE REQUIRED BY AHJ.

2 E7.0 FIRE ALARM RISER

MECHANICAL EQUIPMENT SCHEDULE

KEY	EQUIPMENT DESCRIPTION	LOAD	ELECTRICAL	MOC/P/MFS	FEEDER	DISCONNECT	PANEL	CIRCUIT	NOTES
AHU 1	AIR HANDLING UNIT	890W	240 V/1-890 VA	15A	2#12, 1#12G, 3/4"C	30A2P	A	56,58	1
BRR 1	BASEBOARD HEATER	8.3 A	120 V/1-996 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	70	6
BRR 2	BASEBOARD HEATER	8.3 A	120 V/1-996 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	64	6
CP 1	CIRCULATION PUMP	1/12HP	120 V/1-120 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	61	
EF 2	EXHAUST FAN	0.29 A	120 V/1-35 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	74	3
EF 3	EXHAUST FAN	0.29 A	120 V/1-35 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	74	3
EF 5	EXHAUST FAN	0.29 A	120 V/1-35 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	68	3
EW H 1	ELECTRIC WATER HEATER	12.3 KW	240 V/1-12300 VA	70A	2#4, 1#8G, 1-1/4"C	100A2P	A	44,46	
F 1	INTAKE FAN	4 A	120 V/1-480 VA	15A	2#12, 1#12G, 3/4"C	\$TO	B	2	4
F 4	INTAKE FAN	10 A	120 V/1-1200 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	66	4
F 6	VENTILATION FAN	0.17 A	120 V/1-20 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	57	4
HK 1	AHU-1 HEAT KIT	5 KW	240 V/1-5000 VA	30A	2#10, 1#10G, 3/4"C	INTEGRAL TO UNIT	A	60,62	5
HP 1	UNIT HEATER	11 MCA	240 V/1-2640 VA	15A	2#12, 1#12G, 3/4"C	30A2P	A	56,58	
HT 1	HEAT TRACE	150 W	120 V/1-150 VA	20A	2#12, 1#12G, 3/4"C	\$TO	A	65	7
L 1	LOUVER DAMPER	1 A	120 V/1-120 VA	15A	2#12, 1#12G, 3/4"C	\$TO	B	4	2
L 2	LOUVER DAMPER	1 A	120 V/1-120 VA	15A	2#12, 1#12G, 3/4"C	\$TO	B	4	2
L 3	LOUVER DAMPER	1 A	120 V/1-120 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	67	2
L 4	LOUVER DAMPER	1 A	120 V/1-120 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	67	2
L 5	LOUVER DAMPER	1 A	120 V/1-120 VA	15A	2#12, 1#12G, 3/4"C	\$TO	A	1	2
UH 1	UNIT HEATER	4.0 KW	240 V/1-4000 VA	25A	2#10, 1#10G, 3/4"C	INTEGRAL TO UNIT	A	48,50	6
UH 2	UNIT HEATER	4.0 KW	240 V/1-4000 VA	25A	2#10, 1#10G, 3/4"C	INTEGRAL TO UNIT	A	52,54	6
UH 3	UNIT HEATER	1.5 KW	120 V/1-1500 VA	20A	2#12, 1#12G, 3/4"C	INTEGRAL TO UNIT	A	51	6
UH 4	UNIT HEATER	1.5 KW	120 V/1-1500 VA	20A	2#12, 1#12G, 3/4"C	INTEGRAL TO UNIT	A	53	6
UH 5	UNIT HEATER	0.5 KW	120 V/1-500 VA	15A	2#12, 1#12G, 3/4"C	INTEGRAL TO UNIT	A	72	6
UH 6	UNIT HEATER	1.5 KW	120 V/1-1500 VA	20A	2#12, 1#12G, 3/4"C	INTEGRAL TO UNIT	A	55	6
UH 7	UNIT HEATER	3 KW	240 V/1-3000 VA	20A	2#12, 1#12G, 3/4"C	INTEGRAL TO UNIT	A	69,71	6

MECHANICAL EQUIPMENT GENERAL NOTES

1. REFER TO MECHANICAL PLANS FOR SPECIFIC EQUIPMENT LOCATIONS AND REQUIREMENTS.
2. PRIOR TO ROUGH-IN, COORDINATE ALL MECHANICAL EQUIPMENT POWER AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR'S FINAL SHOP DRAWINGS.
3. PROVIDE ALL 120V CONTROL WIRING, REFER TO SPECIFICATIONS FOR FURTHER CONTROL WIRING CLARIFICATION.
4. EXTERIOR DISCONNECT SWITCHES ARE TO BE PROVIDED AS NEMA 3R EQUIPMENT UNLESS OTHERWISE NOTED.
5. PROVIDE WEATHERPROOF 120 VOLT GFCI RECEPTACLES WITHIN 25' OF ALL ROOFTOP HEATING, VENTILATING, AND AIR CONDITIONING EQUIPMENT. CIRCUIT TO SPARE CIRCUIT ON NEAREST 120V PANELBOARD OR AS INDICATED ON PLANS.
6. PROVIDE DUCT DETECTION ON ALL RETURN AIR SYSTEMS OF 2,000 CFM OR GREATER, AND FOR ALL SUPPLY AIR SYSTEMS 15,000 CFM OR GREATER, INCLUDING THOSE SYSTEMS SERVING MULTIPLE FLOORS. PROVIDE ADDITIONAL DUCT DETECTORS AND INSTALL REMOTE INDICATOR LIGHTS AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.

MECHANICAL EQUIPMENT SPECIFIC NOTES

1. POWERED BY HP-1.
2. PROVIDE POWER CONNECTION TO LOUVER DAMPER CONTROL TRANSFORMER. ALSO PROVIDE BACKBOX AND CONDUIT TO WALL SWITCH CONTROL. LOCATED PER MECHANICAL DRAWINGS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR EXACT REQUIREMENTS.
3. INTERLOCK CONTROLS WITH LOCAL LIGHTING CONTROLS.
4. PROVIDE WALL SWITCH FOR FAN CONTROL. POWER REQUIREMENTS TO SWITCH PER MECHANICAL SCHEDULE.
5. INTEGRAL HEAT KIT TO UNIT REQUIRES SEPARATE POWER FROM AHU UNIT. POWER SHALL BE ROUTED THROUGH INDOOR CONTROL BOARD.
6. CIRCUIT SHALL PASS THROUGH LINE VOLTAGE THERMOSTAT FOR CONTROL OF UNIT HEATER. COORDINATE EXACT LOCATION AND REQUIRMENTS WITH MECHANICAL CONTRACTOR.
7. HEAT TRACE FOR WASTE PIPING TO TRENCH DRAIN. REFER TO NOTES ON PLUMBING SANITARY PLANS FOR ADDITIONAL INFORMATION.



DESIGNED:
BYF, CJC
02/27/2023
TECH. REVIEW:
KMD
DATE:
02/27/2023

SUB SHEET NO.

E7.0

TITLE OF SHEET
ELECTRICAL
SCHEDULES

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143

PMIS/PKG NO.

316223

SHEET
94 OF 104

PANEL: A															
LOCATION: MECHANICAL 136 SUPPLY FROM: MDP MOUNTING: SURFACE ENCLOSURE: TYPE 1						VOLTS: 120/240 Single PHASES: 1 WIRES: 3				A.I.C. RATING: FULLY RATED TO AT LEAST 42K AIC MAINS TYPE: M.L.O. MAINS RATING: 400 A MCB RATING: N/A					
Notes: TWO-SECTION PANEL															
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	M	LOUVER DAMPER L5	20	1		120	1127				2	20	SEPTIC CONTROL PANEL	E	2
3	R	RECPT MECHANICAL 136 DEDICATED...	20	1				360	0		--	--	--	--	4
5	R	RECPT MECHANICAL 136 DEDICATED...	20	1		360	500			GFCI	2	30	RECPT TRAIL STOR 134 POWER TOOLS	E	6
7	R	RECPT MECHANICAL 136	20	1				360	500		--	--	--	--	8
9	R	RECPT AC TRAIL STORAGE 134	20	1		360	500			GFCI	2	30	RECEPT TRAIL STOR 134 POWER TOOLS	E	10
11	R	RECPT AC TRAIL STORAGE 134	20	1				360	500		--	--	--	--	12
13	R	RECPT AC TRAIL STORAGE 134	20	1		360	180				1	20	RECPT TRAIL STOR POWER TOOL	R	14
15	R	RECPT AC TRAIL STORAGE 134	20	1				180	0		1	20	SPARE	--	16
17	R	RECPT TRAIL STORAGE 134	20	1		180	2000			GFCI	2	30	DRYER LAUNDRY	E	18
19	R	RECPT TRAIL STORAGE 134	20	1				720	2000		--	--	--	--	20
21	R	RECPT POWER TOOL	20	1		180	1260				1	20	RECPT WORKSPACE 130	R	22
23	R	RECPT BREAKROOM	20	1				180	900		1	20	RECPT OFFICE 150	R	24
25	R	RECPT TRAIL STORAGE 152	20	1		540	540				1	20	RECPT RESTROOM	R	26
27	R	RECPT EXTERIOR WEST	20	1				180	1500	GFCI	1	20	WASHING MACHINE LAUNDRY	E	28
29	R	RECPT EXTERIOR SOUTH	20	1		540	900			GFCI	1	20	REFRIGERATOR BREAK ROOM	KE	30
31	R	RECPT BARN 161	20	1				180	180		1	20	RECPT TRAIL STOR POWER TOOL	R	32
33	R	RECPT BARN 161	20	1		180	540				1	20	RECPT BREAKROOM/LAUNDRY	R	34
35	R	RECPT BARN 161	20	1				180	1200		1	20	MICROWAVE BREAK ROOM	KE	36
37	R	RECPT BARN 161	20	1		180	180				1	20	RECPT BREAKROOM/TRAIL STORAGE	R	38
39	L	LTG OFFICES, STORAGE, TACK	20	1				1551	720		1	20	RECPT TACKROOM 135	R	40
41	L	LTG BARN, EXTERIOR	20	1		1456	540				1	20	RECPT BARN 161 STALL	R	42
43	E	FACP	20	1	HC-ON			500	6150		2	70	EW-H-1	E	44
45	E	RP-1	20	1		500	6150				--	--	--	--	46
47	R	RECPT EXTERIOR NORTH	20	1				360	2000		2	25	UH-1	E	48
49	R	RECPT EXTERIOR EAST	20	1		360	2000				--	--	--	--	50
51	E	UH-3	20	1				1500	2000		2	25	UH-2	E	52
53	E	UH-4	20	1		1500	2000				--	--	--	--	54
55	E	UH-6	20	1				1500	1765		2	15	HP1	E	56
57	M	FAN, F-6	20	1		20	1765				--	--	--	--	58
59	--	SPARE	20	1				0	2500		2	30	HK-1 (AHU-1 HEAT KIT)	E	60
61	M	CP-1	20	1		120	2500				--	--	--	--	62
63	E	EW-C-1	20	1	GFCI			500	996		1	15	BRR-2	E	64
65	E	HT-1 (HEAT TAPE)	20	1	GFEP	150	1200				1	15	FAN, F-4	M	66
67	M	LOUVER DAMPER L3, L4	20	1				240	35		1	15	EF-5	E	68
69	E	UH-7	20	2		1500	996				1	15	BRR-1	E	70
71	--	--	--	--				1500	500		1	15	UH-5	E	72
73	--	SPARE	20	1		0	70				1	15	EF-2, EF-3	M	74
75	--	SPARE	20	1				0	0		1	20	SPARE	--	76
77	--	SPARE	20	1		0	0				1	20	SPARE	--	78
79	--	SPARE	20	1				0	0		1	20	SPARE	--	80
81	--	SPARE	20	1		0	0				1	20	SPARE	--	82
83	--	SPARE	20	1				0	0		1	20	SPARE	--	84
85	--	SPARE	20	1		0	0				1	20	SPARE	--	86
87	--	SPARE	20	1				0	0		1	20	SPARE	--	88
89	--	SPARE	20	1		0	0				1	20	SPARE	--	90
91	--	SPARE	20	1				0	0		1	20	SPARE	--	92
93	--	SPARE	20	1		0	0				1	20	SPARE	--	94
95	--	SPARE	20	1				0	0		1	20	SPARE	--	96
97	--	SPARE	20	1		0	0				1	20	SPARE	--	98
99	--	SPARE	20	1				0	0		1	20	SPARE	--	100
101	--	SPARE	20	1		0	0				1	20	SPARE	--	102
103	--	SPARE	20	1				0	0		1	20	SPARE	--	104
105	--	BUSSED SPACE	--	1		--	--				1	--	BUSSED SPACE	--	106
107	--	BUSSED SPACE	--	1				--	--		1	--	BUSSED SPACE	--	108
109	--	BUSSED SPACE	--	1		--	--				1	--	BUSSED SPACE	--	110
111	--	BUSSED SPACE	--	1				--	--		1	--	BUSSED SPACE	--	112
113	--	BUSSED SPACE	--	1		--	--				1	--	BUSSED SPACE	--	114
115	--	BUSSED SPACE	--	1				--	--		1	--	BUSSED SPACE	--	116
117	--	BUSSED SPACE	--	1		--	--				1	--	BUSSED SPACE	--	118
119	--	BUSSED SPACE	--	1				--	--		1	--	BUSSED SPACE	--	120
Total Load:						33554 VA		33797 VA							
Total Amps:						280 A		282 A							
CB TYPE LEGEND											CIRCUIT PHASE CODE LEGEND				
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER						HC-(ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF...					N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.				
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT						HT#: HANDLE TIE WITH GROUPING #					N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.				
AFCI: ARC FAULT CIRCUIT INTERRUPTER						ST: SHUNT TRIP					N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER				
CAFCl: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER						LOCK: PERMANENTLY LOCKABLE BREAKER					AND AIC RATING TO MATCH EXISTING.				
LOAD TYPE:			LOAD			DEMAND LOAD			PANEL TOTALS						
LIGHTING:			3007 VA			3759 VA									
RECEPTACLE:			11340 VA			10670 VA			TOTAL CONN. LOAD:				67351 VA		
MOTOR:			1770 VA			2070 VA			TOTAL EST. LOAD:				67733 VA		
EQUIPMENT:			49134 VA			49134 VA			TOTAL CONN.::				281 A		
KITCH EQUIP:			2100 VA			2100 VA			TOTAL EST. DEMAND:				282 A		
CONTINUOUS:															
EXISTING:															
NOTES:															
1. BUSSING SIZE TO BE INCREASED TO ACCOUNT FOR FUTURE PV SYSTEM															

PANEL: MDP																
LOCATION: MECHANICAL 136 SUPPLY FROM: UTILITY XFMR MOUNTING: SURFACE ENCLOSURE: NEMA-3R						VOLTS: 120/240 Single PHASES: 1 WIRES: 3				A.I.C. RATING: FULLY RATED TO AT LEAST 42K AIC MAINS TYPE: MCB MAINS RATING: 600 A MCB RATING: 400 A						
Notes:																
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT	
1	L; E; KE...	PANEL 'A'	400	2		33554	--				1	--	BUSSED SPACE	--	2	
3	--	--	--	--				33797	--		1	--	BUSSED SPACE	--	4	
5	L; E;...	PANEL 'B'	60	2		660	--				1	--	BUSSED SPACE	--	6	
7	--	--	--	--				801	--		1	--	BUSSED SPACE	--	8	
9	--	BUSSED SPACE	--	1		--	--				1	--	BUSSED SPACE	--	10	
11	--	BUSSED SPACE	--	1				--	--		1	--	BUSSED SPACE	--	12	
13	--	BUSSED SPACE	--	1		--	--				1	--	BUSSED SPACE	--	14	
15	--	BUSSED SPACE	--	1				--	--		1	--	BUSSED SPACE	--	16	
17	--	BUSSED SPACE	--	1		--	--				1	--	BUSSED SPACE	--	18	
19	--	BUSSED SPACE	--	1				--	--		1	--	BUSSED SPACE	--	20	
21	--	SPD	60	2		0	0				2	150	PV COMBINER (FUTURE)	Other	22	
23	--	--	--	--				0	0		--	--	--	--	24	
Total Load:						34214 VA		34598 VA								
Total Amps:						285 A		288 A								
CB TYPE LEGEND											CIRCUIT PHASE CODE LEGEND					
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER						HC (ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF... HT#: HANDLE TIE WITH GROUPING # ST: SHUNT TRIP LOCK: PERMANENTLY LOCKABLE BREAKER					N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.					
GFP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT											N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.					
AFCI: ARC FAULT CIRCUIT INTERRUPTER											N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.					
CAFCl: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER																
LOAD TYPE:			LOAD			DEMAND LOAD			PANEL TOTALS							
LIGHTING:			3568 VA			4460 VA										
RECEPTACLE:			11520 VA			10760 VA			TOTAL CONN. LOAD: 68812 VA							
MOTOR:			2010 VA			2310 VA			TOTAL EST. LOAD: 69244 VA							
EQUIPMENT:			49614 VA			49614 VA			TOTAL CONN.: 287 A							
KITCH EQUIP:			2100 VA			2100 VA			TOTAL EST. DEMAND: 289 A							
CONTINUOUS:																
EXISTING:																
NOTES:																

LIGHTING FIXTURE SCHEDULE														
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMP QUAN.	LAMP WATTAGE	LAMP / CCT / CRI	MAX WATTAGE	LUMEN OUTPUT	DIMMING / MIN LEVEL	FIXTURE FINISH	LOCATION	BOF/RFD/OFH	NOTES
D1	6" LED DOWNLIGHT	LITHONIA	LDN6-30/25-LO6-AR-LSS-MVOLT-B AA (OR APPROVED EQUAL)	120 V	1	28 W	LED/3000K/80	28 VA	2504	0-10V	SEMI-SPECULAR	CEILING RECESSED	11'-6" BOF	
D1EM	6" LED DOWNLIGHT WITH EMERGENCY BATTERY	LITHONIA	LDN6-30/25-LO6-AR-LSS-MVOLT-B AA-EL (OR APPROVED EQUAL)	120 V	1	28 W	LED/3000K/80	28 VA	2504	0-10V	SEMI-SPECULAR	CEILING RECESSED	11'-6" BOF	
L1	4' LINEAR LED FIXTURE	MARK	S4LS-MSL4-80CRI-30K-1000LMF-M VOLT (OR APPROVED EQUAL)	120 V	1	37 W	LED/3000K/80	37 VA	4103	SWITCHING	WHITE	CEILING SURFACE	11'-6" BOF	
L1EM	4' LINEAR LED FIXTURE WITH EMERGENCY BATTERY	MARK	S4LS-MSL4-80CRI-30K-1000LMF-M VOLT-E10WLCP (OR APPROVED EQUAL)	120 V	1	37 W	LED/3000K/80	37 VA	4103	SWITCHING	WHITE	CEILING SURFACE	11'-6" BOF	
L2	8' LINEAR LED FIXTURE	MARK	S4LS-MSL8-80CRI-30K-1000LMF-M VOLT (OR APPROVED EQUAL)	120 V	1	74 W	LED/3000K/80	74 VA	8206	SWITCHING	WHITE	CEILING SURFACE	11'-6" BOF	
L2EM	8' LINEAR LED FIXTURE WITH EMERGENCY BATTERY	MARK	S4LS-MSL8-80CRI-30K-1000LMF-M VOLT-E10WLCP (OR APPROVED EQUAL)	120 V	1	74 W	LED/3000K/80	74 VA	8206	SWITCHING	WHITE	CEILING SURFACE	11'-6" BOF	
L3	8' LINEAR LED FIXTURE, DUST PROOF	LITHONIA	CSV-T-L96-8000LM-MVOLT-35K-80C RI (OR APPROVED EQUAL)	120 V	1	68 W	LED/3500K/80	68 VA	8130	SWITCHING	WHITE	CEILING SURFACE	17'-5" BOF	
L3EM	8' LINEAR LED FIXTURE, DUST PROOF, WITH EMERGENCY BATTERY	LITHONIA	CSV-T-L96-8000LM-MVOLT-35K-80C RI-IE7WCP (OR APPROVED EQUAL)	120 V	1	68 W	LED/3500K/80	68 VA	8130	SWITCHING	WHITE	CEILING SURFACE	17'-5" BOF	
P1	LED RLM FIXTURE	BASELITE	FD16-75-ST18-LSLC-75-50W-3K-LD M120	120 V	1	50 W	LED/3000K/80	50 VA	4900	SWITCHING	DISTRESSED RED	CEILING SUSPENDED	12'-0" BOF	1
P1EM	LED RLM FIXTURE WITH EMERGENCY BACKUP VIA INVERTER	BASELITE	FD16-75-ST18-LSLC-75-50W-3K-LD M120	120 V	1	50 W	LED/3000K/80	50 VA	4900	SWITCHING	DISTRESSED RED	CEILING SUSPENDED	12'-0" BOF	1
P2	LED RLM FIXTURE WITH POLYCARBONATE LENS	BASELITE	FD16-75-ST18-LSLC-75-50W-3K-LD M120-CRL16	120 V	1	50 W	LED/3000K/80	50 VA	4900	SWITCHING	DISTRESSED RED	CEILING SUSPENDED	12'-0" BOF	1
P3EM	LED RLM FIXTURE WITH EMERGENCY BACKUP VIA INVERTER RE:#1/7.0	BASELITE	FD16-75-ST18-LSLC-75-80W-3K-LD M120	120 V	1	80 W	LED/3000K/80	80 VA	8000	SWITCHING	DISTRESSED RED	CEILING SUSPENDED	21'-6" BOF	1
W1	2' LED VANITY FIXTURE	COOPER	605-25-W-L3/835-UNV-MW	120 V	1	20 W	LED/3500K/80	20 VA	2000	SWITCHING	WHITE	SURFACE WALL	7'-0" BOF	
X1	EXIT SIGN EM BATTERY BACKUP	LITHONIA	LQM-S-W-3-R-120/277-EL-N-SD	120 V	1	1 W	LED / GREEN	1 VA		NONE	WHITE WITH GREEN LETTERS	SURFACE WALL		
EW1	EXTERIOR LED FORWARD THROW FULL CUTOFF, DARK SKY COMPLIANT	LITHONIA	WDGE3-LED-P3-27K-80CRI-RFT-M VOLT-SRM-DDBXD-MEZ180087	120 V	1	71 W	LED/2700K/80	71 VA	9334	N/A	BRONZE	WALL SURFACE	17'-0" BOF	2
EW2	EXTERIOR LED WIDE THROW FULL CUTOFF FIXTURE, DARK SKY COMPLIANT	LITHONIA	WDGE2-LED-P3-27K-80CRI-T3M-M VOLT-SRM-DDBXD	120 V	1	32 W	LED/2700K/80	32 VA	2908	SWITCHING	BRONZE	WALL SURFACE	9'-1" BOF AT BARN, 7'-6" BOF AT HAY STORAGE	
EW2EM	EXTERIOR LED TYPE III THROW, WITH EMERGENCY BATTERY, FULL CUTOFF FIXTURE, DARK SKY COMPLIANT	LITHONIA	WDGE2-LED-P3-27K-80CRI-T3M-M VOLT-SRM-E20WC-DDBXD	120 V	1	32 W	LED/2700K/80	32 VA	3063	SWITCHING	BRONZE	WALL SURFACE	9'-1" BOF AT BARN, 7'-6" BOF AT HAY STORAGE	
EW3	EXTERIOR LED WIDE THROW FULL CUTOFF FIXTURE, DARK SKY COMPLIANT	BASELITE	TAC14-75-B1-LWTM-41-27K-LED25 W-LDM0-10V0	120 V	1	25 W	LED/2700K/80	25 VA	1900	SWITCHING	BRONZE	WALL SURFACE	9'-1" BOF AT BARN UON, 7'-6" BOF AT HAY STORAGE	
EW3EM	EXTERIOR LED WIDE THROW FULL CUTOFF FIXTURE WITH EMERGENCY BACKUP VIA INVERTER, DARK SKY COMPLIANT	BASELITE	TAC14-75-B1-LWTM-41-27K-LED25 W-LDM0-10V0	120 V	1	25 W	LED/2700K/80	25 VA	1900	SWITCHING	BRONZE	WALL SURFACE	9'-1" BOF	
EW4EM	EXTERIOR LED WIDE THROW FULL CUTOFF FIXTURE, DARK SKY COMPLIANT	LITHONIA	WDGE2-LED-P5-27K-80CRI-VW-MV OLT-E20WC-DDBXD	120 V	1	71 W	LED/2700K/80	71 VA	9250	SWITCHING	BRONZE	WALL SURFACE	17'-0" BOF	

LIGHTING FIXTURE GENERAL NOTES	
1.	BOF = BOTTOM OF FIXTURE HEIGHT, RFD = RECESSED FIXTURE DEPTH, OFH = OVERALL FIXTURE HEIGHT
2.	ALL LED LAMPS TO BE 3000K COLOR TEMPERATURE AND A MINIMUM OF 90CRI, UON.
3.	ALL REFLECTOR LAMPS TO BE PROVIDED AS WIDE FLOOD DISTRIBUTION, UON.
4.	LUMENS LISTED ARE DELIVERED LUMENS, NOT INITIAL.
5.	FOR ALL SPECIFIED LUMINAIRES, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MOUNTING HARDWARE, ACCESSORIES, COMPONENTS, LEADER/JUMPER CABLES, WIRE FEED, CONNECTORS, END CAPS, REMOTE POWER SUPPLIES, AND ANY OTHER NECESSARY COMPONENT AS REQUIRED FOR INSTALLING A SECURE AND FULLY FUNCTIONAL SYSTEM.
6.	THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHT FIXTURES TO ENSURE COMPATIBILITY WITH SPECIFIED FIXTURES. NOTIFY SPECIFIER OF ANY DISCREPANCIES.
7.	ALL FINISH SELECTIONS SHALL BE VERIFIED BE CONTRACTING OFFICER AS PART OF THE SUBMITTAL PROCESS. UNLESS OTHERWISE NOTED, EC SHALL ASSUME STANDARD LUMINAIRE FINISH OPTION FOR PRICING.
8.	ALL MOUNTING HEIGHTS SHALL BE VERIFIED WITH ARCHITECTURAL ELEVATIONS PRIOR TO ANY ROUGH-IN.
9.	ALL EXTERIOR FIXTURES SHALL BE DARK SKY COMPLIANT.
LIGHTING FIXTURE SPECIFIC NOTES	
1.	VERIFY STEM LENGTH WITH FIXTURE MOUNTING HEIGHT PRIOR TO ORDER.
2.	FIXTURE REQUIRES A SPECIAL FACTORY MODIFICATION TO ACHIEVE 2700K. COORDINATE EXACT REQUIREMENTS WITH MANUFACTURER/DISTRIBUTOR DURING SUBMITTAL PROCESS.



DESIGNED:
BYF, CJC
BYF, CJC
TECH. REVIEW:
KMD
DATE:
02/27/2023

SUB SHEET NO.

E8.0

TITLE OF SHEET
ELECTRICAL LIGHTING
SCHEDULES

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
96 OF 104

2/24/2023 10:11:45 AM
BIM_360/2021-51 ROMO Barn & Tack/5504.00 - NPS ROMO CRD Barn - Elec Central.rvt

LIGHTING CONTROL NOTES			
GENERAL CONTROL NOTES		N4	LIGHTING CONTROL SYSTEM SHALL BE DIGITAL AND CONSIST OF A MASTER LIGHTING CONTROL PANEL. REFER TO RELAY PANEL SCHEDULE FOR DIMMING REQUIREMENTS.
G1	THE LIGHTING CONTROL SYSTEM CONSISTS OF THE FOLLOWING: a. STAND-ALONE CONTROLS b. NETWORKED RELAY BASED LIGHTING CONTROL PANEL SYSTEM	N5	RELAY PANELS SHALL BE PRE-WIRED, PRE-ASSEMBLED, PRE-PROGRAMMED AND LISTED TO UL916 OR UL924 WHEN USED WITH CENTRAL INVERTER (DEPENDING ON NORMAL OR EMERGENCY OPERATION), PANELS SHALL BE PROVIDED WITH DUAL VOLTAGE POWER SUPPLY AND 16 GAGE BARRIERS TO SEPARATE HIGHER AND LOWER VOLTAGES, NORMAL AND EMERGENCY POWER.
G2	ALTERNATE MANUFACTURER'S WILL BE REVIEWED ACCORDING TO THE NOTES PROVIDED IN THE LIGHTING FIXTURE SCHEDULE.	N6	ELECTRICAL CONTRACTOR SHALL COORDINATE PRE-PROGRAMMING SCHEDULE OF OPERATIONS WITH CONTRACTING OFFICER PRIOR TO PREPARING SUBMITTALS.
G3	ALL WIRING DIAGRAMS WITHIN THESE DRAWINGS ARE PROVIDED TO COMMUNICATE THE DESIGN INTENT. SYSTEM SHALL BE WIRED ACCORDING TO THE APPROVED SHOP DRAWINGS.	N7	STANDARD RELAYS SHALL HAVE A NORMALLY CLOSED (NC) CONTACT RATED FOR 120/277V, 20A. STANDARD RELAYS SHALL BE ZERO-CROSS TYPE, NO EXCEPTIONS.
G4	ALL STRUCTURED CABLE WIRING SHOWN ON RISER DIAGRAMS IS INTENDED TO BE BY CONTROL MANUFACTURER APPROVED STANDARD STRUCTURED CABLING, UNLESS OTHERWISE NOTED. EC SHALL PROVIDE ALL CABLING WITHIN THE LIGHTING CONTROL SYSTEM, CABLING BETWEEN THE NETWORKED HEAD-END AND THE BUILDINGS COMMUNICATION NETWORK SHALL BE PROVIDED BY THE LOW VOLTAGE CONTRACTOR.	N8	ALL INCANDESCENT LIGHTING RELAYS SHALL BE CONTROLLED BY A NC/SOFTSTART RELAY.
G5	ALL MANUALLY DIMMED LIGHT LOADS SHALL BE CAPABLE OF DIMMING LIGHTS TO OFF SETTING. DIMMING COMPATIBILITY BETWEEN THE CONTROLS AND LIGHT FIXTURES SHALL BE COORDINATED BY THE EC TO ENSURE THAT LIGHTING IS ABLE TO DIM TO LEVEL NOTED ON LIGHTING FIXTURE SCHEDULE.	N9	RELAY PANEL ELECTRONICS SHALL PROVIDE CURRENT VISUAL STATUS AND CONTROL OF EACH RELAY OR ZONE. ALL SYSTEM CONTROL ELECTRONICS SHALL STORE PROGRAMMING IN A NON-VOLATILE MEMORY AND PROVIDE 10 YEAR BATTERY BACKUP FOR TIME OF DAY.
G6	LIGHTING CONTROL SYSTEM SHALL INCLUDE A MINIMUM OF (4) HOURS OF MANUFACTURER'S REPRESENTATIVE TIME ON SITE FOR SYSTEM CHECK-OUT AND NPS TRAINING. ELECTRICAL CONTRACTOR SHALL VIDEO RECORD TRAINING SESSION AND PROVIDE COPY OF VIDEO TO CONTRACTING OFFICER AS PART OF PROJECT COMPLETION SUBMITTALS.	N10	LIGHTING CONTROL PANELS SHALL BE CONTROLLED BY A 32-CHANNEL DIGITAL TIMECLOCK (DTC) THAT CONTROLS AND PROGRAMS THE ENTIRE LIGHTING CONTROL SYSTEM. THE DTC SHALL SUPPLY ALL TIME FUNCTIONS AND ACCEPT OTHER INPUTS. THE DTC SHALL ACCEPT CONTROL LOCALLY USING BUILT IN BUTTON PROMPTS AND USE OF AN 8 LINE 21 LETTER DISPLY FORM A COMPUTER/MODEM/ETHERNET/INTERNET. ALL COMMANDS SHALL BE IN ENGLISH.
G7	ALL DIGITAL SWITCHES FOR OVERRIDE CONTROL OF LIGHTING CONTROL SYSTEM(S) SHALL HAVE A MAXIMUM SETTING OF 2 HOURS PER IECC REQUIREMENTS.	N11	NETWORKED LIGHTING SWITCH INPUT LOCATIONS SHALL BE CAPABLE OF REMOTE PROGRAMMING.
G8	FINAL OCCUPANCY AND DAYLIGHT SENSOR LOCATION SHALL BE PROVIDED BY MANUFACTURER AND LOCATED PER APPROVED SHOP DRAWINGS AND DEVICE REQUIREMENTS. LOCATIONS INDICATED IN THESE DRAWINGS SHALL BE REVIEWED AND ALTERED AS NECESSARY FOR CORRECT OPERATION BY MANUFACTURER. IF OPERATIONS OF SENSORS DOES NOT MEET THE INTENT OUTLINED IN THESE DOCUMENTS THE MANUFACTURER REPRESENTATIVE SHALL PROVIDE FIELD RECTIFICATION SERVICES AS NECESSARY IN ORDER TO RECONFIGURE SYSTEM TO MEET OUTINED INTENT.	N12	STANDARD LIGHTING CONTROL SYSTEM SOFTWARE, PRE-INSTALLED INTO THE DTC, SHALL CONSIST OF AND USE STANDARD GRAPHICAL MANAGEMENT SOFTWARE PAGES.
G9	OCCUPANCY SENSORS SHALL BE COORDINATED SUCH THAT THE MOUNTING IS NOT WITHIN 6' OF AIR RETURN SYSTEMS.	N13	LIGHTING CONTROL SYSTEM INTERFACES TO INCLUDE A DRY CONTACT INPUT INTERFACE, BMS INTERFACE AND ETHERNET/INTERNET INTERFACE. EC SHALL COORDINATE THE OPERATION AND INSTALLATION OF LOW VOLTAGE CONNECTIONS BETWEEN LIGHTING CONTROL SYSTEM AND ANY ADDITIONAL ETHERNET BASED INTERFACES WITH LOW VOLTAGE CONTRACTOR/CONTRACTING OFFICER.
G10	PHOTOCELL SENSORS SHALL BE COORDINATED SUCH THAT THE DEVICE(S) ARE NOT WITHIN PROXIMATY TO INDIRECT LIGHTING OR WHERE SUBJECT TO VEILING REFLECTIONS FROM GLASS OR WATER SURFACES.		
G11	WHERE APPLICABLE, WALLSTATIONS WITH MORE THAN ONE GANG SHALL BE CONGREGATED TOGETHER UNDER A SINGLE FACEPLATE, UON.		
STANDALONE LIGHTING CONTROL GENERAL NOTES			
S1	APPROVED STANDALONE LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. LEVITON b. nLIGHT/SENSORSWITCH c. LUTRON d. GREENGATE e. WATTSTOPPER f. DOUGLAS		
ROOM CONTROLLER GENERAL NOTES			
R1	APPROVED ROOM CONTROLLER LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. CRESTRON b. nLIGHT c. LUTRON d. GREENGATE e. WATTSTOPPER f. DOUGLAS		
R2	REFER TO ELECTRICAL LIGHTING LAYOUTS FOR LAYOUT OF DEVICES CONNECTED TO ROOM CONTROLLERS. ROOM CONTROLLER COMPONENTS ARE INDICATED IN THE "LIGHTING CONTROL DEVICE" SCHEDULE, THESE COMPONENTS START WITH THE DESIGNATION 'R'.		
R3	ROOM CONTROLLER HEAD END EQUIPMENT LOCATIONS ARE INDICATED IN SPACES, HOWEVER DRAWINGS ARE DIAGRAMMATIC AND EXACT QUANTITY OF ROOM CONTROLLER HEAD END EQUIPMENT PIECES VARIES FROM MANUFACTURER TO MANUFACTURER BASED ON DIMMING UTILIZATION, QUANTITY OF RELAYS, NUMBER OF INPUT DEVICES, QUANTITY OUTPUT ZONES AND RECEPTACLE CONTROL.		
NETWORKED RELAY BASED LIGHTING CONTROL PANEL SYSTEM			
N1	APPROVED NETWORKED RELAY BASED LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. CRESTRON b. nLIGHT c. LUTRON e. WATTSTOPPER f. DOUGLAS		
N2	REFER TO ELECTRICAL LIGHTING LAYOUTS FOR LAYOUT OF DEVICES CONNECTED TO DISTRIBUTED LIGHTING CONTROL SYSTEM. DISTRIBUTED COMPONENTS ARE INDICATED IN THE "LIGHTING CONTROL DEVICE" SCHEDULE, THESE COMPONENTS START WITH THE DESIGNATION 'N'.		
N3	RELAY BASED CONTROL PANELS SHALL BE PROVIDED BASED ON THE QUANTITY OF RELAYS INDICATED IN THE SYSTEM RISER DIAGRAM. COMPONENTS PROVIDED SHALL BE CAPABLE OF PROVIDING FUNCTIONALITY IN ACCORDANCE WITH 'SEQUENCE OF OPERATIONS' SCHEDULE.		

LIGHTING CONTROLS NAMING CONVENTION	
SYSTEM TYPE	N = NETWORKED R = ROOM CONTROLLER (THE ABSENCE OF LETTERS ABOVE UNDER 'SYSTEM TYPE' INDICATE A STANDALONE SYSTEM)
AUTOMATIC MEANS OF SHUTOFF	L = LIGHT LEVEL (VIA PHOTOCELL) M = MANUAL O = OCCUPANCY T = TIMECLOCK V = VACANCY
DEVICES	C = CONTROLLED RECEPTACLE D = DIMMER E = EXTERIOR P = PHOTOCELL S = SENSOR U = UNIQUE DEVICE TYPE W = SWITCH MOUNTED DEVICE
NUMBERING	1,2,3... = QUANTITY AS REQUIRED FOR DIFFERENT PROGRAMMING SCENARIOS, DEVICE CHARACTERISTICS OR MOUNTING CONDITIONS

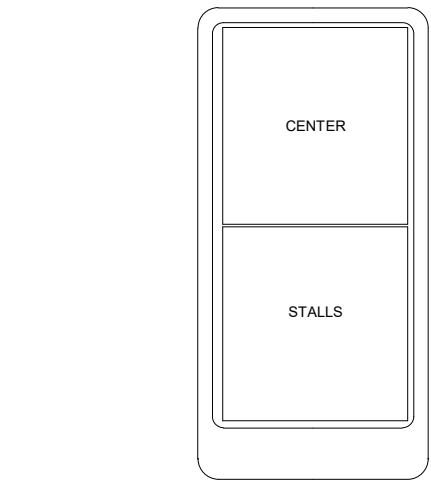
LIGHTING CONTROL DEVICES			
TYPE	DESCRIPTION	NOTES	DETAILS
NETWORKED COMPONENTS			
NPS1	NETWORKED, CEILING MOUNTED, CLOSED LOOP PHOTOCELL/ DAYLIGHT SENSOR IN PRIMARY DAYLIGHT ZONE	SENSOR SHALL NOT BE LOCATED IN CLOSE PROXIMITY TO INDIRECT LIGHTING OR WHERE SUBJECT TO VEILING REFLECTANCES FROM GLASS OR WATER SURFACES. SEE SEQUENCE OF OPERATION FOR PROGRAMMED LIGHTING LEVEL.	
NPS2	NETWORKED, CEILING MOUNTED, CLOSED LOOP PHOTOCELL/ DAYLIGHT SENSOR IN SECONDARY DAYLIGHT ZONE	SENSOR SHALL NOT BE LOCATED IN CLOSE PROXIMITY TO INDIRECT LIGHTING OR WHERE SUBJECT TO VEILING REFLECTANCES FROM GLASS OR WATER SURFACES. SEE SEQUENCE OF OPERATION FOR PROGRAMMED LIGHTING LEVEL.	
NW1	NETWORKED BUTTON STATION, PROGRAM RELAY ZONES AS INDICATED ON BUTTON DETAIL DIAGRAM	SEE DETAILS THIS SHEET	
STANDALONE CONTROL SYSTEMS			
OS1	CEILING MOUNTED, DUAL TECH, OCCUPANCY SENSOR, LINE VOLTAGE	AUTOMATIC ON, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE	
VS1	CEILING MOUNTED, DUAL TECH, OCCUPANCY SENSOR SET TO VACANCY MODE, LOW VOLTAGE	ON VIAL LOCAL SWITCH, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE	
VSW1	WALLSWITCH MOUNT, OCCUPANCY SENSOR SET TO VACANCY MODE, ON/OFF SWITCH	ON VIAL LOCAL SWITCH, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE	
W1	LOW VOLTAGE TOGGLE ON/OFF SWITCH.	ZONED PER ROOM	

LIGHTING SEQUENCE OF OPERATION									
CONTROL SEQUENCE	ON	OFF	SENSOR TYPE	TIME OUT	DIMMING	CONTROLLED RECEPTACLE	DAYLIGHT HARVESTING	TARGET ILLUMINANCE (FC)	NOTES
ET1	TIMECLOCK AUTOMATIC ON 30 MINUTES PRIOR TO SUNSET	TIMECLOCK AUTOMATIC OFF 30 MINUTES AFTER SUNRISE	NONE	N/A	SWITCHING	NO	NO	--	
M1	MANUAL ON	MANUAL OFF	NONE	N/A	SWITCHING	NO	NO	--	
MT1	MANUAL ON	TIMECLOCK AUTOMATIC OFF (ADJUSTIBLE TIME OFF VIA COUNTDOWN TIMER)	NONE	VARIABLE	SWITCHING	NO	NO	--	
O1	AUTOMATIC ON	AUTOMATIC OFF	OCCUPANCY	15 MINUTES	SWITCHING	NO	NO	--	
TP1	MANUAL ON VIA WALLSWITCH ONLY, TIMECLOCK ACTIVATION 30 MINUTES PRIOR TO OPEN OF BUSINESS	TIMECLOCK AUTOMATIC OFF 30 MINUTES AFTER CLOSE OF BUSINESS, OVERRIDE WITH WALL SWITCH OR PHOTOCELL ABOVE TARGET ILLUMINANCE	PHOTOCELL	N/A	0-10V DIMMING	NO	YES	50 FC	PRIMARY DAYLIGHT ZONE. PHOTOCELL OVERRIDE, FUNCTIONALITY DURING TIMECLOCK ON HOURS ONLY
TP2	MANUAL ON VIA WALLSWITCH ONLY, TIMECLOCK ACTIVATION 30 MINUTES PRIOR TO OPEN OF BUSINESS	TIMECLOCK AUTOMATIC OFF 30 MINUTES AFTER CLOSE OF BUSINESS, OVERRIDE WITH PHOTOCELL ABOVE TARGET ILLUMINANCE	PHOTOCELL	N/A	0-10V DIMMING	NO	YES	50 FC	SECONDARY DAYLIGHT ZONE. PHOTOCELL OVERRIDE, FUNCTIONALITY DURING TIMECLOCK ON HOURS ONLY
V1	MANUAL ON	AUTOMATIC OFF	VACANCY	15 MINUTES	SWITCHING	NO	NO	--	

LIGHTING ZONE SCHEDULE						
ZONE ID	ZONE DESCRIPTION	DIMMING / SWITCHING	VOLTAGE	PANEL-CIRCUIT	ZONE LOAD	CONTROL SEQUENCE
RP1-1	EXTERIOR FRONT/SIDE BARN	SWITCHING	120 V	A-41	296 VA	ET1
RP1-2	EXTERIOR REAR BARN	SWITCHING	120 V	A-41	160 VA	ET1
RP1-3	INTERIOR BARN STALLS	SWITCHING	120 V	A-41	600 VA	TP2
RP1-4	INTERIOR BARN WALKWAY	SWITCHING	120 V	A-41	400 VA	TP2
RP1-5	SPARE				0 VA	
RP1-6	SPARE				0 VA	
RP1-7	SPARE				0 VA	
RP1-8	SPARE				0 VA	

LIGHTING RELAY SCHEDULE - RP1					
RELAY ID	RELAY DESCRIPTION	DIMMING / SWITCHING	VOLTAGE	PANEL-CIRCUIT	CONTROL SEQUENCE
RP1-1	EXTERIOR FRONT/SIDE BARN	SWITCHING	120 V	A-41	ET1
RP1-2	EXTERIOR REAR BARN	SWITCHING	120 V	A-41	ET1
RP1-3	INTERIOR BARN STALLS	SWITCHING	120 V	A-41	TP2
RP1-4	INTERIOR BARN WALKWAY	SWITCHING	120 V	A-41	TP2
RP1-5	SPARE				
RP1-6	SPARE				
RP1-7	SPARE				
RP1-8	SPARE				

EMERGENCY INVERTER SCHEDULE					
INVERTER ID	DESCRIPTION	MAX LOAD	PANEL	CIRCUIT NUMBER	DETAIL
INV1	750W EMERGENCY INVERTER, NON-DIMMING		A	41	#1/E7.0



WALLSTATION 'NW1'	
LOCATION: BARN	
CENTER	RP1-4: ON/OFF
STALLS	RP1-3: ON/OFF

TYPICAL KEYPAD DETAILS GENERAL NOTES	
A.	ALL BUTTON ENGRAVINGS ARE NOTED FOR DESIGN INTENT ONLY AND SHALL BE FINALIZED WITH THE CONTRACTING OFFICER PRIOR TO PROCUREMENT. EC SHALL CONFIRM THAT ENGRAVINGS FIT WITHIN MANUFACTURER CHARACTER LIMITS PRIOR TO PROCUREMENT.
B.	ALL FACEPLATES AND BUTTON FINISHES SHALL BE PROVIDED WHITE UNLESS OTHERWISE NOTED BY THE CONTRACTING OFFICER. FINAL APPROVAL REQUIRED PRIOR TO PROCUREMENT.

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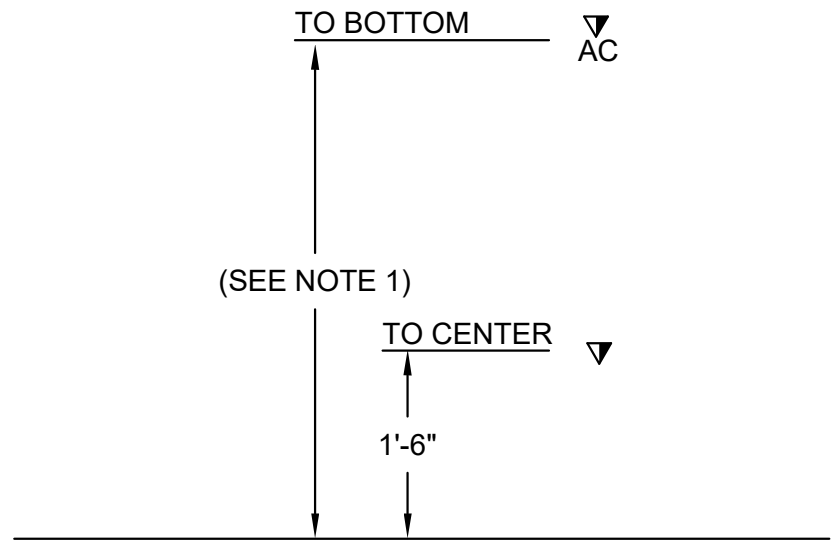
E8.1

WALLSTATION ENGRAVING DETAIL

	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET		DRAWING NO.
	AE DESIGN		ELECTRICAL LIGHTING CONTROLS SCHEDULES		121
					175143
	AE DESIGN				PMIS/PKG NO.
	TECH. REVIEW:				316223
KMD	E8.1	CONSTRUCT COLORADO RIVER DISTRICT BARN AND TACK SHED ROCKY MOUNTAIN NATIONAL PARK, CO		SHEET	
DATE:				97	
02/27/2023				OF	104

DISTRIBUTION & RACEWAY

	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
	CONDUIT EXPOSED OR CONCEALED IN WALL OR CEILING
	RACEWAY UP
	RACEWAY DOWN
	CONDUIT WITH CAPPING
	CONDUIT WITH BUSHING
	CONDUIT WITH CONTINUATION
	LADDER RACK LENGTH AS INDICATED ON DRAWINGS
	CABLE TRAY LENGTH AS INDICATED ON DRAWINGS



NOTES:

- THE CONTRACTOR SHALL REFER TO ARCHITECTURAL ELEVATIONS TO COORDINATE ALL COUNTER HEIGHTS. ALL "AC" DEVICES SHALL HAVE BOTTOM OF BACK-BOX MOUNTED 4" ABOVE THE BACK/SIDE SPLASH.

1
T0.0

TECH - DEVICE MOUNTING HEIGHT

SYSTEMS LEGEND

	TTB, MDF OR IDF SYSTEM BACKBOARD
	TELECOMMUNICATION OUTLET
	FLOOR MOUNTED TELECOMMUNICATION OUTLET
	TELEVISION OUTLET
	TECHNOLOGY SYSTEMS DEVICES TAG
	SPEAKER - PAGING AND OR SOUND SYSTEM
	VIDEO CAMERA
	PROJECTION SCREEN
	VIDEO PROJECTOR
	DISPLAY MONITOR
	PUSH BUTTON
	CLOSED CIRCUIT TELEVISION CAMERA
	CABLE TRAY LENGTH AS INDICATED ON DRAWINGS
	WIRELESS ACCESS POINT

ABBREVIATIONS AND SYMBOLS

A	AMPERE(S)
AC	ABOVE COUNTER
ABA	ARCHITECTURAL BARRIERS ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ALS	ASSISTIVE LISTENING SYSTEM
AV	AUDIO-VIDEO OR AUDIO-VISUAL
BGM	BACKGROUND MUSIC
C	CONDUIT
CATV	COMMUNITY ACCESS TELEVISION
CPU	CENTRAL PROCESSING UNIT
DSP	DIGITAL SIGNAL PROCESSOR
DVD	DIGITAL VIDEO DISC/VERSATILE DISC
(E)	EXISTING TO REMAIN
(ER)	ELECTRICAL CONTRACTOR
FM	EXISTING TO BE RELOCATED
FPD	FREQUENCY MODULATION
GC	FLAT PANEL DISPLAY
GPC	GENERAL CONTRACTOR
IG	GENERAL PURPOSE COMPUTER
IP	ISOLATED GROUND
IR	INTERNET PROTOCOL
IT	INFRARED
LAN	INFORMATION TECHNOLOGY
LCD	LOCAL AREA NETWORK
LTG	LIQUID CRYSTAL DISPLAY
MATV	LIGHTING
(N)	MASTER ANTENNA TELEVISION
NC	NEW
NO	NORMALLY CLOSED
OAE	NORMALLY OPEN
OFCI	OR APPROVED EQUAL
OFE	OWNER FURNISHED/CONTRACTOR INSTALLED
OH	OWNER FURNISHED EQUIPMENT
PA	OVERHEAD
PC	PUBLIC ADDRESS
PDP	PERSONAL COMPUTER
PH	PLASMA DISPLAY PANEL
RCPT	PHASE
(R)	RECEPTACLE
RF	EXISTING TO BE REMOVED
(RL)	RADIO FREQUENCY
RU	RELOCATED LOCATION
TO	RACK UNIT (TIA/EIA RACK)
TV	TELECOMMUNICATIONS OUTLET
UC	TELEVISION
UG	UNDER COUNTER/CABINET
UHF	UNDERGROUND
UON	ULTRA HIGH FREQUENCY
UPS	UNLESS OTHERWISE NOTED
USB	UNINTERRUPTIBLE POWER SUPPLY.
V	UNIVERSAL SERIAL BUS
VHF	VOLT(S)
VP	VERY HIGH FREQUENCY
W	VIDEO PROJECTOR
WAN	WATT(S)
WG	WIDE AREA NETWORK
WP	WIREGUARD
	WEATHERPROOF OR WATERPROOF
	DETAIL NOTE
	REVISION (DELTA) TAG

PROJECT GENERAL NOTES

- THE WORK DESCRIBED HEREIN SHALL BE REVIEWED, COORDINATED, AND FACILITATED BY ALL CONTRACTORS; THIS INCLUDES, BUT IS NOT LIMITED TO THE COMMUNICATIONS, SECURITY, LOW VOLTAGE, AV, ELECTRICAL, AND GENERAL CONTRACTORS. FURTHERMORE, ALL WORK SHALL BE COORDINATED WITH THE CONSTRUCTION MANAGER TO SCHEDULE THE SEQUENCE OF ALL WORK.
- MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES. IN ADDITION, CONTRACTOR SHALL ADHERE TO ALL BUILDING AND DISTRICT RULES AND REGULATIONS WHEN APPLICABLE.
- THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE, NOT ALL EQUIPMENT, PARTS, OR ANCILLARY PIECES ARE SHOWN FOR A COMPLETE SYSTEM. CONTRACTORS ARE RESPONSIBLE FOR FURNISHING, INSTALLING, AND SUCCESSFULLY TESTING FULLY FUNCTIONING AND COMPLETE SYSTEMS, UNLESS OTHERWISE NOTED.
- ALL WORK SHOWN HEREIN SHALL BE ASSUMED TO BE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED. REFER TO RESPONSIBILITY MATRIX FOR FURTHER CLARIFICATION AND DELINEATION OF CONSTRUCTION RESPONSIBILITIES.
- ALL WORK REQUIRED FOR INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT, AND MATERIALS, SHALL BE IN STRICT COMPLIANCE WITH BUILDING STANDARDS, UNLESS OTHERWISE NOTED.
- CONTRACTORS SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENT FEES, TAXES, AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF WORK.
- CONTRACTORS SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY AND ALL MATERIAL OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, OR IN VIOLATION OF THE LAWS, ORDINANCES, RULES, OR REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION (AHJ).
- CONTRACTORS SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH OTHER TRADES AND DRAWINGS.
- CONTRACTORS SHALL MAINTAIN AN UPDATED DOCUMENT SET CONTAINING THE MOST RECENT CONSTRUCTION DOCUMENTS, ALL FIELD OR DOCUMENT CHANGES, AND UPDATED 'AS BUILT' DRAWINGS THROUGHOUT CONSTRUCTION.
- ALL MATERIAL AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
- ALL CUTTING, DRILLING, AND PATCHING OF MASONRY, STEEL, OR IRON WORK BELONGING TO THE BUILDING MUST BE COORDINATED WITH ELECTRICAL, GENERAL, AND STRUCTURAL CONTRACTOR, AS WELL ARCHITECT. UNDER NO CIRCUMSTANCES MAY STRUCTURAL WORK BE CUT UNLESS WRITTEN INSTRUCTION IS PROVIDED BY ARCHITECT AND ENGINEER OF RECORD.
- ALL MATERIAL, EQUIPMENT, WIRING DEVICES, CABLING, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- FOR ALL EXTERIOR SCOPE, CONTRACTOR SHALL COORDINATE WITH CIVIL, STRUCTURAL, LANDSCAPE, AND GENERAL CONTRACTOR, AS WELL AS ARCHITECT, TO ENSURE ALL BUILDING FOOTING, SITE WORK, AND OTHER SUCH SCOPE IS COORDINATED WITH.
- PULL BOXES AND HANDHOLES SHALL NOT BE INSTALLED IN PLACE OF CONDUIT BENDS. CONTRACTOR SHALL INSTALL PULL BOXES AND HANDHOLES IN STRAIGHT SECTIONS OF CONDUIT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY DISCREPANCIES BETWEEN THESE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS. ANY DISCREPANCIES ARE TO BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER.
- ALL CONDUITS AND SLEEVES DESIGNATED FOR COMMUNICATIONS USE, WHETHER THEY ARE UTILIZED BY THE CONTRACTOR OR NOT, SHALL BE FIRE RATED TO MATCH OR EXCEED THE PENETRATED MATERIAL. THIS SHALL INCLUDE PENETRATIONS INTO AND THROUGH WALLS, FLOORS, CEILINGS, AND ROOFS PER CODE AND AHJ.
- THE ENTIRE CABLE PLANT SHALL BE TESTED AND CERTIFIED BY CONTRACTOR AS DETERMINED BY BICSI, NEC, AND TIA/EIA STANDARDS AT A MINIMUM, UNLESS OTHERWISE SPECIFIED.
- ALL EQUIPMENT, CABLING, RACEWAY, ETC. SHALL BE GROUNDED IN ACCORDANCE WITH THE SPECIFICATIONS PROVIDED AND THE STANDARDS SET FORTH PER BICSI AND ANSI J-STD-607-A. PROVIDE GROUND CONDUCTORS, GROUND CLAMPS, COMPRESSION TAPS, LUGS, ETC. AS REQUIRED FOR CONNECTION TO THE TELECOMMUNICATIONS GROUNDING AND BONDING SYSTEM. ACCESS TO BUILDING GROUND SHALL BE PROVIDED TO EACH TELECOMMUNICATION SPACE BY THE ELECTRICAL CONTRACTOR.
- ALL TELECOMMUNICATIONS SYSTEMS CONDUITS WHICH ARE INTERIOR OR EXPOSED SHALL BE STEEL, THIN-WALL ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE NOTED. UNDER NO CIRCUMSTANCES SHALL FLEXIBLE CONDUIT BE UTILIZED FOR PATHWAYS. ALL CONDUITS SHALL BE, AT MINIMUM, 1 INCH IN TRADE SIZE, UNLESS SPECIFICALLY AND OTHERWISE NOTED.
- ALL TELECOMMUNICATIONS SYSTEMS CONDUITS WHICH ARE UNDERGROUND SHALL BE RIGID POLYVINYL CHLORIDE CONDUIT (PVC), UNLESS OTHERWISE NOTED. SCHEDULE 40 PVC SHALL BE UTILIZED IN NON-TRAFFIC AND LOW-TRAFFIC AREAS. SCHEDULE 80 PVC SHALL BE UTILIZED IN HIGH-TRAFFIC AREAS AND WHEN ENCASED IN CEMENT.
- NO MORE THAN TWO (2) 90-DEGREE BENDS (OR A TOTAL OF 180-DEGREES) MAY BE INSTALLED BETWEEN PULLBOXES, HANDHOLES, OR PULL POINTS. A 4 INCH SQUARE, 2 1/8 INCH DEEP BACKBOX SHALL BE PROVIDED AND INSTALLED AS A PULL BOX FOR 1 INCH CONDUIT PATHWAYS, UNLESS OTHERWISE NOTED. FOR ALL OTHER PATHWAYS, REFER TO DRAWINGS AND SPECIFICATIONS FOR PULL BOX SIZE REQUIREMENTS.
- FOR INTERIOR SPACES, NO MORE THAN 100 FEET OF PATHWAY MAY BE INSTALLED BETWEEN PULLBOXES OR PULL POINTS.
- FOR EXTERIOR PATHWAY, NO MORE THAN 500 FEET OF PATHWAY MAY BE INSTALLED BETWEEN HANDHOLES OR PULL POINTS.
- ALL MANUFACTURER CABLE BEND RADIUS REQUIREMENTS SHALL BE OBSERVED AND PROTECTED DURING THE INSTALLATION OF CABLING. FOR 2 INCH (TRADE SIZE) CONDUITS OR LESS, CONDUITS BEND RADIUS SHALL BE A MINIMUM OF 6 TIMES THE CONDUIT DIAMETER. FOR CONDUITS GREAT THAN 2 INCHES (TRADE SIZE), CONDUIT BEND RADIUS SHALL BE A MINIMUM OF 10 TIMES THE CONDUIT DIAMETER. ALL CONDUIT BENDS SHALL BE "SWEEPING" TYPE, NO BEND FITTINGS ARE PERMITTED.
- FOR LOCATIONS WHERE BOTH POWER AND NETWORK OUTLETS ARE TO BE INSTALLED, NETWORK OUTLETS SHALL BE IMMEDIATELY ADJACENT AND ORTHOGONAL TO THE POWER OUTLET, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ENSURE THAT ALL NETWORK OUTLET LOCATIONS AND POWER OUTLET LOCATIONS ARE COORDINATED TO BE ADJACENT TO EACH OTHER WITH PROPER SPACING PER ARCHITECTURAL ELEVATIONS.
- FOR ALL OUTLETS/BACKBOXES INSTALLED INTO ACOUSTICALLY-RATED PARTITIONS (TYPICALLY OFFICES, CONFERENCE ROOM, CLASSROOMS, PRESENTATION SPACES, ETC.) MAINTAIN A MINIMUM OF 12 INCHES OF SEPARATION BETWEEN OUTLETS/BACKBOXES ON OPPOSITE SIDES OF PARTITION. PROVIDE ACOUSTICAL OUTLET BACKER PUTTY AND/OR PUTTY PADS. ACOUSTICAL RATING SHALL BE MAINTAINED PER ASTM C919 AND ASTM E497, AND BE TESTED TO UL 263 (ASTM E119) AND UL 1479 (ASTM E814) STANDARDS.
- ALL CABLING SHALL BE SUPPORTED BY DEDICATED INFRASTRUCTURE AND EQUIPMENT. THIS INCLUDES J-HOOKS, SLINGS, CABLE STRAPS, CABLE TRAY, CONDUIT, AND MAUNFACTURED SLEEVES. CABLE SHALL NOT BE SUPPORTED BY OTHER TRADE'S EQUIPMENT OR ARCHITECTURAL ELEMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, HVAC DUCTS, PIPING, ELECTRICALLY DEDICATED CONDUIT, CEILING TILE/GRID, ETC.
- J-HOOKS, SLINGS, CABLE STRAPS, CABLE TRAY, CONDUIT, SLEEVES, PENETRATIONS, AND ANY OTHER PATHWAYS USED FOR ROUTING NETWORK/VOICE/CATV CABLING SHALL BE DEDICATED TO NETWORK CABLING. NO OTHER TRADE, SERVICE, OR SYSTEM SHALL UTILIZE SAME PATHWAY. (IT IS ACCEPTABLE TO USE BRIDAL RINGS CONNECTED TO CABLE TRAY FOR ROUTING OF OTHER SYSTEMS CABLING.)
- J-HOOKS, SLINGS, CABLE STRAPS, CABLE TRAY, AND OTHER TYPES OF LOOSE CABLE ROUTING EQUIPMENT SHALL NOT BE INSTALLED ABOVE NON-ACCESSIBLE CEILING. CONDUIT PATHWAY SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR FOR ROUTING OVER NON-ACCESSIBLE CEILING, UNLESS OTHERWISE NOTED.
- ALL INTERIOR CABLING SHALL BE PLENUM RATED UNLESS SPECIFICALLY AND OTHERWISE NOTED.
- ALL BACKBOX INSTALLATIONS SHALL BE COORDINATED WITH WALL SURFACE TO ENSURE THAT MUD RING/EXTENSION RING SHALL BE MOUNTED TO BE FLUSH WITH WALL SURFACE TO ENSURE PROPER MOUNTING OF FACEPLATE(S).
- FOR ALL OPEN ENDED CONDUIT NOT TERMINATED INTO A BOX OR ENLCOSURE, CONTRACTOR SHALL PROVIDE AND INSTALL A NYLON BUSHING AND CONDUIT END.
- A PULL STRING SHALL BE PROVIDED FOR ALL CONDUIT PATHWAYS. FOR EXTERIOR PATHWAYS, PULL STRING SHALL BE MULE TAPE WITH A MINIMUM TENSION STRENGTH OF 2200 LBS. FOR INTERIOR PATHWAYS, A STRING OR MULE TAPE WITH A MINIMUM TENSION STRENGTH OF 200 LBS. SHALL BE INSTALLED. ALL PULL STRINGS SHALL BE TIED OFF WITH 3 FEET OF SLACK ON EACH END.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING COMPLETE AND FUNCTIONAL SYSTEMS AS INDICATED. FOR ANY DISCREPANICES BETWEEN THE NUMBER OF DEVICES NEEDED AND THE NUMBER OF DEVICES INDICATED, CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER.



DESIGNED:
BYF, CJC
BYF, CJC
TECH. REVIEW:
KMD
DATE:
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TECHNOLOGY COVER SHEET

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143

PMIS/PKG NO.
316223

SHEET
98 OF 104

RESPONSIBILITY MATRIX															
THE RESPONSIBILITIES LISTED HEREIN ARE PROVIDED AS A RECOMMENDATION AND DO NOT SUPERSEDE OR REPLACE ANY CONTRACTS OR OTHERWISE DEFINED RESPONSIBILITIES BETWEEN THE DESIGNATED PARTIES. IN ADDITION, THE INFORMATION IS MEANT TO INDICATE GENERAL RESPONSIBILITY FOR A SCOPE OF WORK AND IN NO WAY DISALLOWS THE RESPONSIBLE PARTY TO SUBCONTRACT THE SCOPE.															
RESPONSIBLE PARTY	GENERAL CONTRACTOR		ELECTRICAL CONTRACTOR		TELECOM CONTRACTOR		LOW VOLTAGE CONTRACTOR		AUDIO-VISUAL CONTRACTOR		SECURITY CONTRACTOR		GOVERNMENT		NOTES
	SCOPE OF WORK	PROVIDE	INSTALL	PROVIDE	INSTALL	PROVIDE	INSTALL	PROVIDE	INSTALL	PROVIDE	INSTALL	PROVIDE	INSTALL		
BUDGET OF WORK	GC		GC		GC		GC		GC		GC		FFE		
SITE															
INCOMING SERVICE CABLING / COORDINATION / DEMARC													X	X	1
HANDHOLE / MAINTENANCE HOLE			X	X											
EXTERIOR CONDUIT PATHWAY / DUCTBANK			X	X											
TRENCHING			X	X											
INTERIOR INFRASTRUCTURE															
GROUNDING & BONDING			X	X	X	X									3, 4
INTERIOR IN-WALL CONDUIT PATHWAY			X	X											
INTERIOR SURFACE MOUNT CONDUIT PATHWAY			X	X											
BACKBOX / JUNCTION BOX			X	X											
FLOOR BOX / POKE THROUGH			X	X		X									5
SLEEVE / CONDUIT PENETRATIONS			X	X	X	X									6
TELECOMMUNICATIONS															
PLYWOOD BACKBOARD	X	X													
LADDER RACK / LADDER RUNWAY / ACCESSORIES					X	X									
RACK / FRAME / CABINET (TELECOM)					X	X									
WIREMANAGER					X	X									
FIBER PATCH PANEL					X	X									
COPPER PATCH PANEL					X	X									
POWER DISTRIBUTION UNIT (PDU)					X	X									
UNINTERRUPTIBLE POWER SUPPLY (UPS)													X	X	
MISCELLANEOUS RACK COMPONENTS (DRAWER, SHELF, ETC.)					X	X									
BACKBONE CABLING SYSTEM (NETWORK, VOICE, CATV)					X	X									
HORIZONTAL CABLING SYSTEM (NETWORK, VOICE, CATV)					X	X									
FACEPLATE / JACK / SURFACE MOUNT BOX					X	X									
PATCH CABLE (INTERIOR TO TELECOMMUNICATIONS ROOM)													X	X	
PATCH CABLE (END DEVICE / OUTLET)													X	X	2
LABELING					X	X									
WIRELESS ACCESS POINT (WAP)													X	X	
NETWORK EQUIPMENT (SWITCH, HEADEND, FIREWALL, ETC.)													X	X	
PERIPHERAL EQUIPMENT (PHONE, PRINTER, PC, ETC.)													X	X	
NOTES:															
1. CONTRACTOR SHALL COORDINATE WITH GOVERNMENT REGARDING TIMELINE OF INSTALLATION AND REQUIREMENTS FOR INSTALLATION TO ENSURE A TIMELY INSTALLATION.															
2. THE PARTY RESPONSIBLE FOR INSTALLING THE END DEVICE (PC, CAMERA, WAP, ETC.) SHALL BE RESPONSIBLE FOR INSTALLING THE END-OF-RUN PATCH CABLE. AFTER INSTALLATION, VERIFICATION OF OPERABILITY IS REQUIRED.															
3. THE ELECTRICAL CONTRACTOR SHALL i) EXTEND THE BUILDING GROUND TO EACH TELECOMMUNICATION SPACE ii) PROVIDE AND INSTALL THE BUSBAR(S), GROUNDING CABLES, AND ASSOCIATED EQUIPMENT, iii) AND ENSURE EACH TELECOMMUNICATION SPACE HAS PROPER ACCESS TO BUILDING GROUND THROUGH THE LOCAL BUSBAR AS SHOWN IN THE DRAWINGS.															
4. FOR ALL DEVICES, EQUIPMENT, PATHWAY, AND OTHER SUCH MATERIAL REQUIRED TO BE GROUNDED, THE CONTRACTOR/PARTY, IN WHICH THE DEVICE, EQUIPMENT, PATHWAY OR OTHER SUCH MATERIAL WAS INSTALLED BY, SHALL BE RESPONSIBLE FOR ITS PROPER BONDING AND GROUNDING.															
5. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF ALL FLOOR BOXES AND POKE THROUGHs, AS WELL AS ALL CONDUIT/PATHWAY REQUIREMENTS PERTAINING TO IT, REGARDLESS IF THERE IS POWER CABLING INCLUDED AT DEVICE. THE TELECOM CONTRACTOR SHALL COORDINATE WITH DRAWINGS AND ELECTRICAL CONTRACTOR ENSURE LOW VOLTAGE REQUIREMENTS ARE MET AND SHALL PROVIDE AND INSTALL ALL CABLING AND FACEPLATE/TERMINATION EQUIPMENT PERTAINING TO DEVICE.															
6. PRIOR TO CABLE INSTALLATION, THE CONTRACTOR/PARTY RESPONSIBLE FOR INSTALLING THE PENETRATION SHALL ALSO ENSURE THE FIRE-RATING OF THE PENETRATION MATCHES OR EXCEEDS THE PENETRATED SURFACE UPON INSTALLATION. AFTER CABLE INSTALLATION, THE TELECOM CONTRACTOR SHALL ENSURE EACH PENETRATION IS FIRE-RATED TO MATCH OR EXCEED THE PENETRATED SURFACE AFTER ALL CABLES HAVE BEEN INSTALLED.															



DESIGNED:
BYF, CJC
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DATE:
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T0.1

TITLE OF SHEET
TECHNOLOGY
RESPONSIBILITY MATRIX

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

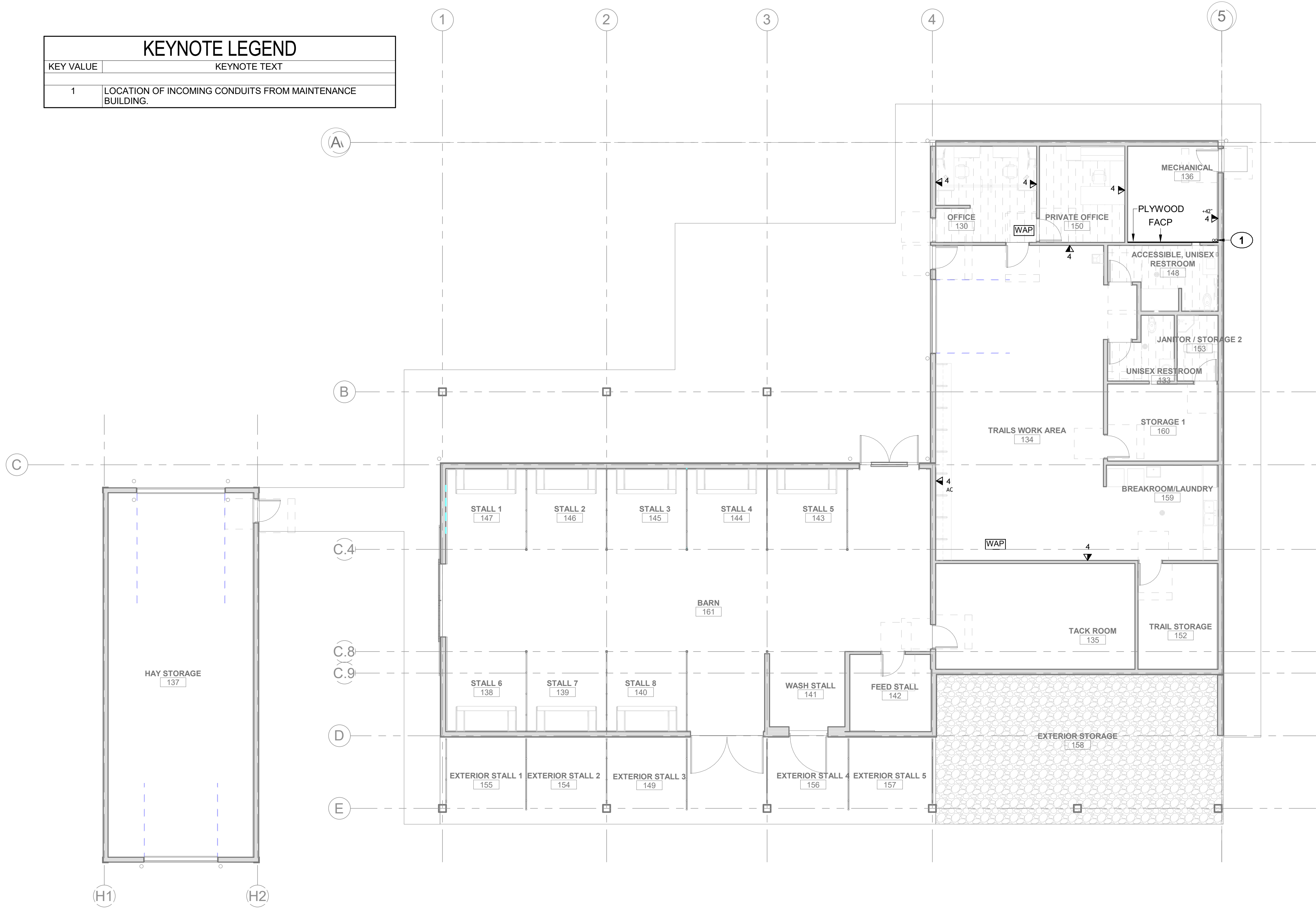
DRAWING NO.
121
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316223

SHEET
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2/24/2023 10:11:49 AM
BIM 360//2021-51 ROMO Barn & Tack/5504.00 - NPS ROMO CRD Barn - Elec Central.rvt

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	LOCATION OF INCOMING CONDUITS FROM MAINTENANCE BUILDING.

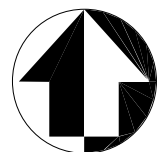
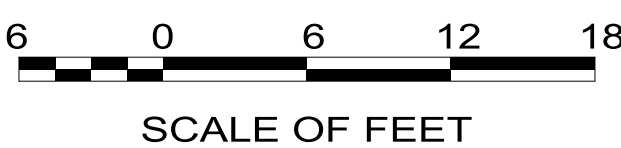


1 TECHNOLOGY PLAN
T1.0

GENERAL NOTES	
1.	CONTRACTOR SHALL REFER TO LEGEND, NOTES, SCHEDULES, DETAILS, AND SPECIFICATIONS FOR MORE INFORMATION.
2.	DEVICE LOCATIONS SHOWN SHALL BE COORDINATED WITH ARCHITECTURAL ELEMENTS, FURNITURE, AND OTHER TRADES FOR FINAL INSTALLATION LOCATION.
3.	ALL CABLING SHALL BE ENCLOSED IN CONDUIT FOR ITS ENTIRE PATH FROM THE IT ROOM. CONDUIT SHALL ROUTE FROM EACH TERMINATION POINT BACK TO THE IT ROOM IN A CONTINUOUS PATHWAY.
4.	NO MORE THAN 100 FEET OF PATHWAY MAY BE INSTALLED BETWEEN PULL POINTS.
5.	ALL CONDUIT BENDS SHALL BE "SWEEPING" TYPE AND IN ACCORDANCE WITH THE BEND RADIUS REQUIREMENTS SPECIFIED IN PROJECT GENERAL NOTES. NO "BEND" OR "ELBOW" FITTINGS ARE PERMITTED UNLESS SPECIFICALLY NOTED.
6.	NO EQUIPMENT MAY ENTER OR PASS THROUGH THE TELECOMMUNICATION SPACE UNLESS SPECIFICALLY SUPPORTING THE SPACE. THIS INCLUDES, BUT IS NOT LIMITED TO, HVAC DUCTS, CONDUIT, PLUMBING, ETC.
7.	A MINIMUM OF 3 FEET OF CLEARANCE SHALL BE MAINTAINED IN THE FRONT OF RACK, AFTER EQUIPMENT IS INSTALLED. CONTRACTOR SHALL ASSUME A MINIMUM OF 24 INCHES OF DEPTH FOR RACK MOUNTED ACTIVE EQUIPMENT IN WALL MOUNTED RACKS.
8.	ALL WALLS AT RACK LOCATION SHALL BE COVERED WITH PLYWOOD. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
9.	THE DEDICATED IN-ROOM HVAC THERMOSTAT SHALL BE MOUNTED ADJACENT THE LIGHT SWITCH NEAR ENTRY DOOR.
10.	CONTRACTOR SHALL COORDINATE WITH OWNER AND OTHER TRADES TO ENSURE WALL AND RACK SPACE ALLOCATION NEEDS ARE ACCOUNTED FOR.

#	KEY	RACK 01	#
26	FP1	FIBER PANEL	26
25			25
24		OWNER EQUIPMENT	24
23			23
22	RH2	WIRE MANAGER	22
21			21
20	CP2	PATCH PANEL	20
19			19
18		OWNER SWITCH	18
17	RH2	WIRE MANAGER	17
16			16
15			15
14			14
13			13
12			12
11			11
10			10
9			9
8			8
7			7
6			6
5			5
4			4
3	SP1	PDU	3
2		OWNER UPS	2
1			1
RR3			

2 SXL - RACK
T1.0



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TECHNOLOGY PLAN

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
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COPPER CONNECTIVITY				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
CC2	CAT 6A CABLE, PLENUM, UTP	COMMSCOPE	CS44P	PROVIDE 'CS44P-IO' FOR ALL CABLES IN AN EXTERIOR ENVIRONMENT.
CJ2	CAT 6A JACK	COMMSCOPE	UKJ10G	
CW4	4-PORT FACEPLATE, LABELED	COMMSCOPE	2111039-x	FINISH SHALL MATCH COLOR OF POWER RECEPTACLE DEVICE FACEPLATES
CW7	SURFACE MOUNT BOX, (BISCUIT), PLENUM, 2 PORT	COMMSCOPE	SMB-2P-xxx PLENUM	WIRELESS ACCESSSS POINT LOCATIONS
CP2	CAT 6A PATCH PANEL, 48 PORTS, 2RU, BLACK, FLAT	COMMSCOPE	UNP-6A-DM-2U-48	

FIBER CONNECTIVITY				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
FC2	12 STRAND MM (OM4) FIBER, OSP/ISP, PLENUM, LOOSE TUBE	CORNING	012TSP-T4190D20	TO BE USED BETWEEN FACILITY MAINTENANCE BUILDING AND BARN/TACK BUILDING
FM1	FIBER CASSETTE, 12 STRAND MM, LC CONNECTOR	CORNING	CCH-CS12-E4-P00QE	
FP1	1 RU FIBER PANEL	CORNING	CCH-01U	

RACKS AND ACCESSORIES				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
RR3	WALL MOUNT SWING GATE RACK, EIA. 19-INCH IN WIDTH, BLACK, 26RU	CPI	11807-725	
RH2	HORIZONTAL WIRE MANAGER, 2U, 5" DEEP	CPI	35441-702	

GROUNDING				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
PBB	PRIMARY BONDING BUSBAR (PBB) COMPLIANT WITH ANSI/TIA-607	CPI	40153-020	

PATHWAYS				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
HH1	SMALL HANDHOLE - NON-TRAFFIC RATED	OLDCASTLE INFRASTRUCTURE	2436-36	TIER 15 RATED COVER
HH3	STANDARD HANDHOLE - TRAFFIC RATED	OLDCASTLE INFRASTRUCTURE	3660-36	TIER 22 RATED COVER

POWER DISTRIBUTION DEVICES				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
SP1	PDU, HORIZTONAL, 120V INPUT, (16) 5-20 OUTLETS	TRIPPLITE	PDUMH20ATS	

COPPER PATCH CORDS								
SYSTEM	AREA	CATEGORY	QUANTITY	LENGTH (FT)	COLOR	MANUFACTURER	PART NUMBER	COMMENTS
NETWORK	IT ROOM	CAT6A	1 PER PATCH PORT	1	BLUE	COMMSCOPE	UC1AAA2	
	PREMISE		1 PER OUTLET PORT	7	BLUE	COMMSCOPE	UC1AA2 / UC1AA22	PLENUM RATED WHEN ABOVE CEILING
VOICE	IT ROOM	CAT6A	1 PER PATCH PORT	1	WHITE	COMMSCOPE	UC1AAA2	
	PREMISE		1 PER OUTLET PORT	7	WHITE	COMMSCOPE	UC1AAA2	
WIRELESS ACCESS POINT (WAP)	IT ROOM	CAT6A	1 PER PATCH PORT	1	GREEN	COMMSCOPE	UC1AAA2	
	PREMISE		1 PER OUTLET PORT	10	GREEN	COMMSCOPE	UC1AA22	PLENUM RATED

FIBER PATCH CORDS									
AREA	FIBER MODE	CONNECTOR	STRUCTURE	QUANTITY	LENGTH (FT)	COLOR	MANUFACTURER	PART NUMBER	COMMENTS
HEADEND	MM	LC-LC	DUPLEX	6	3	YELLOW	COMMSCOPE	FEWLCLC42	

HORIZONTAL CABLE MATRIX					
SYSTEM	CABLE KEY	CABLE COLOR	JACK KEY	JACK COLOR	COMMENTS
NETWORK	CC2	BLUE	CJ2	BLUE	
VOICE	CC2	BLUE	CJ2	BLUE	
WIRELESS ACCESS POINT (WAP)	CC2	GREEN	CJ2	GREEN	

BACKBONE CABLE MATRIX								
ORIGINATION SPACE	TERMINATION SPACE	CABLE KEY 1	CABLE COLOR 1	CABLE KEY 2	CABLE COLOR 2	CABLE KEY 3	CABLE COLOR 3	COMMENTS
MAINTENANCE BUILDING	BARN & TACK SHED	FC2	YELLOW	--	--	--	--	



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T5.0

TITLE OF SHEET
TECHNOLOGY
SCHEDULES

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

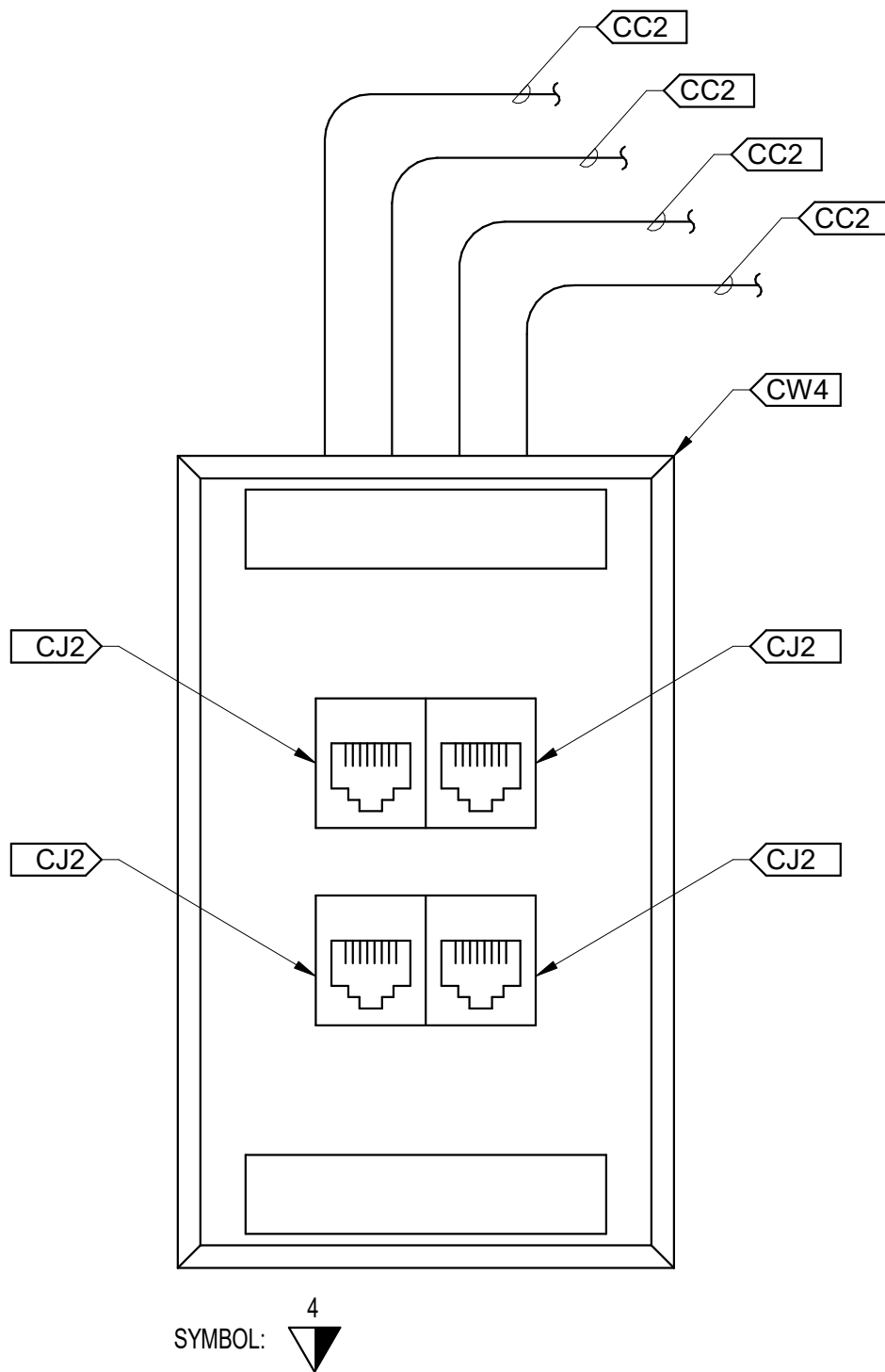
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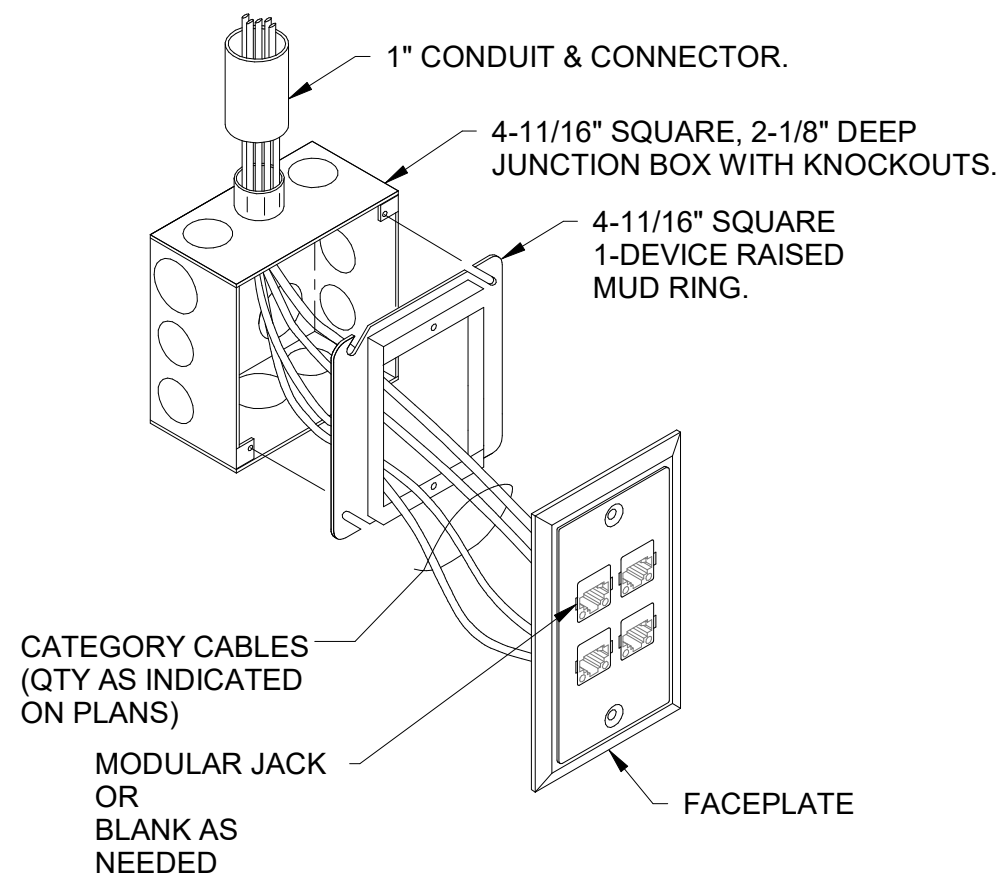
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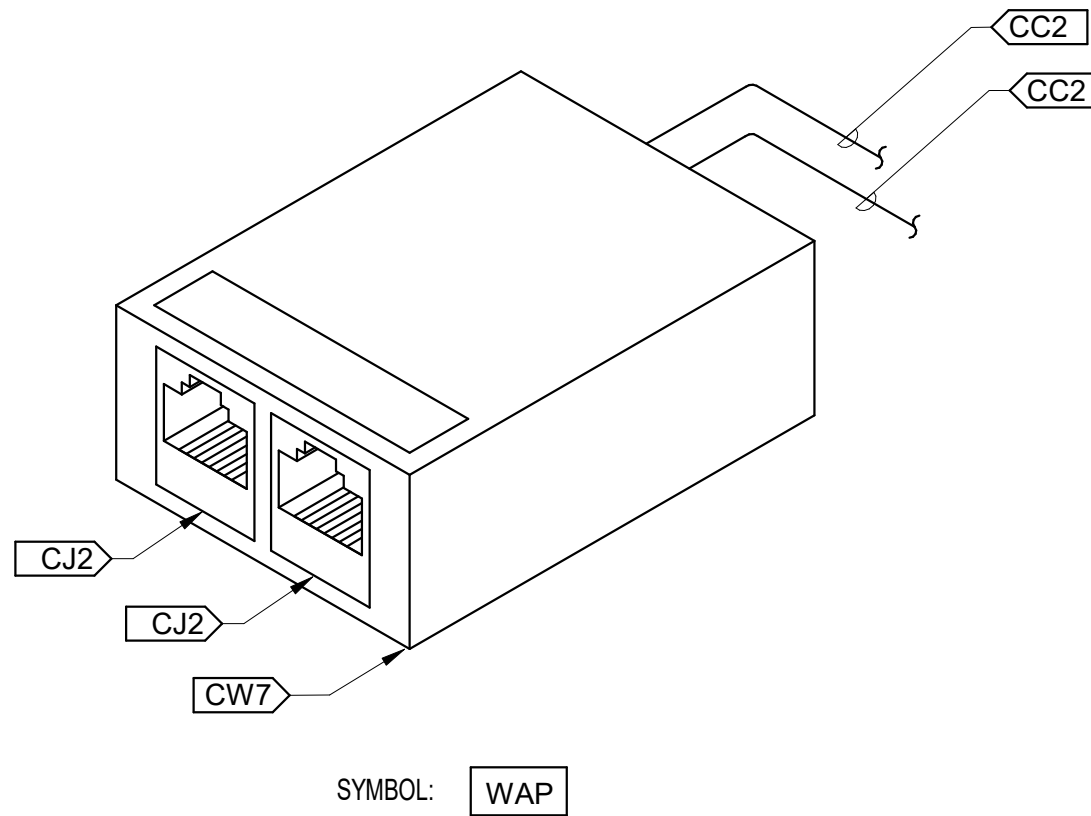
KEYNOTE LEGEND	
KEY	VALUE
◇	
1.	PROVIDE (2) 4" CONDUITS ROUTED FROM FACILITY MAINTENANCE BUILDING TO MECH 136. ONE CONDUIT SHALL PROVIDE INCOMING FIBER, AND ONE CONDUIT SHALL BE LABELED 'SPARE'. REFER TO SHEET T0.2 FOR APPROXIMATE CONDUIT ROUTING. REFER TO T5.0 FOR FIBER REQUIREMENTS.
2.	TELECOMMUNICATIONS PRIMARY BONDING BAR 'PBB' FUNCTIONING AS INTERSYSTEM BONDING TERMINATION DEVICE, COMPLYING WITH NEC 250.94..
3.	MAIN TELEPHONE TERMINAL BOARD 'MTTB' SHALL CONSIST OF 3/4 INCH, FIRE-RETARDANT TREATED PLYWOOD INSTALLED FLOOR TO CEILING IN ROOM, FOR LENGTHS AS INDICATED ON THE PLAN DRAWINGS. ALL RECEPTACLE DEVICES SHOWN IN BACKBOARD ON PLANS SHALL BE FLUSH MOUNT, UON.
4.	NEW TYPICAL WORK AREA COMMUNICATIONS OUTLET FOR STRUCTURED CABLE TERMINATIONS. REFER TO DETAIL 3. PROVIDE 1" CONDUIT TO BACK TO RACK. PROVIDE PULL STRING.
5.	PROVIDE #6AWG GREEN COPPER GROUNDING CONDUCTOR (TYPICAL) BETWEEN GROUNDING BUSSES AS INDICATED.
6.	PRINCIPAL GROUND POINT NEAR ELECTRICAL SERVICE EQUIPMENT.
7.	THE FIRE ALARM SYSTEM IS A REMOTE SUPERVISING STATION ALARM SYSTEM WHICH ALLOWS A SINGLE COMMUNICATION PATH (VIA CELLULAR COMMUNICATIONS) COMPLYING WITH NFPA 72, SECTION 26.6.3.3.



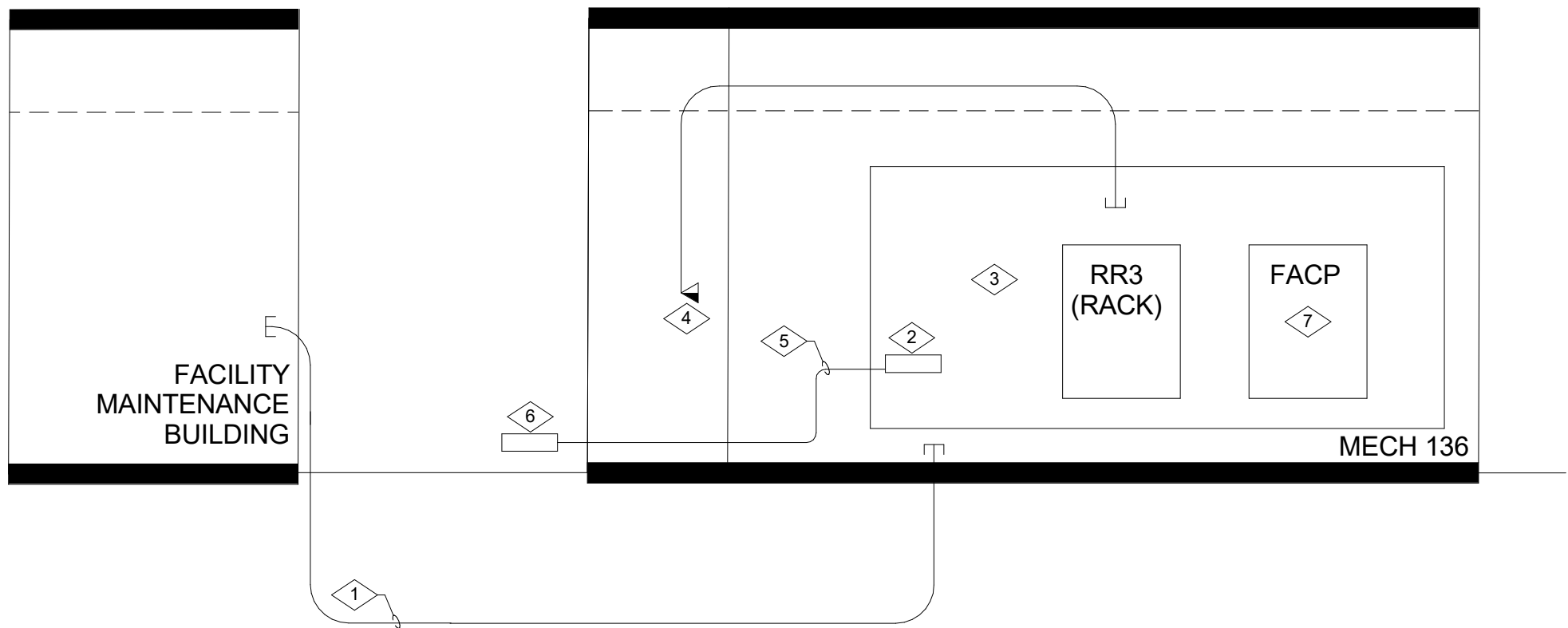
2
T6.0 4 PORT FACEPLATE



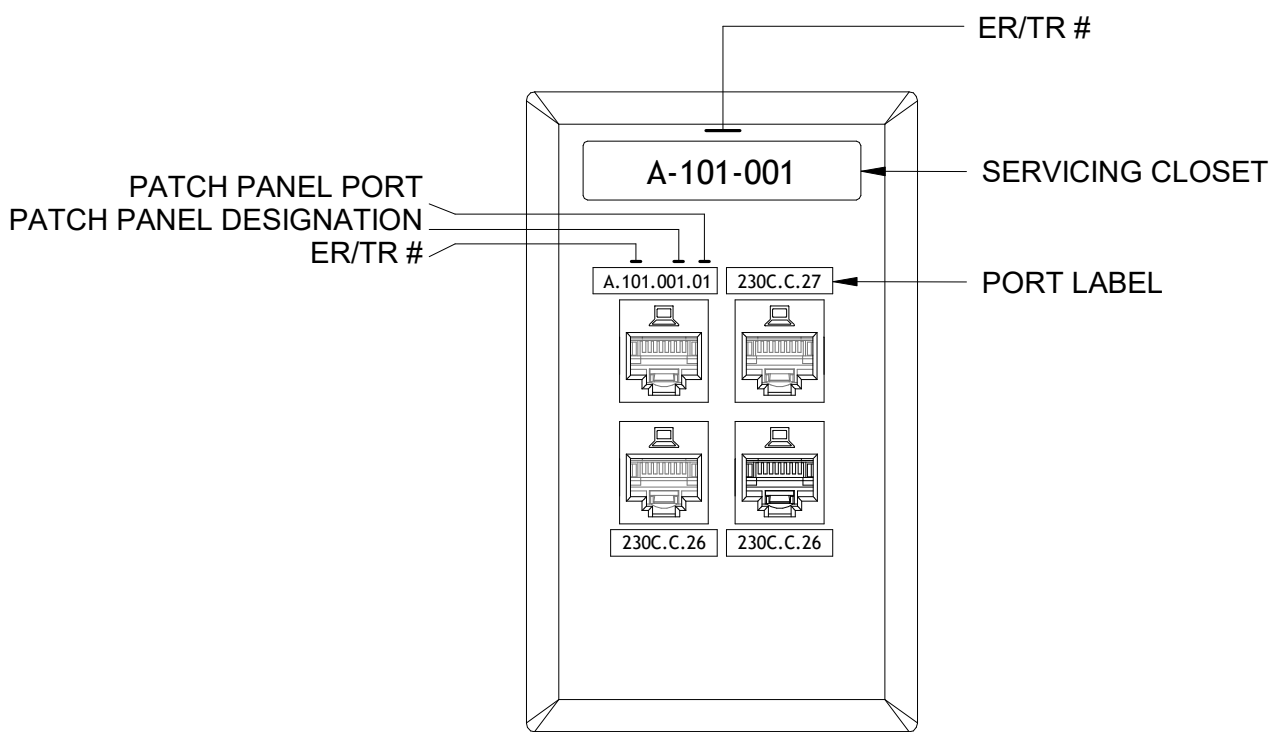
3
T6.0 TELECOMMUNICATIONS
OUTLET BOX DETAILS (TYPICAL)



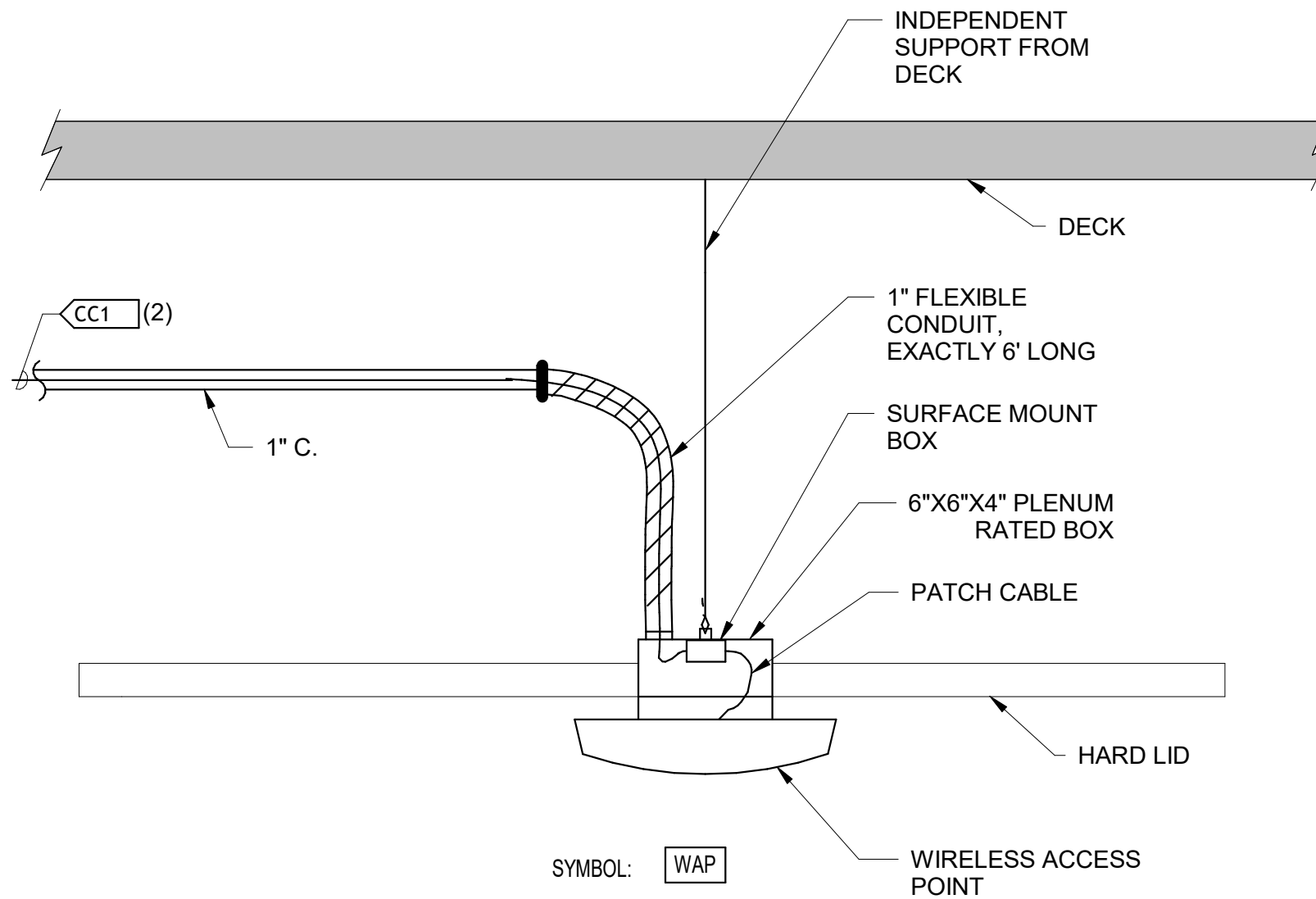
4
T6.0 2 PORT SURFACE MOUNT BOX



1
T6.0 LOW VOLTAGE RISER DIAGRAM



5
T6.0 STANDARD TELECOM OUTLET
IDENTIFICATION SCHEME (TYPICAL)



6
T6.0 WIRELESS ACCESS POINT CEILING
MOUNT DETAIL



DESIGNED:
BYF, CJC
BYF, CJC
TECH. REVIEW:
KMD
DATE:
02/27/2023

SUB SHEET NO.

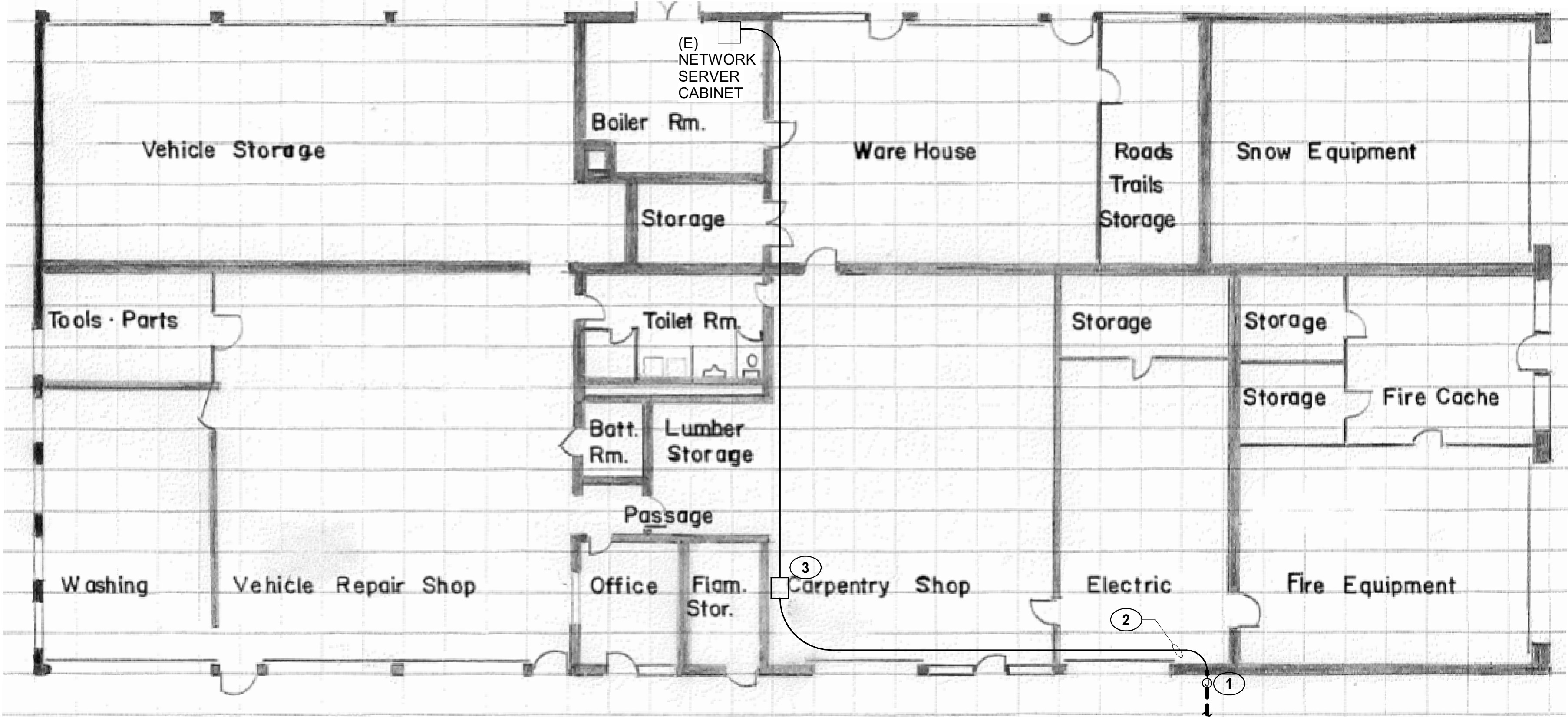
T6.0

TITLE OF SHEET
TECHNOLOGY DETAILS

CONSTRUCT COLORADO RIVER DISTRICT
BARN AND TACK SHED
ROCKY MOUNTAIN NATIONAL PARK, CO

DRAWING NO.
121
175143
PMIS/PKG NO.
316223
SHEET
103 OF 104

2/24/2023 10:11:49 AM
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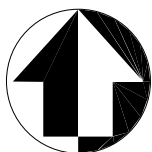
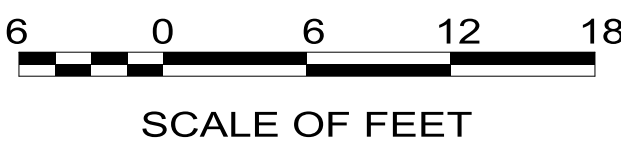
2 ENLARGED MAINTENANCE BUILDING
T6.1

GENERAL NOTES

1.	CONTRACTOR SHALL REFER TO LEGEND, NOTES, SCHEDULES, DETAILS, AND SPECIFICATIONS FOR MORE INFORMATION.
2.	DEVICE LOCATIONS SHOWN SHALL BE COORDINATED WITH ARCHITECTURAL ELEMENTS, FURNITURE, AND OTHER TRADES FOR FINAL INSTALLATION LOCATION.
3.	ALL CABLING SHALL BE ENCLOSED IN CONDUIT FOR ITS ENTIRE PATH FROM THE IT ROOM. CONDUIT SHALL ROUTE FROM EACH TERMINATION POINT BACK TO THE IT ROOM IN A CONTINUOUS PATHWAY.
4.	NO MORE THAN 100 FEET OF PATHWAY MAY BE INSTALLED BETWEEN PULL POINTS.
5.	ALL CONDUIT BENDS SHALL BE "SWEEPING" TYPE AND IN ACCORDANCE WITH THE BEND RADIUS REQUIREMENTS SPECIFIED IN PROJECT GENERAL NOTES. NO "BEND" OR "ELBOW" FITTINGS ARE PERMITTED UNLESS SPECIFICALLY NOTED.
6.	NO EQUIPMENT MAY ENTER OR PASS THROUGH THE TELECOMMUNICATION SPACE UNLESS SPECIFICALLY SUPPORTING THE SPACE. THIS INCLUDES, BUT IS NOT LIMITED TO, HVAC DUCTS, CONDUIT, PLUMBING, ETC.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	INCOMING CONDUITS FROM BARN SHALL TERMINATE IN 24"X16" NEMA 4 JUNCTION BOX AT EXTERIOR OF ELECTRICAL ROOM. MOUNT JUNCTION BOX HIGH ON EXTERIOR WALL, BELOW HEIGHT OF INTERIOR CEILING, IN ALIGNMENT WITH DETERMINED HEIGHT OF CONDUIT ROUTING ON INTERIOR OF BUILDING AND AVOIDING OTHER OBSTACLES ALONG PATH SHOWN. CONDUIT SHALL BE PAINTED TO MATCH BUILDING COLOR. SUBMIT COLOR SAMPLES TO CONTRACTING OFFICER FOR FINAL APPROVAL. REFER TO DETAIL #1/T6.0 FOR MORE INFORMATION.
2	CONDUIT SHALL BE ROUTED UP EXTERIOR WALL TO ELEVATION OF BOTTOM OF INTERIOR STRUCTURE. POKE THROUGH WALL AND ROUTE AT STRUCTURE AS SHOWN. CONTRACTOR SHALL PAINT CONDUIT TO MATCH ADJACENT SURFACES. SUBMIT COLOR SAMPLES TO CONTRACTING OFFICER FOR FINAL APPROVAL.
3	PROVIDE 24"X16" JUNCTION BOX BELOW STRUCTURE, ALIGNED WITH CONDUITS, FOR PULL REQUIREMENTS.



DESIGNED:
BYF, CJC
BYF, CJC
TECH. REVIEW:
KMD
DATE:
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