

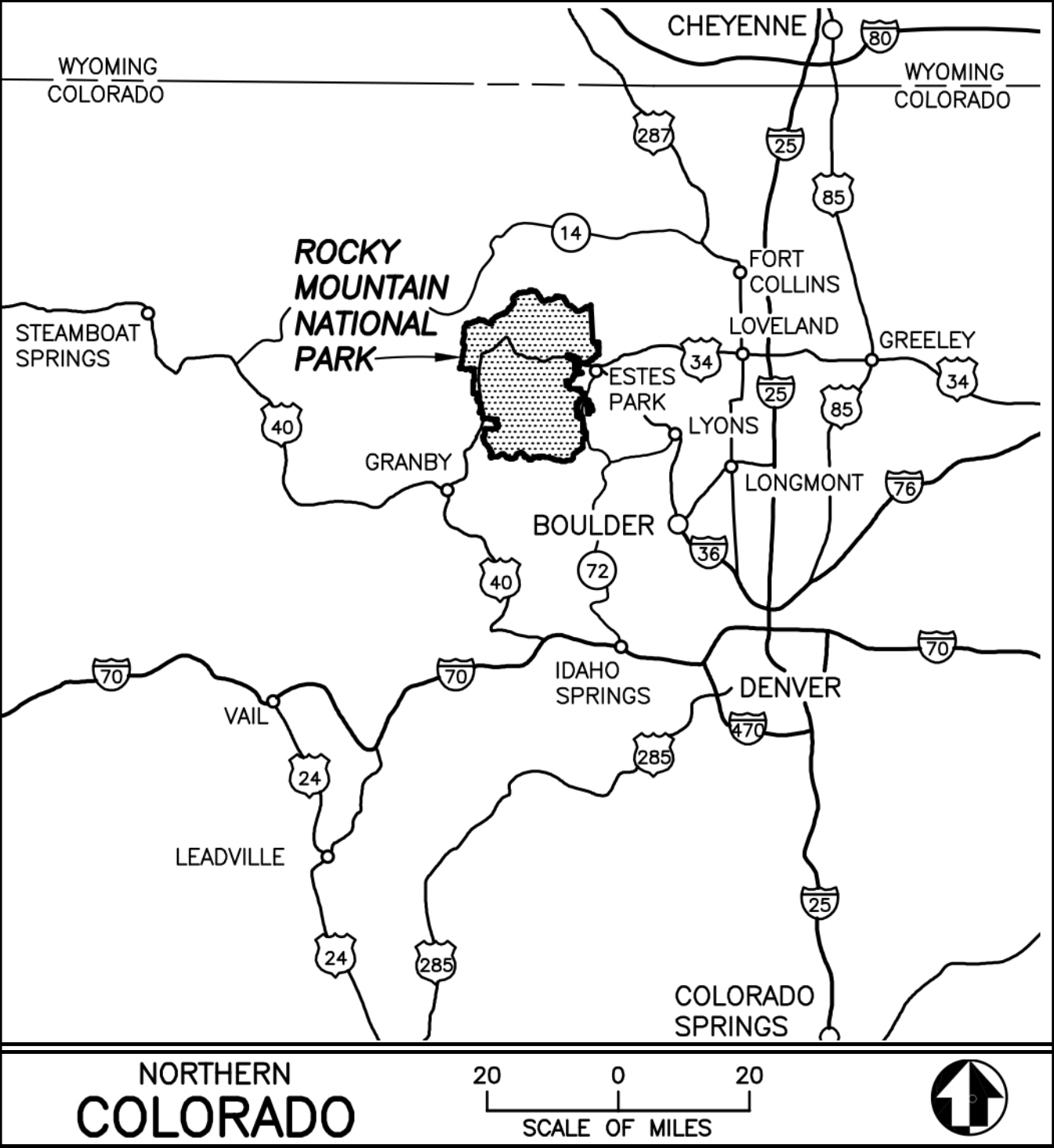
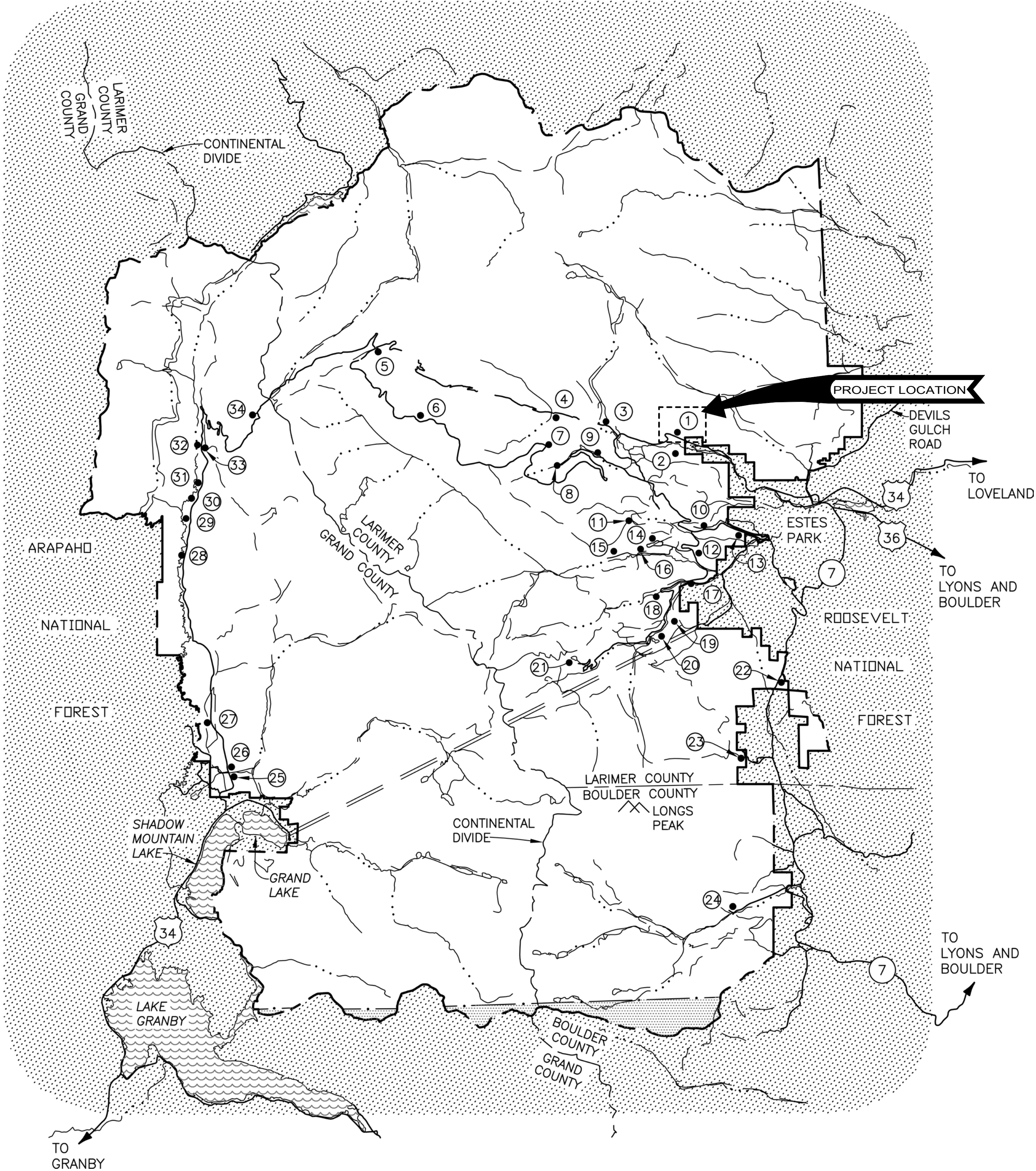
3/8/2022 2:27:06 PM BIM 360://2021-250 ROMO FRE/2021-250 - ROMO FRE - v20 - BIM 360.rvt

LEGEND

- PARK BOUNDARY
- WILDERNESS AREA
- 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			●		●			



PMIS #: ROMO

- ALSO INCLUDES PMIS #:
- ROMO 160755: REPLACE UNDERSIZED ENTRANCE STATION AT FALL RIVER ENTRANCE
- ROMO 199703: REHABILITATE BIGHORN RANGER STATION/FALL RIVER ENTRANCE STATION WASTEWATER SYSTEM
- ROMO 249028: REHABILITATE BIGHORN RANGER STATION/FALL RIVER ENTRANCE WATER SYSTEM
- ROMO 318223: FALL RIVER ROAD TRANSPORTATION IMPROVEMENTS

ROCKY MOUNTAIN NATIONAL PARK

ARCHITECT
ANDERSON HALLAS ARCHITECTS, PC
GOLDEN, CO 80401

Mark Sheet	REVISION	Date	Initial

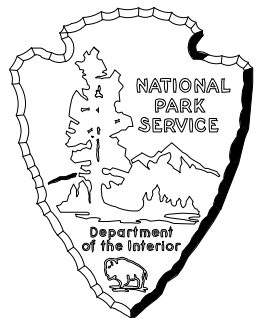
QUALITY DESIGN CERTIFICATION

☐ Prepared in Accordance with Preliminary Design (Title I) OR

☐ Variance from Preliminary Design (Title I) Approved by Superintendent on _____ Date _____ OR

☐ Construction Drawing Not Preceded by Preliminary Design (Title I)

Project Manager _____ Date _____



100% FINAL CDS

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
DENVER SERVICE CENTER

TITLE OF DRAWING
REPLACE UNDERSIZED ENTRANCE STATION
LOCATION WITHIN PARK
FALL RIVER ENTRANCE
NAME OF PARK
ROCKY MOUNTAIN NATIONAL PARK
REGION INTERMOUNTAIN COUNTY LARIMER/GRAND/BOULDER STATE CO

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
1 OF 165



BASIC DATA: USGS TOPO MAP; PARK MINI FOLDER 1987; COVER SHEET REVISED & REDRAWN 3/93. UPDATED 11/98. SGS.

3/17/2022 12:18:21 PMBIM 360://2021-250 ROMO FRE/2021-250 - ROMO FRE - v20 - BIM 360.rvt

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GENERAL NOTES

- DO NOT SCALE DRAWINGS
- ALL WORK TO BE PERFORMED TO APPLICABLE BUILDING CODES (SEE LIST OF APPLICABLE CODES).
- ALL DIMENSIONS ARE TO FACE OF STRUCTURE UNLESS OTHERWISE NOTED. ALL DIMENSIONS INDICATING REQUIRED CLEARANCES ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH THE CONTRACT DOCUMENTS, VERIFYING FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. CONTRACTOR SHALL NOTIFY C.O. IN WRITING OF ANY DISCREPANCY WITHIN THE CONTRACT DOCUMENTS AND REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION.
- SHOULD THERE BE ANY QUESTIONS CONCERNING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE C.O. PRIOR TO PROCEEDING WITH THE WORK, OR RELATED WORK IN QUESTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE PROJECT SCOPE OF WORK, SCHEDULE, AND DEADLINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADVISING THE C.O. OF ALL ITEMS REQUIRING A LONG LEAD TIME UPON NOTICE TO PROCEED THAT WILL AFFECT THE SCHEDULE, AND SHALL SUBMIT ORDER CONFIRMATIONS AND DELIVERY DATES FOR THE ITEMS IN QUESTION TO THE C.O.
- INSTALL ALL MANUFACTURED ITEMS, MATERIALS, AND EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS, EXCEPT WHERE THE CONTRACT DOCUMENTS ARE MORE STRINGENT. ANY MISCELLANEOUS ITEMS OR MATERIALS NOT SPECIFICALLY NOTED, BUT REQUIRED FOR PROPER INSTALLATION SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH TO THE C.O. ALL WARRANTIES AND GUARANTEES REQUIRED AT THE CONCLUSION OF THE PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HOOK UPS / UTILITY CONNECTIONS, ETC. TO TEMPORARY TRAILERS.



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.

G0.1

TITLE OF SHEET
**GENERAL
INFORMATION &
INDEX**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
2 OF **165**

CODE ANALYSIS

2021 INTERNATIONAL BUILDING CODE WITH APPENDICES
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2020 NATIONAL ELECTRICAL CODE
2021 INTERNATIONAL FIRE CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARDS
NPS SUSTAINABILITY GUIDELINES

CODE REQUIREMENTS
NOT SPRINKLED

PER MEETING WITH PARK AHJ ON 2/8/2021 NO INTERIOR SPRINKLER SYSTEM IS REQUIRED BY POLICY PER THE STRUCTURE CONDITIONS DESCRIBED: NO OVERNIGHT OCCUPANCY, NO MUSEUM EXHIBITS, SINGLE LEVEL, AND UNDER 5,000 SF.- TODD NEITZEL, REGIONAL STRUCTURAL FIRE OFFICE

TODD NEITZEL

BUILDING HEIGHT: ALLOWABLE: 40' PER TABLE 504.3
ACTUAL: 20'-7"

NUMBER OF STORIES: ALLOWABLE: 2 PER TABLE 504.4
ACTUAL: 1

ALLOWABLE BUILDING AREA: 9,000 SF (TYPE VB, B OCCUPANCY) PER TABLE 506.2

OCCUPANCY
B BUSINESS

OCCUPANT LOAD
BUSINESS 8 (1071 SF/150)
MECHANICAL/ELECTRICAL ROOM 1 (173 SF/300)
TOTAL BUILDING OCCUPANTS 9

FLOOR AREA
ENTRANCE STATION OFFICE 1,244 SF
KIOSKS (X3) 88(X3) = 264 SF
TOTAL 1508 SF

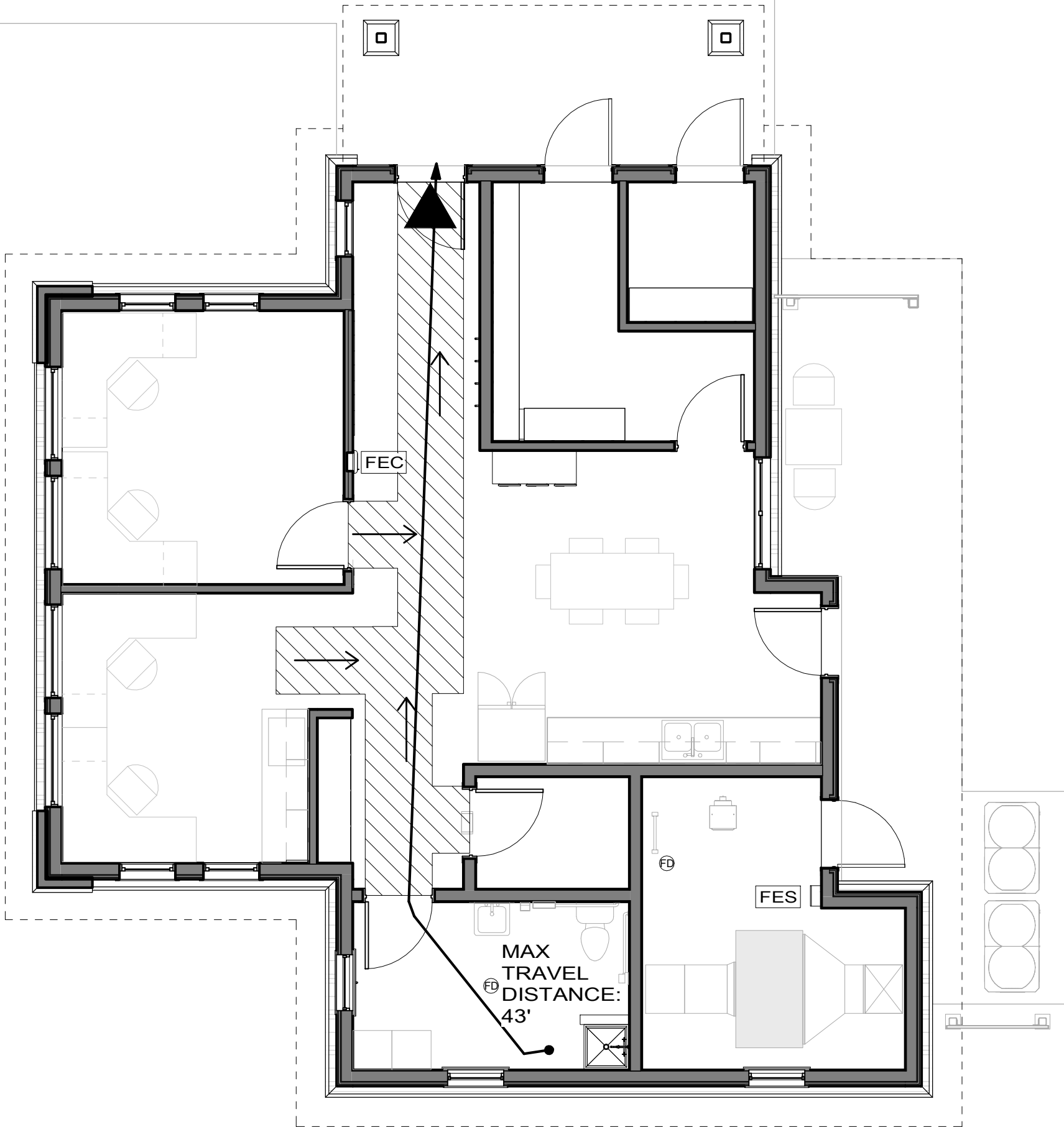
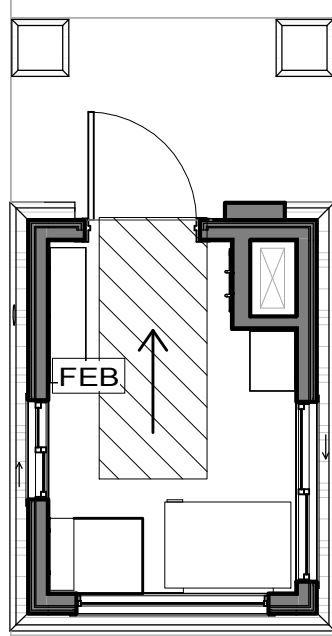
FIRE EXTINGUISHERS REQUIRED PER SECTION 906, AND LOCATED PER IFC TABLE 906.1

FIRE ALARM SYSTEM IS PROVIDED IN ACCORDANCE WITH 907.2.1

FIRE RATING: TYPE VB
PER TABLE 601 AND 602

ALLOWABLE AREA OF OPENINGS:
UNRATED WALLS CAN HAVE UNLIMITED UNPROTECTED OPENINGS IN ACCORDANCE WITH IBC TABLE 705.8.1 EXCEPTION 2 (THE REQUIRED FIRE RATING OF EXTERIOR WALLS IS 0 PER TABLE 601)

ONLY ONE EXIT ACCESS DOOR IS REQUIRED FOR THE OCCUPANT LOAD IN ACCORDANCE WITH IBC 1006.2.1



LEGEND

- EGRESS DOOR WITH EXIT SIGNAGE: RE ELEC
- EGRESS PATH
- DIRECTION OF EGRESS TRAVEL
- FEC SEMI-RECESSED FIRE EXTINGUISHER CABINET (SHALL NOT PROTRUDE MORE THAN 4" FROM WALL)
- FEB FIRE EXTINGUISHER BRACKET
- FES FIRE EXTINGUISHER SURFACE MOUNT

REFERENCE A1.2 FOR ACCESSIBILITY PLAN
REFERENCE LANDSCAPE FOR SITE ACCESSIBILITY PLAN

1 EGRESS PLAN
G0.2 SCALE (A)

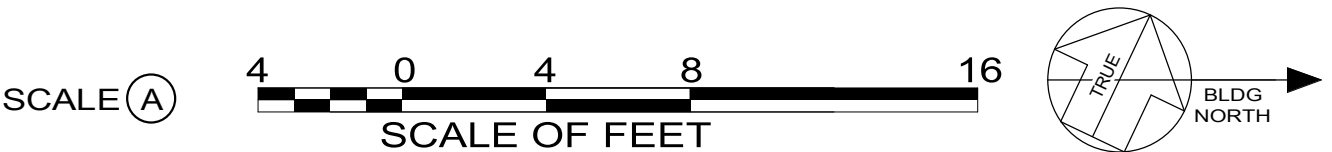
IECC CODE ANALYSIS

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD PER TABLE C402.1.3

CLIMATE ZONE: 5

	REQUIRED	PROVIDED
ATTIC AND OTHER ROOFS	R49	R50.75 (7-1/4" SPRAY FOAM)
WD FRAMED AND OTHER	R20 + R3.8 CONTINUOUS	R24.5 (3-1/2" SPRAY FOAM) + R6 (1" CONTINUOUS)
UNHEATED SLAB ON GRADE	R15 FOR 24" BELOW GRADE	R17.5 (2.5" CONTINUOUS) ENTIRE SLAB AND TO TOP OF FOOTING

BUILDING MEETS IECC CODE REQUIREMENTS FOR THERMAL ENVELOPE



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
G0.2

TITLE OF SHEET
CODE STUDY
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
3 OF 165

APPROX	APPROXIMATE
APT	ANGLE POINT
ARCH	ARCHITECT
BLDG	BUILDING
BM	BENCHMARK
BOC	BACK OF CURB
CIP	CAST IRON PIPE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO*	CLEANOUT
CON	CONTOUR
CONC	CONCRETE
CONT	CONTINUOUS
COR	CORNER
CU	COPPER
C&G	CURB AND GUTTER
DEMO	DEMOLITION
DIA OR Ø	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DTL.	DETAIL
EB	EAST BOUND
EL/ELEV	ELEVATION
ELEC	ELECTRICAL
ESMT	EASEMENT
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FGW	FINISHED GRADE AT WALL
FHY	FIRE HYDRANT
FL	FLOW LINE
FT	FOOT
GB	GRADE BREAK
GR	GRATE (AREA OR VALLEY INLETS)
GV	GATE VALVE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HGL	HYDRAULIC GRADE LINE
HORZ	HORIZONTAL
HP	HIGH POINT
INV	INVERT
LF	LINEAL FEET
LP	LOW POINT
MAX	MAXIMUM
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MH	MANHOLE
MIN	MINIMUM
MOT	MAINTENANCE OF TRAFFIC

NOTES:

1. TOW SHALL BE TOP OF WATER ON UTILITY SHEETS ONLY AND TOP OF WALL ON ALL OTHER SHEETS.
2. THIS ABBREVIATION LIST IS APPLICABLE TO ALL C SHEETS.

* ABBREVIATION MAY DIFFER ON ARCHITECTURAL LIST AND AS SHOWN ONLY APPLIES TO CIVIL SHEETS.

DEMOLITION		PROPOSED
	LIMITS OF CONSTRUCTION	
	CONTOURS	
	WETLANDS	
	SANITARY SEWER	
	SANITARY MANHOLE	
	WATER LINE	
	FIRE WATER LINE	
	FIRE HYDRANT	
	YARD HYDRANT	
	WATER VALVE	
	CLEANOUT	
	CURB STOP	
	STORM SEWER	
	STORM SEWER MAPPED	
	STORM MANHOLE	
	FLARED END SECTION	
	STORM INLET	
	ELECTRIC LINE	
	ELECTRIC METER	
	COMMUNICATIONS LINE	
	FIBER OPTIC LINE	
	CURB & GUTTER	
	SPILL CURB	
	CONCRETE/ SIDEWALK	
	BOLLARD	
	FLAG POLE	
<i>CULVERT</i>	CULVERT	
	SIGN	
	SET PIN	
	DECIDUOUS TREE	
	EVERGREEN TREE	
	BOULDER	
	CONTROL POINT	
	CONCRETE PAVEMENT	
	ASPHALT PAVEMENT	
	SAWCUT	

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
CADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C0.0

TITLE OF SHEET

**LEGEND AND
ABBREVIATIONS**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO. 121 176678
PMIS/PKG NO. 160755
SHEET 4 OF 165

GENERAL NOTES:

1.

ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL IMPROVEMENTS AND BUILDING CONSTRUCTION SHALL BE SUBJECT TO GOVERNMENT INSPECTION.
2.

THE CONTRACTOR SHALL HAVE ONE [1] SIGNED COPY OF PLANS AND ONE COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.
3.

CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER [2]–WEEKS PRIOR TO THE START OF CONSTRUCTION. A PRE–CONSTRUCTION MEETING SHALL BE SCHEDULED PRIOR TO START OF WORK.
4.

THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING, BUT NOT LIMITED TO, SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL AND SECURITY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
5.

CONTRACTOR SHALL OBTAIN ALL PERMITS FOR STREET CUTS, UTILITY INTERRUPTIONS AND TRAFFIC CONTROL. ANY CONSTRUCTION WITHIN THE COLORADO DEPARTMENT OF TRANSPORTATION [CDOT] RIGHT–OF–WAY WILL REQUIRE A CDOT UTILITY SPECIAL USE PERMIT PRIOR TO ANY WORK IN THEIR RIGHT–OF–WAY.
6.

AT LEAST THIRTY [30] WORKING DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A CERTIFIED TRAFFIC CONTROL SUPERVISOR AND SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. NO WORK SHALL BEGIN UNTIL ALL TRAFFIC CONTROL DEVICES HAVE BEEN PLACED IN ACCORDANCE WITH THE PLAN. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN THE TRAFFIC CONTROL DEVICES FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL THE ROADWAY HAS BEEN OPENED AND THE PERMANENT TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED. INSPECTIONS AND MAINTENANCE OF TRAFFIC CONTROL DEVICES SHALL OCCUR ON ALL WORKING AND NON–WORKING DAYS BY THE CONTRACTOR.
7.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSINGS REQUIRED. REPAIR OF DAMAGED UTILITIES SHALL BE AT THE CONTRACTORS EXPENSE, INCLUDING BUT NOT LIMITED TO UNKNOWN UNDERGROUND UTILITIES.
8.

CONTRACTOR SHALL OBTAIN A STORMWATER CONSTRUCTION PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, PRIOR TO CLEARING, GRADING, OR EXCAVATING. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CONTRACTING OFFICER. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
9.

CONTRACTOR SHALL OBTAIN A COLORADO STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT FOR ALL AREAS WHERE DEWATERING IS REQUIRED FROM AN EXCAVATION AND WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, DITCH OR ANY WATERS OF THE UNITED STATES. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CONTRACTING OFFICER. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
10.

THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING AND VERIFYING ELEVATIONS OF ALL EXISTING SEWER MAINS, WATER MAINS AND OTHER UTILITIES AT THE POINT OF CONNECTION SHOWN ON THE PLANS, AND AT ANY UTILITY CROSSINGS PRIOR TO INSTALLING ANY OF THE NEW IMPROVEMENTS. IF A CONFLICT EXISTS AND/OR A DESIGN MODIFICATION IS REQUIRED, THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER TO MODIFY THE DESIGN.
11.

CONTRACTOR SHALL NOTIFY ALL BUSINESSES/RESIDENTS IN WRITING ONE [1] WEEK PRIOR TO ANY SHUT–OFF IN SERVICE. THE NOTICES MUST HAVE CONTRACTOR’S PHONE NUMBER AND NAME OF CONTACT PERSON, AND EMERGENCY PHONE NUMBER FOR AFTER HOURS CALLS. ALL SHUT OFFS MUST BE APPROVED BY THE CONTRACTING OFFICER AND GOVERNMENT OWNED VALVES AND APPURTENANCES SHALL BE OPERATED BY GOVERNMENT PERSONNEL, UNLESS WRITTEN PERMISSION IS GIVEN OTHERWISE.
12.

RECORD DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER PRIOR TO INITIATION OF THE WARRANTY PERIOD. THE RECORD DRAWINGS WILL CONSIST OF A MARKED–UP SET OF “ISSUED FOR CONSTRUCTION” DRAWINGS VERIFYING THE FOLLOWING:

• ALL LENGTHS, SIZES, AND MATERIALS OF INSTALLED PIPE, MANHOLES, AND ANY OTHER IMPROVEMENT.

• HORIZONTAL LOCATIONS EITHER BY STATION AND OFFSET, OR BY NORTHING AND EASTING COORDINATES OF ALL MANHOLES, BENDS, CLEANOUTS, VALVES, TAPS, WYES, STUBS, PLUGS, TEES, ETC.

• INVERT ELEVATIONS OF STORM SEWER AND SANITARY SEWER MANHOLES, INLETS, OUTLETS, STUB ENDS, TOP OF PIPE ELEVATIONS OF EACH UTILITY CROSSING, ETC.

• CONSTRUCTED SLOPE OF STORM AND SANITARY PIPES BETWEEN MANHOLES AND STRUCTURES.

• TOP OF PIPE ELEVATION AT REGULAR INTERVALS AND/OR FITTINGS FOR WATER LINES.

• ELEVATIONS AT FLOWLINE OF CURB AND GUTTER AT DESIGN LOCATIONS AND GRADE BREAKS. ELEVATION OF INLET AND TRENCH DRAIN GRATES, TOP OF CURB AT CURB INLETS.

• ANY OTHER VARIATIONS FROM THE CONSTRUCTION DOCUMENTS MUST BE CLEARLY NOTED AND DETAILED ON THE PLANS.

• AS–BUILT FIELD NOTES, FROM WHICH THE AS–BUILT DRAWINGS ARE PREPARED, ARE TO BE PROVIDED AND STAMPED/SIGNED AND DATED BY A COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR.
16.

THE WETLANDS WITHIN THE PROJECT LIMITS ARE JURISDICTIONAL. THE CONTRACTING OFFICER WILL PROVIDE THE NECESSARY NATIONWIDE PERMIT FROM THE US ARMY CORPS OF ENGINEERS TO ALLOW CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL NOT BEGIN ANY WORK OR DISTURB ANY OF THE WETLANDS IN THIS AREA UNTIL THAT PERMIT HAS BEEN SECURED.
17.

CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT TITLED GEOTECHNICAL INVESTIGATION REPORT, ROCKY MOUNTAIN NATIONAL PARK FALL RIVER ENTRANCE, DATED SEPTEMBER 15, 2021 AND PREPARED BY YEH AND ASSOCIATES, INC. FOR PAVEMENT DESIGN AND RECOMMENDATIONS REGARDING EXCAVATION, COMPACTION, MATERIALS, EMBANKMENT, PAVEMENT SUBEXCAVATION, MOISTURE CONTROL, AND TOPSOIL REMOVAL AND REPLACEMENT. THE CONSTRUCTION METHODS FOR EXCAVATION/EMBANKMENTS, COMPACTION, AND SUBGRADE PREPARATION SHALL BE IN STRICT CONFORMANCE WITH THE PROJECT SPECIFICATIONS. THE CONTRACTING OFFICER SHALL BE NOTIFIED IMMEDIATELY OF DISCREPANCIES BETWEEN THE GEOTECHNICAL REPORT RECOMMENDATIONS AND REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
18.

THE FOLLOWING LIMITED SCOPE OF RESPONSIBILITY NOTE MUST BE LOCATED, OR REFERENCED TO A GENERAL NOTE, ADJACENT TO THE P.E. SEAL PER 5.1.5 OF THE COLORADO BYLAWS AND RULES.
19.

ALL TREE REMOVAL MUST BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO REMOVAL.
20.

REFER TO THE PROJECT SPECIFICATIONS FOR ARCHEOLOGICAL MONITORING REQUIREMENTS DURING CONSTRUCTION.

THE DESIGN PLANS SHOWN HEREIN WERE DEVELOPED BASED UPON THE GEOTECHNICAL INVESTIGATIONS/ANALYSIS/ENGINEERING CRITERIA DEVELOPED BY YEH AND ASSOCIATES, INC., AS PRESENTED IN THE GEOTECHNICAL REPORT ENTITLED GEOTECHNICAL INVESTIGATION REPORT, ROCKY MOUNTAIN NATIONAL PARK FALL RIVER ENTRANCE, DATED SEPTEMBER 15, 2021 SIGNED AND SEALED BY SAMANTHA C. SHERWOOD P.E. MARTIN/MARTIN, INC. RELIED UPON THE ENGINEERING ANALYSIS AND CONCLUSIONS OF THIS REPORT IN THE PREPARATION OF THESE CIVIL ENGINEERING PLANS AND DOCUMENTS. NO INDEPENDENT INVESTIGATIONS AND/OR ANALYSIS WAS CONDUCTED BY MARTIN/MARTIN, INC. THESE PLANS WERE PROVIDED TO YEH AND ASSOCIATES, INC. FOR REVIEW AND VERIFICATION THAT THESE PLANS DEVELOPED BY MARTIN/MARTIN PROPERLY INTERPRETED AND APPLIED THE CRITERIA AND RECOMMENDATIONS ESTABLISHED BY THEIR GEOTECHNICAL REPORT FOR THIS PROJECT.

ACCESSIBLE ROUTES:

1.

ALL CONSTRUCTION AND VERIFICATION/TESTING SHALL BE IN ACCORDANCE WITH RULES AND REGULATIONS OF LOCAL, STATE AND FEDERAL JURISDICTIONS, AND THE MOST CURRENT REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARD – ABAAS AS PROVIDED FOR IN THE REGULATIONS OF THE UNITED STATES ACCESS BOARD AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) – ANSI A117.1. REFER TO SPECIFICATION 321313 FOR ADDITIONAL REQUIREMENTS.
2.

NOTES AND REQUIREMENTS WITHIN THE CONSTRUCTION DOCUMENTS ARE A SUPPLEMENT TO, AND NOT A REPLACEMENT FOR THE REFERENCED REGULATIONS.
3.

CONTRACTORS ARE TO BE AWARE WHEN REFERRING TO THE ABOVE STANDARDS, RULES AND REGULATIONS THAT PUBLISHED VALUES FOR DIMENSION AND SLOPE ARE FOR FINISHED CONSTRUCTION, NO TOLERANCE IS PERMITTED BELOW MINIMUM AS SHOWN ON DRAWINGS OR ABOVE MAXIMUM VALUES AS INDICATED IN THE APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS.
4.

THE REGULATIONS EXPECT THE CONTRACTORS TO BE KNOWLEDGEABLE OF CONSTRUCTION PRACTICES, AND TO USE APPROPRIATE MEANS AND METHODS TO MEET TOLERANCES AND ENSURE CONSTRUCTION COMPLIES WITH REGULATIONS. ALL CONSTRUCTION OR ALTERATIONS OF ACCESSIBILITY ROUTES (WALKS, RAMPS, ENTRANCES, ETC.) SHALL COMPLY WITH STANDARDS, RULES AND REGULATIONS SET FORTH ABOVE, INCLUDING BUT NOT LIMITED TO 5% MAXIMUM LONGITUDINAL GRADE ON WALKS WITHOUT HANDRAILS, 8.33% MAXIMUM LONGITUDINAL GRADE ON WALKS WITH HANDRAILS, AND LANDINGS 2% MAXIMUM COMPOSITE SLOPE. 2% MAXIMUM CROSS SLOPE ON WALKS, AND 2% MAXIMUM COMPOSITE SLOPE IN ACCESSIBLE PARKING/LOADING AREAS. NO TOLERANCE REGARDING MAXIMUM SLOPE WILL BE ALLOWED.
5.

PRIOR TO CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH CONTRACTING OFFICER OR DESIGNATED OFFICIAL IF RULES AND REGULATIONS OF ACCESSIBILITY ROUTES CANNOT BE MET OR A DISCREPANCY OF REQUIREMENTS ARE INDICATED ON DRAWINGS.

SITE HORIZONTAL CONTROL NOTES:

1.

ALL RADII FOR SIDEWALKS SHALL BE A MINIMUM OF [5] FEET.
2.

ALL DIMENSIONS, CURVE DATA AND LINE DATA ARE AT FLOWLINE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3.

ALL PAVEMENT MARKING WITHIN PARKING AREA SHALL BE INLAID PLASTING MARKINGS. ALL PARKING STALLS SHALL BE FOUR INCHES (4”) WIDE WHITE. PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
4.

ALL CURB AND GUTTER WITHIN PARKING AREA IS SIX INCHES (6”) VERTICAL CURB WITH [1’] PAN, UNLESS OTHERWISE NOTED. CURB AND GUTTER SHOWN

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 SHALL BE SPILL TYPE. ALL OTHER AND GUTTER SHALL BE CATCH TYPE.
5.

ALL PAVEMENT IS ASPHALT UNLESS OTHERWISE NOTED. REFER TO SHEET C3.1 FOR PAVING DETAIL.
6.

FLOWLINE RADIUS IS [3] FEET UNLESS OTHERWISE NOTED.
7.

CONTRACTOR TO SUBMIT JOINT PATTERN FOR CONCRETE PAVEMENT, PRIOR TO CONSTRUCTION, FOR APPROVAL. SEE JOINT DETAILS IN PLANS.
8.

THESE PLANS ARE BASED UPON THE ARCHITECTURAL BUILDING PLANS PREPARED BY ANDERSON HALLAS ARCHITECTS, DATED 10/26/21 AS PROVIDED DIGITALLY. ANY SUBSEQUENT REVISIONS TO BUILDING PLANS ARE NOT REFLECTED IN THIS PLAN SET. CONTRACTOR TO VERIFY AND COORDINATE DOOR LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCY.

GRADING NOTES:

1.

ALL SITE GRADING [EXCAVATION, EMBANKMENT, AND COMPACTION] SHALL CONFORM TO THE PROJECT SPECIFICATION.
2.

THE GRADING DESIGN SHOWN HEREON HAS BEEN PREPARED TO THE GREATEST EXTENT POSSIBLE, IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS FOR THIS PROJECT. VARIOUS CONFLICTING DESIGN CRITERIA MAKE TOTAL COMPLIANCE WITH THE GEOTECHNICAL ENGINEER’S RECOMMENDATIONS DIFFICULT [ADA, SITE PLAN LAYOUT, ETC.]. THUS, THESE PLANS HAVE BEEN PROVIDED TO THE GEOTECHNICAL ENGINEER FOR REVIEW AND COMMENT RELATIVE TO COMPLIANCE WITH THEIR RECOMMENDATIONS.
3.

IT IS THE INTENTION OF THE PROJECT GRADING PLANS TO BE IN STRICT COMPLIANCE WITH, AND OR EXCEED, THE PROJECT’S GEOTECHNICAL ENGINEER’S GRADING RECOMMENDATIONS. IF THE CONTRACTOR BELIEVES A DEVIATION EXISTS BETWEEN THE PLANS AND THE GEOTECHNICAL RECOMMENDATION, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY AND REQUEST WRITTEN CLARIFICATION PRIOR TO PROCEEDING WITH WORK. THE GENERAL CONSTRUCTION SPECIFICATION IS THAT THE MOST RESTRICTIVE REQUIREMENT/RECOMMENDATION GOVERNS THE CONSTRUCTION OF THE PROJECT.
4.

GRADING SHOWN HEREON IS DESIGNED TO ADDRESS PROPER DRAINAGE CONSIDERATIONS FOR THE PROTECTION OF THE STRUCTURES AND IMPROVEMENTS WITHIN THE PROJECT. THE COORDINATION OF THIS DESIGN AND COMPLIANCE WITH THE GEOTECHNICAL ENGINEER’S RECOMMENDATION WITH THE LANDSCAPE PLANS, IS THE RESPONSIBILITY OF THE CONTRACTOR.
5.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING GRADE CONDITIONS AT THE LIMITS OF CONSTRUCTION AND AT LOCATIONS THAT INTERFACE WITH EXISTING OR PROPOSED STRUCTURES AND NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES THAT CONTRADICT THE INTENT FOR DRAINAGE PATTERNS, MAXIMUM AND MINIMUM SLOPES, AND PROPOSED ELEVATIONS AS SHOWN ON THE PLAN. THE GOVERNMENT WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
6.

PROPOSED CONTOURS AND SPOT ELEVATIONS AS SHOWN HEREIN ARE DEFINED AS FINISHED ELEVATION AFTER PAVING, LANDSCAPING, ETC. CONTRACTOR SHALL COORDINATE WITH LANDSCAPE FOR THICKNESS OF TOPSOIL, AND LANDSCAPE MATERIALS.

ALL SPOTS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. FG = FINISHED GRADE, FF = FINISH FLOOR, TOF = TOP OF FOUNDATION, HP = HIGH POINT, LP = LOW POINT, TOW = TOP OF WALL [FINISHED GRADE AT BACK OF WALL], BOW = BOTTOM OF WALL [FINISHED GRADE AT FACE OF WALL], GB = GRADE BREAK, FL = FLOWLINE, TOC = TOP OF CURB.
7.

ALL ISLANDS ARE TO BE GRADED SUCH THAT THERE IS A POSITIVE DRAINAGE TO ADJACENT CURB AND GUTTER.
8.

TEMPORARY CUT/FILL SLOPES SHALL NOT EXCEED A STEEPNESS OF [1:1] (H:V). PERMANENT SLOPES SHALL NOT EXCEED [2:1] (H:V) UNLESS NOTED OTHERWISE IN AREAS TO BE SEEDED.
9.

CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED MANHOLE RIMS, VALVE BOXES, ETC. TO MATCH FINAL GRADE.

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EROSION CONTROL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION TO PREVENT DAMAGING FLOWS ON THE SITE AND IN THE WATERSHED BELOW THE SITE. CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO STRIPPING OF NATIVE VEGETATIVE COVER AND AS GRADING PROGRESSES. REFER TO SEDIMENT AND EROSION CONTROL PLANS AND STORM WATER MANAGEMENT PLAN. CONDITIONS IN THE FIELD MAY WARRANT EROSION CONTROL MEASURES IN ADDITION TO WHAT IS SHOWN ON THESE PLANS. THE PLAN MAY BE MODIFIED WITH APPROPRIATE APPROVALS AS FIELD CONDITIONS WARRANT.

2. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.

3. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSION ELEMENTS. TOPSOIL MAY NOT BE MOVED ONCE IT HAS BEEN STOCKPILED.

4. AT ALL TIMES, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE CONTRACTOR SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.

5. PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 30 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. UNLESS SPECIFIED OTHERWISE, TEMPORARY VEGETATION SHALL BE INSTALLED ON ALL DISTURBED AREAS WHERE PERMANENT SURFACE IMPROVEMENTS ARE NOT SCHEDULED FOR INSTALLATION WITHIN THREE MONTHS. TEMPORARY VEGETATION SHALL BE A VIGOROUS, DROUGHT TOLERANT, MIX SUBJECT TO THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. PROJECT SCHEDULING SHALL OCCUR IN SPRING OR FALL PLANTING SEASONS FOR NATURAL GERMINATION, BUT SEEDED AREAS SHALL BE IRRIGATED, IF CONDITIONS MERIT. REFER TO THE LANDSCAPE PLAN FOR FINAL LANDSCAPING.

6. TEMPORARY FENCES SHALL BE INSTALLED ALONG ALL BOUNDARIES OF THE CONSTRUCTION LIMITS AS DIRECTED BY THE CONTRACTING OFFICER. IN ADDITION, THE CONTRACTING OFFICER MAY REQUIRE ADDITIONAL TEMPORARY FENCES IF FIELD CONDITIONS WARRANT.

7. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM AND ADJACENT WATERWAYS DURING ALL DEMOLITION, EXCAVATION, TRENCHING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, ROADWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.

8. THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN INADVERTENTLY DISCHARGED AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS OR CONSTRUCTION PROJECT.

9. THE GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL ENSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC ROADWAYS.

10. APPROVED EROSION AND SEDIMENT CONTROL "BEST MANAGEMENT PRACTICES" [BMP] SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE CONTRACTOR OR HIS/HER AGENT SHALL INSPECT ALL BMPS WEEKLY AND AFTER SIGNIFICANT PRECIPITATION EVENTS. ALL NECESSARY MAINTENANCE AND REPAIR SHALL BE COMPLETED IN A TIMELY MANNER. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR, AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.

11. WATER USED IN THE CLEANING OF CONCRETE TRUCK DELIVERY CHUTES SHALL BE DISCHARGED INTO A PREDEFINED, BERMED CONTAINMENT AREA ON THE JOB SITE. THE REQUIRED CONTAINMENT AREA IS TO BE BERMED SO THAT WASH WATER IS TOTALLY CONTAINED. WASH WATER DISCHARGED INTO THE CONTAINMENT AREA SHALL BE ALLOWED TO INFILTRATE OR EVAPORATE. DRIED CONCRETE WASTE SHALL BE REMOVED FROM THE CONTAINMENT AREA AND PROPERLY DISPOSED OF. SHOULD A PREDEFINED BERMED CONTAINMENT AREA NOT BE AVAILABLE DUE TO THE PROJECT SIZE, OR LACK OF AN AREA WITH A SUITABLE GROUND SURFACE FOR ESTABLISHING A CONTAINMENT AREA, PROPER DISPOSAL OF READY MIX WASHOUT AND RINSE OFF WATER AT THE JOB SITE SHALL CONFORM TO THE APPROVED TECHNIQUES AND PRACTICES IDENTIFIED IN THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT'S TRAINING VIDEO ENTITLED "BUILDING FOR A CLEANER ENVIRONMENT, READY MIX WASHOUT TRAINING", AND ITS ACCOMPANYING MANUAL ENTITLED, "READY MIX WASHOUT GUIDEBOOK, VEHICLE AND EQUIPMENT WASHOUT AT CONSTRUCTION SITES." THE DIRECT OR INDIRECT DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. INFORMATION ABOUT, OR COPIES OF THE VIDEO AND TRAINING MANUAL ARE AVAILABLE FROM THE WATER QUALITY CONTROL DIVISION, COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT, 4300 CHERRY CREEK DRIVE SOUTH, DENVER, COLORADO 80222-1530, 303-692-3555

12. THE CONTRACTOR SHALL PROTECT ALL STORM SEWER FACILITIES ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL WASTE PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS. THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE STORM SEWER SYSTEM IS PROHIBITED.

13. PAVED SURFACES WHICH ARE ADJACENT TO CONSTRUCTION SITES SHALL BE SWEEPED IN A TIMELY MANNER WHEN SEDIMENT AND OTHER MATERIALS ARE TRACKED OR DISCHARGED ON TO THEM. EITHER SWEEPING BY HAND OR USE OF STREET SWEEPERS IS ACCEPTABLE. STREET SWEEPERS USING WATER WHILE SWEEPING IS PREFERRED IN ORDER TO MINIMIZE DUST. FLUSHING OFF PAVED SURFACES WITH WATER IS PROHIBITED.

STORM SEWER NOTES:

1. ALL STORM SEWER LINES SHALL BE RCP, CLASS III UNLESS DISTANCE BETWEEN PIPE CROWN AND BOTTOM OF PAVEMENT IS LESS THAN 18", IN WHICH CASE CLASS V WILL BE REQUIRED.

2. ALL JOINTS AND JOINTING MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:

A. RUBBER GASKET JOINTS FOR TONGUE AND GROOVE OR BELL AND SPIGOT PIPE USING A CONFINED GASKET JOINT SHALL CONSIST OF AN O-RING RUBBER GASKET OR OTHER APPROVED GASKET CONFIGURATION AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM 361, ASTM C443, ASTM C1619, OR ASTM C1628 FOR THE PIPE DESIGNATED. THE STANDARD JOINT CONFIGURATION SHALL BE AS NOTED IN UDFCD SUBSECTION 3.04.F.

B. RUBBER GASKET JOINTS FOR TONGUE AND GROOVE OR BELL AND SPIGOT PIPE USING A SINGLE OFFSET JOINT SHALL CONSIST OF A NON-CIRCULAR RUBBER GASKET OR OTHER APPROVED GASKET CONFIGURATION AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM C76 OR ASTM 361 FOR THE PIPE DESIGNATED. UNLESS OTHERWISE APPROVED BY ENGINEER, THE STANDARD JOINT CONFIGURATION SHALL BE AS NOTED IN SUBSECTION UDFCD 3.04.F.

C. GASKETS MAY BE NATURAL RUBBER, ISOPRENE OR NEOPRENE CONFORMING TO ASTM C1619.

5. CONTRACTOR SHALL IMMEDIATELY REMOVE DEBRIS DEPOSITED INTO MANHOLES AND OTHER STRUCTURES TO ELIMINATE THE POSSIBILITY OF PROPERTY DAMAGE DUE TO THE DEBRIS CAUSING BACKUP. IF IT IS DETERMINED THAT DEBRIS CAUSED A BACKUP, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGES.

6. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE, SUCH THAT THERE IS NO MORE THAN EIGHTEEN [18] INCHES FROM FINISHED GRADE TO THE TOP OF THE CONE SECTION. THE RIM SHALL BE LEFT 1/8-INCH TO 1/4-INCH BELOW FINISHED ASPHALT/CONCRETE.

WATER NOTES:

1. ALL WATER MAIN CONSTRUCTION SHALL BE PERFORMED BY A CONTRACTOR LICENSED IN THE STATE OF COLORADO.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST ALL WATER VALVE BOXES TO THE REQUIRED FINAL GRADE. IN ADDITION, VALVE EXTENSIONS SHALL BE INSTALLED SUCH THAT A SIX FOOT VALVE KEY CAN OPERATE THE VALVE.

3. NO PIPE SHALL BE BACKFILLED UNTIL IT HAS BEEN INSPECTED BY THE GOVERNMENT.

4. THE MANUFACTURER SHALL FURNISH A CERTIFIED STATEMENT THAT ALL OF THE SPECIFIED TESTS AND INSPECTIONS HAVE BEEN MADE AND THE RESULTS THEREOF COMPLY WITH THE REQUIREMENT OF THE APPLICABLE STANDARDS HEREIN SPECIFIED. A COPY OF THE CERTIFICATION WILL BE SENT TO THE GOVERNMENT UPON REQUEST.

5. DISTANCES FOR WATER ARE THE HORIZONTAL DISTANCE BETWEEN CENTER OF FITTING TO CENTER OF VALVE, METER, ETC. THEREFORE, DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND FITTING DIMENSIONS.

6. MAINTAIN A MINIMUM OF TEN FEET [10'] HORIZONTAL SEPARATION BETWEEN ALL SANITARY SEWER AND WATER MAINS AND SERVICES.

7. FOR ALL PIPE INSTALLATIONS, THE DEPTH OF COVER OVER THE PIPE MEASURED FROM FINAL GRADE TO THE TOP OF THE PIPE SHALL BE A MINIMUM OF 6 FEET AND SHALL BE KNOWN AS THE COVER OVER THE PIPE. IF DIFFICULTIES ARISE WHEN CROSSING INTERFERENCE AND WHERE SPECIFICALLY APPROVED BY THE CONTRACTING OFFICER, DEVIATIONS FROM 6 FEET OF COVER WILL BE PERMITTED. COVER OVER THE PIPE SHALL BE A MINIMUM OF 3 FEET AND A MAXIMUM OF 10 FEET.

8. FIRE HYDRANTS SHALL CONFORM TO THE PROJECT MATERIALS AND SPECIFICATIONS. FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPE, FITTINGS, VALVES, THRUST BLOCKS, RESTRAINTS, AND MATERIALS NECESSARY TO INSTALL THE HYDRANT. HYDRANT CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 24" STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS.

9. WHEN IT IS NECESSARY TO LOWER OR RAISE WATER LINES AT STORM DRAINS AND OTHER UTILITY CROSSINGS, A MINIMUM CLEARANCE OF 18-INCHES SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF PIPES.

10. THE WATER QUALITY CONTROL DIVISION OF THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT [CDPHE] REQUIRES ALL WATER LINE CONTRACTORS TO POSSESS A CURRENT DISCHARGE PERMIT FOR DISCHARGES OF CHLORINATED AND PROCESS WATERS ASSOCIATED WITH THE INSTALLATION OF NEW MAINS OR CONDUITS. CONTACT CDPHE WATER QUALITY CONTROL DIVISION AT 303-692-3517 FOR INFORMATION ON OBTAINING THE REQUIRED PERMIT.

11. CONTRACTOR TO COORDINATE HORIZONTAL AND VERTICAL LOCATIONS OF UTILITY SERVICE CONNECTIONS TO BUILDING WITH MECHANICAL/PLUMBING PLANS PRIOR TO CONSTRUCTION. WHERE NEW WATER MAINS CONNECT TO EXISTING BUILDING SERVICES, CONTRACTOR SHALL LOCATE SAID SERVICES A MINIMUM OF FIVE (5) DAYS PRIOR TO TRENCHING OF NEW WATER MAIN. NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES.

12. CONTRACTOR TO INSTALL WATER MAINS AS SHOWN ON PLANS IN ACCORDANCE WITH MANUFACTURES RECOMMENDATION FOR JOINT INSERTION, VERTICAL AND HORIZONTAL DEFLECTIONS. IF DESIGN ALIGNMENT REQUIRES A HORIZONTAL OR VERTICAL DEFLECTION IN EXCESS OF PIPE MANUFACTURES ALLOWANCES, CONTRACTOR TO SUBMIT TO THE CONTRACTING OFFICER PROPOSED ALTERNATIVE SOLUTIONS TO ACHIEVE THE INTENT OF THE DESIGN ALIGNMENT.

SANITARY SEWER NOTES:

1. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SEWER POINTS OF CONNECTION PRIOR TO CONSTRUCTION OF ANY PROPOSED SEWER.

2. ALL SANITARY SEWER MAIN TESTING SHALL BE DONE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

3. ALL SANITARY SEWER MAIN CONSTRUCTION SHALL BE DONE BY A CONTRACTOR LICENSED IN THE STATE OF COLORADO. THE CONTRACTING OFFICER SHALL BE NOTIFIED [48] HOURS IN ADVANCE OF ANY PLANNED CONSTRUCTION.

4. DISTANCES FOR SANITARY SEWER ARE THE HORIZONTAL DISTANCES FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. THEREFORE, DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND MANHOLE WIDTHS.

5. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE, SUCH THAT THERE IS NO MORE THAN EIGHTEEN INCHES (18") FROM FINISHED GRADE TO THE TOP OF THE CONE SECTION. THE RIM SHALL BE LEFT 1/8-INCH TO 1/4-INCH BELOW FINISHED ASPHALT.

6. MANHOLE CONES SHALL BE ALIGNED TO PROVIDE A MINIMUM OF THREE FEET [3'] CLEARANCE BETWEEN THE MANHOLE RING AND THE LIP OF GUTTER.

7. CONTRACTOR TO COORDINATE HORIZONTAL AND VERTICAL LOCATIONS OF UTILITY SERVICE CONNECTIONS TO BUILDING WITH MECHANICAL/PLUMBING PLANS PRIOR TO CONSTRUCTION. WHERE NEW SANITARY LATERALS CONNECT TO EXISTING BUILDING SERVICES. CONTRACTOR SHALL LOCATE SAID LATERALS A MINIMUM OF FIVE (5) DAYS PRIOR TO TRENCHING OF NEW SANITARY MAIN. NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES.

8. NO BACKFILL MATERIAL SHALL BE PLACED ABOVE THE SPRINGLINE OF THE PIPE UNTIL A GOVERNMENT REPRESENTATIVE HAS AUTHORIZED BACKFILLING. IT SHALL BE THE DUTY OF THE CONTRACTOR TO NOTIFY THE CONTRACTING OFFICER FORTY EIGHT [48] HOURS IN ADVANCE OF PROPOSED BACKFILL OPERATIONS SO A GOVERNMENT REPRESENTATIVE MAY INSPECT THE PIPE AND THE BEDDING PRIOR TO BACKFILLING.


9. CONTRACTOR SHALL IMMEDIATELY REMOVE DEBRIS DEPOSITED INTO MANHOLES AND OTHER STRUCTURES TO ELIMINATE THE POSSIBILITY OF PROPERTY DAMAGE DUE TO THE DEBRIS CAUSING BACKUP INTO PRIVATE PROPERTIES. IF IT IS DETERMINED THAT DEBRIS CAUSED A BACKUP, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGES.

10. UNLESS NOTED OTHERWISE ON PLANS, INSTALL FOUR INCH (4") SANITARY SEWER SERVICE LINES AT 0.0208--FT/FT MINIMUM, 0.0800--FT/FT MAXIMUM SLOPE. INSTALL SIX INCH (6") SERVICE LINES AT 0.0104 FT/FT MINIMUM, 0.0600 FT/FT MAXIMUM SLOPE.

SURVEY NOTES:

1. TOPOGRAPHIC SURVEY SHOWN HEREON HAS BEEN PREPARED BY MARTIN/MARTIN, INC. IN OCTOBER 2020.

2. THE LOCATION AND LIMITS OF THE FEDERAL PROPERTY BOUNDARY IS NOT SHOWN HEREON AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE PRIOR TO CONSTRUCTION. NOTIFY THE CONTRACTING OFFICER IF THE LOCATION OF THE PROPERTY LINE RESULTS IN CONSTRUCTION OFF OF FEDERAL LAND.

	DESIGNED: VARIES	SUB SHEET NO. C0.2	TITLE OF SHEET NOTES	DRAWING NO. 121
	AEEL/RTP/CDS			176678
	TECH REVIEW: DCW			PMIS/PKG NO. 160755
	DATE: 03/10/2022			SHEET 6 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:43 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\160755\DRAWINGS\CIVIL\CDS\C1.0 SURVEY CONTROL PLAN.DWG

BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



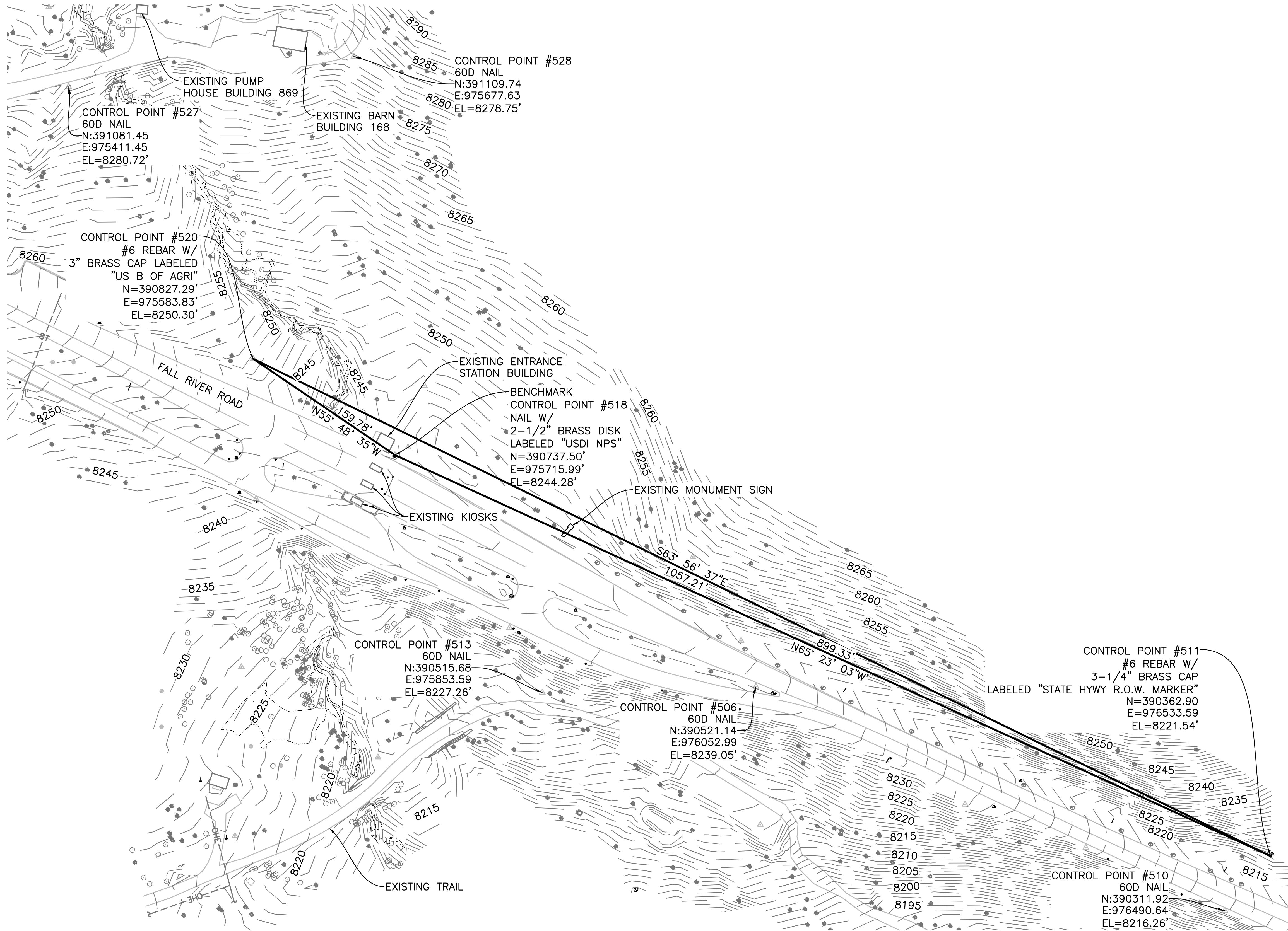
DESIGNED:
VARIES
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C1.0

TITLE OF SHEET
**SURVEY
CONTROL PLAN**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
7 OF 165



LEGEND

	CURB AND GUTTER
	CONTOUR
	CENTERLINE DITCH
	RIRAP
	PROPOSED TRAIL
	EDGE OF WATER
	STORM LINE
	MAPPED STORM LINE
	ELECTRIC LINE
	MAPPED ELECTRIC LINE
	OVERHEAD UTILITY
	TELE COMMUNICATION LINE
	FIBER OPTIC LINE
	SANITARY SEWER LINE
	MAPPED SANITARY SEWER LINE
	WATER LINE
	MAPPED WATER LINE
	MAPPED FIRE LINE
	GRAVEL
	PLANT
	EDGE OF ROAD
	WETLANDS
	SET PIN
	SMALL SIGN
	DECIDUOUS TREE
	CONIFER TREE
	BUSH
	BOULDER
	CONTROL POINT
	SPOT ELEVATION
	PILLAR/COLUMN
	SANITARY MANHOLE
	ELECTRIC OUTLET BOX
	VALVE BOX - WATER
	FIRE HYDRANT
	ELECTRIC METER
	TRANSFORMER
	CAMPFIRE PIT/GRILL
	WATER SPIGOT
	DRINKING FOUNTAIN
	ROOF DRAIN
	CLEANOUT
	CULVERT
	FLAG POLE

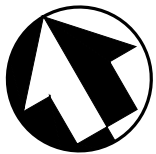
NOTES:

- SEE SHEET C0.0 - C0.2 FOR ADDITIONAL NOTES, LEGENDS AND ABBREVIATIONS.
- CONTRACTOR SHALL RESET EXISTING MONUMENTS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES. REFER TO DIVISION 31 SECTION "SITE CLEARING" FOR ADDITIONAL REQUIREMENTS.

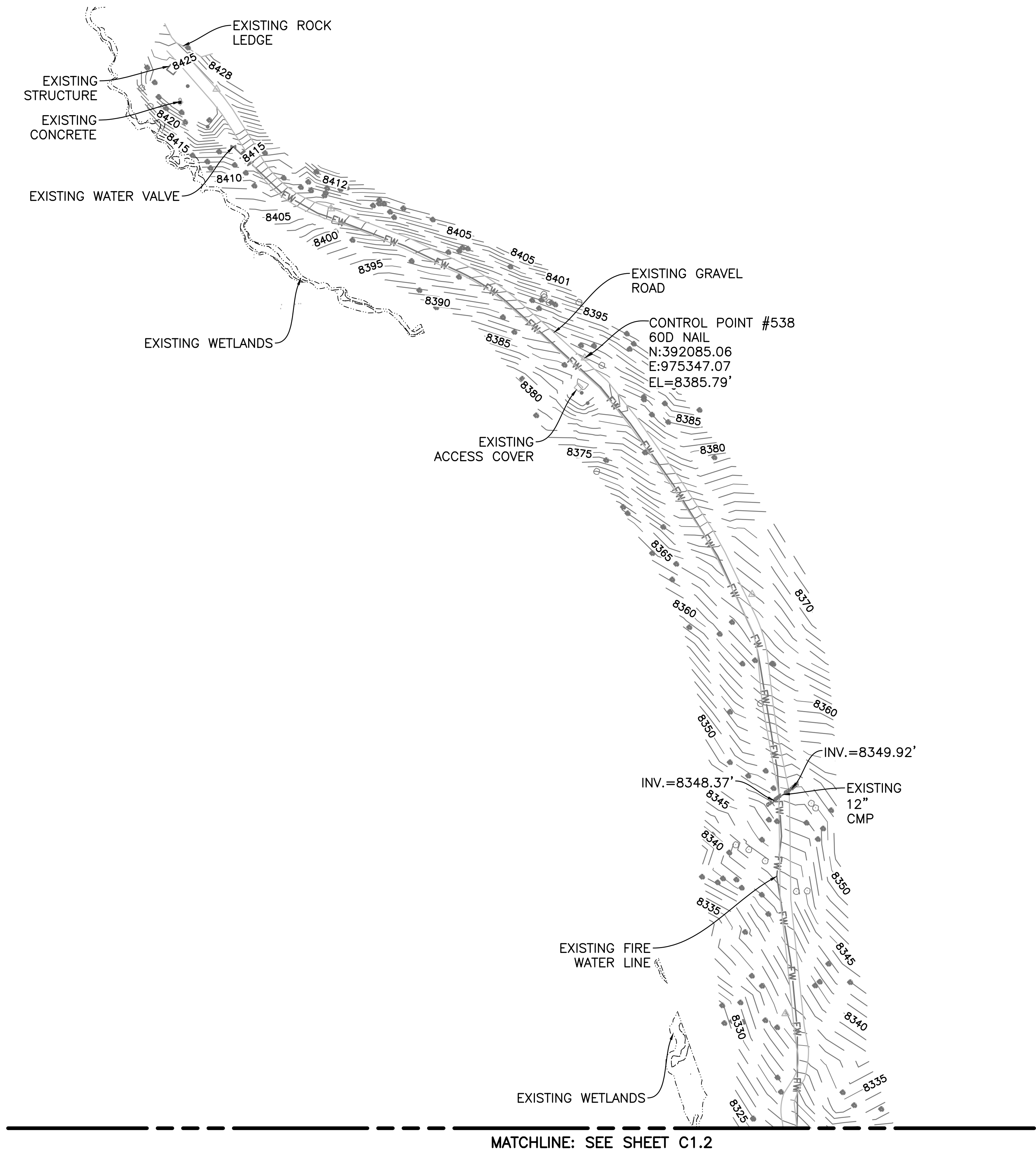
CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

50 0 50 100
SCALE OF FEET



PLOT DATE: Wednesday, March 9, 2022 2:44 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\60755\DRAWINGS\CIVIL\CDS\C1.0 EXISTING CONDITIONS.DWG



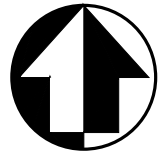
LEGEND	
	CURB AND GUTTER
	CONTOUR
	CENTERLINE DITCH
	RIRAP
	PROPOSED TRAIL
	EDGE OF WATER
	STORM LINE
	MAPPED STORM LINE
	ELECTRIC LINE
	MAPPED ELECTRIC LINE
	OVERHEAD UTILITY
	TELE COMMUNICATION LINE
	FIBER OPTIC LINE
	SANITARY SEWER LINE
	MAPPED SANITARY SEWER LINE
	WATER LINE
	MAPPED WATER LINE
	MAPPED FIRE LINE
	GRAVEL
	PLANT
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	WETLANDS
	SET PIN
	SMALL SIGN
	DECIDUOUS TREE
	CONIFER TREE
	BUSH
	BOULDER
	CONTROL POINT
	SPOT ELEVATION
	PILLAR/COLUMN
	SANITARY MANHOLE
	ELECTRIC OUTLET BOX
	VALVE BOX - WATER
	FIRE HYDRANT
	ELECTRIC METER
	TRANSFORMER
	CAMPFIRE PIT/GRILL
	WATER SPIGOT
	DRINKING FOUNTAIN
	ROOF DRAIN
	CLEANOUT
	CULVERT
	FLAG POLE

NOTES:

1. SEE SHEET C0.0 - C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
2. EXISTING CONDITIONS ARE BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY MARTIN/MARTIN, INC. IN OCTOBER 2020.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING



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DCW
DATE:
03/10/2022

SUB SHEET NO.

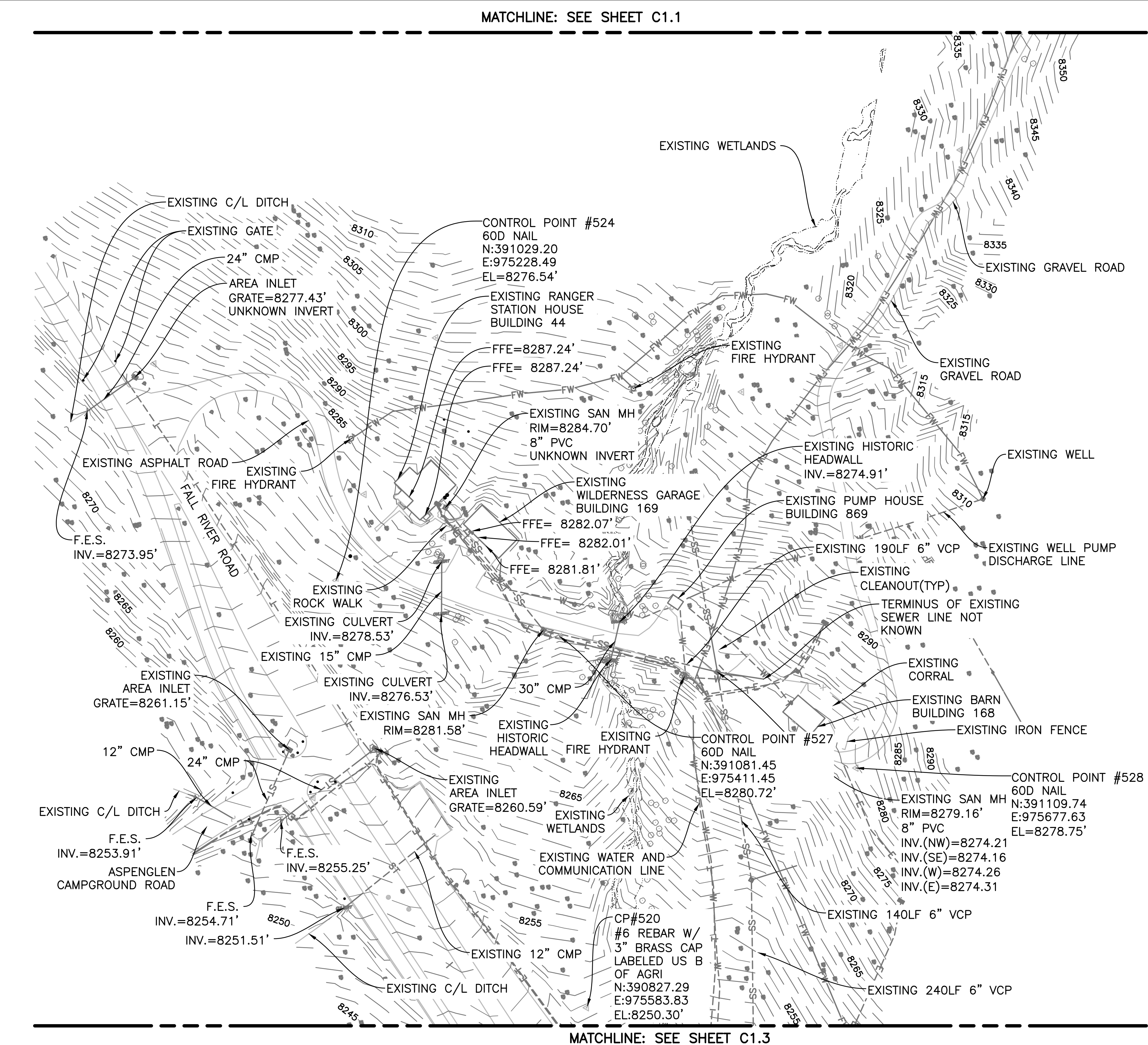
C1.1

TITLE OF SHEET
**EXISTING
CONDITIONS**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
8 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:45 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDs\C1.2 EXISTING CONDITIONS.dwg



LEGEND

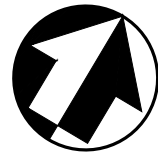
	CURB AND GUTTER
	CONTOUR
	CENTERLINE DITCH
	RIRAP
	PROPOSED TRAIL
	EDGE OF WATER
	STORM LINE
	MAPPED STORM LINE
	ELECTRIC LINE
	MAPPED ELECTRIC LINE
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	WETLANDS
	SET PIN
	SMALL SIGN
	DECIDUOUS TREE
	CONIFER TREE
	BUSH
	BOULDER
	CONTROL POINT
	SPOT ELEVATION
	PILLAR/COLUMN
	SANITARY MANHOLE
	ELECTRIC OUTLET BOX
	VALVE BOX - WATER
	FIRE HYDRANT
	ELECTRIC METER
	TRANSFORMER
	CAMPFIRE PIT/GRILL
	WATER SPIGOT
	DRINKING FOUNTAIN
	ROOF DRAIN
	CLEANOUT
	CULVERT
	FLAG POLE

NOTES:

- SEE SHEET SET C0.0 - C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
- EXISTING CONDITIONS ARE BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY MARTIN/MARTIN, INC. IN OCTOBER 2020.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



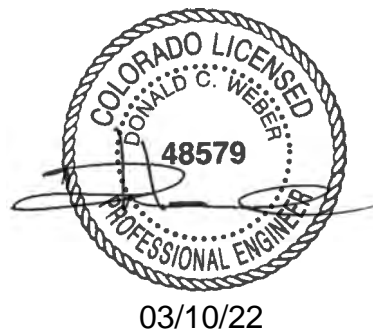
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



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03/10/2022

SUB SHEET NO.

C1.2

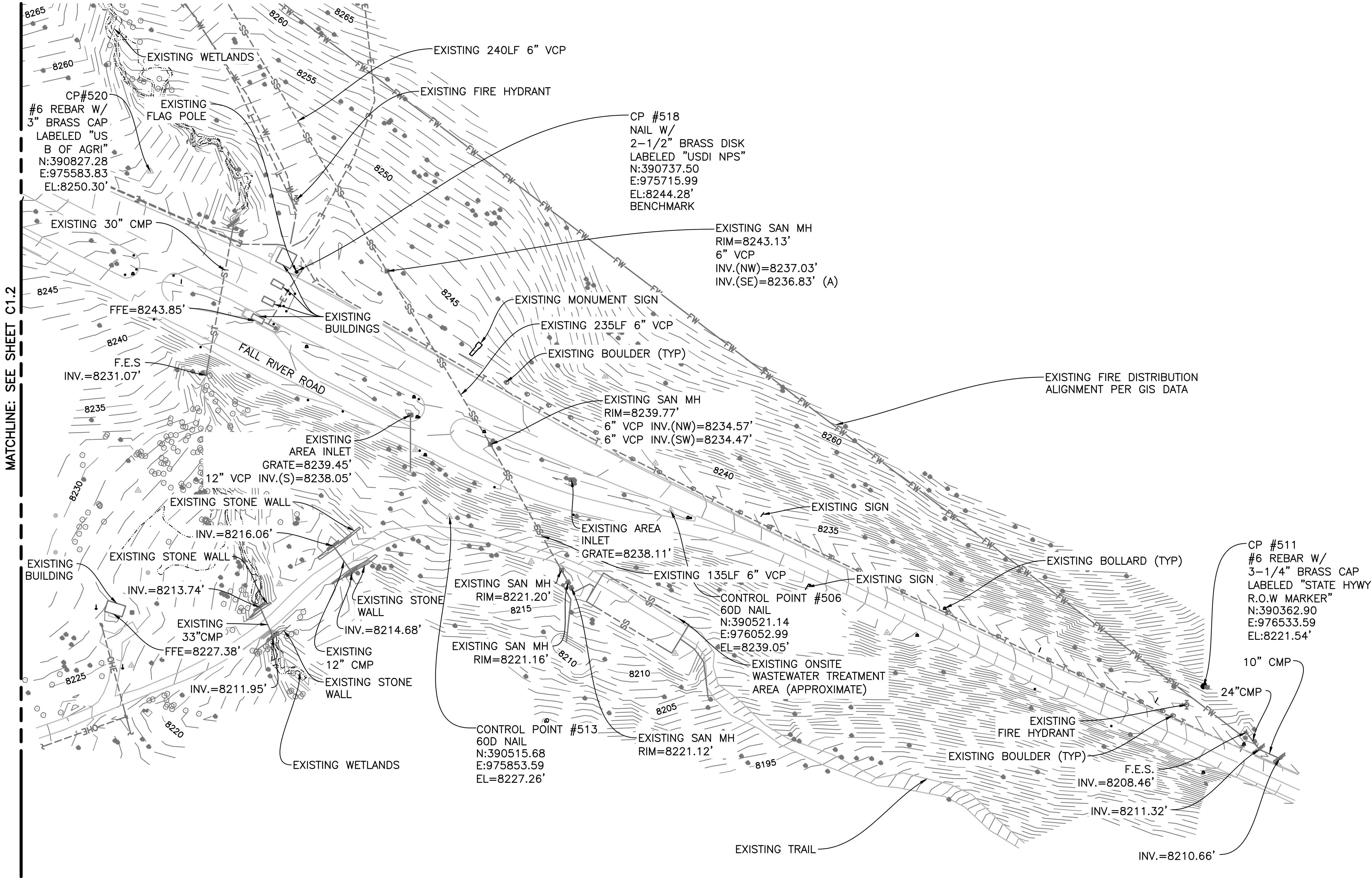
TITLE OF SHEET
EXISTING
CONDITIONS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
9 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:46 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\60755\DRAWINGS\CIVIL\CDS\C1.3 EXISTING CONDITIONS.DWG

MATCHLINE: SEE SHEET C1.2



LEGEND

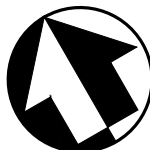
	CURB AND GUTTER
	CONTOUR
	CENTERLINE DITCH
	RIRAP
	PROPOSED TRAIL
	EDGE OF WATER
	STORM LINE
	MAPPED STORM LINE
	ELECTRIC LINE
	MAPPED ELECTRIC LINE
	OVERHEAD UTILITY
	TELE COMMUNICATION LINE
	FIBER OPTIC LINE
	SANITARY SEWER LINE
	MAPPED SANITARY SEWER LINE
	WATER LINE
	MAPPED WATER LINE
	MAPPED FIRE LINE
	GRAVEL
	PLANT
	EDGE OF ROAD
	WETLANDS
	SET PIN
	SMALL SIGN
	DECIDUOUS TREE
	CONIFER TREE
	BUSH
	BOULDER
	CONTROL POINT
	SPOT ELEVATION
	PILLAR/COLUMN
	SANITARY MANHOLE
	ELECTRIC OUTLET BOX
	VALVE BOX - WATER
	FIRE HYDRANT
	ELECTRIC METER
	TRANSFORMER
	CAMPFIRE PIT/GRILL
	WATER SPIGOT
	DRINKING FOUNTAIN
	ROOF DRAIN
	CLEANOUT
	CULVERT
	FLAG POLE

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

NOTES:

- SEE SHEET C001 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
- EXISTING CONDITIONS ARE BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY MARTIN/MARTIN, INC. IN OCTOBER 2020.
- THE LOCATION OF THE EXISTING ONSITE WASTEWATER TREATMENT SYSTEM IS APPROXIMATED BASED ON RECORD DRAWINGS PROVIDED BY THE GOVERNMENT. CONTRACTOR SHALL LOCATE THE VERTICAL AND HORIZONTAL LOCATION (POTHOLE) PRIOR TO CONSTRUCTION. NOTIFY THE CONTRACTING OFFICER IF LOCATION OF EXISTING SYSTEM CONFLICT WITH NEW IMPROVEMENTS.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



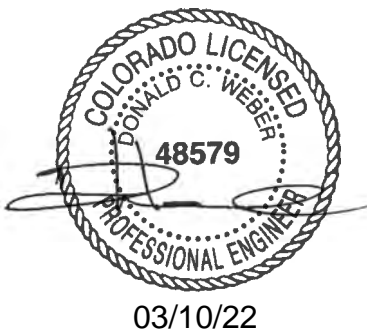
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING



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TECH REVIEW:
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DATE:
03/10/2022

SUB SHEET NO.
C1.3

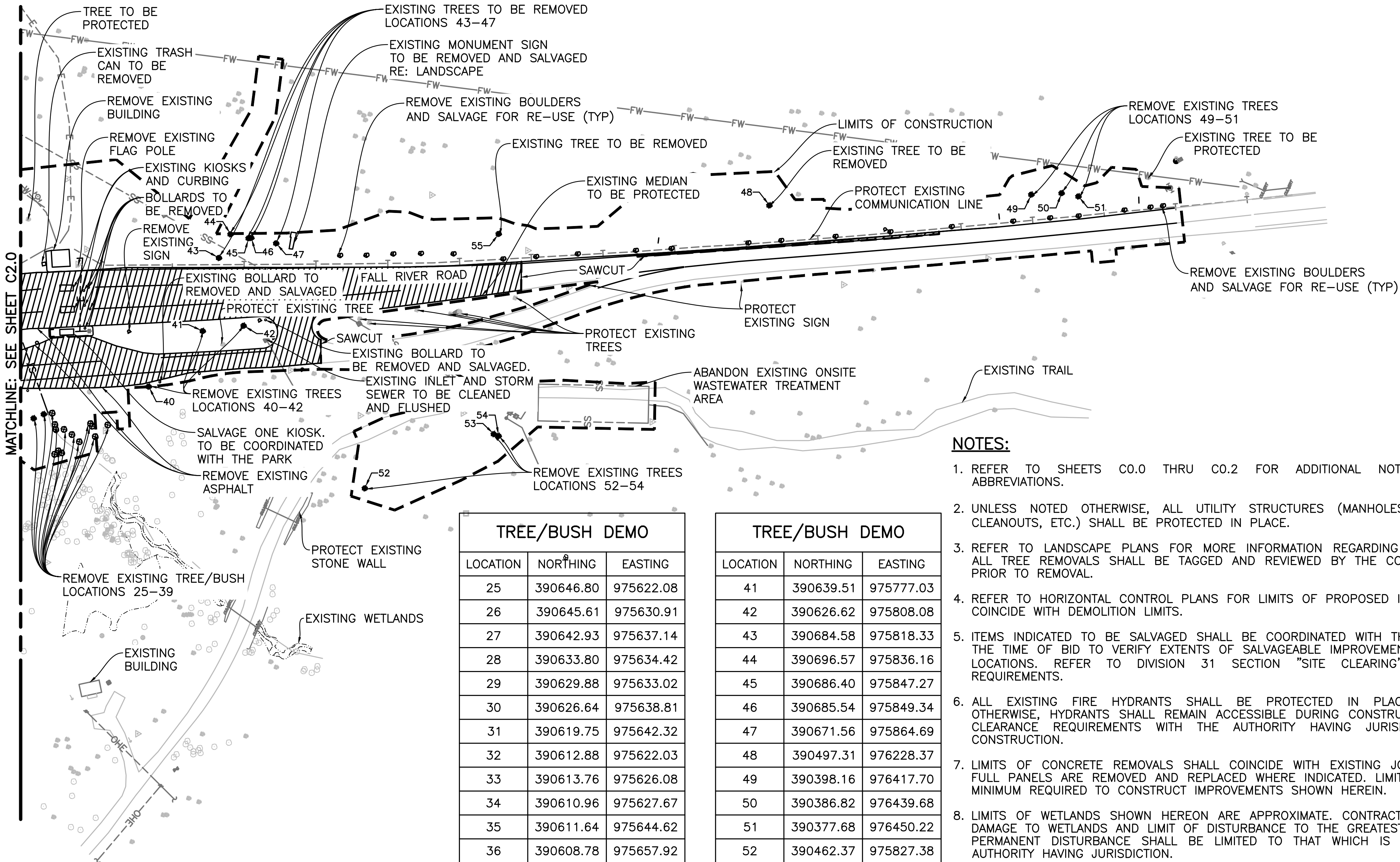
TITLE OF SHEET
**EXISTING
CONDITIONS**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
10 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:48 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\60755\DRAWINGS\CIVIL\CDS\C2.1 SITE DEMOLITION PLAN.DWG

MATCHLINE: SEE SHEET C2.0



NOTES:

- REFER TO SHEETS C0.0 THRU C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
- UNLESS NOTED OTHERWISE, ALL UTILITY STRUCTURES (MANHOLES, INLETS, VALVES, CLEANOUTS, ETC.) SHALL BE PROTECTED IN PLACE.
- REFER TO LANDSCAPE PLANS FOR MORE INFORMATION REGARDING TREE PROTECTION. ALL TREE REMOVALS SHALL BE TAGGED AND REVIEWED BY THE CONTRACTING OFFICER PRIOR TO REMOVAL.
- REFER TO HORIZONTAL CONTROL PLANS FOR LIMITS OF PROPOSED IMPROVEMENTS THAT COINCIDE WITH DEMOLITION LIMITS.
- ITEMS INDICATED TO BE SALVAGED SHALL BE COORDINATED WITH THE GOVERNMENT AT THE TIME OF BID TO VERIFY EXTENTS OF SALVAGEABLE IMPROVEMENTS AND STOCKPILE LOCATIONS. REFER TO DIVISION 31 SECTION "SITE CLEARING" FOR ADDITIONAL REQUIREMENTS.
- ALL EXISTING FIRE HYDRANTS SHALL BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE, HYDRANTS SHALL REMAIN ACCESSIBLE DURING CONSTRUCTION. COORDINATE CLEARANCE REQUIREMENTS WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO CONSTRUCTION.
- LIMITS OF CONCRETE REMOVALS SHALL COINCIDE WITH EXISTING JOINING SUCH THAT FULL PANELS ARE REMOVED AND REPLACED WHERE INDICATED. LIMITS SHOWN ARE THE MINIMUM REQUIRED TO CONSTRUCT IMPROVEMENTS SHOWN HEREIN.
- LIMITS OF WETLANDS SHOWN HEREON ARE APPROXIMATE. CONTRACTOR SHALL MITIGATE DAMAGE TO WETLANDS AND LIMIT OF DISTURBANCE TO THE GREATEST EXTENT POSSIBLE. PERMANENT DISTURBANCE SHALL BE LIMITED TO THAT WHICH IS PERMITTED BY THE AUTHORITY HAVING JURISDICTION.
- REFER TO SHEETS C3.5 AND C3.6 FOR REMOVAL, PROTECTION AND RESETTING OF EXISTING SIGNAGE.
- CONTRACTOR TO RESET EXISTING SURVEY MONUMENT (CP #518) THAT IS LOCATED ADJACENT TO THE EXISTING FLAG POLE. COORDINATE NEW MONUMENT LOCATION WITH THE CONTRACTING OFFICER PRIOR TO CONSTRUCTING MONUMENT AND SUBMIT MONUMENT RECORD SHEETS AS REQUIRED BY THE GOVERNMENT.

EXISTING	LEGEND	DEMOLITION
5750	LIMITS OF CONSTRUCTION	---
ST	CONTOURS	---
ST	WETLANDS	---
ST	STORM SEWER	---
ST	STORM SEWER	---
CULVERT	CULVERT	---
SM	STORM MANHOLE	SM
SS	SANITARY SEWER	---
SS	SANITARY MANHOLE	SS
W	WATER LINE	---
FW	FIRE WATER LINE	---
WV	WATER VALVE	WV
FH	FIRE HYDRANT	FH
YH	YARD HYDRANT	YH
OHE	OVERHEAD ELECTRIC	---
E	ELECTRIC LINE	---
EBM	ELECTRIC BOX/METER	EBM
C	COMMUNICATION LINE	---
FO	FIBER OPTIC LINE	---
S	SIGN	S
CP	CONTROL POINT	CP
B	BOLLARD	B
FP	FLAG POLE	FP
ET	EVERGREEN TREE	ET
B	BOULDER	B
CG	CURB & GUTTER	CG
A	ASPHALT	A
SC	SAWCUT	SC
D	DRIVE	D
DR	DRIVE	DR

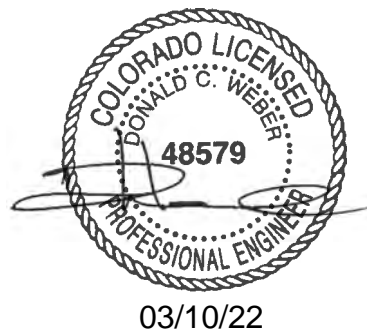
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C2.1

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SCALE OF FEET

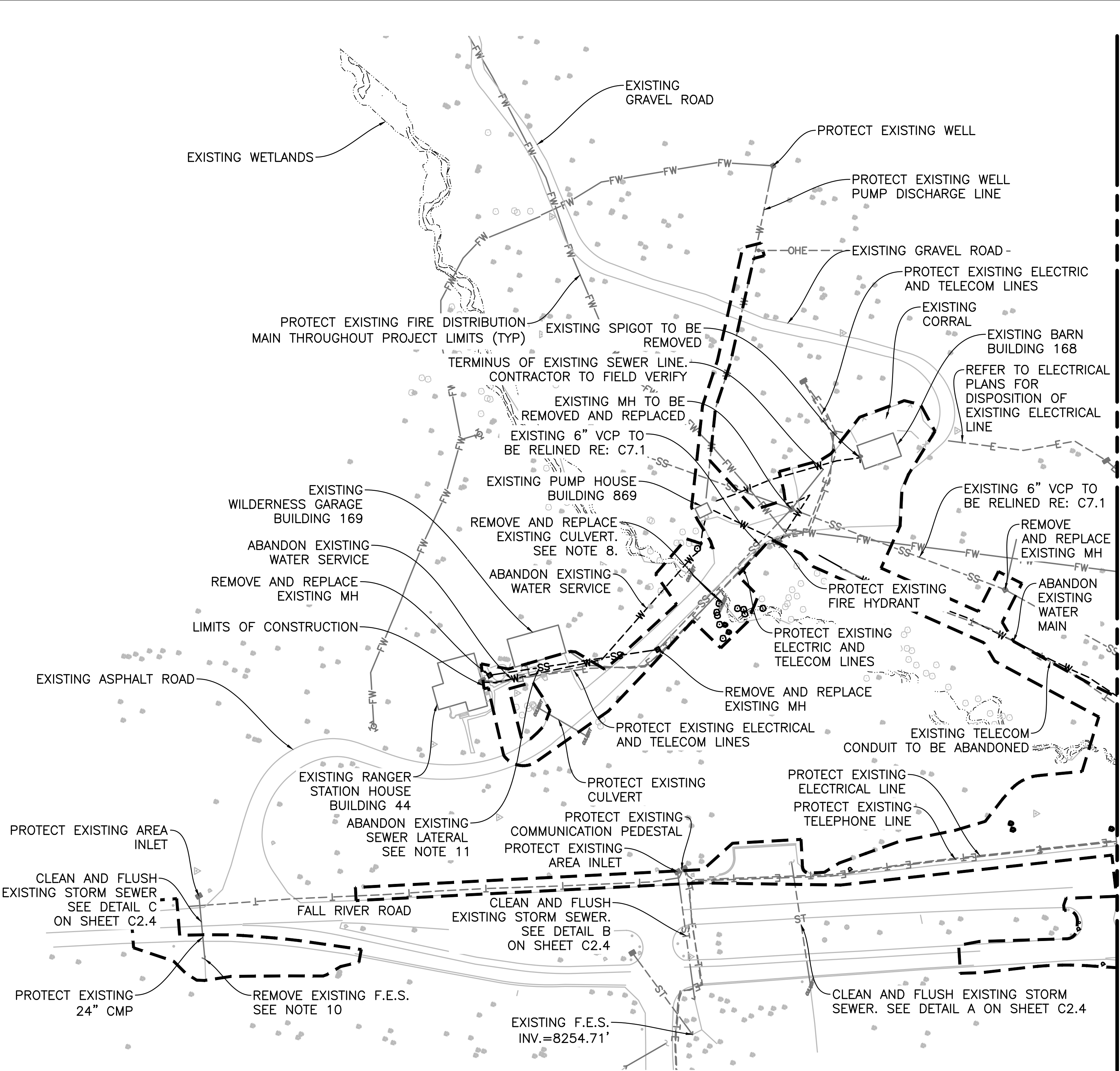
TITLE OF SHEET
**SITE
DEMOLITION
PLAN**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
12 OF **165**

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

PLOT DATE: Wednesday, March 9, 2022 2:49 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\60755\DRAWINGS\CIVIL\CD5\C2.2 UTILITY DEMOLITION PLAN.DWG



MATCHLINE: SEE SHEET C2.3

NOTES:

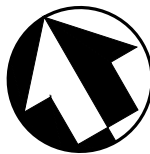
1. REFER TO SHEETS C0.0 THRU C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
2. UNLESS NOTED OTHERWISE, ALL UTILITY STRUCTURES (MANHOLES, INLETS, VALVES, CLEANOUTS, ETC.) SHALL BE PROTECTED IN PLACE.
3. EXISTING WATER AND SANITARY SERVICE LATERALS FOR BUILDINGS WITHIN THE RANGER STATION AREA SHALL BE REMOVED WITHIN THREE FEET OF THE EXISTING BUILDING FOR NEW CONNECTION
4. REFER TO HORIZONTAL CONTROL PLANS FOR LIMITS OF PROPOSED IMPROVEMENTS THAT COINCIDE WITH DEMOLITION LIMITS.
5. CONTRACTOR SHALL BE AWARE THAT THERE ARE TWO (2) SEPARATE WATER DISTRIBUTION SYSTEMS WITHIN THE PROJECT LIMITS. THE DOMESTIC WATER SYSTEM IS TO BE REMOVED AND/OR ABANDONED AND THE EXISTING FIRE DISTRIBUTION SYSTEM AND ASSOCIATED FIRE HYDRANTS SHALL BE PROTECTED IN PLACE.
6. ALL EXISTING FIRE HYDRANTS SHALL BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE. HYDRANTS SHALL REMAIN ACCESSIBLE DURING CONSTRUCTION. COORDINATE CLEARANCE REQUIREMENTS WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL COORDINATE AND VERIFY REMOVAL OF ELECTRICAL, GAS, AND COMMUNICATION LINES NOTED TO BE REMOVED PRIOR TO DEMOLITION ACTIVITIES. PROVIDE TEMPORARY SERVICE AS REQUIRED AND COORDINATE WITH THE UTILITY PROVIDER AS INDICATED. IF DAMAGED ELECTRICAL CONDUITS ARE EXPOSED DURING CONSTRUCTION, NOTIFY THE CONTRACTING OFFICER.
8. REFER TO LANDSCAPE PLANS FOR REQUIREMENTS TO SALVAGE EXISTING ROCK FOR RE-USE. SEE STRUCTURAL AND LANDSCAPE PLANS FOR HEADWALL RECONSTRUCTION.
9. LIMITS OF WETLANDS SHOWN HEREON ARE APPROXIMATE. CONTRACTOR SHALL MITIGATE DAMAGE TO WETLANDS AND LIMIT OF DISTURBANCE TO THE GREATEST EXTENT POSSIBLE. PERMANENT DISTURBANCE SHALL BE LIMITED TO THAT WHICH IS PERMITTED BY THE AUTHORITY HAVING JURISDICTION.
10. CONTRACTOR TO INSPECT EXISTING PIPE TO REMAIN AND NOTIFY THE CONTRACTING OFFICER IF THE CONDITION IS RUSTED, DETERIORATED OR OTHERWISE NOT ABLE TO RECEIVE NEW CMP PIPE EXTENSION. NOTIFY THE CONTRACTING OFFICER PRIOR TO CONSTRUCTION.
11. REMOVE PORTIONS OF EXISTING PIPE THAT CONFLICT WITH NEW IMPROVEMENTS
12. CONTRACTOR TO FOLLOW ALL FEDERAL, STATE, AND LOCAL CODES AND REQUIREMENTS FOR THE ABANDONMENT OF THE EXISTING SEPTIC TANK, DISCHARGE PIPING, AND ON-SITE WASTEWATER TREATMENT AREA. RE: SPECS.
13. REFER TO LANDSCAPE PLANS FOR MORE INFORMATION REGARDING TREE PROTECTION. ALL TREE REMOVALS SHALL BE TAGGED AND REVIEWED BY THE CONTRACTING OFFICER PRIOR TO REMOVAL.

LEGEND		
EXISTING	LIMITS OF CONSTRUCTION	DEMOLITION
-----S750-----	CONTOUR	-----
-----W-----	WETLANDS	-----
-----ST-----	STORM SEWER MAPPED	-----ST-----
CULVERT	STORM SEWER CULVERT	CULVERT
ST	STORM MANHOLE	ST
SS	SANITARY SEWER	SS
SS	SANITARY MANHOLE	SS
W	WATER LINE	W
FW	FIRE WATER LINE	
WV	WATER VALVE	WV
FD	FIRE HYDRANT	
YH	YARD HYDRANT	YH
OHE	OVERHEAD ELECTRIC	
E	ELECTRIC LINE	E
EB	ELECTRIC BOX/METER	EB
T	TELE COMMUNICATION LINE	
FO	FIBER OPTIC LINE	
Ω	SIGN	Ω
△	CONTROL POINT	
○	DECIDUOUS TREE	
★	EVERGREEN TREE	★
⊙	BOULDER	⊙
DRIVE	DRIVE	DRIVE

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

50 0 50 100
SCALE OF FEET



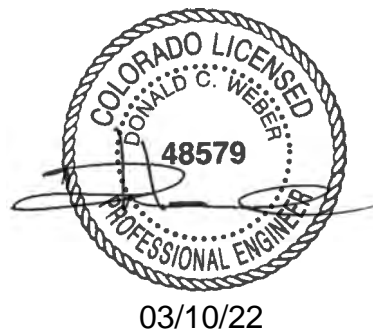
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING



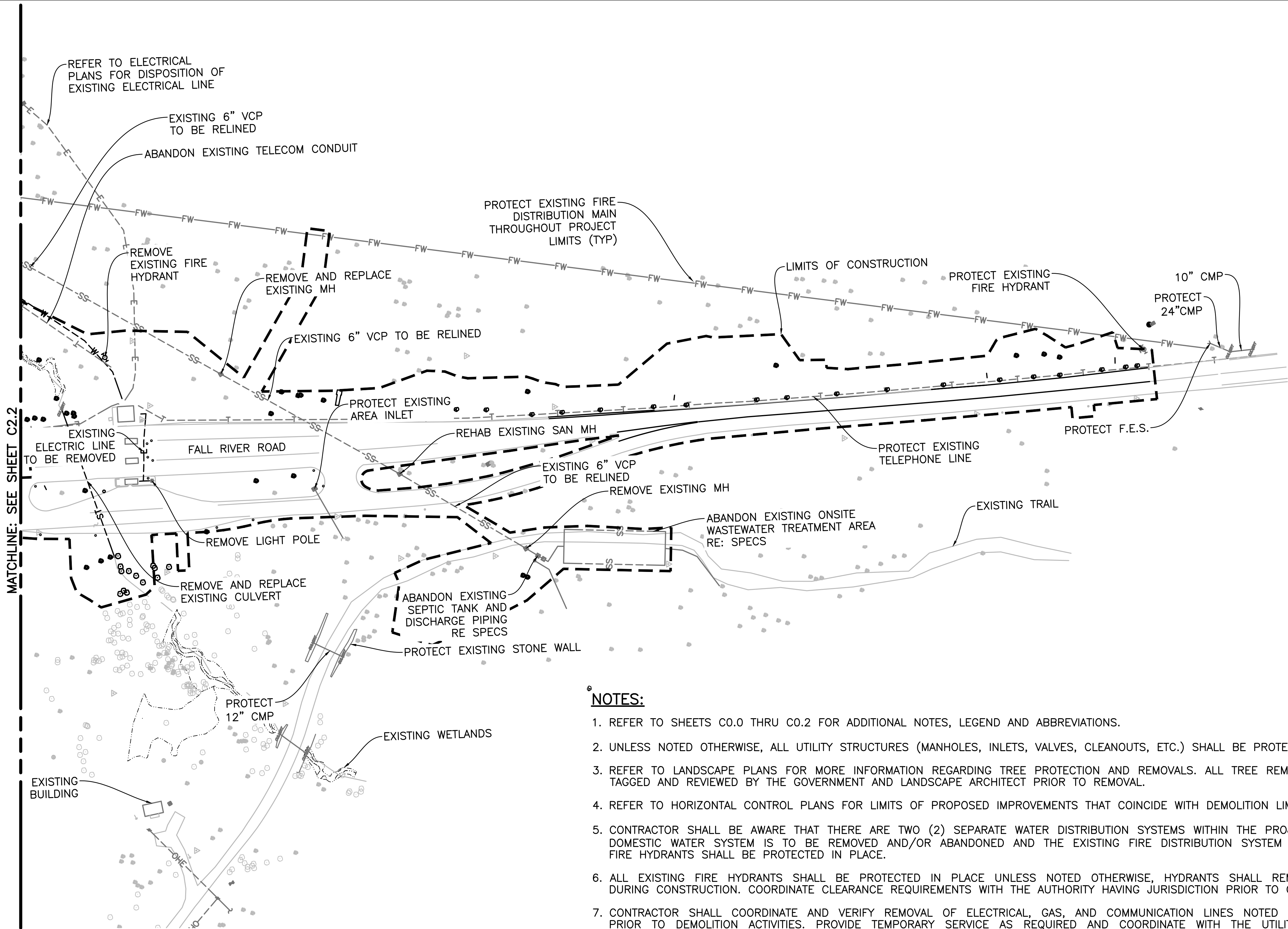
DESIGNED:
VARIES
CADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C2.2

TITLE OF SHEET
**UTILITY
DEMOLITION
PLAN**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
13 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:49 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\60755\DRAWINGS\CIVIL\CD5\2.4 UTILITY DEMOLITION PLANDWG



EXISTING	LEGEND	DEMOLITION
	LIMITS OF CONSTRUCTION	-----
-----5750-----	CONTOUR	
-----b-----	WETLANDS	
-----ST-----	STORM SEWER MAPPED	-----b-----
CULVERT	STORM SEWER CULVERT	CULVERT
⊗	STORM MANHOLE	⊗
-----SS-----	SANITARY SEWER	-----SS-----
⊗	SANITARY MANHOLE	⊗
-----W-----	WATER LINE	-----W-----
FW	FIRE WATER LINE	
⊗	WATER VALVE	⊗
⊗	FIRE HYDRANT	
⊗	YARD HYDRANT	⊗
-----OHE-----	OVERHEAD ELECTRIC	
-----E-----	ELECTRIC LINE	-----E-----
⊗	ELECTRIC BOX/METER	⊗
-----T-----	TELE COMMUNICATION LINE	
-----FO-----	FIBER OPTIC LINE	
⊗	SIGN	⊗
⊗	CONTROL POINT	
⊗	DECIDUOUS TREE	
⊗	EVERGREEN TREE	⊗
⊗	BOULDER	⊗
⊗	DRIVE	⊗
	DRIVE	⊗

NOTES:

1. REFER TO SHEETS C0.0 THRU C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
2. UNLESS NOTED OTHERWISE, ALL UTILITY STRUCTURES (MANHOLES, INLETS, VALVES, CLEANOUTS, ETC.) SHALL BE PROTECTED IN PLACE.
3. REFER TO LANDSCAPE PLANS FOR MORE INFORMATION REGARDING TREE PROTECTION AND REMOVALS. ALL TREE REMOVALS SHALL BE TAGGED AND REVIEWED BY THE GOVERNMENT AND LANDSCAPE ARCHITECT PRIOR TO REMOVAL.
4. REFER TO HORIZONTAL CONTROL PLANS FOR LIMITS OF PROPOSED IMPROVEMENTS THAT COINCIDE WITH DEMOLITION LIMITS.
5. CONTRACTOR SHALL BE AWARE THAT THERE ARE TWO (2) SEPARATE WATER DISTRIBUTION SYSTEMS WITHIN THE PROJECT LIMITS. THE DOMESTIC WATER SYSTEM IS TO BE REMOVED AND/OR ABANDONED AND THE EXISTING FIRE DISTRIBUTION SYSTEM AND ASSOCIATED FIRE HYDRANTS SHALL BE PROTECTED IN PLACE.
6. ALL EXISTING FIRE HYDRANTS SHALL BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE, HYDRANTS SHALL REMAIN ACCESSIBLE DURING CONSTRUCTION. COORDINATE CLEARANCE REQUIREMENTS WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL COORDINATE AND VERIFY REMOVAL OF ELECTRICAL, GAS, AND COMMUNICATION LINES NOTED TO BE REMOVED PRIOR TO DEMOLITION ACTIVITIES. PROVIDE TEMPORARY SERVICE AS REQUIRED AND COORDINATE WITH THE UTILITY PROVIDER AS INDICATED. IF DAMAGED ELECTRICAL CONDUITS ARE EXPOSED DURING CONSTRUCTION, NOTIFY THE CONTRACTING OFFICER
8. LIMITS OF WETLANDS SHOWN HEREON ARE APPROXIMATE. CONTRACTOR SHALL MITIGATE DAMAGE TO WETLANDS AND LIMIT OF DISTURBANCE TO THE GREATEST EXTENT POSSIBLE. PERMANENT DISTURBANCE SHALL BE LIMITED TO THAT WHICH IS PERMITTED BY THE AUTHORITY HAVING JURISDICTION.
9. CONTRACTOR TO FOLLOW ALL FEDERAL, STATE, AND LOCAL CODES AND REQUIREMENTS FOR THE ABANDONMENT OF THE EXISTING SEPTIC TANK, DISCHARGE PIPING, AND ON-SITE WASTEWATER TREATMENT AREA. RE: SPECS.
- 10.REFER TO LANDSCAPE PLANS FOR MORE INFORMATION REGARDING TREE PROTECTION. ALL TREE REMOVALS SHALL BE TAGGED AND REVIEWED BY THE CONTRACTING OFFICER PRIOR TO REMOVAL.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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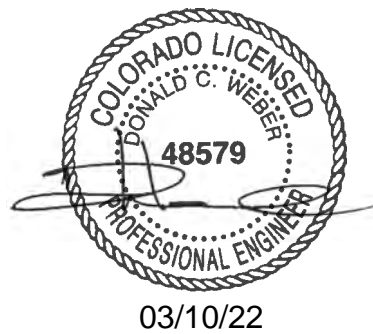
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C2.3

TITLE OF SHEET
UTILITY
DEMOLITION
PLAN
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
14 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:50 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\60755\DRAWINGS\CIVIL\CDS\C2.4 EXISTING STORM SEWER MAINTENANCE.DWG

BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

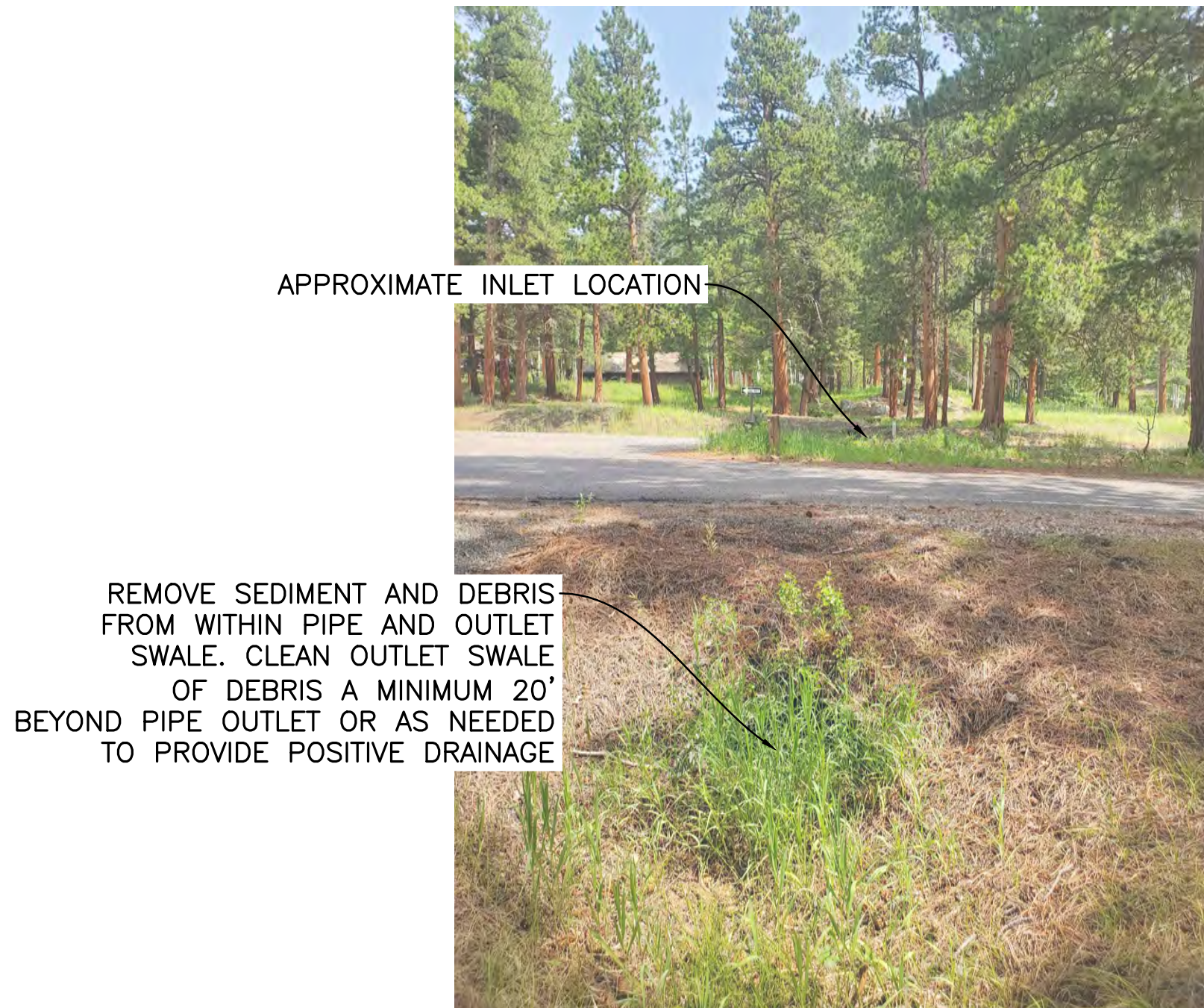
ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

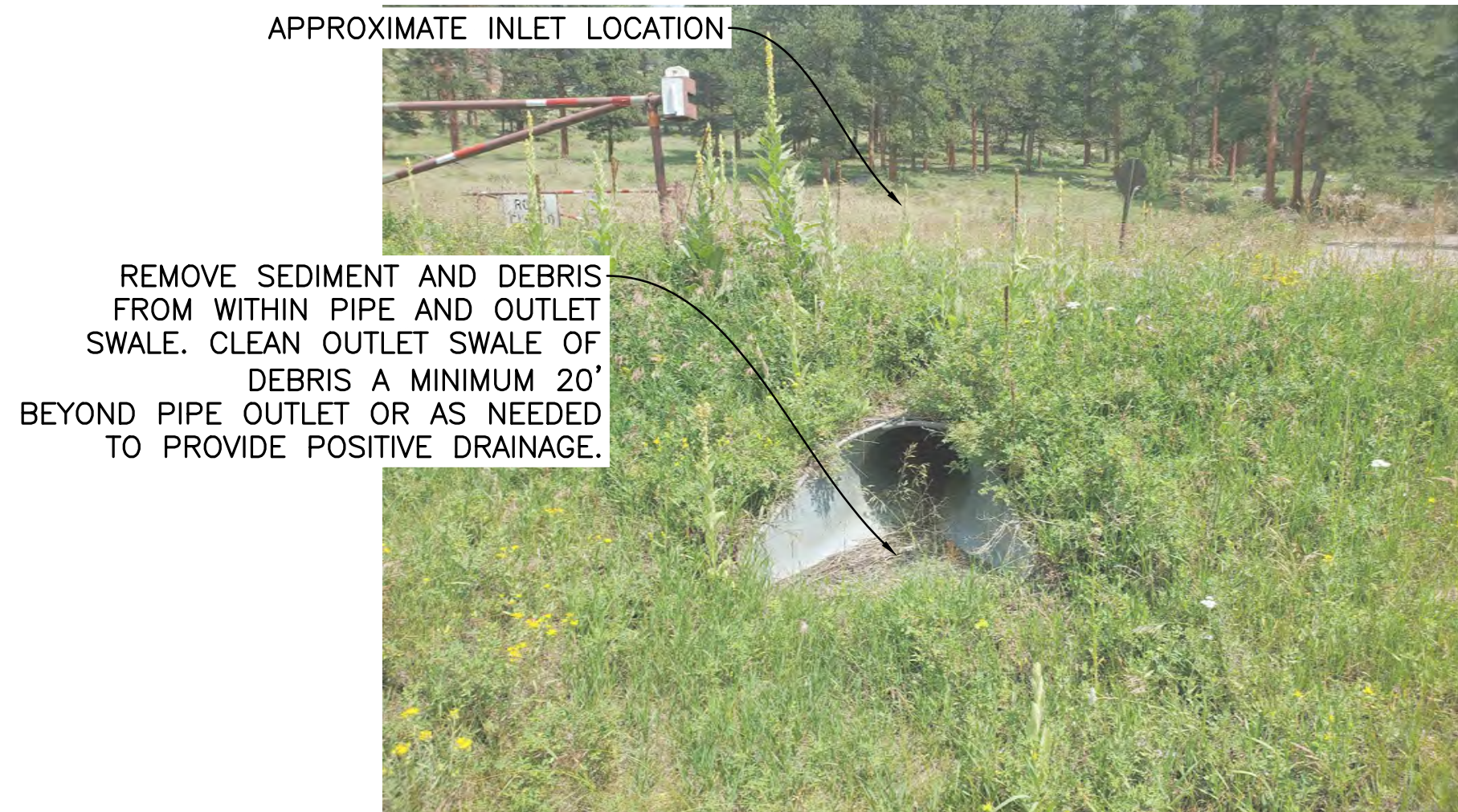
PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



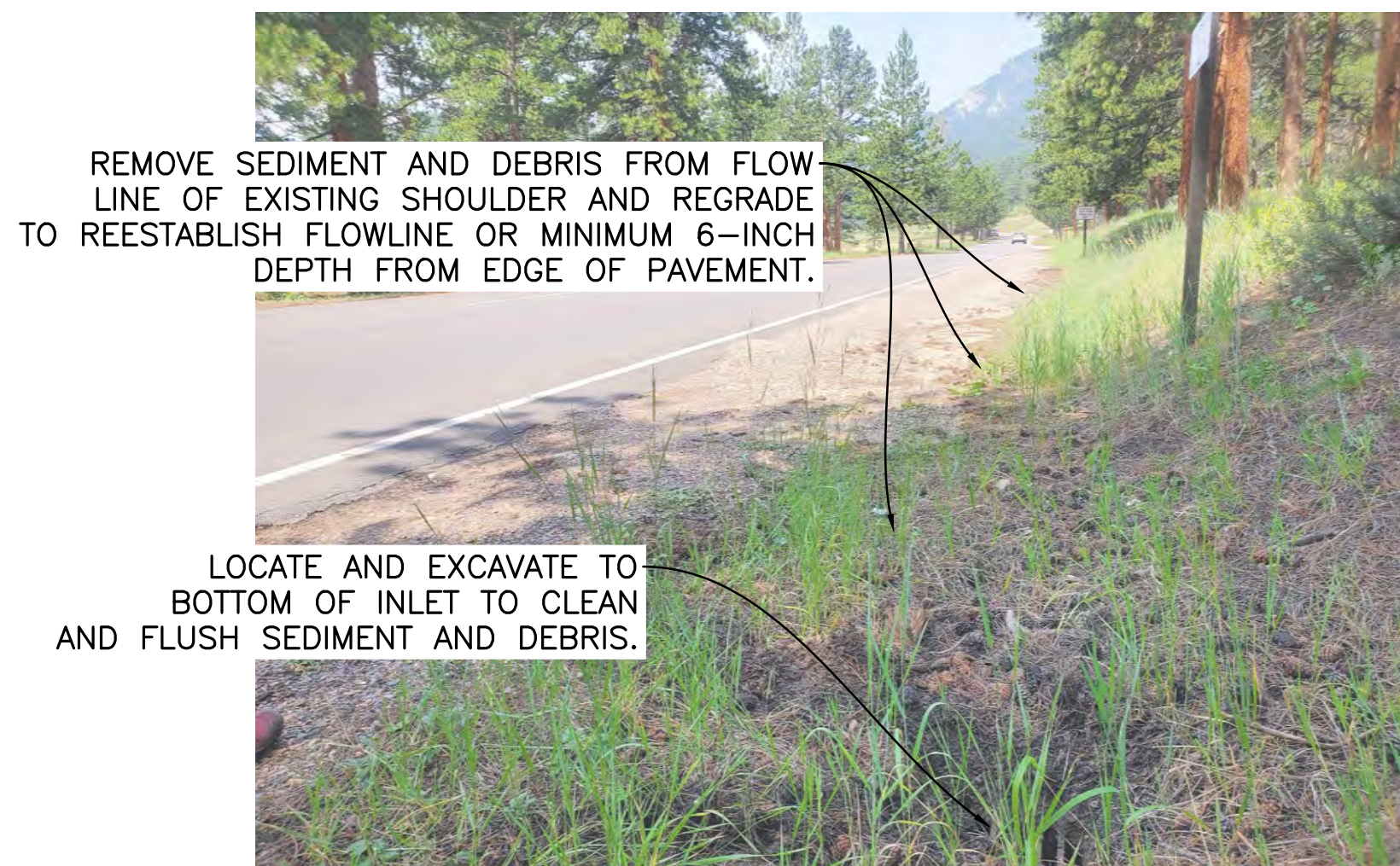
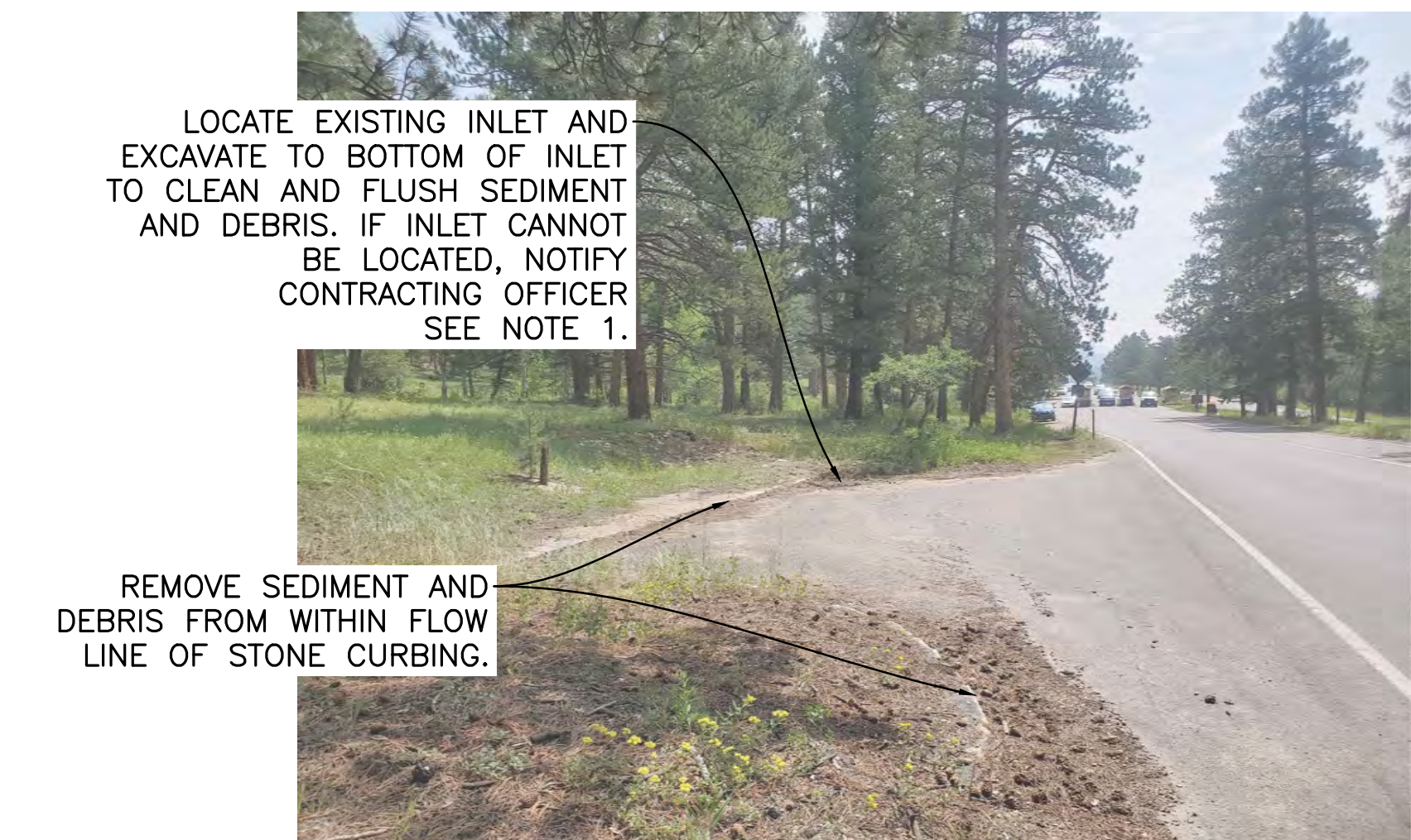
STORM SEWER MAINTENANCE DETAIL 'A'



STORM SEWER MAINTENANCE DETAIL 'B'



STORM SEWER MAINTENANCE DETAIL 'C'



NOTES:

1. THE EXISTING INLET COULD NOT BE FIELD VERIFIED DURING COLLECTION OF TOPOGRAPHIC SURVEY AND IN SUBSEQUENT FIELD INVESTIGATIONS. CONTRACTOR SHALL REMOVE SEDIMENT AND VEGETATION TO LOCATE INLET AND NOTIFY THE CONTRACTING OFFICER IF INLET DOES NOT EXIST. CONTRACTOR SHALL CARRY AN ALLOWANCE FOR CONSTRUCTING A NEW INLET OVER THE EXISTING STORM SEWER PIPE. ASSUME A CDOT TYPE C INLET IN ACCORDANCE WITH CDOT STANDARD PLAN M-604-10.



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AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

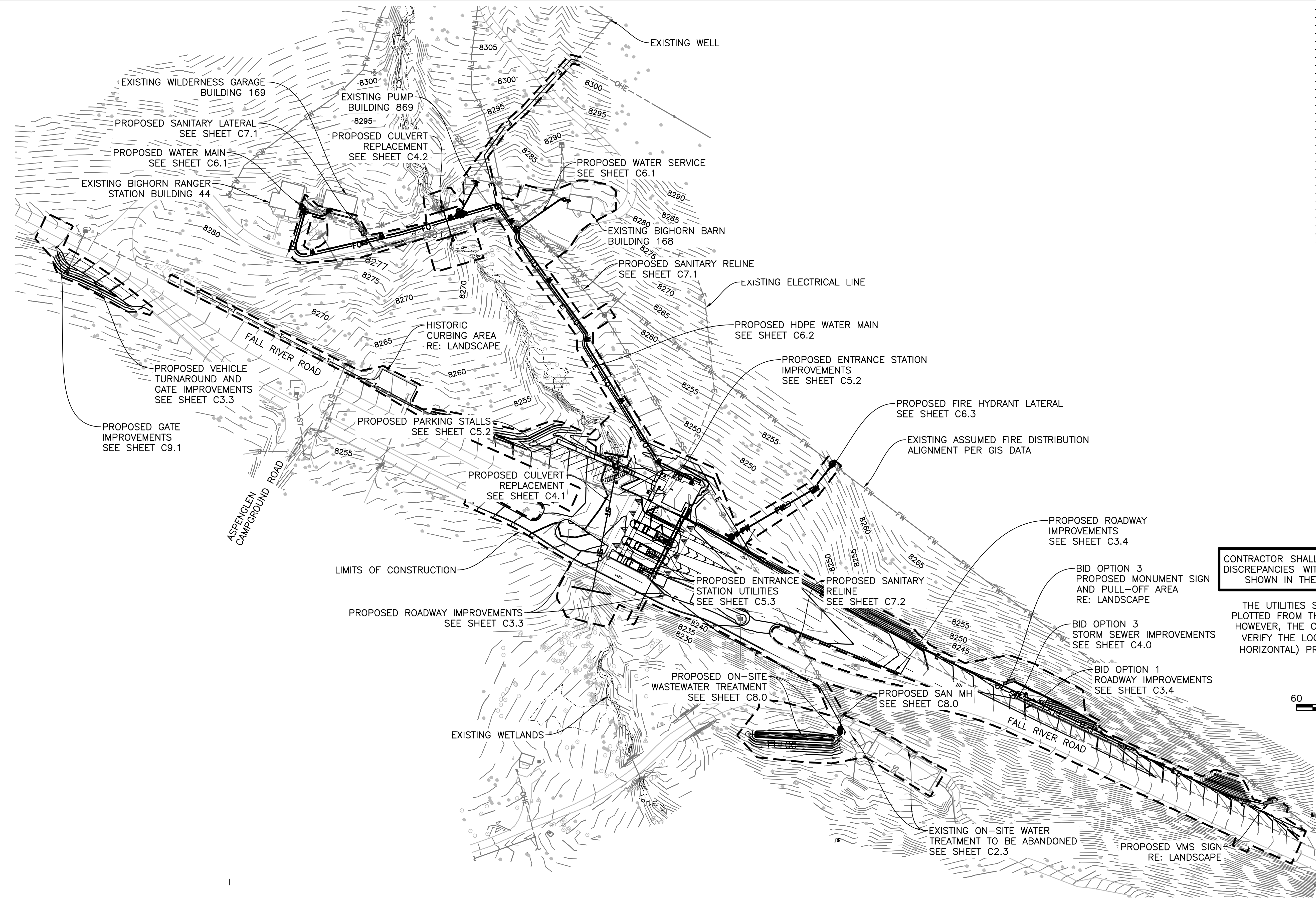
SUB SHEET NO.

C2.4

TITLE OF SHEET
**EXISTING
STORM SEWER
MAINTENANCE**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
15 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:52 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\60755\DRAWINGS\CIVIL\CDS\C2.5 OVERALL SITE PLAN.DWG



CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

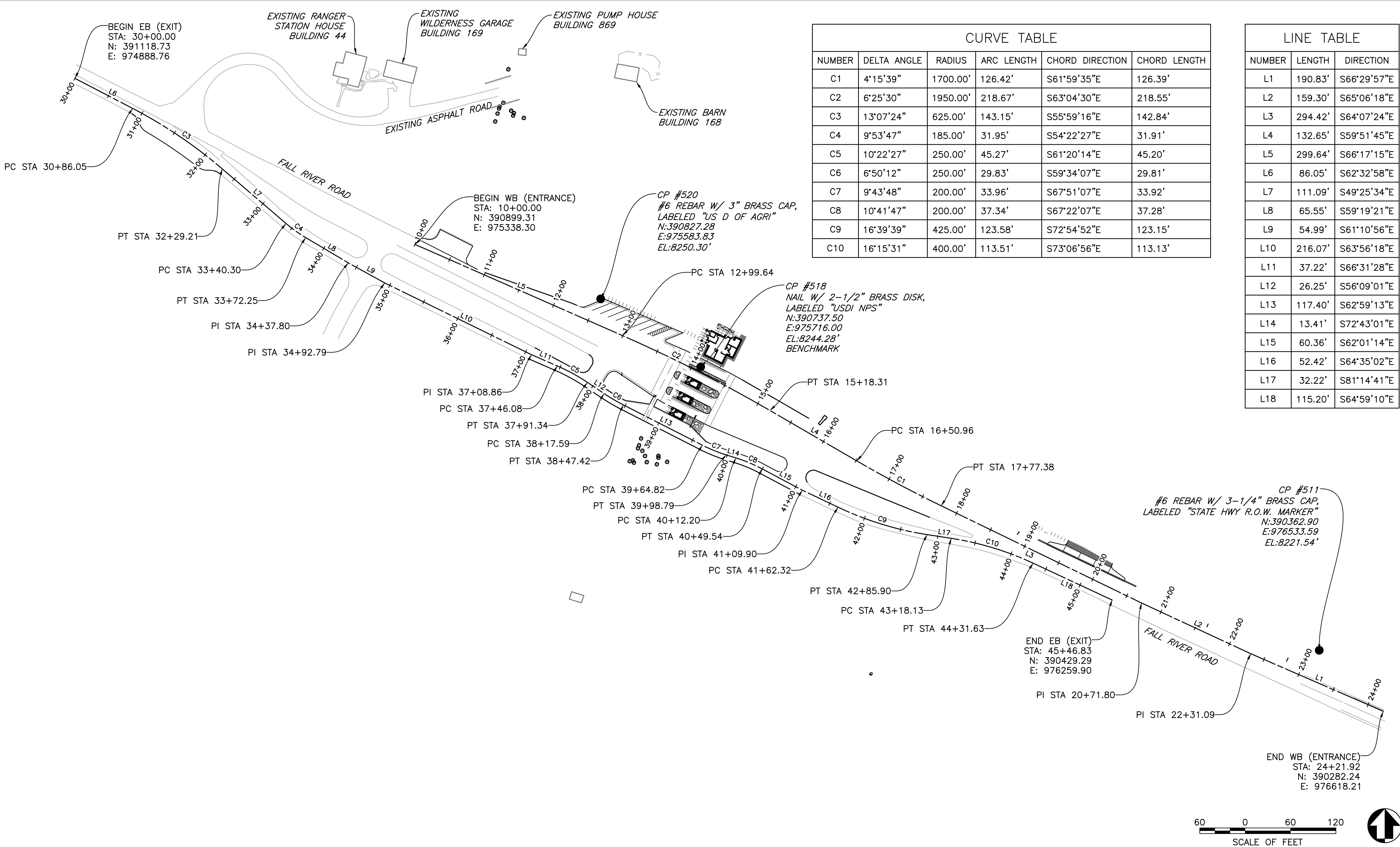
SUB SHEET NO.
C2.5

TITLE OF SHEET
OVERALL SITE PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
16 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:53 PM LAST SAVED BY: RPOILLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDs\C3.0 ROADWAY GEOMETRIC LAYOUT.dwg



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING

DESIGNED:
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AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

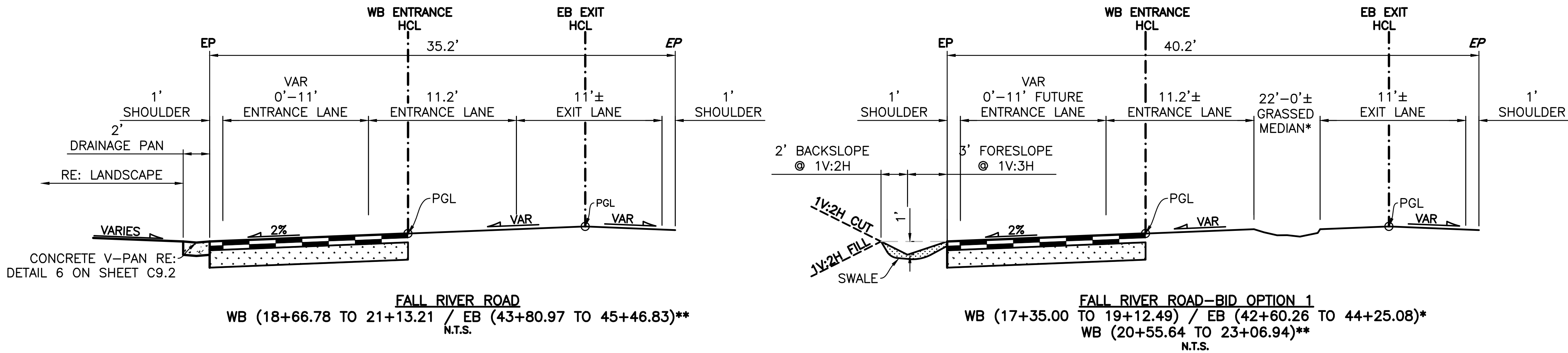
SUB SHEET NO.

C3.0

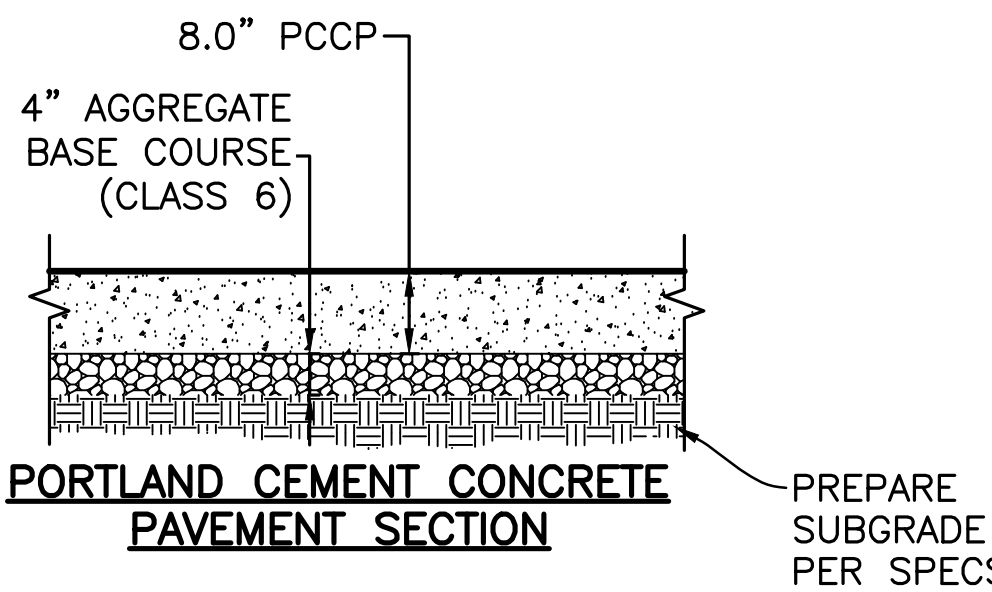
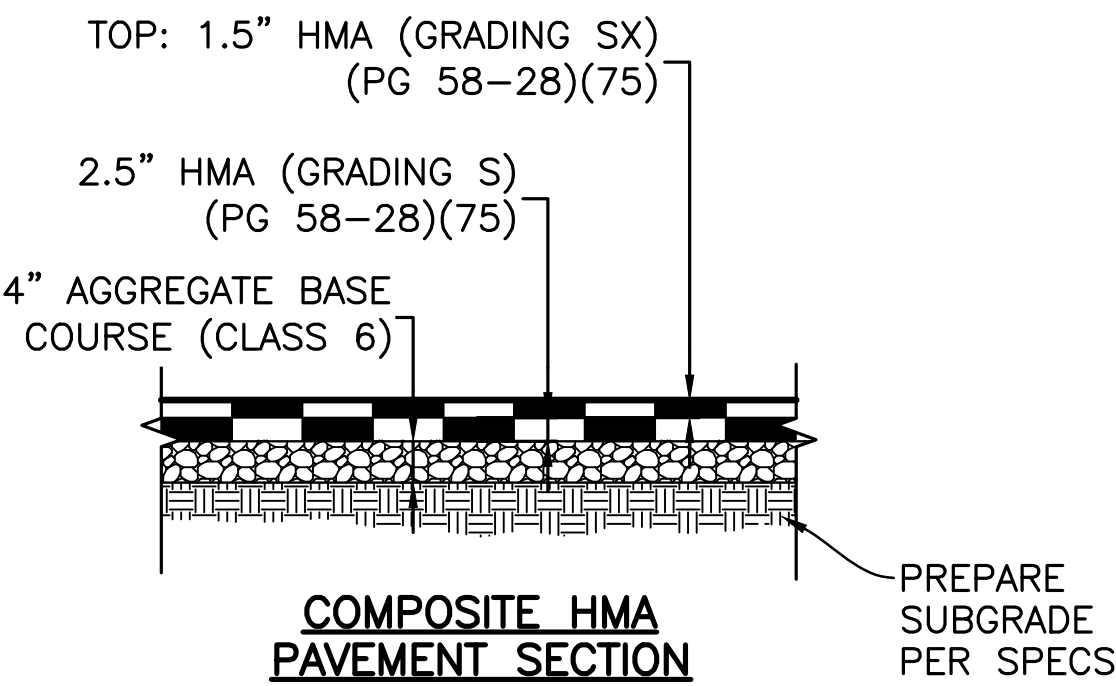
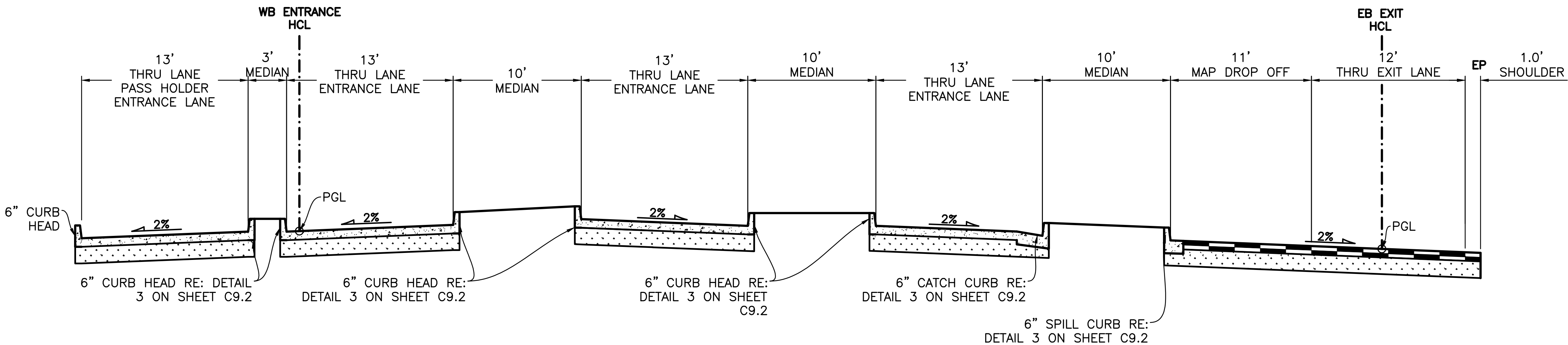
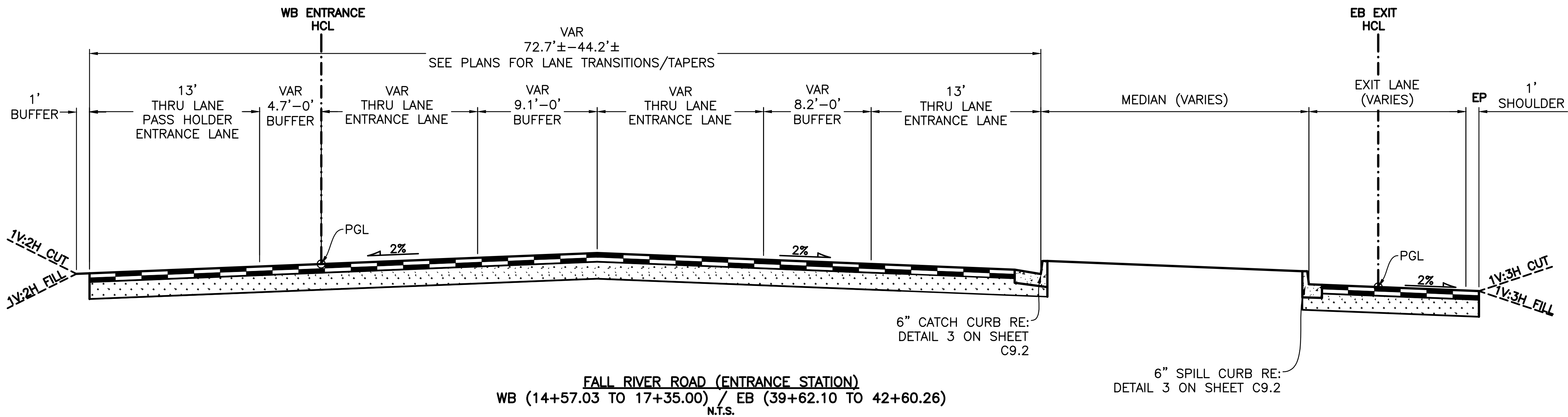
TITLE OF SHEET
**ROADWAY
GEOMETRIC
LAYOUT**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
17 OF 165

PLOT DATE: Wednesday, March 16, 2022 5:10 PM LAST SAVED BY: CSIMPSON
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\C03\C3.1 ROADWAY TYPICAL SECTIONS.dwg



- LEGEND**
- HCL ~ HORIZONTAL CONTROL LINE
 - PGL ~ PROFILE GRADE LINE
 - HMA ~ HOT MIX ASPHALT
 - PCCP ~ PORTLAND CEMENT CONCRETE PAVEMENT
 - * REFER TO GEOTECHNICAL RECOMMENDATIONS IN THE GEOTECHNICAL AND PAVEMENT INVESTIGATION REPORT, BY YEH AND ASSOCIATES, INC., DATED SEPTEMBER 15, 2021.
 - ~ ABC AND SUBGRADE PREPARATIONS REQUIREMENTS PER THE PROJECT SPECIFICATIONS
 - **ALIGNMENT ENDS BEFORE WIDENING SEE PLANS FOR LIMITS



TYPICAL PAVEMENT SECTIONS
NOT TO SCALE

- NOTE:**
1. THE ROADWAY FORESLOPE AND BACKSLOPE SHOWN HEREON IS BASED ON THE ROADSIDE DESIGN VARIANCE LETTER, DATED AUGUST 13, 2021, AS REVIEWED AND INFORMALLY APPROVED BY THE GOVERNMENT. CONTRACTOR SHALL CONFIRM ALLOWABLE FORESLOPE AND BACKSLOPE WITH THE CONTRACTING OFFICER PRIOR TO SUBMISSION OF BIDS AND MODIFY AS DIRECTED AND IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDELINES.



DESIGNED:
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GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C3.1

TITLE OF SHEET
**ROADWAY
TYPICAL
SECTIONS**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
18 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:54 PM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\2010821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755 DRAWINGS\CIVIL\CDA\C2.6 PAVING PLAN.dwg

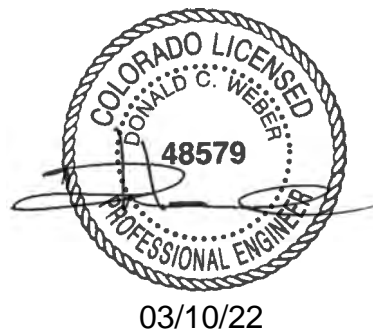
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

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DESIGNED:
VARIES
EADD
AEL/RTP/CDS
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DATE:
03/10/2022

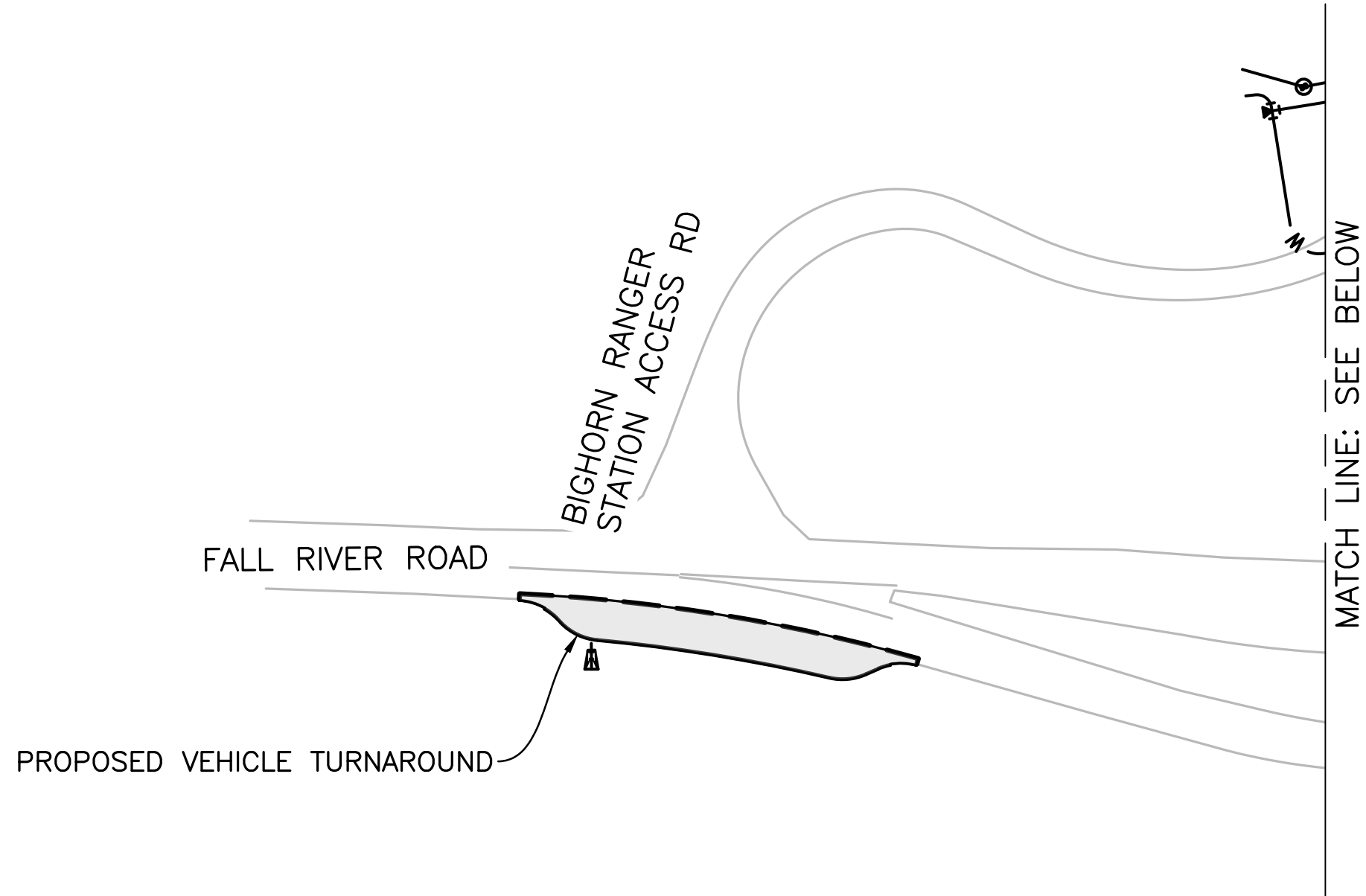
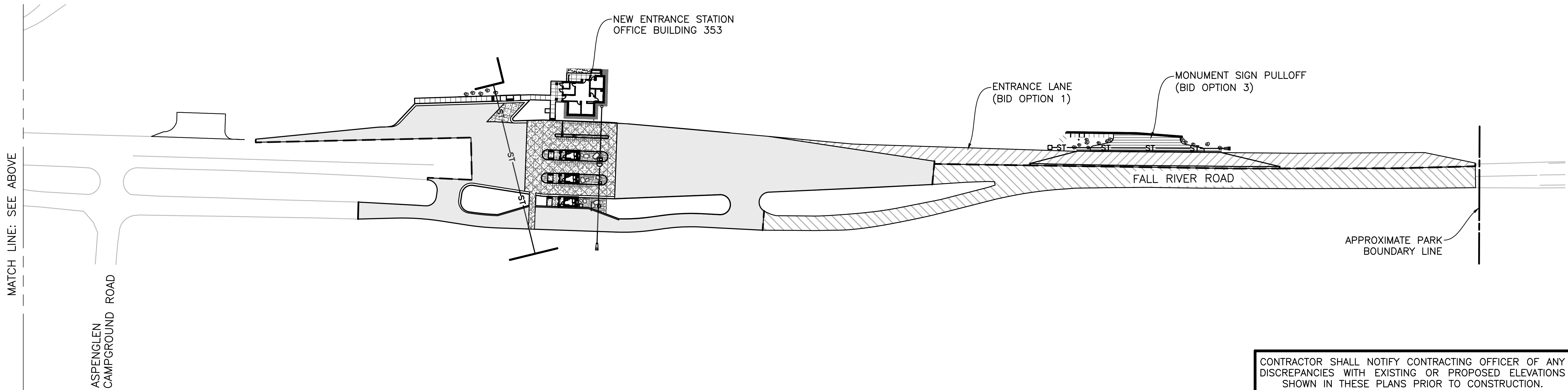
SUB SHEET NO.

C3.2

TITLE OF SHEET
PAVING PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
19 OF **165**

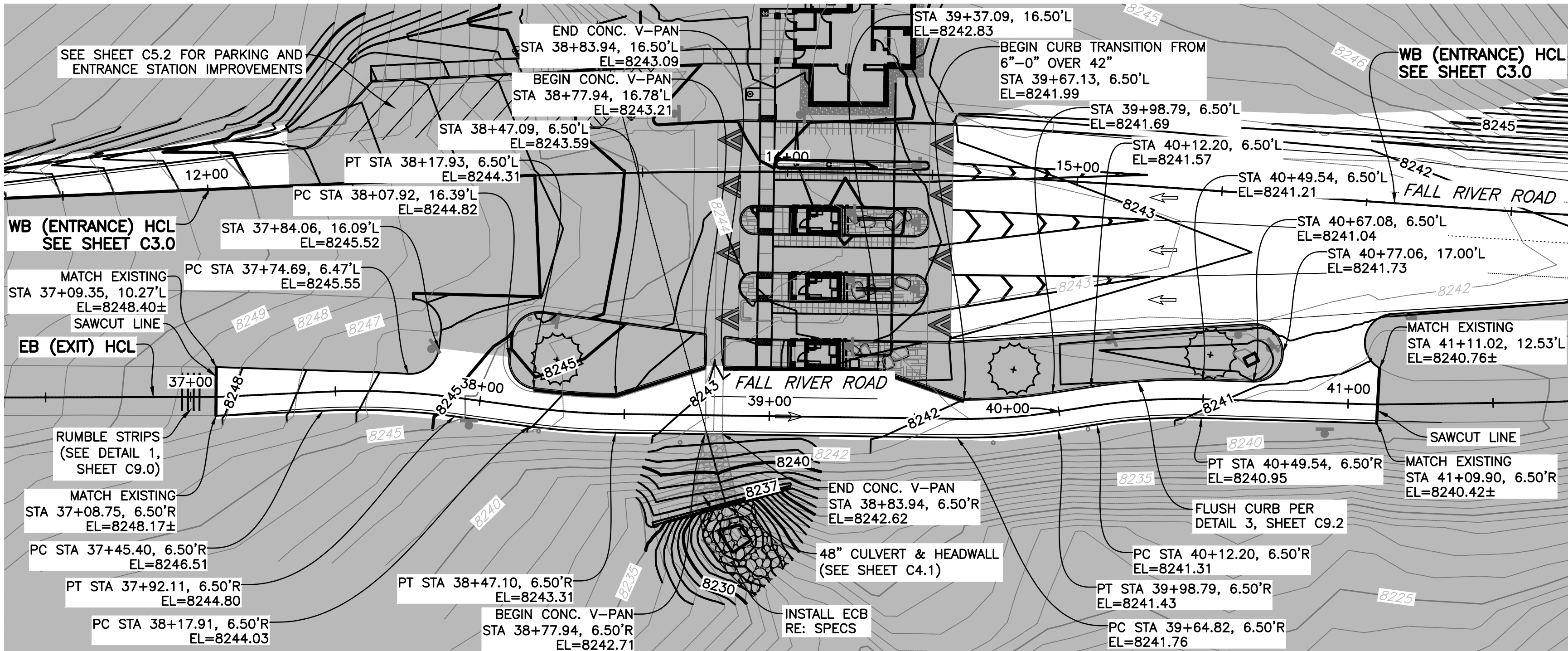
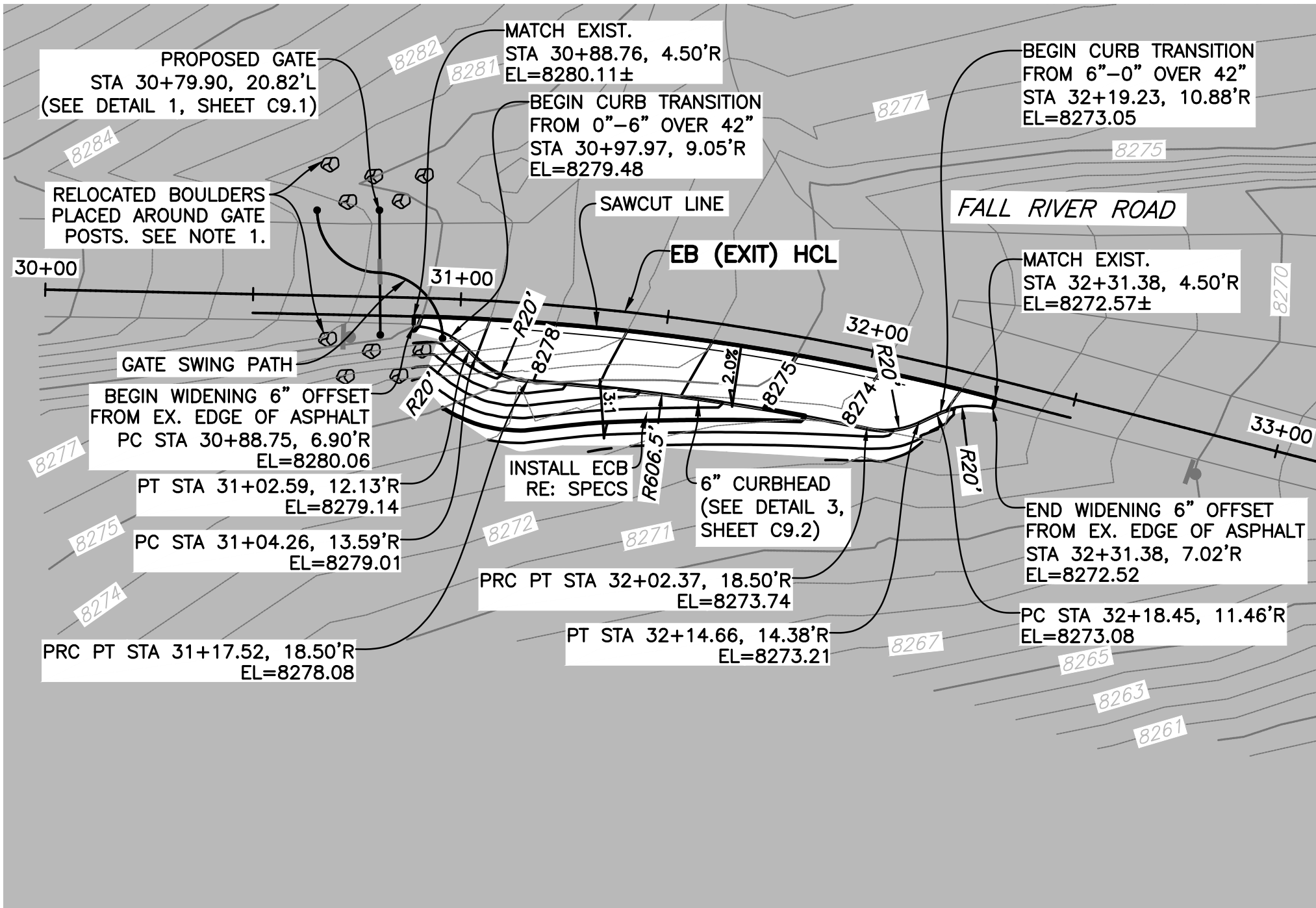


PAVEMENT LEGEND	
BASE BID - COMPOSITE HMA PAVEMENT SECTION RE: SHEET C3.1	
BASE BID - PORTLAND CEMENT CONCRETE PAVEMENT SECTION RE: SHEET C3.1	
BID OPTION 1 - COMPOSITE HMA PAVEMENT SECTION RE: SHEET C3.1	
BID OPTION 1 - SLURRY SEAL RE: SHEET C3.1	
BID OPTION 3 - COMPOSITE HMA PAVEMENT SECTION RE: SHEET C3.1	
SIGN DESCRIPTIONS	
	DRIVE

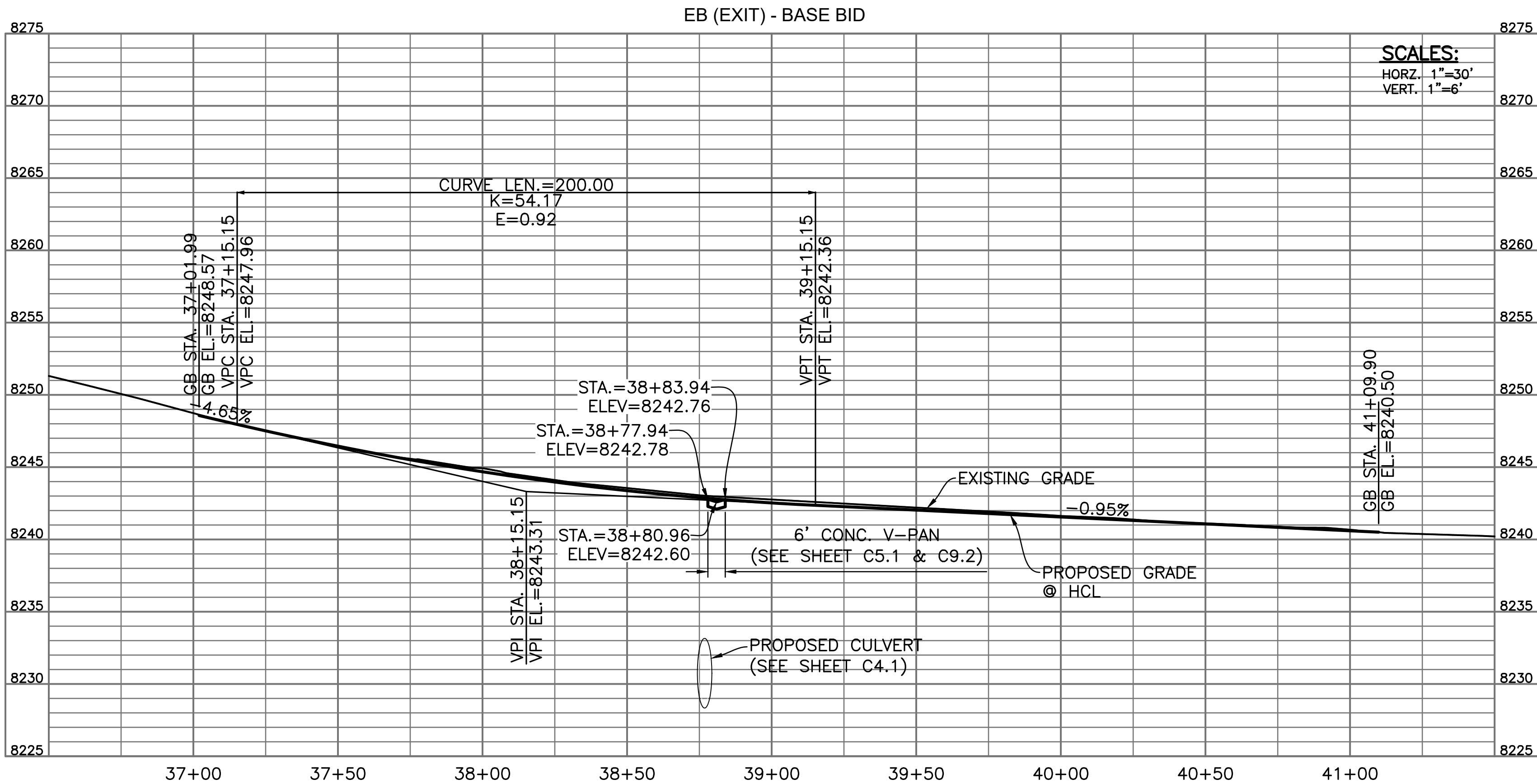
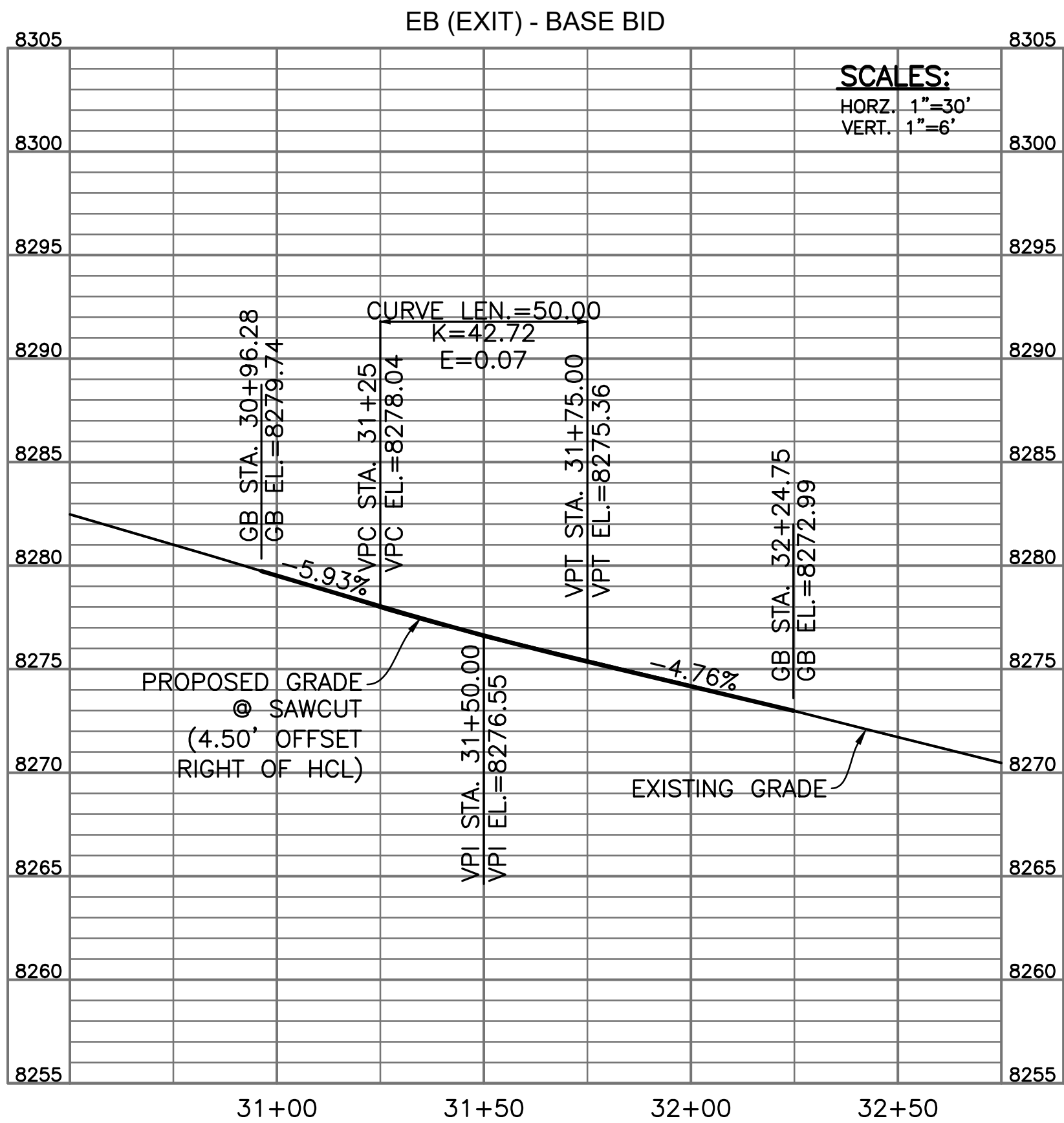
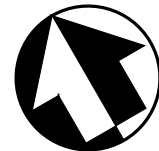
CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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- NOTE:
1. CONTRACTOR TO COORDINATE FINAL PLACEMENT OF BOULDERS AROUND GATE WITH CONTRACTING OFFICER.



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

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PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

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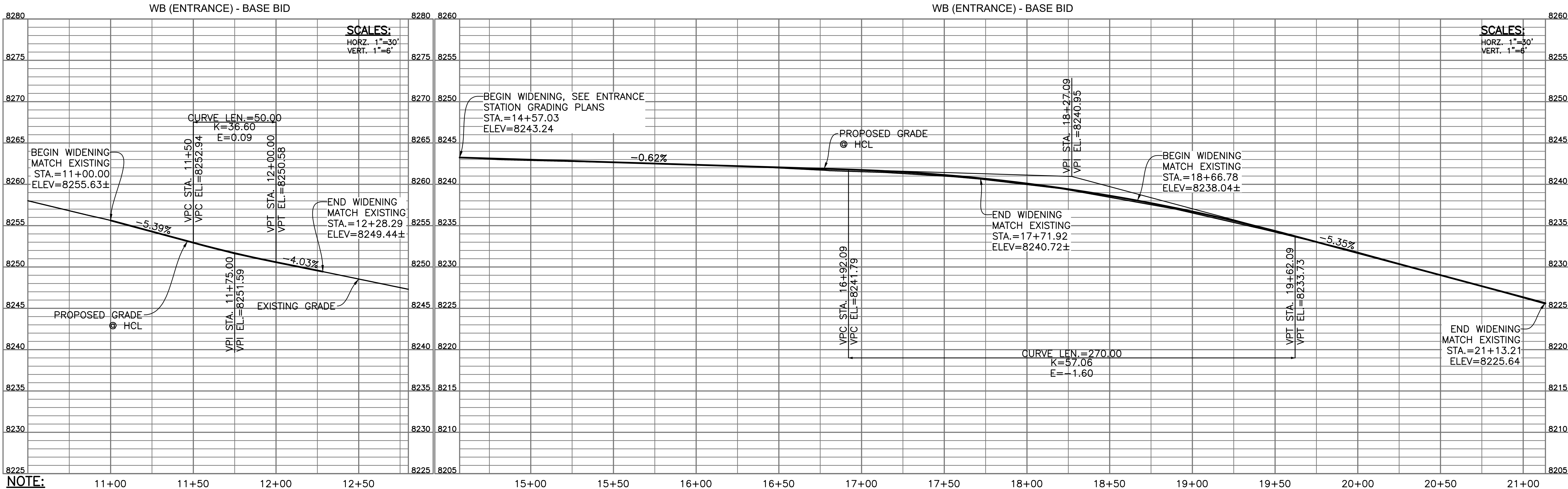
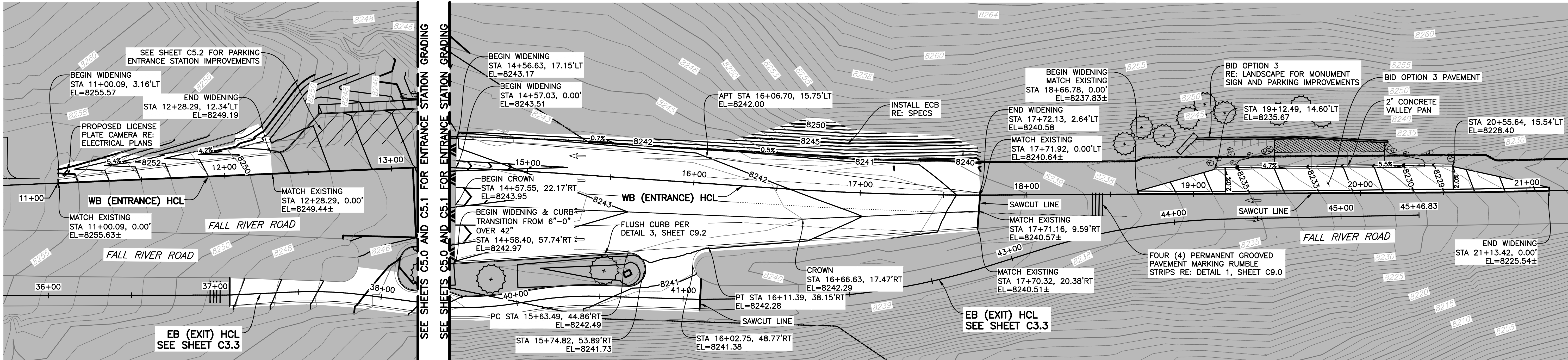
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VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C3.3

TITLE OF SHEET
EB ROADWAY PLAN & PROFILE - BASE BID
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
20 OF **165**

PLOT DATE: Wednesday, March 16, 2022 5:19 PM LAST SAVED BY: ZDRURY
DRAWING LOCATION: G:\SULLIVAN\20-0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDs\C3.3 WB ROADWAY PLAN & PROFILE - BASE BID.dwg



NOTE:

1. THE ROADWAY FORESLOPE AND BACKSLOPE SHOWN HEREON IS BASED ON THE ROADSIDE DESIGN VARIANCE LETTER, DATED AUGUST 13, 2021, AS REVIEWED AND INFORMALLY APPROVED BY THE GOVERNMENT. CONTRACTOR SHALL CONFIRM ALLOWABLE FORESLOPE AND BACKSLOPE WITH THE CONTRACTING OFFICER PRIOR TO SUBMISSION OF BIDS AND MODIFY AS DIRECTED AND IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDELINES.

BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING

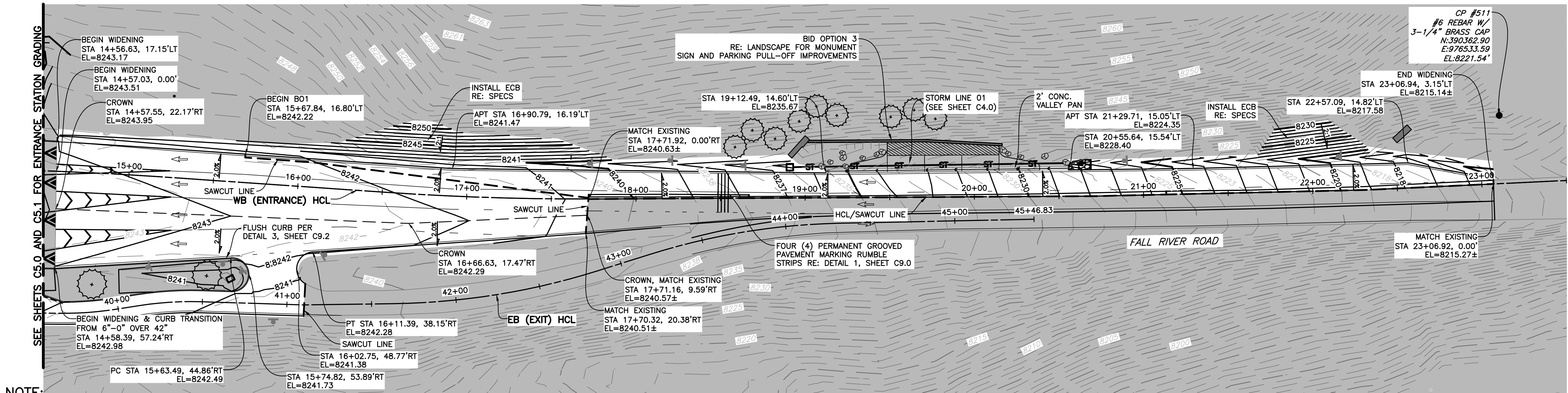


DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C3.4

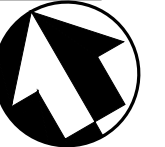
TITLE OF SHEET
WB ROADWAY PLAN & PROFILE - BASE BID
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
21 OF **165**

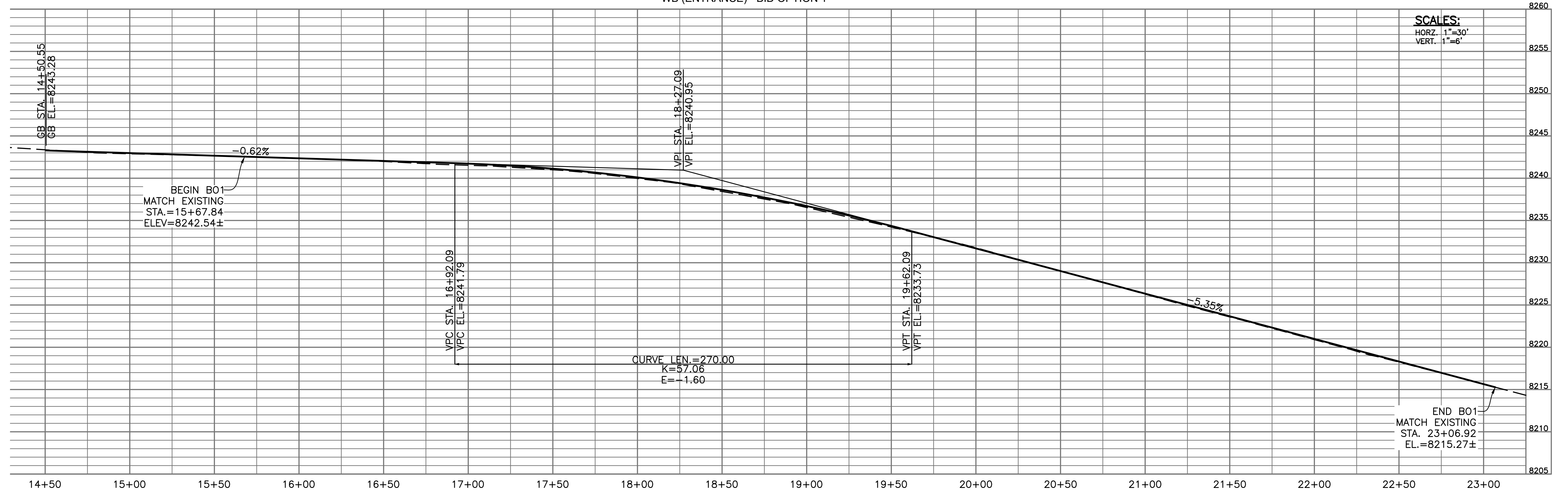


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WB (ENTRANCE) - BID OPTION 1



BENCHMARK

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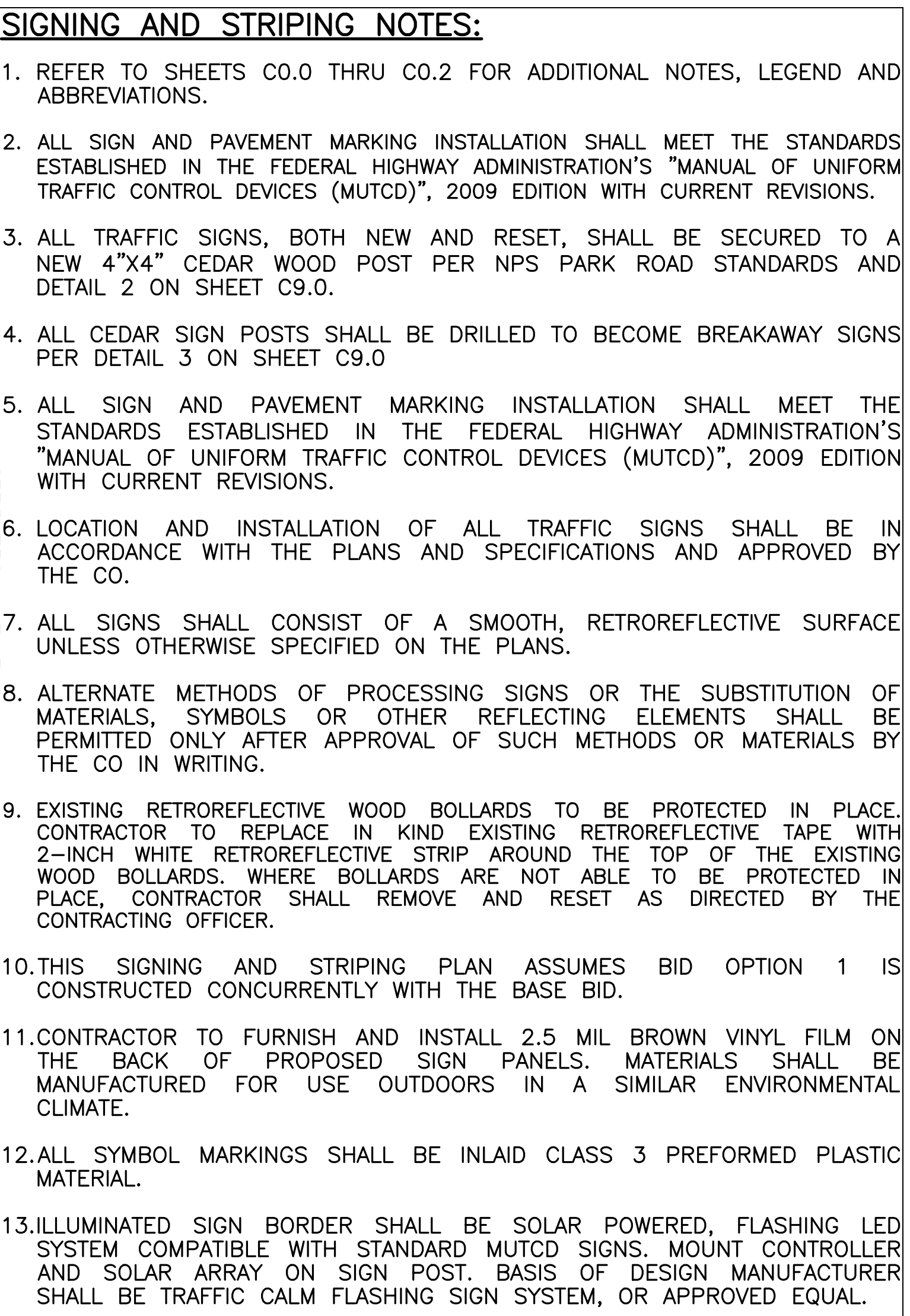
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AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022


SUB SHEET NO.

C3.5

TITLE OF SHEET
**WB ROADWAY PLAN
& PROFILE - BID
OPTION 1**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
22 OF 165



BENCHMARK	PROJECT COORDINATE SYSTEM AND BASIS OF BEARING	 03/10/22	DESIGNED: VARIES	DRAWING NO. 121	TITLE OF SHEET SIGNAGE & STRIPING PLAN - BID OPTION 1	DRAWING NO. 121
ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.	PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING		VARIES	SUB SHEET NO.	<div>C3.7</div>	176678
ELEVATION = 8244.28' (NAVD 1988)			GADD			PMIS/PKG NO. 160755
			AEL/RTP/CDS		SHEET	24 OF 165
		TECH REVIEW: DCW		FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK		
		DATE: 03/10/2022				

PLOT DATE: Wednesday, March 9, 2022 3:04 PM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDs\C4-0 STORM LINE 01 & 02 PLAN & PROFILE.dwg

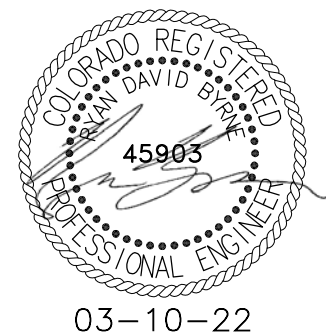
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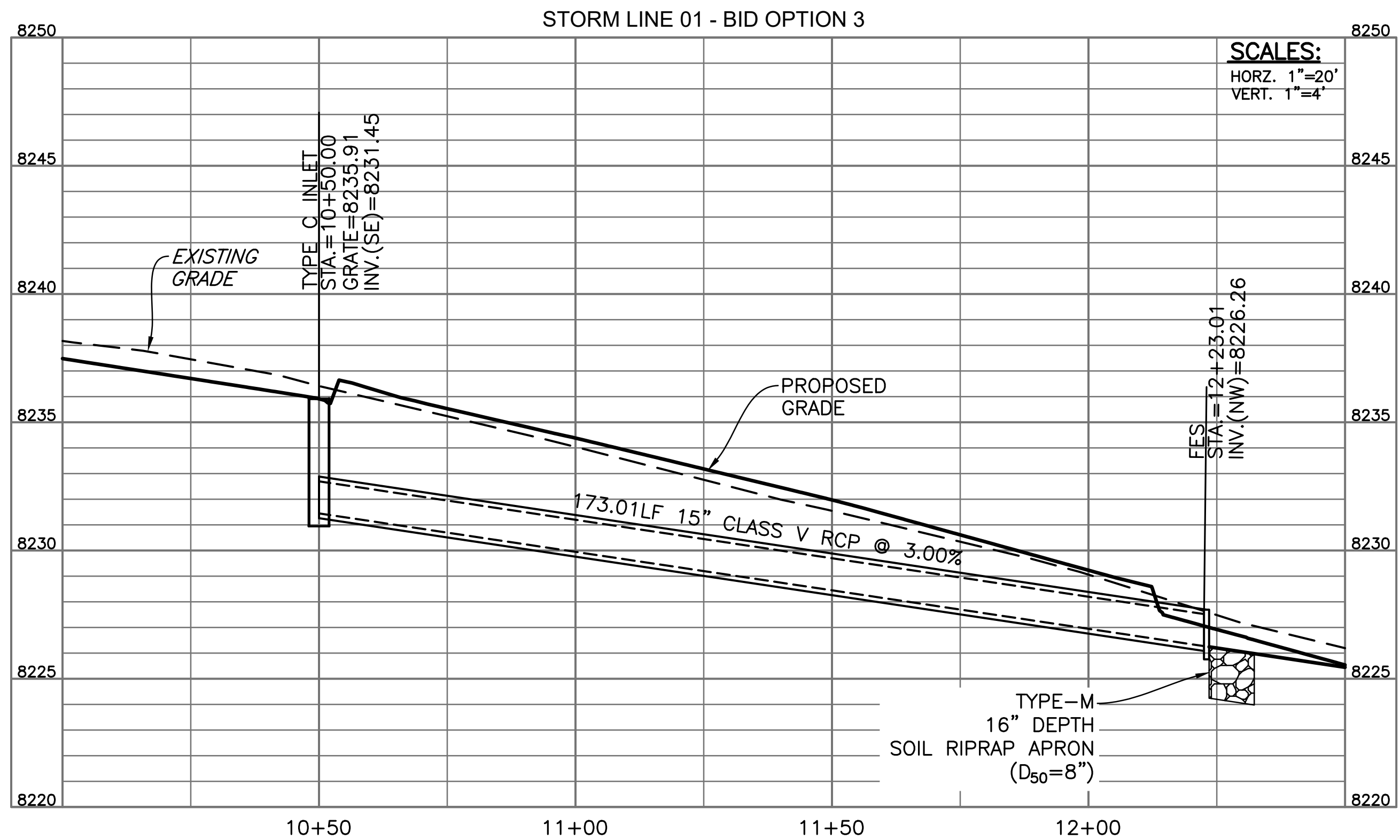
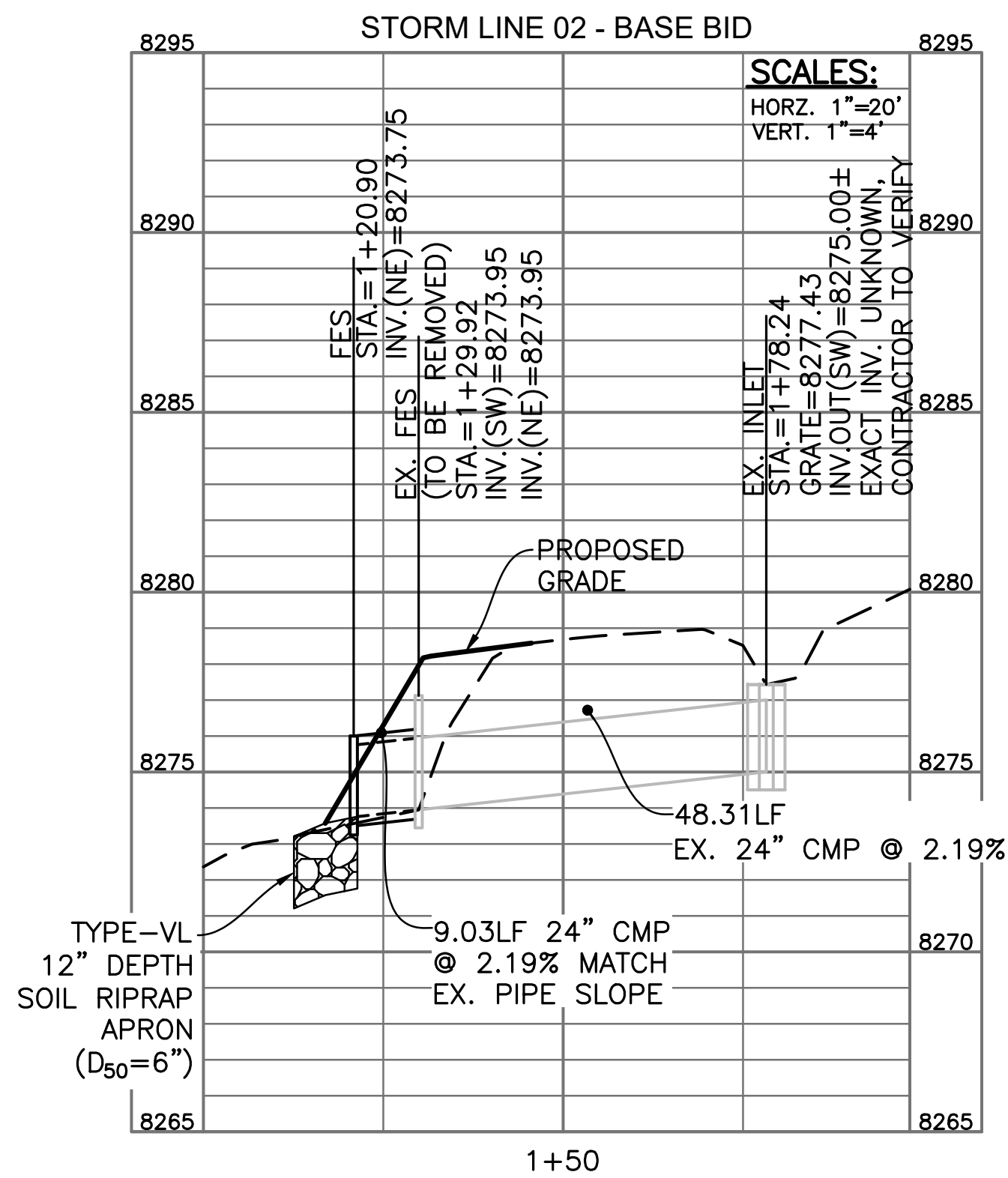
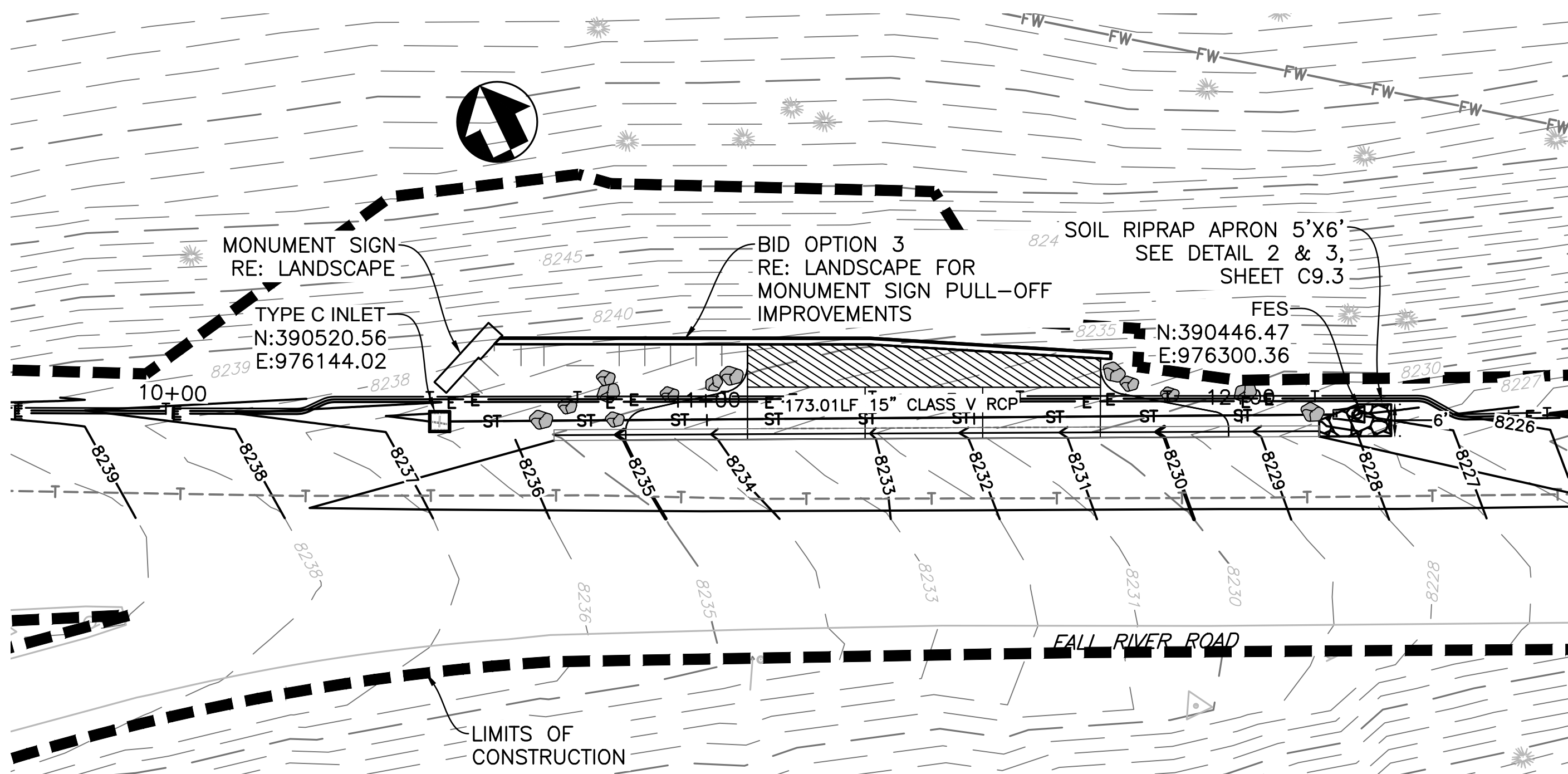
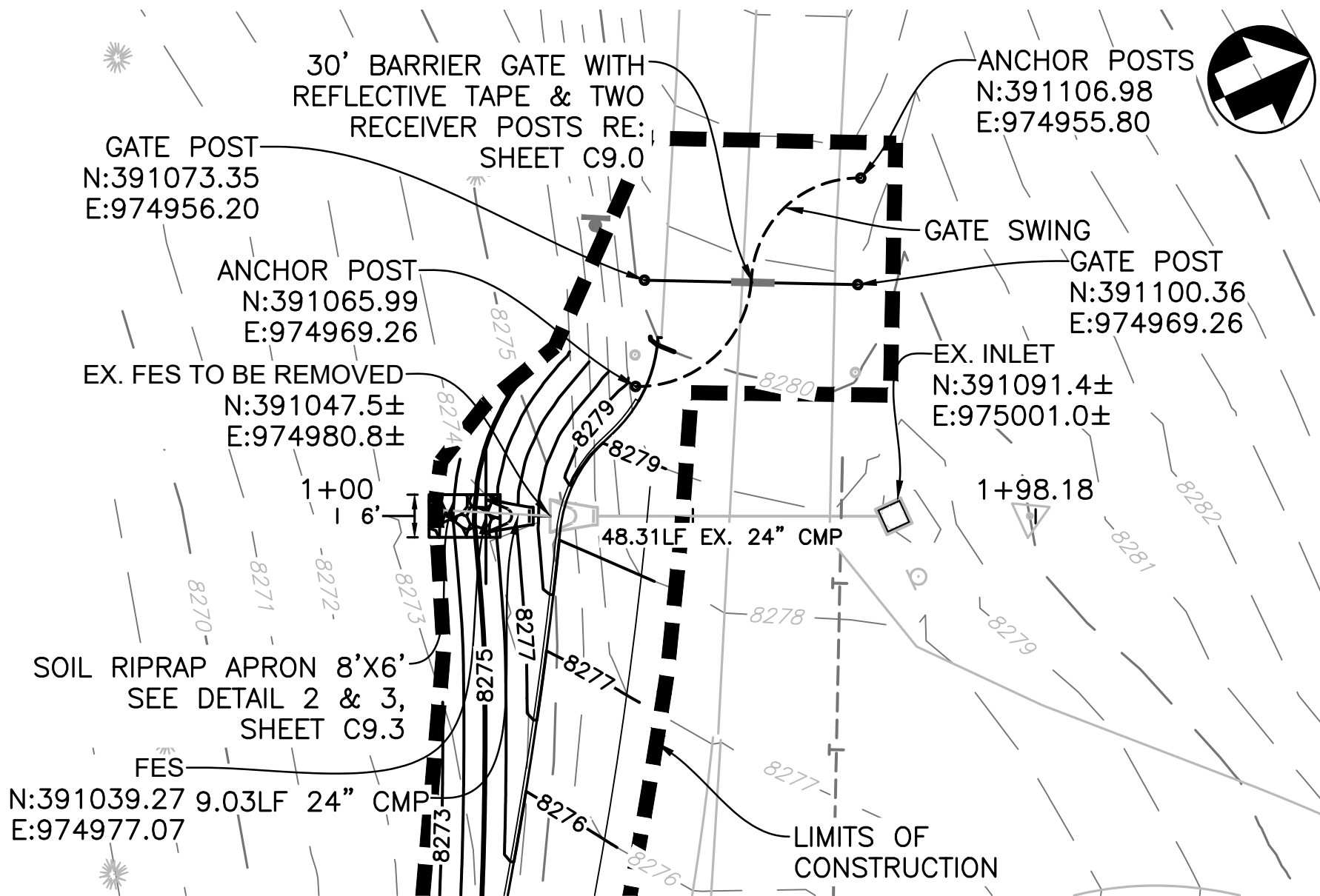
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AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C4.0

TITLE OF SHEET
**STORM LINE 01
& 02 PLAN &
PROFILE**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
25 of 165



NOTE

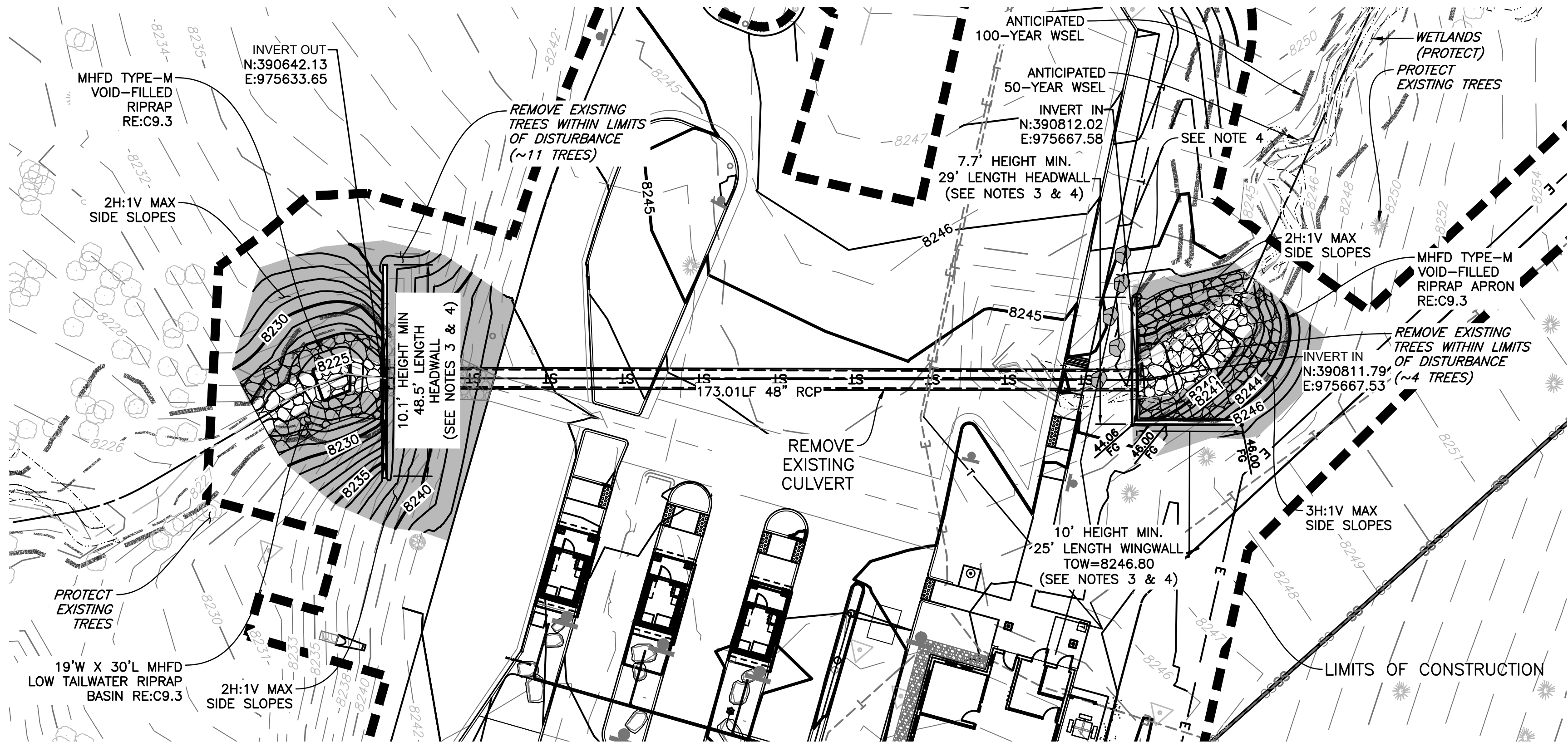
CULVERT EXTENTIONS ARE TO MATCH EXISTING PIPE SLOPE. PIPE CONNECTION AND JOINTING TO BE PER MANUFACTURER RECOMMENDATIONS.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

20 0 20 40
SCALE OF FEET

PLOT DATE: Wednesday, March 9, 2022 3:06 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\Cds\C4.1 CULVERT PLAN & PROFILE.dwg



NOTES:

1. REFER TO C9.3 FOR DETAILS.
2. REFER TO C9.3 FOR MHFD USDTM DETAILS FOR LOW TAILWATER ENERGY DISSIPATION DETAILS.
3. REFER TO C4.3 THROUGH C4.7 FOR STRUCTURAL DETAILS.
4. REFER TO LANDSCAPE PLANS FOR BOULDER LOCATION

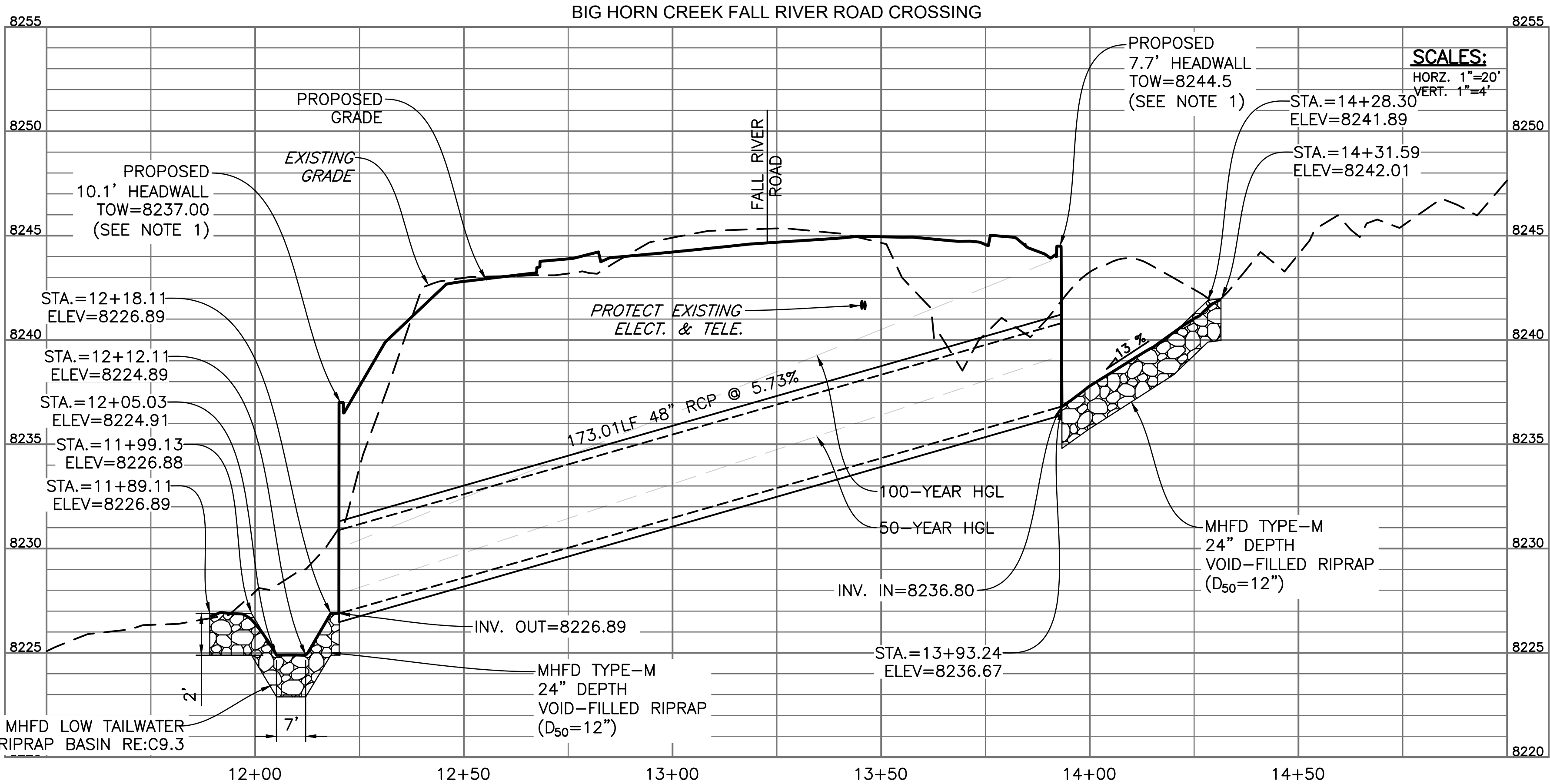
EC BLANKET NOTES:

1. TOPSOIL TO BE PLACED UNDERNEATH EROSION CONTROL BLANKET.
2. RE: SECTION 015713 FOR ACCEPTABLE EROSION CONTROL BLANKET MANUFACTURERS.

LEGEND

- PROPOSED 100-YEAR WSEL
- PROPOSED 50-YEAR WSEL
- EXISTING WETLANDS
- EROSION CONTROL BLANKETS
(SEE DETAILS 1 THRU 3 BELOW
& 4 C4.2)

Big Horn Creek Culvert Summary				
Culvert ID	Tributary Area	100-year Design Flow	100-year Headwater El.	100-year Headwater Depth
	SQ. MILES	CFS	Feet (NAVD 88)	Feet
Ranger Station	1.38	132	8279.68	7.0
Fall River Road	1.38	132	8243.80	7.0

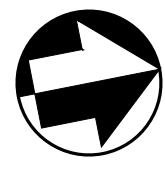


SCALES:
HORZ. 1"=20'
VERT. 1"=4'

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20 0 20 40
SCALE OF FEET



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

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DESIGNED:
VARIES
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

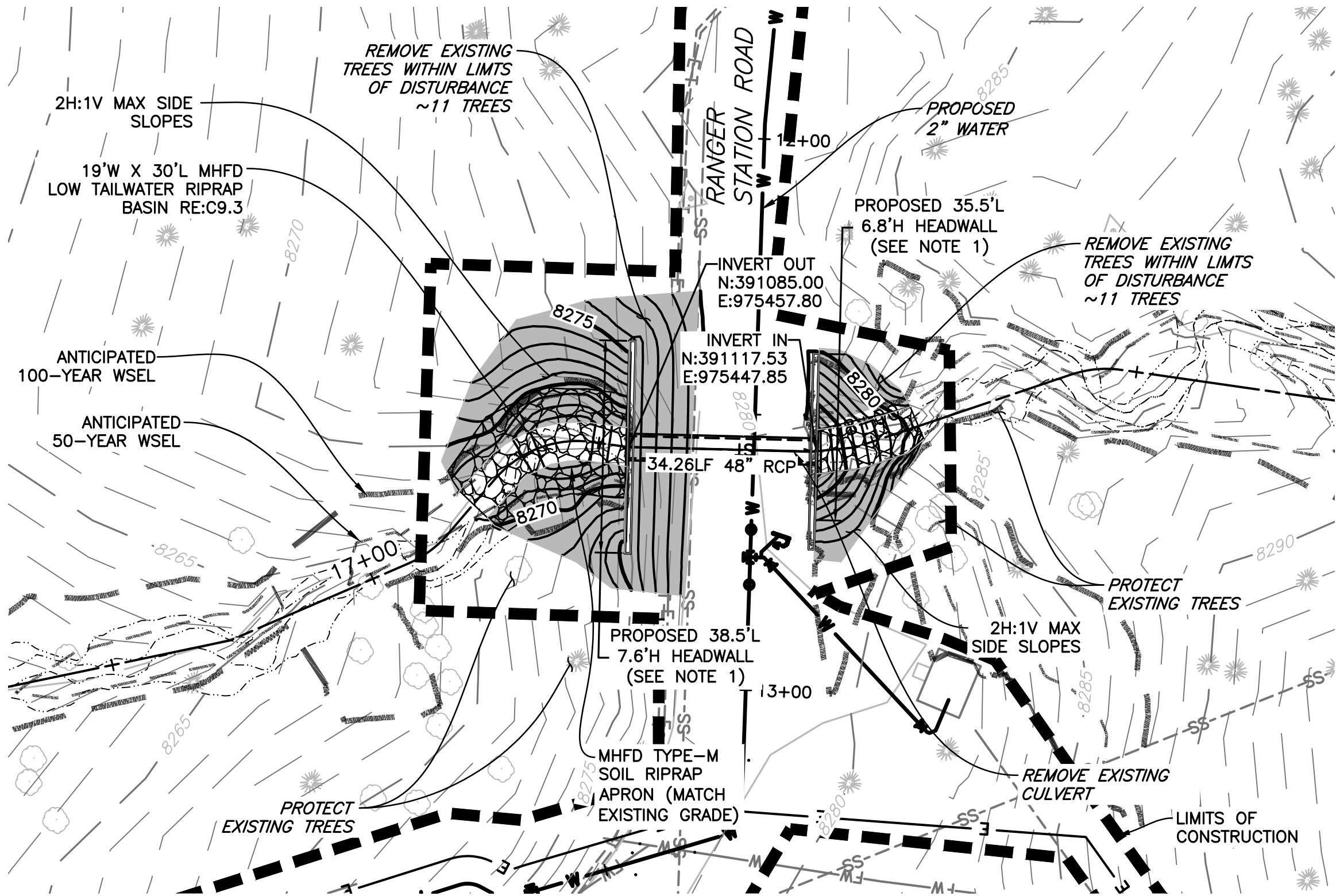
SUB SHEET NO.

C4.1

TITLE OF SHEET
CULVERT PLAN & PROFILE

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
26 OF **165**



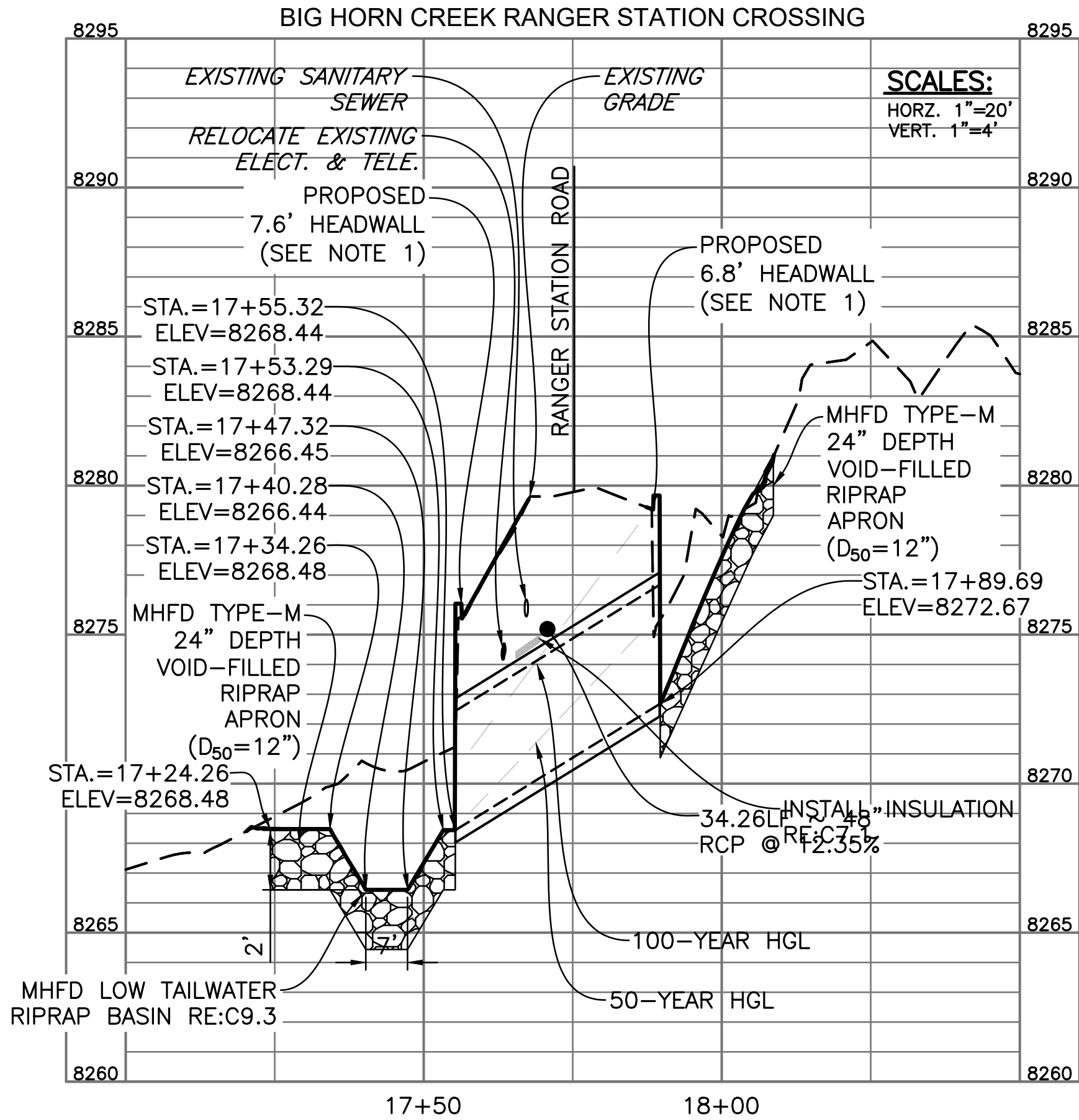
NOTES:

- 1. REPLACE EXISTING STORM SEWER WITH PROPOSED 48" RCP. REFER TO STRUCTURAL AND LANDSCAPE FOR HISTORIC HEADWALL RECONSTRUCTION.
- 2. REFER TO C9.3 FOR MHFD USDTM (URBAN STORM DRAINAGE AND TECHNICAL CRITERIA MANUAL) DETAILS FOR LOW TAILWATER ENERGY DISSIPATION DETAILS.

LEGEND

- PROPOSED 100-YEAR WSEL
- PROPOSED 50-YEAR WSEL
- EXISTING WETLANDS
- EROSION CONTROL BLANKETS (SEE DETAILS 1 THRU 3 C4.1 & BELOW)

Big Horn Creek Culvert Summary				
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DESIGNED:
VARIES
CADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C4.2

TITLE OF SHEET
CULVERT PLAN
& PROFILE

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
27 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:42 PM LAST SAVED BY: MGEIGER
DRAWING LOCATION: H:\PROJECTS\20.0821.S.01--ROMO Fall River Entrance Station\BIM\DWG\ROMO_GEN NOTES AND PLANS.dwg

STRUCTURAL NOTES:

1. ALL CONSTRUCTION TO BE IN CONFORMANCE WITH FHWA FLH PDDM 2018 (FEDERAL HIGHWAY ADMINISTRATION – FEDERAL LANDS HIGHWAY – PROJECT DEVELOPMENT AND DESIGN MANUAL) AND COLORADO DEPARTMENT OF TRANSPORTATION “STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION” 2019 EDITION, AS MODIFIED BY PROJECT SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS, AND THESE DRAWINGS.
2. CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AS RELATED TO THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.
3. ALL WORK SHALL CONFORM TO THE RECOMMENDATIONS, AS APPLICABLE, DISCUSSED IN THE GEOTECHNICAL REPORT ENTITLED "GEOTECHNICAL INVESTIGATION REPORT ROCKY MOUNTAIN NATIONAL PARK FALL RIVER ENTRANCE ESTES PARK, COLORADO" BY YEH AND ASSOCIATES (YEH PROJECT NO.: 220–348) DATED SEPTEMBER 15, 2021 AND THE SUBSEQUENT EMAIL RECEIVED FROM YEH ON OCTOBER, 29, 2021.
4. STATIONS, ELEVATIONS, SLOPES AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE CONTRACTING OFFICER BEFORE ORDERING OR FABRICATING ANY MATERIAL.
5. BACKFILL FOR CULVERT AND WINGWALLS SHALL BE ON–SITE MATERIAL MEETING THE APPROVAL OF CONTRACTING OFFICER AND THE GEOTECHNICAL ENGINEER. LIMITS OF THE STRUCTURE EXCAVATION AND BACKFILL SHALL BE AS SHOWN ON CDOT STANDARD M–206–1 "EXCAVATION AND BACKFILL FOR STRUCTURES: DATED 7/31/2019.
6. A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER AND CONTRACTING OFFICER SHALL BE PRESENT TO OBSERVE THE EXCAVATION AND VERIFY DESIGN PARAMETERS HAVE BEEN ACHIEVED PRIOR TO THE CONSTRUCTION OF THE CULVERT AND WINGWALLS
7. THE CONTRACTOR SHALL NOT BACKFILL STRUCTURE UNTIL THE WALLS HAVE REACHED 100% OF DESIGN STRENGTH (f_c).
8. REINFORCING SPLICES:

A. NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED ON DRAWNGS. MAKE BARS CONTINUOUS AROUND CORNERS WHERE DETAIL NOT PROVIDED. WHERE PERMITTED, SPLICES MAY BE MADE BY CONTACT LAPS OR MECHANICAL CONNECTORS.

B. THE FOLLOWING TABLE GIVES THE MINIMUM CLASS B LAP SPLICE LENGTHS FOR REINFORCING BARS, THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED LESS THAN 6" ON CENTER.

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10
^Δ TOP BARS	1’–6”	1’–11”	2’–5’	2’–11”	3’–5”	3’–10”	4’–9”	5’–11”
ALL OTHERS	1’–4”	1’–6”	1’–11”	2’–3”	2’–7”	3’–0”	3’–8”	4’–7”

^Δ TOP BARS REFERS TO A HORIZONTAL BAR WHICH SHALL HAVE MORE THAN 1 FOOT OF CONCRETE CAST BELOW IT.

- C. SPLICE CONTINUOUS TOP AND BOTTOM BARS IN WALLS, BEAMS, AND GRADE BEAMS 'LTS' UNLESS NOTED OTHERWISE.
9. MISCELLANEOUS REINFORCING REQUIREMENTS:

A. PROVIDE ADDITIONAL BARS OR STIRRUPS REQUIRED TO SECURE REINFORCING IN PLACE DURING CONCRETE PLACEMENT.

B. MAKE ALL REINFORCING BAR BENDS IN THE FABRICATOR’S SHOP UNLESS NOTED.

C. NO WELDING OF REINFORCING PERMITTED UNLESS NOTED ON DRAWINGS. WHERE PERMITTED, PERFORM WELDING IN ACCORDANCE WITH AWS D1.4–2011.
10. STRUCTURAL CONCRETE MIX REQUIREMENTS:

A. 28 DAY STRENGTH, f_c = 4,500 PSI

B. MAXIMUM WATER / CEMENT RATIO = 0.45

C. NORMAL WEIGHT CONCRETE

D. MAX AGGREGATE SIZE = 3/4 INCH (#67)

E. TOTAL AIR CONTENT, INCLUDING BOTH ENTRAINED AND ENTRAPPED AIR = 6% (+/– 1 1/2%)

F. SEE CDOT SPECIFICATION SECTION 601 FOR ADDITIONAL INFORMATION.
11. REINFORCEMENT PROTECTION:

A. 3” CLEAR COVER FOR ALL REINFORCEMENT CAST AGAINST THE EARTH

B. 2” CLEAR COVER FOR ALL OTHER REINFORCEMENT

C. PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE REINFORCEMENT AT POSITIONS SHOWN ON PLANS. ALL REINFORCING, DOWELS, BOLTS, AND EMBEDDED PLATES SHALL BE SET AND TIED IN PLACE BEFORE THE CONCRETE IS POURED. "STABBING" INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.

12. CONSTRUCTION/CONTROL JOINTS:

A. SUBMIT DRAWNGS SHOWING CONSTRUCTION AND CONTROL JOINT LOCATIONS ALONG WITH THE SEQUENCE OF POURS. CONSTRUCTION JOINT LOCATIONS AND CASTING SEQUENCE SHALL BE ARRANGED TO MINIMIZE THE EFFECTS OF ELASTIC AND LONG–TERM SHORTENING/SHRINKAGE.
13. A HYDROPHILIC WATERSTOP SHALL BE PLACED AROUND THE CIRCUMFERENCE OF THE RCP PIPE AT THE CENTERLINE OF THE WALL PRIOR TO POURING CONCRETE. THE WATERSTOP SHALL BE SIKA SWELL STOP OR CONTRACTING OFFICER–APPROVED EQUIVALENT.
14. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4 INCH.
15. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL–INCLUSIVE.
16. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF ALL UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
17. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES AND IS RESPONSIBLE FOR ANY DAMAGES THERETO.
18. MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM (PROVIDED) ASCE (38) UTILITY QUALITY LEVEL D (Q/LD) AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES (DEPICTED OR NOT DEPICTED) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

DESIGN DATA:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION

DESIGN METHODS:

LOAD AND RESISTANCE FACTOR DESIGN (LRFD)
LIVE LOAD SURCHARGE = 2 FEET

SOIL PARAMETERS:

ON–SITE MATERIAL:
UNIT WEIGHT = 125 PCF
DRAINED EQUIVALENT HORIZONTAL FLUID PRESSURE = 60 PCF (AT REST)
DRAINED EQUIVALENT HORIZONTAL FLUID PRESSURE = 38 PCF (ACTIVE)
FACTORED BEARING RESISTANCE = 5,500 PSF

REINFORCE CONCRETE:
CONCRETE f_c = 4,500 PSI
REINFORCING STEEL f_y = 60,000 PSI

BENCHMARK

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ELEVATION = 8244.28’ (NAVD 1988)

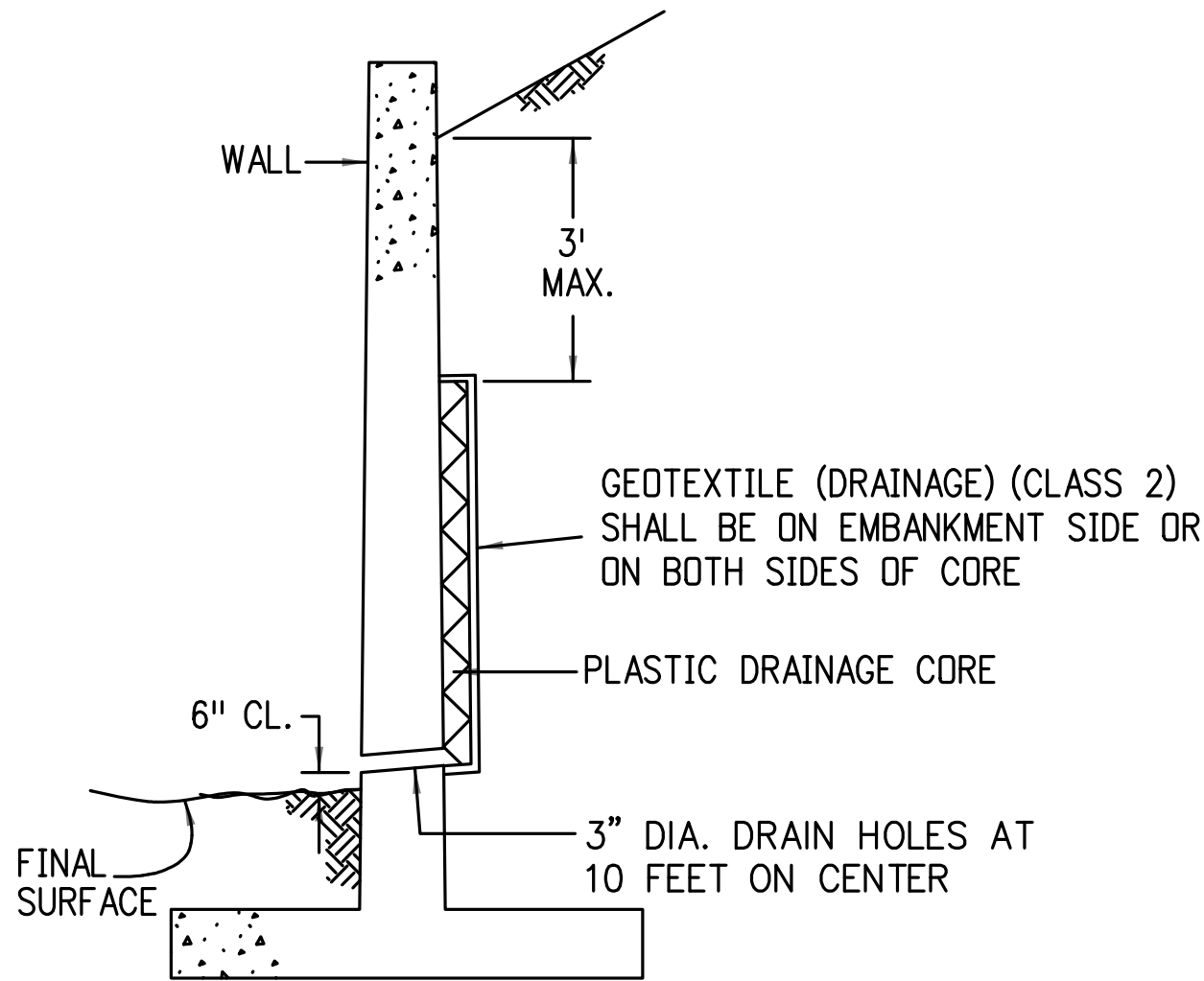
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DESIGNED: LE	SUB SHEET NO. C4.3	TITLE OF SHEET ENTRANCE STATION CULVERT STRUCTURAL NOTES FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678
CHAD MNG			PMIS/PKG NO. 160755
TECH REVIEW: JMD			SHEET
DATE: 03/10/2022			28 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:42 PM LAST SAVED BY: MGEIGER
DRAWING LOCATION: H:\PROJECTS\20.0821.S.01-ROMO Fall River Entrance Station\BIM\DWG\ROMO_GEN NOTES AND PLANS.dwg



NOTE: REFERENCE CDOT STANDARD PLAN
NO. M-605-1 FOR PLACEMENT

GEOCOMPOSITE DRAIN WITHOUT PIPE
NO SCALE

BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

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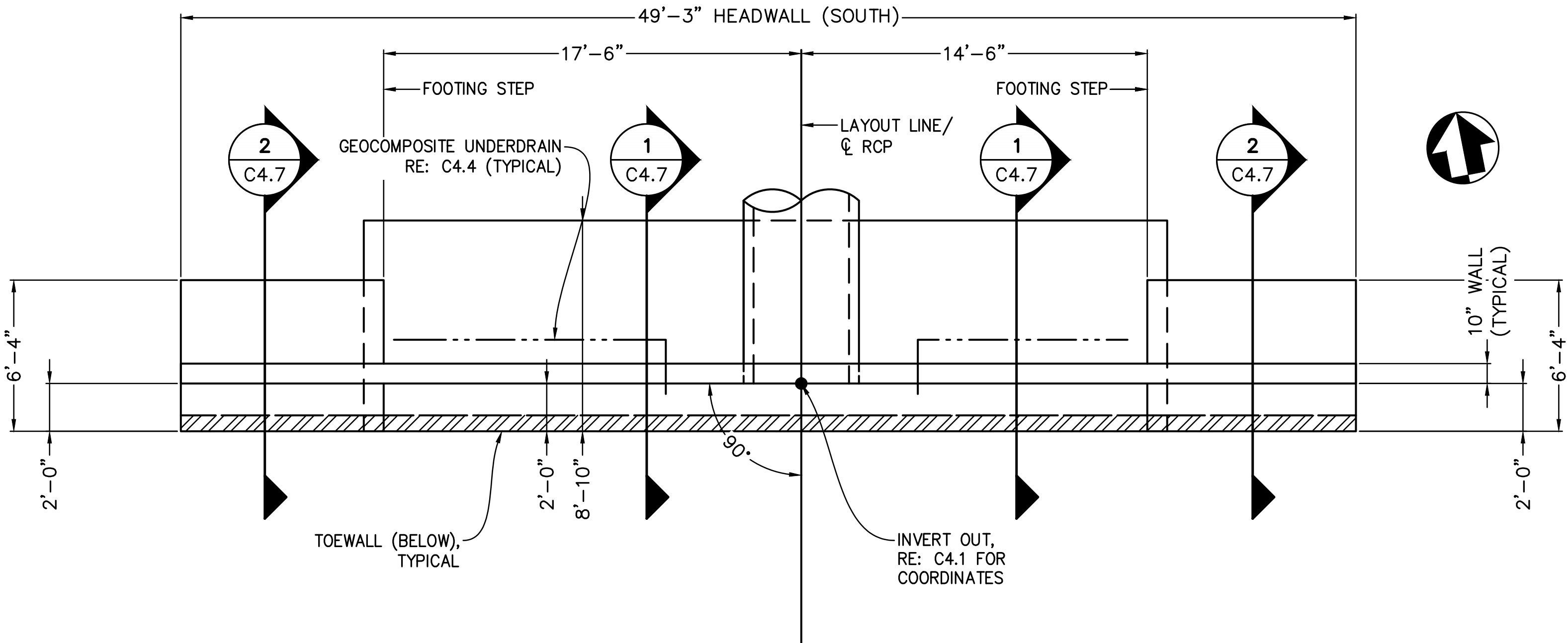
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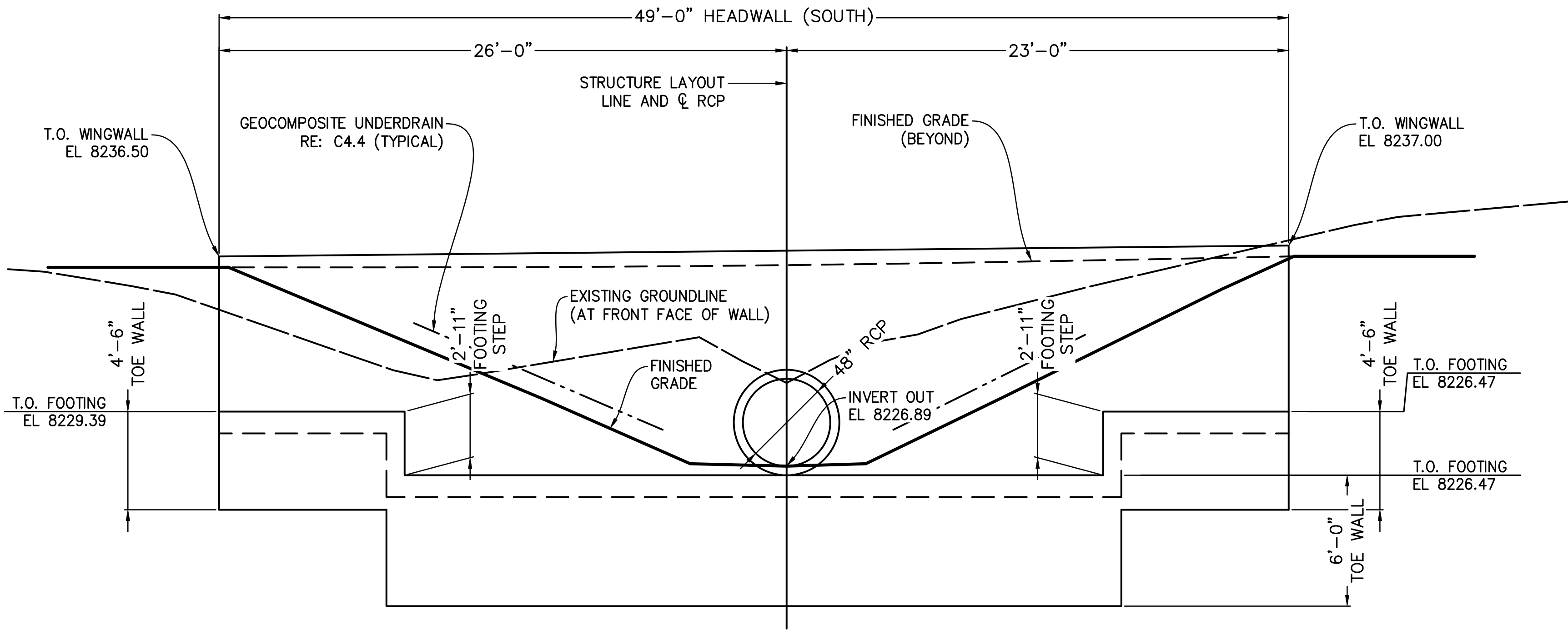


DESIGNED: LE MNG	SUB SHEET NO. C4.4	TITLE OF SHEET ENTRANCE STATION CULVERT STRUCTURAL NOTES FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678
TECH REVIEW: JMD			PMIS/PKG NO. 160755
DATE: 03/10/2022			SHEET 29 OF 165

PLOT DATE: Wednesday, March 9, 2022 2:43 PM LAST SAVED BY: MGEIGER
DRAWING LOCATION: H:\PROJECTS\20.0821.S.01-ROMO Fall River Entrance Station\BIM\DWG\ROMO_GEN NOTES AND PLANS.dwg



SOUTH HEADWALL LAYOUT PLAN
SCALE: 1/4" = 1'-0"



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



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.
ELEVATION = 8244.28' (NAVD 1988)

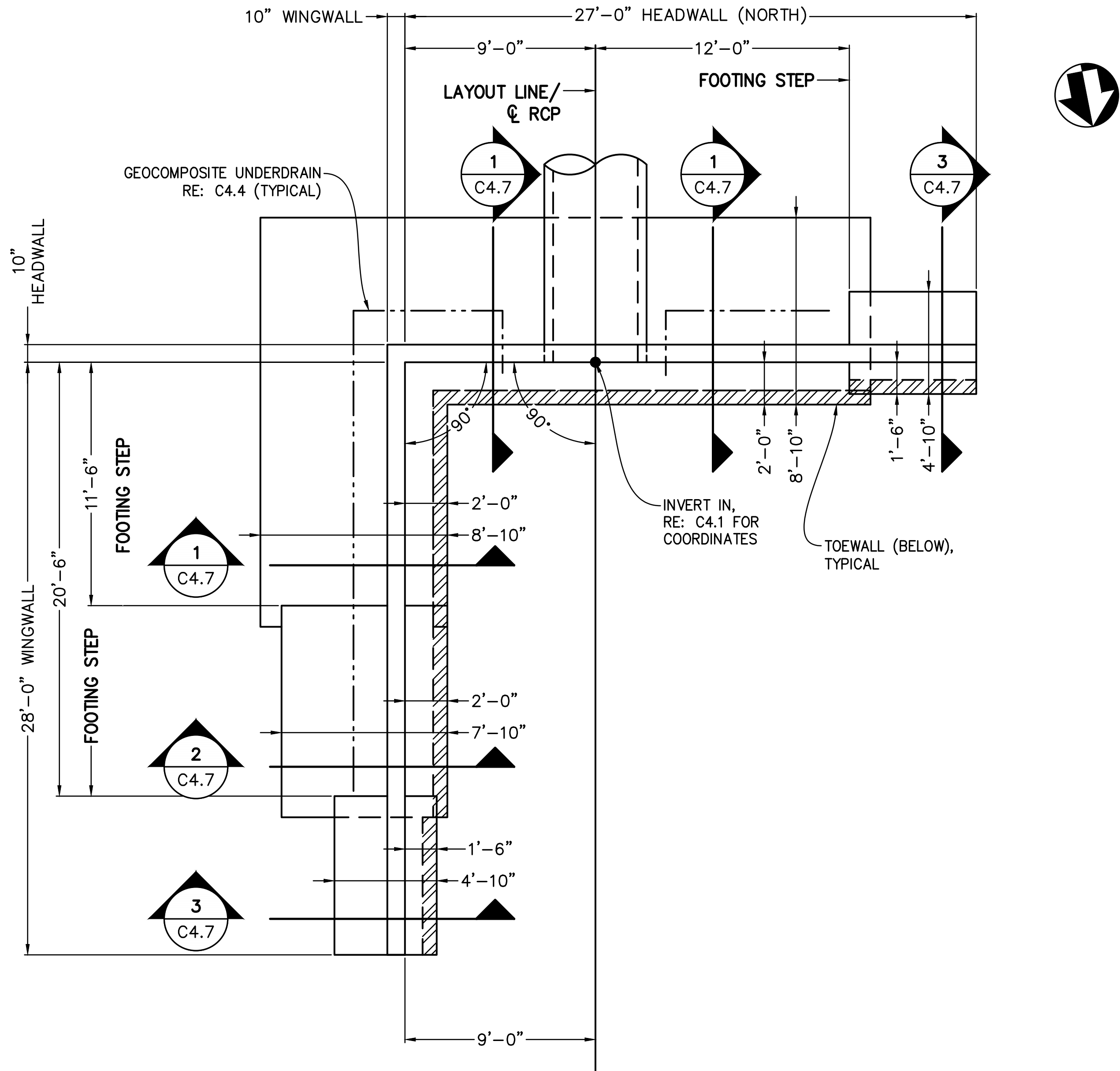
PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING

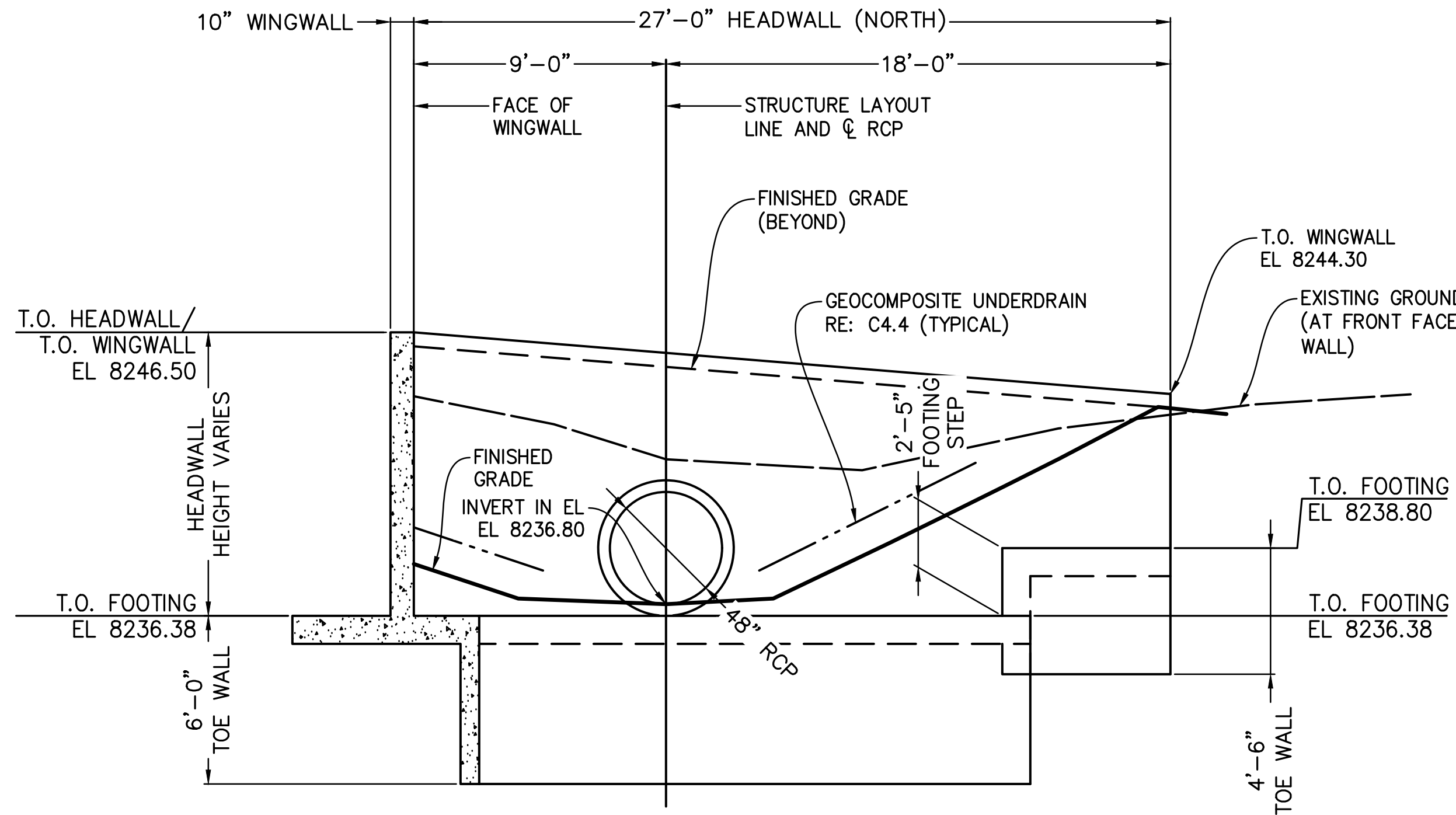
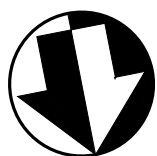


DESIGNED: LE MNG TECH REVIEW: JMD DATE: 03/10/2022	SUB SHEET NO. C4.5	TITLE OF SHEET ENTRANCE STATION CULVERT SOUTH HEADWALL PLAN AND ELEVATION FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 30 OF 165
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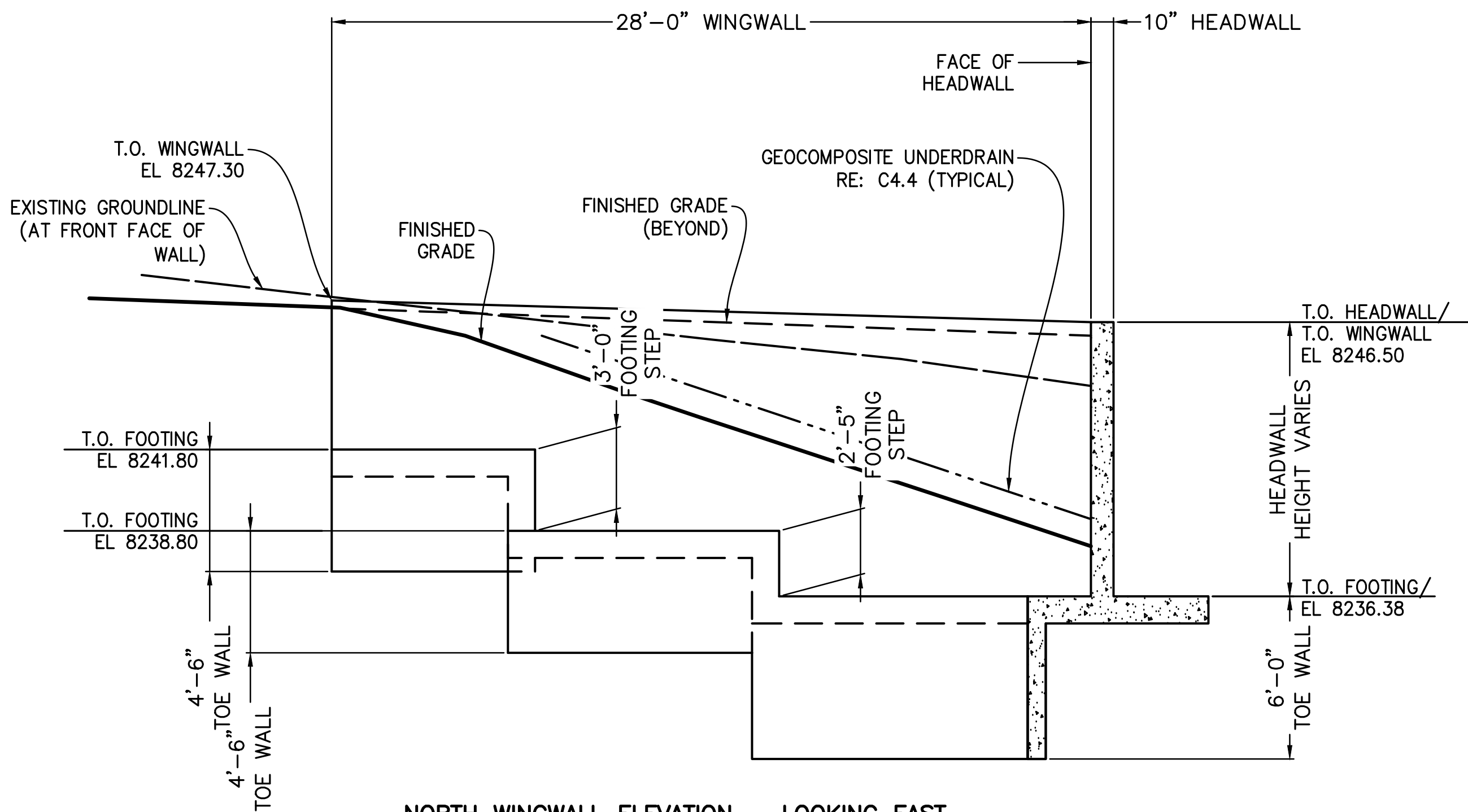
PLOT DATE: Wednesday, March 9, 2022 2:43 PM LAST SAVED BY: MGEIGER
DRAWING LOCATION: H:\PROJECTS\20.0821.S.01-ROMO Fall River Entrance Station\BIM\DWG\ROMO_GEN NOTES AND PLANS.dwg



NORTH HEADWALL LAYOUT PLAN
SCALE: 1/4" = 1'-0"



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



NORTH WINGWALL ELEVATION - LOOKING EAST
SCALE: 1/4" = 1'-0"



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

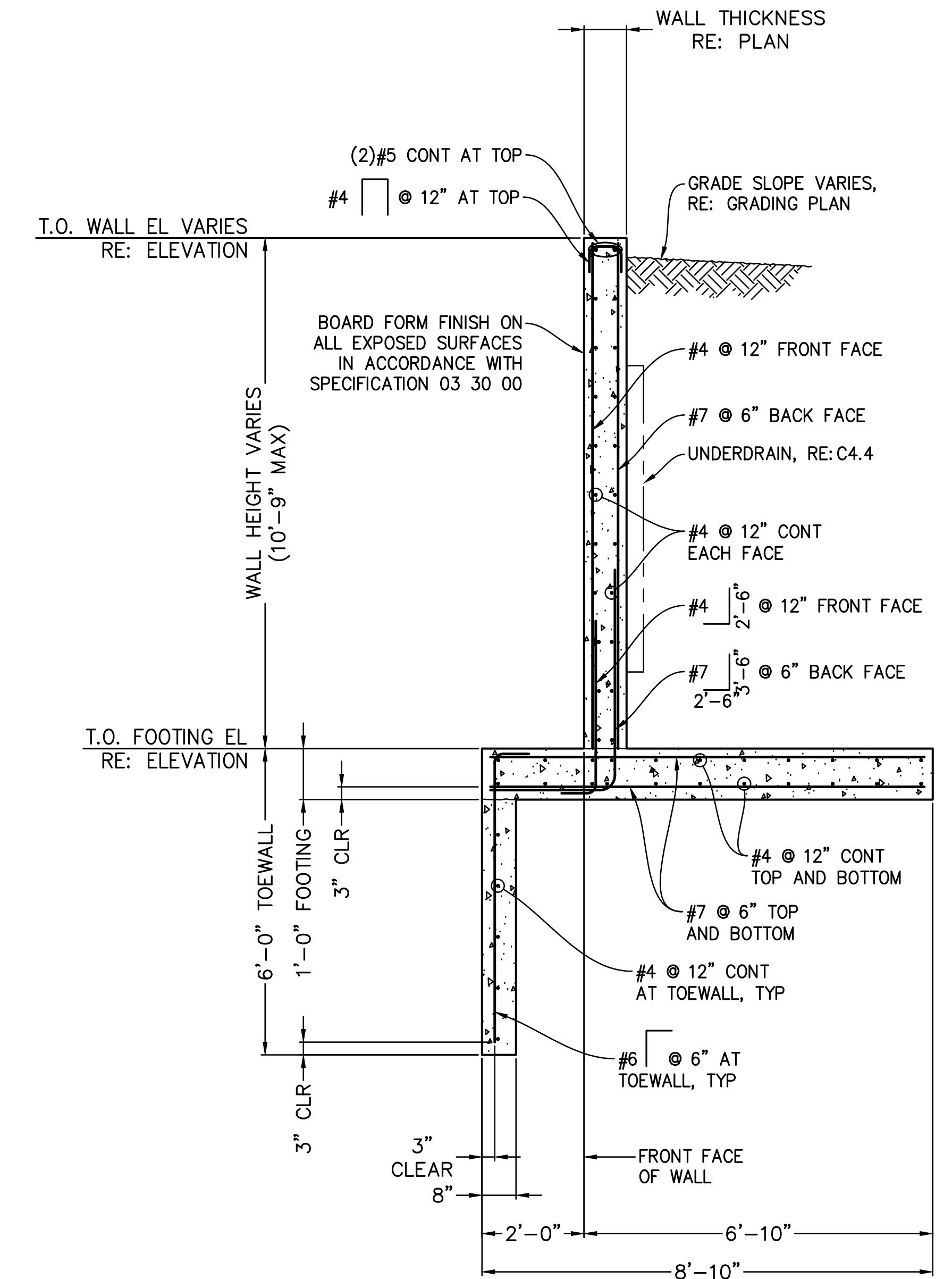
PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING

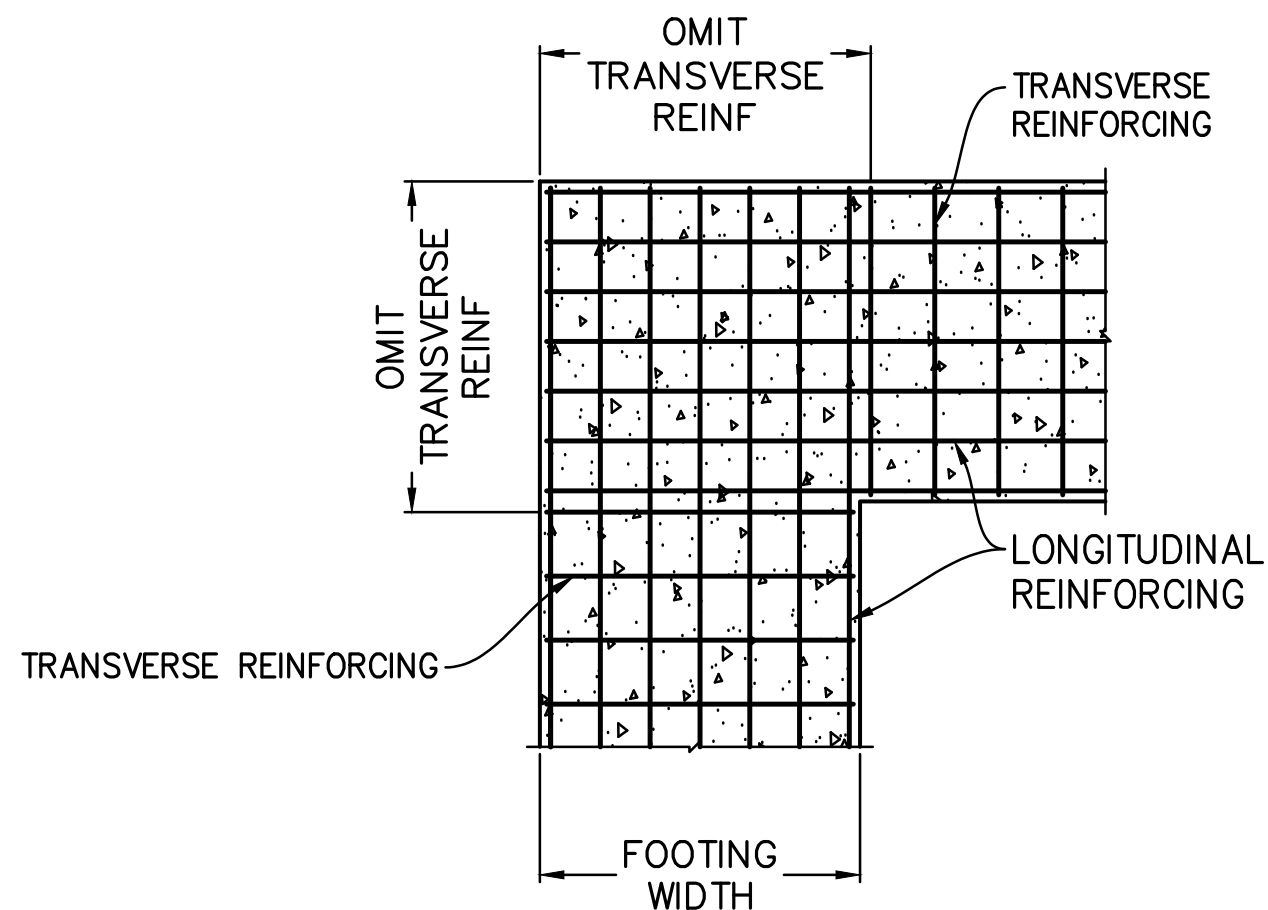


DESIGNED: LE	SUB SHEET NO. C4.6	TITLE OF SHEET ENTRANCE STATION CULVERT NORTH HEADWALL PLAN AND ELEVATIONS	DRAWING NO. 121
MNG			PMIS/PKG NO. 160755
TECH REVIEW: JMD			SHEET 31 OF 165
DATE: 03/10/2022		FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	

PLOT DATE: Wednesday, March 9, 2022 2:43 PM LAST SAVED BY: MGEIGER
DRAWING LOCATION: H:\PROJECTS\2020\2021\ROMO-Fall River Entrance Station\BIM\DWG\ROMO_STRUCT_DETAILS.dwg

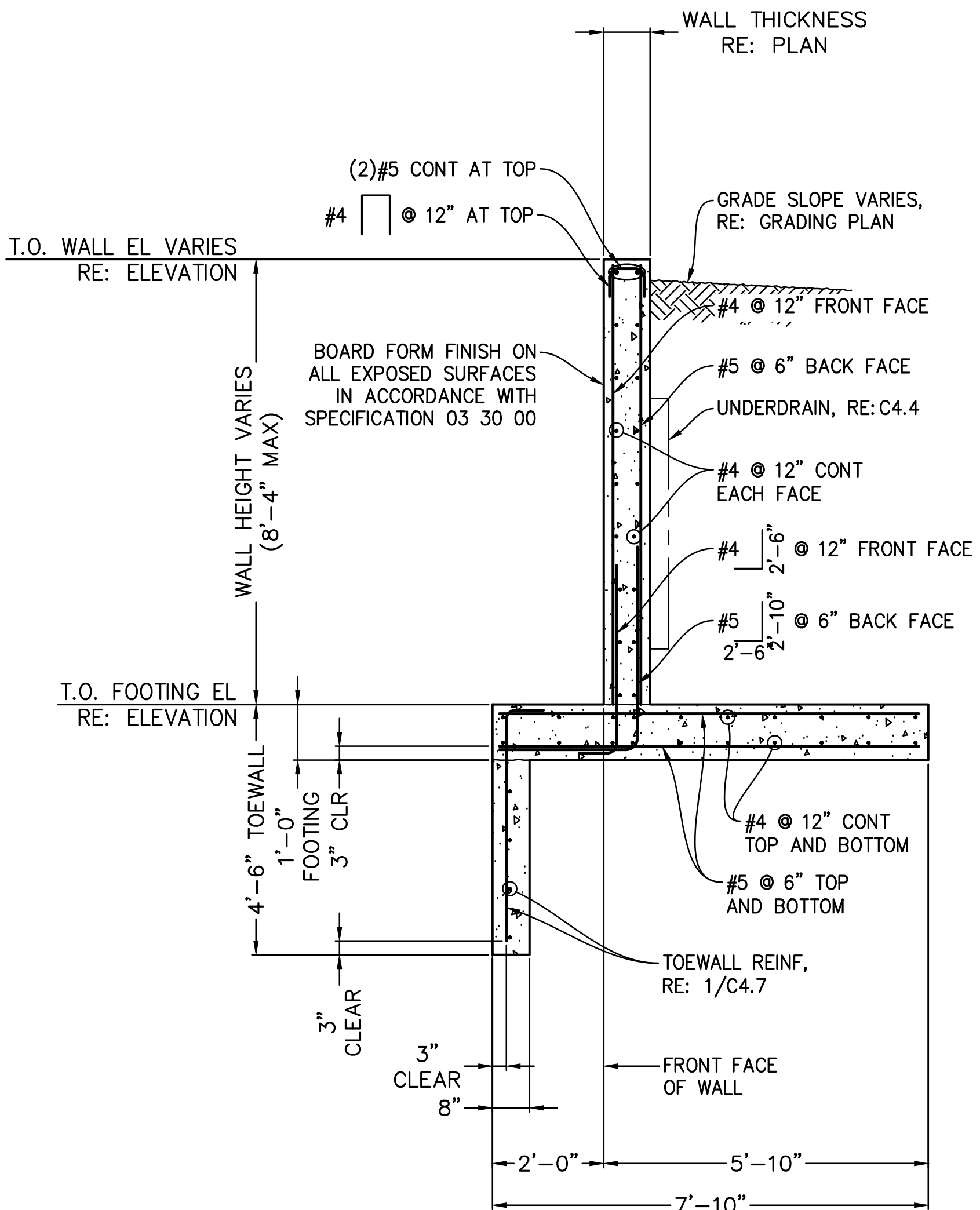


1 WALL SECTION - MAX 10' HEIGHT
C4.5 NO SCALE

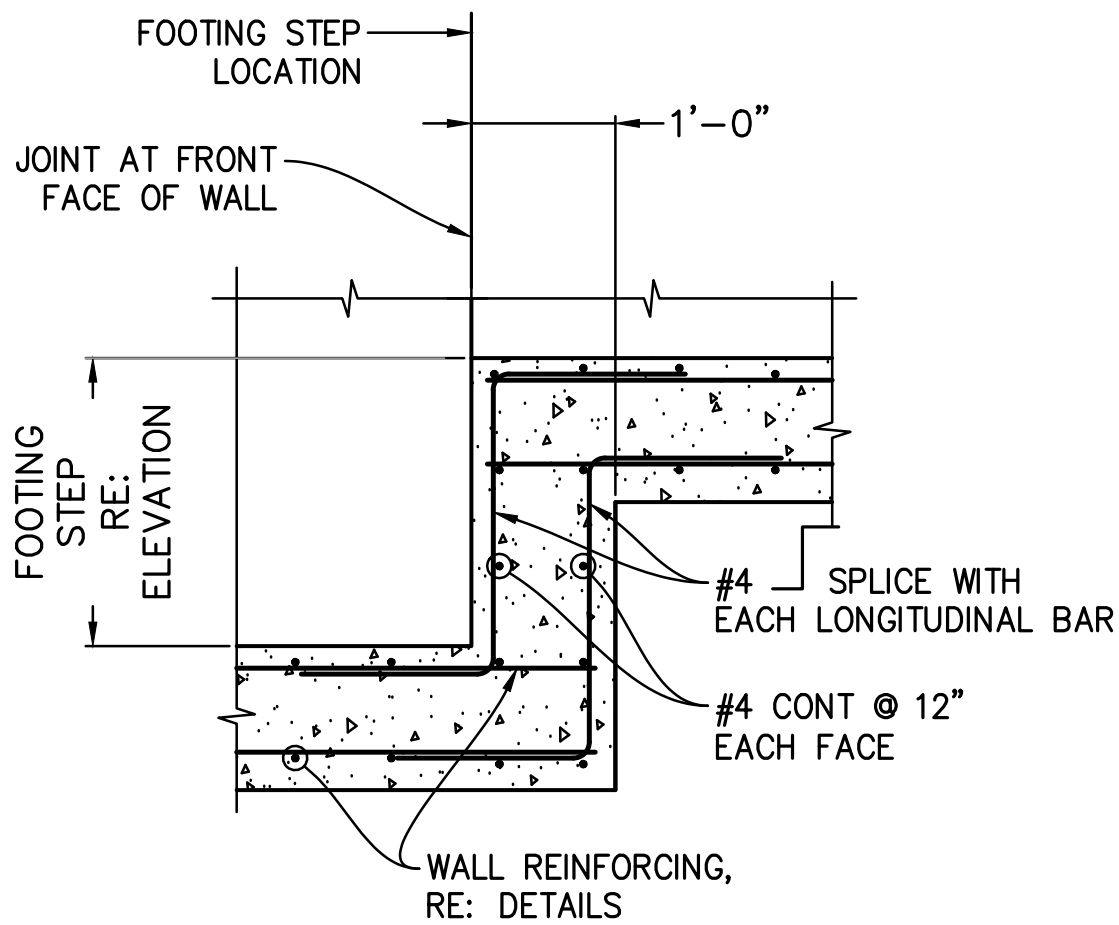


- NOTES:
1. TYPICAL TOP AND BOTTOM MAT REINFORCING.

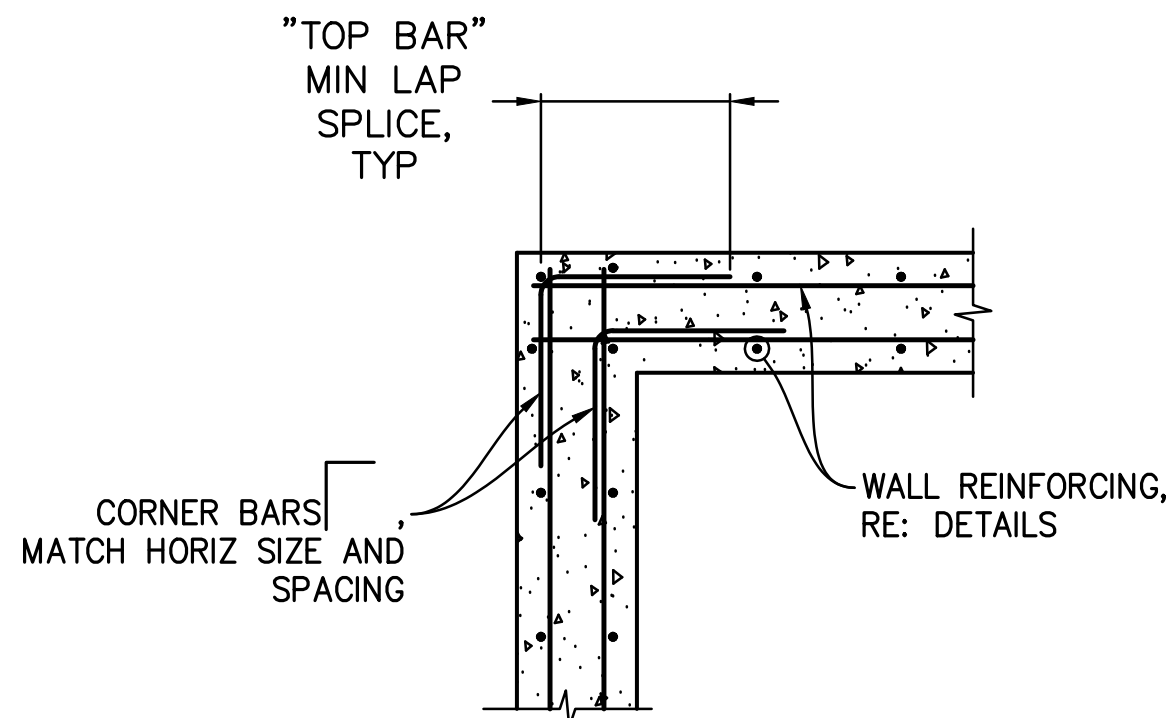
HEADWALL FOOTING
INTERSECTION CORNER DETAIL
NOT TO SCALE



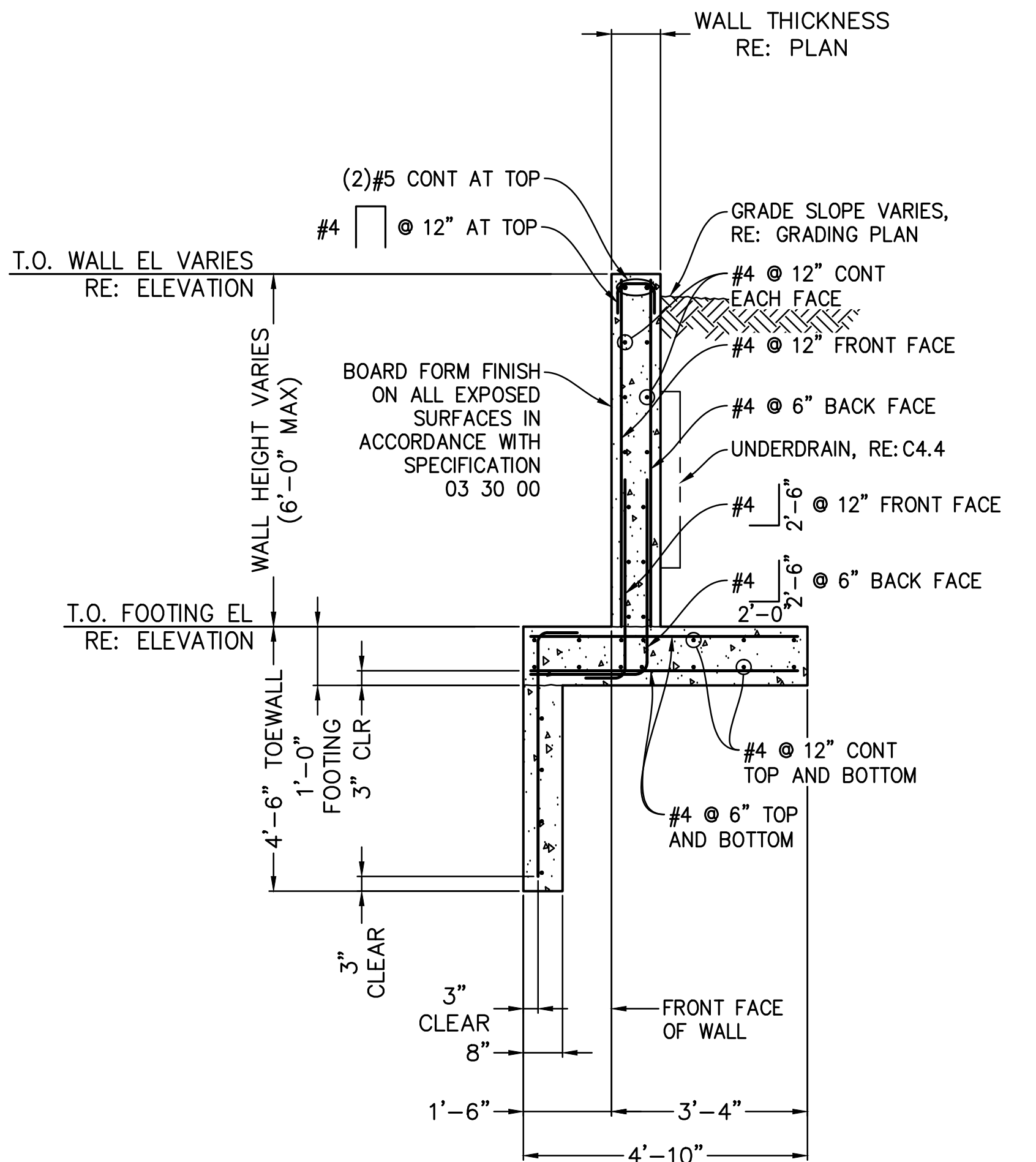
2 WALL SECTION - MAX 8' HEIGHT
C4.5 NO SCALE



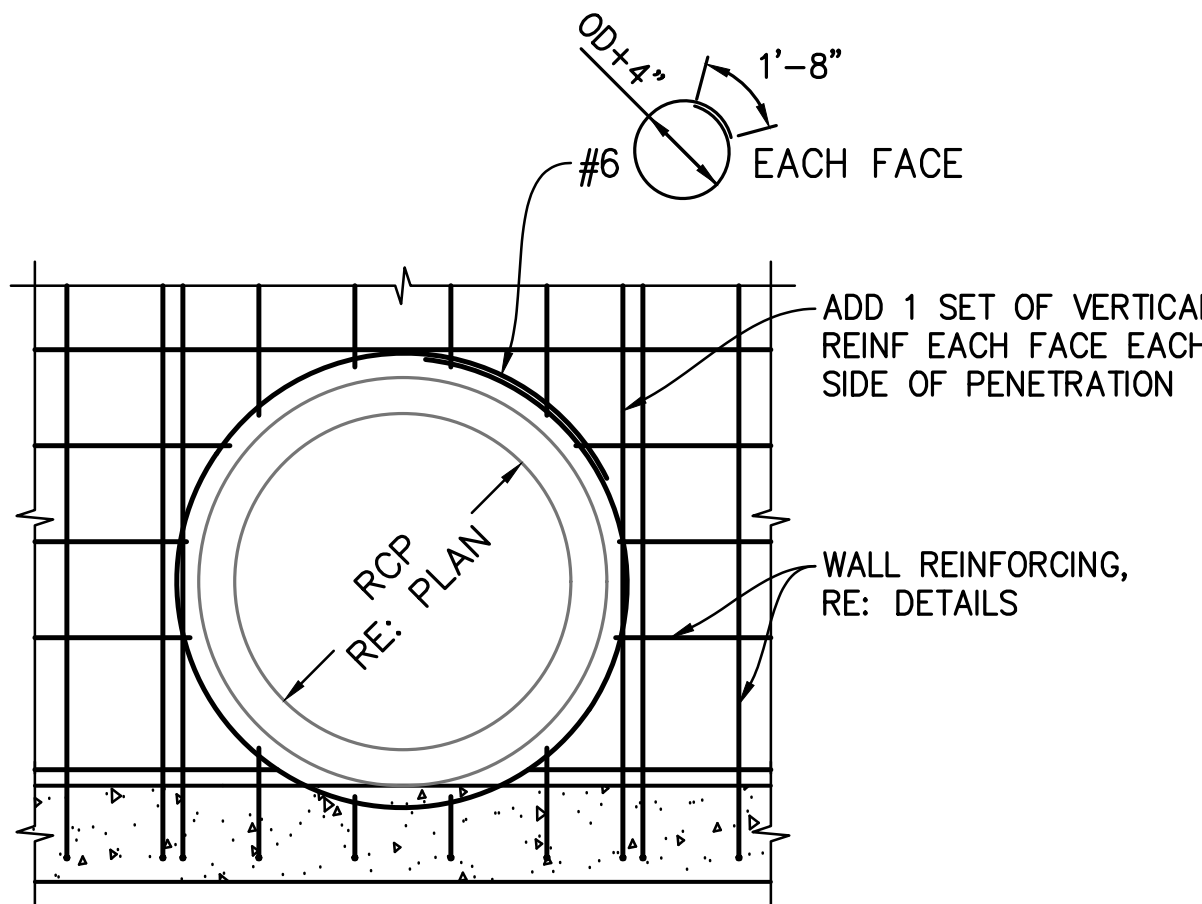
TYPICAL FOOTING STEP DETAIL
NOT TO SCALE



TYPICAL 90° WALL CORNER DETAIL
NOT TO SCALE



3 WALL SECTION - MAX 6' HEIGHT
C4.5 NO SCALE



RCP PENETRATION DETAIL
NOT TO SCALE

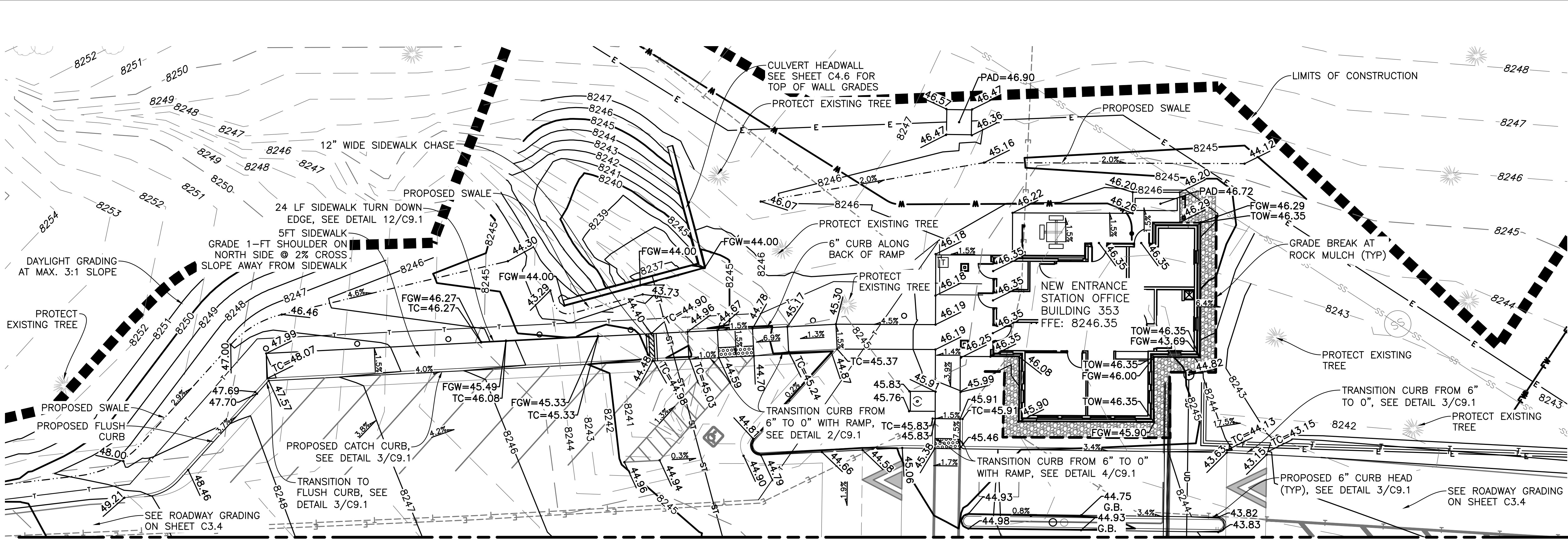


DESIGNED:
LE
CADD
MNG
TECH REVIEW:
JMD
DATE:
03/10/2022

SUB SHEET NO.
C4.7

TITLE OF SHEET
**ENTRANCE
STATION CULVERT
CULVERT DETAILS**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
32 OF 165



GRADING CONTINUES ON SHEET C5.1

- NOTES:**
- 1. REFER TO SHEETS C0.0 THRU C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
 - 2. SPOT ELEVATIONS SHOWN AS XX.XX MEAN "82XX.XX FT."
 - 3. ALL SPOTS ARE TO FLOWLINE UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

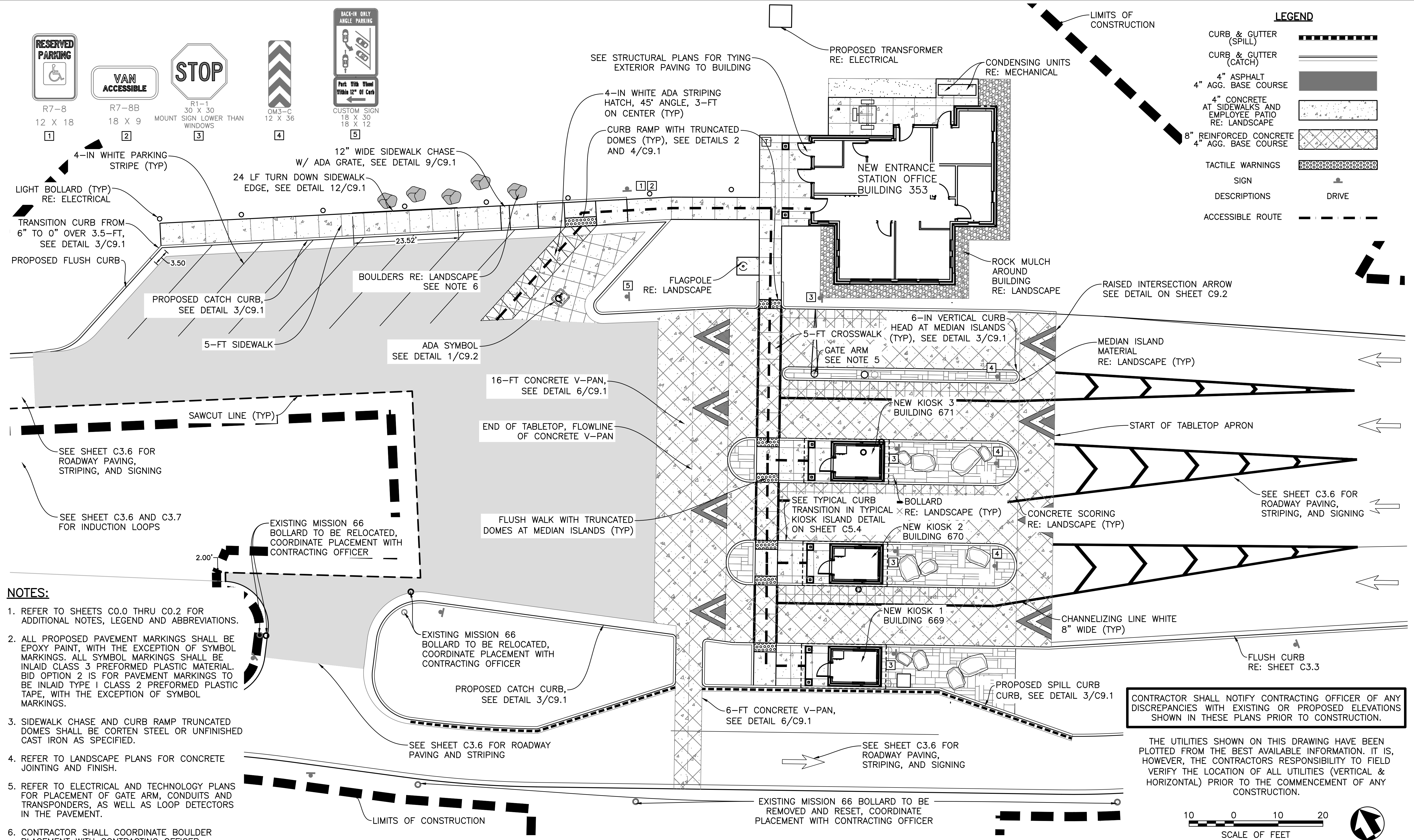
SUB SHEET NO.
C5.0

TITLE OF SHEET
**ENTRANCE STATION
GRADING PLAN**

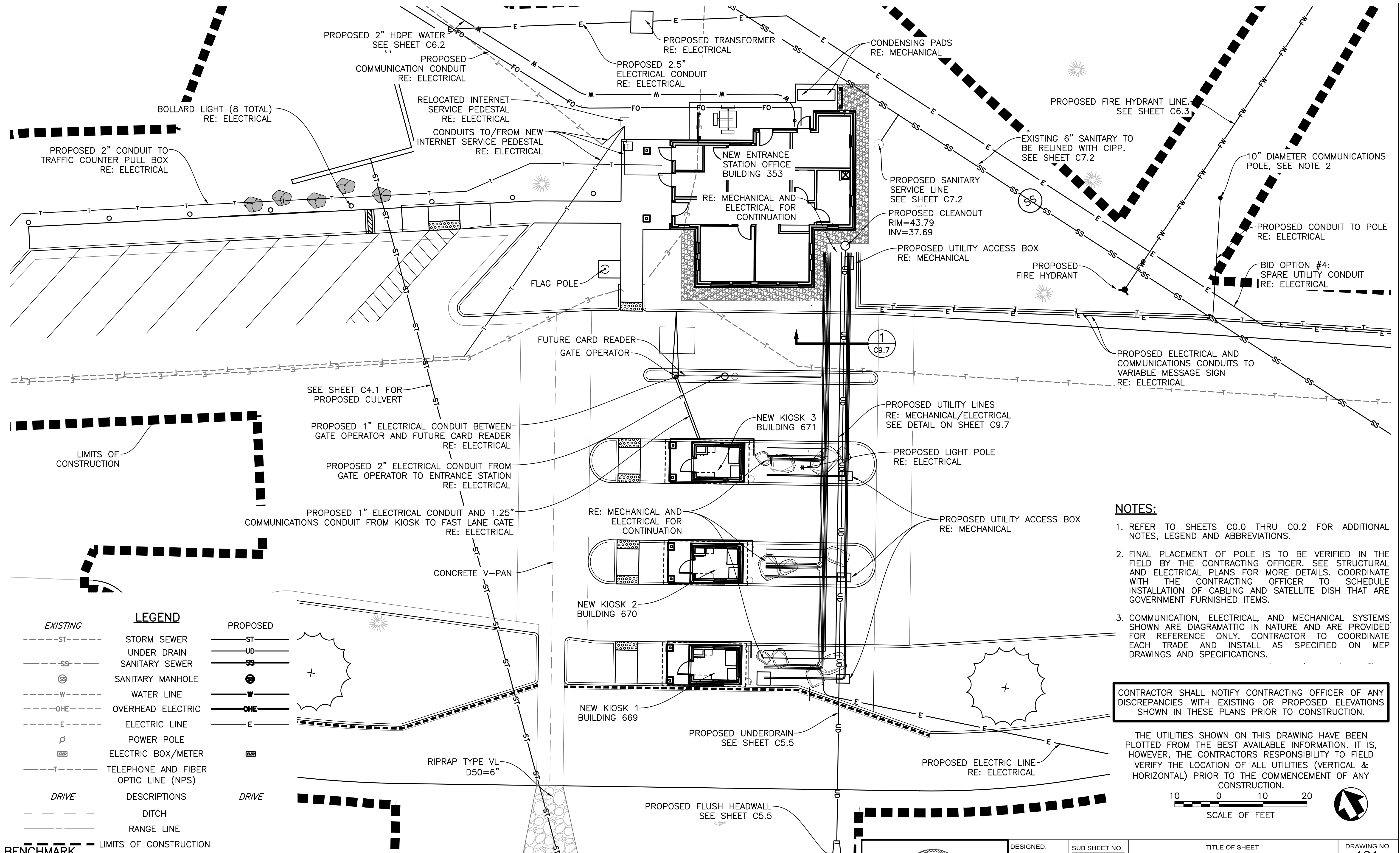
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
33 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:12 PM LAST SAVED BY: ZDRURY
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDs\C5.2 ENTRANCE STATION PAVING & STRIPING PLAN.dwg



	DESIGNED: VARIES	SUB SHEET NO. C5.2	TITLE OF SHEET ENTRANCE STATION PAVING & STRIPING PLAN	DRAWING NO. 121 176678
	AEI/RTP/CDS TECH REVIEW: DCW DATE: 03/10/2022			
			FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	SHEET 35 OF 165



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C5.3

TITLE OF SHEET

**ENTRANCE STATION
UTILITY PLAN**

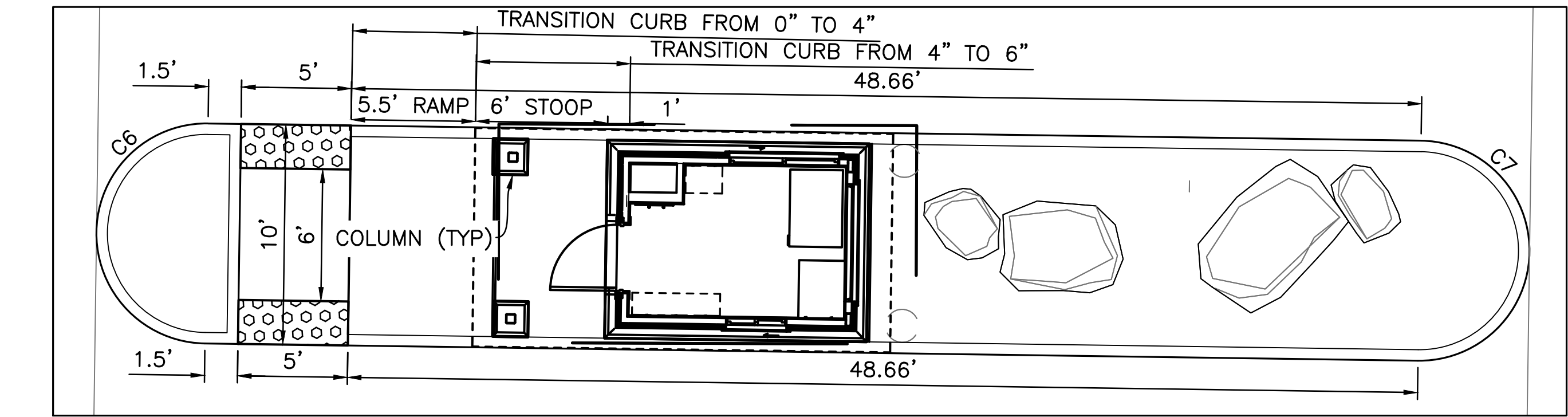
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

RAWING NO.
121
76678

MIS/PKG NO.
160755

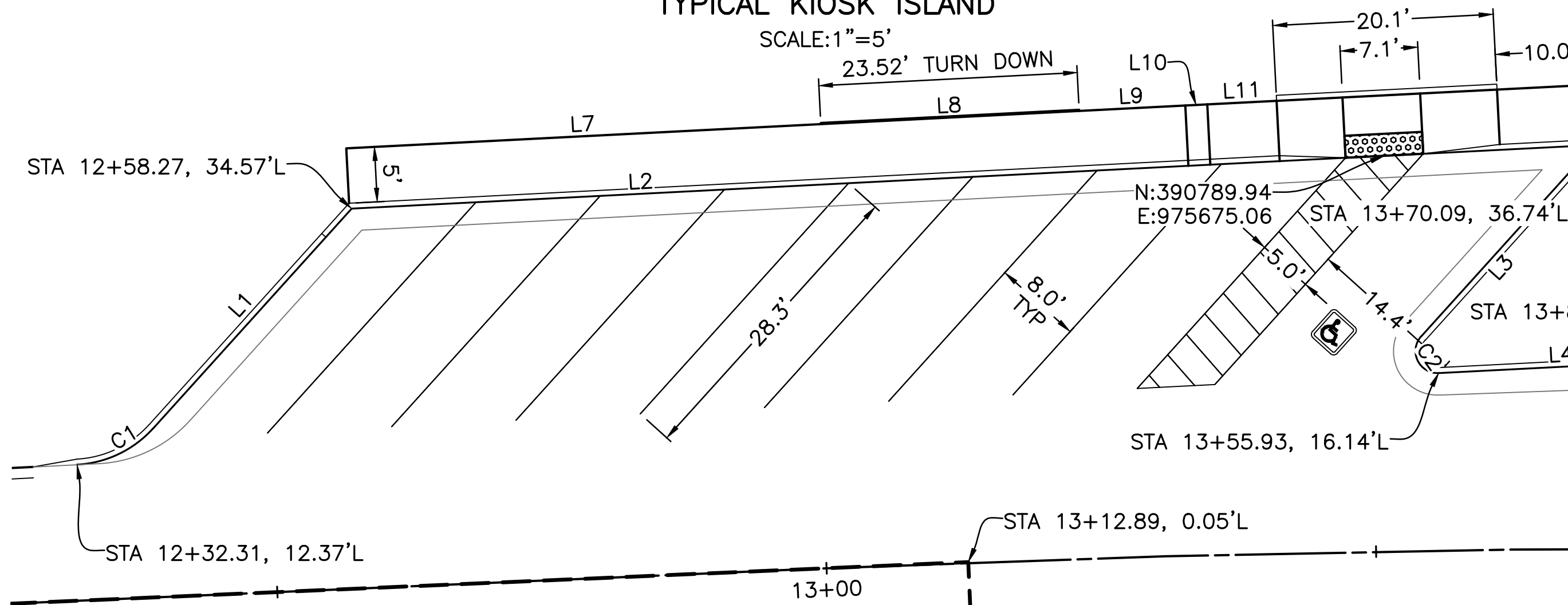
SHEET
6 OF **165**

PLOT DATE: Wednesday, March 9, 2022 3:14 PM LAST SAVED BY: ZDRURY
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDs\C5.4 ENTRANCE STATION HORIZONTAL CONTROL PLAN.dwg



TYPICAL KIOSK ISLAND

SCALE: 1"=5'



LINE TABLE		
NUMBER	DIRECTION	LENGTH
L1	S68°16'10"W	27.16'
L2	S66°43'50"E	113.14'
L3	S68°16'10"W	23.46'
L4	S66°43'50"E	28.41'
L5	S62°59'13"E	5.53'
L6	N62°59'13"W	52.62'
L7	N66°43'36"W	114.83'
L8	N66°43'36"W	114.83'
L9	N66°43'36"W	114.83'
L10	N66°43'36"W	114.83'
L11	N66°43'36"W	114.83'
L12	S56°06'11"E	55.42'
L13	S56°05'24"E	5.65'
L14	S62°59'12"E	61.12'
L15	S62°59'12"E	50.17'
L16	N62°59'12"W	50.17'
L17	N26°25'13"E	18.87'
L18	N26°25'13"E	17.56'
L19	S63°34'47"E	6.04'
L20	N26°25'13"E	8.44'
L21	S63°34'47"E	24.11'

LINE TABLE		
NUMBER	DIRECTION	LENGTH
L22	N26°25'13"E	4.25'
L23	S63°34'47"E	9.45'
L24	S25°52'00"W	6.01'

NOTES:

- REFER TO SHEETS C0.0 THRU C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
- REFER TO SHEET C3.0 FOR LAYOUT OF ROADWAY ALIGNMENTS.

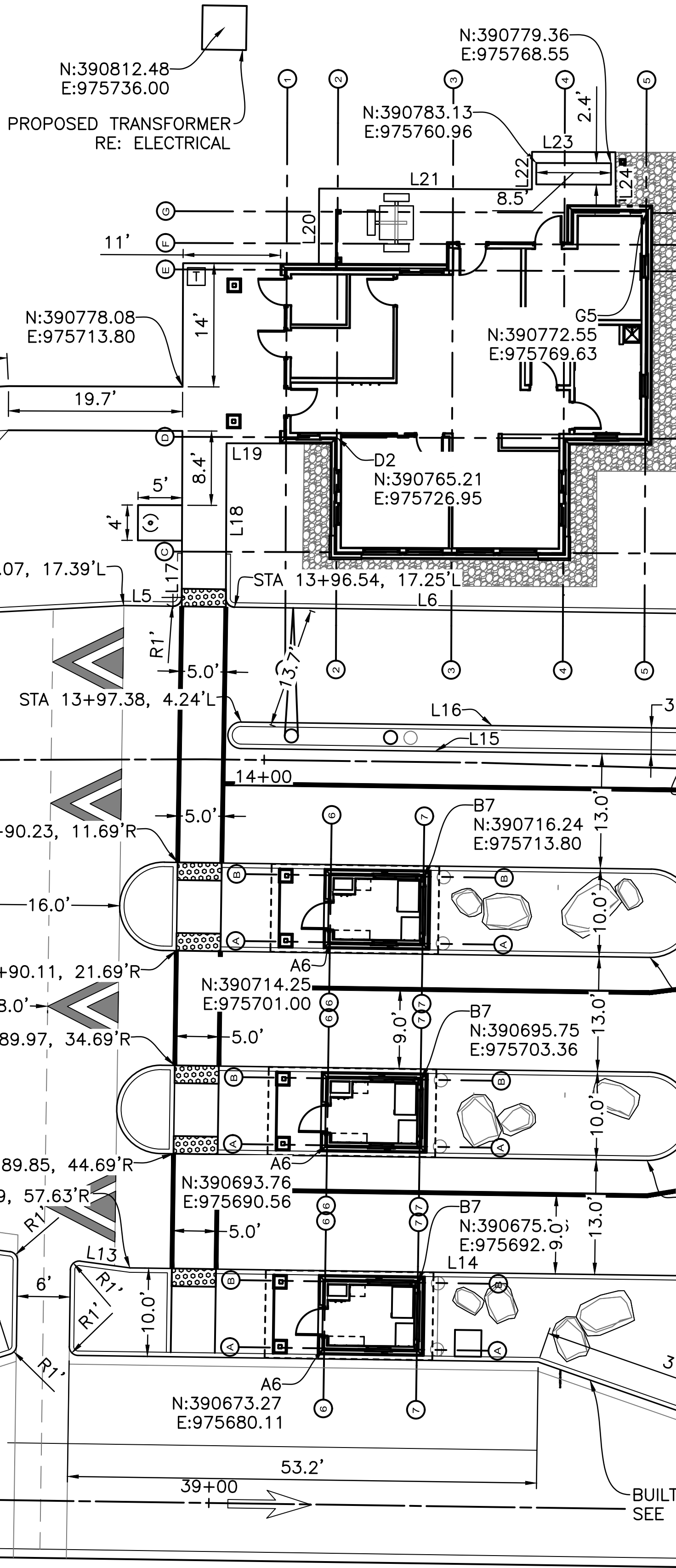
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

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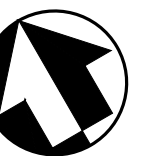


CURVE TABLE					
NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD LENGTH
C1	45°00'00"	10.00'	7.85'	S89°13'50"E	7.65'
C2	135°00'00"	2.00'	4.71'	S00°46'10"W	3.70'
C3	91°28'18"	10.00'	15.96'	N78°58'57"E	14.32'
C4	89°23'48"	10.00'	15.60'	N11°27'07"W	14.07'
C5	6°50'12"	238.00'	28.40'	N59°34'07"W	28.38'
C6	180°00'04"	5.00'	15.71'	N27°00'47"E	10.00'
C7	180°00'04"	5.00'	15.71'	S27°00'47"W	10.00'

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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10 0 10 20
SCALE OF FEET



DESIGNED:
VARIES
CHECKED:
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C5.4

TITLE OF SHEET
**ENTRANCE STATION
HORIZONTAL
CONTROL PLAN**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
37 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:17 PM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\2010821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDA\C6.0 OVERALL WATER PLAN.dwg

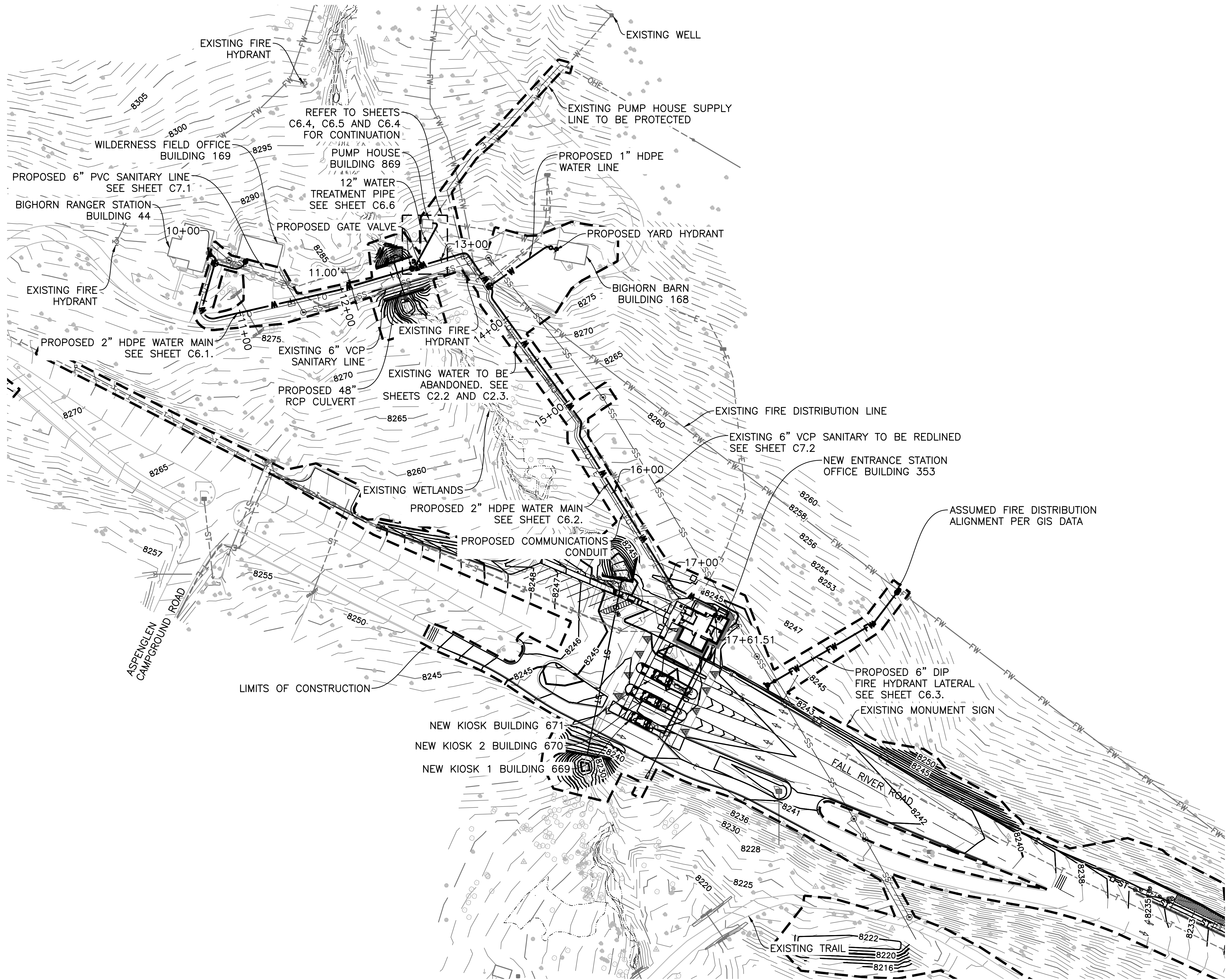
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



LEGEND

EXISTING		PROPOSED
	LIMITS OF CONSTRUCTION	---
	WETLANDS	---
---	SANITARY SEWER	---
SS	SANITARY MANHOLE	SS
	SANITARY CLEAN OUT	O
---	WATER LINE	---
FW	FIRE WATER LINE	FW
FD	FIRE HYDRANT	FD
FD	YARD HYDRANT	FD
	WATER VALVE	•
	CURB STOP	•
---	STORM SEWER	---
ST	UNDERDRAIN LINE	UD
	FLARED END SECTION	▶
---	ELECTRIC LINE	---
EL	ELECTRIC METER	EL
---	OVERHEAD ELECTRIC LINE	---
OHE	TELEPHONE LINE	T
T	TELEPHONE PEDESTAL	T
---	FIBER OPTIC LINE	---
FO	SIGN	FO
DRIVE	DESCRIPTIONS	DRIVE

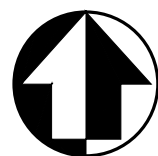
NOTES:

- SEE SHEETS C0.0-C0.2 FOR ADDITIONAL NOTES, LEGEND, AND ABBREVIATIONS.
- SEE DETAIL 8 ON C9.6 FOR TYPICAL SERVICE CONNECTION/ PUMP OUT (BUILDING) DETAIL.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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50 0 50 100
SCALE OF FEET



DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C6.0

TITLE OF SHEET
OVERALL WATER PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
39 OF **165**

PLOT DATE: Wednesday, March 9, 2022 3:19 PM LAST SAVED BY: RPOLLIARD
DRAWING LOCATION: G:\SULLIVAN\200821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDA\C6.1 WATER PLAN AND PROFILE.dwg

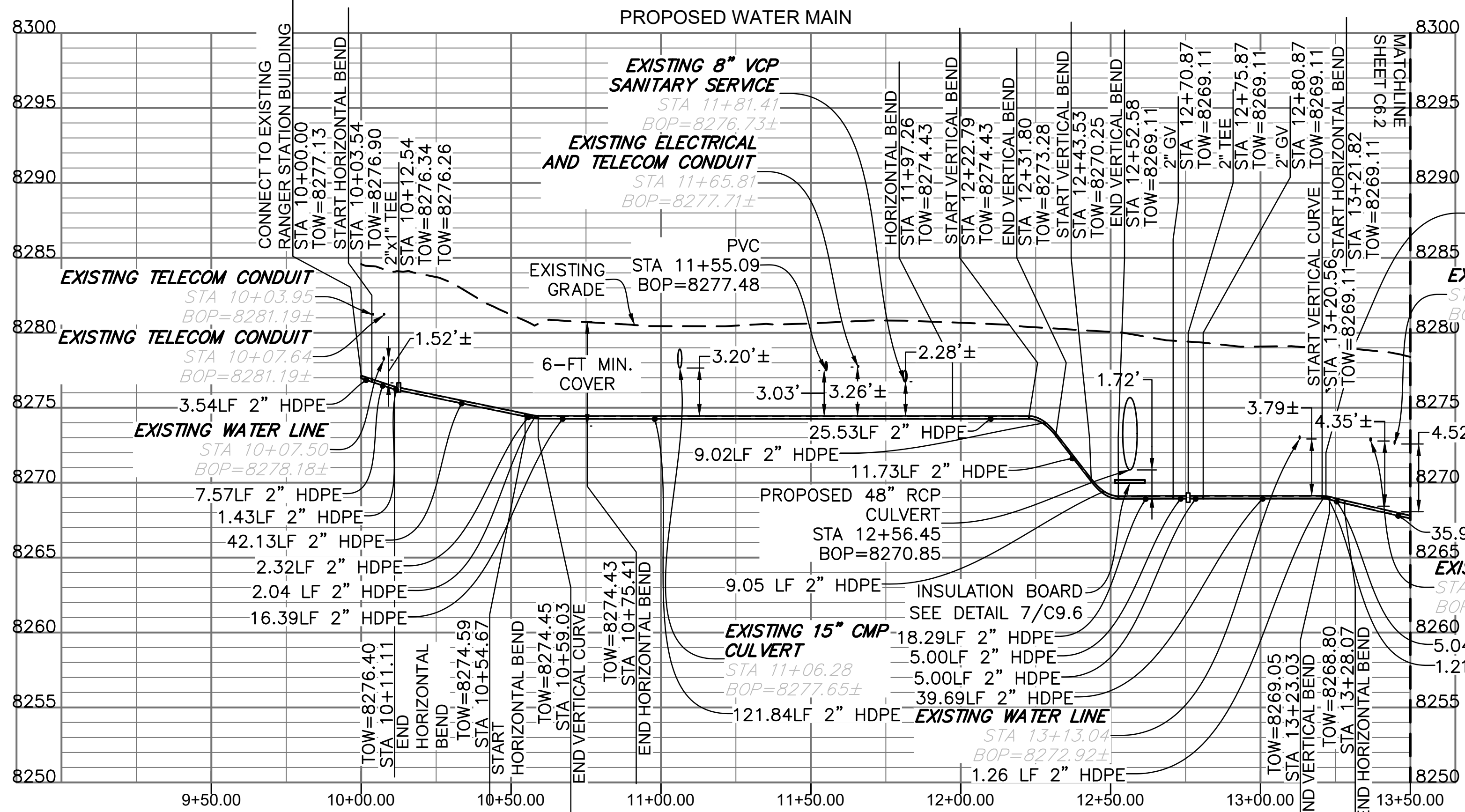
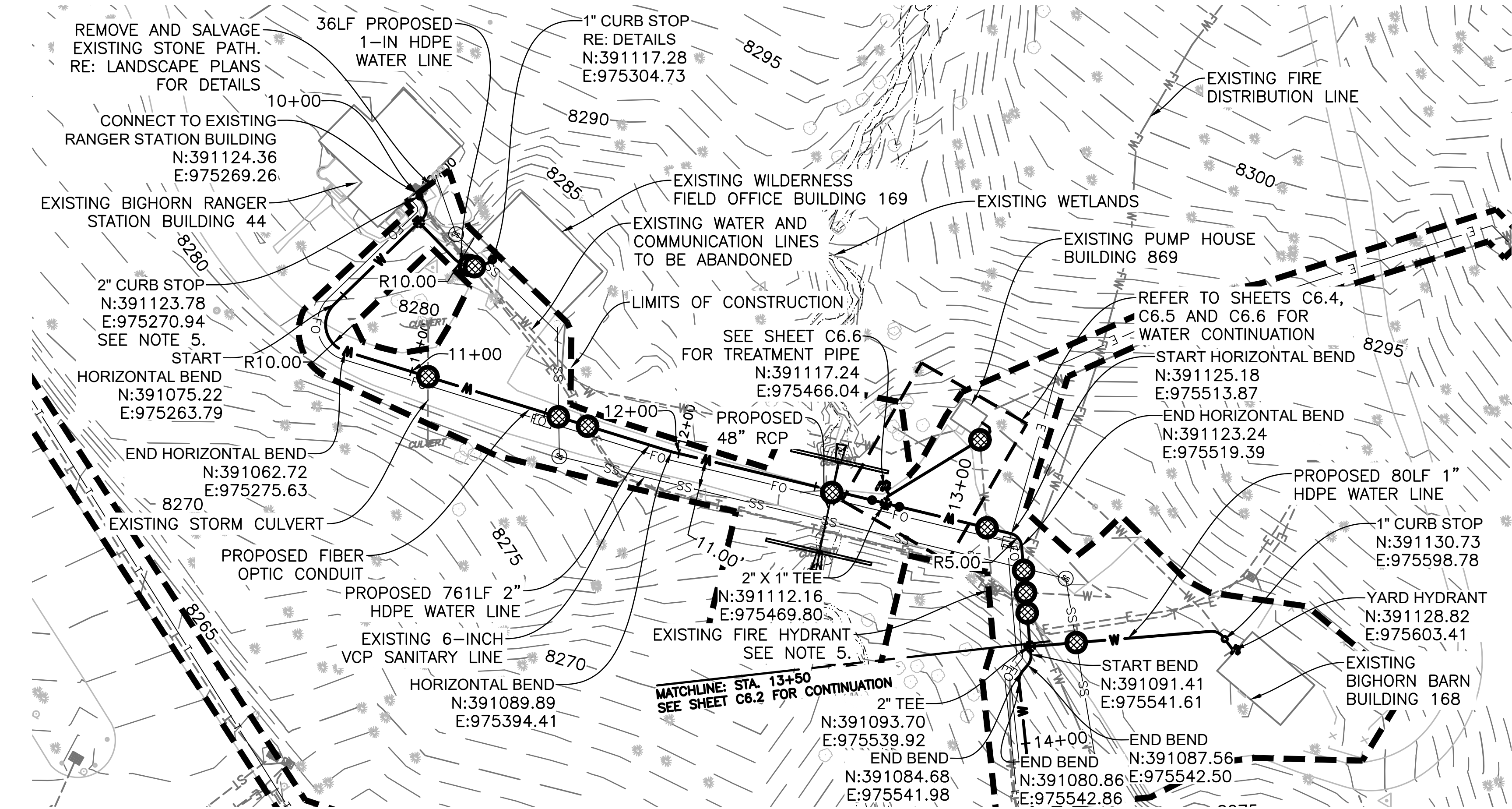
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



SCALES:
HORZ. 1"=30'
VERT. 1"=6'

NOTES:

- SEE SHEETS C0.0-C0.2 FOR ADDITIONAL NOTES, LEGEND, AND ABBREVIATIONS.
- WATER MAIN ALIGNMENTS SHOWN HEREON ARE DERIVED TO MAINTAIN SEPARATION FROM EXISTING UTILITIES TO REMAIN AND ALSO TO MAINTAIN MINIMUM 10-FOOT SEPARATION FROM EXISTING TREES. WHERE FEASIBLE WATER ALIGNMENT HAS BEEN ESTABLISHED OUTSIDE OF EXISTING TREE CANOPIES.
- WATER MAIN IS PROPOSED AS HIGH DENSITY POLYETHYLENE PIPE (HDPE) AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR MINIMUM RADIUS.
- PIPE INSULATION TO BE PROVIDED AT CULVERT CROSSING TO MITIGATE FREEZE POTENTIAL DUE TO OPEN AIR WITHIN THE CULVERT. PIPE INSULATION TO BE PROVIDED FOR NEW PIPES WITH LESS THAN 6-FOOT OF COVER OR DEPTH BELOW STORM PIPE LESS THAN 6-FT.
- EXISTING FIRE DISTRIBUTION WATER MAIN FROM THE BIG HORN RANGER STATION COMPLEX TO THE FALL RIVER VISITOR CENTER IS SHOWN HEREON DIAGRAMMATICALLY. THE PROPOSED FIRE HYDRANT LATERAL AND ASSEMBLY WILL BE CONSTRUCTED AND FED FROM THE EXISTING MAIN PENDING FIELD VERIFICATION OF ALIGNMENT. SEE NOTE 10, SHEET C0.1.
- LOCATE EXISTING WATER SERVICE CONNECTION WITHIN THE EXISTING BUILDING 44 AND CONNECT TO EXISTING MAIN. PROVIDE REDUCER AND PIPE COUPLER TO ALLOW JOINING OF DISSIMILAR MATERIALS.
- CONTRACTOR TO PROVIDE MANHOLE COATING TO PROTECT FROM HYDROGEN SULFIDE CORROSION.
- SEE DETAIL 8 ON C9.6 FOR TYPICAL SERVICE CONNECTION/ PUMP OUT (BUILDING) DETAIL.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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30 0 30 60
SCALE OF FEET

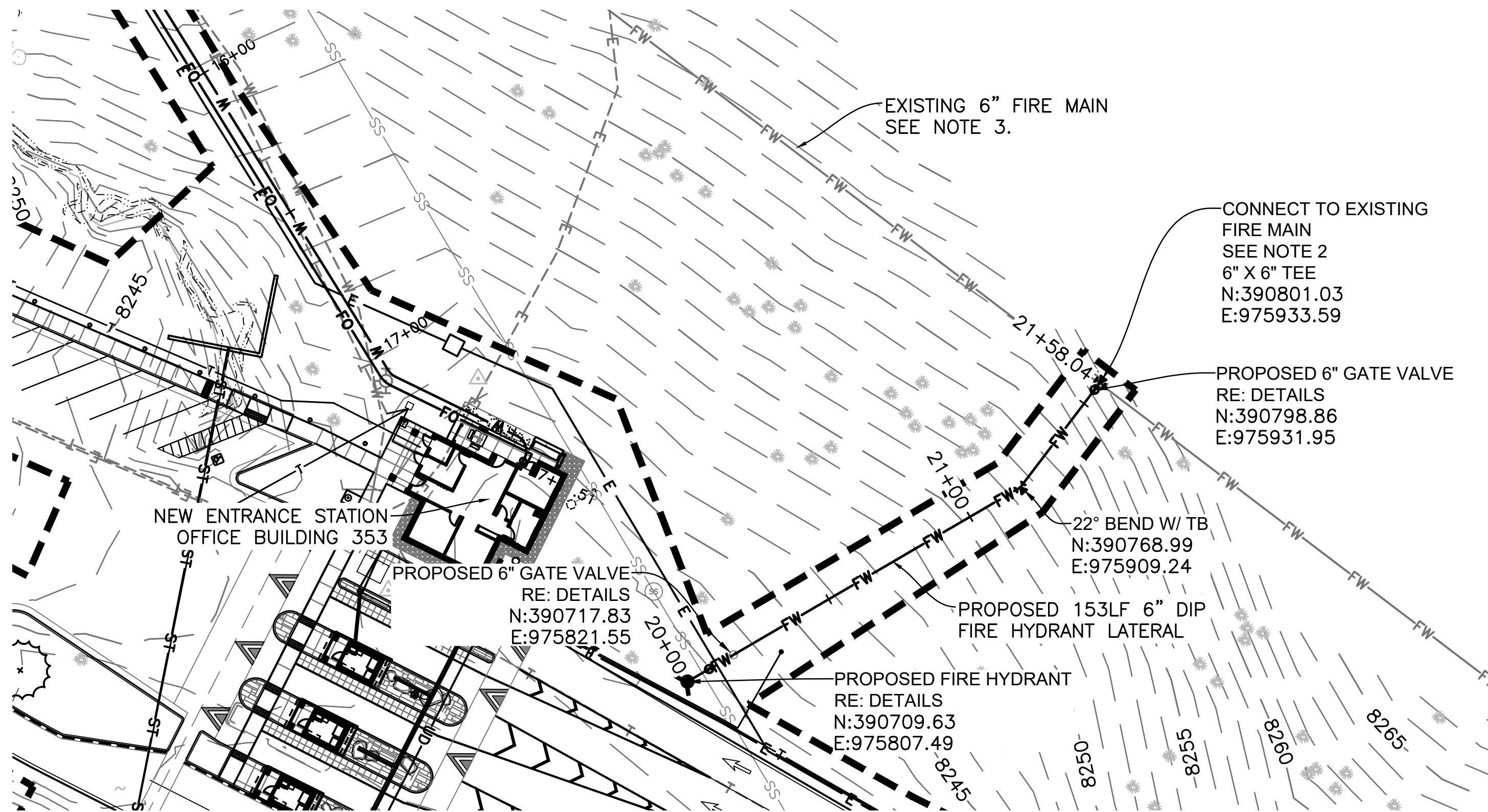


DESIGNED:
VARIES
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C6.1

TITLE OF SHEET
WATER PLAN AND PROFILE
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
40 OF **165**



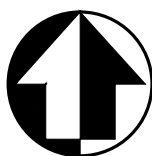
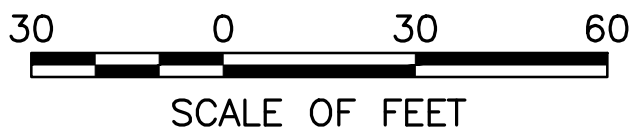
LEGEND		
EXISTING		PROPOSED
LIMITS OF CONSTRUCTION — — — — —		
WETLANDS		
—SS—	SANITARY SEWER	—SS—
⊗	SANITARY MANHOLE	⊗
	SANITARY CLEAN OUT	○
—W—	WATER LINE	—W—
—FW—	FIRE WATER LINE	—FW—
⊕	FIRE HYDRANT	⊕
⊕	YARD HYDRANT	⊕
	WATER VALVE	●
	CURB STOP	•
—ST—	STORM SEWER	—ST—
	FLARED END SECTION	▤
—E—	ELECTRIC LINE	—E—
⊠	ELECTRIC METER	
—T—	TELEPHONE LINE	—T—
⊠	TELEPHONE PEDESTAL	
—FO—	FIBER OPTIC LINE	—FO—
	SIGN	
DRIVE	DESCRIPTIONS	DRIVE

NOTES:

- SEE SHEETS C0.0—C0.2 FOR ADDITIONAL NOTES, LEGEND, AND ABBREVIATIONS.
- CONNECTION TO EXISTING WATER MAIN SHALL BE MADE WITH A MEGA-LUG RESTRAINT DEVICE AND BOLTED SLEEVE COUPLING. ROTATE TEE TO MATCH PROFILE.
- LOCATION OF EXISTING 6" FIRE MAIN IS APPROXIMATE BASED ON GIS DATA RECEIVED FROM THE NPS. CONTRACTOR TO FIELD LOCATE EXISTING WATER MAIN AND CONFIRM HORIZONTAL/VERTICAL LOCATION PRIOR TO TRENCHING NEW FIRE HYDRANT LATERAL. PROVIDE SUFFICIENT TIME IN BASE LINE CONSTRUCTION SCHEDULE TO ALLOW FOR FIELD INVESTIGATIONS TO OCCUR PRIOR TO FIRE HYDRANT LATERAL CONSTRUCTION.
- CONTRACTOR TO PROTECT EXISTING TREES AND VEGETATION TO THE EXTENT PRACTICAL WHILE TRENCHING NEW FIRE HYDRANT LATERAL. REFER TO PROJECT SPECIFICATIONS FOR REQUIREMENTS WHEN TRENCHING WITHIN THE DRIP LINE OF EXISTING TREES.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



BENCHMARK

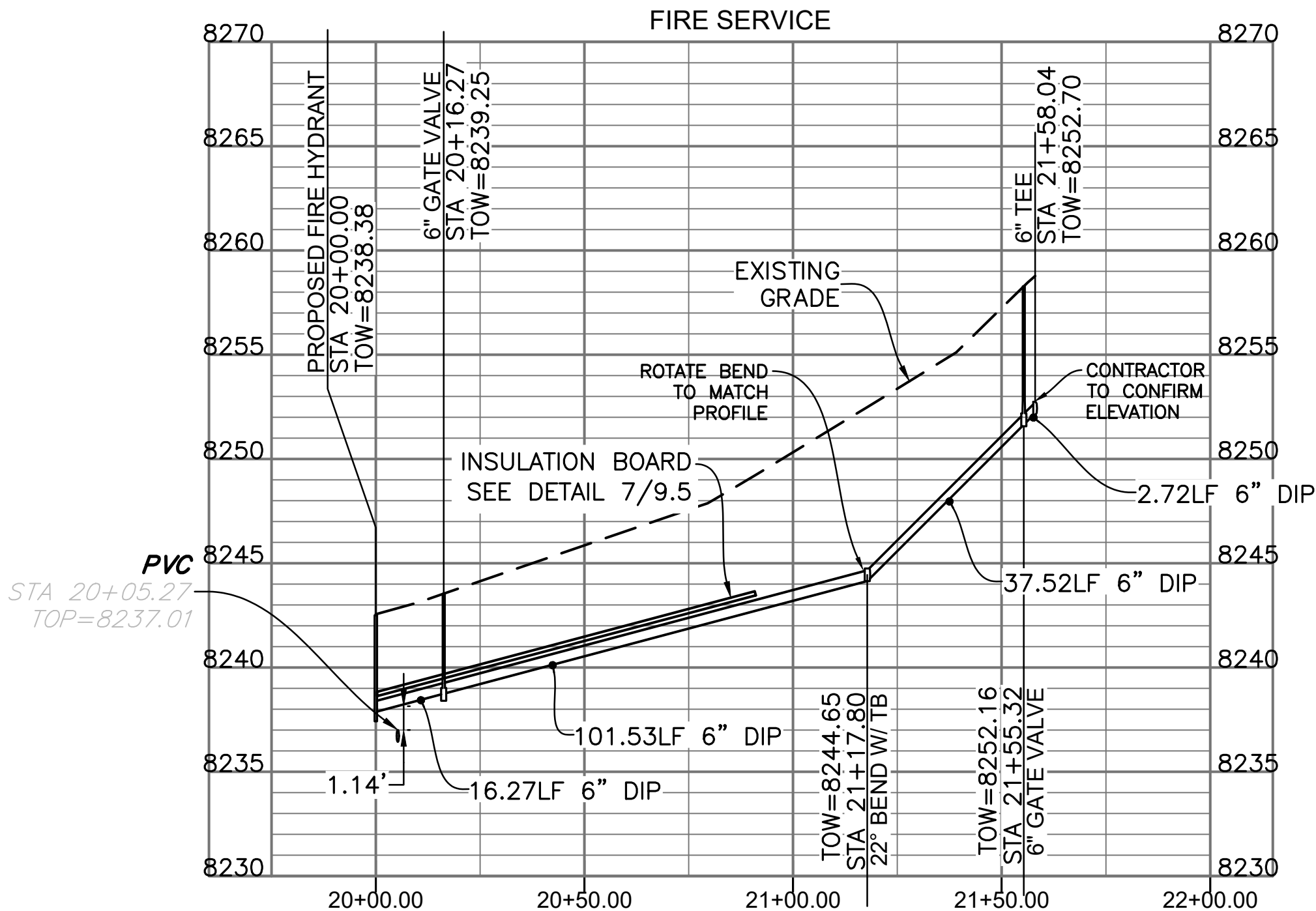
ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

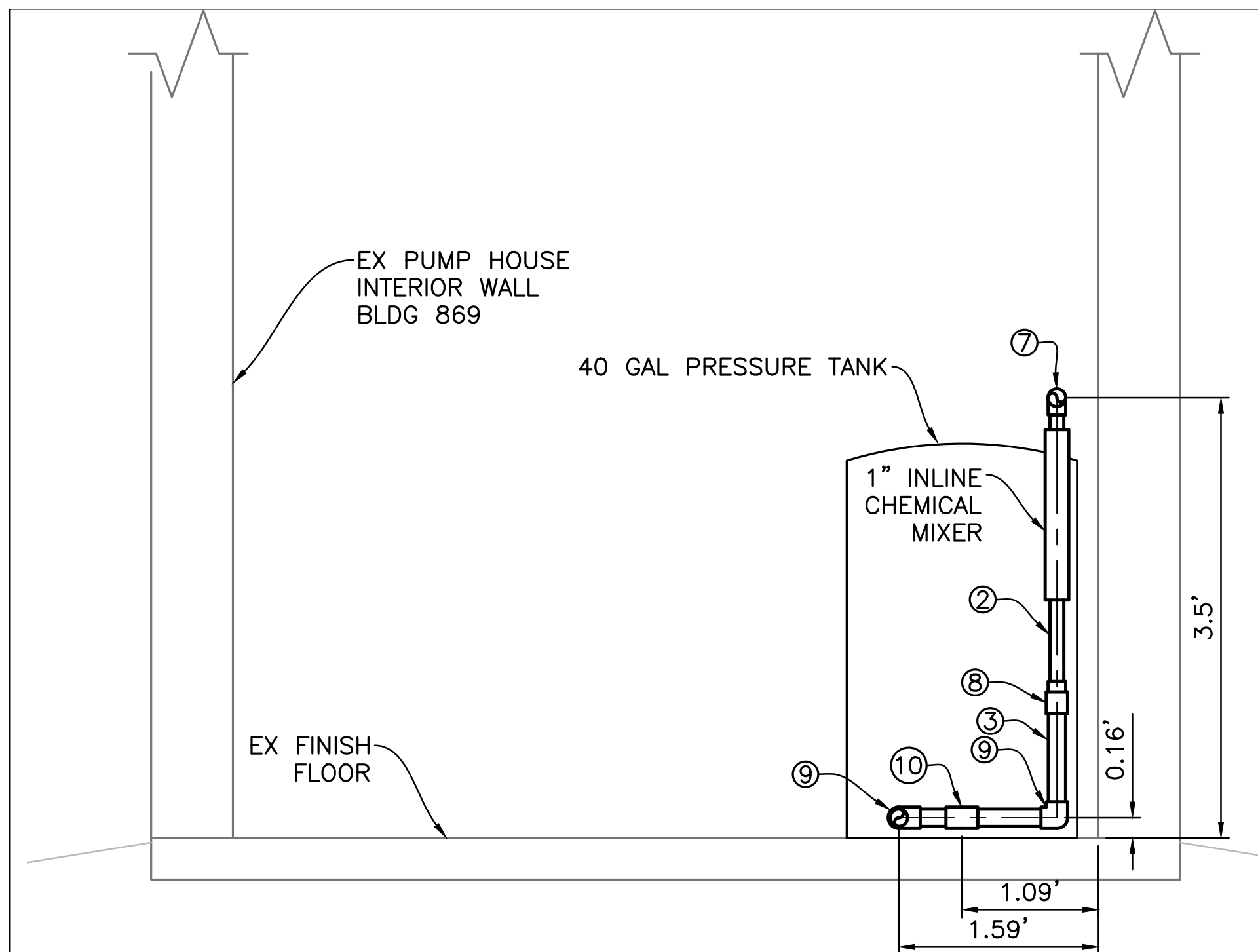
PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING

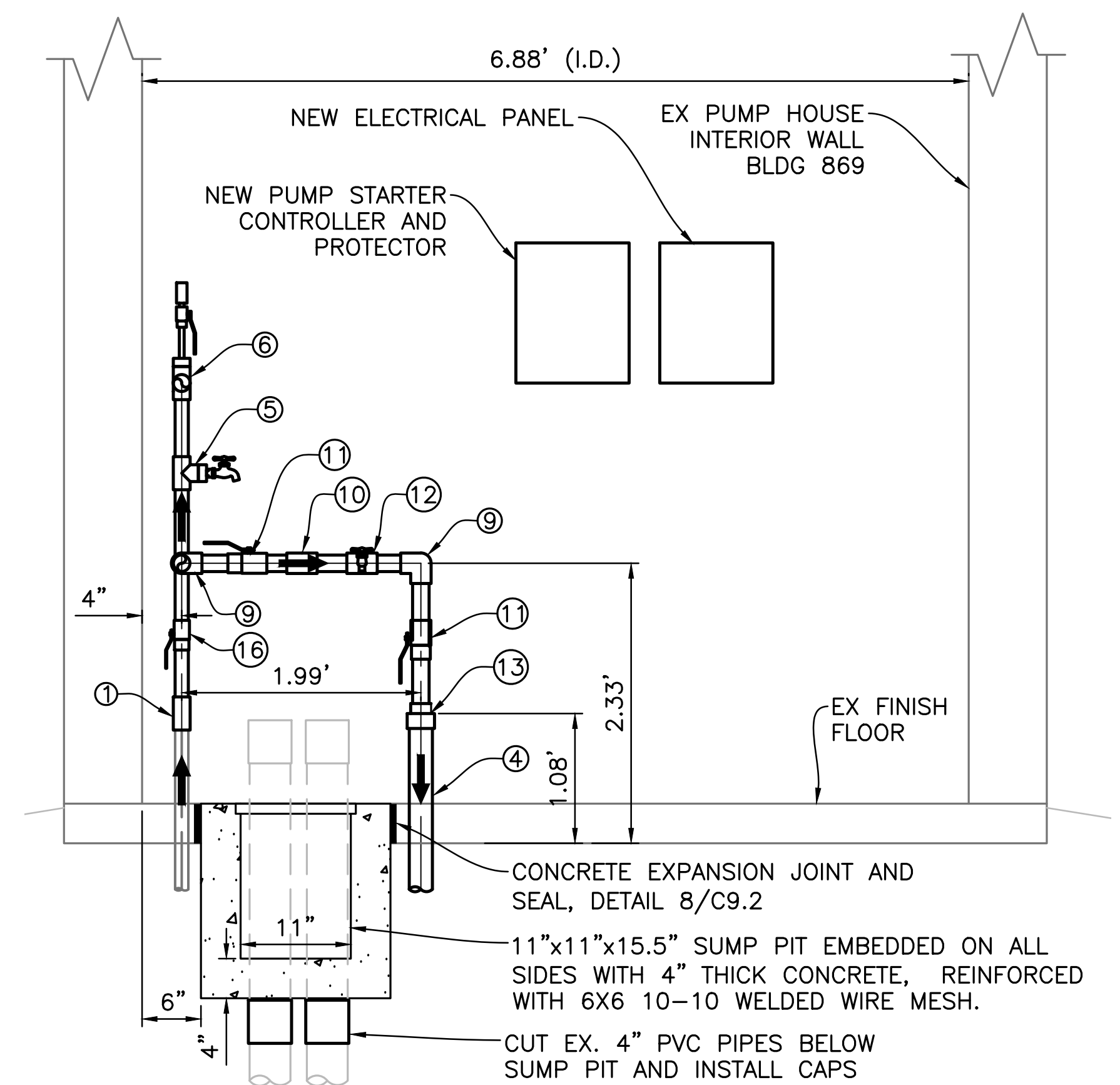
SCALES:
HORZ. 1"=30'
VERT. 1"= 6'



	DESIGNED: VARIES	SUB SHEET NO. C6.3	TITLE OF SHEET FIRE HYDRANT PLAN AND PROFILE	DRAWING NO. 121 176678
	ADD AEL/RTP/CDS TECH REVIEW: DCW DATE: 03/10/2022			PMIS/PKG NO. 160755
			FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	SHEET 42 OF 165



2 SECTION DETAIL
C6.5 1" = 1'



3 SECTION DETAIL
C6.5 1" = 1'

- 1 1-IN HDPE TO PVC TRANSITION ADAPTOR CONNECT TO EX. WATER WELL SUPPLY LINE
- 2 1-IN SCH 80 PVC PIPE
- 3 1-1/4-IN SCH 80 PVC PIPE
- 4 2-IN SCH 80 PVC PIPE
- 5 1"x1/2" SCH 80 PVC REDUCING TEE, 1/2" THREADED ADAPTOR, NPT 1/2" STAINLESS STEEL SMOOTH NOSE SAMPLE PORT
- 5 1"x1" SCH 80 PVC TEE, 1"x1/2" REDUCING BUSHING, 1/2" BRONZE BALL VALVE, STAINLESS STAIN PRESSURE GAUGE
- 6 1"x1/2" REDUCING TEE, 1/2"x1/4" REDUCING BUSHING CONNECT 1/4" TEFLON TUBING FROM CHEMICAL DOSING PUMP
- 7 1" SCH 80 PVC 90° BEND
- 8 1-1/4"x1" SCH 80 PVC REDUCING COUPLING
- 9 1-1/4" SCH 80 PVC 90° BEND
- 10 1-1/4" SCH 80 PVC TEE
- 11 1-1/4" BRONZE BALL VALVE
- 12 1-1/4" SCH 80 PVC TEE, 1-1/4"x1/2" THREADED REDUCING BUSHING, NPT 1/2" STAINLESS STEEL SMOOTH NOSE SAMPLE PORT
- 13 2"x1-1/4" SCH 80 PVC REDUCING BUSHING
- 14 2" SCH 80 PVC 90° BEND
- 15 1"x1/2" REDUCING TEE, 1/2" THREADED ADAPTOR, FNPT PRESSURE SWITCH, 40-60 PSI
- 16 1" BRONZE BALL VALVE

NOTES:

1. REFER TO SHEETS C0.0 THROUGH C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
2. THE CHEMICAL TREATMENT SOLUTION FOR THE 7.5-GALLON WHITE POLYETHYLENE TANK WILL BE PREPARED BY:
 - a. ADDING DISTILLED OR DEIONIZED WATER TO WITHIN TWO INCHES OF THE 7.5-GALLON MARK ON THE TANK.
 - b. ADDING TWO CUPS OF 12.5% SODIUM HYPOCHLORITE (12.5% BLEACH), AND
 - c. FILLING TO THE 7.5-GALLON MARK WITH DISTILLED OR DEIONIZED WATER.
3. CHEMICAL INJECTION PUMP TO BE SET AT A DOSE FLOW RATE OF 0.06 GPH.

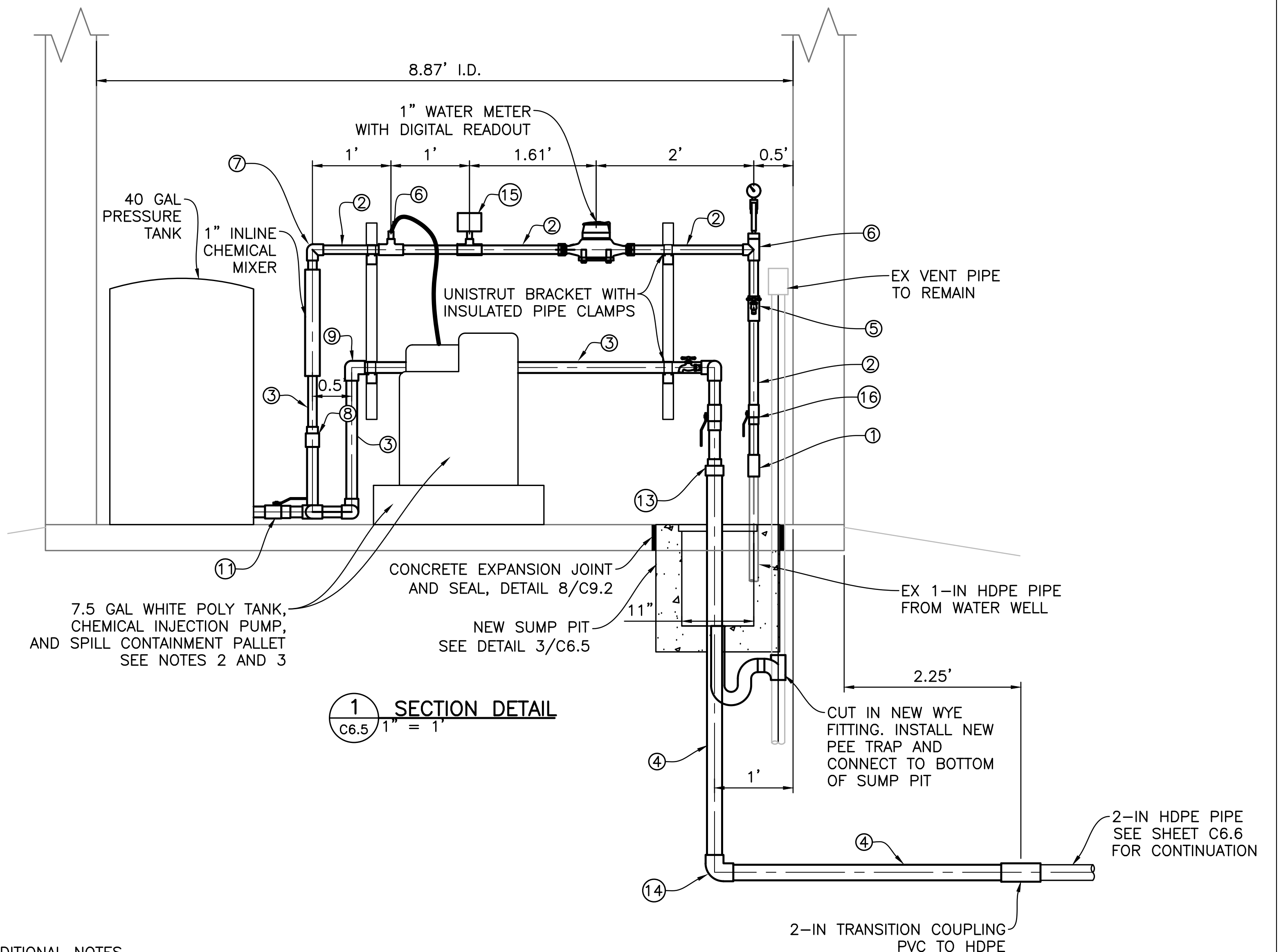
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING

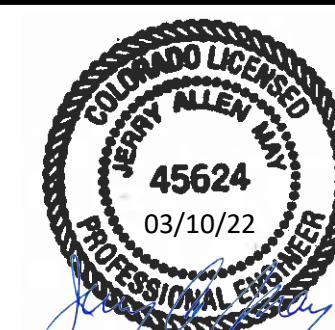


1 SECTION DETAIL
C6.5 1" = 1'

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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1 0 1 2
SCALE OF FEET

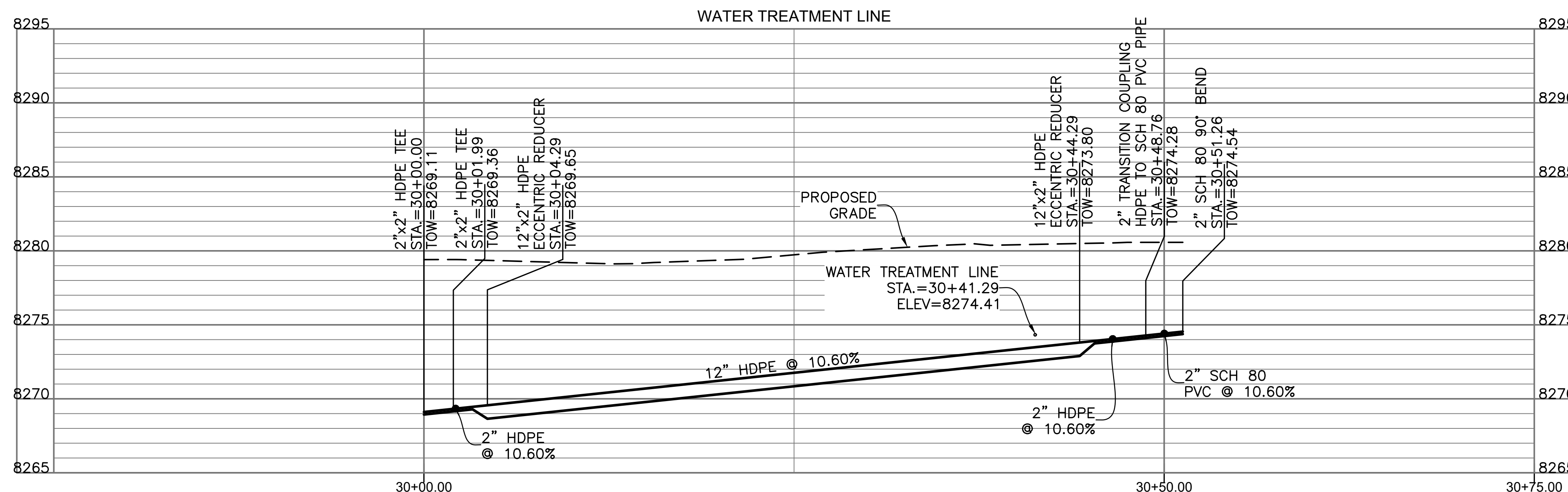
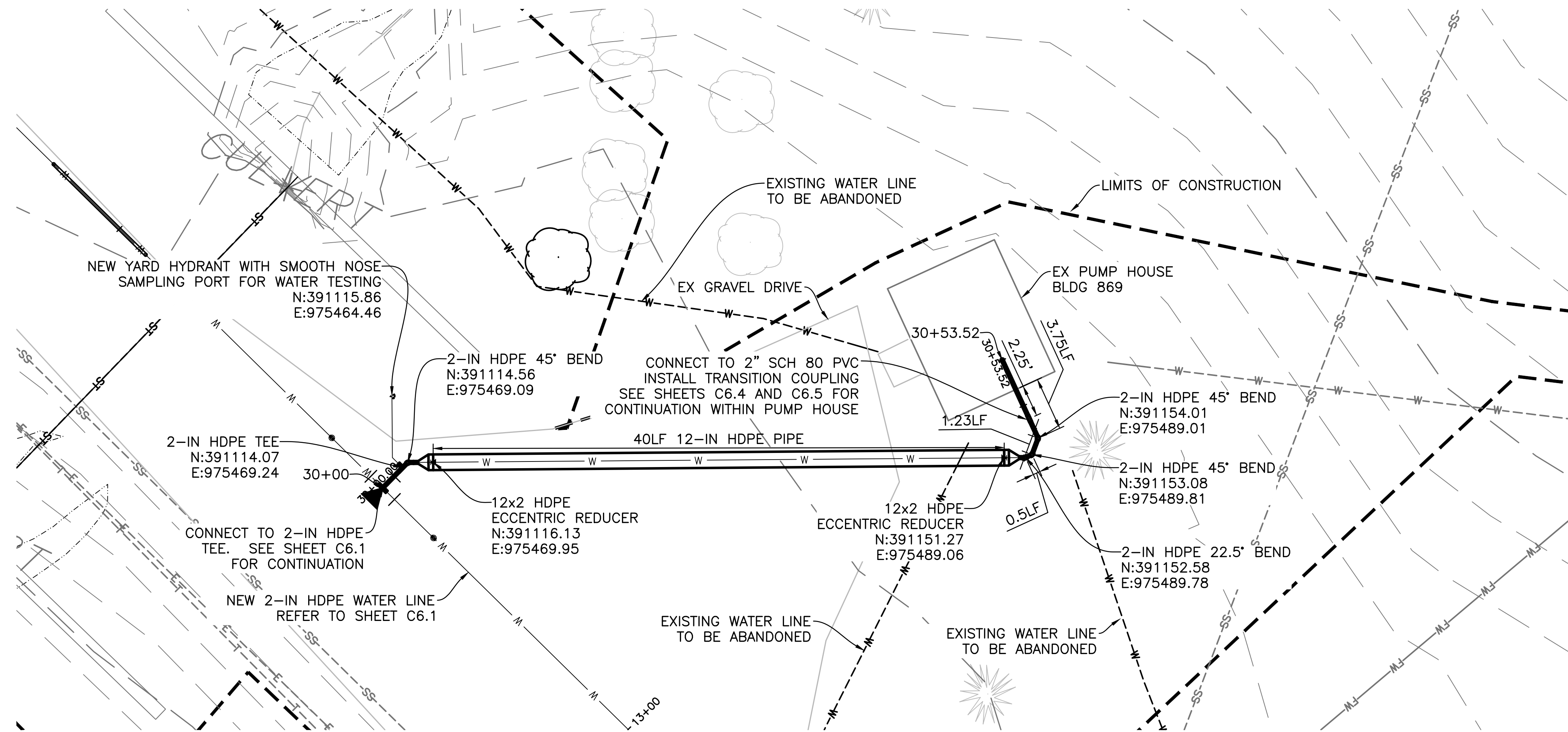


DESIGNED:
JVM ES
CADD
AJDL
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C6.5

TITLE OF SHEET
**PUMP HOUSE
SECTION DETAILS**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
44 OF 165



NOTES:

1. REFER TO SHEETS C0.0 THROUGH C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

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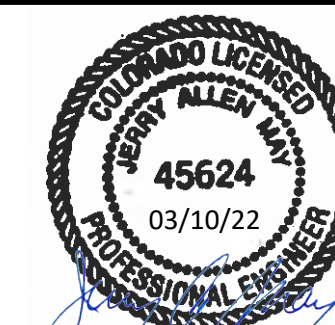
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING



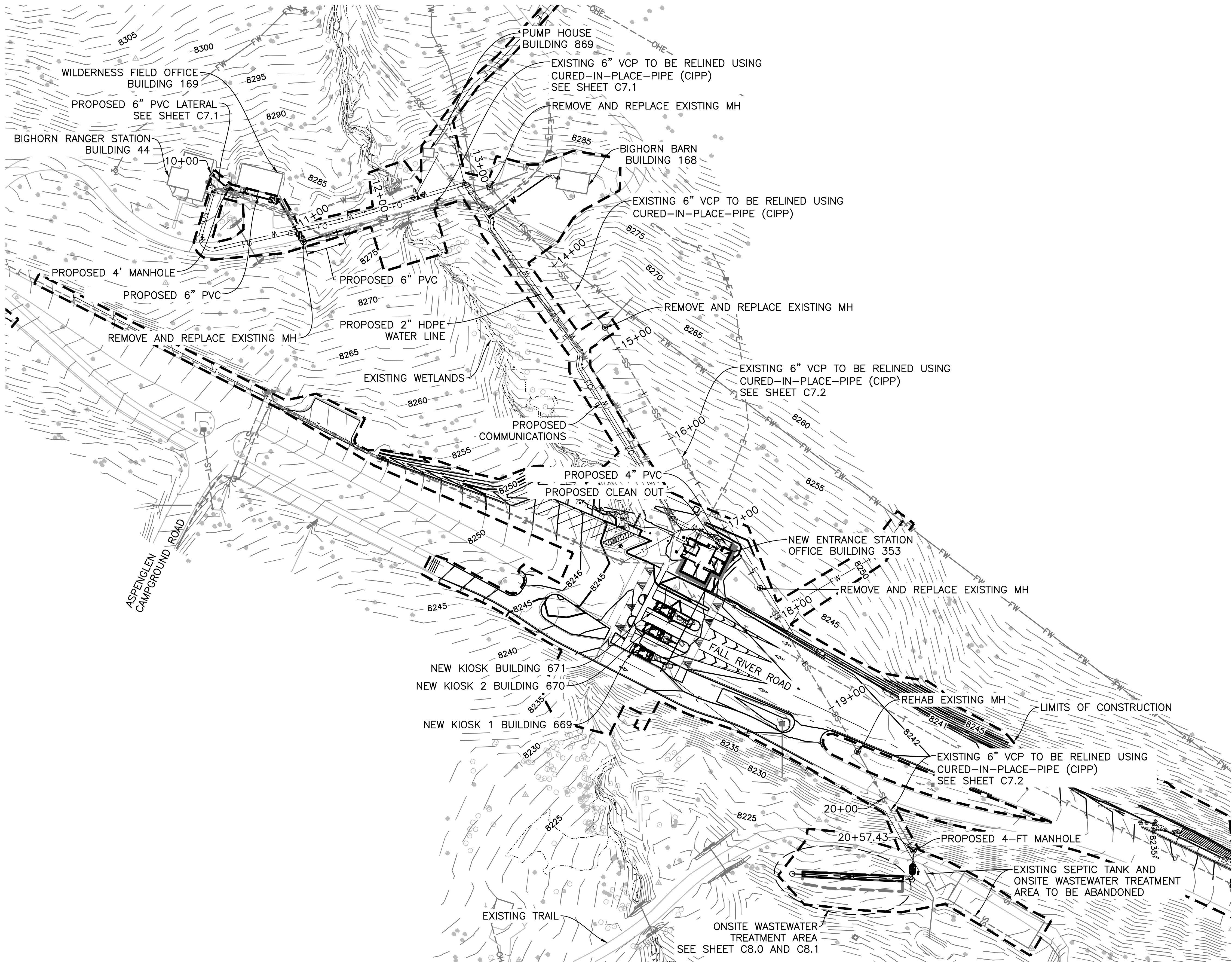
DESIGNED:
JVM ES
@ADD
AJDL
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.

C6.6

TITLE OF SHEET
**NEW 12-IN
TREATMENT PIPE
PLAN AND PROFILE**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
45 OF 165



LEGEND

EXISTING		PROPOSED
---	LIMITS OF CONSTRUCTION	---
---	WETLANDS	---
---	SANITARY SEWER	---
SS	SANITARY MANHOLE	SS
---	SANITARY CLEAN OUT	---
---	WATER LINE	---
FW	FIRE WATER LINE	FW
---	FIRE HYDRANT	---
---	YARD HYDRANT	---
---	WATER VALVE	---
---	CURB STOP	---
---	STORM SEWER	---
---	UNDERDRAIN LINE	---
---	FLARED END SECTION	---
---	ELECTRIC LINE	---
ELM	ELECTRIC METER	---
---	OVERHEAD ELECTRIC LINE	---
---	TELEPHONE LINE	---
TEL	TELEPHONE PEDESTAL	---
---	FIBER OPTIC LINE	---
---	SIGN	---
DRIVE	DESCRIPTIONS	DRIVE

NOTES:

1. SEE SHEETS C0.0-C0.2 FOR ADDITIONAL NOTES, LEGEND, AND ABBREVIATIONS.

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50 0 50 100
SCALE OF FEET



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



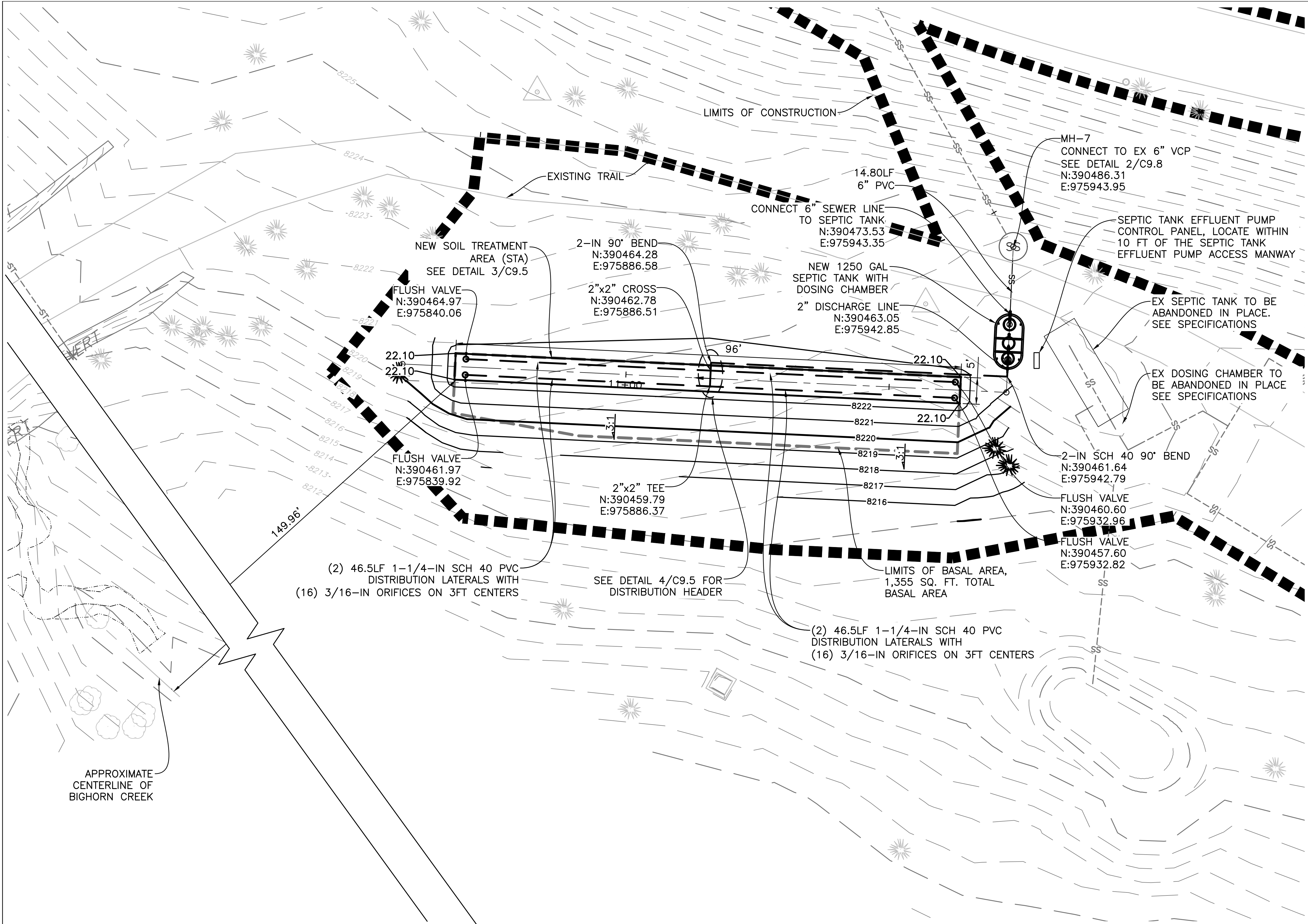
DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C7.0

TITLE OF SHEET
**OVERALL
SANITARY PLAN**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
46 OF 165



LEGEND

EXISTING PROPOSED

---SS--- LIMITS OF CONSTRUCTION - - - - -

SS SANITARY SEWER - - - - -

SS SANITARY MANHOLE SS

- NOTES:**
1. REFER TO SHEETS C0.0 THROUGH C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
 2. SEE DETAIL 4/C9.5 FOR DISTRIBUTION HEADER
 3. SEE DETAIL 5/C9.5 FOR FLUSH VALVE CONSTRUCTION.
 4. RESTORATION OF THE HISTORIC TRAIL THAT IS DISTURBED DURING CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



BENCHMARK

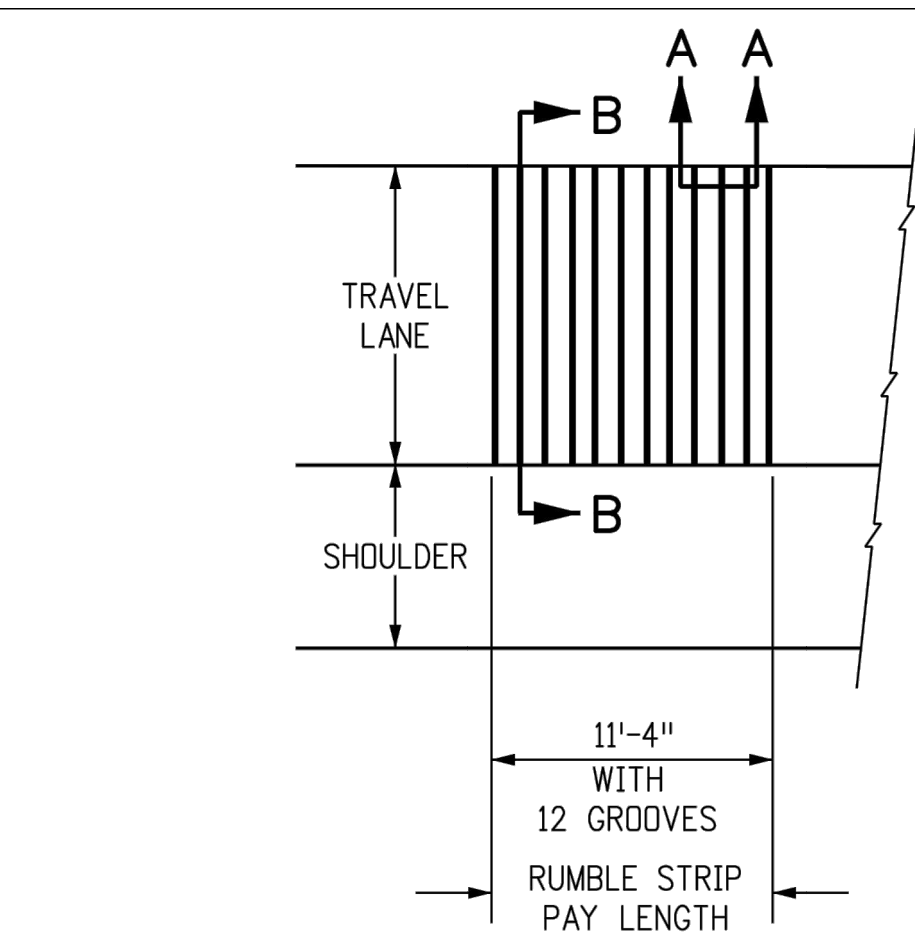
ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

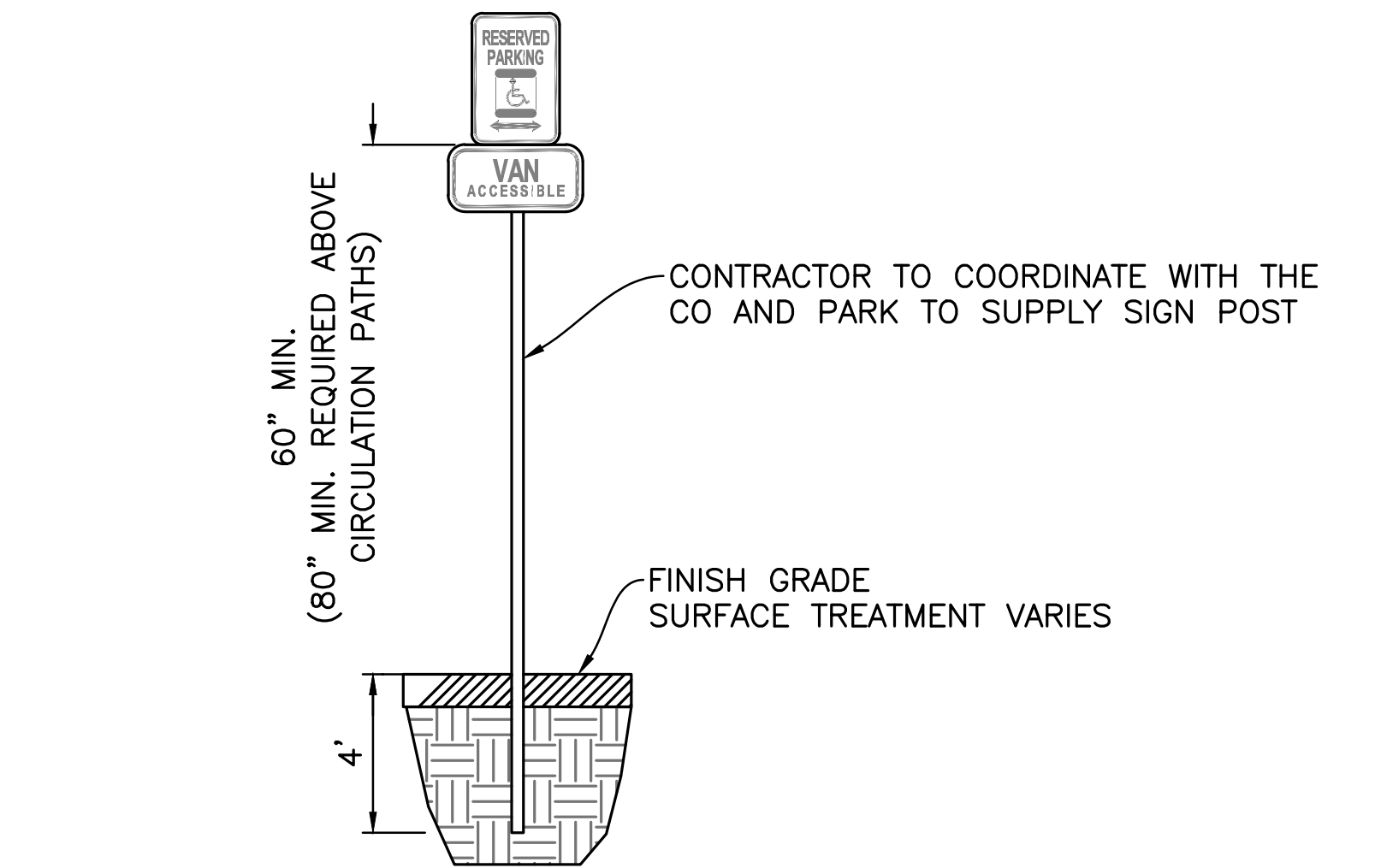
PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING

	DESIGNED:	SUB SHEET NO. C8.0	TITLE OF SHEET ON-SITE WASTEWATER TREATMENT PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	JVM			176678
	ADD			PMIS/PKG NO. 160755
	AJDL			SHEET
	TECH REVIEW:			49 OF 165
	DCW			
	DATE:			
	03/10/2022			



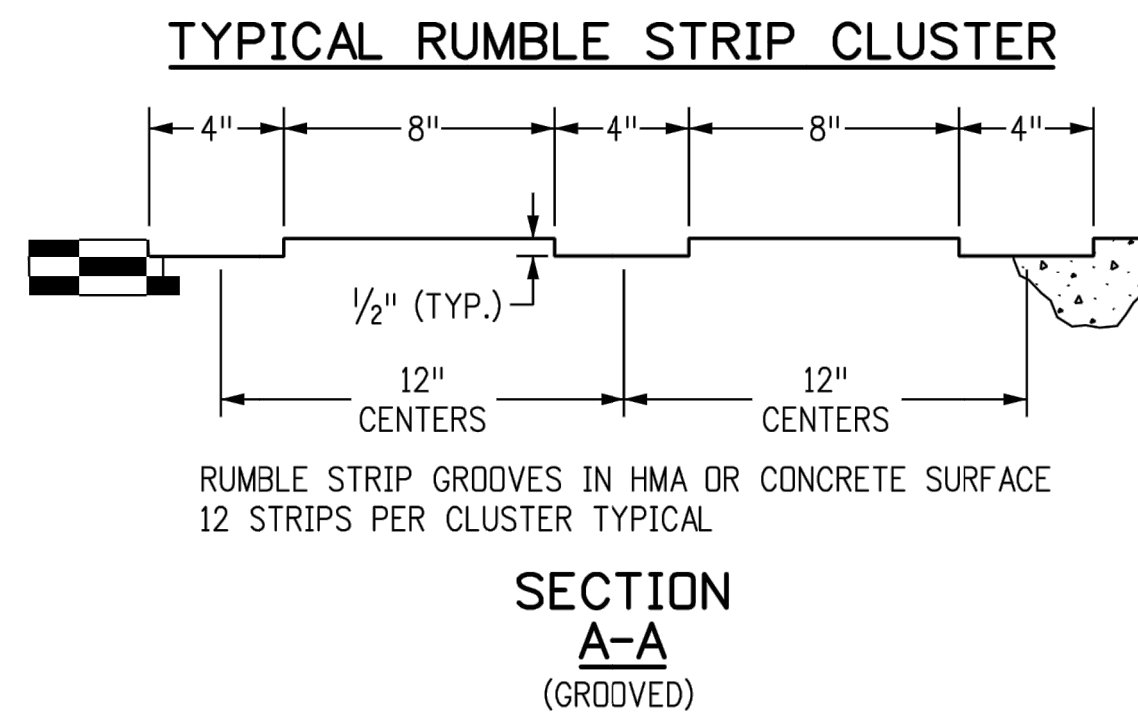
1. GROOVED RUMBLE STRIP SKEW OR CLUSTER SPACING SHALL BE MODIFIED TO AVOID LOCATING A GROOVE ON A CONCRETE PAVEMENT TRANSVERSE JOINT.
2. PERMANENT TRAVEL LANE RUMBLE STRIPS SHALL BE THE GROOVE DESIGN, AND MAY BE CUT IN EXISTING, NEW HMA, OR CONCRETE PAVEMENT. THE GROOVES MAY BE CUT BY SAWING, GRINDING, OR OTHER METHOD AS APPROVED.



1. CONTRACTOR SHALL PROVIDE RESERVED PARKING SIGNS COMPLIANT WITH NPS GRAPHIC IDENTITY SYSTEM. CONTRACTOR SHALL COORDINATE WITH CONTRACTING OFFICER FOR APPROPRIATE SIGNAGE.

NOTES:

1. Place long dimension of post cross section normal to sign axis.
See Section C-C.
2. Balanced single post installations of unframed single sheet aluminum panel signs shall have back spacers if 1'-6" or more in depth and a combination of block spacers and back braces if 1'-6" or more in depth and 2'-10" or more in width. Sign panels less than 1'-6" in depth and 2'-10" or more in width shall have back braces only.
3. For post size see sign layout, format or quantity sheets.
4. Balanced single post installations of Laminated Panel and Framed single sheet panel signs require back braces when 2'-10" or more in length.
5. Breakaway feature for single post installation shall be the same as the breakaway feature shown for the two post installation.
6. Tolerance for diameter of drilled holes in breakaway feature is $\pm \frac{1}{8}$ ".
7. Bolt hole Layout is dependent on type of panel.
Drill holes in post to match panel.
8. $\frac{5}{16}$ " ϕ for single sheet aluminum panel signs.
9. $\frac{3}{8}$ " ϕ for laminated panel signs or framed single sheet aluminum panel signs.



The diagram illustrates a splice connection between two steel beams. The top portion shows the side view of the splice, with labels for "B" OVERHANG, "C" POST SPACING, and "D" SIGN DEPTH. It shows two beams with a central splice region. The bottom portion shows the end view of the splice, with labels for "E" POST = E PANEL BOLTS and "F" DRILLED HOLES (BREAKAWAY FEATURE), SEE SIDE VIEW. The end view shows the beams joined by bolts, with a breakaway feature indicated by curved lines.

DETAIL A

S

Hex HEAD
NOTES 8

FLAT
FIBER

Ø POST

1'-0"

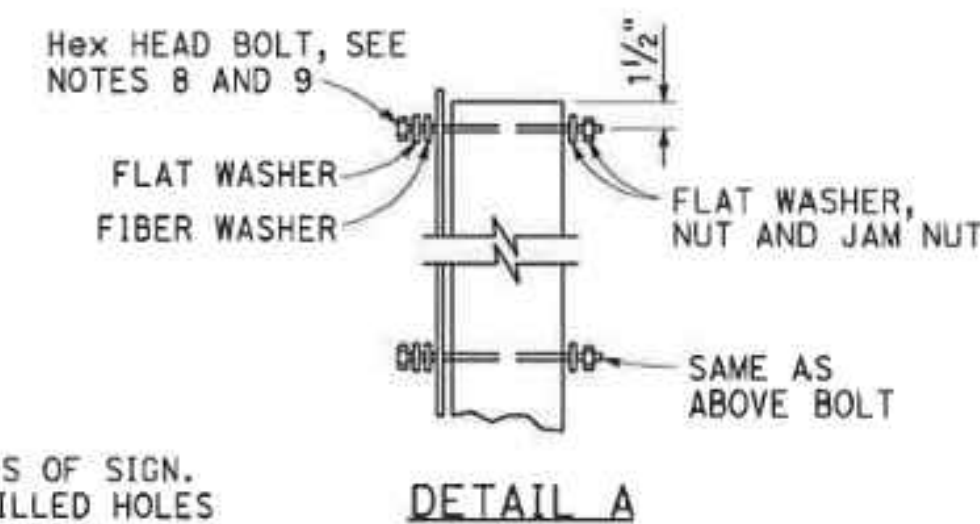
3"

1/2"

BREAKAWAY FEATURE

DRILL 3" HOLES IN 6" x 8" POST,
2" HOLES IN 6" x 6" POST, AND
1/2" HOLES FOR 4" x 6" POSTS.
ORIENT HOLE AXIS PARALLEL TO AXIS OF SIGN.
SEE NOTE 6 FOR TOLERANCES OF DRILLED HOLES.

SIDE VIEW



3 WOODEN SIGN POST BREAKAWAY DETAIL (FOR REFERENCE ONLY)
NO SCALE



DESIGNED:
VARIES
CADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

	SUB SHEET NO.
S	C9.0

TITLE OF SHEET

ROADWAY DETAILS

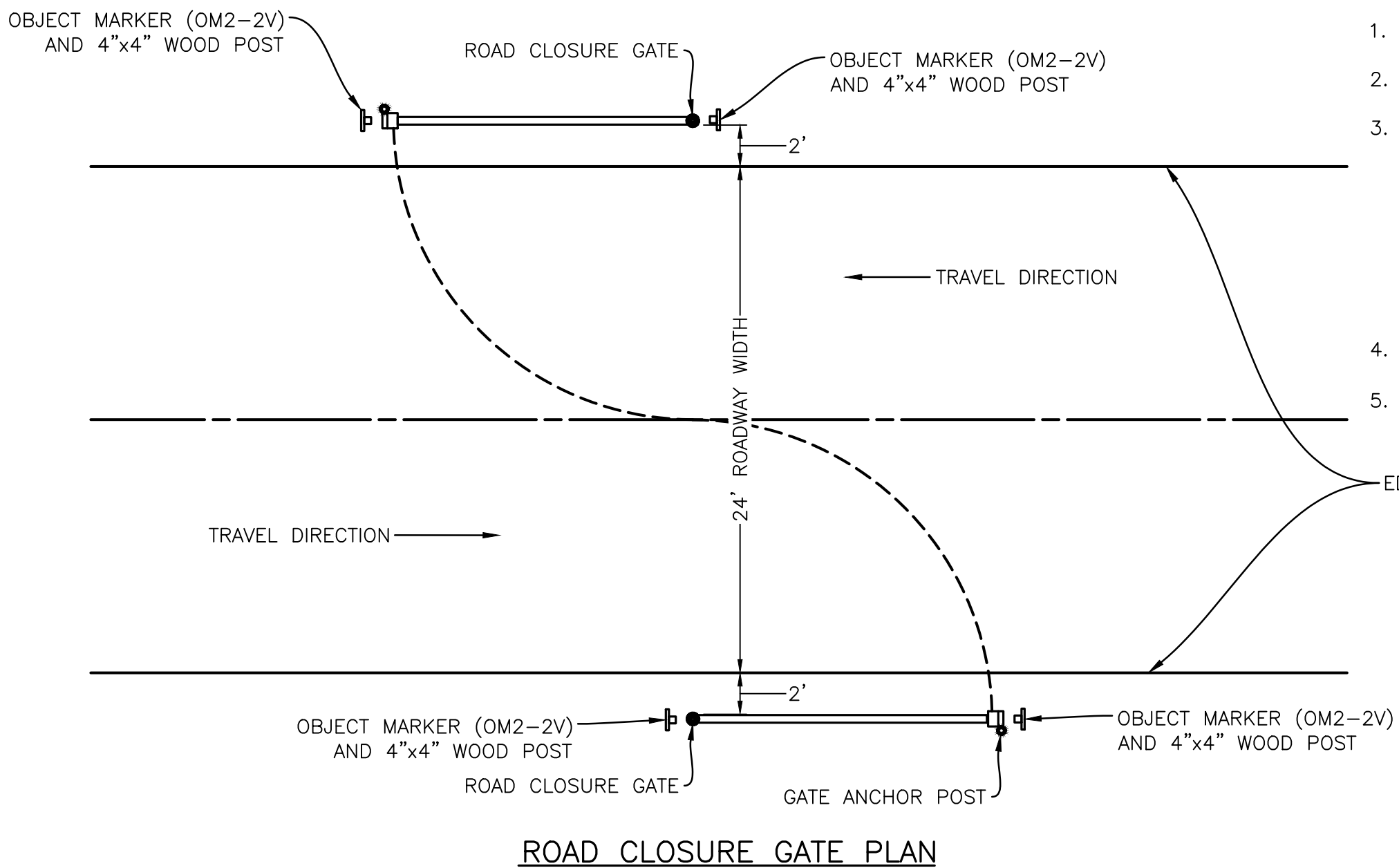
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
76678

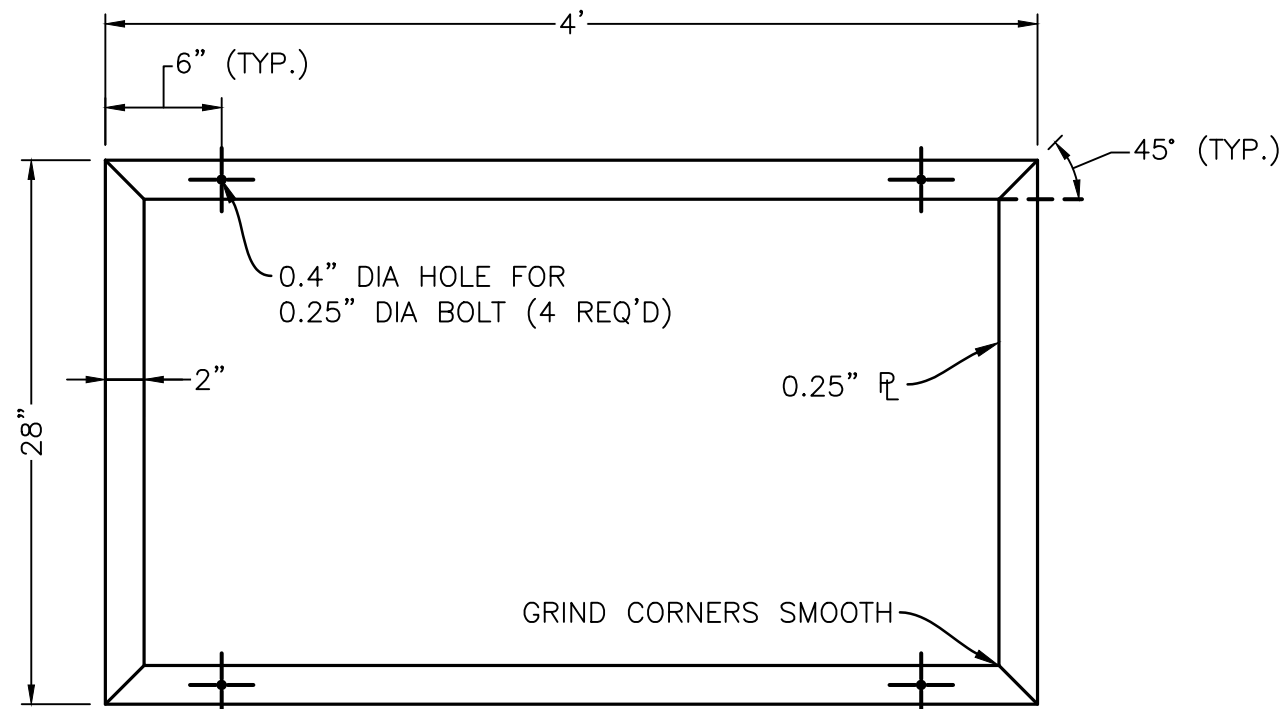
MIS/PKG NO.
160755

SHEET
1 OF **165**

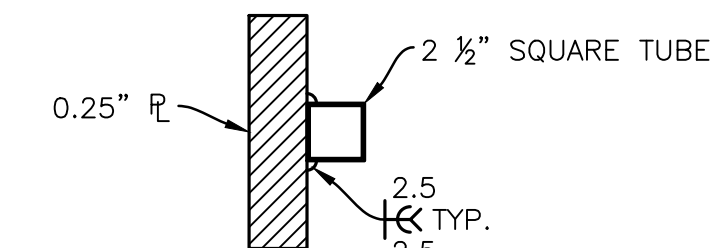
PLOT DATE: Wednesday, March 9, 2022 3:35 PM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\20.0821-NFS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\C09\C09.1 GATE DETAILS.dwg



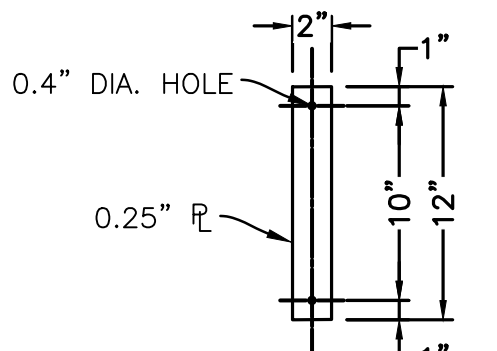
ROAD CLOSURE GATE PLAN



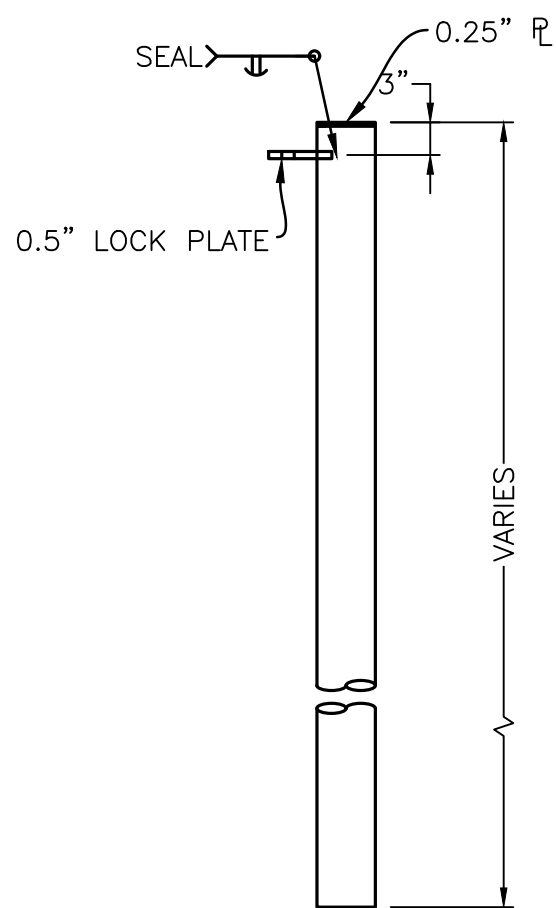
SIGN MOUNTING BRACKET
(R11-2 SIGN NOT SHOWN)



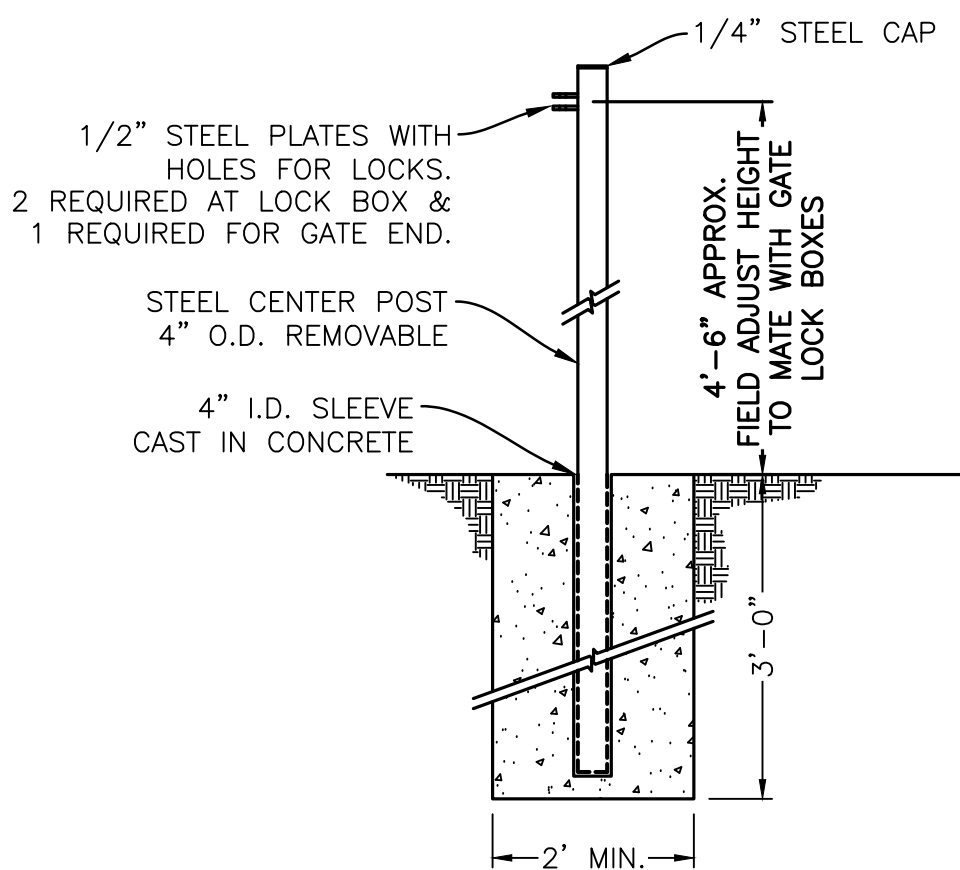
SECTION B-B
(SIGN MOUNTING BRACKET SIMILAR)



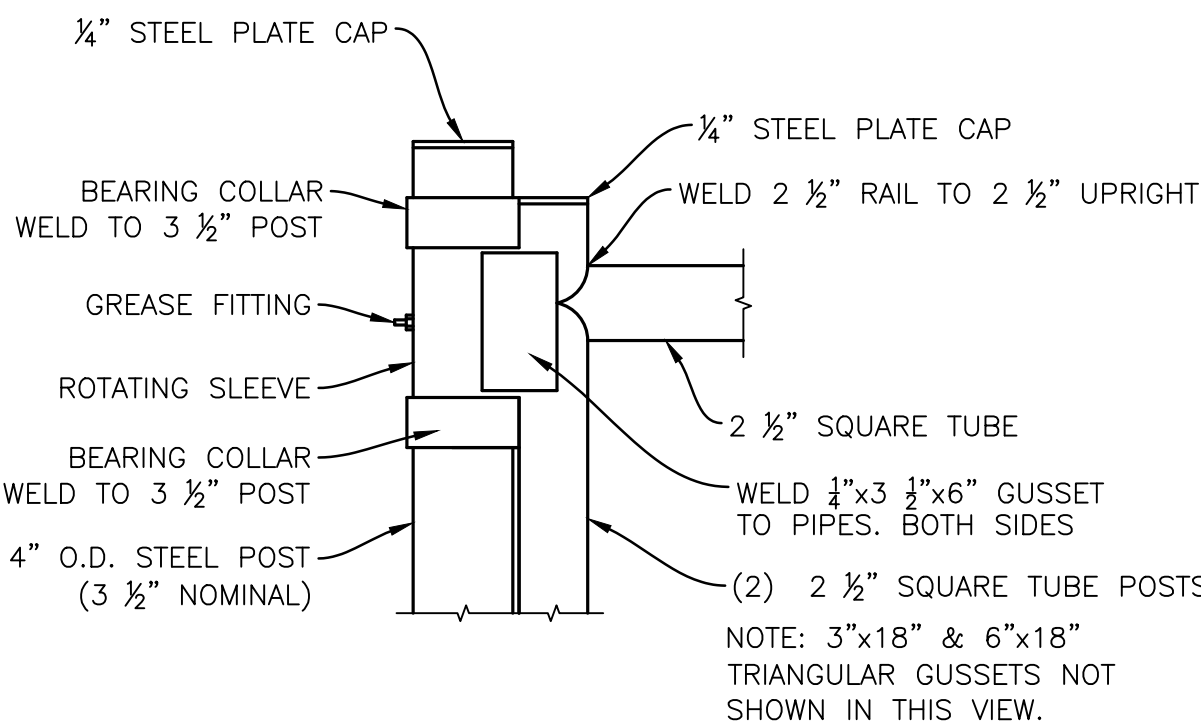
OBJECT MARKER MOUNTING
BAR DETAIL



HOLDING POST DETAILS
NOTE: MINIMUM FOOTING DEPTH OF 3 FEET



GATE ANCHOR POST



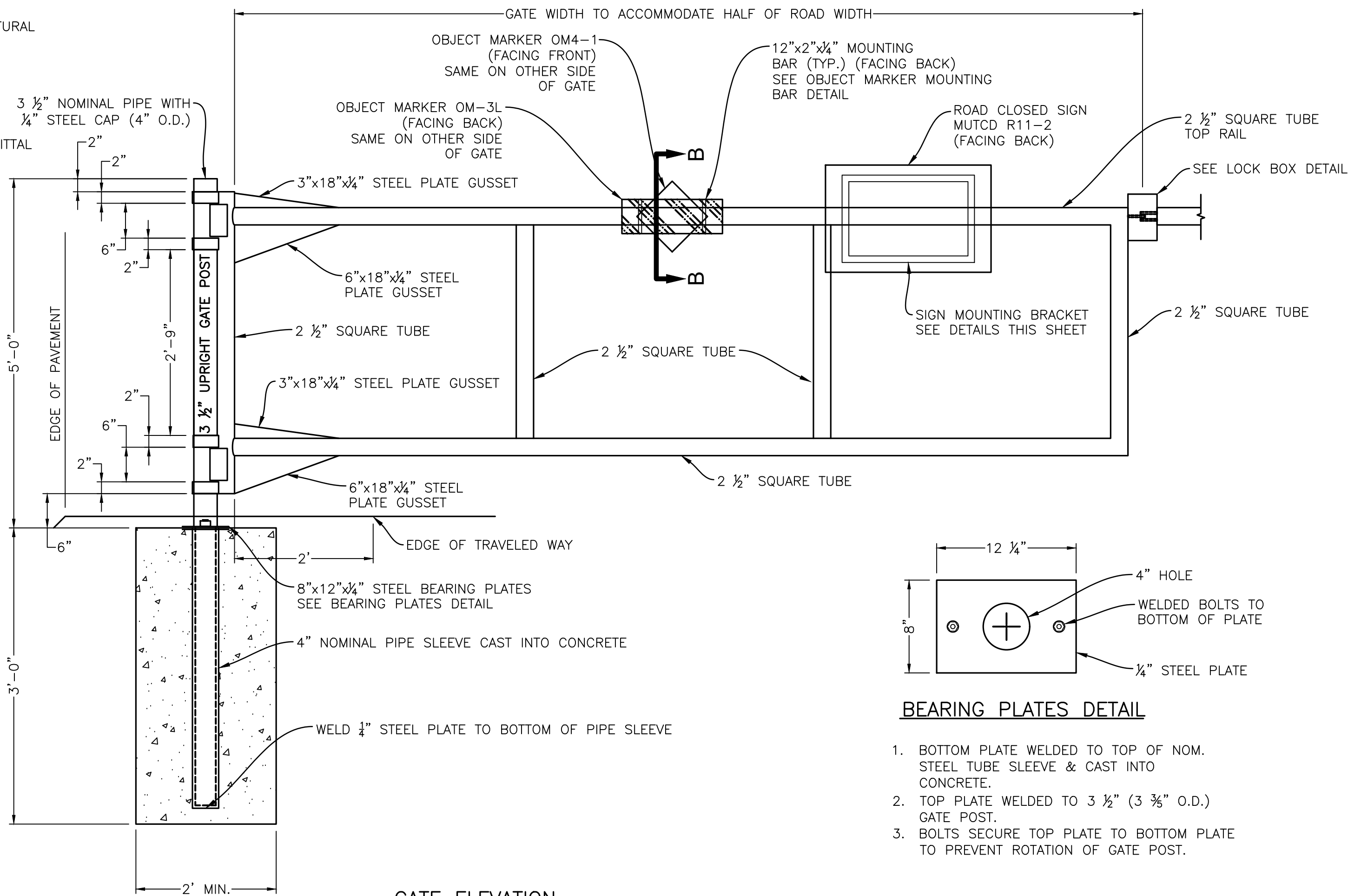
BEARING DETAIL (TYP.)

1 ROAD CLOSURE GATE DETAIL
C9.1 NO SCALE

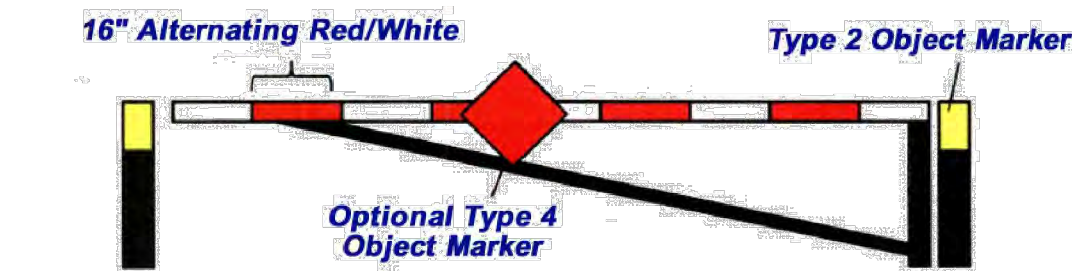
NOTES:

- DIMENSIONS NOT LABELED ARE IN INCHES
- WELDED STUDS SHALL CONFORM TO AASHTO M169
- THE DETAILS AND GATE LAYOUT SHOWN HEREON ARE SHOWN FOR REFERENCE AND FOR BIDDING PURPOSES TO INFORM DESIGN INTENT. CONTRACTOR TO CONFIRM MEMBER SIZES, FOUNDATION REQUIREMENTS, AND CONNECTION DETAILS AND SHALL PROVIDE SIGNED/SEALED SHOP DRAWINGS FROM A STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- GATE MATERIAL SHALL BE COLD ROLLED STEEL.
- REFER TO SPECIFICATION 05 50 00 "METAL FABRICATIONS" FOR GATE FABRICATION AND SUBMITTAL REQUIREMENTS.

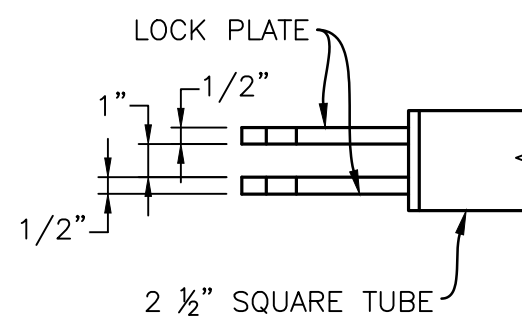
GATE MATERIAL SCHEDULE					
NOMINAL SIZE	ACTUAL O.D.	ACTUAL I.D.	WALL THICKNESS	WEIGHT/LNFT	COMPONENT
2 1/2"	2.875"	2.469"	0.203"	18.98 LB	TOP & BOTTOM RAILS; BRACE: GATE ANCHOR POST
3 1/2"	3.548"	3.146"	0.226"	29.89 LB	MAIN UPRIGHT GATE POST
4"	4.026"	3.756"	0.237"	35.41 LB	BEARING COLLARS & SLEEVES: CAST-IN-PLACE PIPE SLEEVE



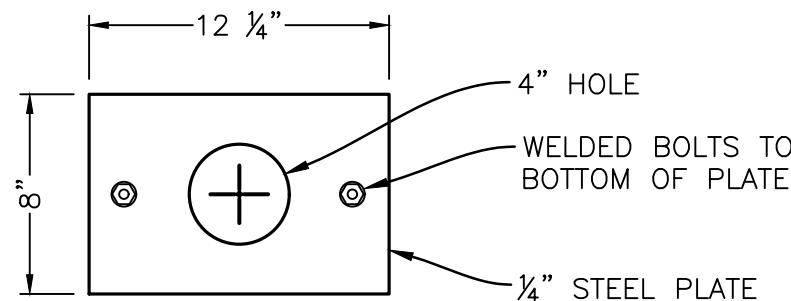
GATE ELEVATION



RETROREFLECTIVITY MARKINGS
ALTERNATING RED/WHITE MARKINGS SHALL BE APPLIED TO BOTH SIDES OF THE TOP BAR.

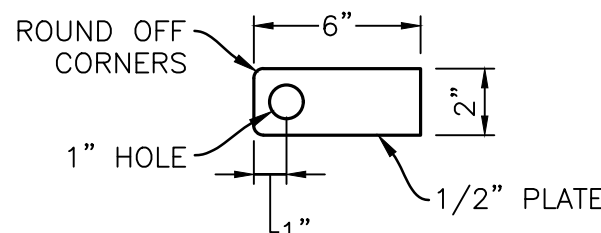


GATE END

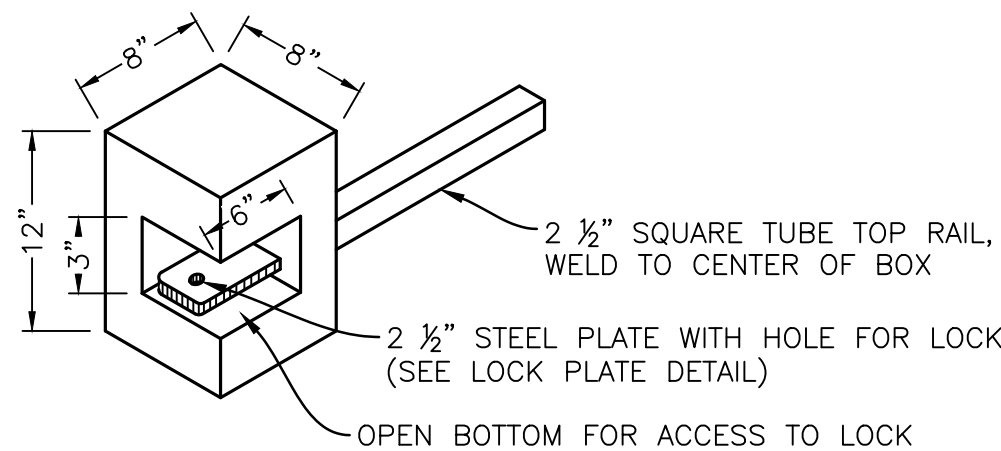


BEARING PLATES DETAIL


- BOTTOM PLATE WELDED TO TOP OF NOM. STEEL TUBE SLEEVE & CAST INTO CONCRETE.
- TOP PLATE WELDED TO 3 1/2" (3 3/8" O.D.) GATE POST.
- BOLTS SECURE TOP PLATE TO BOTTOM PLATE TO PREVENT ROTATION OF GATE POST.



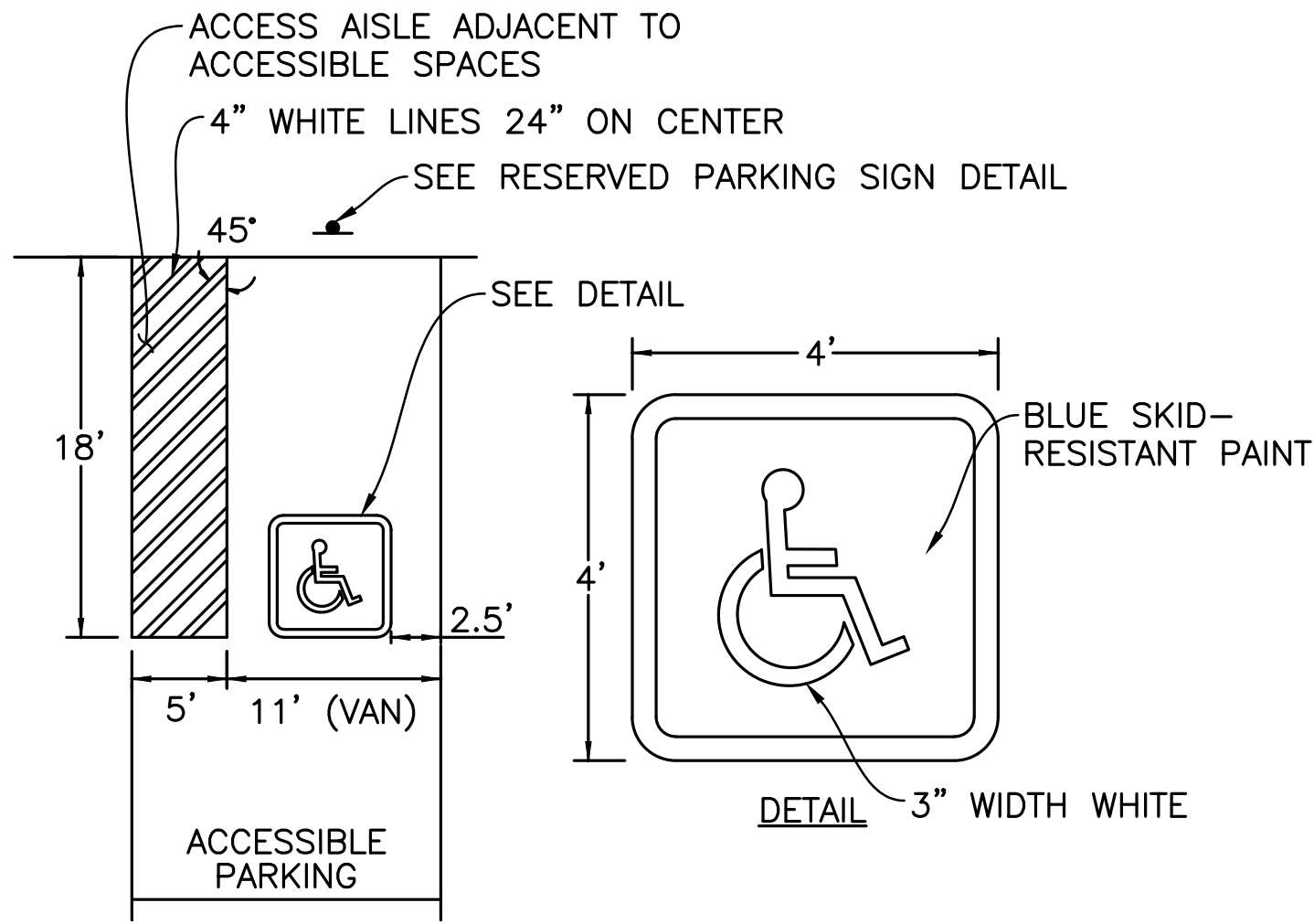
LOCK PLATE DETAIL



LOCK BOX DETAIL

SIGNED FOR REFERENCE ONLY - SEE NOTE 3  03/10/22	DESIGNED: VARIES EADD AEL/RTP/CDS TECH REVIEW: DCW DATE: 03/10/2022	SUB SHEET NO. C9.1	TITLE OF SHEET GATE DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 20 OF 165

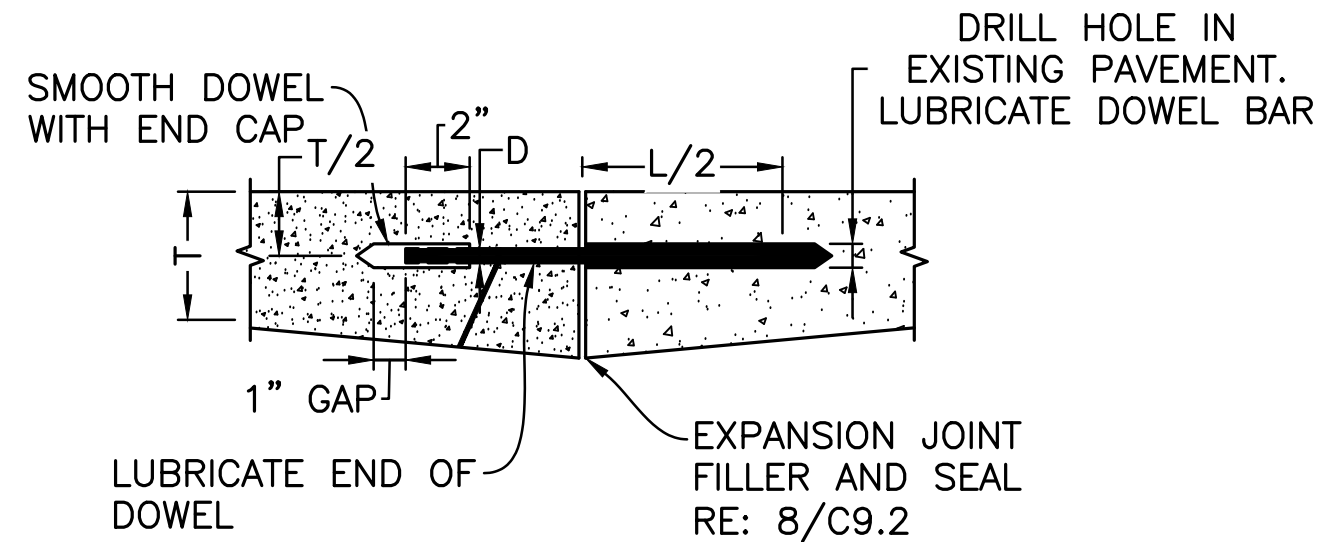
PLOT DATE: Wednesday, March 9, 2022 3:36 PM LAST SAVED BY: ZDRURY
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDs\C9.2 PAVING DETAILS.dwg



NOTES:

1. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARD (ABAAS).
2. ALL SLOPES THROUGHOUT THE ACCESSIBLE PARKING AND AISLE AREAS SHALL NOT EXCEED 1.8%.
3. ALL DIMENSIONS TO EDGES OF 4" PAVEMENT STRIPING.
4. ALL STRIPING SHALL BE 4" WIDE SOLID WHITE PAVEMENT MARKINGS UNLESS OTHERWISE NOTED.

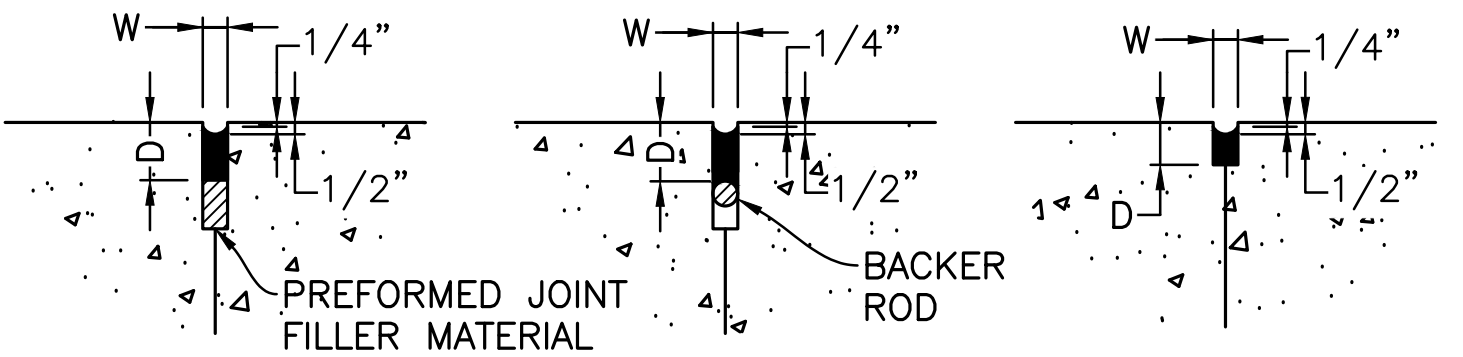
1 ABA STRIPING DETAIL
C9.2 NO SCALE



NOTES:

1. VERIFY EXISTING DOWEL DIAMETER, LENGTH, AND SPACING
2. FOR $T < 8"$ DOWEL $D=3/4"$ $L=16"$ SPACING=12" O.C.
3. FOR $11.5" < T \leq 8"$ DOWEL $D=1"$ $L=16"$ SPACING=12" O.C.
4. DOWEL TO BE SMOOTH COATED STEEL AND LIGHTLY GREASED

5 DOWELED EXPANSION TO EXISTING CONCRETE JOINT
C9.2 NO SCALE



DEEP JOINT WITH
PREFORMED JOINT
FILLER MATERIAL

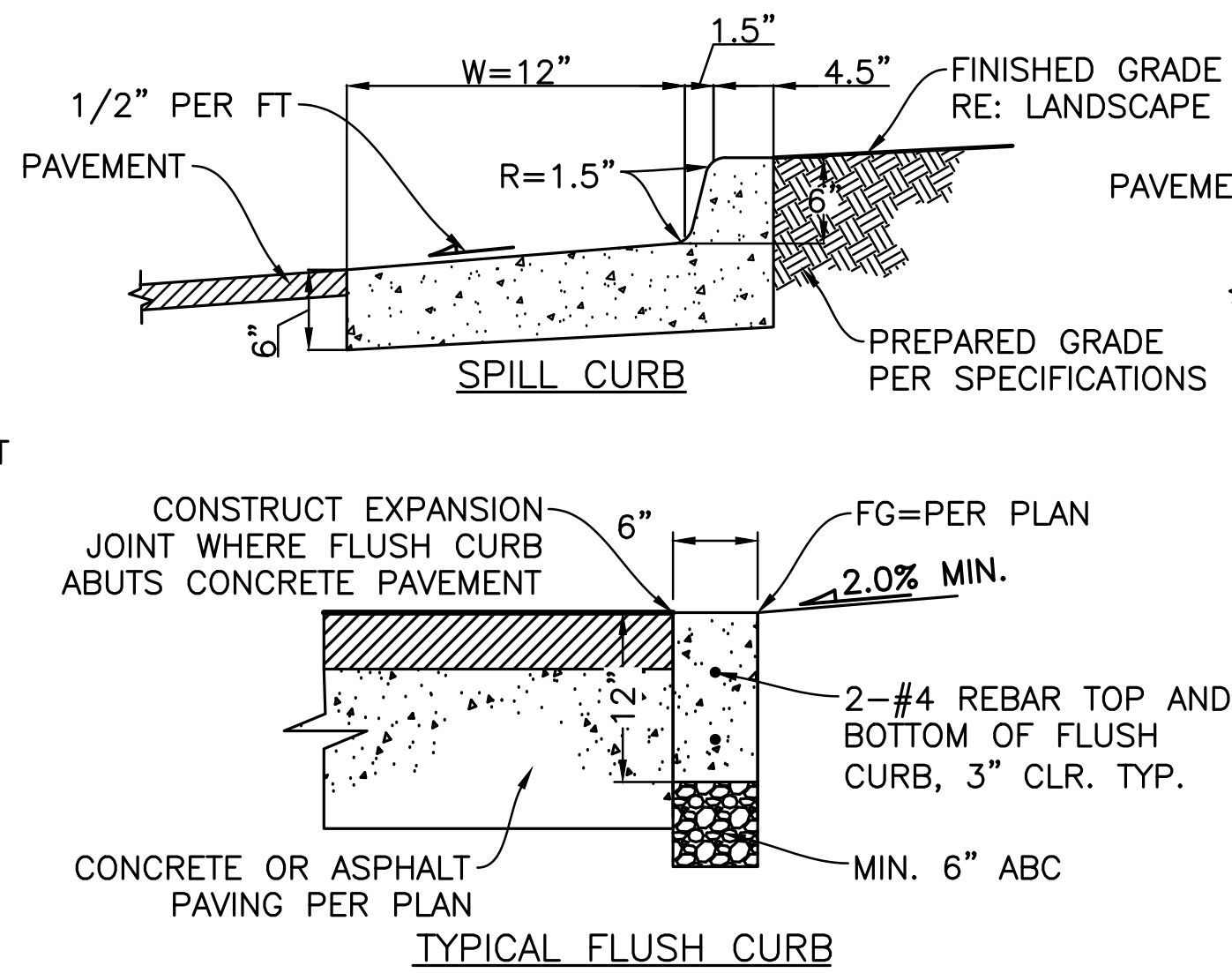
DEEP JOINT WITH
BACKER ROD

SHALLOW JOINT NO
FILLER MATERIAL

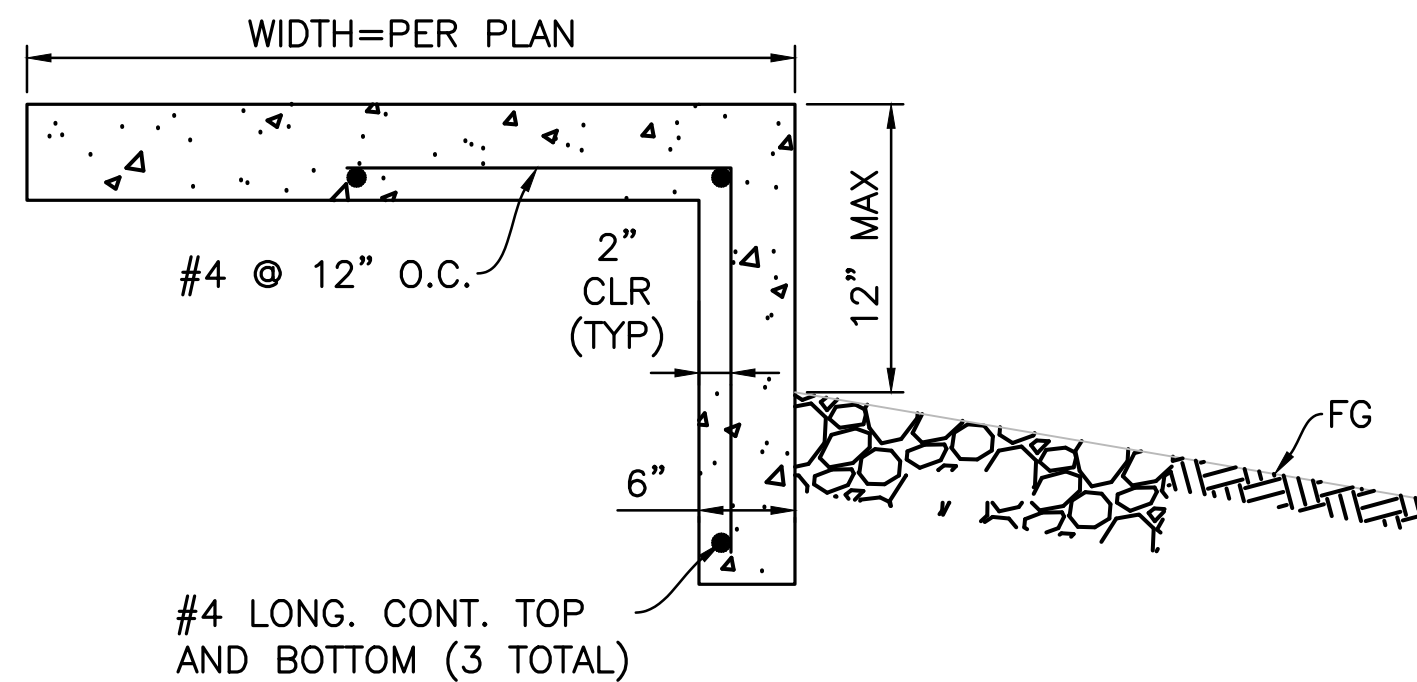
NOTES:

1. VERIFY JOINT DEPTH TO WIDTH RATIO WITH JOINT SEALANT MANUFACTURER FOR FILLER MATERIAL REQUIREMENTS
2. JOINT TO BE FREE AND CLEAN OF ALL DEBRIS PRIOR TO SEALING
3. EXCESS SEALANT TO BE REMOVED FROM SURFACE

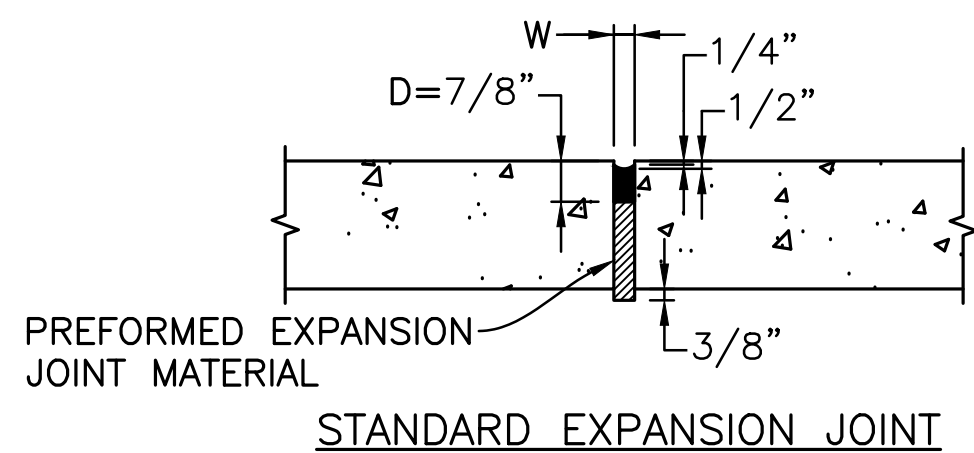
7 SAWN CONCRETE NON-SAG JOINT SEALANT
C9.2 NO SCALE



2 PARALLEL ABA CURB RAMP
C9.2 NO SCALE



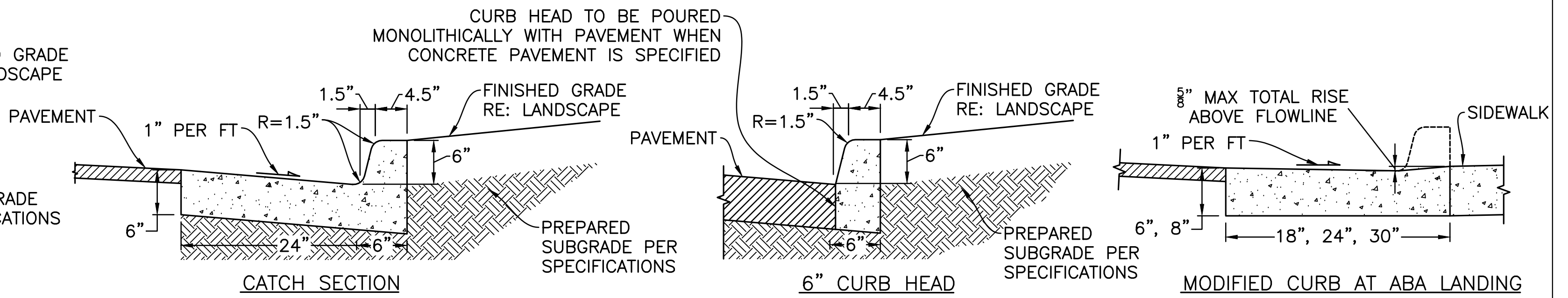
12 TYPICAL TURN DOWN EDGE
C9.2 NO SCALE



NOTES:

1. VERIFY JOINT DEPTH TO WIDTH RATIO WITH JOINT SEALANT MANUFACTURER FOR FILLER MATERIAL REQUIREMENTS
2. JOINT TO BE FREE AND CLEAN OF ALL DEBRIS PRIOR TO SEALING
3. EXCESS SEALANT TO BE REMOVED FROM SURFACE

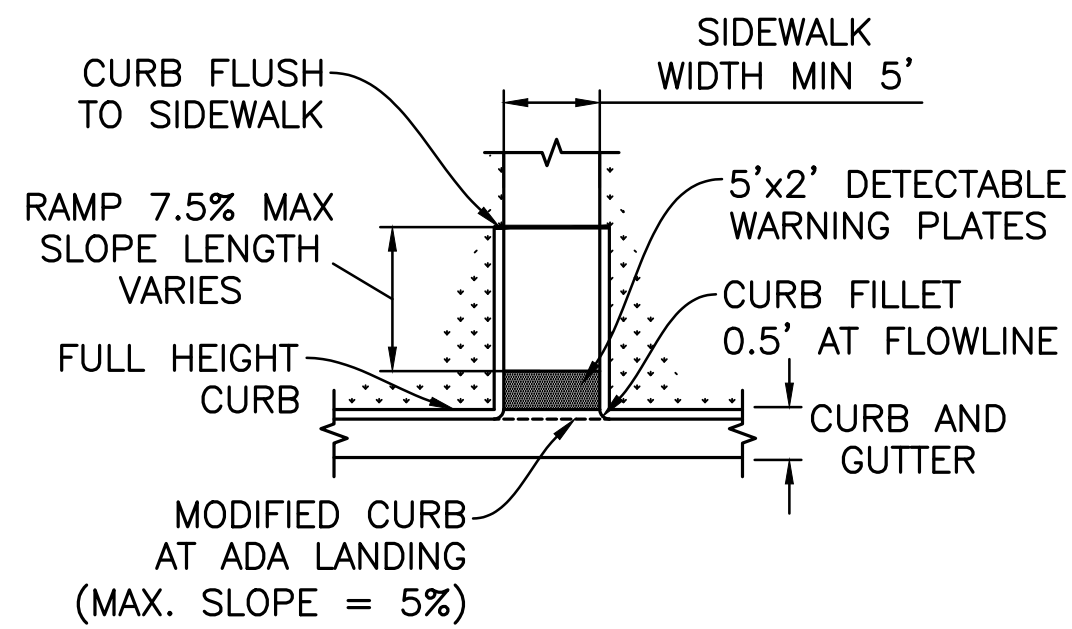
8 CONCRETE EXPANSION JOINT AND SEAL
C9.2 NO SCALE



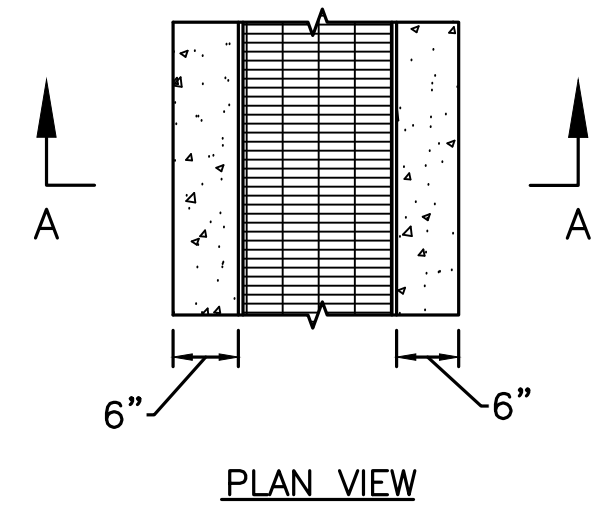
NOTES:

1. PROVIDE LONGITUDINAL AND TRANSVERSE CONTRACTION JOINTS AT MAXIMUM OF 10' AND EXPANSION JOINTS AT EVERY 100'.
2. SUBGRADE REQUIREMENTS PER PROJECT SPECIFICATIONS.
3. ENSURE ALL EDGES, CORNERS, AND SURFACES ARE SMOOTH TO FACILITATE WHEELCHAIR MOVEMENTS

3 CURB DETAILS
C9.2

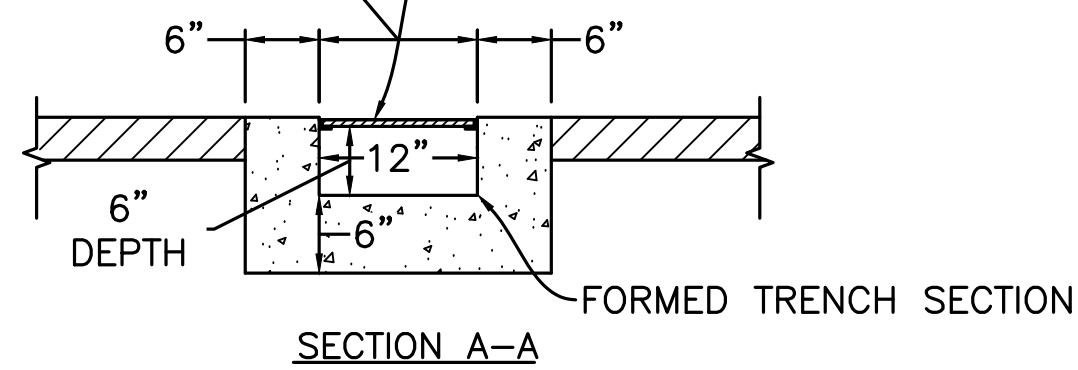


4 DIRECTIONAL ABA CURB RAMP
C9.2



14" WIDE NEENAH GRAY
IRON HEAVY DUTY GRATE
R-4990-DX W/ TYPE P
GRATE

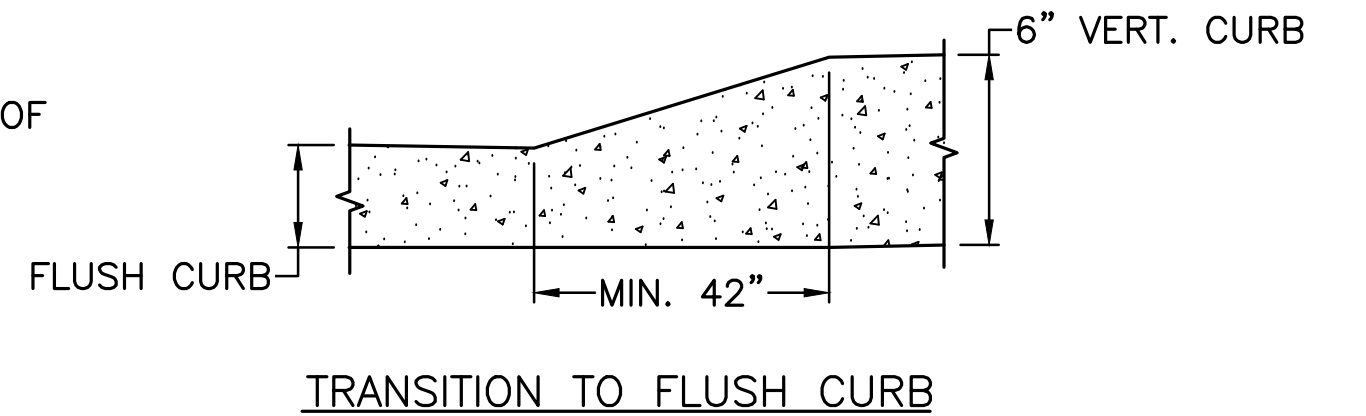
INSTALL FRAME PER MANUFACTURER'S
RECOMMENDATIONS



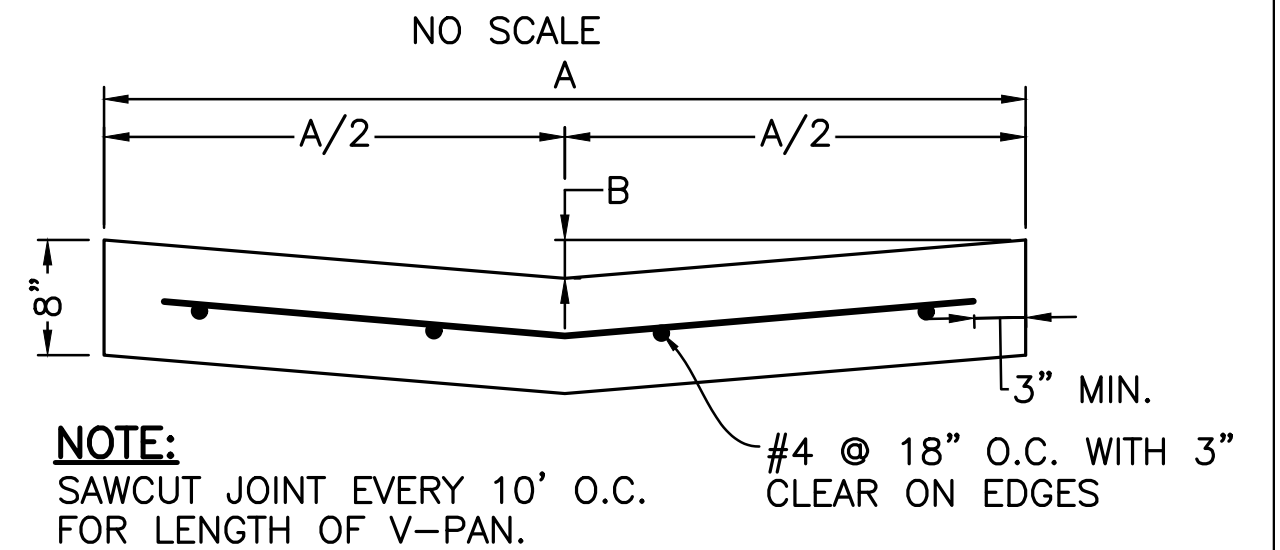
NOTES:

1. INSTALL TRENCH DRAIN COVER AND FRAMES PER MANUFACTURER'S RECOMMENDATIONS
2. TRENCH DRAIN SHALL BE TRAFFIC RATED AND GRATE SHALL BE ABA ACCESSIBLE
3. TRENCH DRAIN COVER/GRATE SHALL BE SUBMITTED TO CONTRACTING OFFICER FOR APPROVAL
4. TRENCH DRAIN SHALL BE SLOPED AT MINIMUM 0.5%

9 SIDEWALK CHASE DETAIL
C9.2 NO SCALE



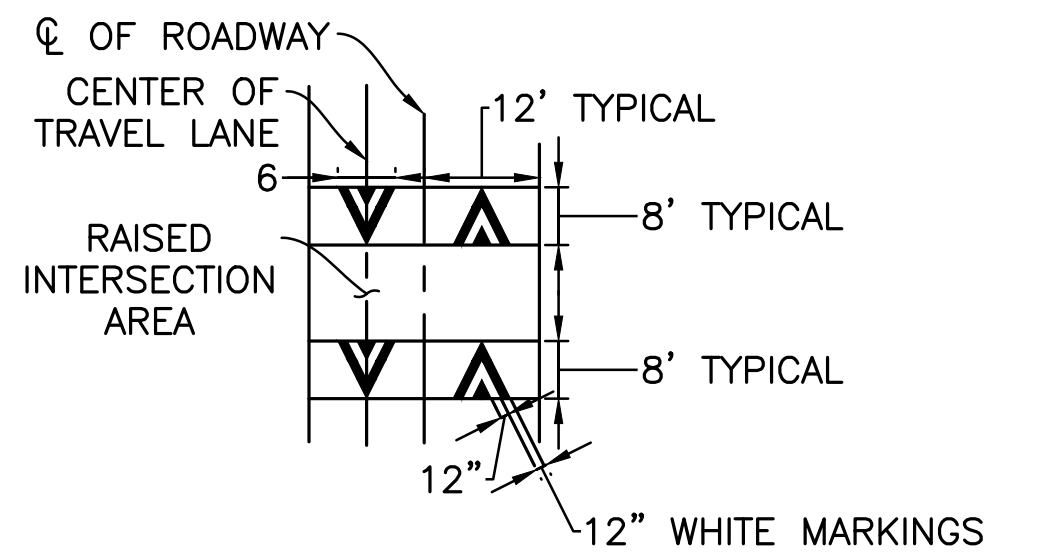
10 RAISED INTERSECTION ARROW DETAIL
C9.2 NO SCALE



NOTE:
SAWCUT JOINT EVERY 10' O.C.
FOR LENGTH OF V-PAN.

CENTERLINE DEPTH (B)			
PAN WIDTH (A)	2'-0"	6'-0"	16'-0"
CENTERLINE DEPTH (B)	0'-1"	0'-3"	0'-6"

6 CONCRETE V-PAN DETAIL
C9.2 NO SCALE



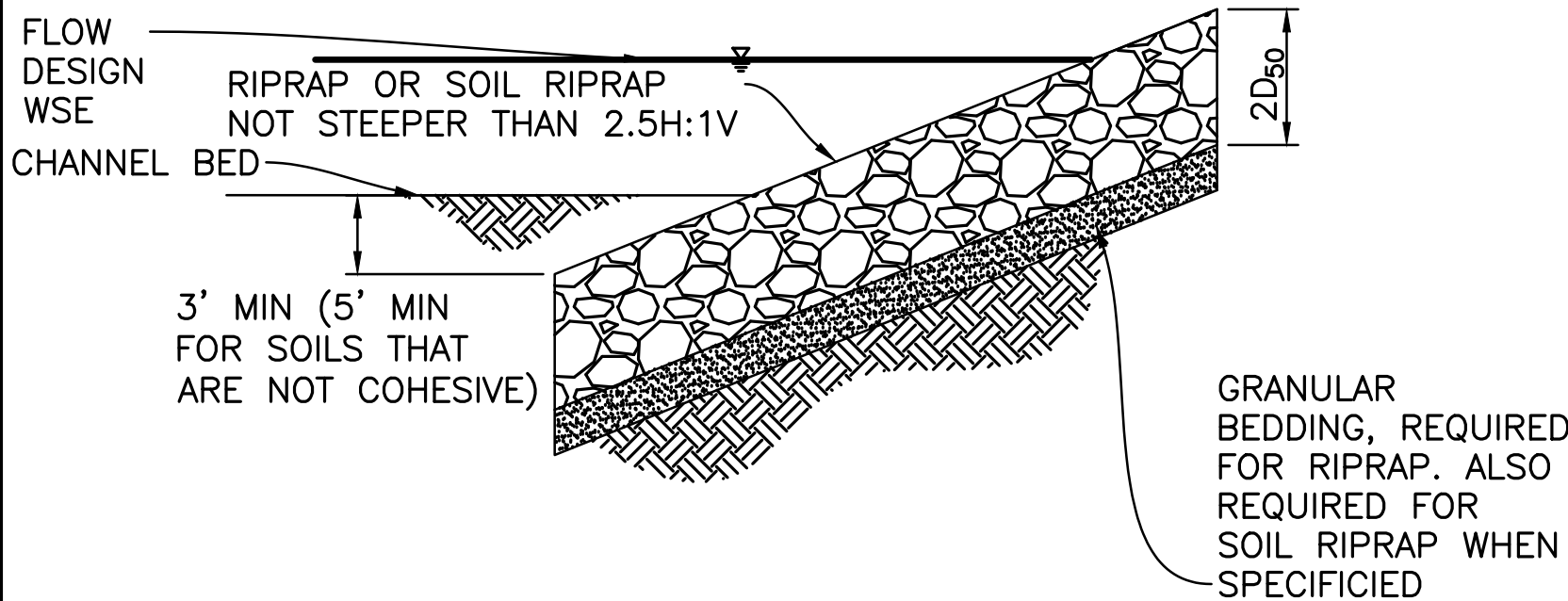
DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C9.2

TITLE OF SHEET
PAVING DETAILS
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
53 OF 165

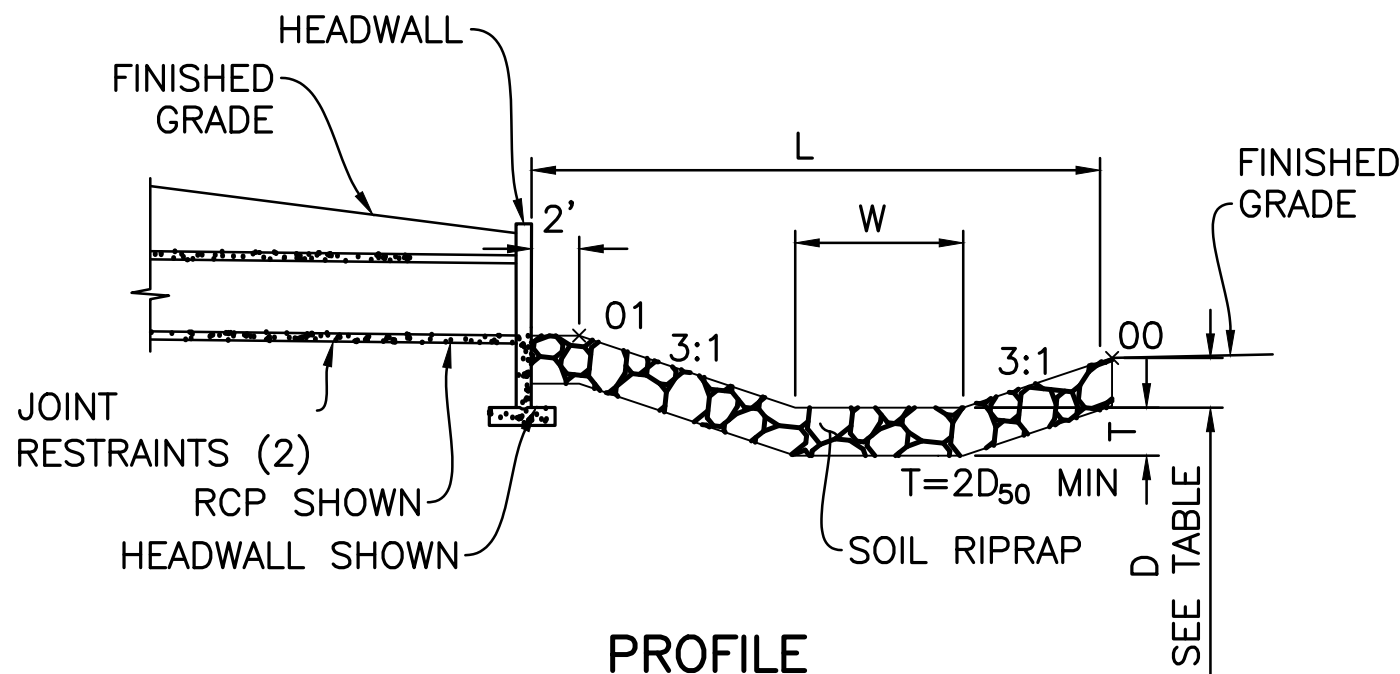
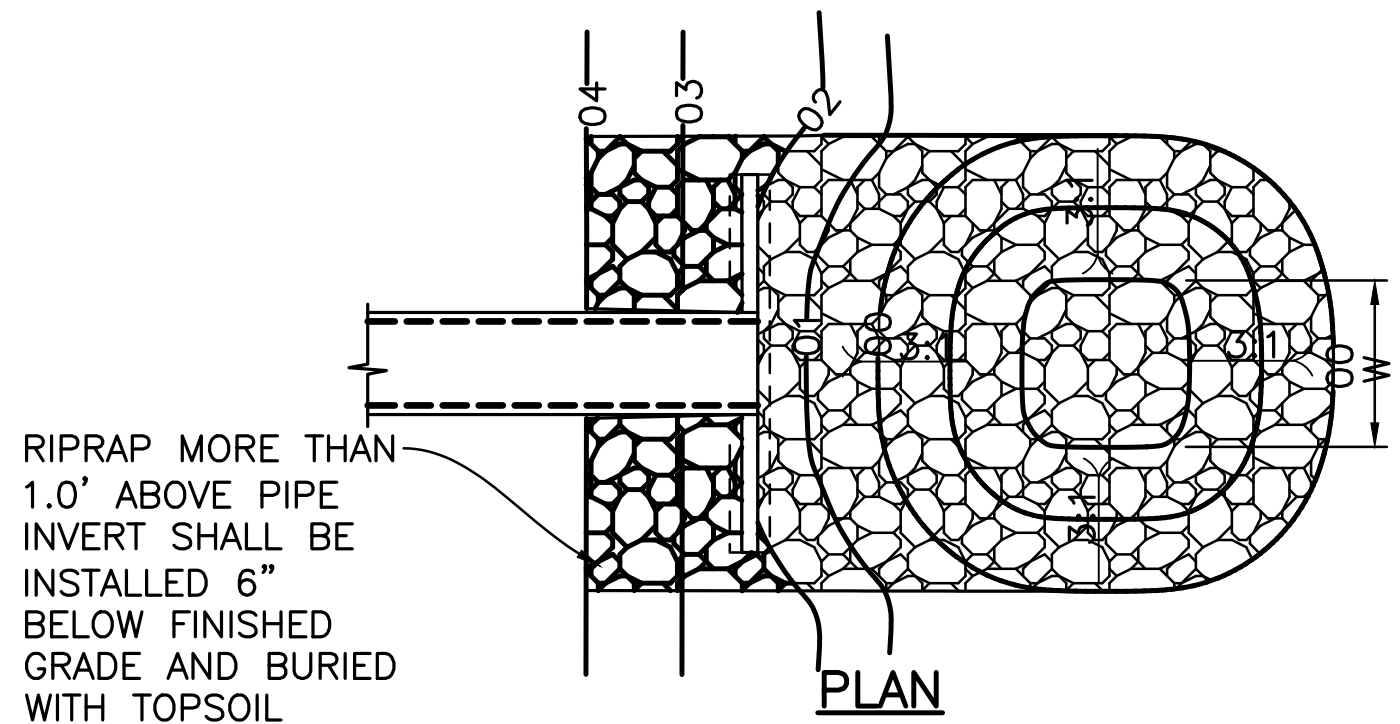
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DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDs\C9.3 DRAINAGE DETAILS.dwg



RIPRAP DESIGNATION	THICKNESS REQUIREMENTS FOR GRANULAR BEDDING		
	MINIMUM BEDDING THICKNESS (INCHES)		
	FINE-GRAINED SOILS ¹		COARSE-GRAINED SOILS ²
	TYPE I (LOWER LAYER)	TYPE II (UPPER LAYER)	TYPE II
VL (D ₅₀ = 6 IN)	4	4	6
L (D ₅₀ = 9 IN)	4	4	6
M (D ₅₀ = 12 IN)	4	4	6
H (D ₅₀ = 18 IN)	4	6	8
VH (D ₅₀ = 24 IN)	4	6	8

NOTES:

- MAY SUBSTITUTE ONE 12-INCH LAYER OF TYPE II BEDDING. THE SUBSTITUTION OF ONE LAYER OF TYPE II BEDDING SHALL NOT BE PERMITTED AT DROP STRUCTURES. THE USE OF A COMBINATION OF FILTER FABRIC AND TYPE II BEDDING AT DROP STRUCTURES IS ACCEPTABLE.
- FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.



PIPE SIZE OR BOX HEIGHT	D	W*	L
18" - 24"	1'-0"	4'	15'
30" - 36"	1'-6"	6'	20'
42" - 48"	2'-0"	7'	24'
54" - 60"	2'-6"	8'	28'
66" - 72"	3'-0"	9'	32'

* IF OUTLET PIPE IS A BOX CULVERT WITH A WIDTH GREATER THAN W, THEN W = CULVERT WIDTH

1 LOW TAILWATER RIPRAP BASIN
C9.3 (BASED ON MHFD USDTCM)

RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D ₅₀ * (INCHES)
TYPE VL	70 - 100	12	6
	50 - 70	9	
	35 - 50	6	
	2 - 10	2	
TYPE L	70 - 100	15	9
	50 - 70	12	
	35 - 50	9	
	2 - 10	3	
TYPE M	70 - 100	21	12
	50 - 70	18	
	35 - 50	12	
	2 - 10	4	
TYPE H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
	2 - 10	6	

*D₅₀ = MEAN ROCK SIZE

RIPRAP AND SOIL RIPRAP PLACEMENT AND GRADATION

SOIL RIPRAP NOTES:

- ELEVATION TOLERANCES FOR THE SOIL RIPRAP SHALL BE 0.10 FEET. THICKNESS OF SOIL RIPRAP SHALL BE NO LESS THAN THICKNESS SHOWN AND NO MORE THAN 2-INCHES GREATER THAN THE THICKNESS SHOWN.
- WHERE "SOIL RIPRAP" IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP VOIDS ARE TO BE FILLED WITH NATIVE SOIL. THE RIPRAP SHALL BE PRE-MIXED WITH THE NATIVE SOIL AT THE FOLLOWING PROPORTIONS BY VOLUME: 65 PERCENT RIPRAP AND 35 PERCENT SOIL. THE SOIL USED FOR MIXING SHALL BE NATIVE TOPSOIL AND SHALL HAVE A MINIMUM FINES CONTENT OF 15 PERCENT. THE SOIL RIPRAP SHALL BE INSTALLED IN A MANNER THAT RESULTS IN A DENSE, INTERLOCKED LAYER OF RIPRAP WITH RIPRAP VOIDS FILLED COMPLETELY WITH SOIL. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF SOIL; THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT SOIL.
- WHERE SPECIFIED (TYPICALLY AS "BURIED SOIL RIPRAP"), A SURFACE LAYER OF TOPSOIL SHALL BE PLACED OVER THE SOIL RIPRAP ACCORDING TO THE THICKNESS SPECIFIED ON THE CONTRACT DRAWINGS. THE TOPSOIL SURFACE LAYER SHALL BE COMPACTED TO APPROXIMATELY 85% OF MAXIMUM DENSITY AND WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE IN ACCORDANCE WITH ASTM D698. TOPSOIL SHALL BE ADDED TO ANY AREAS THAT SETTLE.
- ALL SOIL RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

U.S. STANDARD SIEVE SIZE	GRADATION FOR GRANULAR BEDDING	
	PERCENT PASSING BY WEIGHT	
	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.09 CLASS A
3 INCHES	-	90 - 100
1½ INCHES	-	-
¾ INCHES	-	20 - 90
⅜ INCHES	100	-
#4	95 - 100	0 - 20
#16	45 - 80	-
#50	10 - 30	-
#100	2 - 10	-
#200	0 - 2	0 - 3

RIPRAP BEDDING

2 SOIL RIPRAP PLACEMENT
C9.3 (BASED ON MHFD USDTCM)

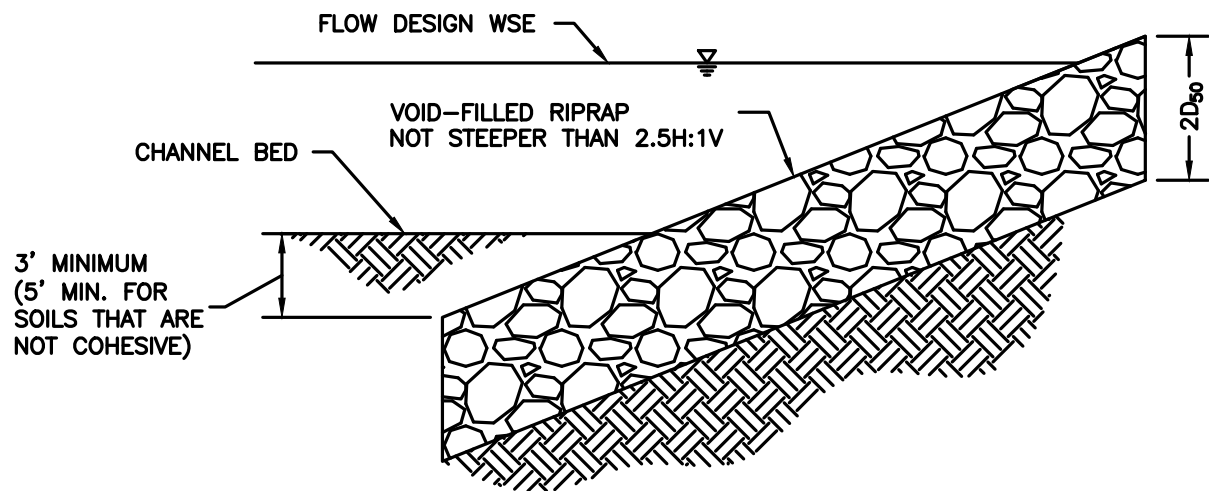


TABLE 1. MIX REQUIREMENTS FOR TYPE VL AND L VOID-FILLED RIPRAP (D ₅₀ = 6 TO 9 INCH)		
APPROPRIATE PROPORTIONS (BY VOLUME)	MATERIAL TYPE	MATERIAL DESCRIPTION
6 PARTS	RIPRAP	D ₅₀ = 6 INCH (TYPE VL) OR D ₅₀ = 9 INCH (TYPE L), SEE TABLE 3
1 PART	VOID-FILL MATERIAL	VTC (VEHICLE TRACKING CONTROL) ROCK (CRUSHED ROCK WITH 100% PASSING 4-INCH SIEVE, 50-70% PASSING 3-INCH SIEVE, 0-10% PASSING 2-INCH SIEVE)
1 PART	VOID-FILL MATERIAL	4-INCH MINUS PIT RUN SURGE (ROUND RIVER ROCK AND SAND, WELL GRADED, 90-100% PASSING 4-INCH SIEVE, 70-80% PASSING ½-INCH SIEVE, 40-60% PASSING ¾-INCH SIEVE, 10-30% PASSING #16 SIEVE)
1 PART	VOID-FILL MATERIAL	TYPE II BEDDING (CRUSHED ROCK WITH 100% PASSING 3-INCH SIEVE, 20-90% PASSING ¾-INCH SIEVE, 0-20% PASSING #4 SIEVE, 0-3% PASSING #200 SIEVE)
½ TO 1 PART	VOID-FILL MATERIAL	NATIVE TOPSOIL

VOID-FILLED RIPRAP PLACEMENT AND GRADATION

TABLE 2. MIX REQUIREMENTS FOR TYPE M AND H VOID-FILLED RIPRAP (D ₅₀ = 12 TO 18 INCH)		
APPROPRIATE PROPORTIONS (BY VOLUME)	MATERIAL TYPE	MATERIAL DESCRIPTION
6 PARTS	RIPRAP	D ₅₀ = 12-INCH (TYPE M) OR D ₅₀ = 18-INCH (TYPE H), SEE TABLE 3
2 PART	VOID-FILL MATERIAL	7-INCH MINUS CRUSHED ROCK SURGE (100% PASSING 7-INCH SIEVE, 80-100% PASSING 6-INCH SIEVE, 35-50% PASSING 3-INCH SIEVE, 10-20% PASSING ½-INCH SIEVE)
1 PART	VOID-FILL MATERIAL	VTC (VEHICLE TRACKING CONTROL) ROCK (CRUSHED ROCK WITH 100% PASSING 4-INCH SIEVE, 50-70% PASSING 3-INCH SIEVE, 0-10% PASSING 2-INCH SIEVE)
1 PART	VOID-FILL MATERIAL	4-INCH MINUS PIT RUN SURGE (ROUND RIVER ROCK AND SAND, WELL GRADED, 90-100% PASSING 4-INCH SIEVE, 70-80% PASSING ½-INCH SIEVE, 40-60% PASSING ¾-INCH SIEVE, 10-30% PASSING #16 SIEVE)
1 PART	VOID-FILL MATERIAL	TYPE II BEDDING (CRUSHED ROCK WITH 100% PASSING 3-INCH SIEVE, 20-90% PASSING ¾-INCH SIEVE, 0-20% PASSING #4 SIEVE, 0-3% PASSING #200 SIEVE)
½ TO 1 PART	VOID-FILL MATERIAL	NATIVE TOPSOIL

VOID-FILLED RIPRAP PLACEMENT AND GRADATION NOTES:

- WHERE "VOID-FILLED RIPRAP" IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP SHALL BE MIXED WITH THE MATERIALS AND ASSOCIATED PROPORTIONS LISTED IN TABLE 1 OR TABLE 2 TO FILL THE VOIDS OF THE RIPRAP.
- THE MIX PROPORTIONS PROVIDED IN TABLE 1 AND TABLE 2 ARE APPROXIMATE AND ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER.
- THE RIPRAP AND VOID-FILLED MATERIALS SHALL BE STOCKPILED SEPERATELY AND THOROUGHLY MIXED PRIOR TO PLACEMENT AND SHALL BE INSTALLED AND COMPACTED SO THAT A DENSE, INTERLOCKED LAYER OF RIPRAP AND VOID-FILL MATERIAL IS PROVIDED WITH RIPRAP VOIDS COMPLETELY FILLED. THE LOOSE MATERIAL SHALL BE PLACED IN A SINGLE LIFT OF SUFFICIENT HEIGHT SUCH THAT FINAL GRADE WILL BE ACHIEVED UPON COMPACTED. IF THE COMPACTED MATERIAL IS BELOW FINAL GRADE, PLACEMENT OF ONLY THE SMALLER VOID-FILL MATERIALS TO ACHIEVE FINAL GRADE IS NOT PERMITTED. IN SUCH CASES IT IS NECESSARY TO ADD MORE STANDARD SIZED VOID-FILLED RIPRAP AND REMIX THE ENTIRE THICKNESS OF ROCK TO ACHIEVE THE DESIGN SECTION. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF THE VOID-FILL MATERIALS. THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT FILLING THE VOIDS.
- COMPACTION OF THE VOID-FILLED RIPRAP SHALL BE PERFORMED BY WHEEL ROLLING WITH HEAVY RUBBER-TIRED EQUIPMENT (E.G. FRONT END LOADER). THE MOISTURE CONTENT OF THE MIXTURE SHALL BE AT OPTIMUM CONDITIONS PRIOR TO COMPACTION AND WATER SHALL BE ADDED, AS NECESSARY, AT THE DIRECTION OF THE ENGINEER.
- WHERE INDICATED ON THE DRAWINGS, A SURFACE LAYER OF MOIST TOPSOIL SHALL BE PLACED OVER THE VOID-FILLED RIPRAP. THE TOPSOIL SURFACE LAYER SHALL BE COMPACTED TO APPROXIMATELY 85% OF MAXIMUM DENSITY AND WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE IN ACCORDANCE WITH ASTM D698. TOPSOIL SHALL BE ADDED TO ANY AREAS THAT SETTLE.
- ALL VOID-FILLED RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

TABLE 3. VOID-FILLED RIPRAP PLACEMENT AND GRADATION			
RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D ₅₀ * (INCHES)
TYPE VL	70 - 100	12	6
	50 - 70	9	
	35 - 50	6	
	2 - 10	2	
TYPE L	70 - 100	15	9
	50 - 70	12	
	35 - 50	9	
	2 - 10	3	
TYPE M	70 - 100	21	12
	50 - 70	18	
	35 - 50	12	
	2 - 10	4	
TYPE H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
	2 - 10	6	

*D₅₀ = MEAN ROCK SIZE

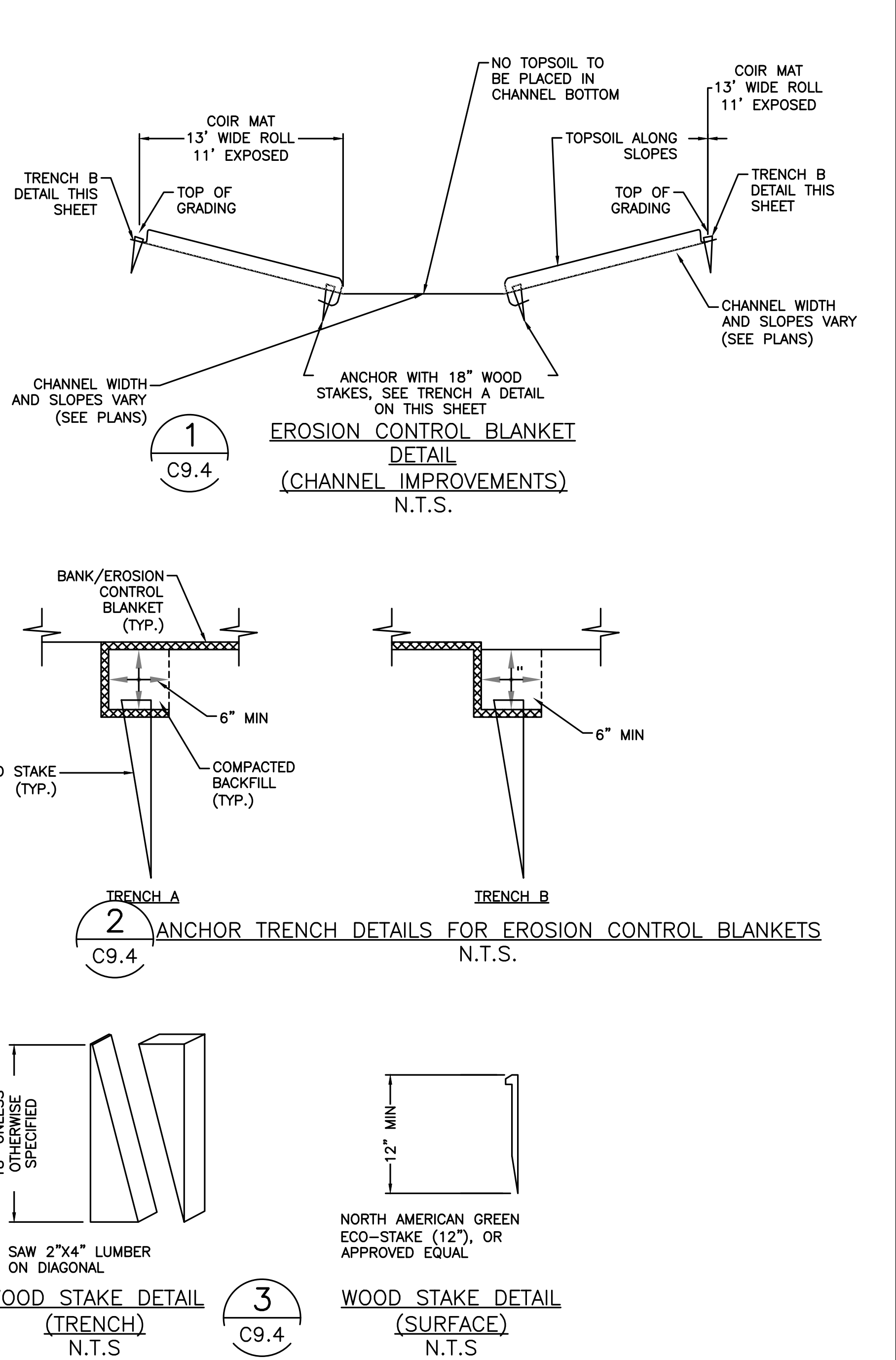
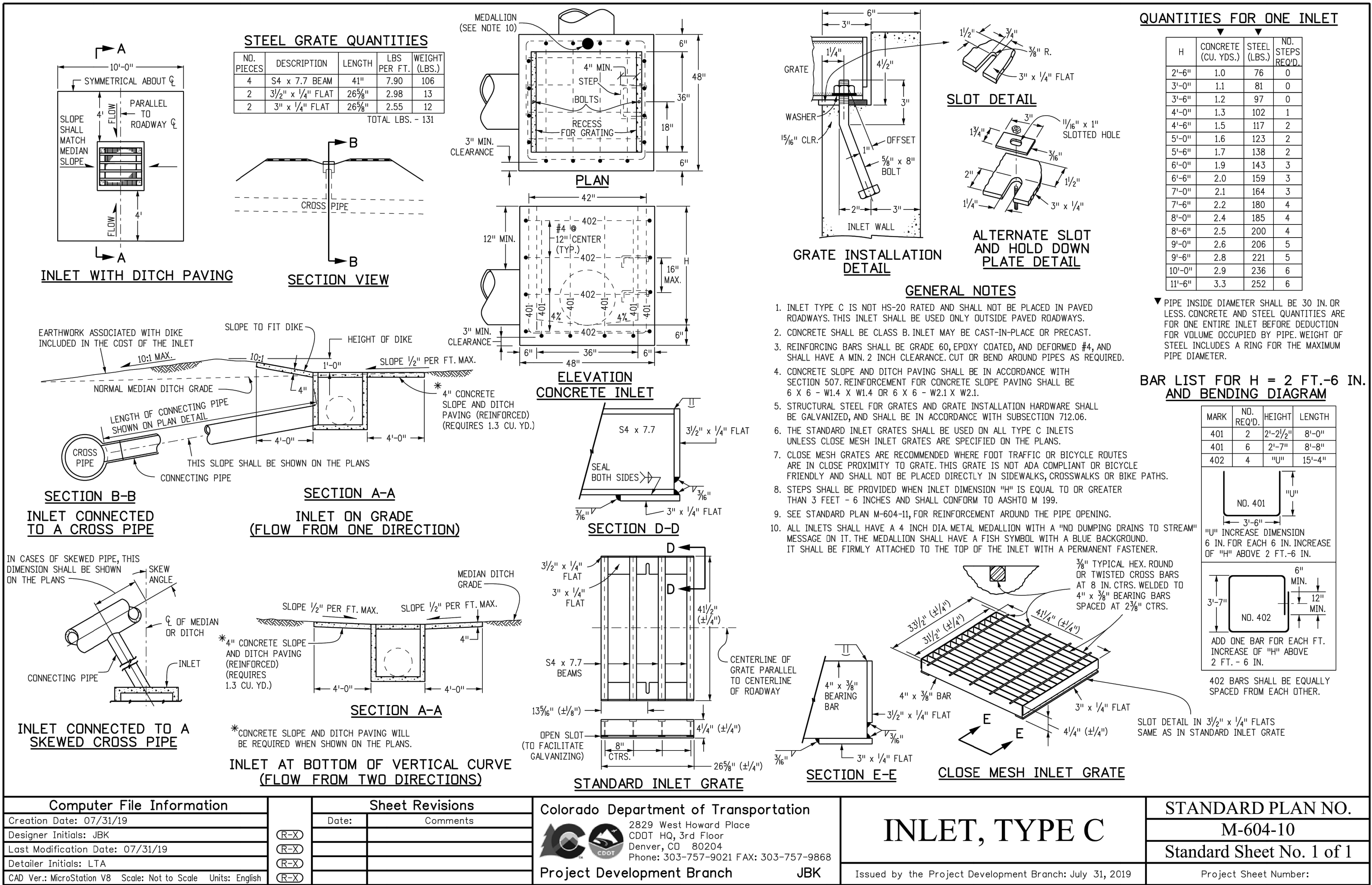
NOTE: MIX ON SITE AND PRIOR TO PLACEMENT

3
C9.3

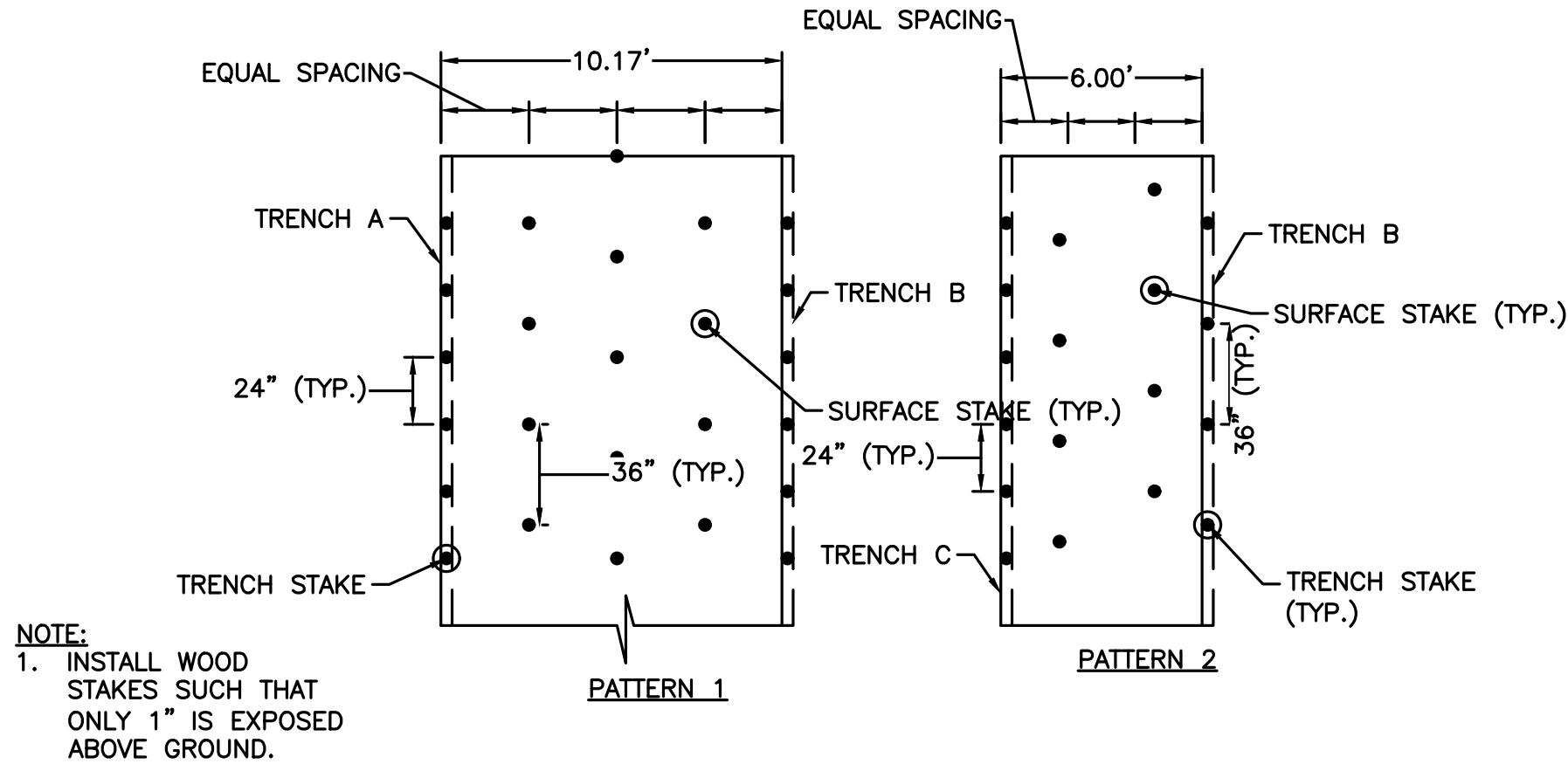
VOID-FILLED RIPRAP PLACEMENT
(BASED ON MHFD USDTCM)

	DESIGNED: VARIES	SUB SHEET NO.	TITLE OF SHEET DRAINAGE DETAILS	DRAWING NO. 121 176678 PMIS/PKG NO. 160755
	CHAD AEL/RTP/CDS TECH REVIEW: DCW DATE: 03/10/2022			
03-10-22		C9.3	FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	SHEET 54 OF 165

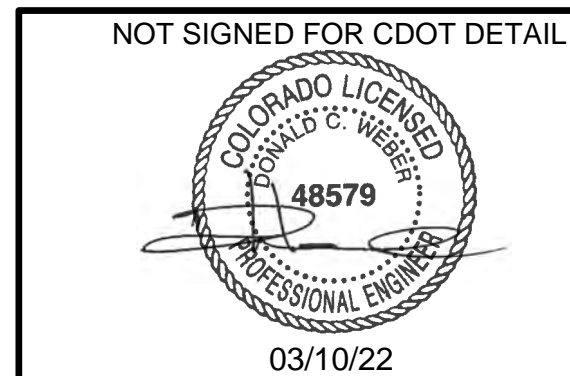
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DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDs\C9.4 DRAINAGE DETAILS.dwg



1 TYPE C INLET
C9.4



4 STAKING PATTERNS FOR BANK/EROSION CONTROL BLANKET
N.T.S.

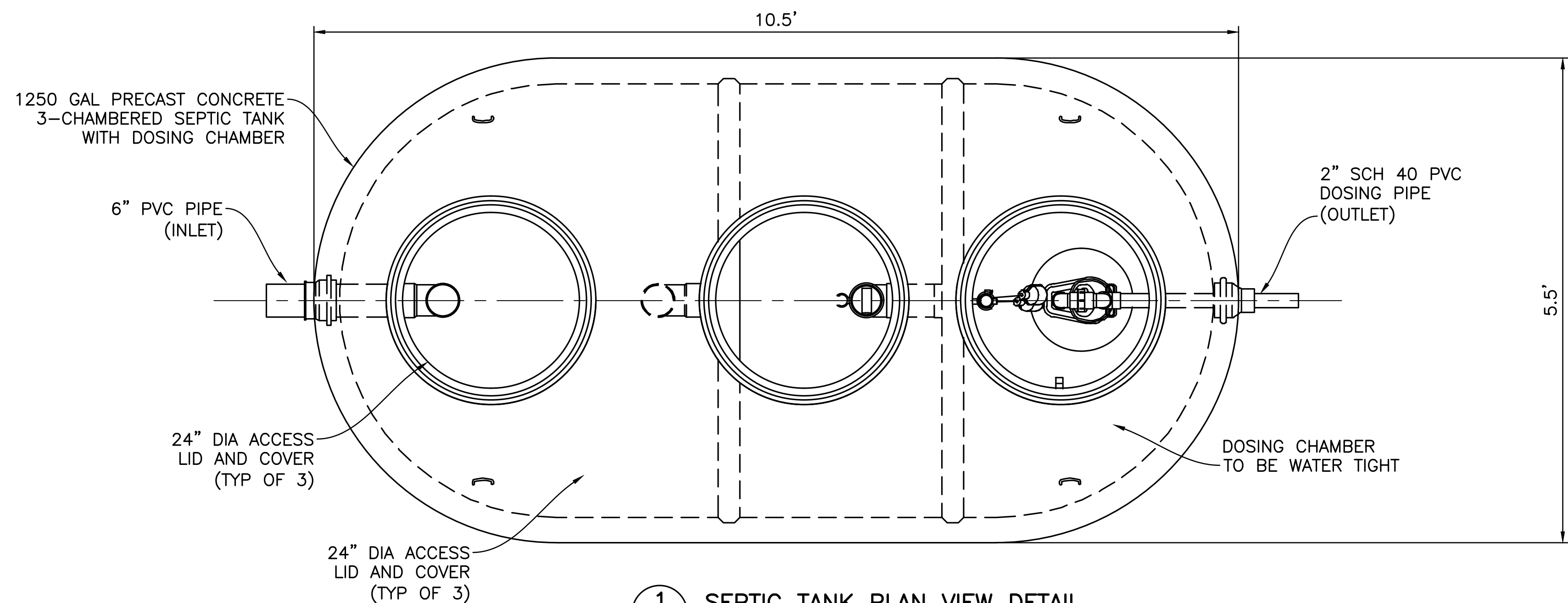


DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

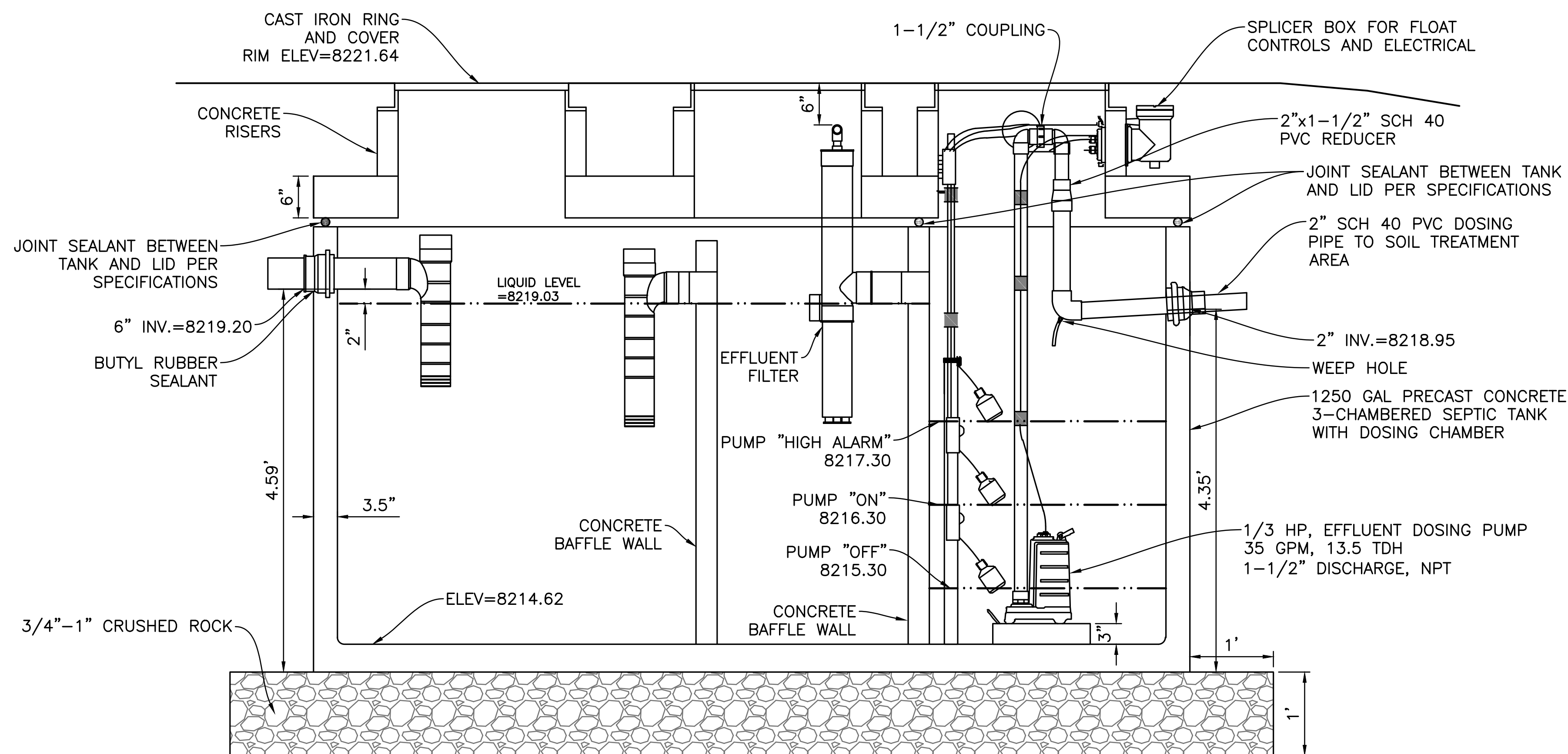
SUB SHEET NO.
C9.4

TITLE OF SHEET
DRAINAGE DETAILS
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

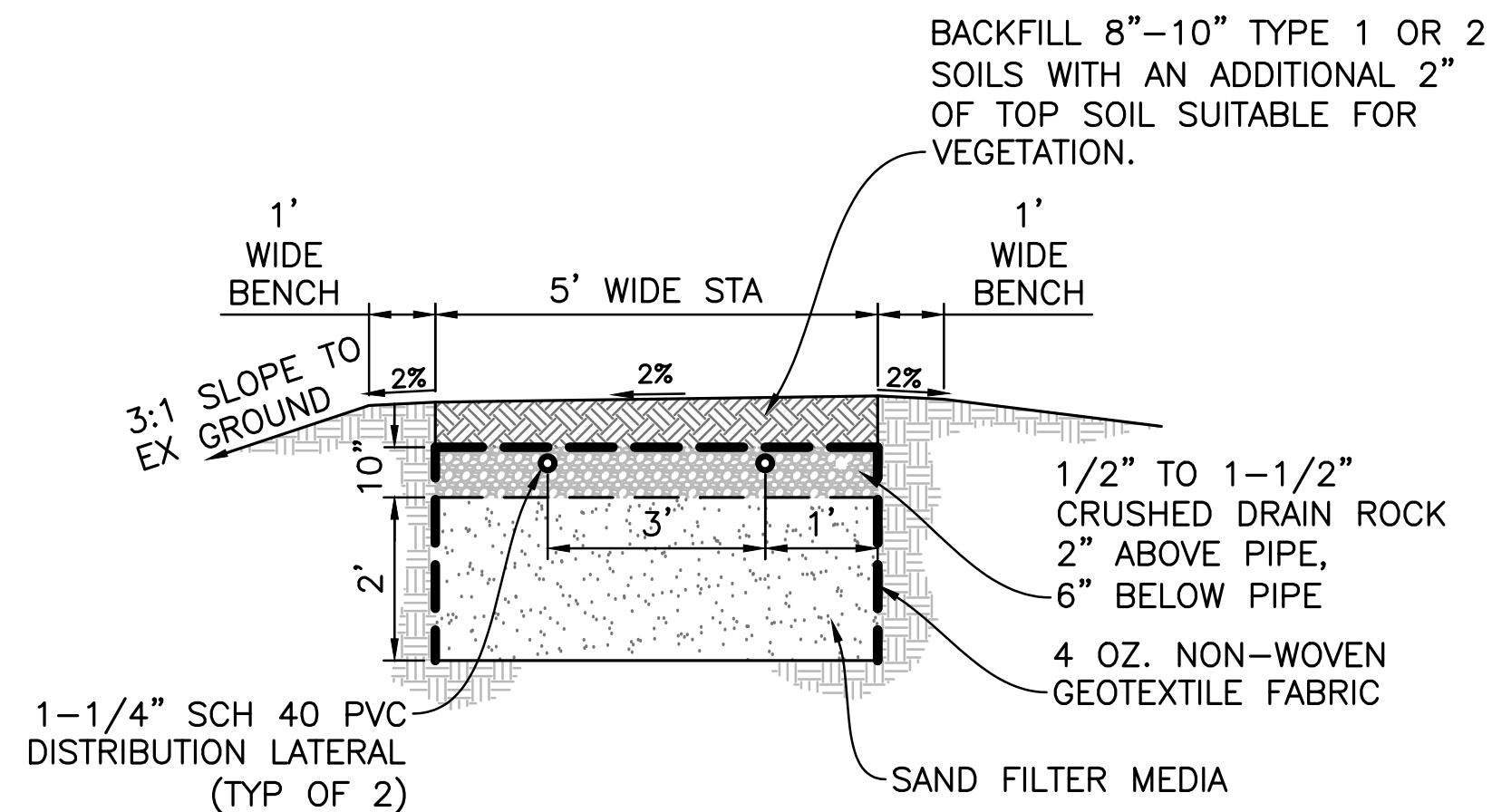
DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
55 OF **165**



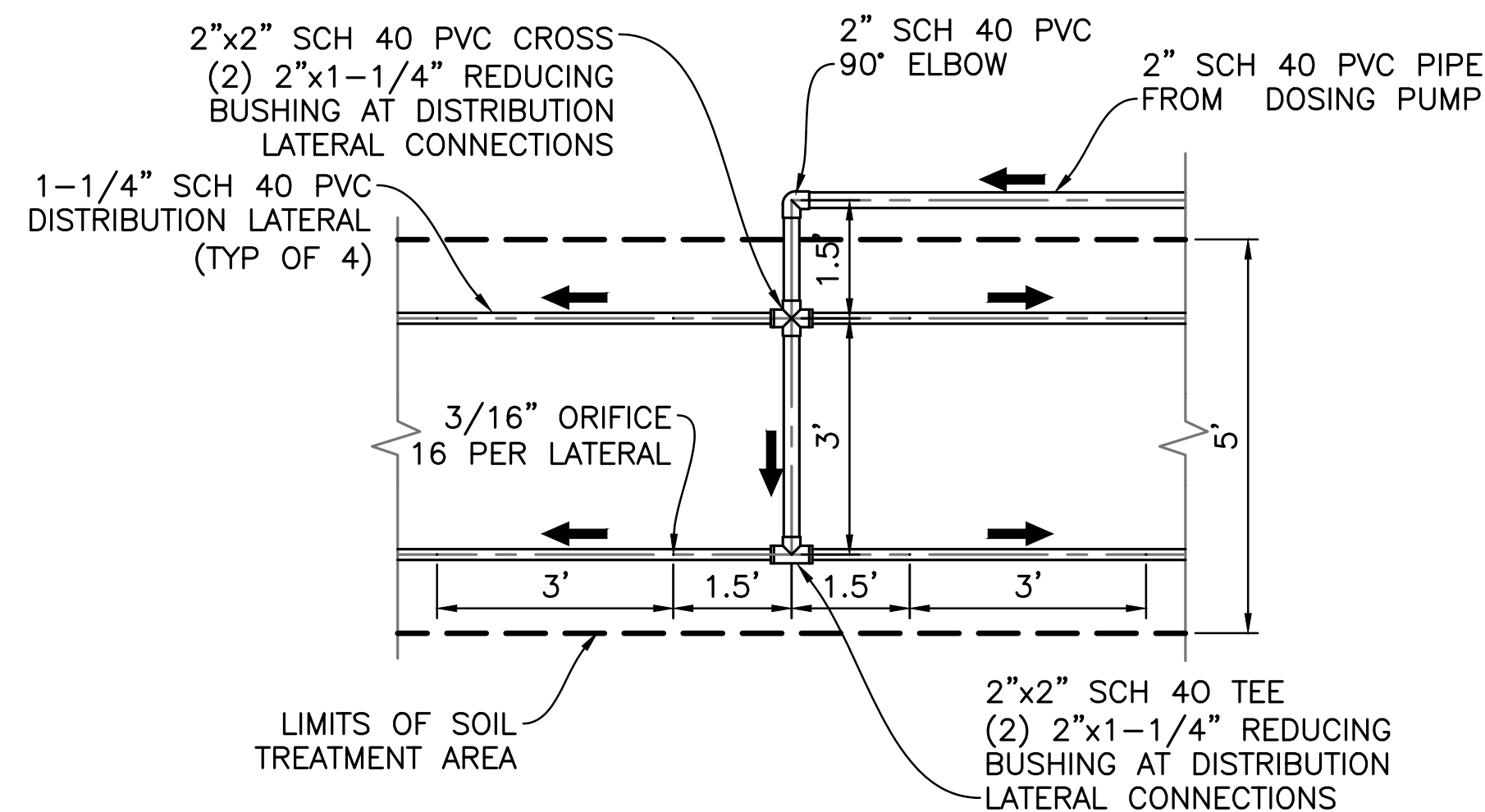
1 SEPTIC TANK PLAN VIEW DETAIL
C9.5



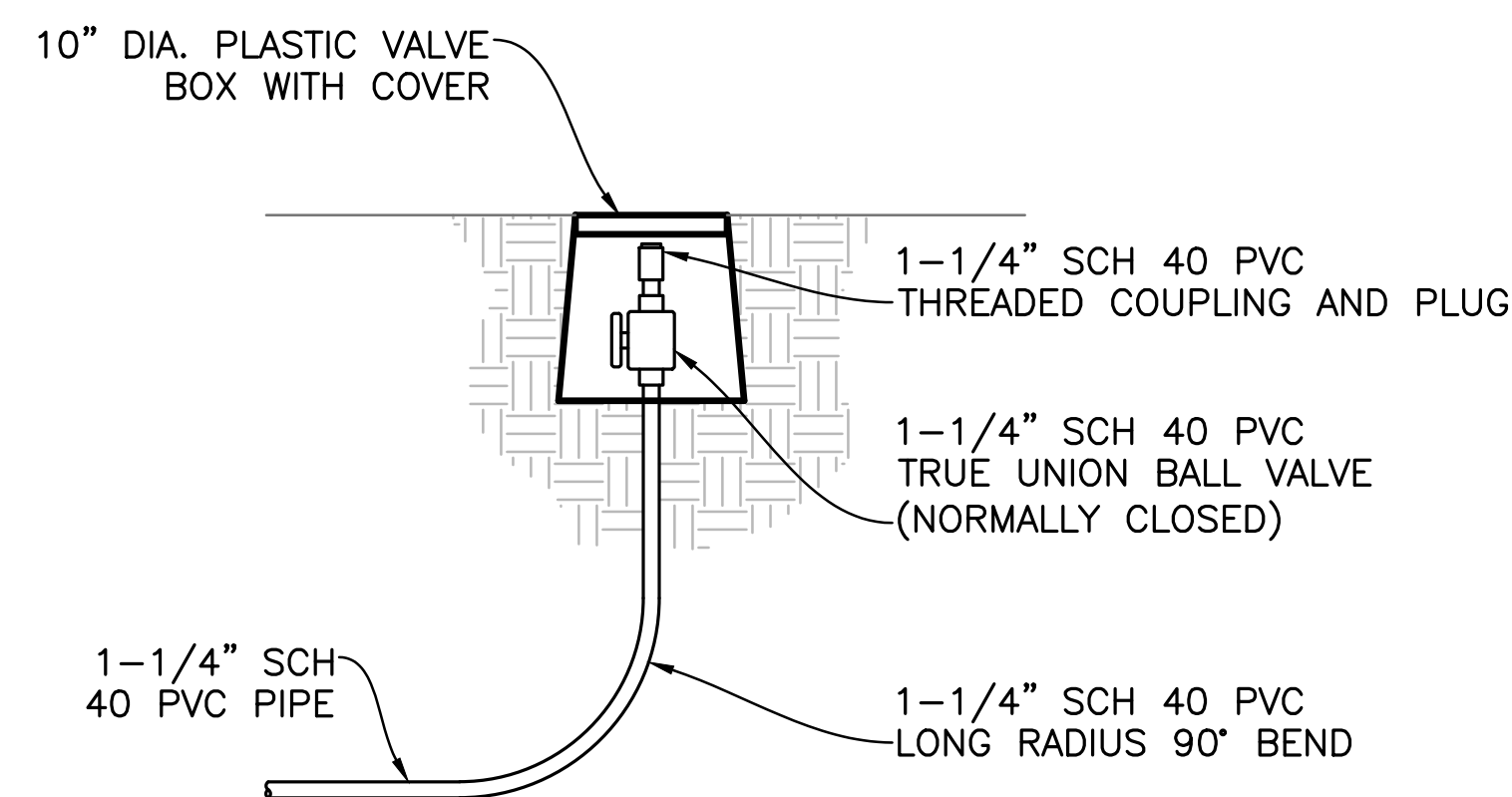
2 SEPTIC TANK SECTION VIEW DETAIL
C9.5



3 SOIL TREATMENT AREA DETAIL
C9.5



4 DISTRIBUTION HEADER DETAIL
C9.5



5 FLUSH VALVE DETAIL
C9.5

BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
JVM ES
AJDL
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C9.5

TITLE OF SHEET
UTILITY DETAILS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
56 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:37 PM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO FALL RIVER ENTRANCE & REHAB & WASTEWATER\DRAWINGS\CIVIL\CDS\C9.6 UTILITY DETAILS.DWG

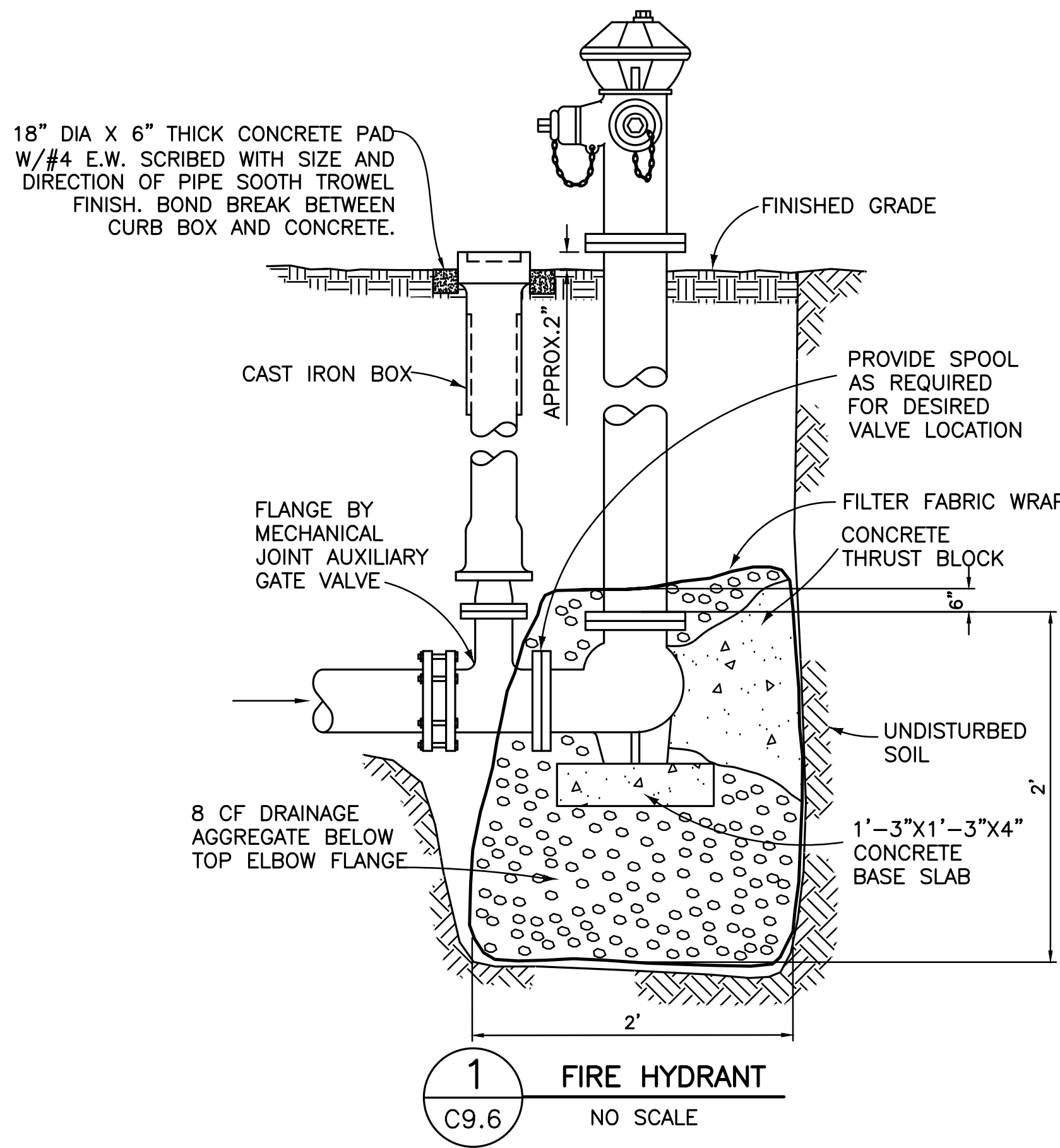


TABLE I THRUST(T) AT FITTINGS, IN POUNDS AT 100 PSI WATER PRESSURE					
PIPE SIZE	TEE OR DEAD END	90° BEND	45° BEND	22 1/2° BEND	11 3/4° BEND
2"	443	627	339	173	87
4"	1810	2559	1385	706	355
6"	3739	5288	2862	1459	733

TABLE II SAFE BEARING LOADS (B)	
SOIL	SAFE BEARING LOAD, POUNDS PER SQ. FT.
SOUND SHALE	10000
CEMENTED SAND AND GRAVEL	4000
COARSE AND FINE COMPACTED SAND	3000
MEDIUM CLAY (CAN BE SPADED)	2000
SOFT CLAY	1000
MUCK	0

$$A_{SB} = \frac{T}{B} \times \frac{P_T}{100}$$

WHERE:

A_{SB} = AREA OF BLOCK BEARING AGAINST UNDISTURBED TRENCH MATERIAL IN SQ. FT.

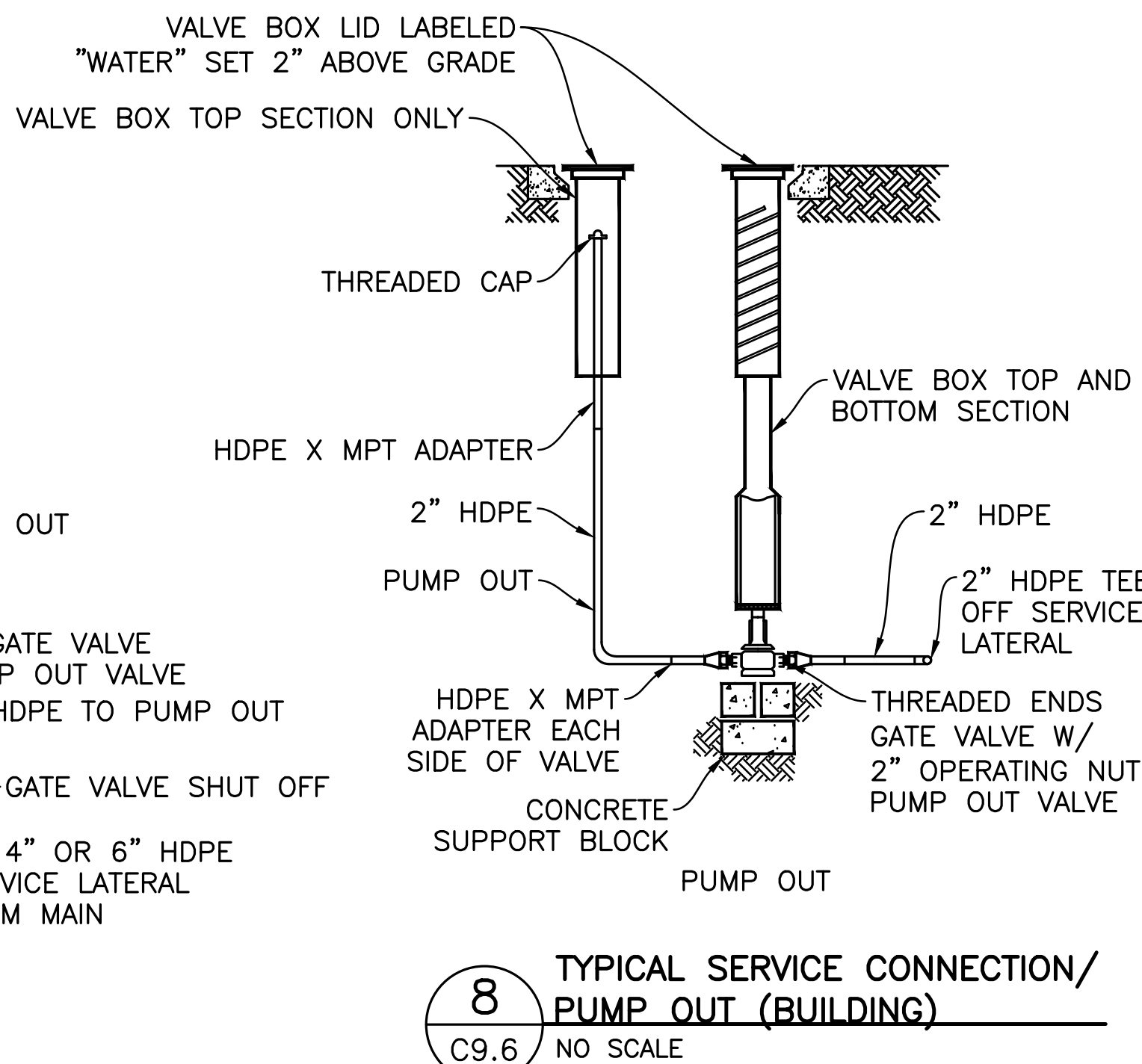
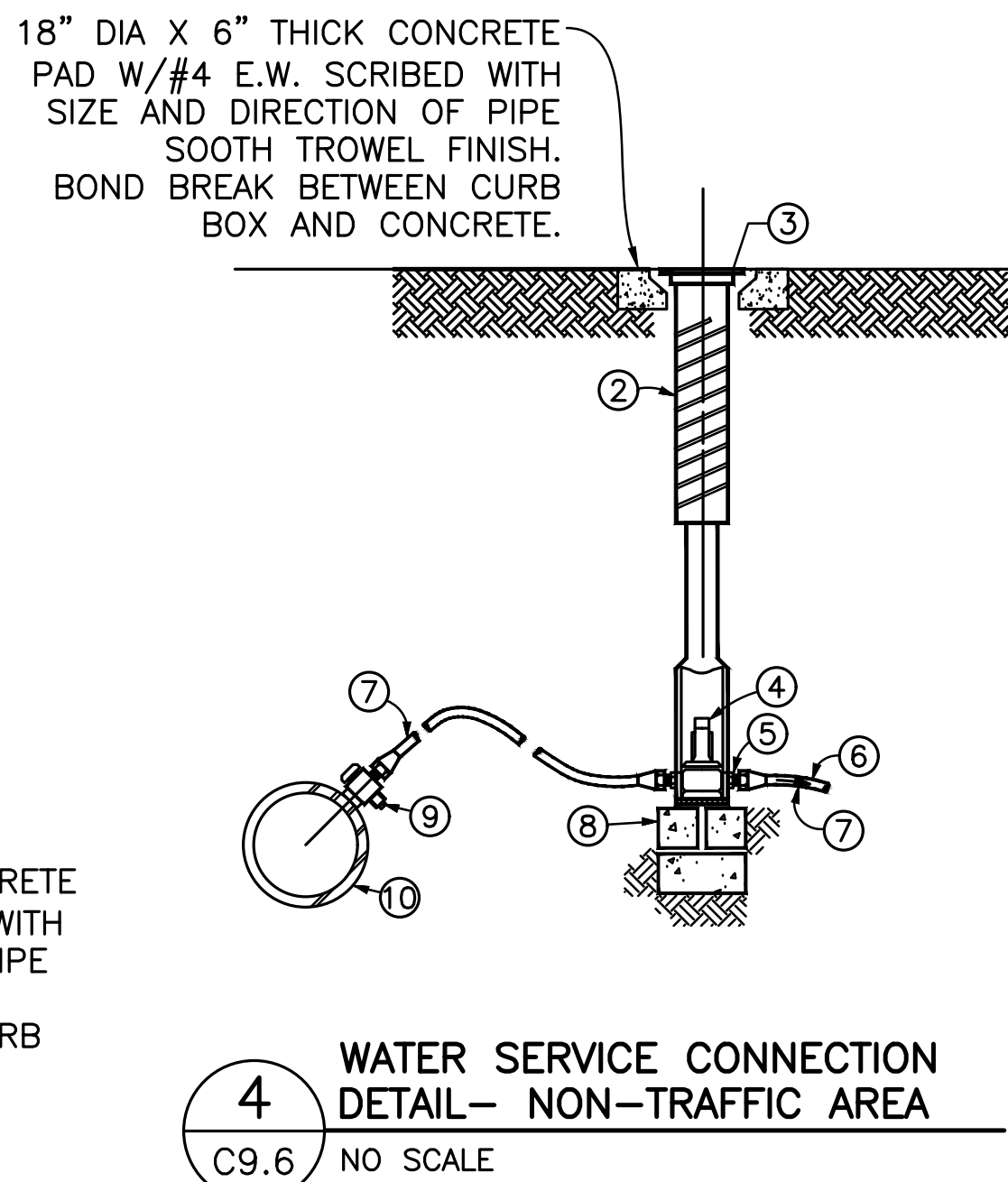
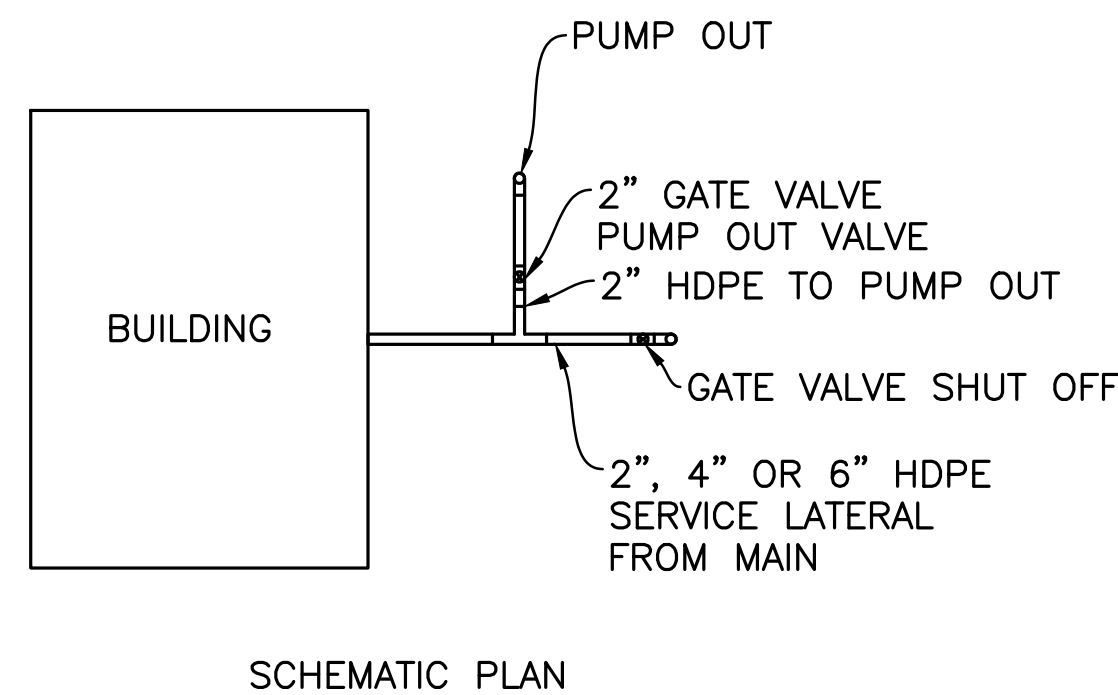
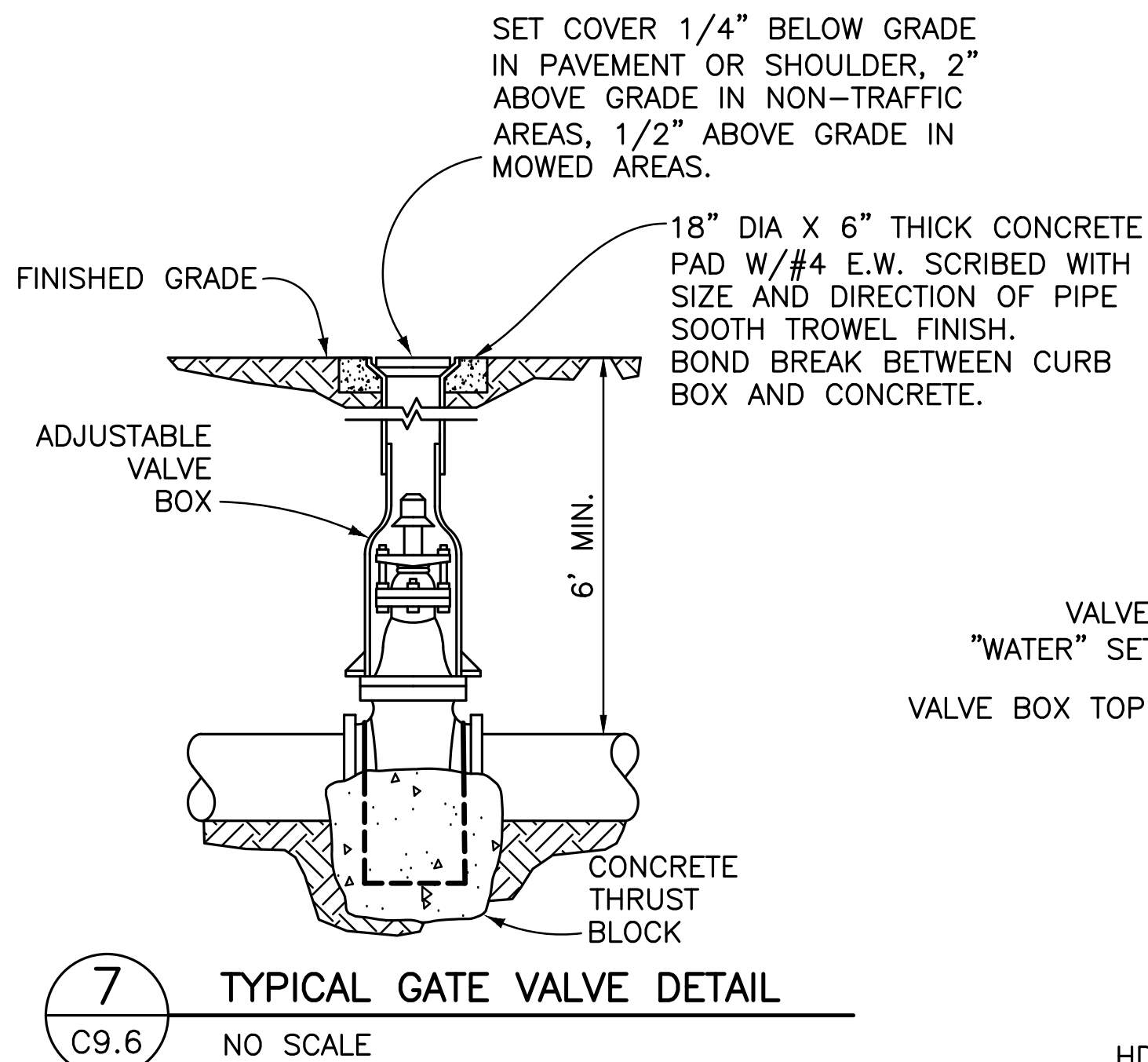
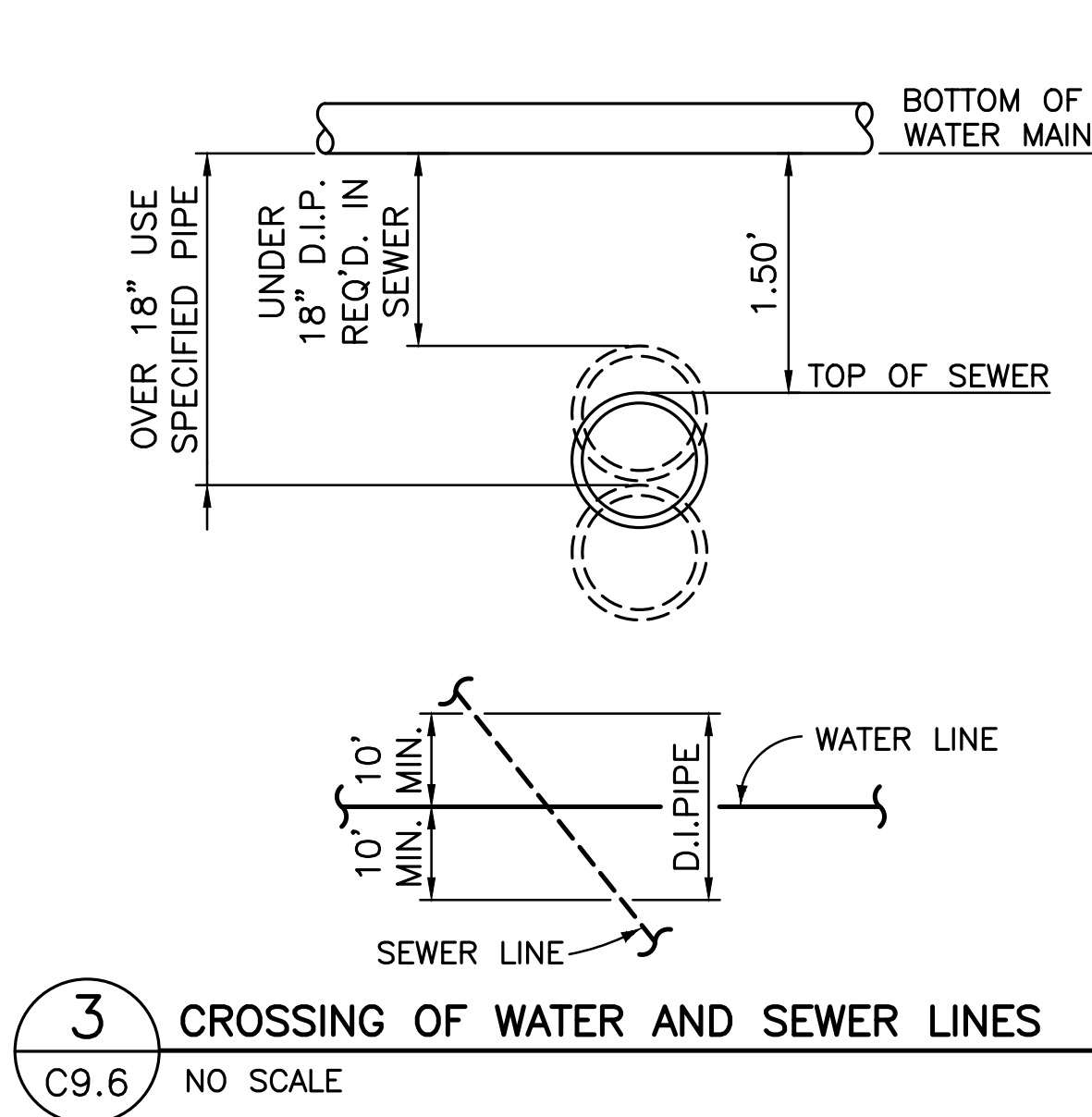
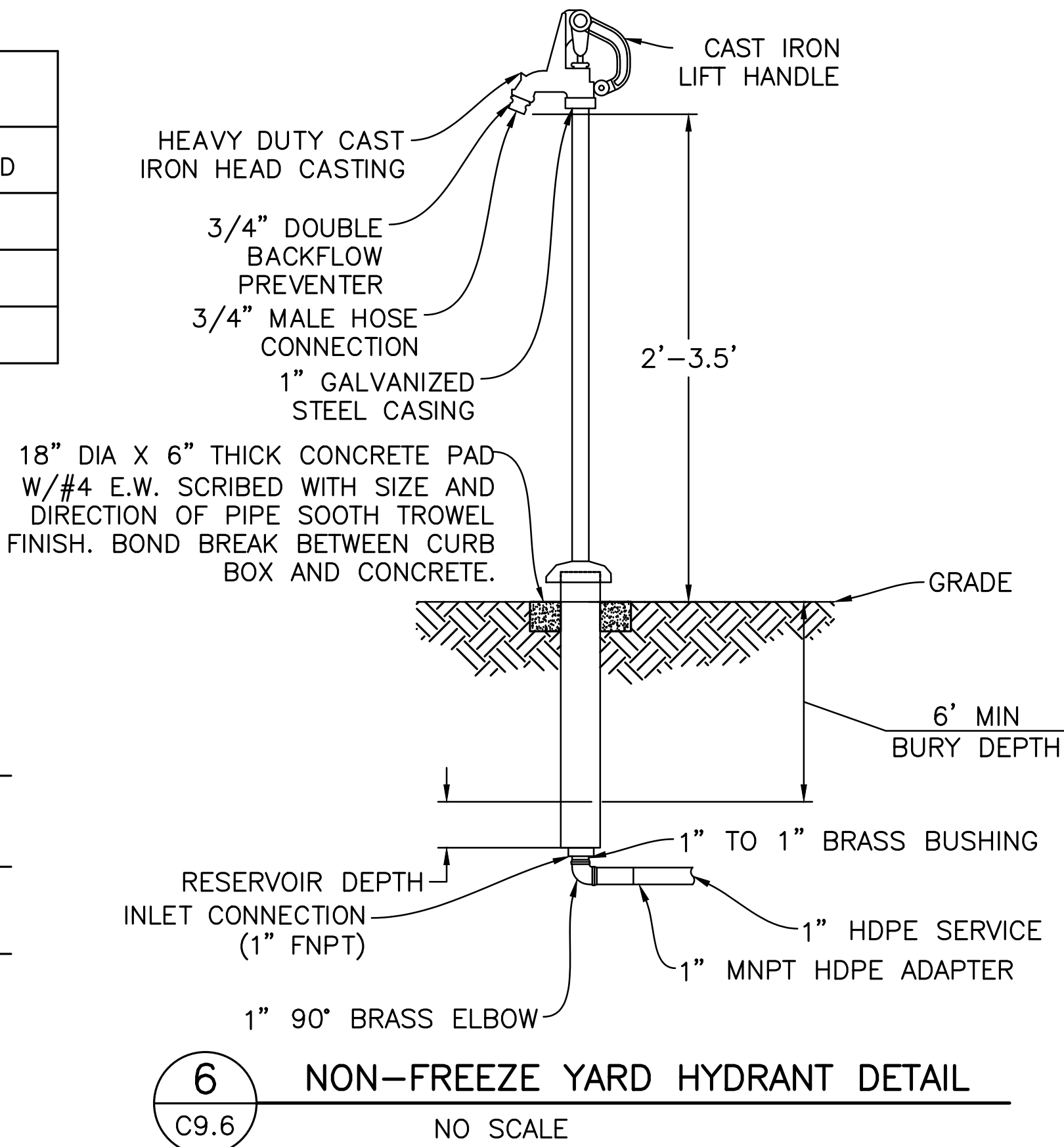
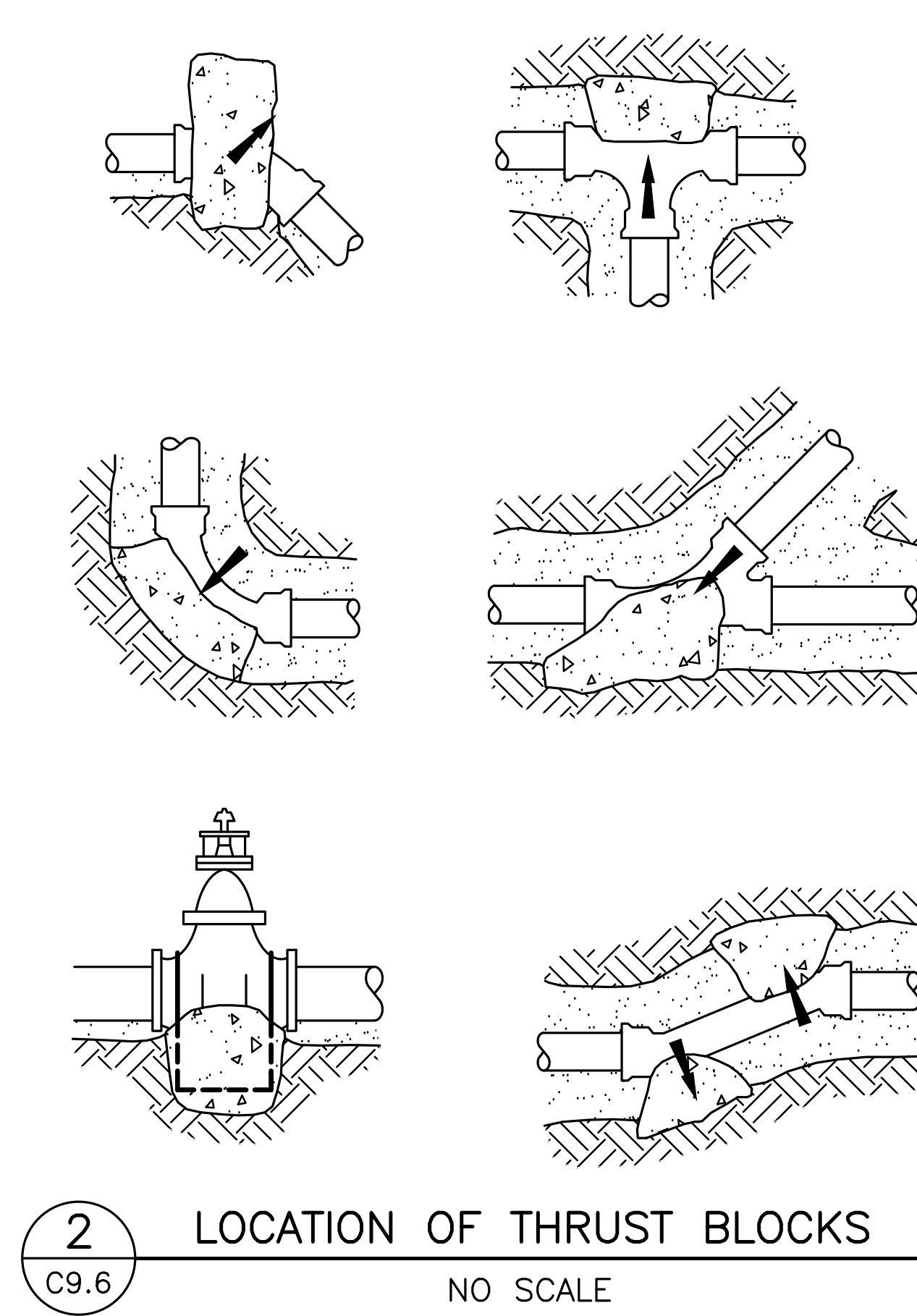
T = THRUST FACTOR FROM TABLE I IN POUNDS AT 100 P.S.I.

B = SAFE BEARING LOAD FROM TABLE II IN POUNDS/SQ.FT.

P_T = PRESSURE USED FOR PIPELINE TEST IN P.S.I.

5 THRUST BLOCK SIZING

C9.6 NO SCALE




BENCHMARK

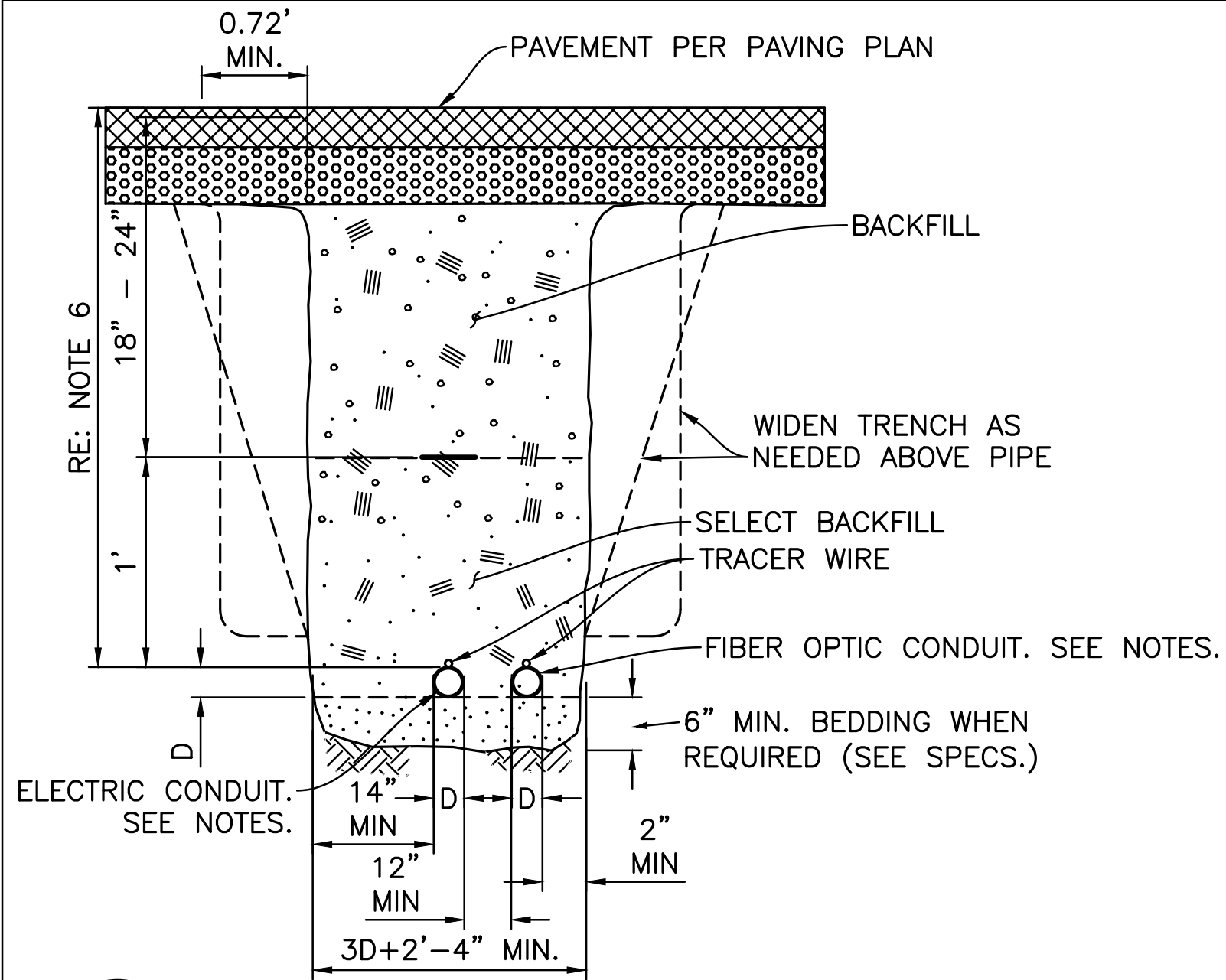
ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

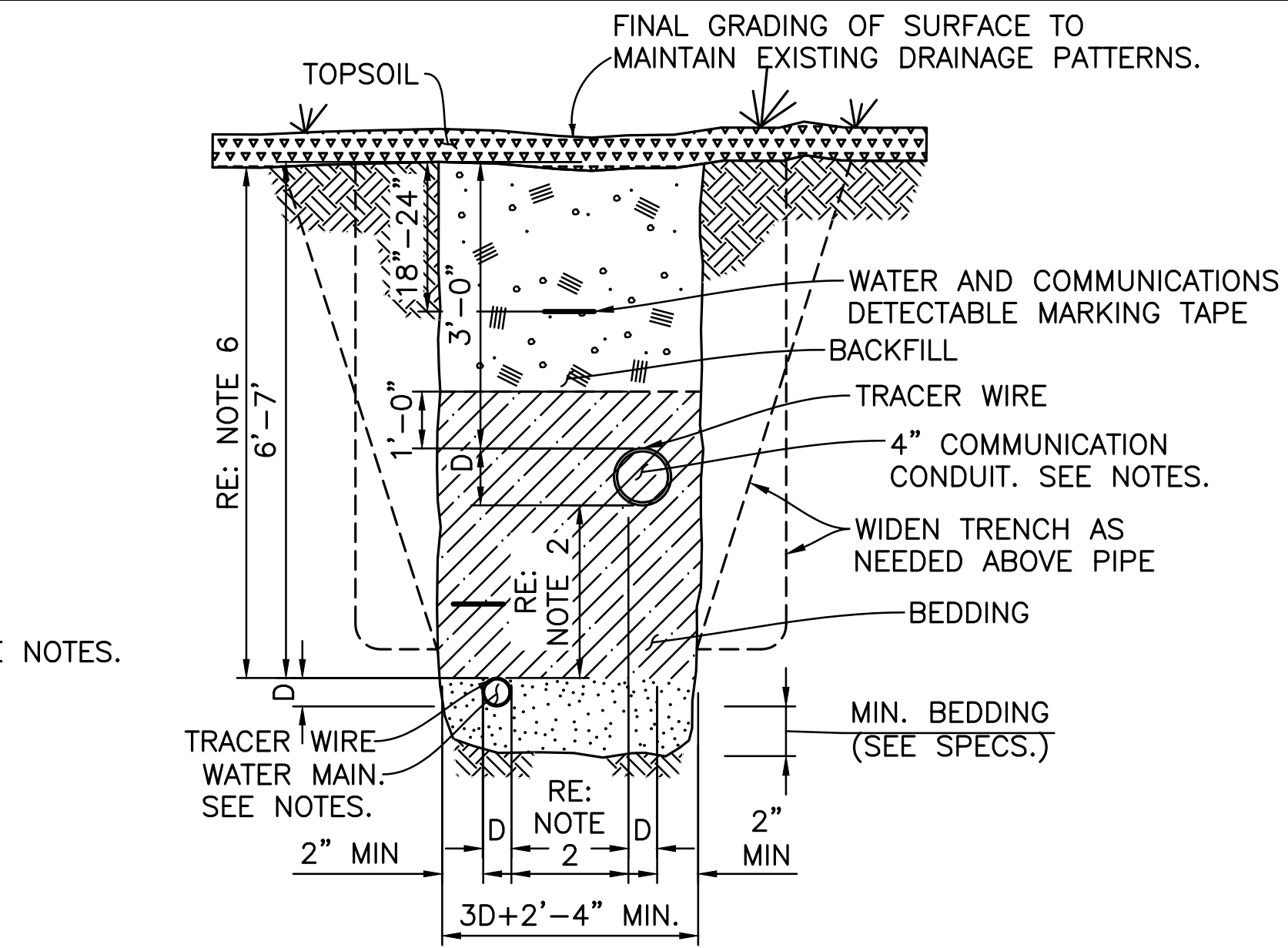
PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING

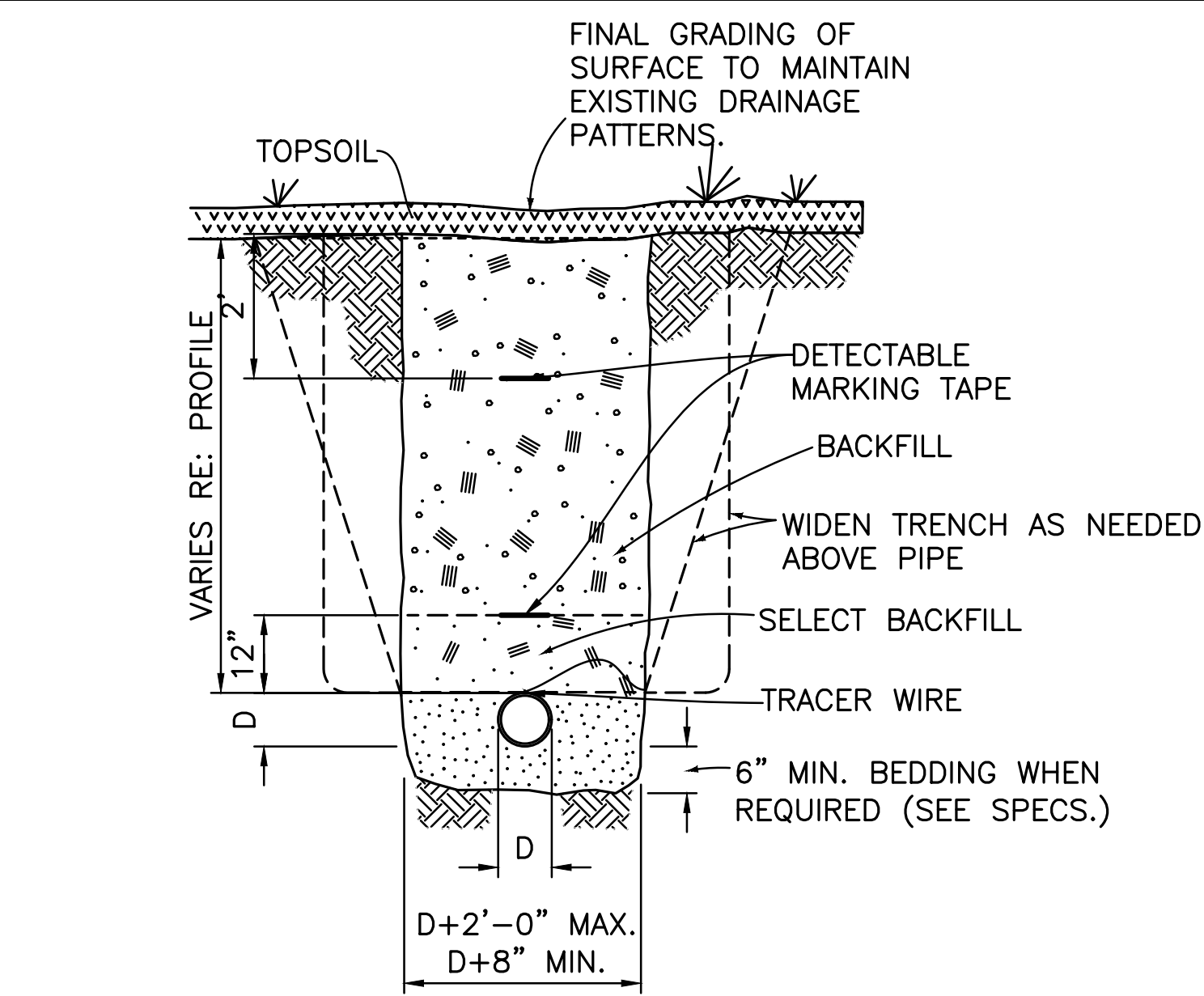
 03/10/22	DESIGNED: VARIES GADD AEL/RTP/CDS TECH REVIEW: DCW DATE: 03/10/2022	SUB SHEET NO. C9.6	TITLE OF SHEET UTILITY DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 58 OF 165



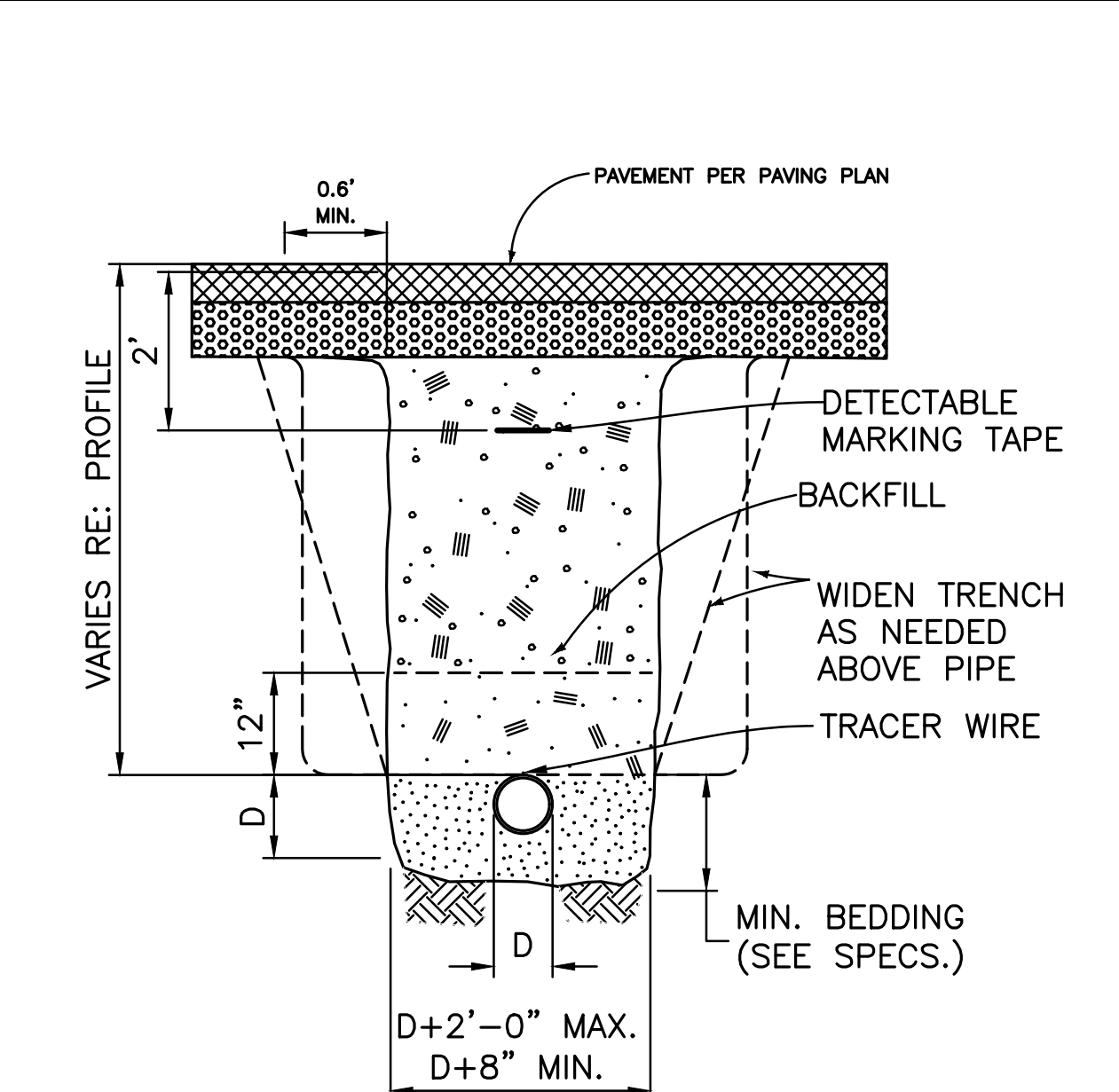
1 TRENCH DETAIL DRY UTILITIES, PAVED AREA
C9.7 NO SCALE



2 TRENCH DETAIL WATER/FIBER OPTIC IN COMMON TRENCH, NON-TRAFFIC AREA
C9.7 NO SCALE



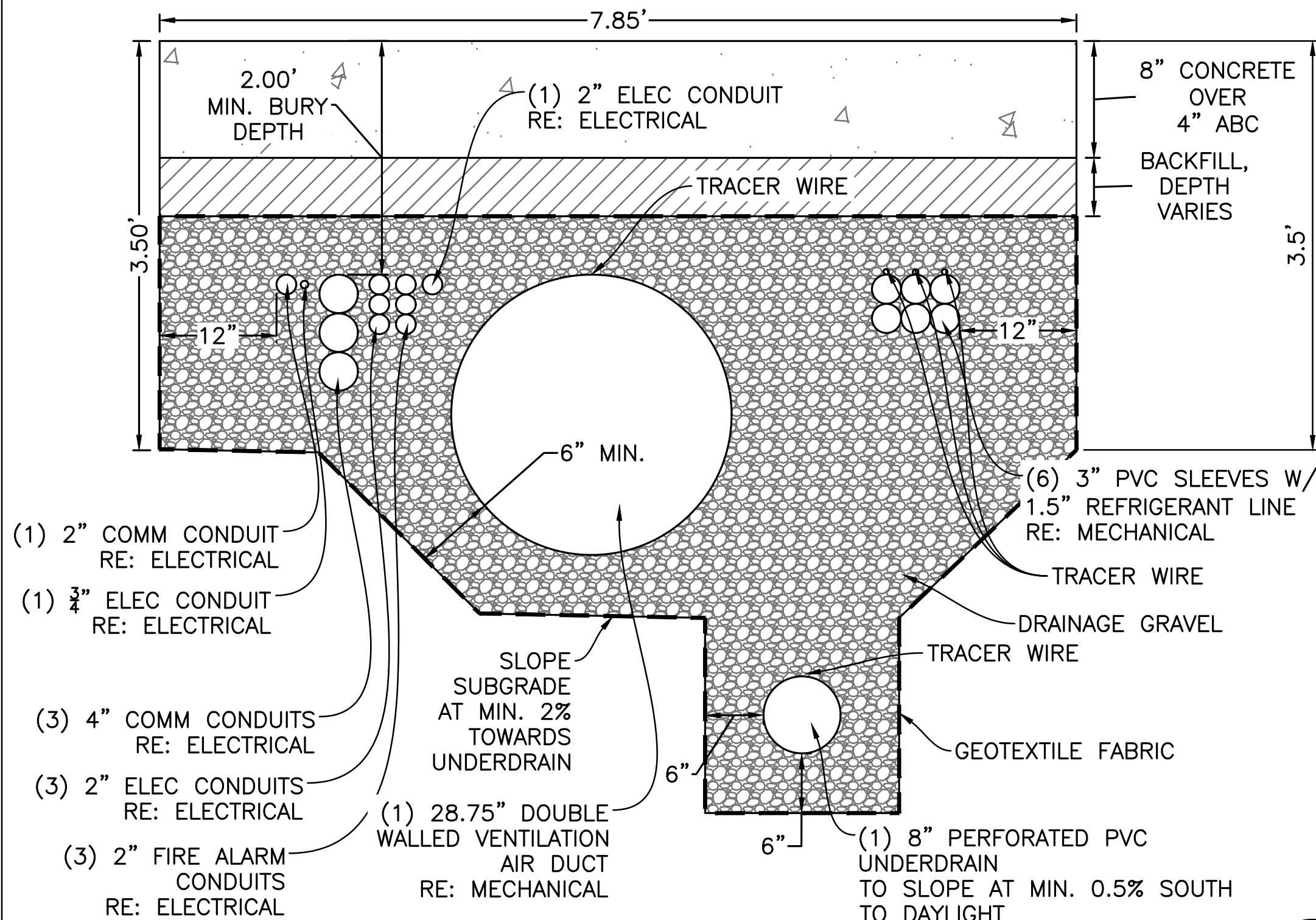
3 TRENCH DETAIL SINGLE PIPE, NON-TRAFFIC AREA
C9.7 NO SCALE



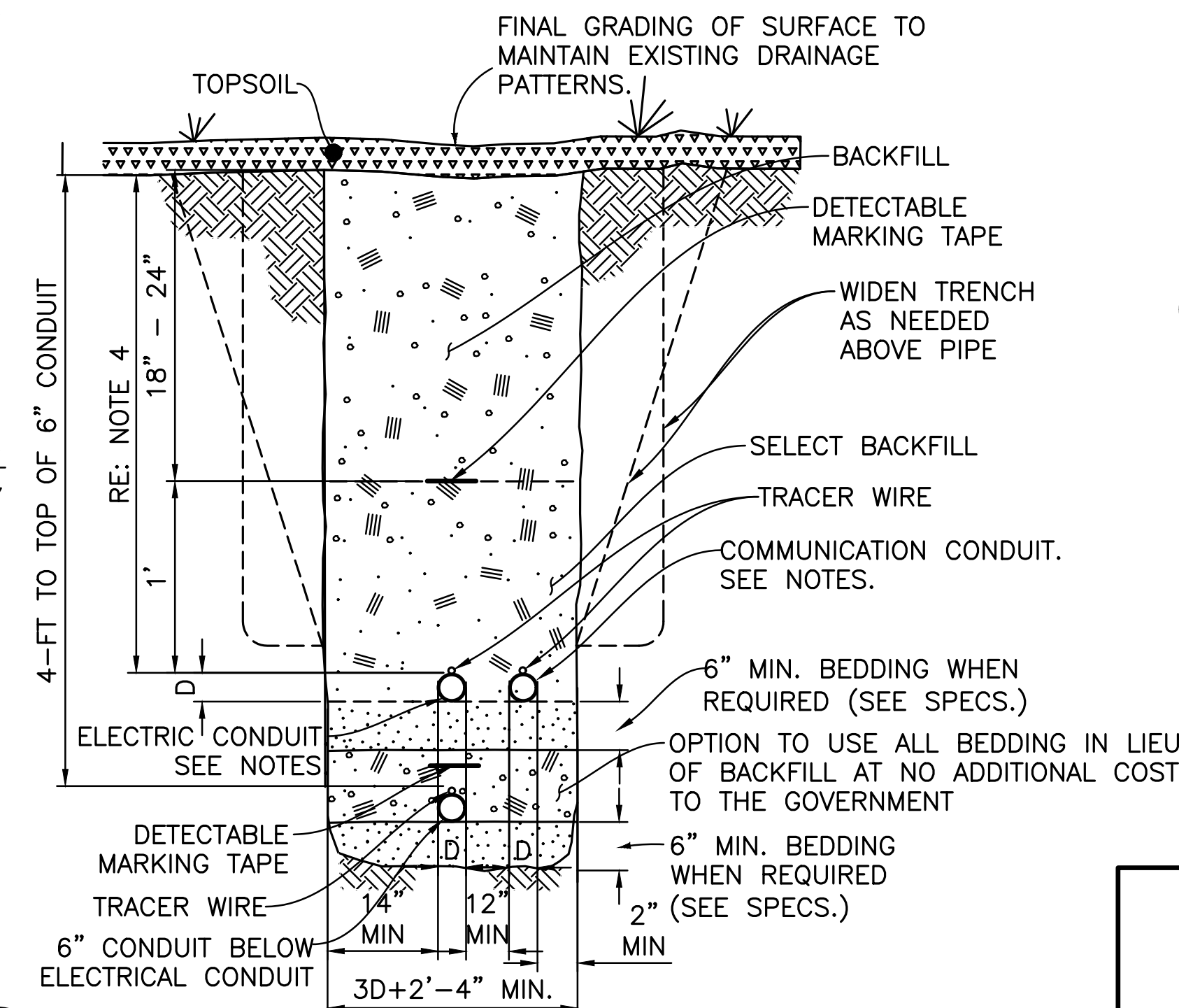
4 TRENCH DETAIL SINGLE PIPE, PAVED AREA
C9.7 NO SCALE

TRENCH NOTES:

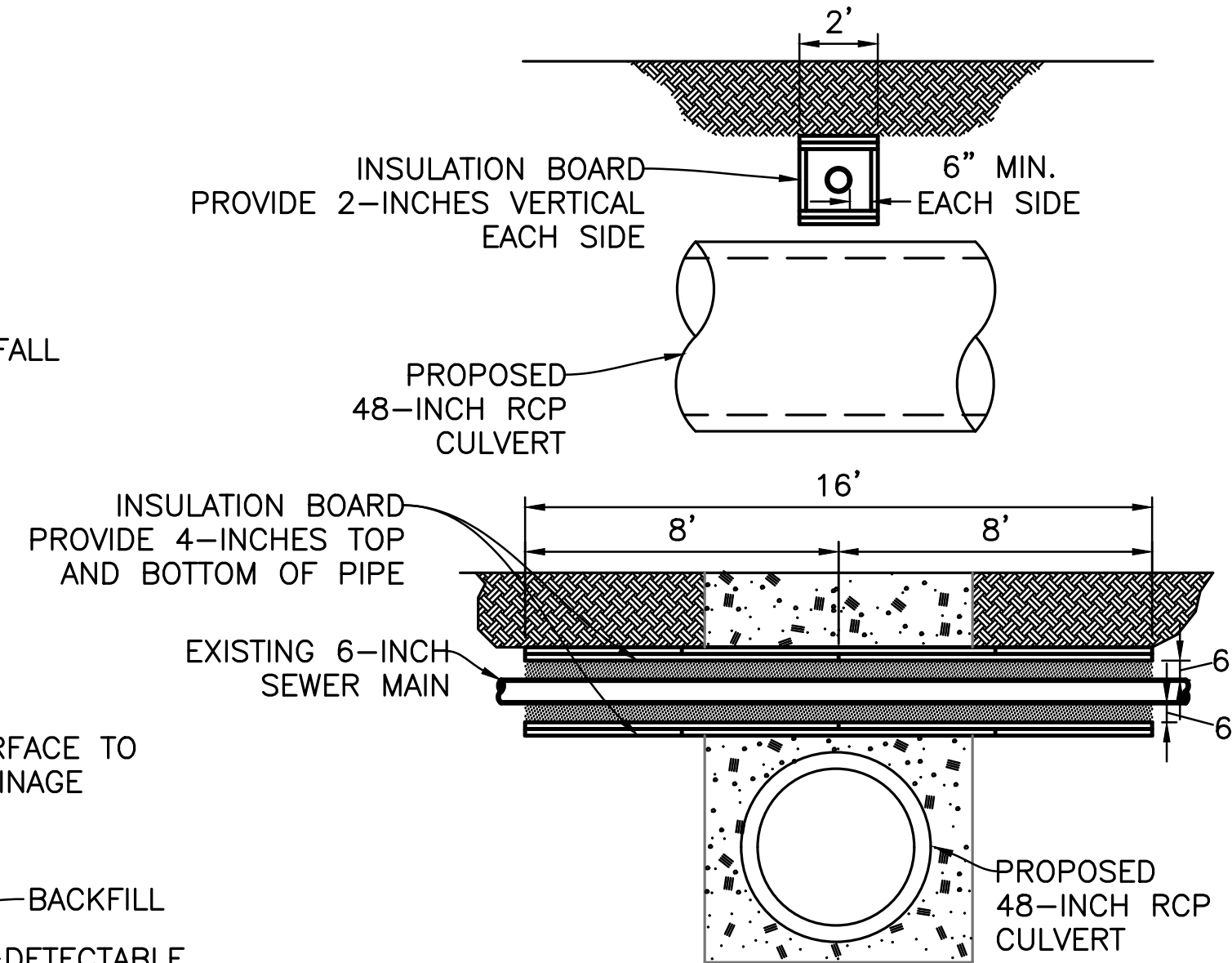
1. COMPACT BACKFILL PER SPECS.
2. FOR WATER AND COMMUNICATIONS: MAINTAIN MINIMUM 36" HORIZONTAL SEPARATION AND 36" VERTICAL SEPARATION BETWEEN OUTSIDE OF PIPE TO OUTSIDE OF PIPE. SEPARATION CAN BE REDUCED IF APPROVED BY THE CONTRACTING OFFICER.
3. FOR WATER AND SANITARY: MAINTAIN MINIMUM BURIAL DEPTHS FROM EXISTING/PROPOSED GRADES INDICATED BELOW
MINIMUM BURY DEPTH:
WATER = 6' BURY DEPTH (MIN.)
SANITARY = 3' BURY DEPTH (MIN.)
4. RAMPS SHALL BE PROVIDED EVERY 20-FT TO 50-FT ALONG TRENCH LENGTH AT SLOPES LESS THAN 45° TO ALLOW ANIMALS TO ESCAPE SHOULD THEY FALL IN. ALTERNATIVELY, TRENCHES MAY BE COVERED, WHEN WORK IS NOT BEING PERFORMED, IN SUCH WAY AS TO PREVENT ANIMALS FROM FALLING IN. CONTRACTOR TO VERIFY NO ANIMALS IN TRENCH PRIOR TO COVERING.
5. DRY UTILITIES MAY BE PLACED IN SAME TRENCH. TRENCH SHALL MEET PROJECT SPECIFICATIONS, CODE AND/OR UTILITY AGENCY REQUIREMENTS.
6. FOR ELECTRIC AND FIBER OPTIC: MAINTAIN MINIMUM 12" HORIZONTAL SEPARATION BETWEEN OUTSIDE OF PIPE TO OUTSIDE OF PIPE UNLESS LOCAL JURISDICTIONS REQUIRE GREATER SEPARATION. MAINTAIN MINIMUM BURIAL DEPTH INDICATED BELOW:
ELECTRIC PRIMARY = 48" COVER (MIN.)
ELECTRIC SECONDARY = 24" COVER (MIN.)
COMMUNICATIONS CABLES = 24" COVER (MIN.)



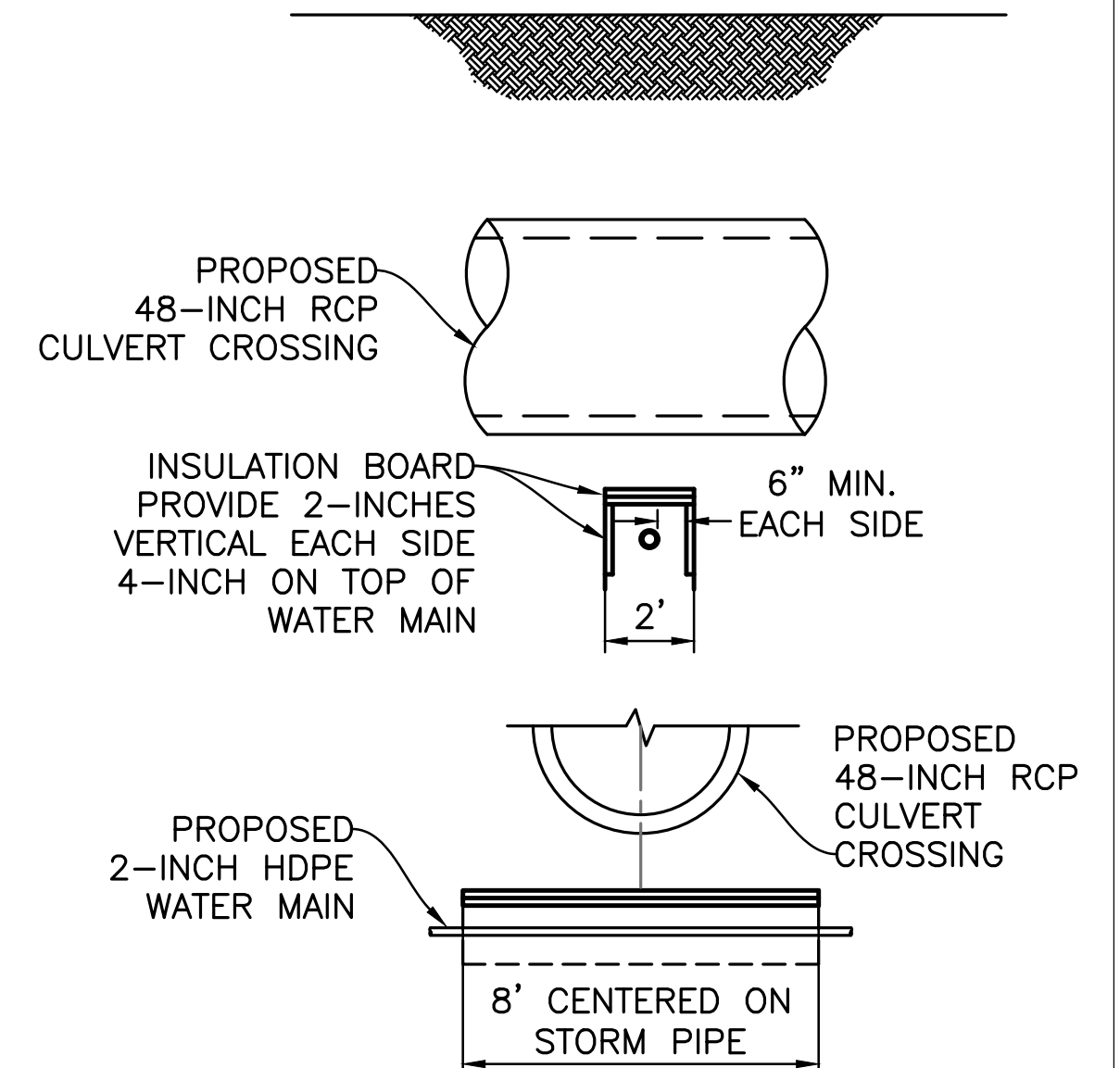
5 UTILITY TRENCH SECTION VIEW DETAIL
C9.7 NO SCALE



6 TRENCH DETAIL DRY UTILITIES, NON-TRAFFIC AREA
C9.7 NO SCALE



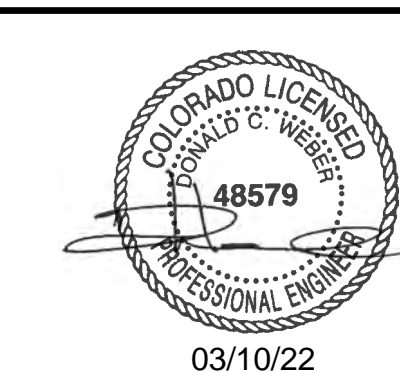
7 SEWER MAIN INSULATION
C9.7 NO SCALE



8 WATER MAIN INSULATION
C9.7 NO SCALE

INSULATION NOTES:

1. INSULATION REQUIRED WHEN TOP OF PIPE IS LESS THAN MINIMUM BURY DEPTH LISTED ON NOTE 3 OF TRENCH NOTES, THIS SHEET.
2. WHERE 6- FEET OF BURY DEPTH OVER WATER MAIN CANNOT BE ACHIEVED, PROVIDE MINIMUM OF 8'-FT IN LENGTH EXTERIOR GRADE RIGID INSULATION BOARD (CENTERED ON STORM PIPE). PROVIDE LAYERS OF INSULATION NECESSARY TO PROVIDE COVER (FROM BOTTOM OF STORM TO TOP OF WATER MAIN) EQUIVALENT TO 6 FEET. STAGGER JOINTS OF LAYERS AND INSTALL MIN. 3-INCHES ABOVE TOP OF PIPE (COMPACT PIPE BEDDING AND BACKFILL ABOVE AND BENEATH PER SPECIFICATIONS). THE INSULATION SHALL COMPLY WITH ASTM C578 TYPE IX.



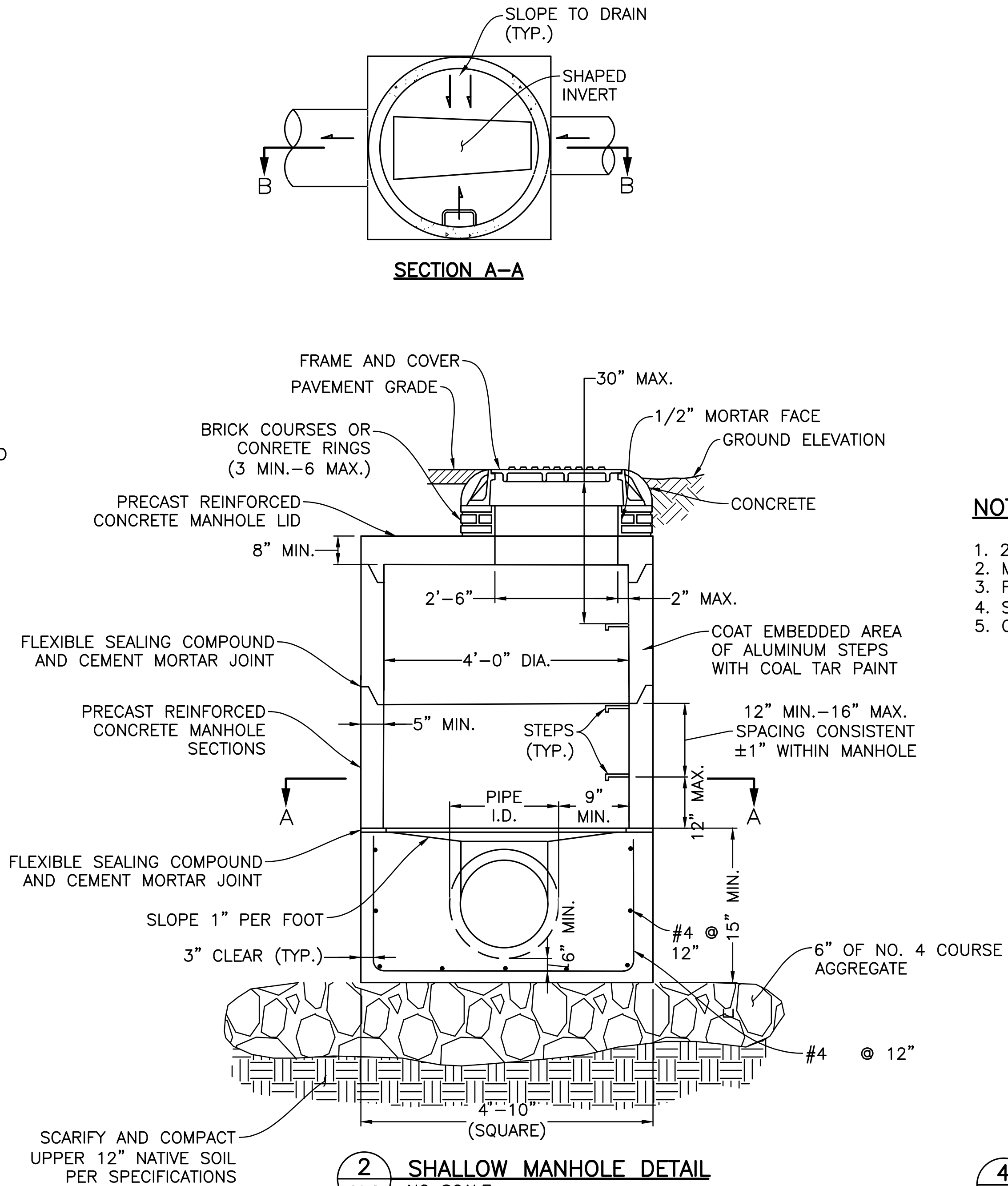
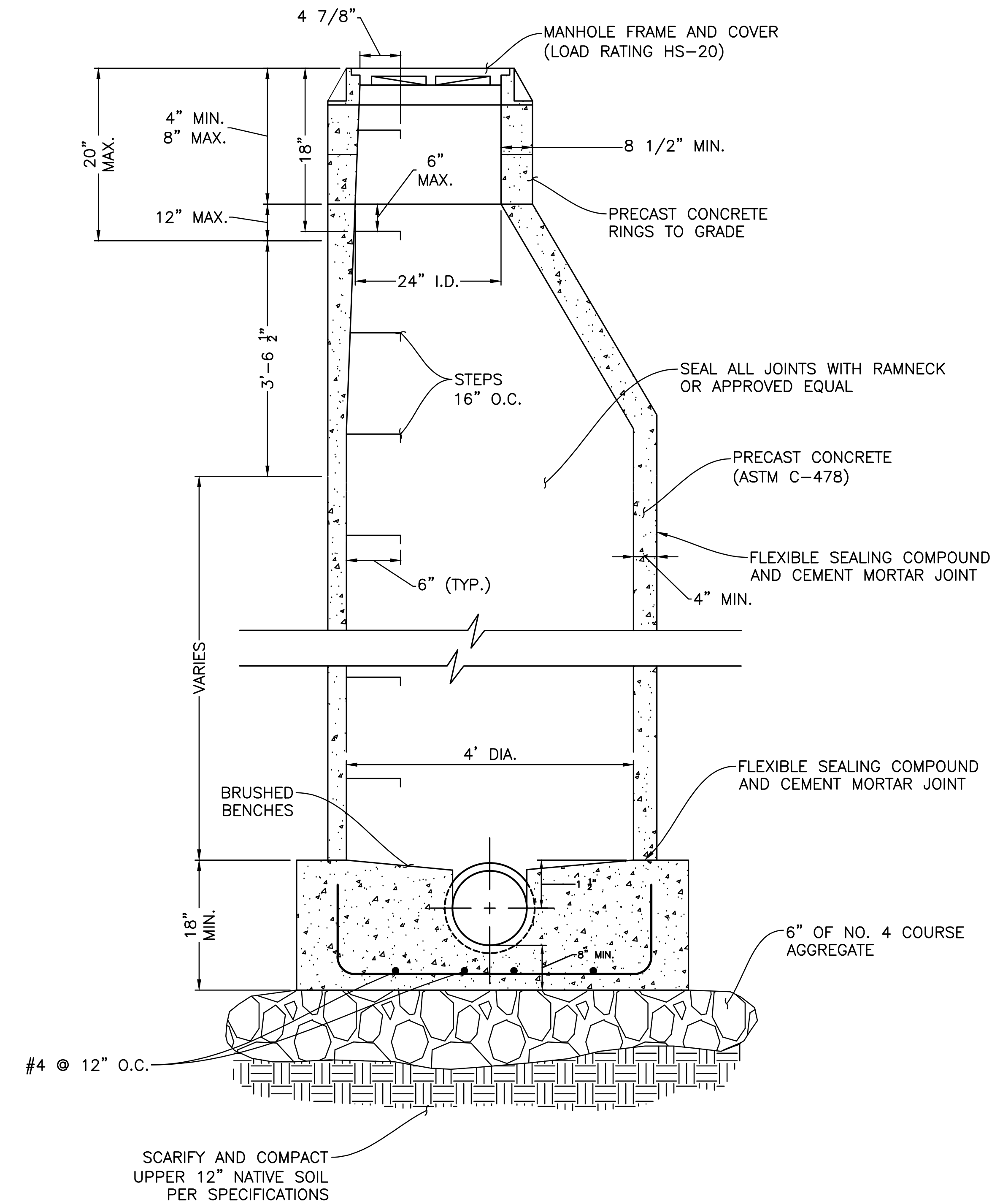
DESIGNED:
VARIES
CADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C9.7

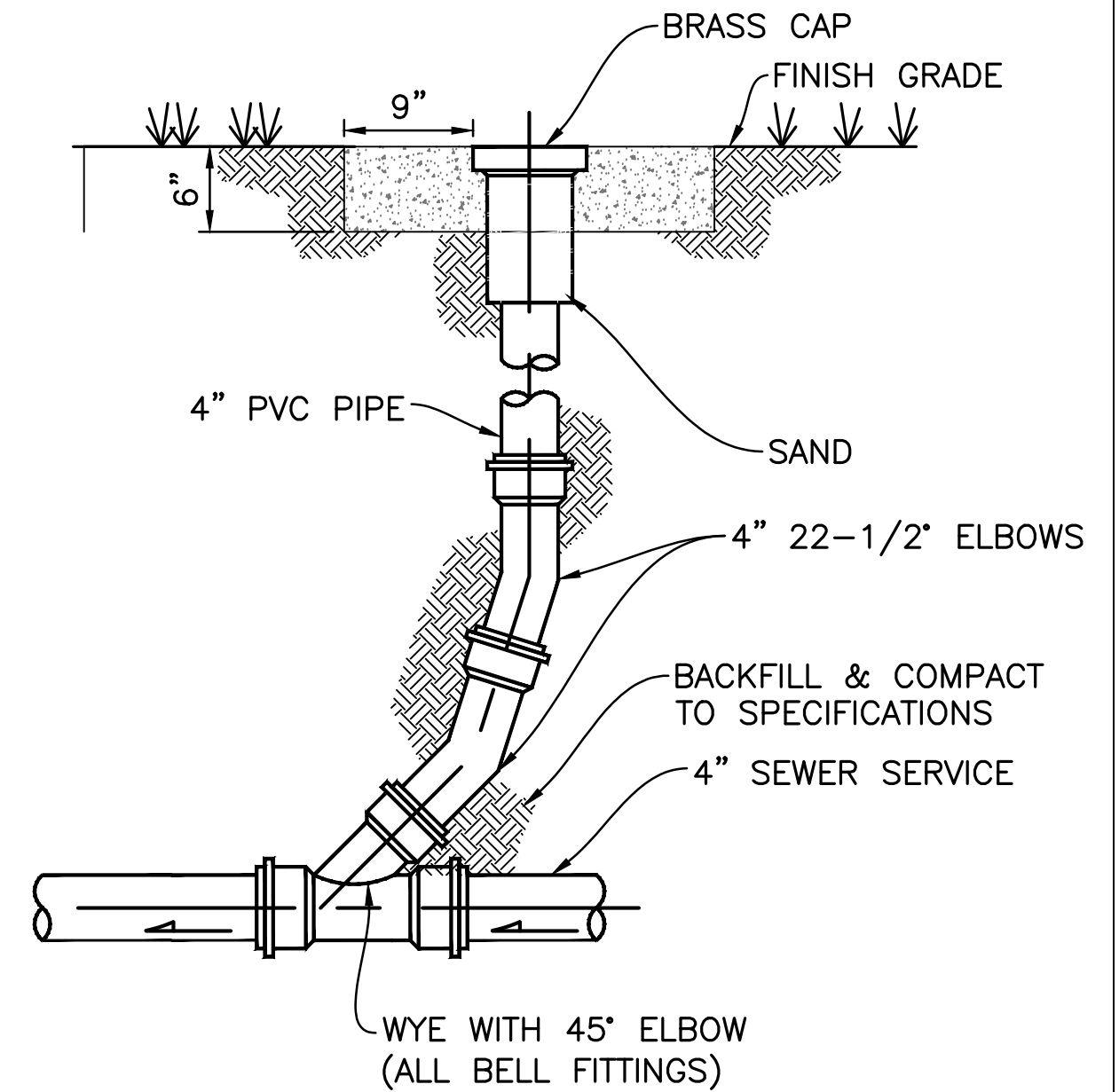
TITLE OF SHEET
UTILITY DETAILS
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121 176678
PMIS/PKG NO.
160755
SHEET
58 OF 165

PLOT DATE: Thursday, March 10, 2022 10:48 AM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\C9a\C9.8 UTILITY DETAILS.dwg

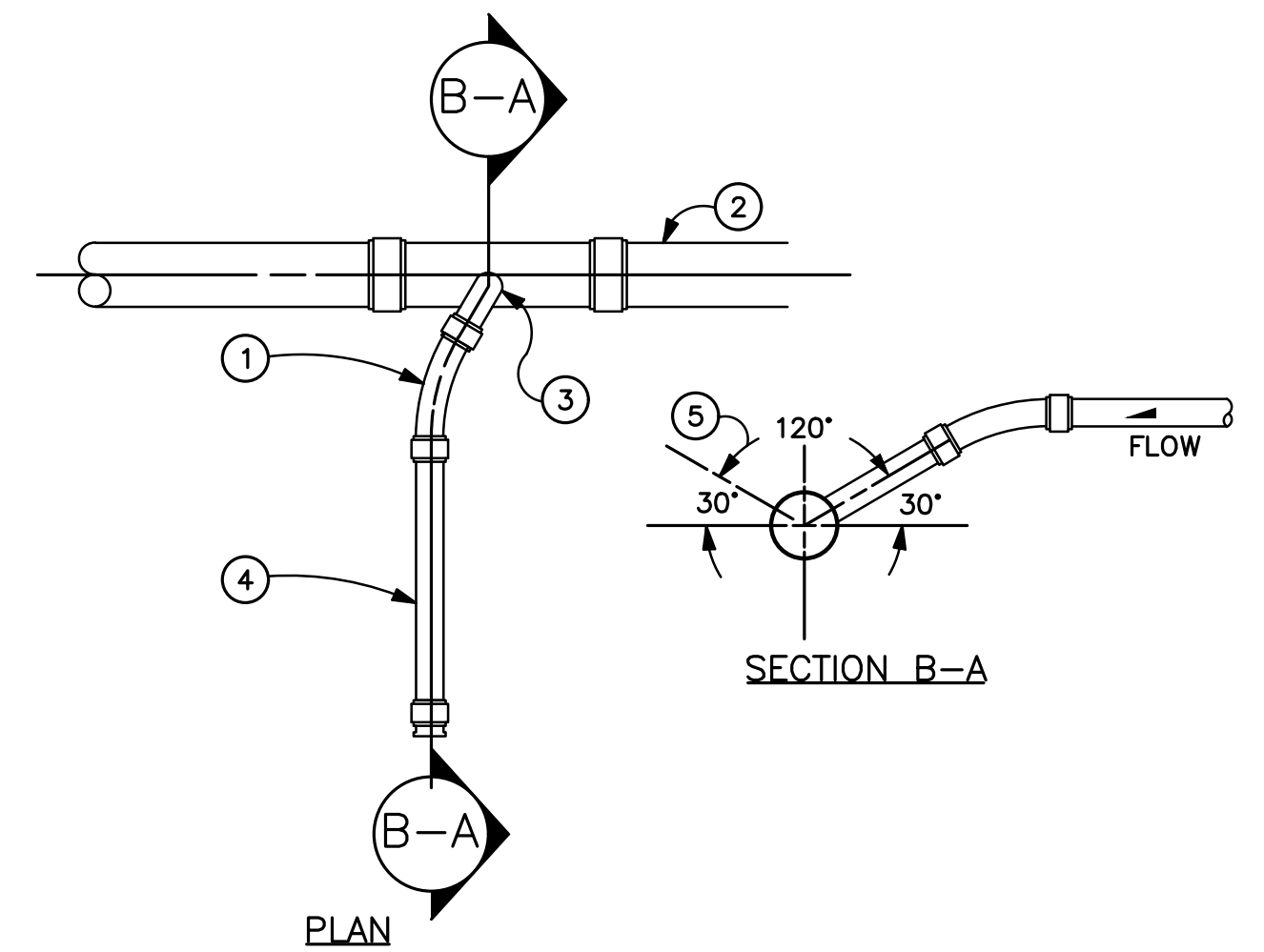


NOTE: 4' MAX FROM TOP OF BENCH TO FINISH GRADE



NOTES:

- 22 1/2" LONG RADIUS BEND
- MAIN LINE
- FOR SERVICE TAPS TO MAIN LINES USE A 45° SADDLE WYE.
- SERVICE LINE. SEE SPECIFICATIONS. GRADE 1/4" DROP PER FOOT.
- CENTER OF WYE BRANCH TO BE PLACED IN UPPER THIRD



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C9.8

TITLE OF SHEET
UTILITY
DETAILS
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
59 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:38 PM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Wastewater\160755\DRAWINGS\CIVIL\CDs\C10.0 CONSTRUCTION MOT - GENERAL NOTES.dwg

BENCHMARK

ELEVATIONS ARE BASED ON A 2 ½” BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28’ (NAVD 1988)

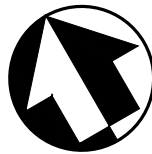
NOTES:



- 1.REFER TO DIVISION 1 SECTION "TEMPORARY FACILITIES AND CONTROLS" FOR INFORMATION ON TEMPORARY FACILITIES DURING CONSTRUCTION.
- 2.THE CONSTRUCTION PHASING/STAGING PROVIDED HEREIN IS FOR BIDDING PURPOSES AND IS NOT INTENDED TO DICTATE CONTRACTOR MEANS AND METHODS OR CONSTRUCTION SEQUENCING. THE PHASING/STAGING DESIGN SHOWN IS INTENDED TO CONVEY ONE OPTION TO CONSTRUCT THE ENTRANCE STATION IN ACCORDANCE WITH THE PROJECT CONSTRAINTS AND PARAMETERS. CONTRACTOR SHALL DEVELOP THE CONSTRUCTION PHASING, STAGING, AND SEQUENCING STRATEGY TO THEIR OWN SATISFACTION PRIOR TO BID.
- 3.THE CONSTRUCTION PHASING/STAGING PROVIDED HEREIN COVERS ONLY THE ENTRANCE STATION IMPROVEMENTS AND ASSUMES THAT DOMESTIC WATER, WATER TREATMENT, SANITARY SEWER, AND ONSITE WASTEWATER TREATMENT IMPROVEMENTS ARE CONCURRENT CONSTRUCTION ACTIVITIES.
- 4.A DETOUR PLAN DEPICTING ADVANCE MESSAGING SIGNS AND ALTERNATE ROUTES THROUGH THE TOWN OF ESTES PARK IS INCLUDED IN THE CONSTRUCTION DRAWINGS. CONTRACTOR TO COORDINATE WITH CDOT AND TOWN OF ESTES PARK PER THE TERMS OF THE SPECIAL USE PERMIT FOR TRAFFIC CONTROL WITHIN THE RIGHTS-OF-WAY THAT WILL BE GOVERNMENT FURNISHED.
- 5.A DETOUR PLAN WITHIN PARK BOUNDARIES IS INCLUDED IN THE CONSTRUCTION DRAWINGS AND SHALL BE COORDINATED WITH THE PARK PRIOR TO CONSTRUCTION AND IMPLEMENTATION OF DETOUR.
- 6.STAGING AND LAYDOWN AREAS AVAILABLE FOR CONTRACTOR’S USE ARE IDENTIFIED IN THE CONSTRUCTION DRAWINGS. CONFIRM MATERIAL PLACEMENT WITH CONTRACTING OFFICER PRIOR TO PLACEMENT.
- 7.BEST MANAGEMENT PRACTICES (BMP) SHALL BE INSTALLED, INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE CONTRACTOR’S STORMWATER MANAGEMENT PLAN (SWMP) AND THE REQUIREMENTS OF THE CDPHE CONSTRUCTION GENERAL PERMIT.
- 8.THE FOLLOWING ACCESS WILL BE MAINTAINED, UNLESS OTHERWISE APPROVED BY THE CONTRACTING OFFICER:
 - a.ONE INBOUND LANE AND ONE OUTBOUND LANE AT ALL TIMES.
 - b.LANES MUST BE A MINIMUM OF 10-FT OR AS REQUIRED TO ACCOMMODATE DELIVERY VEHICLES AND EMERGENCY ACCESS VEHICLES.
 - c.SHORT TERM CLOSURE OF ALL LANES MAY BE ALLOWED, BUT ARE TO BE MINIMIZED. FULL LANE CLOSURES ARE TO BE APPROVED IN WRITING BY THE CONTRACTING OFFICER.
 - d.ACCESS TO THE ASPENGLÉN CAMPGROUND AND ADJACENT PRIVATE RESIDENCES SHALL BE PROVIDED AT ALL TIMES.
- 9.A VEHICLE TURNAROUND AREA MUST BE PROVIDED FOR THE PUBLIC TO USE AND BE AVAILABLE AT ALL TIMES. CONTRACTOR SHALL PROVIDE A FLAGGER WHEN WARRANTED OR WHEN REQUESTED BY THE PARK.

- 10.A TEMPORARY KIOSK IS TO BE PLACED EAST OF THE EXISTING ENTRANCE STATION, WITHIN PARK BOUNDARY LIMITS, FOR THE DURATION OF CONSTRUCTION. TEMPORARY PAVEMENT IS TO BE CONSTRUCTED AS NEEDED AT THE TEMPORARY KIOSK TO ALLOW FOR ONE INBOUND AND ONE OUTBOUND LANE. TEMPORARY KIOSK LOCATION IS TO BE COORDINATED WITH THE CONTRACTING OFFICER BEFORE PLACEMENT. A TEMPORARY POLE WITH A SATELLITE DISH FOR POINT-OF-SALE COMMUNICATION SHALL BE LOCATED WITHIN 300 FEET OF THE TEMPORARY KIOSK. CONTRACTOR SHALL COORDINATE POLE LOCATION AND INSTALL AT THE DIRECTION OF THE CONTRACTING OFFICER. PARK TO INSTALL CABLING BETWEEN TEMPORARY KIOSK AND TEMPORARY POLE.
- 11.THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ONE PORTABLE TOILET AND THREE TEMPORARY PARKING SPACES NEAR THE TEMPORARY KIOSK FOR THE USE OF PARK STAFF WHILE THE KIOSK IS OPERATIONAL. THE CONTRACTOR SHALL COORDINATE LOCATION OF THESE ITEMS WITH THE CONTRACTING OFFICER. THE CONTRACTOR SHALL ALSO PROPERLY SECURE THE PORTABLE TOILET.
- 12.A CONSTRUCTION VEHICLE INSPECTION AREA SHALL BE ESTABLISHED NEAR THE PARK BOUNDARY EAST OF THE ENTRANCE STATION. LOCATION AND PROCEDURE FOR VEHICLE INSPECTION SHALL BE COORDINATED WITH THE CONTRACTING OFFICER.
- 13.LOCATIONS AVAILABLE FOR CONTRACTOR PARKING SHALL BE COORDINATED WITH THE CONTRACTING OFFICER.
- 14.LOCATIONS OF TEMPORARY PAVEMENT SHALL BE COORDINATED WITH THE CONTRACTING OFFICER PRIOR TO PLACEMENT. CONTRACTOR TO MAINTAIN THE TEMPORARY PAVEMENT FOR THE DURATION OF ITS USE. TEMPORARY PAVEMENT SHALL BE MINIMUM 5-INCH FULL DEPTH ASPHALT ON PREPARED SUBGRADE.
- 15.ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION.
- 16.CONTRACTOR MAY DEViate FROM THE PHASING, STAGING, AND TEMPORARY TRAFFIC CONTROL SHOWN HEREIN TO ALLOW FOR CONDITIONS AND REQUIREMENTS OF A PARTICULAR CONSTRUCTION ACTIVITY AS DETERMINED BY THE CONTRACTOR’S MEANS AND METHODS.
- 17.CONTRACTOR SHALL INSPECT ALL TEMPORARY TRAFFIC CONTROL DEVICES WITHIN THE PARK BOUNDARY AND ALONG DETOUR ROUTES TO VERIFY THAT DEVICES ARE EFFECTIVE, CLEARLY VISIBLE, CLEAN, AND IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 18.CONTRACTOR IS RESPONSIBLE TO COORDINATE BETWEEN ADJACENT AND OVERLAPPING PROJECTS TO CHECK THAT DUPLICATE SIGNING IS NOT USED AND TO CHECK COMPATIBILITY OF TRAFFIC CONTROL BETWEEN ADJACENT OR OVERLAPPING PROJECTS.
- 19.CONTRACTOR SHALL USE THE WEST HORSESHOE PARK LOT LOCATED 2.5 MILES WEST ON FALL RIVER ROAD FOR PRIMARY STAGING AND MATERIALS LAYDOWN. COORDINATE WITH THE CONTRACTING OFFICER PRIOR TO MOBILIZATION TO DETERMINE REQUIREMENTS AND CONDITIONS FOR USING THIS LOT DURING CONSTRUCTION.
- 20.CONTRACTOR SHALL PROVIDE INFRASTRUCTURE AND PROTECTION FOR THE ON-GRADE COMMUNICATION LINES ORIGINATING IN THE TEMPORARY KIOSK EAST OF THE EXISTING KIOSKS.

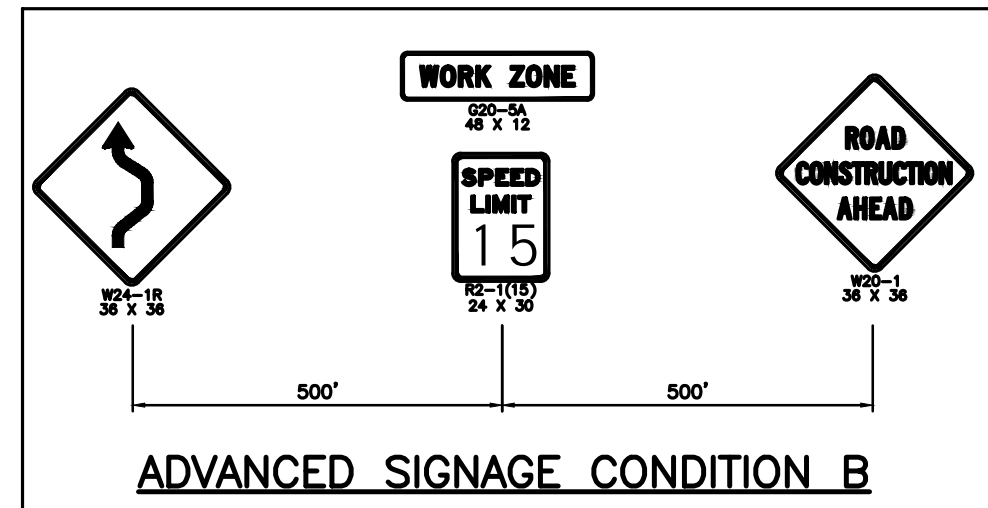
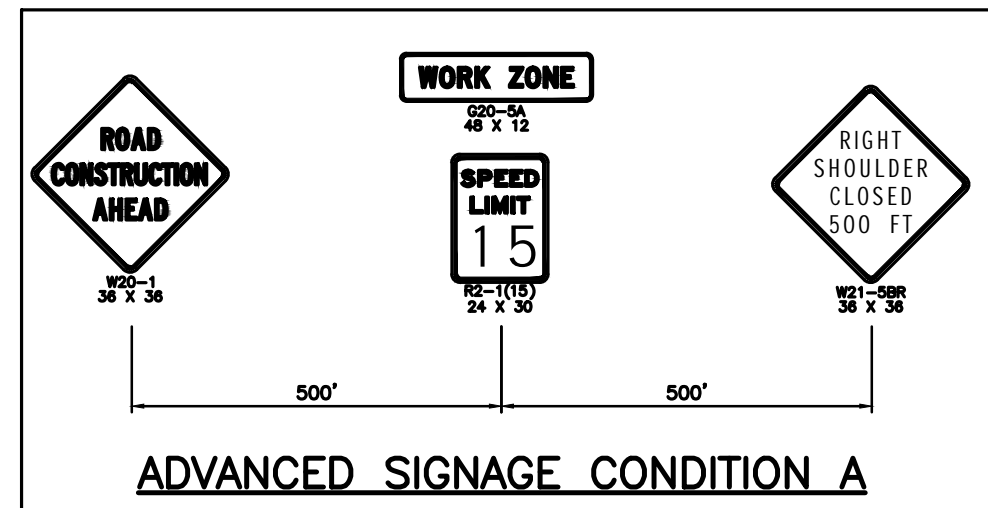
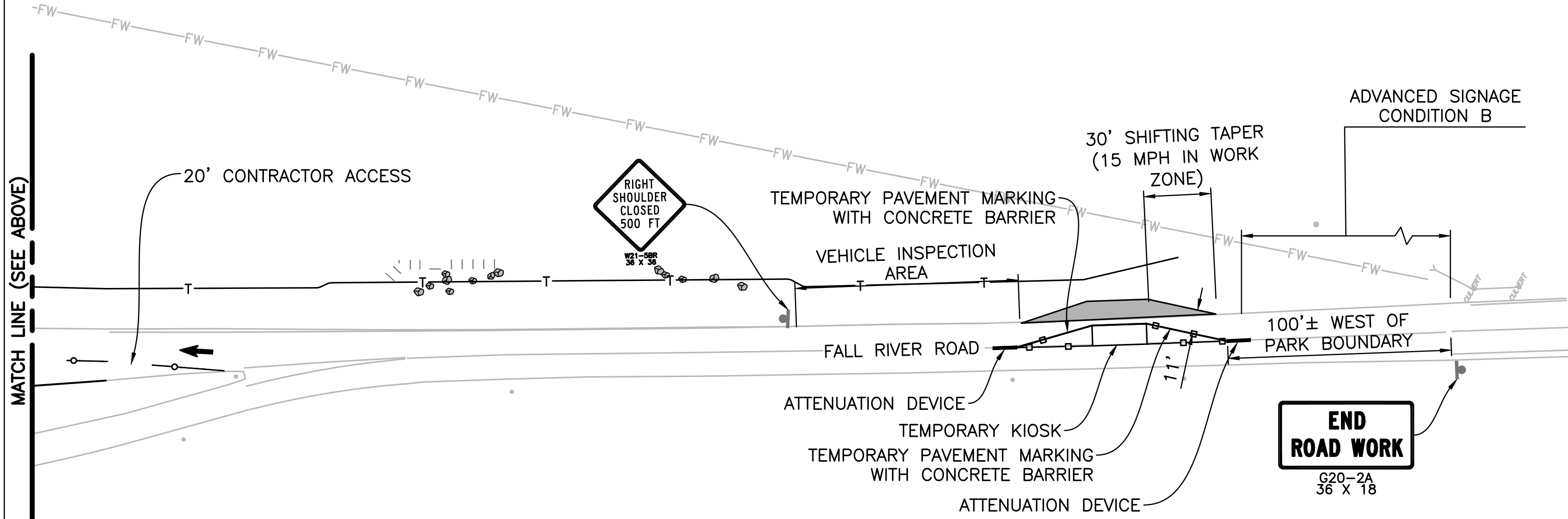
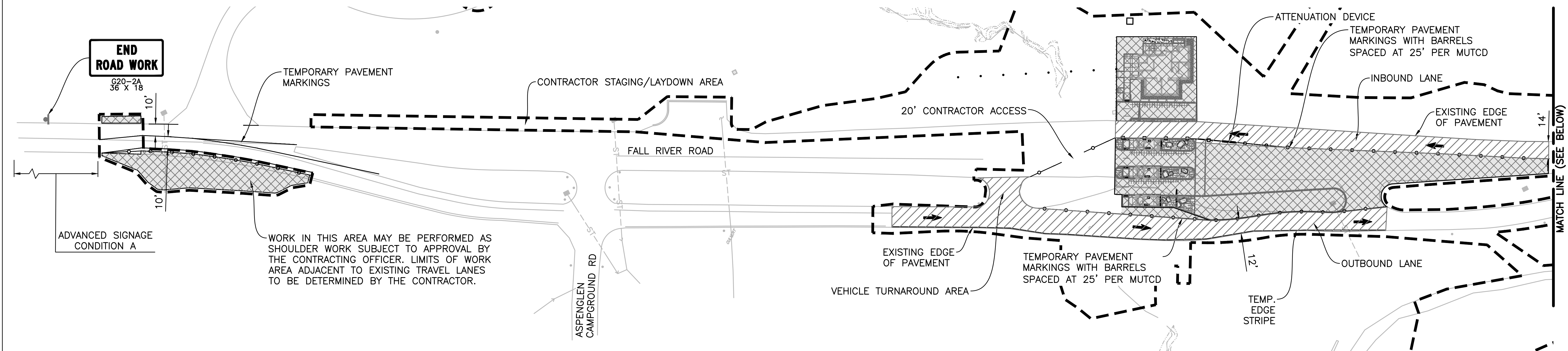
CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



	DESIGNED: VARIES	SUB SHEET NO. C10.0	TITLE OF SHEET CONSTRUCTION MOT - GENERAL NOTES FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	 AEL/RTP/CDS			PMIS/PKG NO. 160755
	TECH REVIEW: DCW			SHEET
	DATE: 03/10/2022			60 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:39 PM LAST SAVED BY: RORBAN
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDs\C10.1 CONSTRUCTION MOT - PHASE 1 STAGE 1.dwg



STAGING/PHASING NOTES PHASE 1, STAGE 1

TRAFFIC CONTROL:

1. ROUTE INBOUND TRAFFIC TO NORTHERNMOST EXISTING ENTRANCE LANE ONLY. OUTBOUND TRAFFIC TO CONTINUE TO UTILIZE EXISTING OUTBOUND LANE.

CONSTRUCTION:

1. THE FOLLOWING NOTES ARE INTENDED TO COVER BROAD CONSTRUCTION ACTIVITIES TO COINCIDE WITH THE PHASING AND STAGING STRATEGY GRAPHICALLY DEPICTED HEREON. CONTRACTOR SHALL DETERMINE AND IMPLEMENT ALL ACTIVITIES, CONSTRUCTION SEQUENCING, AND SUB-CONTRACTOR TRADES REQUIRED PRIOR TO OR CONCURRENT WITHIN THE WORK AREA(S) SHOWN HEREON.
2. CONSTRUCT TEMPORARY KIOSK AND TEMPORARY COMMUNICATIONS POLE FOR POINT OF SALE SYSTEM. POLE LOCATION TO BE COORDINATED WITH CONTRACTING OFFICER AND SHALL BE LOCATED WITHIN 300 FEET OF KIOSK. TEMPORARY KIOSK SHALL BE FULLY OPERATIONAL PRIOR TO EXISTING KIOSKS BEING REMOVED.
3. ESTABLISH CONSTRUCTION VEHICLE INSPECTION AREA EAST OF TEMPORARY KIOSK AS DIRECTED BY THE CONTRACTING OFFICER.
4. REMOVE EXISTING ENTRANCE STATION ADMINISTRATION BUILDING AND KIOSKS.
5. REMOVE EXISTING CURBING AND PAVEMENT AROUND EXISTING KIOSKS, EXCEPT FOR PAVEMENT BEING USED FOR INBOUND AND OUTBOUND TRAFFIC.
6. INSTALL DRY UTILITY TRENCH AND UNDERDRAIN WITHIN LIMITS OF WORK AREA
7. CONSTRUCT NEW KIOSKS
8. PREPARE SITE AND CONSTRUCT NEW ENTRANCE STATION ADMINISTRATION BUILDING.
9. CONSTRUCT PAVEMENT AND CURBING FOR ENTRANCE LANES WITHIN WORK AREA UP TO WEST SIDE TOP OF TABLETOP.
10. THE PROPOSED VEHICLE TURN AROUND AREA, MONUMENT PULL-OFF AREA (BID OPTION 3), AND VARIABLE MESSAGE SIGN (BID OPTION 4) SHOWN HEREON ARE TO BE CONSTRUCTED BASED ON CONTRACTOR SEQUENCING AND ARE SHOWN HEREON TO CONVEY REQUIRED MAINTENANCE OF TRAFFIC IF THESE ACTIVITIES ARE CONCURRENT TO STAGE 1 CONSTRUCTION.

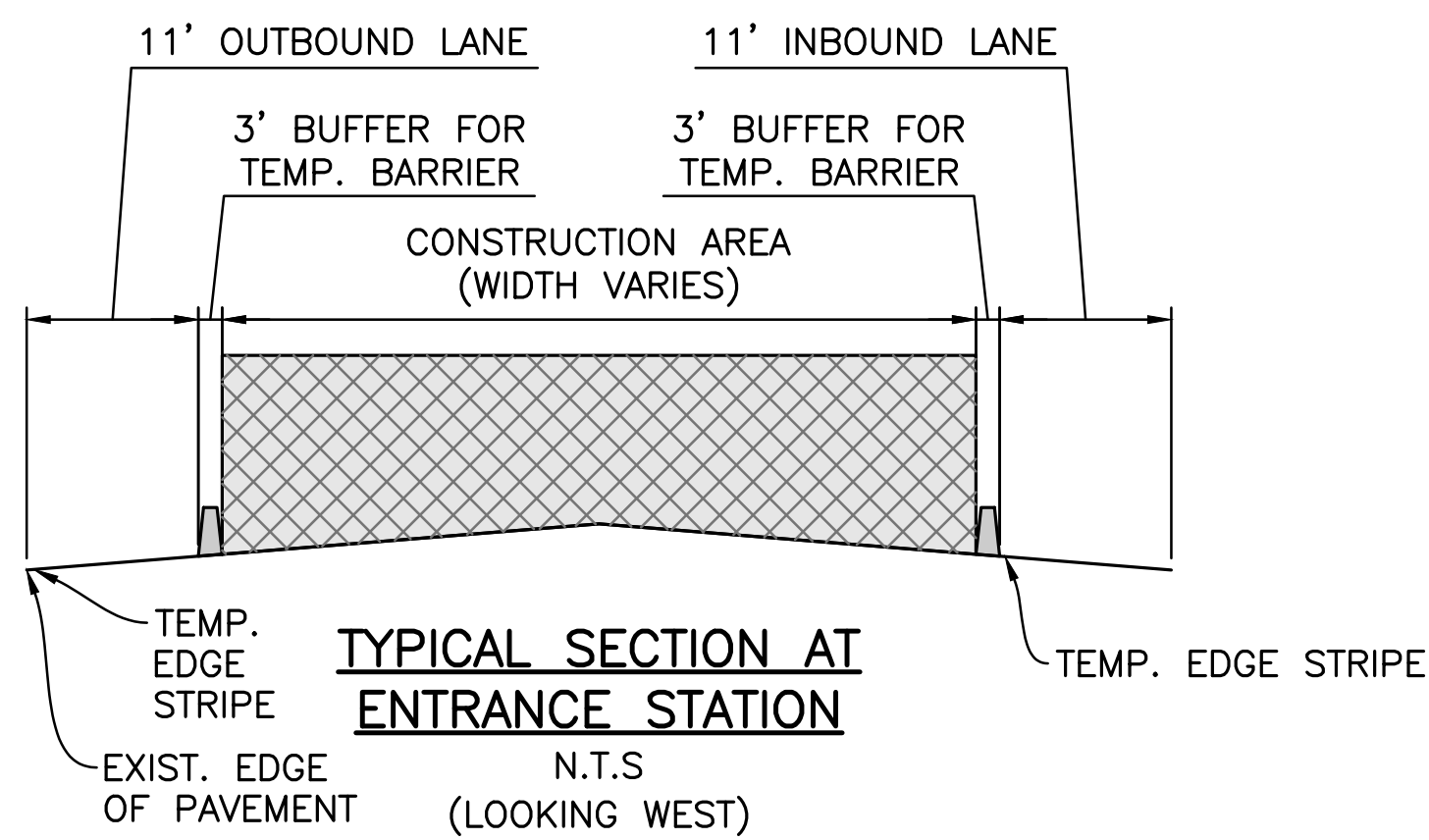
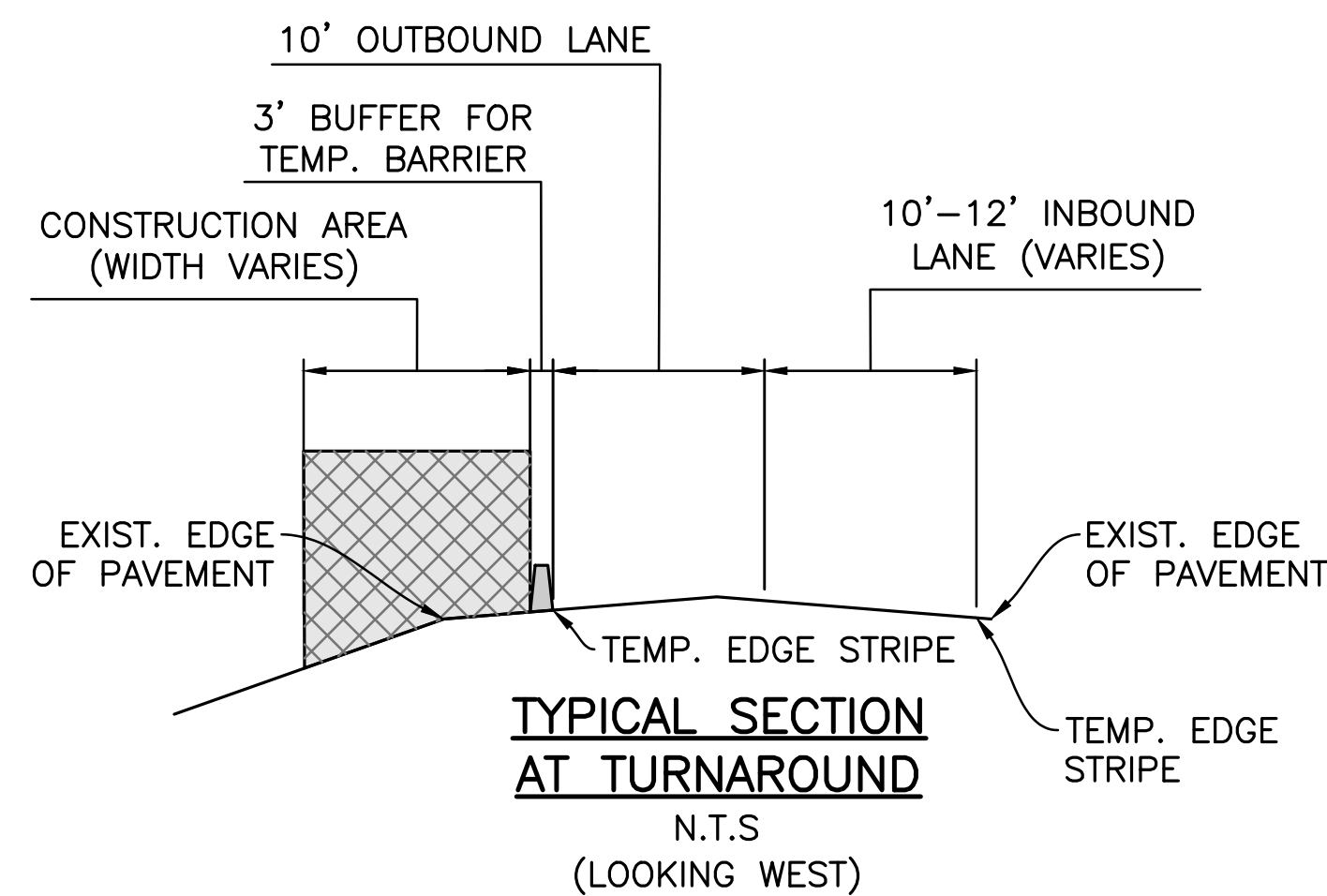
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



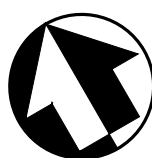
LEGEND

- TRAFFIC ARROW
- TEMPORARY PAVEMENT MARKINGS WITH CONCRETE BARRIER/ ATTENUATION DEVICE
- TEMPORARY PAVEMENT MARKINGS WITH BARRELS
- DEMOLITION/WORK AREA
- OPEN LANES FOR ACCESS/EGRESS
- TEMPORARY PAVEMENT

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

40 0 40 80
SCALE OF FEET



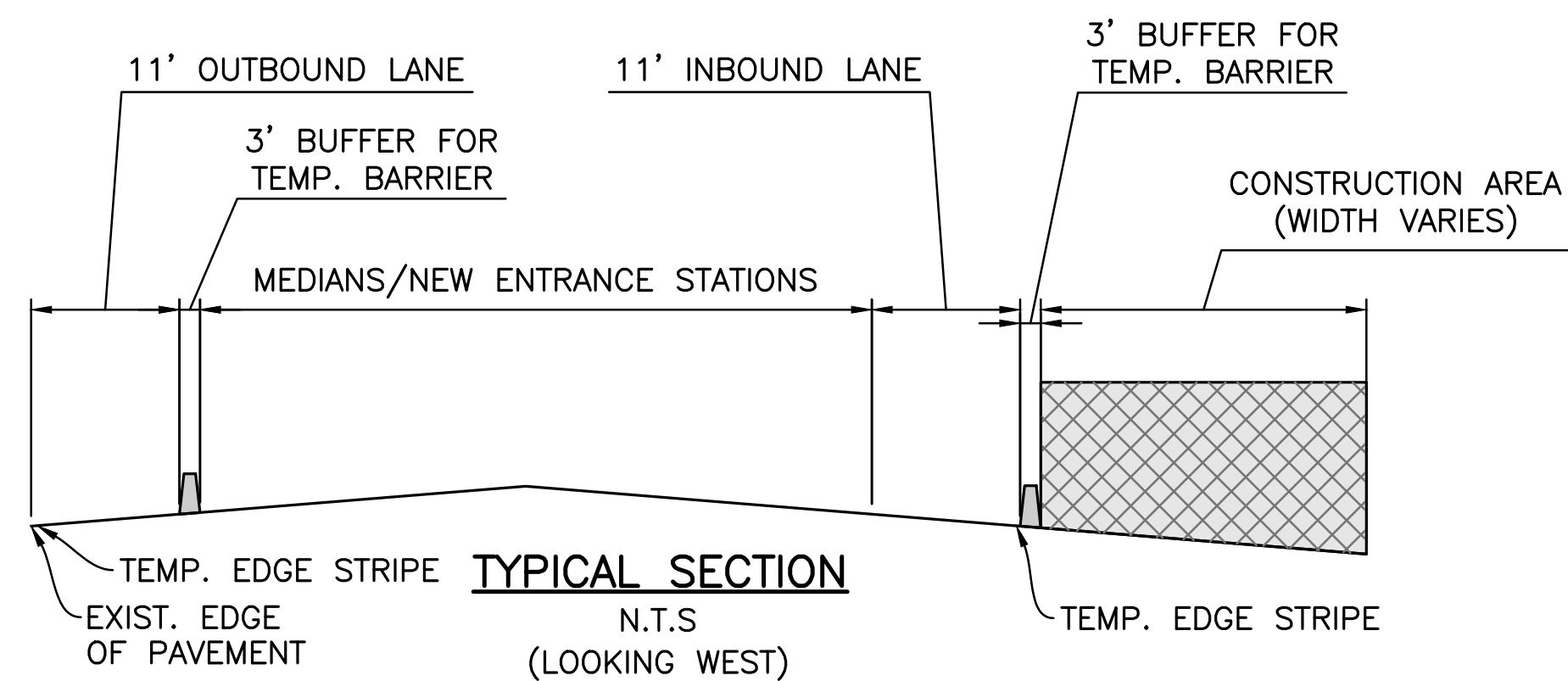
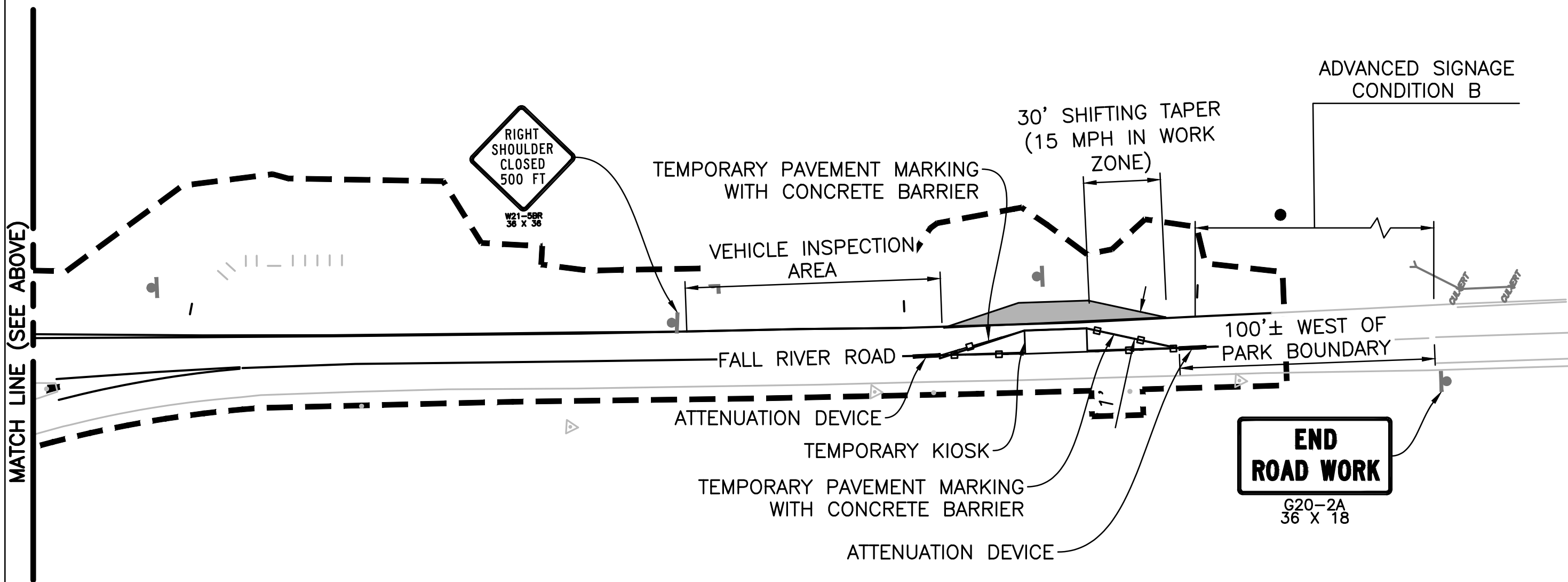
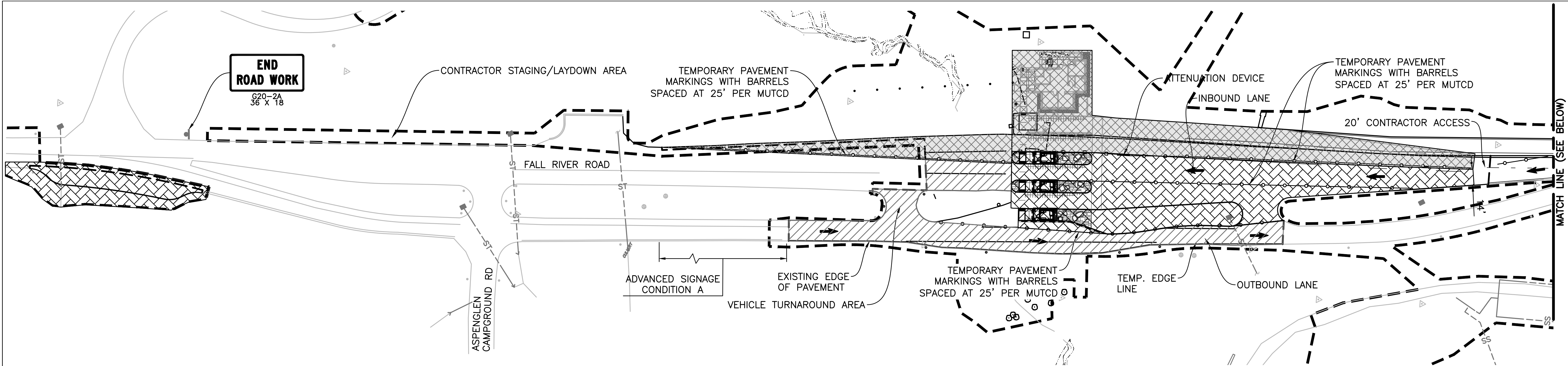
DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C10.1

TITLE OF SHEET
**CONSTRUCTION
MOT - PHASE 1
STAGE 1**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
61 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:40 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\C0a\C10.2 CONSTRUCTION MOT - PHASE 1 STAGE 2.dwg



- LEGEND**
- TRAFFIC ARROW
 - TEMPORARY PAVEMENT MARKINGS WITH CONCRETE BARRIER/ ATTENUATION DEVICE
 - TEMPORARY PAVEMENT MARKINGS WITH BARRELS
 - DEMOLITION/WORK AREA
 - OPEN LANES FOR ACCESS/EGRESS
 - TEMPORARY PAVEMENT
 - PREVIOUS PHASE WORK AREA, OPEN FOR ACCESS/EGRESS

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



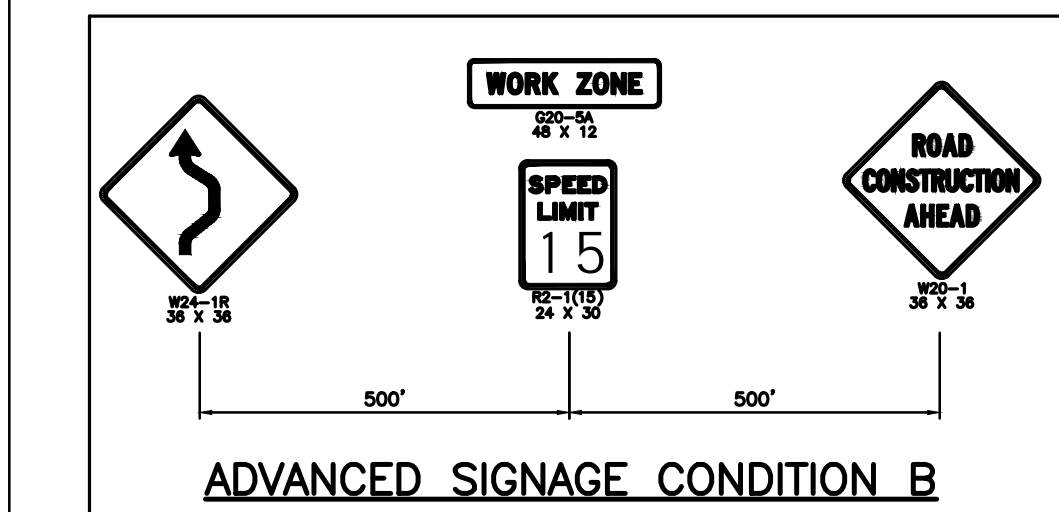
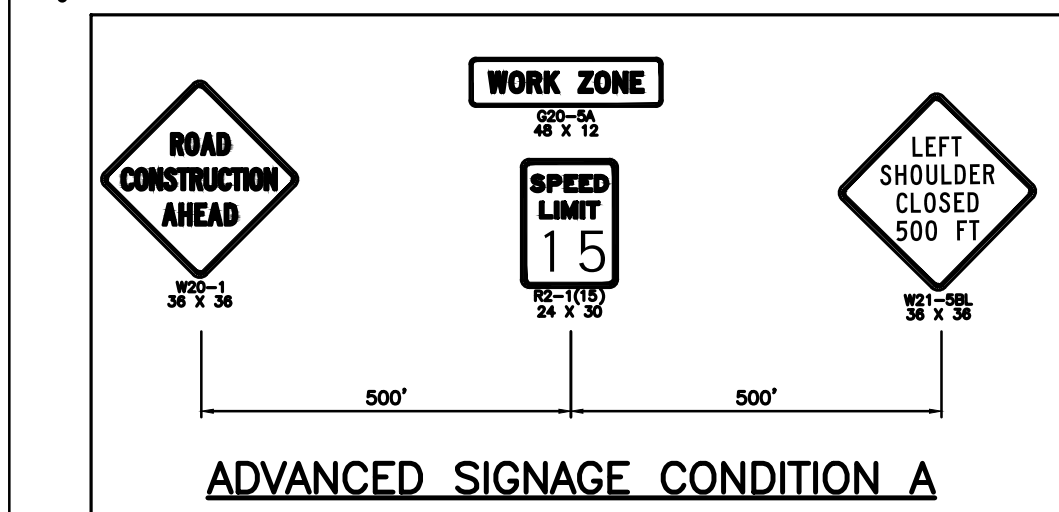
STAGING/PHASING NOTES PHASE 1, STAGE 2

TRAFFIC CONTROL:

1. MAINTAIN TEMPORARY KIOSK AND VEHICLE INSPECTION AREA EAST OF ENTRANCE STATION.
2. ROUTE INBOUND TRAFFIC TO NEW ENTRANCE LANE 3. OUTBOUND TRAFFIC TO CONTINUE TO UTILIZE EXISTING OUTBOUND LANE.

CONSTRUCTION:

1. THE FOLLOWING NOTES ARE INTENDED TO COVER BROAD CONSTRUCTION ACTIVITIES TO COINCIDE WITH THE PHASING AND STAGING STRATEGY GRAPHICALLY DEPICTED HEREON. CONTRACTOR SHALL DETERMINE AND IMPLEMENT ALL ACTIVITIES, CONSTRUCTION SEQUENCING, AND SUB-CONTRACTOR TRADES REQUIRED PRIOR TO OR CONCURRENT WITHIN THE WORK AREA(S) SHOWN HEREON.
2. REMOVE EXISTING NORTHERNMOST ENTRANCE LANE PAVEMENT.
3. CONTINUE INSTALLING DRY UTILITY TRENCH AND UNDERDRAIN NORTH TO NEW ENTRANCE STATION ADMINISTRATION BUILDING.
4. CONSTRUCTION OF NEW ENTRANCE STATION ADMINISTRATION BUILDING AND KIOSKS ASSUMED TO BE ON-GOING ACTIVITIES.
5. CONNECT UTILITIES FOR NEW KIOSKS.
6. CONSTRUCT PAVEMENT AND CURBING FOR ENTRANCE LANES WITHIN LIMITS OF WORK AREA UP TO WEST SIDE OF TABLETOP.
7. INSTALL TEMPORARY DEWATERING SYSTEM FOR BIG HORN CREEK.
8. REMOVE EXISTING TREES AND VEGETATION. PLACE AND COMPACT FILL WITHIN PORTIONS OF CREEK TO RECEIVE TEMPORARY PAVEMENT.
9. CONSTRUCT TEMPORARY PAVEMENT EXTENDING WEST FROM NEW ENTRANCE LANE 1 TO TRANSITION BETWEEN NEW TABLETOP AND EXISTING PAVEMENT TO WEST.
10. THE PROPOSED VEHICLE TURN AROUND AREA, MONUMENT PULL-OFF AREA (BID OPTION 3), AND VARIABLE MESSAGE SIGN (BID OPTION 4) SHOWN IN PHASE 1, STAGE 1 MAY ALSO BE CONSTRUCTED IN THIS STAGE BASED ON CONTRACTOR SEQUENCING. IMPROVEMENTS AND ASSOCIATED MOT ARE NOT SHOWN HEREON FOR CLARITY.



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



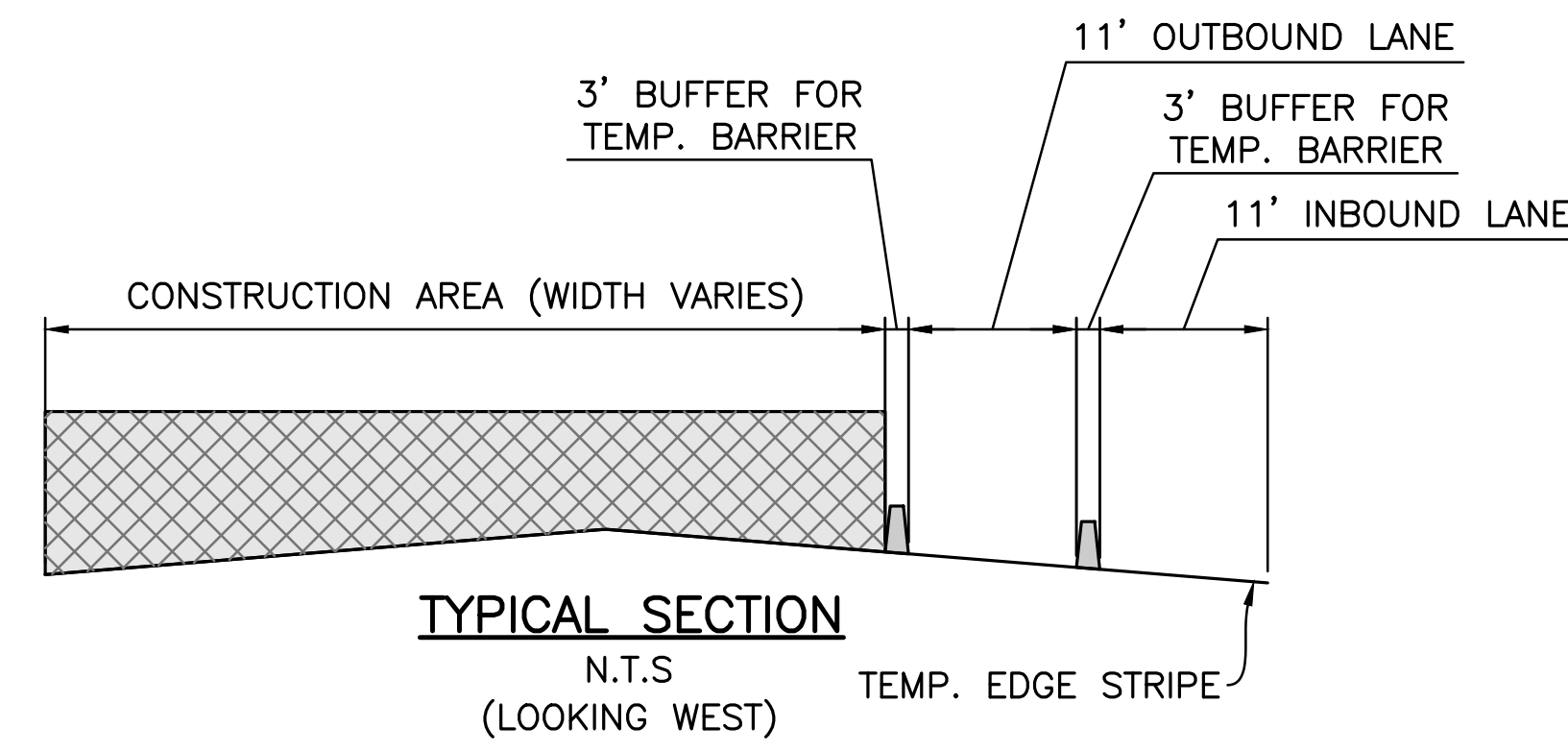
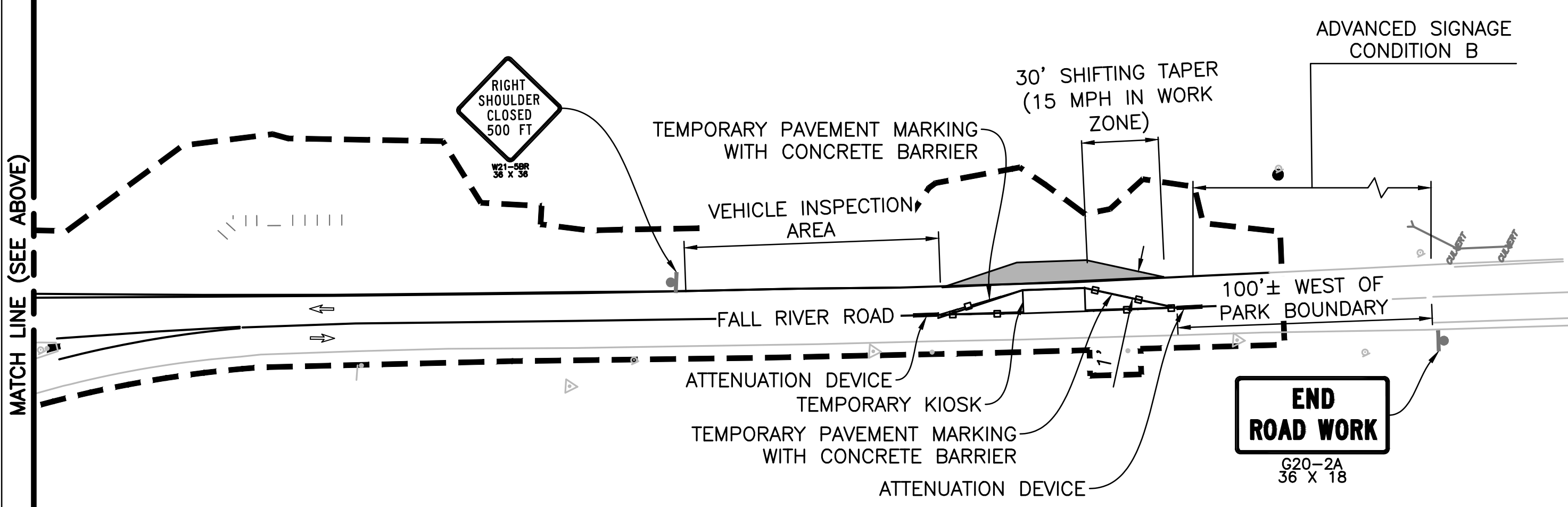
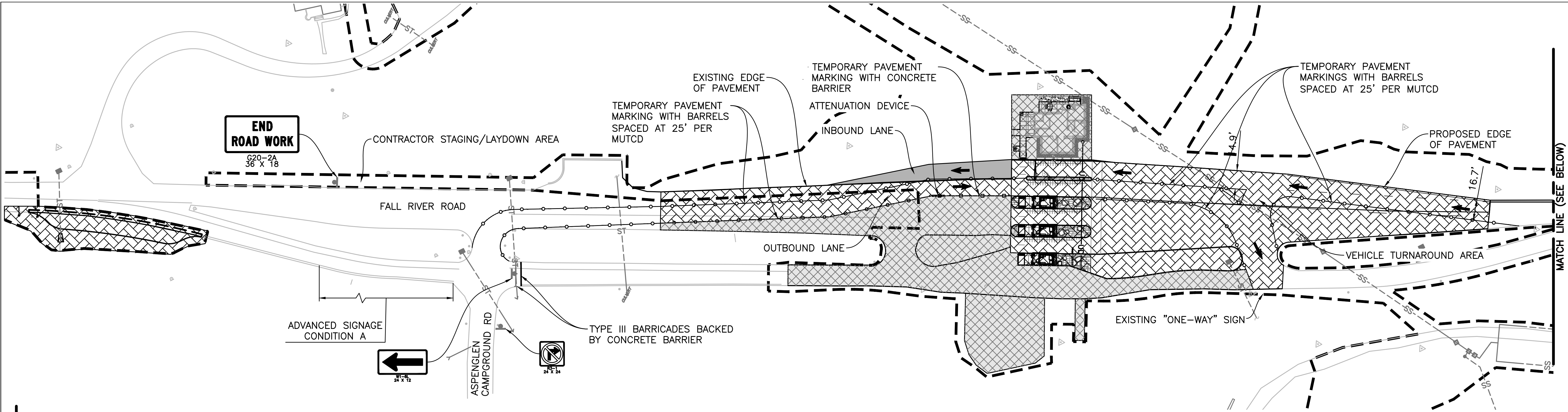
DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C10.2

TITLE OF SHEET
**CONSTRUCTION
MOT - PHASE 1
STAGE 2**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
62 OF 165

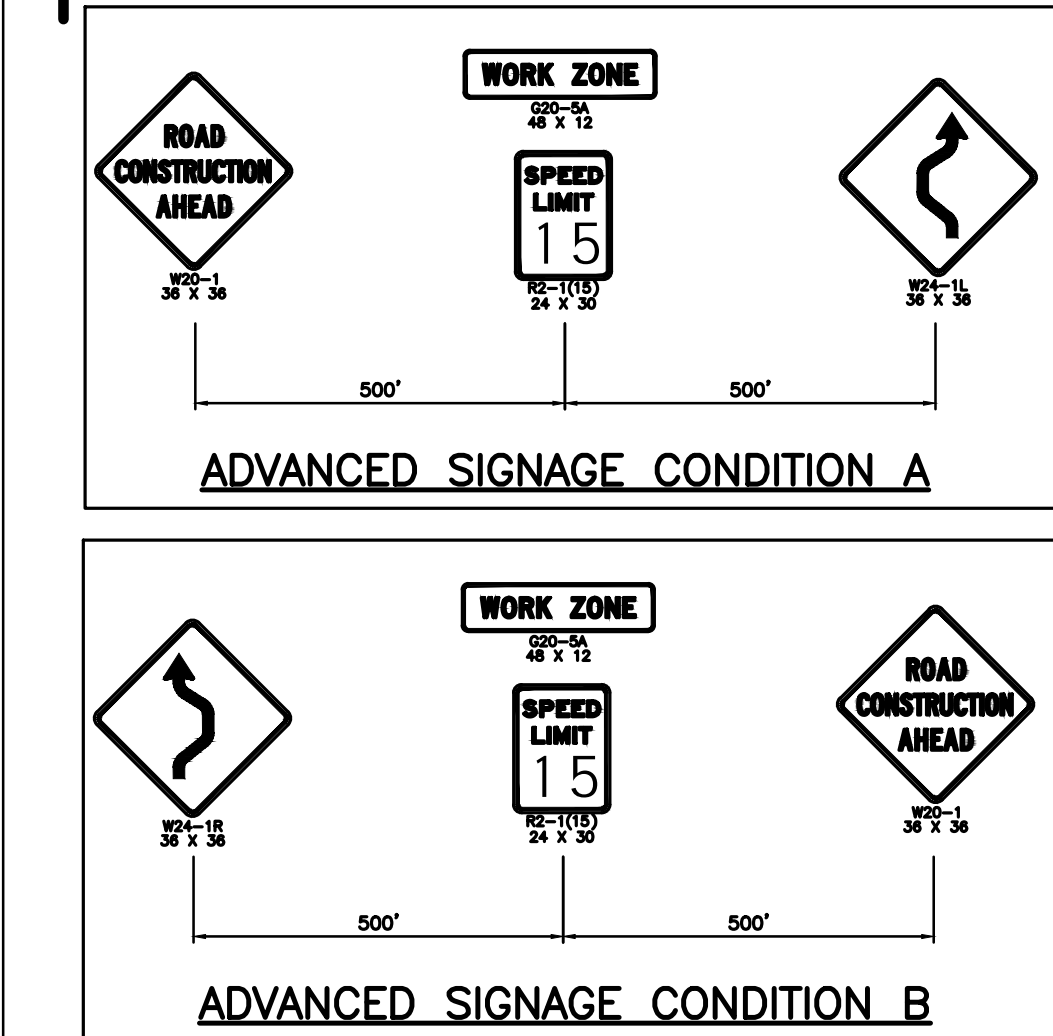
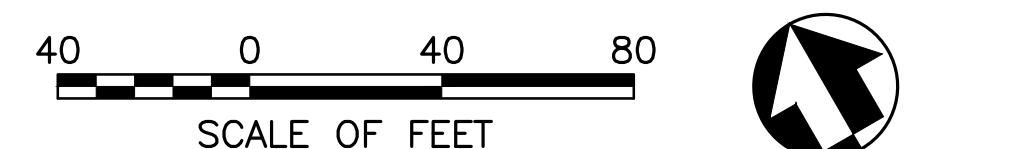
PLOT DATE: Wednesday, March 9, 2022 3:41 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\C0a\C10.3 CONSTRUCTION MOT - PHASE 2 STAGE 1.dwg



- LEGEND**
- TRAFFIC ARROW
 - TEMPORARY PAVEMENT MARKINGS WITH CONCRETE BARRIER/ATTENUATION DEVICE
 - TEMPORARY PAVEMENT MARKINGS WITH BARRELS
 - DEMOLITION/WORK AREA
 - OPEN LANES FOR ACCESS/EGRESS
 - TEMPORARY PAVEMENT
 - PREVIOUS PHASE WORK AREA, OPEN FOR ACCESS/EGRESS

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



- STAGING/PHASING NOTES**
PHASE 2, STAGE 1
- TRAFFIC CONTROL:**
1. MAINTAIN TEMPORARY KIOSK AND VEHICLE INSPECTION AREA EAST OF ENTRANCE STATION.
 2. ROUTE INBOUND TRAFFIC TO NEW ENTRANCE LANE 1. DETOUR OUTBOUND TRAFFIC TO NEW ENTRANCE LANE 2.
- CONSTRUCTION:**
1. THE FOLLOWING NOTES ARE INTENDED TO COVER BROAD CONSTRUCTION ACTIVITIES TO COINCIDE WITH THE PHASING AND STAGING STRATEGY GRAPHICALLY DEPICTED HEREON. CONTRACTOR SHALL DETERMINE AND IMPLEMENT ALL ACTIVITIES, CONSTRUCTION SEQUENCING, AND SUB-CONTRACTOR TRADES REQUIRED PRIOR TO OR CONCURRENT WITHIN THE WORK AREA(S) SHOWN HEREON.
 2. CONSTRUCTION OF NEW ENTRANCE STATION ADMINISTRATION BUILDING AND KIOSKS ASSUMED TO BE ON-GOING ACTIVITIES.
 3. CONSTRUCT REMAINING PORTIONS OF DRY UTILITY TRENCH AND UNDERDRAIN SYSTEM.
 4. MAINTAIN TEMPORARY DEWATERING SYSTEM FOR BIG HORN CREEK.
 5. REMOVE EXISTING TREES AND VEGETATION TO FACILITATE CULVERT CONSTRUCTION.
 6. REMOVE EXISTING 36" CULVERT FROM DOWNSTREAM END TO NORTH END OF WORK AREA.
 7. CONSTRUCT NEW 48" CULVERT STARTING AT DOWNSTREAM END UP TO NORTH END OF WORK AREA.
 8. CONSTRUCT NEW DOWNSTREAM CULVERT HEADWALL AND GRADE SURROUNDING AREA TO FINISH GRADE. INSTALL EROSION CONTROL BLANKET FOR TEMPORARY STABILIZATION.
 9. BACKFILL TRENCHES TO SUBGRADE ELEVATION AND INSTALL TEMPORARY ROAD BASE TO BRING TRENCH BACK TO EXISTING GRADES.
 10. THE PROPOSED VEHICLE TURN AROUND AREA, MONUMENT PULL-OFF AREA (BID OPTION 3), AND VARIABLE MESSAGE SIGN (BID OPTION 4) SHOWN IN PHASE 1, STAGE 1 MAY ALSO BE CONSTRUCTED IN THIS STAGE BASED ON CONTRACTOR SEQUENCING. IMPROVEMENTS AND ASSOCIATED MOT ARE NOT SHOWN HEREON FOR CLARITY.

BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

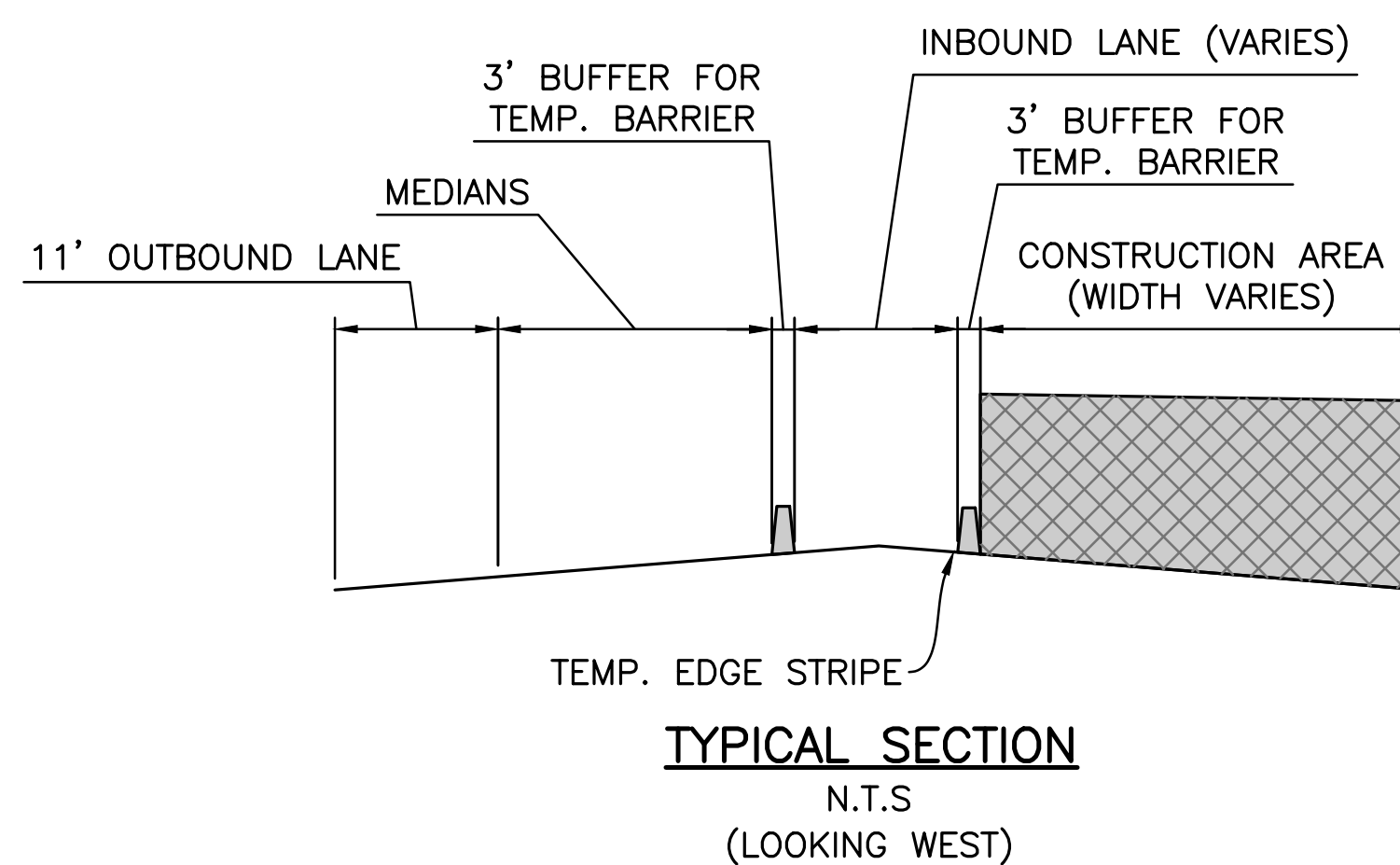
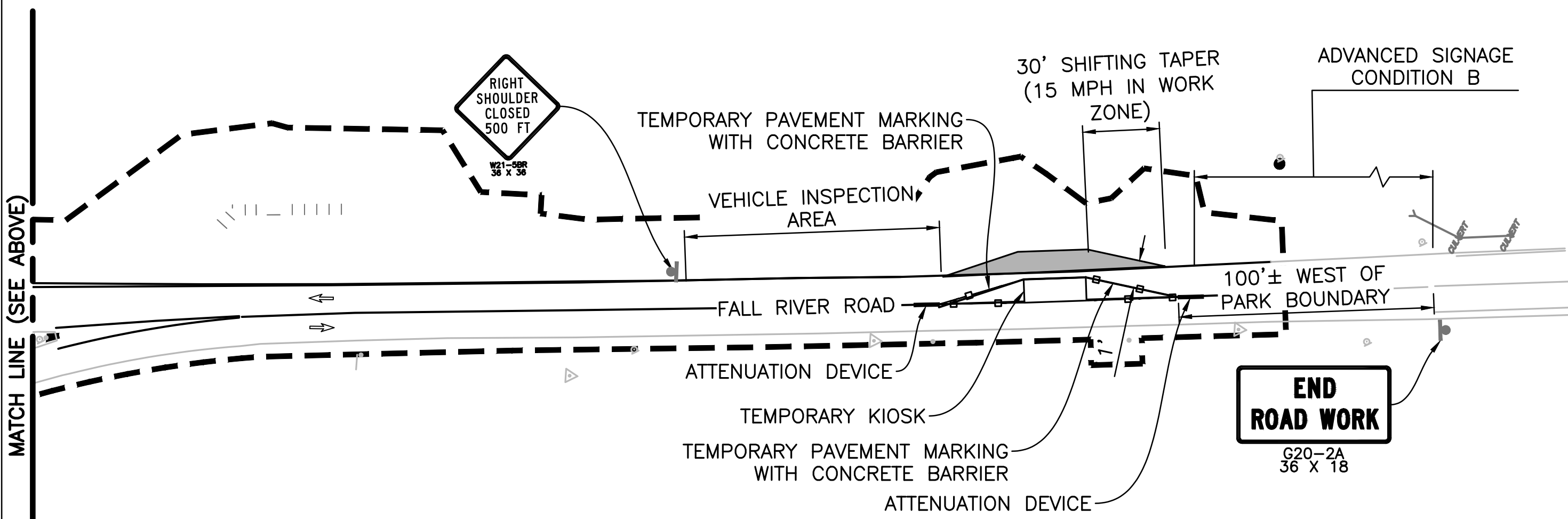
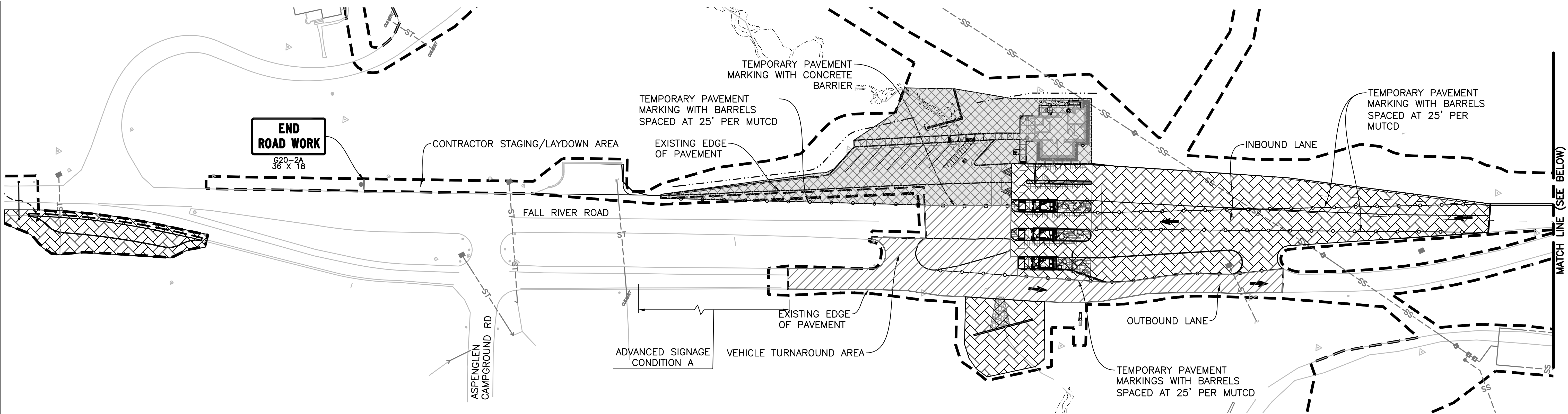
PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING

	DESIGNED: VARIES	SUB SHEET NO.	TITLE OF SHEET CONSTRUCTION MOT - PHASE 2 STAGE 1 FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 63 OF 165
	DATE: 03/10/2022			

C10.3

PLOT DATE: Wednesday, March 9, 2022 3:43 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\C0a\C10.4 CONSTRUCTION MOT - PHASE 2 STAGE 2.dwg

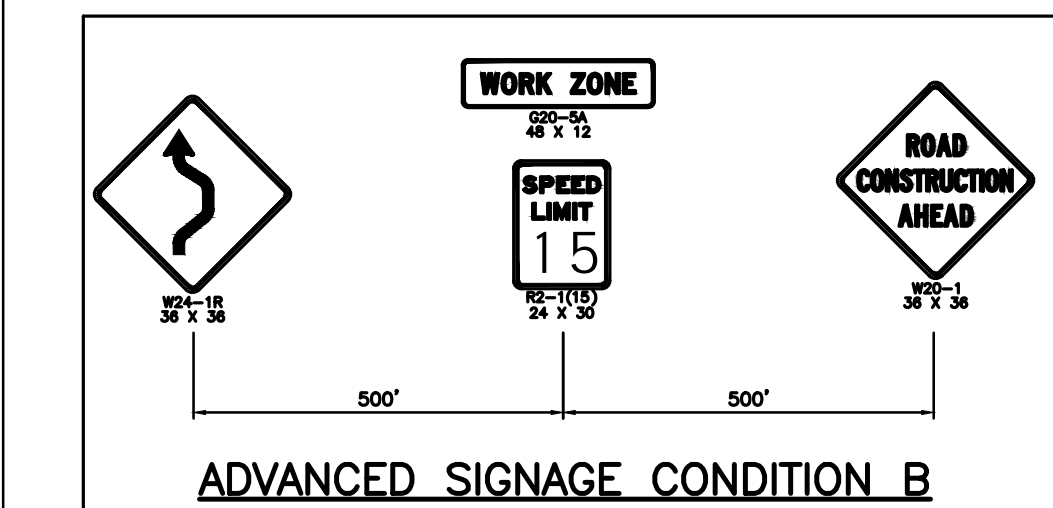
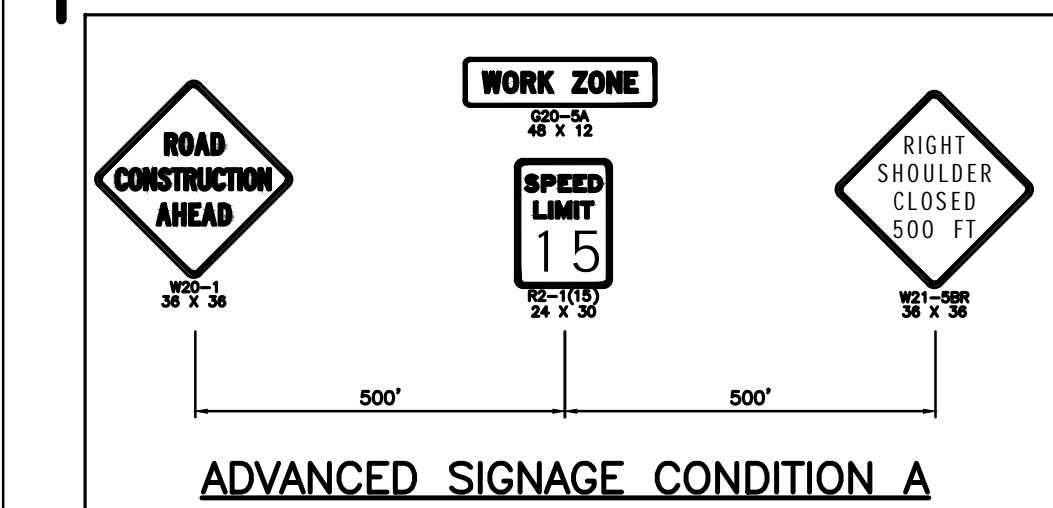


- LEGEND**
- TRAFFIC ARROW
 - TEMPORARY PAVEMENT MARKINGS WITH CONCRETE BARRIER/ ATTENUATION DEVICE
 - TEMPORARY PAVEMENT MARKINGS WITH BARRELS
 - DEMOLITION/WORK AREA
 - OPEN LANES FOR ACCESS/EGRESS
 - TEMPORARY PAVEMENT
 - PREVIOUS PHASE WORK AREA, OPEN FOR ACCESS/EGRESS

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

40 0 40 80
SCALE OF FEET



STAGING/PHASING NOTES PHASE 2, STAGE 2

TRAFFIC CONTROL:

- 1.MAINTAIN TEMPORARY KIOSK AND VEHICLE INSPECTION AREA EAST OF ENTRANCE STATION.
- 2.ROUTE INBOUND TRAFFIC TO NEW ENTRANCE LANE 3. OUTBOUND TRAFFIC TO BE ROUTED BACK TO EXISTING OUTBOUND LANE.
- 3.MAINTAIN EXISTING TEMPORARY PAVEMENT WEST OF NEW ENTRANCE LANE 1 OUTSIDE OF CULVERT TRENCH LIMITS.

CONSTRUCTION:

- 1.THE FOLLOWING NOTES ARE INTENDED TO COVER BROAD CONSTRUCTION ACTIVITIES TO COINCIDE WITH THE PHASING AND STAGING STRATEGY GRAPHICALLY DEPICTED HEREON. CONTRACTOR SHALL DETERMINE AND IMPLEMENT ALL ACTIVITIES, CONSTRUCTION SEQUENCING, AND SUB-CONTRACTOR TRADES REQUIRED PRIOR TO OR CONCURRENT WITHIN THE WORK AREA(S) SHOWN HEREON.
- 2.CONSTRUCTION OF NEW ENTRANCE STATION ADMINISTRATION BUILDING ASSUMED TO BE ON-GOING ACTIVITY.
- 3.MAINTAIN TEMPORARY DEWATERING SYSTEM FOR BIG HORN CREEK.
- 4.REMOVE REMAINING PORTIONS OF EXISTING 36" CULVERT.
- 5.CONSTRUCT REMAINING PORTION OF NEW 48" CULVERT AND UPSTREAM CULVERT HEADWALL. GRADE SURROUNDING AREA TO FINISH GRADE. INSTALL EROSION CONTROL BLANKET FOR TEMPORARY STABILIZATION.
- 6.BACKFILL CULVERT TRENCH AND INSTALL ROAD BASE TO BRING TRENCH BACK TO EXISTING GRADES.
- 7.REMOVE TEMPORARY DEWATERING SYSTEM AFTER CULVERT CONSTRUCTION.
- 8.THE PROPOSED VEHICLE TURN AROUND AREA, MONUMENT PULL-OFF AREA (BID OPTION 3), AND VARIABLE MESSAGE SIGN (BID OPTION 4) SHOWN IN PHASE 1, STAGE 1 MAY ALSO BE CONSTRUCTED IN THIS STAGE BASED ON CONTRACTOR SEQUENCING. IMPROVEMENTS AND ASSOCIATED MOT ARE NOT SHOWN HEREON FOR CLARITY.

BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



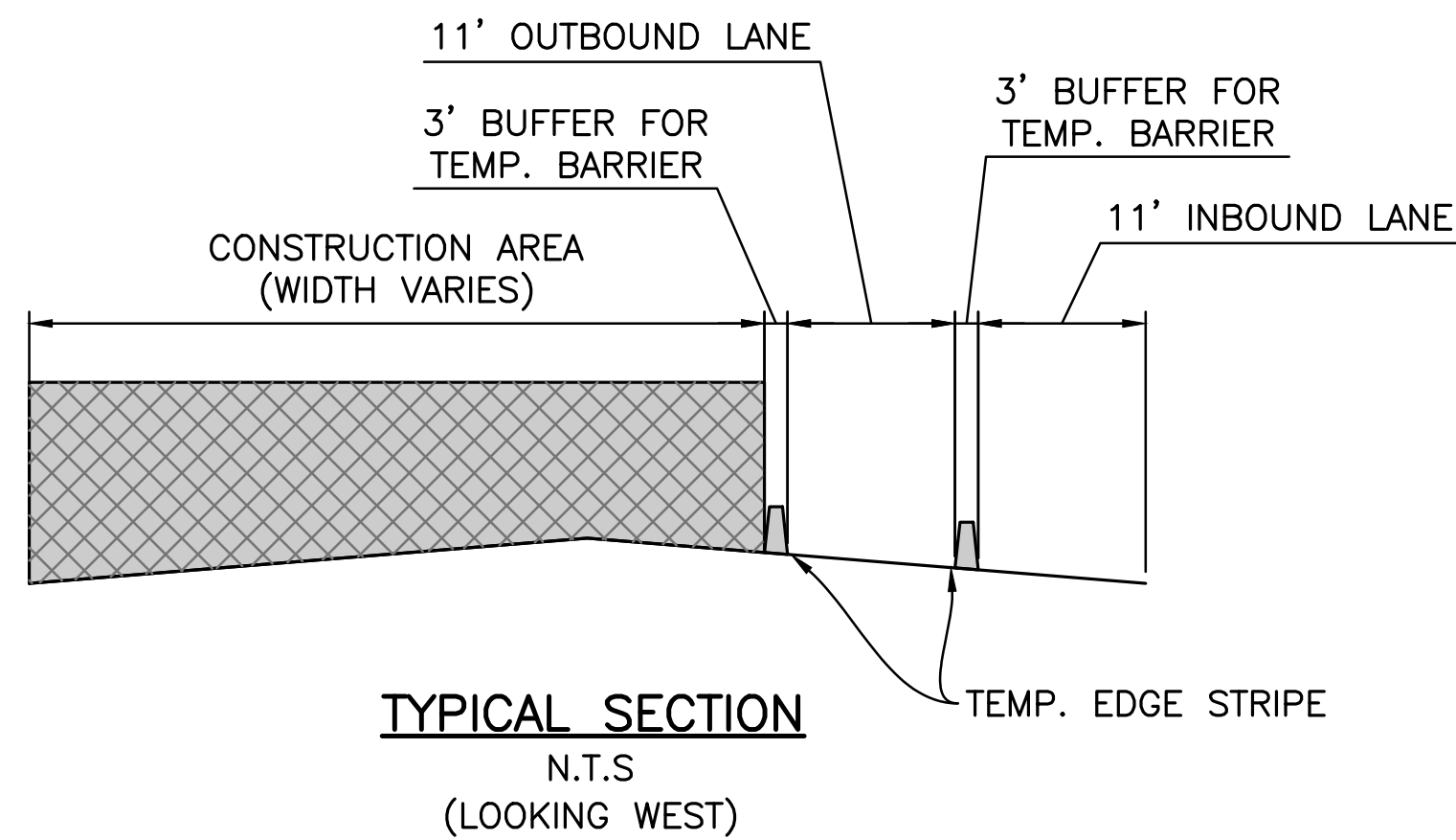
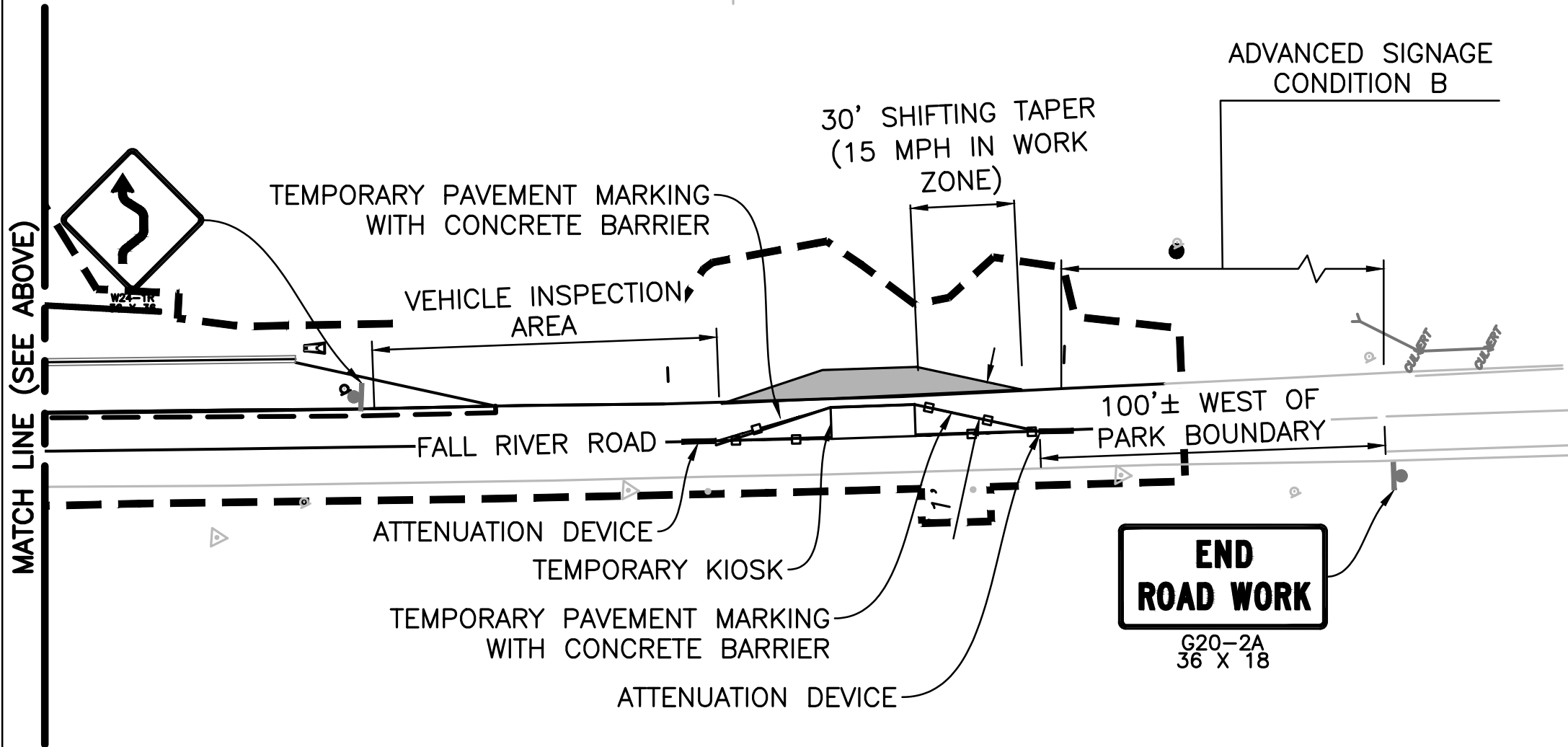
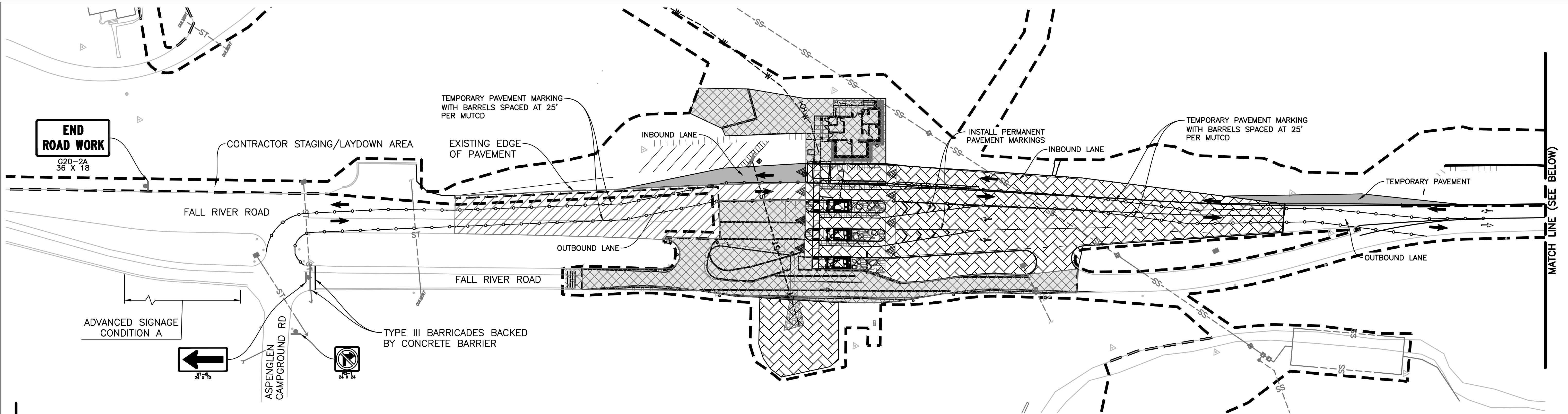
DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C10.4

TITLE OF SHEET
**CONSTRUCTION
MOT - PHASE 2
STAGE 2**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
64 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:44 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDs\C10.5 CONSTRUCTION MOT - PHASE 3 STAGE 1.dwg

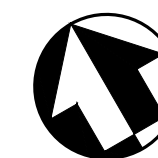


- LEGEND**
- TRAFFIC ARROW
 - TEMPORARY PAVEMENT MARKINGS WITH CONCRETE BARRIER/ATTENUATION DEVICE
 - TEMPORARY PAVEMENT MARKINGS WITH BARRELS
 - DEMOLITION/WORK AREA
 - OPEN LANES FOR ACCESS/EGRESS
 - TEMPORARY PAVEMENT
 - PREVIOUS PHASE WORK AREA, OPEN FOR ACCESS/EGRESS

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

40 0 40 80
SCALE OF FEET



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING



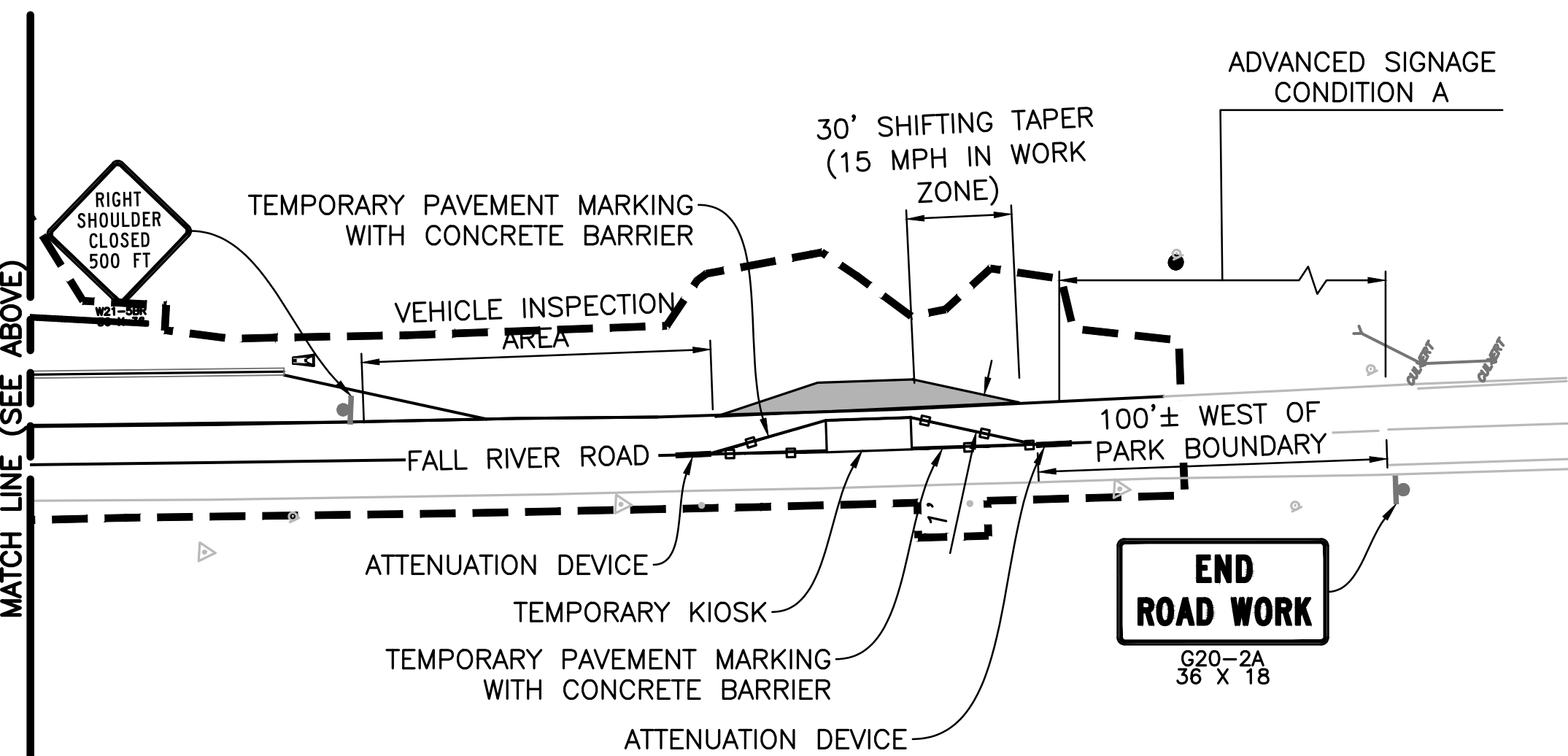
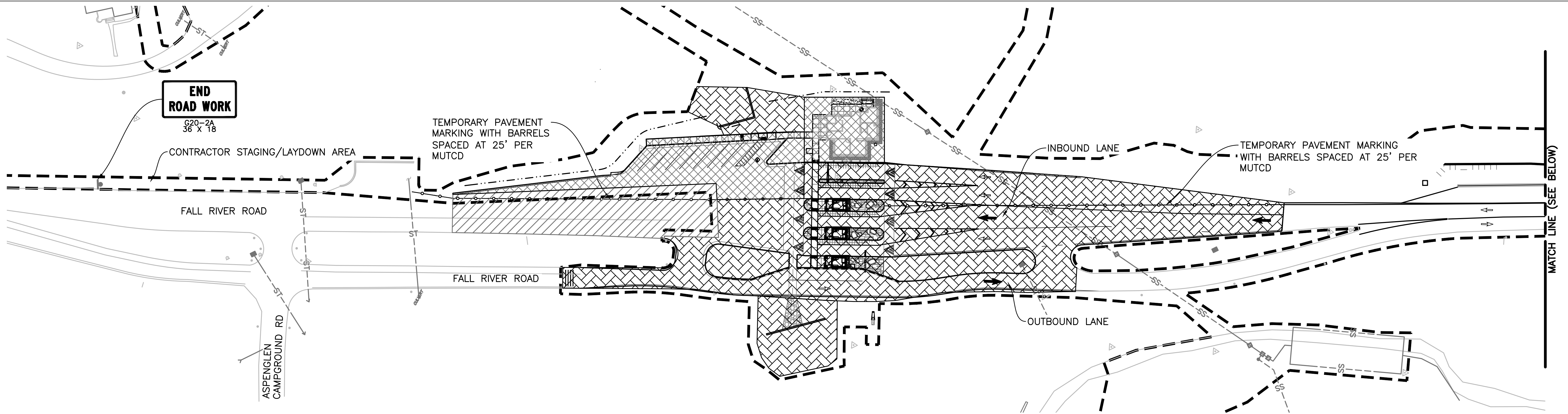
DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C10.5

TITLE OF SHEET
**CONSTRUCTION
MOT - PHASE 3
STAGE 1**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
65 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:45 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDs\C10.6 CONSTRUCTION MOT - PHASE 3 STAGE 2.dwg



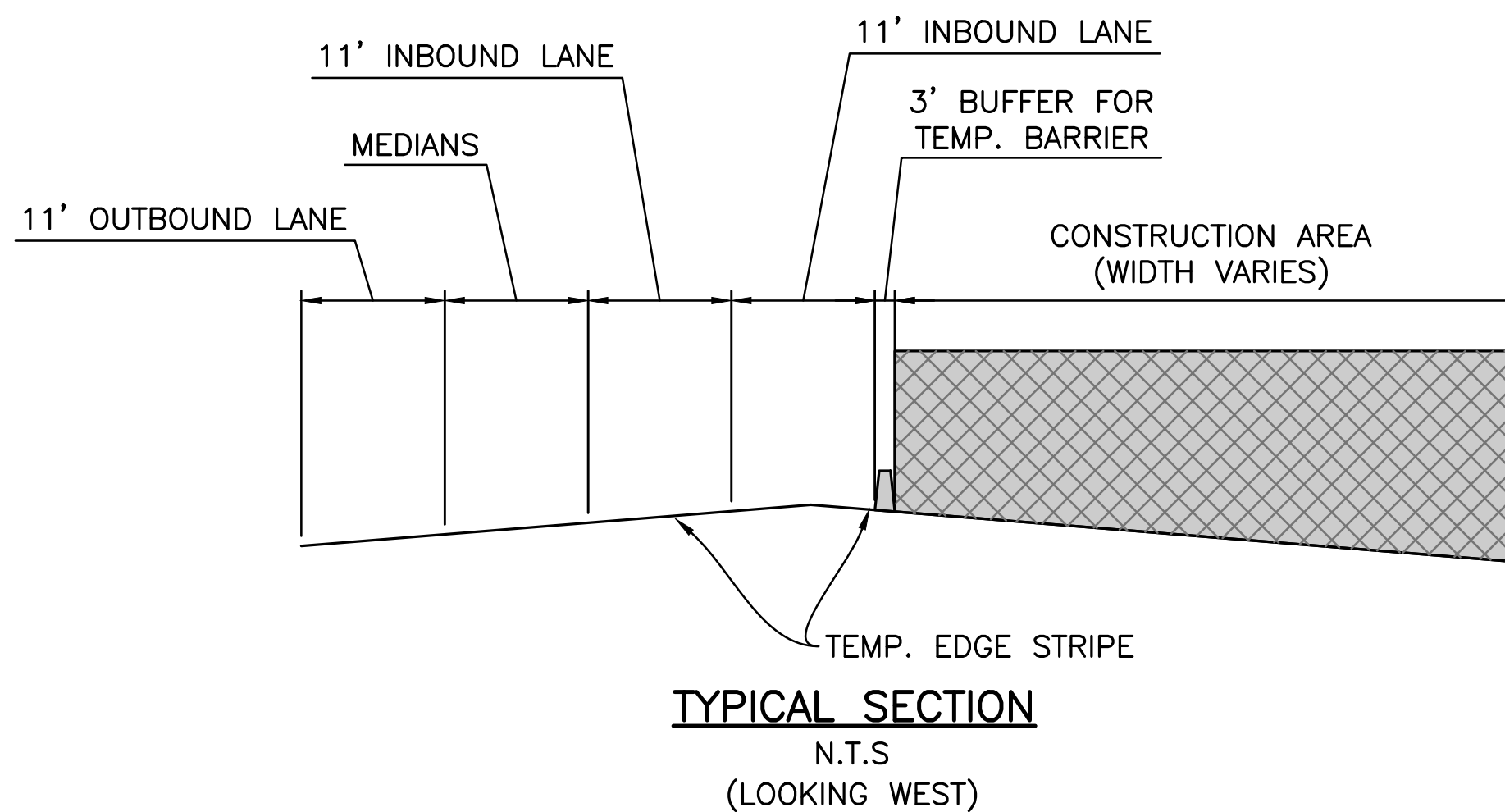
STAGING/PHASING NOTES PHASE 3, STAGE 2

TRAFFIC CONTROL:

1. MAINTAIN TEMPORARY KIOSK AND VEHICLE INSPECTION AREA EAST OF ENTRANCE STATION.
2. ROUTE INBOUND TRAFFIC TO NEW ENTRANCE LANE 3. DETOUR OUTBOUND TRAFFIC TO NEW OUTBOUND LANE.

CONSTRUCTION:

1. THE FOLLOWING NOTES ARE INTENDED TO COVER BROAD CONSTRUCTION ACTIVITIES TO COINCIDE WITH THE PHASING AND STAGING STRATEGY GRAPHICALLY DEPICTED HEREON. CONTRACTOR SHALL DETERMINE AND IMPLEMENT ALL ACTIVITIES, CONSTRUCTION SEQUENCING, AND SUB-CONTRACTOR TRADES REQUIRED PRIOR TO OR CONCURRENT WITHIN THE WORK AREA(S) SHOWN HEREON.
2. CONSTRUCTION OF NEW ENTRANCE STATION ADMINISTRATION BUILDING IS ASSUMED TO BE AN ON-GOING ACTIVITY.
3. CONNECT UTILITIES FOR NEW ENTRANCE STATION ADMINISTRATION BUILDING.
4. REMOVE EXISTING PAVEMENT TO THE WEST OF NEW ENTRANCE LANES 1 AND 2.
5. REMOVE TEMPORARY PAVEMENT CONSTRUCTED IN PHASE 3, STAGE 1

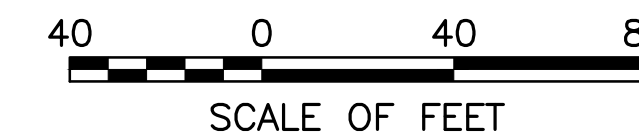


LEGEND

- TRAFFIC ARROW
- TEMPORARY PAVEMENT MARKINGS WITH CONCRETE BARRIER/ ATTENUATION DEVICE
- TEMPORARY PAVEMENT MARKINGS WITH BARRELS
- DEMOLITION/WORK AREA
- OPEN LANES FOR ACCESS/EGRESS
- TEMPORARY PAVEMENT
- PREVIOUS PHASE WORK AREA, OPEN FOR ACCESS/EGRESS

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

SUB SHEET NO.
C10.6

TITLE OF SHEET
**CONSTRUCTION
MOT - PHASE 3
STAGE 2**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
66 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:46 PM LAST SAVED BY: RPOLLARD
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\Cds\C10.7 CONSTRUCTION MOT - BID OPTIONS.dwg

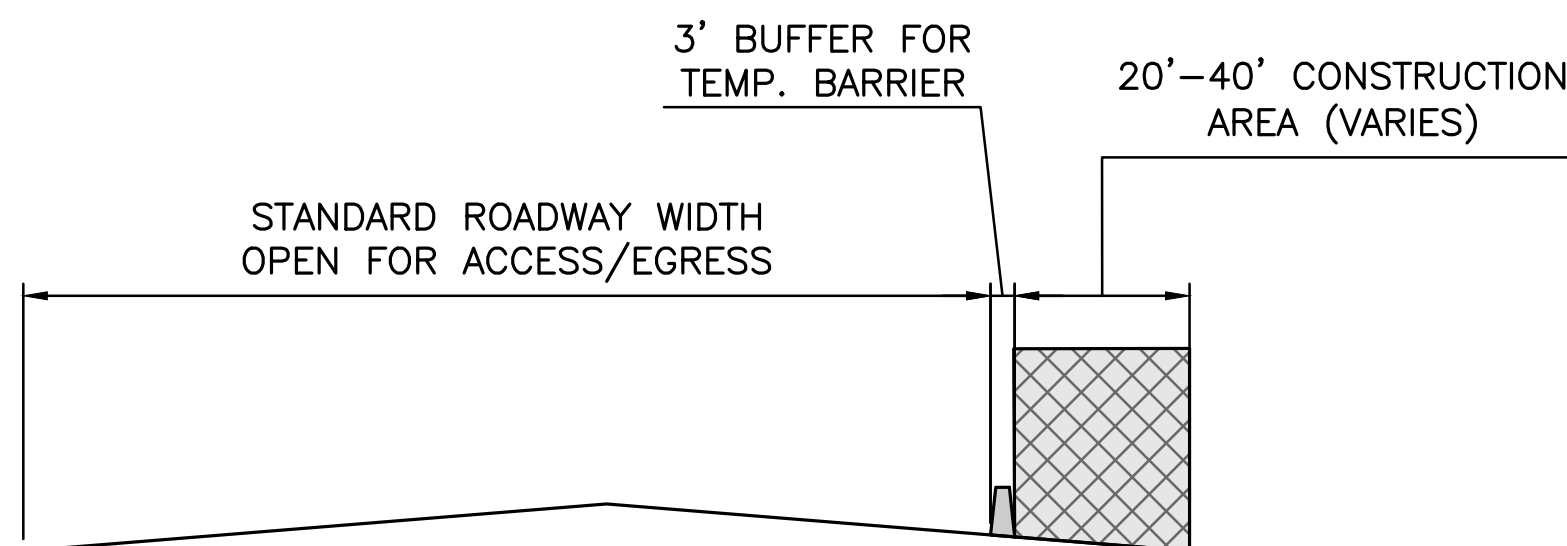
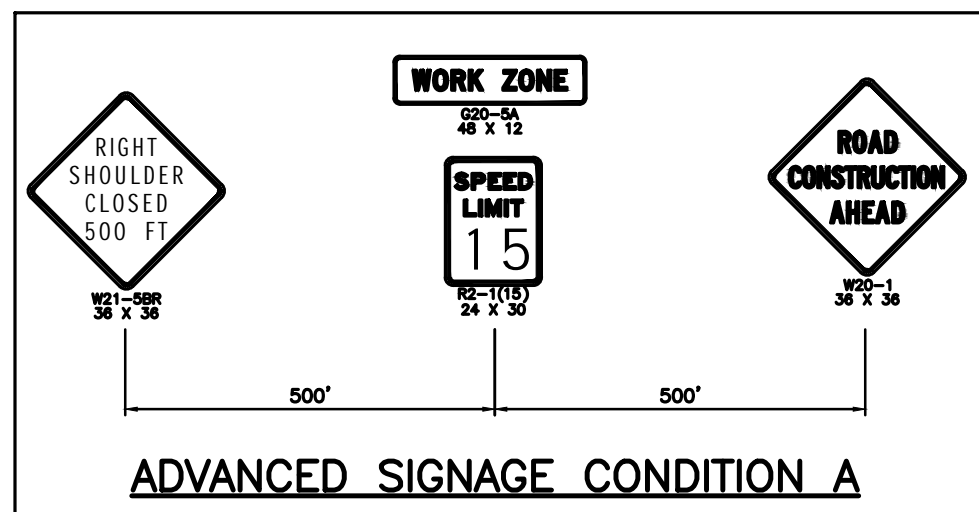
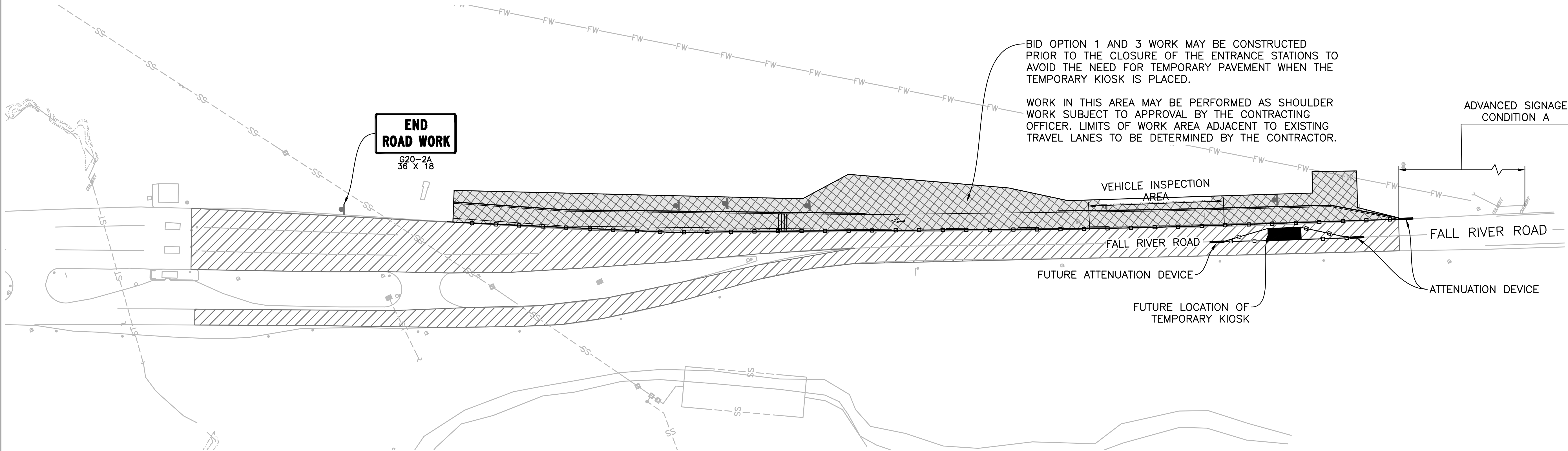
BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTHING AND 2,000,000 FROM THE EASTING



TYPICAL SECTION
N.T.S
(LOOKING WEST)

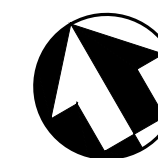
LEGEND

- TRAFFIC ARROW
- TEMPORARY PAVEMENT MARKINGS WITH CONCRETE BARRIER/ ATTENUATION DEVICE
- TEMPORARY PAVEMENT MARKINGS WITH BARRELS
- DEMOLITION/WORK AREA
- OPEN LANES FOR ACCESS/EGRESS

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

40 0 40 80
SCALE OF FEET



DESIGNED:
VARIES
GADD
AEL/RTP/CDS
TECH REVIEW:
DCW
DATE:
03/10/2022

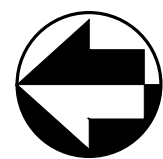
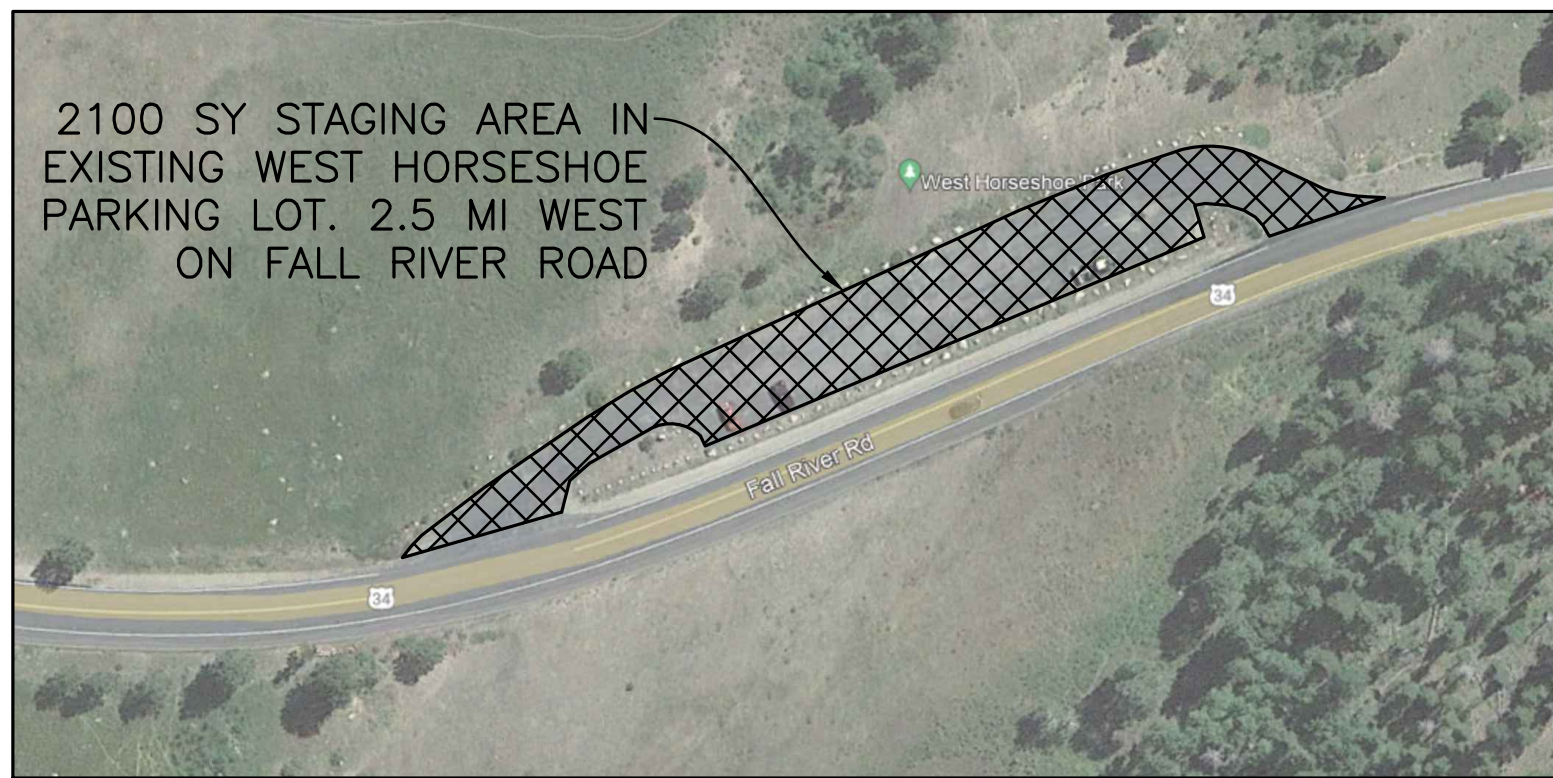
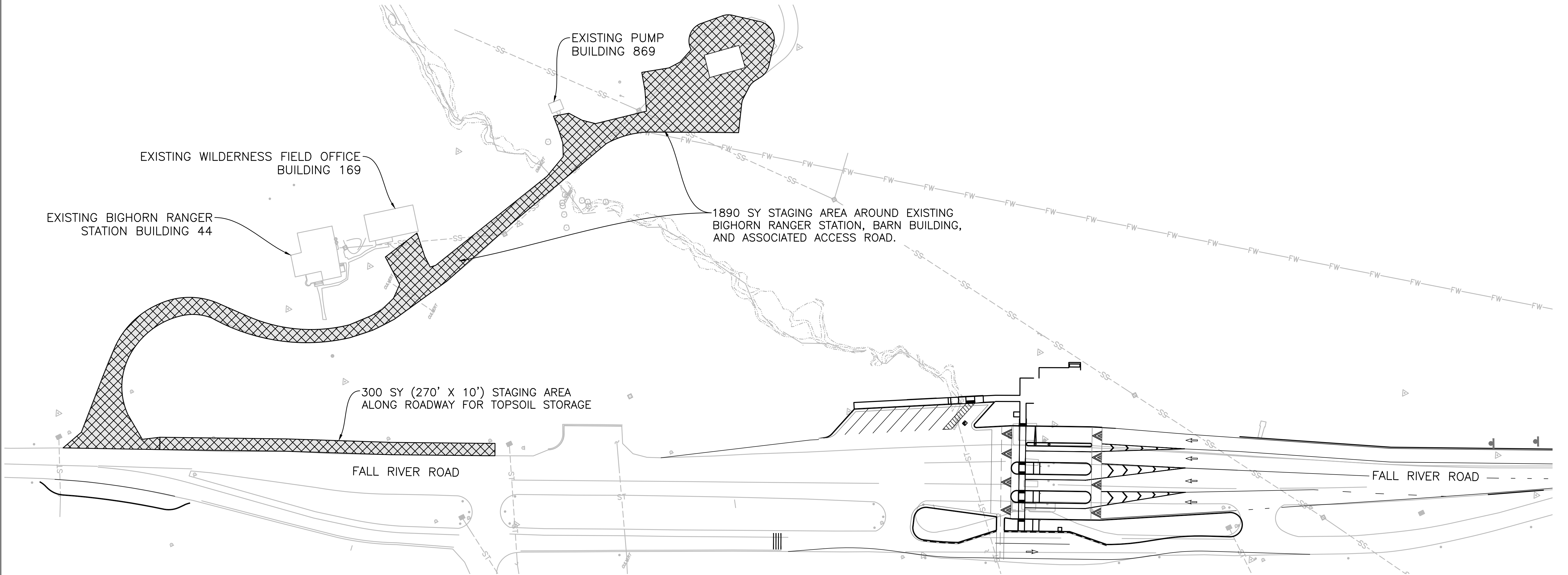
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C10.7

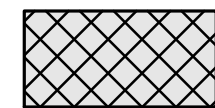
TITLE OF SHEET
**CONSTRUCTION
MOT - BID OPTIONS**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
67 OF 165

PLOT DATE: Wednesday, March 9, 2022 3:46 PM LAST SAVED BY: ALATIMER
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDS\C10.8 CONSTRUCTION STAGING.dwg



LEGEND

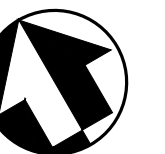


CONSTRUCTION STAGING AREA

CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES WITH EXISTING OR PROPOSED ELEVATIONS SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION.

THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES (VERTICAL & HORIZONTAL) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

40 0 40 80
SCALE OF FEET



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

ELEVATION = 8244.28' (NAVD 1988)

PROJECT COORDINATE SYSTEM AND BASIS OF BEARING

PROJECT COORDINATE AND THE BASIS OF BEARING ARE BASED ON COLORADO NORTH ZONE 1983 (ZONE # 501) MODIFIED BY SCALING THE STATE PLANE COORDINATES BY A FACTOR OF 1.000431921 FROM 0,0 AND THEN SUBTRACTING 1,000,000 FROM THE NORTING AND 2,000,000 FROM THE EASTING



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TECH REVIEW:
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DATE:
03/10/2022

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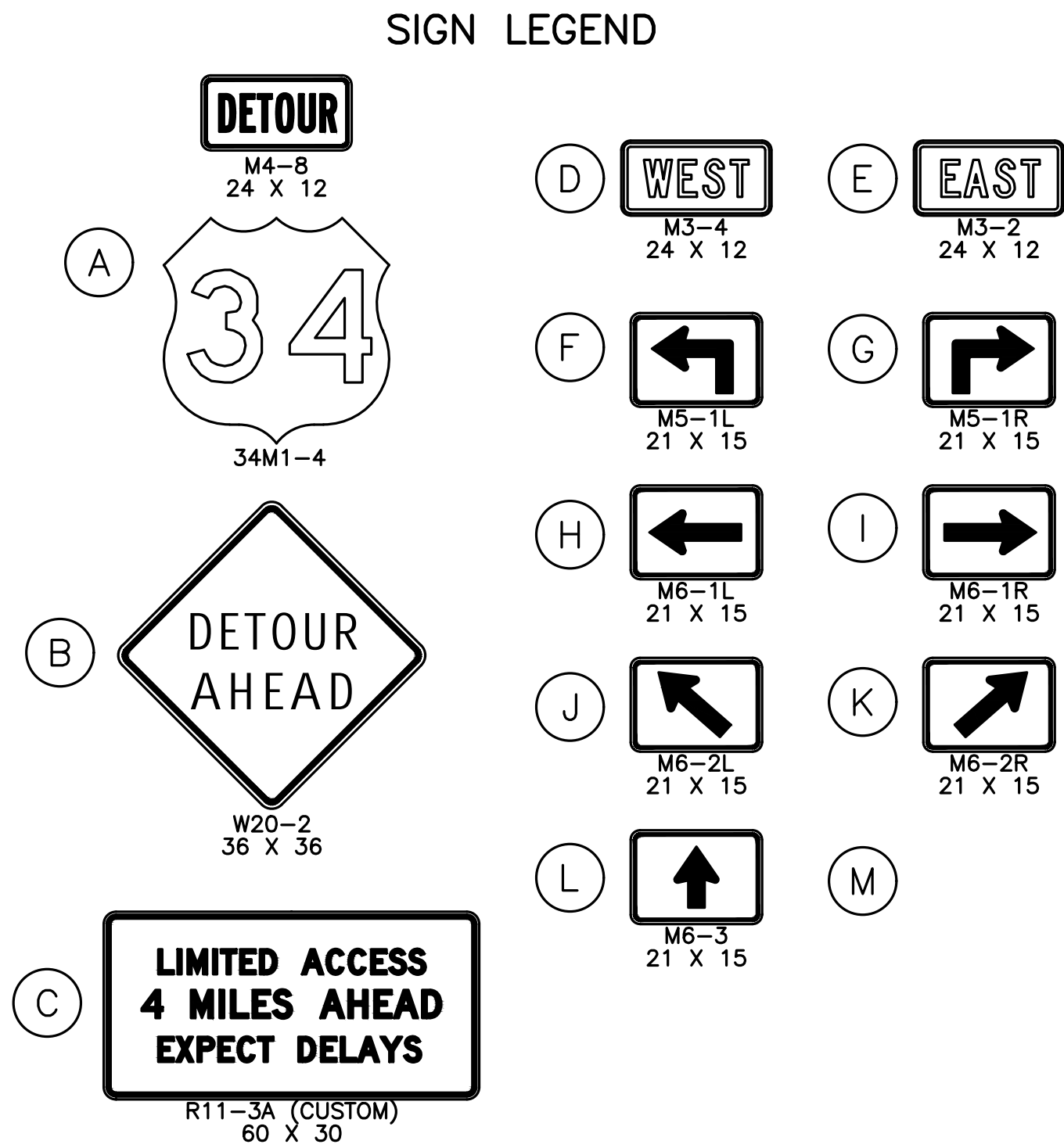
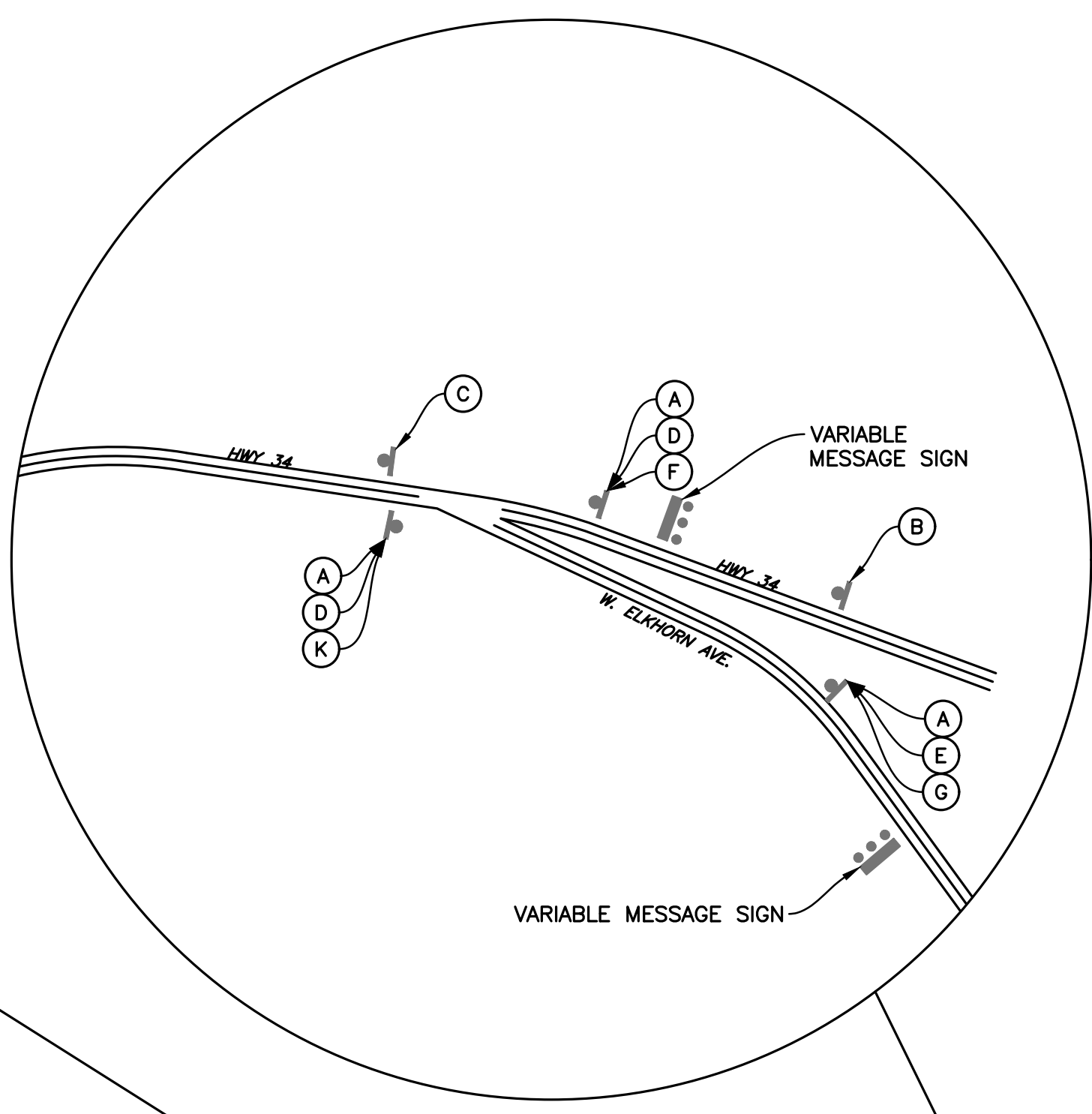
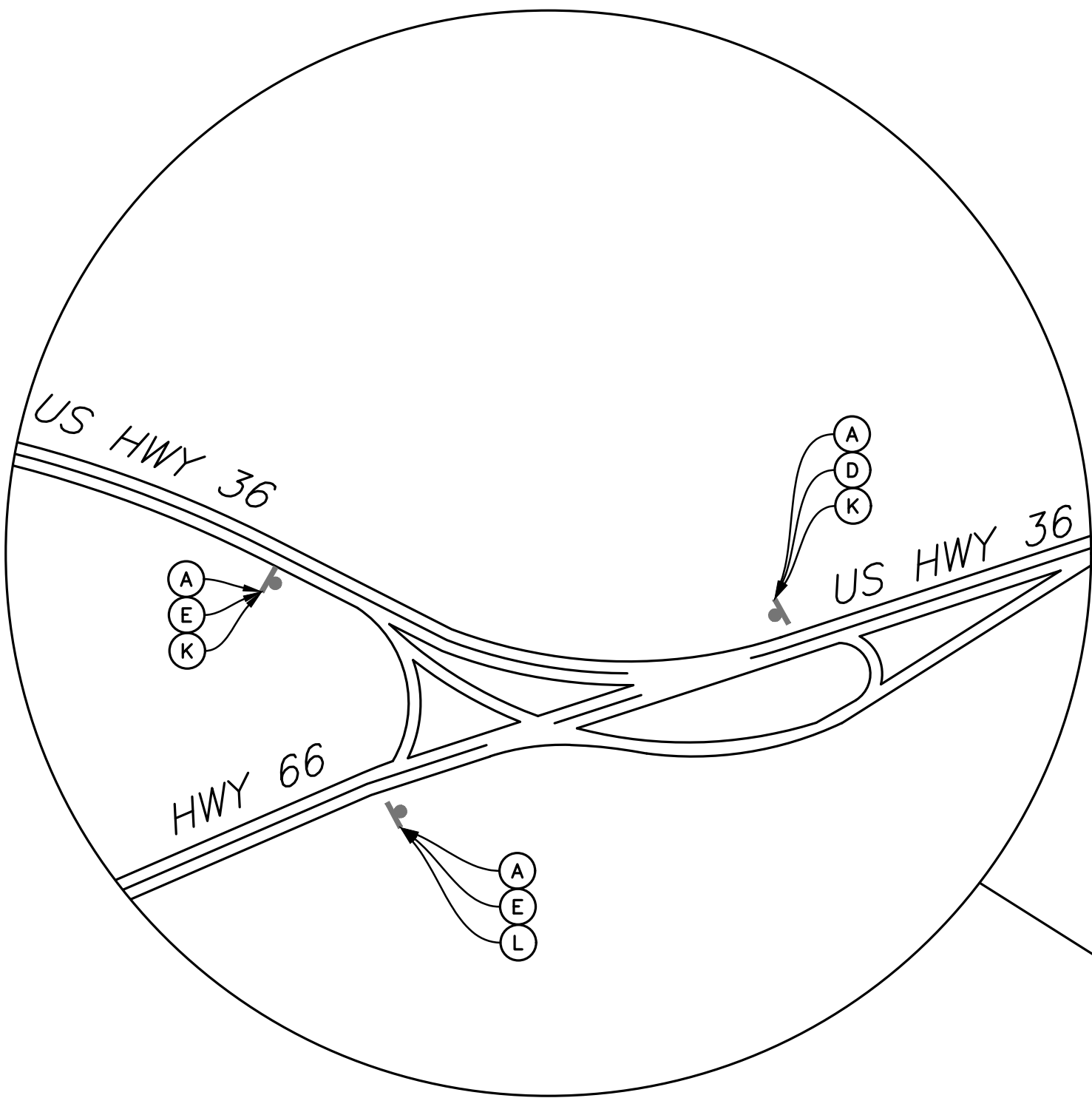
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TITLE OF SHEET
CONSTRUCTION STAGING

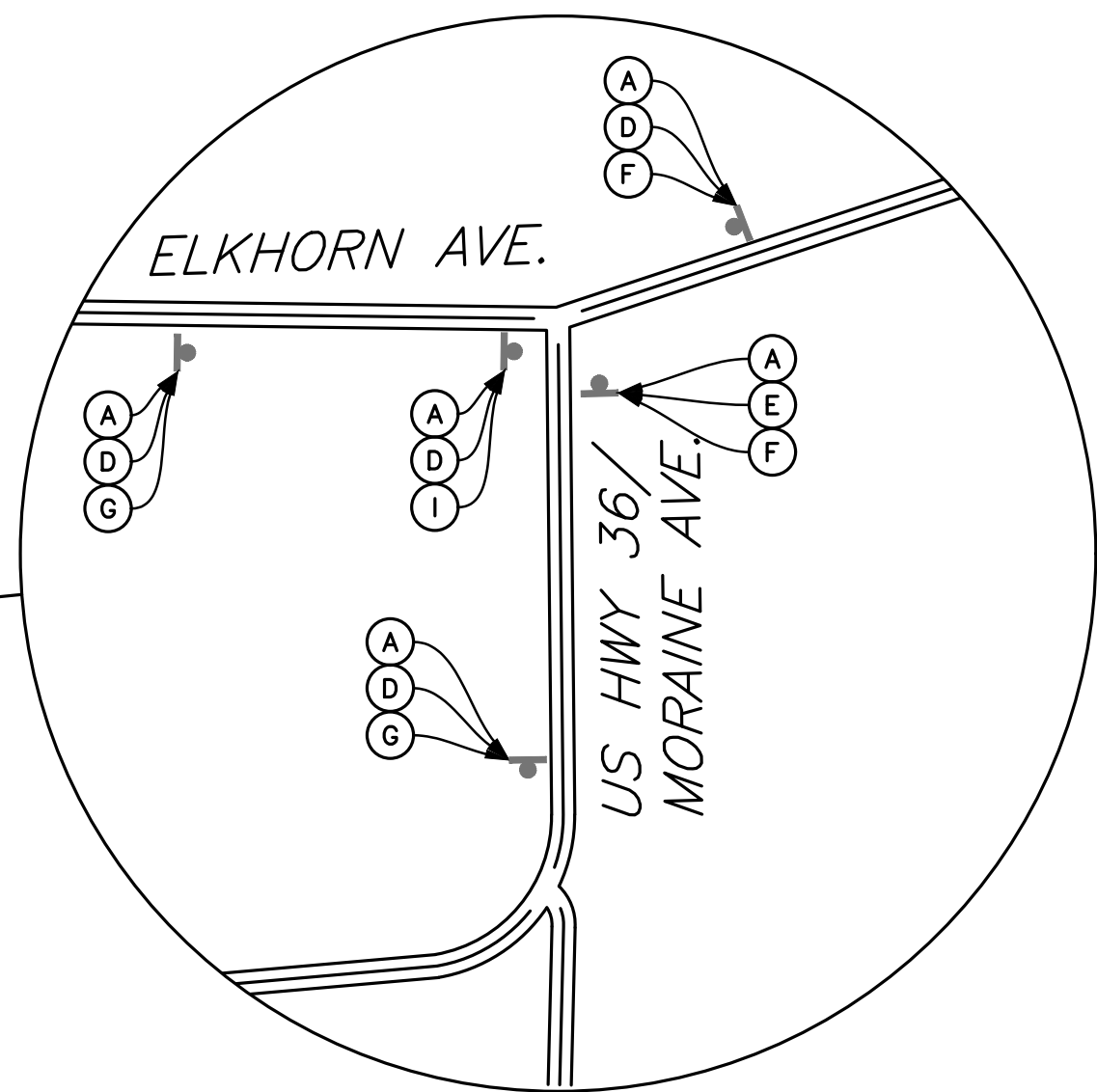
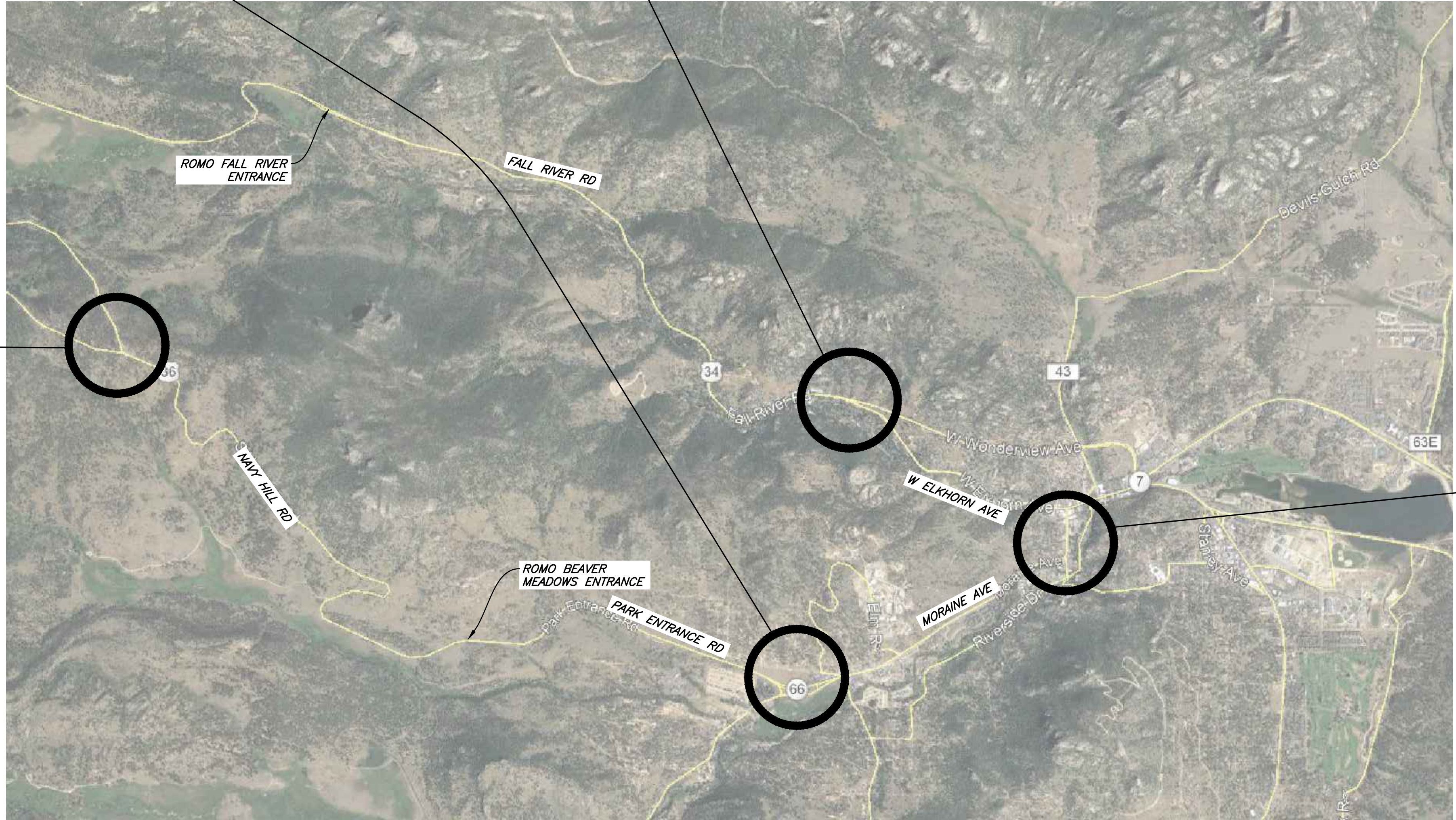
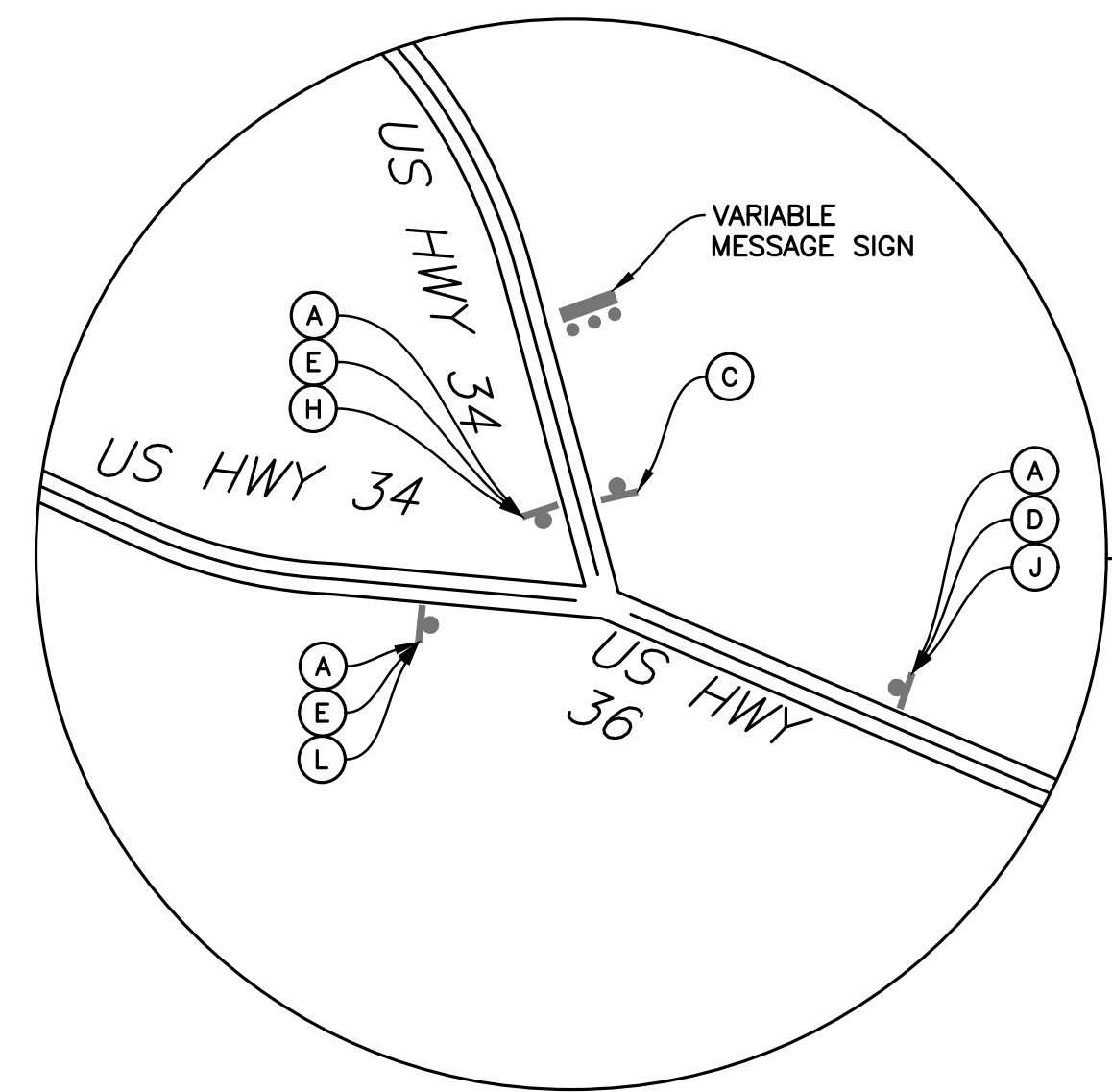
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
68 OF **165**

PLOT DATE: Wednesday, March 9, 2022 3:47 PM LAST SAVED BY: DWEEBER
DRAWING LOCATION: G:\SULLIVAN\20.0821-NPS - ROMO Fall River Entrance & Rehab & Westwater\160755\DRAWINGS\CIVIL\CDs\C10.9 DETOUR PLAN.dwg



- MOT NOTES:**
1. REFER TO SHEETS C0.1 THRU C0.2 FOR ADDITIONAL NOTES, LEGEND AND ABBREVIATIONS.
 2. ALL SIGN AND BARRICADE INSTALLATION SHALL MEET THE STANDARDS ESTABLISHED IN THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)", 2009 EDITION WITH CURRENT REVISIONS.
 3. LETTERS ON SIGNS SHALL HAVE A MINIMUM HEIGHT OF 4" AND MINIMUM WIDTH OF 2".
 4. WHERE TRAFFIC IS MAINTAINED THROUGH OR OVER ANY PART OF THE PROJECT, THE CONTRACTOR SHALL BE REQUIRED TO MARK ALL HAZARDS WITHIN THE LIMITS OF THE PROJECT (INCLUDING CONNECTING ROADS) WITH WELL-MAINTAINED SIGNS.
 5. THE CONTRACTOR'S EQUIPMENT AND PARKING AREAS SHALL NOT INHIBIT THE VISIBILITY OF PROJECT SIGNS AND BARRICADES.
 6. LOCATION AND INSTALLATION OF ALL TRAFFIC SIGNS, TRAFFIC CONTROL, AND BARRICADES SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND APPROVED BY THE CO.
 7. ALL SIGNS AND BARRICADES SHALL CONSIST OF A SMOOTH, RETROREFLECTIVE SURFACE UNLESS OTHERWISE SPECIFIED ON THE PLANS. SIGNS SHALL HAVE A SCREEN PROCESSED BLACK LEGEND AND BORDER ON ORANGE FLEXIBLE RETROREFLECTIVE SHEETING, NON-EXPOSED LENS BACKGROUND.
 8. SIGN PANELS FURNISHED BY THE CONTRACTOR FOR USE ONLY DURING CONSTRUCTION SHALL BE FABRICATED FROM PLYWOOD, ALUMINUM, STEEL OR OTHER SUITABLE MATERIAL, BUT SHALL BE STABLE AND DURABLE ENOUGH TO MEET OTHER REQUIREMENTS OF THIS CONTRACT.
 9. ALL MATERIAL SHALL BE SOUND AND DURABLE. BARRICADES, SIGNS, SYMBOLS AND LETTERING SHALL BE OF GOOD WORKMANSHIP. UNEVEN LETTERING SHALL NOT BE ACCEPTED.
 10. ALTERNATE METHODS OF PROCESSING SIGNS OR THE SUBSTITUTION OF MATERIALS, SYMBOLS OR OTHER REFLECTING ELEMENTS SHALL BE PERMITTED ONLY AFTER APPROVAL OF SUCH METHODS OR MATERIALS BY THE CO IN WRITING.
 11. ALL TRAFFIC CONTROL DEVICES SHALL FOLLOW THE GUIDELINES ESTABLISHED IN THE REFERENCE TITLED "QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES" PUBLISHED BY THE ROADWAY SAFETY TRAINING INSTITUTE AND THE AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION.



2000 0 2000 4000
SCALE OF FEET



BENCHMARK

ELEVATIONS ARE BASED ON A 2 1/2" BRASS DISK STAMPED "USDI NPS" ON THE NORTH SIDE OF THE FLAGPOLE ON THE EAST SIDE OF THE NORTHERLY ENTRANCE BUILDING AT THE FALL RIVER ROAD ENTRANCE STATION.

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03/10/2022

SUB SHEET NO.
C10.9

TITLE OF SHEET
DETOUR PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
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3/08/22 17:24 brittany R25 S:\Projects\ROMO Fall River Entrance - 2016\Drawings\05-CD Final\ROMO160755\DRAWINGS\LA\ L0.1 COVER SHEET.dwg

GENERAL SITE NOTES

1.

TOPOGRAPHIC SURVEY PREPARED BY MARTIN AND MARTIN ENGINEERING, INC, DATED JANUARY 15, 2021.
2.

CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS, ETC. WHICH ARE NECESSARY TO PERFORM THE WORK.
3.

CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CONTRACTING OFFICER AT LEAST 48 HOURS PRIOR TO START UP OR RESTART OF ANY WORK.
4.

LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. NPS AND CONSULTANTS ASSUME NO RESPONSIBILITY FOR THE LOCATIONS AND ACCURACY OF UTILITIES INDICATED ON THE PLANS. CONTRACTOR SHALL LOCATE, CLEARLY MARK AND MAINTAIN EXISTING UTILITIES ON THE SITE PRIOR TO WORK START UP. CALL THE UTILITY NOTIFICATION CENTER OF COLORADO 1 (800) 992–1987 PRIOR TO WORK START UP.
5.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND REPAIR OF UTILITIES IF DAMAGED. REPAIR SHALL BE DONE AT NO ADDITIONAL COST TO THE GOVERNMENT. ALL WORK IN UTILITY EASEMENTS SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THE GOVERNING AGENCY.
6.

CONTRACTOR SHALL PROVIDE TEMPORARY BARRICADES, SIGNAGE AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT GOVERNMENT PERSONNEL AND GENERAL PUBLIC FROM INJURY DUE TO CONSTRUCTION ACTIVITIES.
7.

DO NOT DAMAGE ADJACENT PROPERTIES (INCLUDING FENCES). CONTRACTOR SHALL PROMPTLY REPAIR ANY DAMAGE TO ADJACENT PROPERTIES AT NO ADDITIONAL COST TO THE GOVERNMENT.
8.

CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, TRAILS, WALKS AND OTHER FACILITIES. DO NOT CLOSE, BLOCK OR OBSTRUCT ROADS, WALKS, OR OTHER FACILITIES WITHOUT THE CONTRACTING OFFICER’S WRITTEN PERMISSION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS (INCLUDING SIDEWALKS, ETC. ASSUME REQUIRED SAFETY AND ACCESS MEASURES NECESSARY TO PROTECT THE PUBLIC DURING CONSTRUCTION OPERATIONS).
9.

LIMIT OF WORK IS AS INDICATED.
10.

CONTRACTOR SHALL ENSURE ALL NEW PAVED SURFACES MEET ABAAS GUIDELINES. ALL CONSTRUCTED SURFACES SHALL BE INSTALLED TO BE FLUSH WITH EACH OTHER, NOT TO EXCEED 1/4–INCH VERTICAL CHANGE IN LEVEL.

LANDSCAPE SHEET INDEX

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74	L1.2	ENTRANCE STATION MATERIALS PLAN
75	L1.3	ENTRANCE STATION COLORED CONCRETE PAVING PLAN
76	L1.4	ENTRANCE STATION CONCRETE PAVING SCORING PLAN
77	L1.5	SITE DETAILS
78	L1.6	KIOSK MEDIAN DETAILS
79	L2.1	PARK SIGNS EXISTING CONDITION AND TREE PROTECTION PLAN
80	L2.2	PARK SIGNS MATERIALS AND LAYOUT PLAN
81	L2.3	PARK SIGNS GRADING PLAN
82	L2.4	MONUMENT SIGN AND WALL DETAILS – BID OPTION 3
83	L2.5	MONUMENT SIGN AND WALL DETAILS – BID OPTION 3
84	L2.6	VARIABLE MESSAGE SIGN DETAIL – BID OPTION 4
85	L3.1	CCC CURB EXISTING CONDITION AND TREE PROTECTION PLAN
86	L3.2	CCC CURB DETAILS
87	L4.1	CCC CULVERT HEADWALLS AND STEPS EXISTING CONDITION AND TREE PROTECTION PLAN
88	L4.2	CCC CULVERT HEADWALL DETAILS
89	L4.3	CCC CULVERT HEADWALL DETAILS
90	L4.4	CCC STEPS DETAILS
91	L5.1	REVEGETATION PLAN
92	L5.2	PLANTING DETAILS

ABBREVIATIONS

ABA	ARCHITECTURAL BARRIERS ACT	L	LENGTH
ABAAS	ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARDS	LP	LOW POINT
		LT	LIGHT
AD	AREA DRAIN	MAT	MATERIAL
ADJ	ADJACENT	MAX	MAXIMUM
APPROX	APPROXIMATE	MECH	MECHANICAL
ARCH	ARCHITECTURAL	MFR	MANUFACTURER
ASPH	ASPHALT	MH	MANHOLE
BB	BOTTOM OF BASIN	MIN	MINIMUM
BITUM	BITUMINOUS	MISC	MISCELLANEOUS
BLDG	BUILDING	MTL	METAL
BOC	BACK OF CURB	NIC	NOT IN CONTRACT
BP	BOTTOM OF PIPE	NO	NUMBER
BS	BOTTOM OF STEP	NTS	NOT TO SCALE
BTW	BETWEEN	OC	ON CENTER
BW	BOTTOM OF WALL	OD	OUTSIDE DIAMETER
C	CENTER LINE	PIP	POURED IN PLACE
CB	CATCH BASIN	PT	POINT
CHP	CAST IN PLACE	POC	POINT OF CURVE
CF	CRUSHER FINES	POT	POINT OF TANGENT
CJ	CONTROL JOINT	PP	PONDEROSA PINE
CLR	CLEAR	PTD	PAINTED
CO	CONTRACTING OFFICER	RE	REFERENCE
COL	COLUMN	REC	RECEPTACLE
CONC	CONCRETE	RECS	RECOMMENDATIONS
CONST	CONSTRUCTION	REINF	REINFORCING
CONT	CONTINUOUS	REQ	REQUIRED
CS	COMFORT STATION	RIM	RIM ELEVATION
DBH	DIAMETER AT BREAST HEIGHT	ROW	RIGHT OF WAY
DIA	DIAMETER	SSWR	SANITARY SEWER
DIM	DIMENSION	SCHD	SCHEDULE
DTL	DETAIL	SHT	SHEET
DWG	DRAWING	SP	SPACING
EA	EACH	SPECS	SPECIFICATIONS
EJ	EXPANSION JOINT	SQ	SQUARE
EL	ELEVATION	STRM	STORM SEWER
ELEC	ELECTRICAL	SSL	STAINLESS STEEL
EQ	EQUAL/EQUIVALENT	STD	STANDARD
EW	EACH WAY	STL	STEEL
EWf	ENGINEERED WOOD FIBER	STR	STRUCTURAL
EX	EXISTING	T	TREAD
EXP	EXPANSION	T+B	TOP AND BOTTOM
FG	FINISH GRADE	T+G	TONGUE AND GROOVE
FL	FLOW LINE	TB	TOP OF BOULDER
FS	FINISH SURFACE	TC	TOP OF CONCRETE
FT	FOOT/FEET	TECH	TECHNOLOGY
FTG	FOOTING	TESC	TEMPORARY EROSION SEDIMENTATION CONTROL
FV	FIELD VERIFY		THICK
GA	GAUGE	THK	THICK
GALV	GALVANIZED	TOC	TOP OF CURB
GB	GRADE BREAK	TS	TOP OF STEP
HB	HOSE BIB	TW	TOP OF WALL
HDU	HIGH DENSITY URETHANE	TYP	TYPICAL
HP	HIGH POINT	W	WIDTH
HSS	HIGH-SPEED STEEL	W/	WITH
HT	HEIGHT	WSE	WATER SURFACE ELEVATION
INV	INVERT	WT	WEIGHT
JT	JOINT	WWF	WELDED WIRE FABRIC

LEGEND

	LIMIT OF WORK
	EX ELECTRIC
	EX WATER
	EX TELEPHONE
	EX STORM SEWER
	EX CONTOUR
	EX SPOT EL
	EX SIGN
	TREE PROTECTION FENCING
	EX TREE WITH DRIPLINE
	EX TREE TO BE REMOVED
	CONC PAVING
	RUBBLE STONE PAVING
	CRUSHER FINES PAVING
	ROCK MULCH
	WALL
	FLAGPOLE
	STEEL BOLLARD
	TRASH RECEPTACLE
	RELOCATED BOULDER
	EX SPOT EL
	SPOT EL
	SLOPE
	PONDEROSA PINE
	REVEGETATION

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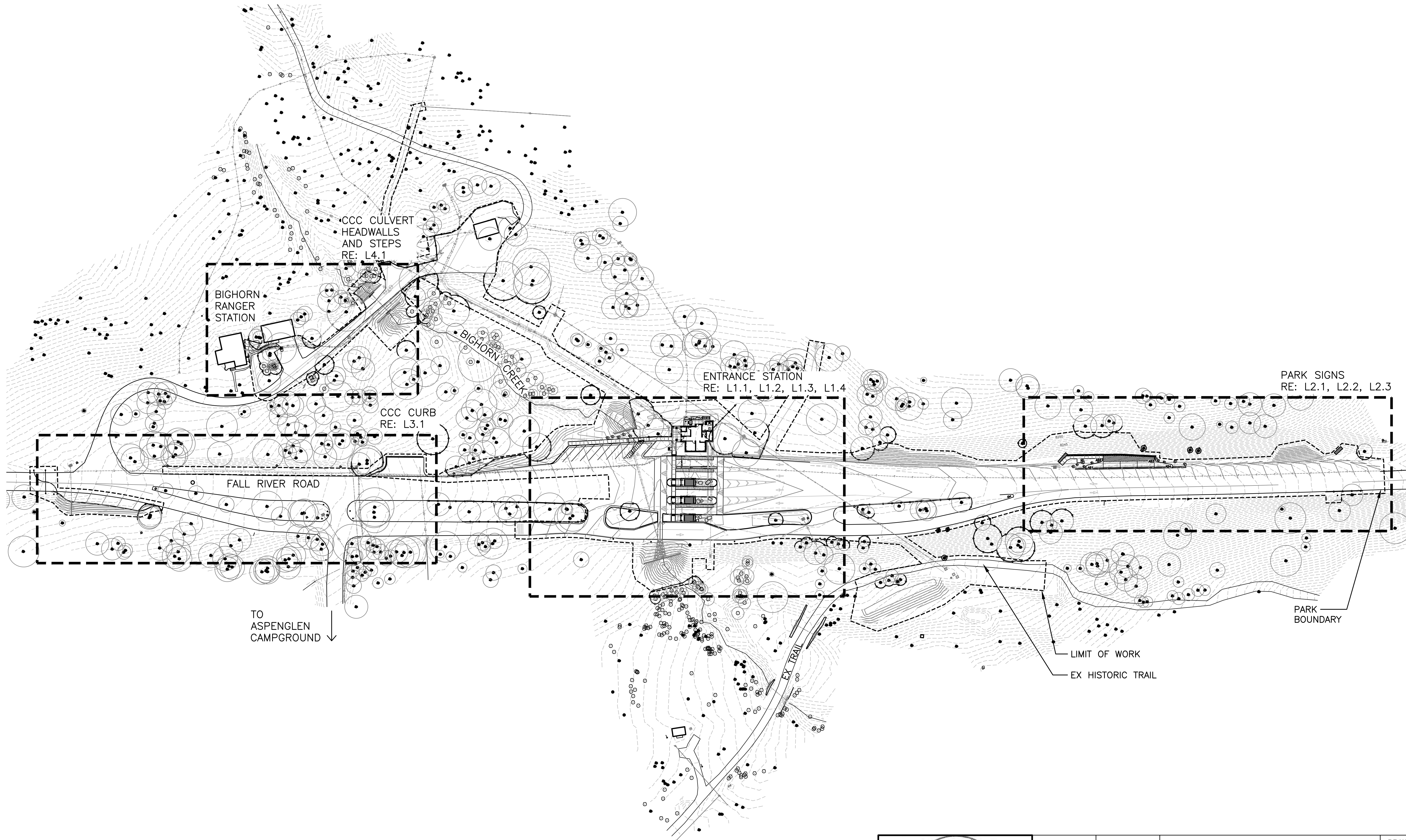
L0.1

TITLE OF SHEET
**LANDSCAPE
COVER SHEET**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
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1 LANDSCAPE KEY PLAN
L0.2

60 0 60 120
SCALE OF FEET



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L0.2

TITLE OF SHEET
LANDSCAPE
KEY PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
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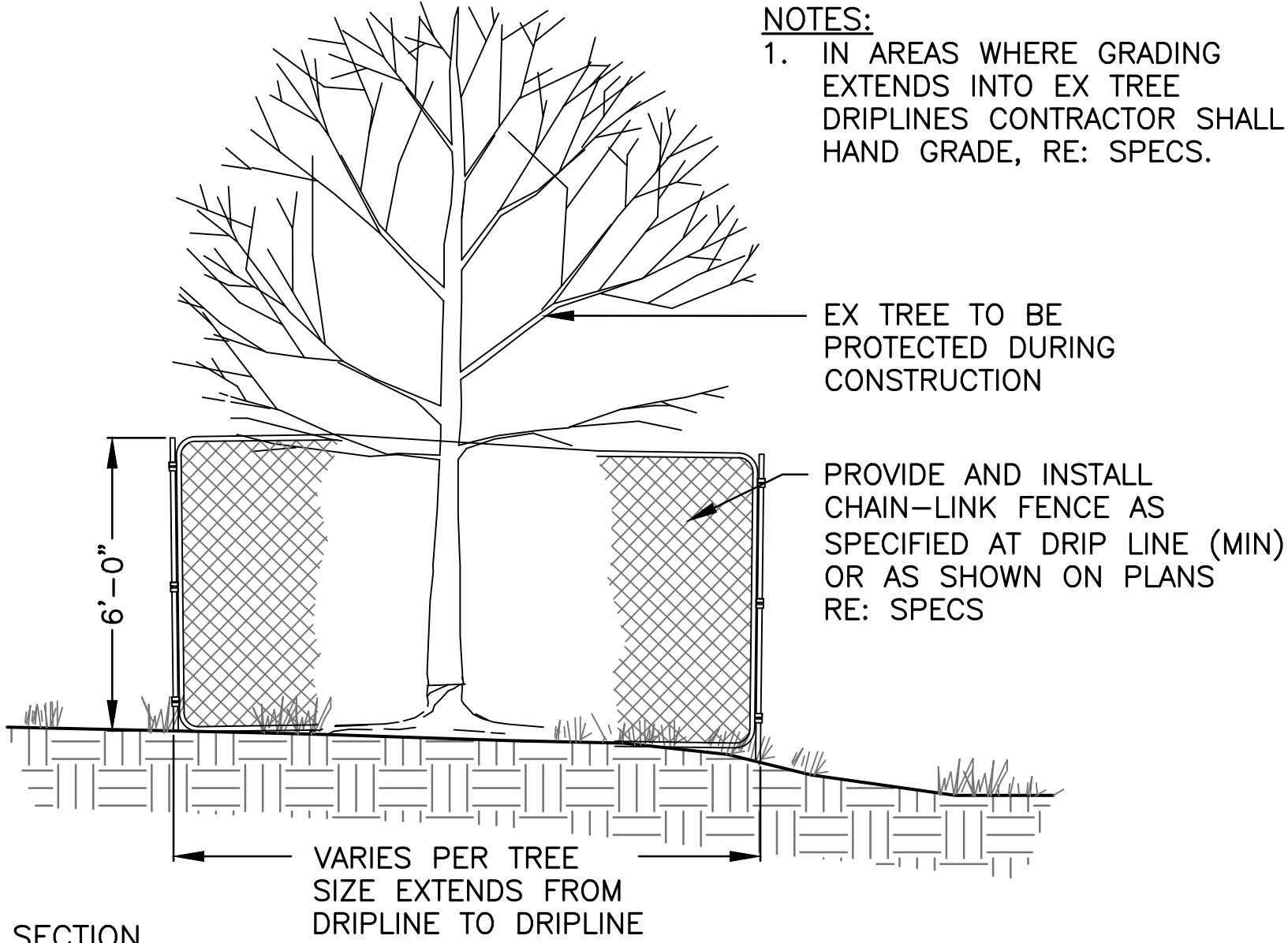
TREE REMOVAL NOTES:

1. TREE REMOVAL IS BASED ON SURVEYED TREES.
2. 55 TOTAL TREES TO BE REMOVED.
3. RE: SHEETS L1.1, L2.1, AND L4.1 FOR SPECIFIC TREES TO BE REMOVED.

TREE PROTECTION NOTES:

1. SITE PREPARATION WITHIN AREAS OF TREE PROTECTION FENCING SHALL BE DONE BY HAND.
2. CONTRACTOR SHALL PROTECT ALL EXISTING TREES TO REMAIN AS INDICATED ON PLANS AND DETAILS.
3. CONTRACTOR SHALL STRIP AREAS TO BE DISTURBED OF TOPSOIL (APPROXIMATELY 6") AND STOCKPILE ON SITE, IN LOCATION APPROVED BY CONTRACTING OFFICER. ALL STOCKPILES TO REMAIN WEED FREE. RE-SPREAD TOPSOIL IN AREAS TO BE SEEDED.
4. ALL TREE REMOVALS SHALL BE TAGGED AND REVIEWED BY GOVERNMENT PRIOR TO REMOVAL.
5. RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND.

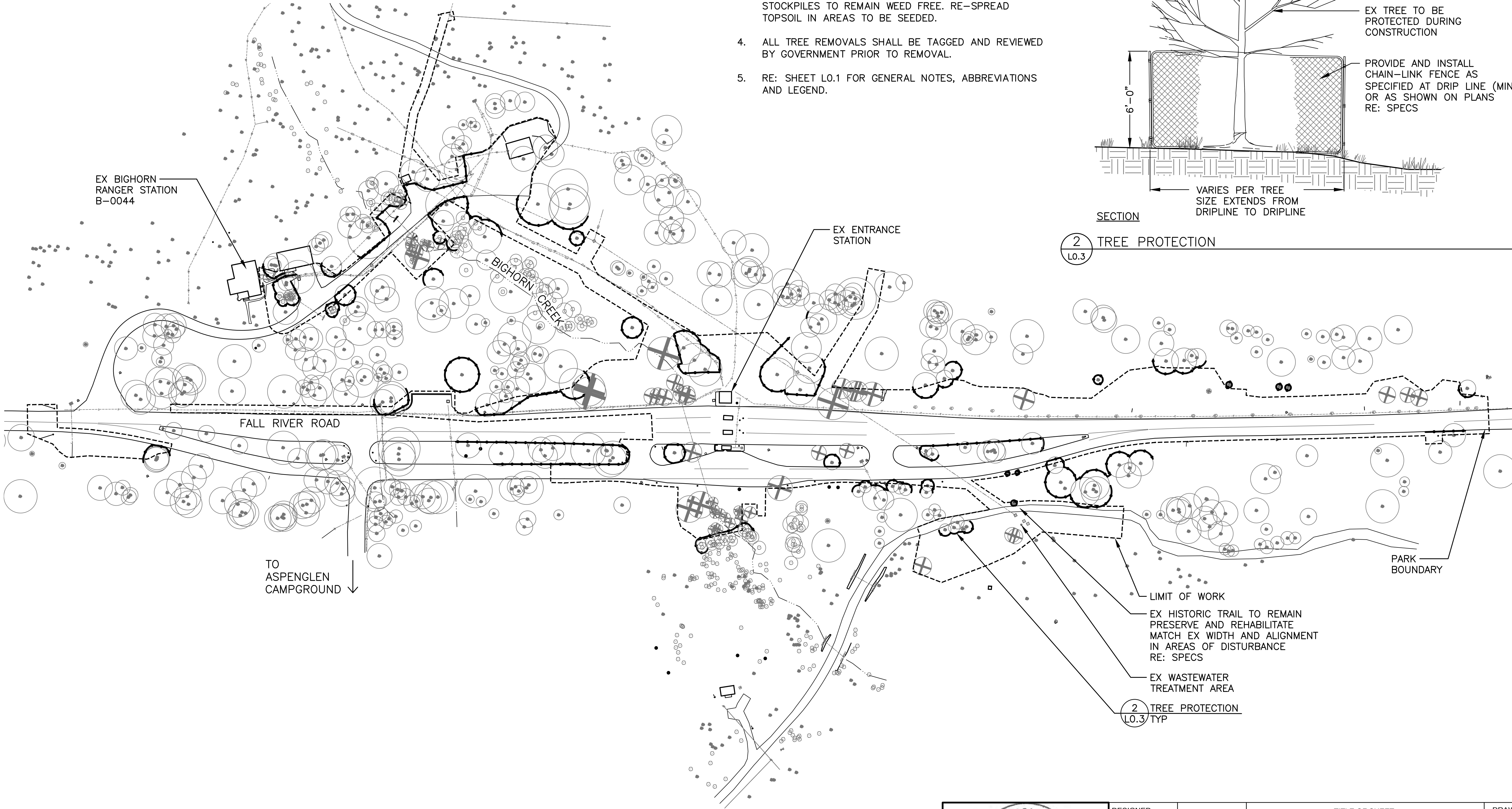
- NOTES:
1. IN AREAS WHERE GRADING EXTENDS INTO EX TREE DRIPLINES CONTRACTOR SHALL HAND GRADE, RE: SPECS.



SECTION

2 TREE PROTECTION

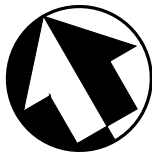
L0.3



1 OVERALL EXISTING CONDITION AND TREE PROTECTION PLAN

L0.3

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SCALE OF FEET



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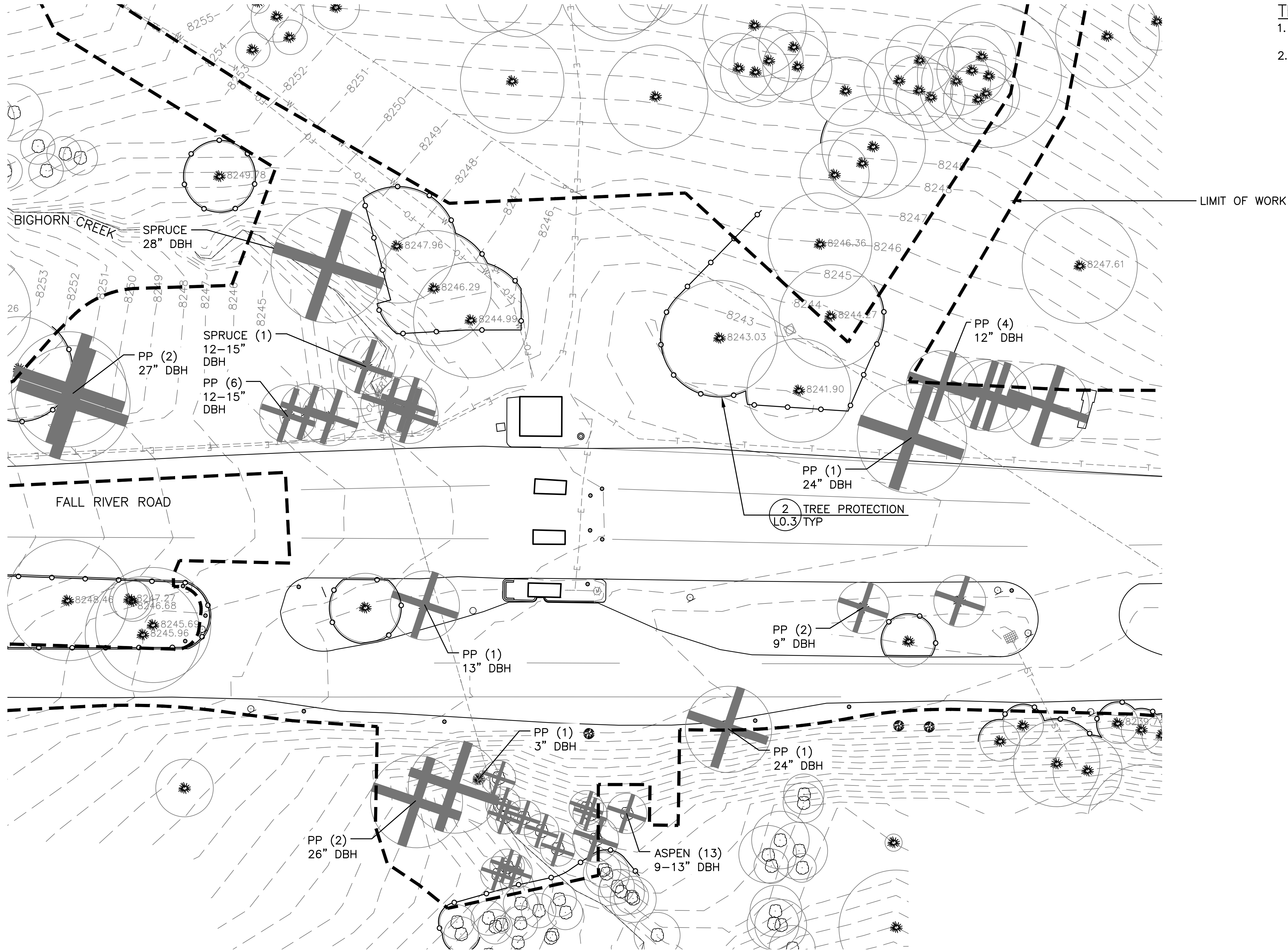
SUB SHEET NO.

L0.3

TITLE OF SHEET
**OVERALL
EX CONDITION AND
TREE PROTECTION PLAN**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

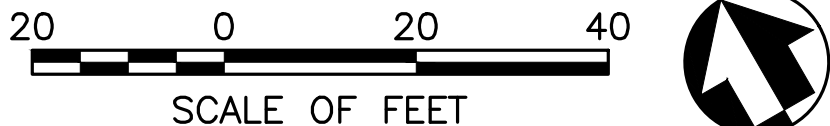
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- TREE PROTECTION NOTES:**
- RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
 - RE: SHEET L0.3 FOR TREE PROTECTION NOTES.

1 ENTRANCE STATION — EXISTING CONDITION AND TREE PROTECTION PLAN
L1.1



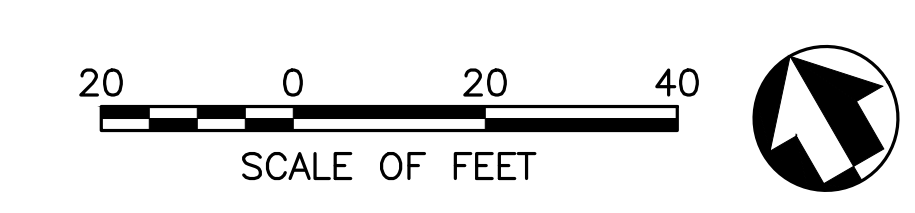
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SUB SHEET NO.
L1.1

TITLE OF SHEET
**ENTRANCE STATION
EX CONDITION AND TREE
PROTECTION PLAN**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

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1 ENTRANCE STATION – MATERIALS PLAN
L1.2

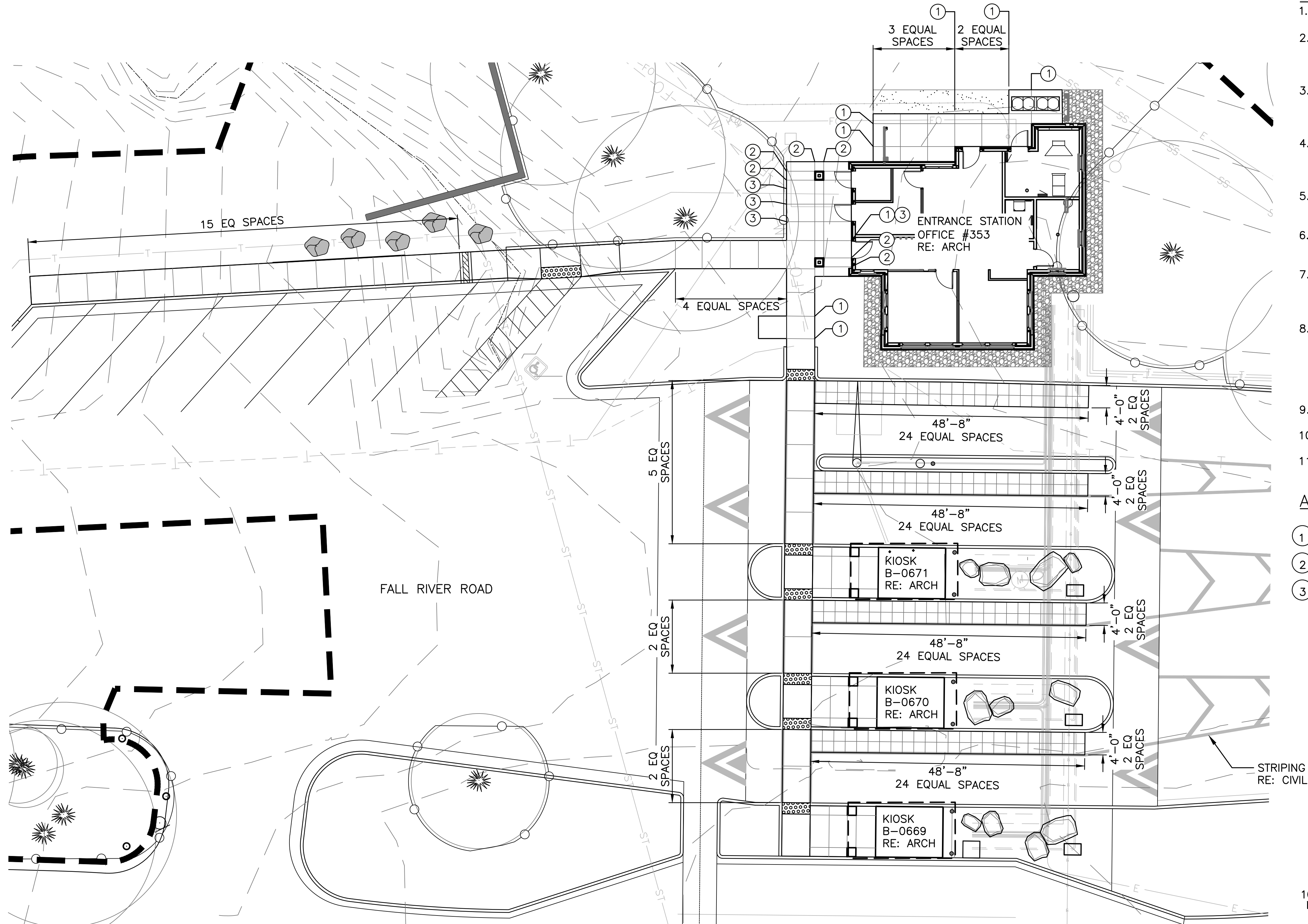
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FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO. 121 176678
PMIS/PKG NO. 160755
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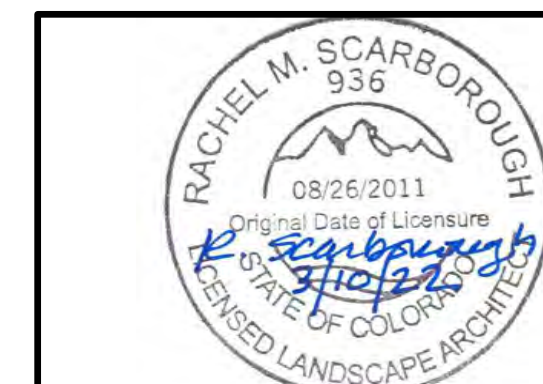
LAYOUT NOTES:

1. RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL SITE IMPROVEMENTS SHALL BE FIELD SURVEYED AND STAKED BY CONTRACTOR. RECEIVE CONTRACTING OFFICER APPROVAL OF STAKED LOCATIONS OF IMPROVEMENTS PRIOR TO INSTALLATION START-UP.
3. RECEIVE CONTRACTING OFFICER APPROVAL OF FINAL STAKING BY CONTRACTOR OF ALL CONCRETE FLATWORK PRIOR TO CONSTRUCTION AND ALL FORM WORK PRIOR TO POURING.
4. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. ANY DEVIATION FROM THESE PLANS MUST BE APPROVED BY CONTRACTING OFFICER PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL FIELD VERIFY UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
6. RE: SITE SURVEY FOR ADDITIONAL CONTROL POINTS, MONUMENTS AND BENCHMARKS.
7. NOTIFY CONTRACTING OFFICER IMMEDIATELY OF ANY DISCREPANCY BETWEEN WRITTEN COORDINATE POINTS/ELEVATIONS AND DIGITAL INFORMATION.
8. ALL CONTROL JOINTS SHALL BE SAWCUT AND SPACED AS INDICATED ON THE DRAWINGS AND DETAILS. EXPANSION JOINTS SHALL BE PLACED AS INDICATED ON THE DRAWINGS OR EVERY 80'. CONTRACTOR SHALL LAY OUT ALL CONTROL JOINTS AND EXPANSION JOINTS IN THE FIELD FOR APPROVAL BY CONTRACTING OFFICER.
9. RE: CIVIL FOR LAYOUT PLANS.
10. RE: L1.2 FOR MATERIALS PLAN.
11. RE: L1.3 FOR COLORED CONCRETE PAVING PLAN.

ALIGNMENT NOTES:

- 1 ALIGN CONC JT WITH EDGE OF CONC PAVING / BUILDING.
- 2 ALIGN CONC JT WITH COLUMN.
- 3 ALIGN CONC JT WITH DOOR JAM.

1 ENTRANCE STATION — CONCRETE PAVING SCORING PLAN
L1.4



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03/10/2022

SUB SHEET NO.

L1.4

TITLE OF SHEET
**ENTRANCE STATION
CONCRETE PAVING
SCORING PLAN**

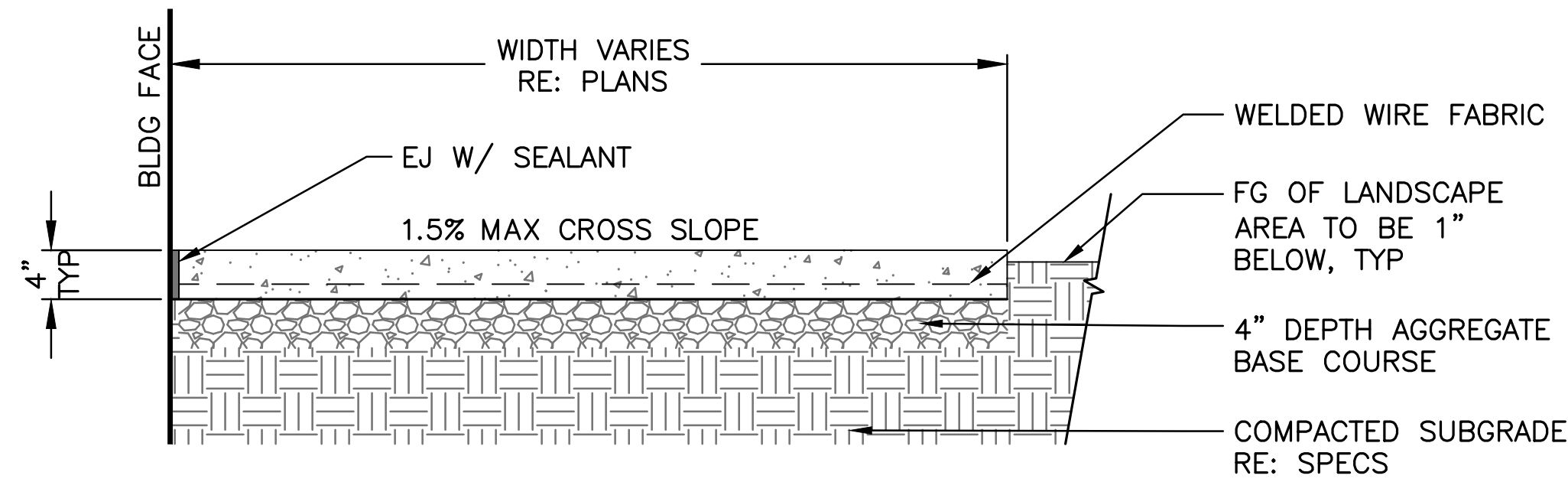
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

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176678
PMIS/PKG NO.
160755
SHEET
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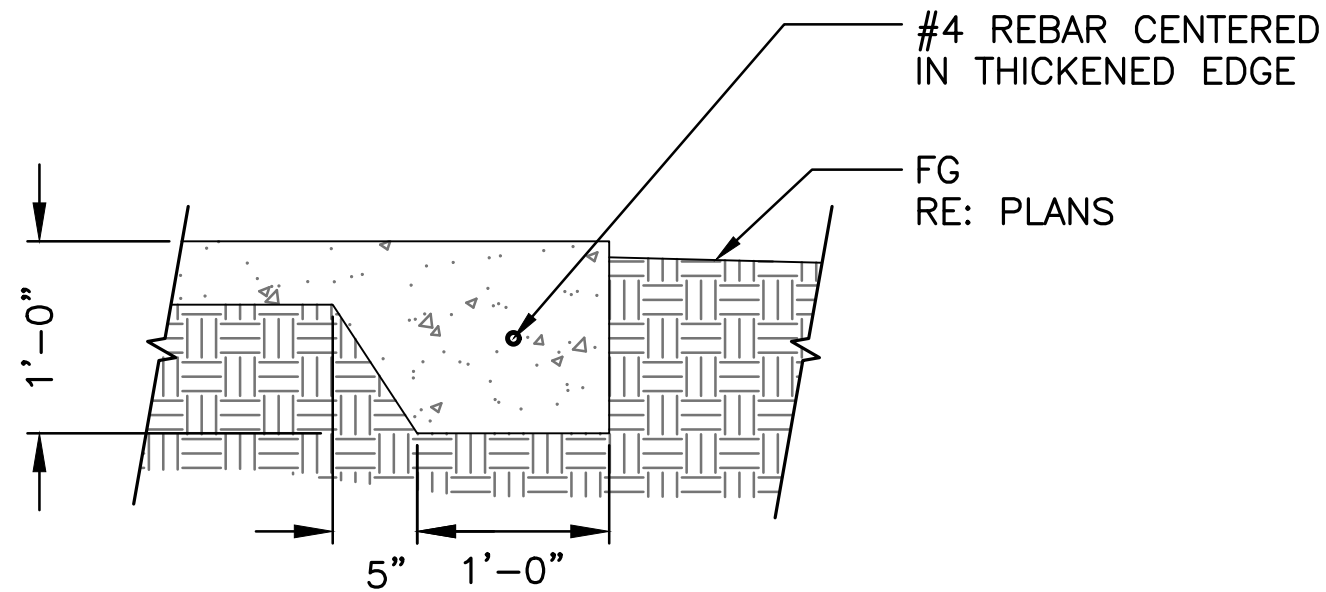
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NOTES:

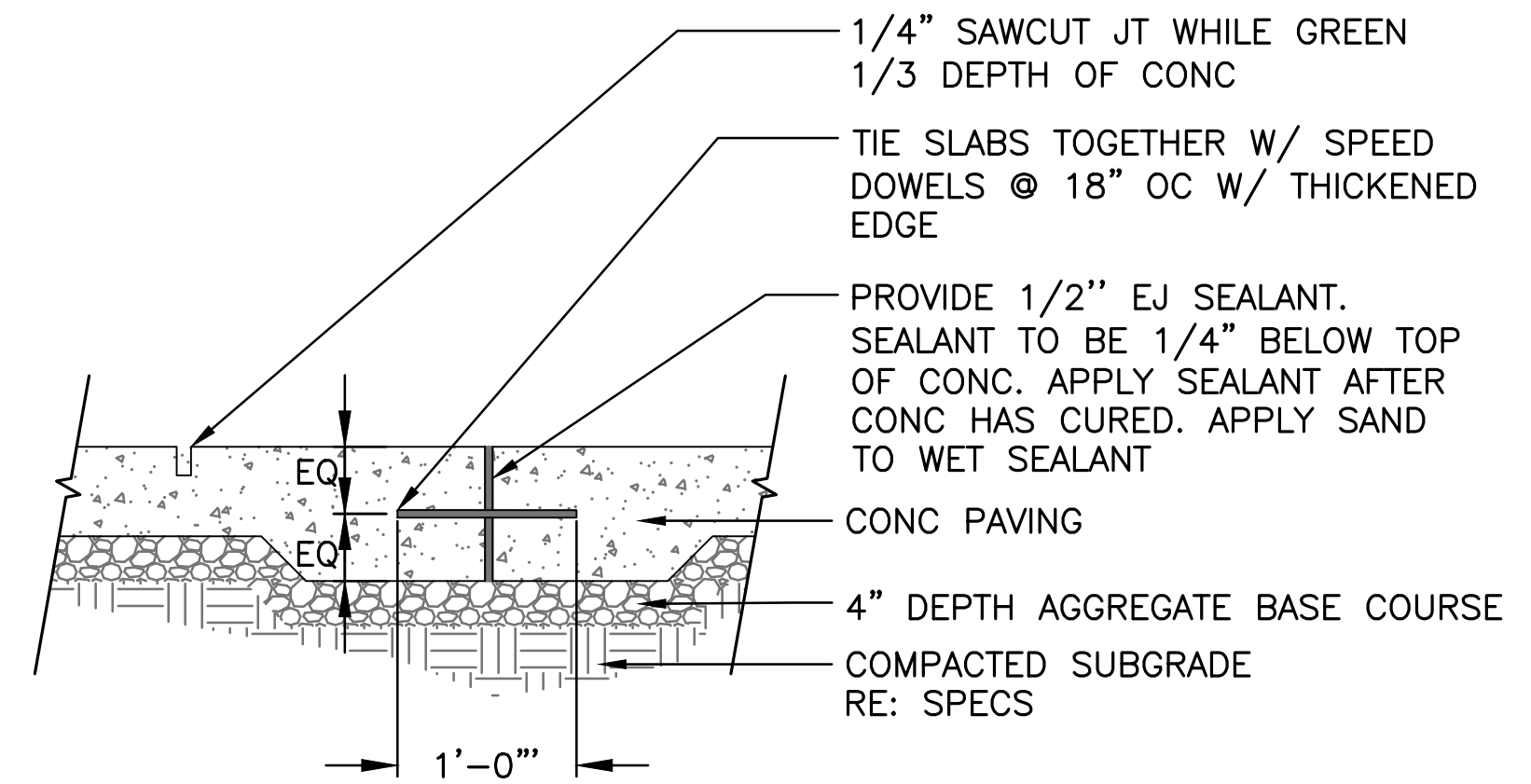
1. PROVIDE EXPANSION JOINTS WHERE PAVEMENT ABUTS WALLS AND STRUCTURES.
2. CONCRETE TO BE COLORED, RE: L1.3.
3. ALL CONSTRUCTED SURFACES SHALL BE INSTALLED TO BE FLUSH WITH EACH OTHER, NOT TO EXCEED 1/4" VERTICAL CHANGE IN LEVEL.
4. DO NOT DOWEL INTO BUILDINGS, WALLS, OR STRUCTURES.
5. PAVING SHALL HAVE POSITIVE DRAINAGE, 1.5% CROSS SLOPE MAX. REFER TO PLANS FOR LONGITUDINAL SLOPE. IF GRADE EXCEEDS MAX ALLOWED, NOTIFY CONTRACTING OFFICER IMMEDIATELY.
6. RE: CIVIL FOR ROADWAY CONCRETE PAVING.



CROSS SECTION



SECTION AT THICKENED EDGE

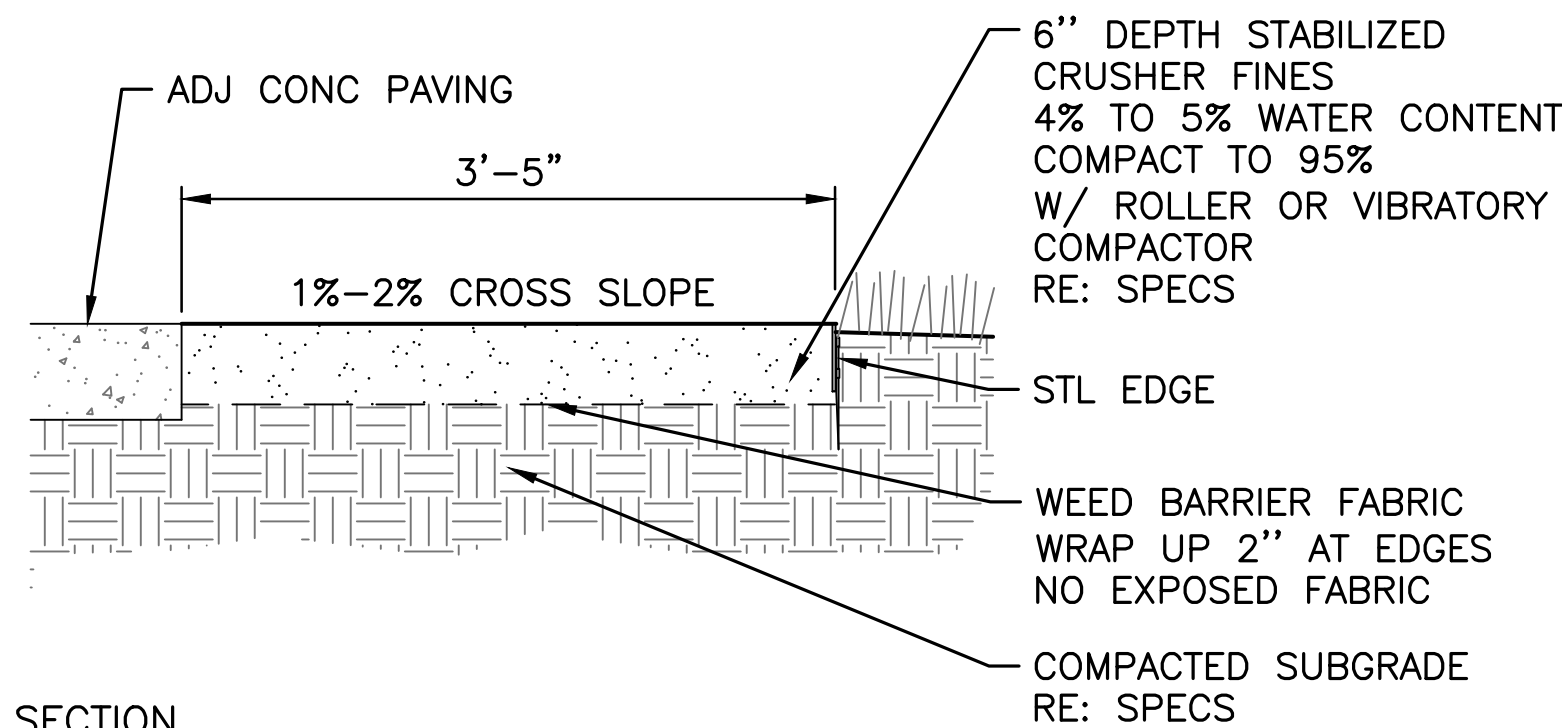


EXPANSION JOINT

1 CONCRETE PAVING – PEDESTRIAN
L1.5 NTS

NOTES:

1. ROCK MULCH SHALL BE 3/4" ANGULAR, CLEAN AND WASHED MOUNTAIN GRANITE. CONTRACTOR SHALL SUBMIT SAMPLE FOR CONTRACTING OFFICERS ACCEPTANCE.
2. WEED BARRIER SHALL BE 4 OZ. PER SQUARE YARD, POLYPROPYLENE WOVEN GEOTEXTILE FABRIC, WATER PERMEABLE, AND UNAFFECTED BY U.V. LIGHT, FREEZING AND THAWING.
3. STEEL EDGE SHALL BE BROWN POWDER COAT FINISH, 14-GAUGE, 6" X 10" ROLL TOP INTERLOCKING SEGMENTS WITH STAKE POCKETS.
4. CONTRACTOR SHALL SUBMIT SAMPLES FOR ALL ABOVE MATERIALS FOR CONTRACTING OFFICERS ACCEPTANCE.

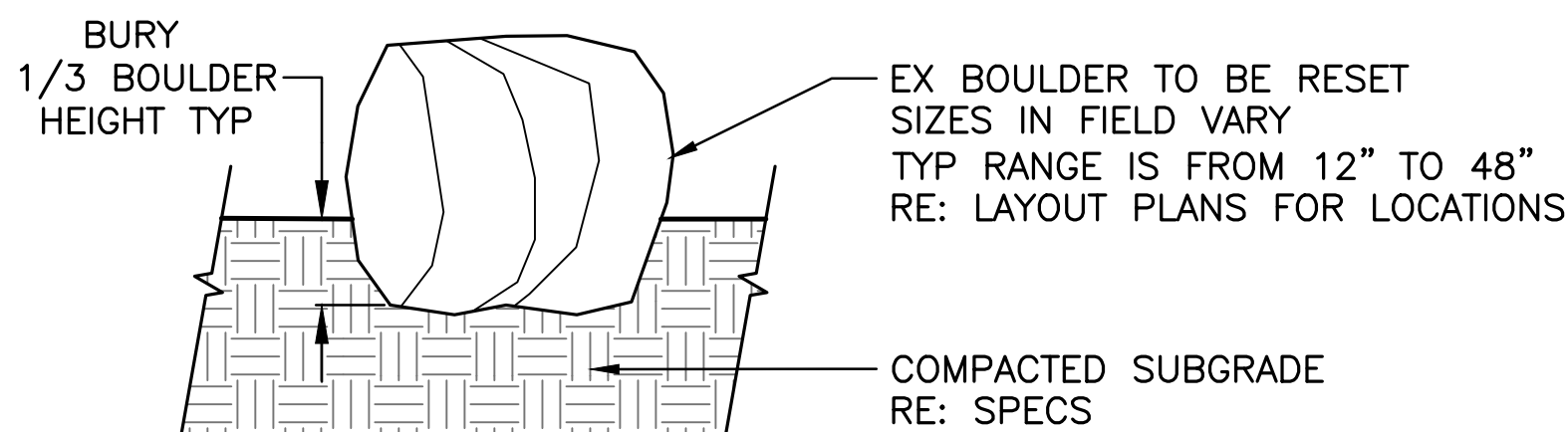


SECTION

2 CRUSHER FINES PAVING
L1.5 NTS

NOTES:

1. BOULDERS SHALL BE GOVERNMENT FURNISHED.

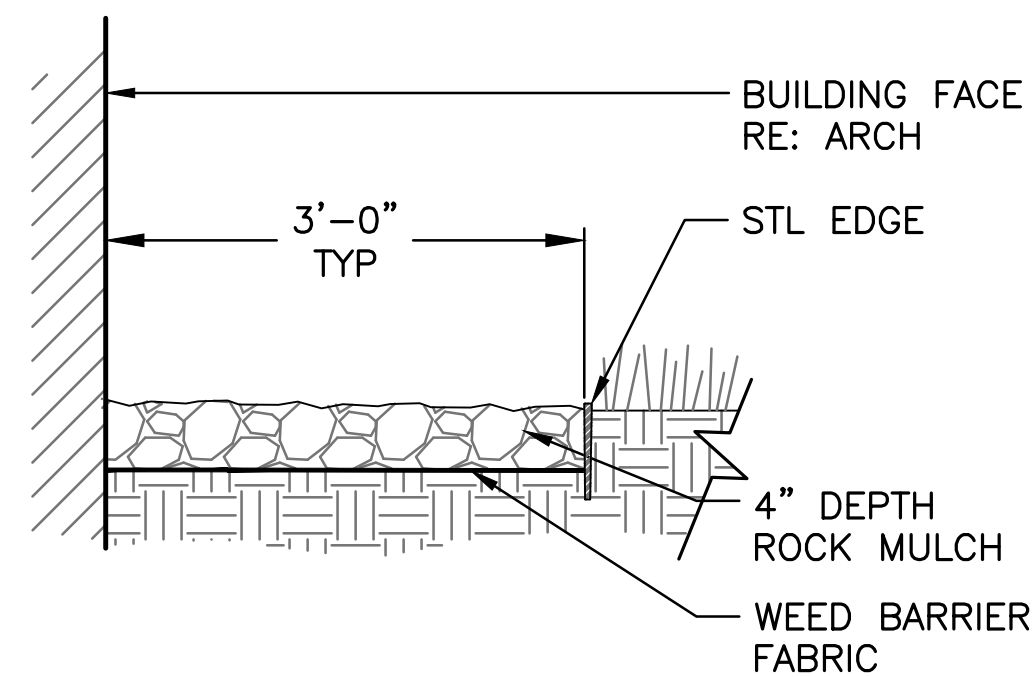


SECTION

5 RESET EX BOULDER
L1.5 NTS

NOTES:

1. ROCK MULCH SHALL BE 3/4" ANGULAR, CLEAN AND WASHED MOUNTAIN GRANITE. CONTRACTOR SHALL SUBMIT SAMPLE FOR CONTRACTING OFFICERS ACCEPTANCE.
2. WEED BARRIER SHALL BE 4 OZ. PER SQUARE YARD, POLYPROPYLENE WOVEN GEOTEXTILE FABRIC, WATER PERMEABLE, AND UNAFFECTED BY U.V. LIGHT, FREEZING AND THAWING.
3. STEEL EDGE SHALL BE BROWN POWDER COAT FINISH, 14-GAUGE, 6" X 10" ROLL TOP INTERLOCKING SEGMENTS WITH STAKE POCKETS.
4. CONTRACTOR SHALL SUBMIT SAMPLES FOR ALL ABOVE MATERIALS FOR CONTRACTING OFFICERS ACCEPTANCE.

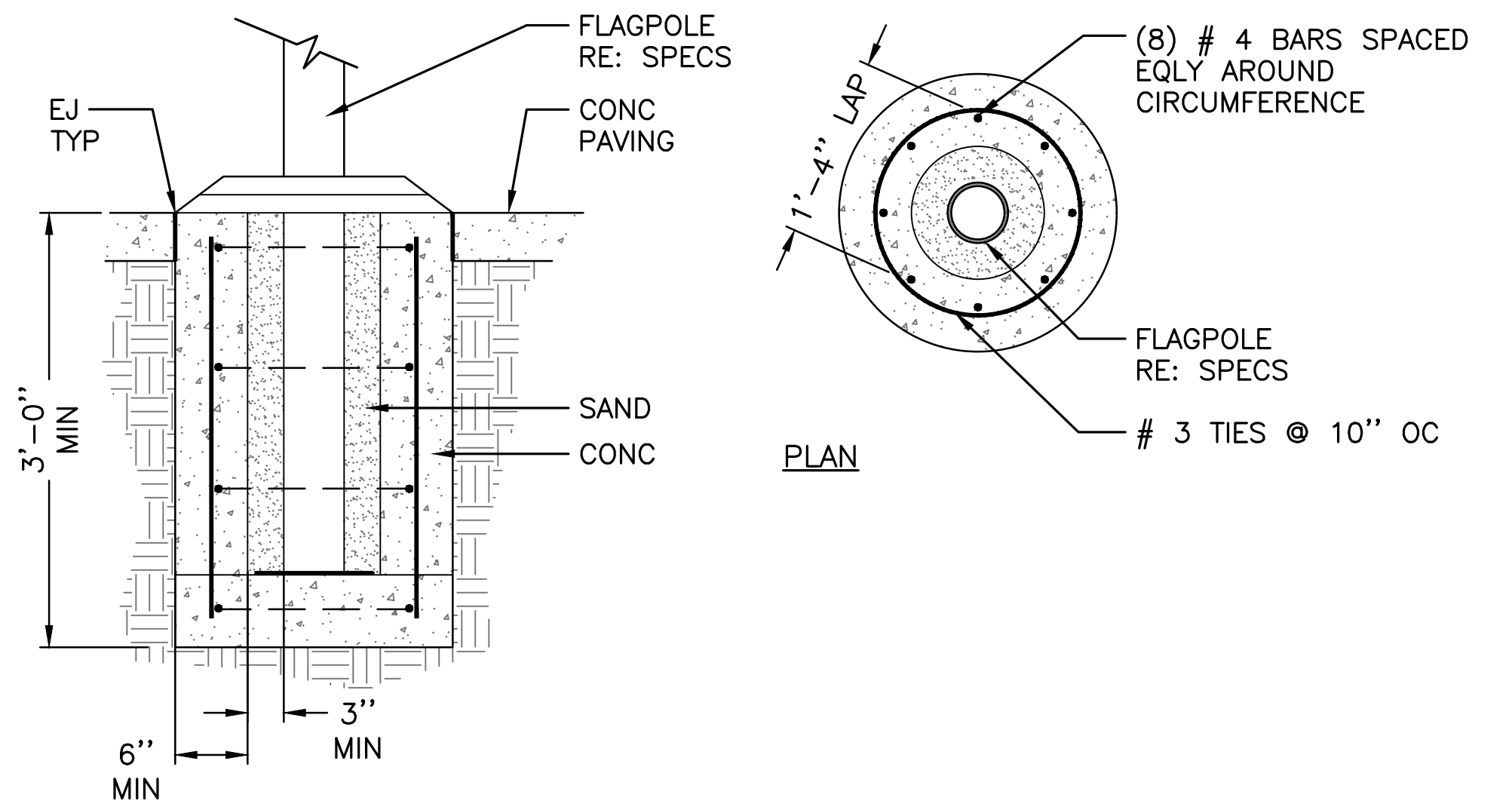


SECTION

3 ROCK MULCH AT BUILDING
L1.5 NTS

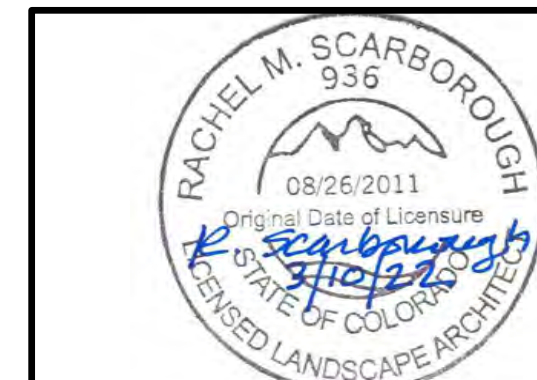
NOTES:

1. CONTRACTOR SHALL INSTALL FLAGPOLE AS PER MANUFACTURER RECOMMENDATIONS.



SECTION

4 FLAGPOLE
L1.5 NTS



DESIGNED:
RS
BS/JS
TECH REVIEW:
TB
DATE:
03/10/2022

SUB SHEET NO.

L1.5

TITLE OF SHEET

SITE DETAILS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.

121

176678

PMIS/PKG NO.

160755

SHEET

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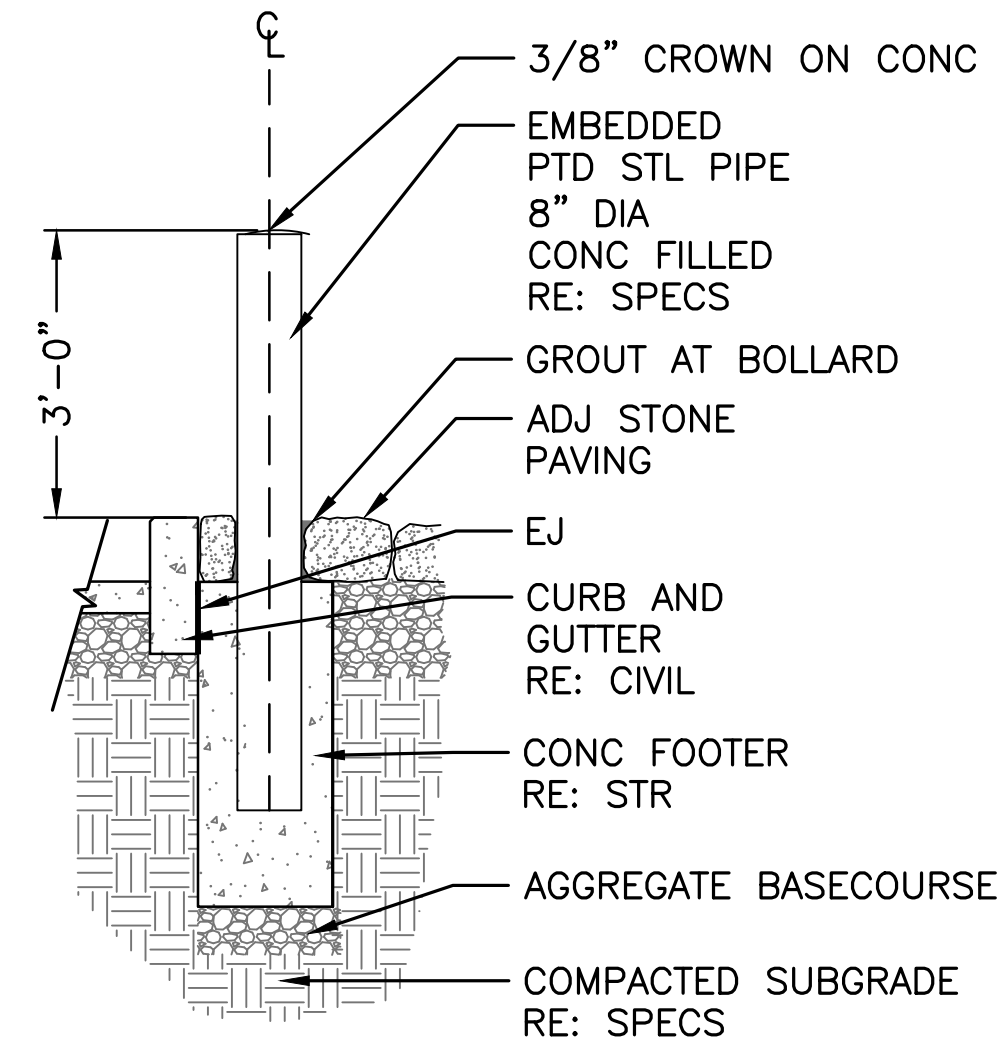
3/08/22 17:25 brittany R25 S:\Projects\ROMO Fall River Entrance - 2016\Drawings\05-CD Final\ROMO160755\DRAWINGS\LA\1.6 KIOSK MEDIAN DETAILS.dwg

ALIGNMENT NOTES:

- 1 ALIGN CONC JT WITH EDGE OF CONC.
- 2 ALIGN CONC JT WITH COLUMN.
- 3 ALIGN CONC JT WITH DOOR JAM.

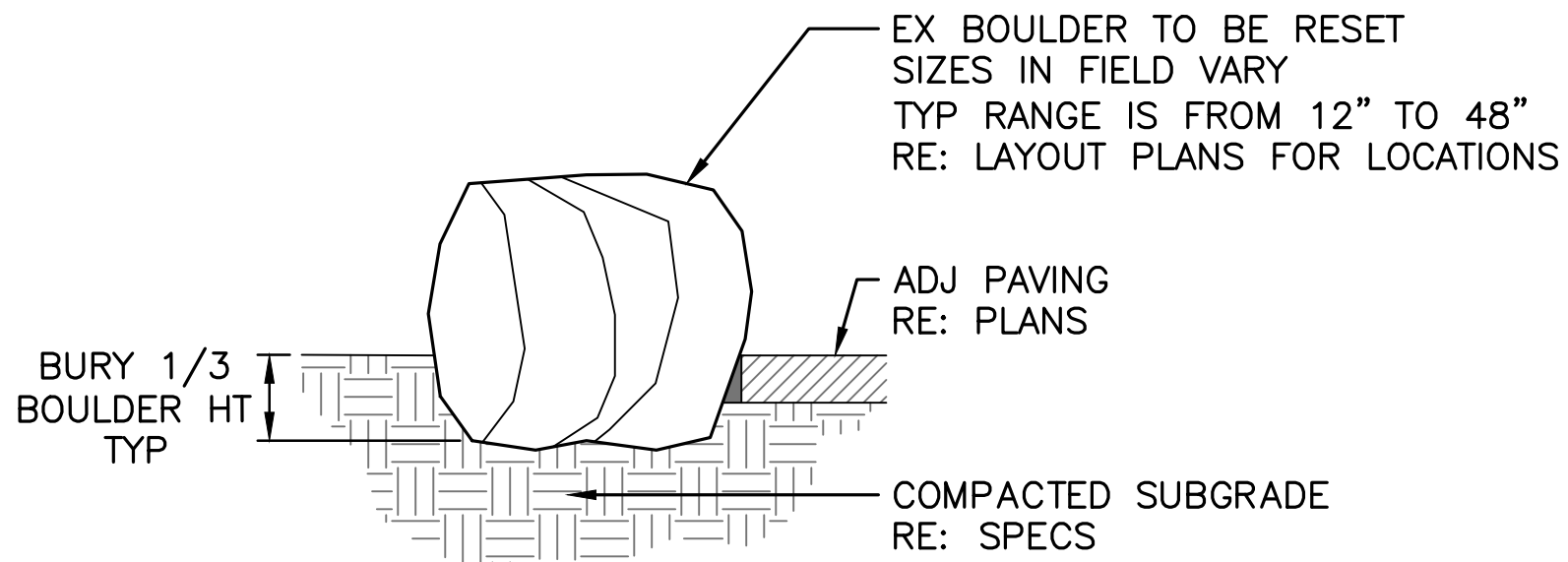
NOTES:

1. BASE BID - CARBON STEEL PAINTED BROWN TO COMPLIMENT ARCHITECTURE. COLOR SHALL BE APPROVED BY CONTRACTING OFFICER.
2. BID OPTION 6 - CORROSIVE RESISTANT CORTEN STRUCTURAL STEEL.



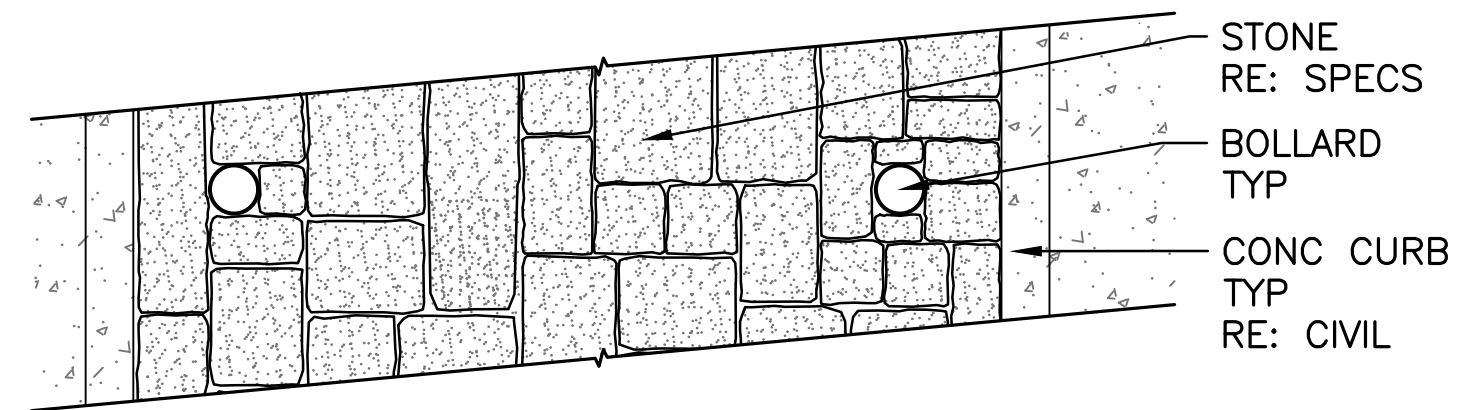
NOTES:

1. BOULDERS SHALL BE GOVERNMENT FURNISHED.

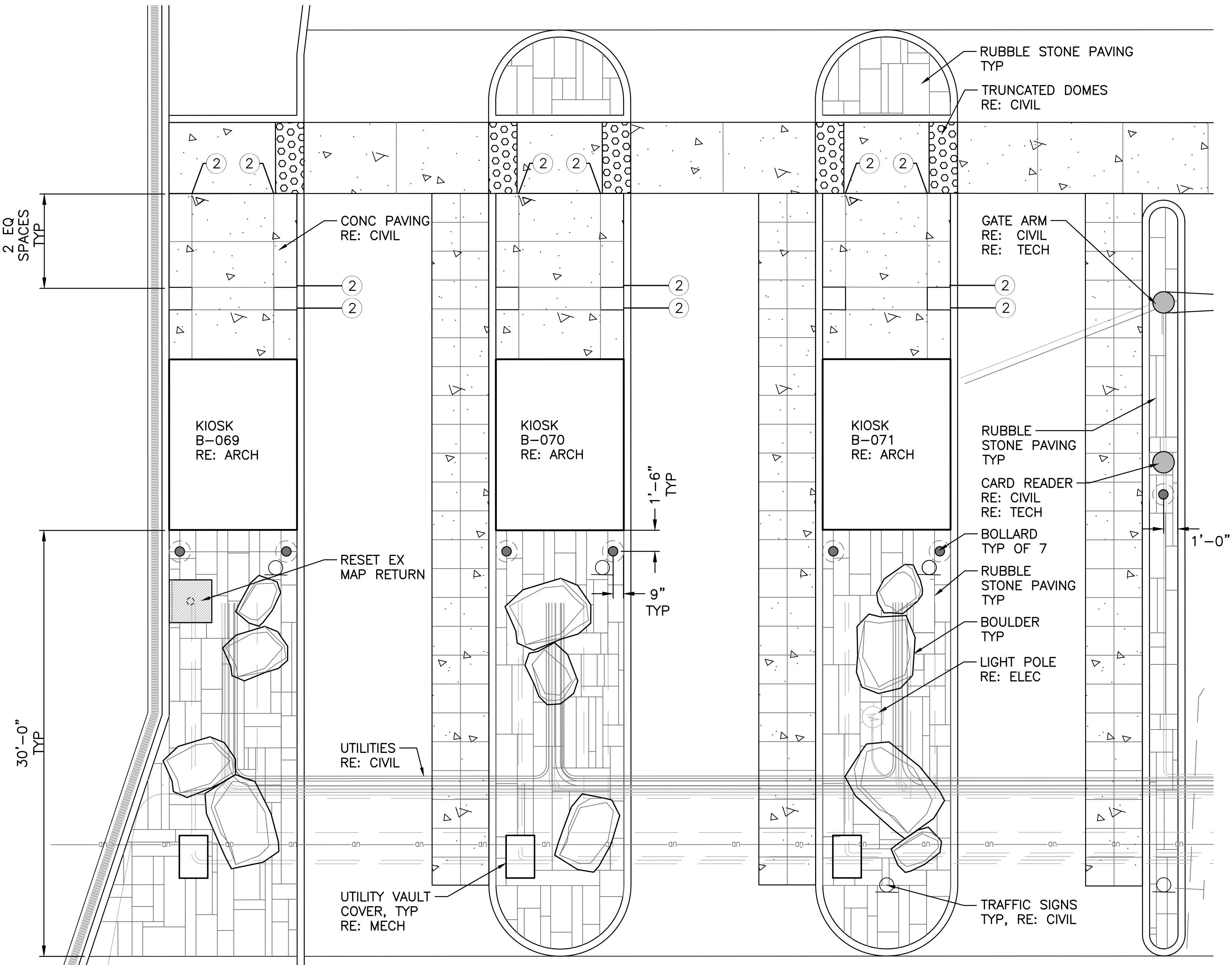
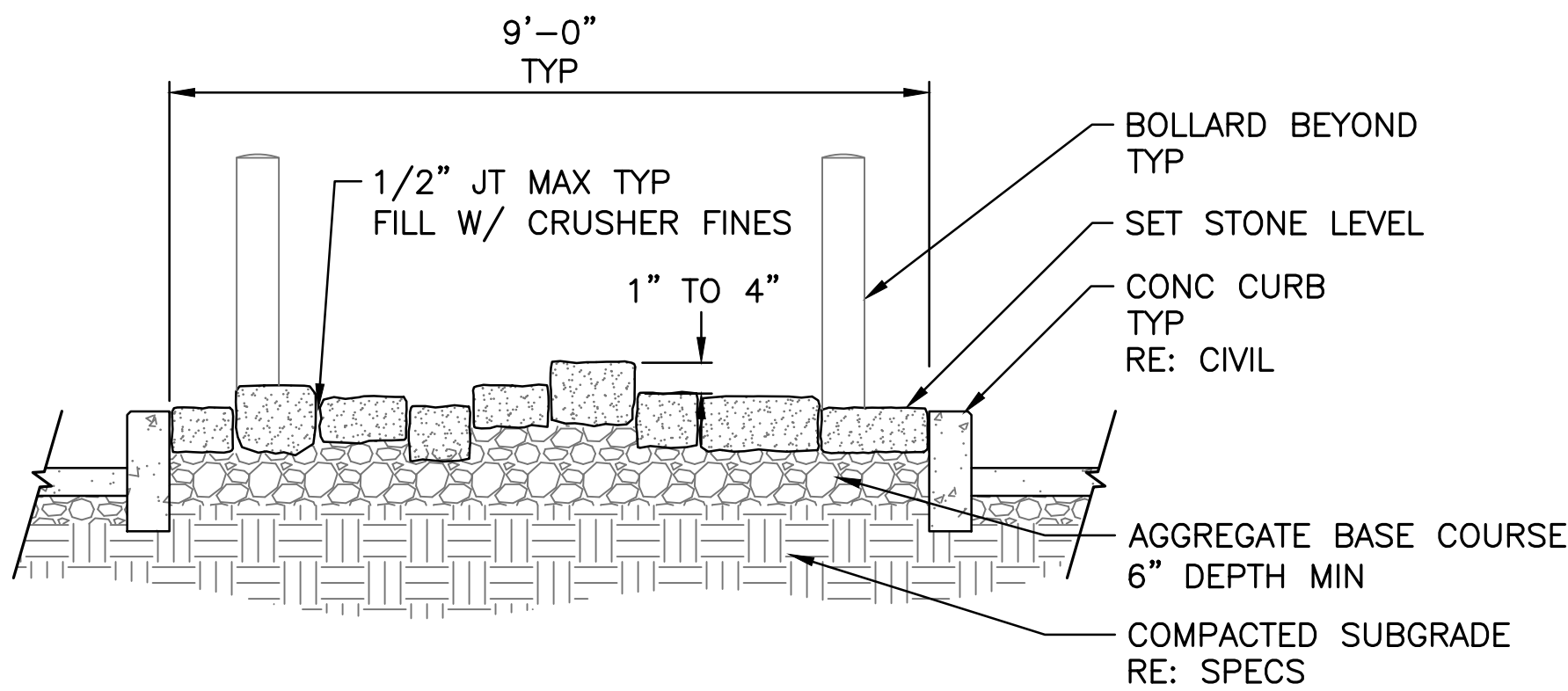


NOTES:

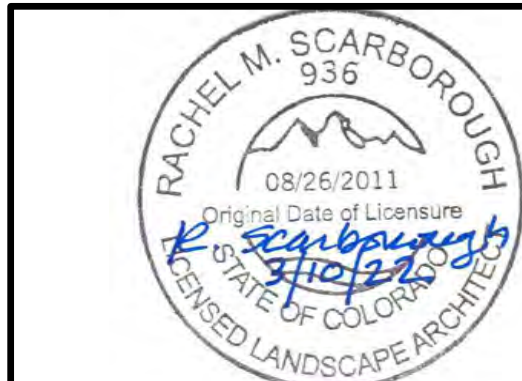
1. STONE SHALL BE LOCAL QUARRIED GRANITE.
2. STONE VARIES FROM 9" X 6" MINIMUM TO 36" X 18" MAXIMUM LENGTH AND WIDTH, 6" X 8" MAX DEPTH.
3. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND MOCK UP FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.



STONE PAVING PRECEDENT



1 KIOSK MEDIAN
L1.6 NTS



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DATE:
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SUB SHEET NO.

L1.6

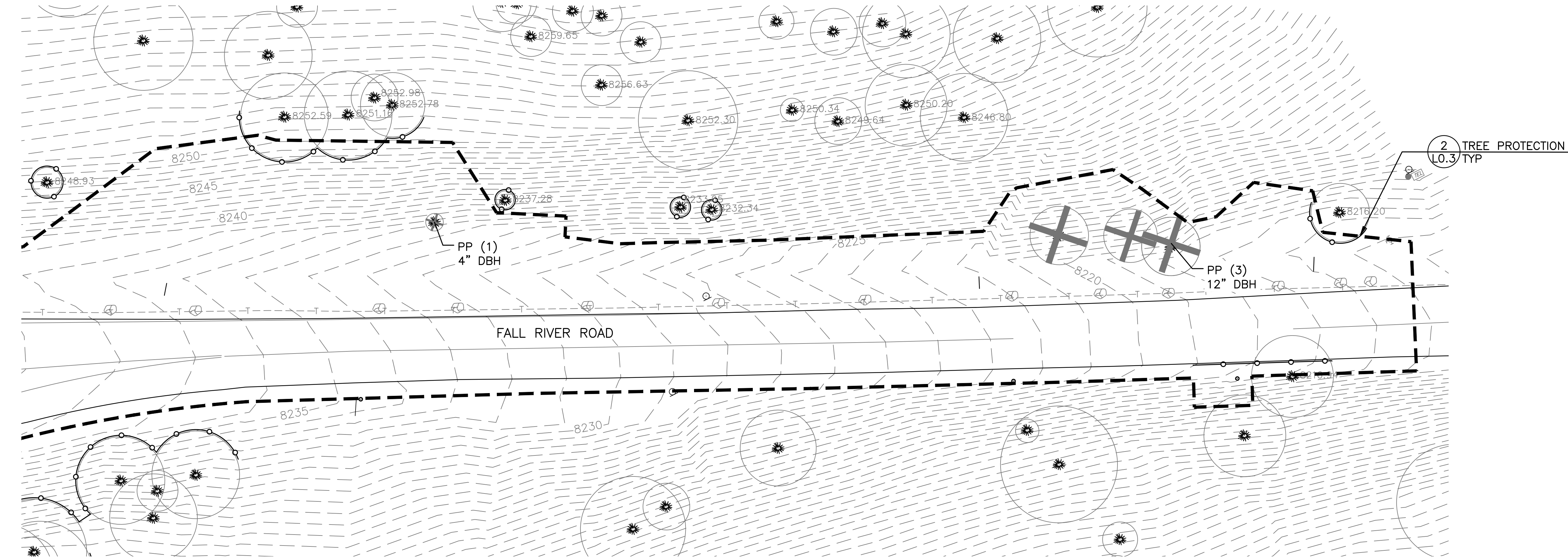
TITLE OF SHEET
KIOSK MEDIAN
DETAILS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

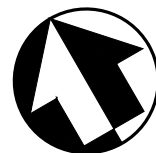
DRAWING NO.
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- TREE PROTECTION NOTES:
- RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
 - RE: SHEET L0.3 FOR TREE PROTECTION NOTES.



1 PARK SIGNS – EXISTING CONDITON AND TREE PROTECTION PLAN
L2.1



	DESIGNED: RS	SUB SHEET NO. L2.1	TITLE OF SHEET PARK SIGNS EX CONDITION AND TREE PROTECTION PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	BS/JS			PMIS/PKG NO. 160755
	TECH REVIEW: TB			SHEET
	DATE: 03/10/2022			79 OF 165

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LAYOUT DATA — WALLS

TABLE OF COORDINATE POINTS

POINT NO.	EASTING (X)	NORTHING (Y)	NOTES
W-1	976159.52	390529.13	END OF WALL, FACE OF WALL
W-2	976222.81	390498.50	FACE OF WALL
W-3	976262.06	390476.50	END OF WALL, FACE OF WALL

LAYOUT DATA — SIGNS

TABLE OF COORDINATE POINTS

POINT NO.	EASTING (X)	NORTHING (Y)	NOTES
S-1	976146.36	390527.63	MONUMENT SIGN, FACE OF STONE BASE
S-2	976160.29	390533.20	MONUMENT SIGN, FACE OF STONE BASE
S-3	976471.26	390378.67	VARIABLE MESSAGE SIGN, FACE OF STONE BASE
S-4	976483.35	390378.30	VARIABLE MESSAGE SIGN, FACE OF STONE BASE

LAYOUT DATA — CAMERA POST

TABLE OF COORDINATE POINTS

POINT NO.	EASTING (X)	NORTHING (Y)	NOTES
P-1	976168.45	390517.59	CENTER OF POST

LAYOUT DATA — CONC PAVING

TABLE OF COORDINATE POINTS

POINT NO.	EASTING (X)	NORTHING (Y)	NOTES
C-1	976200.42	390504.90	EDGE OF CONC, EDGE OF ASPH

LAYOUT DATA — ASPHALT

TABLE OF COORDINATE POINTS

POINT NO.	EASTING (X)	NORTHING (Y)	NOTES
A-1	976174.74	390504.07	EDGE OF ASPH
A-2	976179.11	390505.94	EDGE OF ASPH
A-3	976194.77	390502.22	EDGE OF ASPH
A-4	976260.49	390477.38	EDGE OF ASPH
A-5	976259.54	390475.39	EDGE OF ASPH
A-6	976261.12	390469.70	EDGE OF ASPH
A-7	976275.49	390459.01	EDGE OF ASPH
A-8	976276.41	390455.30	EDGE OF ASPH

TABLE OF CURVES — ASPHALT

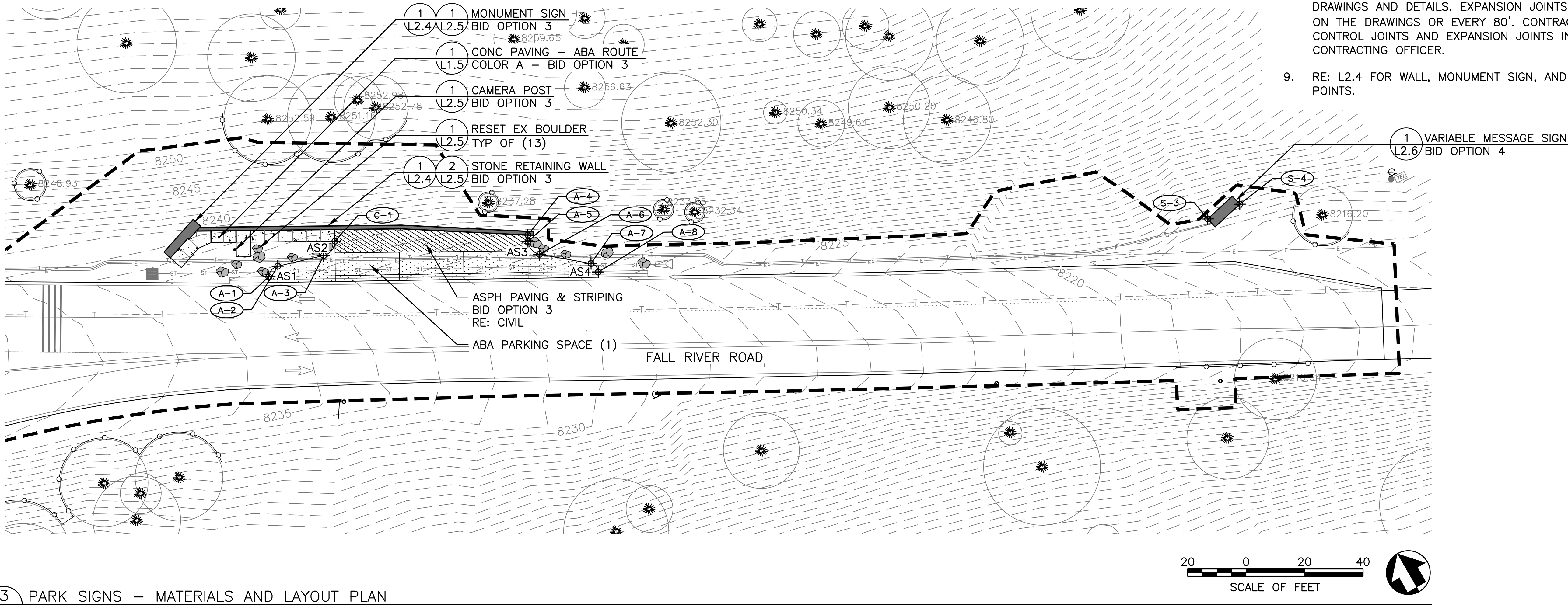
CURVE NO.	POINT OF BEGINNING	POINT OF END	RADIUS	LENGTH
AS1	A-1	A-2	4.00	5.41
AS2	A-3	C-1	5.00	6.77
AS3	A-5	A-6	5.00	6.81
AS4	A-7	A-8	3.00	4.14

MATERIALS NOTES:

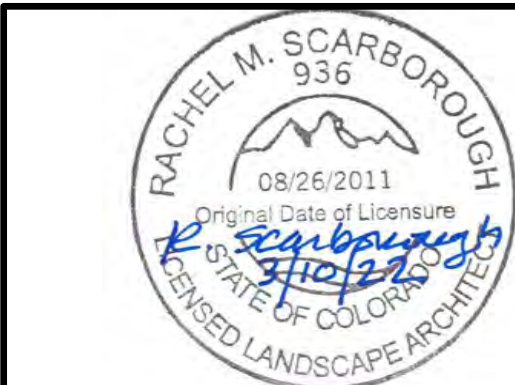
- RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

LAYOUT NOTES:

- RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
- ALL SITE IMPROVEMENTS SHALL BE FIELD SURVEYED AND STAKED BY CONTRACTOR. RECEIVE CONTRACTING OFFICER APPROVAL OF STAKED LOCATIONS OF IMPROVEMENTS PRIOR TO INSTALLATION START-UP.
- RECEIVE CONTRACTING OFFICER APPROVAL OF FINAL STAKING BY CONTRACTOR OF ALL CONCRETE FLATWORK PRIOR TO CONSTRUCTION AND ALL FORM WORK PRIOR TO POURING.
- ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. ANY DEVIATION FROM THESE PLANS MUST BE APPROVED BY CONTRACTING OFFICER PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL FIELD VERIFY UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
- RE: SITE SURVEY FOR ADDITIONAL CONTROL POINTS, MONUMENTS AND BENCHMARKS.
- NOTIFY CONTRACTING OFFICER IMMEDIATELY OF ANY DISCREPANCY BETWEEN WRITTEN COORDINATE POINTS/ELEVATIONS AND DIGITAL INFORMATION.
- ALL CONTROL JOINTS SHALL BE SAWCUT AND SPACED AS INDICATED ON THE DRAWINGS AND DETAILS. EXPANSION JOINTS SHALL BE PLACED AS INDICATED ON THE DRAWINGS OR EVERY 80'. CONTRACTOR SHALL LAY OUT ALL CONTROL JOINTS AND EXPANSION JOINTS IN THE FIELD FOR APPROVAL BY CONTRACTING OFFICER.
- RE: L2.4 FOR WALL, MONUMENT SIGN, AND CAMERA POST COORDINATE POINTS.



3 PARK SIGNS — MATERIALS AND LAYOUT PLAN
L2.2



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BS/JS
TECH REVIEW:
TB
DATE:
03/10/2022

SUB SHEET NO.

L2.2

TITLE OF SHEET
PARK SIGNS
MATERIALS AND
LAYOUT PLAN

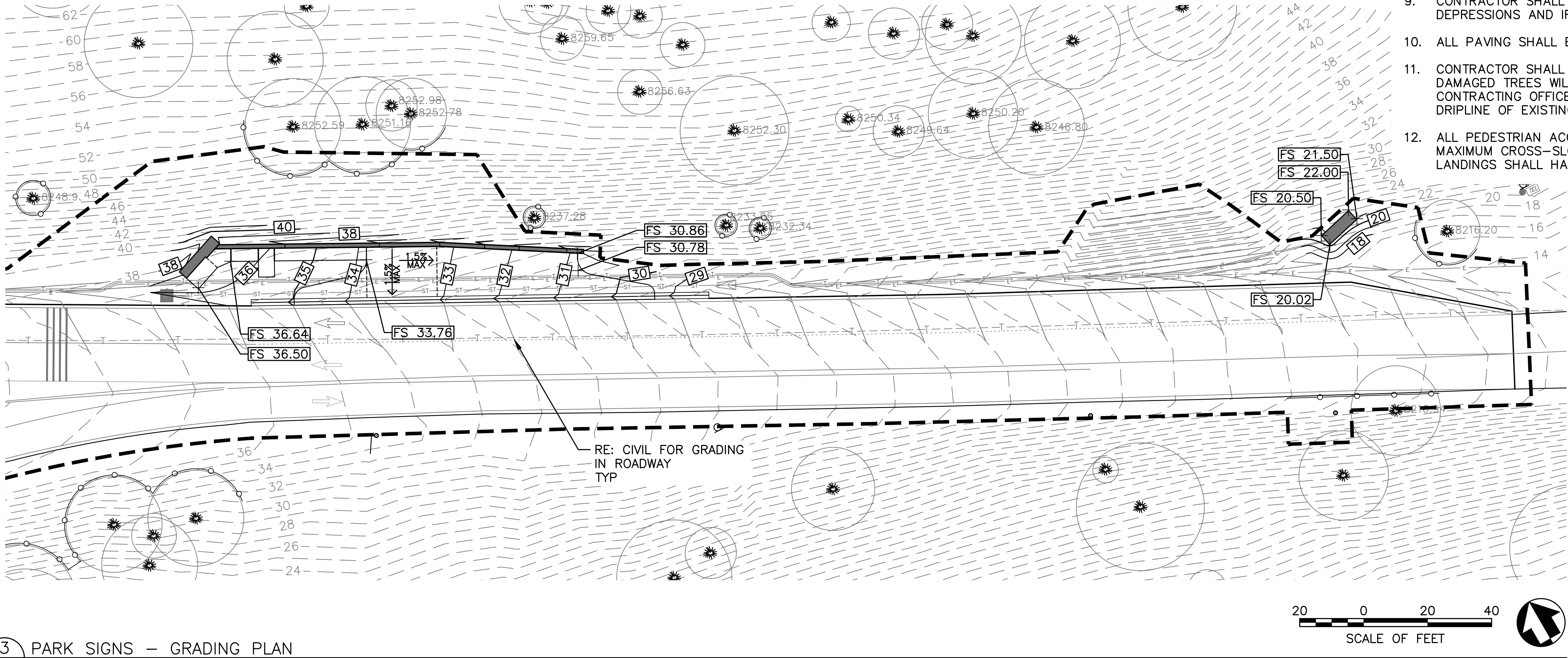
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
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GRADING NOTES

1. RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. EXISTING CONTOUR INTERVAL IS 1 FOOT.
3. PROPOSED CONTOUR INTERVAL IS 1 FOOT.
4. ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE PREPARED AND SEEDED, RE: SPECIFICATIONS.
5. ALL TOPSOIL WHERE PHYSICALLY PRACTICABLE, SHALL BE SALVAGED AND NO TOPSOIL SHALL BE REMOVED FROM THE SITE EXCEPT AS SET FORTH IN THE APPROVED PLANS. TOPSOIL AND OVERBURDEN SHALL BE SEGREGATED AND STOCKPILED SEPARATELY. TOPSOIL SHALL NOT BE MOVED AFTER STOCKPILING. ALL STOCKPILES SHALL REMAIN WEED FREE. TOPSOIL AND OVERBURDEN SHALL BE REDISTRIBUTED WITHIN THE GRADED AREA AFTER ROUGH GRADING TO PROVIDE A SUITABLE BASE FOR AREAS THAT WILL BE SEEDED AND PLANTED. RUNOFF FROM THE STOCKPILED AREA SHALL BE CONTROLLED TO PREVENT EROSION AND RESULTING SEDIMENTATION OF RUNOFF WATER.
6. CONTRACTOR SHALL USE WATER SPRINKLING AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT SCATTERING WHEN REQUESTED BY THE GOVERNMENT. DO NOT USE WATER WHEN IT MAY CREATE HAZARDOUS CONDITIONS SUCH AS ICING, FLOODING OR RUNOFF POLLUTION.
7. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND BASE BID ON ACTUAL CONDITIONS AND MEASUREMENTS. POSITIVE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES. ANY DISCREPANCIES ON THE PLANS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTING OFFICER.
8. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER CONTOURS.
9. CONTRACTOR SHALL PROVIDE SMOOTH FINISH GRADE FREE OF RUTS, DEPRESSIONS AND IRREGULARITIES.
10. ALL PAVING SHALL BE GRADED TO ENSURE POSITIVE DRAINAGE.
11. CONTRACTOR SHALL USE CAUTION WHEN GRADING AROUND EXISTING TREES. DAMAGED TREES WILL BE REPLACED TO THE SATISFACTION OF THE CONTRACTING OFFICER. LARGE EQUIPMENT SHALL NOT BE ALLOWED WITHIN THE DRIPLINE OF EXISTING TREES. RE: SITE DEMOLITION PLAN FOR TREE PROTECTION.
12. ALL PEDESTRIAN ACCESS ROUTES SHALL HAVE 4.0% MAXIMUM SLOPE AND 1.5% MAXIMUM CROSS-SLOPE. ALL CONCRETE BUILDING ENTRIES, BENCH AREAS, AND LANDINGS SHALL HAVE 1.5% MAXIMUM SLOPE AND CROSS-SLOPE.



3 PARK SIGNS - GRADING PLAN
L2.3



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03/10/2022

SUB SHEET NO.
L2.3

TITLE OF SHEET
**PARK SIGNS
GRADING PLAN**

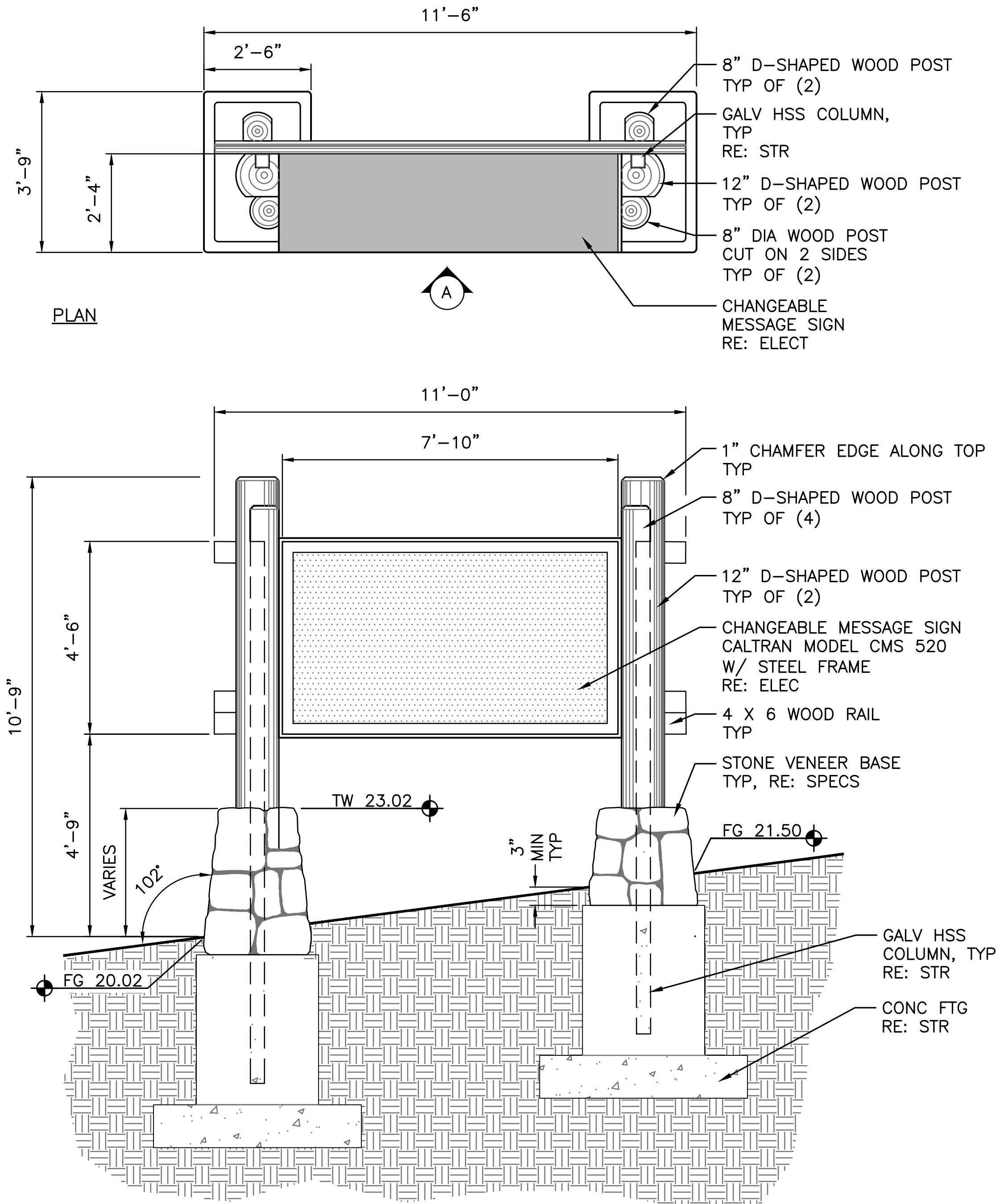
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

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NOTES:

1. LAYOUT LOCATION OF SIGN FOR APPROVAL PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION & INSTALLATION.
3. RE: SPECIFICATIONS FOR FINISH AND STAIN ON WOOD.
4. RE: STRUCTURAL FOR FOOTINGS AND CONNECTION DETAILS.



1
L2.6

VARIABLE MESSAGE SIGN — BID OPTION 4

NTS



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GABD
BS/JS
TECH REVIEW:
TB
DATE:
03/10/2022

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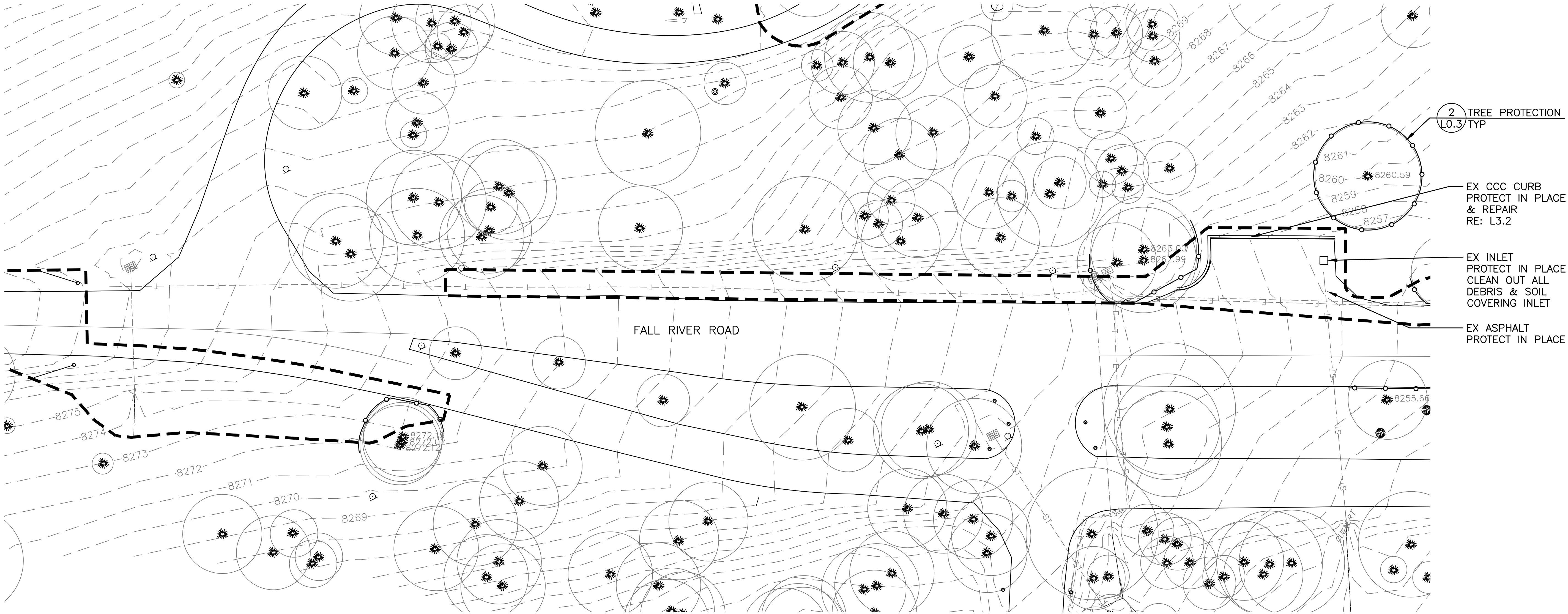
L2.6

TITLE OF SHEET
**VARIABLE MESSAGE
SIGN DETAIL
BID OPTION 4**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

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- TREE PROTECTION NOTES:
- RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
 - RE: SHEET L0.3 FOR TREE PROTECTION NOTES.



2 CCC CURB – EX CONDITION AND TREE PROTECTION PLAN
L3.1



	DESIGNED: RS	SUB SHEET NO. L3.1	TITLE OF SHEET CCC CURB EX CONDITION AND TREE PROTECTION PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	BS/JS			PMIS/PKG NO. 160755
	TECH REVIEW: TB			SHEET 85 OF 165
	DATE: 03/10/2022			

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NOTES:

- EXISTING HISTORIC STONE CURB SHALL BE REPAIRED IN PLACE UNLESS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER. CONTRACTOR SHALL REMOVE DEBRIS & SEDIMENT FROM EXISTING STONES AND CONFIRM THAT HEIGHT AND CONDITION ARE INTACT AND CONSISTENT WITH THE HISTORIC CONDITION.
- IF HISTORIC STONE CURB IS DETERMINED INTACT AND CONDITION IS CONSISTENT WITH THE HISTORIC CONDITIONS, CONTRACTOR SHALL ONLY REPLACE SEVERELY DEGRADED OR THRU-CRACKED STONES THAT MATCH EXISTING STONES IN SIZE, TYPE, COLOR AND COURSING. CONTRACTOR SHALL RESET ANY LOSE STONES, AND REPOINT HEAD JOINTS WHERE MORTAR IS CRACKED OR DEGRADED. MORTAR SHALL MATCH EXISTING MORTAR AND TOOLING. JOINTS SHALL MATCH EXISTING JOINT. PITCH TOP OF HEAD JOINTS TOWARDS TOE OF SLOPE FOR DRAINAGE.
- IF HISTORIC STONE CURB IS DETERMINED ~~NOT~~ INTACT AND ~~NOT~~ CONSISTENT WITH HISTORIC CONDITIONS, CONTRACTOR SHALL REMOVE, SALVAGE AND RESET STONES. IF NEW MATERIAL IS REQUIRED, CONTRACTOR SHALL MATCH EXISTING STONES IN SIZE, TYPE, COLOR AND COURSING. MORTAR SHALL MATCH EXISTING MORTAR AND TOOLING. JOINTS SHALL MATCH EXISTING JOINT. PITCH TOP OF HEAD JOINTS TOWARDS TOE OF SLOPE FOR DRAINAGE.
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.



NORTH STONE CURB (LOOKING EAST) — REPAIR



WEST CURB (LOOKING WEST) — REPAIR

REPLACE/REPAIR
MISSING OR
CRACKED STONES
TYP



STONE CURB — REPAIR

REMOVE SEDIMENT
& DEBRIS
VERIFY CURB
EXTENTS

EX INLET
PROTECT IN PLACE
REMOVE SEDIMENT
& DEBRIS

EX CCC CURB
PROTECT IN PLACE
AND REPAIR

REMOVE SEDIMENT
& DEBRIS AT
BOTTOM AND TOP
OF CURB

EX ASPHALT TO
REMAIN

EX CCC CURB
PROTECT IN PLACE
& REPAIR

REMOVE SEDIMENT
& DEBRIS AT
BOTTOM AND TOP
OF CURB

EX ASPHALT TO
REMAIN

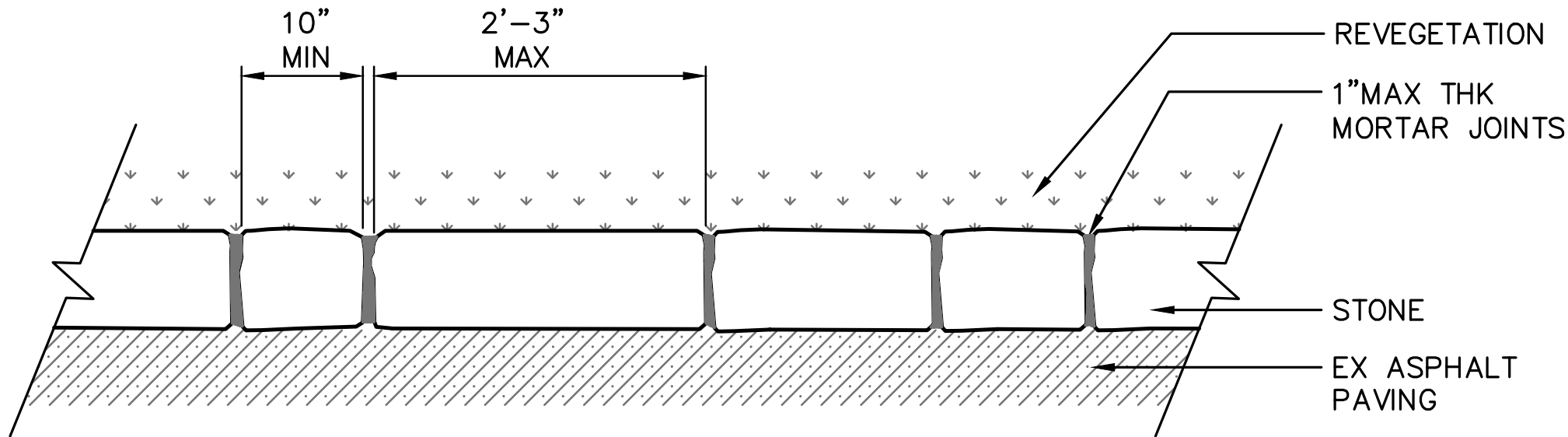
TC
BC
6'-8"



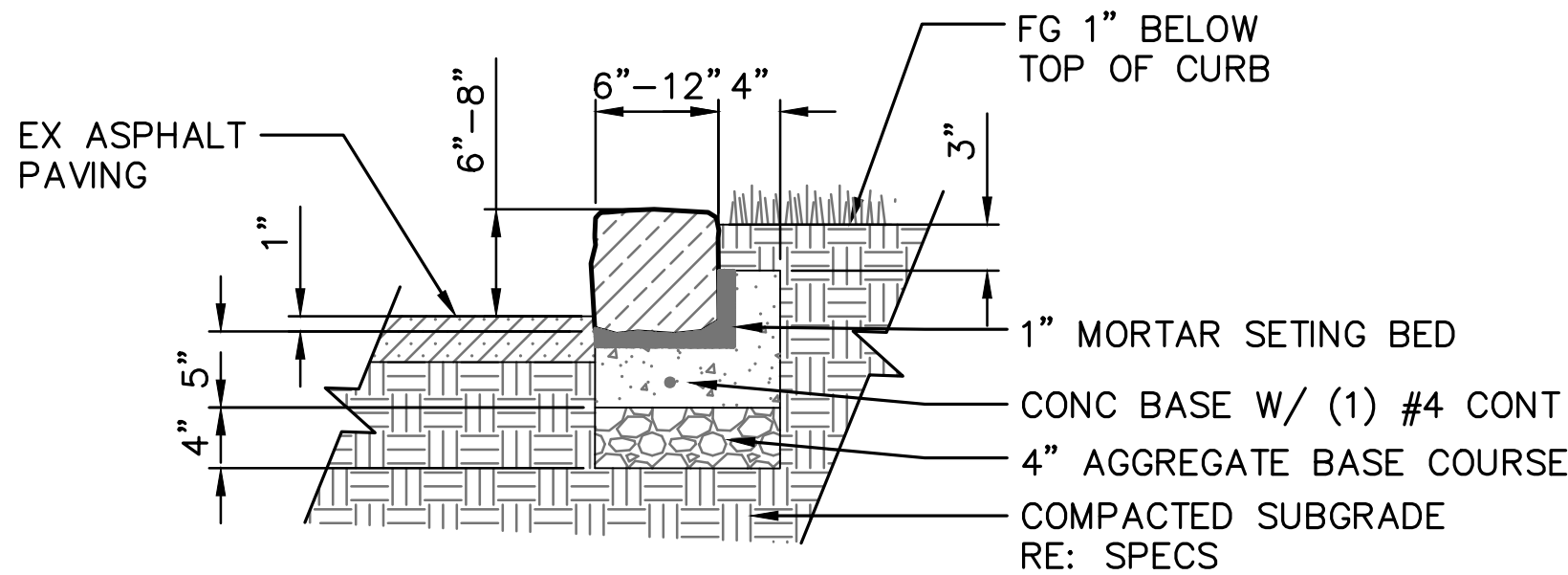
STONE CURB — REPAIR

NOTES:

- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO INSTALLATION INCLUDING SOURCE, SIZE, COLOR, AND PATTERN OF STONE CURB. CONTRACTOR SHALL PROVIDE MOCK OF STONE CURB FOR APPROVAL BY CONTRACTING OFFICER PRIOR TO COMMENCING WORK.
- STONE SHALL BE SALVAGED FROM EX STONE CURB AND RESET.
- NEW STONE SHALL MATCH EXISTING STONE CURB IN COLOR AND TYPE. STONE SHALL VARY IN LENGTH FROM 10" MIN TO 2'-3" MAX AND SET IN RANDOM PATTERN.
- TWO STONES MAY BE STACKED WITH MORTAR.



PLAN



SECTION

STONE CURB — RESET — BID_OPTION 11

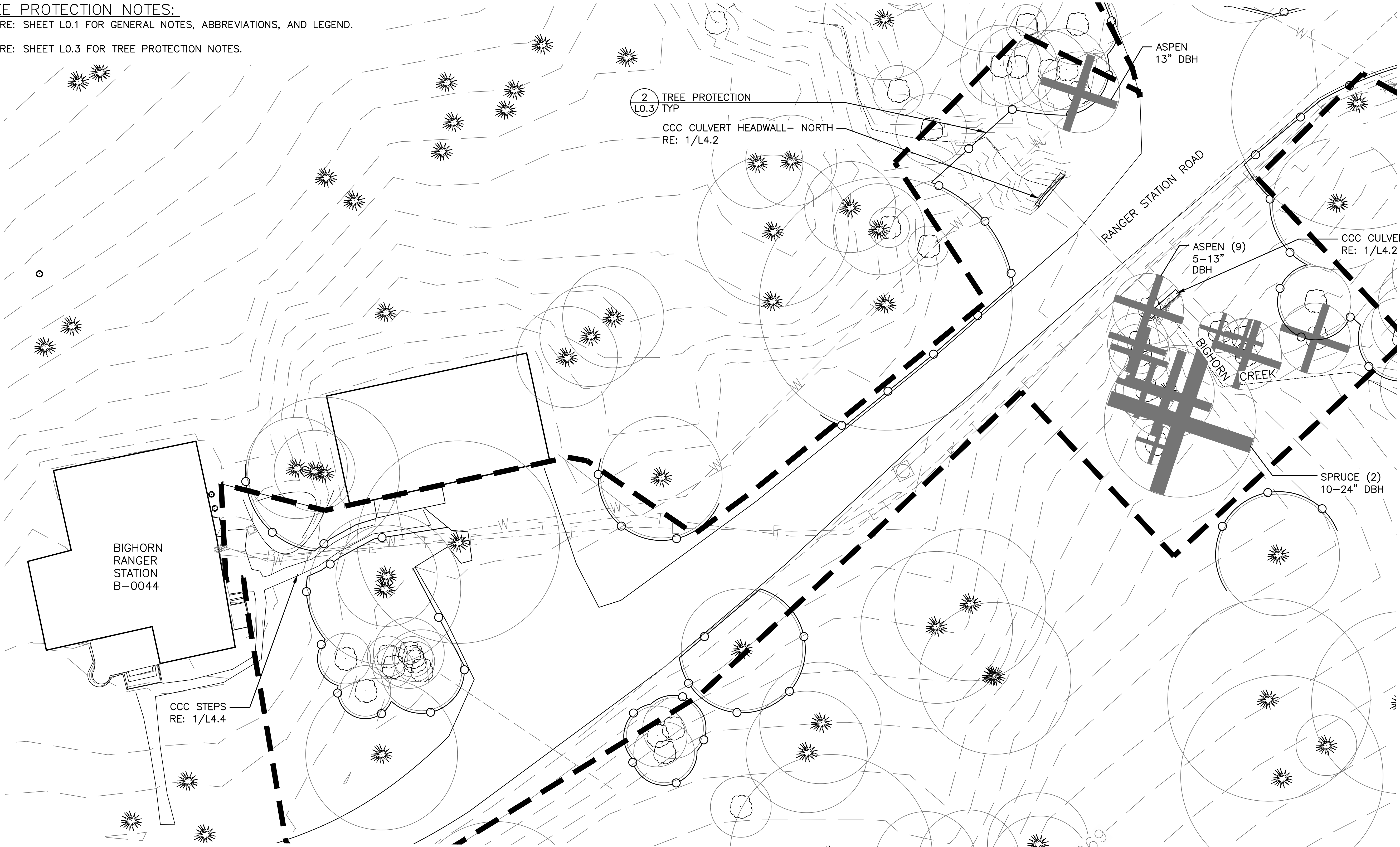
1
L3.2 CCC CURB

	DESIGNED: RS	SUB SHEET NO. L3.2	TITLE OF SHEET CCC CURB DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678
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TREE PROTECTION NOTES:

- 1. RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
- 2. RE: SHEET L0.3 FOR TREE PROTECTION NOTES.



2
L0.3 TREE PROTECTION
TYP

CCC CULVERT HEADWALL- NORTH
RE: 1/L4.2

ASPEN
13" DBH

ASPEN (9)
5-13"
DBH

CCC CULVERT HEADWALL - SOUTH
RE: 1/L4.2

SPRUCE (2)
10-24" DBH

BIGHORN
RANGER
STATION
B-0044

CCC STEPS
RE: 1/L4.4

10 0 10 20
SCALE OF FEET



1
L4.1 CCC CULVERT HEADWALLS AND STEPS - EXISTING CONDITION AND TREE PROTECTION



DESIGNED:
RS
BS/JS
TECH REVIEW:
TB
DATE:
03/10/2022

SUB SHEET NO.

L4.1

TITLE OF SHEET
CCC CULVERT HEADWALLS
AND STEPS
EX CONDITION AND
TREE PROTECTION PLAN
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

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EX NORTH CULVERT

- DECONSTRUCT EX CAPSTONE SALVAGE STONE FOR REUSE AND REBUILD RE: SPECS
- DECONSTRUCT EX STONE WALL SALVAGE STONE FOR REUSE AND REBUILD RE: SPECS
- REMOVE AND DISPOSE EX METAL CULVERT

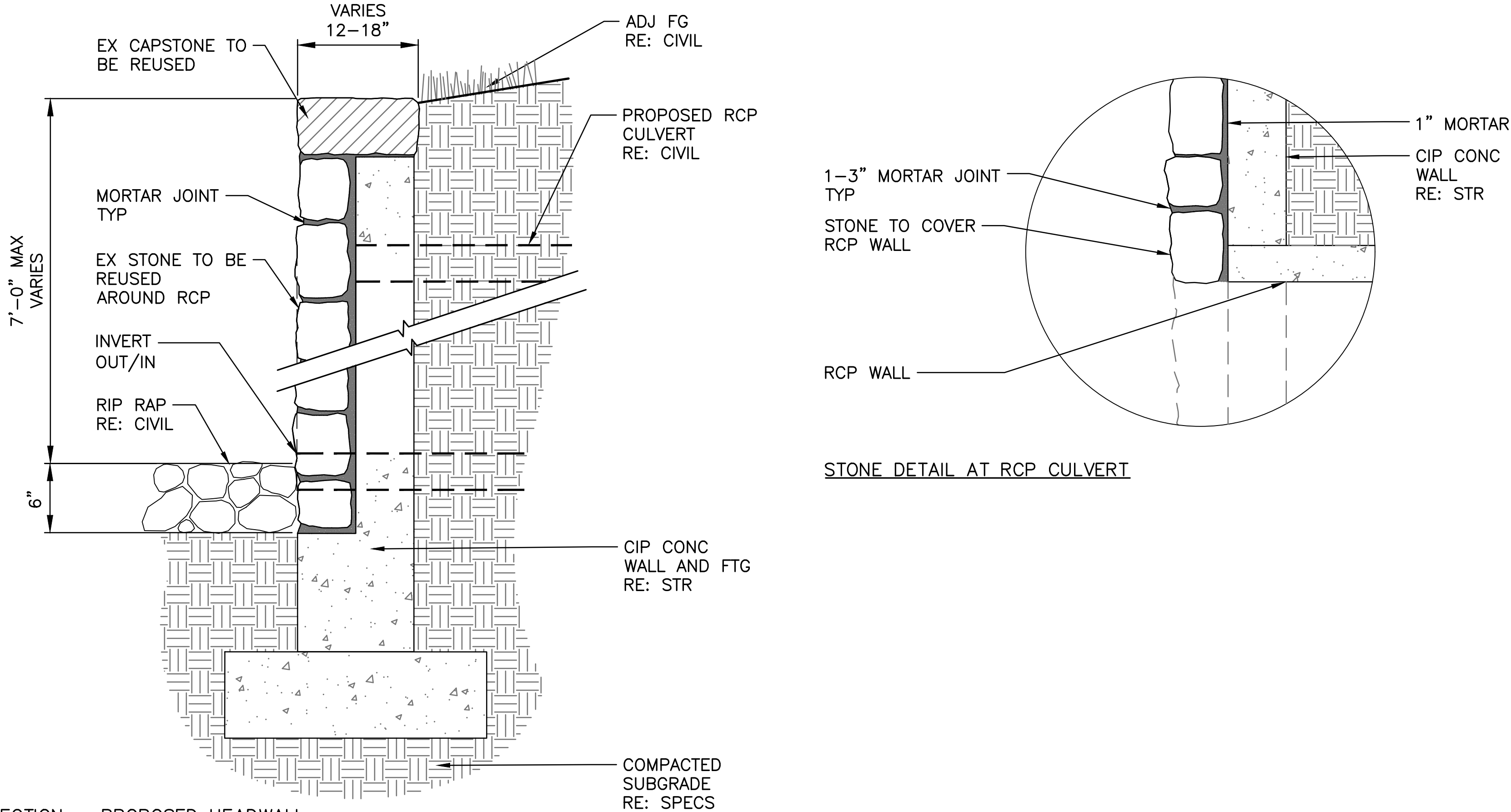


EX SOUTH CULVERT

- DECONSTRUCT EX CAPSTONE SALVAGE STONE FOR REUSE AND REBUILD RE: SPECS
- DECONSTRUCT EX STONE WALL SALVAGE STONE FOR REUSE AND REBUILD RE: SPECS
- REMOVE AND DISPOSE EX METAL CULVERT

NOTES:

- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO DECONSTRUCTION NOTING EXISTING STONE PATTERN, EXISTING STONE, CAPSTONES, AND EXISTING TOOLED JOINTS. CONTRACTOR SHALL PROVIDE METHOD FOR SALVAGE & REUSE OF EXISTING STONE.
- INTENT IS FOR STONE VENEER AND CAPSTONES TO BE REUSED AND RESET IN EXISTING PATTERN USING ORIGINAL STONES IN ORIGINAL LOCATIONS.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO SHOP DRAWING PREPARATION, I.E. NUMBERED STONE, STORAGE, AND EXISTING WALL LENGTHS.
- CONTRACTOR SHOP DRAWINGS SHALL INCLUDE STONE NUMBERING. USING AN INDUSTRIAL OILY SURFACE PERMANENT PAINT MARKER. ON NON-VISIBLE SURFACE. CARDINAL DIRECTIONS SHALL BE LABELED ON EACH INDIVIDUAL STONE(S). STONES SHALL BE STORED ON PALLETS AND EACH PALLET SHALL BE LABELED. STONES SHALL BE SECURED TO PALLET THROUGH BANDING AND WRAPPING. STORE ALL STONES LICHEN UP. STORE CAPSTONE SEPARATE FROM VENEER STONE.
- CONTRACTOR SHOP DRAWINGS SHALL INCLUDE STONE SOURCE, SIZE, AND COLOR OF REBUILD. PROVIDE MOCK UP PRIOR TO COMMENCING WORK.
- NEW STONE SHALL BE FROM LOCAL SOURCES AND SHALL MATCH EXISTING IN COLOR, SIZE, CRAFTSMANSHIP, AND FINISH. REFER TO SPECIFICATIONS.
- AE TEAM WILL TAKE MORTAR SAMPLE OF THE ORIGINAL MORTAR AND PROVIDE SPECIFICATIONS FOR THE SETTING AND POINTING OF MORTAR SO THAT UPON REPLACEMENT THE WALL ASSEMBLY WILL MATCH HISTORIC CONSTRUCTION. NEW MORTAR SHALL MATCH PROPERTIES OF EXISTING MORTAR DETERMINED FROM THE ANALYSIS RESULTS.
- EX STONE SHALL BE REUSED FOR CCC RECONSTRUCTED CULVERT HEADWALL FILLING IN WITH NEW STONE AS NEEDED. CONTRACTOR SHALL RESET EX STONES TO THE ORIGINAL PATTERN, COURSING, AND MORTAR JOINTS. EXISTING STONE SHALL NOT BE CUT.
- HORIZONTAL AND VERTICAL MORTAR BEDS AND JOINTS AT STONE VENEER SHALL MATCH EX WALL MORTAR JOINTS.



SECTION – PROPOSED HEADWALL

1 CCC CULVERT HEADWALL
L4.2 NTS



DESIGNED:
RS
BS/JS
TECH REVIEW:
TB
DATE:
03/10/2022

SUB SHEET NO.

L4.2

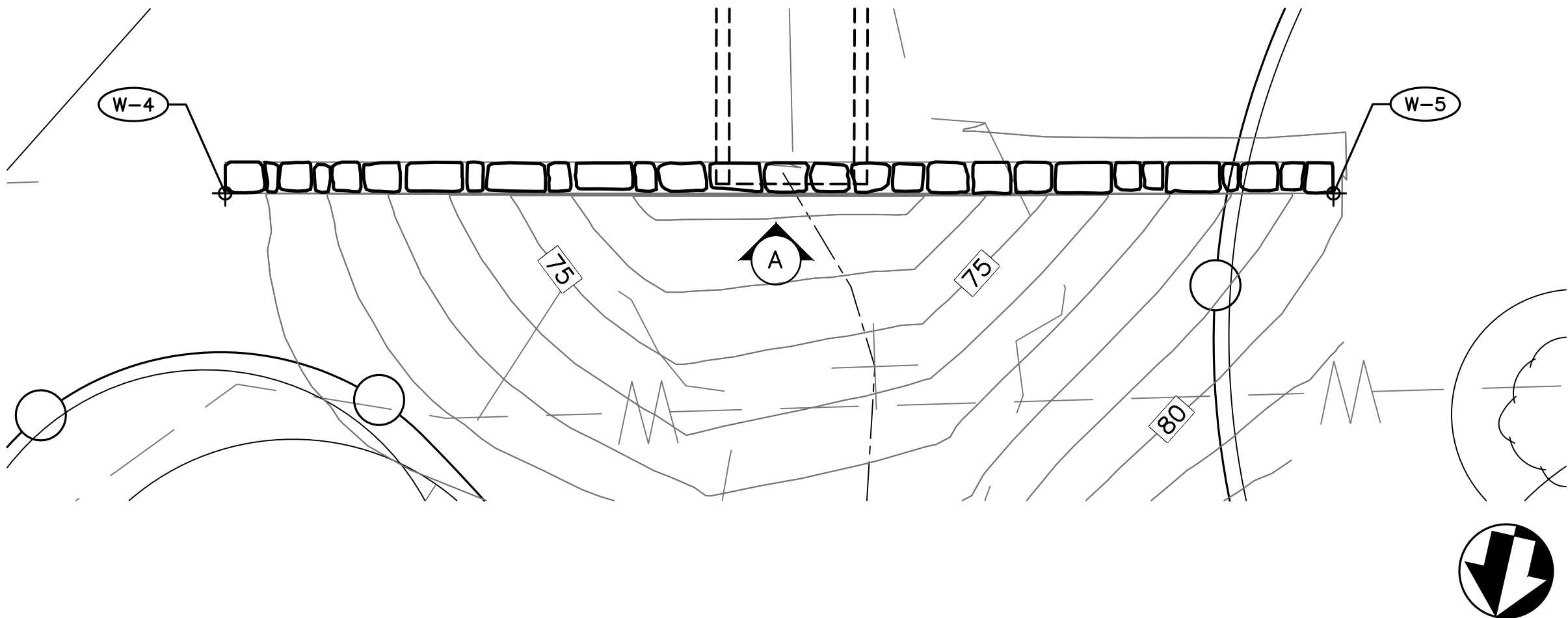
TITLE OF SHEET
**CCC CULVERT
HEADWALL
DETAILS**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
88 OF **165**

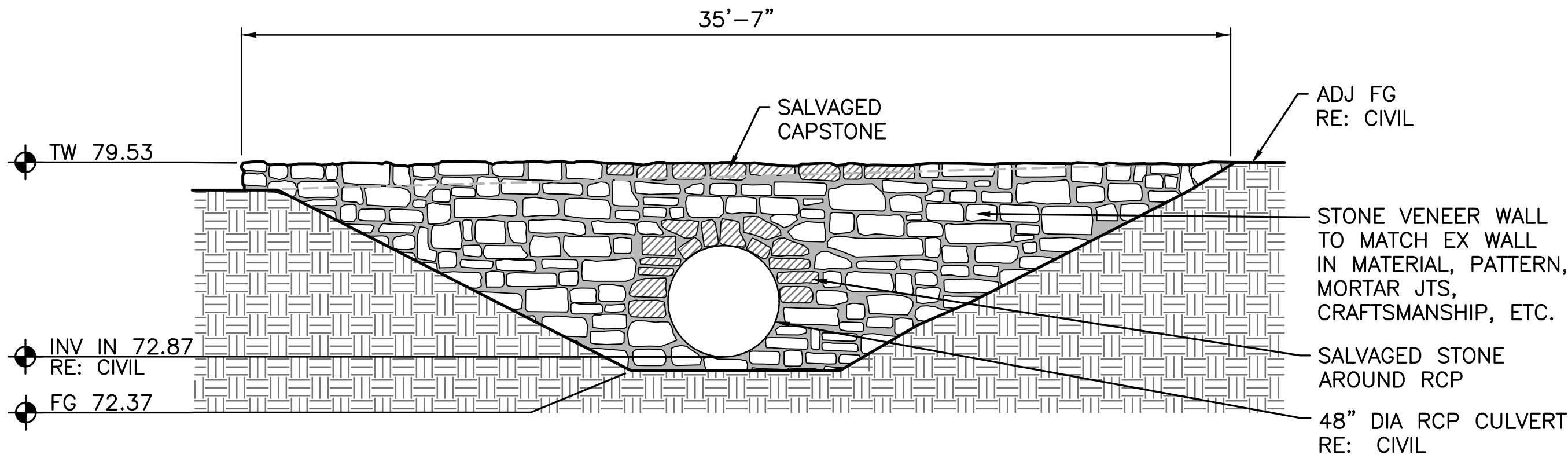
3/08/22 17:26 brittanys R25 S:\Projects\ROMO Fall River Entrance - 2016\Drawings\05-CD Final\ROMO160755\DRAWINGS\L4.3 CCC CULVERT DETAIL.dwg

NOTES:

1. RE: CIVIL FOR GRADING AND UTILITIES.
2. SALVAGED STONE FROM THE EXISTING CULVERT HEADWALL SHALL BE USED ON THE SAME SIDE OF THE RECONSTRUCTED CULVERT HEADWALL.
3. CONTRACTOR SHALL PRIORITIZE SETTING SALVAGED STONE AS CLOSE TO ITS ORIGINAL POSITION AS POSSIBLE, STARTING FROM THE CENTER OF CULVERT, AND USING NEW STONE AS APPROPRIATE TO FILL IN AROUND CULVERT. SALVAGED CAPSTONES SHALL BE REUSED FOR RECONSTRUCTED HEADWALL CAPSTONES.
4. NEW STONE VENEER SHALL MATCH SALVAGED IN MATERIAL, PATTERN, MORTAR JOINTS, CRAFTSMANSHIP AND USED AT EITHER ENDS OF HEADWALL. TYPICAL FOR NORTH AND SOUTH HEADWALLS.
5. RE: L4.2 FOR NOTES ON REMOVING AND SALVAGING STONE.

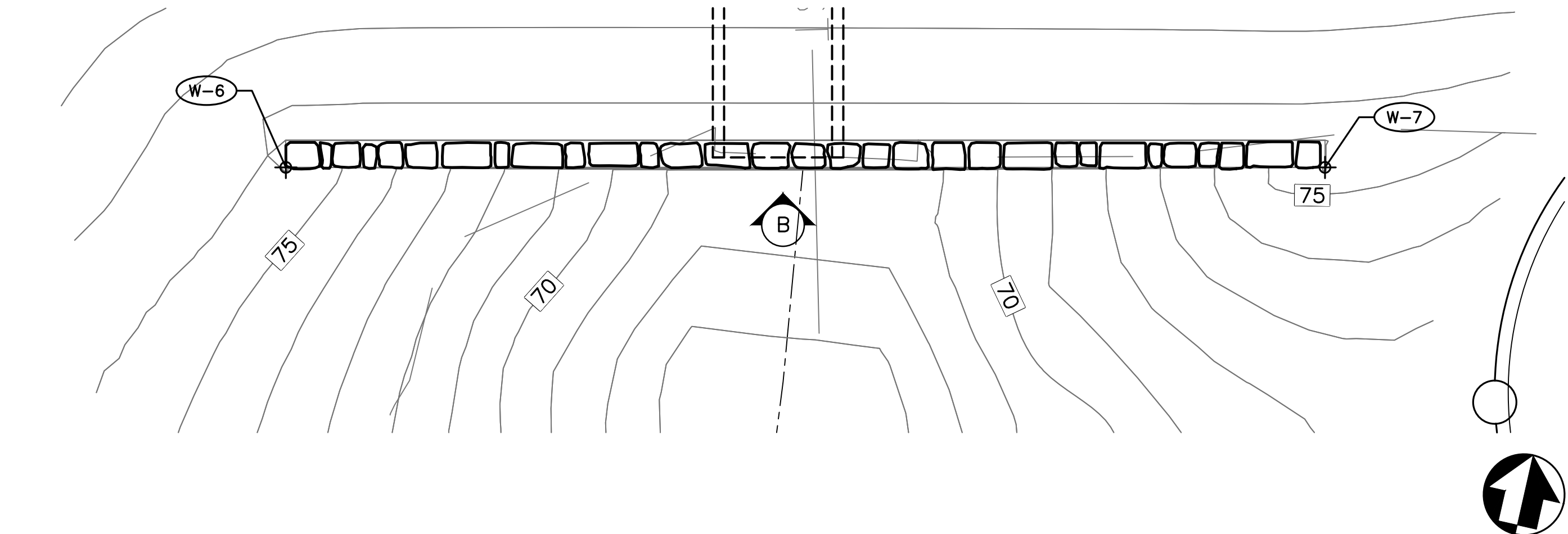


PLAN

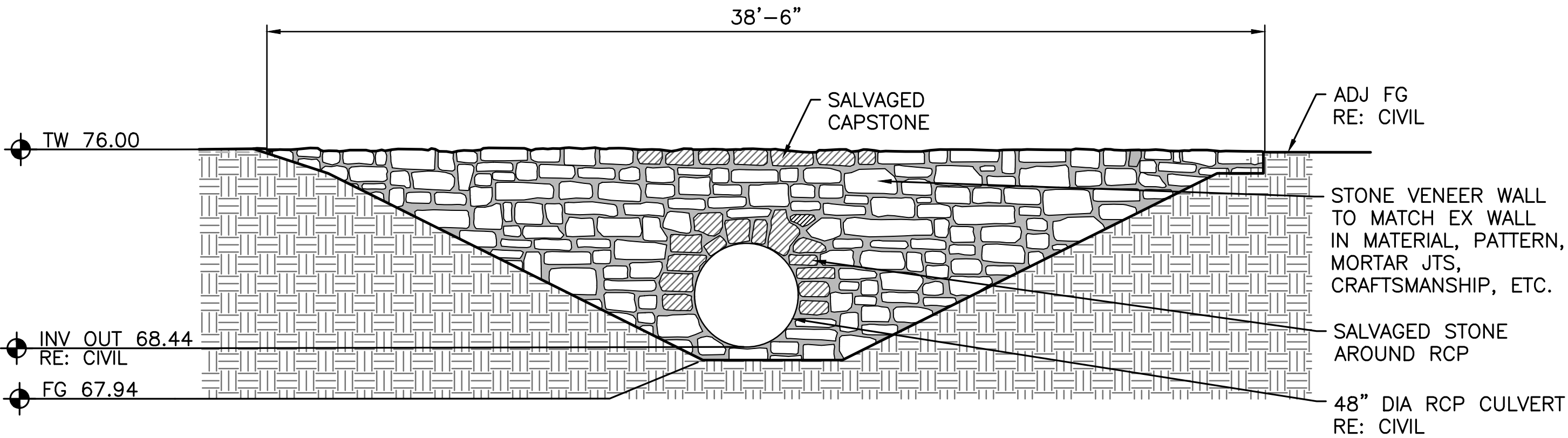


ELEVATION A – LOOKING SOUTH

NORTH CULVERT



PLAN



ELEVATION B – LOOKING NORTH

SOUTH CULVERT

LAYOUT DATA – WALLS

TABLE OF COORDINATE POINTS

POINT NO.	EASTING (X)	NORTHING (Y)	NOTES
W-4	975464.83	391122.72	END OF WALL, FACE OF WALL
W-5	975430.88	391112.34	END OF WALL, FACE OF WALL
W-6	975439.46	391079.13	END OF WALL, FACE OF WALL
W-7	975476.28	391090.39	END OF WALL, FACE OF WALL

1 CCC CULVERT HEADWALLS
L4.3 NTS



DESIGNED:
RS
BS/JS
TECH REVIEW:
TB
DATE:
03/10/2022

SUB SHEET NO.

L4.3

TITLE OF SHEET
**CCC CULVERT
HEADWALL
DETAILS**
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
89 OF **165**

3/08/22 17:26 brittanys R25 S:\Projects\ROMO Fall River Entrance - 2016\Drawings\05-CD Final\ROMO160755\DRAWINGS\LA\ L4.4 CCC STEPS DETAIL.dwg

NOTES:

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO DECONSTRUCTION. CONTRACTOR SHOP DRAWINGS SHALL NOTE EXISTING STONE SPACING, LOCATIONS, AND FINISHED GRADE ELEVATIONS.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO SHOP DRAWING PREPARATION, I.E. NUMBERED STONE, STORAGE, AND LOCATIONS. CONTRACTOR SHOP DRAWINGS SHALL INCLUDE STONE NUMBERING.
3. USING AN INDUSTRIAL OILY SURFACE PERMANENT PAINT MARKER ON NON-VISIBLE SURFACE, CARDINAL DIRECTIONS SHALL BE LABELED ON EACH INDIVIDUAL STONE(S). STONES SHALL BE STORED ON PALLETS AND EACH PALLET SHALL BE LABELED. STONES SHALL BE SECURED TO PALLET THROUGH BANDING AND WRAPPING. STORE ALL STONES LICHEN UP.
4. CONTRACTOR SHALL RESET EXISTING STONE TO MATCH EXISTING STONE PATTERN, LOCATION, AND FINISHED GRADE.

CCC STEPS
TO REMAIN
PROTECT IN
PLACE



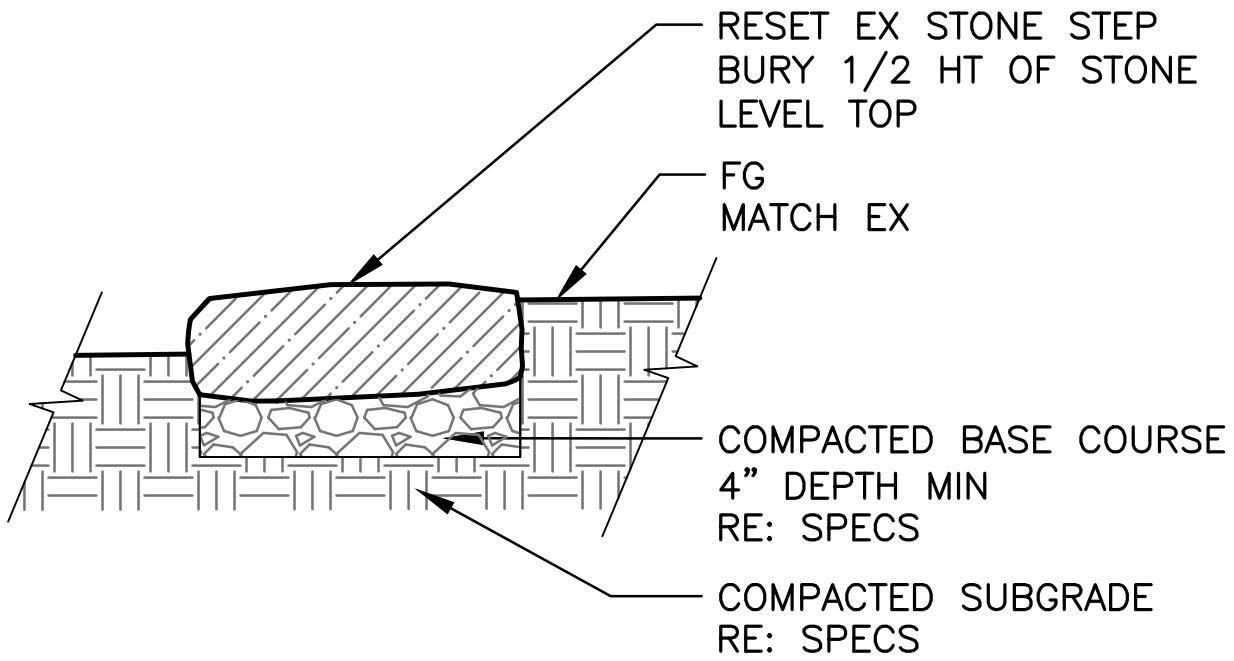
EX CCC STEPS
REMOVE, SALVAGE, &
RESET LEVEL

STONE STEPS — LOOKING WEST TOWARDS BIG HORN RANGER STATION



EX CCC STEPS
REMOVE, SALVAGE, &
RESET LEVEL

STONE STEPS — LOOKING EAST

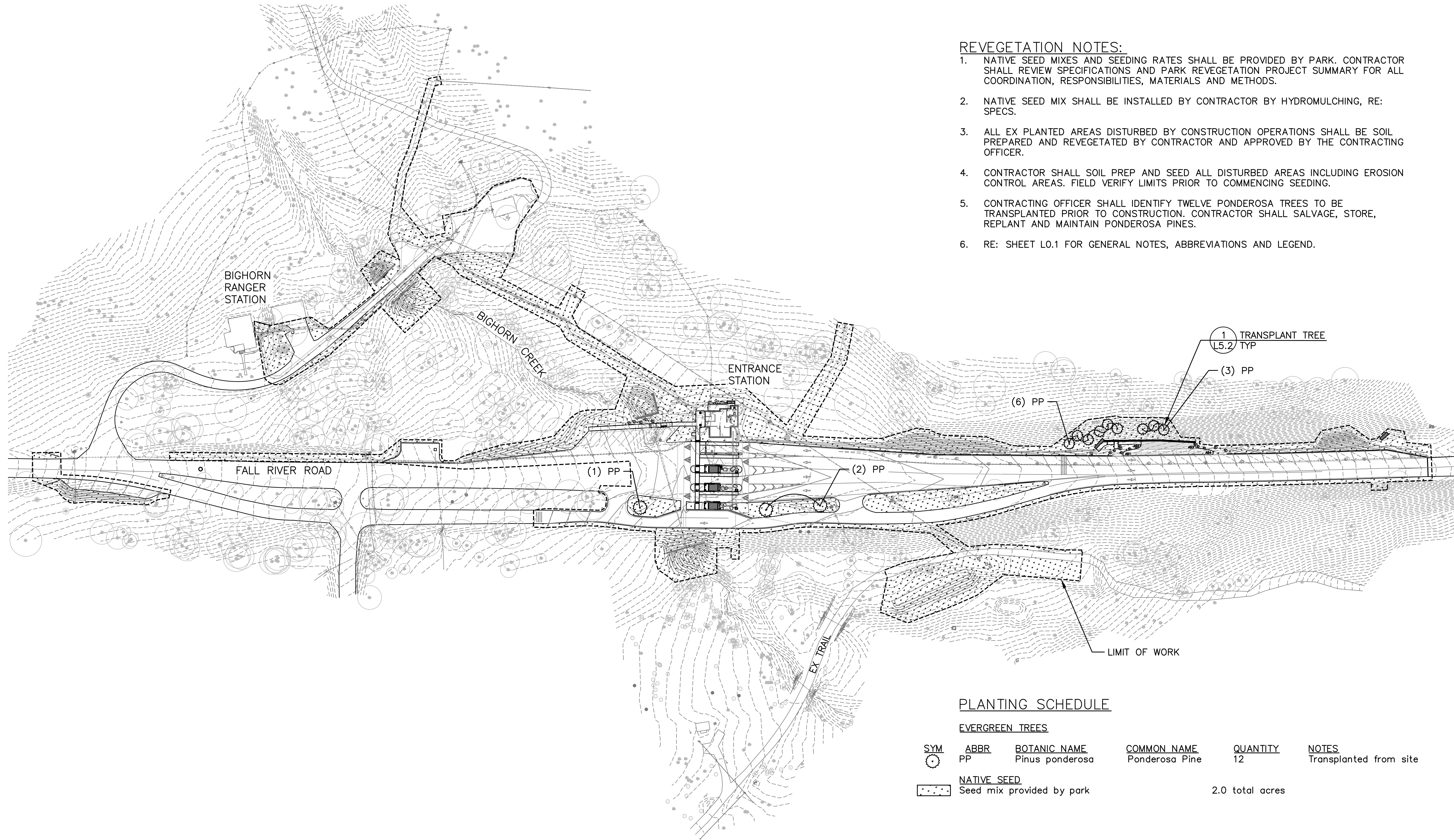


SECTION — RESET STONE STEP

1 CCC STEPS
L4.4

	DESIGNED: RS	SUB SHEET NO. L4.4	TITLE OF SHEET CCC STEPS DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	BS/JS			176678
	TECH REVIEW: TB			PMIS/PKG NO. 160755
	DATE: 03/10/2022			SHEET 90 OF 165

3/08/22 17:26 brittanys R25 S:\Projects\ROMO Fall River Entrance - 2016\Drawings\05-CD Final\ROMO160755\DRAWINGS\L5.1 REVEGETATION PLAN.dwg



- REVEGETATION NOTES:**
1. NATIVE SEED MIXES AND SEEDING RATES SHALL BE PROVIDED BY PARK. CONTRACTOR SHALL REVIEW SPECIFICATIONS AND PARK REVEGETATION PROJECT SUMMARY FOR ALL COORDINATION, RESPONSIBILITIES, MATERIALS AND METHODS.
 2. NATIVE SEED MIX SHALL BE INSTALLED BY CONTRACTOR BY HYDOMULCHING, RE: SPECS.
 3. ALL EX PLANTED AREAS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE SOIL PREPARED AND REVEGETATED BY CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER.
 4. CONTRACTOR SHALL SOIL PREP AND SEED ALL DISTURBED AREAS INCLUDING EROSION CONTROL AREAS. FIELD VERIFY LIMITS PRIOR TO COMMENCING SEEDING.
 5. CONTRACTING OFFICER SHALL IDENTIFY TWELVE PONDEROSA TREES TO BE TRANSPLANTED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL SALVAGE, STORE, REPLANT AND MAINTAIN PONDEROSA PINES.
 6. RE: SHEET L0.1 FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND.

PLANTING SCHEDULE

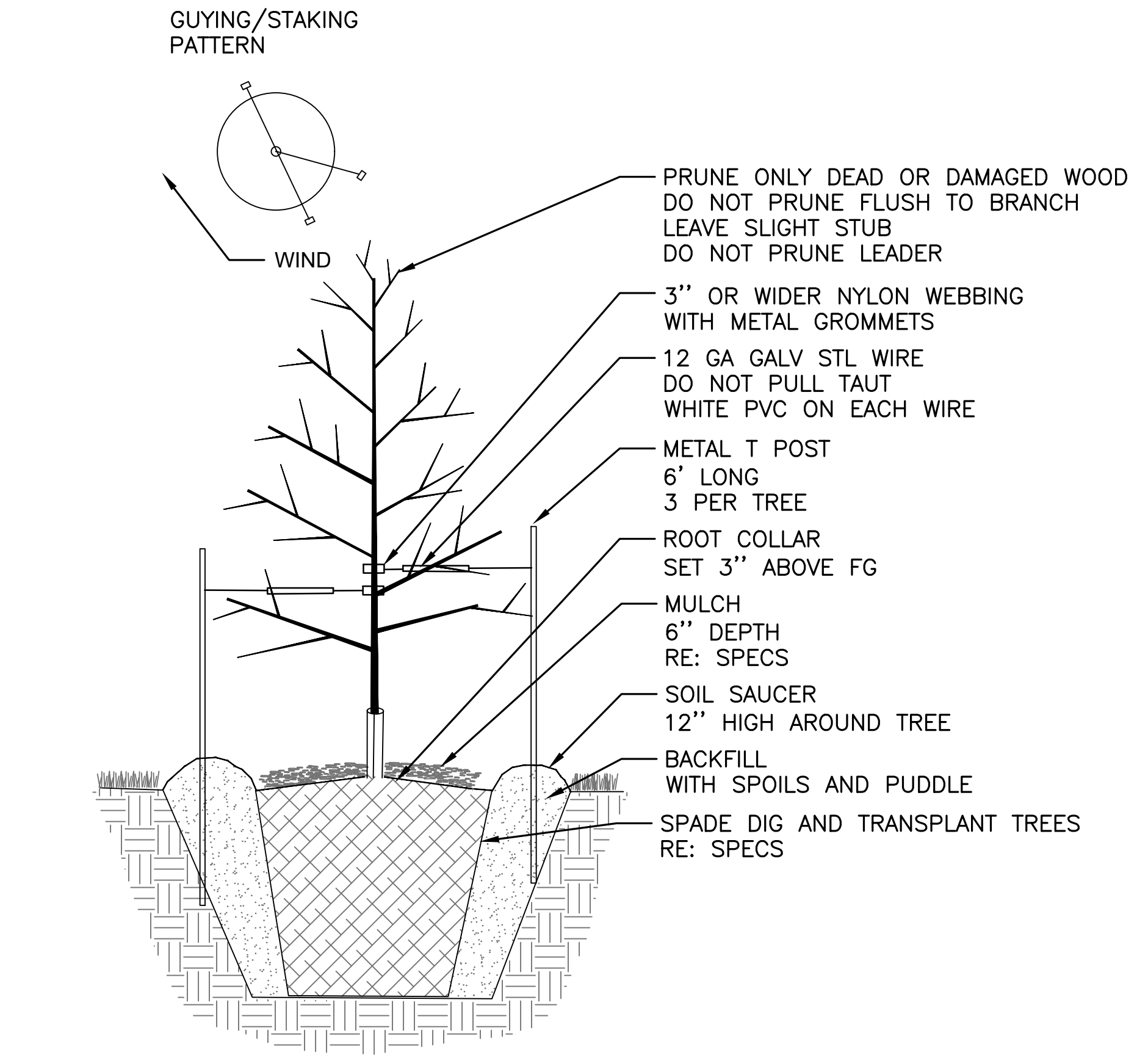
EVERGREEN TREES

SYM	ABBR	BOTANIC NAME	COMMON NAME	QUANTITY	NOTES
	PP	Pinus ponderosa	Ponderosa Pine	12	Transplanted from site
		NATIVE SEED			
		Seed mix provided by park		2.0 total acres	

1 REVEGETATION PLAN
L5.1



	DESIGNED: RS	SUB SHEET NO. L5.1	TITLE OF SHEET REVEGETATION PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	BS/JS			176678
	TECH REVIEW: TB			PMIS/PKG NO. 160755
	DATE: 03/10/2022			SHEET 91 OF 165



1 TRANSPLANT TREE
L5.2 NTS

	DESIGNED: RS	SUB SHEET NO. L5.2	TITLE OF SHEET PLANTING DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	BS/JS			176678
	TECH REVIEW: TB			PMIS/PKG NO. 160755
	DATE: 03/10/2022			SHEET 92 OF 165

ABBREVIATIONS

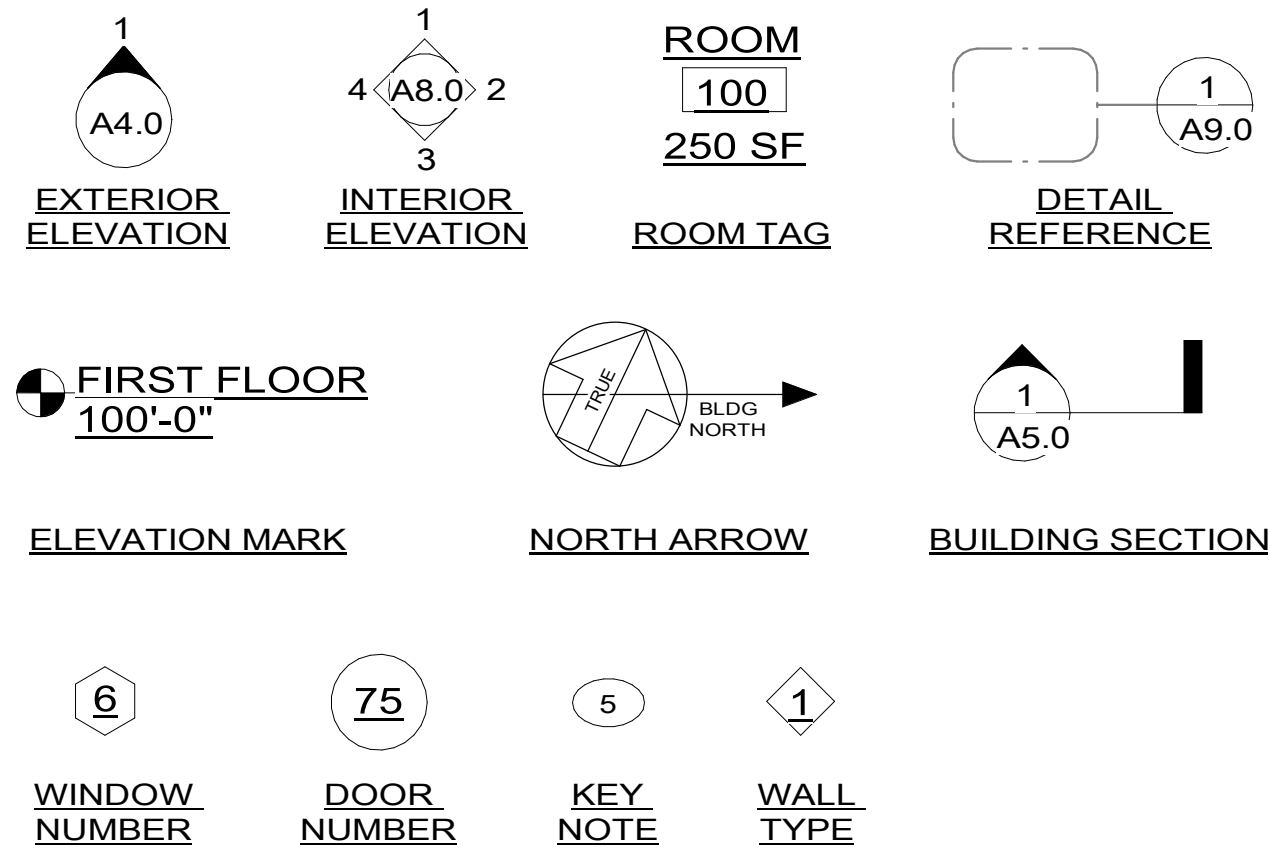
#	POUND(S) or NUMBER	CT	CERAMIC TILE
&	AND	CTBB	CEMENTITIOUS TILE BACKER BOARD
<	ANGLE		
@	AT	CTR	CENTER
A/V	AUDIO VISUAL	DBL	DOUBLE
ABA	ARCHITECTURAL BARRIERS ACT	DEMO	DEMOLITION
ABV	ABOVE	DET	DETAIL
ACM	ASBESTOS CONTAINING MATERIAL	DF	DRINKING FOUNTAIN
ACT	ACCOUSTICAL CEILING TILE	DIA	DIAMETER
ADD	ADDENDUM	DIM	DIMENSION
ADJ	ADJACENT or ADJUSTABLE	DN	DOWN
AFF	ABOVE FINISHED FLOOR	DS	DOWNSPOUT
AHU	AIR HANDLING UNIT	<E>	EXISTING
AL	ALUMINUM	E	EAST
ALT	ALTERNATE	EA	EACH
APPROX	APPROXIMATE(LY)	EG	FOR EXAMPLE
ARCH	ARCHITECTURAL	ELEC	ELECTRICAL
ASPH	ASPHALT	ELEV	ELEVATION
B.O.	BOTTOM OF	EMER	EMERGENCY
BLDG	BUILDING	ENGR	ENGINEER
BLKG	BLOCKING	EQ	EQUAL
BR	BACKER ROD	EQP	EQUIPMENT
BTWN	BETWEEN	ETR	EXISTING TO REMAIN
C.O.	CONTRACTING OFFICER	EXT	EXTERIOR
CAB	CABINET	FACP	FIRE ALARM CONTROL PANEL
CJ	CONTROL JOINT	FD	FLOOR DRAIN
CL	CENTERLINE	FE	FIRE EXTINGUISHER
CLG	CEILING	FEC	FIRE EXTINGUISHER CABINET
CLR	CLEAR	FF	FINISH FACE
CMU	CONCRETE MASONRY UNIT	FIN	FINISH(ED)
COL	COLUMN	FIXT	FIXTURE
CONC	CONCRETE	FLR	FLOOR(ING)
CONST	CONSTRUCTION	FO	FACE OF
CONT	CONTINUOUS	FP	FIRE PROTECTION
CORR	CORRIDOR	FRP	FIBERGLASS REINFORCED
CPT	CARPET		PANEL(ING)

FT	FEET	MTD	MOUNTED
FTG	FOOTING	MTL	METAL
FURR	FURRING	<N>	NEW
GA	GAUGE OR GYPSUM ASSOCIATION	N	NORTH
GALV	GALVANIZED	NA	NOT APPLICABLE
GC	GENERAL CONTRACTOR	NIC	NOT IN CONTRACT
GD	GRADE	NO.	NUMBER
GL	GLASS or GLAZING	NOM	NOMINAL
GND	GROUND	NTS	NOT TO SCALE
GWB	GYPSUM WALLBOARD	OC	ON CENTER
HM	HOLLOW METAL	OD	OUTSIDE DIAMETER
HAZMAT	HAZARDOUS MATERIAL	OH	OPPOSITE HAND
HDR	HEADER	OPNG	OPENING
HDW	HARDWARE	OPP	OPPOSITE
HORZ	HORIZONTAL	OSB	ORIENTED STRAND BOARD
HT	HEIGHT	PLAM	PLASTIC LAMINATE
HVAC	HEATING, VENTILATION and AIR CONDITIONING	PLAS	PLASTER
IBC	INTERNATIONAL BUILDING CODE	PLUMB	PLUMBING
ID	INSIDE DIAMETER	PLY	PLYWOOD
INFO	INFORMATION	PT	PAINT
INS	INSULATION or INSULATED	PTD	PAINTED
INT	INTERIOR	QT	QUARRY TILE
JT	JOINT	RAD	RADIUS
LAV	LAVATORY	RB	RUBBER BASE
LIN	LINOLEUM	RCP	REFLECTED CEILING PLAN
MATL	MATERIAL	RD	ROOF DRAIN
MAX	MAXIMUM	RE	REFER TO or REFERENCE
MECH	MECHANICAL	REINF	REINFORCED
MEP	MECHANICAL, ELECTRICAL and PLUMBING	RELOC	RELOCATE(D)
MFG	MANUFACTURING	REQ	REQUIRED
MFR	MANUFACTURER	REV	REVISE, REVISED or REVISION
MIN	MINIMUM	RM	ROOM
MISC	MISCELLANEOUS	RO	ROUGH OPENING
MO	MASONRY OPENING	RS	ROUGH SAWN
		(S)	SEALANT

MTD	MOUNTED	S	SOUTH
MTL	METAL	SCHED	SCHEDULE
<N>	NEW	SF	SQUARE FEET
N	NORTH	SHTG	SHEATHING
NA	NOT APPLICABLE	SIM	SIMILAR
NIC	NOT IN CONTRACT	SOG	SLAB ON GRADE
NO.	NUMBER	SPEC	SPECIFICATION(S)
NOM	NOMINAL	SQ	SQUARE
NTS	NOT TO SCALE	SS	STAINLESS STEEL
OC	ON CENTER	STD	STANDARD
OD	OUTSIDE DIAMETER	STL	STEEL
OH	OPPOSITE HAND	STN	STAIN
OPNG	OPENING	STRUC	STRUCTURE or STRUCTURAL
OPP	OPPOSITE	(T)	TEMPERED
OSB	ORIENTED STRAND BOARD	T&G	TONGUE AND GROOVE
PLAM	PLASTIC LAMINATE	T.O.	TOP OF
PLAS	PLASTER	TD	THRESHOLD
PLUMB	PLUMBING	TYP	TYPICAL
PLY	PLYWOOD	UON	UNLESS OTHERWISE NOTED
PT	PAINT	VB	VAPOR BARRIER
PTD	PAINTED	VCT	VINYL COMPOSITION TILE
QT	QUARRY TILE	VERT	VERTICAL
RAD	RADIUS	VIF	VERIFY IN FIELD
RB	RUBBER BASE	VIN	VINYL
RCP	REFLECTED CEILING PLAN	VTR	VENT THROUGH ROOF
RD	ROOF DRAIN	W	WEST
RE	REFER TO or REFERENCE	W/	WITH
REINF	REINFORCED	W/O	WITHOUT
RELOC	RELOCATE(D)	WD	WOOD
REQ	REQUIRED	WIN	WINDOW
REV	REVISE, REVISED or REVISION		
RM	ROOM		
RO	ROUGH OPENING		
RS	ROUGH SAWN		
(S)	SEALANT		

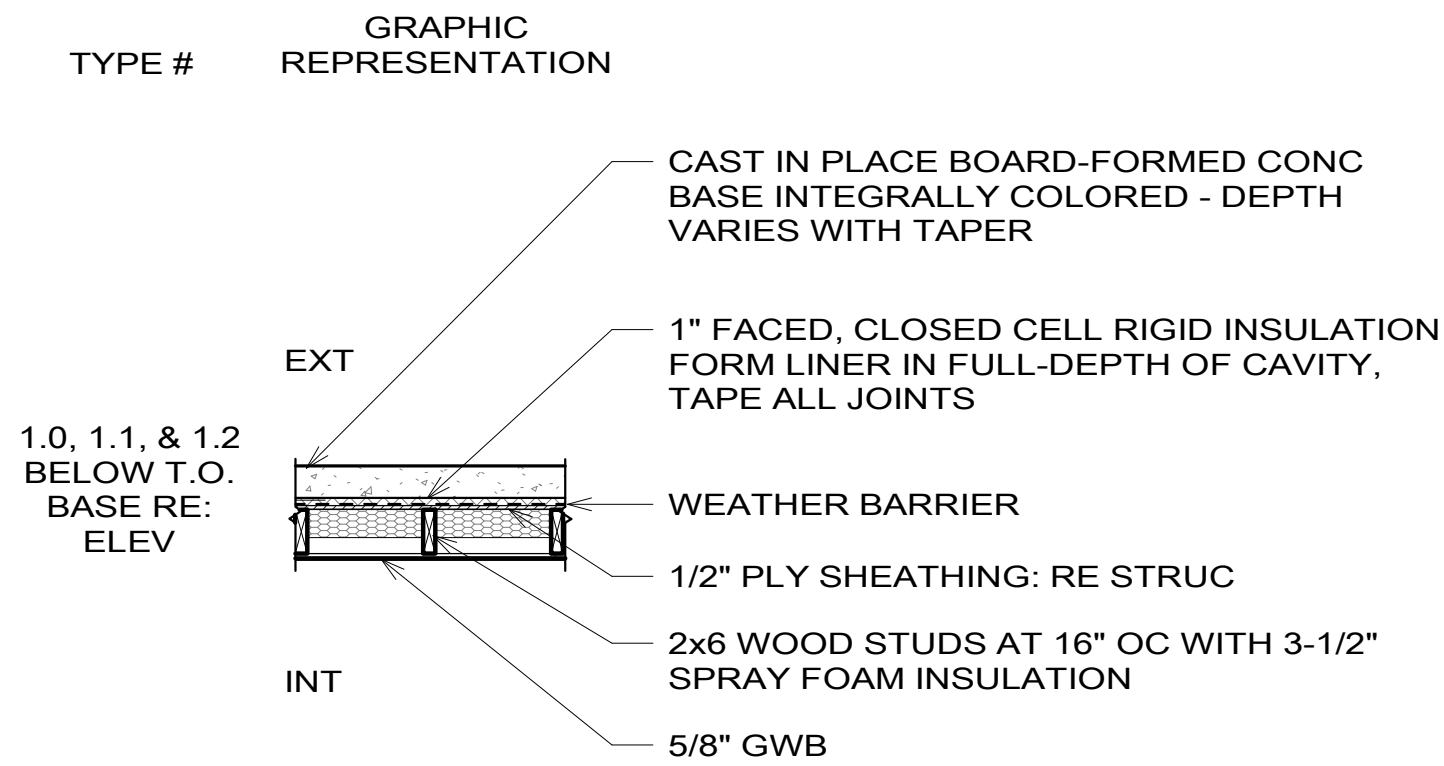
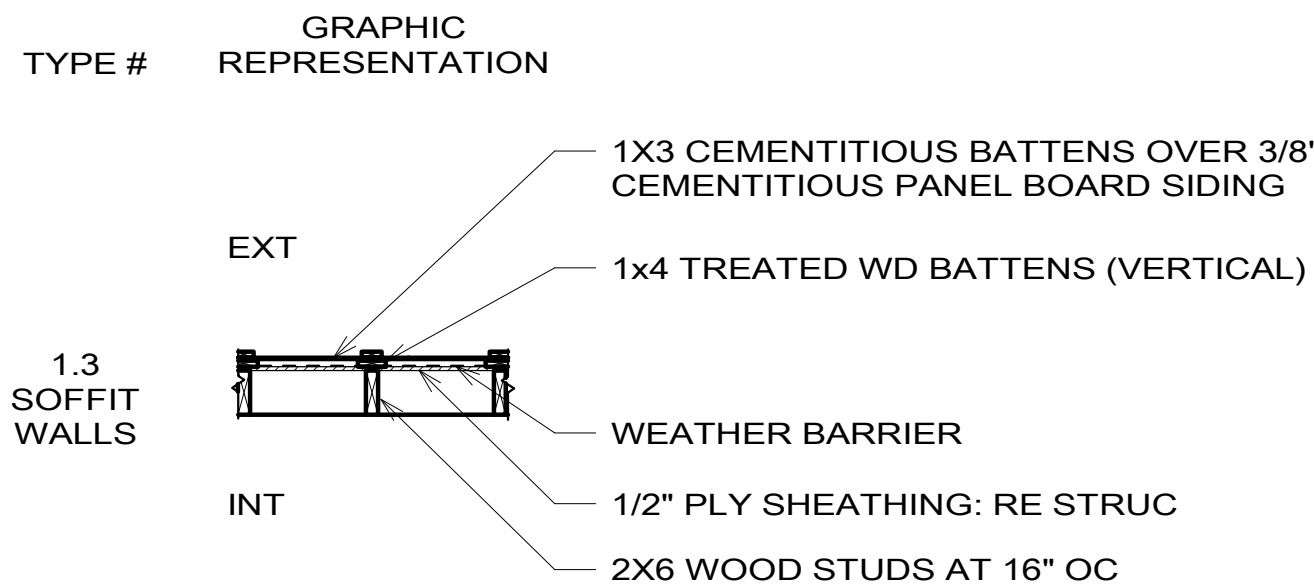
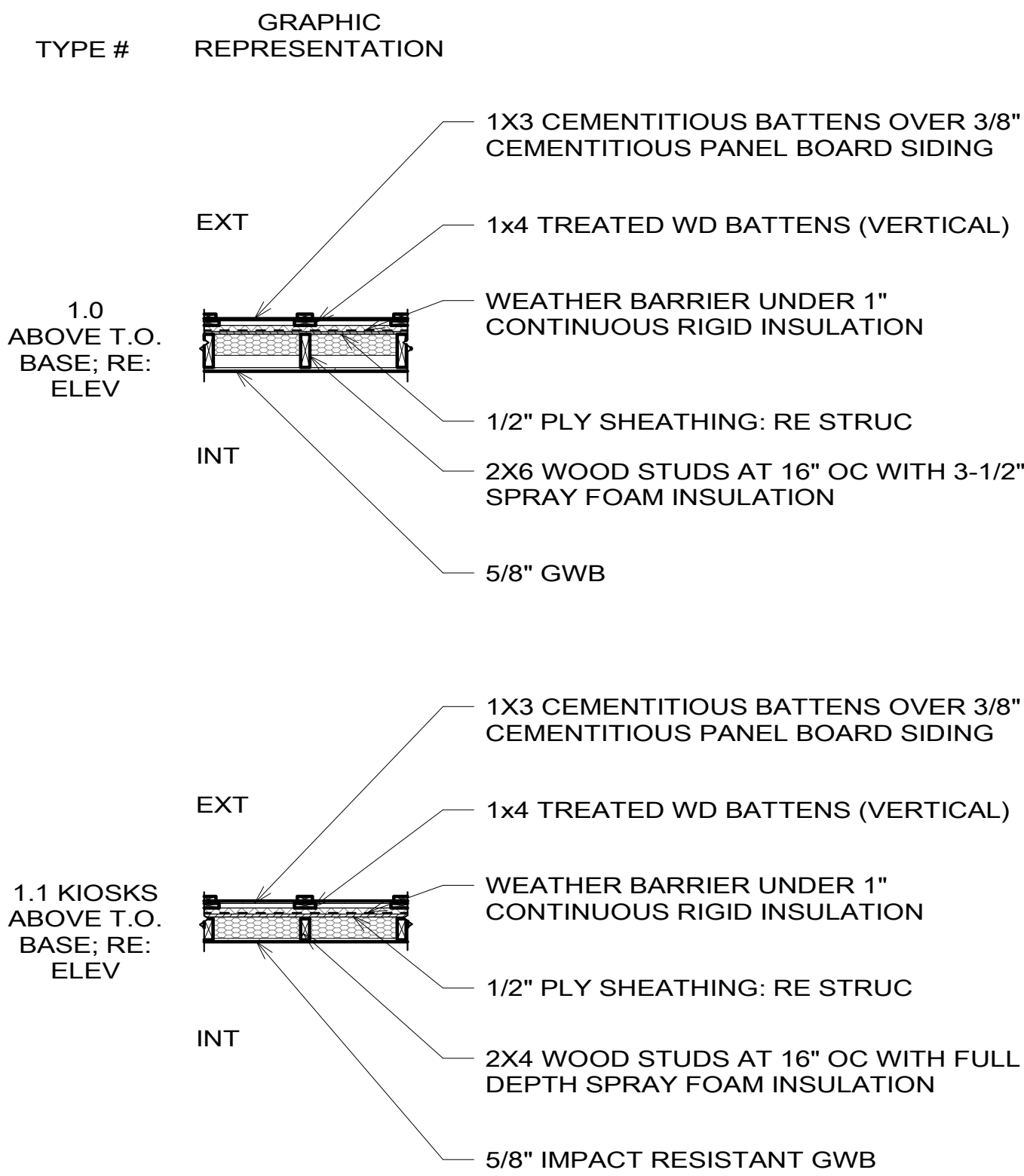
S	SOUTH
SCHED	SCHEDULE
SF	SQUARE FEET
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB ON GRADE
SPEC	SPECIFICATION(S)
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STN	STAIN
STRUC	STRUCTURE or STRUCTURAL
(T)	TEMPERED
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TD	THRESHOLD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VIN	VINYL
VTR	VENT THROUGH ROOF
W	WEST
W/	WITH
W/O	WITHOUT
WD	WOOD
WIN	WINDOW

SYMBOLS

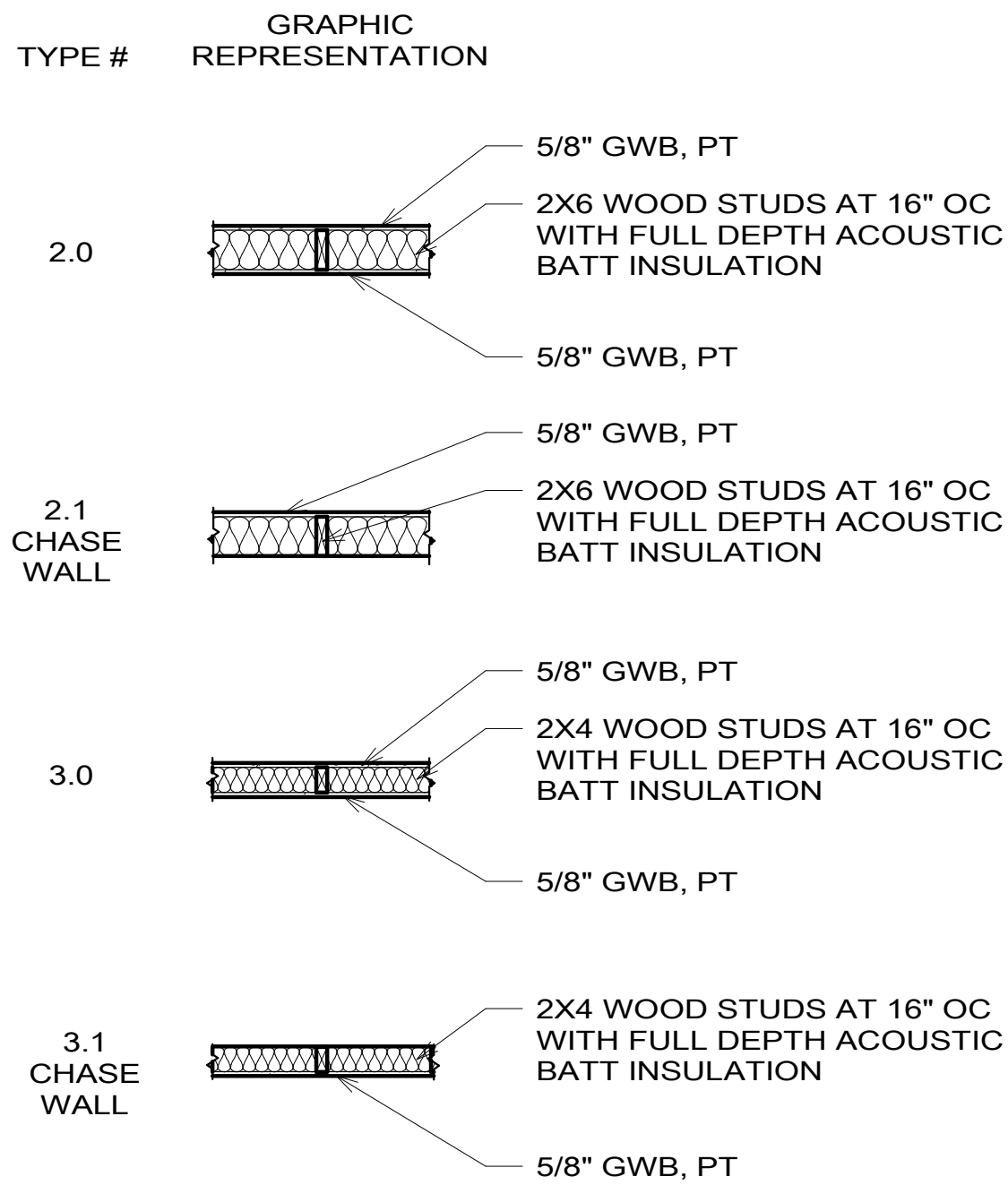
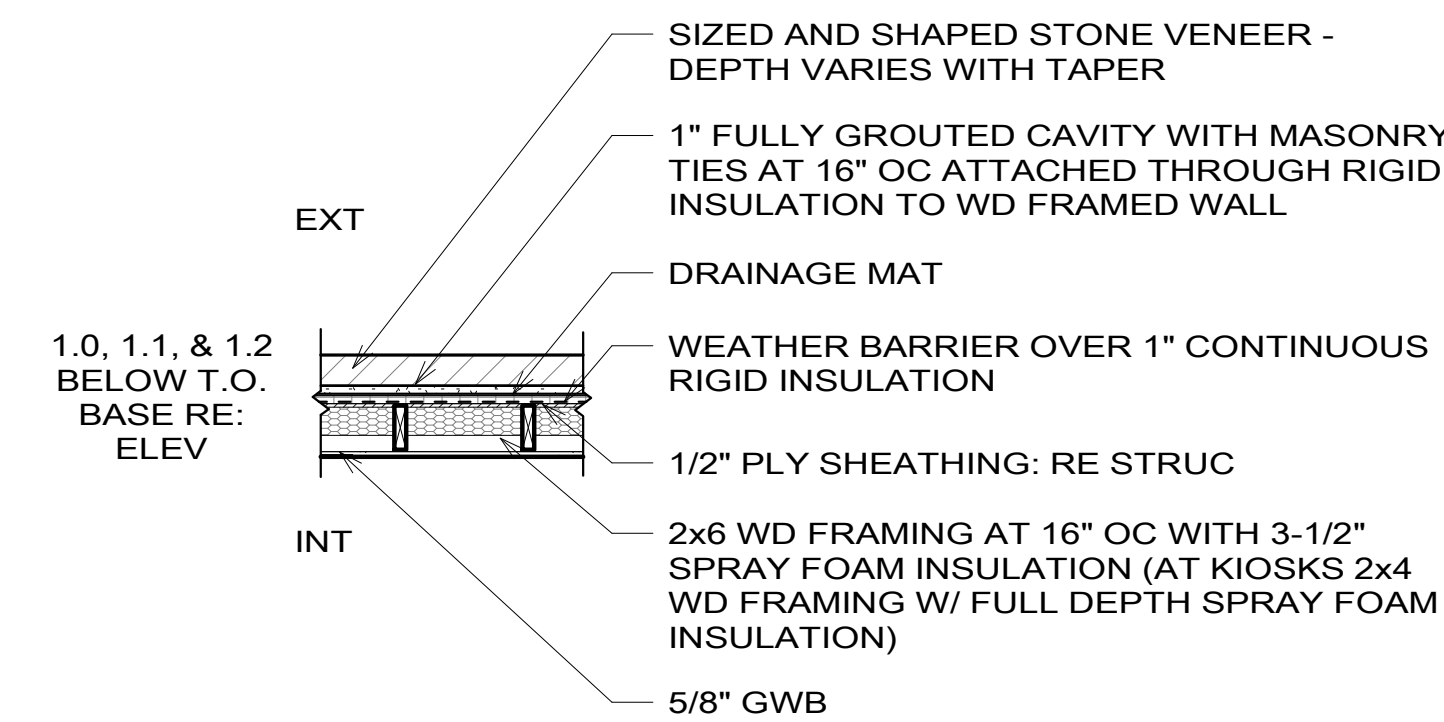


WALL TYPES

SCALE (A)



BID OPTION 5: STONE MASONRY VENEER BASE



SCALE (A) 2 0 2 4
SCALE OF FEET

GENERAL NOTES

1. ALL WET AREAS SHALL HAVE MOISTURE RESISTANT GWB AND CTBB BEHIND WALL TILE. (MATCH THICKNESS OF CTBB TO GWB)
2. ALL EXPOSED GWB THROUGHOUT SHALL BE PAINTED.
3. EXTERIOR STORAGE ROOM 102 SHALL HAVE MOISTURE AND IMPACT RESISTANT GWB.
4. STORAGE ROOM 101 SHALL HAVE IMPACT RESISTANT GWB.

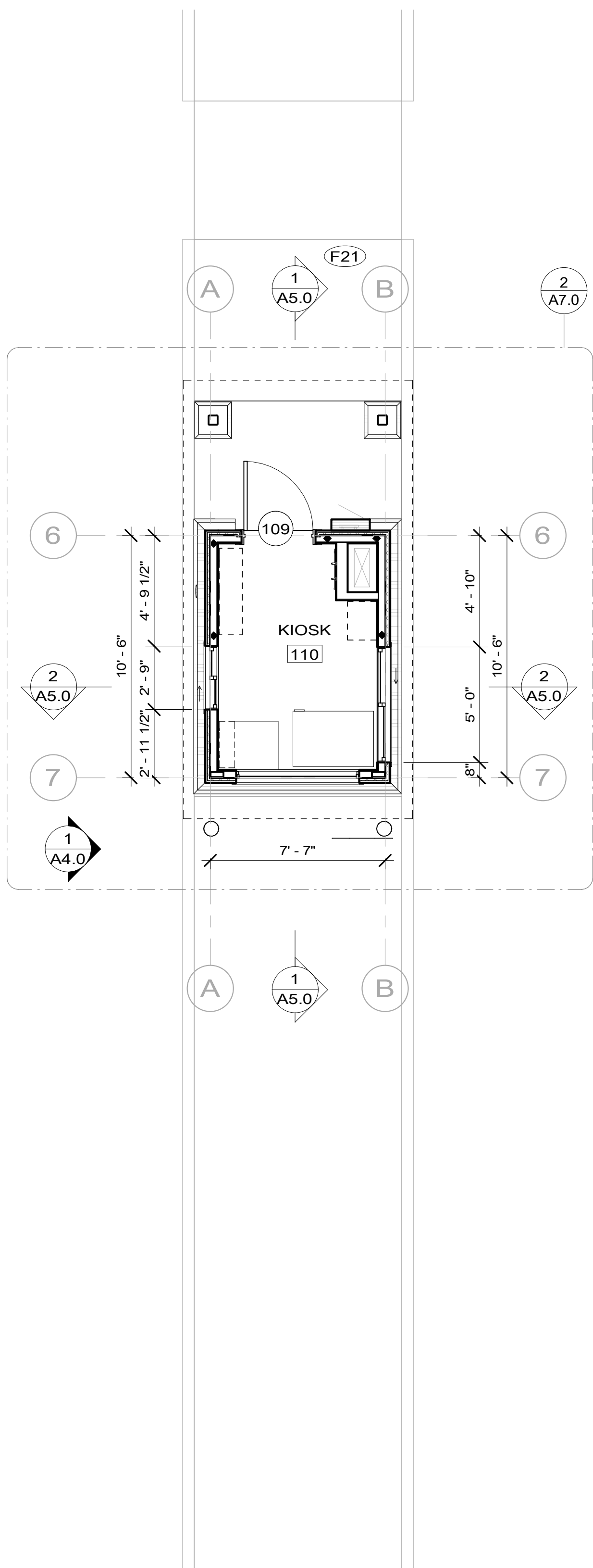


DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
A0.0

TITLE OF SHEET
ARCHITECTURAL
COVER SHEET
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
93 OF 165



1 FLOOR PLAN
A1.0 SCALE (A)

KEYNOTES

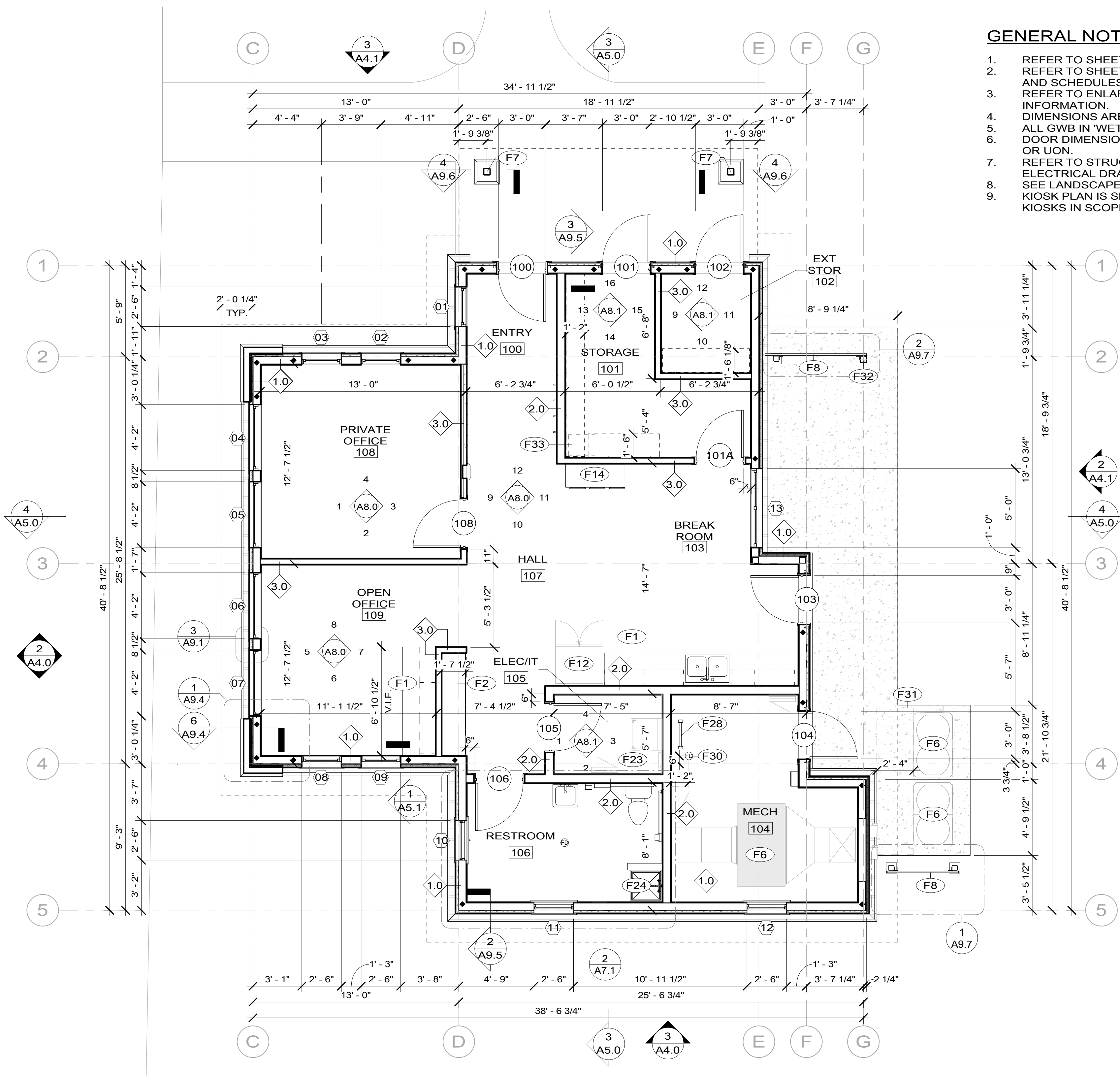
- F1 UPPER AND LOWER PLAM CABINETS WITH SOLID SURFACE COUNTERTOP: RE A8.3
F2 TALL PLAM CABINET CUBBIES: RE A8.3
F6 MECHANICAL EQUIPMENT: RE MECH
F7 STL STRUCTURAL COLUMN WITH BOARD-FORMED CONC BASE: RE STRUC (BID OPTION 5: STONE VENEER BASE)
F8 MTL SLAT SCREEN

KEYNOTES

- F12 SIDE BY SIDE ABA COMPLIANT REFRIGERATOR SHOWN FOR REFERENCE (NIC)
F14 6 DOUBLE HEIGHT MTL LOCKERS: RE A8.0
F21 CONC RAMP: RE CIVIL
F23 SERVER RACK: RE ELEC
F24 MOP SINK: RE PLUMB
F28 MTL ACCESS LADDER
F30 FLOOR DRAIN: RE PLUMB; SLOPE SLAB 2% TO DRAIN: RE STRUC

KEYNOTES

- F31 MECH EQUIP CLEARANCE: RE MECH
F32 STL STRUCTURAL COLUMN: RE STRUC
F33 SALVAGED SAFE FROM <E> ENTRY STATION CLOSET, VERIFY IN FIELD MEASUREMENTS, COORDINATE LOCATION WITH CO



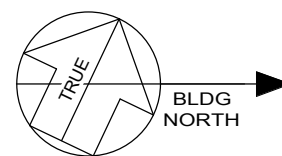
GENERAL NOTES

1. REFER TO SHEET A0.0 FOR WALL TYPES.
2. REFER TO SHEET A6.0 FOR WINDOW AND DOOR ELEVATIONS AND SCHEDULES.
3. REFER TO ENLARGED RESTROOM PLANS A7.1 FOR ADDITIONAL INFORMATION.
4. DIMENSIONS ARE TO FACE OF STRUCTURE UON.
5. ALL GWB IN 'WET' AREAS TO BE MOISTURE RESISTANT.
6. DOOR DIMENSIONS ARE TO CENTERLINE UNLESS STOREFRONT OR UON.
7. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
8. SEE LANDSCAPE PLAN FOR SITE ELEMENTS AROUND BUILDING.
9. KIOSK PLAN IS SHOWN ONCE, BUT THERE ARE THREE NEW KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.

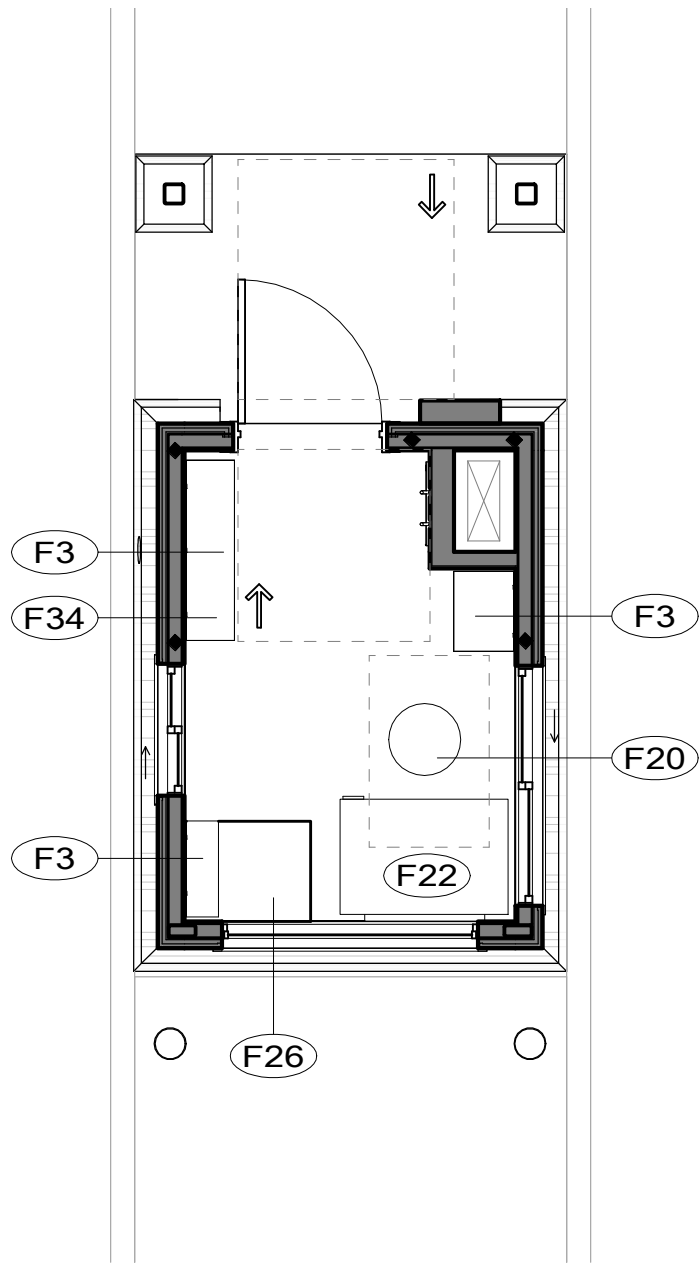
LEGEND

- <N> EXTERIOR WALL
 <N> INTERIOR WALL, 2X FRAMING
 LINE OF ROOF ABOVE
 WALL TYPE TAG: RE A0.0
 WINDOW TYPE TAG: RE WINDOW SCHEDULE
 DOOR TAG: RE DOOR SCHEDULE

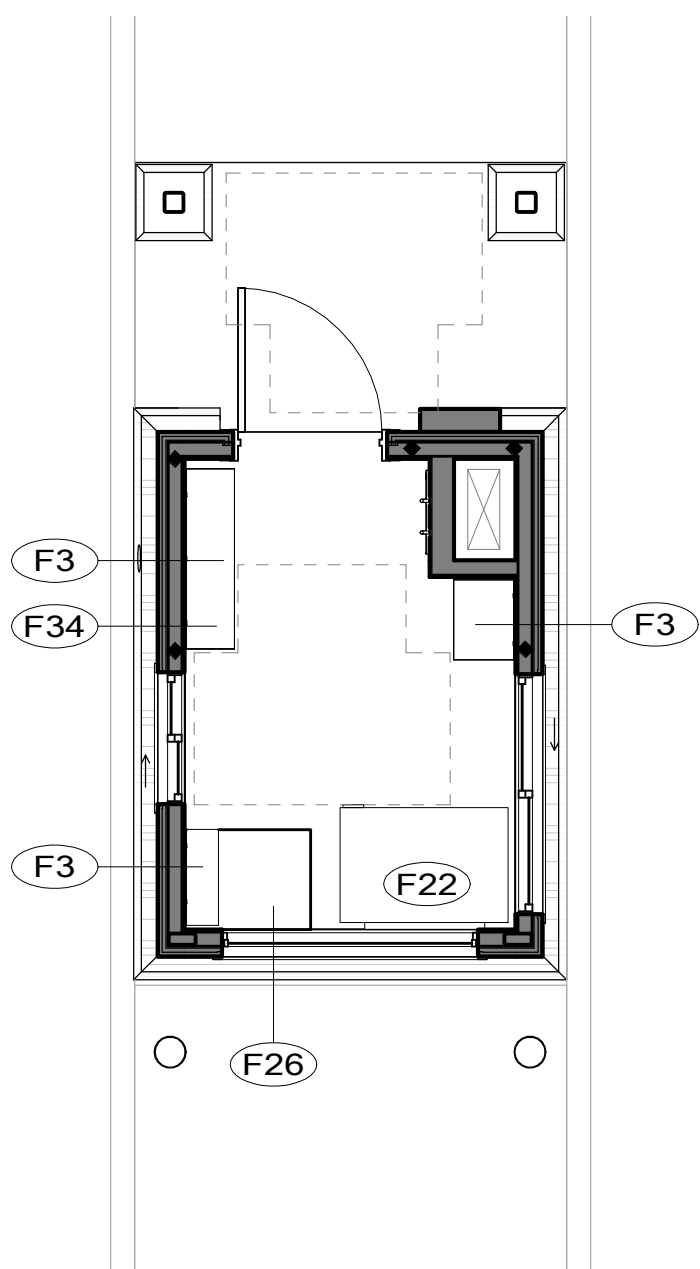
SCALE (A) SCALE OF FEET



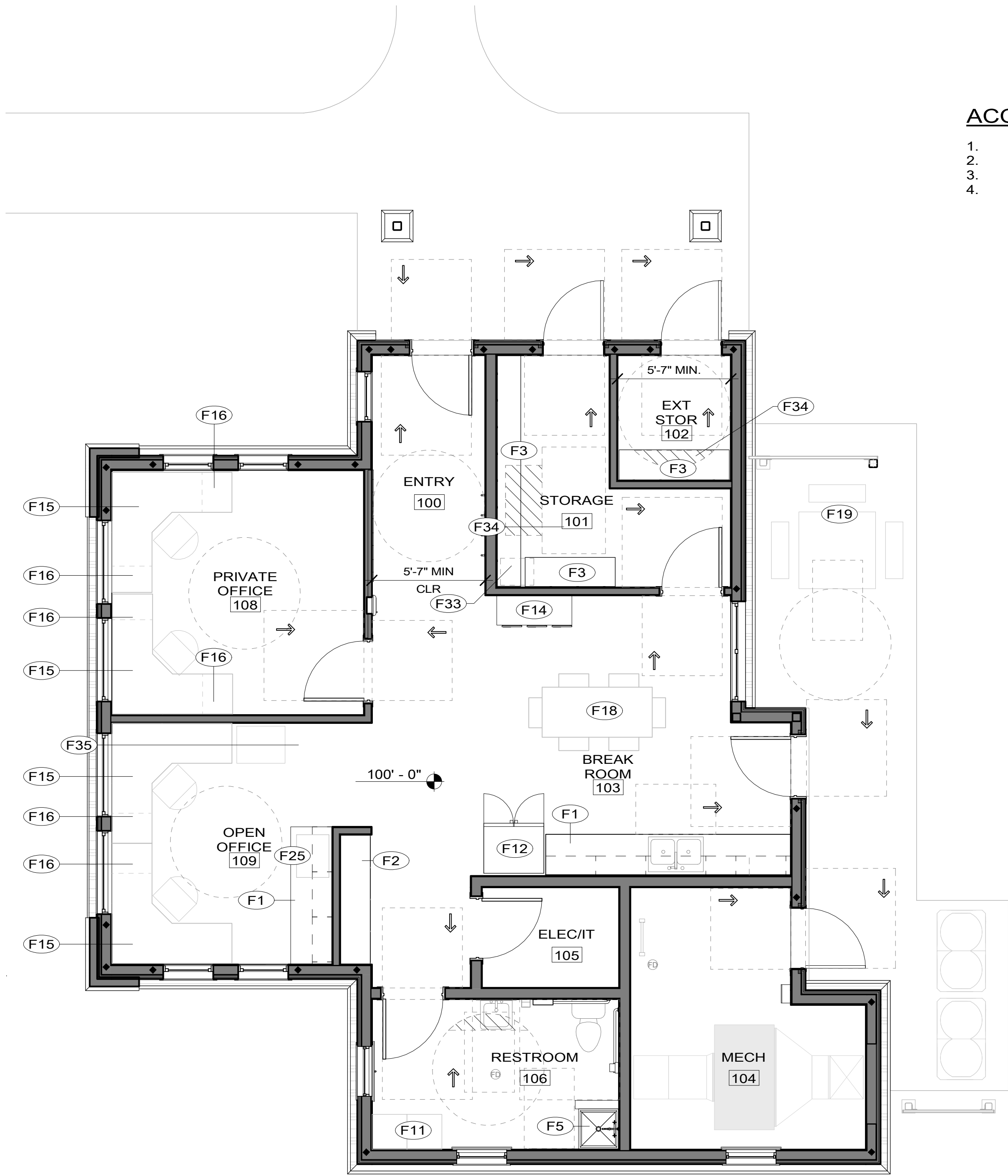
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	RK/LB TECH REVIEW: EH/AC DATE: 03/10/2022			PMIS/PKG NO. 160755 SHEET 94 OF 165



2 FURNISHING & ACCESSIBILITY KIOSK - APPROACH
A1.1



3 ACCESSIBILITY KIOSK - MANEUVERING
A1.1



1 FURNISHING AND ACCESSIBILITY PLAN
A1.1 SCALE (A)

ACCESSIBILITY PLAN GENERAL NOTES

1. SEE A1.0 FOR FULL FLOOR PLAN.
2. FURNITURE NIC SHOWN FOR REFERENCE ONLY UON.
3. SEE LANDSCAPE FOR SITE ACCESSIBILITY PLAN.
4. KIOSK PLAN IS SHOWN ONCE BUT THERE ARE THREE NEW KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.

ABA LEGEND

- 67" TURN RADIUS WITH KNEE AND TOE OVERLAP CLEARANCE SHOWN AS HATCH
- 67" TURN RADIUS
- T-SHAPE TURN AROUND
- T-SHAPE TURN AROUND WITH KNEE AND TOE OVERLAP CLEARANCE SHOWN AS HATCH
- 30X48 CLR. APPROACH
- MANEUVERING CLEARANCE SHOWN DASHED
- ARROW TO DEPICT DIRECTION OF TRAVEL

KEYNOTES

- F1 UPPER AND LOWER PLAM CABINETS WITH SOLID SURFACE COUNTERTOP: RE A8.3
- F2 TALL PLAM CABINET CUBBIES: RE A8.3
- F3 HEAVY DUTY ADJUSTABLE SHELVING, LOCATE BRACKET TO ATTACH TO FRAMING OR PROVIDE BLOCKING WITHIN WALL.
- F5 MOP SINK: RE PLUMB
- F11 TALL CABINETS (NIC)
- F12 SIDE BY SIDE ABA COMPLIANT REFRIGERATOR SHOWN FOR REFERENCE (NIC)
- F14 6 DOUBLE HEIGHT MTL LOCKERS: RE A8.0
- F15 ADJUSTABLE HEIGHT WORKSTATION WITH CHAIR (NIC)
- F16 MTL FILING CABINET, TWO DRAWER, UNDER DESK (NIC)
- F18 TABLE WITH (6) CHAIRS, STAINED WD (NIC)

KEYNOTES

- F19 TABLE WITH (2) CHAIRS, EXTERIOR GRADE EPOXY COATED MTL
- F20 ADJUSTABLE STOOL (NIC)
- F22 MOTORIZED ADJUSTABLE WORK SURFACE
- F25 COUNTERTOP COPIER SCANNER SHOWN FOR REFERENCE (NIC)
- F26 LOWER PLAM CABINET WITH SOLID SURFACE COUNTERTOP: RE A8.3
- F33 SALVAGED SAFE FROM <E> ENTRY STATION CLOSET. VERIFY IN FIELD MEASUREMENTS. COORDINATE LOCATION WITH CO
- F34 SHELVING WITH CLEAR SPACE FOR KNEE AND TOE CLEARANCE OVERLAP
- F35 SAFE (NIC)

SCALE (A) 4 0 4 8
SCALE OF FEET



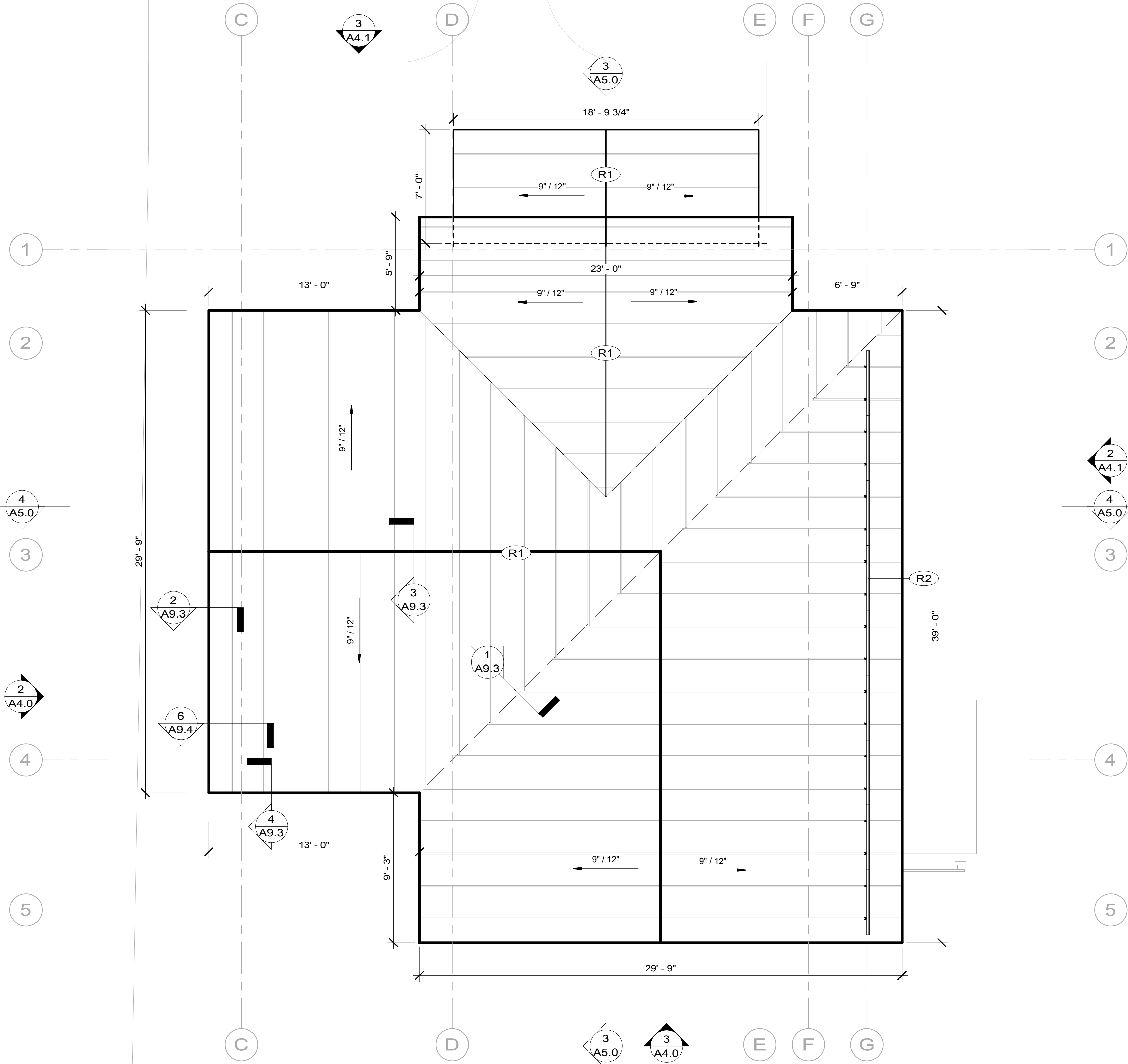
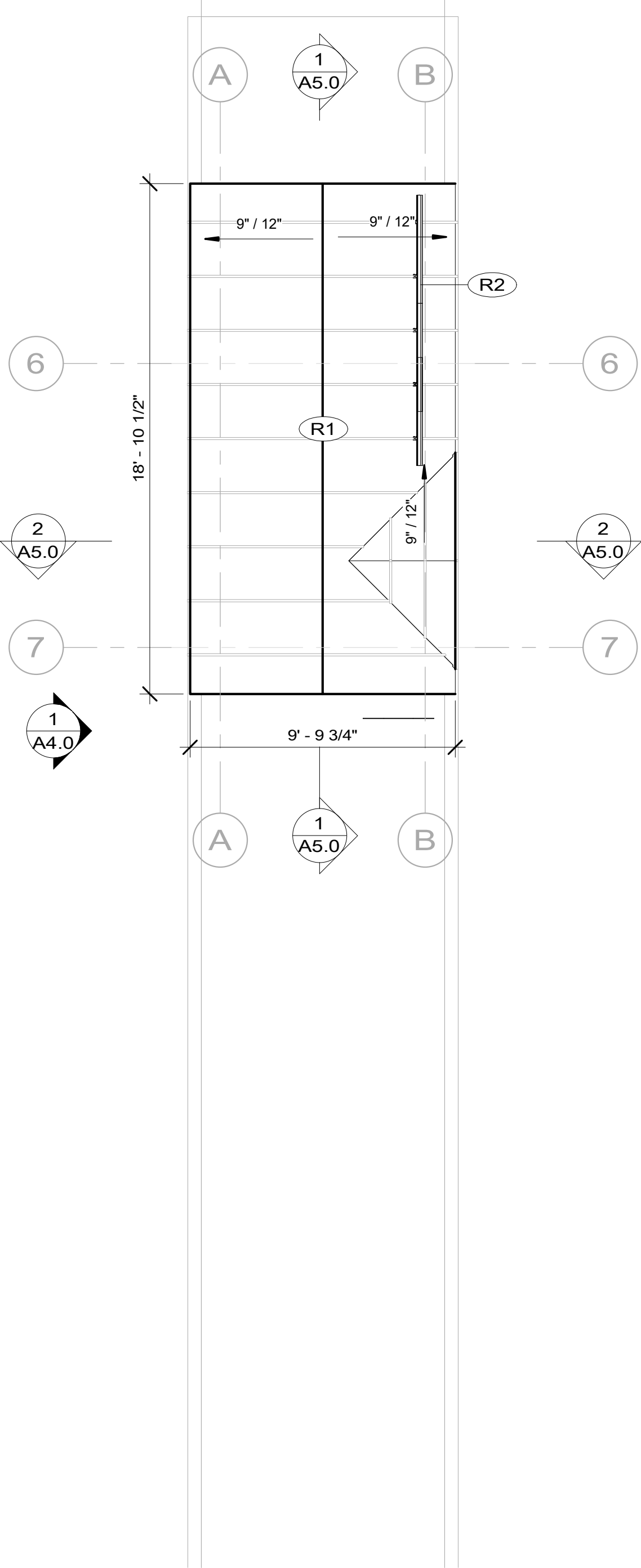
DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
A1.1

TITLE OF SHEET
**FURNISHING AND
ACCESSIBILITY PLAN**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
95 OF **165**



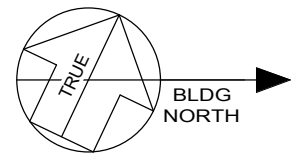
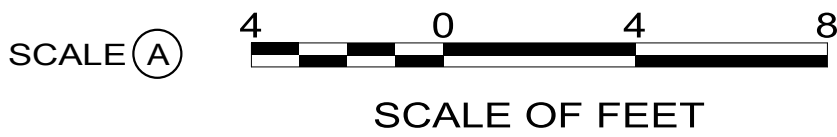
1 ROOF PLAN
SCALE (A)

KEYNOTES

- R1 DOUBLE LOCK MECHANICALLY SEAMED STANDING SEAM
MTL ROOF
R2 STANDING SEAM SNOW GUARDS

GENERAL NOTES

1. STANDING SEAM PATTERN SHOWN FOR REFERENCE ONLY.
2. KIOSK PLAN IS SHOWN ONCE BUT THERE ARE THREE <N> KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.
3. FOR ROOF ASSEMBLY MATERIALS AND CONSTRUCTION RE: A9.3



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

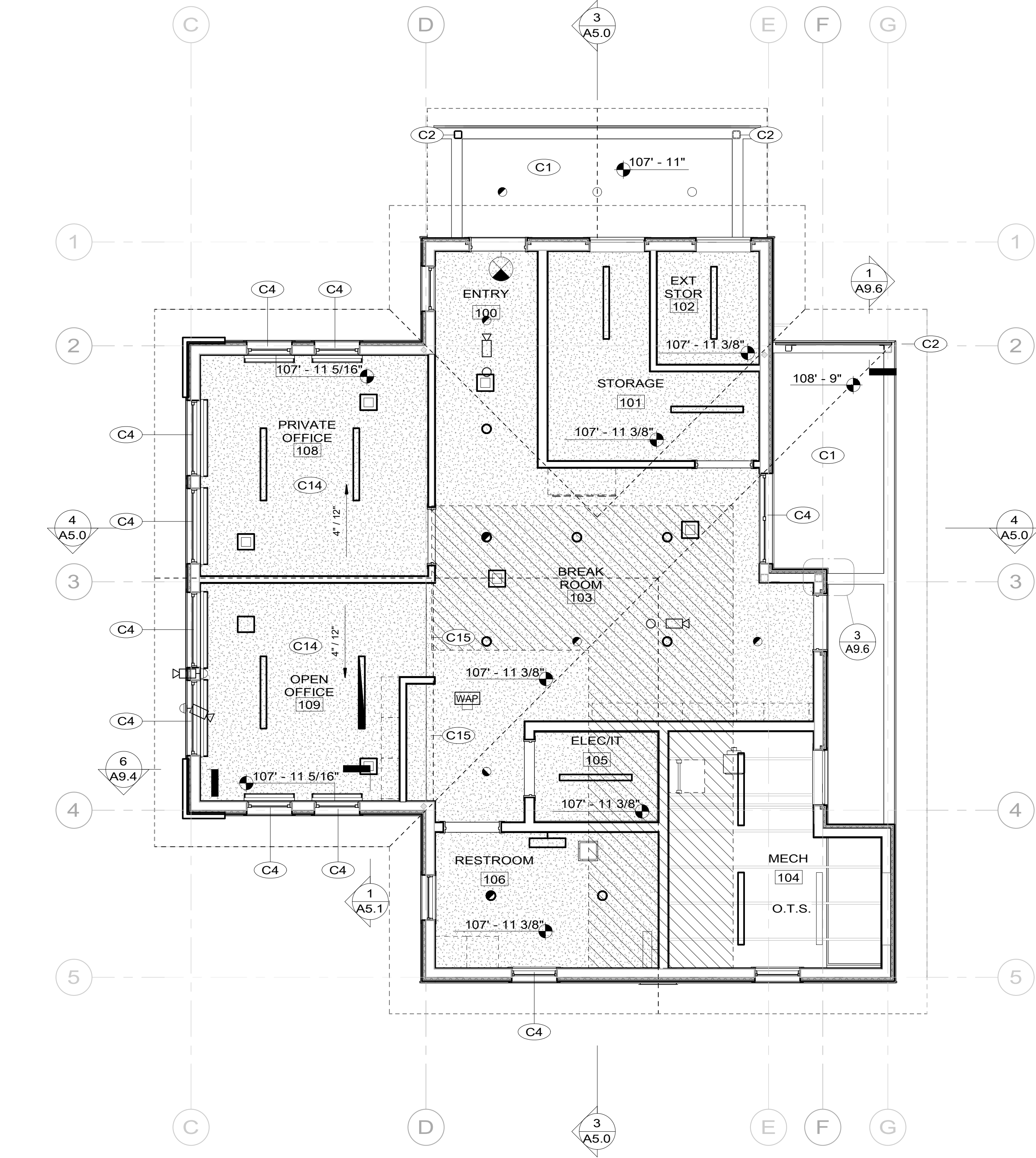
SUB SHEET NO.

A1.2

TITLE OF SHEET
ROOF PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
96 OF **165**



1 ENTRANCE STATION REFLECTED CEILING PLAN
A2.0 SCALE (A)

KEYNOTES

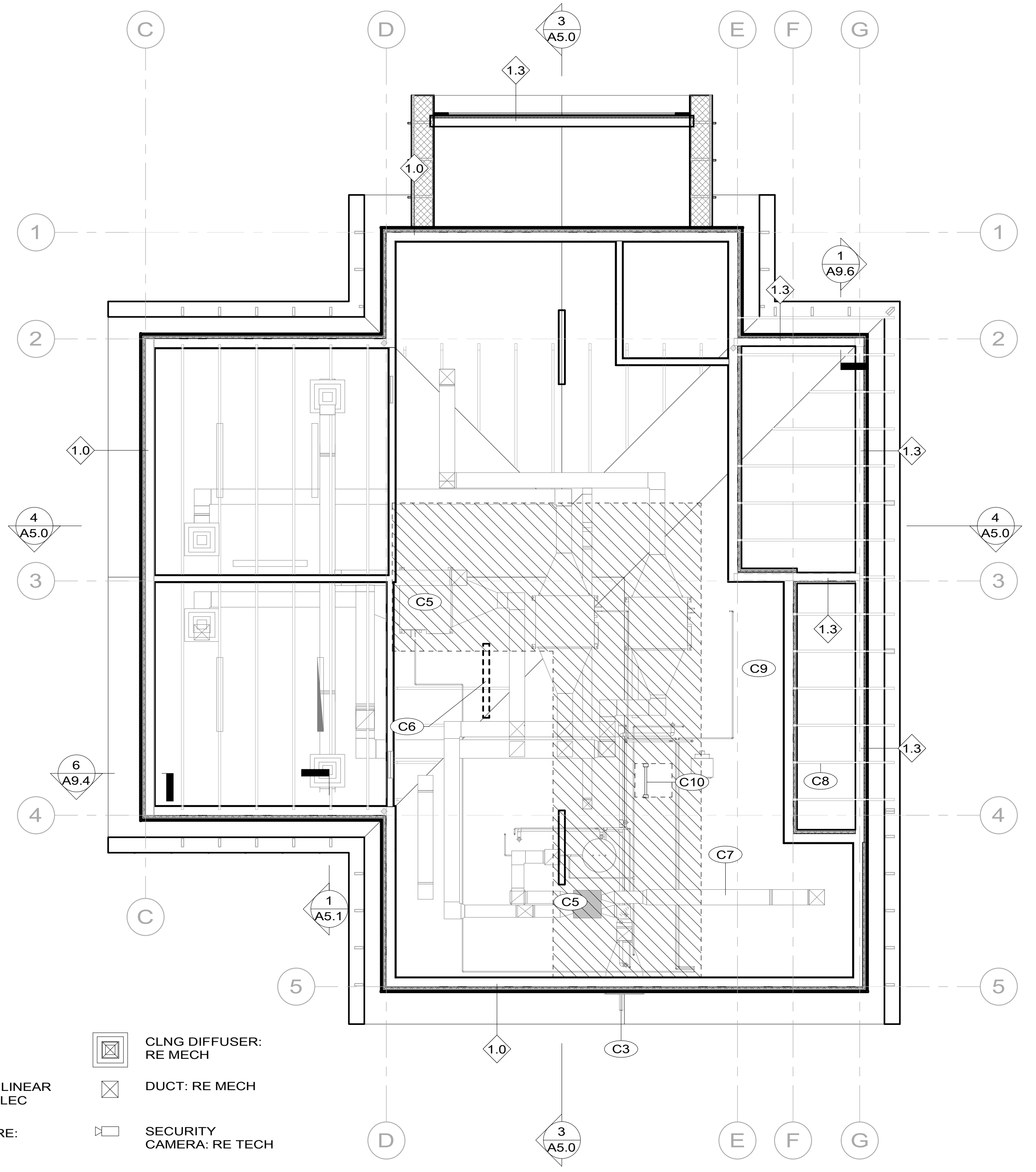
- C1 MTL CLAD SOFFIT, TYP
- C2 STL STRUCTURAL COLUMN WITH BOARD-FORMED CONC BASE; RE: STRUC (BID OPTION 5: STONE VENEER BASE)
- C3 MECHANICAL LOUVER WITH MTL MESH SCREENING ON INT, RE: MECH
- C4 DOUBLE ROLLER SHADES, RE: SEPECIFICATIONS
- C5 MECHANICAL EQUIPMENT TYP, RE: MECH
- C6 LIGHT FIXTURE, RE: ELEC
- C7 MECHANICAL DUCTS TYP, RE: MECH

KEYNOTES

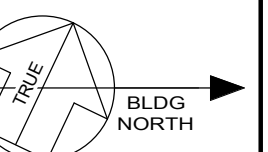
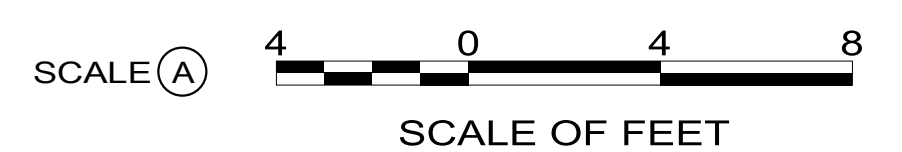
- C8 STRUCTUAL FRAMING RE: STRUCT
- C9 GYPSUM WALL BOARD BETWEEN TRUSSES TO ENCLOSE INSULATION
- C10 ACCESS LADDER
- C14 VAULTED GWB CLNG ATTACHED TO BTM CHORD OF SCISSOR TRUSS; RE: STRUC
- C15 GWB BULKHEAD AT CLNG TRANSITION

GENERAL NOTES

- ALL EXPOSED ELECTRICAL CONDUIT SHALL BE PAINTED, TYP. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- KIOSK PLAN IS SHOWN ONCE BUT THERE ARE THREE <N> KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.
- SEE ENLARGED KIOSK SHEET FOR RCP



2 ENTRANCE STATION ATTIC REFLECTED CEILING PLAN
A2.0 SCALE (A)



DESIGNED:
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TECH REVIEW:
EH/AC
DATE:
03/10/2022

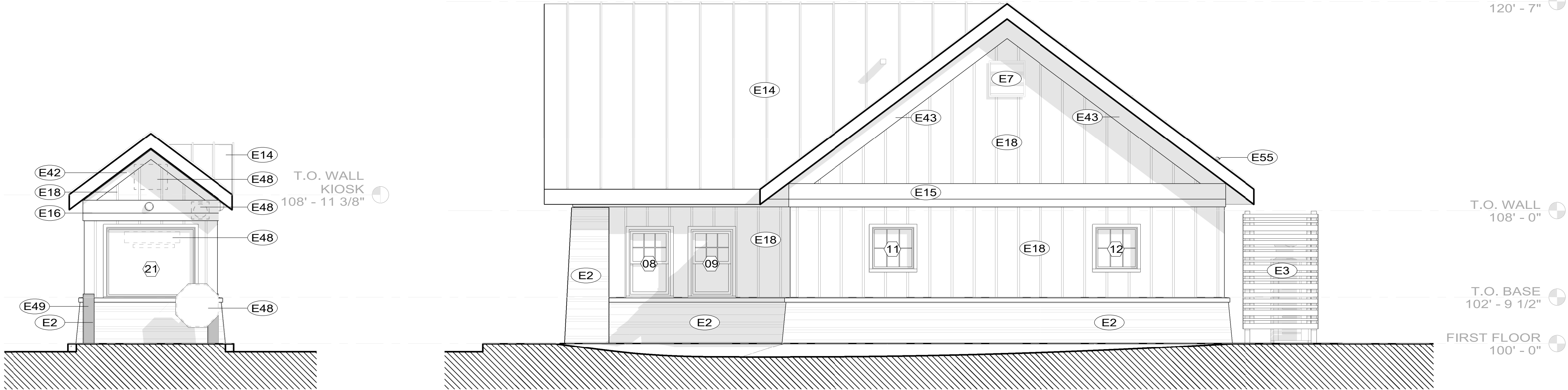
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A2.0

TITLE OF SHEET
**REFLECTED CEILING
PLAN & ATTIC PLAN**

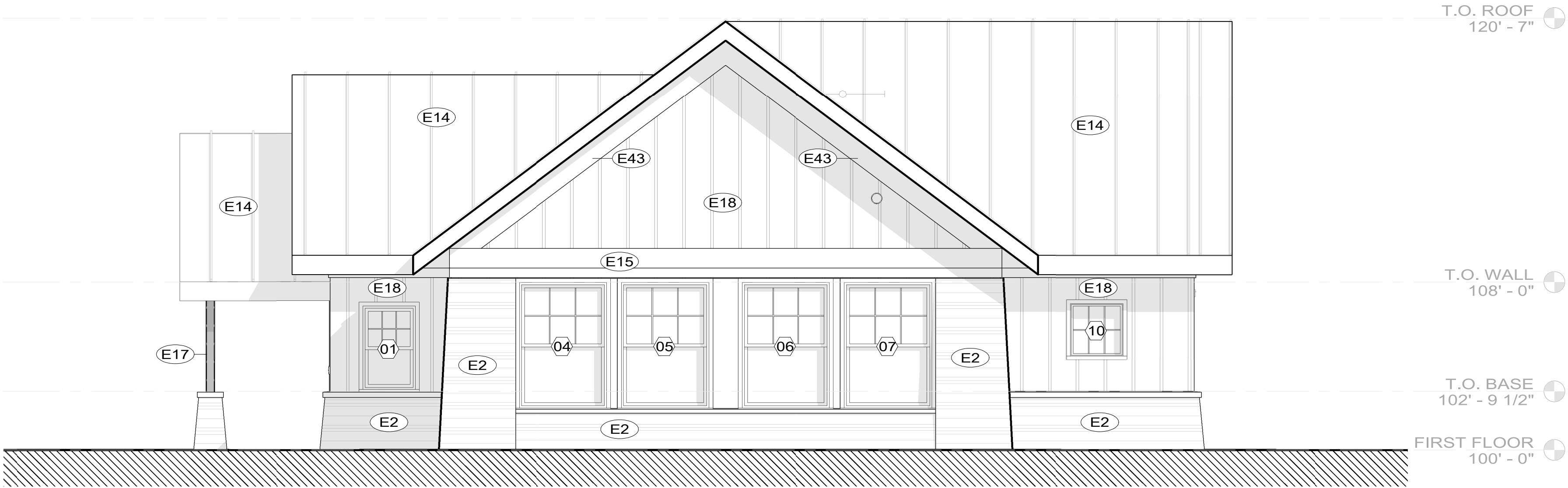
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
**121
176678**
PMIS/PKG NO.
160755
SHEET
97 OF 165

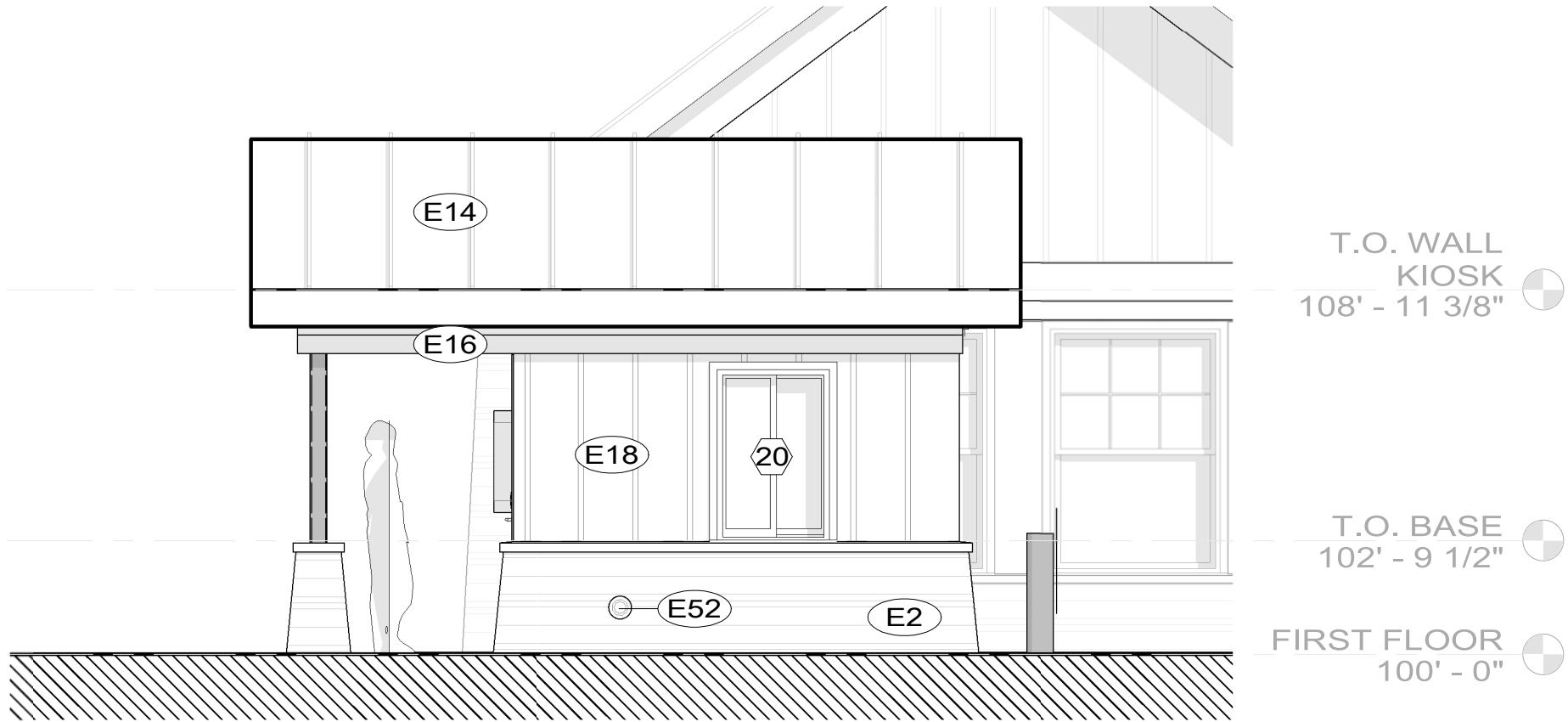
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3 EAST ELEVATION



2 SOUTH ELEVATION



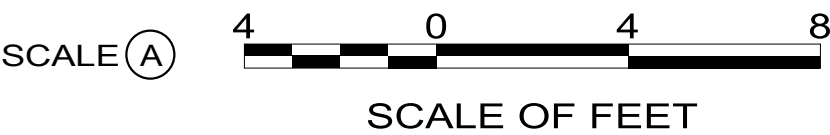
1 KIOSK SOUTH ELEVATION

KEYNOTES

- E2 BOARD-FORMED CONC, INTEGRALLY COLORED TO MATCH LOCAL STONE (BID OPTION 5: STONE VENEER BASE)
- E3 MTL SLAT SCREEN: RE SCREEN DETAILS
- E7 MECHANICAL LOUVER WITH MTL MESH SCREENING ON INT: RE MECH
- E14 STANDING SEAM MTL ROOF
- E15 CEMENTITIOUS TRIM BOARDS (5-1/2" WIDE BOARD FLUSH AND HELD TIGHTLY BELOW 11-1/4" WIDE BOARD)
- E16 CEMENTITIOUS TRIM BOARDS (5-1/2" WIDE BOARD FLUSH AND HELD TIGHTLY BELOW 9-1/4" WIDE BOARD)
- E17 STL STRUCTURAL COLUMN WITH BOARD-FORMED CONC BASE: RE STRUC (BID OPTION 5: STONE VENEER BASE)
- E18 BOARD AND BATTEN CEMENTITIOUS SIDING
- E42 CEMENTITIOUS TRIM BOARD (5-1/2" WIDE) AT RAKE
- E43 CEMENTITIOUS TRIM BOARD (11-1/4" WIDE) AT RAKE/BARGE BOARD
- E48 PARK PROVIDED SIGNAGE, GC TO PROVIDE BLOCKING, ATTACHMENT HARDWARE, & INSTALLATION
- E49 STL BOLLARD: RE LANDSCAPE
- E52 CONDENSATION DOWNSPOUT: RE MECH
- E55 STANDING SEAM SNOW GUARDS

GENERAL NOTES

- STANDING SEAM PATTERN SHOWN FOR REFERENCE ONLY.
- REFER TO SHEET A6.0 FOR WINDOW AND DOOR SCHEDULES.
- KIOSK ELEVATIONS ARE SHOWN ONCE BUT THERE ARE THREE <N> KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.
- BID OPTION 5 - STONE VENEER: SUBSTITUTION OF BASE BID BOARDFORM CONC VENEER ON THE OFFICE AND KIOSK BUILDINGS FOR GRANITE STONE VENEER.
- BID OPTION 6 - WEATHERING STL ROOFING AND ELEMENTS: SUBSTITUTION OF THE BASE BID PREFINISHED STANDING SEAM METAL ROOFING FOR STANDING SEAM BARE "WEATHERING" STL ROOFING. ALSO SUBSTITUTES STL BOLLARDS, STL SIDEWALK GRATE, TRUNCATED DOME PAVERS, EXPOSED STL COLUMNS AND STL SCREENS (AT BACK OF OFFICE BUILDING) WITH SAME ELEMENT COMPOSED OF WEATHERING STL.



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

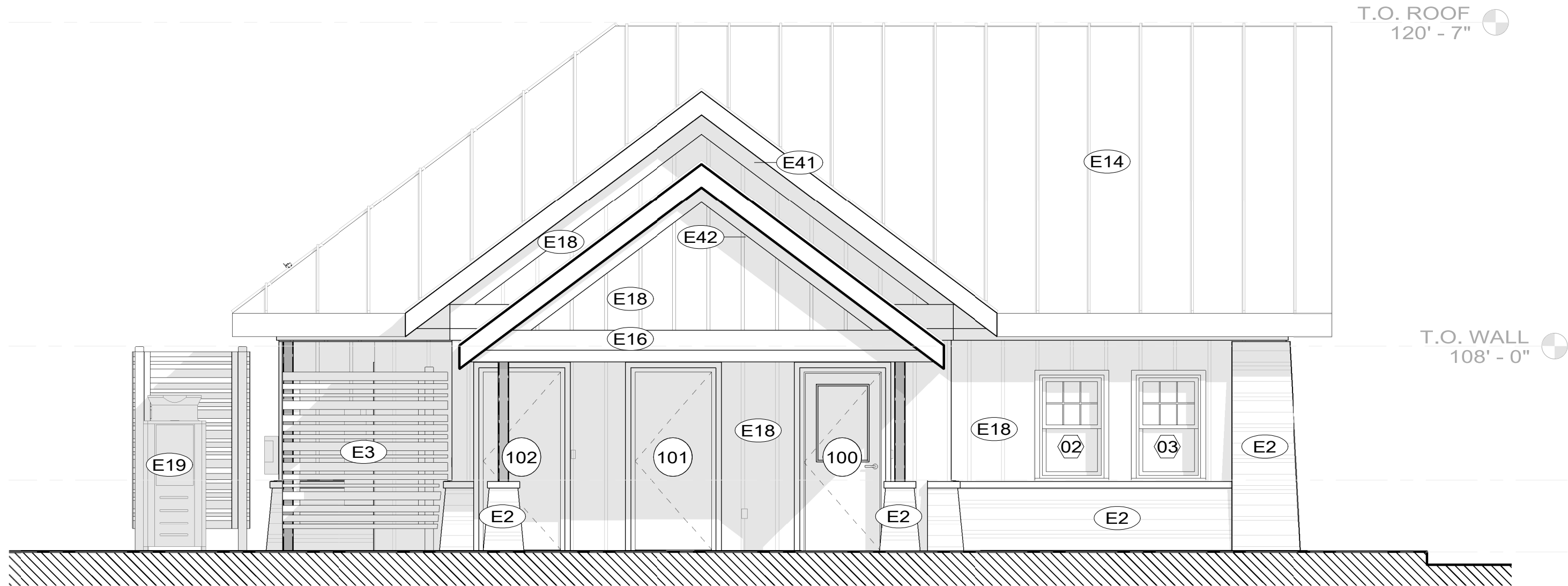
SUB SHEET NO.

A4.0

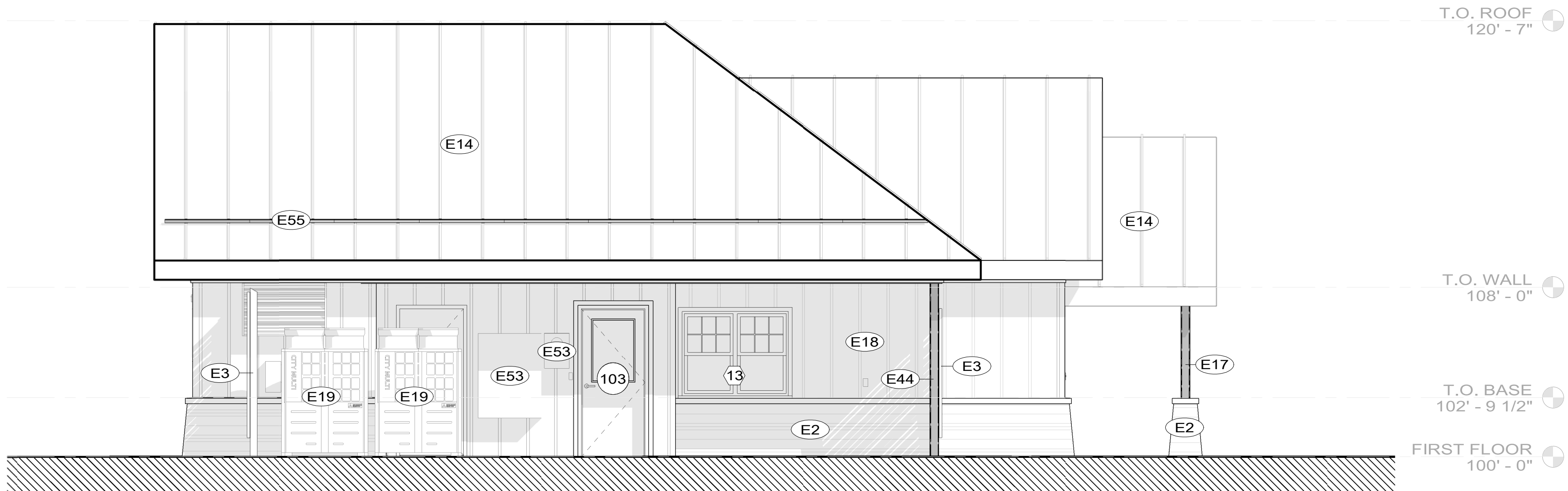
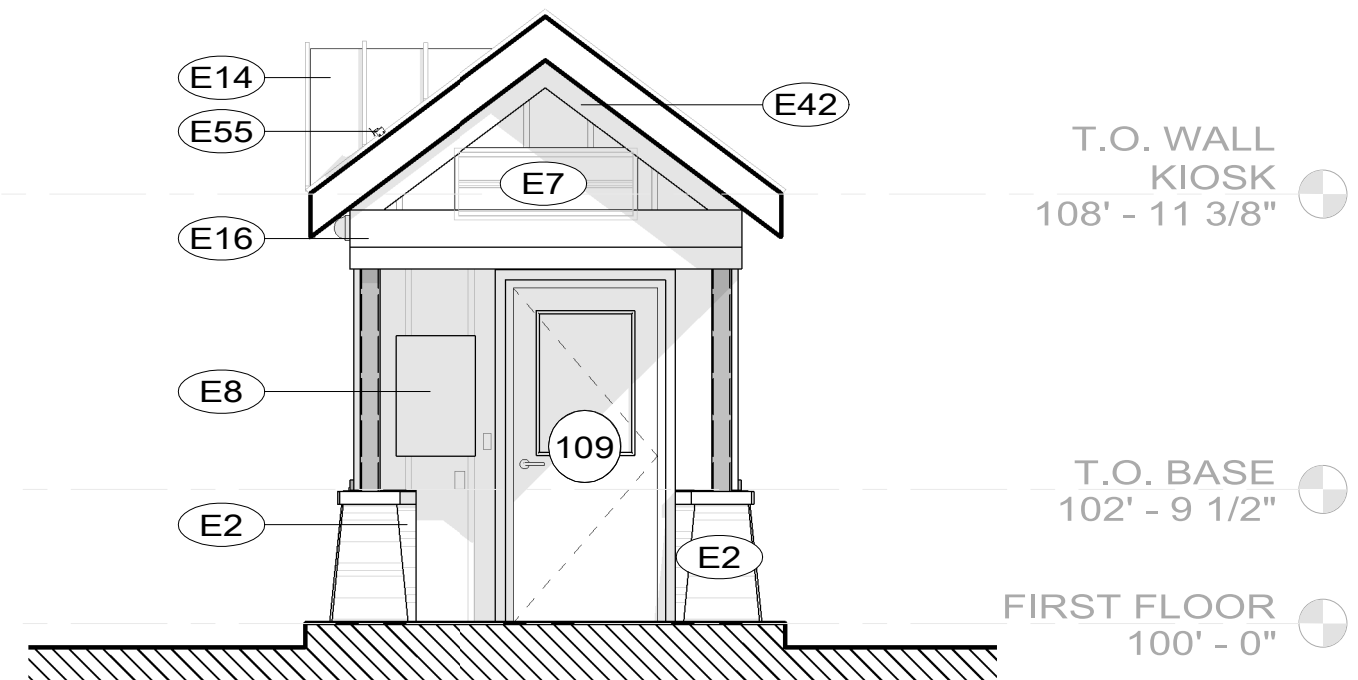
TITLE OF SHEET
**EXTERIOR
ELEVATIONS**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

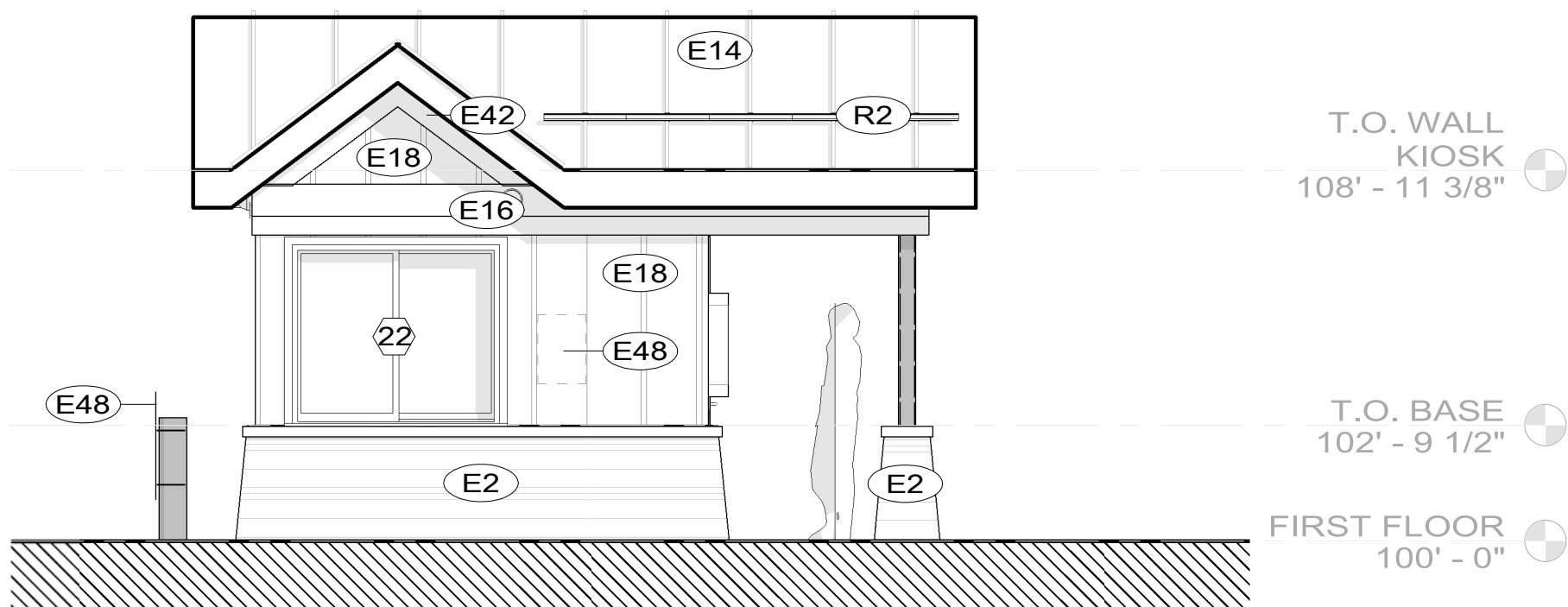
DRAWING NO.
121
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98 OF **165**



3 WEST ELEVATION



2 NORTH ELEVATION



1 KIOSK NORTH ELEVATION

KEYNOTES

- E2 BOARD-FORMED CONC, INTEGRALLY COLORED TO MATCH LOCAL
STONE (BID OPTION 5: STONE VENEER BASE)
E3 MTL SLAT SCREEN: RE SCREEN DETAILS
E7 MECHANICAL LOUVER WITH MTL MESH SCREENING ON INT: RE
MECH
E8 ELEC PANEL: RE ELEC
E14 STANDING SEAM MTL ROOF
E16 CEMENTITIOUS TRIM BOARDS (5-1/2" WIDE BOARD FLUSH AND HELD
TIGHTLY BELOW 9-1/4" WIDE BOARD)
E17 STL STRUCTURAL COLUMN WITH BOARD-FORMED CONC BASE: RE
STRUC (BID OPTION 5: STONE VENEER BASE)
E18 BOARD AND BATTEN CEMENTITIOUS SIDING
E19 MECHANICAL EQUIPMENT: RE MECH
E41 CEMENTITIOUS TRIM BOARD (7-1/4" WIDE) AT RAKE/BARGE BOARD
E42 CEMENTITIOUS TRIM BOARD (5-1/2" WIDE) AT RAKE
E44 STL STRUCTURAL COLUMN: RE STRUC
E48 PARK PROVIDED SIGNAGE, GC TO PROVIDE BLOCKING,
ATTACHMENT HARDWARE, & INSTALLATION
E53 ELEC EQUIPMENT: RE ELEC
E55 STANDING SEAM SNOW GUARDS
R2 STANDING SEAM SNOW GUARDS

GENERAL NOTES

1. STANDING SEAM PATTERN SHOWN FOR REFERENCE ONLY.
2. REFER TO SHEET A6.0 FOR WINDOW AND DOOR SCHEDULES.
3. KIOSK ELEVATIONS ARE SHOWN ONCE BUT THERE ARE THREE <N> KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.
4. BID OPTION 5 – STONE VENEER: SUBSTITUTION OF BASE BID BOARDFORM CONC VENEER ON THE OFFICE AND KIOSK BUILDINGS FOR GRANITE STONE VENEER.
5. BID OPTION 6 – WEATHERING STL ROOFING AND ELEMENTS: SUBSTITUTION OF THE BASE BID PREFINISHED STANDING SEAM METAL ROOFING FOR STANDING SEAM BARE "WEATHERING" STL ROOFING. ALSO SUBSTITUTES STL BOLLARDS, STL SIDEWALK GRATE, TRUNCATED DOME PAVERS, EXPOSED STL COLUMNS AND STL SCREENS (AT BACK OF OFFICE BUILDING) WITH SAME ELEMENT COMPOSED OF WEATHERING STL.

SCALE (A)

SCALE OF FEET



DESIGNED:
AC/RK/LB
CADD
RK/LB
TECH REVIEW
EH/AC
DATE:
03/10/2022

SUB SHEET NO.

A4.1

TITLE OF SHEET

**EXTERIOR
ELEVATIONS**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
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PREPARE FOR REPAINTING THROUGH SCRAPING AND SANDING. REPAINT <E> WD DOOR AND FRAME, REPLACE WEATHERSTRIPPING.

3 PUMP HOUSE SOUTH ELEVATION
A4.2



REPAIR <E> CONC SLAB WHERE IMPACTED BY EQUIPMENT REPLACEMENT; ALLOWANCE OF 6 SF OF <N> CONC SLAB

4 PUMP HOUSE NORTHWEST INTERIOR
A4.2



REPAIR <E> WD SHINGLE ROOF.

REPLACE DRY AND CRACKING WD FASCIA IN-KIND AND REPAINT.

RE: ELECTRICAL, CIVIL, AND MECHANICAL FOR REPLACEMENT AND WATER TREATMENT SCOPE

BUILDING DIMENSIONS:
EXTERIOR - 10'-2 1/2" X 8'-2 1/2"
BOTTOM OF SIDING TO PEAK - 9'-6"
INTERIOR FLOOR - 8'-10 1/2" X 6'-10 1/2"; 61SF

2 PUMP HOUSE NORTHWEST ELEVATION
A4.2



PREPARE FOR REPAINTING THROUGH SCRAPING AND SANDING; REPAINT FULL EXTERIOR SIDING AND TRIM

1 PUMP HOUSE SOUTHEAST ELEVATION
A4.2

NOTE: PUMP HOUSE IMPROVEMENTS ARE CONSIDERED PART OF THE WATER SYSTEM REHABILITATION LINE ITEM



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EH/AC
DATE:
03/10/2022

SUB SHEET NO.

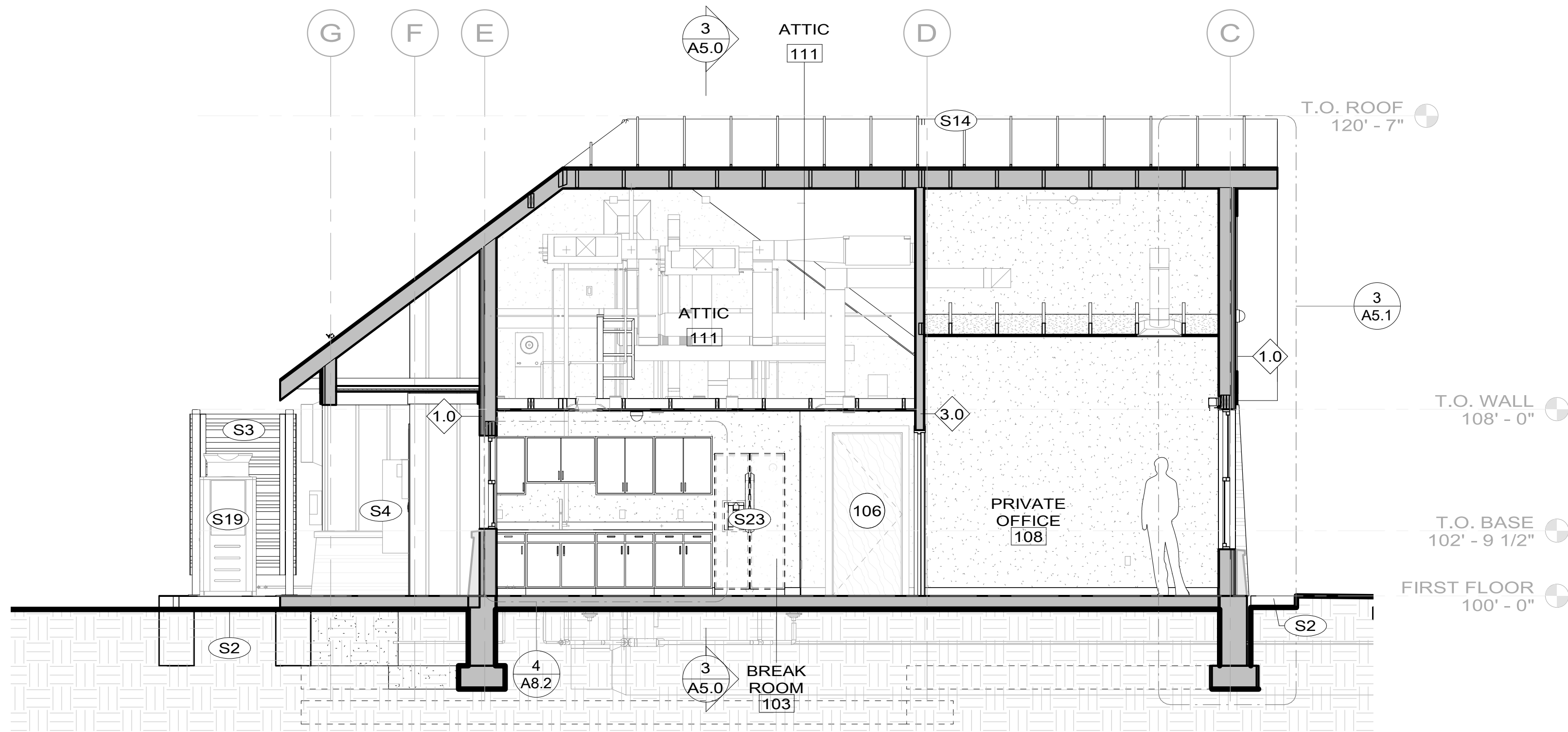
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TITLE OF SHEET
PUMP HOUSE ELEVATIONS

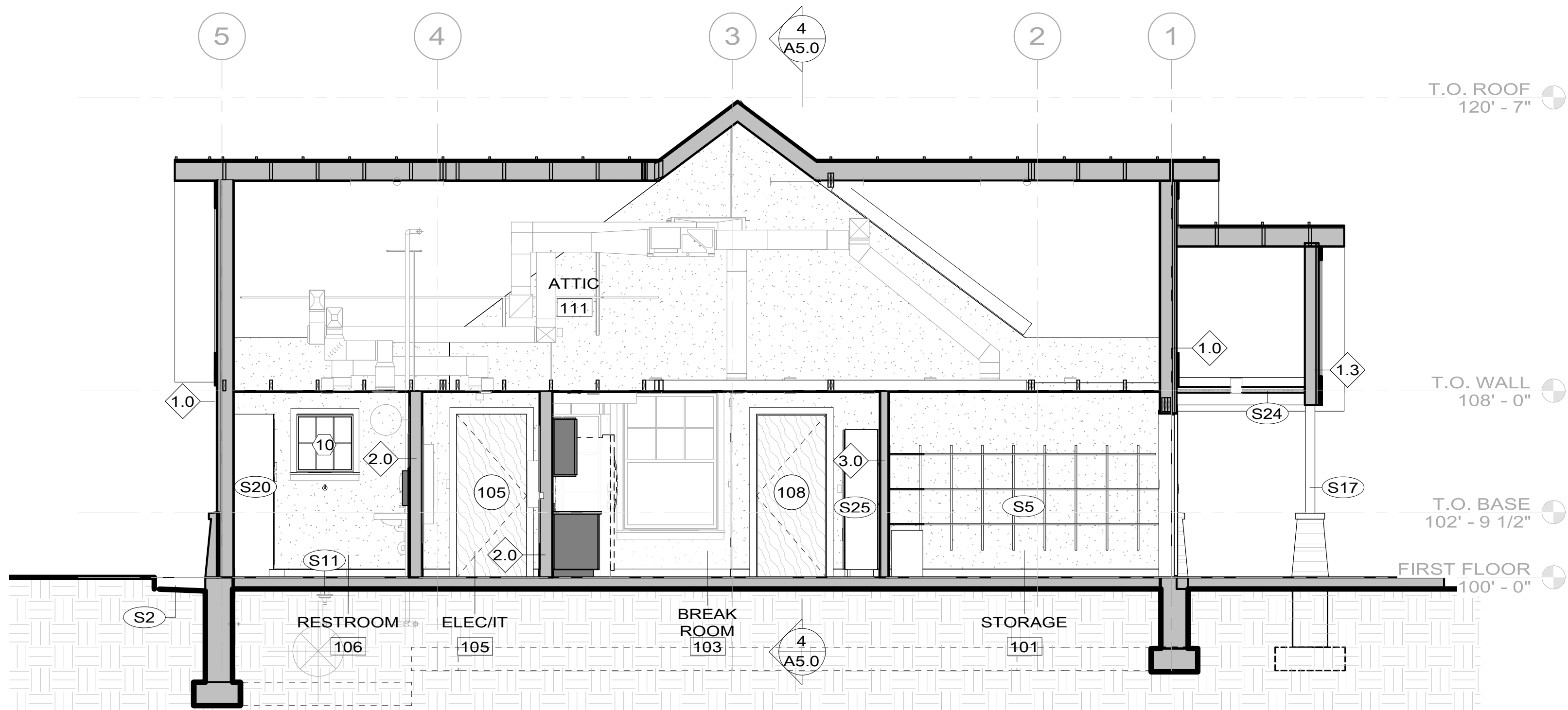
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
100 OF **165**

3/8/2022 2:26:41 PM BIM 360://2021-250 ROMO FRE/2021-250 - ROMO FRE - v20 - BIM 360.rvt



4 BUILDING SECTION - BREAK ROOM & PRIVATE OFFICE
A5.0 SCALE (A)



3 BUILDING SECTION EAST/WEST
A5.0 SCALE (A)

KEYNOTES

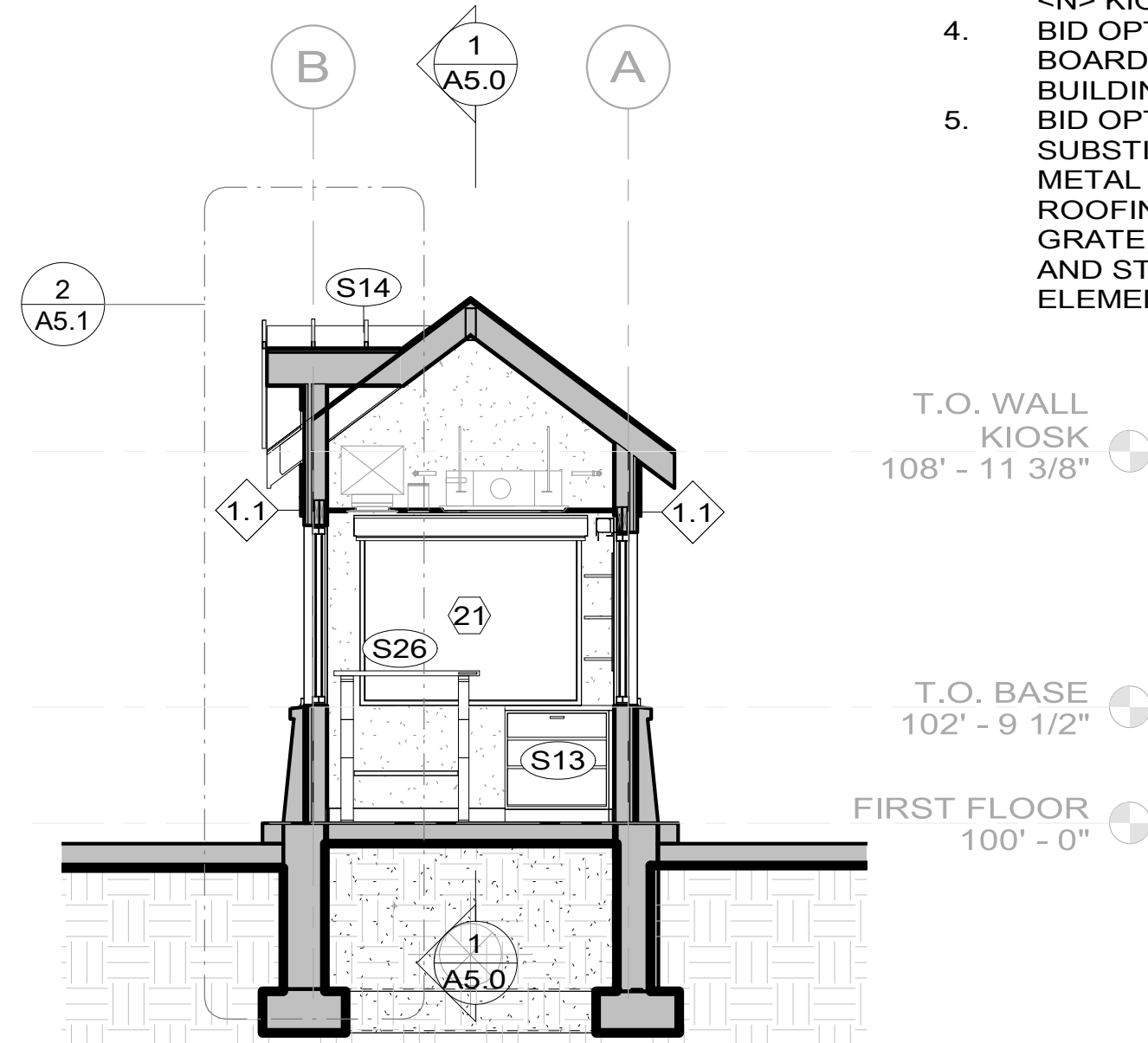
- S2 ROCK MULCH LANDSCAPING AT BASE, PER L1.2
- S3 MTL SLAT SCREEN: RE SCREEN DETAILS
- S4 ELEC EQUIPMENT: RE ELEC
- S5 HEAVY DUTY ADJUSTABLE SHELVING, LOCATE BRACKET TO ATTACH TO FRAMING OR PROVIDE BLOCKING WITHIN WALL
- S11 FLOOR DRAIN: RE PLUMB
- S13 LOWER PLAM CABINET WITH SOLID SURFACE COUNTERTOP: RE A8.3 700
- S14 STANDING SEAM MTL ROOF

KEYNOTES

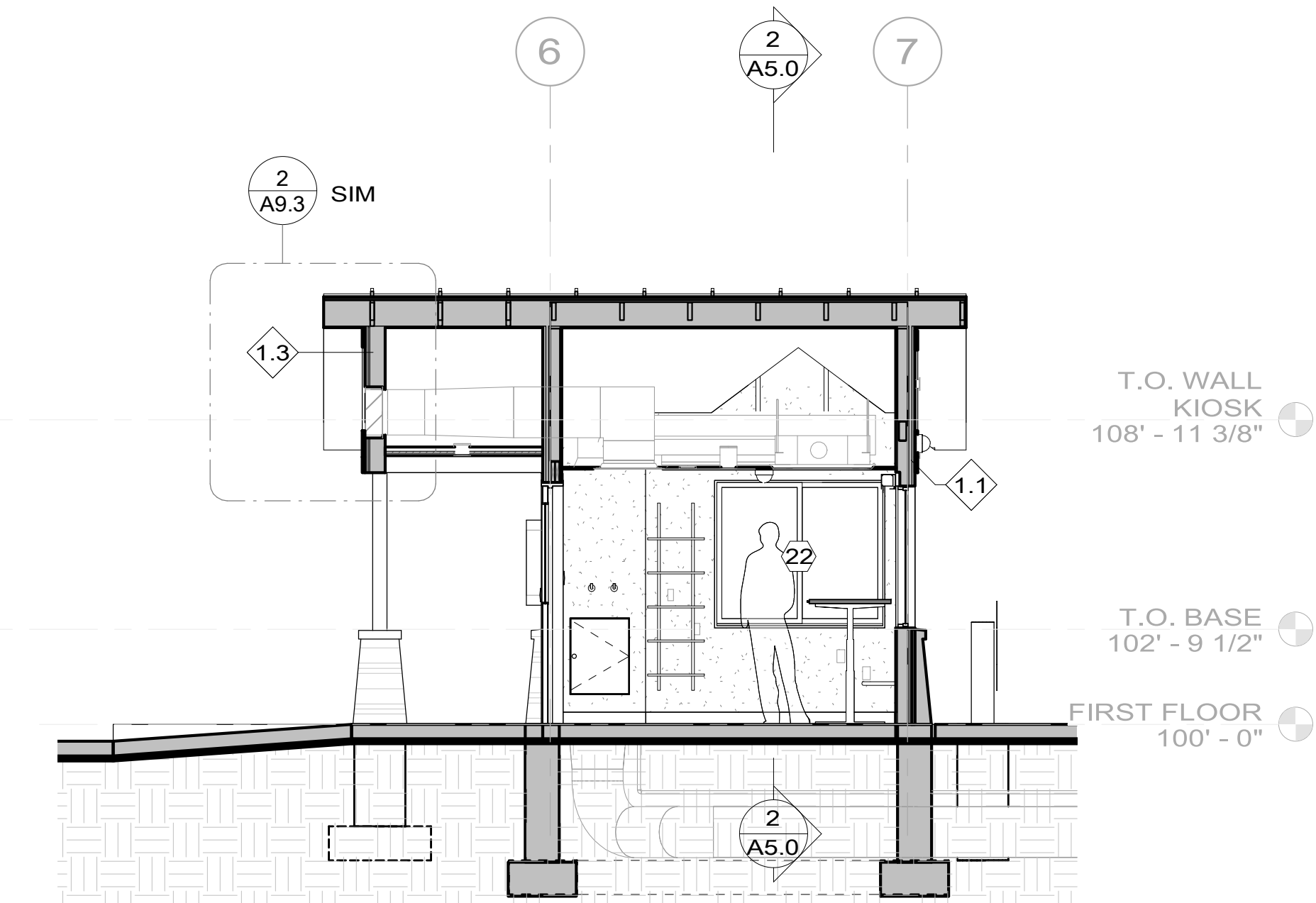
- S17 STL STRUCTURAL COLUMN WITH BOARD-FORMED CONC BASE: RE STRUC (BID OPTION 5: STONE VENEER BASE)
- S19 MECHANICAL EQUIPMENT: RE MECH
- S20 TALL PLAM CABINETS: RE A8.2
- S23 SIDE BY SIDE ABA COMPLIANT REFRIGERATOR SHOWN FOR REFERENCE (NIC)
- S24 MTL CLAD SOFFIT, TYP
- S25 6 DOUBLE HEIGHT MTL LOCKERS
- S26 MOTORIZED ADJUSTABLE WORK SURFACE

GENERAL NOTES

1. STANDING SEAM PATTERN SHOWN FOR REFERENCE ONLY.
2. REFER TO SHEET A6.0 FOR WINDOW AND DOOR SCHEDULES.
3. KIOSK ELEVATIONS ARE SHOWN ONCE BUT THERE ARE THREE <N> KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.
4. BID OPTION 5 - STONE VENEER: SUBSTITUTION OF BASE BID BOARDFORM CONC VENEER ON THE OFFICE AND KIOSK BUILDINGS FOR GRANITE STONE VENEER.
5. BID OPTION 6 - WEATHERING STL ROOFING AND ELEMENTS: SUBSTITUTION OF THE BASE BID PREFINISHED STANDING SEAM METAL ROOFING FOR STANDING SEAM BARE "WEATHERING" STL ROOFING. ALSO SUBSTITUTES STL BOLLARDS, STL SIDEWALK GRATE, TRUNCATED DOME PAVERS, EXPOSED STL COLUMNS AND STL SCREENS (AT BACK OF OFFICE BUILDING) WITH SAME ELEMENT COMPOSED OF WEATHERING STL.



2 KIOSK SECTION N/S (AT 3 LOCATIONS)
A5.0 SCALE (A)

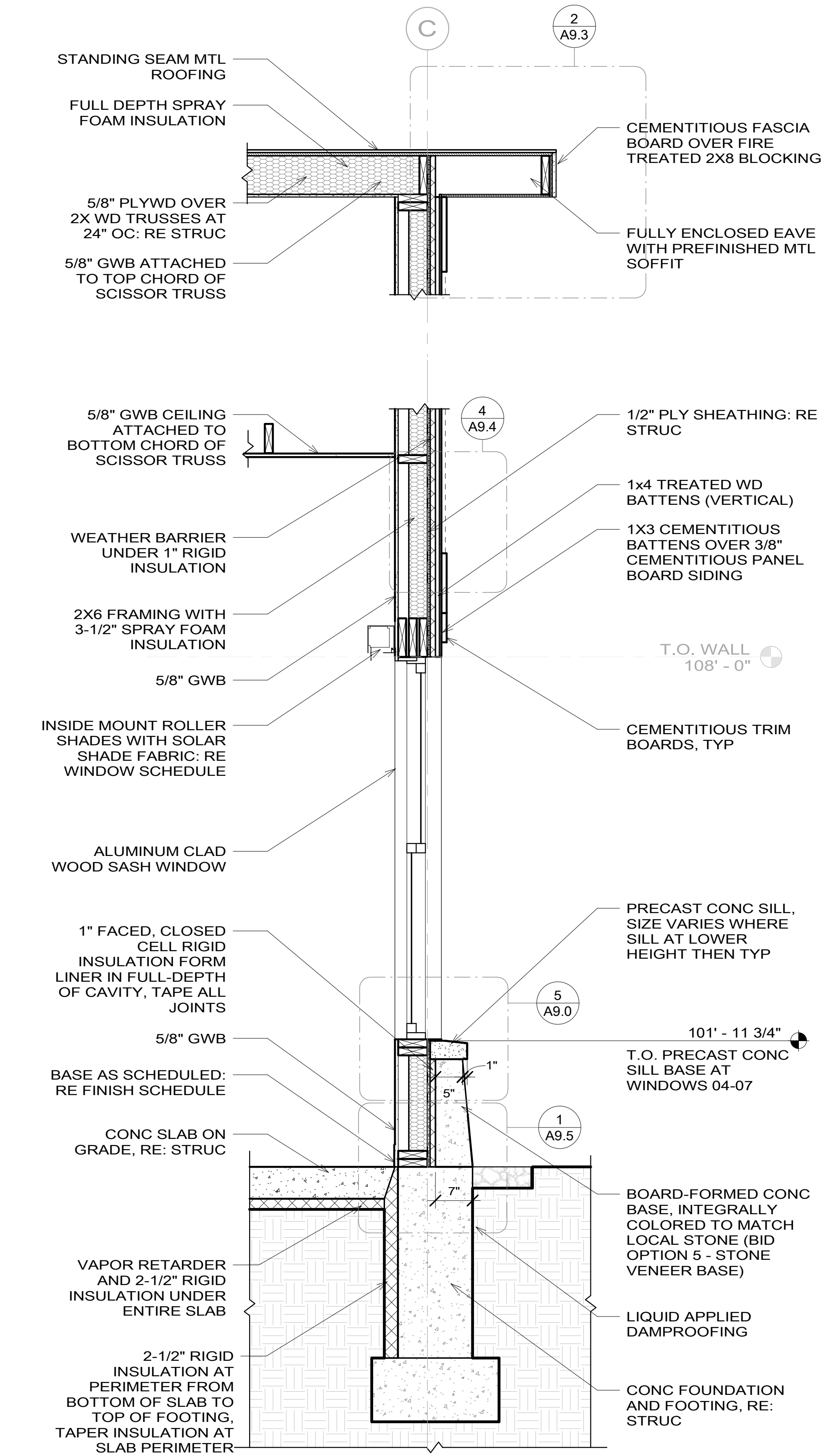


1 KIOSK SECTION E/W (AT 3 LOCATIONS)
A5.0 SCALE (A)

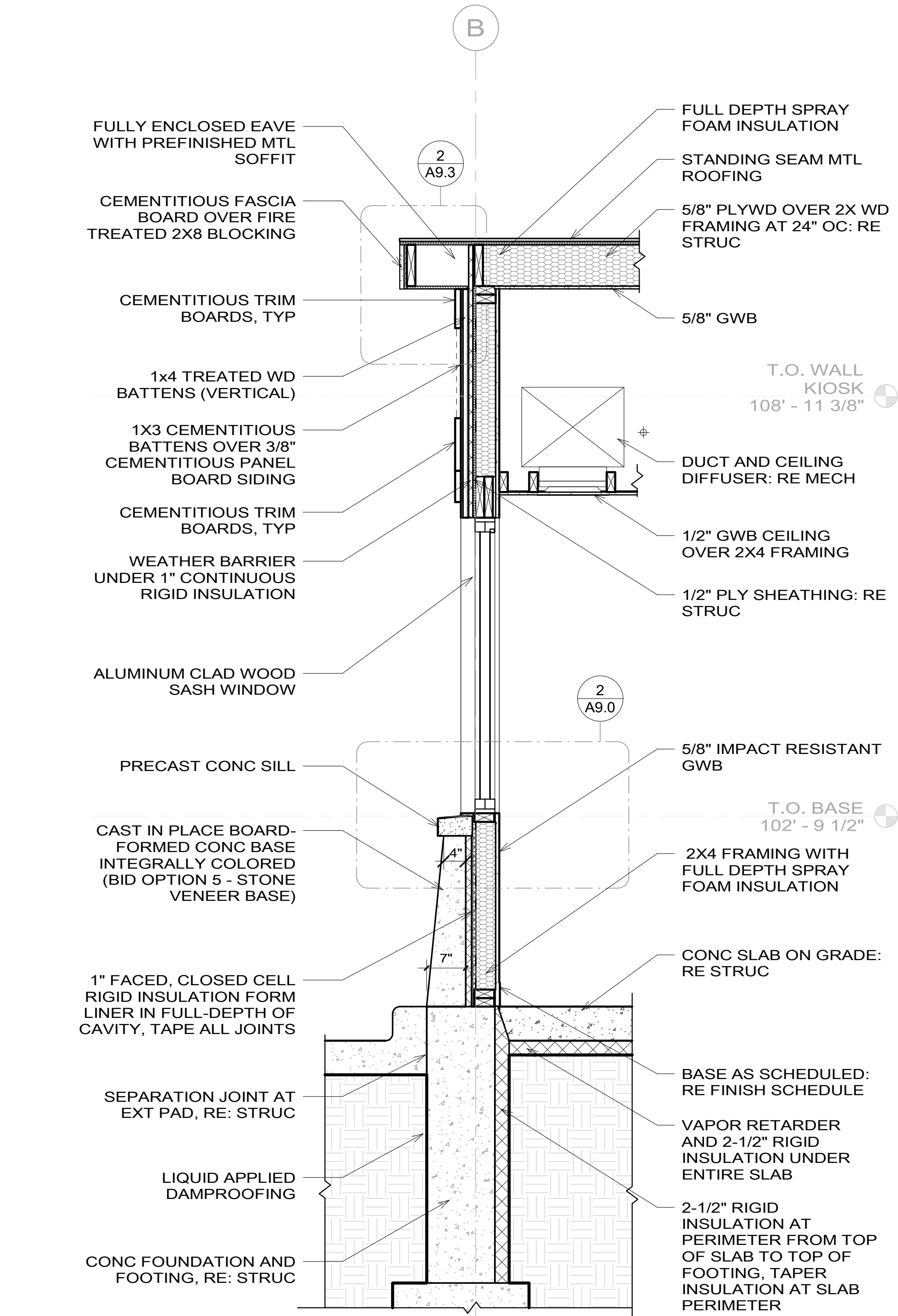
SCALE (A) 4 0 4 8
SCALE OF FEET

	DESIGNED: AC/RK/LB GADD RK/LB TECH REVIEW: EH/AC DATE: 03/10/2022	SUB SHEET NO. A5.0	TITLE OF SHEET BUILDING SECTIONS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 101 OF 165

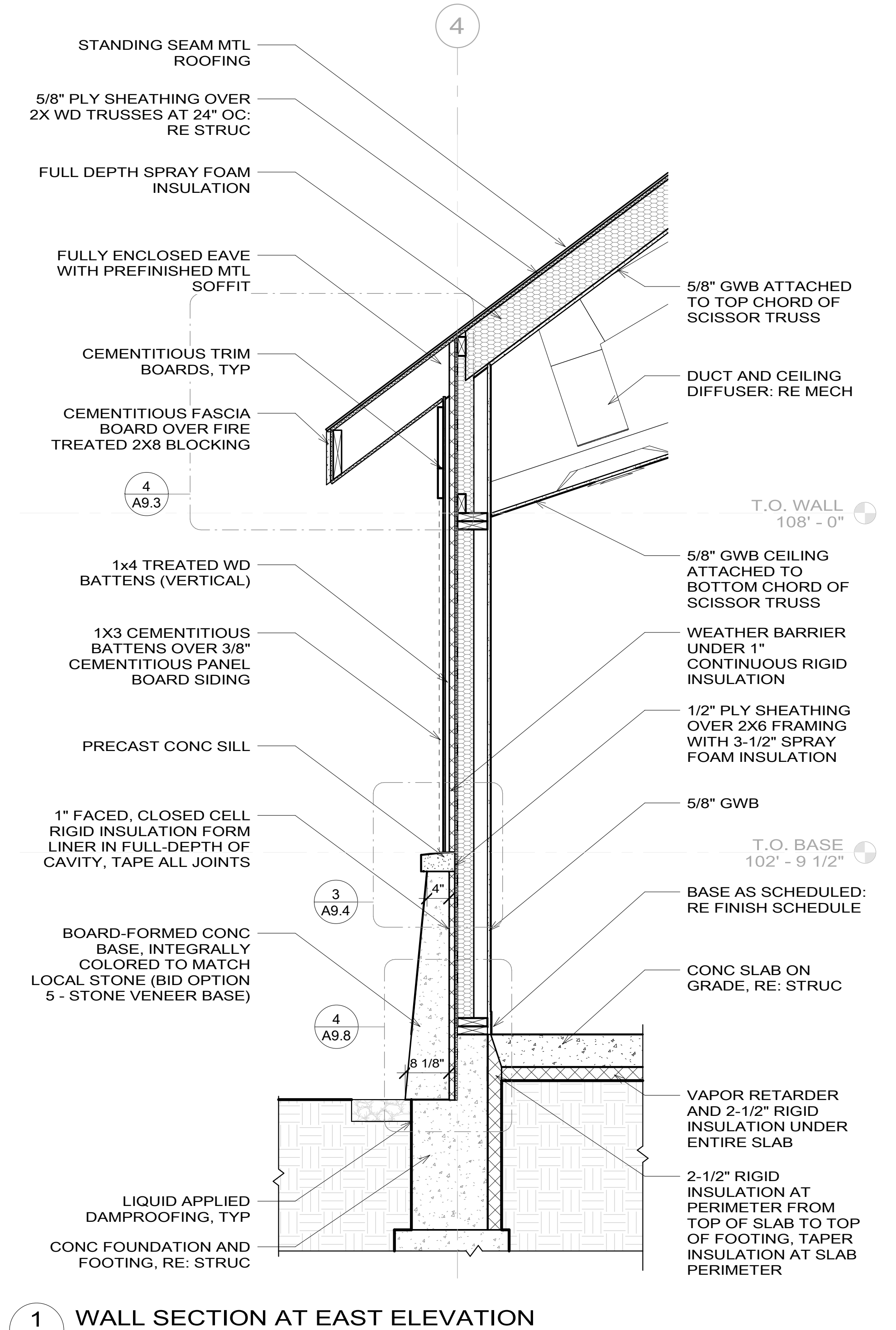
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3 WALL SECTION AT SOUTH ELEVATION



2 WALL SECTION AT KIOSK TRANSACTION WINDOW



1 WALL SECTION AT EAST ELEVATION

SCALE (A) 2 0 2 4
SCALE OF FEET



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RK/LB
TECH REVIEW:
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03/10/2022

SUB SHEET NO.
A5.1

TITLE OF SHEET
WALL SECTIONS

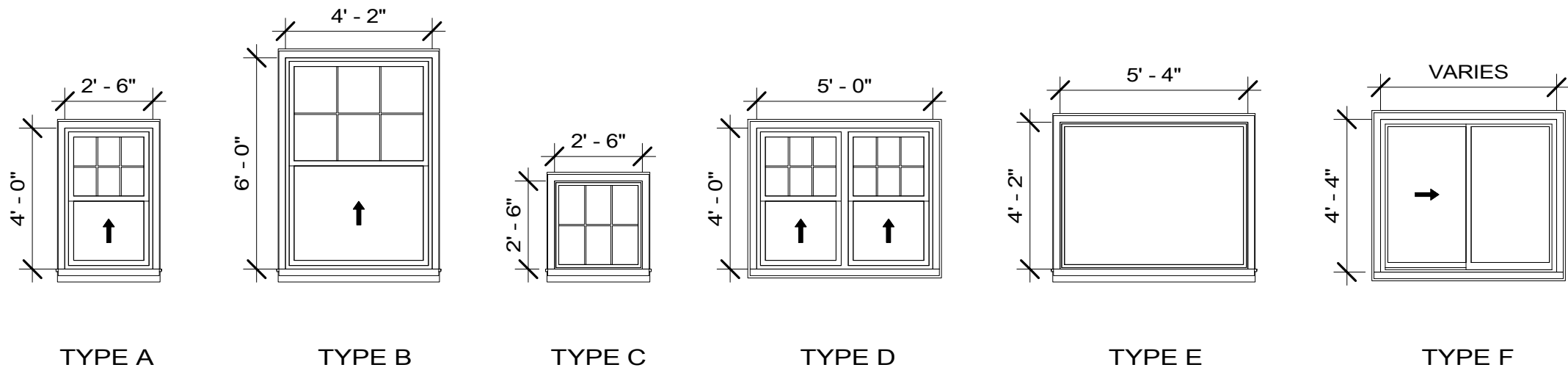
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
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WINDOW SCHEDULE										
NUMBER	WINDOW TYPE	QUANTITY	WIDTH	HEIGHT	SILL HEIGHT	GLASS TYPE	DETAILS			COMMENTS
							HEAD	JAMB	SILL	
01	A	1	2' - 6"	4' - 0"	2' - 10 1/2"		2/A9.1	4/A9.0	5/A9.0	
02	A	1	2' - 6"	4' - 0"	2' - 10 1/2"		2/A9.1	4/A9.0	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
03	A	1	2' - 6"	4' - 0"	2' - 10 1/2"		2/A9.1	4/A9.0	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
04	B	1	4' - 2"	6' - 0"	2' - 0"		2/A9.1	3/A9.1	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
05	B	1	4' - 2"	6' - 0"	2' - 0"		2/A9.1	3/A9.1	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
06	B	1	4' - 2"	6' - 0"	2' - 0"		2/A9.1	3/A9.1	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
07	B	1	4' - 2"	6' - 0"	2' - 0"		2/A9.1	3/A9.1	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
08	A	1	2' - 6"	4' - 0"	2' - 10 1/2"		2/A9.1	4/A9.0	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
09	A	1	2' - 6"	4' - 0"	2' - 10 1/2"		2/A9.1	4/A9.0	5/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
10	C	1	2' - 6"	2' - 6"	4' - 6"	TEMPERED, FRITTED	2/A9.1	4/A9.0	1/A9.1	PROVIDE PRIVACY FILM ON INT OF WINDOW
11	C	1	2' - 6"	2' - 6"	4' - 6"	FRITTED	2/A9.1	4/A9.0	1/A9.1	PROVIDE PRIVACY FILM ON INT OF WINDOW
12	C	1	2' - 6"	2' - 6"	4' - 6"	FRITTED	2/A9.1	4/A9.0	1/A9.1	PROVIDE PRIVACY FILM ON INT OF WINDOW
13	D	1	5' - 0"	4' - 0"	2' - 10 1/2"		2/A9.1	4/A9.0	5/A9.0	
20	F	3	2' - 9"	4' - 2"	2' - 10"	TEMPERED	1/A9.0	3/A9.0	2/A9.0	PROVIDE PRIVACY FILM ON INT OF WINDOW
21	E	3	5' - 4"	4' - 2"	2' - 10"		1/A9.0	3/A9.0	2/A9.0	
22	F	3	5' - 0"	4' - 4"	2' - 10"	TEMPERED	1/A9.0	3/A9.0	2/A9.0	

NOTE:
1. WINDOWS 20-22 SHALL BE PROVIDED IN EACH OF THE 3 KIOSKS: RE CIVIL FOR LOCATIONS.
2. ALL WINDOWS ARE ALUMINUM CLAD WOOD WINDOWS

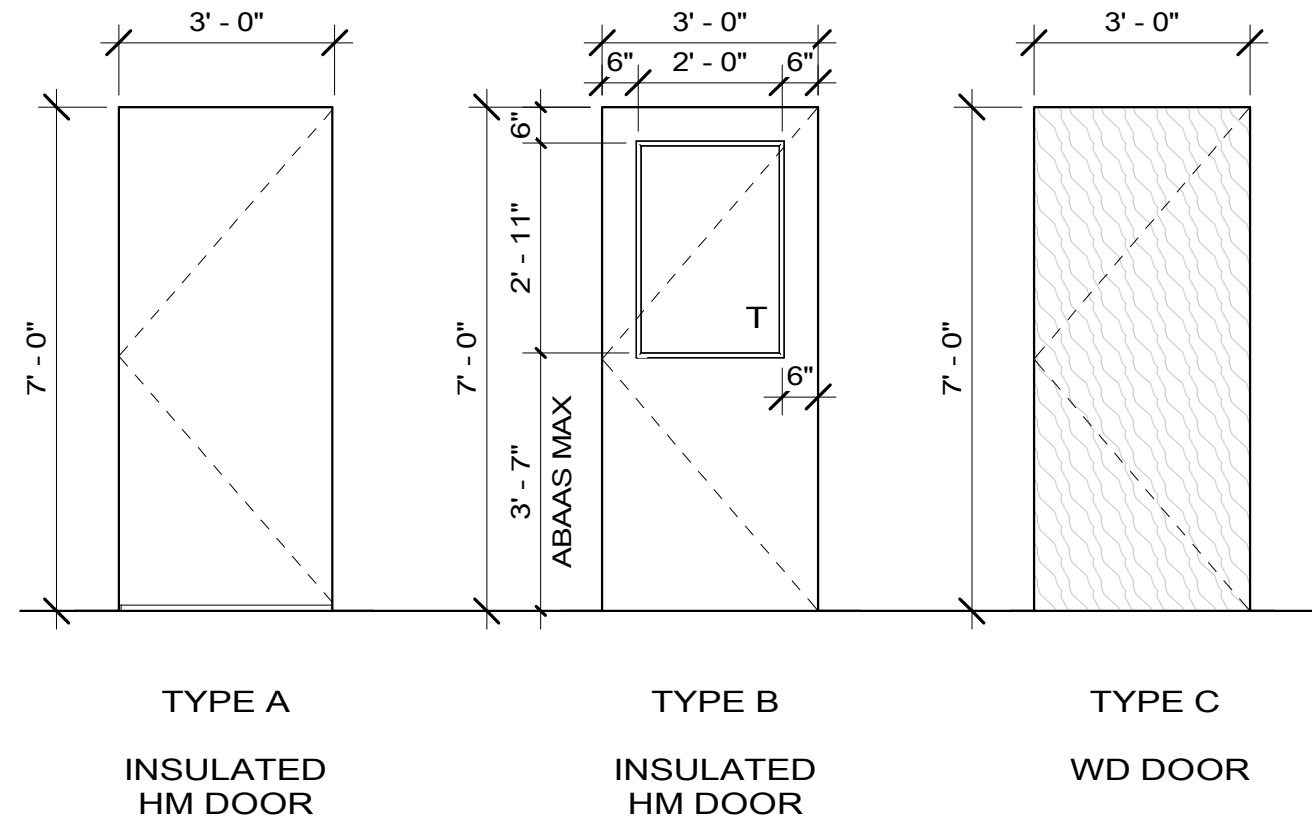
WINDOW TYPES



DOOR SCHEDULE										
NUMBER	QUANTITY	FRAME TYPE	DOOR TYPE	SIZE			DETAILS			COMMENTS
				THICKNESS	WIDTH	HEIGHT	HEAD	JAMB	THRESHOLD	
100	1	HM	B	1 3/4"	3' - 0"	7' - 0"	6/A9.2	4/A9.2	7/A9.2	PROVIDE PRIVACY FILM ON INT FACE OF LIGHT AND ENCLOSED BLIND; INSULATED
101	1	HM	A	1 3/4"	3' - 0"	7' - 0"	6/A9.2	4/A9.2	7/A9.2	INSULATED
101A	1	WD	C	1 3/4"	3' - 0"	7' - 0"	2/A9.2	1/A9.2	3/A9.2	
102	1	HM	A	1 3/4"	3' - 0"	7' - 0"	6/A9.2	4&5/A9.2	7/A9.2	INSULATED
103	1	HM	B	1 3/4"	3' - 0"	7' - 0"	6/A9.2	4/A9.2	7/A9.2	PROVIDE PRIVACY FILM ON INT FACE OF LIGHT AND ENCLOSED BLIND; INSULATED
104	1	HM	A	1 3/4"	3' - 0"	7' - 0"	6/A9.2	4/A9.2	7/A9.2	INSULATED, PROVIDE IN FLOOR DOOR STOP
105	1	WD	C	1 3/4"	3' - 0"	7' - 0"	2/A9.2	1/A9.2	3/A9.2	MECH DOOR GRILLE : RE MECH
106	1	WD	C	1 3/4"	3' - 0"	7' - 0"	2/A9.2	1/A9.2	3/A9.2	PROVIDE CLOSURE STOP
108	1	WD	C	1 3/4"	3' - 0"	7' - 0"	2/A9.2	1/A9.2	3/A9.2	
109	3	HM	B	1 3/4"	3' - 0"	7' - 0"	6/A9.2	4&5/A9.2	7/A9.2	PROVIDE PRIVACY FILM ON INT FACE OF LIGHT AND ENCLOSED BLIND; INSULATED

NOTE:
1. DOOR 109 SHALL BE PROVIDED IN EACH OF THE 3 KIOSKS: RE CIVIL FOR LOCATIONS.
2. FOR WORK AT DOOR AND FRAME OF PUMPHOUSE: RE SHEET A4.2

DOOR TYPES

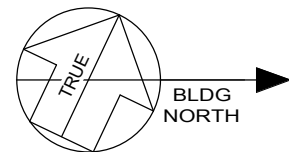


1 DOOR & WINDOW KEY PLAN

KEYNOTES

C4 DOUBLE ROLLER SHADES, RE: SEPECIFICATIONS
C13 WINDOW SCREEN: RE SPECIFICATIONS

SCALE (A) 4 0 4 8
SCALE OF FEET



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
A6.0

TITLE OF SHEET
SCHEDULES

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
103 OF 165

3/8/2022 2:26:44 PM BIM 360://2021-250 ROMO FRE/2021-250 - ROMO FRE - v20 - BIM 360.rvt

ROOM FINISH SCHEDULE													
ROOM NUMBER	NAME	AREA	FLOOR FINISH	CEILING FINISH	NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		COMMENTS
					WALL FINISH	BASE	WALL FINISH	BASE	WALL FINISH	BASE	WALL FINISH	BASE	
100	ENTRY	68 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
101	STORAGE	95 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
102	EXT STOR	36 SF	CONC	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
103	BREAK ROOM	193 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
104	MECH	132 SF	CONC	O.T.S.	GWB-PT	RB-ST	GWB-PT	RB-ST	GWB-PT	RB-ST	GWB-PT	RB-ST	
105	ELEC/IT	34 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
106	RESTROOM	91 SF	SF	GWB-PT	GWB-PT	CWB	GWB-PT/CWT	CWB	GWB-PT	CWB	GWB-PT/CWT	CWB	RE RESTROOM ELEVATIONS FOR EXTENTS
107	HALL	120 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
108	PRIVATE OFFICE	154 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
109	OPEN OFFICE	143 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	
110	KIOSK	63 SF	SF	GWB-PT	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	GWB-PT	RB	

GENERAL NOTES

1.

ALL WET AREAS SHALL HAVE MOISTURE RESISTANT GWB AND CTBB BEHIND WALL TILE. (MATCH THICKNESS OF CTBB TO GWB)
2.

ALL EXPOSED FINISHED WOOD WORK SHALL BE SANDED SMOOTH AND STAINED; COLOR AS SELECTED BY CONTRACTING OFFICER.
3.

ALL EXPOSED GWB THROUGHOUT SHALL BE PAINTED.
4.

EXTERIOR STORAGE ROOM 102 SHALL HAVE MOISTURE AND IMPACT RESISTANT GWB.
5.

STORAGE ROOM 101 SHALL HAVE IMPACT RESISTANT GWB.

FLOOR FINISH KEY:

CONC = SEALED CONCRETE (DEEP CLEAN PRIOR TO APPLYING SEALANT)
SF = SHEET FLOORING

WALL FINISH KEY:

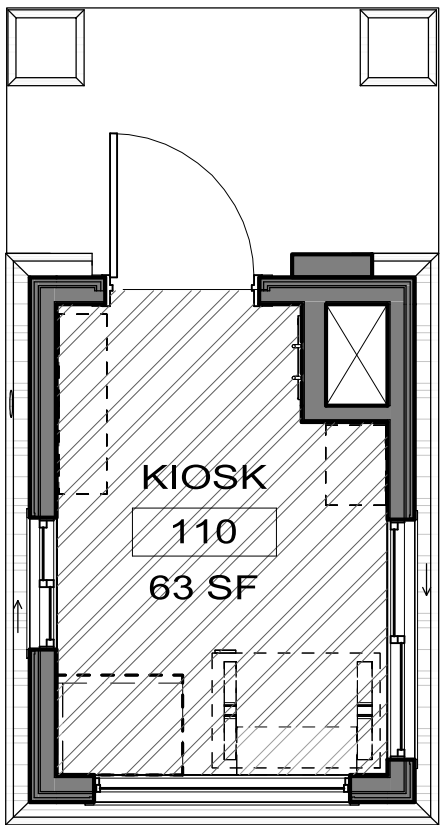
GWB = GYPSUM WALL BOARD (MOISTURE RESISTANT AT WET AREAS)
CTBB = CERAMIC TILE BACKER BOARD (BEHIND WALL TILE TO 5'-0" A.F.F.)
CWT = CERAMIC WALL TILE TO HEIGHT AS SHOWN ON RESTROOM ELEVATIONS (ALLOW FOR 10% ACCENT TILE)
PT = PAINT FINISH, BASE COLOR

WALL BASE KEY:

CWB = CERAMIC WALL TILE BASE
RB = RUBBER BASE
RB-ST = RUBBER BASE WITH 2-1/2" SANITARY TOE

CEILING FINISH KEY:

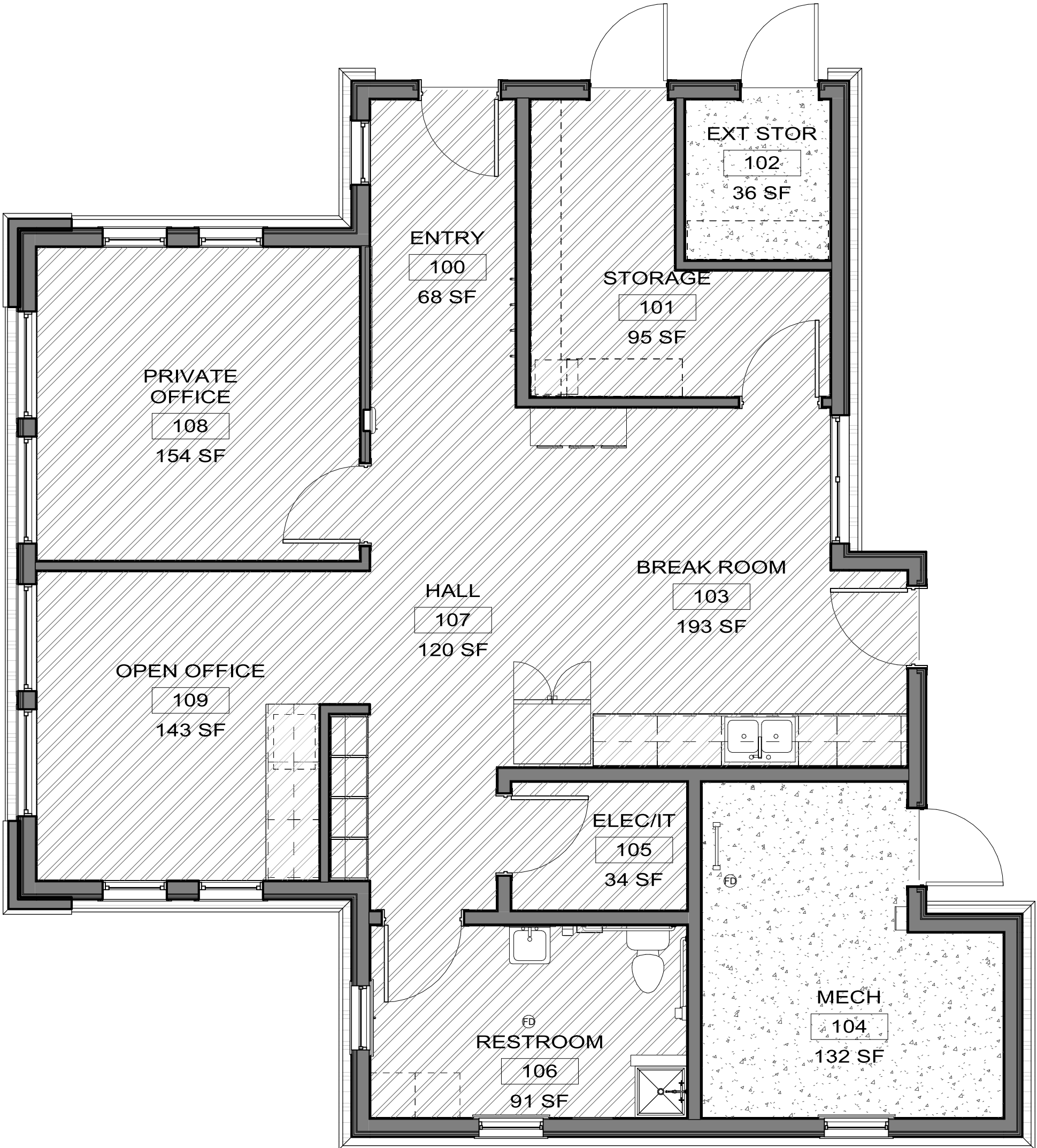
O.T.S. = OPEN TO STRUCTURE
GWB = GYPSUM BOARD CEILING



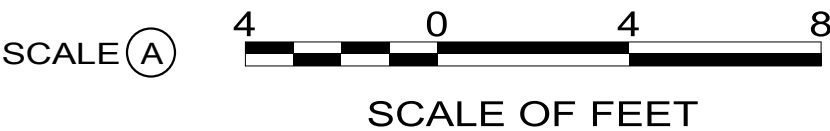
NOTE: KIOSK 1 OF 3
DISTANCE BETWEEN
KIOSK AND OFFICE
SHOWN GRAPHICALLY:
RE CIVIL FOR
PROPOSED LOCATION

FINISH LEGEND

- CONC
- SF



1 FLOOR FINISH PLAN
A6.1



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

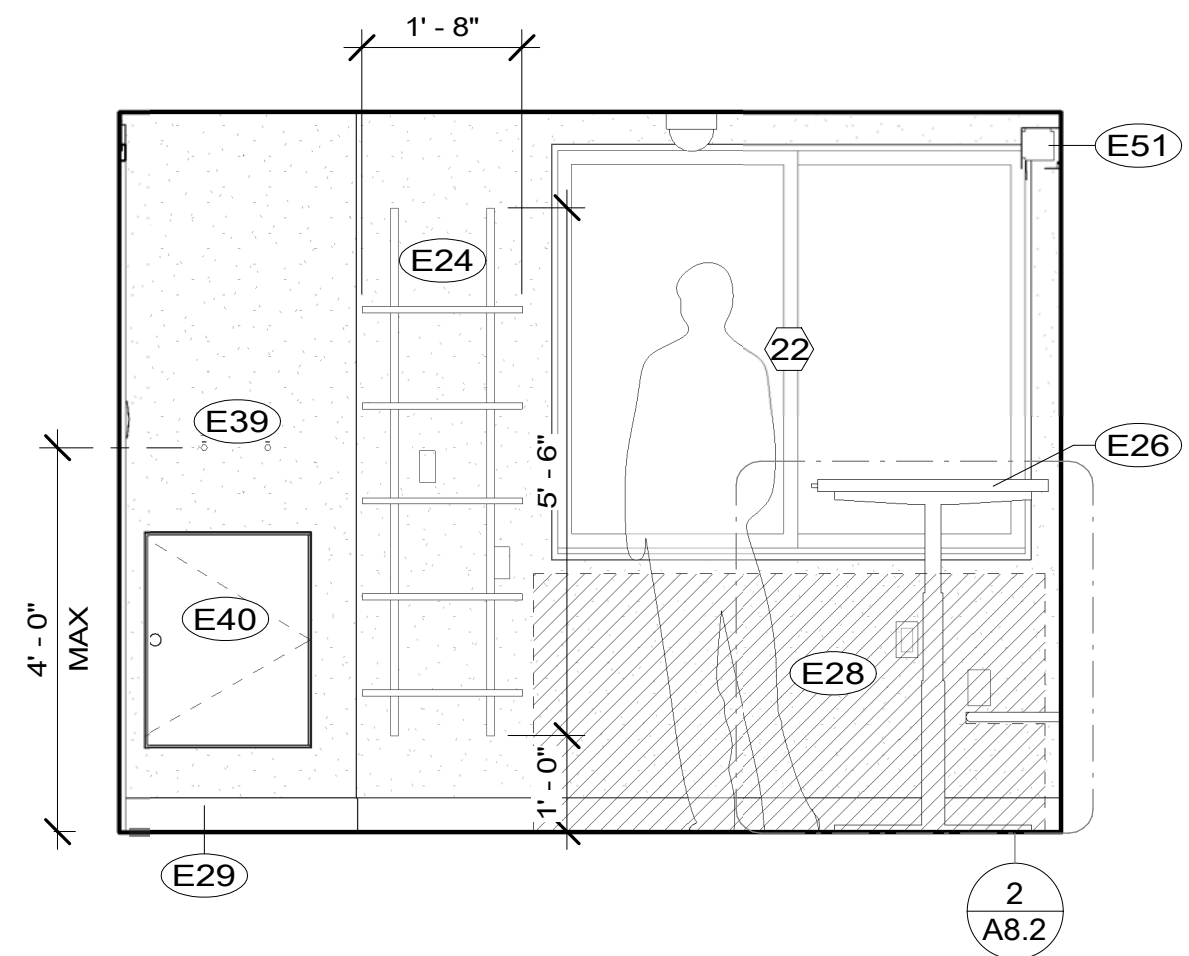
SUB SHEET NO.

A6.1

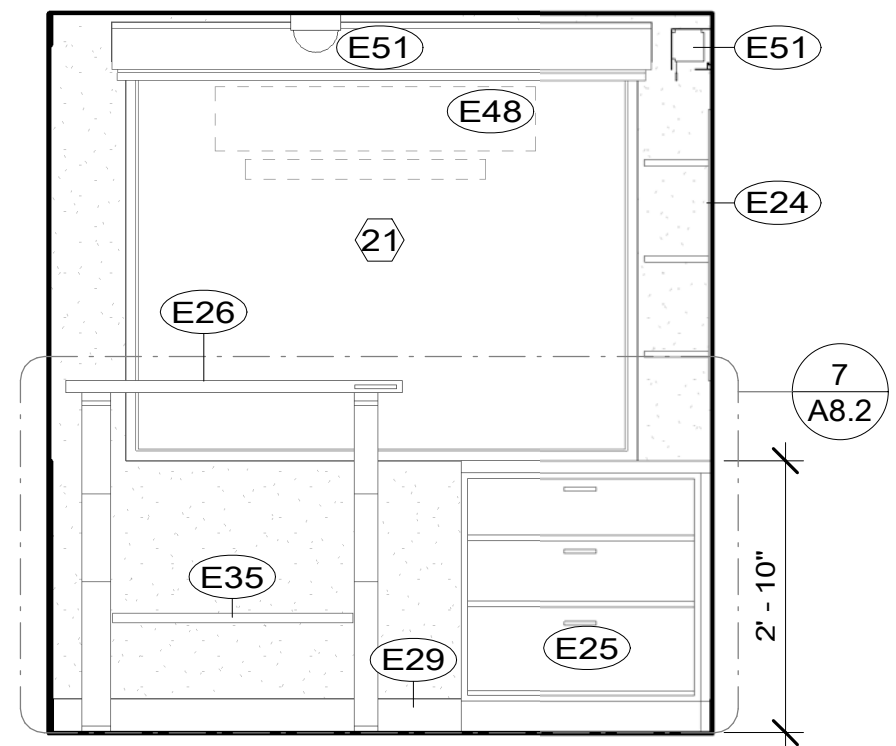
TITLE OF SHEET
FINISH SCHEDULE & PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

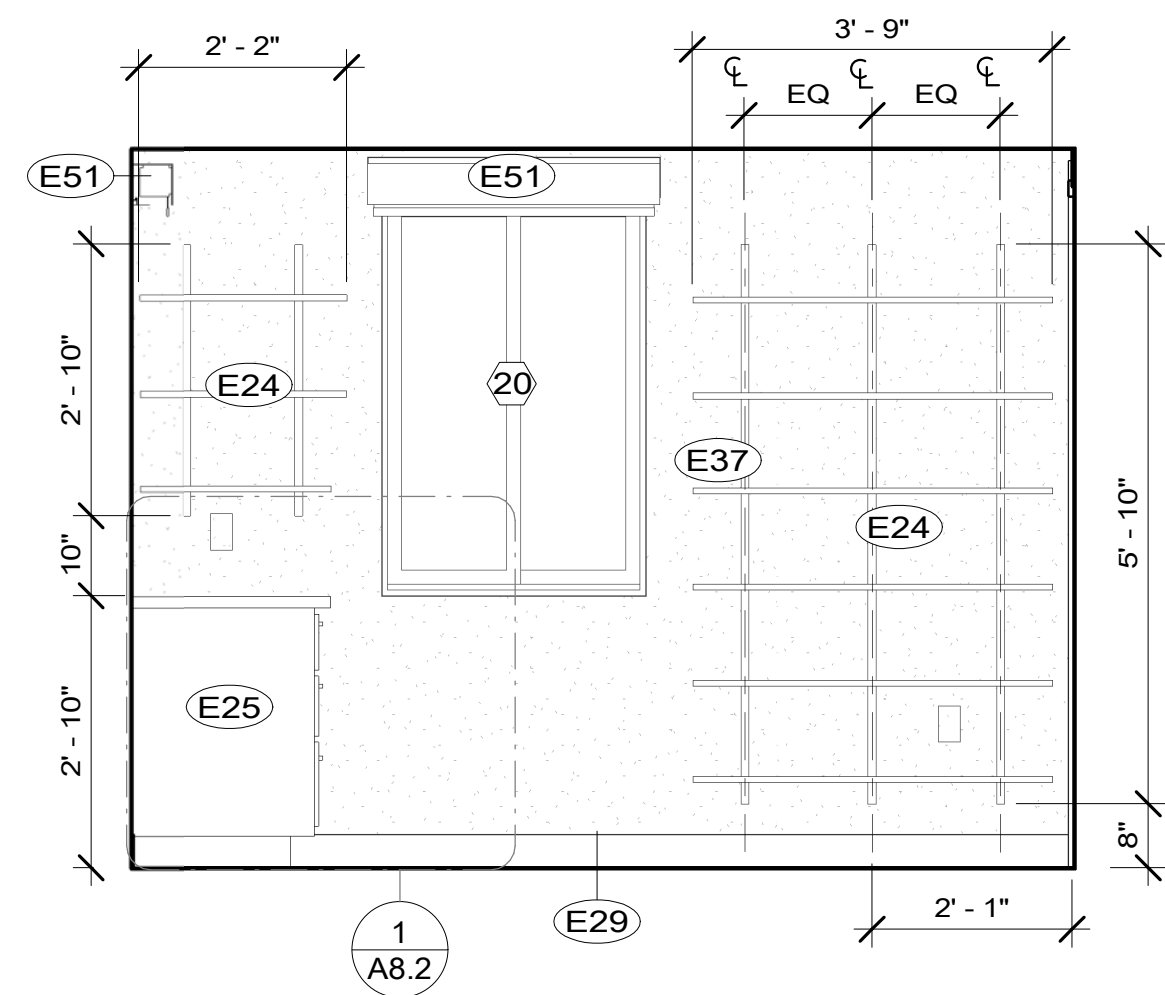
DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
104 OF **165**



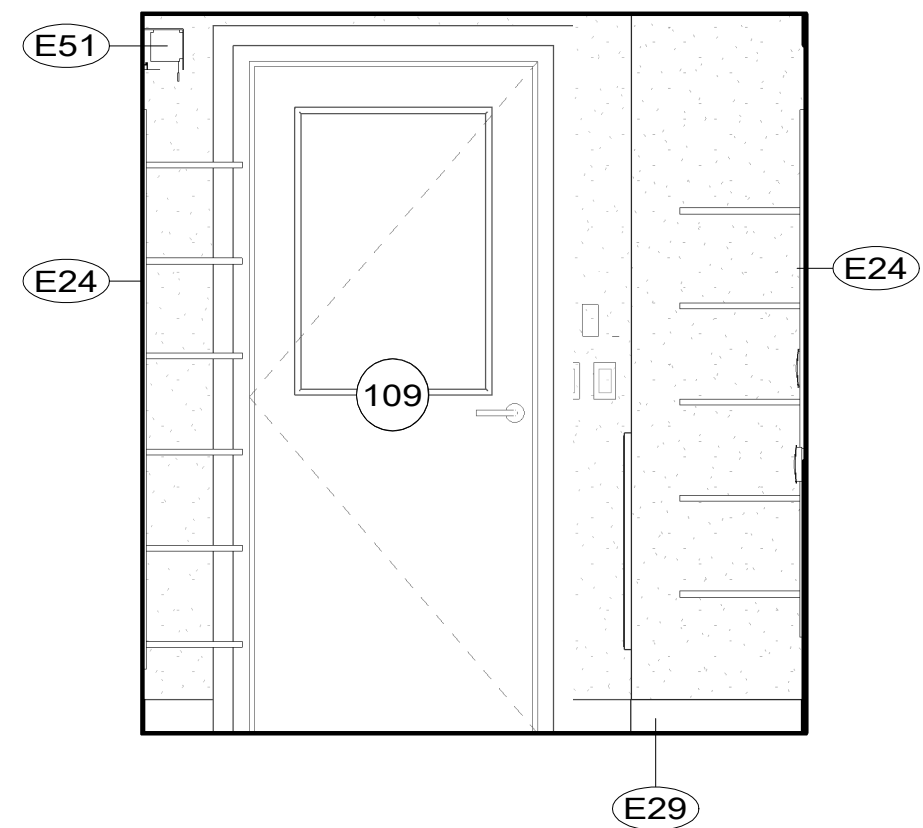
6 KIOSK 110 NORTH
A7.0



5 KIOSK 110 EAST
A7.0



4 KIOSK 110 SOUTH
A7.0







3 KIOSK 110 WEST
A7.0

KEYNOTES

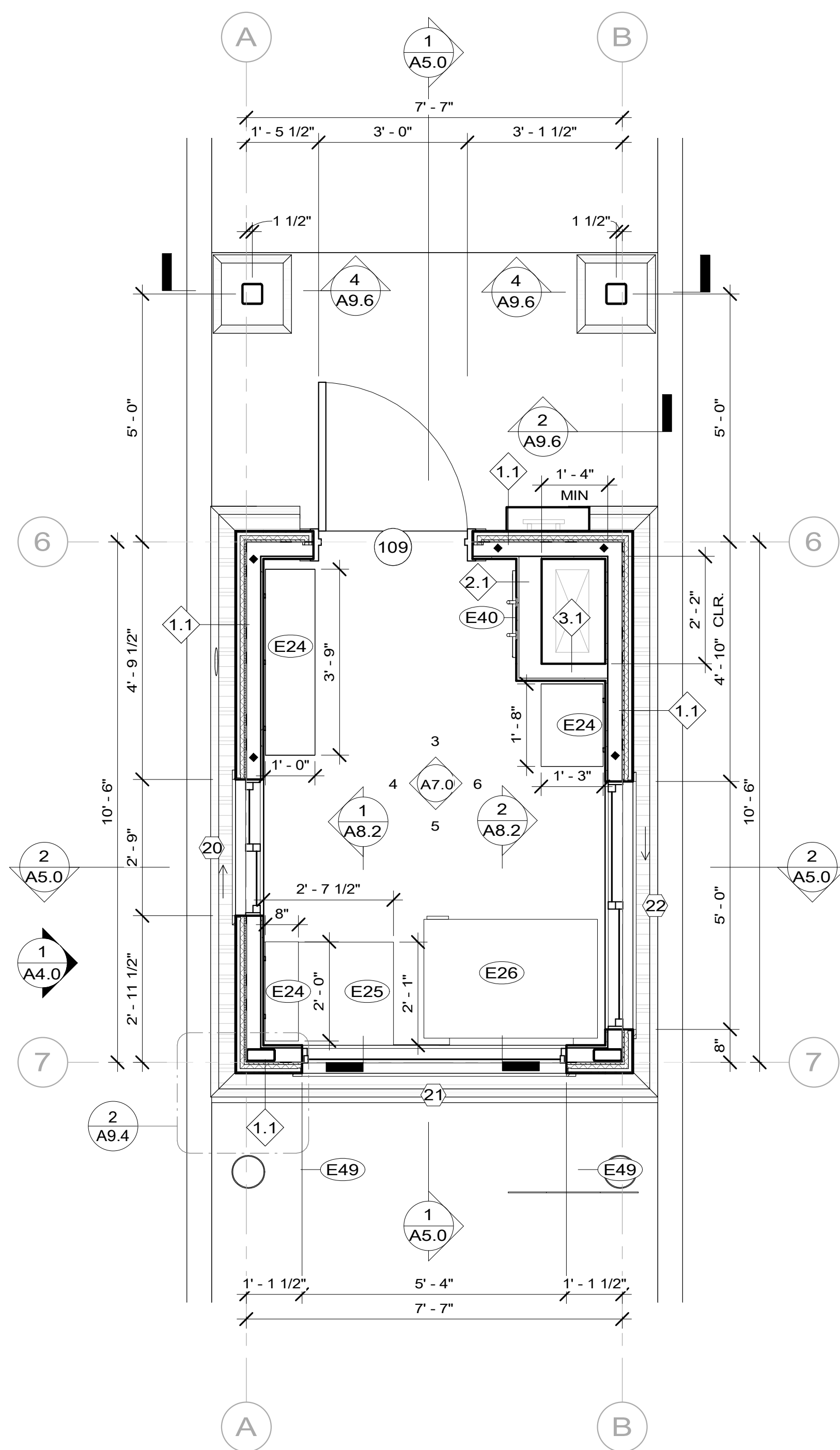
- C1 MTL CLAD SOFFIT, TYP
- C2 STL STRUCTURAL COLUMN WITH BOARD-FORMED CONC
BASE: RE STRUC (BID OPTION 5: STONE VENEER BASE)
- C3 MECHANICAL LOUVER WITH MTL MESH SCREENING ON INT,
RE: MECH
- C4 DOUBLE ROLLER SHADES, RE: SEPECIFICATIONS
- C6 LIGHT FIXTURE, RE: ELEC
- C7 MECHANICAL DUCTS TYP. RE: MECH
- C11 MECH CASSETTE: RE MECH
- C12 MECH GRILLE: RE MECH
- E24 HEAVY DUTY ADJUSTABLE SHELVING, LOCATE BRACKET TO
ATTACH TO FRAMING OR PROVIDE BLOCKING WITHIN WALL,
SPACING AND QUANTITIES PER MANUFACTURER'S
STANDARDS
- E25 LOWER PLAM CABINET WITH SOLID SURFACE COUNTERTOP
- E26 MOTORIZED ADJUSTABLE WORK SURFACE
- E28 EXTENTS OF WALL GUARD
- E29 BASE AS SCHEDULED: RE FINISH SCHEDULE
- E35 SOLID SURFACE SHELF WITH HEAVY DUTY MTL BRACKETS
- E37 FIRE EXTINGUISHER BRACKET
- E39 COAT HOOK(S) CONTRACTOR TO INSTALL WITH BLOCKING IN
WALL
- E40 24"x18" ACCESS PANEL
- E48 PARK PROVIDED SIGNAGE, GC TO PROVIDE BLOCKING,
ATTACHMENT HARDWARE, & INSTALLATION
- E49 STL BOLLARD: RE LANDSCAPE
- E51 DOUBLE ROLLER SHADES: RE SEPECIFICATIONS

LEGEND

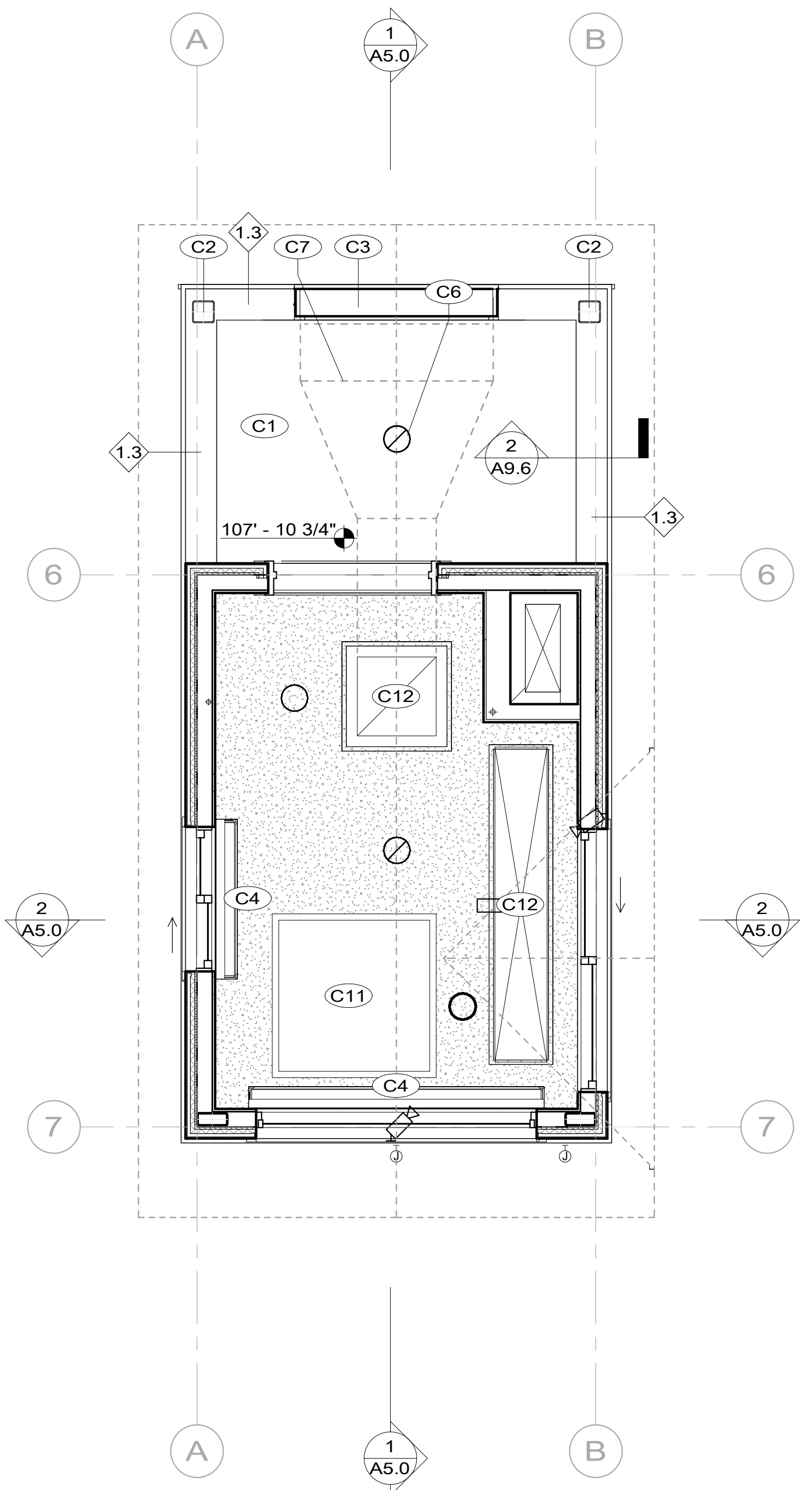
- | | |
|---|--------------------------------|
|  | GWB CEILING |
|  | EXIT LUMINAIRE:
RE ELEC |
|  | RECESSED LUMINAIRE:
RE ELEC |
|  | DUCT: RE MECH |
|  | SECURITY CAMERA
RE: TECH |

GENERAL NOTES

1. REFER TO SHEET A6.0 FOR WINDOW AND DOOR SCHEDULES.
2. KIOSK ELEVATIONS AND PLANS ARE SHOWN ONCE BUT THERE ARE THREE NEW KIOSKS IN SCOPE. SEE ALSO CIVIL AND LANDSCAPE PLANS.
3. BID OPTION 5 – STONE VENEER: SUBSTITUTION OF BASE BID BOARDFORM CONC VENEER ON THE OFFICE AND KIOSK BUILDINGS FOR GRANITE STONE VENEER.
4. BID OPTION 6 – WEATHERING STL ROOFING AND ELEMENTS: SUBSTITUTION OF THE BASE BID PREFINISHED STANDING SEAM METAL ROOFING FOR STANDING SEAM BARE "WEATHERING" STL ROOFING. ALSO SUBSTITUTES STL BOLLARDS, STL SIDEWALK GRATE, TRUNCATED DOME PAVERS, EXPOSED STL COLUMNS AND STL SCREENS (AT BACK OF OFFICE BUILDING) WITH SAME ELEMENT COMPOSED OF WEATHERING STL.



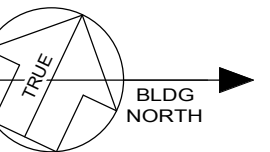
2 ENLARGED KIOSK PLAN
A7.0




1 ENLARGED KIOSK RCP

SCALE (A)

SCALE OF FEET



DESIGNED:
AC/RK/LB

RK/LB
TECH REVIEW
EH/AC
DATE:
03/10/2022

SUB SHEET NO.

A7.0

TITLE OF SHEET

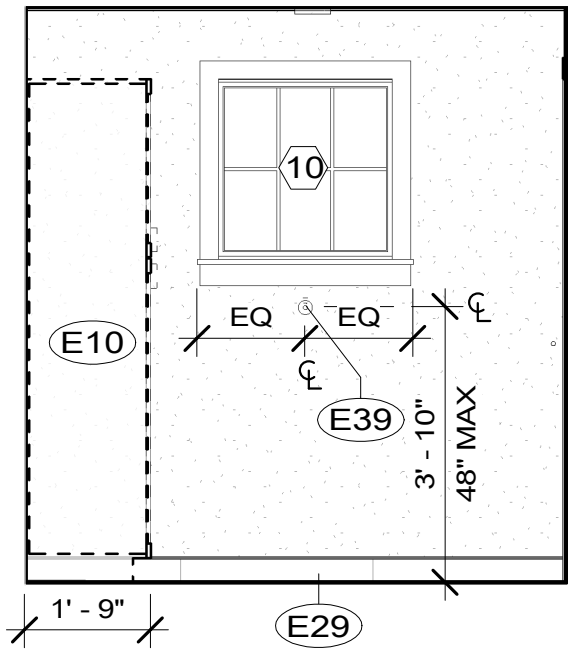
ENLARGED KIOSK PLANS & ELEVATIONS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

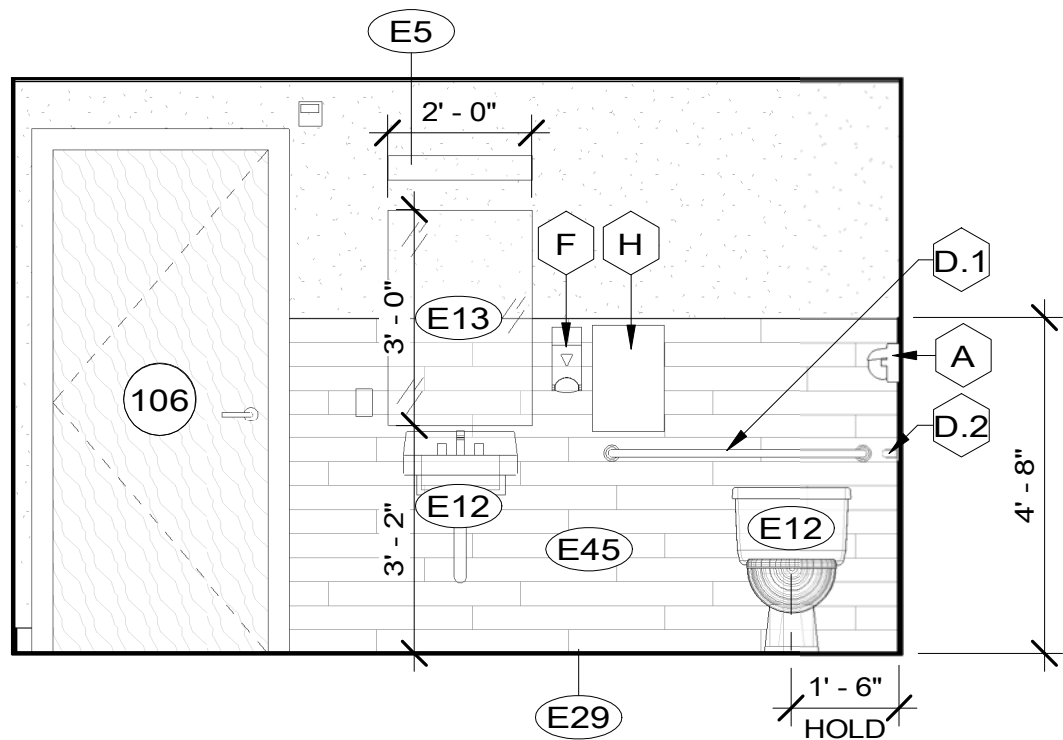
DRAWING NO.
121
176678

PMIS/PKG NO.
160755

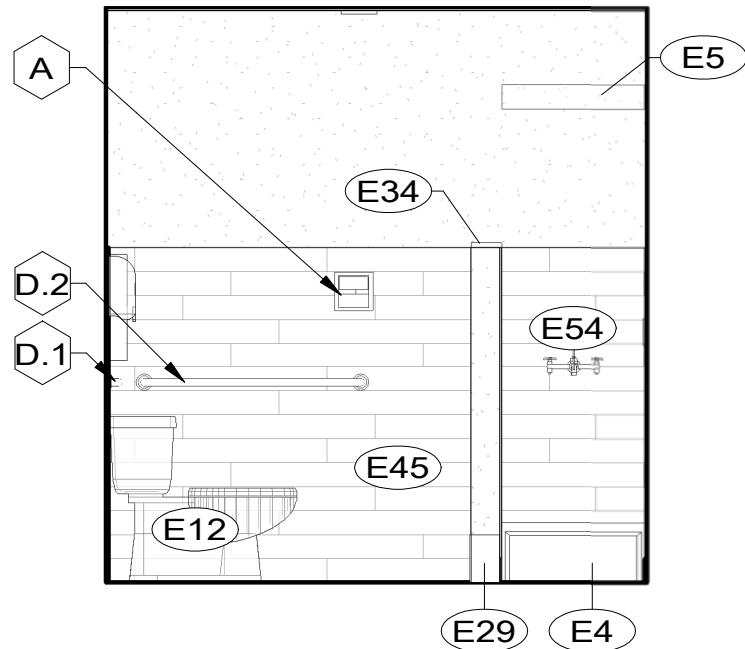
SHEET
05 OF 165



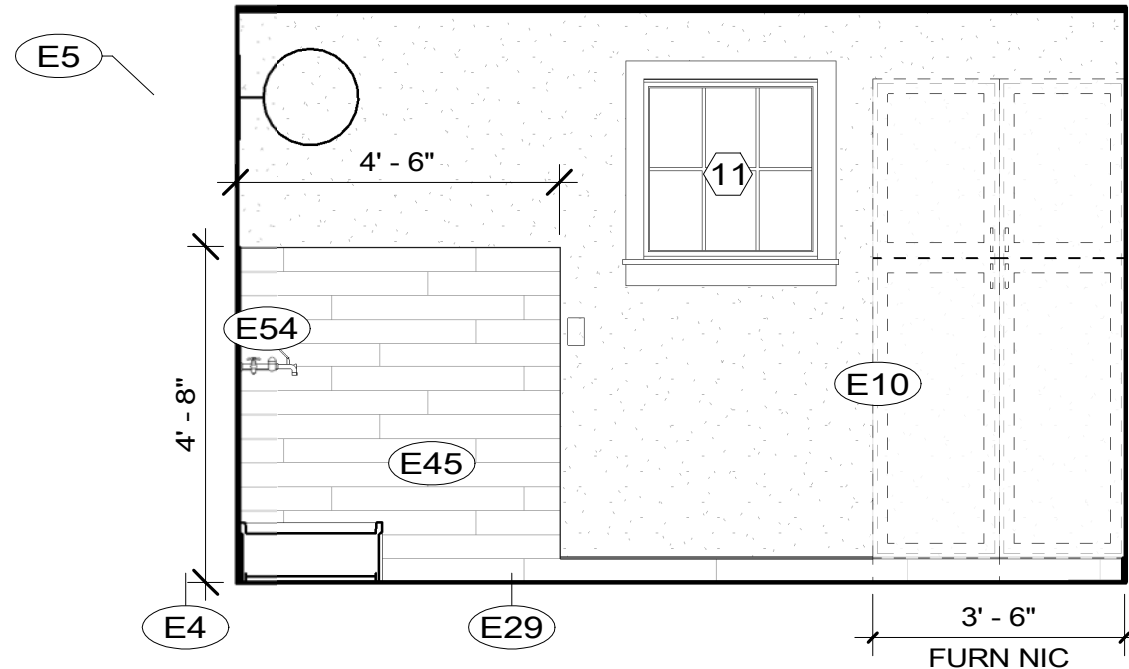
6 RESTROOM 106 WEST
A7.1



5 RESTROOM 106 NORTH
A7.1



4 RESTROOM 106 EAST
A7.1



3 RESTROOM 106 SOUTH
A7.1

LEGEND

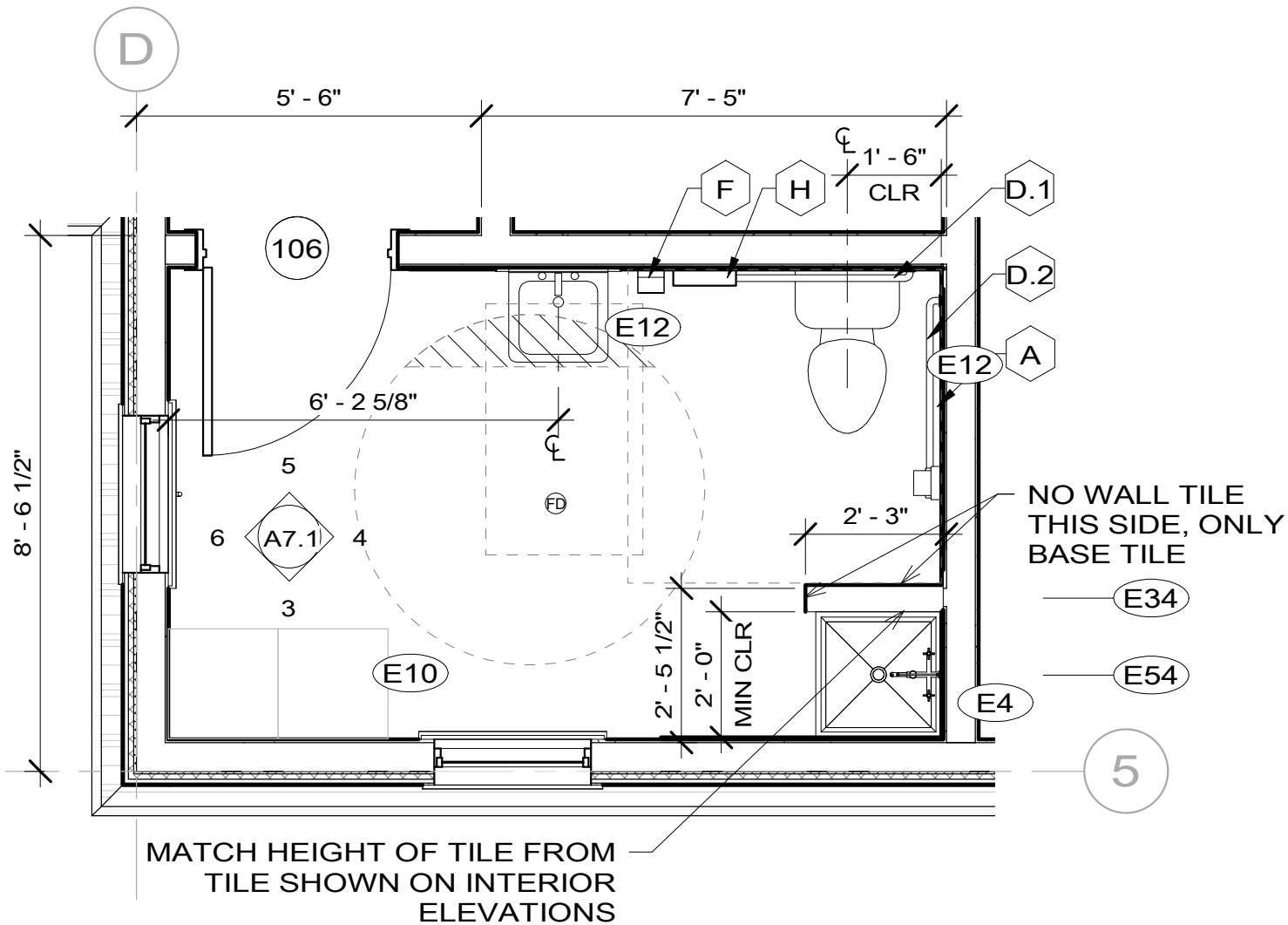
- CWT ON CTBB
- MOISTURE RESISTANT
GWB

KEYNOTES

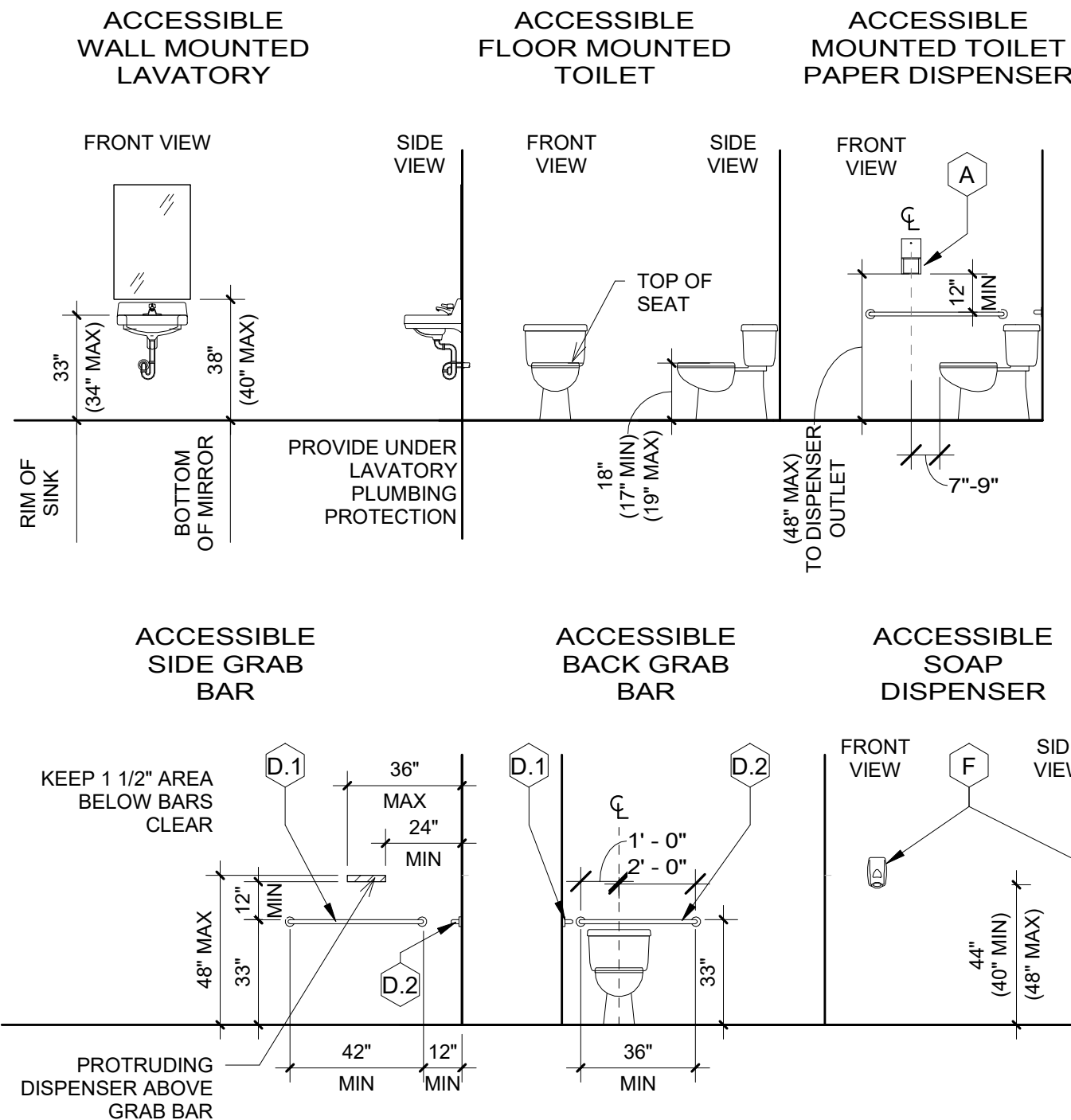
- E4 MOP SINK: RE PLUMB
- E5 LIGHT FIXTURE: RE ELEC
- E10 TALL CABINETS (NIC)
- E12 ACCESSIBLE PLUMBING FIXTURE: RE PLUMB
- E13 WALL HUNG MIRROR, PROVIDE SHIM SAME DEPTH AS CT AT GWB BEHIND
- E29 BASE AS SCHEDULED: RE FINISH SCHEDULE
- E34 WD CAP AT TOP OF HALF WALL W/ 1/4" SCHLUTER REVEAL, EPOXY PT
- E39 COAT HOOK(S) CONTRACTOR TO INSTALL WITH BLOCKING IN WALL
- E45 4X12 CERAMIC TILE WITH BULLNOSE TOP AND SIDES AS APPLICABLE
- E54 MOP SINK FAUCET MOUNTING HEIGHT 46" MAX AFF: RE PLUMB

ABA LEGEND

- 67" TURN RADIUS WITH KNEE AND TOE OVERLAP CLEARANCE SHOWN AS HATCH
- 67" TURN RADIUS
- T-SHAPE TURN AROUND
- T-SHAPE TURN AROUND WITH KNEE AND TOE OVERLAP CLEARANCE SHOWN AS HATCH
- 30X48 CLR. APPROACH
- MANEUVERING CLEARANCE SHOWN DASHED
- ARROW TO DEPICT DIRECTION OF TRAVEL



2 RESTROOM 106 ENLARGED
A7.1



TOILET ACCESSORY
GENERAL NOTES:

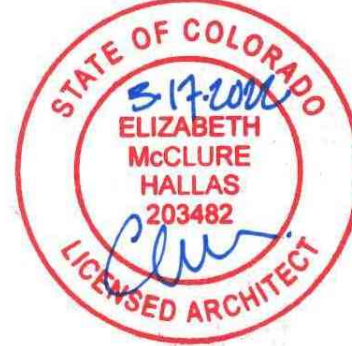
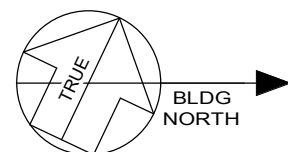
- ALL ACCESSIBLE FIXTURE AND ACCESSORIES SHALL BE MOUNTED IN COMPLIANCE WITH ABAAS.
- ALL LAVATORIES SHALL HAVE UNDER LAVATORY PROTECTION.
- ALL FAUCETS SHALL MEET ABA REQUIREMENTS.
- TOILET PAPER DISPENSER, SOAP DISPENSER, AND PAPER TOWEL DISPENSER SHALL BE GOVERNMENT PROVIDED, CONTRACTOR INSTALLED.

TOILET ACCESSORY
LEGEND:

- A TOILET PAPER DISPENSER
- D.1 GRAB BAR - SIDE WALL
- D.2 GRAB BAR - REAR WALL
- F SOAP DISPENSER
- H PAPER TOWEL DISPENSER

1 TOILET ROOM ACCESSORY ELEVATIONS
A7.1

SCALE (A) 4 0 4 8
SCALE OF FEET



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
A7.1

TITLE OF SHEET
RESTROOM PLAN
AND ELEVATIONS
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

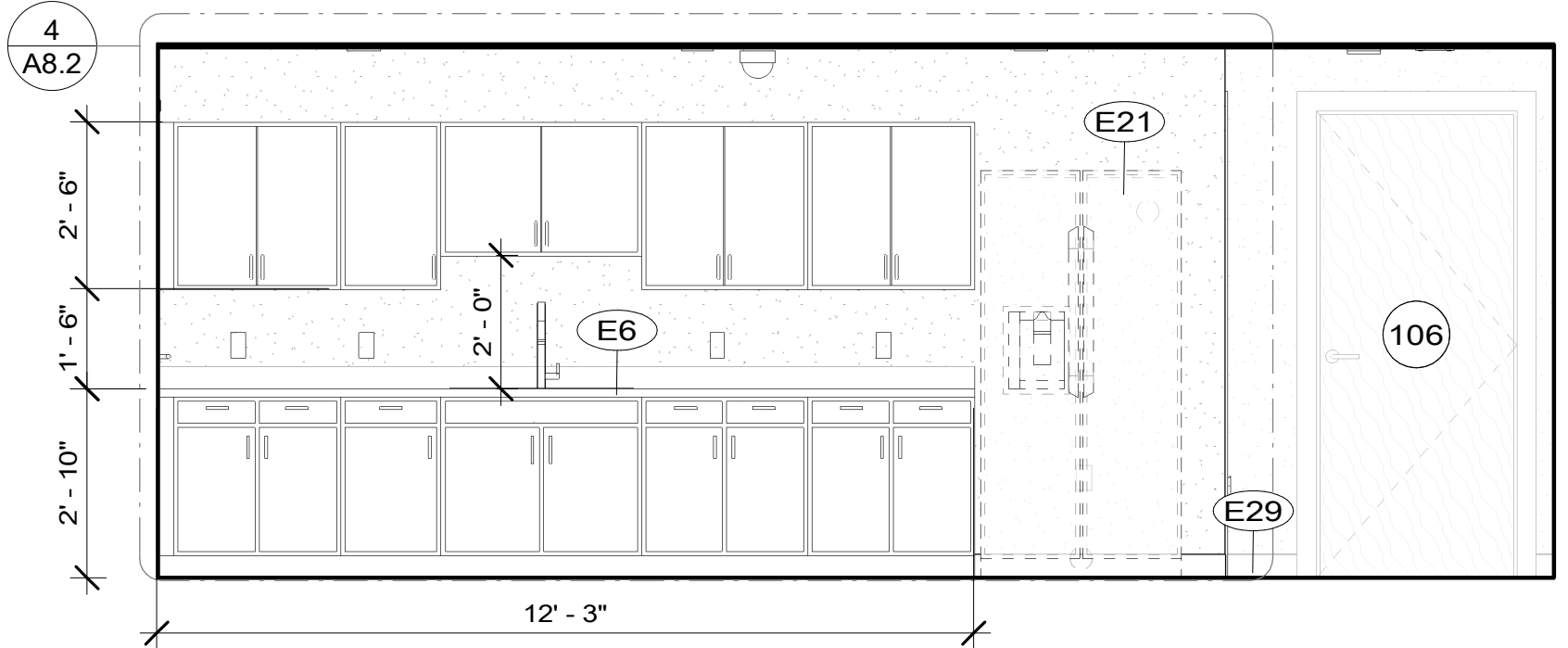
DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
106 OF 165



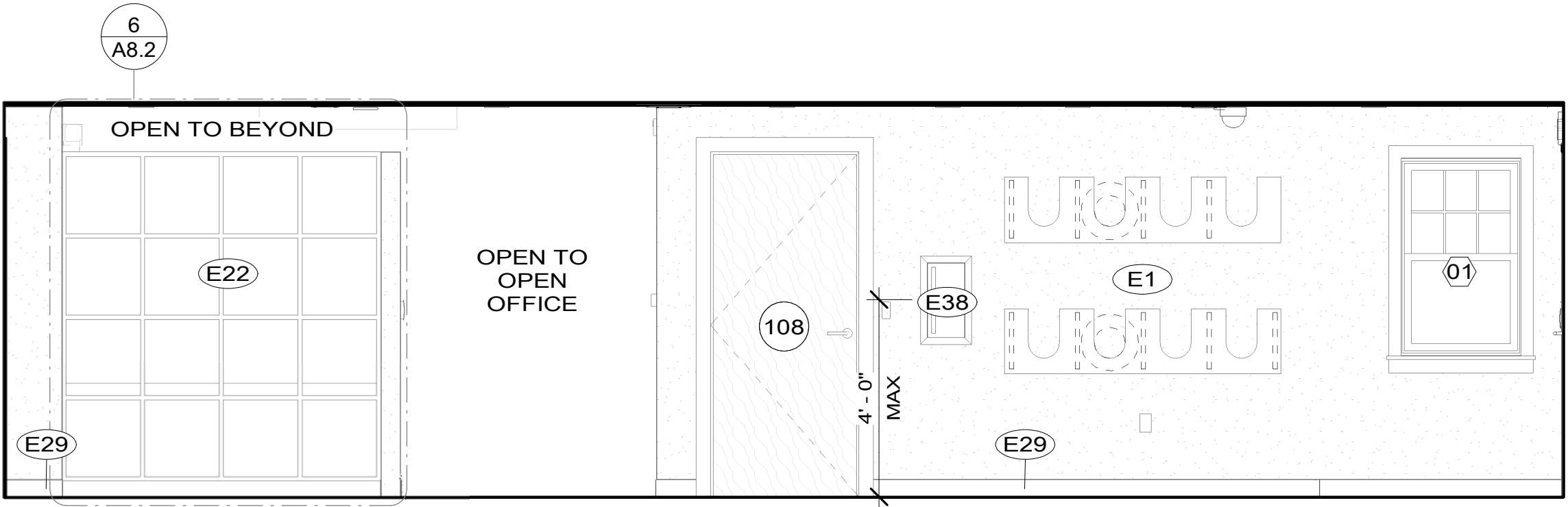
12 BREAK ROOM 103 WEST
A8.0



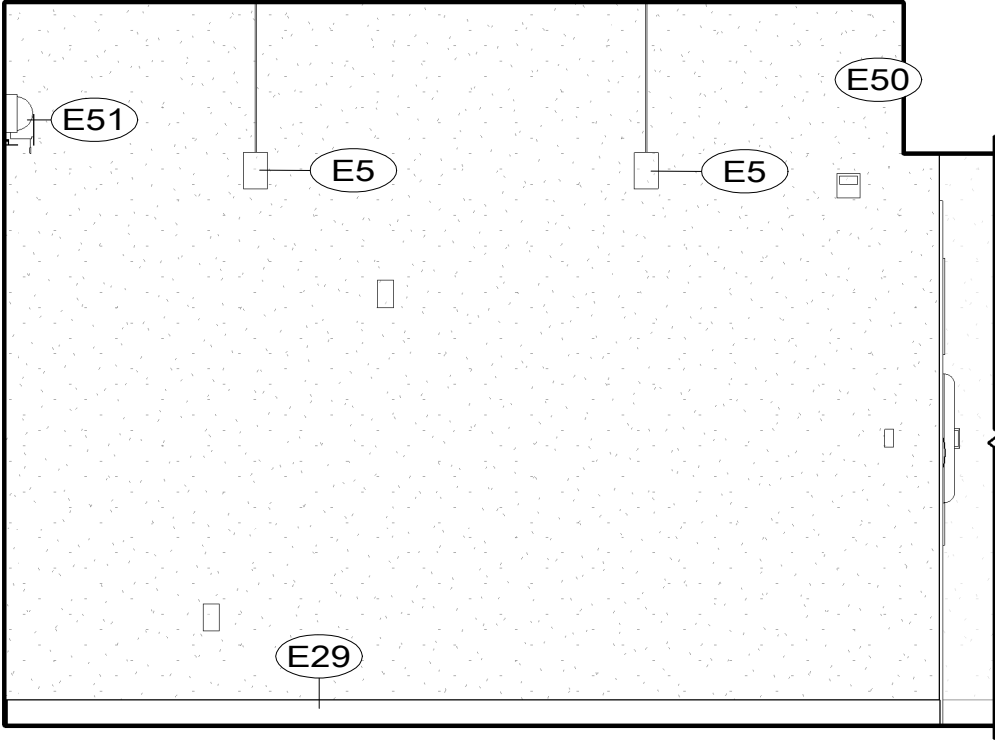
11 BREAK ROOM 103 NORTH
A8.0



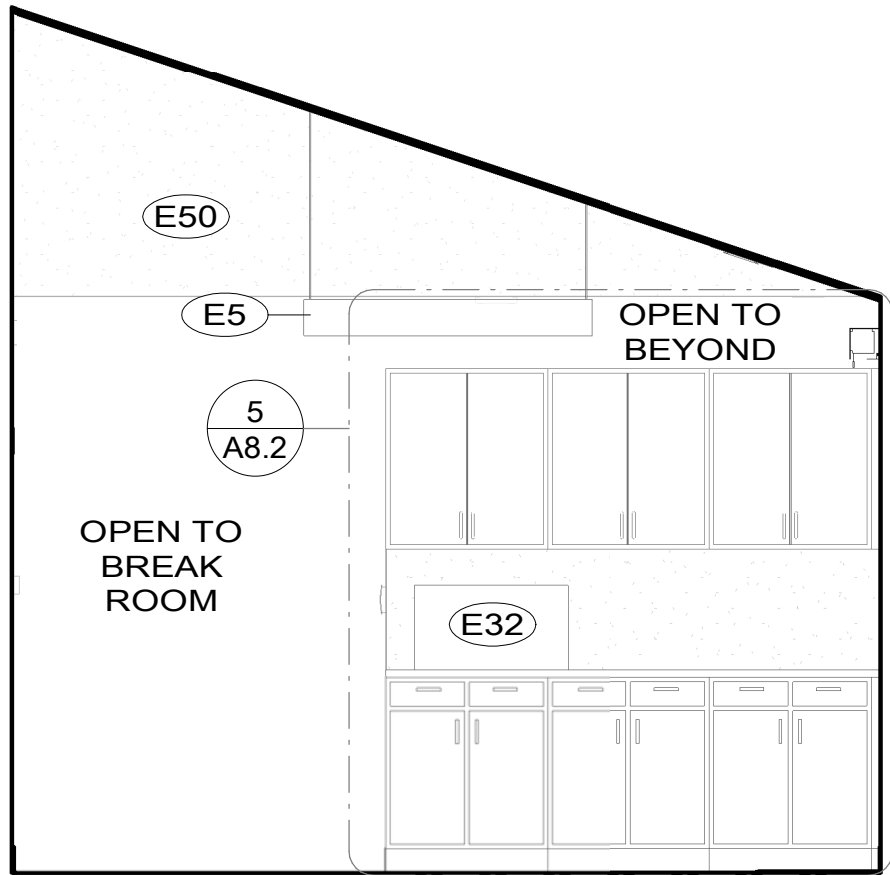
10 BREAK ROOM 103 EAST
A8.0



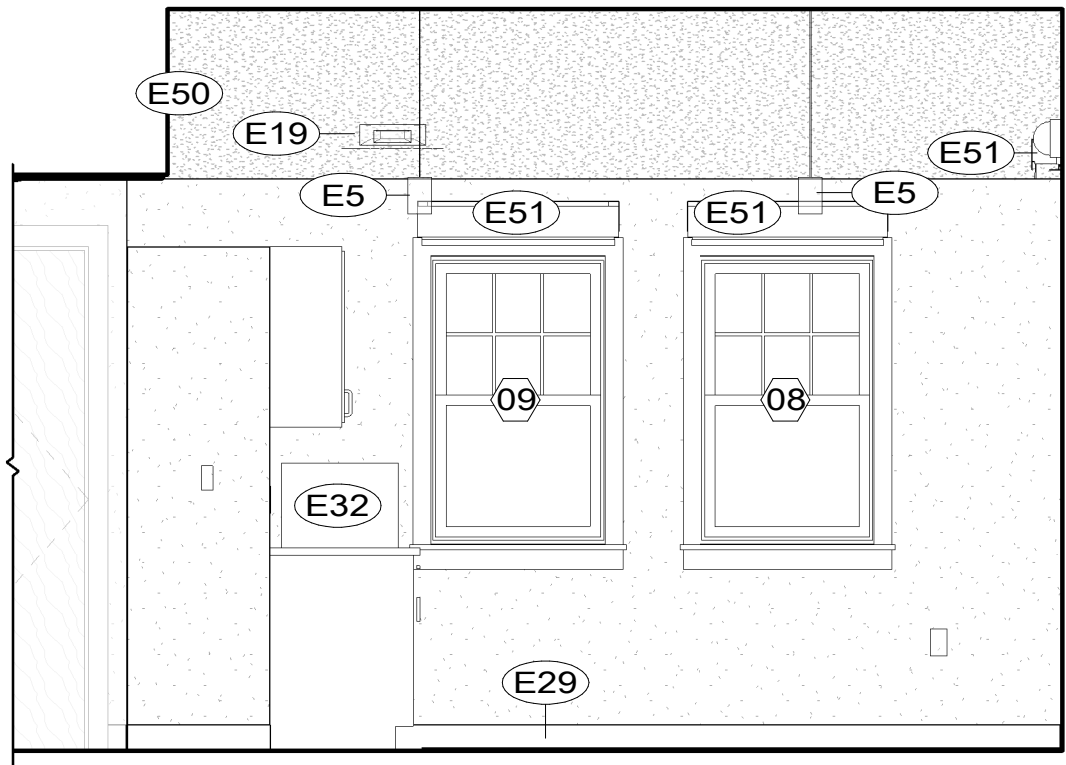
9 BREAK ROOM 103 SOUTH
A8.0



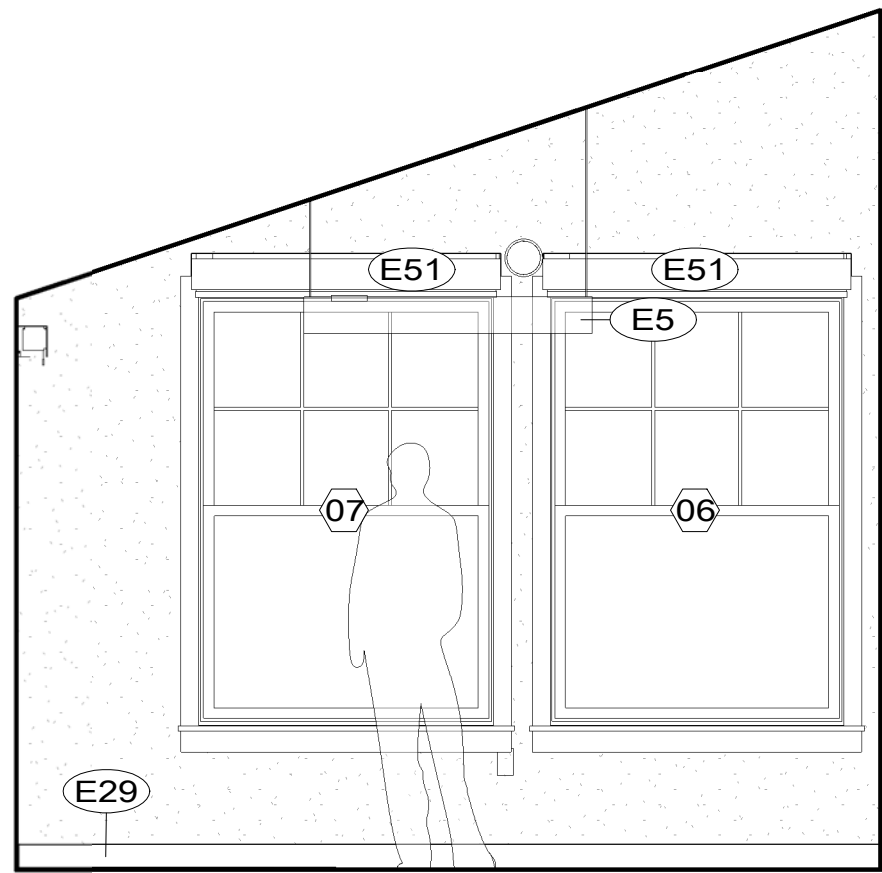
8 OFFICE 109 WEST
A8.0



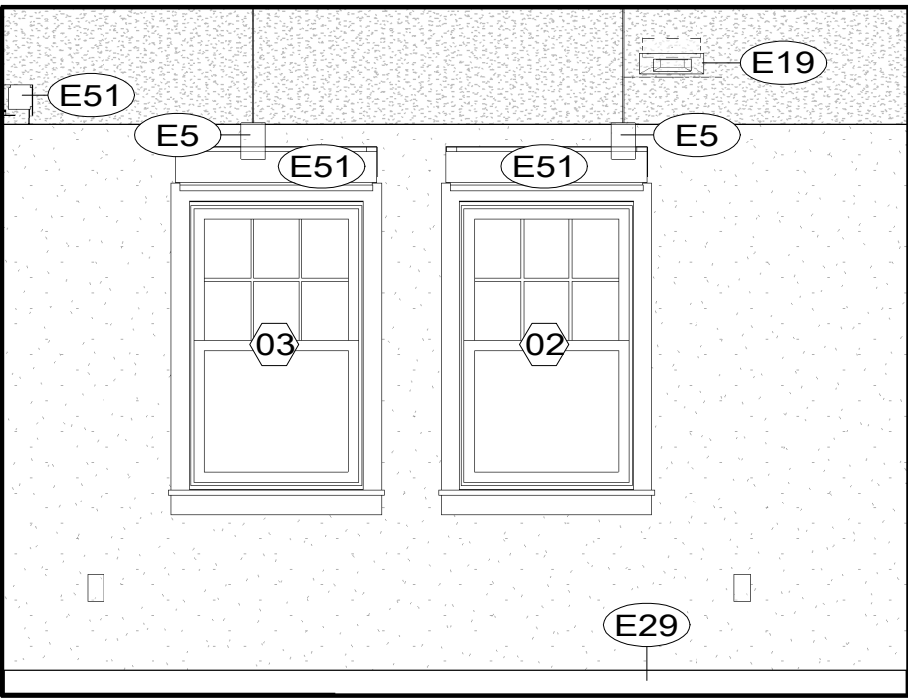
7 OFFICE 109 NORTH
A8.0



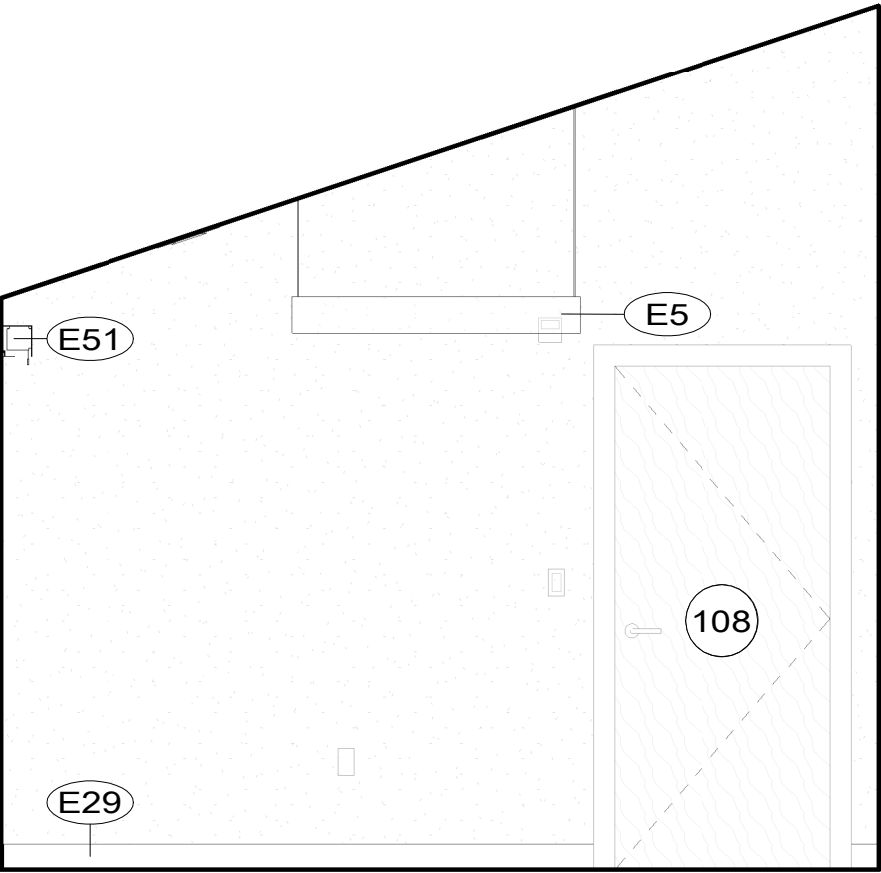
6 OFFICE 109 EAST
A8.0



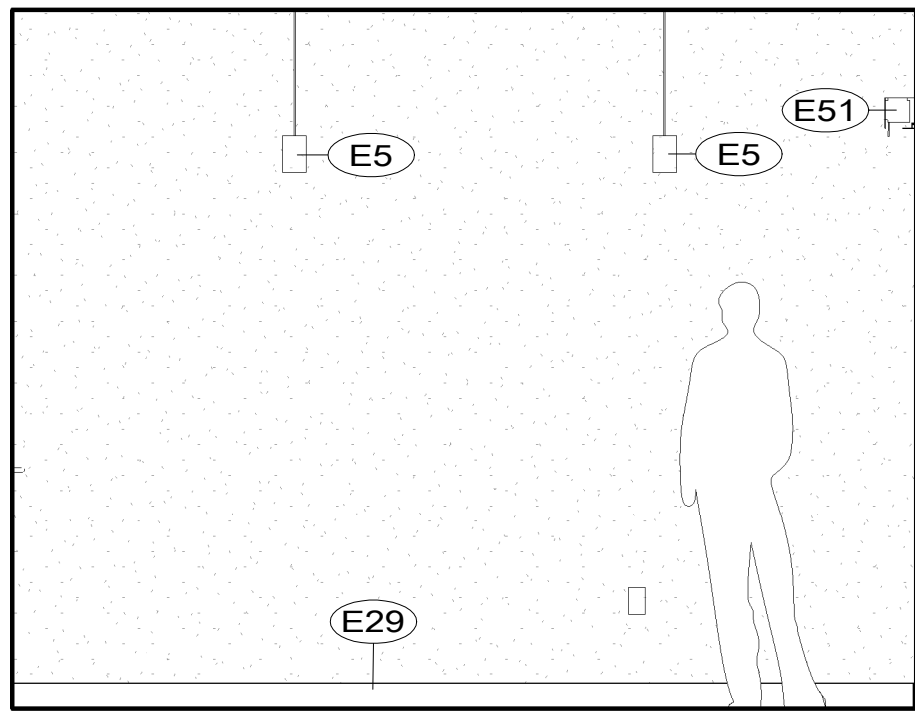
5 OFFICE 109 SOUTH
A8.0



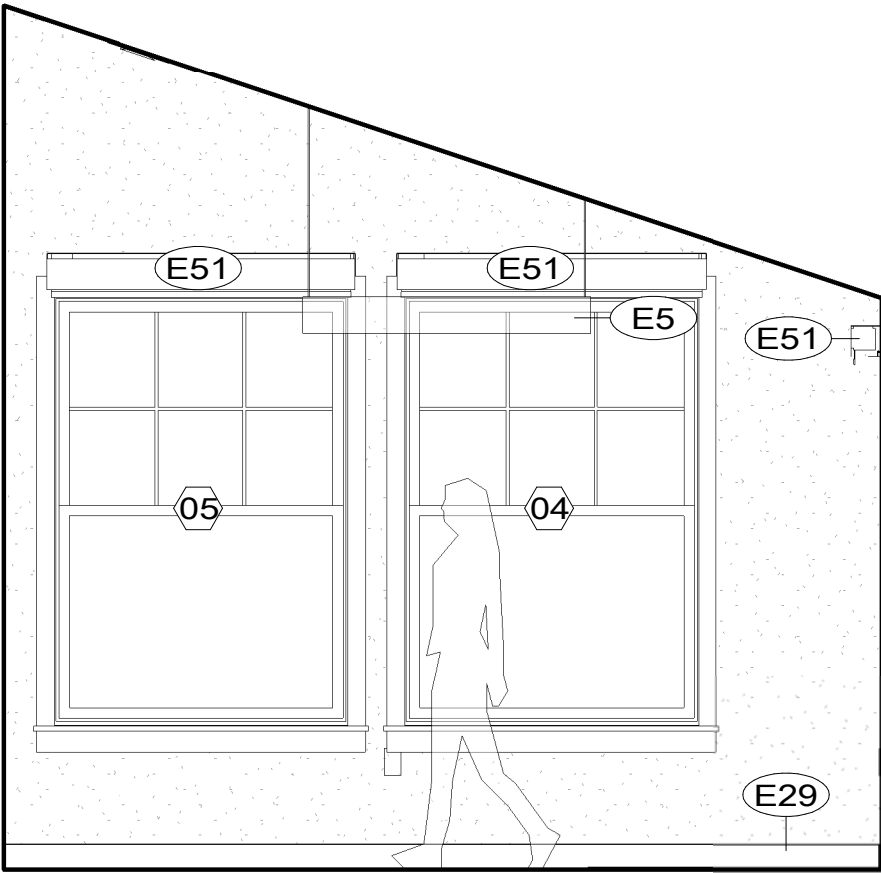
4 OFFICE 108 WEST
A8.0



3 OFFICE 108 NORTH
A8.0



2 OFFICE 108 EAST
A8.0



1 OFFICE 108 SOUTH
A8.0

KEYNOTES

- E1 FLAT HAT STORAGE (NIC)
- E5 LIGHT FIXTURE: RE ELEC
- E6 DOUBLE BASIN SINK: RE PLUMB
- E19 MECHANICAL EQUIPMENT: RE MECH
- E20 6 DOUBLE HEIGHT MTL LOCKERS
- E21 SIDE BY SIDE ABA COMPLIANT REFRIGERATOR SHOWN FOR REFERENCE (NIC)
- E22 TALL PLAM CABINET CUBBIES
- E29 BASE AS SCHEDULED: RE FINISH SCHEDULE
- E31 FA PANEL: RE ELEC

KEYNOTES

- E32 COUNTERTOP COPIER SCANNER SHOWN FOR REFERENCE (NIC)
- E38 FIRE EXTINGUISHER CABINET
- E39 COAT HOOK(S) CONTRACTOR TO INSTALL WITH BLOCKING IN WALL
- E50 GWB BULKHEAD AT CLNG TRANSITION
- E51 DOUBLE ROLLER SHADES: RE SEPECIFICATIONS

GENERAL NOTES

1. REFER TO SHEET A6.0 FOR WINDOW AND DOOR SCHEDULES.

SCALE (A) 2 0 2 4 6
SCALE OF FEET



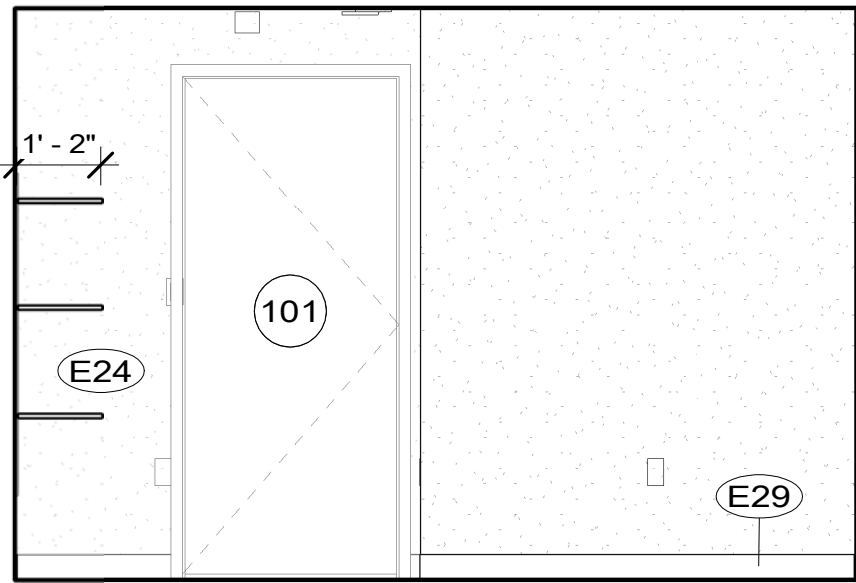
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AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
A8.0

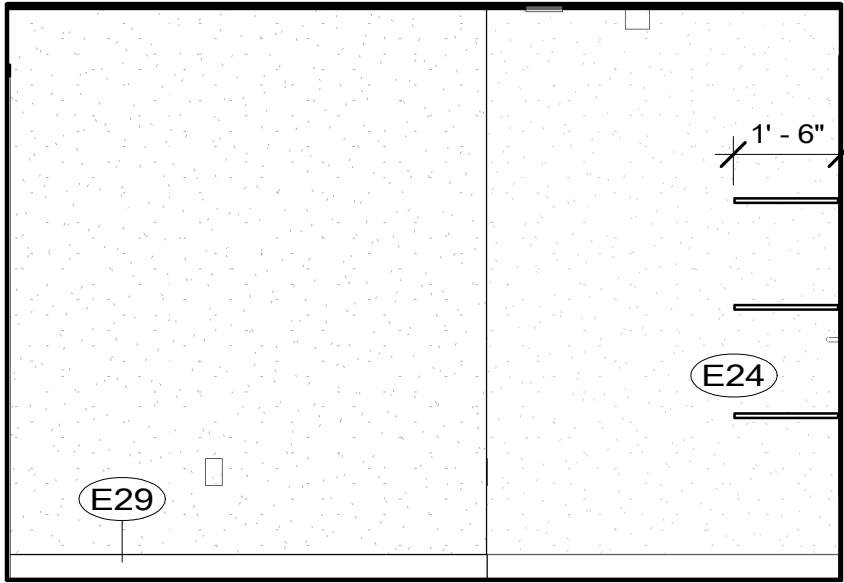
TITLE OF SHEET
**INTERIOR
ELEVATIONS**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

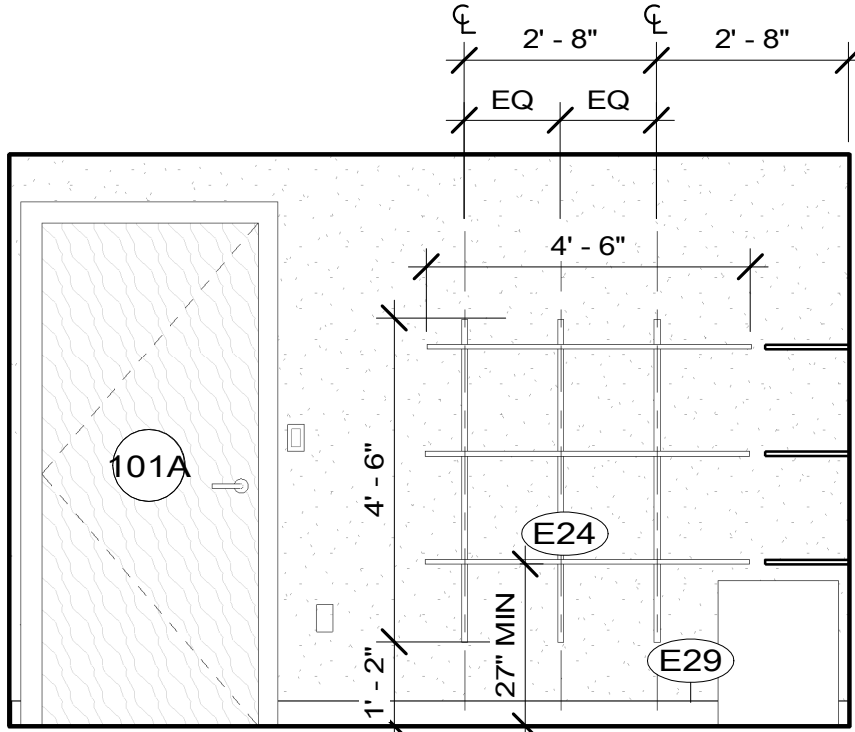
DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
107 OF **165**



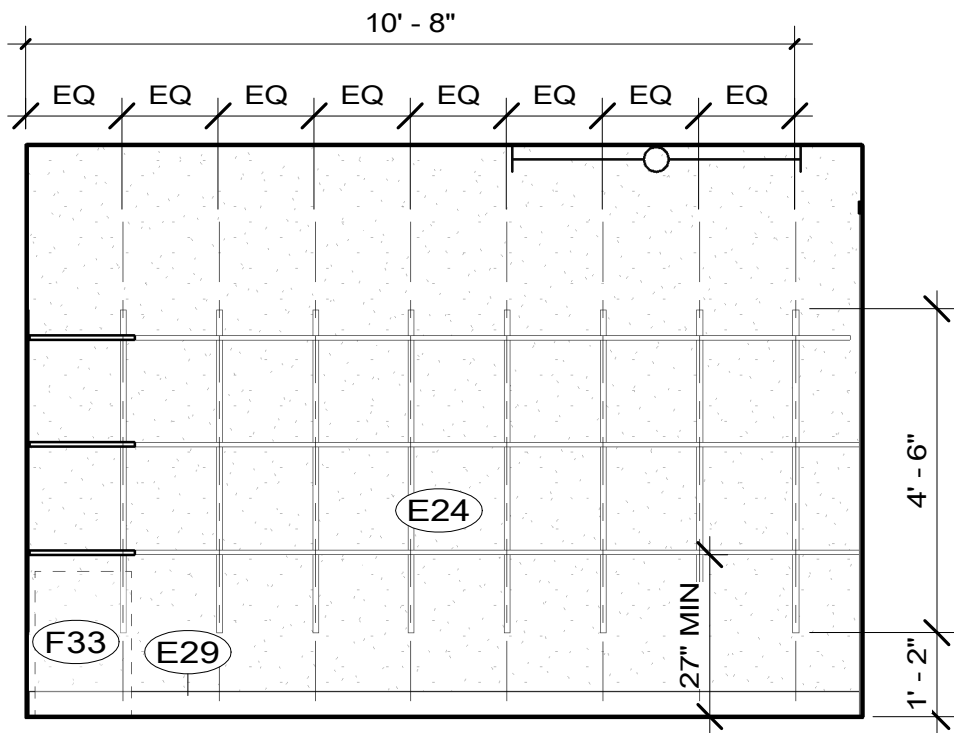
16 STORAGE 101 WEST
A8.1



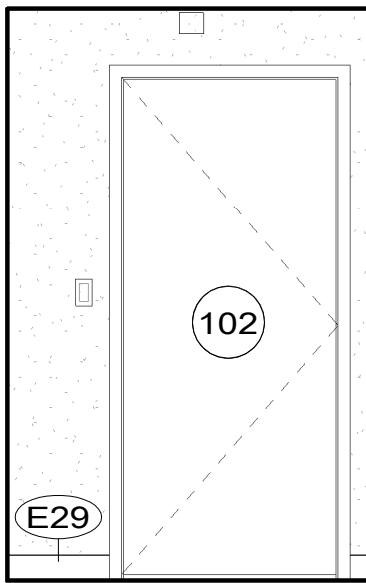
15 STORAGE 101 NORTH
A8.1



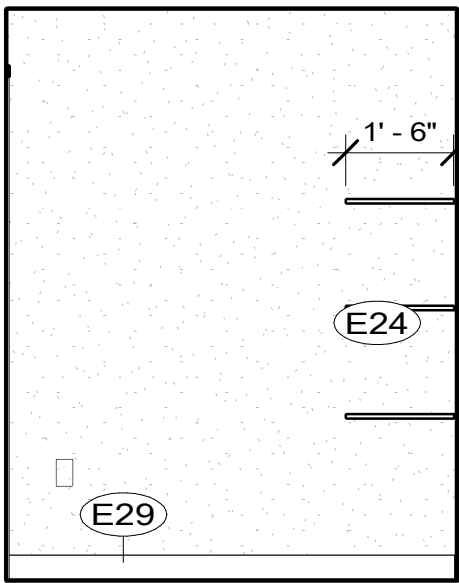
14 STORAGE 101 EAST
A8.1



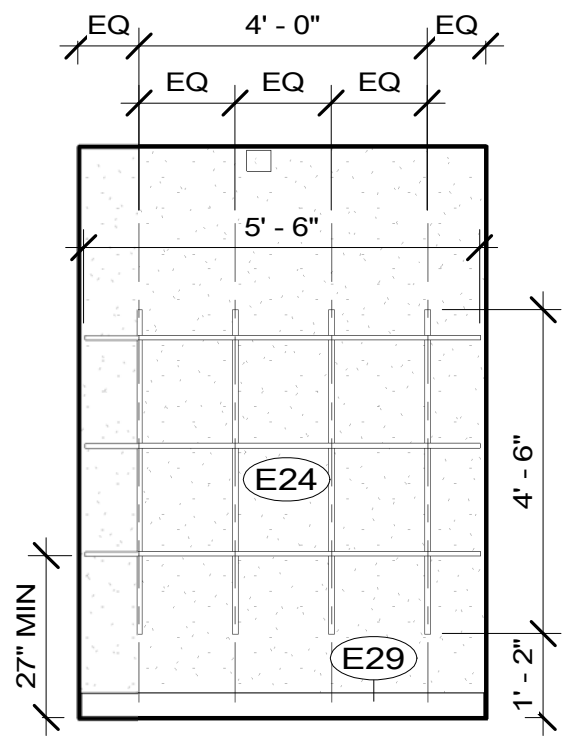
13 STORAGE 101 SOUTH
A8.1



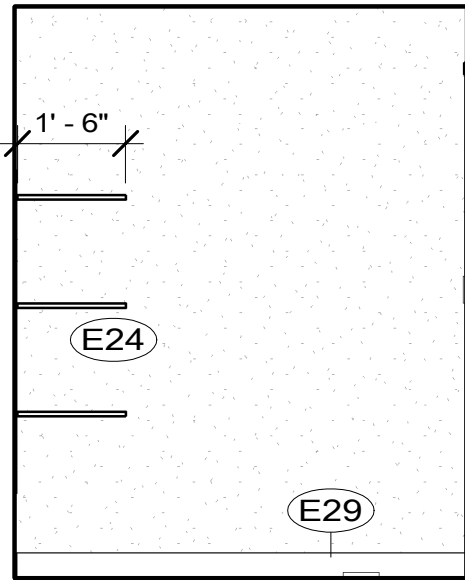
12 STOR 102 WEST
A8.1



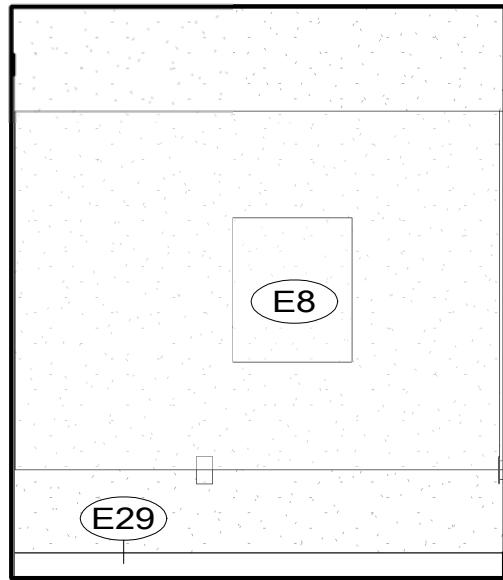
11 STOR 102 NORTH
A8.1



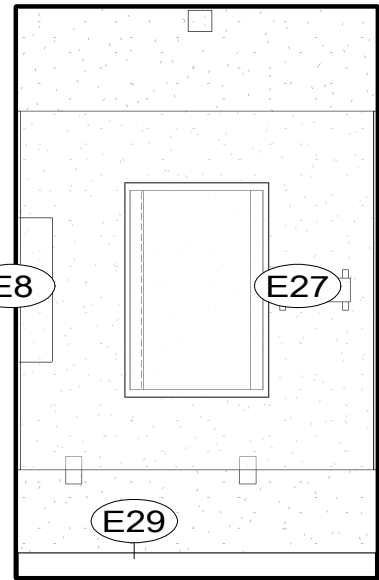
10 STOR 102 EAST
A8.1



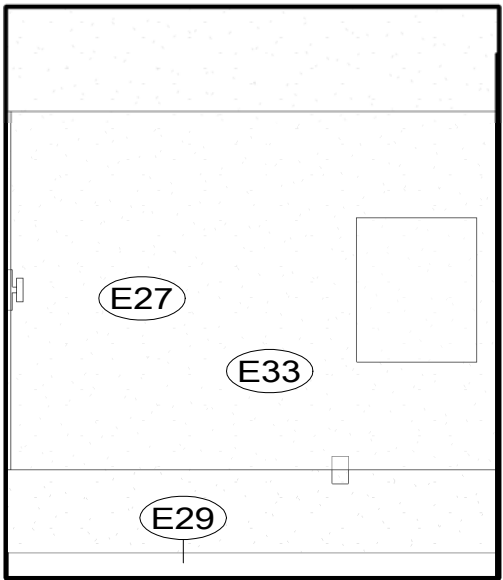
9 STOR 102 SOUTH
A8.1



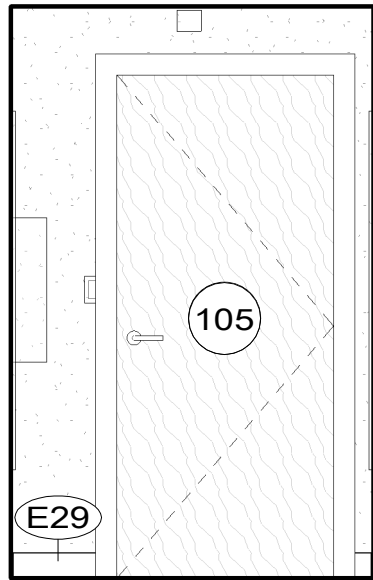
4 ELEC 105 WEST
A8.1



3 ELEC 105 NORTH
A8.1



2 ELEC 105 EAST
A8.1



1 ELEC 105 SOUTH
A8.1

KEYNOTES

- E8 ELEC PANEL: RE ELEC
E24 HEAVY DUTY ADJUSTABLE SHELVING, LOCATE BRACKET TO ATTACH TO FRAMING OR PROVIDE BLOCKING WITHIN WALL, SPACING AND QUANTITIES PER MANUFACTURER'S STANDARDS
E27 SERVER RACK: RE ELEC
E29 BASE AS SCHEDULED: RE FINISH SCHEDULE
E33 PLYWD BACKBOARD

KEYNOTES

- F33 SALVAGED SAFE FROM <E> ENTRY STATION CLOSET, VERIFY IN FIELD MEASUREMENTS, COORDINATE LOCATION WITH CO

GENERAL NOTES

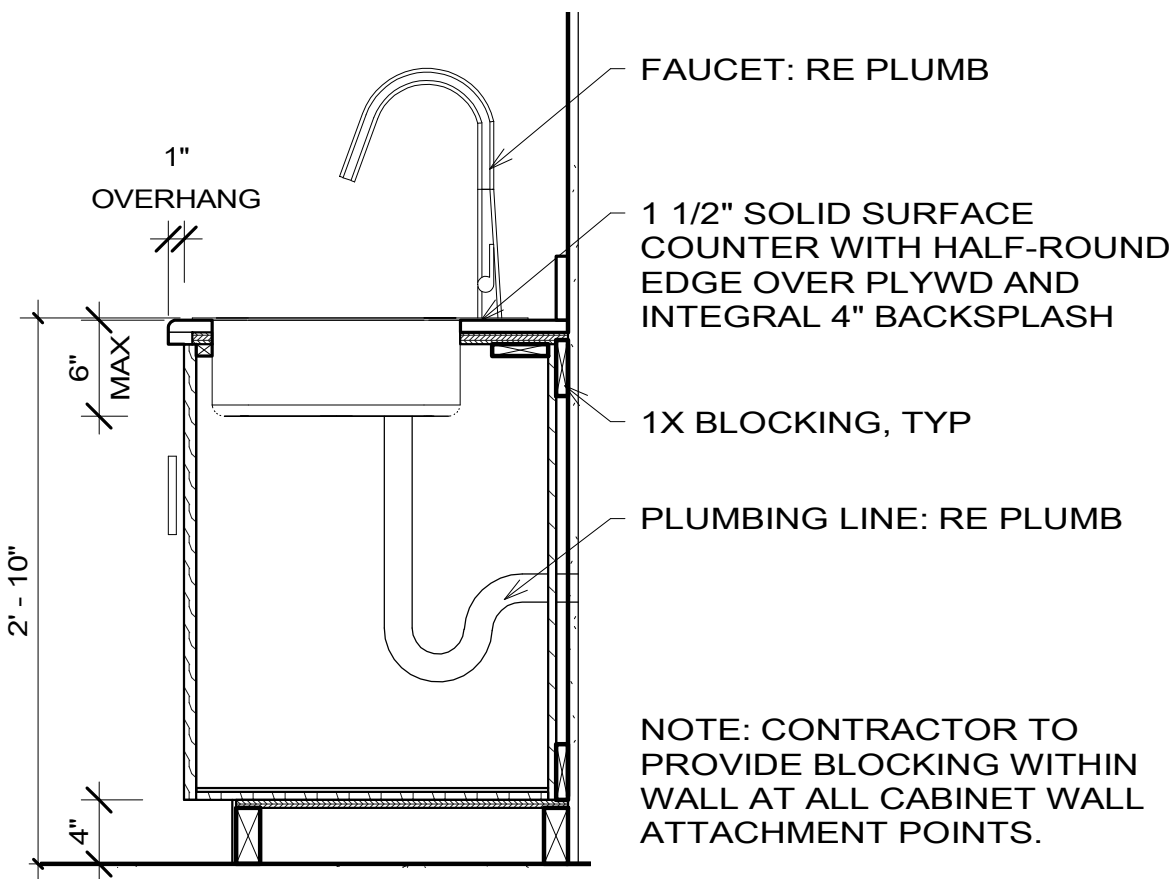
1. REFER TO SHEET A6.0 FOR WINDOW AND DOOR SCHEDULES.

SCALE (A) 2 0 2 4 6
SCALE OF FEET



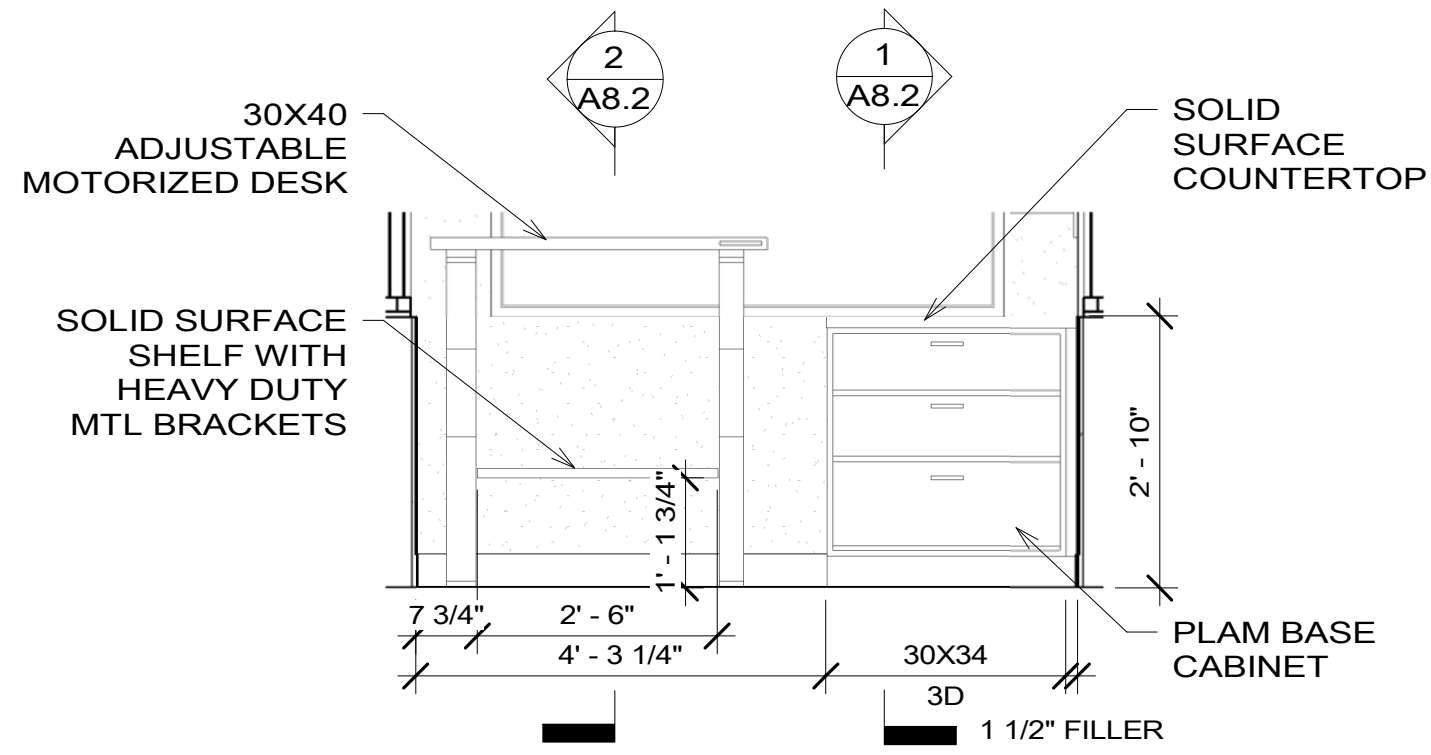
DESIGNED: AC/RK/LB GADD RK/LB TECH REVIEW: EH/AC DATE: 03/10/2022	SUB SHEET NO. A8.1	TITLE OF SHEET INTERIOR ELEVATIONS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 108 OF 165
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3/18/2022 2:26:58 PM BIM 360://2021-250 ROMO FRE/2021-250 - ROMO FRE - v20 - BIM 360.rvt



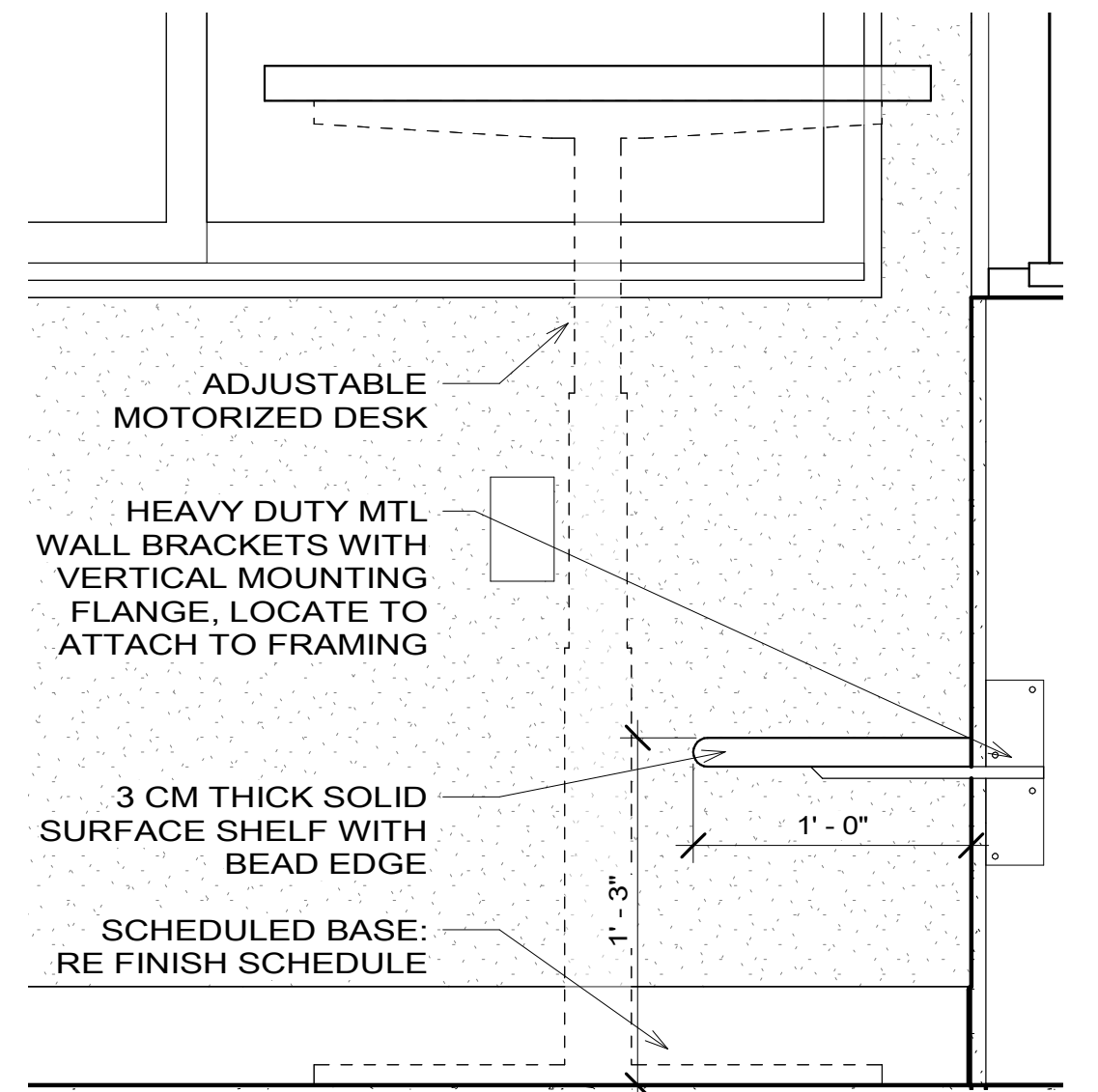
8 SECTION AT SINK CABINET

A8.2 SCALE (B)



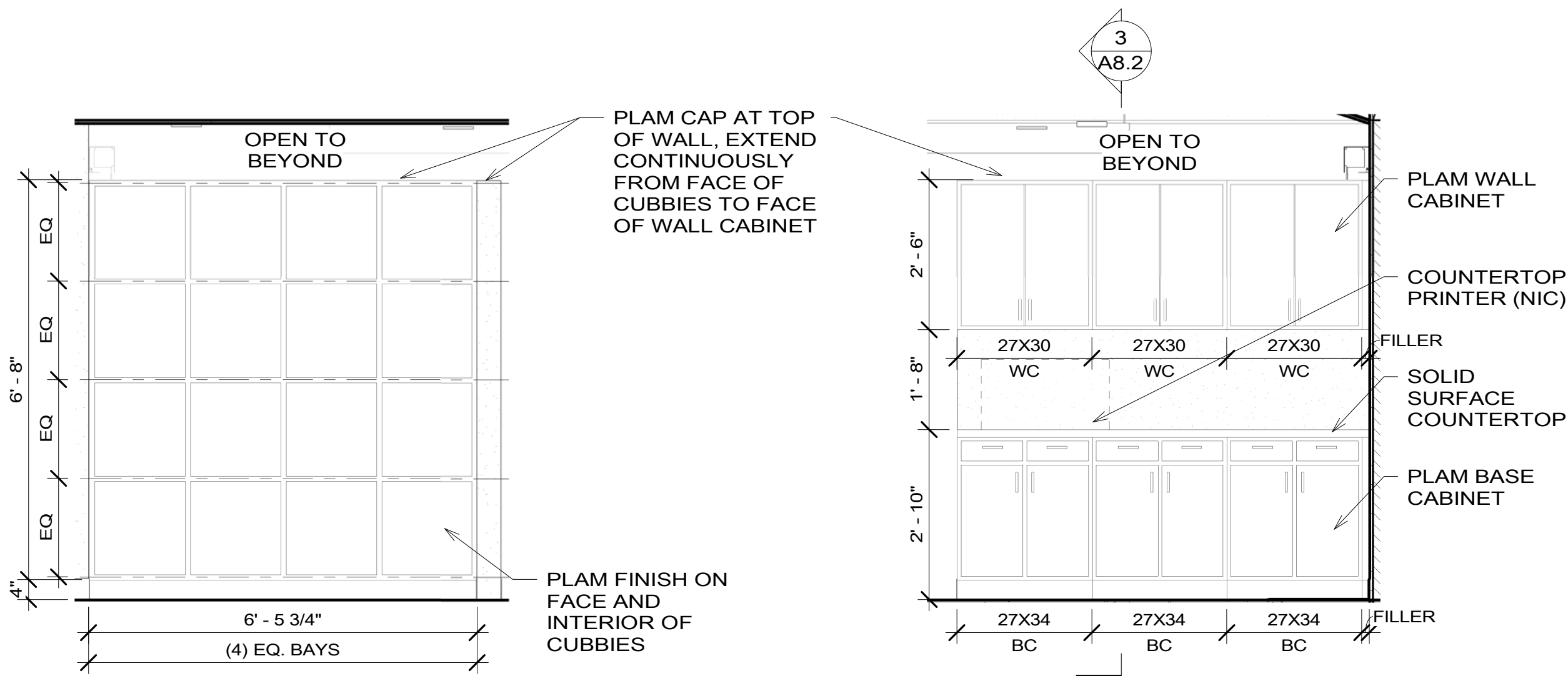
7 KIOSK CASEWORK

A8.2 SCALE (A)



2 SECTION AT KIOSK WORK STATION

A8.2 SCALE (C)

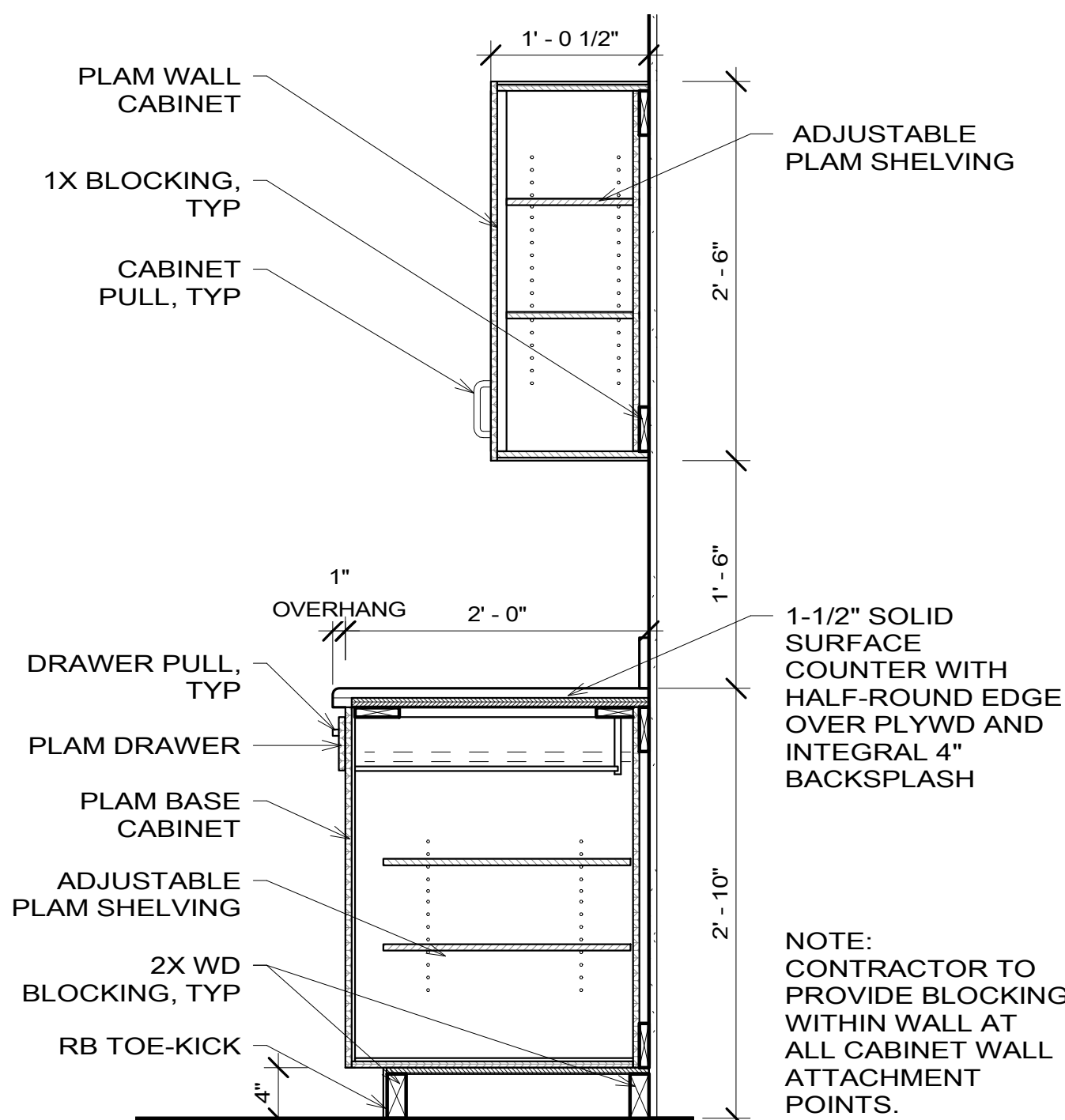


6 BREAK ROOM 103 CUBBIES

A8.2 SCALE (A)

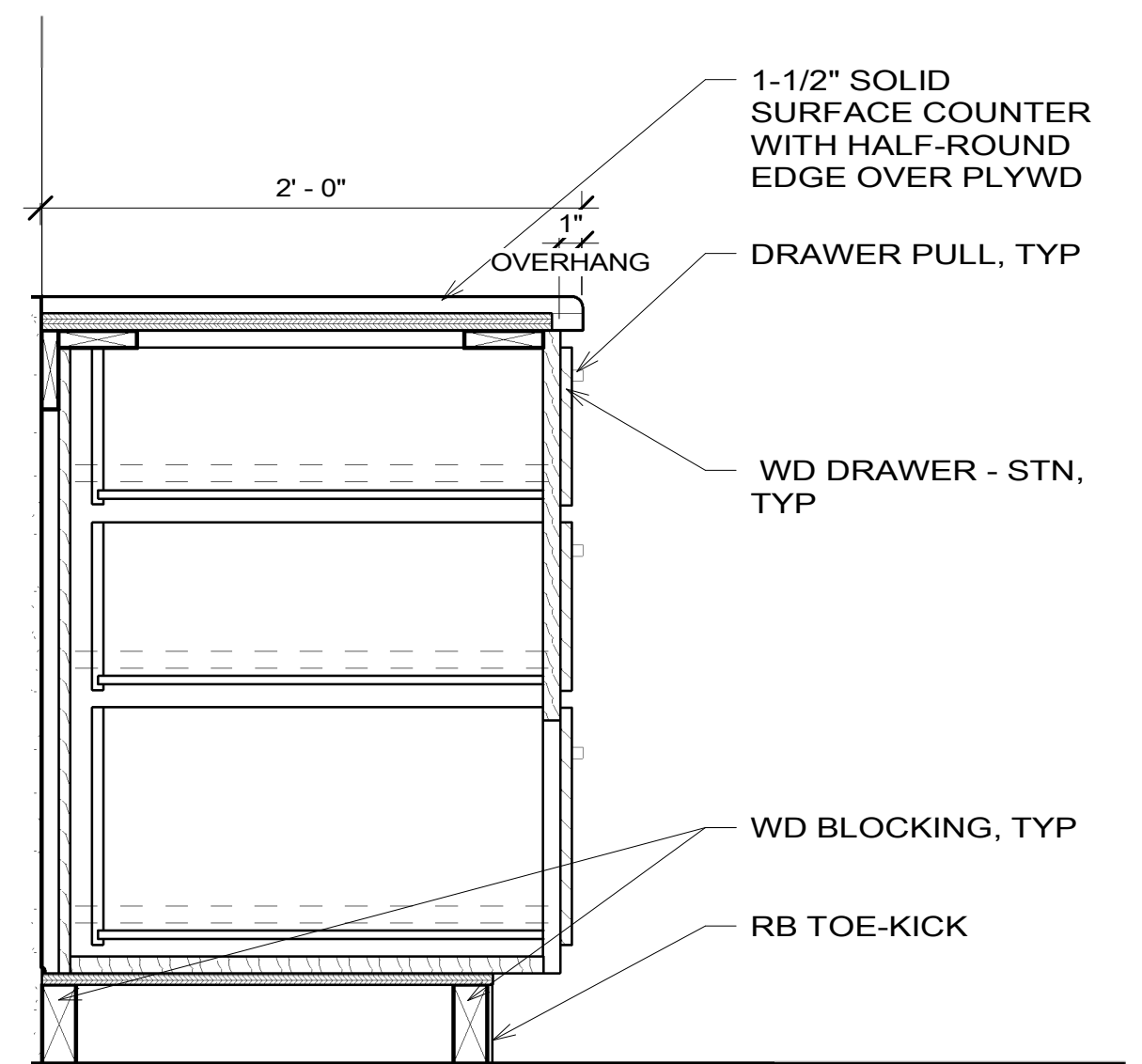
5 OFFICE 108 CASEWORK

A8.2 SCALE (A)



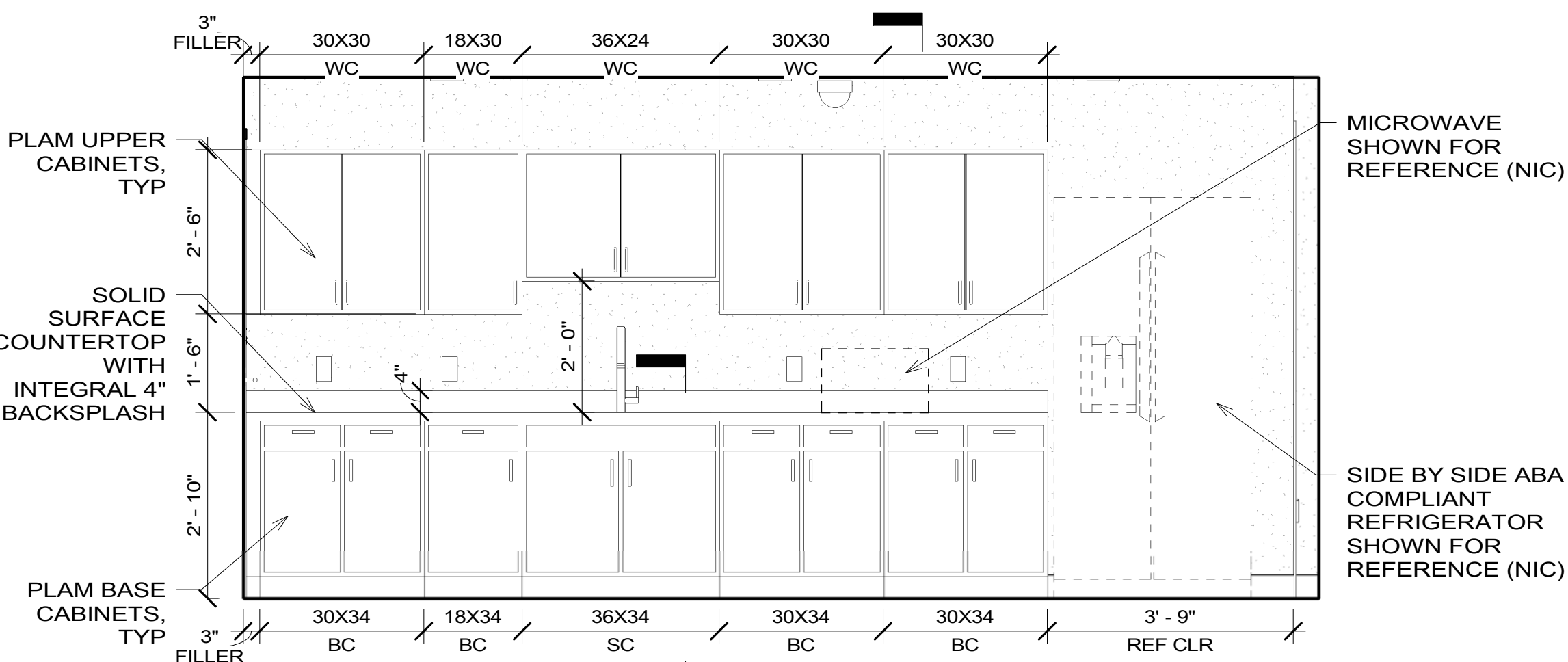
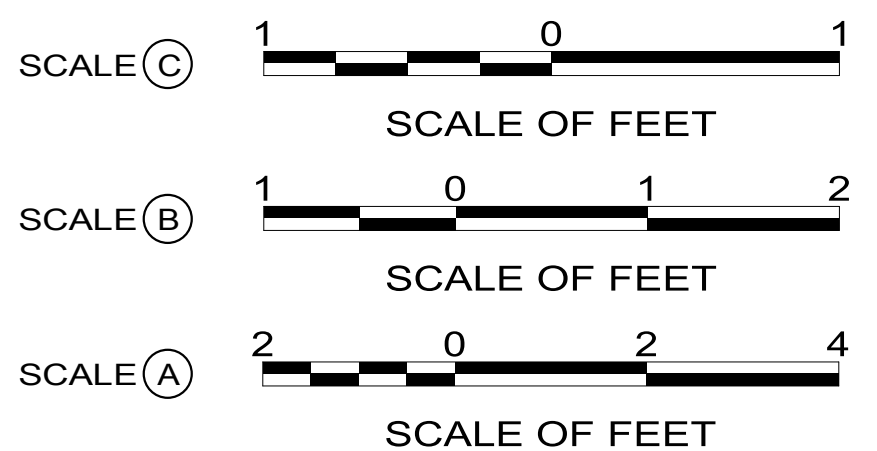
3 TYP SECTION AT CABINETS

A8.2 SCALE (B)



1 SECTION AT KIOSK BASE CABINET

A8.2 SCALE (C)



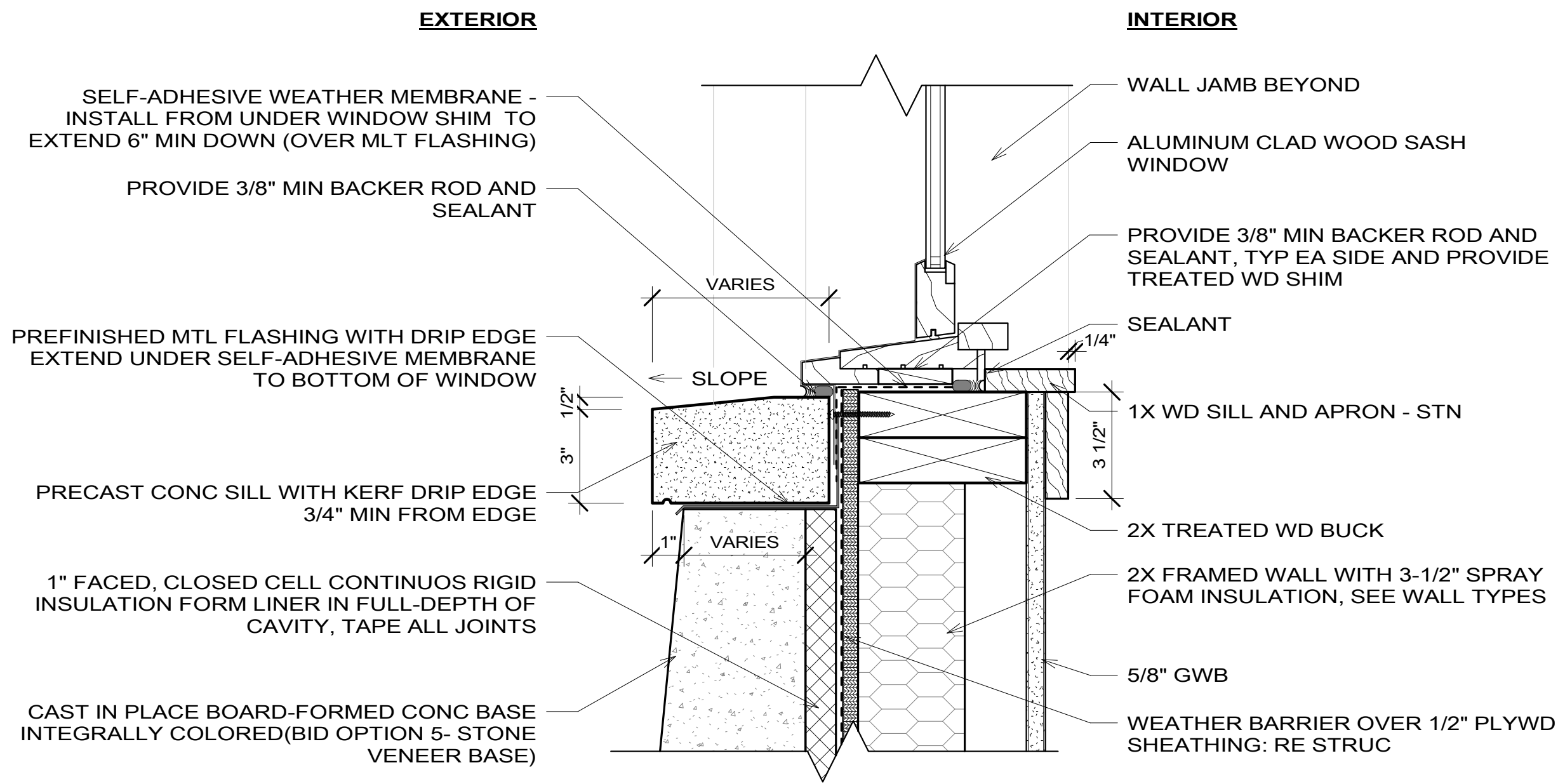
4 BREAK ROOM CASEWORK

A8.2 SCALE (A)

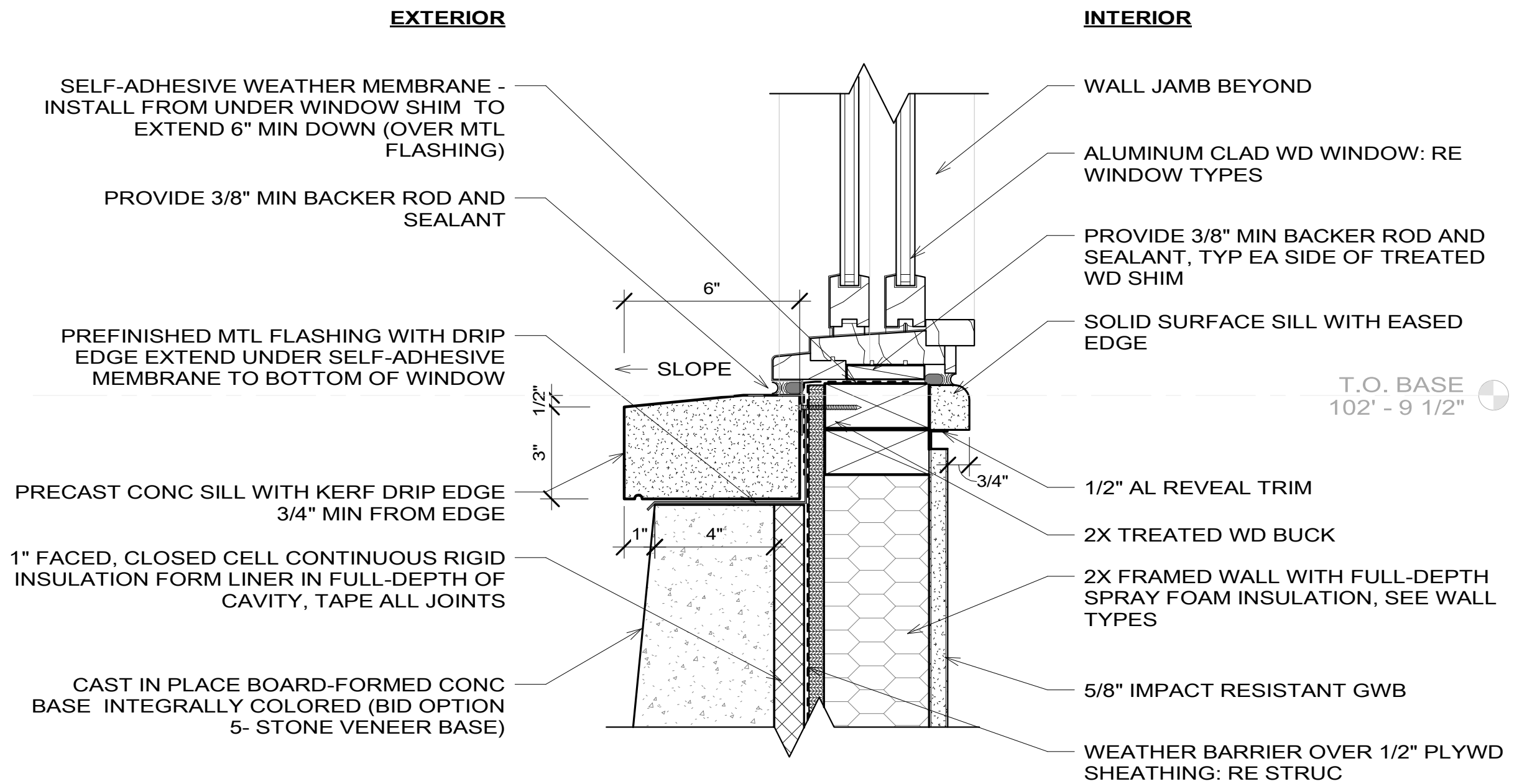
	DESIGNED: AC/RK/LB	SUB SHEET NO. A8.2	TITLE OF SHEET ENLARGED CASEWORK FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678
	TECH REVIEW: EH/AC			PMIS/PKG NO. 160755
	DATE: 03/10/2022			SHEET 109 OF 165

3/8/2022 2:27:00 PM BIM 360://2021-250 ROMO FRE/2021-250 - ROMO FRE - v20 - BIM 360.rvt

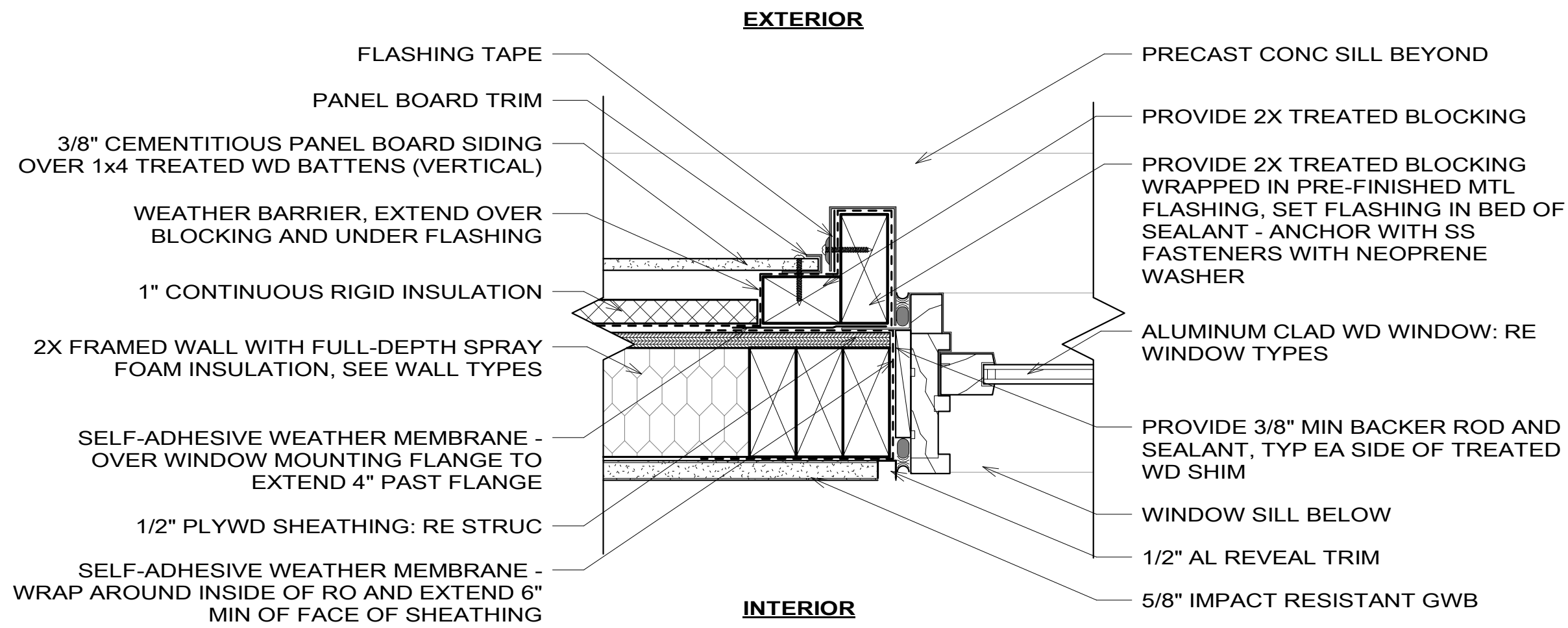
5 DOUBLE HUNG WINDOW SILL AT BASE



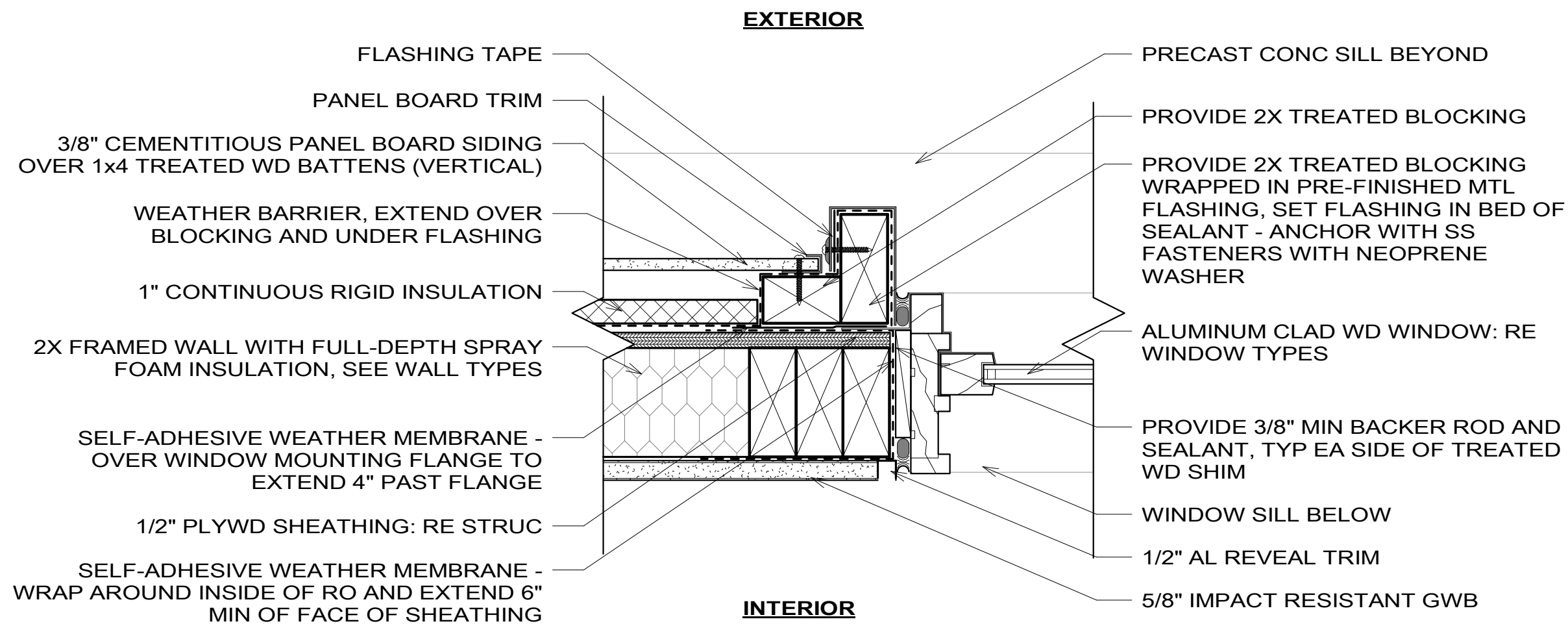
2 KIOSK WINDOW SILL



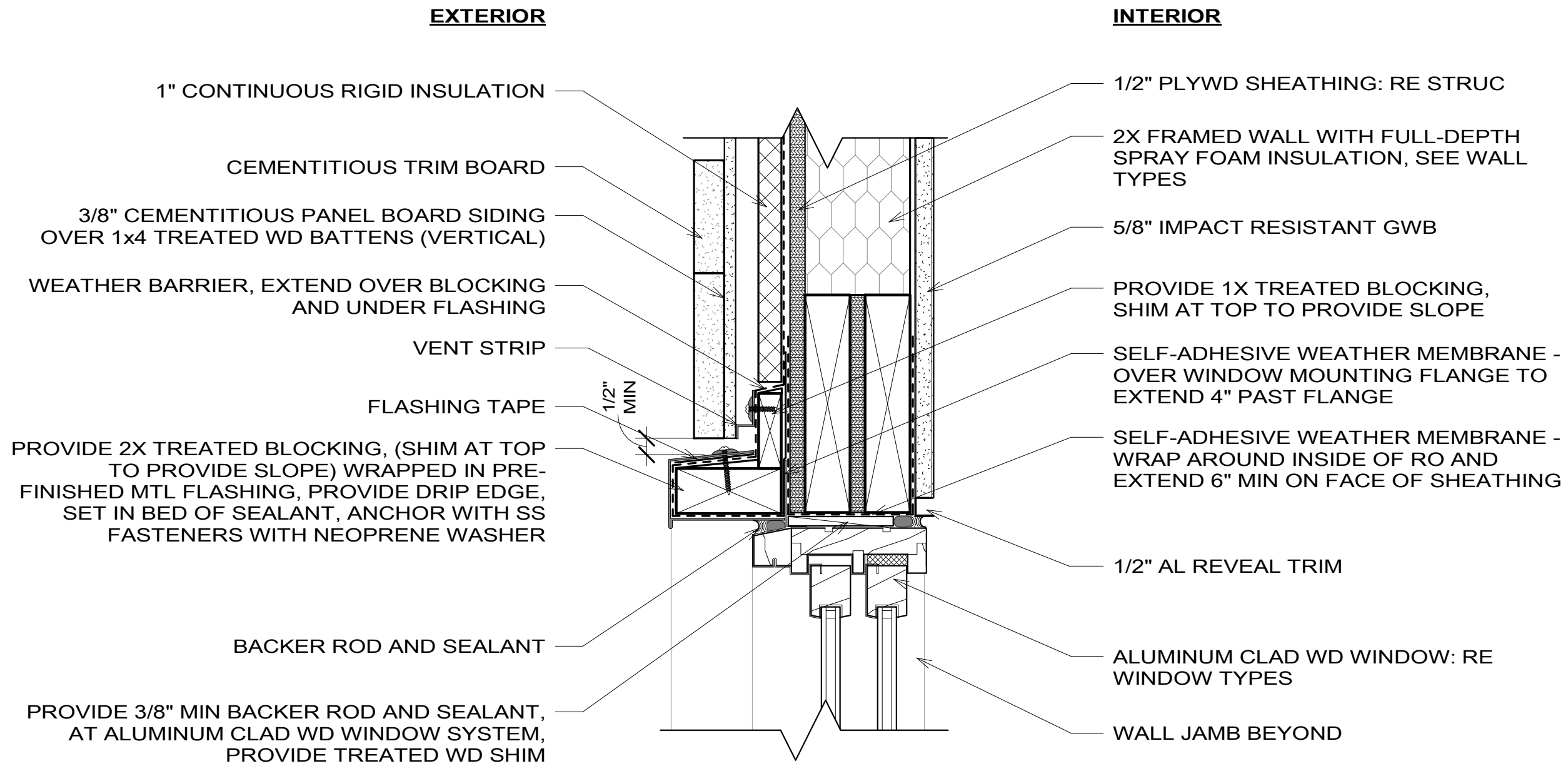
4 DOUBLE HUNG WINDOW JAMB



3 KIOSK WINDOW JAMB



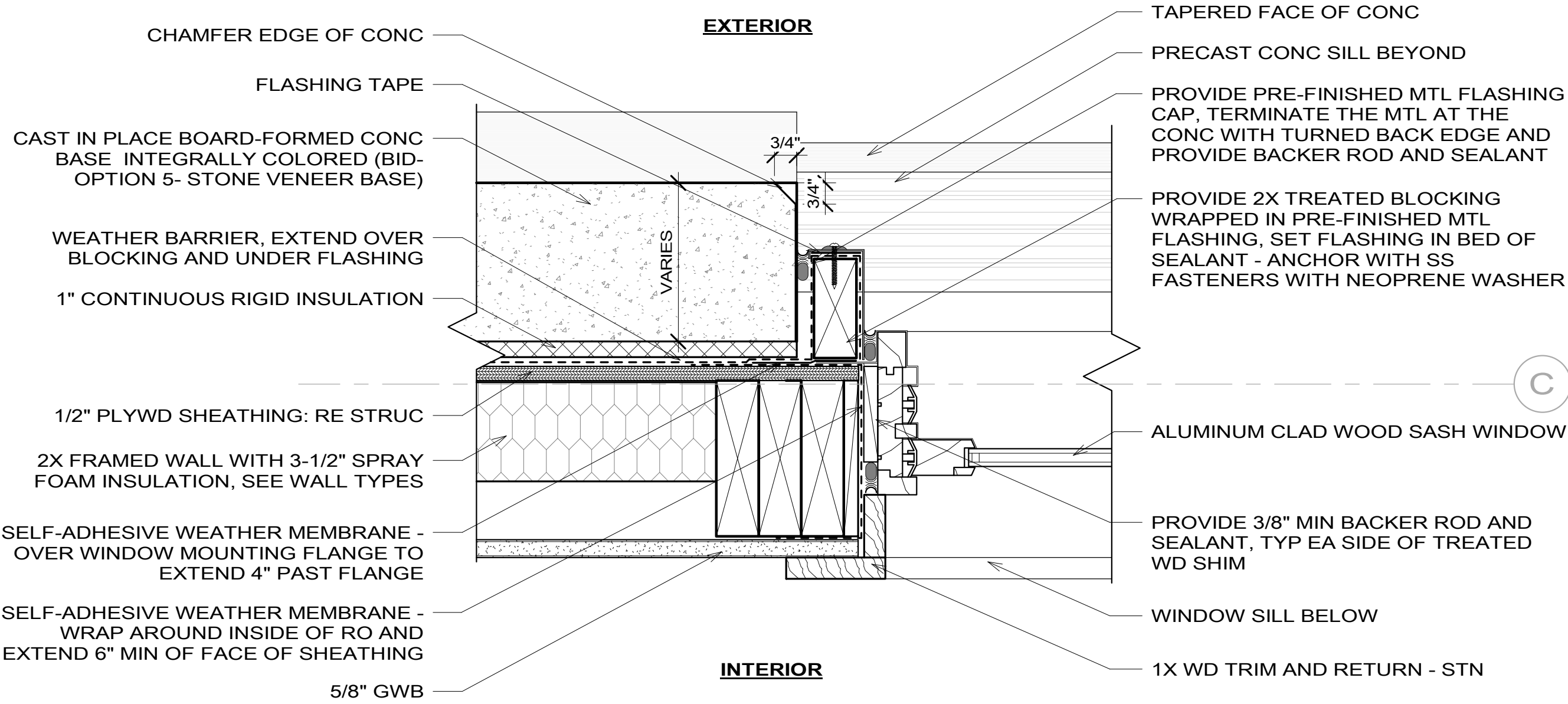
1 KIOSK WINDOW HEAD



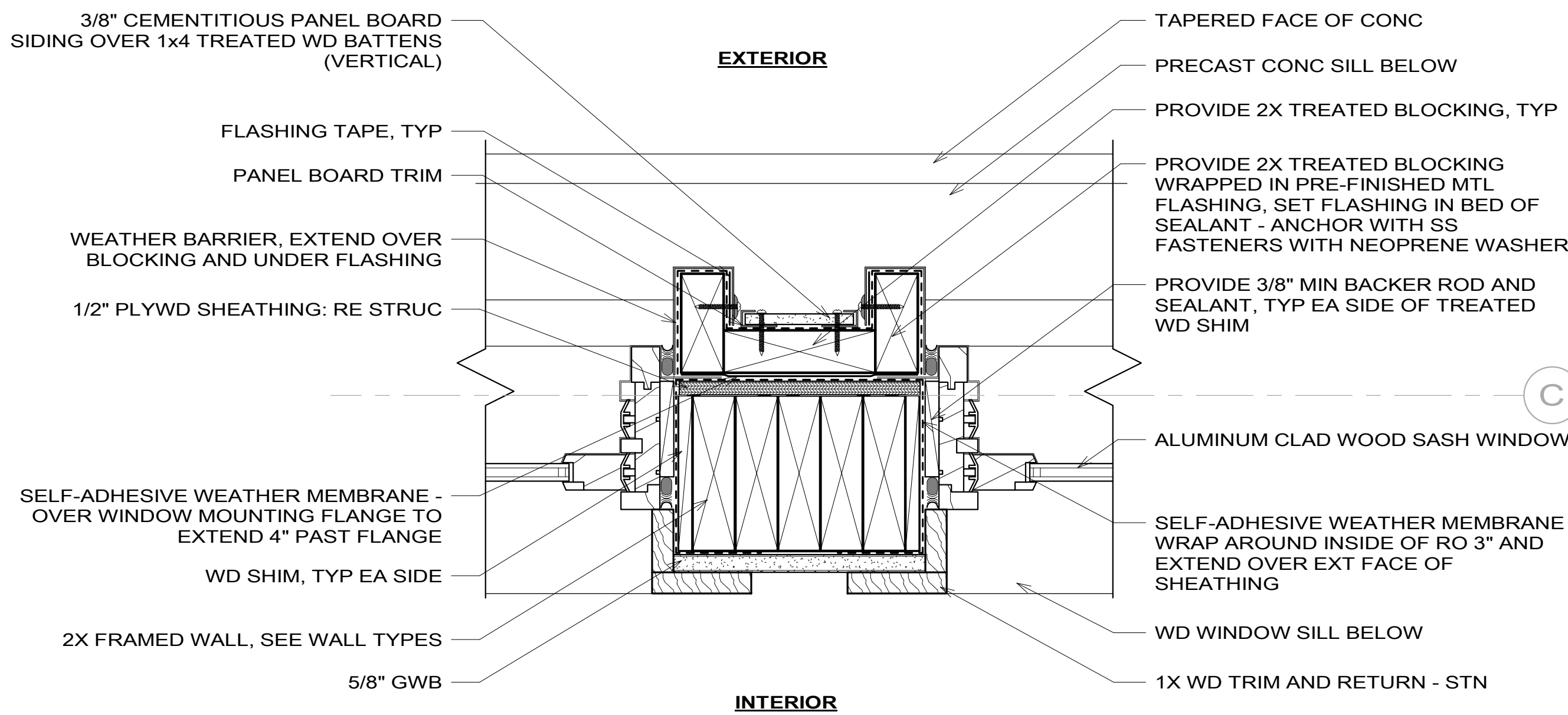
SCALE (A) 6 3 0 6
SCALE OF INCH

	DESIGNED: AC/RK/LB	SUB SHEET NO. A9.0	TITLE OF SHEET WINDOW DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
	6400 RK/LB			176678
	TECH REVIEW: EH/AC			PMIS/PKG NO. 160755
	DATE: 03/10/2022			SHEET 110 OF 165

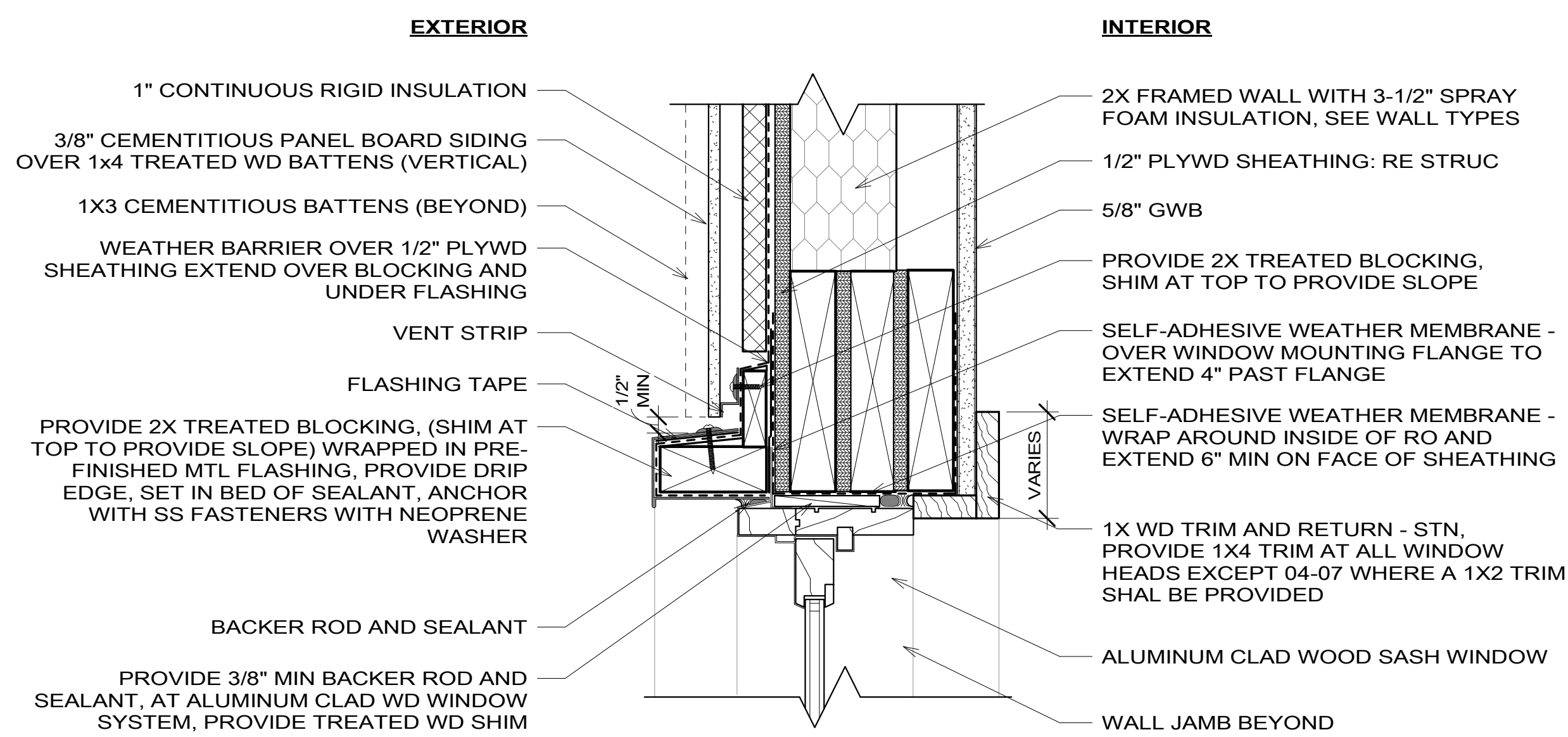
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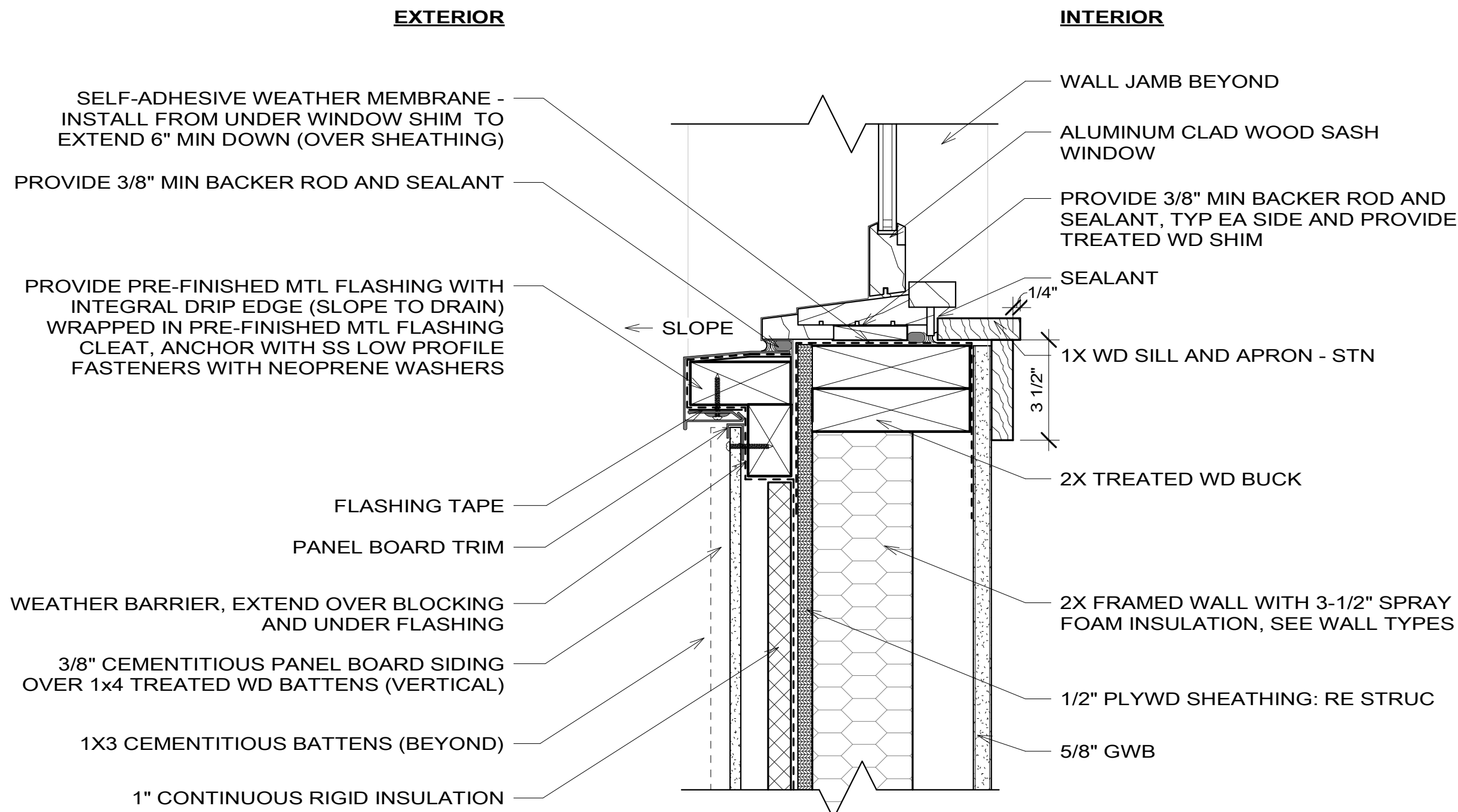
4 WINDOW JAMB AT OFFICES - SOUTH AT CORNER
A9.1



3 WINDOW JAMB AT OFFICES - SOUTH
A9.1



2 DOUBLE HUNG WINDOW HEAD
A9.1



1 DOUBLE HUNG WINDOW SILL AT SIDING
A9.1

SCALE (A) 6 3 0 6
SCALE OF INCH



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

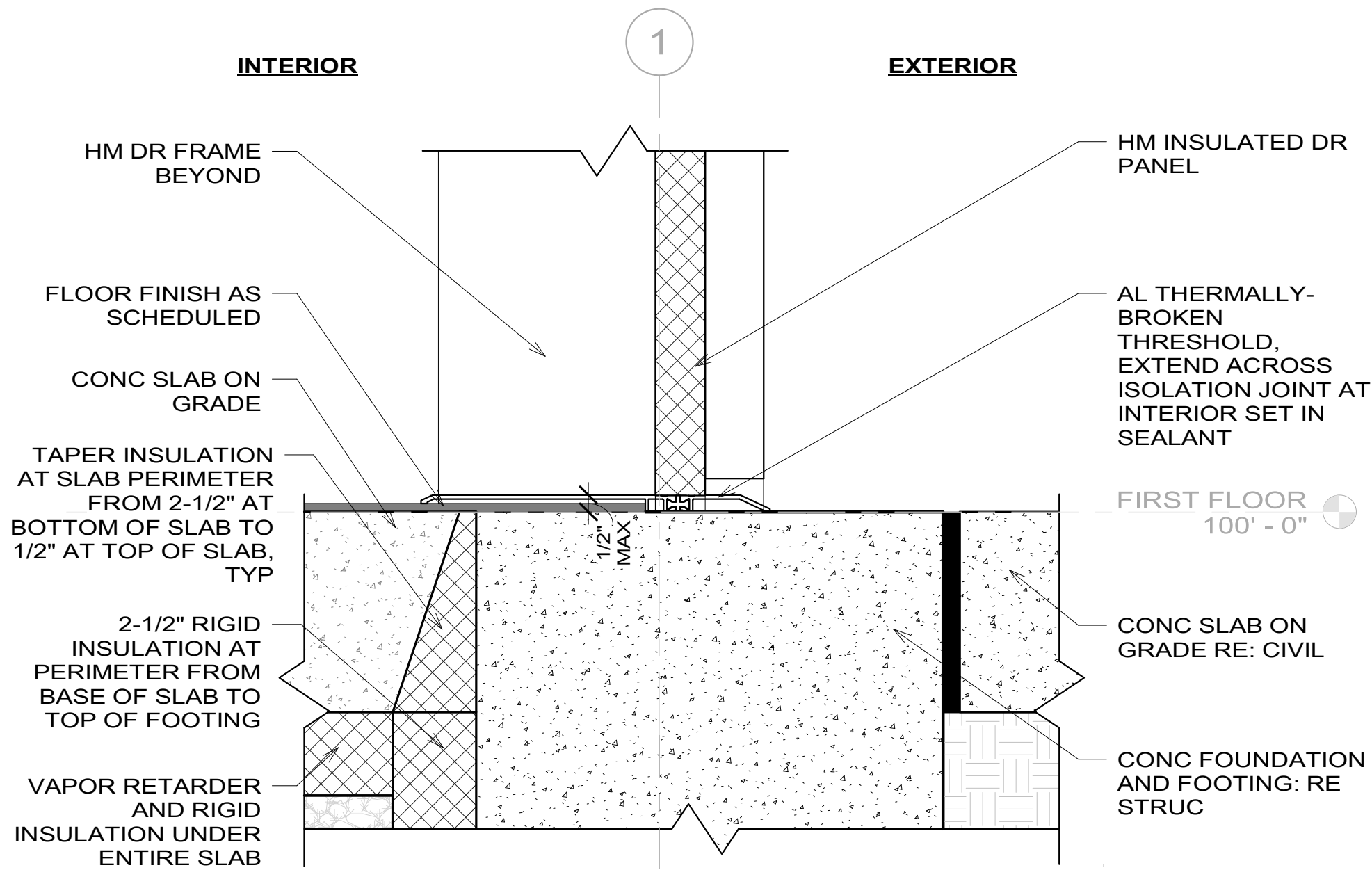
SUB SHEET NO.
A9.1

TITLE OF SHEET
WINDOW DETAILS

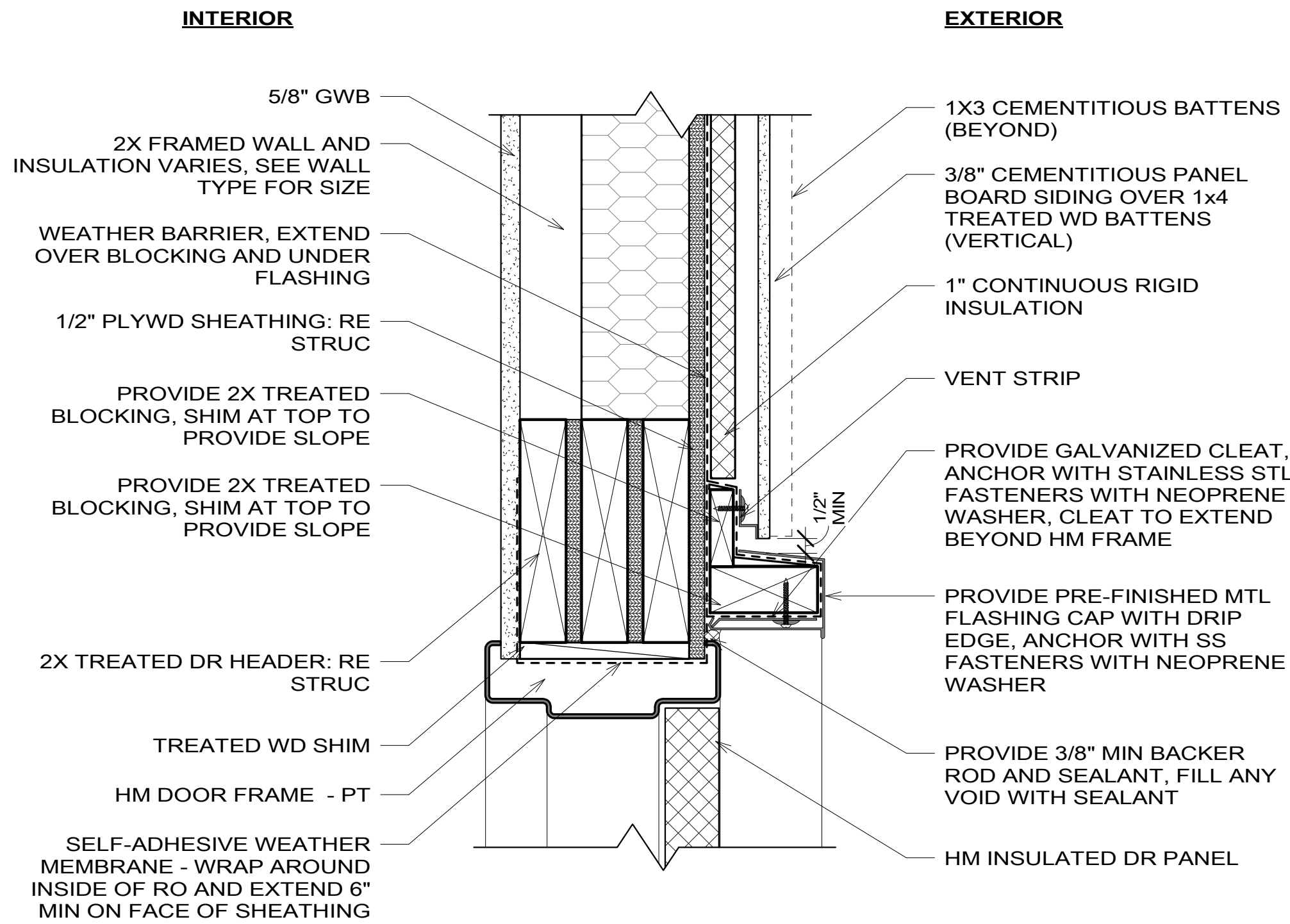
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
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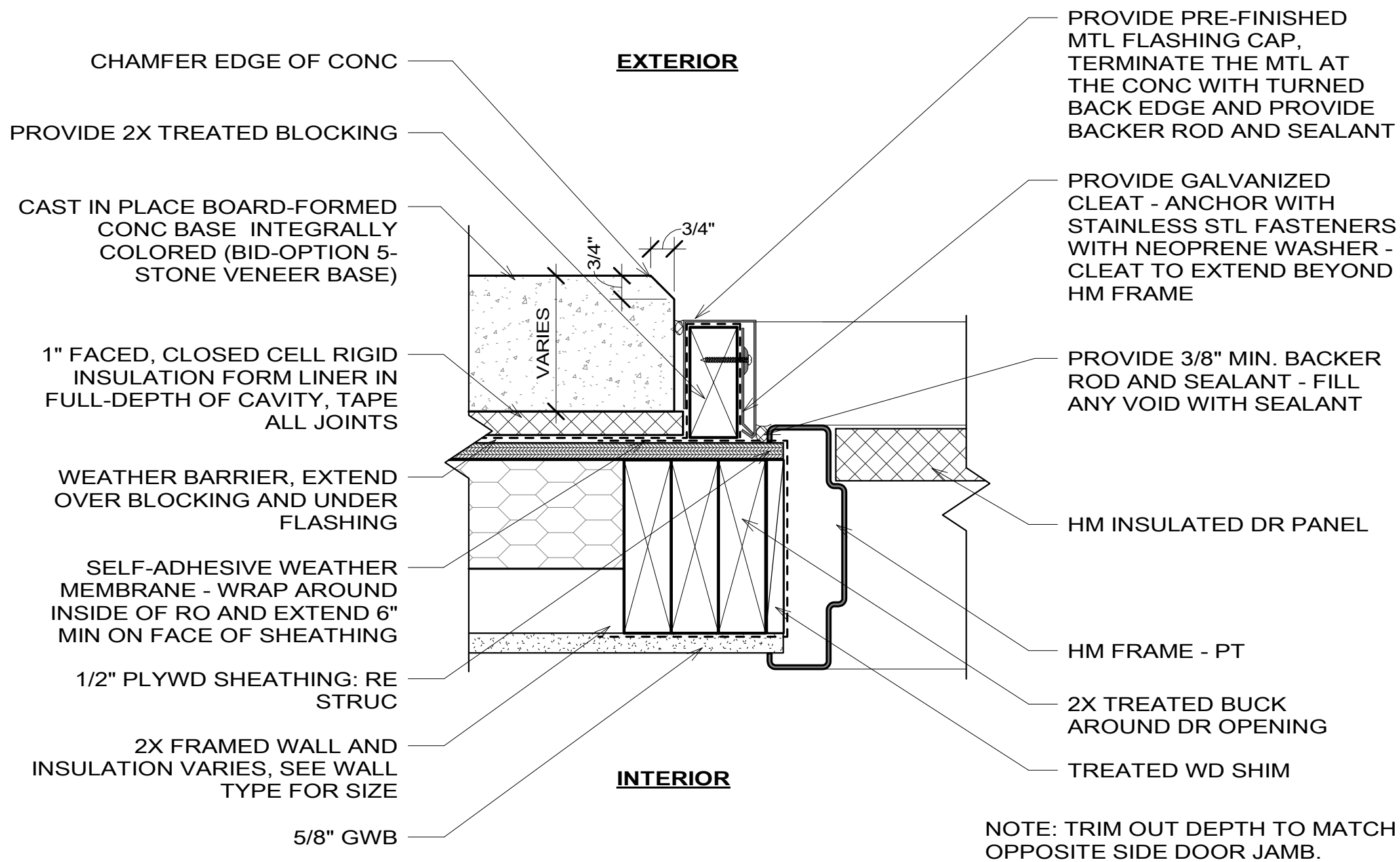
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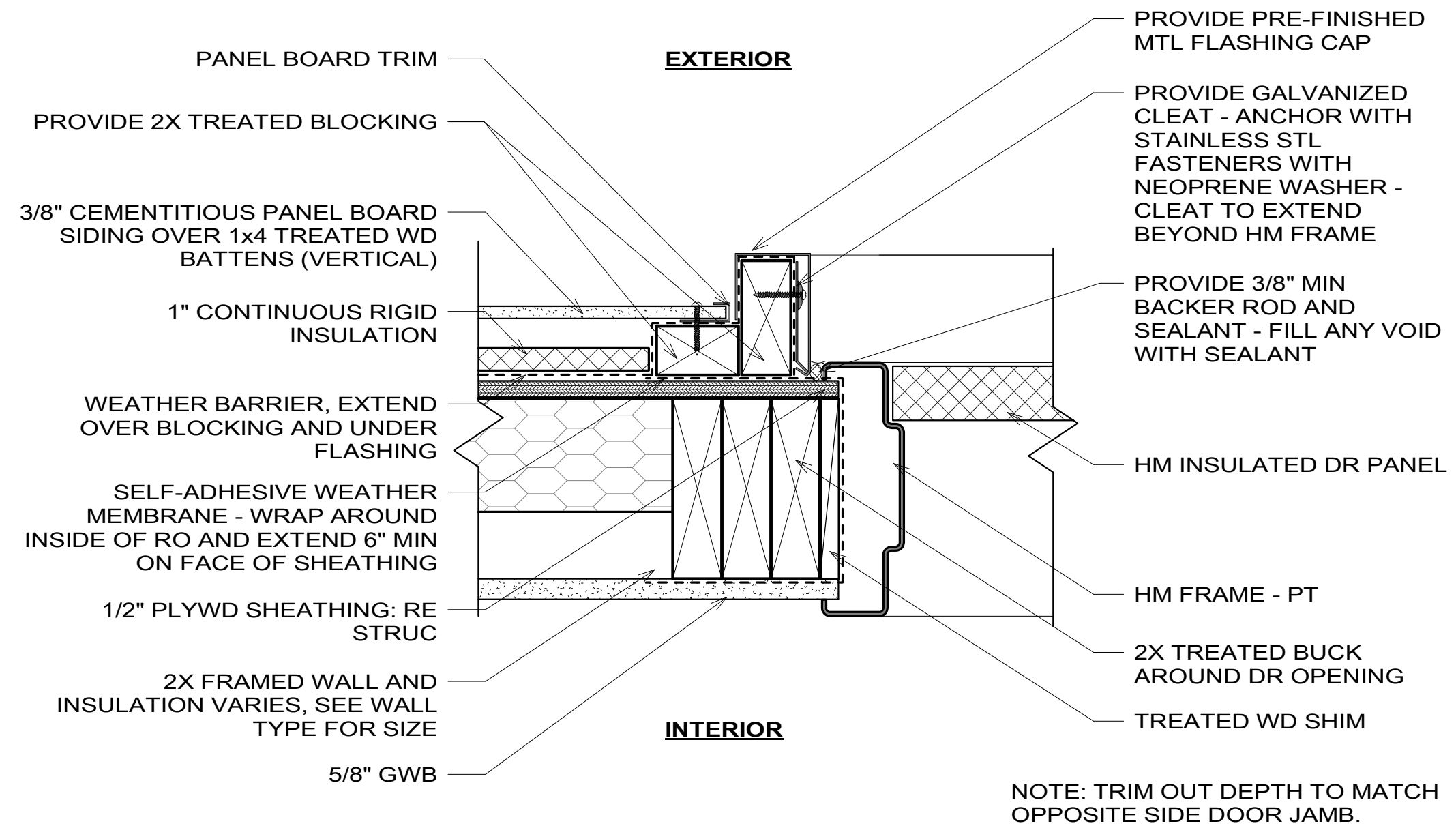
7 DTL AT THRESHOLD IN EXT WALL DR
A9.2



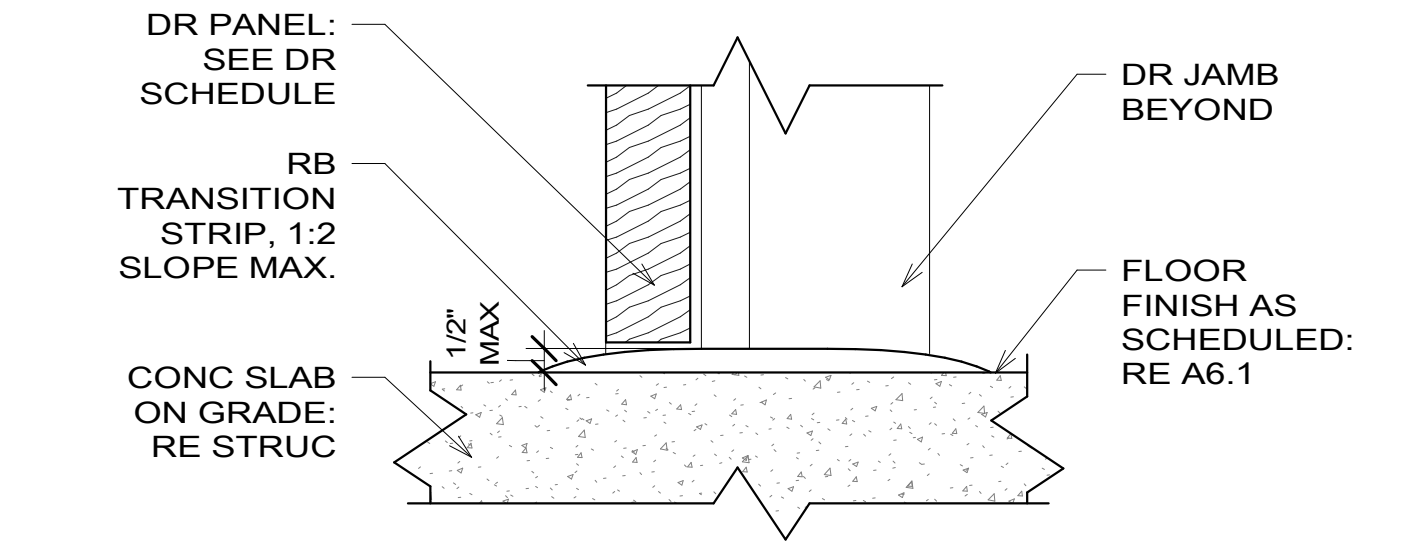
6 DTL AT HEAD IN EXT WALL DR
A9.2



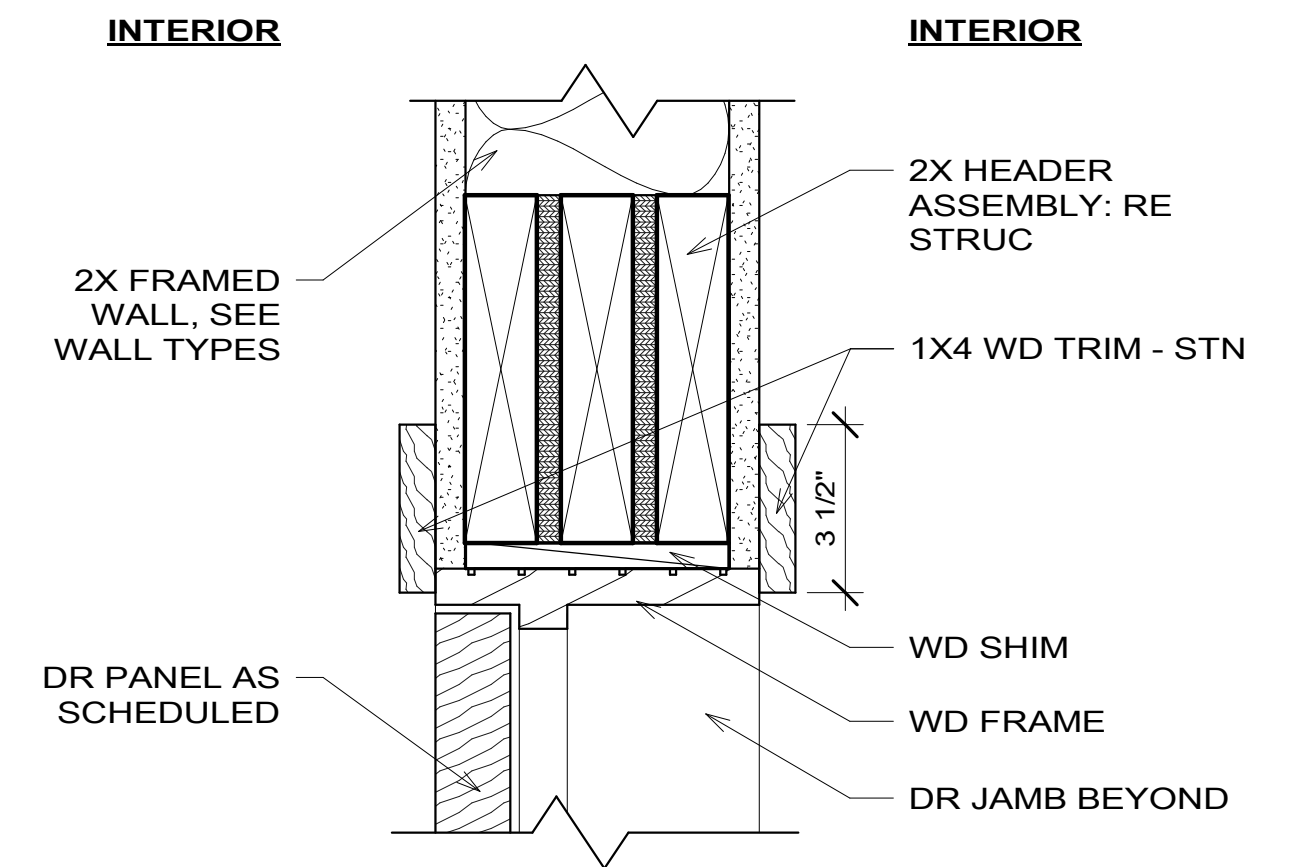
5 DTL AT JAMB IN EXT WALL DR AT BASE
A9.2



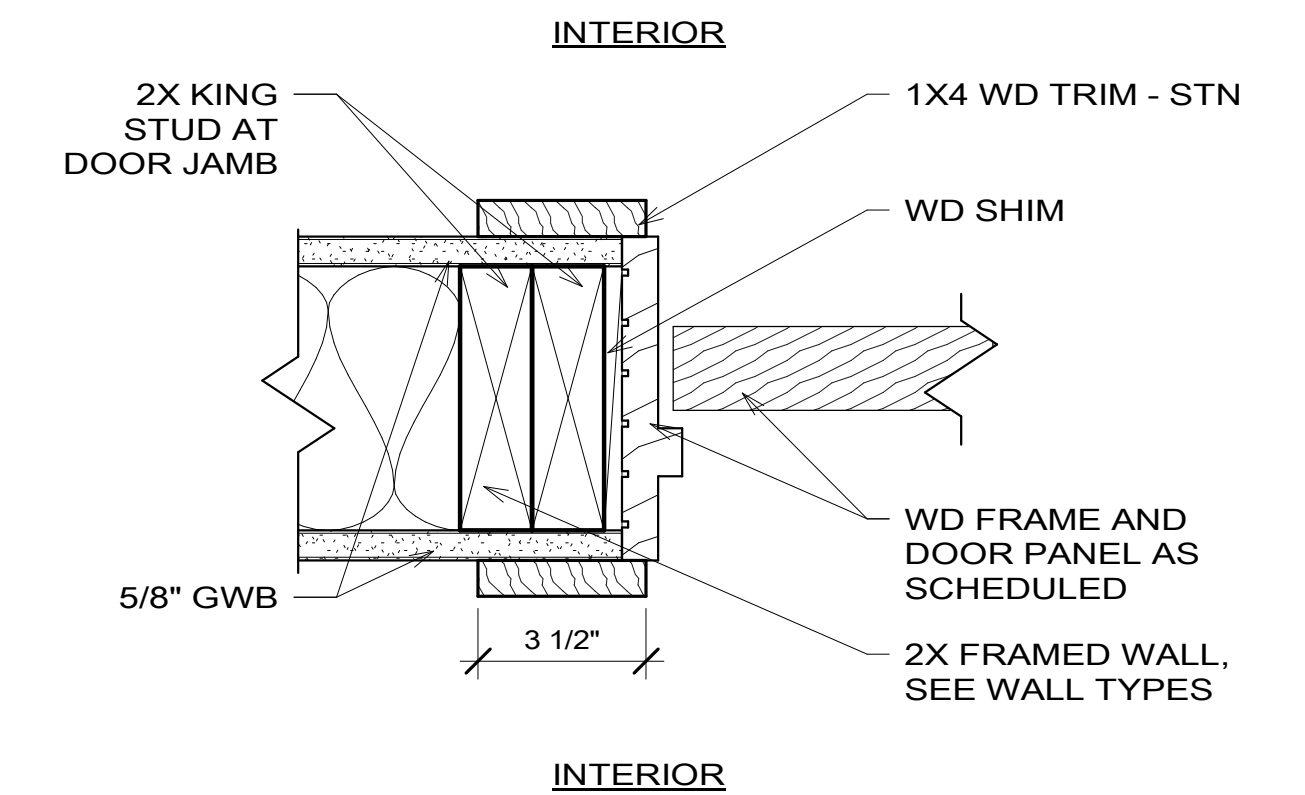
4 DTL AT JAMB IN EXT WALL DR
A9.2



3 TYP INTERIOR DR TRANSITION STRIP
A9.2



2 TYP INTERIOR DOOR HEAD
A9.2



1 TYPICAL INTERIOR DOOR JAMB
A9.2

SCALE (A) 6 3 0 6
SCALE OF INCH



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

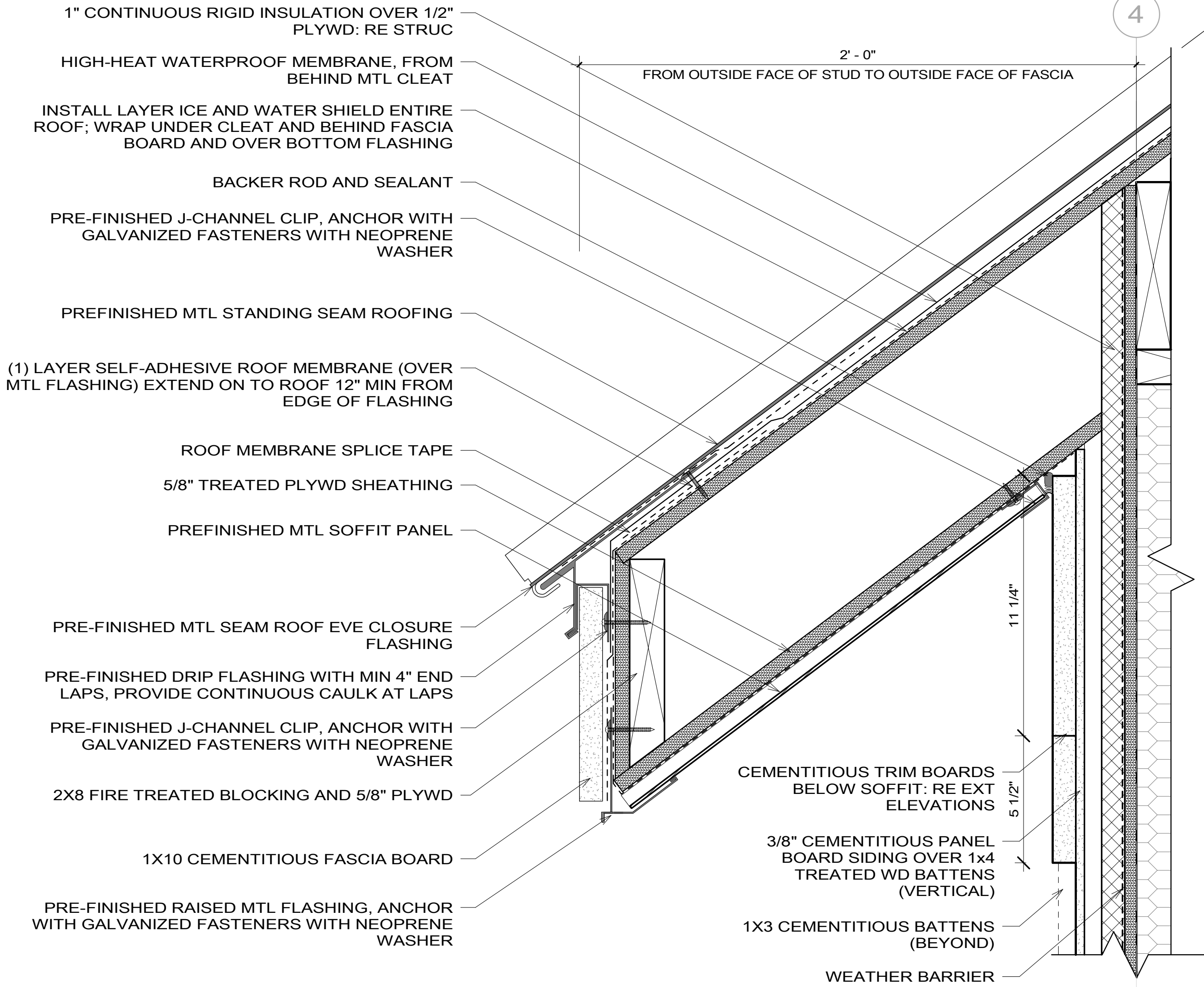
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A9.2

TITLE OF SHEET
DOOR DETAILS

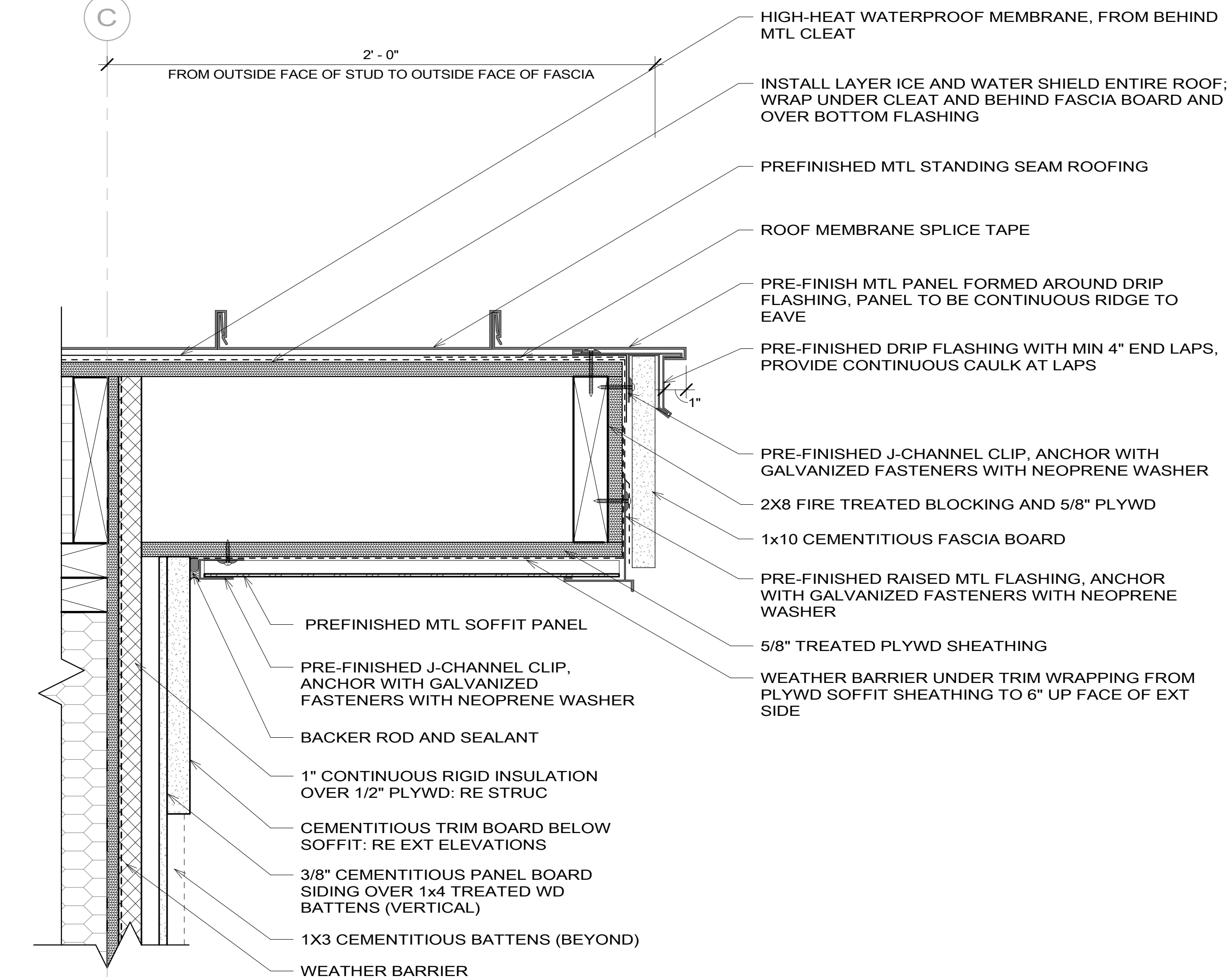
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

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176678
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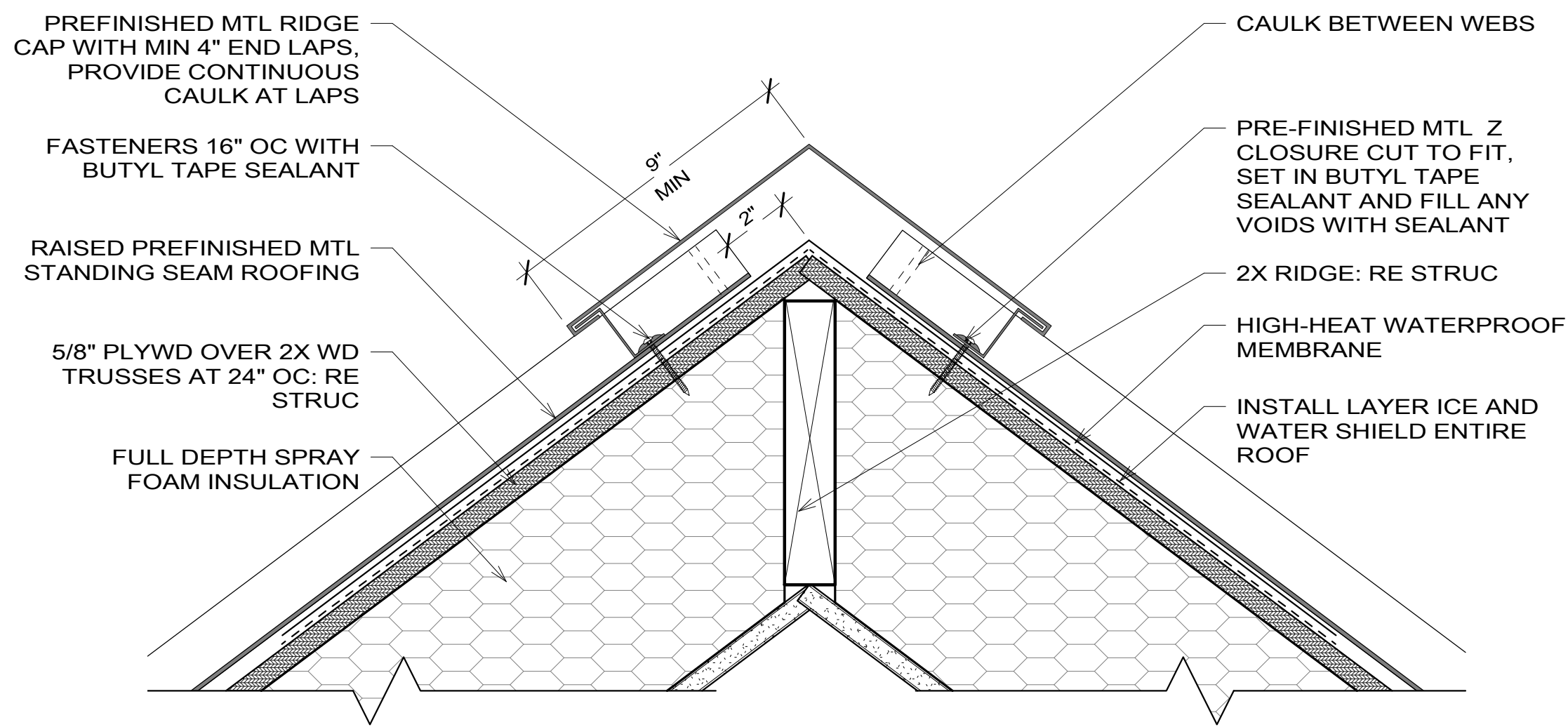
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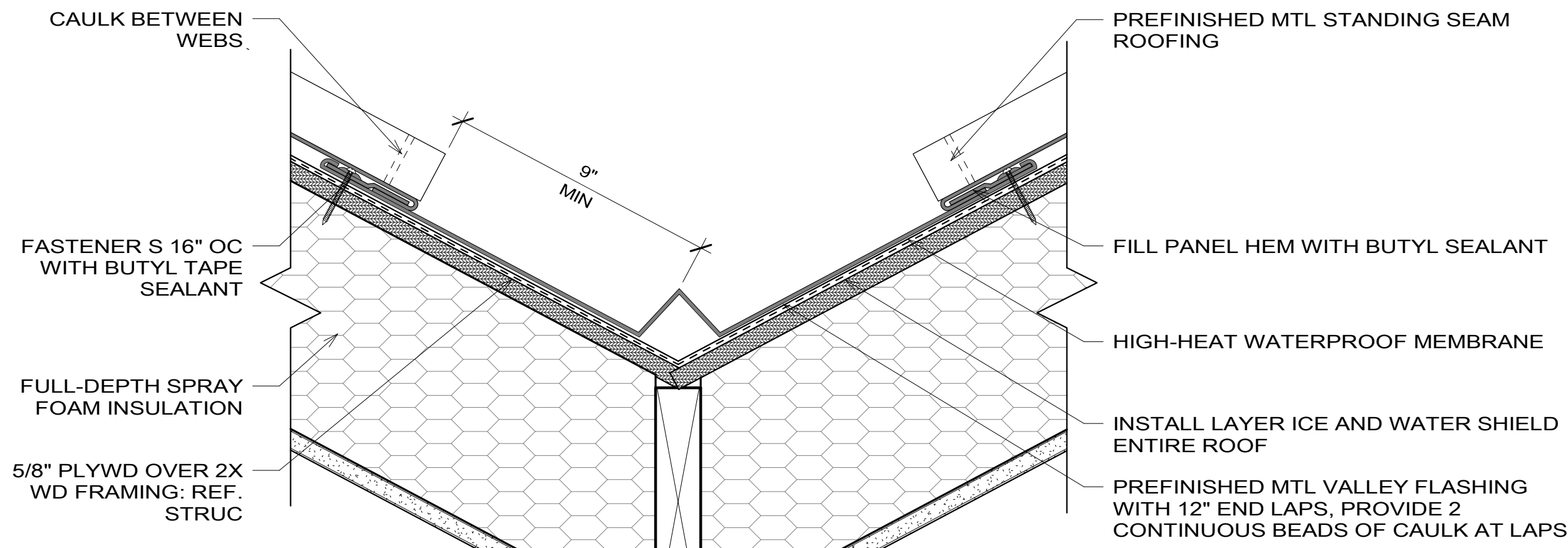
4 TYP ROOF EAVE DTL



2 TYP ROOF RAKE DTL



3 TYP ROOF RIDGE DTL



1 TYP ROOF VALLEY DTL

SCALE (A) 6 3 0 6
SCALE OF INCH



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

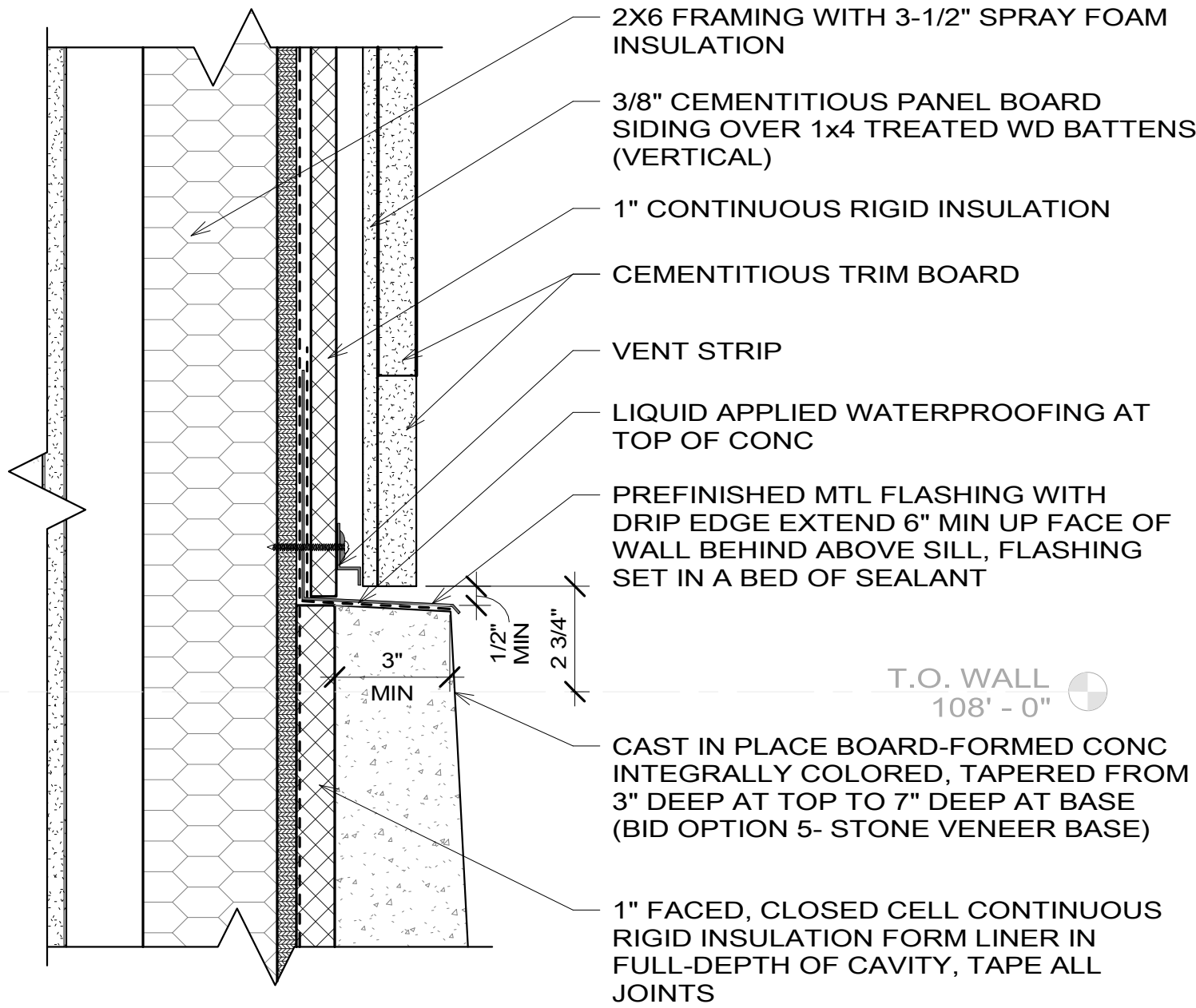
SUB SHEET NO.
A9.3

TITLE OF SHEET
ROOF DETAILS

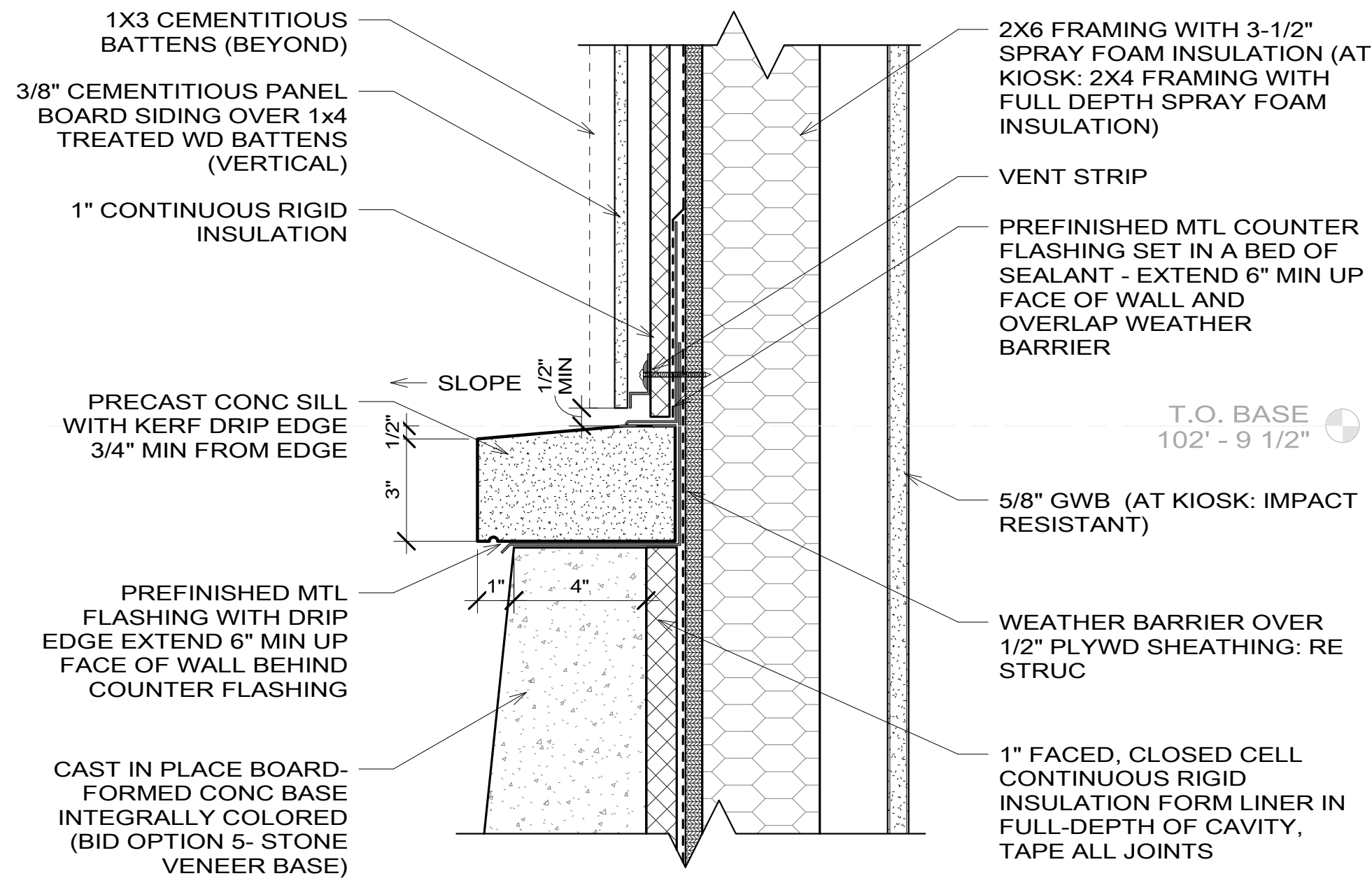
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
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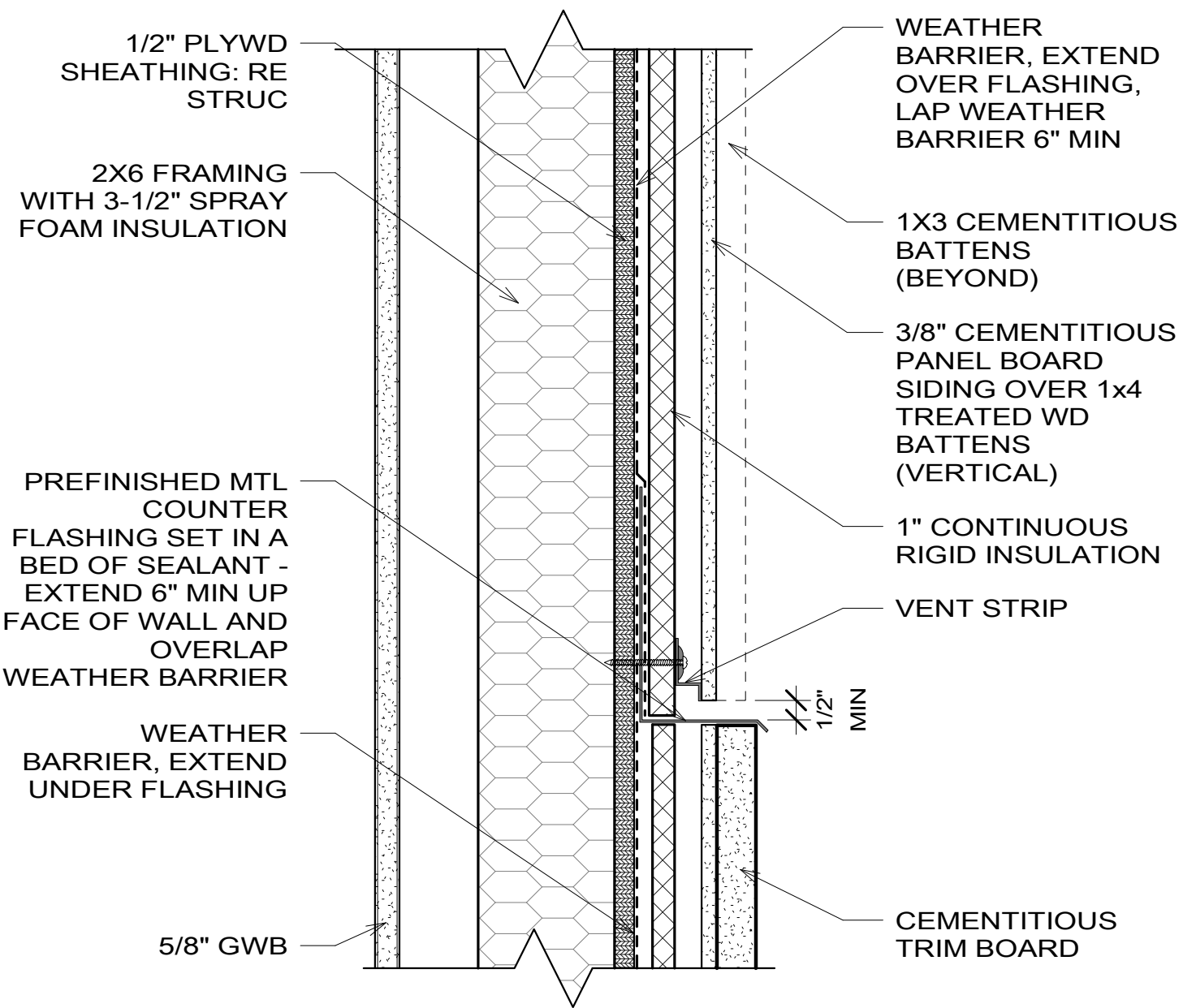
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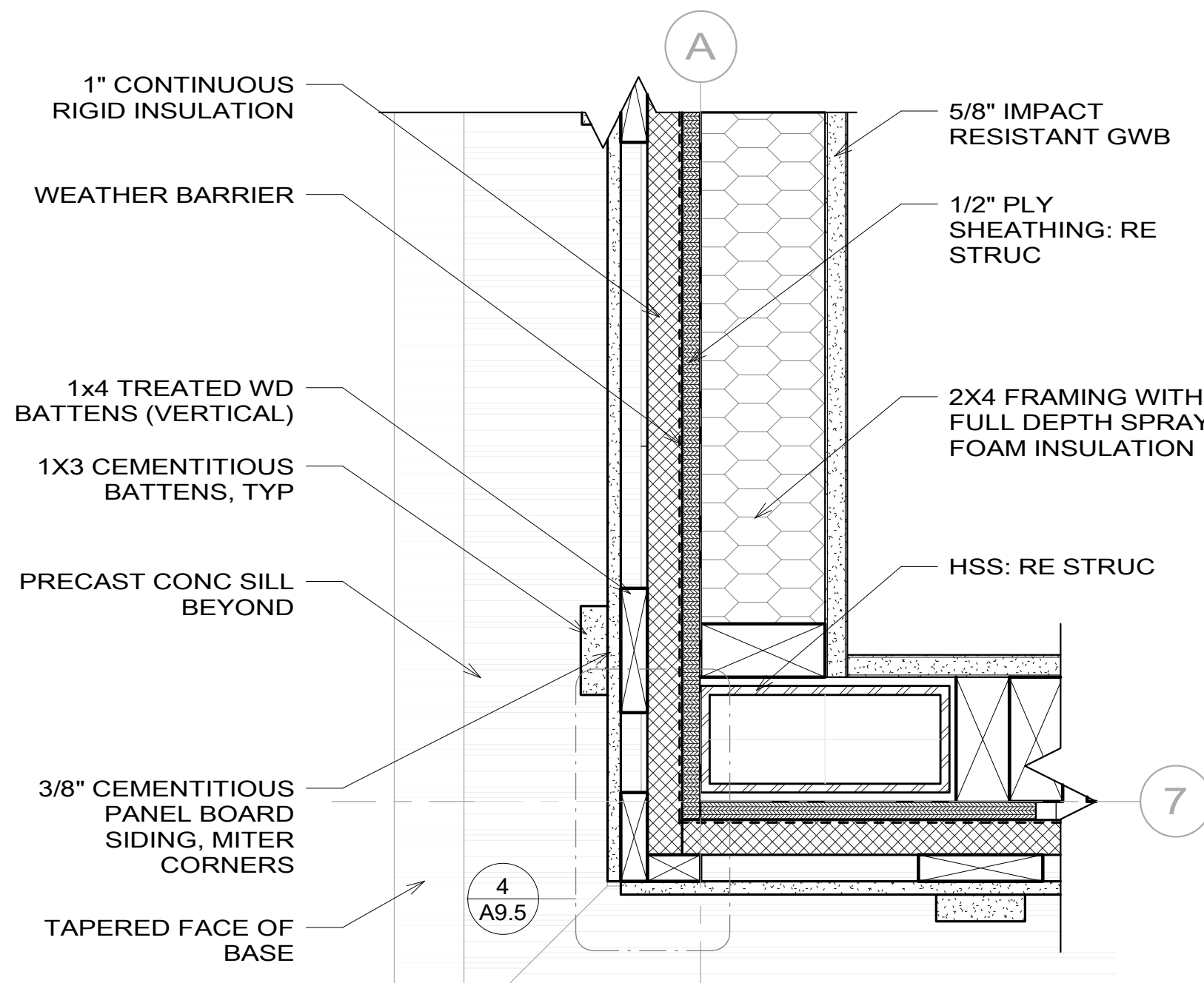
6 TOP OF BATTERED CONC DTL
A9.4 SCALE (B)



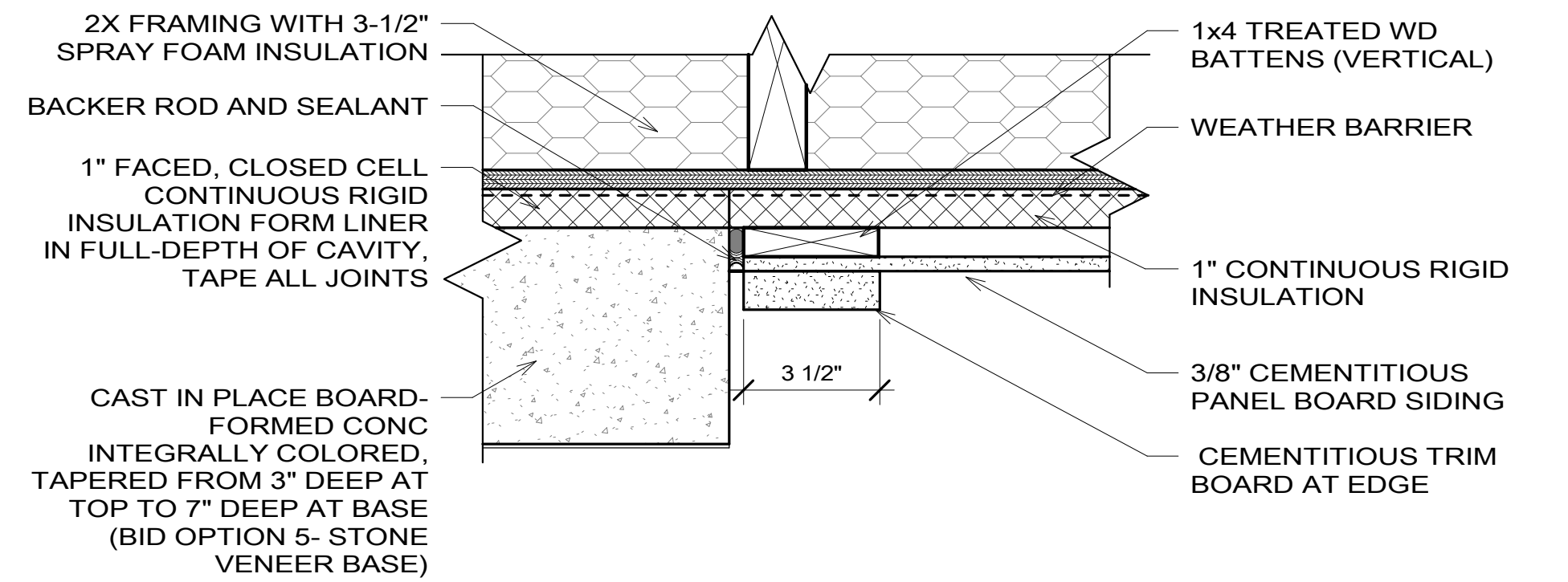
3 SILL AT BASE/SIDING DTL
A9.4 SCALE (B)



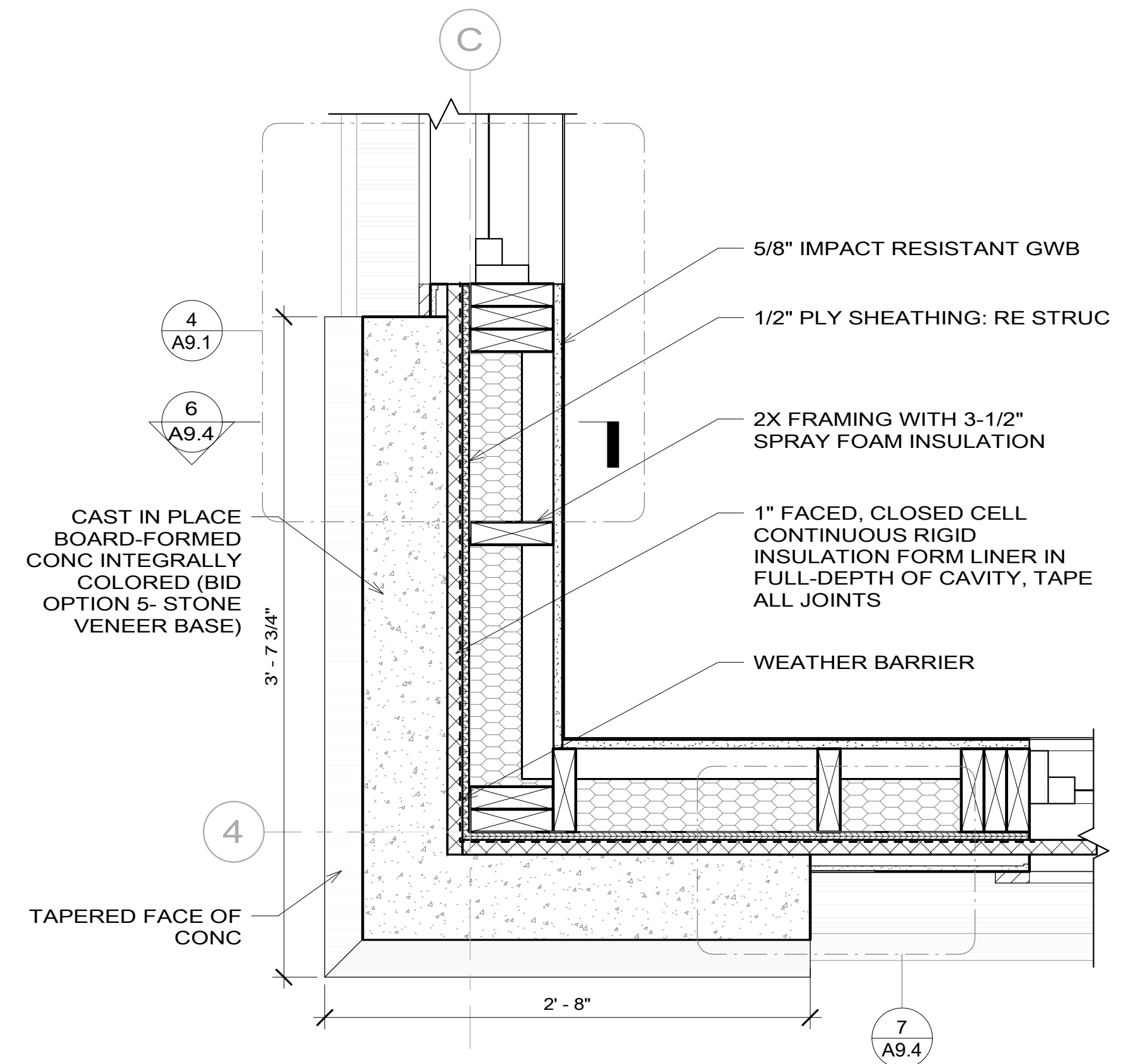
4 TYP DATUM TRIM DTL
A9.4 SCALE (B)



2 KIOSK CORNER COLUMN DTL
A9.4 SCALE (B)



7 BASE/SIDING TRANSITION PLAN DTL
A9.4 SCALE (B)



1 ENTRANCE STATION CORNER DTL
A9.4 SCALE (A)



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

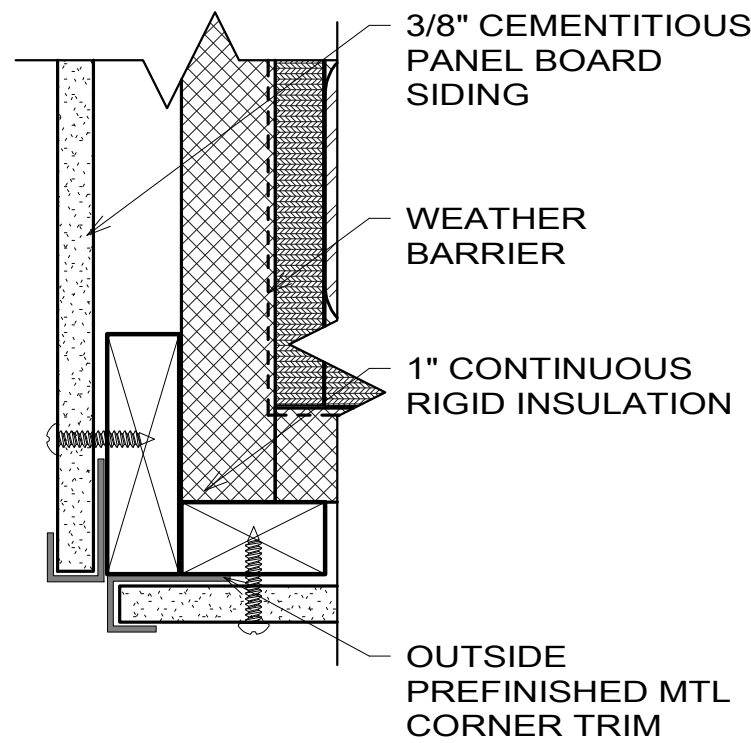
SUB SHEET NO.
A9.4

TITLE OF SHEET
WALL DETAILS

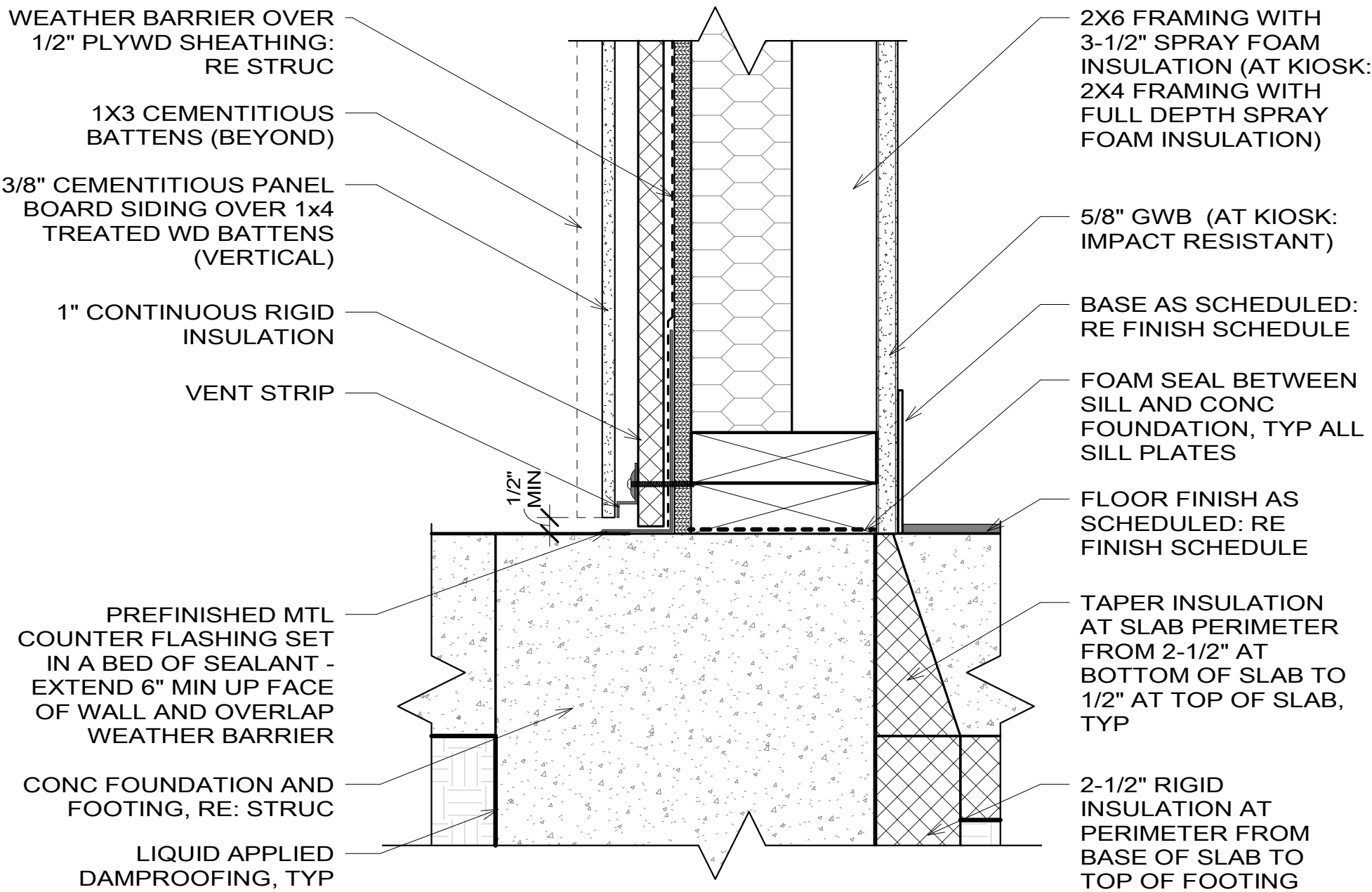
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

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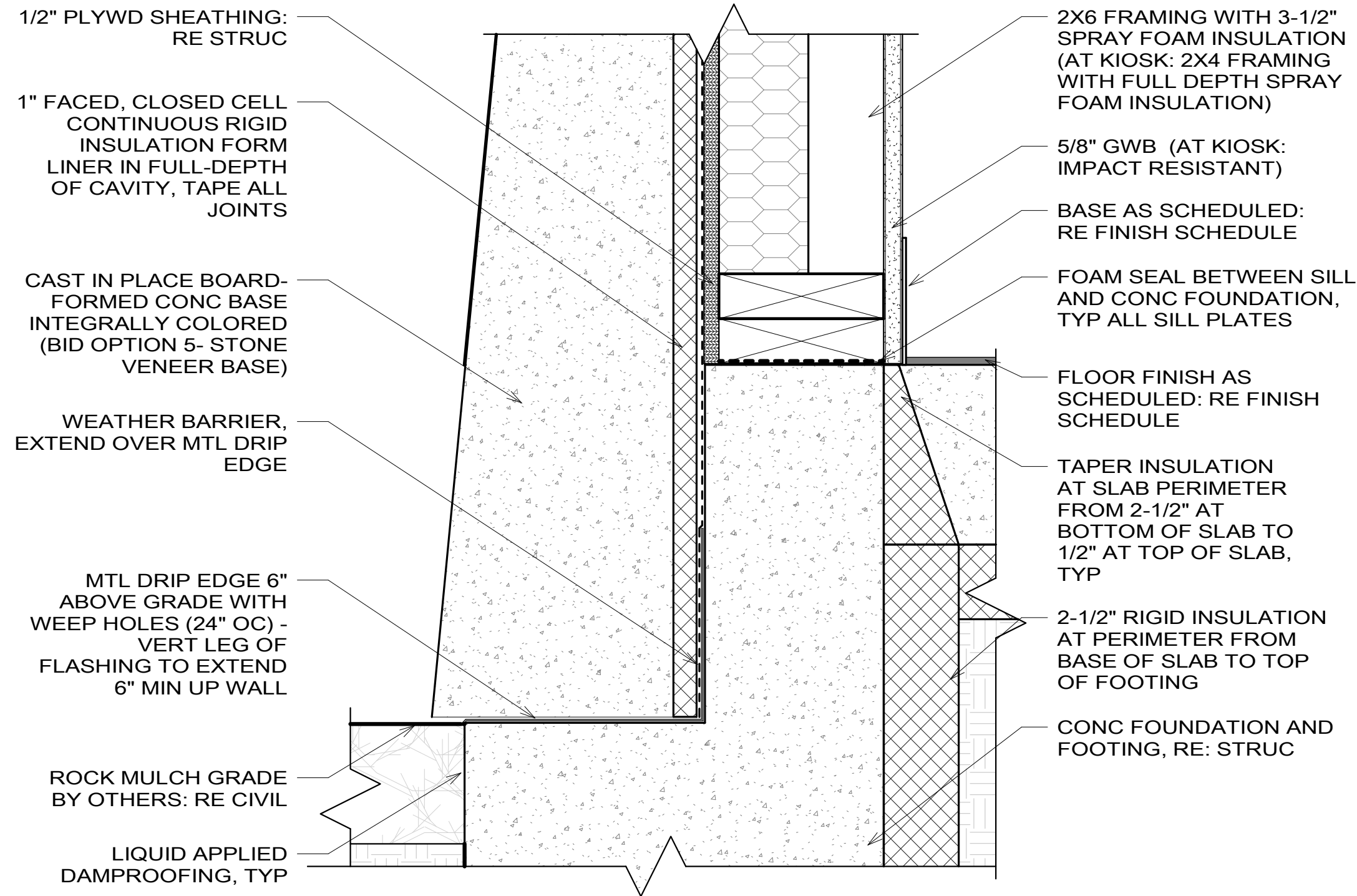
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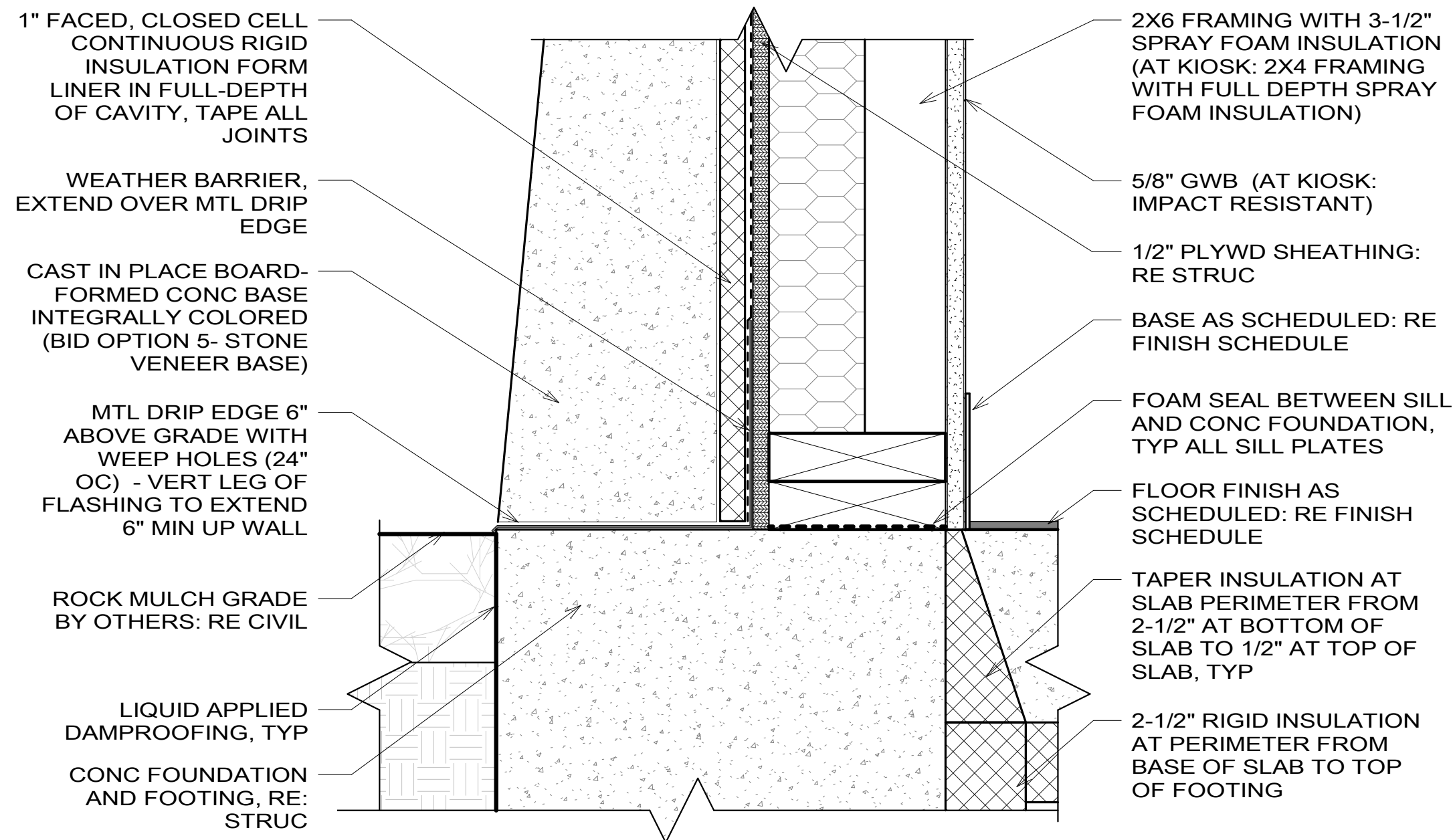
4 TYP CORNER TRIM DTL
A9.5



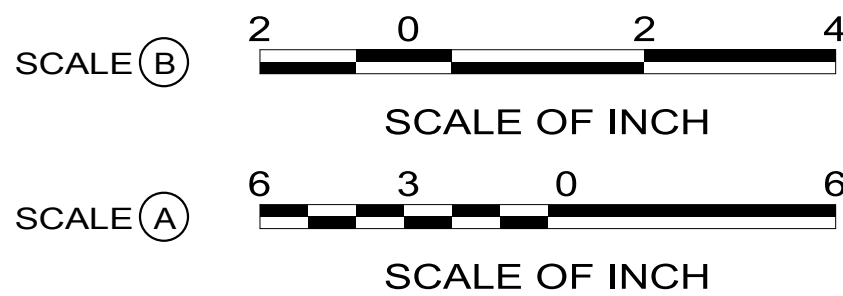
3 BASE OF WALL AT SIDING
A9.5



2 BASE OF CONC WALL AT SOUTH ELEVATION
A9.5



1 TYP BASE OF CONC WALL DTL
A9.5



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.

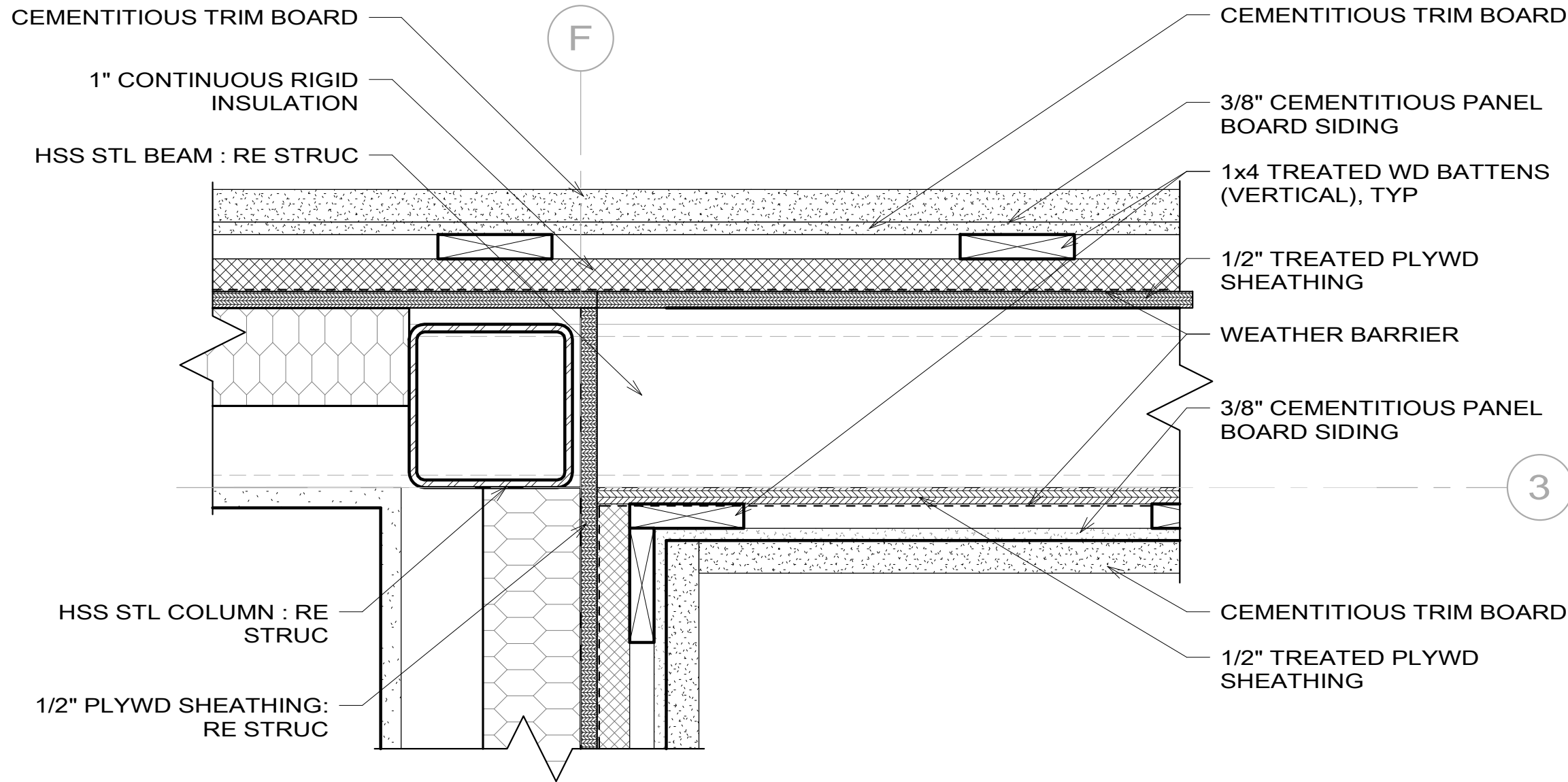
A9.5

TITLE OF SHEET
WALL DETAILS

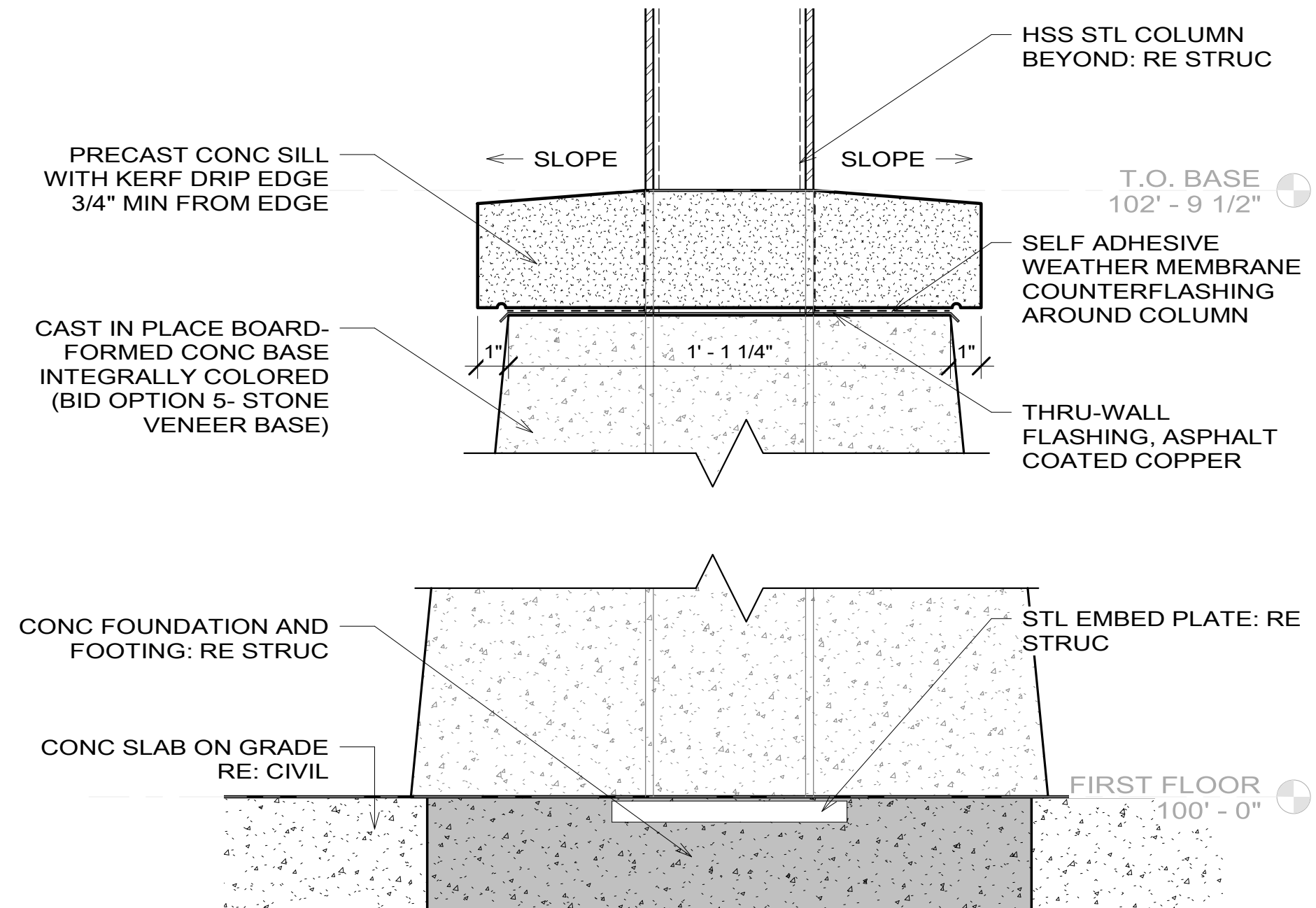
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
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176678
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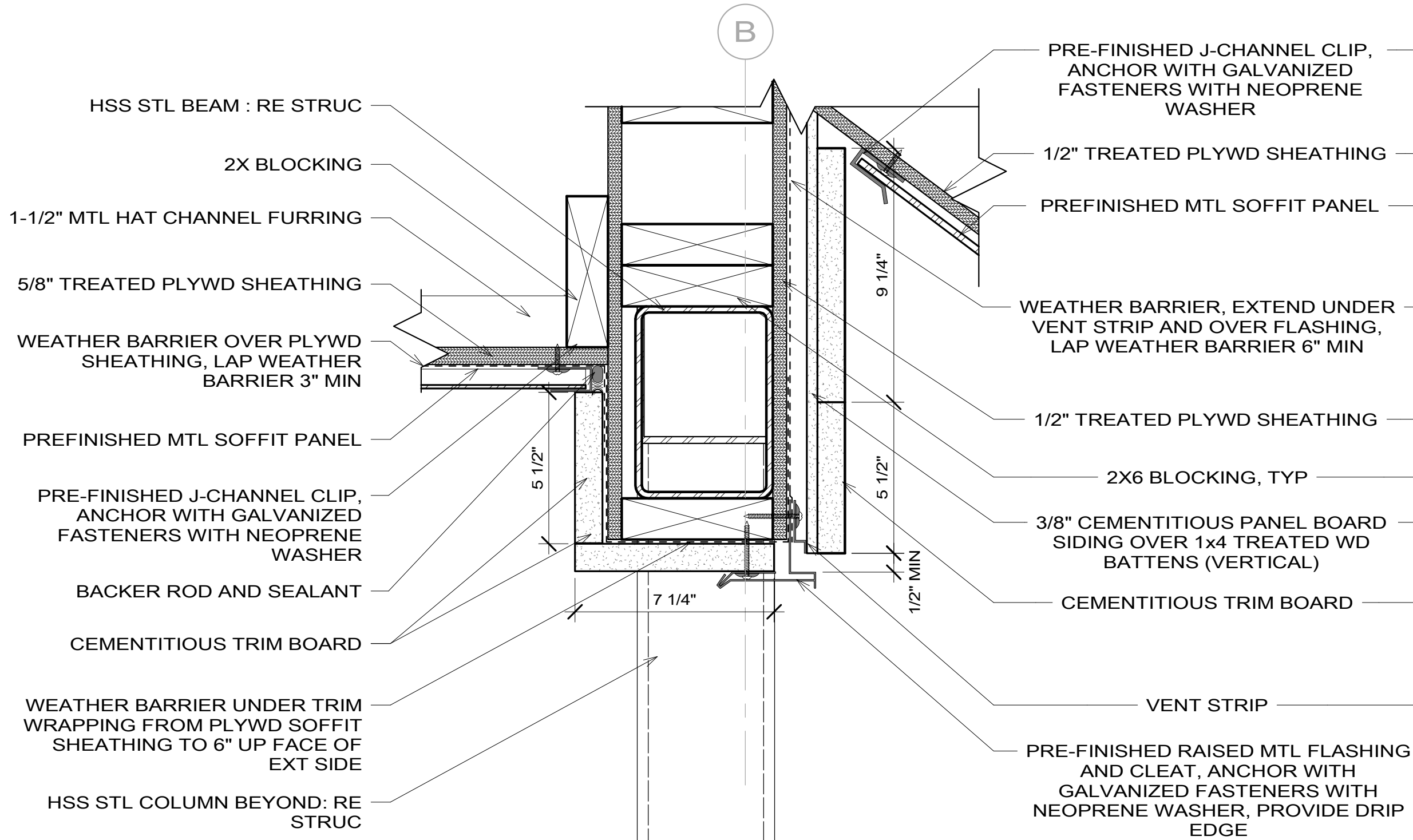
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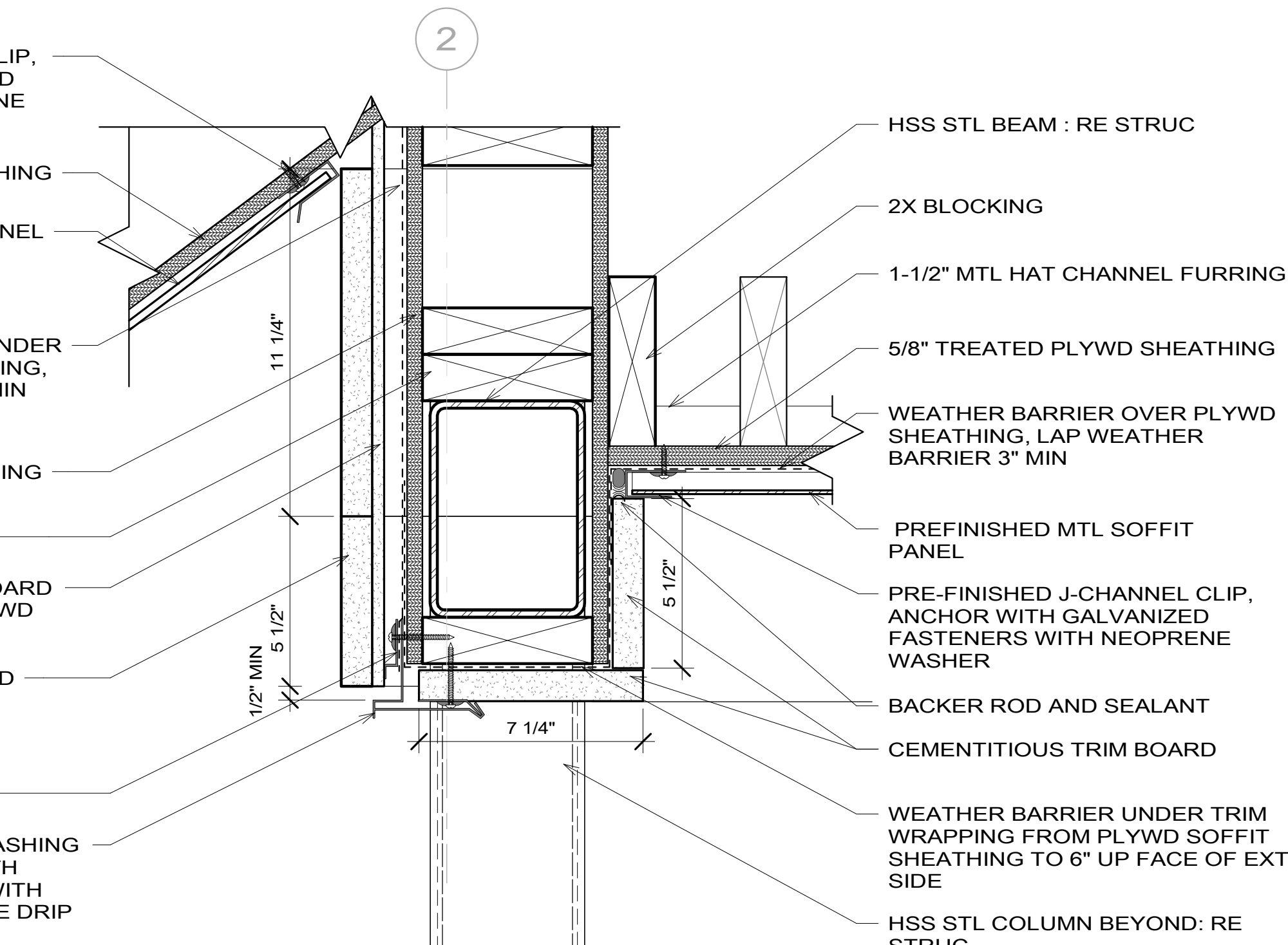
3 PORCH SOFFIT AT STEEL BEAM PLAN DTL
A9.6



4 TOP OF BATTERED CONC COLUMN BASE
A9.6



2 KIOSK SOFFIT
A9.6



1 PORCH SOFFIT
A9.6

SCALE (A) 6 3 0 6
SCALE OF INCH

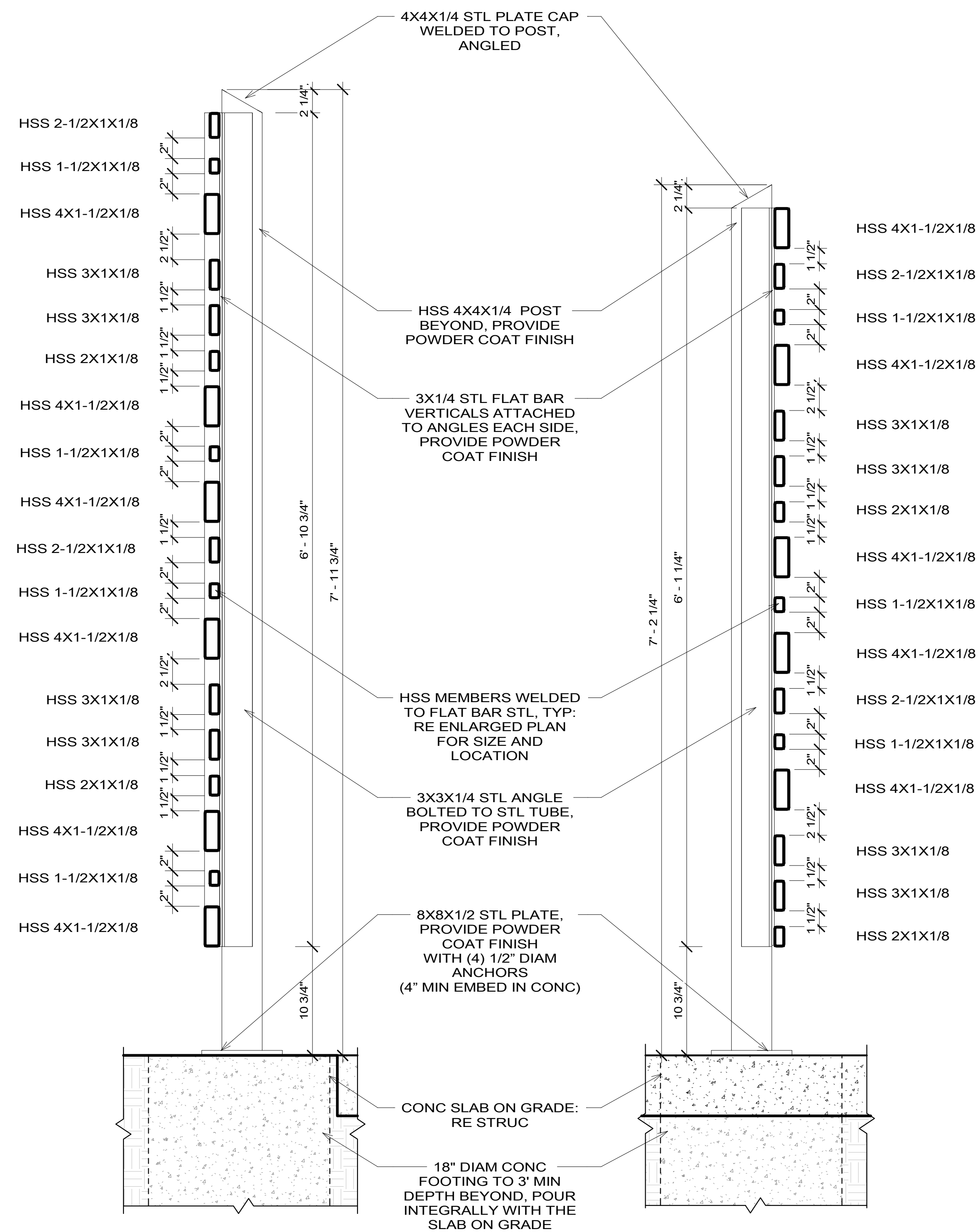


DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
A9.6

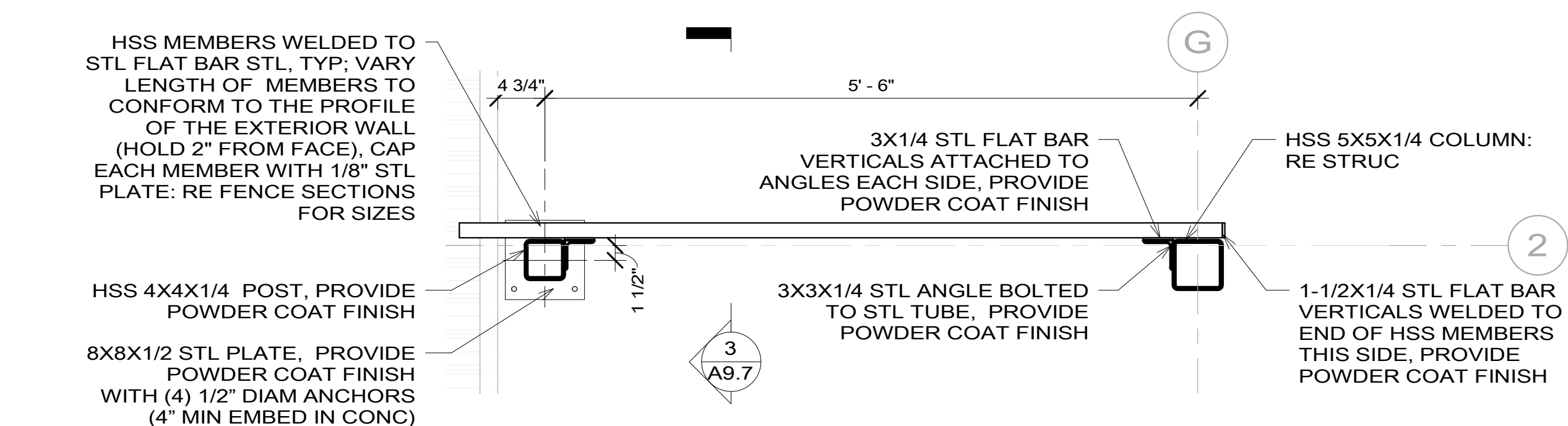
TITLE OF SHEET
EXTERIOR DETAILS
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
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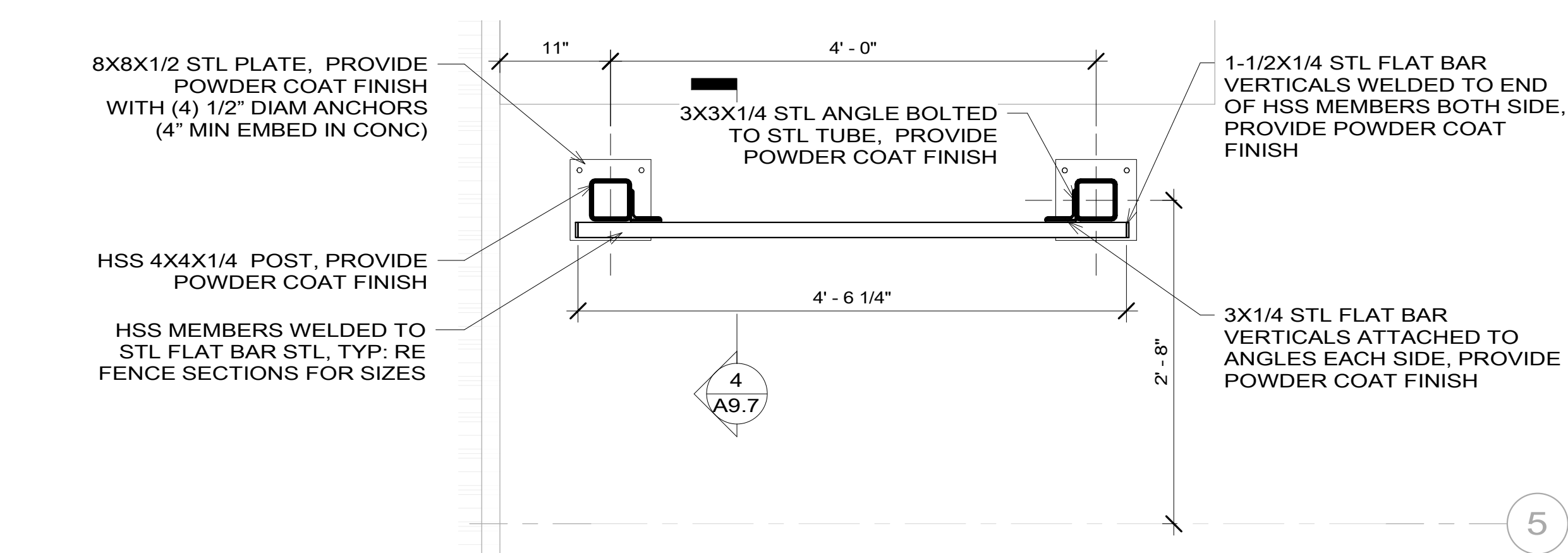


4 FENCE SECTION - EAST
A9.7 SCALE (B)

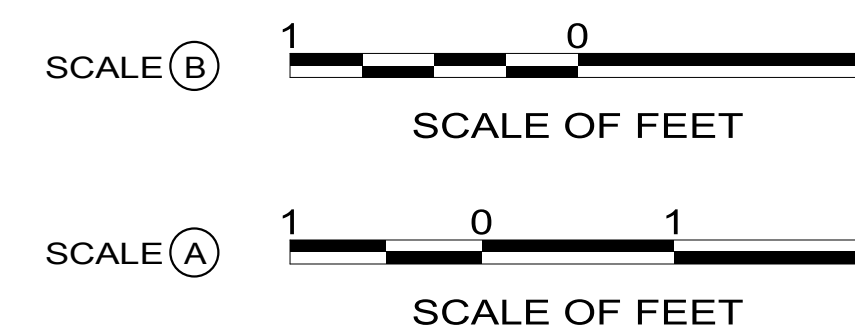
3 FENCE SECTION - WEST
A9.7 SCALE (B)



2 FENCE ENLARGED PLAN - WEST
A9.7 SCALE (A)



1 FENCE ENLARGED PLAN - EAST
A9.7 SCALE (A)



DESIGNED:
AC/RK/LB
CADD
RK/LB
TECH REVIEW
EH/AC
DATE:
03/10/2022

SUB SHEET NO

A9.7

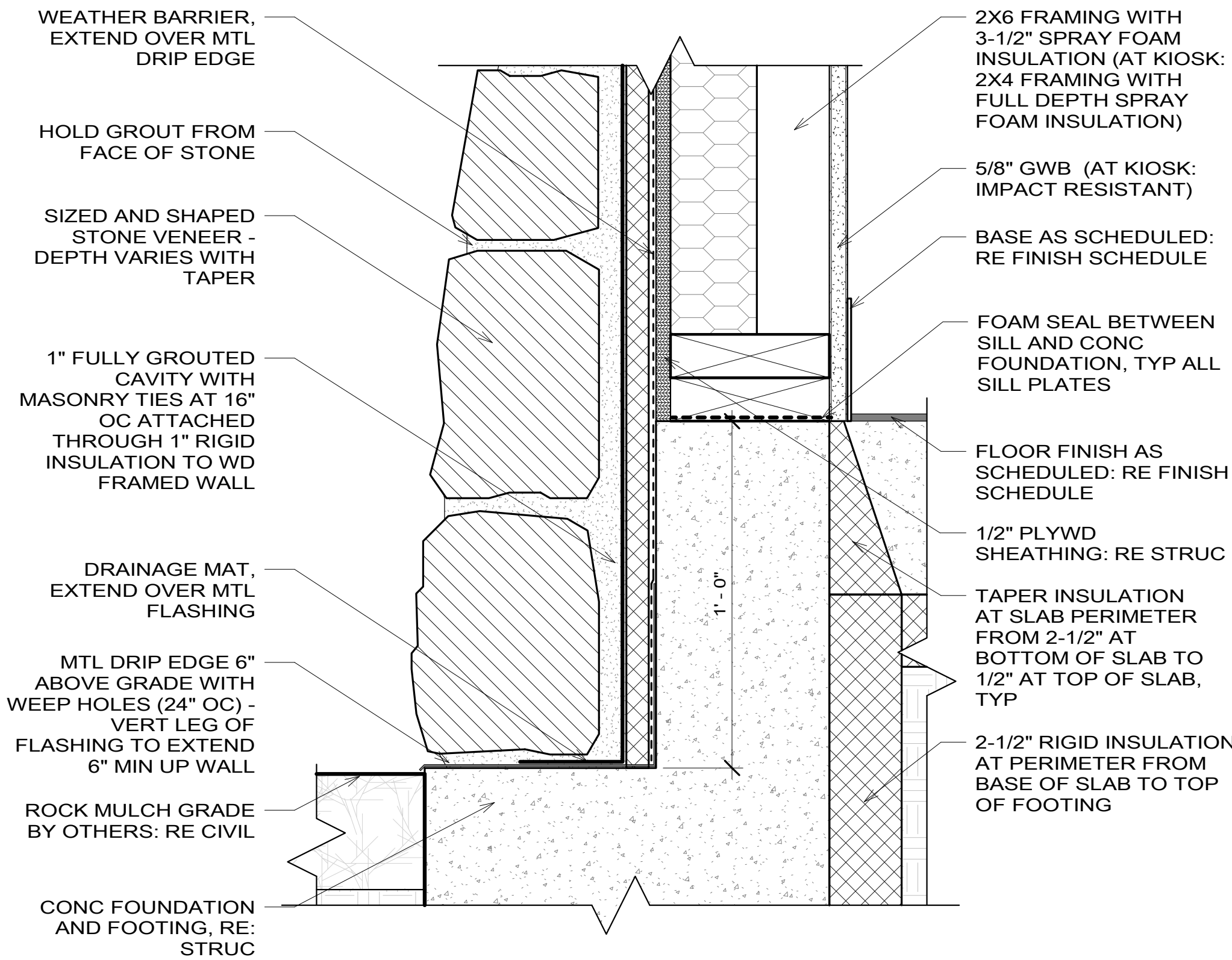
TITLE OF SHEET

SCREEN DETAILS

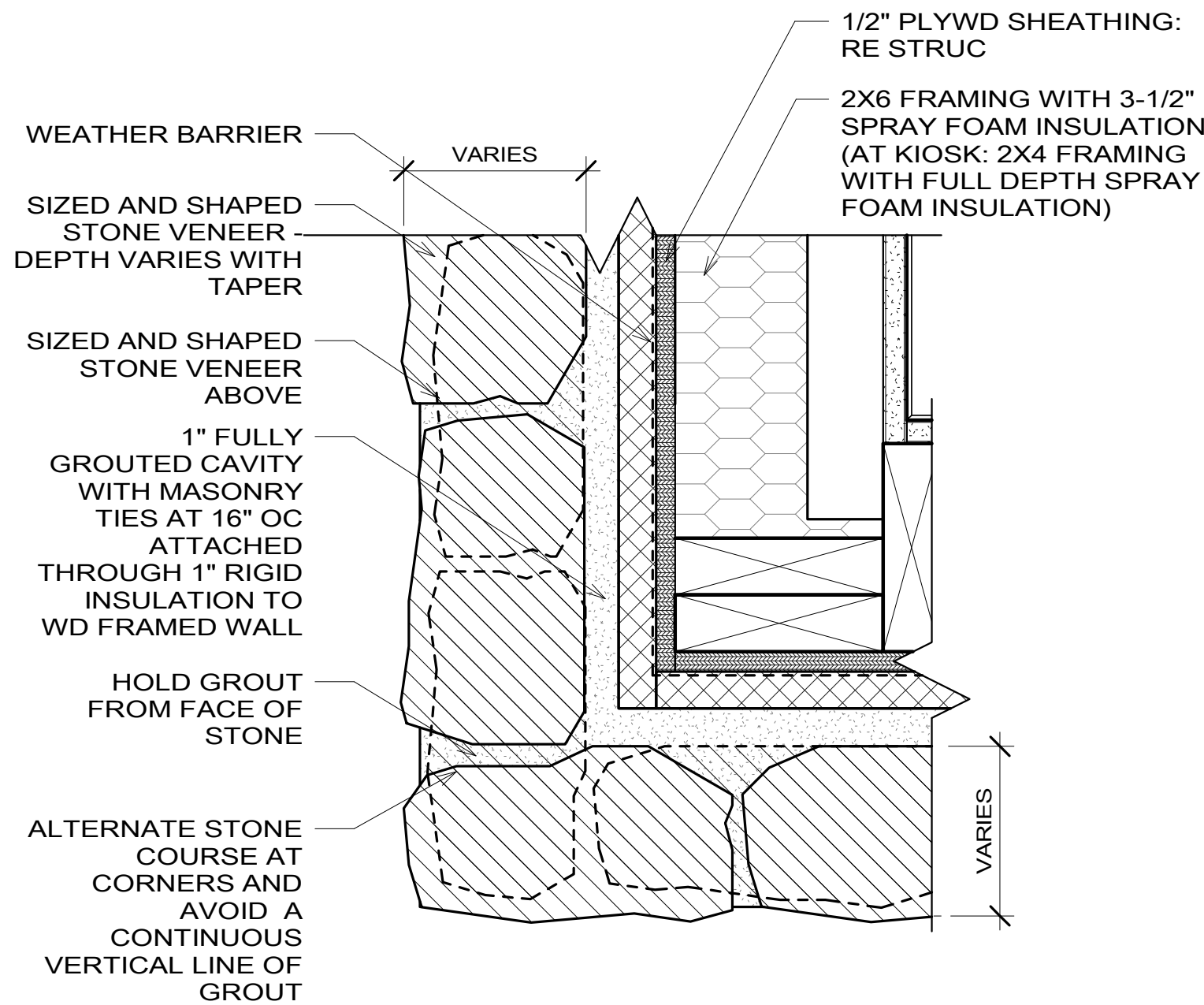
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO. 121 176678
PMIS/PKG NO. 160755
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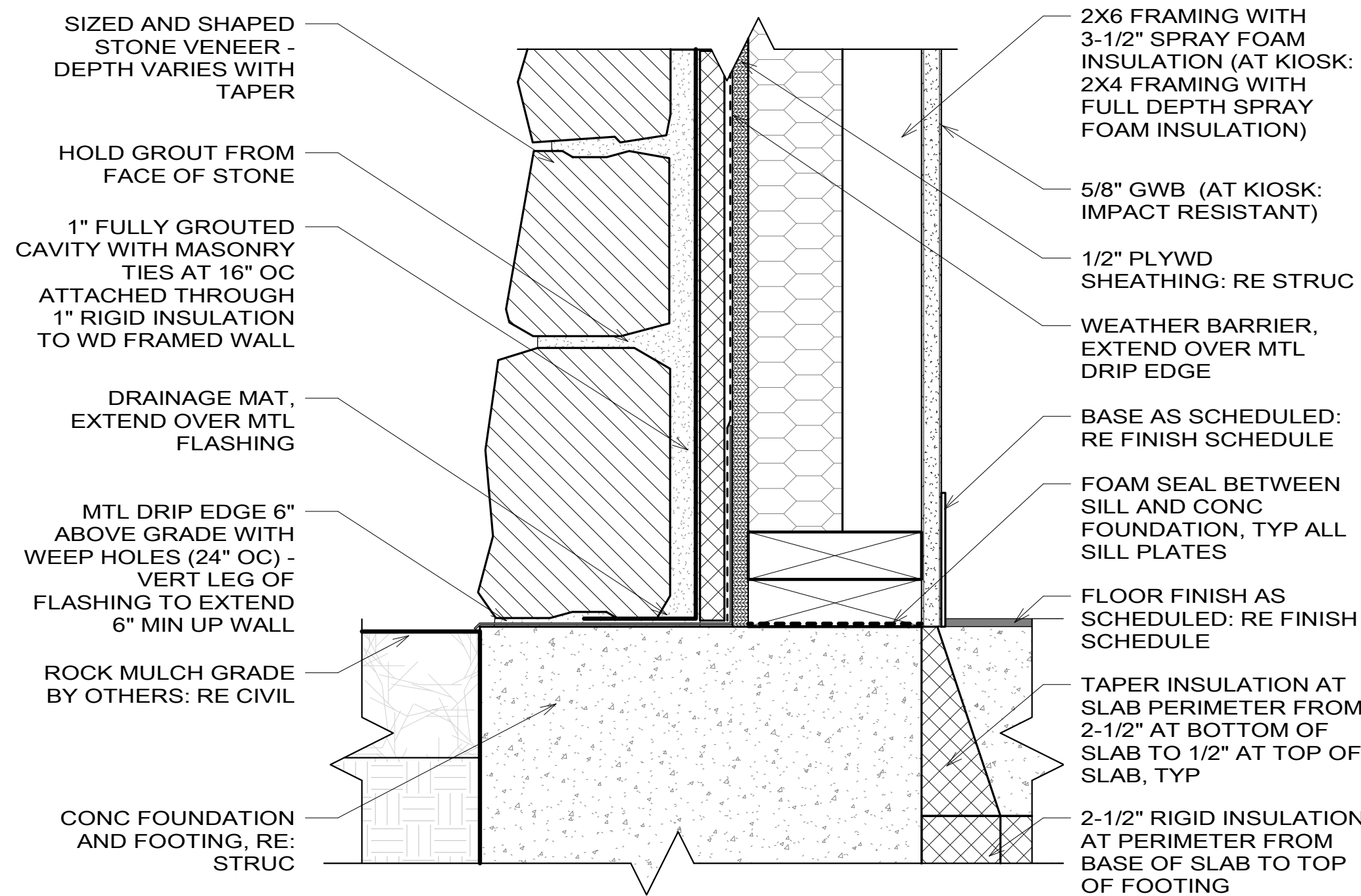
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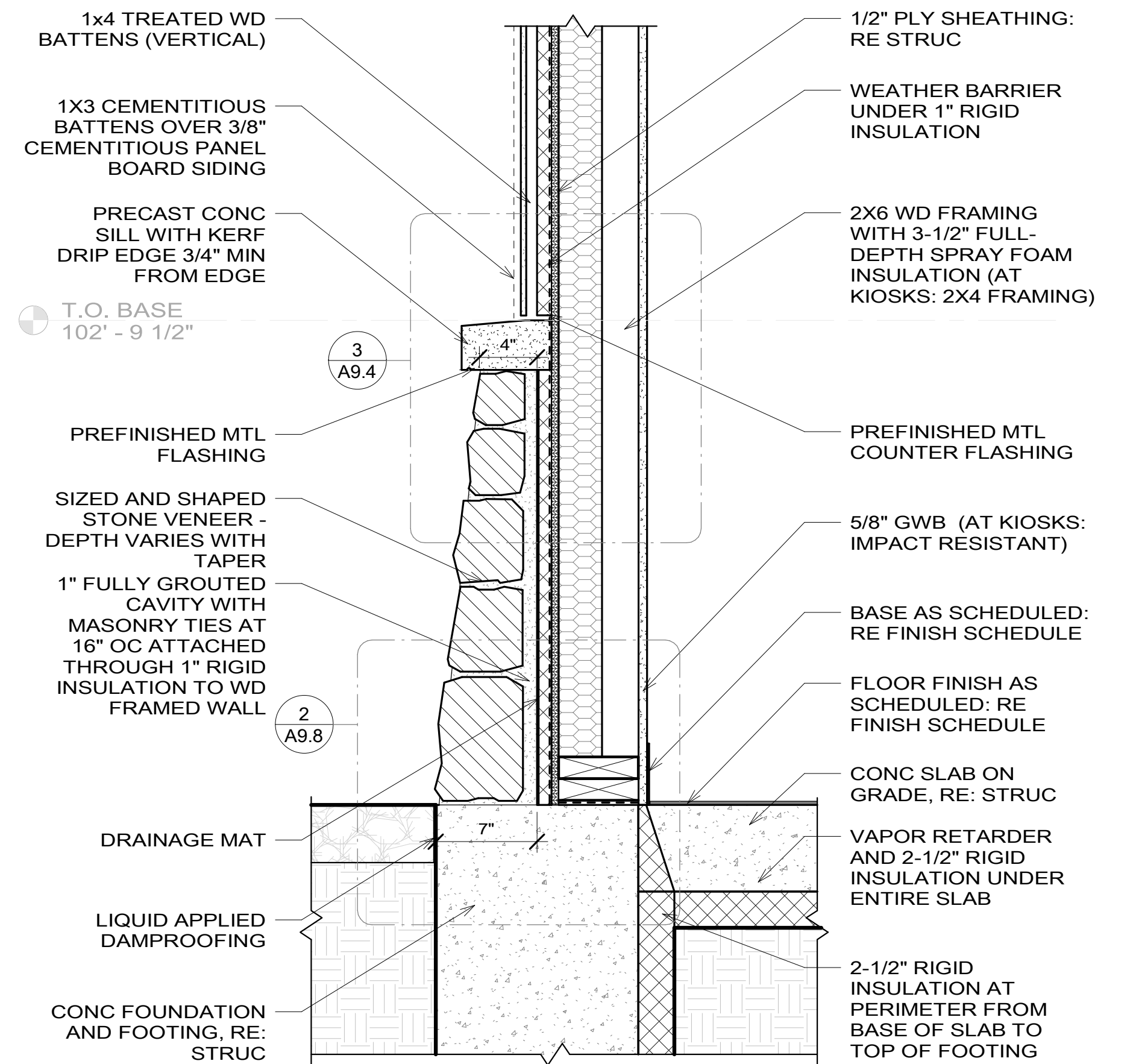
4 BASE OF STONE WALL AT SOUTH ELEVATION
SCALE (B)



3 STONE CORNER TYPICAL DTL
SCALE (B)



2 BASE OF STONE WALL TYPICAL DTL
SCALE (B)



1 TYP WALL SECTION AT BID OPTION - STONE VENEER
SCALE (A)



GENERAL NOTE

SHAPED AND TOOLED STONE MASONRY VENEER LAID UP IN A HORIZONTAL RANDOM PATTERN, ROUGHLY COURSED, WITH A MIXTURE OF SOMEWHAT RECTILINEAR AND SOMEWHAT SQUARER STONES. LARGEST STONES SHALL BE PLACED PREDOMINANTLY NEAR THE BOTTOM AND CORNERS, WITH A VARIETY OF SIZES SPREAD EVENLY THROUGHOUT THE WALL, DEPTH VARIES WITH TAPER



DESIGNED:
AC/RK/LB
GADD
RK/LB
TECH REVIEW:
EH/AC
DATE:
03/10/2022

SUB SHEET NO.
A9.8

TITLE OF SHEET
BID OPTION 5- STONE VENEER BASE
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
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176678
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SHEET
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STRUCTURAL GENERAL NOTES

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 CATEGORY: II STANDARD

4. ROOF LOADS

A. ROOF LIVE LOAD

B. GROUND SNOW LOAD, P_g

C. FLAT-ROOF SNOW LOAD, P_f

D. SNOW EXPOSURE FACTOR, C_e

E. SNOW IMPORTANCE FACTOR, I_s

F. THERMAL FACTOR, C_t

20 PSF, 300 LBS

85 PSF (PER 2016 SEAC SNOW LOADS, SITE AT 8,260 FT)

60 PSF

0.9

1.0

1.0
5. FLOOR LIVE LOADS:

OCCUPANCY OR USE	UNIFORMLY DISTRIBUTED (PSF)	CONCENTRATED LOAD (LBS)	LIVE LOAD REDUCTION
OFFICE	50	2,000	YES
PUBLIC SPACES	100	2,000	NO

6. VEHICLE IMPACT LOADS:

A. KIOSK BOLLARDS AND PLANTERS PER ASCE 7: 6,000 LBS APPLIED AT 1'-6" TO 2'-3" HEIGHT ABOVE DRIVE SURFACE (IMPACT FORCE DUE TO EQUIVALENT OF 6,000 LB VEHICLE TRAVELING AT 5 MPH)
7. WIND:

A. BASIC DESIGN WIND SPEED, V_{ULT} , (3-SEC GUST)

B. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD} , (3-SEC GUST)

C. INTERNAL PRESSURE COEFFICIENT

D. WIND EXPOSURE

E. GROUND ELEVATION FACTOR

F. COMPONENTS AND CLADDING ULTIMATE DESIGN WIND PRESSURES

175 MPH

135 MPH

0.18 (ENCLOSED)

C

0.78 (8,260 FT ELEV)

1. WALLS:

a. WITHIN 3 FEET OF CORNERS

b. AWAY FROM CORNERS

2. ROOFS:

a. WITHIN 3 FEET OF CORNERS

b. WITHIN 3 FEET OF EDGES

c. AWAY FROM EDGES

3. OVERHANGS:

a. WITHIN 3 FEET OF CORNERS

b. AWAY FROM CORNERS

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

+52 PSF

-70 PSF

+52 PSF

-57 PSF

+48 PSF

-61 PSF

+48 PSF

-61 PSF

+48 PSF

-52 PSF

+52 PSF

-97 PSF

+52 PSF

-52 PSF
8. SEISMIC:

A. SPECTRAL RESPONSE ACCELERATION PARAMETERS

1. SHORT PERIOD

a. S_s

b. S_{DS}

2. ONE SECOND

a. S_1

b. S_{D1}

0.258 g

0.274 g

0.065 g

N/A

B. SOILS SITE CLASS

C. SEISMIC IMPORTANCE FACTOR

D. SEISMIC DESIGN CATEGORY

E. BASIC SEISMIC-FORCE-RESISTING SYSTEMS

a. LIGHT FRAMED WOOD WALLS WITH WOOD SHEATHING (WOOD SW), ENTRANCE STATION OFFICE

b. STEEL ORDINARY MOMENT FRAME (SOMF), KIOSKS

F. DESIGN BASE SHEAR

G. SEISMIC RESPONSE COEFFICIENTS, C_s

H. RESPONSE MODIFICATION COEFFICIENTS, R

I. ANALYSIS PROCEDURE

4 KIPS (ENTRANCE STATION OFFICE), 1 KIP (KIOSKS)

0.04 (WOOD SW), 0.08 (SOMF)

6.5 (WOOD SW), 3.5 (SOMF)

EQUIVALENT LATERAL FORCE

FOUNDATION DESIGN:

1. REFER TO GEOTECHNICAL EVALUATION NO 220-348 BY YEH AND ASSOCIATES INC, DATED FEBRUARY 3, 2021.
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.

FOOTINGS:

1. DESIGN OF FOOTINGS IS BASED ON

A. MAXIMUM ALLOWABLE BEARING PRESSURE

B. MAXIMUM ALLOWABLE BEARING PRESSURE, SHORT TERM
- 3,000 PSF

4,000 PSF
2. BEAR ON 12" MINIMUM DEPTH OF PROPERLY COMPACTED ENGINEERED FILL, EXTERIOR FOOTINGS SHALL BEAR BELOW FROST DEPTH.

EARTH RETAINING STRUCTURES:

1. EARTH EQUIVALENT FLUID LATERAL PRESSURE:

A. WALLS RESTRAINED AT TOP (AT REST)

B. CANTILEVERED WALLS (ACTIVE)

C. PASSIVE RESISTING
- 60 PCF

38 PCF

350 PCF
2. COEFFICIENT OF SLIDING FRICTION
- 0.38

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	MAX W/CM RATIO	MAXIMUM AGGREGATE	SLUMP, INCHES ($\pm 1"$)	AIR CONTENT PERCENT ($\pm 1.5\%$)	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
BOARD-FORMED VENEER/WALLS	F0-S0-W0-C0	5000	0.42	3/4" STONE	7	6%	I/II	SELF-CONSOLIDATING
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 SLAB ON GRADE	F3-S0-W0-C2	5000	0.40	3/4" STONE	4	6%	I/II	15% MIN, 25% MAX FLY ASH

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 OR BARS OPTED TO BE FIELD-BENT 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 BARS

b. #5 BAR, W31 OR D31 WIRE, AND SMALLER

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

1. SLABS, WALLS, JOISTS: #11 BARS AND SMALLER

2. BEAMS AND COLUMNS:

a. PRIMARY REINFORCEMENT

b. STIRRUPS, TIES, SPIRALS

2"

1-1/2"

3/4"

1-1/2"

1-1/2"

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

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 DETAILS
S5.03	TYPICAL WOOD DETAILS
S5.04	TYPICAL WOOD DETAILS
S5.11	FOUNDATION SECTIONS
S5.12	SITE FOUNDATION SECTIONS
S5.21	ROOF FRAMING SECTIONS
S5.22	ROOF FRAMING SECTIONS



DESIGNED: JSS	SUB SHEET NO. S0.1	TITLE OF SHEET GENERAL NOTES FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
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STRUCTURAL STEEL:

- 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).
- STRUCTURAL STEEL WIDE FLANGE BEAMS AND WT SHAPES SHALL CONFORM TO ASTM A992, 50 KSI YIELD.
- OTHER ROLLED SHAPES, INCLUDING PLATES, CHANNELS, AND ANGLES SHALL CONFORM TO ASTM A36, 36 KSI YIELD.
- HOLLOW STRUCTURAL SECTION (HSS) RECTANGULAR SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 50 KSI YIELD.
- HSS ROUND SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 46 KSI YIELD.
- PIPE SHAPES SHALL CONFORM TO ASTM A53, GRADE B, 35 KSI YIELD.
- 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".
- ALL BEAMS SHALL HAVE FULL DEPTH WEB STIFFENERS EACH SIDE OF WEBS ABOVE AND BELOW COLUMNS.
- ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36 OR 55, AS NOTED ON THE CONSTRUCTION DRAWINGS WITH WELDABILITY SUPPLEMENT S1.
- 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.
- 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.
- 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.

CORROSION CONTROL:

- ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 UNLESS SPECIFICALLY NOTED AS "SELF-WEATHERING".
- 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.
- 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).
- WHERE NOTED AS '**', BID OPTION 6: STEEL MEMBERS AND ALL CONNECTING PLATES AND BOLTS SHALL BE "SELF-WEATHERING":
 - WIDE FLANGE BEAMS SHALL BE ASTM ASTM A588, 50 KSI YIELD.
 - PLATES SHALL BE ASTM A588, 50 KSI YIELD.
 - HSS RECTANGULAR SHAPES SHALL BE ASTM A847, 50 KSI YIELD.
 - BOLTS SHALL BE GRADE A325 TYPE 3.

STRUCTURAL WOOD FRAMING:

- IN-GRADE BASE VALUES HAVE BEEN USED FOR DESIGN.
- DIMENSIONAL LUMBER FRAMING SHALL BE S4S DOUGLAS FIR-LARCH NO. 2 OR BETTER UNO.
- SOLID TIMBER BEAMS AND POSTS SHALL BE DOUGLAS FIR-LARCH NO. 1 OR BETTER UNO.
- STUDS SHALL BE DOUGLAS FIR-LARCH STUD GRADE OR BETTER UNO.
- TOP AND BOTTOM PLATES SHALL BE DOUGLAS FIR-LARCH NO. 2 OR BETTER UNO.
- ALL LUMBER SHALL BE 19% MAXIMUM MOISTURE CONTENT AT THE TIME OF INSTALLATION.
- 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:
 - UC2 AT INTERIOR
 - UC3B AT EXTERIOR WITH NO GROUND CONTACT
 - UC4B AT EXTERIOR WITH GROUND CONTACT
- FASTENERS FOR USE WITH TREATED WOOD SHALL BE CORROSION RESISTANT IN ACCORDANCE WITH SECTION 2304.10.5 OF THE IBC.
- 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.
- 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.
- STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED OR DETAILED ON THE STRUCTURAL DRAWINGS.
- ALL BOLTS SHALL BE RE-TIGHTENED PRIOR TO CLOSING IN OF WALLS, FLOORS, AND ROOFS.
- ALL BOLTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS UNDER HEAD AND/OR NUT, UNO.
- 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.
- CONNECTOR BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307, GRADE A AND ANSI/ASME B18.2.1.
- NAILS AND SPIKES SHALL CONFORM TO ASTM F1667.
- WOOD SCREWS SHALL CONFORM TO ANSI/ASME B18.6.1.
- 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.
- CONVENTIONAL LIGHT FRAMING SHALL COMPLY WITH IBC SECTION 2308.
- 2X BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS, UNO.
- 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.
- PROVIDE A MINIMUM OF (3) STUDS AT EACH CORNER, UNO.
- ALL JOISTS AND BEAMS (EXCLUDING I-JOISTS) SHALL BE SEAT-CUT FOR FULL UNIFORM BEARING AT SUPPORTS, SEATS, CAPS, ETC.
- VENTING IS REQUIRED IN ALL ENCLOSED ROOF AND CRAWL SPACE FRAMING CAVITIES, PER THE CONSTRUCTION DRAWINGS.
- EXCEPT AS NOTED OTHERWISE, MINIMUM NAILING SHALL BE PROVIDED AS SPECIFIED IN TABLE 2304.10.1 "FASTENING SCHEDULE" OF THE IBC.
- ALL MULTIPLE MEMBER BEAMS SHALL BE NAILED TOGETHER WITH MAX NUMBER OF 10D NAILS VERTICALLY @ 3" AND HORIZONTALLY @ 12" PER PLY, UNO.
- ALL ROOF RAFTERSAND TRUSSES SHALL BE ANCHORED TO SUPPORTS WITH H2.5A METAL FRAMING ANCHORS AS SHOWN IN THE DETAILS.

WOOD SHEATHING:

- PLYWOOD AND ORIENTED STRAND BOARD (OSB) FLOOR AND ROOF SHEATHING SHALL BE APA RATED WITH STAMP INCLUDING APA TRADEMARK AND PANEL SPAN RATING.
 - MINIMUM ROOF SHEATHING: 19/32" OSB OR CDX PLYWOOD, APA 40/20, NAILED.
 - MINIMUM WALL SHEATHING: 7/16" OSB OR CDX PLYWOOD, APA 24/16, BLOCKED AND NAILED.
- 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.
- NAIL ALL SHEATHING TO PLATES USING EDGE NAIL SPACING INDICATED.
- SHEATHE ALL EXTERIOR WALLS.
- SHEATHING SHALL BE CONTINUOUS FROM BOTTOM PLATE TO TOP PLATE. CUT IN "L" AND "T" SHAPES AROUND OPENINGS.
- ALL SHEATHING SHEETS SHALL HAVE 1/8" GAP AT ALL EDGES AND JOINTS.
- PROVIDE (1) PANEL SHEATHING CLIP AT ALL UNSUPPORTED ROOF SHEATHING PANEL EDGES.

LIGHT-METAL-PLATE-CONNECTED WOOD TRUSSES:

- TRUSS MANUFACTURER SHALL COMPLY WITH ALL REQUIREMENTS AS STATED IN SECTION 2303.4 OF THE IBC.
- ALL PRE-ENGINEERED GABLE END TRUSSES SHALL BE DESIGNED FOR WIND FORCES PERPENDICULAR TO THE TRUSS.
- 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.
- FULL HEIGHT BLOCKING SHALL BE PLACED BETWEEN TRUSSES AT ALL SUPPORTS.
- CROSS BRIDGING DESIGN SHALL BE PROVIDED BY TRUSS MANUFACTURER AS REQUIRED FOR LATERAL EFFECTS.
- 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.
- 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."
- 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.
- TRUSSES SHALL BE DESIGNED TO SUPPORT THE FULL DEAD LOADS AND THE SUPERIMPOSED DESIGN LOADS NOTED ABOVE OR ON THE DRAWINGS.
- 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.
- SCISSOR TYPE TRUSSES SHALL BE DESIGNED FOR A MAXIMUM OF 1/2" TOTAL HORIZONTAL DEFLECTION UNDER DEAD PLUS LIVE LOADS.
- THE FABRICATOR SHALL DETERMINE TRUSS WEB ARRANGEMENTS AND MEMBER FORCES.
- TRUSS TO TRUSS CONNECTIONS SPECIFIED SHALL BE BY TRUSS SUPPLIER, UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS.
- 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.
- TRUSS FABRICATOR SHALL SPECIFY ALL FLOOR AND ROOF TRUSS BRACING AND BRIDGING.
- 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.
- TRUSS DESIGN SHALL INCLUDE A 250 LBS LOAD PER NFPA TO SUPPORT SPRINKLER LOADS LOCATED ANYWHERE ALONG THE BOTTOM CHORD OF THE TRUSS.
- DEFLECTION LIMITS FOR TRUSSES SHALL NOT EXCEED THE FOLLOWING DEFLECTION CRITERIA:
 - ROOF LIVE LOAD = L/360
 - ROOF TOTAL LOAD = L/240 (1" MAXIMUM)

ENGINEERED LUMBER:

- STRUCTURAL CAPACITIES OF STRUCTURAL COMPOSITE LUMBER SHALL BE IN CONFORMANCE WITH SECTION 2303.10.1 OF THE IBC.
- MANUFACTURER OF STRUCTURAL COMPOSITE LUMBER PRODUCTS SHALL HAVE PROPER CODE EVALUATION REPORTS FOR ALL PRODUCTS AND SHALL BE APPROVED BY THE CONTRACTING OFFICER.
- 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.
- 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:
 - F_b = 2600 PSI
 - F_v = 285 PSI
 - F_{cPAR} = 2460 PSI
 - F_{cPERP} = 750 PSI
 - E = 1900 KSI
- MEMBERS NOTED AS LSL (LAMINATED STRAND LUMBER) ON PLAN SHALL BE PLANT-FABRICATED AND HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:
 - F_b = 1700 PSI
 - F_v = 400 PSI
 - F_{cPAR} = 1400 PSI
 - F_{cPERP} = 680 PSI
 - E = 1300 KSI
- BRIDGING AND BLOCKING SHALL BE INSTALLED ACCORDING TO THE FABRICATOR'S REQUIREMENTS.



DESIGNED: JSS	SUB SHEET NO. S0.2	TITLE OF SHEET GENERAL NOTES FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678
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TECH REVIEW: TSS			
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SHOP DRAWINGS:

- 1. 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.
- 2. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONSTRUCTION DRAWINGS OR PROJECT SPECIFICATIONS.
- 3. 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.
- 4. FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE CONTRACTING OFFICER FOR REVIEW PRIOR TO FABRICATION FOR:
 - A. CONCRETE MIX DESIGNS
 - B. CONCRETE REINFORCING STEEL
 - C. STRUCTURAL STEEL
 - D. PLANT FABRICATED WOOD RAFTERS
 - E. GLUED-LAMINATED TIMBER
 - F. PRE-ENGINEERED WOOD TRUSSES
- 5. SUBMIT IN A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE CONTRACTING OFFICER.
- 6. 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.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS:

- 1. THE CONSTRUCTION DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED.
- 2. 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.
- 3. ALL PROPRIETARY CONNECTIONS AND ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
- 4. ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE APPLICABLE CODES AND LOCAL ORDINANCES.
- 5. 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.
- 6. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE CONTRACTING OFFICER FROM ALL CONSEQUENCES.
- 7. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE CONSTRUCTION DRAWINGS DO NOT DESCRIBE METHODS OF CONSTRUCTION.
- 8. 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.
- 9. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE TEMPORARY BRACING IS PROVIDED.
- 10. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND ANY OTHER SUPPORTING ELEMENTS ARE IN PLACE.
- 11. 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.

PRECAUTIONARY NOTES ON STRUCTURAL BEHAVIOR:

- 1. INTERIOR ARCHITECTURAL FINISH DETAILING MUST ACCOMMODATE THE RELATIVE DIFFERENTIAL MOVEMENTS OF SUPPORTING STRUCTURAL ELEMENTS.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. EXTERIOR/PERIMETER AND INTERIOR ARCHITECTURAL FINISH DETAILS SHOULD ALLOW FOR RELATIVE MOVEMENTS BETWEEN ELEMENTS WITH DIFFERENT SUPPORT CONDITIONS.

DEFERRED SUBMITTALS:

- 1. PORTIONS OF THE STRUCTURE HAVE ELEMENTS OF PROPRIETARY DESIGN AND FABRICATION, WHICH SHALL BE SUBMITTED BY THE SUPPLIER FOR APPROVAL AFTER AWARD OF CONTRACT.
- 2. THESE ITEMS SHALL CONFORM TO THE LOAD, CAPACITY, SIZE, GEOMETRY, CONNECTION, AND SUPPORT CRITERIA NOTED ON THE STRUCTURAL DRAWINGS.
- 3. 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.
- 4. FURNISH DEFERRED SUBMITTALS FOR:
 - A. SUPPLIER ENGINEERED OPEN-WEB WOOD TRUSSES
 - B. SUPPLIER ENGINEERED HANDRAILS AND GUARDRAILS
- 5. SUBMITTALS WILL BE REVIEWED BY THE CONTRACTING OFFICER FOR COMPLIANCE WITH THE SPECIFIED DESIGN REQUIREMENTS.
- 6. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN CALCULATIONS AND DRAWINGS HAVE BEEN REVIEWED BY THE CONTRACTING OFFICER.

SPECIAL INSPECTIONS:

- 1. 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:
 - A. SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTIONS:
 - 1. 1704.2 SPECIAL INSPECTIONS AND TESTS
 - 2. 1704.3 STATEMENT OF SPECIAL INSPECTIONS
 - B. SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
 - 1. 1705.1.1 SPECIAL CASES (POST-INSTALLED ANCHORS)
 - 2. 1705.2 STEEL CONSTRUCTION
 - 3. 1705.3 CONCRETE CONSTRUCTION
 - 4. 1705.6 SOILS
 - C. SECTION 1705.12 SPECIAL INSPECTIONS FOR WIND RESISTANCE AND THE FOLLOWING SUB-SECTIONS:
 - 1. 1705.12.1 STRUCTURAL WOOD
 - 2. 1705.12.3 WIND-RESISTING COMPONENTS
- 2. 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.
- 3. 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.
- 4. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTING OFFICER FOR CORRECTION.
- 5. 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.
- 6. 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.
- 7. 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.
- 8. 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.



DESIGNED: JSS	SUB SHEET NO. S0.3	TITLE OF SHEET GENERAL NOTES FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121
CHIEF			176678
JSS			PMIS/PKG NO. 160755
TECH REVIEW: TSS			SHEET
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(E)	EXISTING
(N)	NEW
(R)	REMOVE
@	ON CENTER SPACING
AB	ANCHOR ROD (BOLT)
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
AESS	ARCH EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
AMT	AMOUNT
ANCH	ANCHOR, ANCHORAGE
APPROX	APPROXIMATE
ARCH	ARCHITECT, -URAL
ATR	ALL THREAD ROD
AVG	AVERAGE
BC	BOTTOM OF CONCRETE
BL	BRICK LEDGE
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BW	BOTTOM OF WALL
CB	COUNTERBORE
CF	CUBIC FOOT
CFS	COLD FORMED STEEL
CG	CENTER OF GRAVITY
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT, CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CM	CONSTRUCTION MANAGER, -MENT
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COM	COMMON
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS, CONTINUE
COORD	COORDINATE, COORDINATION
CS	COUNTERSINK
CTR	CENTER
CY	CUBIC YARD
DAB	DEFORMED ANCHOR BAR
DET	DETAIL


DEV	DEVELOP
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DP	DRILLED PIER
DT	DOUBLE TEE
DWG	DRAWING
DWL	DOWEL
E-E	END TO END
E-W	EAST TO WEST
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
EMBED	EMBEDMENT
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE
EST	ESTIMATE
EXC	EXCAVATE
EXP	EXPANSION
EXT	EXTERIOR
F-F	FACE TO FACE
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISHED FLOOR, FAR FACE
FIG	FIGURE
FL	FLUSH
FLG	FLANGE
FLR	FLOOR
FO	FACE OF
FP	FULL PENETRATION
FS	FOOTING STEP, FAR SIDE
FTG	FOOTING
GA	GAGE, GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERAL
GL	GLUED LAMINATED, GLULAM
GND	GROUND
GR	GRADE
GT	GIRDER TRUSS
GYP BD	GYPSUM BOARD

HAS	HEADED ANCHOR STUD
HDG	HOT-DIP GALVANIZED
HDR	HEADER
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
ID	INSIDE DIAMETER
IF	INSIDE FACE
INT	INTERIOR, INTERMEDIATE
IT	INVERTED TEE
JB	JOIST BEARING
JST	JOIST
JT	JOINT
K	KIPP (1,000 LBS)
LGS	LIGHT GAGE STEEL
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LP	LOW POINT
LSL	LAMINATED STRAND LUMBER
LT	LIGHT
LVL	LAMINATED VENEER LUMBER
MACH	MACHINE
MASY	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURE, -ER, -ED
MIN	MINIMUM
ML	MICROLLAM (TRUS-JOIST BRAND LVL)
MO	MASONRY OPENING
MTL	METAL
N-S	NORTH TO SOUTH
NF	NEAR FACE
NIC	NOT IN CONTRACT
NS	NEAR SIDE
NTS	NOT TO SCALE
OCJ	OSHA COLUMN JOIST
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
PAF	POWDER ACTUATED FASTENER

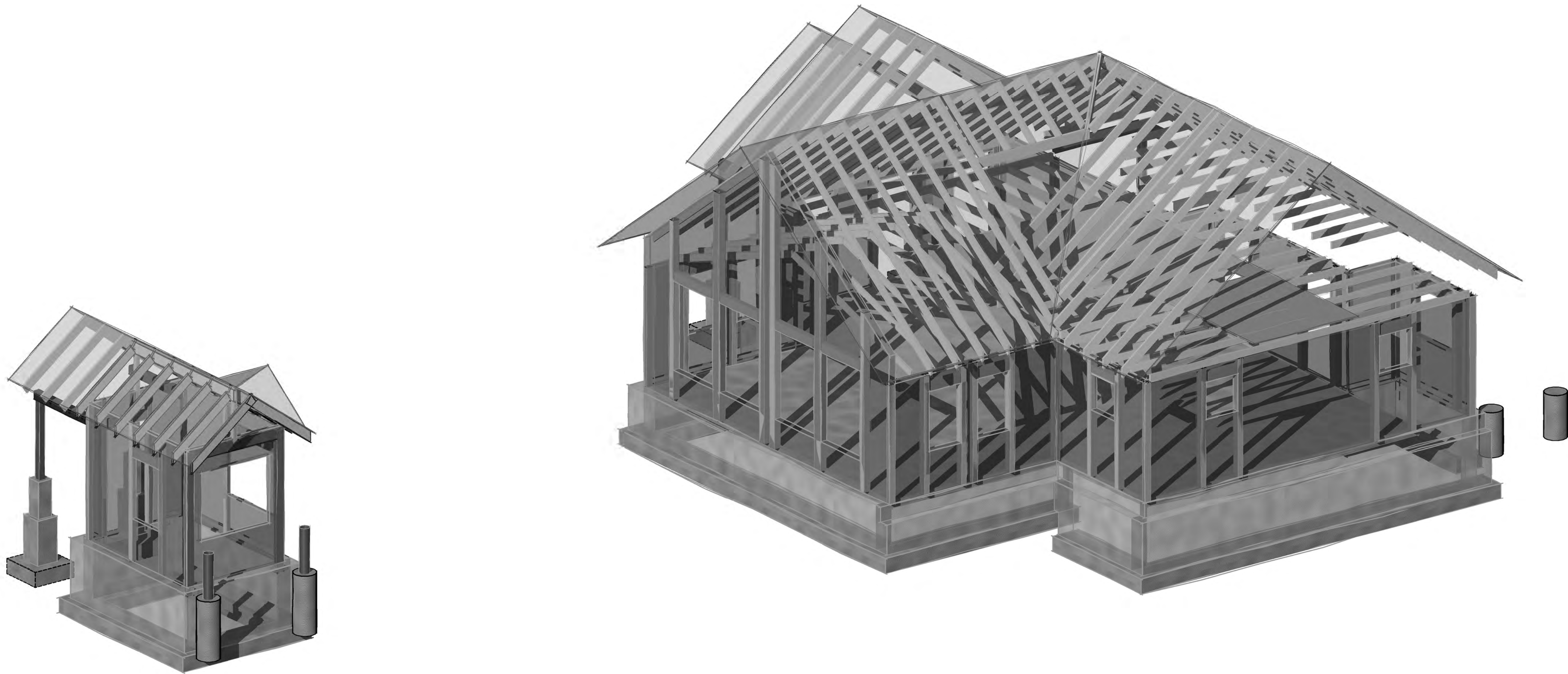
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PE	PRE-ENGINEERED
PEN	PENETRATION
PERP	PERPENDICULAR
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUND PER LINEAR FOOT
PNL	PANEL
PP	PANEL POINT
PS	PRESTRESSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POST TENSIONED, PRESSURE TREATED
PTN	PARTITION
PWD	PLYWOOD
QTY	QUANTITY
R	RADIUS
RE	REFERENCE, REFER TO
RECT	RECTANGLE
REINF	REINFORCE, -ED, -ING
REQ	REQUIRED
REQMT	REQUIREMENT
RET	RETAINING
RM	ROOM
RMO	ROUGH MASONRY OPENING
RO	ROUGH OPENING
SC	SLIP-CRITICAL
SCH	SCHEDULE
SDST	SELF-DRILLING/SELF-TAPPING
SECT	SECTION
SF	SQUARE FEET, SUB-FLOOR
SFRS	SEISMIC FORCE-RESISTING SYSTEM
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SOG	SLAB ON GRADE
SP	SPACES, SPACED
SPEC	SPECIFICATIONS
SQ	SQUARE
SSR	SHEAR STUD RAIL
ST	SNUG-TIGHT
STD	STANDARD
STIFF	STIFFENER
STL	STEEL

STRUCT	STRUCTURE, -AL
SUPT	SUPPORT
SY	SQUARE YARD
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TOUNGE AND GROOVE
TB	TOP OF BEAM
TC	TOP OF CONCRETE
TCA	TORQUE-CONTROLLED ANCHOR
TD	TOP OF DECK
THD	THREAD
THK	THICK, -NESS
TJ	TOP OF JOIST
TL	TOTAL LOAD
TPG	TOPPING
TRANS	TRANSVERSE
TW	TOP OF WALL
TYP	TYPICAL
ULT	ULTIMATE
UNO	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
WP	WORK POINT
WT	WEIGHT
WTS	WELDED THREADED STUD
WWF	WELDED WIRE FABRIC
XS	EXTRA STRONG
XSECT	CROSS SECTION
XXS	DOUBLE EXTRA STRONG

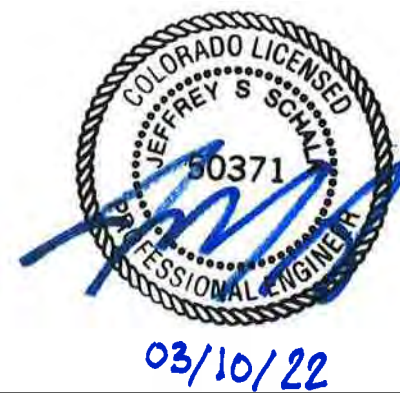
SYMBOLS KEY																	
		DIRECTION OF DECK SPAN			WOOD BEARING WALL	BUILDING COLUMN DESIGNATIONS			COLUMN <u>ABOVE</u>			FULLY WELDED MOMENT CONNECTION			TOP OF CONCRETE OR MASONRY ELEVATION		
		GRID DESIGNATION			WOOD SHEAR WALL				COLUMN OR OTHER ELEMENT <u>BELOW</u> SEE SCHEDULES & NOTES Cx = COLUMN BPx = BASE PLATE EPx = EMBED PLATE ABx = ANCHOR BOLT HDx = HOLDOWN			LOCATION OF BEND IN BENT BEAM			BRICK LEDGE ELEVATION		
		REVISION			STRESSING END ANCHOR				COLUMN CONTINUOUS FROM LEVEL BELOW			INDICATES CONFIGURATION OF INVERTED CHEVRON-TYPE BRACED BAY WITH HSS DIAGONAL BRACES			TOP OF FOOTING ELEVATION		
		SHEAR WALL			DEAD END ANCHOR				"X" NUMBER OF KING STUDS BELOW "Y" NUMBER OF TRIMMER STUDS BELOW			INDICATES CONFIGURATION OF SINGLE DIAGONAL BRACED BAY WITH HSS DIAGONAL BRACE			TOP OF FLOOR ELEVATION		
		SHORING			INTERMEDIATE ANCHOR				"X" NUMBER OF BUILT-UP 2x6 STUDS IN COLUMN BELOW			INDICATES RIGID (MOMENT) FRAME WITH FULL PENETRATION WELDED BEAM FLANGE TO COLUMN CONNECTIONS					
		STEP IN FLOOR ELEVATION			TOP OF CONCRETE OR MASONRY ELEVATION				"X" NUMBER OF BUILT-UP 2x4 STUDS IN COLUMN BELOW			INDICATES RIGID (MOMENT) FRAME ELEVATION W/ FULL PENETRATION WELDED BEAM FLANGE TO COLUMN CONNECTIONS					
		CMU (CONCRETE MASONRY UNIT)			TOP OF BEAM ELEVATION				HOLDOWN								
		BRICK			JOIST BEARING ELEVATION												
		CIP CONCRETE			BRICK LEDGE ELEVATION												
		PRECAST CONCRETE			TOP OF FOOTING ELEVATION												
		EXISTING CONCRETE			TOP OF FLOOR ELEVATION												
		EARTH			COLUMN CONTINUOUS FROM LEVEL BELOW												
		ISOLATED SPREAD FOOTING MARK			COLUMN STARTING AT THIS LEVEL												
		SPREAD FOOTING MARK			COLUMN STOPPING BELOW THIS LEVEL. SEE FRAMING PLAN AT NEXT LOWER LEVEL												
		STEP IN BOTTOM OF WALL/GRADE BEAM			COLUMN STARTING AND ENDING AT THIS LEVEL OF FRAMING												
		DRILLED PIER: Px = PIER MARK, {x} = PIER PENETRATION			COLUMN CONNECTING A LOWER BEAM TO A HIGHER BEAM AT THIS LEVEL OF FRAMING												
		ROOF SLOPE															
		DIRECTION OF SLOPE (DOWN)															
		STAIR OR RAMP DIRECTION															
										BRACED/FRAME BAY SYMBOLS							
												INDICATES BRACED BAY MARK					
												INDICATES BRACED BAY ELEVATION					
												INDICATES CONFIGURATION OF INVERTED CHEVRON-TYPE BRACED BAY WITH HSS DIAGONAL BRACES					
												INDICATES CONFIGURATION OF SINGLE DIAGONAL BRACED BAY WITH HSS DIAGONAL BRACE					
												INDICATES RIGID (MOMENT) FRAME WITH FULL PENETRATION WELDED BEAM FLANGE TO COLUMN CONNECTIONS					
												INDICATES RIGID (MOMENT) FRAME ELEVATION W/ FULL PENETRATION WELDED BEAM FLANGE TO COLUMN CONNECTIONS					
												INDICATES BRACED BAY OR FRAMED BAY COLUMN BASE					
																	TOP OF CONCRETE OR MASONRY ELEVATION
																	BRICK LEDGE ELEVATION
																	TOP OF FOOTING ELEVATION
																	TOP OF FLOOR ELEVATION



DESIGNED:	SUB SHEET
JSS	
CAED	



1 3D BUILDING VIEW - SCHEMATIC ONLY
S0.5 NO SCALE



DESIGNED:
JSS
GADD
JSS
TECH REVIEW:
TSS
DATE:
03/10/2022

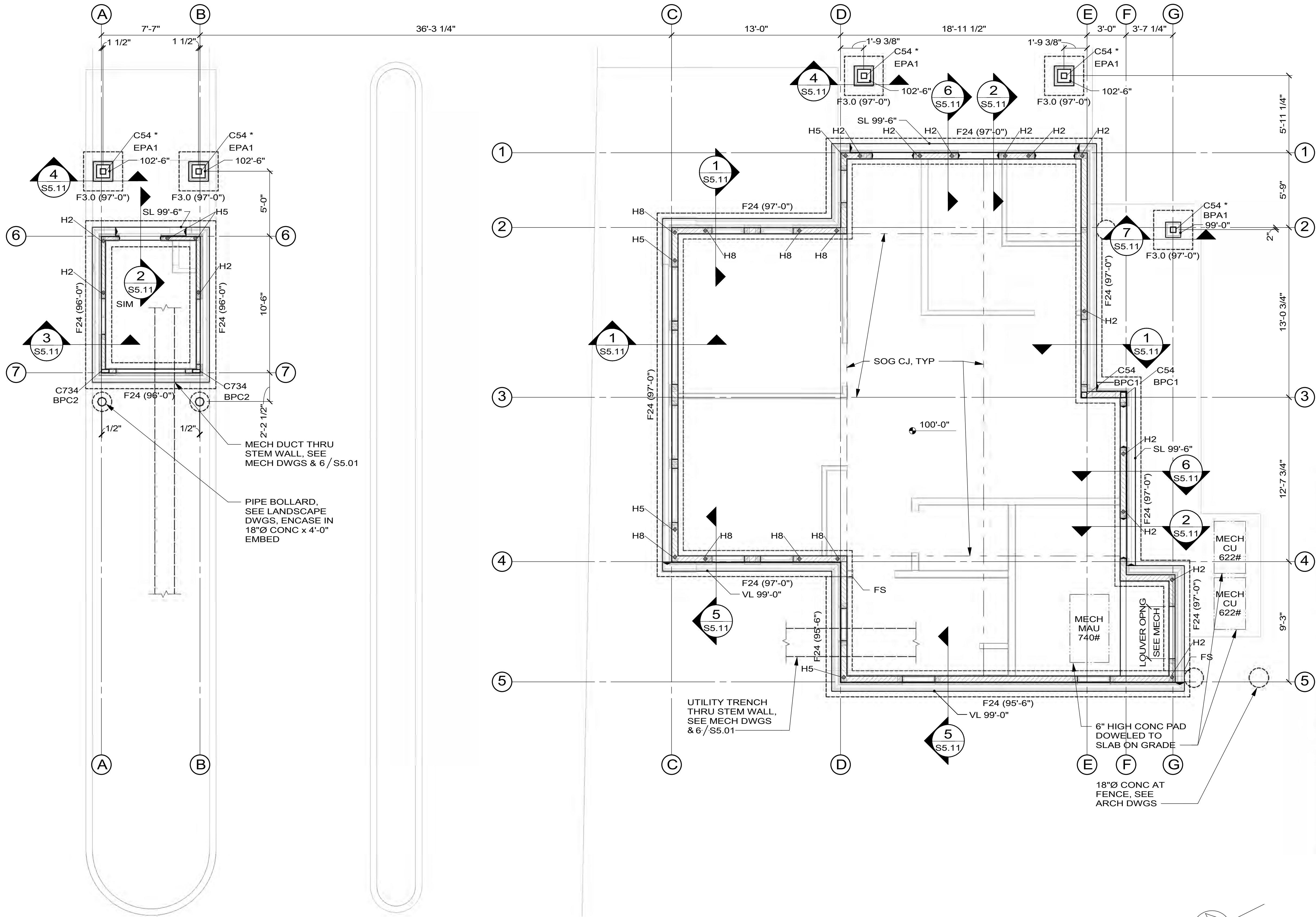
SUB SHEET NO.

S0.5

TITLE OF SHEET
3D VIEW

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
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HOLDOWN NOTES:

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

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

FOOTING NOTES:

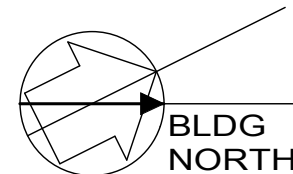
- FOOTINGS SHALL BE PLACED ON 12" DEPTH MINIMUM COMPACTED ENGINEERED FILL PER GEOTECH REPORT
- CENTER FOOTINGS UNDER STEMWALLS & PILASTERS, TYPICAL UNLESS NOTED OTHERWISE
- FOOTING WIDTHS SHALL NOT VARY IN THE FIELD FROM SIZES NOTED; OVERSIZE NOT ALLOWED
- LAPPED BOARD FORMING NOT ALLOWED
- TRENCH FORMING NOT ALLOWED
- SEE FOOTING SCHEDULE, 2 / S5.01

TYPICAL EXPOSED INTERIOR SLAB ON GRADE:

6" THICK CONCRETE SLAB ON VAPOR BARRIER ON RIGID INSULATION PER ARCH DWGS ON 4" GRAVEL ON 12" MINIMUM COMPACTED ENGINEERED FILL PER GEOTECH REPORT; REINFORCE SLAB WITH #4 @ 16", EA WAY, 3" CLEAR FROM BOTTOM; PROVIDE SAWCUT OR FORMED CONTROL JOINTS PER 8 / S5.01, @ ±10'-0" IN EACH DIRECTION. ADD (2) #4 x 4'-6" DIAGONAL BARS AT MID-DEPTH OF SLAB AT ALL RE-ENTRANT CORNERS.

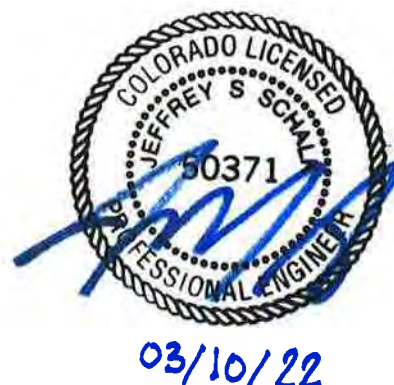
FOUNDATION PLAN

- 100'-0" = TOP OF INTERIOR FLOOR SLAB AT EACH BUILDING WITH USGS ELEVATIONS:
 - 8,246.35' = 100'-0" AT OFFICE BUILDING
 - 8,244.30' / 8,244.63' / 8,245.10' = 100'-0" AT KIOSK 1 / 2 / 3
- 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'-0" AT EXTERIOR STUD WALL AND 99'-6" AT DOOR OPENINGS & SLAB LEDGE UNLESS NOTED: SL XXX'-X"
- AT PERIMETER STEM WALL SUPPORTING STUD WALLS, TOP OF DROPPED VENEER LEDGE ELEVATION = 99'-0" UNLESS NOTED THUS: VL XXX'-X"
- EXTERIOR STEEL COLUMNS BEAR ON SUBGRADE PILASTERS AT ELEVATION = 100'-0", TYPICAL UNLESS NOTED: XXX'-X"



SCALE (A)

4 0 4 8
SCALE OF FEET
1/4" = 1'-0"



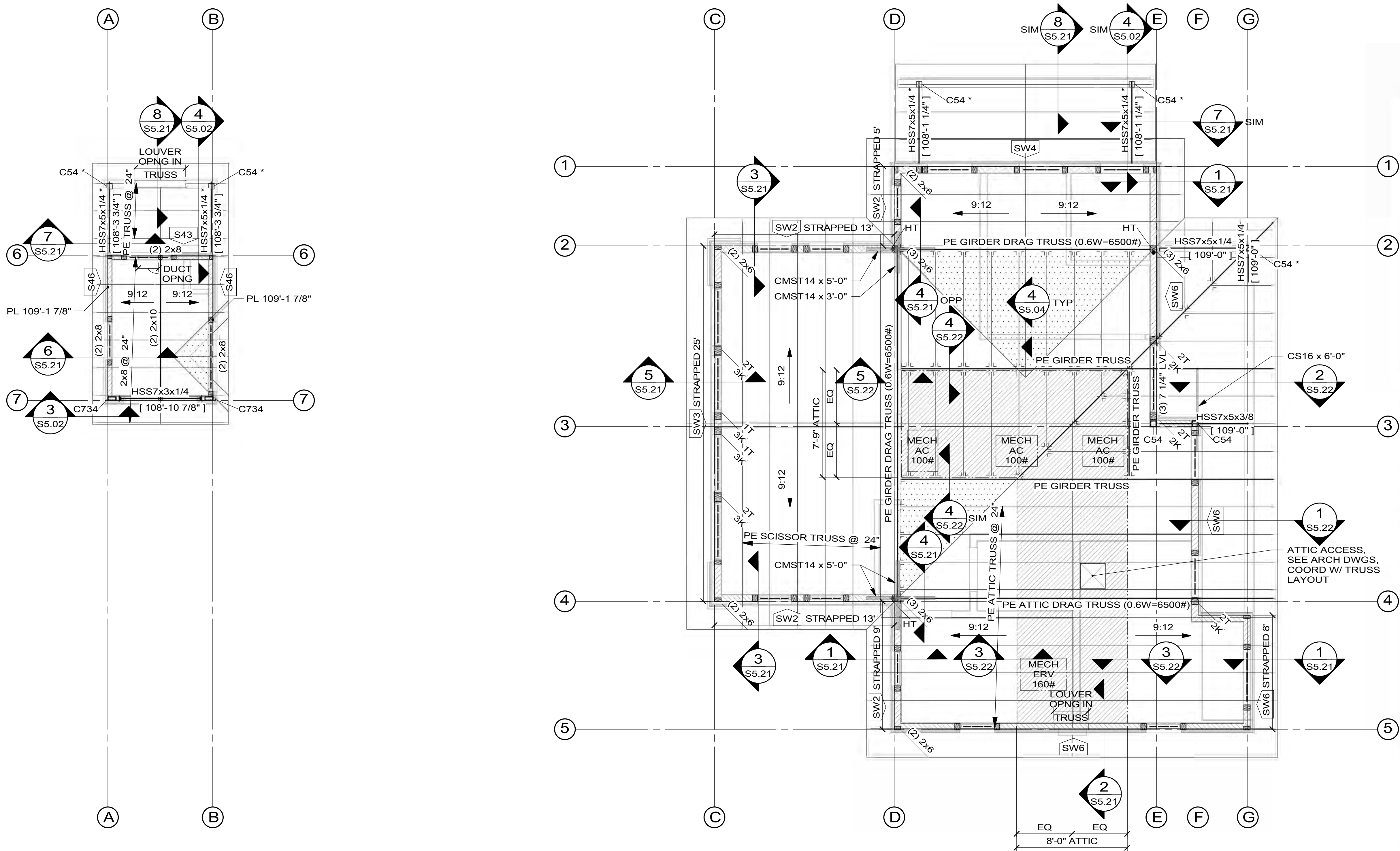
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JSS
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JSS
TECH REVIEW:
TSS
DATE:
03/10/2022

SUB SHEET NO.
S1.1

TITLE OF SHEET
FOUNDATION PLAN

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
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SHEET
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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
ATTIC LIVE LOAD BOTTOM CHORD = 30 PSF
ATTIC MECH UNITS = AS NOTED, ADDITIVE TO LIVE
DEAD LOAD TOP CHORD = 15 PSF
SNOW LOAD TOP CHORD = 50 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 ENGINEER OF RECORD FOR THE PROJECT.

XK K INDICATES NUMBER OF 2x KING STUDS, T
XT INDICATES NUMBER OF 2x TRIM STUDS (EQUAL TO WALL STUD WIDTH)

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

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

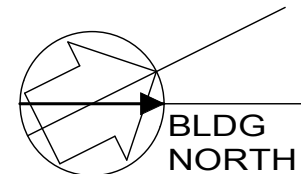
TYPICAL EXTERIOR WOOD FRAMED WALLS (UNO):

- 2x6 STUDS @ 16" (2x4 STUDS @ 16" AT KIOSK)
- SHEATHED WITH 7/16" APA 24/16, 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, 1 / S5.03
- ALL WALLS HATCHED THUS ARE UNO
- AT "STRAPPED" WALLS, INSTALL CONTINUOUS STRAPS ABOVE & BELOW WINDOWS, SEE 1 / S5.04

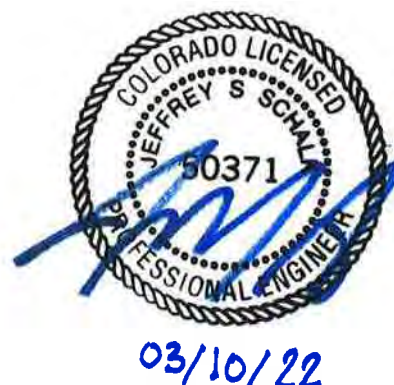
TYPICAL ROOF SHEATHING:
19/32" APA 40/20 RATED SHEATHING FASTENED WITH 10d NAILS (0.128"Ø x 3") @ 6" ALONG PANEL EDGES AND @ 12" ALONG INTERMEDIATE FRAMING MEMBERS. LAY PANELS PERPENDICULAR TO FRAMING MEMBERS AND STAGGER PANEL JOINTS.
HATCH PATTERN INDICATES ATTIC REGION BELOW WITH 3/4" APA 48/24 RATED SHEATHING

ROOF FRAMING PLAN

- 100'-0" DRAWING ELEVATION = USGS ELEVATIONS, SEE S1.1
- TOP OF PLATE ELEVATION = 108'-0" TYPICAL UNLESS NOTED 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, 'CXX' OR 'PIPE' INDICATE STEEL COLUMNS, SEE SCHEDULE, 2 / S5.02
- ALL EXPOSED STEEL NOTED WITH ' * ' INDICATES BID OPTION 6, "SELF-WEATHERING" STEEL, SEE GENERAL NOTES, CORROSION CONTROL



SCALE 1/4" = 1'-0"



DESIGNED:
JSS
TECH REVIEW:
TSS
DATE:
03/10/2022

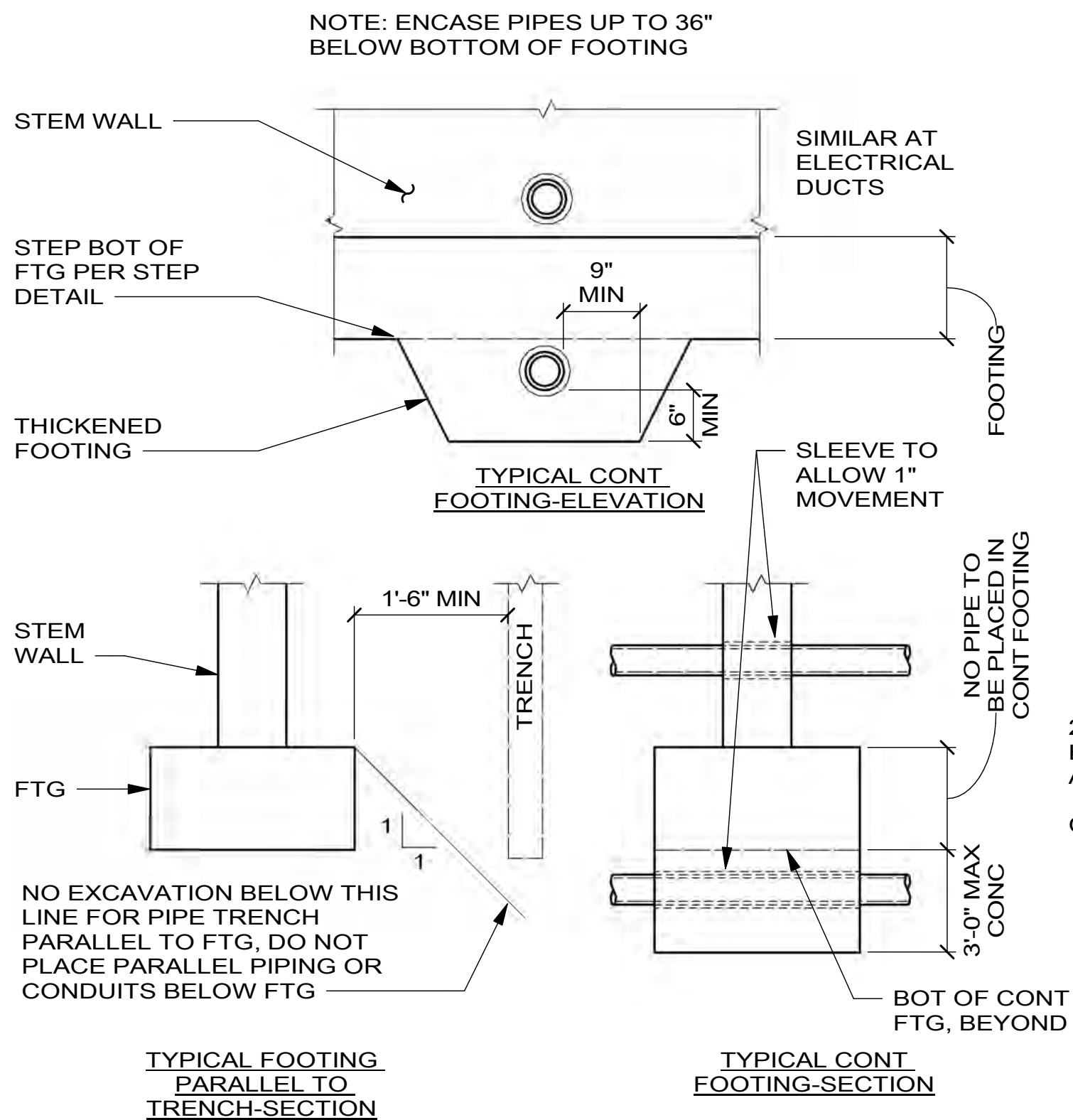
SUB SHEET NO.
S1.2

TITLE OF SHEET
ROOF FRAMING PLAN

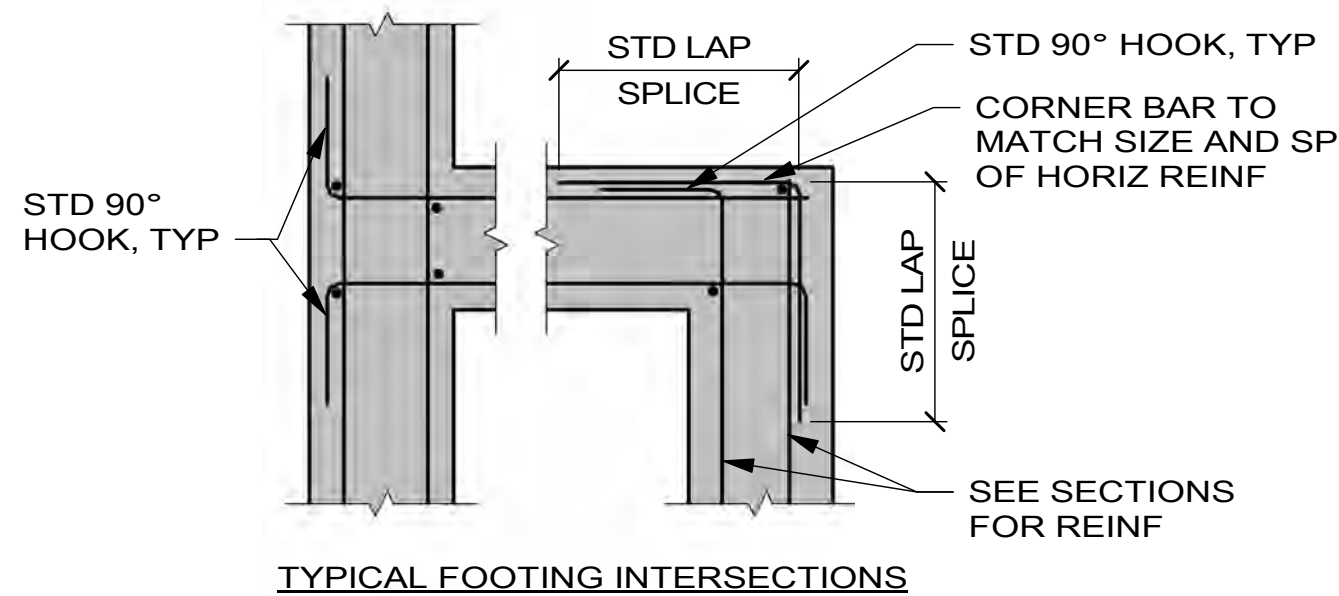
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
125 OF 165

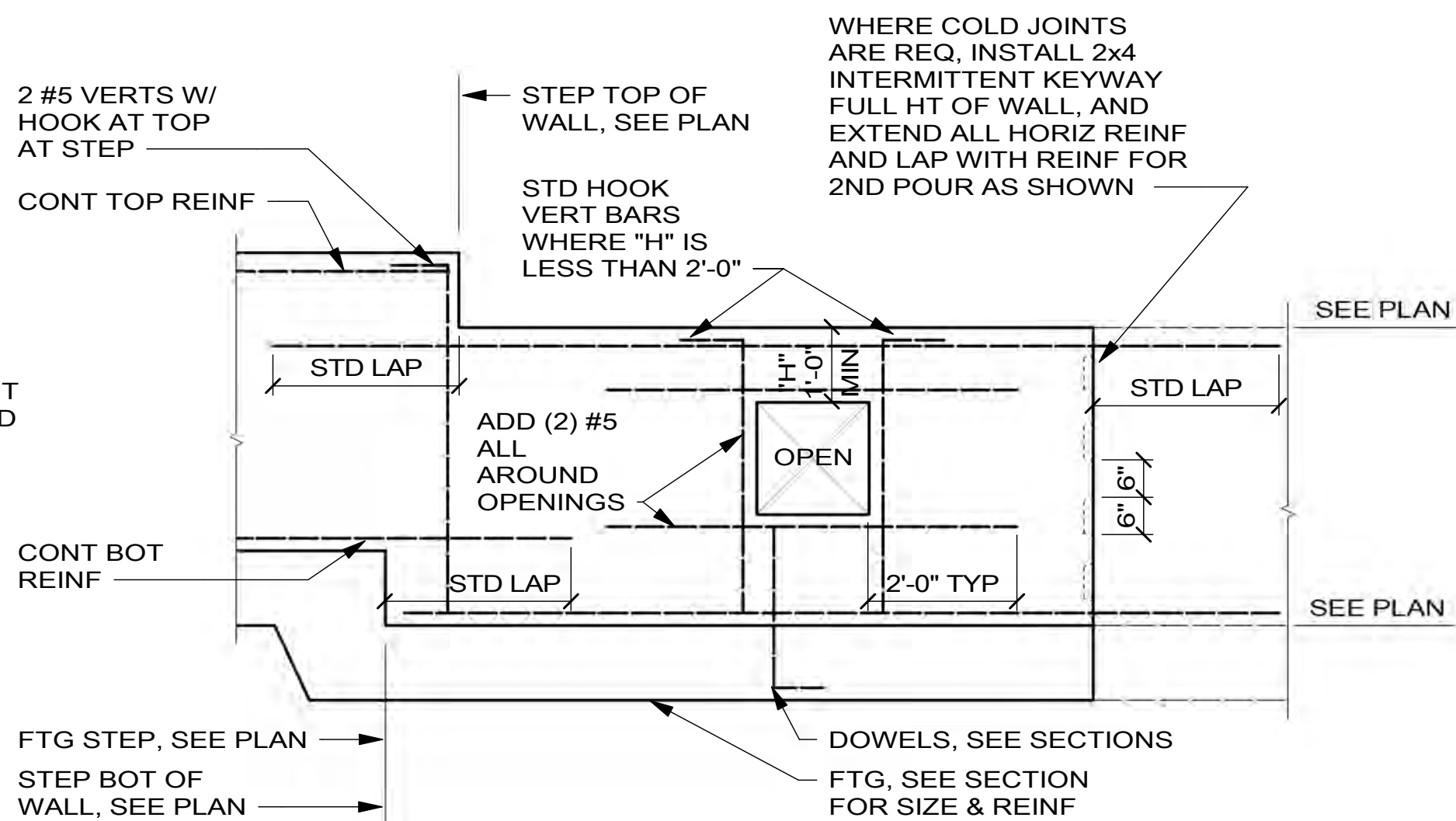
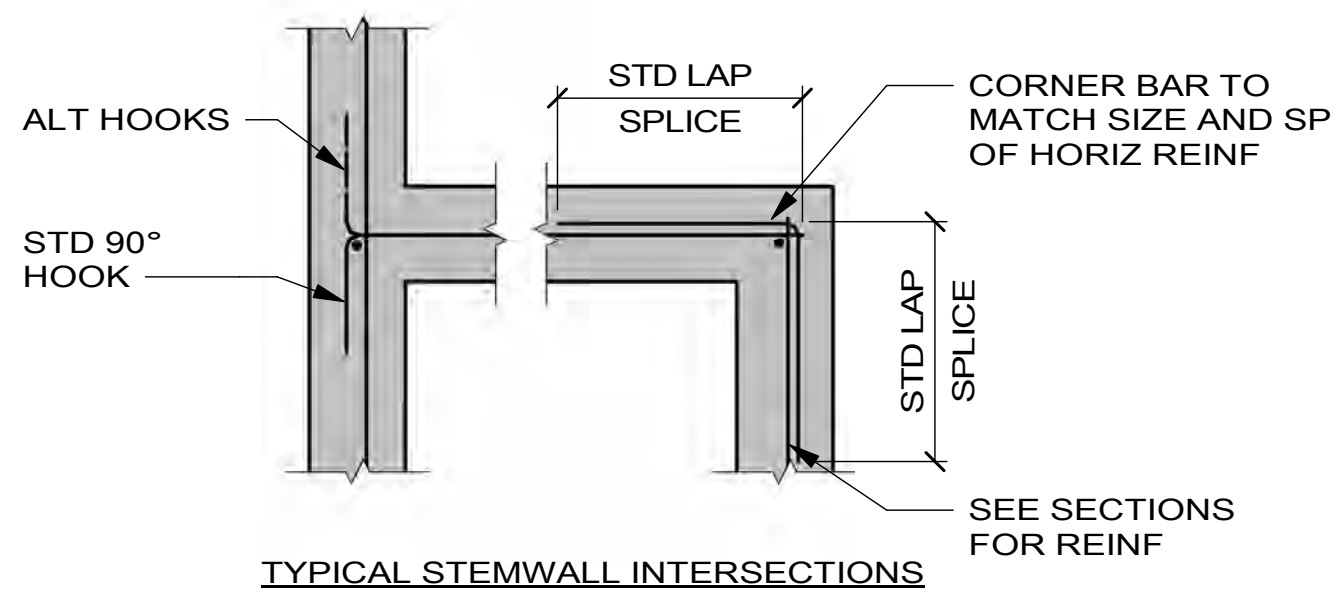
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5 PIPE AT FOOTING DETAIL
S5.01 SCALE A



1 CONC INTERSECTIONS PLAN DETAIL
S5.01 SCALE A



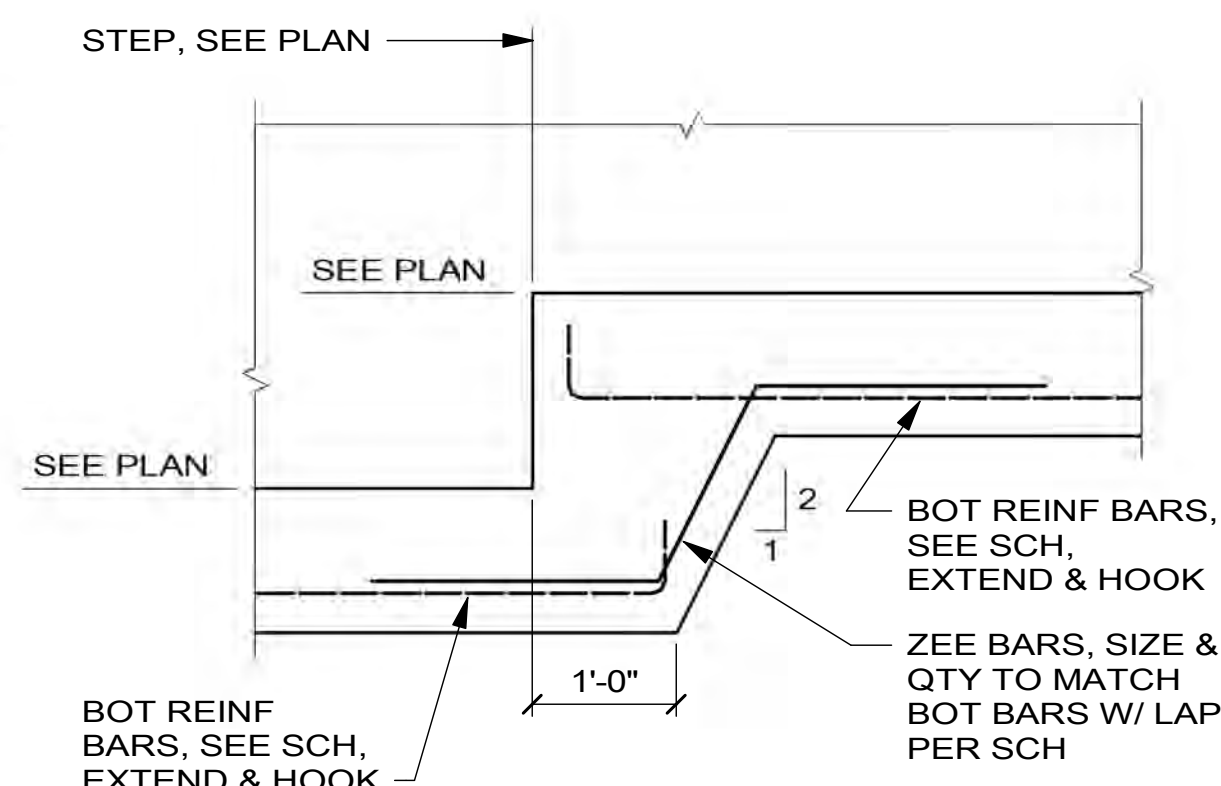
6 FOUNDATION STEP & OPENING DETAIL
S5.01 SCALE B

FOOTING SCHEDULE				
MARK	WIDTH	LENGTH	THICKNESS	REINFORCING
F3.0	3'-0"	3'-0"	1'-0"	(4) #5 EA WAY
F24	2'-0"		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



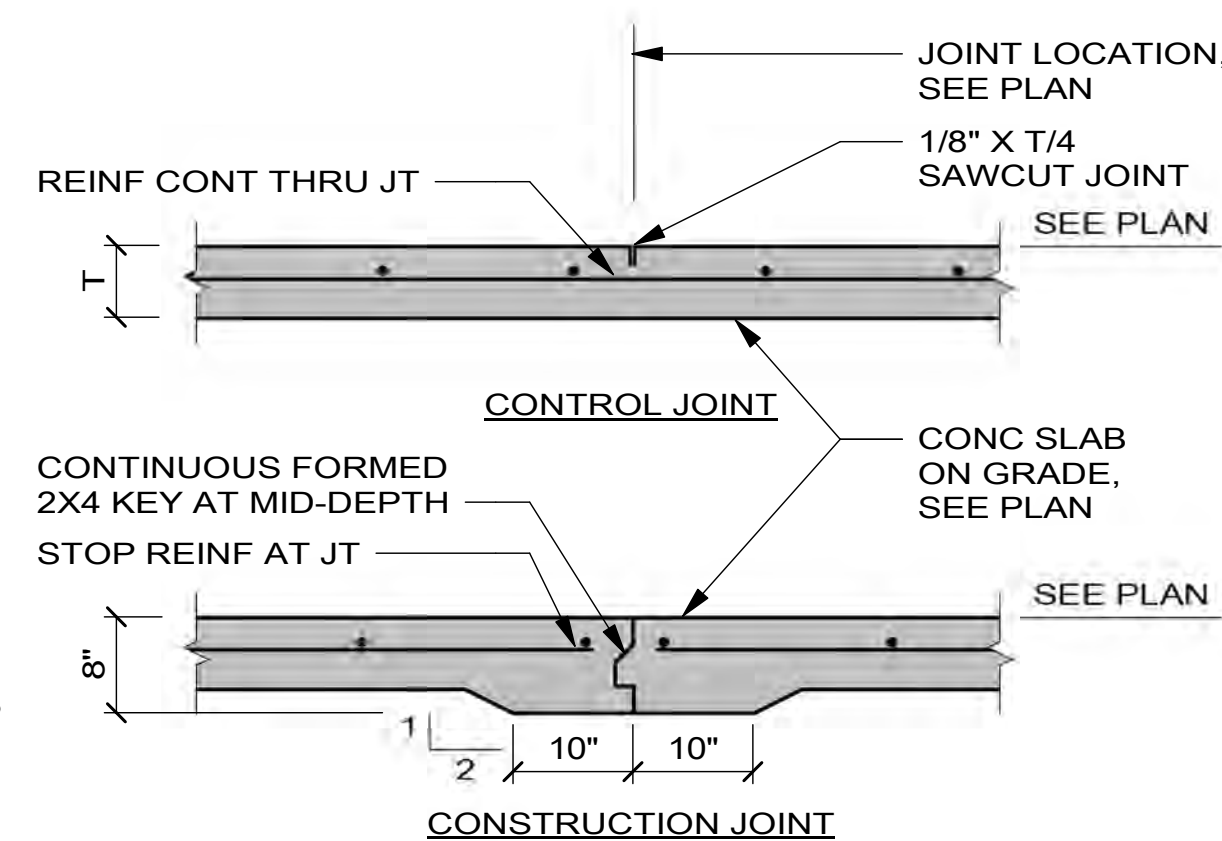
7 FOOTING STEP DETAIL
S5.01 SCALE A

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) (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
#7	EMBED	63	48	54	42	49 37
#7	LAP	81	63	70	54	63 49

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 JOINT DETAIL
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"
#7	5-1/4"	10"	7"	1'-2"

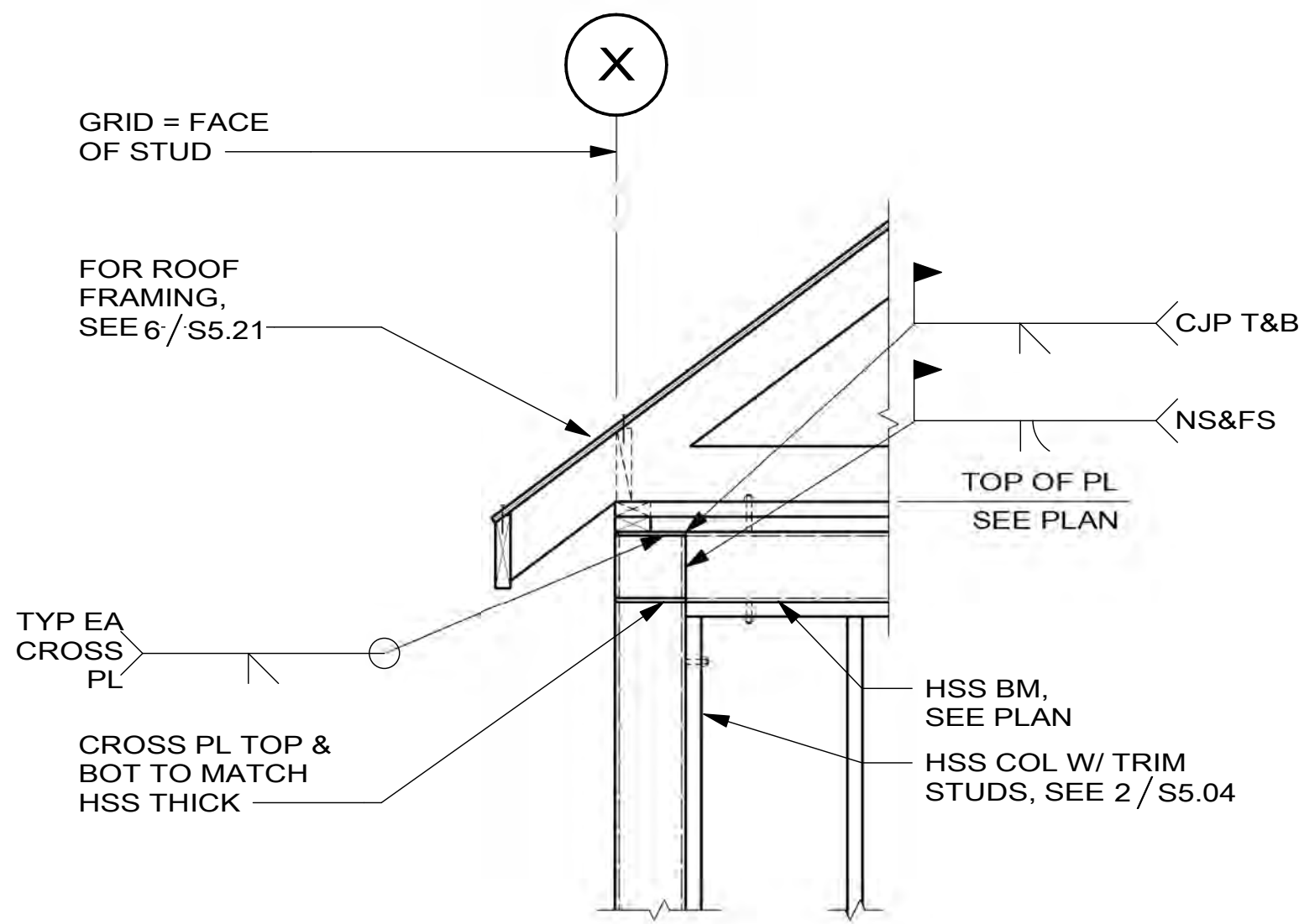
ALL GRADES OF STEEL
D = FINISHED INSIDE BEND Ø
db = NOMINAL BAR DIAMETER
MIN D = 6 db FOR #3 THROUGH #7

4 REINF HOOK SCHEDULE
S5.01 NO SCALE

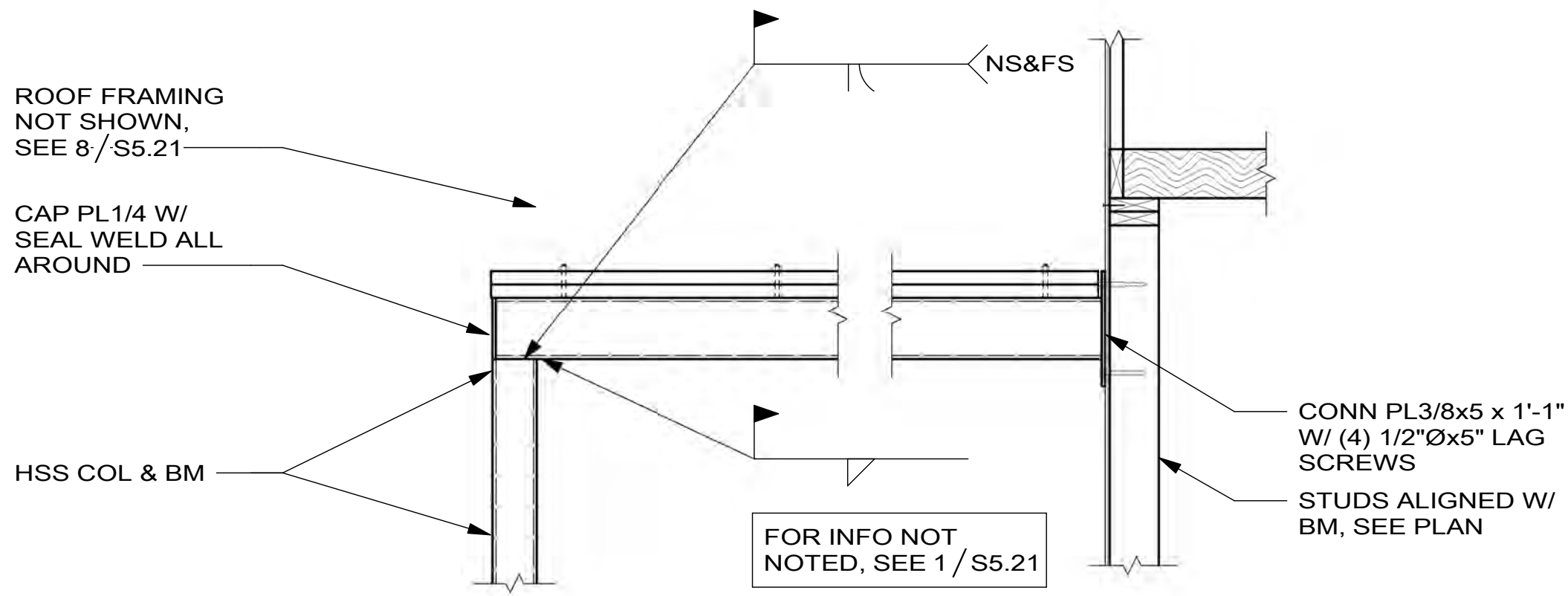
SCALE A 1 0 1 2 3 3/4" = 1'-0"
SCALE OF FEET



DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 03/10/2022	SUB SHEET NO. S5.01	TITLE OF SHEET TYPICAL CONCRETE DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 126 OF 165
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3 HSS MOMENT FRAME CONN
S5.02 SCALE (A)



4 HSS BEAM CONN
S5.02 SCALE (A)

BASE PLATE SCHEDULE						
MARK	TYPE	COUNT	DIM L	DIM W	THICK	NOTES
BPA1	A	5	11"	11"	3/4"	
BPC1	C	2	10"	5 1/2"	3/4"	
BPC2	C	6	1'-0"	5 1/2"	3/4"	
EPA1	A	8	7"	7"	5/8"	

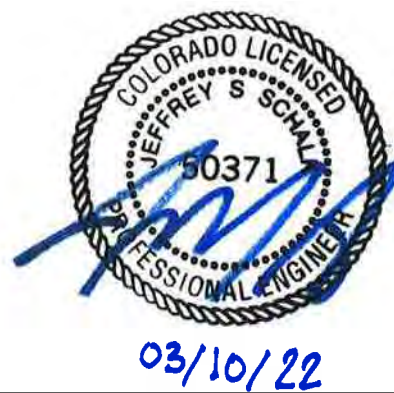
1 COLUMN BASE PLATE SCHEDULE
S5.02 SCALE (A)

COLUMN SCHEDULE	
TYPICAL COLUMN MARKS:	
HSS COLUMN WALL THICKNESS IN 16ths OF AN INCH (EXAMPLE: '5' INDICATES 5/16" WALL THICKNESS, '10' INDICATES 5/8", ETC...)	
CXX OR CXXX	
SQUARE OR RECTANGULAR HSS COLUMN SIZE (EXAMPLE: '6' INDICATES HSS6x6, '75' INDICATES HSS7x5)	
STEEL COLUMN SCHEDULE	
MARK	SIZE
C54	HSS5X5X1/4
C54 *	HSS5X5X1/4 *
C734	HSS7X3X1/4

*** INDICATES BID OPTION 6, "SELF-WEATHERING" STEEL, SEE GENERAL NOTES, CORROSION CONTROL

2 COLUMN SCHEDULE
S5.02 NO SCALE

SCALE (A) 1 0 1 2 3 3/4" = 1'-0"
SCALE OF FEET

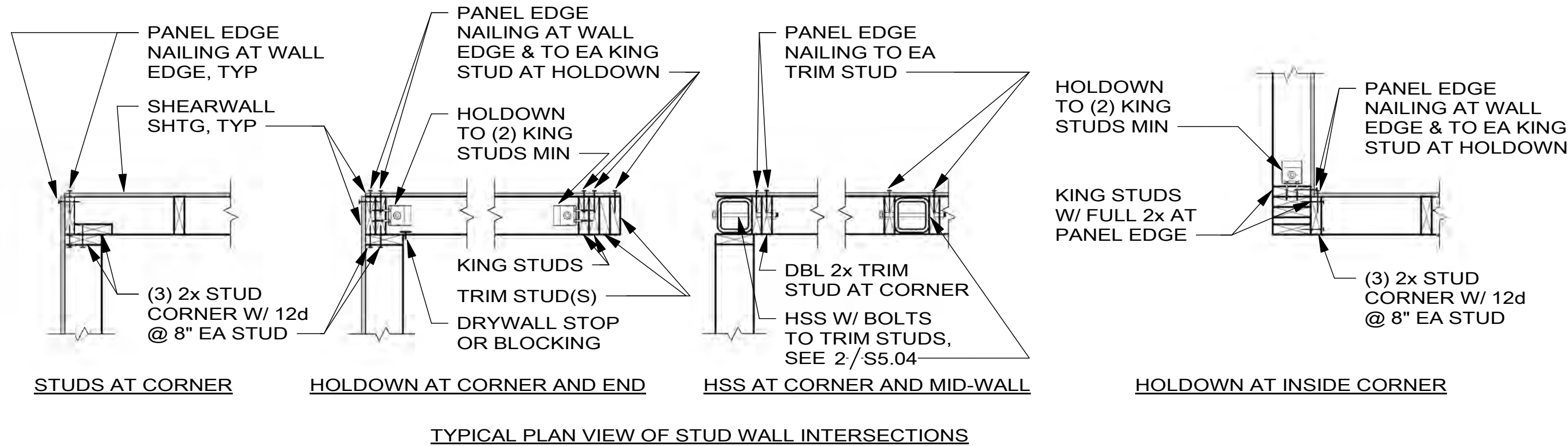


DESIGNED: JSS
CHECKED: JSS
TECH REVIEW: TSS
DATE: 03/10/2022

SUB SHEET NO.
S5.02

TITLE OF SHEET
TYPICAL STEEL DETAILS
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
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3 STUD WALL PLAN DETAILS
S5.03 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
S43	2x4 @ 16" W/ (2) 2x4 @ 48" AT SHTG SPLICES	7/16" APA (24/16)	8d COM (0.131"Øx2 1/2")	3"	12"	1/2"Ø @ 16"	0.229"x3" PL (BPS1/2-3)	490 PLF	685 PLF	1'-0"
S46	2x4 @ 16"	7/16" APA (24/16)	8d COM (0.131"Øx2 1/2")	6"	12"	1/2"Ø @ 32"	STD CUT WASHER	260 PLF	365 PLF	2'-0"
SW2	2x6 @ 16" W/ (2) 2x6 @ 48" AT SHTG SPLICES	7/16" APA (32/16)	8d COM (0.131"Øx2 1/2")	2"	12"	1/2"Ø @ 16"	0.229"x3" PL (BPS1/2-6)	640 PLF	895 PLF	8"
SW3	2x6 @ 16" W/ (2) 2x6 @ 48" AT SHTG SPLICES	7/16" APA (24/16)	8d COM (0.131"Øx2 1/2")	3"	12"	1/2"Ø @ 16"	0.229"x3" PL (BPS1/2-6)	490 PLF	685 PLF	1'-0"
SW4	2x6 @ 16"	7/16" APA (32/16)	8d COM (0.131"Øx2 1/2")	4"	12"	1/2"Ø @ 24"	0.229"x3" PL (BPS1/2-6)	380 PLF	530 PLF	1'-4"
SW6	2x6 @ 16"	7/16" APA (24/16)	8d COM (0.131"Øx2 1/2")	6"	12"	1/2"Ø @ 32"	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

2x FLAT BLKG AT HORIZ EDGE SPLICES

AT HORIZ EDGES

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

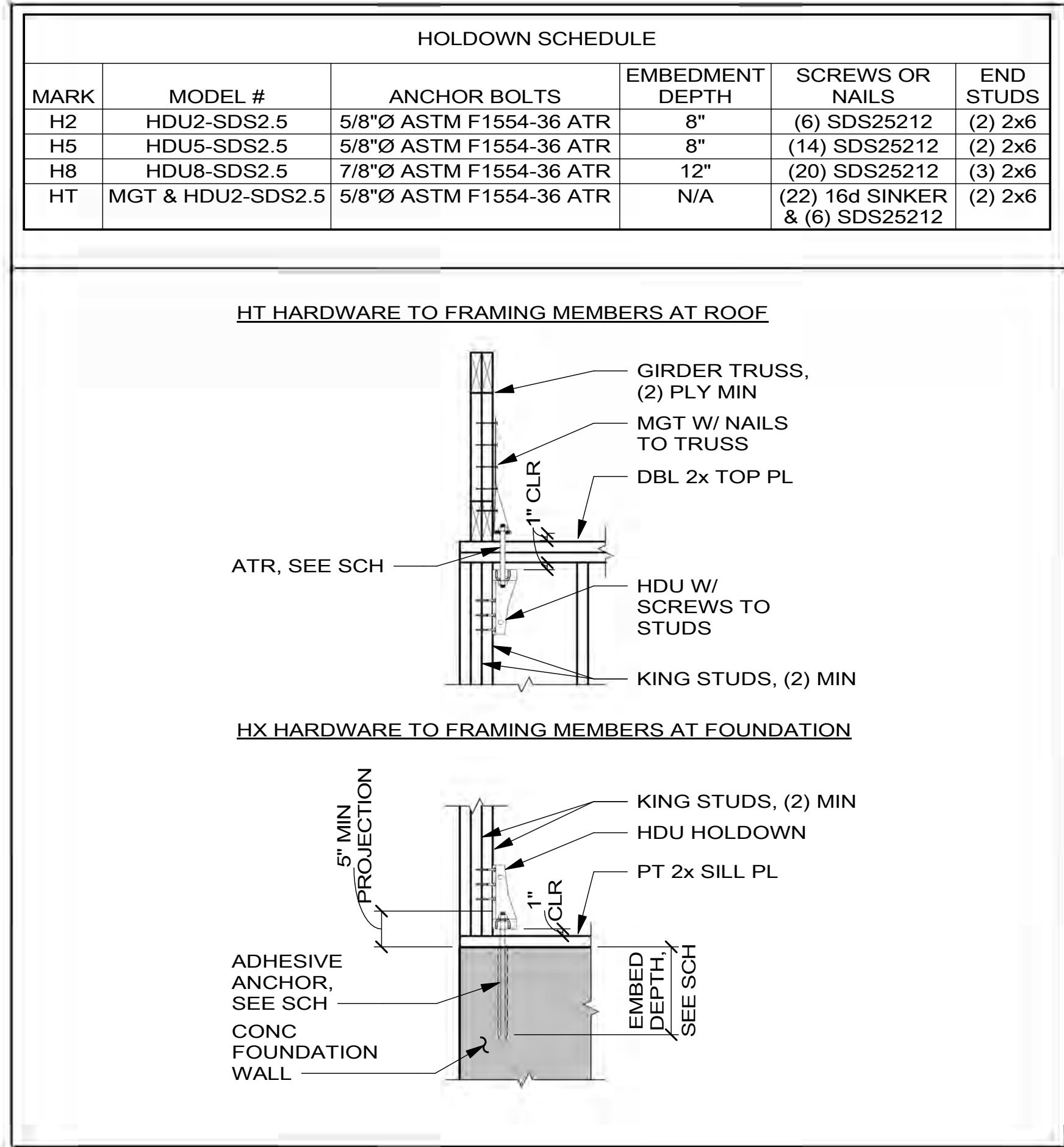
1/2" MAX

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
S5.03 SCALE (A)



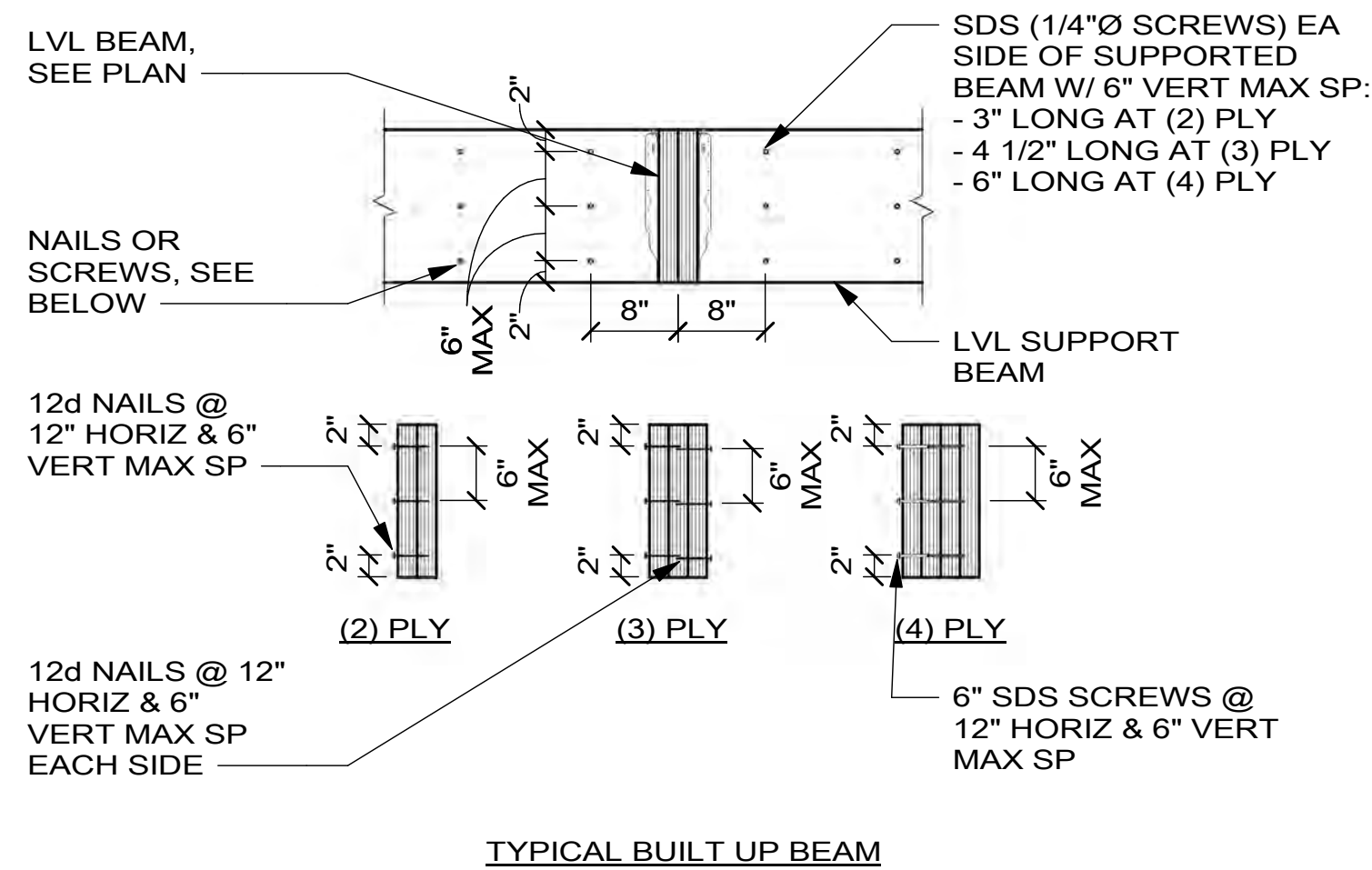
2 HOLDOWN SCHEDULE & DETAILS
S5.03 SCALE (A)

SCALE (A) 1 0 1 2 3 3/4" = 1'-0"
SCALE OF FEET



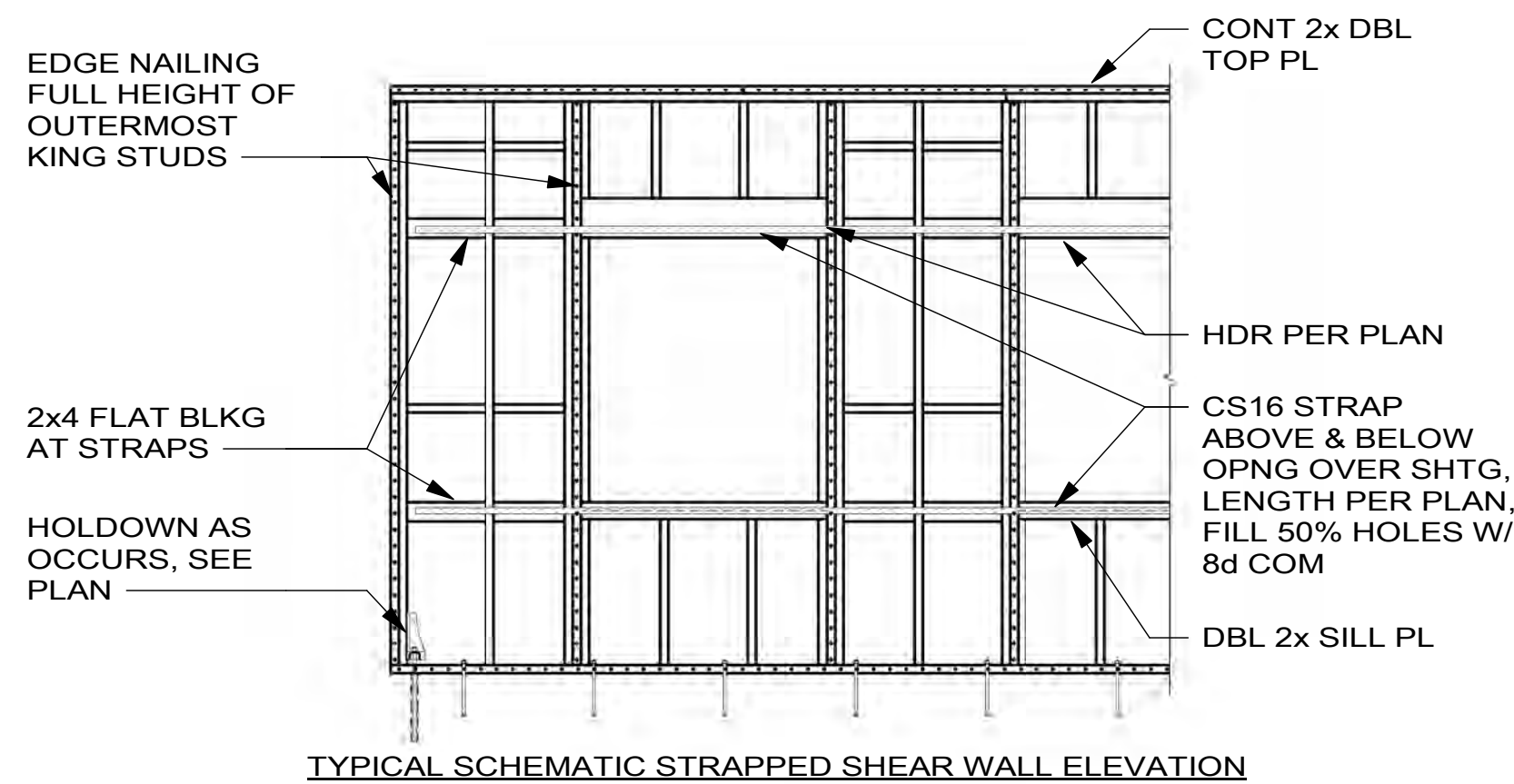
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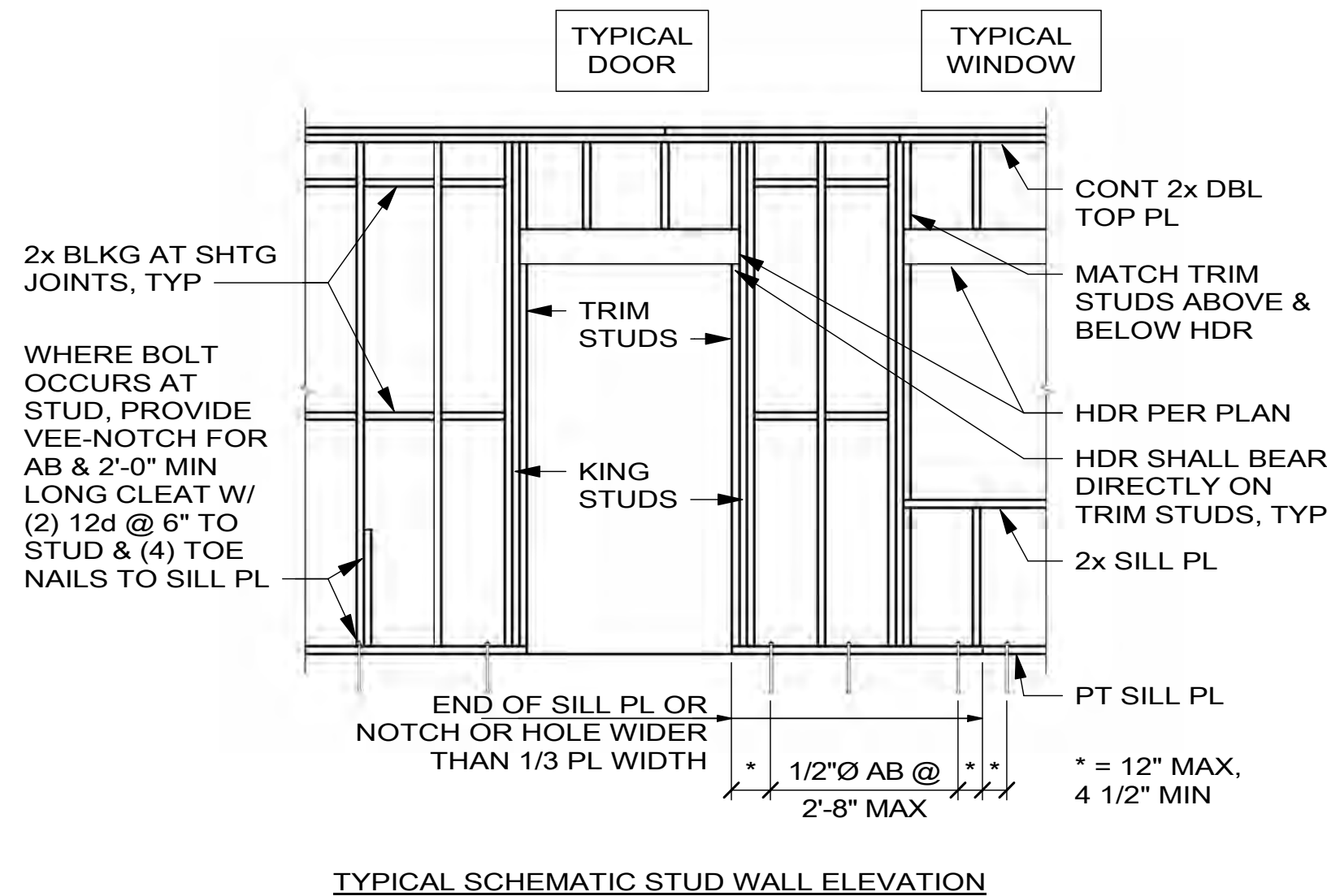


TYPICAL BUILT UP BEAM

5 BUILT UP BEAM DETAIL
S5.04 SCALE A

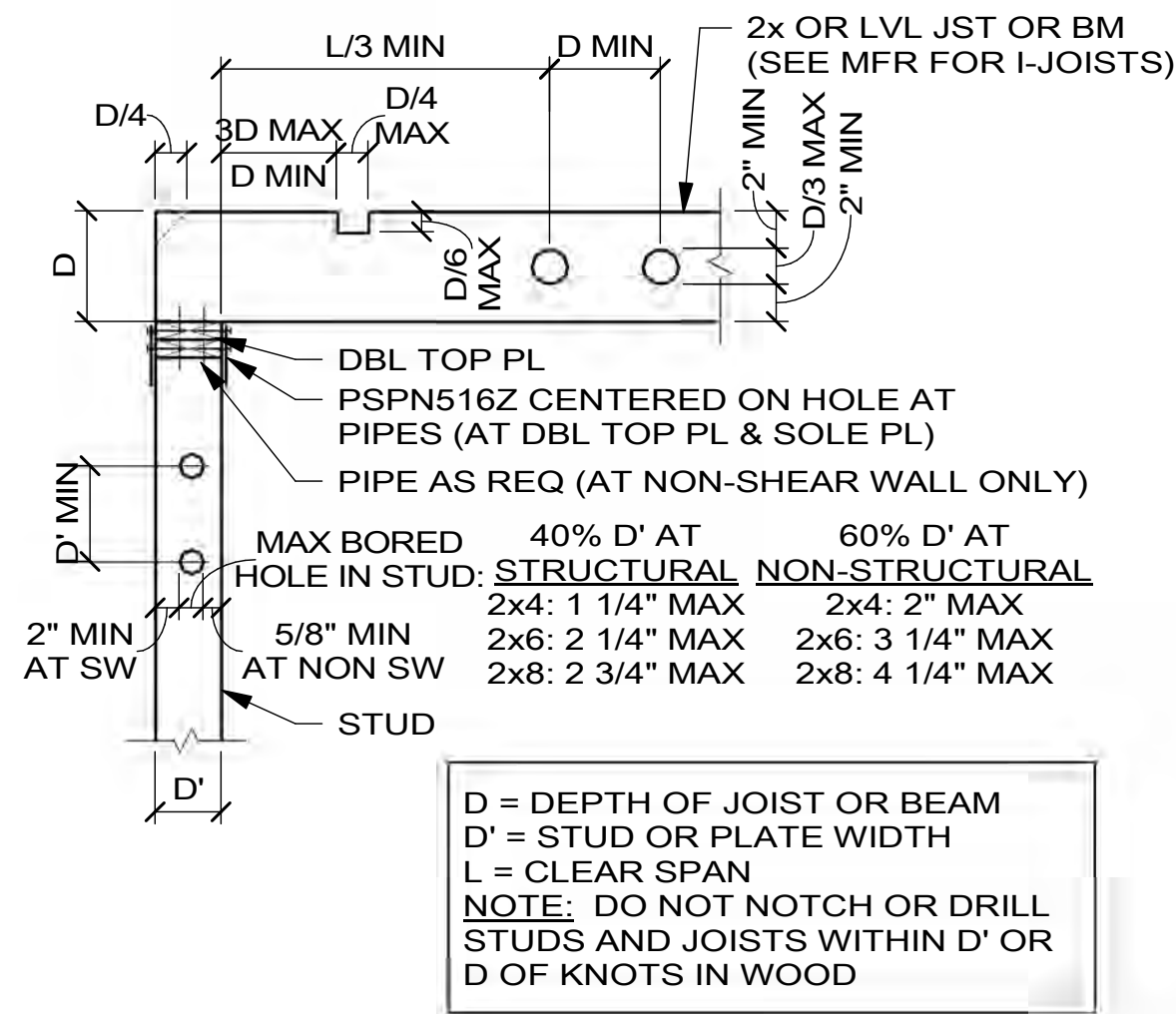


TYPICAL SCHEMATIC STRAPPED SHEAR WALL ELEVATION



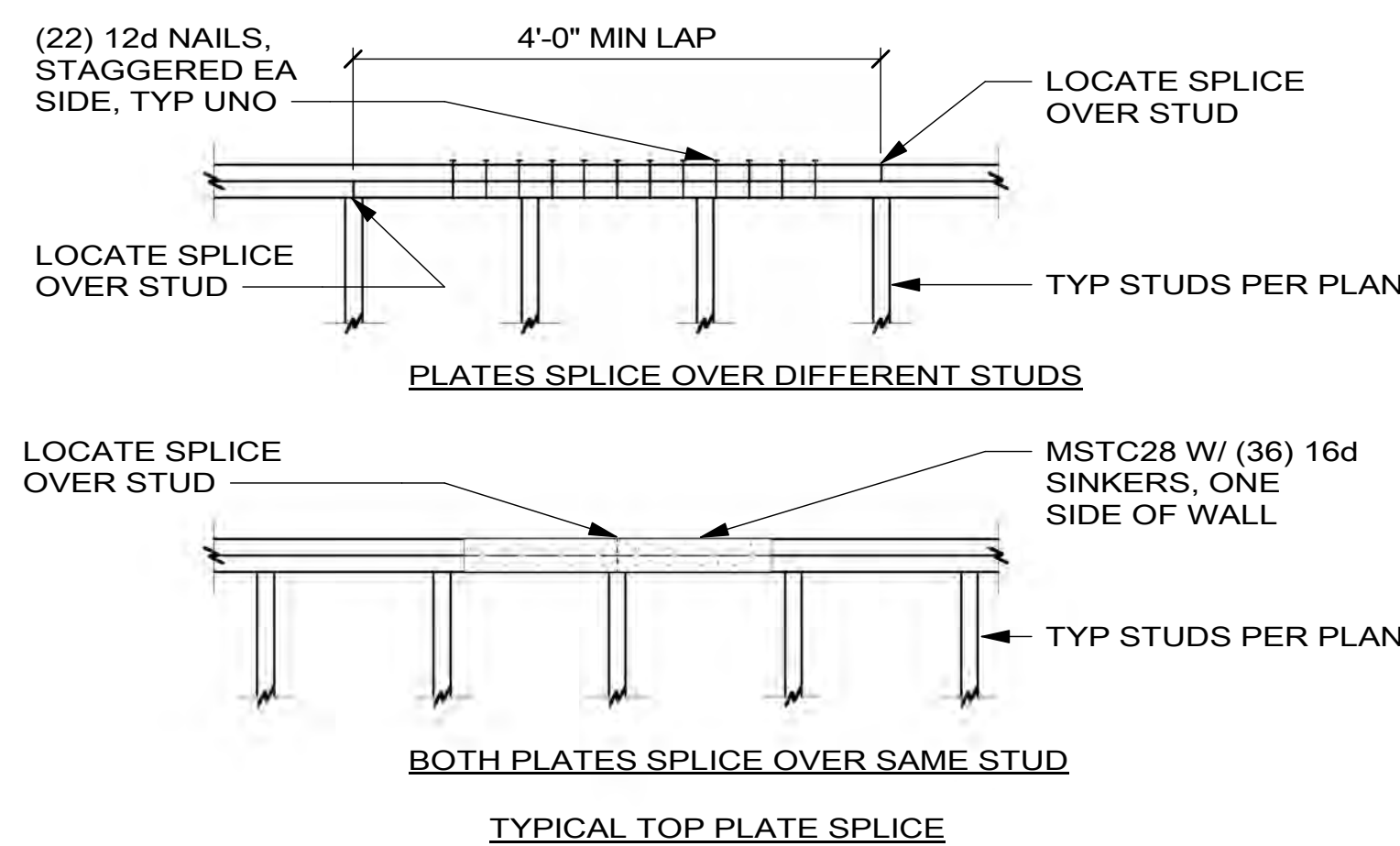
TYPICAL SCHEMATIC STUD WALL ELEVATION

1 STUD WALL ELEVATIONS
S5.04 NO SCALE

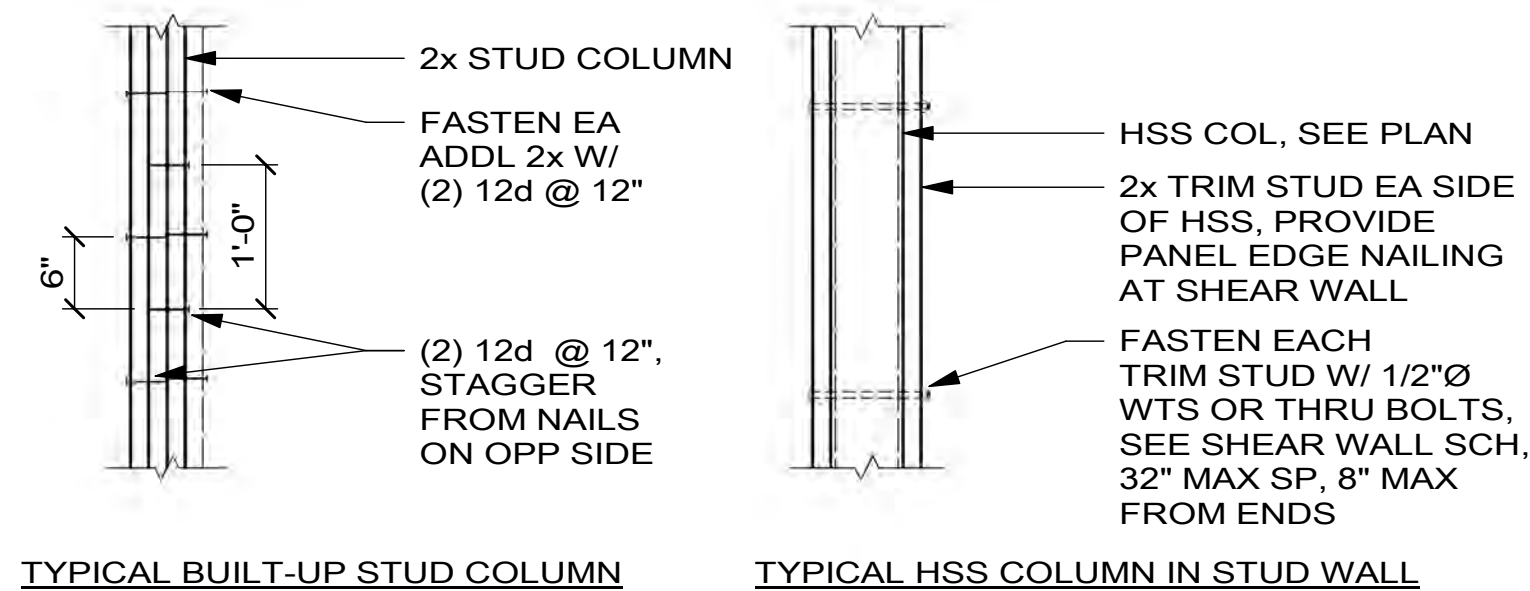


TYPICAL HOLES IN STUDS & JOISTS

6 STUD & JOIST HOLE DETAIL
S5.04 SCALE A



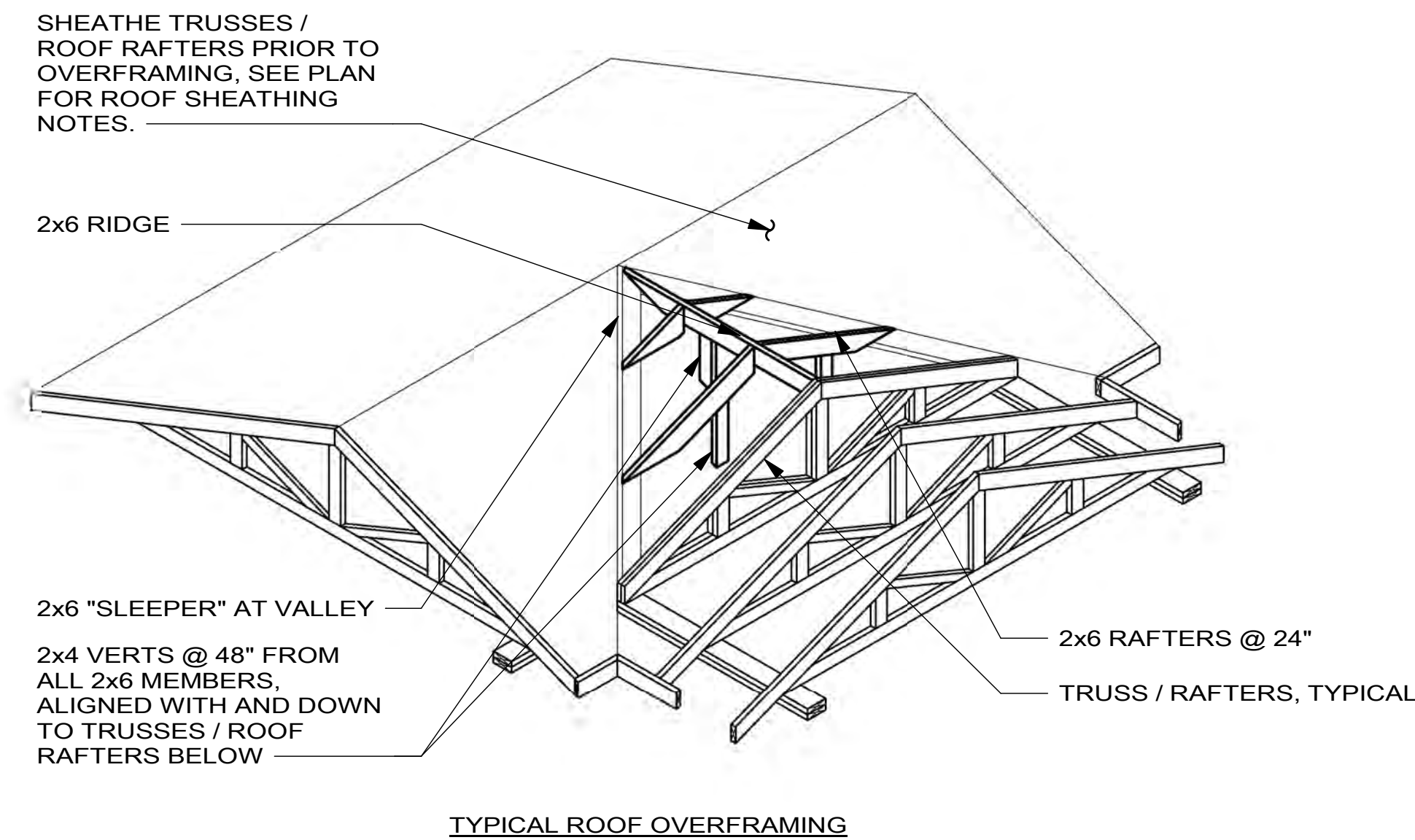
3 DOUBLE TOP PLATE SPLICE DETAILS
S5.04 SCALE A



TYPICAL BUILT-UP STUD COLUMN

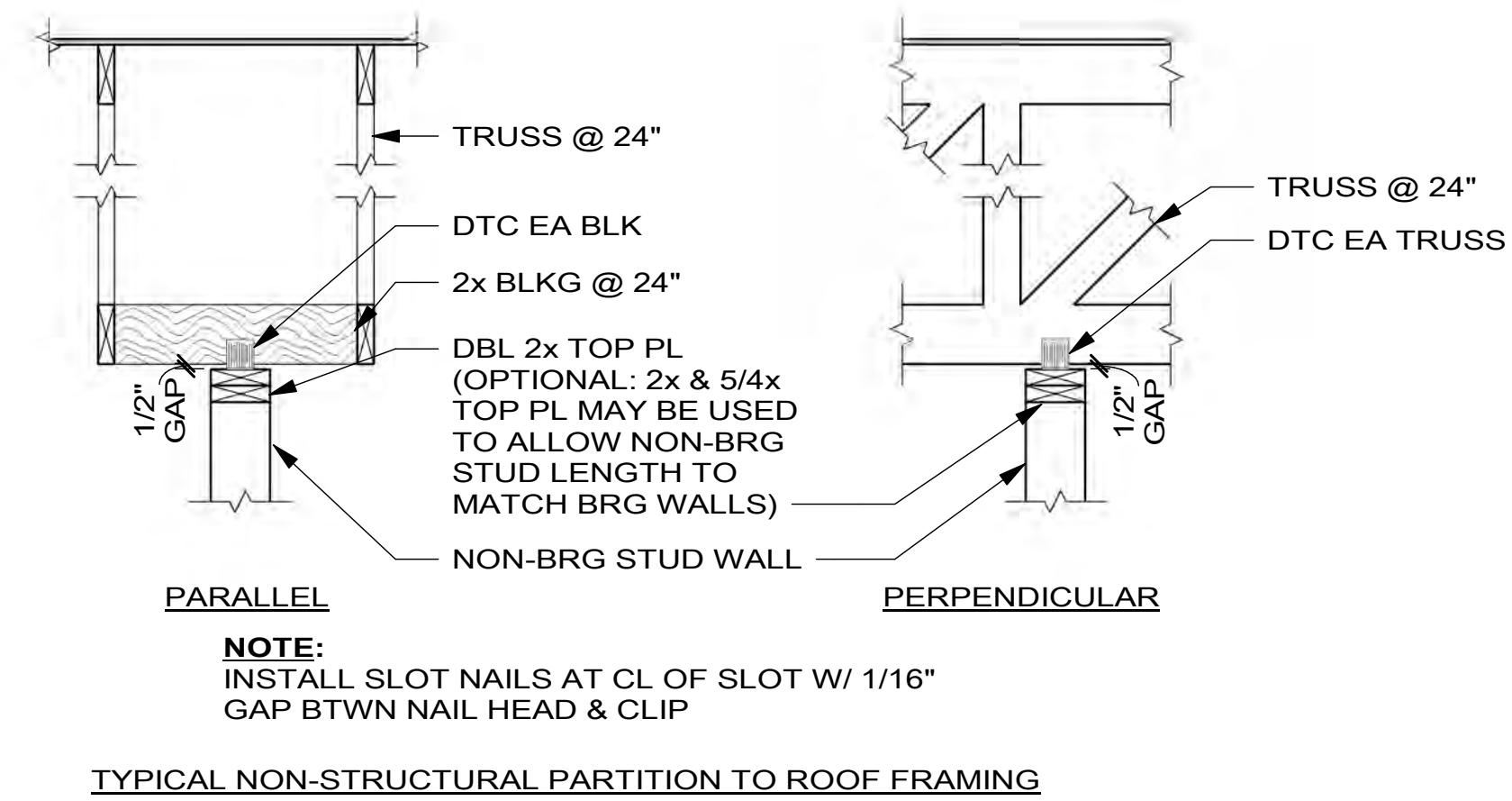
TYPICAL HSS COLUMN IN STUD WALL

2 COLUMN DETAILS
S5.04 SCALE A



TYPICAL ROOF OVERFRAMING

7 ROOF OVERFRAME DETAIL
S5.04 NO SCALE



4 NON BEARING PARTITION DETAILS
S5.04 SCALE A

SCALE A 1 0 1 2 3 3/4" = 1'-0"

SCALE OF FEET



DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 03/10/2022	SUB SHEET NO. S5.04	TITLE OF SHEET TYPICAL WOOD DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 129 OF 165
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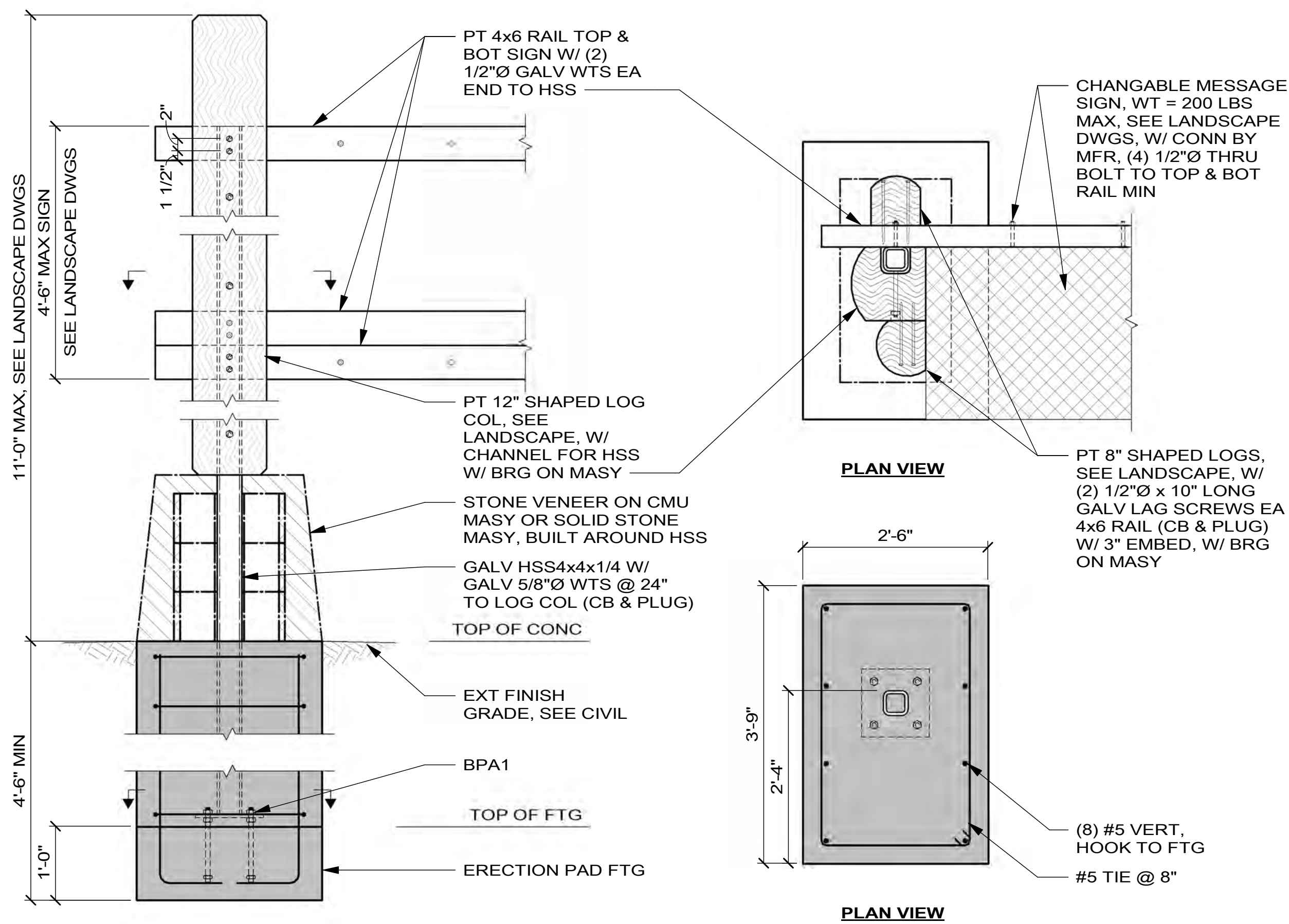


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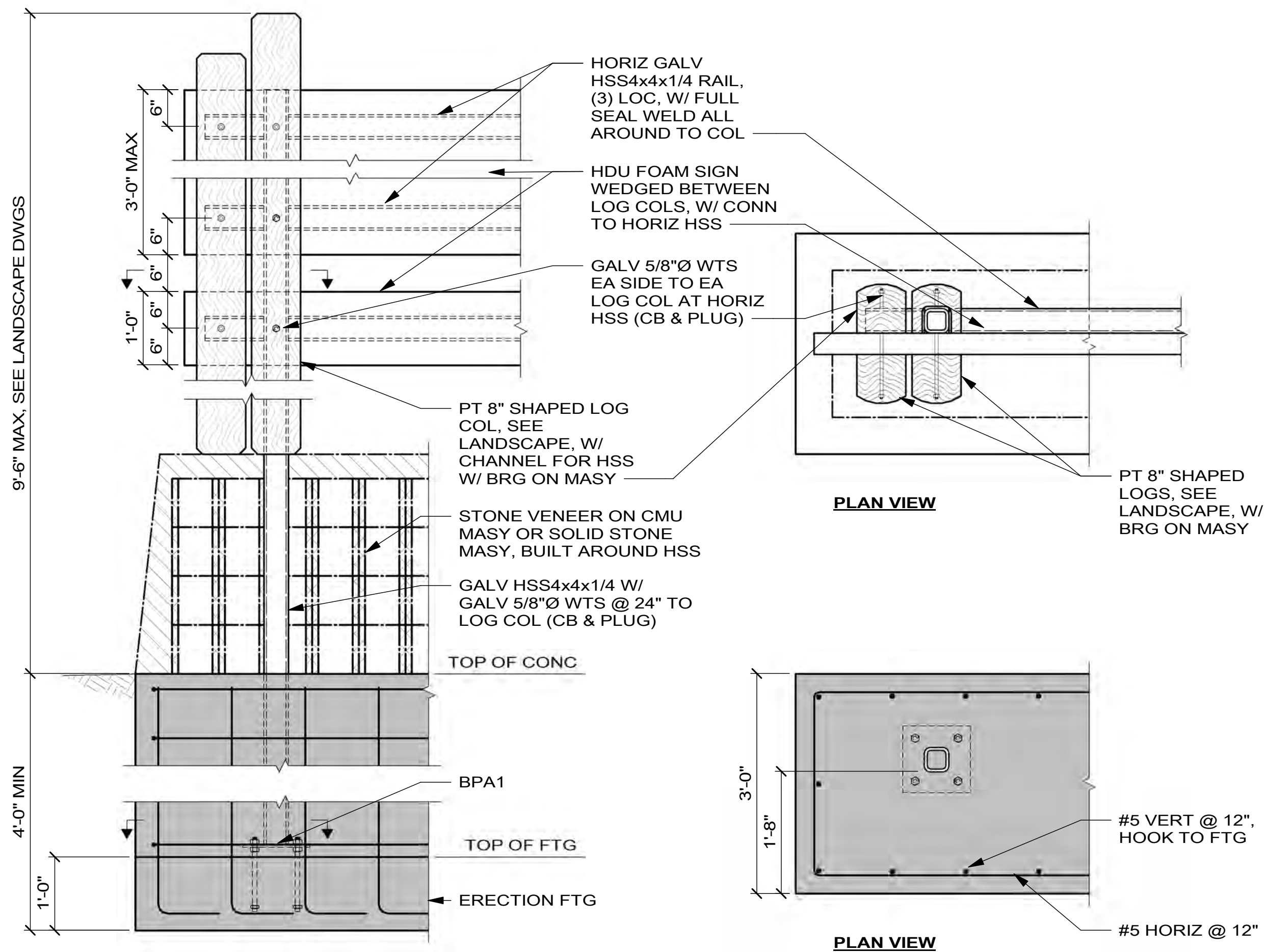
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DRAWING NO. 121 <hr/> 76678
MIS/PKG NO. 160755
SHEET 30 OF 165

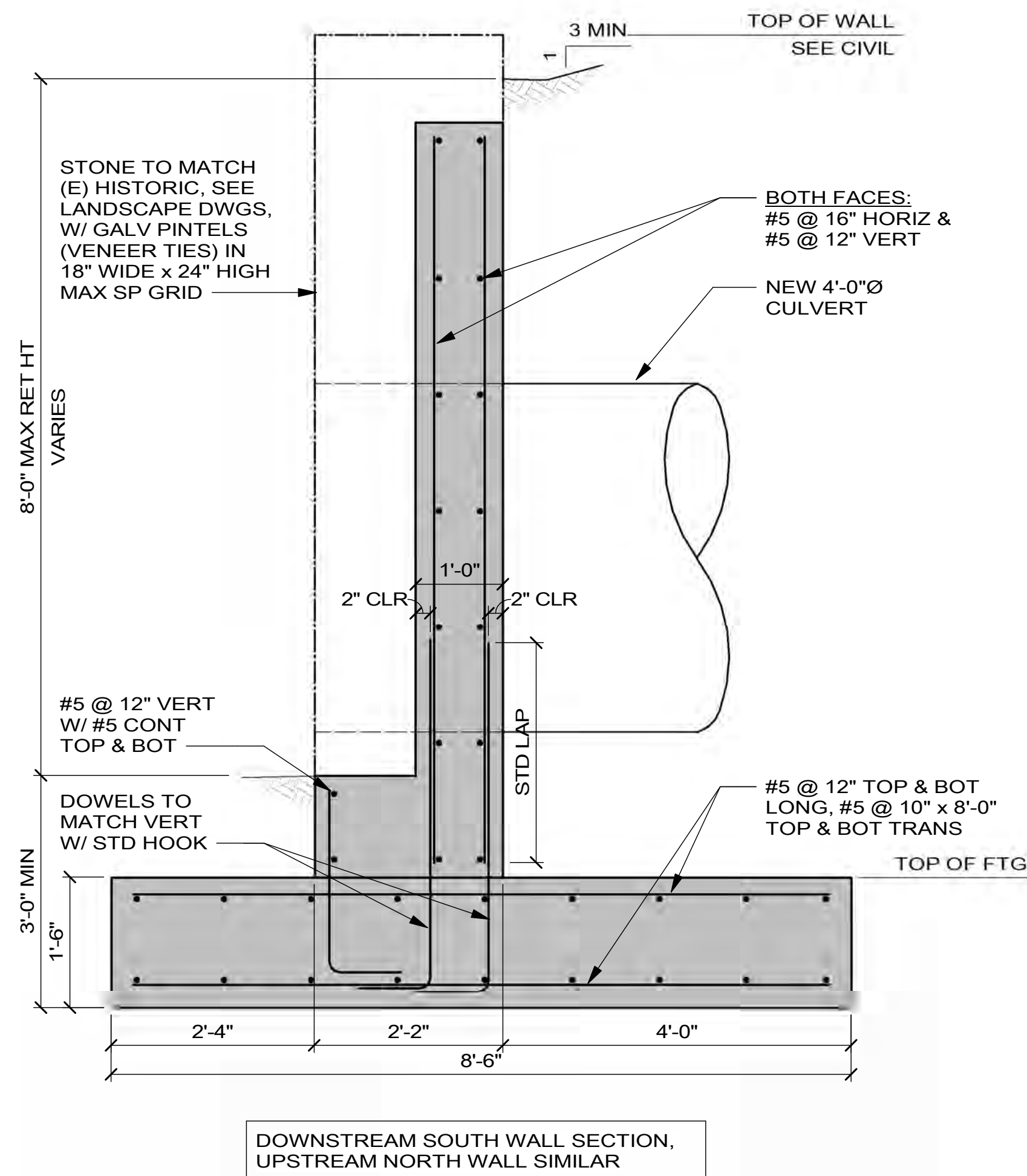
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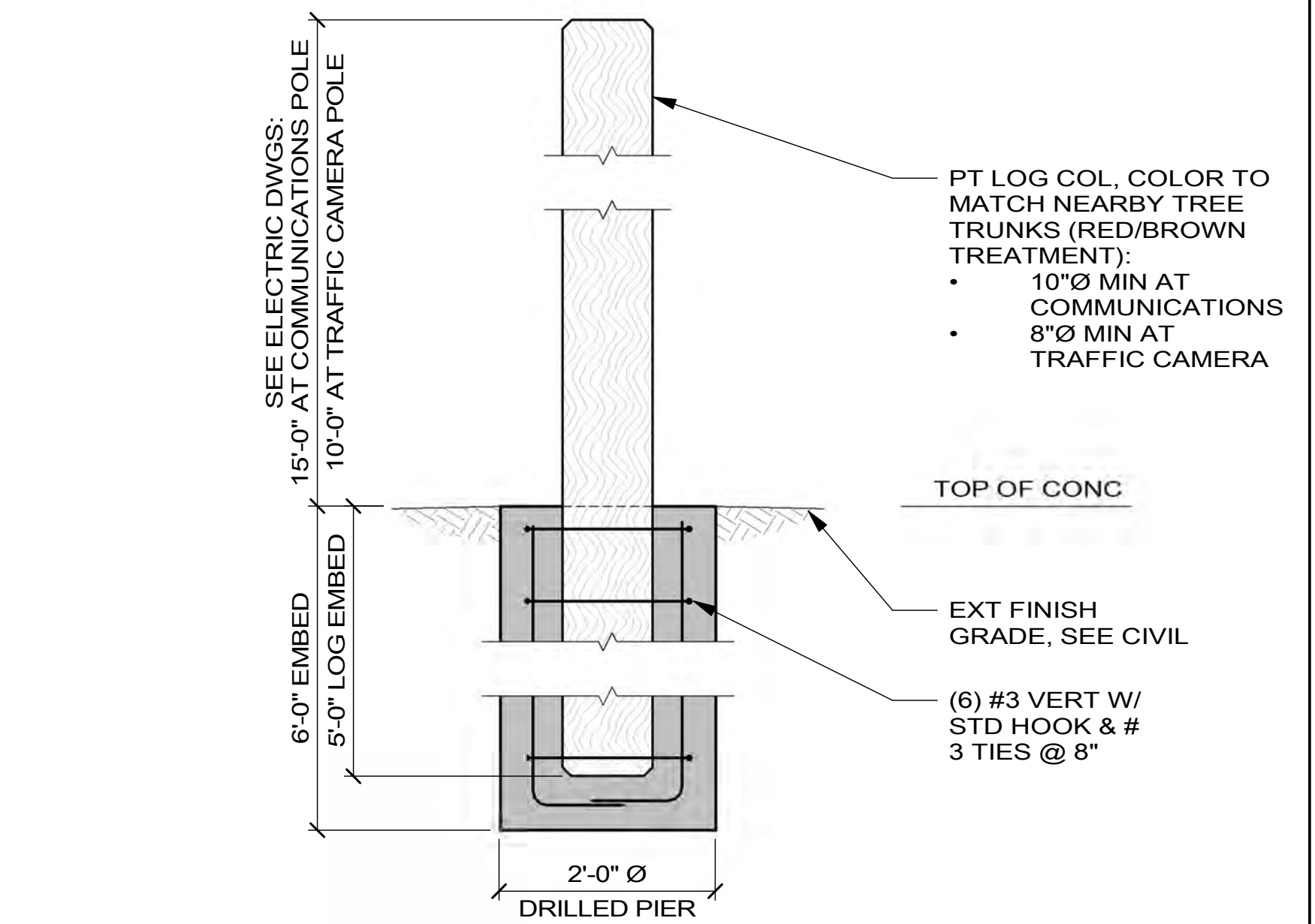
4 VARIABLE MESSAGE SIGN FOUNDATION - BID OPTION 4
S5.12 SCALE **A**



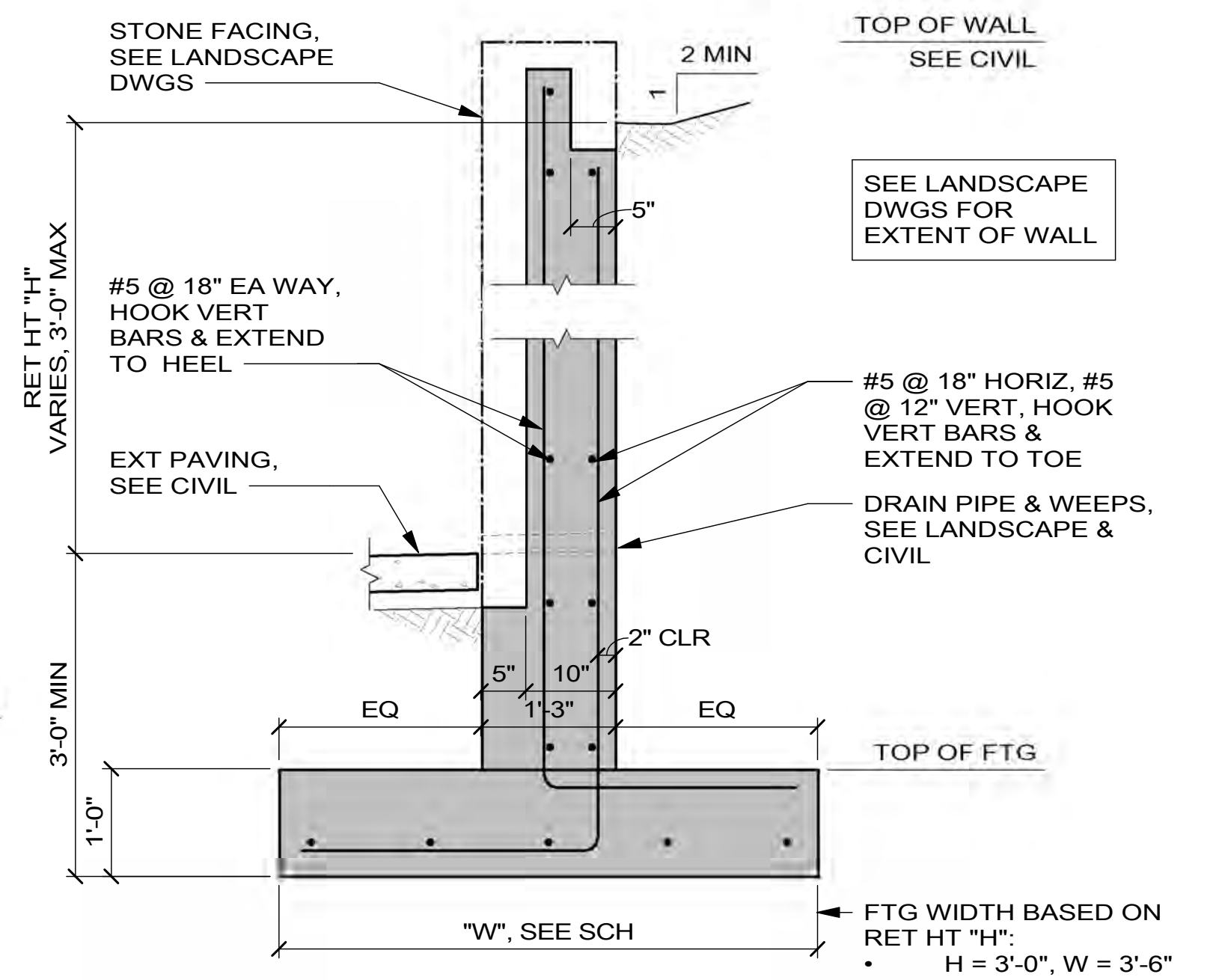
1 PARK SIGN FOUNDATION - BID OPTION 3
S5.12 SCALE **A**



2 HISTORIC CULVERT AND STONE HEADWALL x 38'-6\"/>



5 COMMUNICATIONS & TRAFFIC CAMERA POLES
S5.12 SCALE **A**



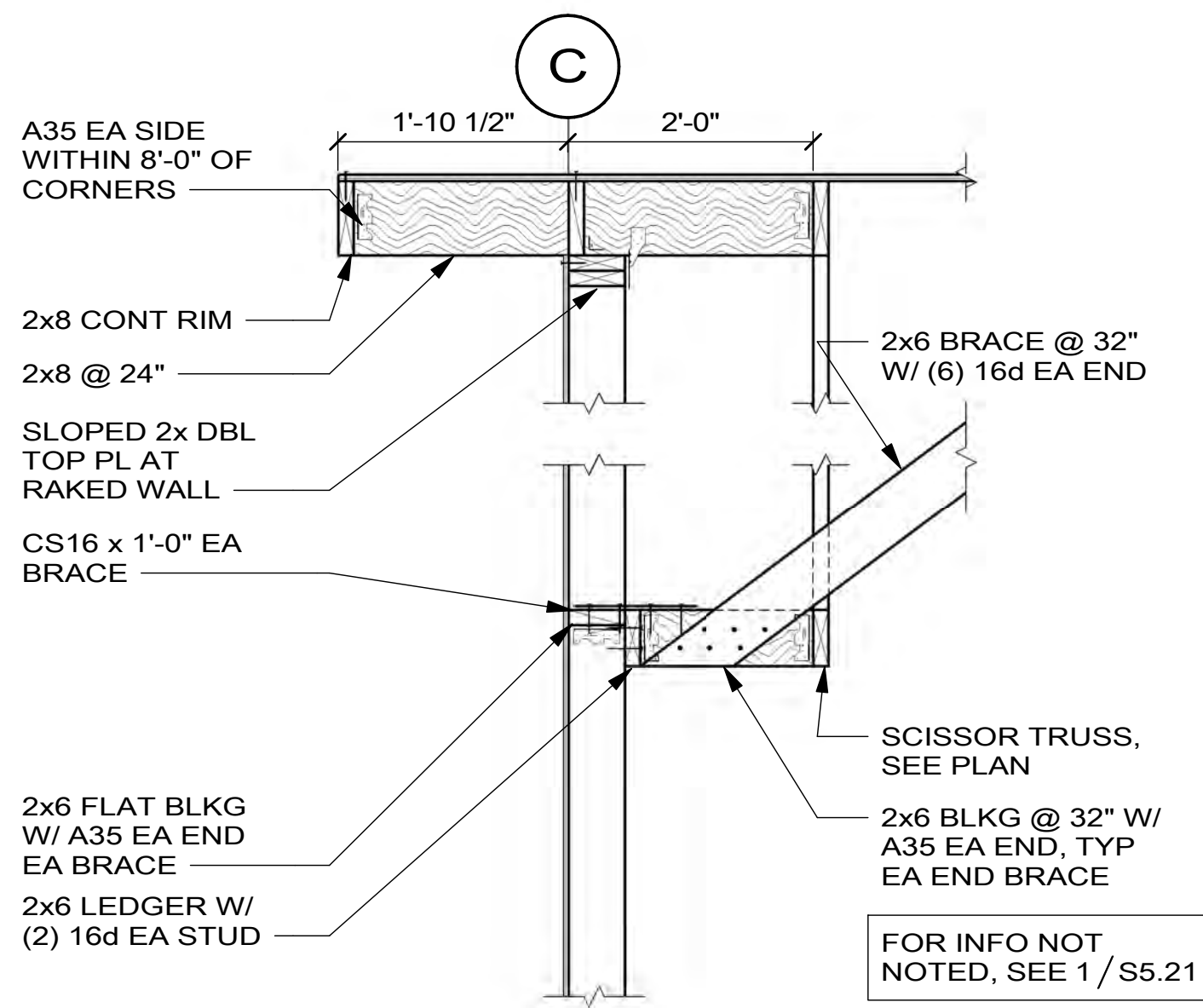
3 FOUNDATION AT RETAINING WALL - BID OPTION 3
S5.12 SCALE **A**

SCALE **A** 1 0 1 2 3 3/4" = 1'-0"
SCALE OF FEET

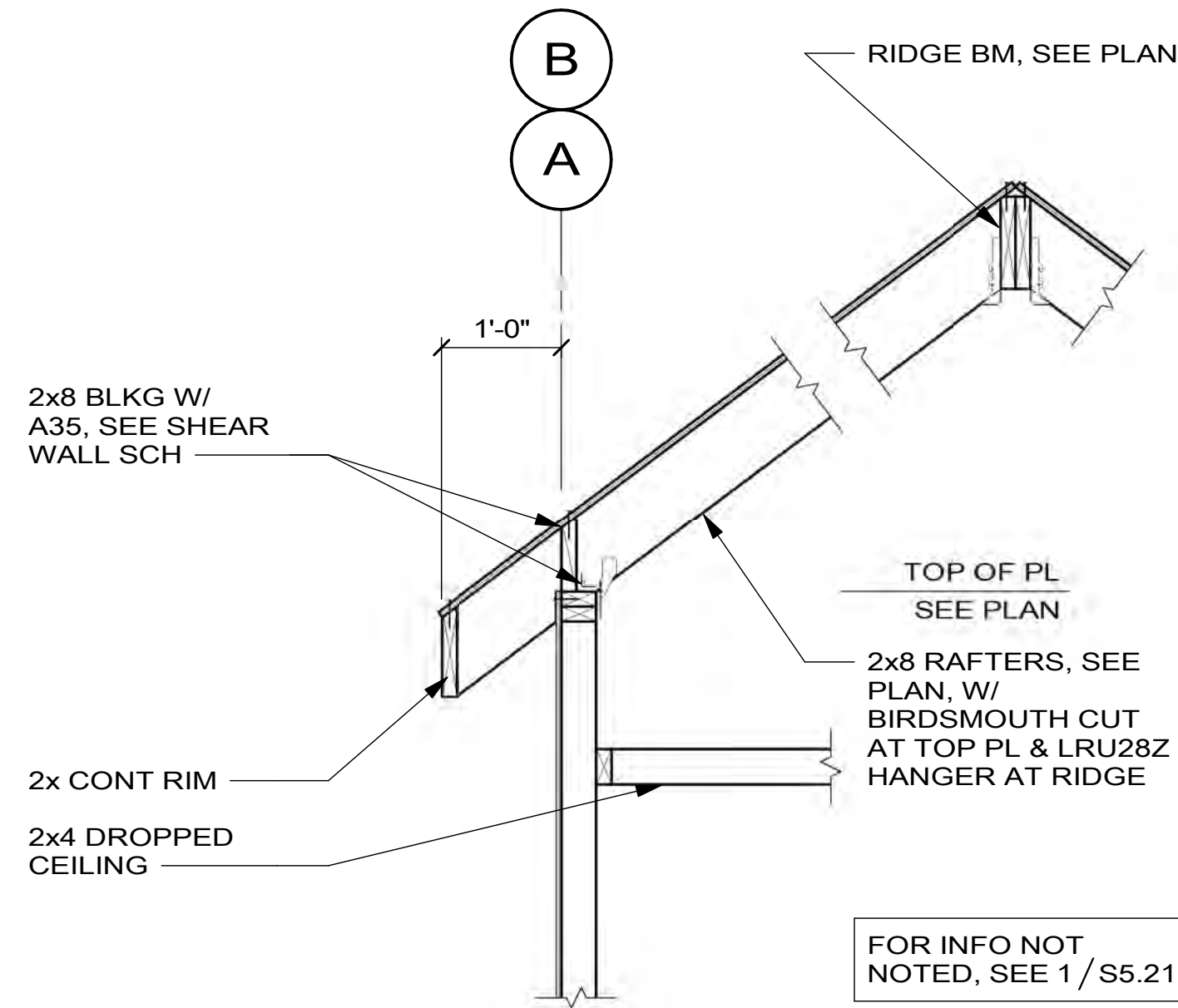


DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 03/10/2022	SUB SHEET NO. S5.12	TITLE OF SHEET SITE FOUNDATION SECTIONS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 131 OF 165
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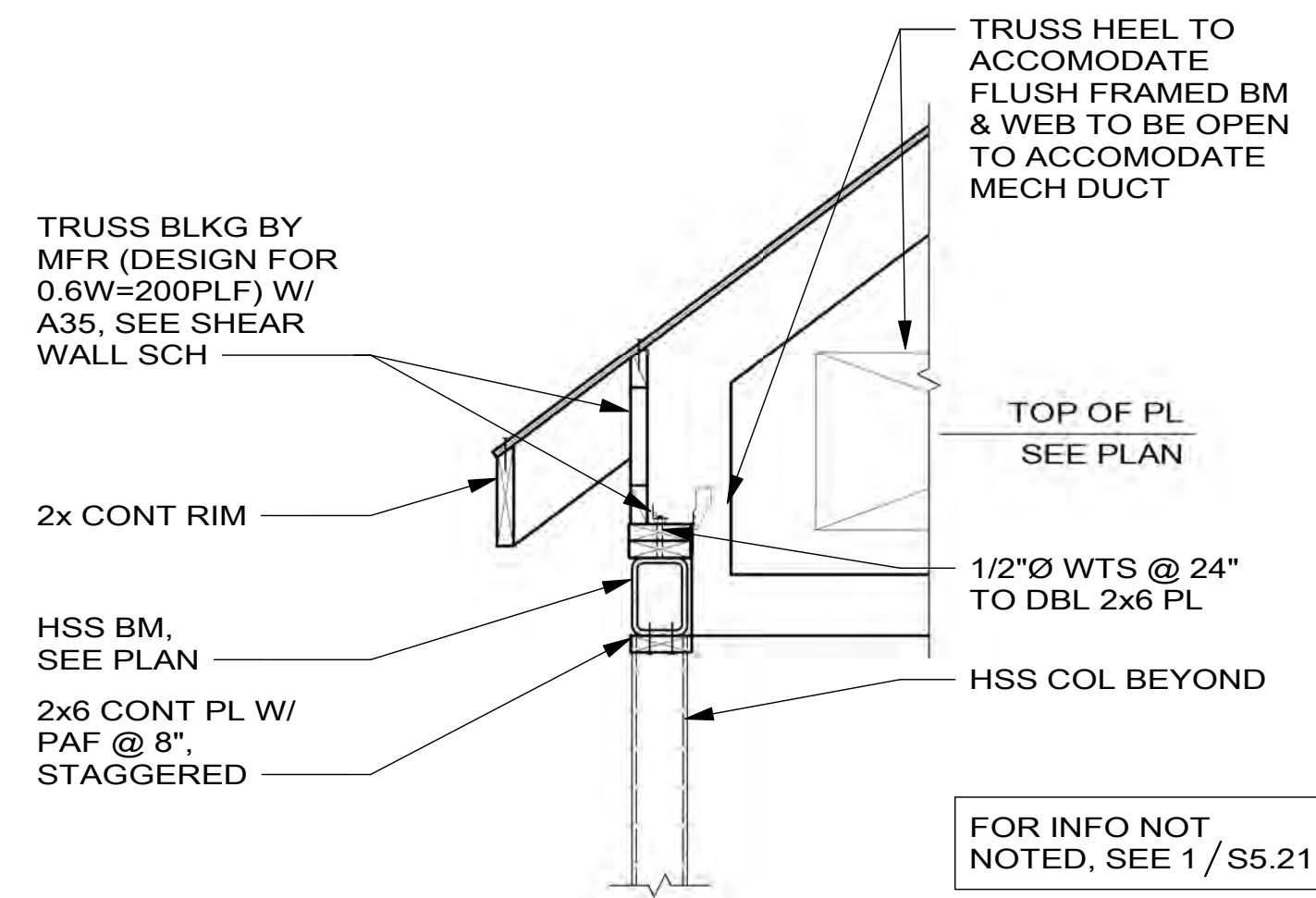
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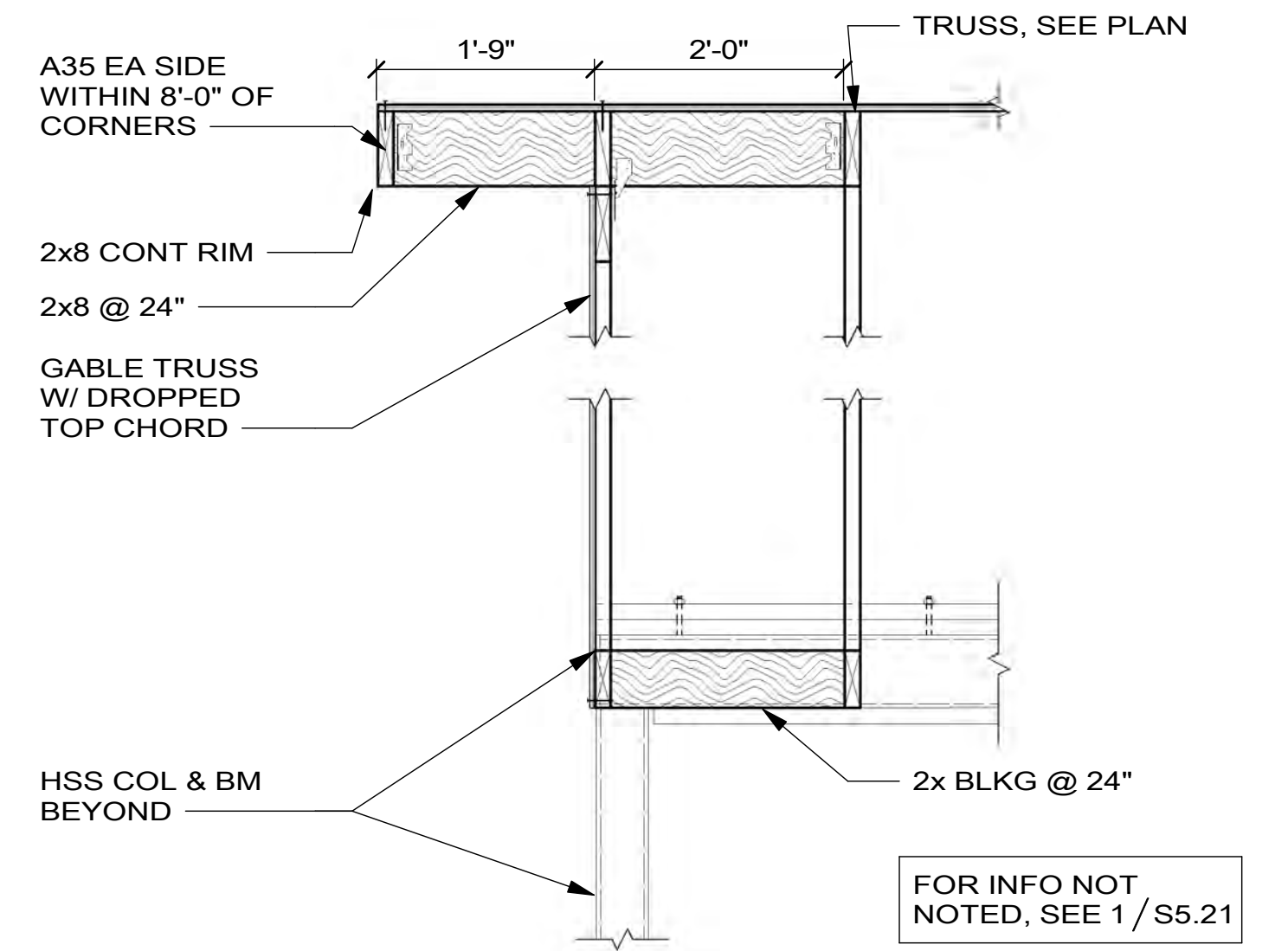
5 SCISSOR TRUSS AT GABLE WALL
S5.21 SCALE (A)



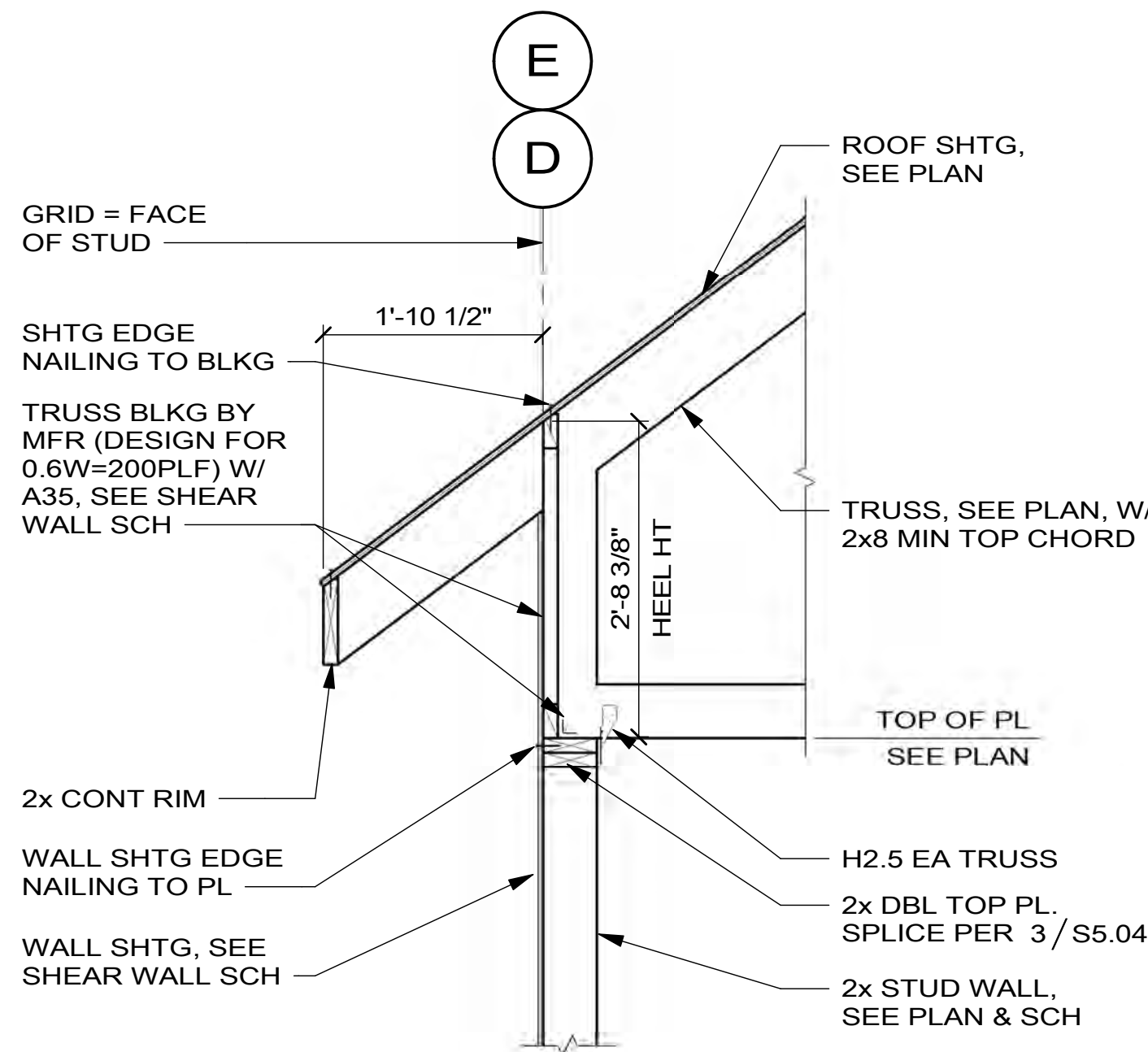
6 PERP ROOF TRUSS AT KIOSK
S5.21 SCALE (A)



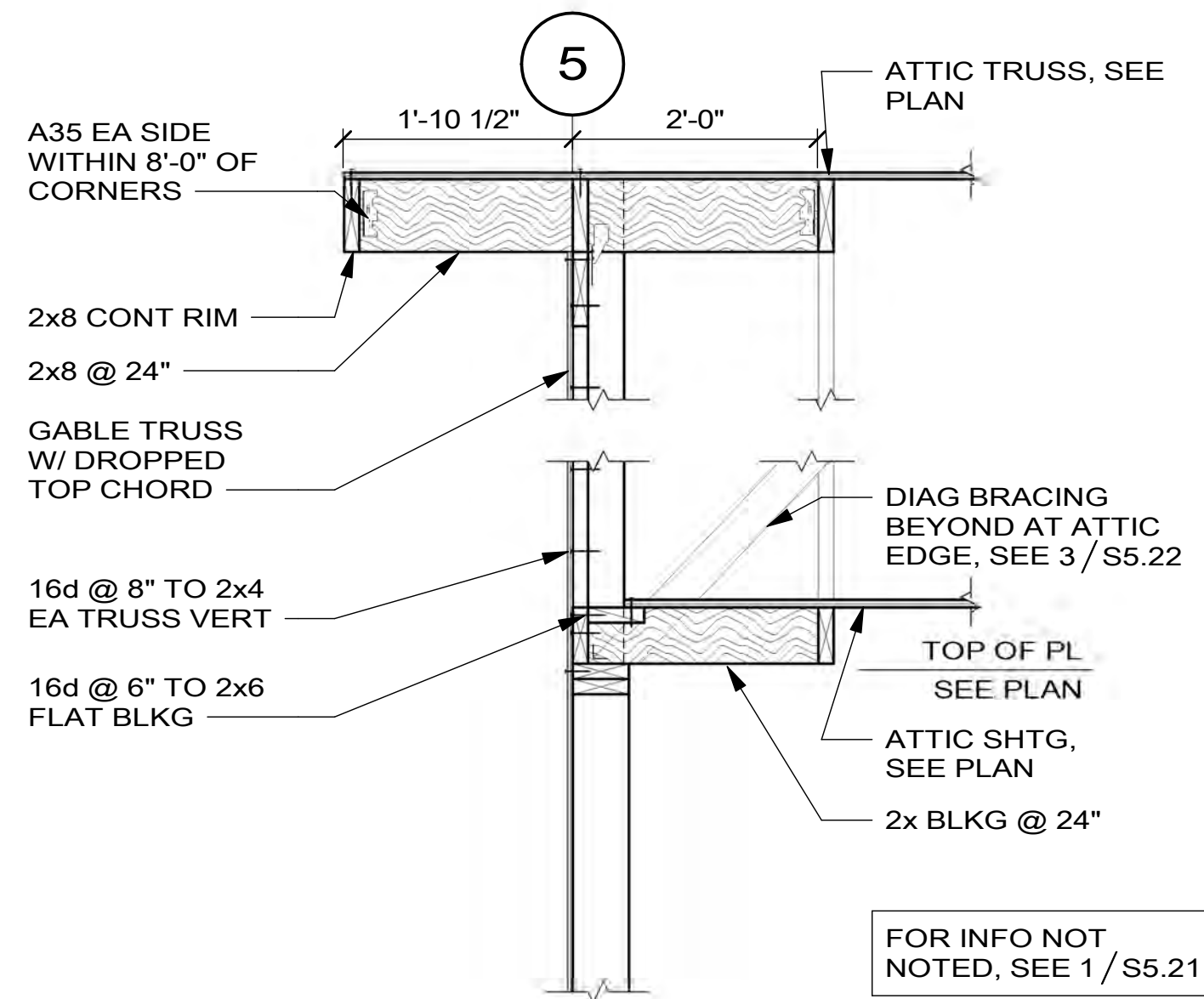
7 PERP ROOF TRUSS AT KIOSK HSS
S5.21 SCALE (A)



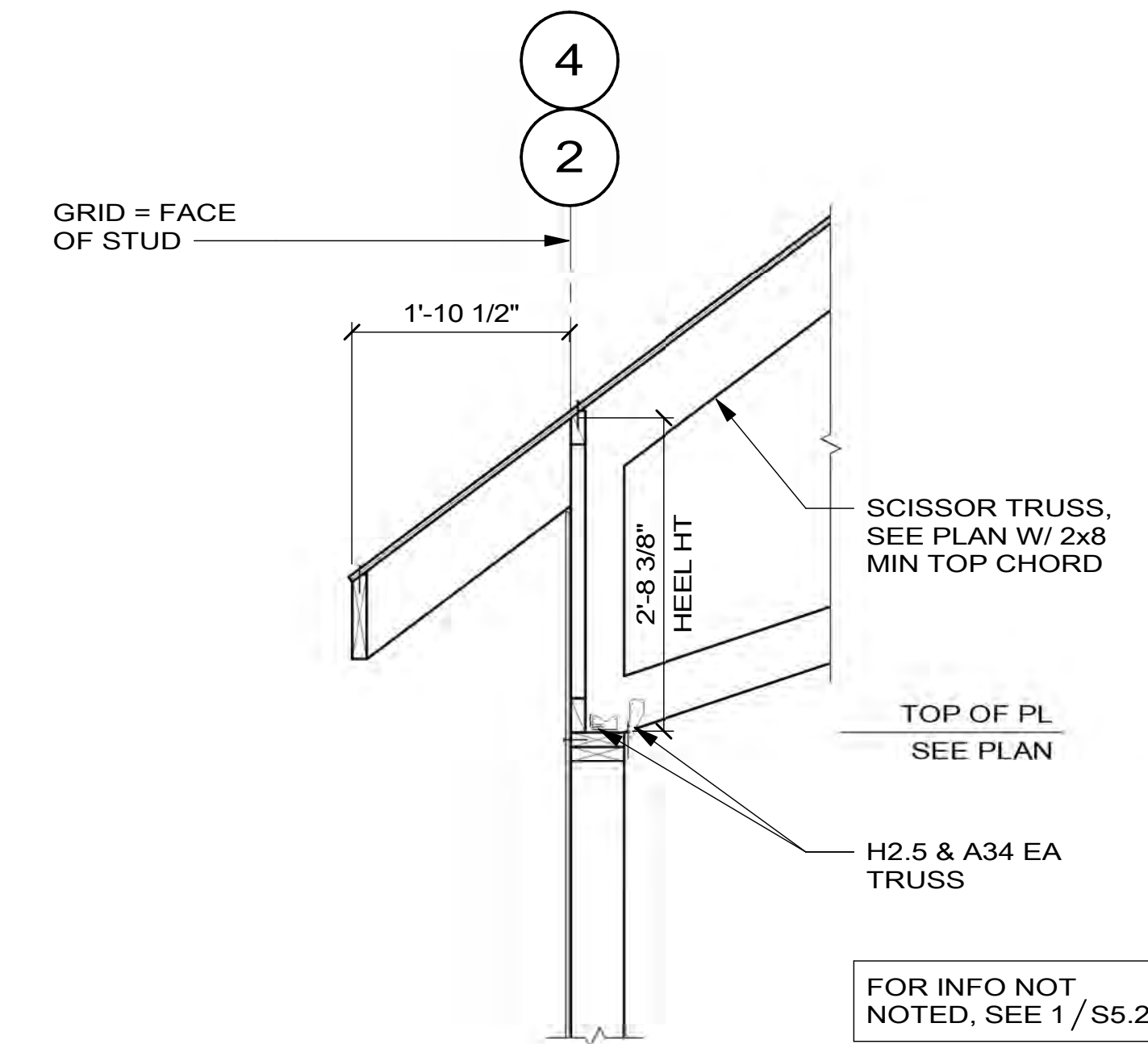
8 TRUSS AT KIOSK OVERHANG
S5.21 SCALE (A)



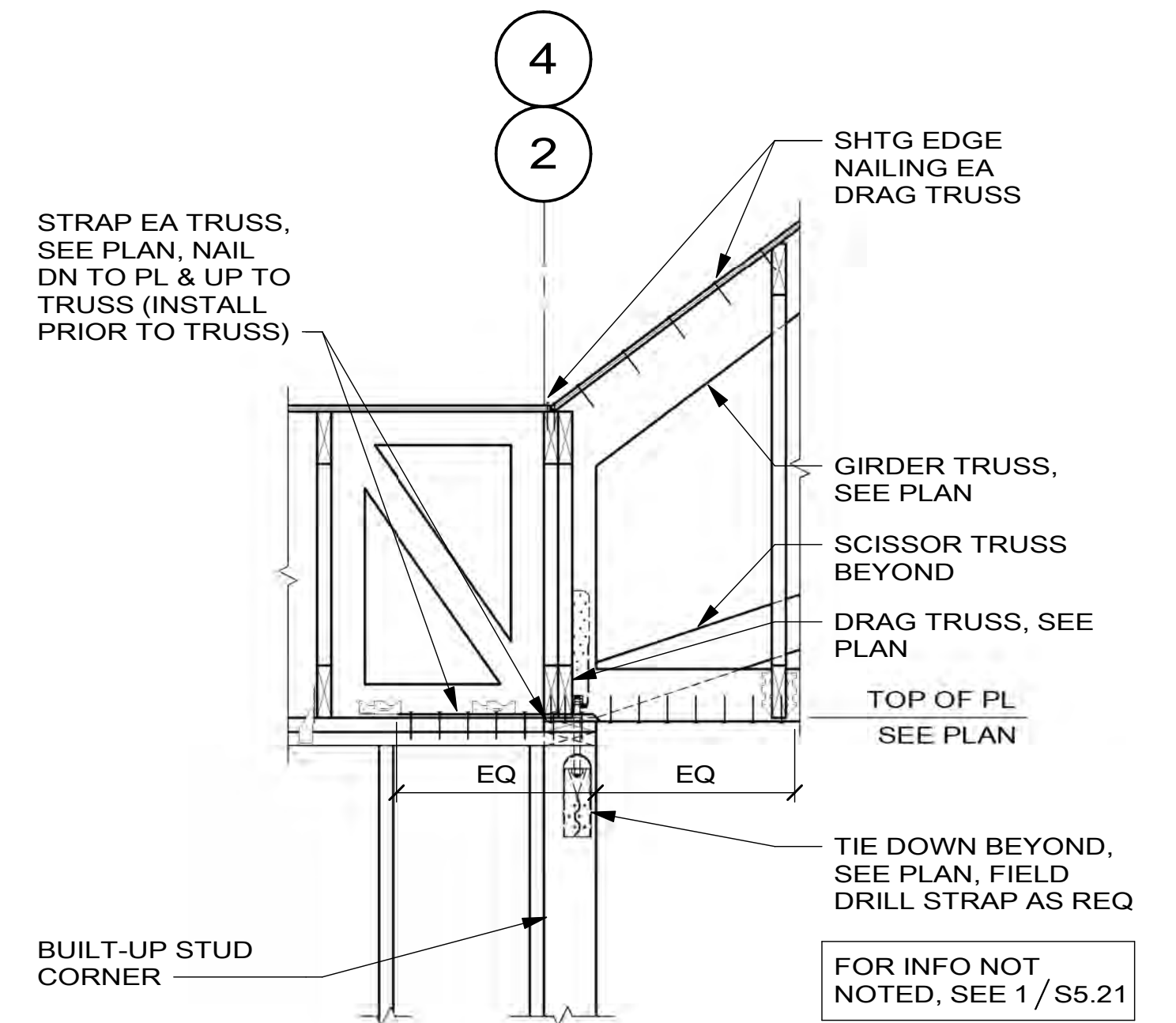
1 PERP ROOF TRUSS AT EXT WALL
S5.21 SCALE (A)



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



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



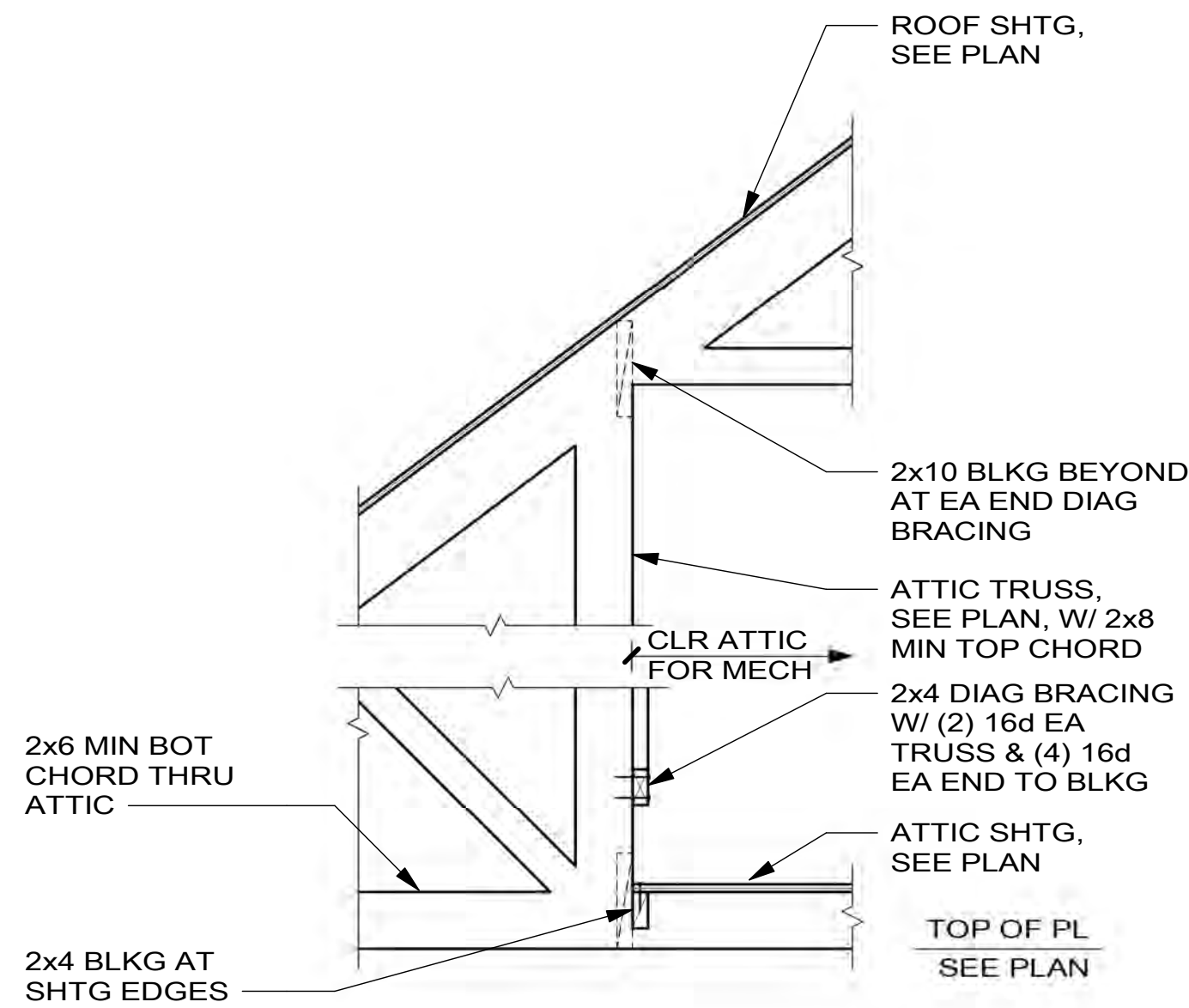
4 GIRDER TRUSS AT EXT WALL
S5.21 SCALE (A)

SCALE (A) 1 0 1 2 3 3/4" = 1'-0"

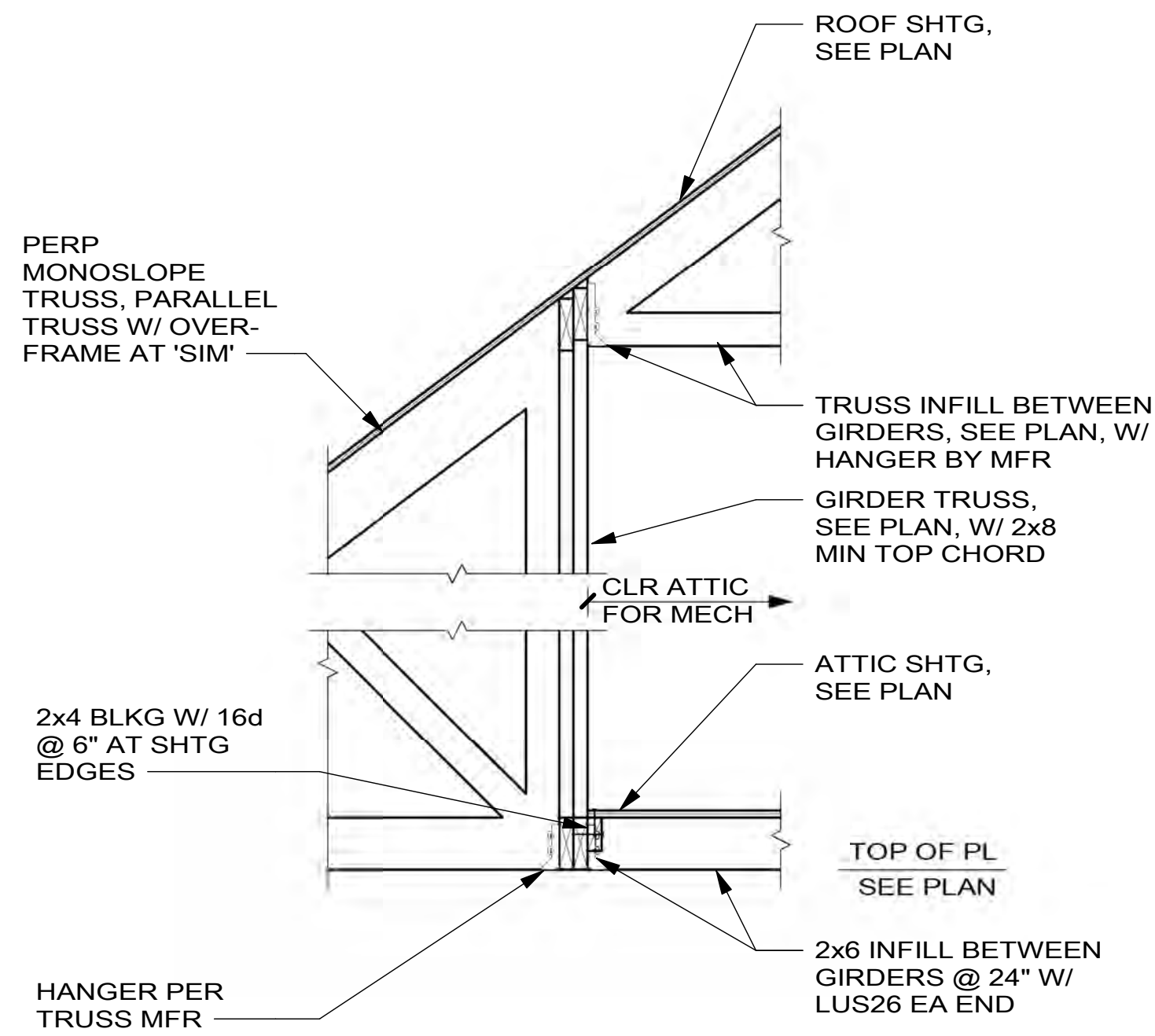


DESIGNED: JSS TSS	SUB SHEET NO. S5.21	TITLE OF SHEET ROOF FRAMING SECTIONS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 132 OF 165
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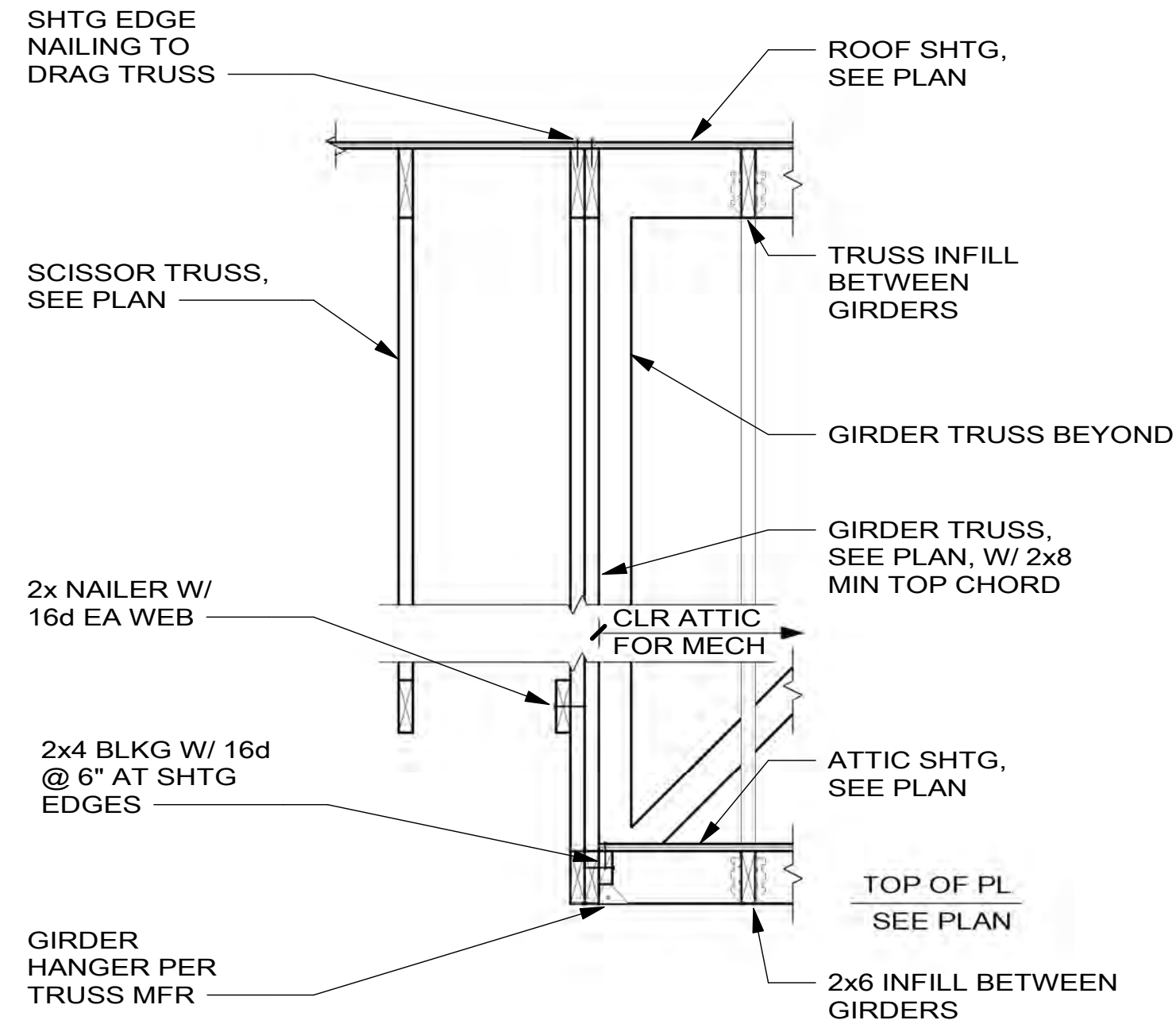
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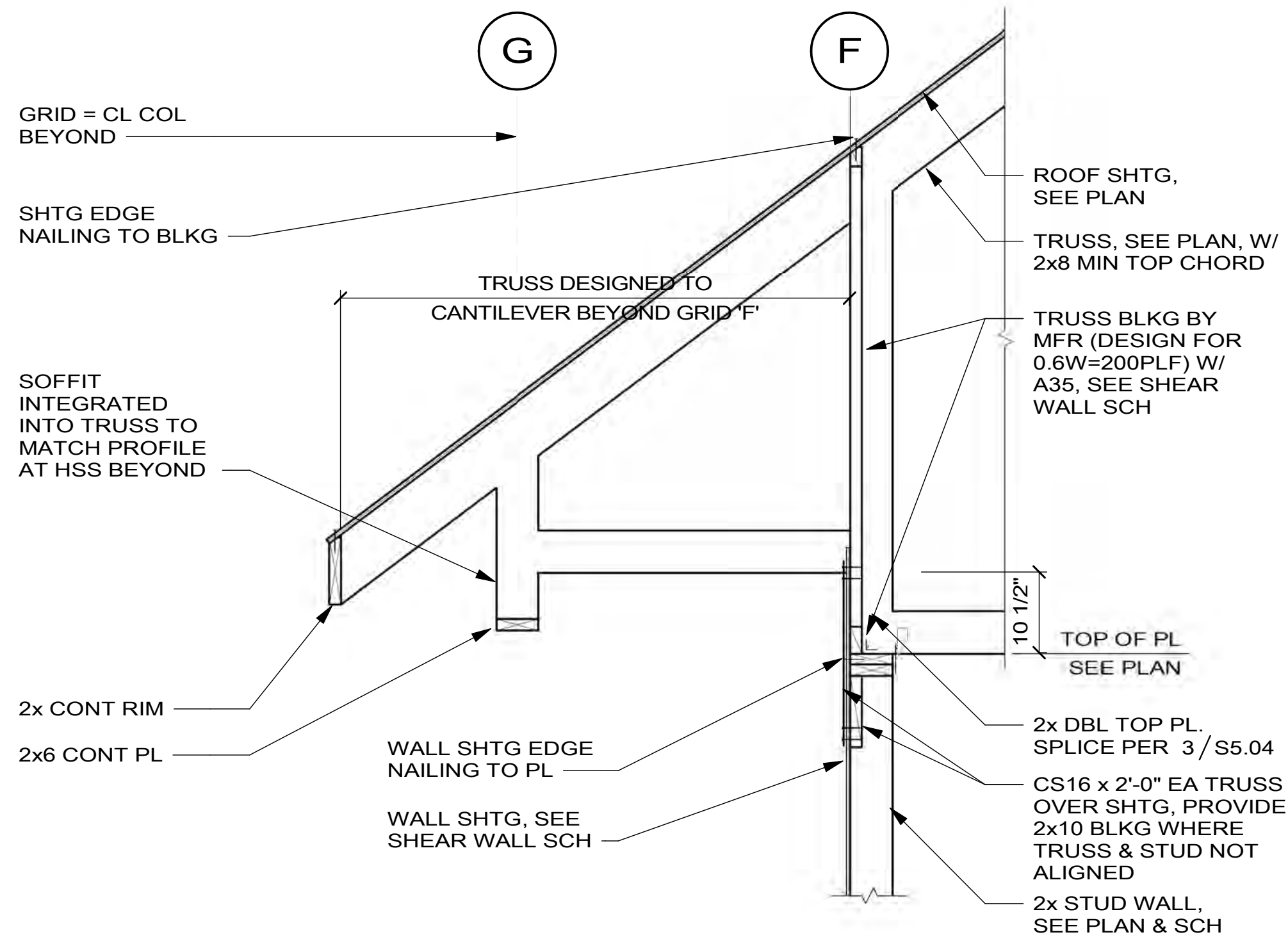
3 ROOF TRUSS AT ATTIC
S5.22 SCALE A



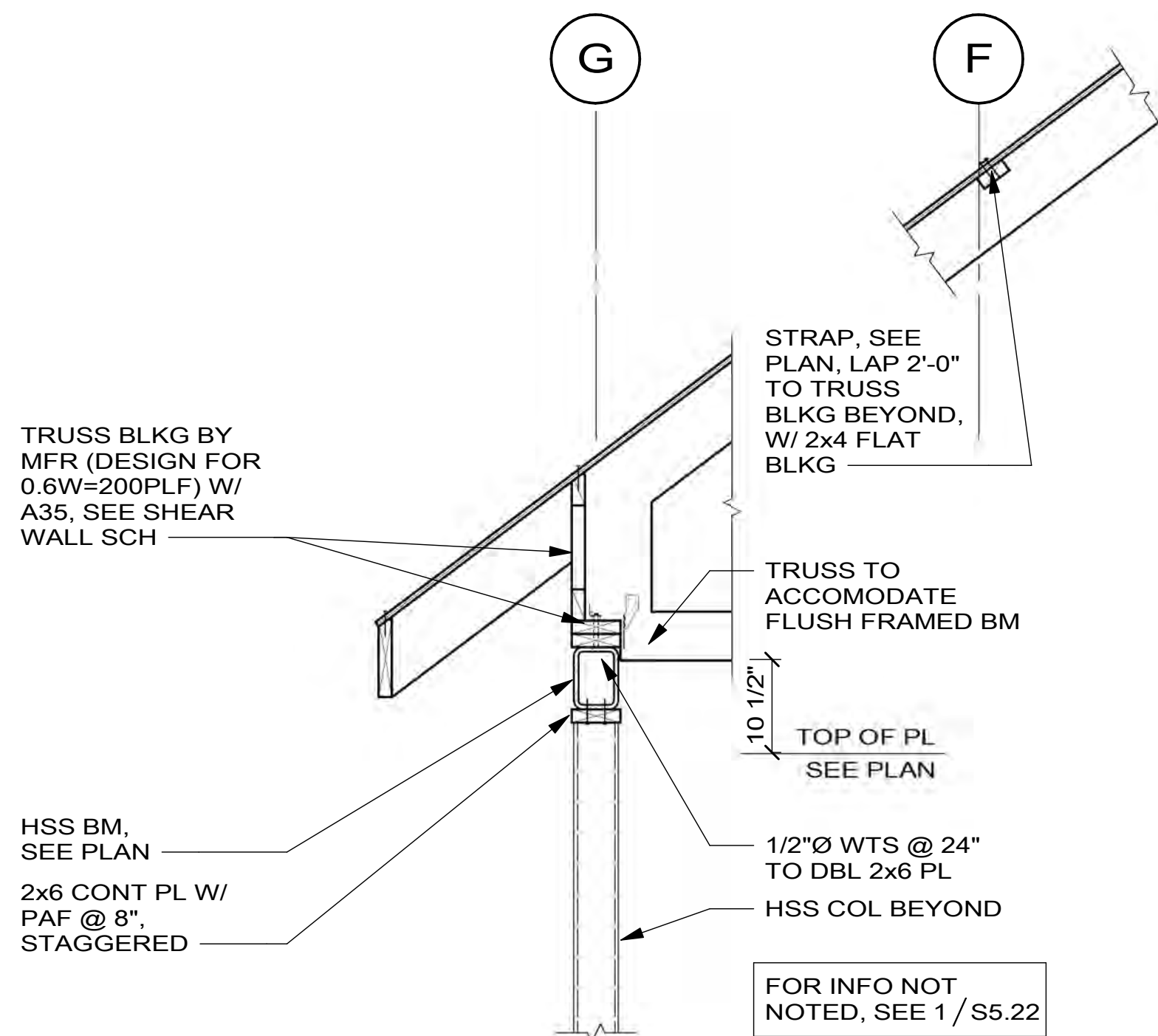
4 ROOF GIRDER TRUSS AT ATTIC
S5.22 SCALE A



5 ROOF GIRDER TRUSS AT ATTIC
S5.22 SCALE A



1 CANTILEVER ROOF TRUSS AT EXT WALL
S5.22 SCALE A



2 PERP ROOF TRUSS AT HSS
S5.22 SCALE A

SCALE A 1 0 1 2 3 3/4" = 1'-0"
SCALE OF FEET



DESIGNED: JSS GADD JSS TECH REVIEW: TSS DATE: 03/10/2022	SUB SHEET NO. S5.22	TITLE OF SHEET ROOF FRAMING SECTIONS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 133 OF 165
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MECHANICAL NOTES

I. GENERAL

- ALL WORK SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS AND SPECIFICATIONS, AND LOCAL 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 MANUFACTURER'S 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.
- PROVIDE ACCESS DOORS IN DUCTWORK AS REQUIRED FOR ACCESS TO FIRE DAMPERS, FIRE/SMOKE DAMPERS, OR ANY OTHER MECHANICAL EQUIPMENT REQUIRING MAINTENANCE OF SERVICE.
- ALL PIPE AND DUCT PENETRATIONS THOUGH RATED WALLS SHALL BE SEALED PER 2021 IBC.

OUTSIDE AIR CALCULATION (CALCULATIONS BASED ON IMC TABLE 403.3)										
ROOM NAME	ROOM # (per zoning)	SQUARE FEET	OA CFM/ PERSON	OA CFM/SF	OCCUPANT LOAD #/1000 SF	AIR DIST. EFFECTIVENESS	OA PERCENTAGE	SA PROVIDED	OA PROVIDED	OA REQUIRED
ENTRY	100	68	0	0.06	0	0.8	13%	200	27	5.1
STORAGE	101	103	5	0.06	5	0.8	13%	UNOCCUPIED	UNOCCUPIED	UNOCCUPIED
EXT. STORAGE	102	30	0	0.00	0	0.8	13%	UNOCCUPIED	UNOCCUPIED	UNOCCUPIED
BREAKROOM	103	193	5	0.06	5	0.8	13%	250	33	20.5
MECH	104	105	0	0.00	0	0.8	13%	UNOCCUPIED	UNOCCUPIED	UNOCCUPIED
ELEC/IT	105	34	0	0.00	0	0.8	13%	50	7	0.0
RESTROOM	106	91	0	0.00	0	0.8	13%	EXHAUST 180	EXHAUST 180	EXHAUST 180
HALL	107	120	0	0.06	0	0.8	13%	125	17	9.0
PRIVATE OFFICE	108	154	5	0.06	5	0.8	13%	500	67	16.4
OPEN OFFICE	109	143	5	0.06	5	0.8	13%	500	67	15.2
KIOSK (TYP. OF 3)	110	43	5	0.06	5	0.8	100%	1500	1500	4.6
									1716	70.7

ABBREVIATIONS

AD	ACCESS DOOR
AAV	AUTOMATIC AIR VENT
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
AS	AIR SEPARATOR
AUX.	AUXILIARY
AVG	AVERAGE
BDD	BACKDRAFT DAMPER
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
C.I.	CAST IRON
CO	CLEANOUT
CW	COLD WATER
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
DAS	DIRT AND AIR SEPARATOR
DB	DRY BULB
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DN	DOWN
D	DRAIN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
E.C.	ELECTRICAL CONTRACTOR
EWT	ENTERING WATER TEMP
(F)	FUTURE
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN, FIRE DAMPER
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FS	FLOW SWITCH
F/S	FIRE SMOKE DAMPER
FT	FEET
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
HX	HEAT EXCHANGER
ID	INSIDE DIAMETER
IN	INCHES
KW	KILOWATT
L	LAVATORY
LAT	LEAVING AIR TEMPERATURE
M	MOTORIZED DAMPER
M.C.	MECHANICAL CONTRACTOR
MSB	MOP SERVICE BASIN
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
PRV	PRESSURE REDUCING VALVE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE
S	SINK
SL	SEA LEVEL
SS	SINK
T&P	TEMPERATURE AND PRESSURE
TYP.	TYPICAL
U	URINAL
UC	UNDER CUT DOOR
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VENT, VOLTS
VD	VOLUME DAMPER
VTR	VENT THROUGH ROOF
WB	WET BULB
W	WATT, WASTE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET, WATER COLUMN
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
ESP	EXTERNAL STATIC PRESSURE
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
EFF	EFFICIENCY
EER	ENERGY EFFICIENCY RATIO
SEER	SEASONAL ENERGY EFFICIENCY RATIO
HSPF	HEATING SEASONAL PERFORMANCE FACTOR

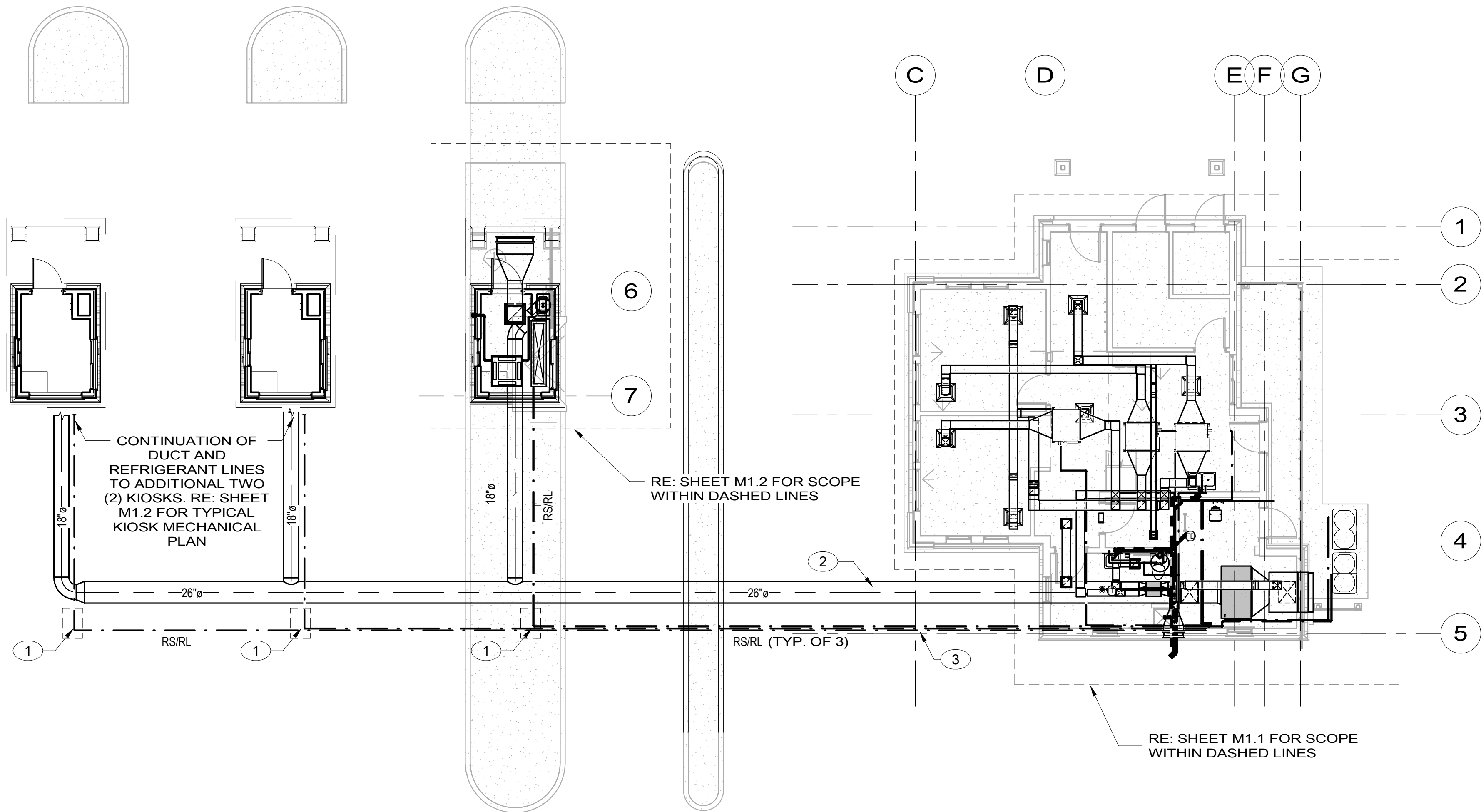
VENTILATION AND AIR CONDITIONING SYMBOLS

	SUPPLY DUCT UP		SECTION LETTER
	SUPPLY DUCT DOWN		SHEET WHERE SHOWN
	RETURN DUCT UP		DETAIL IDENTIFIER
	RETURN DUCT DOWN		SHEET WHERE SHOWN
	EXHAUST DUCT UP		FIRE DAMPER
	EXHAUST DUCT DOWN		SMOKE DAMPER
			COMBINATION FIRE/SMOKE DAMPER
	DUCT (FIRST FIGURE, SIDE SHOWN AND SECOND FIGURE, SIDE NOT SHOWN) ALL DUCTS DIMENSIONS SHALL BE SHOWN IN INCHES.		ACCESS PANEL
	INCLINED RISE (R), ARROW IN DIRECTION OF AIR FLOW		
	INCLINED DROP (D), ARROW IN DIRECTION OF AIR FLOW		
	TRANSITIONS		
	RECTANGULAR TO ROUND TRANSITION		
	STANDARD RECTANGULAR BRANCH FOR SUPPLY OR RETURN		
	RECTANGULAR DUCT ELBOW WITH TURNING VANES		
	FLEXIBLE CONNECTION		
	MANUAL VOLUME DAMPER		
	REFRIGERANT LIQUID LINE		
	REFRIGERANT SUCTION LINE		
	CONDENSER WATER RETURN		
	CONDENSER WATER SUPPLY		
	CHILLED WATER RETURN		
	CHILLED WATER SUPPLY		
	HEATING WATER RETURN		
	HEATING WATER SUPPLY		
	THERMOSTAT		
	ZONE SENSOR		
	DUCT MOUNTED SMOKE DETECTOR		
	MOTORIZED DAMPER		



DESIGNED: BG	SUB SHEET NO. M0.0	TITLE OF SHEET MECHANICAL COVER SHEET FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 134 OF 165
TECH REVIEW: TJR			
DATE: 03/10/2022			

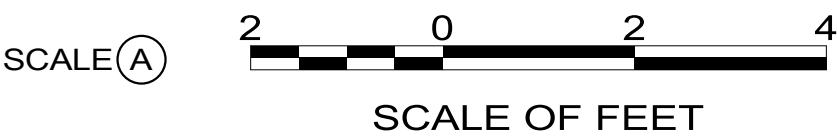
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1 OVERALL MECHANICAL PLAN
SCALE (A)

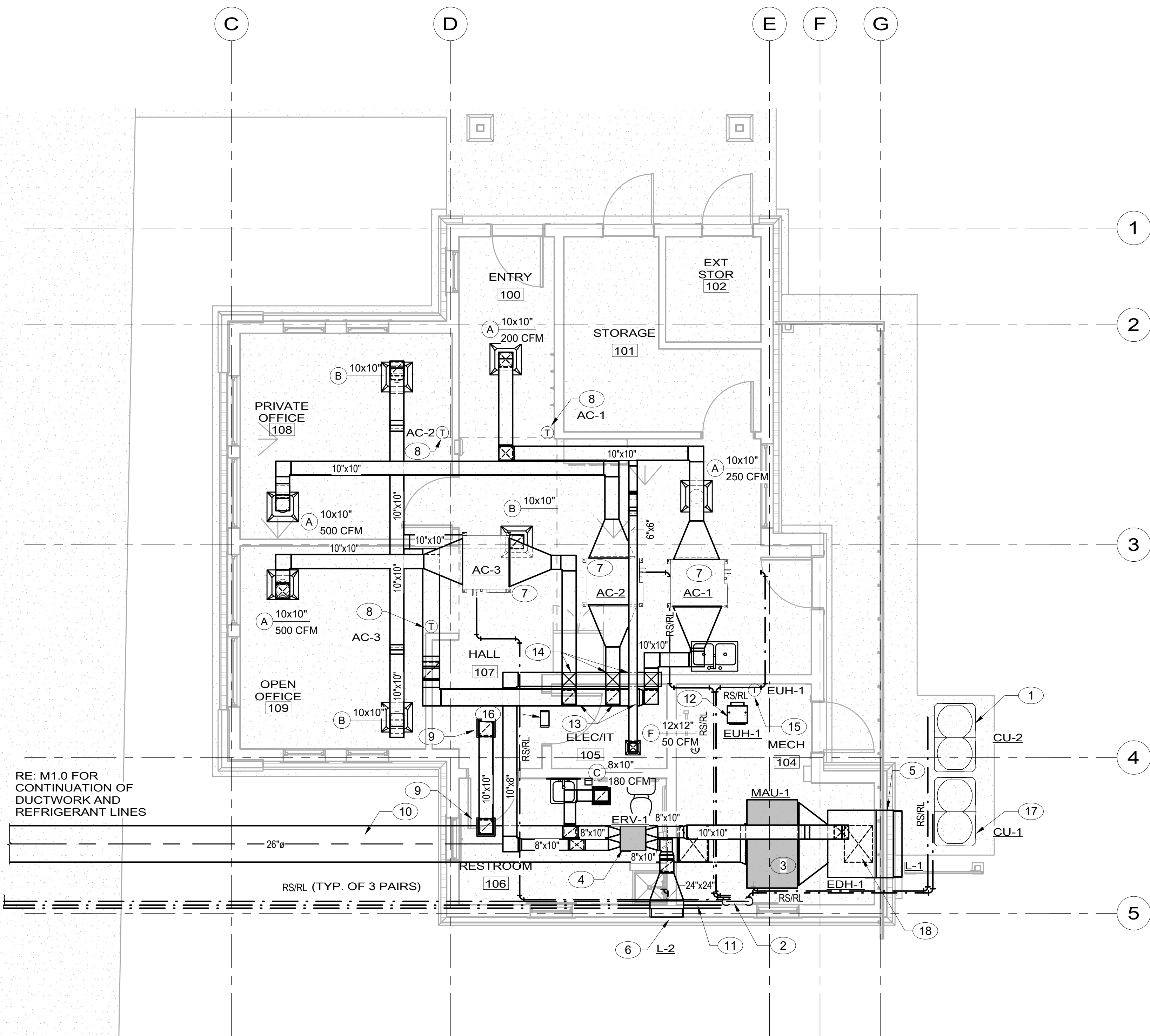
KEYNOTES:

- 1 PROVIDE AND INSTALL UTILITY VAULT ACCESSIBLE AT GRADE FOR REFRIGERANT LINES. REFRIGERANT LINES TO BE SLEEVED IN PVC THROUGH VAULT WALL. ELBOW TO THE KIOSK EXPOSED IN THE VAULT, AND THEN SLEEVE IN PVC AGAIN BEFORE EXITING THE VAULT. TYPICAL OF ALL THREE (3) KIOSKS. VAULT TO BE 36x24x18" MANUFACTURED CONCRETE POLYMER ENCLOSURE BOX WITH OPEN BOTTOM. BOTTOM 4" TO BE FILLED WITH GRAVEL.
- 2 UNDERGROUND DUCTWORK TO BE PROVIDED AS DOUBLE WALLED FRP. RE: CIVIL DETAIL.
- 3 UNDERGROUND REFRIGERANT LINE PAIRS (RS/RL) TO BE INDIVIDUALLY SLEEVED WITH PVC SLEEVES. REFRIGERANT PAIRS TO BE ROUTED AND STACKED SO THAT EACH STACK HAS A RS/RL LINE.



DESIGNED: BG GADD BG TECH REVIEW: TJR DATE: 03/10/2022	SUB SHEET NO. M1.0	TITLE OF SHEET OVERALL - MECHANICAL PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 135 OF 165
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1 MAIN BUILDING - MECHANICAL PLAN
M1.1 SCALE (A)

GENERAL NOTES:

1. ALL DUCTS AND MECHANICAL EQUIPMENT IN BUILDING TO BE ROUTED IN ATTIC SPACE UNLESS OTHERWISE NOTED.

KEYNOTES:

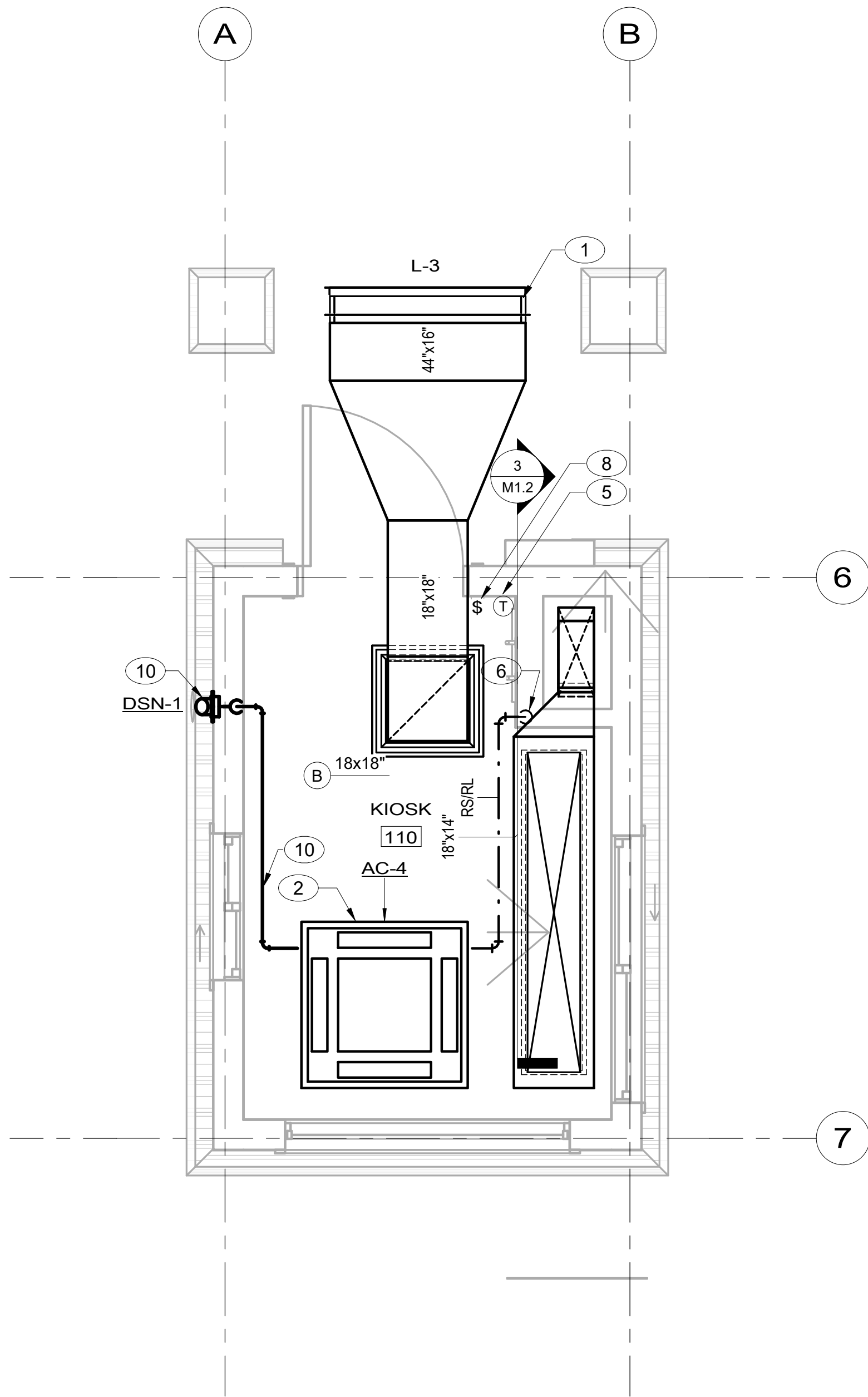
- 1 PROVIDE AND INSTALL NEW VRF CONDENSING UNIT TO SERVE BRANCH CONTROLLER IN MECHANICAL ROOM. PROVIDE WITH SHARED 6" CONCRETE PAD. REFRIGERANT LIQUID/SUCTION LINES TO RUN 6" ABOVE THE GROUND AND ENTER INTO THE MECHANICAL ROOM. REFRIGERANT LINES TO BE PROVIDED WITH GRADE MOUNTED DURA BLOK PIPE SUPPORTS.
- 2 PROVIDE AND INSTALL WALL MOUNTED REFRIGERANT BRANCH CONTROLLER FROM CU-1. BRANCH CONTROLLER TO DISTRIBUTE UNDERGROUND IN PVC SLEEVES THREE (3) PAIRS OF RS/RL LINES TO KIOSKS AND THREE (3) PAIRS OF RS/RL LINES TO AIR CONDITIONING UNITS ABOVE CEILING IN MAIN BUILDING.
- 3 PROVIDE AND INSTALL NEW MAKEUP AIR UNIT (MAU-1) IN MECHANICAL ROOM ON 6" EQUIPMENT PAD. PROVIDE WITH ELECTRIC DUCT HEATER (EDH-1) AT OUTLET OF MAU-1. SUPPLY DUCTWORK TO ROUTE UNDER SLAB IN MECHANICAL ROOM AND TRANSITION TO ROUND FRP DUCT 6" ABOVE GRADE AND ROUTE UNDERGROUND OUTSIDE. SUPPLY DUCTWORK ROUTES TO EACH KIOSK. PROVIDE WITH REFRIGERANT CONNECTIONS FROM CU-2.
- 4 PROVIDE AND INSTALL NEW ENERGY RECOVERY VENTILATION UNIT (ERV-1) IN ATTIC. PROVIDE WITH INTAKE CONNECTION TO MECHANICAL ROOM INTAKE LOUVER (L-1) AND EXHAUST CONNECTION TO EXTERIOR WALL EXHAUST LOUVER (L-2).
- 5 PROVIDE AND INSTALL NEW INTAKE LOUVER IN EXTERIOR WALL. COORDINATE INSTALLATION HEIGHT WITH CONTRACTING OFFICER TO INSTALL AS HIGH AS POSSIBLE. PROVIDE PLENUM BOX ON INTERIOR SIDE OF LOUVER. PROVIDE 10X10" VERTICAL BRANCH UP FROM PLENUM BOX TO SERVE ERV-1 AND 20X26" VERTICAL BRANCH DOWN FROM PLENUM BOX TO SERVE EDH-1 AND MAU-1.
- 6 PROVIDE AND INSTALL NEW EXHAUST LOUVER IN EXTERIOR WALL. COORDINATE INSTALLATION HEIGHT WITH CONTRACTING OFFICER. TRANSITION EXHAUST DUCTWORK IN ATTIC SPACE TO CONNECT TO 24X24" EXTERIOR LOUVER.
- 7 PROVIDE AND INSTALL NEW AIR CONDITIONING UNIT ABOVE CEILING IN ATTIC SPACE. ROUTE CONDENSATE DRAIN TO DISCHARGE TO BREAKROOM SINK TAILPIPE VIA CODE APPROVED AIR GAP.
- 8 PROVIDE AND INSTALL NEW WALL-MOUNTED THERMOSTAT FOR AIR CONDITIONING UNIT CONTROL. INSTALL TO MATCH LIGHT SWITCH HEIGHT AND NOT TO EXCEED 48" AFF.
- 9 PROVIDE AND INSTALL CEILING MOUNTED DUCTED TRANSFER GRILLES (TAG-D).
- 10 UNDERGROUND DUCTWORK TO BE PROVIDED AS DOUBLE WALLED FRP.
- 11 REFRIGERANT LINES TO KIOSKS TO BE ROUTED UNDERGROUND BENEATH RESTROOM (TYP. OF THREE PAIRS). UNDERGROUND REFRIGERANT LINES TO BE SLEEVED INDIVIDUALLY IN PVC.
- 12 PROVIDE AND INSTALL NEW ELECTRIC UNIT HEATER (EUH-1) IN MECHANICAL ROOM. EUH-1 TO BE SUPPORTED FROM STRUCTURE. MAINTAIN ALL MANUFACTURER RECOMMENDED CLEARANCES.
- 13 COMMON RETURN DUCT TO BRANCH IN ATTIC TO AIR CONDITIONING UNIT INLET. PROVIDE BALANCING DAMPER AT EACH RETURN AIR BRANCH FROM MAIN.
- 14 VENTILATION MAIN TO BRANCH TO EACH AIR CONDITIONING UNIT INLET DUCT. PROVIDE BALANCING DAMPER AT EACH VENTILATION CONNECTION AIR CONDITIONING RETURN DUCT BRANCH.
- 15 PROVIDE AND INSTALL NEW WALL-MOUNTED THERMOSTAT FOR ELECTRIC UNIT HEATER CONTROL. INSTALL TO MATCH LIGHT SWITCH HEIGHT AND NOT TO EXCEED 48" AFF.
- 16 PROVIDE AND INSTALL NEW 12X4" DOOR MOUNTED TRANSFER GRILLE (TAG-G). COORDINATE WITH CONTRACTING OFFICER FOR INSTALLATION HEIGHT.
- 17 PROVIDE AND INSTALL NEW VRF CONDENSING UNIT TO MAU-1 IN MECHANICAL ROOM. PROVIDE WITH SHARED 6" CONCRETE PAD. REFRIGERANT LIQUID/SUCTION LINES TO RUN 6" ABOVE THE GROUND AND ENTER INTO THE MECHANICAL ROOM. REFRIGERANT LINES TO BE PROVIDED WITH GRADE MOUNTED DURA BLOK PIPE SUPPORTS.
- 18 PROVIDE AND INSTALL NEW ELECTRIC DUCT HEATER (EDH-1) WITHIN VERTICAL DUCTWORK ON THE INLET SIDE TO MAU-1.

SCALE (A) 2 0 2 4
SCALE OF FEET

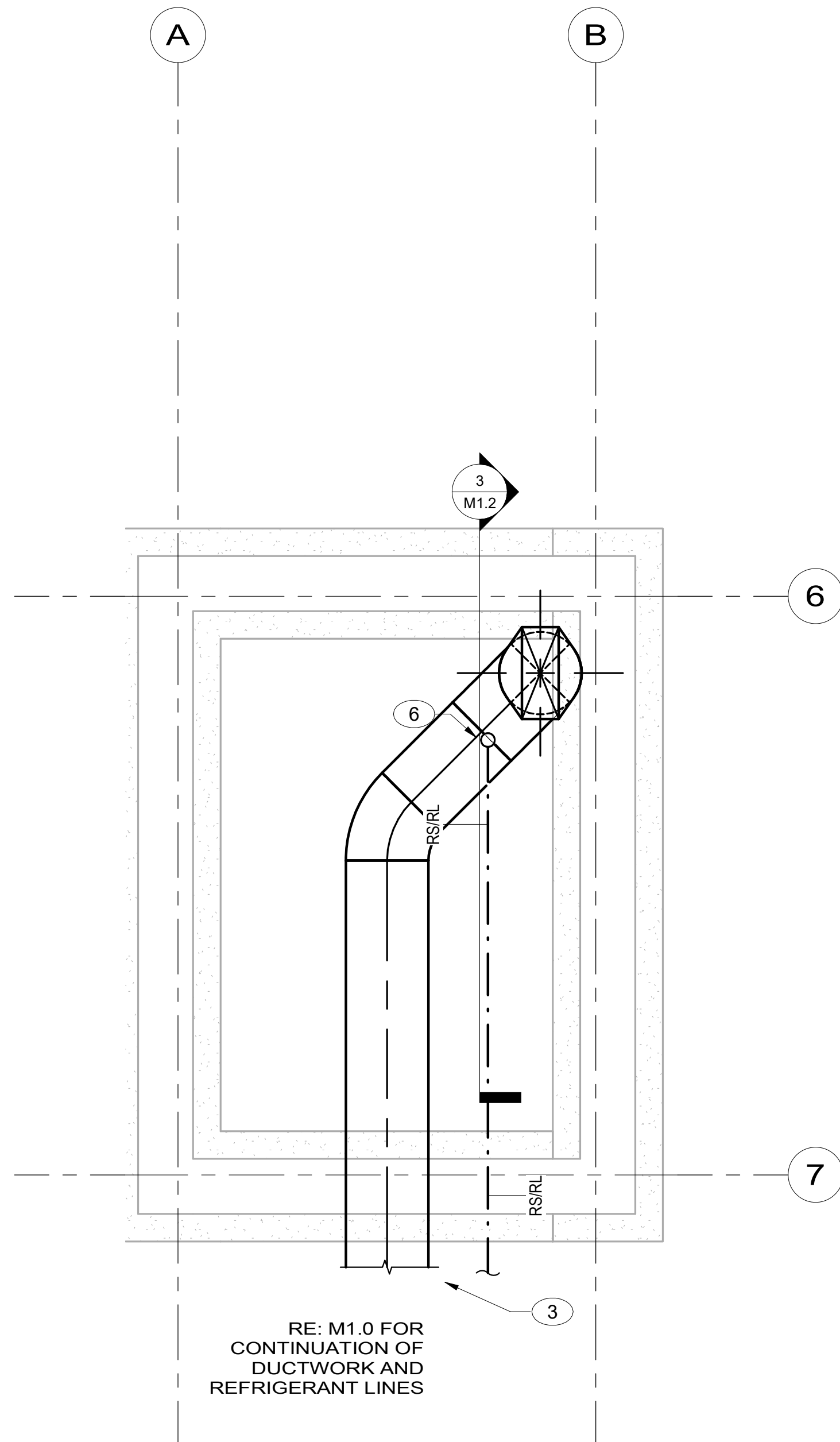


DESIGNED: BG GADD BG TECH REVIEW: TJR DATE: 03/10/2022	SUB SHEET NO. M1.1	TITLE OF SHEET MAIN BUILDING - MECHANICAL PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 136 OF 165
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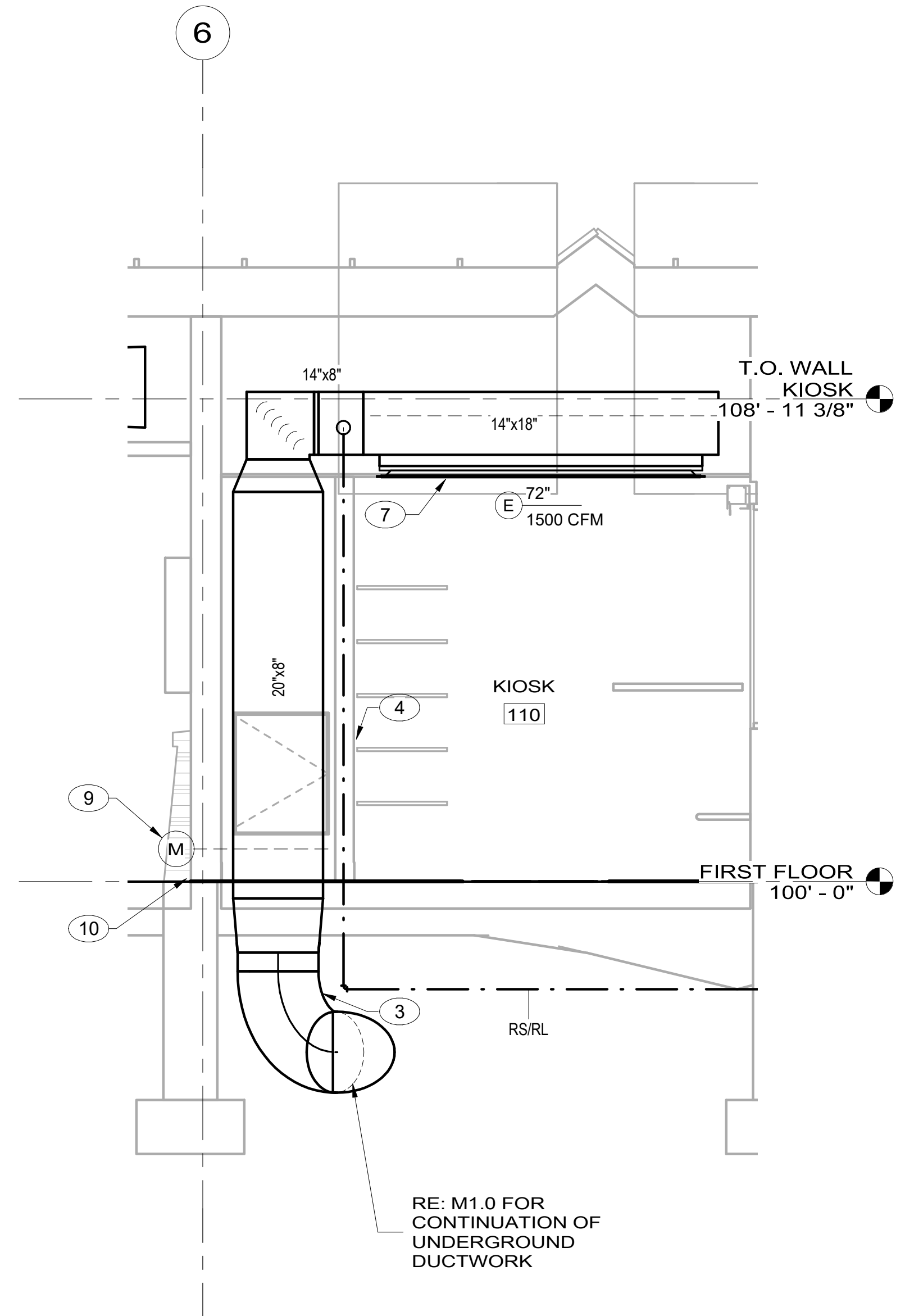
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1 ABOVE GROUND KIOSK (TYPICAL OF 3) - MECHANICAL PLAN
M1.2 SCALE (A)



2 BELOW GROUND KIOSK (TYPICAL OF 3) - MECHANICAL PLAN
M1.2 SCALE (A)



3 KIOSK ELEVATION PLAN
M1.2 SCALE (A)

KEYNOTES:

- PROVIDE AND INSTALL RELIEF LOUVER (L-3) IN EXTERIOR FACE OF CANOPY. CENTER LOUVER IN CANOPY FACADE AND PROVIDE WITH DUCTED RELIEF TO RELIEF GRILLE IN KIOSK.
- PROVIDE AND INSTALL NEW RECESSED CEILING REFRIGERANT CASSETTE (AC-4). PROVIDE WITH REFRIGERANT CONNECTIONS AND ROUTE CONDENSATE FROM CONDENSATE PUMP TO DAYLIGHT AT EXTERIOR OF KIOSK BUILDING.
- ROUTE ROUND FRP DUCT UNDER KIOSK TO RISE IN MECHANICAL CHASE TO ABOVE CEILING OF KIOSK. ONCE 6" ABOVE GRADE, DUCT TO BE PROVIDED AS SHEET METAL.
- PROVIDE AND INSTALL ACCESS PANEL IN VERTICAL SECTION OF KIOSK CHASE. PROVIDE ADDITIONAL ACCESS PANEL IN VERTICAL COMPONENT OF DUCTWORK WITHIN THE FOOTPRINT OF THE KIOSK CHASE ACCESS PANEL.
- PROVIDE AND INSTALL NEW WALL-MOUNTED THERMOSTAT FOR AC-4 CONTROL. COORDINATE INSTALLATION HEIGHT TO MATCH LIGHT SWITCH AND NOT TO EXCEED 48" AFF.
- REFRIGERANT LINES TO ROUTE IN CHASE WALL UP ABOVE CEILING TO CONNECT TO AC-4.
- PROVIDE AND INSTALL CONTINUOUS 72" SLOT DIFFUSER (TAG-E) ON BOTTOM OF DUCT. SLOT DIFFUSER TO BE MOUNTED IN GYP. CEILING.
- PROVIDE AND INSTALL NEW WALL-MOUNTED CONTROL SWITCH TO OPERATE ELECTRONIC SUPPLY DAMPER. WALL SWITCH TO BE ON WHEN OCCUPIED AND PROVIDED WITH CONTROL WIRING TO ELECTRONIC DAMPER.
- PROVIDE AND INSTALL NEW IN-DUCT ELECTRONIC DAMPER. ELECTRONIC DAMPER TO BE PROVIDE WITH LOW-VOLTAGE WIRING FROM KIOSK WALL SWITCH AND PROVIDED WITH END SWITCH AND CONTROL WIRING TO MAU. CONTROL WIRING TO ROUTE UNDERGROUND AND FOLLOW SAME PATH AS REFRIGERANT PIPING.
- ROUTE CONDENSATE DRAIN FROM AC UNIT ABOVE CEILING AND DOWN INSIDE KIOSK WALL TO EXTERIOR MOUNTED DOWNSPOUT NOZZLE (DSN-1). DOWNSPOUT NOZZLE TO BE INSTALLED AS LOW AS POSSIBLE AND AS TIGHT AS POSSIBLE TO BOARD-FOAM. REFER TO MANUFACTURER'S RECCOMENDATIONS FOR CONDENSATE DRAIN SIZE.

SCALE (A) 2 0 2 4
SCALE OF FEET



DESIGNED: BG GADD BG TECH REVIEW: TJR DATE: 03/10/2022	SUB SHEET NO. M1.2	TITLE OF SHEET TYPICAL KIOSK - MECHANICAL PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 137 OF 165
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ELECTRIC HEAT SCHEDULE																		
GENERAL						PERFORMANCE			ELECTRICAL				PHYSICAL					
TAG	MANUFACTURER	MODEL	LOCATION	ARRANGEMENT	AIR FLOW [CFM]	EAT [°F]	LAT [°F]	DELTA T [°F]	VOLTAGE [V]	PHASE	FREQ [HZ]	POWER [KW]	DUCT SIZE [IN]	LENGTH [IN]	WIDTH [IN]	HEIGHT [IN]	WEIGHT [LBS]	REMARKS
EUH-1	MODINE	HER100C 1201	MECHANICAL RM	HANGING	830	-	-	48	240	1	60.0	10.0	-	16-7/8	21-1/4	20-7/8	67	2,3
EDH-1	GREENHECK	IDHE	MAU OUTLET	IN DUCT	4,500	-5	40	-	230	1	60.0	51.0	26x20	-	-	-		1,2,4,5
NOTES: 1. PROVIDE WITH SCR HEATING ELEMENT. 2. PROVIDE WITH INTEGRAL ELECTRICAL DISCONNECT. 3. PROVIDE WITH LOW VOLTAGE THERMOSTAT FOR EQUIPMENT CONTROL. 4. PROVIDE WITH TEMPERATURE SENSOR IN SUPPLY DUCT FOR EQUIPMENT CONTROL. 5. PROVIDE WITH MANUFACTURER'S MOUNTING BRACKET AND HARDWARE FOR IN DUCT MOUNTING.																		

MAKEUP AIR UNIT SCHEDULE																								
GENERAL				SUPPLY FAN (@ 7,000 FT)					COOLING (@ 7,000 FT)			HEATING (@ 7,000 FT)			ELECTRICAL					PHYSICAL				NOTES
TAG	MFG	MODEL	SERVICE	TOTAL AIRFLOW [CFM]	ESP [IN. W.C.]	SPEED [RPM]	POWER [BHP]	SIZE [HP]	OAT DB [°F]	LAT DB [°F]	TOTAL CAPACITY [BTU/H]	OAT DB [°F]	LAT DB [°F]	TOTAL CAPACITY [BTU/H]	VOLTAGE [V]	PHASE	FREQUENCY [HZ]	MCA [A]	MOCPP [A]	LENGTH [IN]	WIDTH [IN]	HEIGHT [IN]	WEIGHT [LBS]	
MAU-1	TRANE	UCCA	KIOSKS	4,500	1.00	1685	2.061	3	86.0	65.0	84,097	40.0	65.0	100,116	208/230	3	60	20.5	35.0	36.1	63.0	69.9	740.0	
NOTES: 1. PROVIDE WITH FACTORY MOUNTED CONTROLLER AND ELECTRICAL DISCONNECT. 2. UNIT PERFORMANCE IS AT ALTITUDE OF 7,000 FT. 3. PROVIDE WITH 2" MERV 8 FILTERS. 4. PROVIDE WITH INDOOR 6" THICK CONCRETE PAD. 5. PROVIDE WITH UNIVERSAL CONTROLLER FOR MAU-1, EDH-1, AND CU-2 EQUIPMENT COMMUNICATION. REF: SEQUENCE OF OPERATIONS FOR EQUIPMENT OPERATION.																								

ENERGY RECOVERY VENTILATION UNIT SCHEDULE																																			
GENERAL					AIRFLOWS (@ 7,000 FT)								SUMMER PERFORMANCE (@ 5,300 FT)						WINTER PERFORMANCE (@ 5,300 FT)						ELECTRICAL					PHYSICAL				NOTES	
																									VOLTAGE	PHASE	FREQUENCY	MCA	MOCP	LENGTH	WIDTH	HEIGHT	WEIGHT		
TAG	MANUFACTURER	MODEL	LOCATION	SERVICE	OA SUPPLY [CFM]	EXHAUST [CFM]	SUPPLY ESP [IN. W.C.]	EXHAUST ESP [IN. W.C.]	SUPPLY SPEED [RPM]	SUPPLY SIZE [HP]	EXHAUST SPEED [BHP]	EXHAUST SIZE [HP]	OA DB [°F]	OA WB [°F]	RA DB [°F]	RA WB [°F]	SA DB [°F]	SA WB [°F]	OA DB [°F]	OA WB [°F]	RA DB [°F]	RA WB [°F]	SA DB [°F]	SA WB [°F]	VOLTAGE [V]	PHASE	FREQUENCY [HZ]	MCA [A]	MOCP [A]	LENGTH [IN]	WIDTH [IN]	HEIGHT [IN]	WEIGHT [LBS]		
ERV-1	GREENHECK	MINIVENT-450-VG	ATTIC	MAINBUILDING	200	180	0.75	0.50	1546	1/4	1404	1/4	86.6	64.4	75.0	61.4	77.7	62.1	-5.0	-6.5	70.0	52.7	50.8	41.0	230	1	60.0	4.1	15.0	40.2	28.6	19.9	160.0	1,2	
NOTES:																																			
1. PROVIDE WITH MERV 8 FILTER																																			
2. PROVIDE WITH 7-DAY PROGRAMMABLE TIMECLOCK.																																			

SPLIT SYSTEM COOLING SCHEDULE																										
GENERAL				SUPPLY FAN (@ 7,000 FT)		VRF PERFORMANCE (@ 7,000 FT)								ELECTRICAL						PHYSICAL						NOTES
TAG	MANUFACTURER	MODEL	LOCATION	TOTAL AIRFLOW [CFM]	ESP [IN WC]	REFRIG	HEATING EAT [°F]	HEATING LAT [°F]	HEATING CAPACITY MBH	COOLING EAT [°F]	COOLING LAT [°F]	COOLING CAPACITY MBH	VOLTAGE [V]	PHASE	FREQUENCY [HZ]	MCA [A]	MOCP [A]	EER	LENGTH [IN]	WIDTH [IN]	HEIGHT [IN]	WEIGHT [LBS]				
AC-1	MITSUBISHI	TPEFYP024	MAIN BUILDING CEILING	500	0.5	R410A	55.7	105.0	27.0	77.0	55.0	24.0	230	1	60.0	2.1	15.0	-	26-13/16	35-5/8	15	100	2,4,5,7			
AC-2	MITSUBISHI	TPEFYP024	MAIN BUILDING CEILING	500	0.5	R410A	55.7	105.0	27.0	77.0	55.0	24.0	230	1	60.0	2.1	15.0	-	26-13/16	35-5/8	15	100	2,4,5,7			
AC-3	MITSUBISHI	TPEFYP024	MAIN BUILDING CEILING	500	0.5	R410A	55.7	105.0	27.0	77.0	55.0	24.0	230	1	60.0	2.1	15.0	-	26-13/16	35-5/8	15	100	2,4,5,7			
AC-4	MITSUBISHI	TPLFYP024EM	KIOSK CEILING	636-812	-	R410A	70.0	110.0	27.0	75.0	50.0	24.0	208/230	1	60.0	0.5	15.0	-	33-3/32	33-3/32	11-3/4	55	2,3,5,6,7			
AC-5	MITSUBISHI	TPLFYP024EM	KIOSK CEILING	636-812	-	R410A	70.0	110.0	27.0	75.0	50.0	24.0	208/230	1	60.0	0.5	15.0	-	33-3/32	33-3/32	11-3/4	55	2,3,5,6,7			
AC-6	MITSUBISHI	TPLFYP024EM	KIOSK CEILING	636-812	-	R410A	70.0	110.0	27.0	75.0	50.0	24.0	208/230	1	60.0	0.5	15.0	-	33-3/32	33-3/32	11-3/4	55	2,3,5,6,7			
CU-1	MITSUBISHI	PURY-HP120	ON-GRADE	8,300	-	R410A	-	-	120.0	-	-	135.0	208/230	3	60.0	44.0	60.0	13.2	48-7/8	29-5/32	71-5/8	622	1,8,9,10,11			
CU-2	MITSUBISHI	PUHY-HP120	ON-GRADE	8,300	-	R410A	-	-	120.0	-	-	135.0	208/230	3	60.0	43.0	60.0	13.8	48-7/8	29-5/32	71-5/8	622	1,6,10,11			
NOTES:																										
1. PROVIDE WITH HAIL GUARDS.																										
2. PROVIDE WITH 208/230V BLUE DIAMOND MINI CONDENSATE PUMP WITH RESERVOIR AND SENSOR.																										
3. PROVIDE WITH CEILING GRILLE (PLP-41EAEU).																										
4. PROVIDE WITH 2" FILTER.																										
5. PROVIDE WITH TEMPERATURE SENSOR TO COMMUNICATE WITH CENTRALIZED CONTROLLER IN MECHANICAL ROOM.																										
6. PROVIDE WITH FACTORY PROGRAMMED UNIT CONTROLLER.																										
7. PROVIDE WITH SYSTEM CENTRALIZED CONTROLLER FOR OUTDOOR, INDOOR, AND BATCH CONTROLLER COMMUNICATION.																										
8. PROVIDE UNIT WITH CAPABILITIES OF SIMULTANEOUS HEATING AND COOLING.																										
9. PROVIDE WITH BRANCH CONTROLLER CAPABLE OF COMMUNICATING WITH CENTRALIZED CONTROLLER.																										
10. PROVIDE WITH HYPER HEAT OPTION FOR -22F OPERATION.																										
11. PROVIDE WITH 24" MANUFACTURED EQUIPMENT STAND.																										

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	EAD-635	MAIN BUILDING	INTAKE	4,700	6.2	758	0.07	29.75	59.75	6	51	1,2,3,4,5,6	
L-2	GREENHECK	EAD-403	MAIN BUILDING	EXHAUST	180	1.9	97	0.002	23.75	23.75	6	16	1,2,3,4,5,6	
L-3	GREENHECK	ESD-635	KIOSK	RELIEF	1,500	1.8	855	0.11	17.75	35.75	6	16	1,2,3,4	
L-4	GREENHECK	ESD-635	KIOSK	RELIEF	1,500	1.8	855	0.11	17.75	35.75	6	16	1,2,3,4	
L-5	GREENHECK	ESD-635	KIOSK	RELIEF	1,500	1.8	855	0.11	17.75	35.75	6	16	1,2,3,4	
NOTES: 1. PROVIDE WITH ALUMINUM INSECT SCREEN. 2. PROVIDE WITH 2 COATS OF KYNAR PAINT. COORDINATE FINAL COLOR SELECTION WITH CONTRACTING OFFICER PRIOR TO ORDERING 3. PROVIDE WITH BACKDRAFT DAMPER UPSTREAM OF LOUVER 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. 6. PROVIDE WITH 7-DAY PROGRAMMABLE TIMECLOCK.														

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE						
TAG	MANUFACTURER	MODEL	SERVICE	MATERIAL	FACE SIZE	REMARKS
A	PRICE	SCD	SUPPLY	STEEL	24x24"	1,2
B	PRICE	PDDR	RETURN	STEEL	24x24"	1,2
C	PRICE	PDDR	EXHAUST	STEEL	12x12"	1,2
D	PRICE	PDDR	TRANSFER	STEEL	12x12"	1
E	PRICE	SDS150	SUPPLY	ALUMINUM	72"	1,2,3,4,5
F	PRICE	SCD	SUPPLY	ALUMINUM	12x12"	1,2
G	PRICE	ATG	TRANSFER	ALUMINUM	12x4"	6
NOTES: 1. PROVIDE WITH GYPSUM BOARD MOUNTING FRAME. 2. OPSSABLE BLADE DAMPER IN FACE OF GRILLE. 3. PROVIDE AS 6-SLOT, 1-1/2" SLOT WIDTH. 4. PROVIDE AS CONTINOUS SLOT. 5. PROVIDE WITH NECESSARY ACCESSORIES TO MOUNT TO BOTTOM OF DUCT. 6. PROVIDE WITH DOOR MOUNTING FRAME.						



DESIGNED: BG	SUB SHEET NO. M6.0	TITLE OF SHEET MECHANICAL SCHEDULE FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 138 OF 165
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FREEZE PROTECTION ELECTRIC HEAT (EUH-1) SEQUENCE OF OPERATION:

ELECTRIC UNIT HEATER SHALL ENABLE UPON A CALL FOR HEATING. WHEN SPACE TEMPERATURE IS BELOW HEATING SETPOINT OF 60 DEG F (ADJ.) ELECTRIC UNIT HEATER SHALL ENABLE TO MAINTAIN SPACE HEATING SETPOINT.

ENERGY RECOVERY VENTILATION (ERV-1) SEQUENCE OF OPERATION:

ERV IS TO OPERATE ON A SCHEDULED TIMECLOCK TO OPERATE DURING OCCUPIED HOURS (ADJ.). DURING OCCUPIED MODE THE SUPPLY AND EXHAUST FAN SHALL RUN CONTINUOUSLY, THE EXHAUST LOUVER SHALL OPEN TO 100%, AND THE INTAKE LOUVER SHALL OPEN TO 100%. DURING UNOCCUPIED MODE THE ERV SHALL BE DISABLED, THE EXHAUST LOUVER SHALL BE 100% CLOSED, AND THE INTAKE LOUVER SHALL BE 100% CLOSED UNLESS CALLED TO BE OPEN BY OTHER EQUIPMENT.

DURING OCCUPANY OVERRIDE AT ANY LOCAL THERMOSTAT, ERV TO OPERATE IN OCCUPIED MODE, INTAKE AND EXHAUST LOUVER SHALL OPEN TO 100%, AND OCCUPIED SETPOINTS SHALL BE MAINTAINED UNTIL OCCUPANCY OVERRIDE IS RELEASED. WHEN OCCUPANCY OVERRIDE IS RELEASED, THE EQUIPENT SHALL RETURN TO UNOCCUPIED MODE CONDITIONS.

MOTORIZED DAMPERS (L-1 & L-2)SEQUENCE OF OPERATION:

MOTORIZED INTAKE AND EXHAUST DAMPERS ARE TO OPERATE ON THE SAME AS SCHEDULE AS AND BE INERLOCKED TO THE ENERGY RECOVERY VENTILATION (ERV) AND MAKE-UP AIR UNIT'S (MAU) INTAKE AND EXHAUST DAMPERS ARE TO BE 100% OPEN WHEN ERV OR MAU IS RUNNING AND 100% CLOSED WHEN ERV AND MAU ARE NOT RUNNING.

KIOSK VENTILATION SYSTEM (MAU-1, CU-1, & EDH-1) SEQUENCE OF OPERATION:

MAKE-UP AIR UNIT TO BE PROGRAMMED FOR STAND ALONE OPERATION AND PROVIDED WITH A SUPPLY AIR TEMPERATURE SENSOR FOR UNIT CONTROL. MAKE-UP AIR UNIT TO ENABLE UPON AN OCCUPIED CALL FROM ANY KIOSK END SWITCH. MAKE-UP AIR UNIT TO BE DISABLED DURING UNOCCUPIED MODE.

DURING OCCUPIED MODE THE SUPPLY FAN SHALL RUN IN ONE OF THREE (3) PRESET CONDITIONS PROGRAMMED IN THE VFD, THE INTAKE LOUVER (L-1) SHALL OPEN TO 100%, AND THE MOTORIZED DAMPER AT THE KIOSK SHALL OPEN TO BALANCED POSITION. PRESET AIRFLOW CONDITIONS ARE TO BE BALANCED AT INTERVALS OF 1,500 CFM (ADJ.) AND TO EITHER INCREASE OR DECREASE STAGING AS KIOSK WALL SWITCHES ARE ENABLED OR DISABLED.

WHEN THE OUTSIDE AIR TEMPERATURE IS 75 DEG F (ADJ.) OR HIGHER, COOLING MODE SHALL BE ENABLED. OUTDOOR UNIT REVERSING VALVE SHALL BE POSITIONED TO PROVIDE COOLING. REFRIGERANT FLOW AND OUTDOOR UNIT SHALL CONTROL TO MAINTAIN A COOLING SUPPLY AIR TEMPERATURE SETPOINT OF 75 DEG F (ADJ.). WHEN THE OUTSIDE AIR TEMPERATURE IS 65 DEG F (ADJ.) OR LOWER, HEATING MODE SHALL BE ENABLED. WHEN OUTSIDE AIR TEMPERATURE IS 30 DEG F (ADJ.) OR HIGHER OUTDOOR UNIT REVERSING VALVE SHALL BE POSITIONED TO PROVIDE HEATING. OUTDOOR UNIT SHALL CONTROL TO MAINTAIN A HEATING SUPPLY AIR TEMPERATURE SETPOINT OF 65 DEG F (ADJ.). WHEN OUTSIDE AIR TEMPERATURE IS BELOW 30 DEG F (ADJ.) ELECTRIC DUCT HEATER SHALL PREHEAT OUTSIDE AIR AND MODULATE SCR HEATING ELEMENT TO PROVIDE 30 DEG F (ADJ.). OUTDOOR UNIT REVERSING VALVE SHALL BE POSITIONED TO PROVIDE HEATING. REFRIGERANT FLOW AND OUTDOOR UNIT SHALL MODULATE TO MAINTAIN A HEATING SUPPLY AIR TEMPERATURE SETPOINT OF 65 DEG F (ADJ.). WHEN HEATING SUPPLY AIR TEMPERATURE SETPOINT IS MAINTAINED FOR 10 MINUTES (ADJ.), THEN THE OUTDOOR UNIT SHALL DISABLE HEATING. WHEN OUTSIDE AIR IS BETWEEN 75 DEG F (ADJ.) AND 65 DEG F (ADJ.) OUTDOOR UNIT TO DISABLE HEATING AND COOLING, AND SUPPLY FAN TO CONTINUOUSLY RUN.

DURING OCCUPANY OVERRIDE AT ANY LOCAL THERMOSTAT, ERV TO OPERATE IN OCCUPIED MODE, INTAKE LOUVER SHALL OPEN TO 100%, AND OCCUPIED SETPOINTS SHALL BE MAINTAINED UNTIL OCCUPANCY OVERRIDE IS RELEASED. WHEN OCCUPANCY OVERRIDE IS RELEASED, THE EQUIPENT SHALL RETURN TO UNOCCUPIED MODE CONDITIONS.

AIR CONDITIONING OUTDOOR UNIT (CU-2) SEQUENCE OF OPERATION:

OUTDOOR UNIT AND ALL INDOOR AIR CONDITIONING UNITS TO BE CONTROLLED BY A CENTRALIZAED CONTROLLER AND OPERATE AS A STAND ALONE SPACE CONDITIONING SYSTEM. CENTRALIZED CONTROLLER TO MAINTAIN SCHEDULES, SETPOINTS, AND CONTROL REFRIGERANT FLOW AND OUTDOOR UNIT TO MAINTAIN SPACE TEMPERATURE SETPOINTS.

OUTDOOR UNIT TO ENABLE UPON A CALL FOR HEATING OR COOLING FROM THE CENTRALIZED CONTROLLER. OUTDOOR UNIT SHALL MODULATE REFRIGERANT FLOW AND REVERSING VALVE SHALL SWITCH FROM HEATING TO COOLING TO MAINTAIN ALL SPACE TEMPERATURE SETPOINTS.

MAIN BUILDING AIR CONDITIONING SYSTEM (AC-1, AC-2, & AC-3) SEQUENCE OF OPERATION:

DUCTED INDOOR AIR CONDITIONING UNITS TO BE CONTROLLED BY THE CENTRALIZED CONTROLLER AND BE PROVIDED WITH ZONE TEMPERATURE SENSORS. AIR CONDITIONING UNITS ARE TO ENABLE UPON A SCHEDULE CALL AND TO OPERATE IN EITHER OCCUPIED OR UNOCCUPIED MODE.

DURING OCCUPIED MODE THE SUPPLY FAN SHALL RUN CONTINUOUSLY. WHEN THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT OF 75 DEG F (ADJ.), THE AIR CONDITIONING UNIT SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE OCCUPIED SPACE COOLING SETPOINT. WHEN THE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT OF 70 DEG F (ADJ.), THE AIR CONDITIONING UNIT SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE OCCUPIED SPACE HEATING SETPOINT. WHEN THERE IS NO DEMAND FOR COOLING OR HEATING, THE FAN SHALL RUN WITHOUT REFRIGERANT FLOW.

DURING UNOCCUPIED MODE THE SUPPLY FAN SHALL RUN UPON A CALL FOR HEATING OR COOLING. WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85 DEG F (ADJ.), THE AIR CONDITIONING UNIT FAN SHALL RUN AND UNIT SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE UNOCCUPIED SPACE COOLING SETPOINT. WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60 DEG F (ADJ.), THE AIR CONDITIONING UNIT FAN SHALL RUN AND SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE UNOCCUPIED SPACE HEATING SETPOINT. WHEN THERE IS NO DEMAND FOR COOLING OR HEATING, THE FAN SHALL SHALL DISABLE.

KIOSK AIR CONDITIONING SYSTEM (AC-4, AC-5, & AC-6) SEQUENCE OF OPERATION:

CEILING MOUNTED AIR CONDITIONING UNITS TO BE CONTROLLED BY THE CENTRALIZED CONTROLLER AND BE PROVIDED WITH ZONE TEMPERATURE SENSORS. AIR CONDITIONING UNITS ARE TO ENABLE UPON A SCHEDULE CALL AND TO OPERATE IN EITHER OCCUPIED OR UNOCCUPIED MODE.

DURING OCCUPIED MODE THE AIR CONDITIONER SHALL RUN UPON A CALL FOR HEATING OR COOLING. WHEN THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT OF 75 DEG F (ADJ.), THE AIR CONDITIONING UNIT SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE OCCUPIED SPACE COOLING SETPOINT. WHEN THE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT OF 70 DEG F (ADJ.), THE AIR CONDITIONING UNIT SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE OCCUPIED SPACE HEATING SETPOINT. WHEN THERE IS NO DEMAND FOR COOLING OR HEATING, THE AIR CONDITIONING UNIT SHALL DISABLE.

DURING UNOCCUPIED MODE THE AIR CONDITIONER SHALL RUN UPON A CALL FOR HEATING OR COOLING. WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85 DEG F (ADJ.), THE AIR CONDITIONING UNIT SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE UNOCCUPIED SPACE COOLING SETPOINT. WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60 DEG F (ADJ.), THE AIR CONDITIONING UNIT SHALL MODULATE REFRIGERANT FLOW TO MAINTAIN THE UNOCCUPIED SPACE HEATING SETPOINT. WHEN THERE IS NO DEMAND FOR COOLING OR HEATING, THE AIR CONDITIONING UNIT SHALL DISABLE.



DESIGNED: BG GADD BG TECH REVIEW: TJR DATE: 03/10/2022	SUB SHEET NO. M7.0	TITLE OF SHEET SEQUENCE OF OPERATIONS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 139 OF 165
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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 360 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.

III. 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 2018 IBC.
- PROVIDE ADHESIVE, MULTICOLOR PIPE LABELS FOR ALL SYSTEMS. PROVIDE EVERY 50 FEET, AND EVERY 25 FEET IN CONGESTED AREAS.

ABBREVIATIONS

AD	ACCESS DOOR
AAV	AUTOMATIC AIR VENT
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
AS	AIR SEPARATOR
AUX.	AUXILIARY
AVG	AVERAGE
BDD	BACKDRAFT DAMPER
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
C.I.	CAST IRON
CO	CLEANOUT
CW	COLD WATER
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
DAS	DIRT AND AIR SEPARATOR
DB	DRY BULB
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DN	DOWN
D	DRAIN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
E.C.	ELECTRICAL CONTRACTOR
EWI	ENTERING WATER TEMP
(F)	FUTURE
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN, FIRE DAMPER
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FS	FLOW SWITCH
F/S	FIRE SMOKE DAMPER
FT	FEET
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
HX	HEAT EXCHANGER
ID	INSIDE DIAMETER
IN	INCHES
KW	KILOWATT
L	LAVATORY
LAT	LEAVING AIR TEMPERATURE
M	MOTORIZED DAMPER
M.C.	MECHANICAL CONTRACTOR
MSB	MOP SERVICE BASIN
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
PRV	PRESSURE REDUCING VALVE
RPBP	
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE
S	SINK
SL	SEA LEVEL
SS	SINK
T&P	TEMPERATURE AND PRESSURE
TYP.	TYPICAL
U	URINAL
UC	UNDER CUT DOOR
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VENT, VOLTS
VD	VOLUME DAMPER
VTR	VENT THROUGH ROOF
WB	WET BULB
W	WATT, WASTE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET, WATER COLUMN
HSPF	HEATING SEASONAL PERFORMANCE FACTOR
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
ESP	EXTERNAL STATIC PRESSURE
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
EFF	EFFICIENCY
EER	ENERGY EFFICIENCY RATIO
SEER	SEASONAL ENERGY EFFICIENCY RATIO

PLUMBING PIPING SYMBOLS

	COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATING
	WASTE (ABOVE GRADE)
	WASTE (BELOW GRADE)
	VENT
	SLOPE DOWN IN DIRECTION OF ARROW

PIPING SYMBOLS

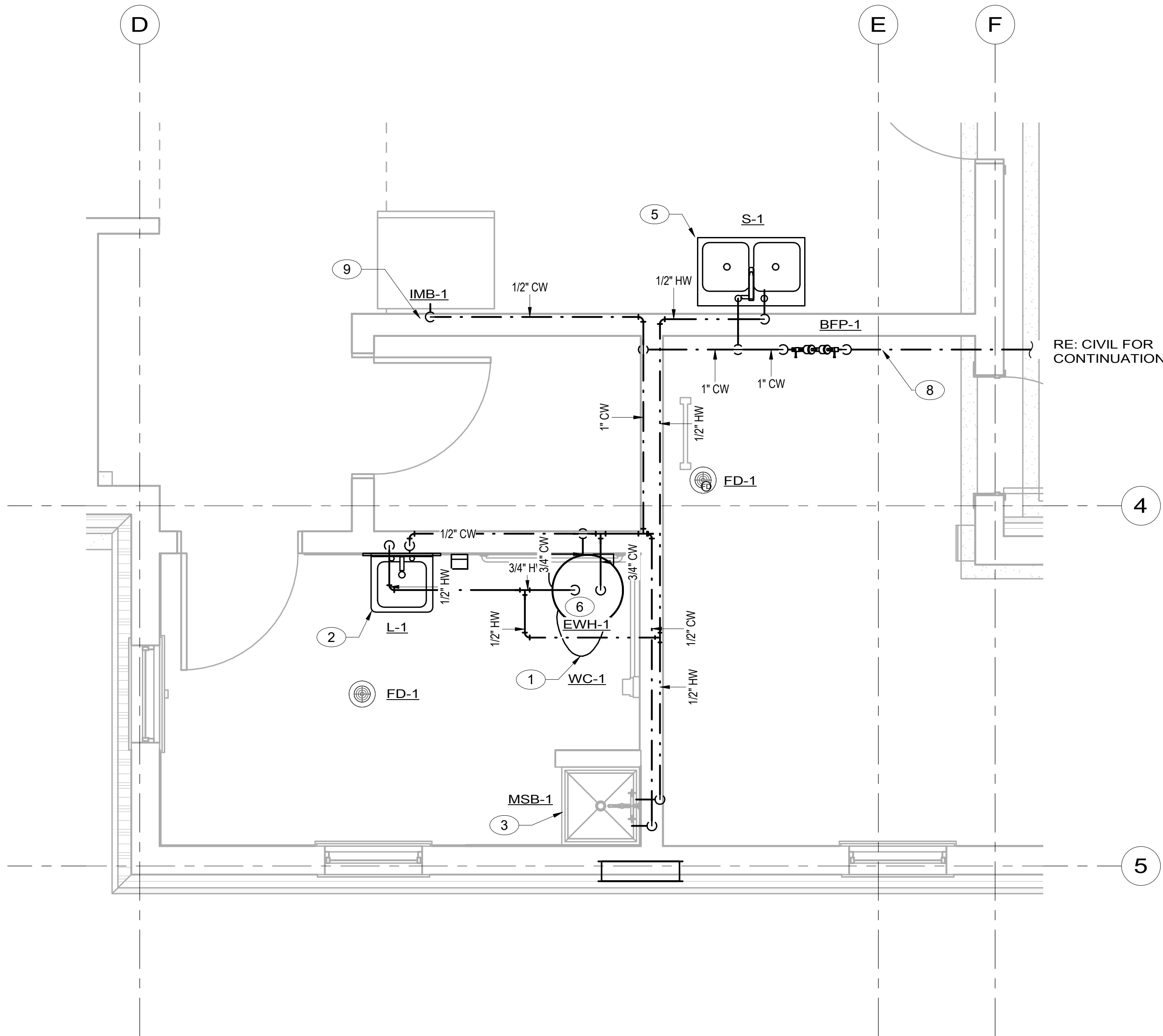
	CAP
	FLOOR CLEANOUT
	FLOOR DRAIN
	FLOOR SINK
	GRADE CLEANOUT
	CLEANOUT PLUG, IN LINE
	WALL CLEANOUT
	TEE, OUTLET UP
	TEE, OUTLET DOWN
	ELBOW, TURNED DOWN
	ELBOW, TURNED UP
	EXPANSION JOINT
	FLEXIBLE CONNECTOR
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	SLEEVE - THROUGH WALL
	UNION
	FUNNEL DRAIN
	STRAINER WITH BLOWDOWN AND HOSE CONNECTION
	FLOW SWITCH
	PRESSURE AND TEMPERATURE TAP

	PRESSURE GAUGE
	TEMPERATURE SENSOR
	PRESSURE SENSOR
	WATER HAMMER ARRESTOR
	AIR VENT - AUTOMATIC
	AIR VENT - MANUAL
	ANGLE VALVE
	ANGLE GATE VALVE, PLAN
	ANGLE GLOBE VALVE
	ANGLE GLOBE VALVE, PLAN
	BALL VALVE
	CHECK VALVE
	PLUG VALVE
	RELIEF VALVE
	3-WAY AUTOMATIC VALVE
	2-WAY AUTOMATIC VALVE
	BALANCING VALVE
	HOSE BIB (PLAN)
	WALL HYDRANT
	PUMP
	REDUCED PRESSURE BACKFLOW
	THERMOMETER
	STRAINER
	T&P PORT
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE



DESIGNED: BG GADD BG TECH REVIEW: TJR DATE: 03/10/2022	SUB SHEET NO. P0.0	TITLE OF SHEET PLUMBING COVER SHEET FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 140 OF 165
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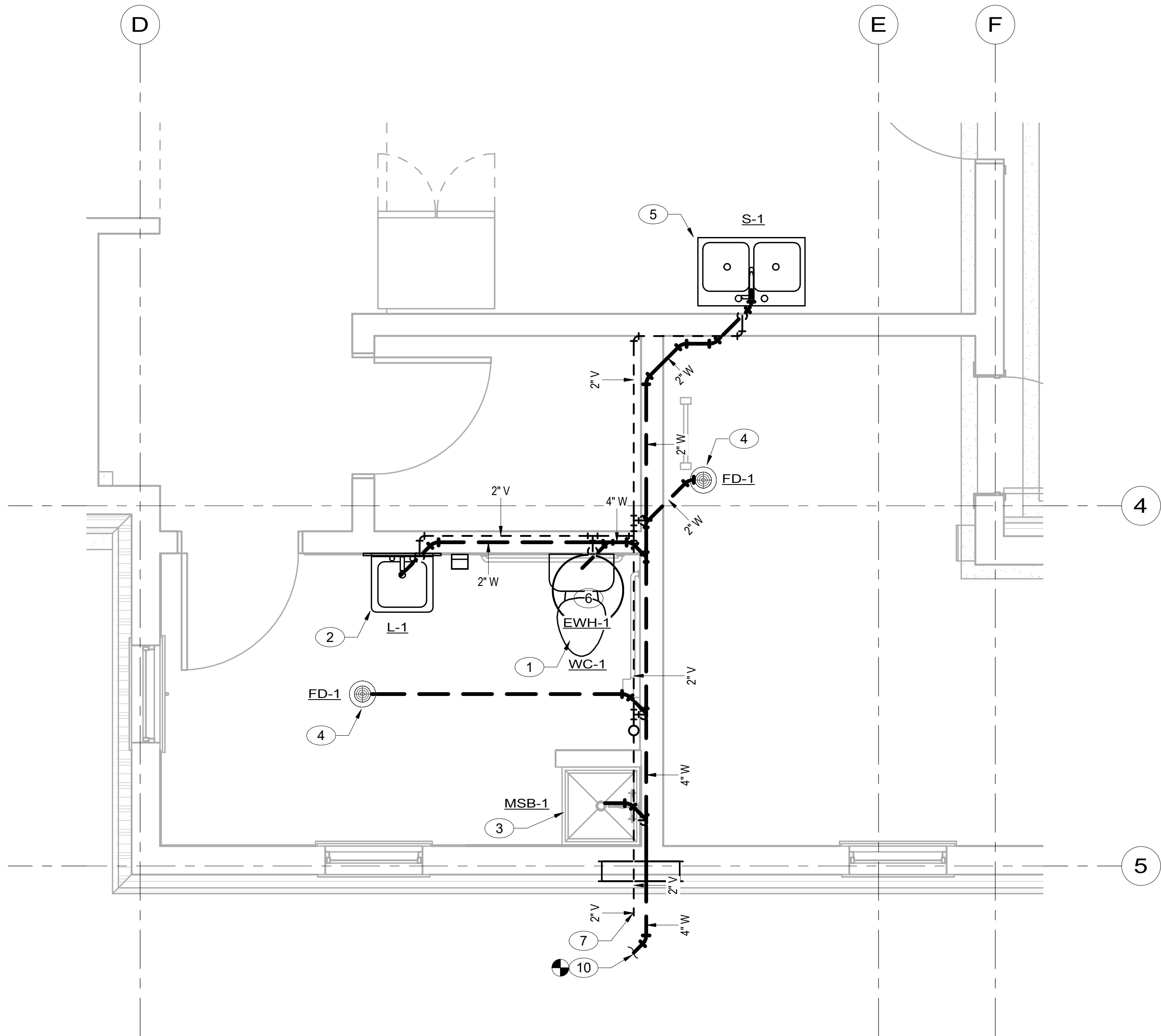
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1 MAIN BUILDING - DOMESTIC WATER PLUMBING PLAN
P1.0 SCALE (A)

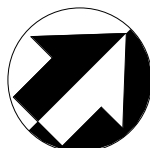
KEYNOTES:

- 1 PROVIDE AND INSTALL NEW WATER CLOSET (WC-1). PROVIDE WITH 1/2" CW, 4" WASTE, AND 2" VENT CONNECTIONS.
- 2 PROVIDE AND INSTALL NEW LAVATORY (L-1). PROVIDE WITH 1/2" CW, 1/2" HW, 2" WASTE, AND 1-1/2" VENT CONNECTIONS.
- 3 PROVIDE AND INSTALL NEW MOP SERVICE BASIN (MSB-1). PROVIDE WITH 1/2" CW, 1/2" HW, 3" WASTE, AND 1-1/2" VENT CONNECTIONS.
- 4 PROVIDE AND INSTALL NEW FLOOR DRAIN (FD-1). PROVIDE WITH 2" WASTE AND 2" VENT CONNECTION.
- 5 PROVIDE AND INSTALL NEW BREAKROOM SINK (S-1). PROVIDE WITH 1/2" CW, 1/2" HW, 2" WASTE, AND 1-1/2" VENT CONNECTIONS.
- 6 PROVIDE AND INSTALL NEW ELECTRIC WATER HEATER. PROVIDE WITH 3/4" CW AND 3/4" HW CONNECTIONS. ROUTE DRAIN PAN DISCHARGE TO MECHANICAL ROOM FLOOR DRAIN.
- 7 PROVIDE AN INSTALL SIDEWALL VENT TERMINAL HOOD IN EXTERIOR OF BUILDING. BUILDING VENT MAIN TO CONNECT AND TERMINATE AT VENT HOOD. COORDINATE INSTALLATION HEIGHT WITH CONTRACTING OFFICER.
- 8 PROVIDE AND INSTALL NEW 1" INLINE BACKFLOW PREVENTER AT CW ENTRY TO MECHANICAL ROOM. ROUTE DRAIN TIGHT TO WALL AND TO DISCHARGE AT FLOOR DRAIN.
- 9 PROVIDE AND INSTALL NEW ICE MAKER BOX (IMB-1). PROVIDE WITH 1/2" CW CONNECTION.
- 10 CONNECT NEW 4" WASTE LINE TO EXISTING 4" WASTE BELOW GRADE.



2 MAIN BUILDING - SANITARY AND VENT PLUMBING PLAN
P1.0 SCALE (A)

SCALE (A)  SCALE OF FEET



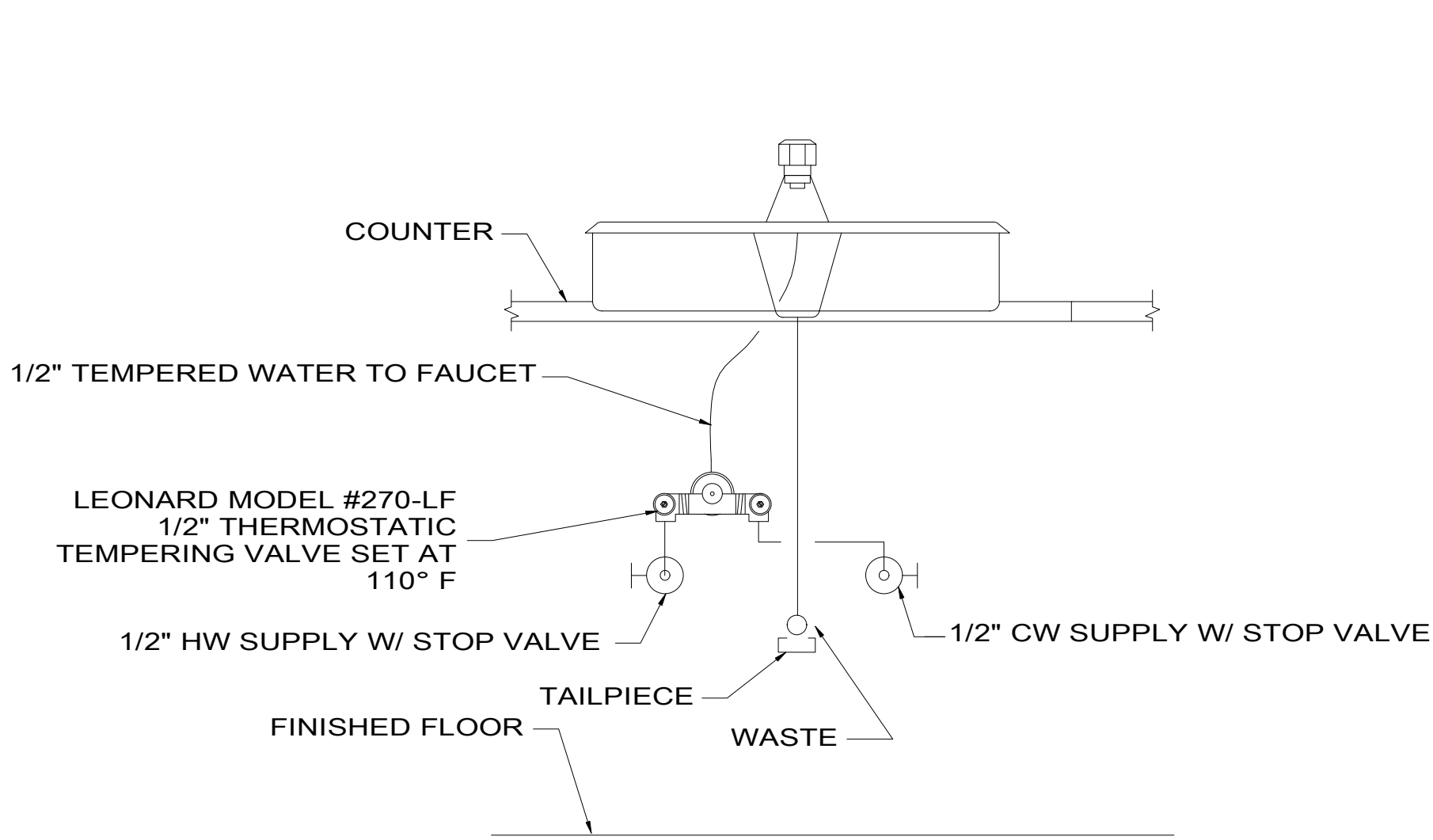
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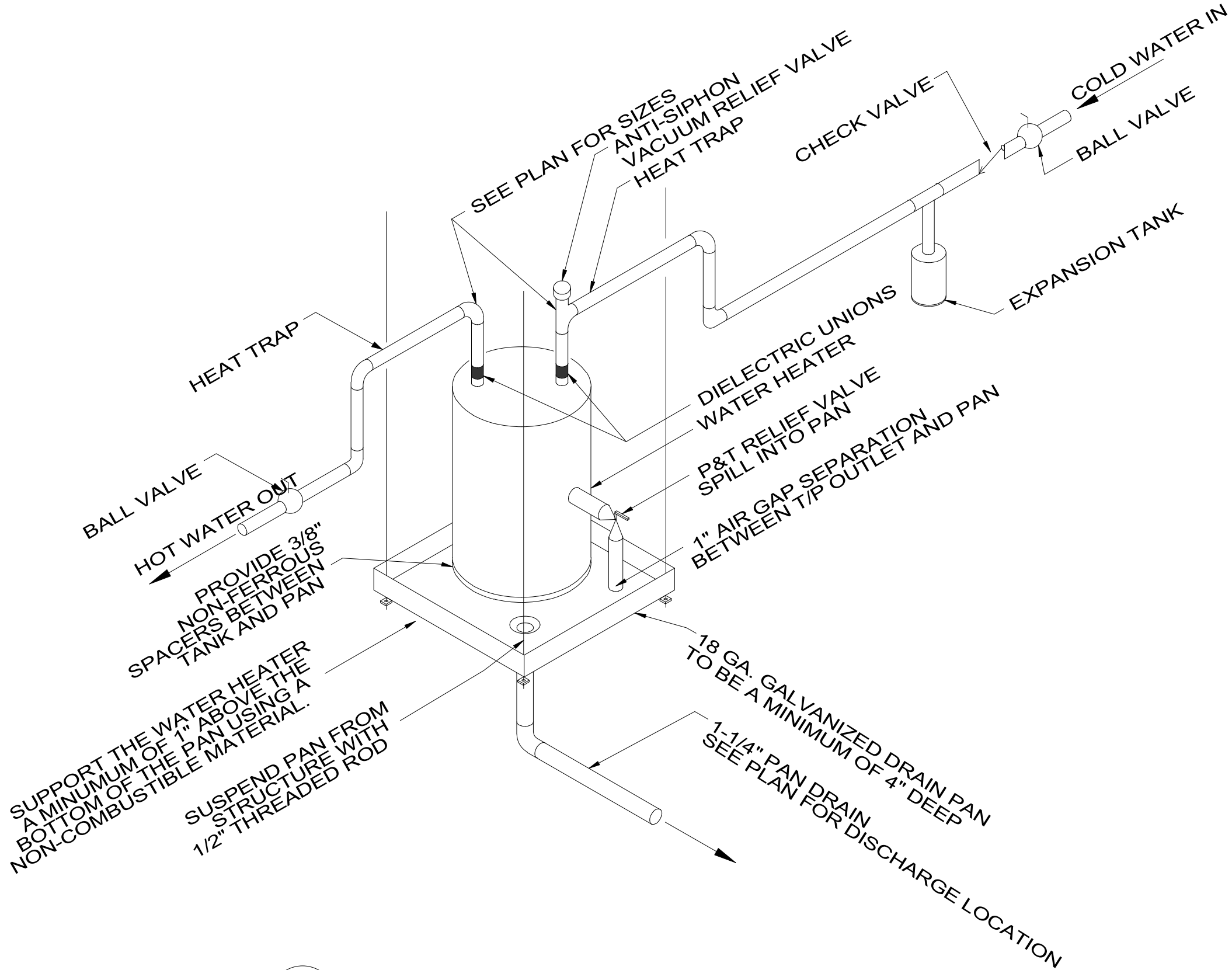
PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	FINISH	MANUFACTURER	MODEL NUMBER	FINISH	GPM/GPF	ELECTRICAL	REMARKS
WC-1	WATER CLOSET- FLOOR MOUNTED (ABA)	AMERICAN STANDARD	215AA.104.020	WHITE	CHURCH	9500CT	WHITE	1.28	-	1
L-1	LAVATORY- WALL HUNG (ABA)	AMERICAN STANDARD	0356.421	WHITE	DELTA	567LF-HGM-PP	CHROME	0.5	-	2,3,6,10,12
MSB-1	MOP SERVICE BASIN	FIAT	MSB2424	WHITE	CHICAGO	445-897SRXKCCP	CHROME	2.2	-	4,13
S-1	SINK- DOUBLE COMPARTMENT (ABA)	JUST	DL-ADA-2233-A-GR	STAINLESS STEEL (18 GA)	DELTA	9193-DST	CHROME	1.8	-	3,6,10,11
FD-1	FLOOR DRAIN	JAY R SMITH	2005-Y-A	NICKEL BRONZE	-	-	-	-	-	7,8
DSN-1	DOWN SPOUT NOZZLE	JAY R SMITH	1770-T-RB	CAST BRONZE	-	-	-	-	-	
IMB-1	ICE MAKER BOX	SIOUX CHIEF	696-G1010MF	WHITE	-	-	-	-	-	5
BFP-1	REDUCED PRESSURE BACKFLOW PREVENTER DOMESTIC	APOLLO	RPLF4A 1"	-	-	-	-	-	-	9
EWH-1	ELECTRIC WATER HEATER 12 GPH @ 100°F RISE	AO SMITH	DEL-20	-	ARMSTRONG	AST-5	-	-	240/60/1 3000 W	14,15

- REMARKS:
- LOOSE KEY 1/4" TURN BALL VALVE ANGLE STOP, STAINLESS STEEL BRAIDED SUPPLIES
 - PROVIDE WITH CONCEALED FLOOR MOUNTED CARRIER (COORDINATE WITH WALL THICKNESS)
 - 17 GA. P-TRAP, LOOSE KEY ANGLE STOPS, STAINLESS STEEL BRAIDED SUPPLIES
 - PAIL HOOK, WALL BRACKET, THREAD END, VACUUM BREAKER, INTEGRAL CHECKS & SHUTOFF STOPS
 - WITH "AA" WATER HAMMER ARRESTERS
 - PROVIDE LEONARD #270-LF MIXING VALVE UNDER FIXTURE. (ASSE 1070 RATED)
 - PROVIDE WITH TRAP GUARD
 - MOUNT FLUSH WITH FLOOR
 - PROVIDE WITH STRAINER.
 - PROVIDE WITH TRUEBRO #103 E-Z P-TRAP AND SUPPLIES INSULATION KIT
 - 6" DEEP BOWL, REAR DRAIN LOCATION
 - SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHT
 - HOSE AND HOSE BRACKET AND MOP HANGER
 - PROVIDE WITH MAGNESIUM ANODE ROD.
 - PROVIDE WITH DRAIN PAN, SEE PLANS FOR DRAIN LOCATION.



1 LOCAL MIXING VALVE DETAIL
P6.0 SCALE: NTS










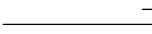


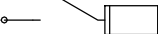





2 WATER HEATER INSTALLATION DETAIL
P6.0 SCALE: NTS






















DESIGNED: BG GADD BG TECH REVIEW: TJR DATE: 03/10/2022	SUB SHEET NO. P6.0	TITLE OF SHEET PLUMBING SCHEDULE AND DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 142 OF 165
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








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

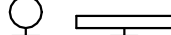








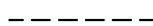







FIRE ALARM

	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











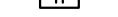

















SYSTEMS

	TTB, MDF OR IDF SYSTEM BACKBOARD
	TELECOMMUNICATION OUTLET
	FLOOR MOUNTED TELECOMMUNICATION OUTLET
	TELEVISION OUTLET
	WIRELESS ACCESS POINT
	SPEAKER - PAGING AND OR SOUND SYSTEM - INDICATES SPEAKER ZONE
	MICROPHONE OUTLET
	VOLUME CONTROL
	PUSH BUTTON
	CLOSED CIRCUIT TELEVISION CAMERA
	CABLE TRAY (LENGTH AS INDICATED ON DRAWINGS)

LIGHTING FIXTURES

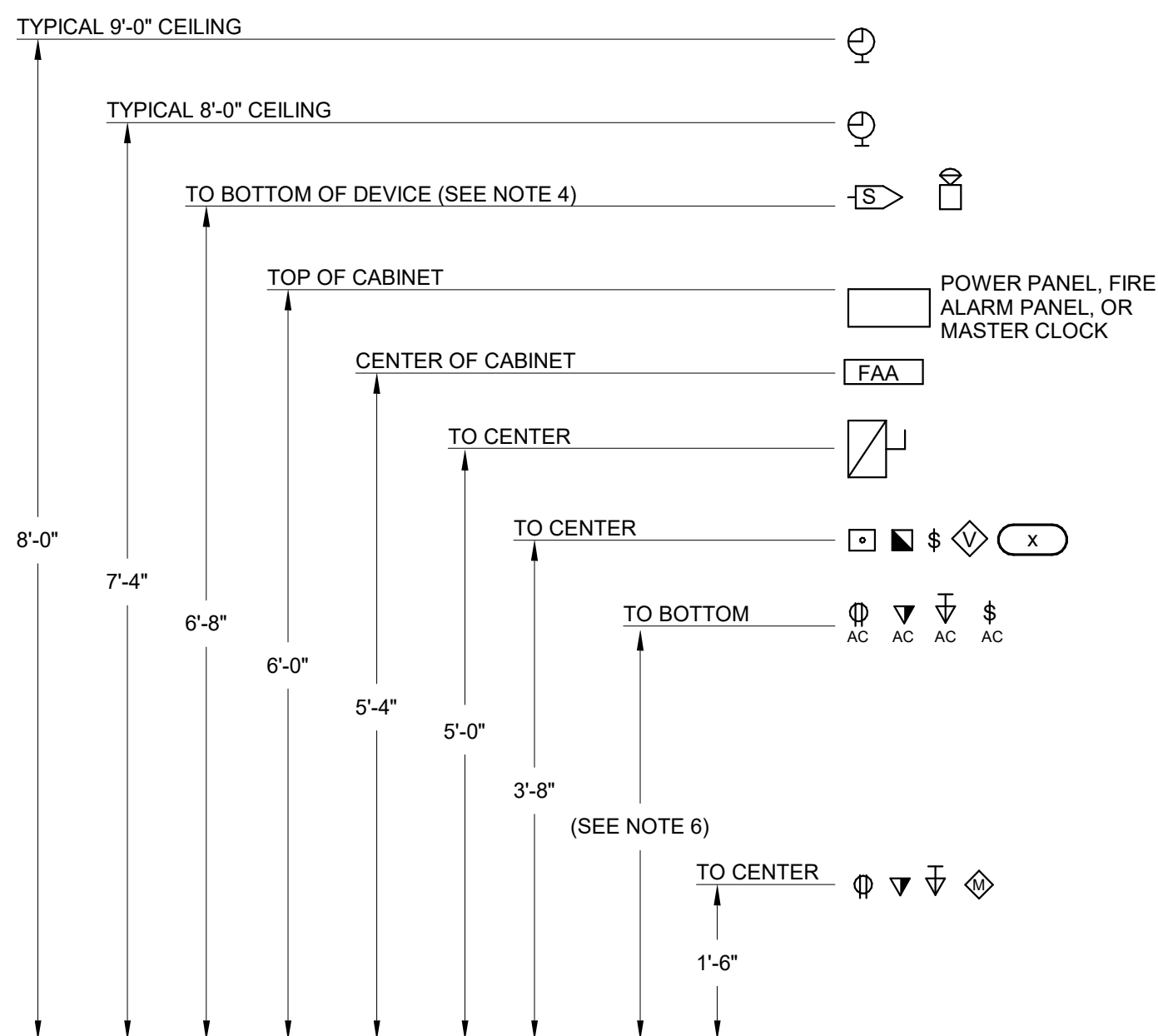
<p>A₈</p> <p>LUMINAIRE TYPE, REFERENCING LUMINAIRE SCHEDULE</p> <p>TYPICAL ALL FIXTURES, SUBSCRIPT, IF SHOWN,</p> <p>REFERENCES WALL SWITCH OR RELAY/ZONE CONTROL</p>	
	WALL MOUNTED LUMINAIRE
	SURFACE OR PENDANT MOUNTED LUMINAIRE
	RECESSED LUMINAIRE
	RECESSED DOWNLIGHT LUMINAIRE
	SURFACE CEILING LUMINAIRE
	PENDANT LUMINAIRE
	ARROW INDICATES DIRECTIONAL LUMINAIRE
	MONOPOINT LUMINAIRE
	SURFACE OR PENDANT TRACK LUMINAIRE
	LED TAPE LUMINAIRE
	EXIT LUMINAIRE - SHADED INDICATES FACE / DIRECTIONAL ARROWS AS SHOWN
	BATTERY PACK EMERGENCY LUMINAIRE
	HATCH INDICATES EMERGENCY LUMINAIRE
	STEP LIGHT TYPE LUMINAIRE
	IN-GRADE UPLIGHT
	BOLLARD OR POST TOP LUMINAIRE
	EXTERIOR AREA LIGHT

WIRING DEVICES

	DUPLEX RECEPTACLE
	FOUR PLEX RECEPTACLE
	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
	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)
	MOTOR
	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
	LIGHTING CONTROL DEVICE, REFER TO DETAILS FOR CONTROL INTENT

ABBREVIATIONS AND SYMBOLS

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

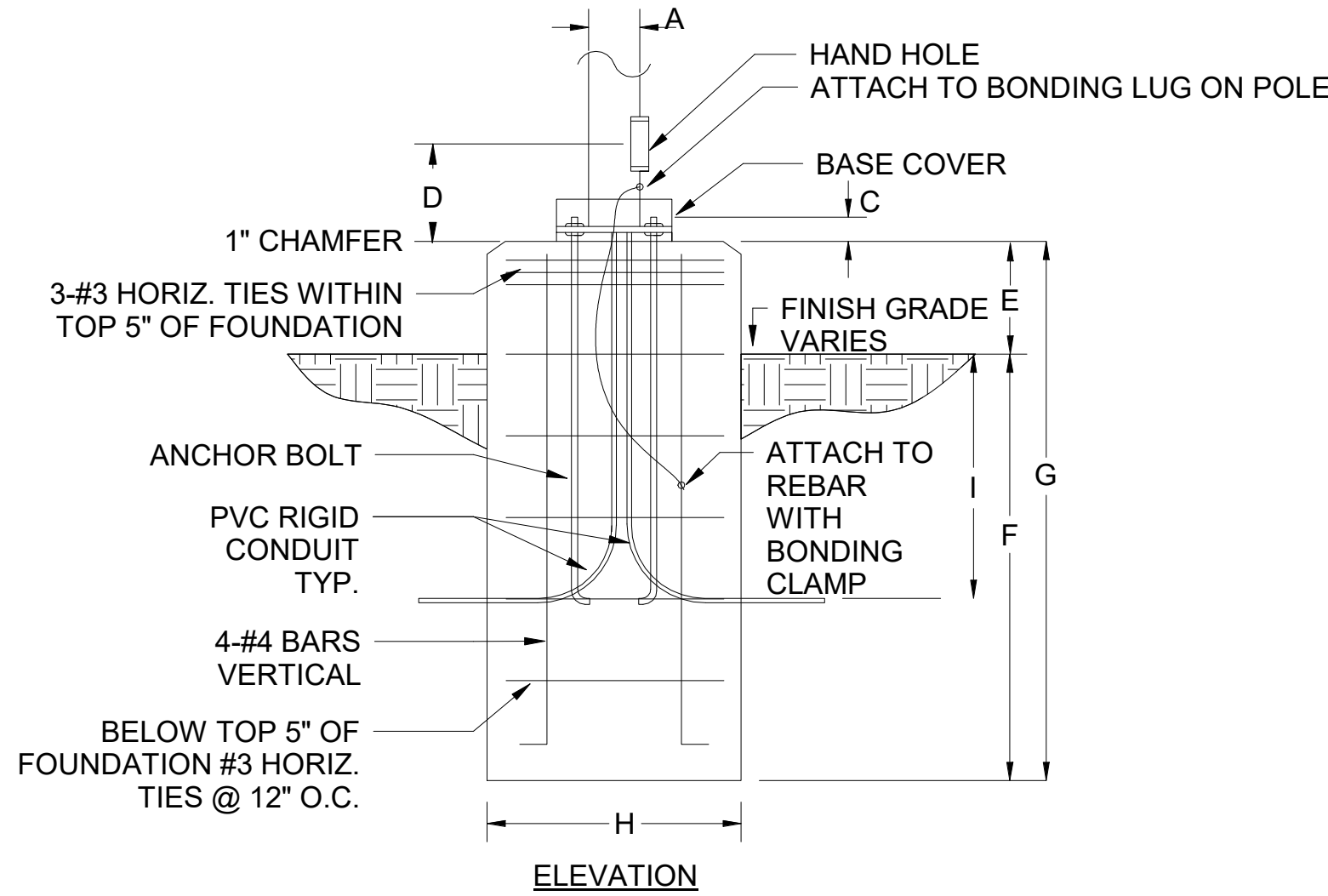


NOTES:

1. WHERE MULTIPLE LINE VOLTAGE DEVICES ARE SHOWN ADJACENT TO EACH OTHER, THEY ARE ALL TO SHARE THE SAME JUNCTION BOX, UP TO FOUR GANGS.
2. 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.
3. SEPARATELY GANGED DEVICES ARE NOT ALLOWED TO BE INSTALLED ADJACENT TO ONE ANOTHER HORIZONTALLY WITHIN THE SAME STUD BAY.
4. AUDIBLE VISUAL FIRE ALARM DEVICES SHOWN ARE TO BE MOUNTED AT 90" OR 6" BELOW CEILING, WHICHEVER IS LOWER. ALARM STROBES TO BE MOUNTED AT 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
5. MAXIMUM ELEVATION FOR ALL LOAD CENTER CIRCUIT BREAKERS SHALL NOT EXCEED 48" AFF, WITHIN DWELLING UNITS.
6. 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 BACKSIDE SPLASH.

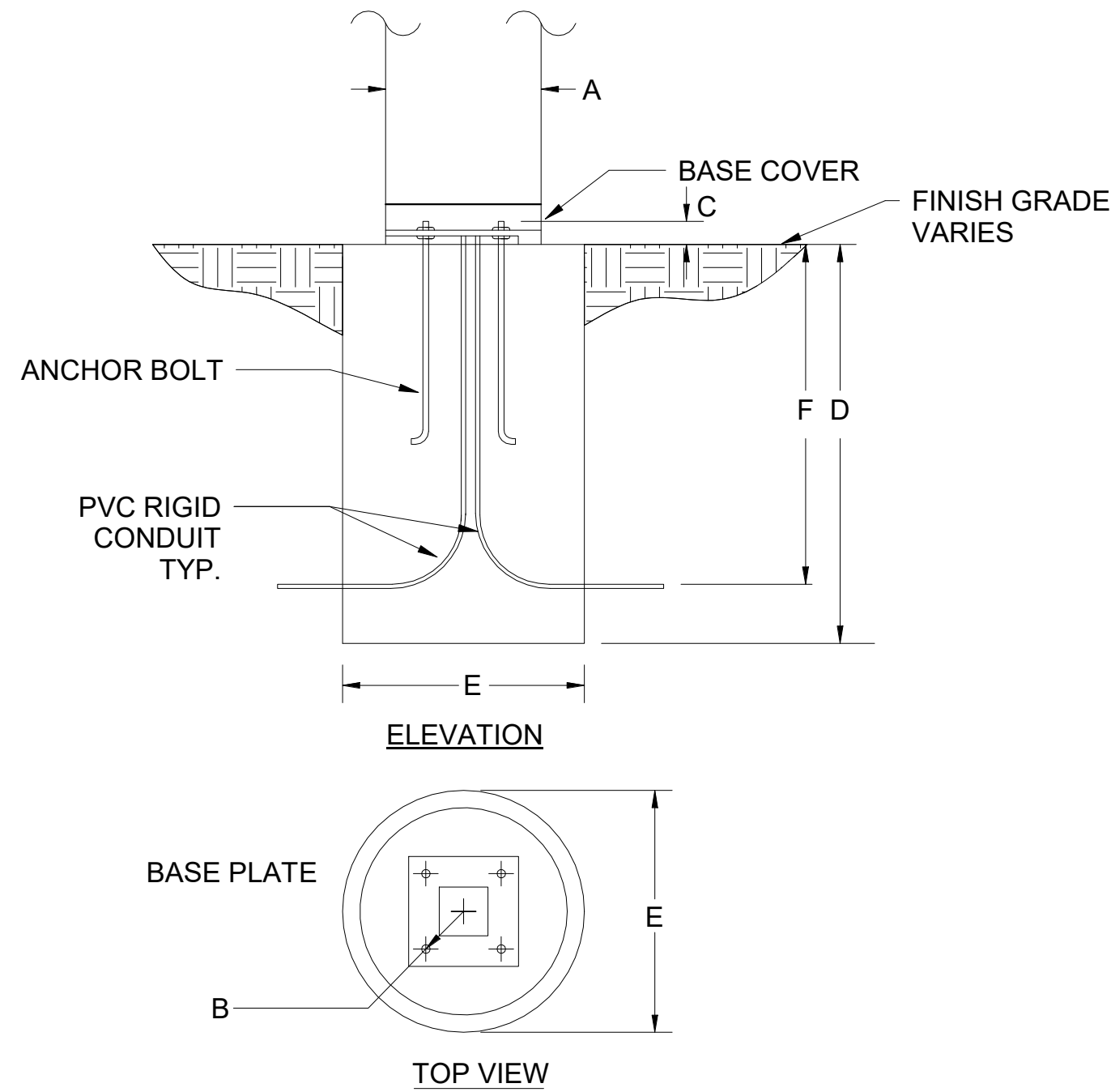
DEVICE MOUNTING HEIGHT

DESIGNED: BJL/BDJ/KMD	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 121
CADD	E0.0	ELECTRICAL COVER SHEET	176678
BJL/BDJ/KMD			PMIS/PKG NO. 160755
TECH REVIEW: BJJ/JEB			SHEET
DATE: 03/10/2022		FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	143 OF 165



POLE KEY	OVERALL HEIGHT	A	ANCHOR BOLT DATA				E	F	G	H	I
			B	SIZE	C	D					
EA1	18'0"	4"	PER MANUFACTURER				0'2"	6'0"	6'2"	24"	36"

1 POLE BASE DETAIL



POLE KEY	OVERALL HEIGHT	A	ANCHOR BOLT DATA			D	E	F
			B	SIZE	C			
EB1	25'		PER MANUFACTURER			2'6"	12"	24"

2 BOLLARD BASE DETAIL

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 SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
6	THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
7	FOR ALL JOBS THAT INCLUDE DEMOLITION WORK BY THE ELECTRICAL CONTRACTOR, DURING AND AFTER DEMOLITION, EC SHALL MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING DEVICES THAT ARE TO REMAIN. EC SHALL REMOVE, RELOCATE, AND/OR REWORK ANY CONDUIT AND WIRING TO FACILITATE THE NEW CONSTRUCTION SCOPE OF WORK. FOR ALL LUMINAIRES THAT ARE EXISTING TO REMAIN OR EXISTING TO BE RELOCATED, EC SHALL CLEAN LENSES AND REPLACE ALL EXTINGUISHED LAMPS, UON.
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 HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE CONTRACTING OFFICER.
10	ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
11	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.
12	DO NOT SHARE NEUTRAL CONDUCTORS FOR MULTIWIRE 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.
13	SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE "AS-BUILT" DRAWINGS.
14	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.
15	ALL NEW CIRCUITS SHALL HAVE A GROUND WIRE INSTALLED.
16	ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SPECIAL OUTLET BOXES THAT MAY BE REQUIRED TO ENCLOSE RECEPTACLES.
17	IN EXPOSED AND SUSPENDED 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. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.

LIGHTNING PROTECTION SYSTEM NOTES

ELECTRICAL CONTRACTOR SHALL PROVIDE BID OPTION (#8) PRICING TO PROVIDE AND INSTALL A LIGHTNING PROTECTION SYSTEM FOR EACH STRUCTURE (ENTRY STATION AND EACH KIOSK) WITH AN UNDERWRITER'S LABORATORIES LISTED MASTER C LABEL. REFER TO PERFORMACE SPECIFICATION SECTION 26 4113 FOR SYSTEM REQUIREMENTS. COORDINATE ALL AIR TERMINAL LOCATIONS ON ROOF WITH THE CONTRACTING OFFICER WHILE DEVELOPING SUBMITTALS. COORDINATE ALL DOWN CONDUCTOR LOCATIONS WITH THE CONTRACTION OFFICER AND MANUFACTURER DURING SUBMITTALS. SUBMITTALS REQUIRE FULL ROOF PLANS WITH ALL AIR TERMINALS (AND ALL OTHER EQUIPMENT) TO BE INDICATED FOR REVIEW PRIOR TO SUBMITTAL APPROVAL.

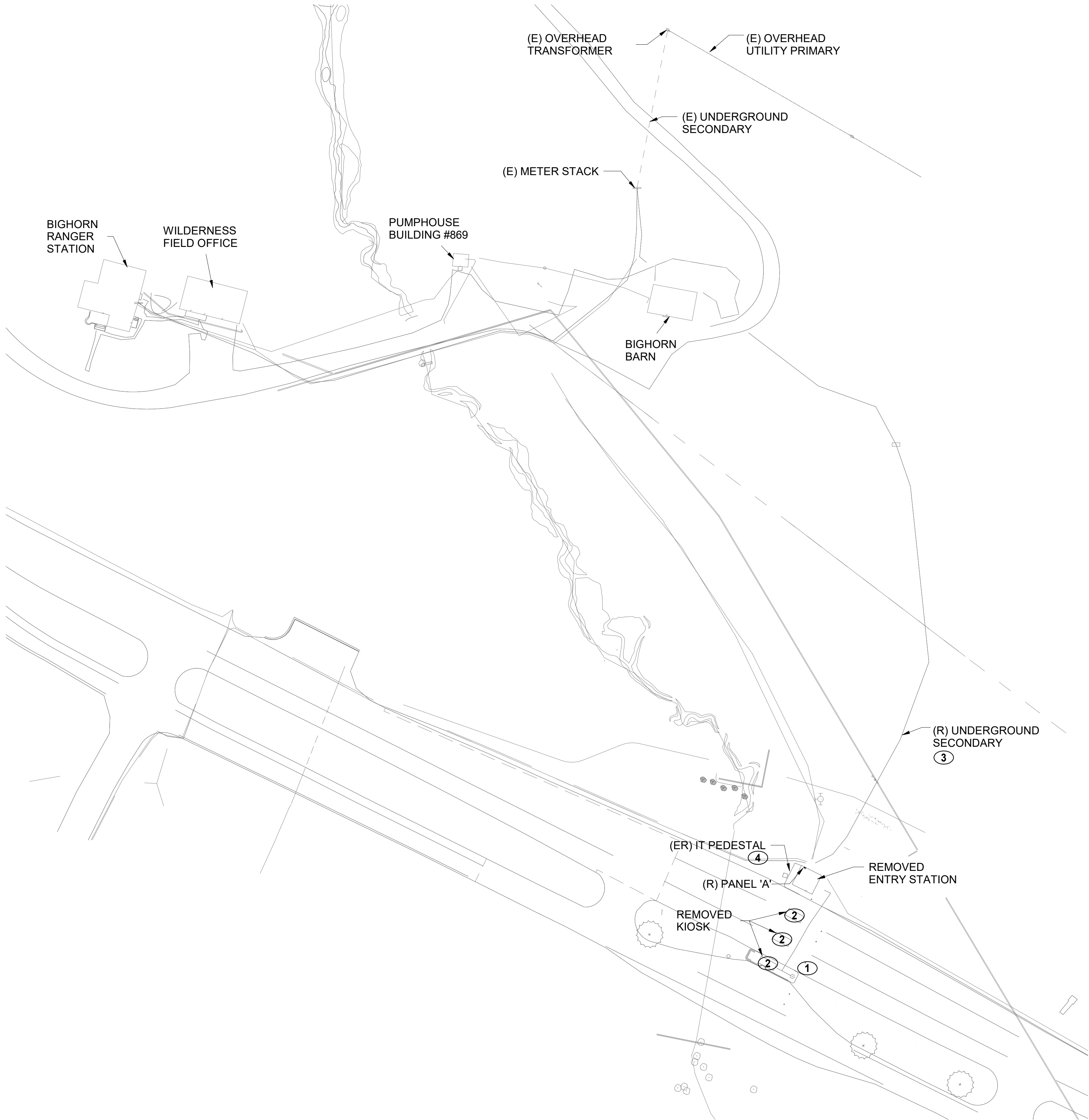
COVERSHEET NOTES

18	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.
19	ALL RECEPTACLES SHALL BE SPECIFICATION GRADE NEMA 5-20R, UNLESS OTHERWISE NOTED.
20	ALL LIGHT SWITCHES SHALL BE SPECIFICATION GRADE, QUIET OPERATION RATED 120/277 VOLT, 20 AMPS, UNLESS OTHERWISE NOTED.
21	ALL FACE PLATE AND DEVICE COLORS SHALL BE APPROVED BY CONTRACTING OFFICER.
22	PROVIDE LUMINAIRES SHOWN AS SHADED WITH EMERGENCY BATTERY BACKUP POWER. EMERGENCY LUMINAIRES SHALL SENSE UNSWITCHED POWER TO THE SPACE AND OPERATED 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 TEST SWITCHES AND VISIBLE INDICATING LIGHTS. CONNECT THE EMERGENCY BATTERY BACKUP TO THE UN-SWITCHED LEG OF THE LIGHTING CIRCUIT INDICATED.
23	ALL BATTERY BACKUP EMERGENCY LIGHTING AND EXIT LIGHTS SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING, UON.
24	ALL DIMMED LIGHTING CIRCUITS ARE TO RECEIVE DEDICATED NEUTRALS. DO NOT SHARE NEUTRALS ON DIMMED LIGHTING CIRCUITS.
25	PROVIDE CONTRACTING OFFICER WITH A COMPLETE LISTING OF ALL LAMPS UTILIZED ON THE PROJECT INCLUDING MANUFACTURER AND CATALOG INFORMATION. PROVIDE A SUGGESTED SOURCE, INCLUDING CONTACT NAME AND PHONE NUMBER, FOR REORDERING.
26	THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHTING.
27	ROUGH-IN FOR MECHANICAL EQUIPMENT SHALL ONLY OCCUR AFTER MECHANICAL EQUIPMENT SUBMITTALS ARE THOROUGHLY REVIEWED FOR CHANGES. NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES.
28	FINAL LAYOUT AND QUANTITY OF ALL FIRE ALARM DEVICES SUBJECT TO APPROVAL OF LOCAL AUTHORITY HAVING JURISDICTION.
29	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.
30	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.
31	G.C. SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT. TURN EQUIPMENT OVER TO THE CONTRACTING OFFICER AS INDICATED OR RECYCLE/DISCARD ALL EQUIPMENT AS REQUIRED. E.C. SHALL BE RESPONSIBLE FOR DISCONNECTING PRIMARY SERVICE AND TEMPORARY POWER.
32	IDENTIFY EACH RECEPTACLE WITH PANELBOARD IDENTIFICATION AND CIRCUIT NUMBER. USE HOT, STAMPED, OR ENGRAVED MACHINE PRINTING WITH BLACK-FILLED LETTERING ON FACE OF PLATE, AND DURABLE WIRE MARKERS OR TAGS INSIDE OUTLET BOXES.
33	EACH CONDUIT INSTALLED SHALL INCLUDE A PULL STRING THROUGHOUT THE ENTIRE LENGTH OF THE CONDUIT FOR FUTURE CONDUCTORS AND CABLES.



DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. E0.1	TITLE OF SHEET ELECTRICAL GENERAL NOTES FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 144 OF 165
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3/16/2022 9:25:18 PM BIM 360://2021-250 ROMO FRE/4991.00 - NPS ROMO Fall River - Electrical Central.rvt



DEMO SITE GENERAL NOTES	
A	PLEASE COORDINATE ALL UTILITY WORK WITH ESTES PARK POWER AND COMMUNICATION. LOCAL CONTACT IS TYLER BOLES (970-577-3607).
B	EXISTING ENTRY OFFICE BUILDING AND ALL KIOSKS TO BE DEMOLISHED IN THEIR ENTIRETY. EC SHALL BE RESPONSIBLE FOR DISCONNECTING POWER AND REMOVING FEEDERS/CONDUIT AS NOTED.

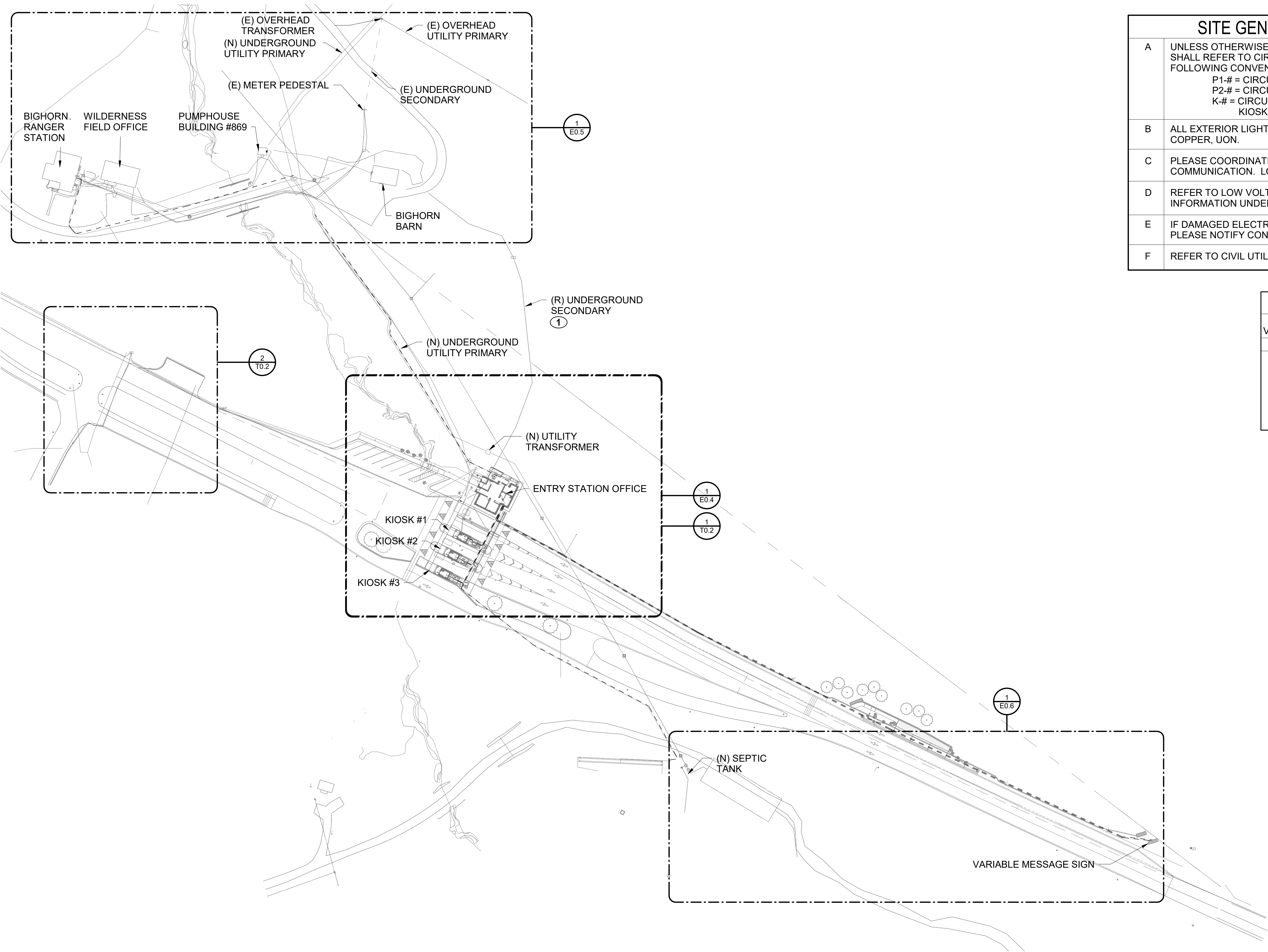
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	EXISTING POLE LIGHT FIXTURE TO BE DEMOLISHED. PULL BACK CONDUCTORS/ CONDUIT TO PANEL.
2	EC SHALL DEMOLISH EXISTING UNDERGROUND ELECTRICAL FEEDERS AND CONDUIT AS WELL AS ALL COMMUNICATIONS CONDUIT AND WIRING ROUTED FROM DEMOLISHED ENTRY STATION TO EACH DEMOLISHED KIOSK.
3	EXISTING ELECTRICAL SERVICE TO EXISTING ENTRY STATION SHALL BE DEMOLISHED. CONTRACTOR SHALL REMOVE FEEDERS FROM CONDUIT BACK TO EXISTING METER PEDESTAL (NORTH OF BIGHORN BARN). CONDUIT SHALL BE CUT BELOW GRADE AND CAPPED. EC SHALL COORDINATE SHUTDOWN OF EXISTING SERVICE WITH ESTES PARK POWER AND COMMUNICATIONS.
4	EXISTING INTERNET SERVICE PEDESTAL TO BE RELOCATED AS PART OF THIS SCOPE OF WORK. REFER TO TECHNOLOGY SITE PLAN FOR NEW PEDESTAL LOCATION.

1 ELECTRICAL SITE PLAN - DEMO
E0.2



DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. E0.2	TITLE OF SHEET ELECTRICAL DEMO - SITE PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 145 OF 165
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3/16/2022 9:25:20 PM BIM 360://2021-250 ROMO FRE/4991.00 - NPS ROMO Fall River - Electrical Central.rvt



SITE GENERAL NOTES

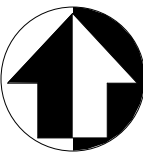
A	UNLESS OTHERWISE NOTED, ALL CIRCUIT NUMBERS INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS BASED UPON THE FOLLOWING CONVENTION, (THIS SHEET ONLY): P1-# = CIRCUIT TO PANEL 'P1' P2-# = CIRCUIT TO PANEL 'P2' K-# = CIRCUIT TO RESPECTIVE KIOSK PANEL 'K1', 'K2', OR 'K3'
B	ALL EXTERIOR LIGHTING CIRCUITS SHALL UTILIZE A MINIMUM WIRE SIZE OF #10AWG COPPER, UON.
C	PLEASE COORDINATE ALL UTILITY WORK WITH ESTES PARK POWER AND COMMUNICATION. LOCAL CONTACT IS TYLER BOLES (970-577-3607).
D	REFER TO LOW VOLTAGE RISER DIAGRAM, #4/T6.3, FOR MORE ADDITIONAL CONDUIT INFORMATION UNDER ELECTRICAL CONTRACTOR SCOPE OF WORK.
E	IF DAMAGED ELECTRICAL CONDUITS ARE EXPOSED DURING CONSTRUCTION PLEASE NOTIFY CONTRACTING OFFICER.
F	REFER TO CIVIL UTILITY DETAILS, SHEET C9.7 FOR ALL TRENCH DETAILS.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	EXISTING ELECTRICAL SERVICE TO EXISTING ENTRY STATION SHALL BE DEMOLISHED. CONTRACTOR SHALL REMOVE FEEDERS FROM CONDUIT BACK TO EXISTING METER PEDESTAL (NORTH OF BIGHORN BARN). CONDUIT SHALL BE CUT BELOW GRADE AND CAPPED. EC SHALL COORDINATE SHUTDOWN OF EXISTING SERVICE WITH ESTES PARK POWER AND COMMUNICATIONS.

1 E0.3 ELECTRICAL SITE PLAN - OVERALL

60 0 60 120
SCALE OF FEET



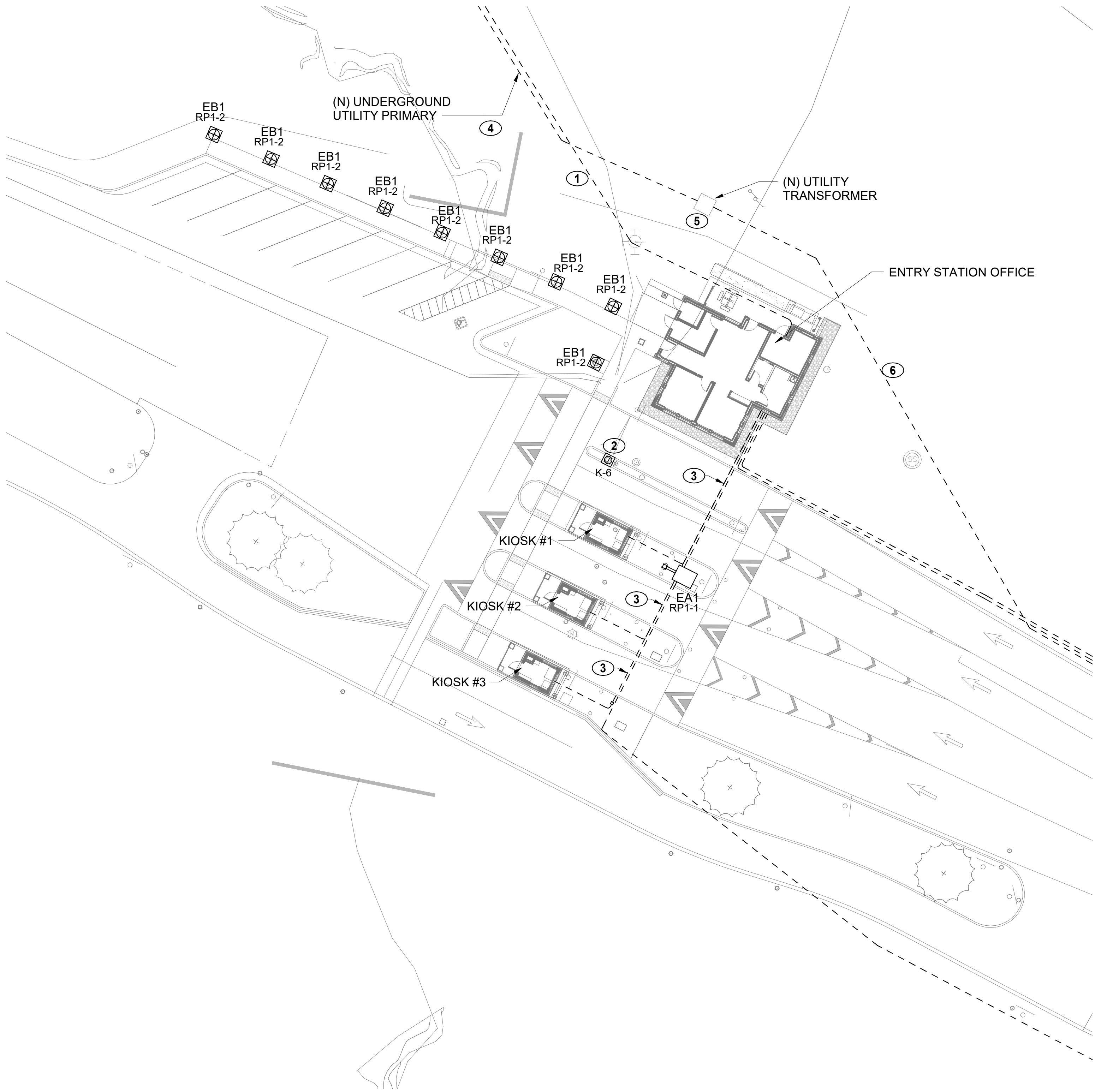
DESIGNED:
BJL/BDJ/KMD
GADD
BJL/BDJ/KMD
TECH REVIEW:
BJJ/JEB
DATE:
03/10/2022

SUB SHEET NO.
E0.3

TITLE OF SHEET
ELECTRICAL SITE
PLAN - OVERALL
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
146 OF 165

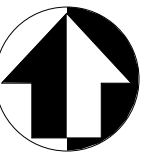
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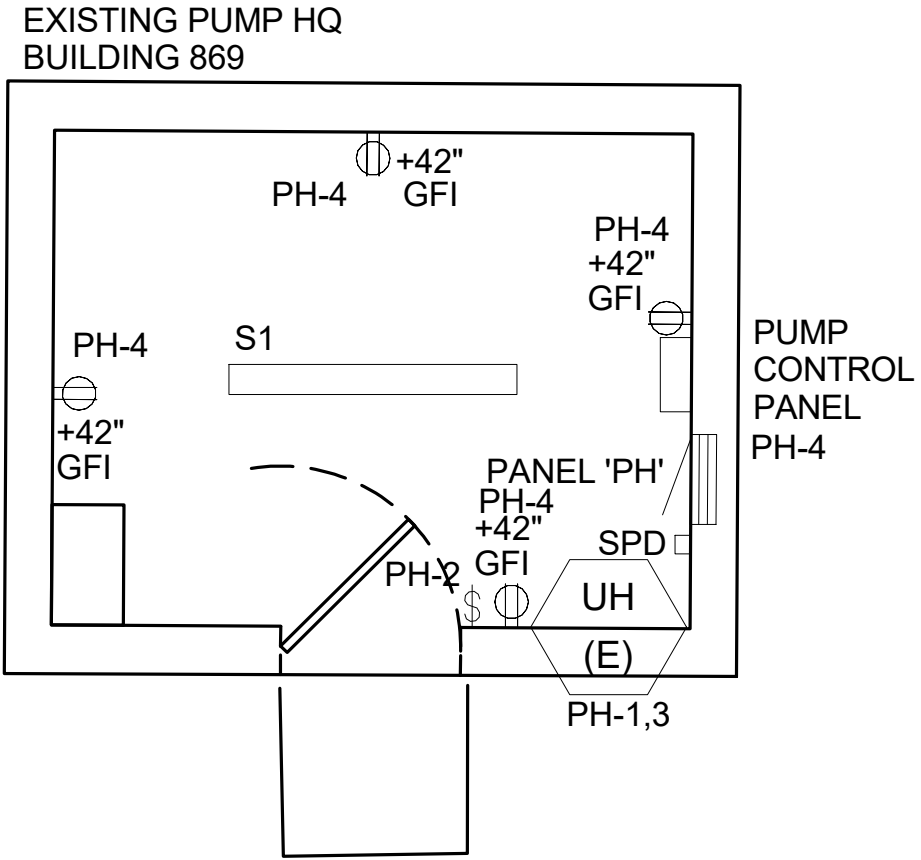
1
E0.4 ELECTRICAL SITE PLAN - ENTRY STATION

SITE GENERAL NOTES	
A	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): P1-# = CIRCUIT TO PANEL 'P1' P2-# = CIRCUIT TO PANEL 'P2' K-# = CIRCUIT TO RESPECTIVE KIOSK PANEL 'K1', 'K2', OR 'K3'
B	ALL EXTERIOR LIGHTING CIRCUITS SHALL UTILIZE A MINIMUM WIRE SIZE OF #10AWG COPPER, UON.
C	PLEASE COORDINATE ALL UTILITY WORK WITH ESTES PARK POWER AND COMMUNICATION. LOCAL CONTACT IS TYLER BOLES (970-577-3607).
D	REFER TO LOW VOLTAGE RISER DIAGRAM, #4/T6.3, FOR MORE ADDITIONAL CONDUIT INFORMATION UNDER ELECTRICAL CONTRACTOR SCOPE OF WORK.
E	IF DAMAGED ELECTRICAL CONDUITS ARE EXPOSED DURING CONSTRUCTION PLEASE NOTIFY CONTRACTING OFFICER.
F	REFER TO CIVIL UTILITY DETAILS, SHEET C9.7 FOR ALL TRENCH DETAILS.

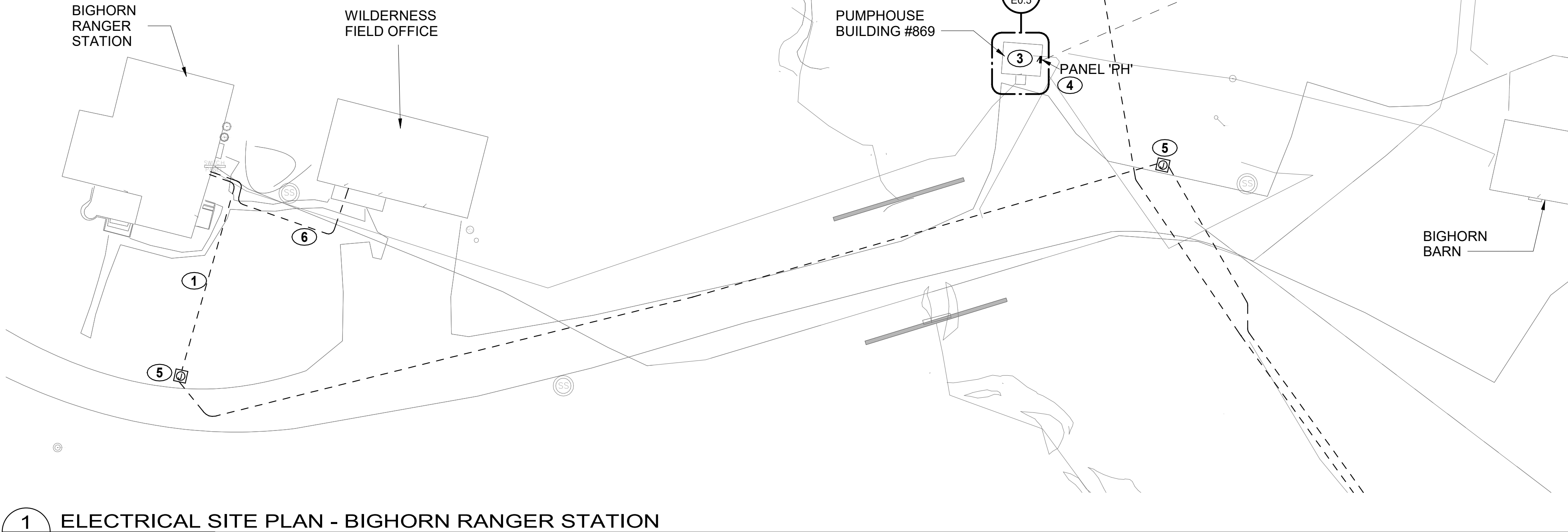
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	EC SHALL PROVIDE NEW 4" CONDUIT WITH FIBER OPTIC CABLING IN SAME TRENCH AS NEW WATER LINES FROM THE BIGHORN RANGER STATION TO THE NEW ENTRANCE STATION OFFICE TELECOM RACK FOR TELE/COMMUNICATIONS PROVISIONS. CONDUIT SHALL ENTER BIG HORN RANGER STATION BUILDING ADJACENT TO WATER LINE. PROVIDE A MINIMUM 10' COIL OF FIBER WITHIN THE RANGER STATION. MAINTAIN A MINIMUM OF 12" OF SEPARATION BETWEEN WATER LINE AND NEW CONDUIT. REFER TO FIBER CONNECTIVITY SCHEDULE IN TECHNOLOGY DRAWINGS. REFER TO DETAIL 2/C9.7 FOR TRENCH DETAIL.
2	EC SHALL PROVIDE 120V, 20A ELECTRICAL CIRCUIT TO FAST PASS ENTRY GATE FROM KIOSK#1. PROVIDE (1) 1" CONDUIT WITH 3#10 CONDUCTORS.
3	APPROXIMATE ROUTING OF UNDERGROUND CONDUITS IN SHARED UTILITY TRENCH BETWEEN ENTRY STATION OFFICE BUILDING AND EACH KIOSK. REFER TO CIVIL DRAWINGS (C5.3) FOR EXACT LOCATIONS AND TRENCH DETAILS (5/C9.7). REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR MORE INFORMATION.
4	NEW UNDERGROUND UTILITY PRIMARY FROM OVERHEAD POLE TO NEW PAD MOUNTED TRANSFORMER SHALL BE PROVIDED BY ESTES PARK POWER AND COMMUNICATIONS. EPP&C HAS PROVIDED A CONSTRUCTION ESTIMATE OF \$56,000 TO PERFORM ALL UTILITY WORK. COST SHALL BE CARRIED AS PART OF CONSTRUCTION BUDGET AND PAID FOR BY THE NPS. CONTRACTOR SHALL COORDINATE SEQUENCING OF WORK WITH EPP&C (TYLER BOLES).
5	APPROXIMATE LOCATION OF NEW 120/240V, 1-PHASE, PAD MOUNTED TRANSFORMER. THE EC SHALL COORDINATE ROUTING AND TERMINATION IN THE FIELD AS TO ACHIEVE BUILDING POWER ACTIVATION. ESTES PARK POWER AND COMMUNICATIONS (EPP&C) 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 EPP&C. THE EC SHALL PERFORM ALL TRENCHING AND BACKFILLING ON THE SECONDARY SIDE OF THE TRANSFORMER. EPP&C SHALL MAKE ALL CONNECTIONS OF SECONDARY CABLING AT THE TRANSFORMER LANDINGS. THE EC SHALL FURNISH AND INSTALL THE REQUIRED METER HOUSINGS AND TRANSFORMER PAD AS COORDINATED WITH EPP&C. EPP&C SHALL FURNISH, INSTALL, AND CONNECT THE METER IN THAT HOUSING. ALL COSTS FOR WORK DESCRIBED ABOVE TO BE PERFORMED BY EPP&C SHALL BE CARRIED AS PART OF THE PROJECT BUDGET AND SHALL BE PAID FOR BY THE NPS.
6	BID OPTION 4: EC SHALL PROVIDE (1) 6" SCH-40 CONDUIT BURIED AT 4 FOOT TO TOP OF CONDUIT FROM UTILITY TRANSFORMER TO PARK BOUNDARY FOR FUTURE UTILITY COMPANY UPGRADES. PROVIDE CONDUIT WITH PULL STRING AND STAKE LOCATION AT PROPERTY LINE. CONDUIT SHALL SHARE TRENCH WITH CONDUITS TO VARIABLE MESSAGE SIGN. CONDUIT SHALL BE INSTALLED TO MEET ESTES PARK POWER AND COMMUNICATIONS REQUIREMENTS. RE 3/C9.7 AND 6/C9.7 FOR TRENCH DETAILS.



DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. E0.4	TITLE OF SHEET ELECTRICAL SITE PLAN - ENTRY STATION FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 147 OF 165
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2 PUMP HOUSE ELECTRICAL
E0.5 SCALE (B)



1 ELECTRICAL SITE PLAN - BIGHORN RANGER STATION
E0.5 SCALE (A)

KEYNOTE LEGEND

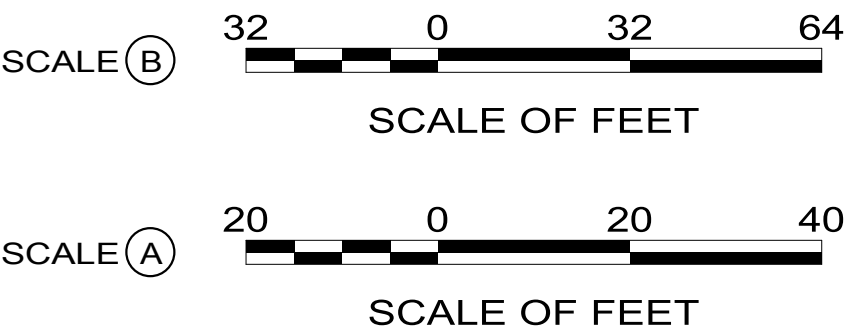
KEY VALUE	KEYNOTE TEXT
1	EC SHALL PROVIDE NEW 4" CONDUIT WITH FIBER OPTIC CABLING IN SAME TRENCH AS NEW WATER LINES FROM THE BIGHORN RANGER STATION TO THE NEW ENTRANCE STATION OFFICE TELECOM RACK FOR TELE/COMMUNICATIONS PROVISIONS. CONDUIT SHALL ENTER BIG HORN RANGER STATION BUILDING ADJACENT TO WATER LINE. PROVIDE A MINIMUM 10' COIL OF FIBER WITHIN THE RANGER STATION. MAINTAIN A MINIMUM OF 12" OF SEPARATION BETWEEN WATER LINE AND NEW CONDUIT. REFER TO FIBER CONNECTIVITY SCHEDULE IN TECHNOLOGY DRAWINGS. REFER TO DETAIL 2/C9.7 FOR TRENCH DETAIL.
2	EC SHALL REPLACE EXISTING 40A UNDERGROUND FEEDERS (3#8, 1#10G) FROM METER PEDESTAL TO PUMPHOUSE BUILDING, RE-USING EXISTING CONDUIT.
3	EXISTING ELECTRICAL AND INFRASTRUCTURE AT PUMP HOUSE BUILDING SHALL BE DEMOLISHED AND REPLACED WITH NEW. REFER TO 2/E0.5 FOR MORE INFORMATION.
4	EC SHALL REPLACE EXISTING 40A ELECTRICAL PANEL LOCATED WITHIN PUMPHOUSE BUILDING. PROVIDE NEW 60A, 12-SPACE PANEL WITH 40A/2P MAIN BREAKER.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
5	CONTRACTOR SHALL PROVIDE GRADE MOUNTED PULL BOX AT THIS LOCATION. BOX TO BE APPROXIMATELY 12"X12"X12" WITH A T22 LOAD RATING, OPEN BOTTOM, AND PROVIDED WITH A NEOPRENE GASKET SIMILAR TO A QUAZITE #B16121212G WITH 2-BOLT COVER #C16121202A017 (OR APPROVED EQUAL). PROVIDE SCREENING ON ALL OPENINGS TO PREVENT ANIMAL INTRUSION INTO THE BOX. DO NOT LOCATE PULL BOX IN ROADWAY.
6	PROVIDE (1) 2" CONDUIT FOR FUTURE POWER AND (1) 4" CONDUIT FOR FUTURE FIBER OPTICS CABLING IN SAME TRENCH AS NEW WATER LINES FROM THE BIGHORN RANGER STATION TO THE WILDERNESS FIELD OFFICE. CONDUITS SHALL ENTER EACH BUILDING ADJACENT TO WATER LINE ENTRY LOCATION. FIELD VERIFY EXACT PENETRATION LOCATION INTO BUILDING WITH CONTRACTING OFFICER PRIOR TO INSTALLATION. PROVIDE PULL STRING WITHIN EACH CONDUIT AND CAP ON CONDUIT FOR FUTURE USE. MAINTAIN A MINIMUM OF 12" OF SEPARATION BETWEEN WATER LINE AND NEW CONDUIT.
7	NEW UNDERGROUND UTILITY PRIMARY FROM OVERHEAD POLE TO NEW PAD MOUNTED TRANSFORMER SHALL BE PROVIDED BY ESTES PARK POWER AND COMMUNICATIONS. EPP&C HAS PROVIDED A CONSTRUCTION ESTIMATE OF \$56,000 TO PERFORM ALL UTILITY WORK. COST SHALL BE CARRIED AS PART OF CONSTRUCTION BUDGET AND PAID FOR BY THE NPS. CONTRACTOR SHALL COORDINATE SEQUENCING OF WORK WITH EPP&C (TYLER BOLES).

SITE GENERAL NOTES

A	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): P1-# = CIRCUIT TO PANEL 'P1' P2-# = CIRCUIT TO PANEL 'P2' K-# = CIRCUIT TO RESPECTIVE KIOSK PANEL 'K1', 'K2', OR 'K3'
B	ALL EXTERIOR LIGHTING CIRCUITS SHALL UTILIZE A MINIMUM WIRE SIZE OF #10AWG COPPER, UON.
C	PLEASE COORDINATE ALL UTILITY WORK WITH ESTES PARK POWER AND COMMUNICATION. LOCAL CONTACT IS TYLER BOLES (970-577-3607).
D	REFER TO LOW VOLTAGE RISER DIAGRAM, #4/T6.3, FOR MORE ADDITIONAL CONDUIT INFORMATION UNDER ELECTRICAL CONTRACTOR SCOPE OF WORK.
E	IF DAMAGED ELECTRICAL CONDUITS ARE EXPOSED DURING CONSTRUCTION PLEASE NOTIFY CONTRACTING OFFICER.
F	REFER TO CIVIL UTILITY DETAILS, SHEET C9.7 FOR ALL TRENCH DETAILS.



DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. E0.5	TITLE OF SHEET ELECTRICAL SITE PLAN - BIGHORN RANGER STATION FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 148 OF 165
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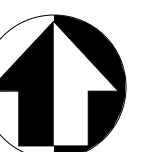
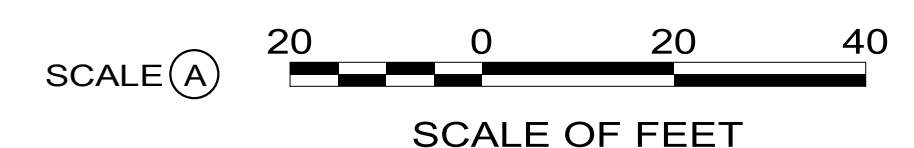



1 ELECTRICAL SITE PLAN - VMS & SEPTIC TANK
E0.6 SCALE (A)

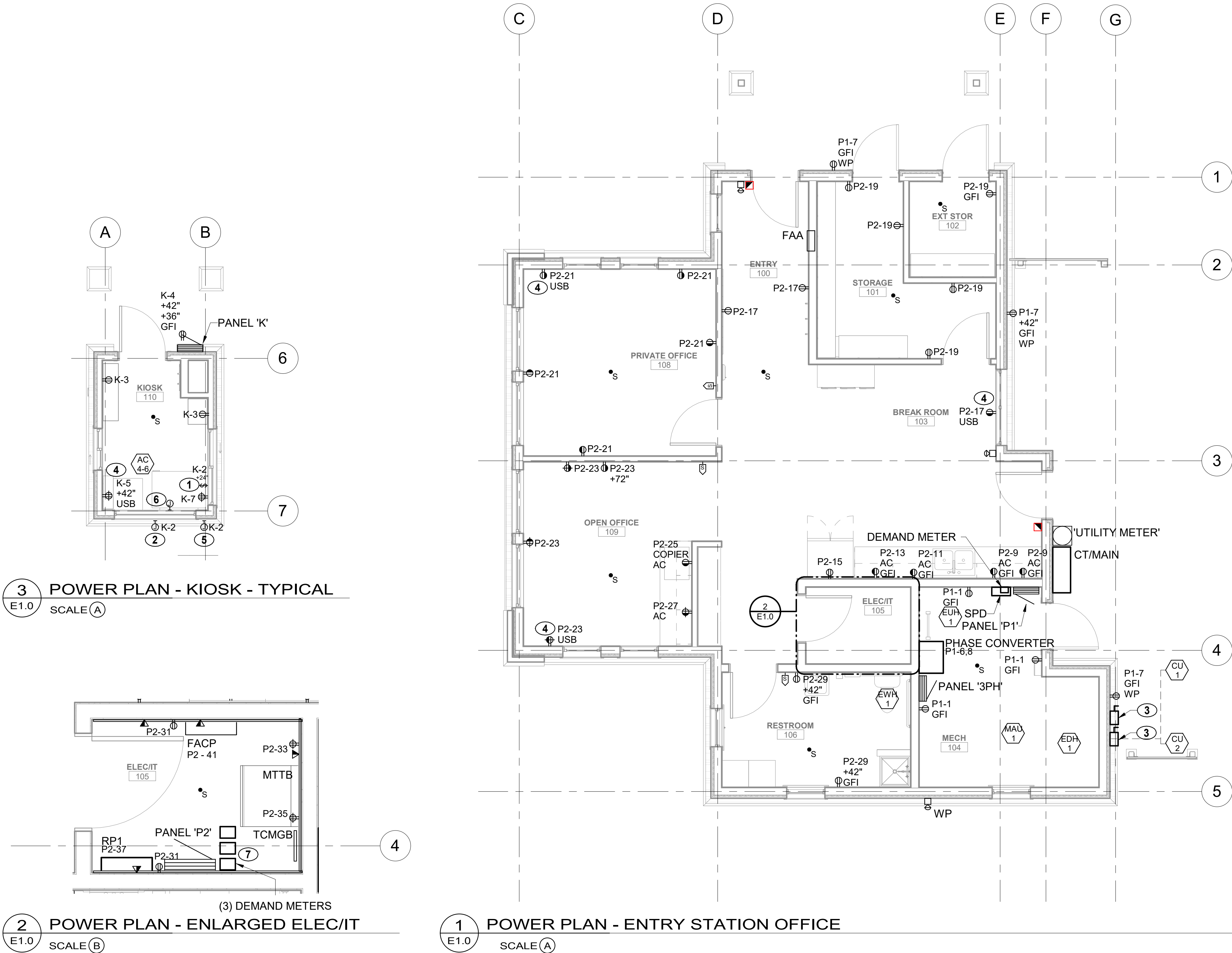
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	BID OPTION #4: EC SHALL PROVIDE NEW 2" FIBER OPTICS CONDUIT FROM THE ENTRANCE STATION OFFICE TO THE VARIABLE MESSAGE SIGN (VMS) WITH (1) FIBER OPTIC CABLE FOR COMMUNICATIONS TO SIGNAGE. CONDUIT SHALL TERMINATE AT AN 8"x8"x6" NEMA 3R ENCLOSURE AND BE MOUNTED TO BACK SIDE OF VARIABLE MESSAGE SIGN STRUCTURE. REFER TO DETAIL 5/E5.0 FOR MORE INFORMATION.
2	BID OPTION #4: EC SHALL PROVIDE 120V, 20A ELECTRICAL CIRCUIT TO VARIABLE MESSAGE SIGN. PROVIDE (1) 1" CONDUIT WITH 3#4 CONDUCTORS TO A 30A/1P SERVICE RATED, FUSED DISCONNECT WITH 20A FUSES, CONDUCTOR SIZES HAVE BEEN INCREASED TO ACCOUNT FOR VOLTAGE DROP. PROVIDE REDUCING PIN CONNECTORS OR SPLICES ON EACH END TO MAKE FINAL TERMINATIONS TO BREAKERS/EQUIPMENT. DISCONNECT SHALL BE MOUNTED TO BACK SIDE OF VARIABLE MESSAGE SIGN STRUCTURE. REFER TO DETAIL 5/E5.0 FOR MORE INFORMATION. RE: 6/C9.7 FOR TRENCH DETAIL.
3	EC SHALL PROVIDE 120V, 20A ELECTRICAL CIRCUIT TO SEPTIC TANK EFFLUENT PUMP CONTROL PANEL WITH INTEGRAL DISCONNECT. PROVIDE (1) 1" CONDUIT WITH 3#6 CONDUCTORS, CONDUCTOR SIZES HAVE BEEN INCREASED TO ACCOUNT FOR VOLTAGE DROP. PROVIDE REDUCING PIN CONNECTORS OR SPLICES ON EACH END TO MAKE FINAL TERMINATIONS TO BREAKERS/DISCONNECT. CONTROL PANEL WILL BE MOUNTED TO UNISTRUT BACKBOARD, PROVIDED AND INSTALLED BY WASTE WATER TREATMENT CONTRACTOR. RE: 3/C9.7 FOR TRENCH DETAIL AND C8.0 & 9.5 FOR MORE INFORMATION.
4	BID OPTION 4: EC SHALL PROVIDE (1) 6" SCH-40 CONDUIT BURIED AT 4 FOOT TO TOP OF CONDUIT FROM UTILITY TRANSFORMER TO PARK BOUNDARY FOR FUTURE UTILITY COMPANY UPGRADES. PROVIDE CONDUIT WITH PULL STRING AND STAKE LOCATION AT PROPERTY LINE. CONDUIT SHALL SHARE TRENCH WITH CONDUITS TO VARIABLE MESSAGE SIGN. CONDUIT SHALL BE INSTALLED TO MEET ESTES PARK POWER AND COMMUNICATIONS REQUIREMENTS. RE 3/C9.7 AND 6/C9.7 FOR TRENCH DETAILS.
5	EC SHALL PROVIDE (1) 3/4" CONDUIT BETWEEN CONTROL PANEL AND EXTERNAL SPLICE BOX FOR ROUTING OF CABLES TO SEPTIC TANK PUMP. CABLING AND TERMINATIONS TO BE INSTALLED BY OTHERS.
6	EC SHALL PROVIDE ELECTRICAL SERVICE FOR TEMPORARY KIOSK. ANTICIPATE A 120/240V, 60A ELECTRICAL SERVICE WITH DIRECT READ UTILITY METER AND 60A, 24-SPACE ELECTRICAL PANEL WITH 60A MAIN DISCONNECT. ESTES PARK POWER AND COMMUNICATIONS TO PROVIDE POLE MOUNTED TRANSFORMER ON NEAREST OVERHEAD UTILITY LINE AND EC SHALL PROVIDE CONDUITS FROM TRANSFORMER TO TEMP KIOSK ROUTED ON SURFACE OF GROUND. ANTICIPATE 200 FEET OF 3#4, 1#10G IN 1-1/4" SCH-80 PVC. REFER TO CIVIL "CONSTRUCTION MOT" DRAWINGS SHEETS C10.0-C10.6 FOR MORE INFORMATION.
7	APPROXIMATE LOCATION OF TEMPORARY KIOSK. PROVIDE A TEMPORARY POINT-TO-POINT SYSTEM WITHIN 300 FEET OF THE TEMPORARY KIOSK. REFER TO LOW VOLTAGE RISER DIAGRAM ON SHEET T6.3 FOR MORE INFORMATION.

SITE GENERAL NOTES

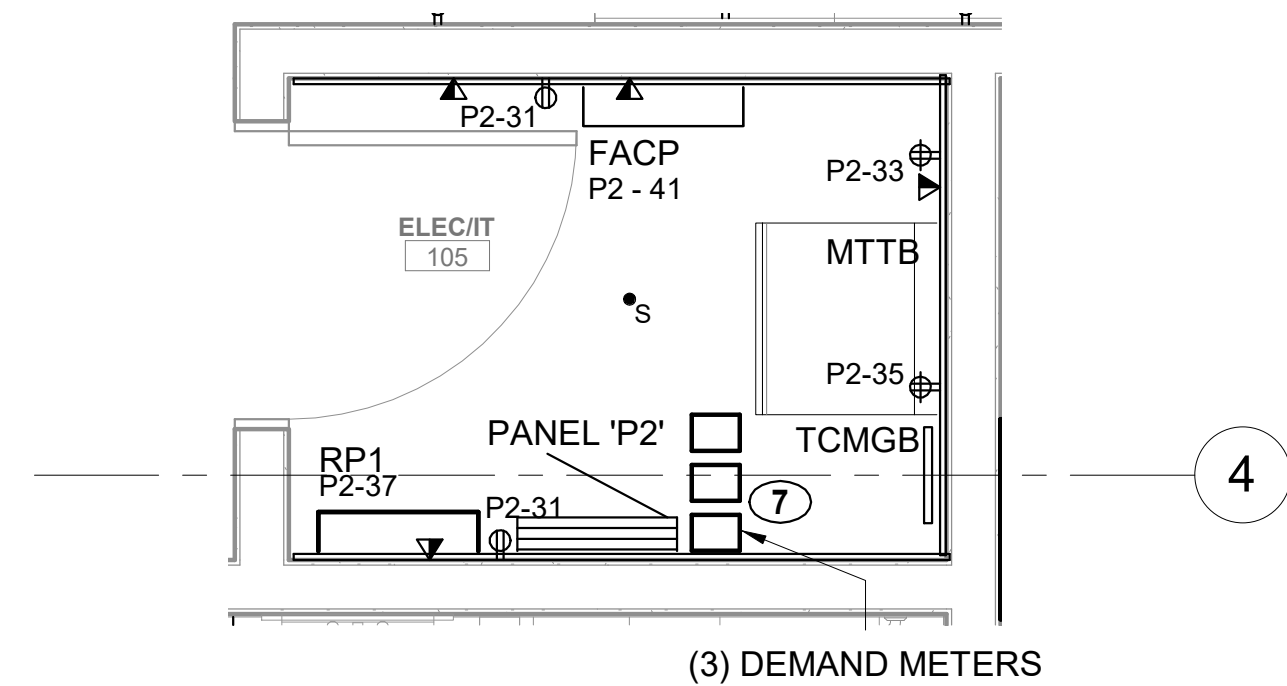
SITE GENERAL NOTES	
A	<p>UNLESS OTHERWISE NOTED, ALL CIRCUITS INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS BASED UPON THE FOLLOWING CONVENTION. (THIS SHEET ONLY):</p> <p>P1# = CIRCUIT TO PANEL 'P1' P2# = CIRCUIT TO PANEL 'P2' K# = CIRCUIT TO RESPECTIVE KIOSK PANEL 'K1', 'K2', OR 'K3'</p>
B	ALL EXTERIOR LIGHTING CIRCUITS SHALL UTILIZE A MINIMUM WIRE SIZE OF #10AWG COPPER, UON.
C	PLEASE COORDINATE ALL UTILITY WORK WITH ESTES PARK POWER AND COMMUNICATION. LOCAL CONTACT IS TYLER BOLES (970-577-3607).
D	REFER TO LOW VOLTAGE RISER DIAGRAM, #4/T6.3, FOR MORE ADDITIONAL CONDUIT INFORMATION UNDER ELECTRICAL CONTRACTOR SCOPE OF WORK.
E	IF DAMAGED ELECTRICAL CONDUITS ARE EXPOSED DURING CONSTRUCTION PLEASE NOTIFY CONTRACTING OFFICER.
F	REFER TO CIVIL UTILITY DETAILS, SHEET C9.7 FOR ALL TRENCH DETAILS.



DESIGNED: BJL/BDJ/KMD	SUB SHEET NO. E0.6	TITLE OF SHEET ELECTRICAL SITE PLAN - VMS & SEPTIC TANK	DRAWING NO. 121 176678
 BJL/BDJ/KMD			PMIS/PKG NO. 160755
TECH REVIEW: BJJ/JEB			SHEET
DATE: 03/10/2022			149 OF 165
		FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	



3 POWER PLAN - KIOSK - TYPICAL
SCALE (A)

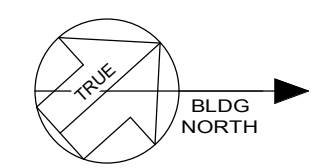
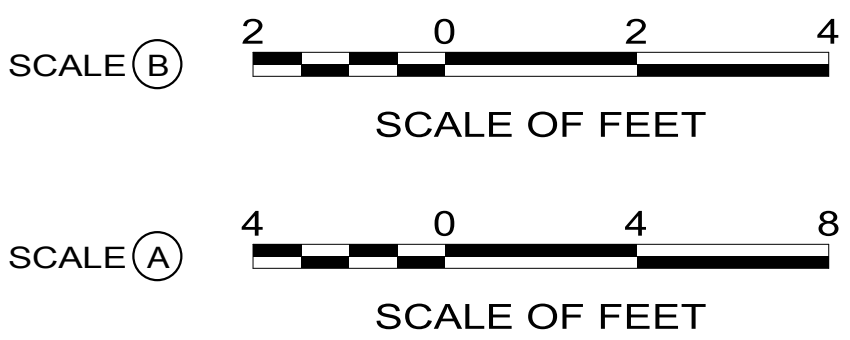


2 POWER PLAN - ENLARGED ELEC/IT
SCALE (B)

1 POWER PLAN - ENTRY STATION OFFICE
SCALE (A)

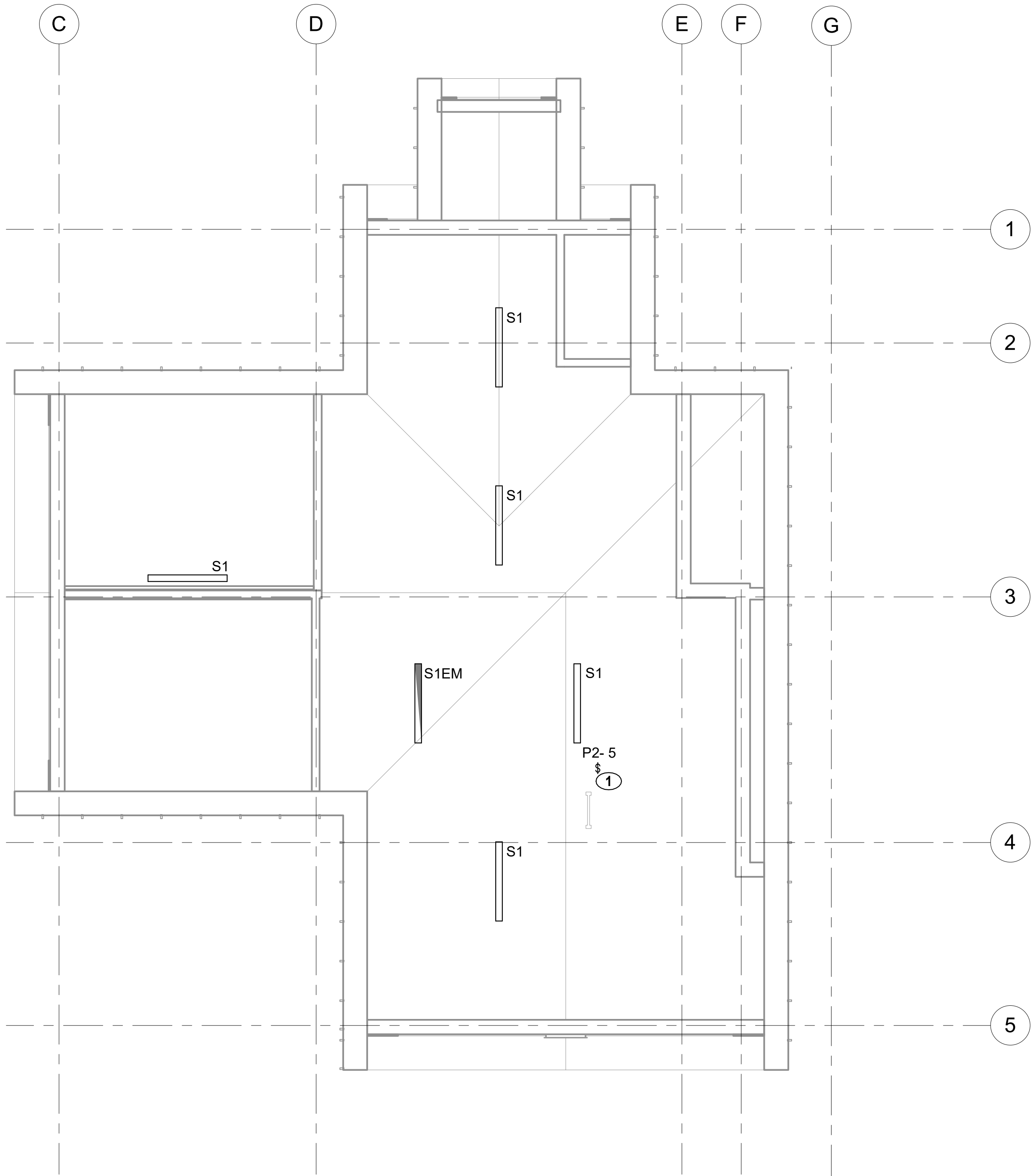
POWER GENERAL NOTES	
A	UNLESS OTHERWISE NOTED, ALL CIRCUIT NUMBERS INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS BASED UPON THE FOLLOWING CONVENTION, (THIS SHEET ONLY): P1-# = CIRCUIT TO PANEL 'P1' P2-# = CIRCUIT TO PANEL 'P2' K-# = CIRCUIT TO RESPECTIVE KIOSK PANEL 'K1', 'K2', OR 'K3'
B	LAYOUT OF DEVICES IN KIOSK IS TYPICAL OF (3) SEPARATE KIOSKS ON THE SITE. REFER TO SITE PLAN FOR MORE INFORMAITON. KIOSK #1 WILL CONTAIN PANEL 'K1', KIOSK #2 WILL CONTAIN PANEL 'K2', AND KIOSK #3 WILL CONTAIN PANEL 'K3'.
C	ALL HALF SHADED RECEPTACLE DEVICES ARE DEVICES TO BE CONTROLLED WITH THE OCCUPANCY/VACANCY SENSOR IN THE SAME SPACE. REFER TO DETAILS 2&3 ON SHEET E5.0 FOR MORE INFORMAITON.

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	CONTRACTOR SHALL PROVIDE SINGLE POLE DOUBLE THROW SWITCH TAPCO 113632 OR EQUAL BENEATH ADJUSTABLE DESK FOR CONTROL OF OPEN/CLOSE SIGNAGE. CONNECT SWITCH UP LEG TO OPEN LIGHT AND SIMPLEX RECEPTACLE FOR LANE LIGHT, SWITCH DOWN LEG TO CLOSED LIGHT.
2	CONTRACTOR TO PROVIDE WEATHERPROOF JUNCTION BOX FOR MOUNTING OF OPEN/CLOSE SIGNAGE (PROVIDED BY NPS). SIGN TO BE CONTROLLED BY SWITCH LOCATED INSIDE THE KIOSK.
3	CONTRACTOR SHALL LOCATE DISCONNECTS FOR CONDENSING UNITS ALONG THIS WALL. CONDUITS TO EACH UNIT SHALL BE BUNDLED AND ROUTED WITH CONDENSATE LINES.
4	EC SHALL PROVIDE USB TYPE RECEPTACLE AT THIS LOCATION. PROVIDE WITH (1) TYPE A CHARGER AND (1) TYPE C CHARGER SIMILAR TO LEVITON #T5833 (OR APPROVED EQUAL).
5	CONTRACTOR TO PROVIDE WEATHER PROOF IN-USE ENCLOSURE WITH SIMPLEX RECEPTACLE FOR LANE LIGHT CONNECT TO 'OPEN' (UP) TOGGLE SWITCH INSIDE KIOSK.
6	PROVIDE NEMA 1 RECESSED 12"X12" ENCLOSURE FOR COMMUNICATIONS CONDUITS. REFER TO #3/T6.3 FOR MORE INFORMATION.
7	EC SHALL STACK DEMAND METERS VERTICALLY ADJACENT TO PANEL P2. REFER TO ELECTRICAL ONE-LINE DIAGRAM, SHEET E3.0 FOR MORE INFORMATION.



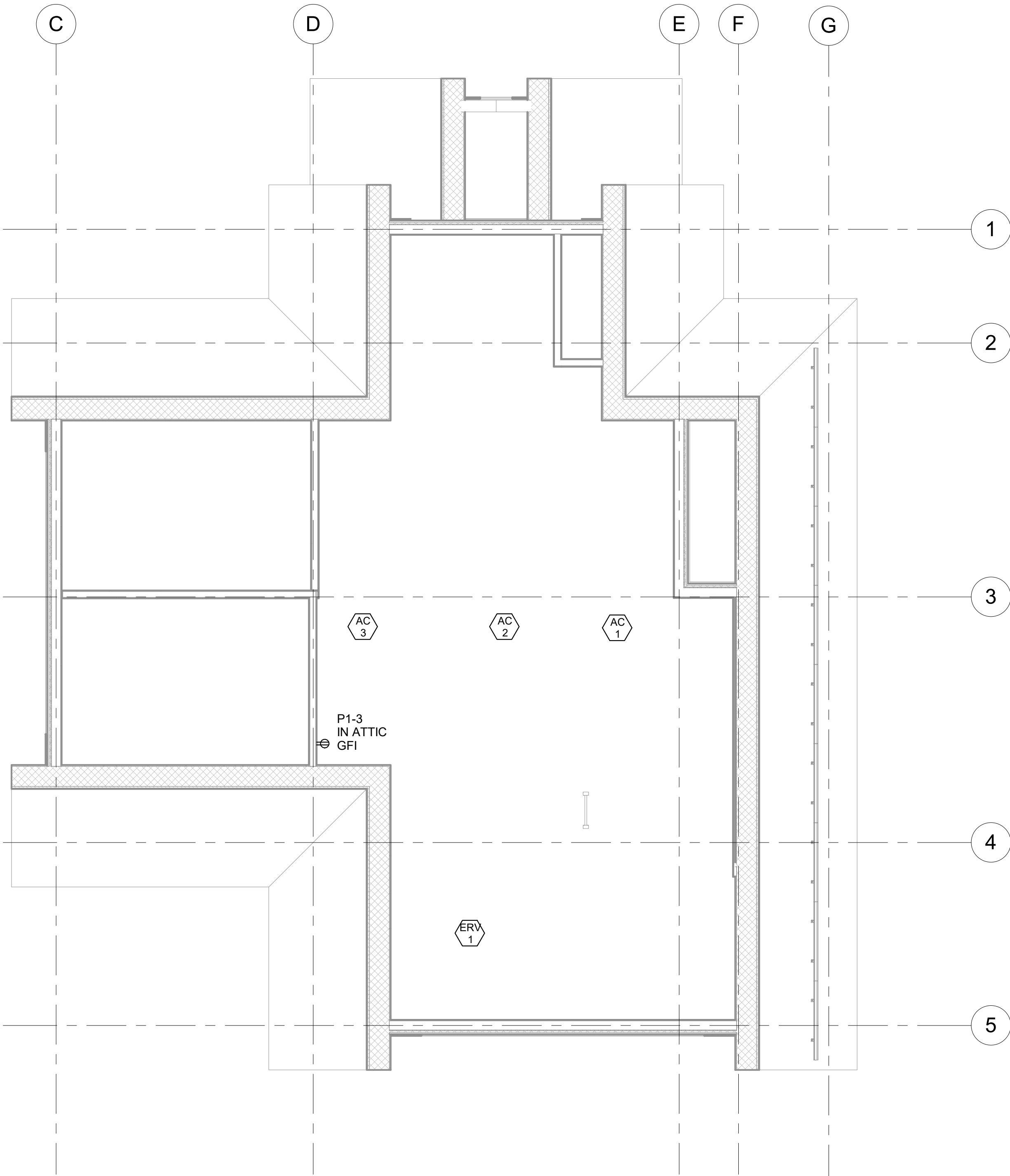
DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. E1.0	TITLE OF SHEET ELECTRICAL POWER PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 150 OF 165
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3/16/2022 9:25:23 PM BIM 360://2021-250 ROMO FRE/4991.00 - NPS ROMO Fall River - Electrical Central.rvt



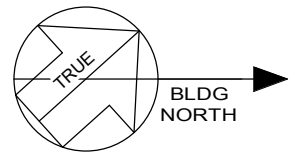
2 ATTIC LIGHTING PLAN
E1.1

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	EC SHALL PROVIDE SWITCH FOR CONTROL OF ATTIC LIGHTS AT ENTRY TO ATTIC SPACE.



1 ATTIC POWER PLAN
E1.1

4 0 4 8
SCALE OF FEET



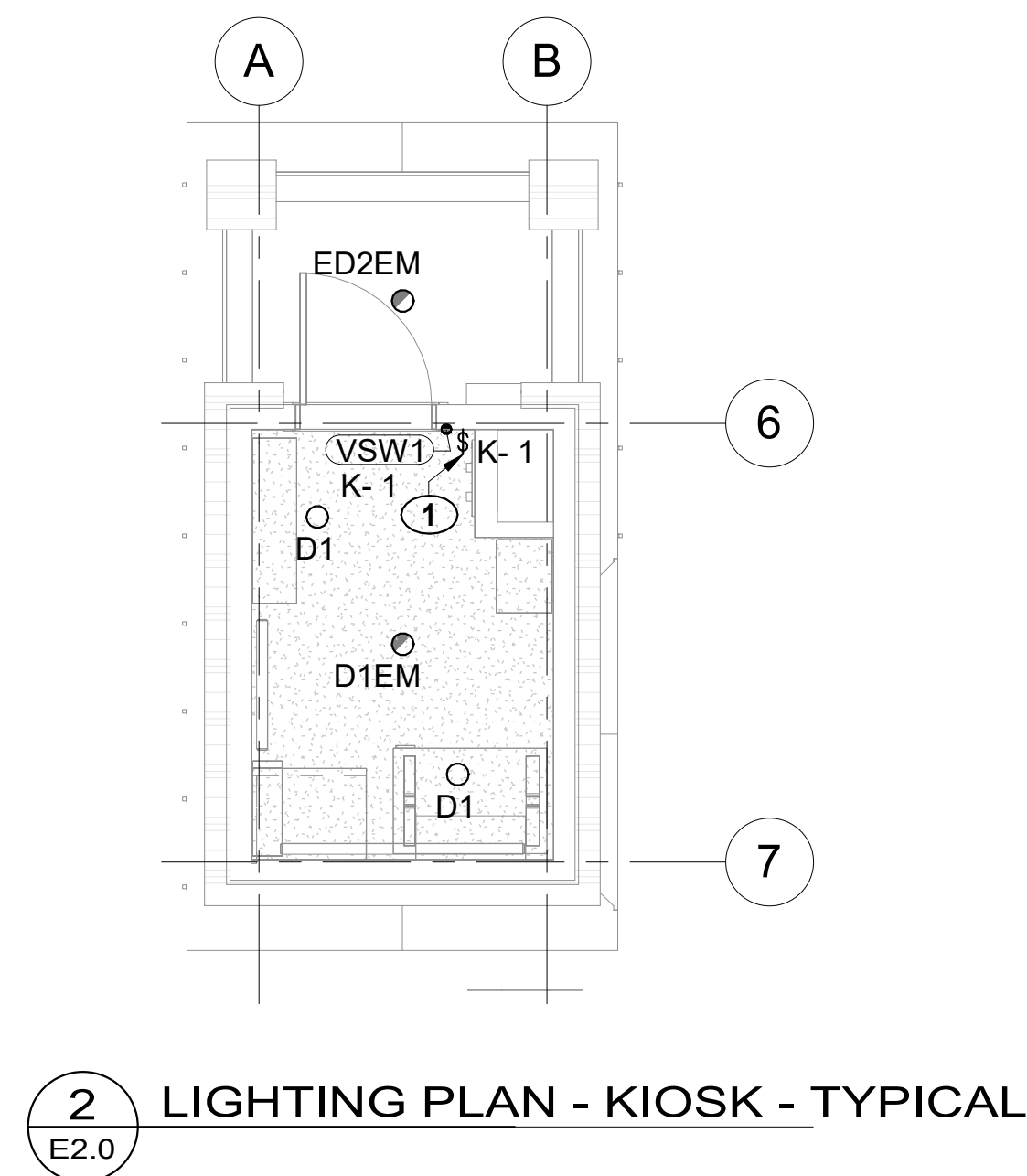
DESIGNED:
BJL/BDJ/KMD
GADD
BJL/BDJ/KMD
TECH REVIEW:
BJJ/JEB
DATE:
03/10/2022

SUB SHEET NO.
E1.1

TITLE OF SHEET
ELECTRICAL ATTIC PLANS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
151 OF **165**

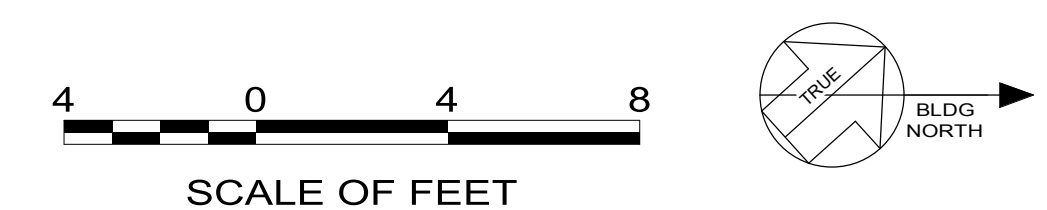


1 LIGHTING PLAN - ENTRY STATION OFFICE
E2.0



LIGHTING GENERAL NOTES	
A	ALL FIXTURES WITH HATCHING AND/OR DESIGNATED AS 'EM' SHALL BE PROVIDED WITH INTEGRAL BATTERY BACKUP. BATTERY SHALL ENGAGE ONLY AFTER COMPLETE LOSS OF POWER TO THE CIRCUIT.
B	CIRCUIT ALL EMERGENCY LIGHTING AND EXIT SIGNS TO NEAREST LINE VOLTAGE CIRCUIT, AHEAD OF ALL SWITCH LEGS.
C	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'

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	EC TO PROVIDE A NEW 7-DAY PROGRAMABLE LIGHT SWITCH AT THIS LOCATION. PROVIDE TORK #SS703Z OR APPROVED EQUAL FOR EXTERIOR LIGHTING.
2	MOUNT LIGHT FIXTURE TO BOTTOM OF CEILING JOIST.



DESIGNED:
BJL/BDJ/KMD
CADD
BJL/BDJ/KMD
TECH REVIEW:
BJJ/JEB
DATE:
03/10/2022

SUB SHEET NO.

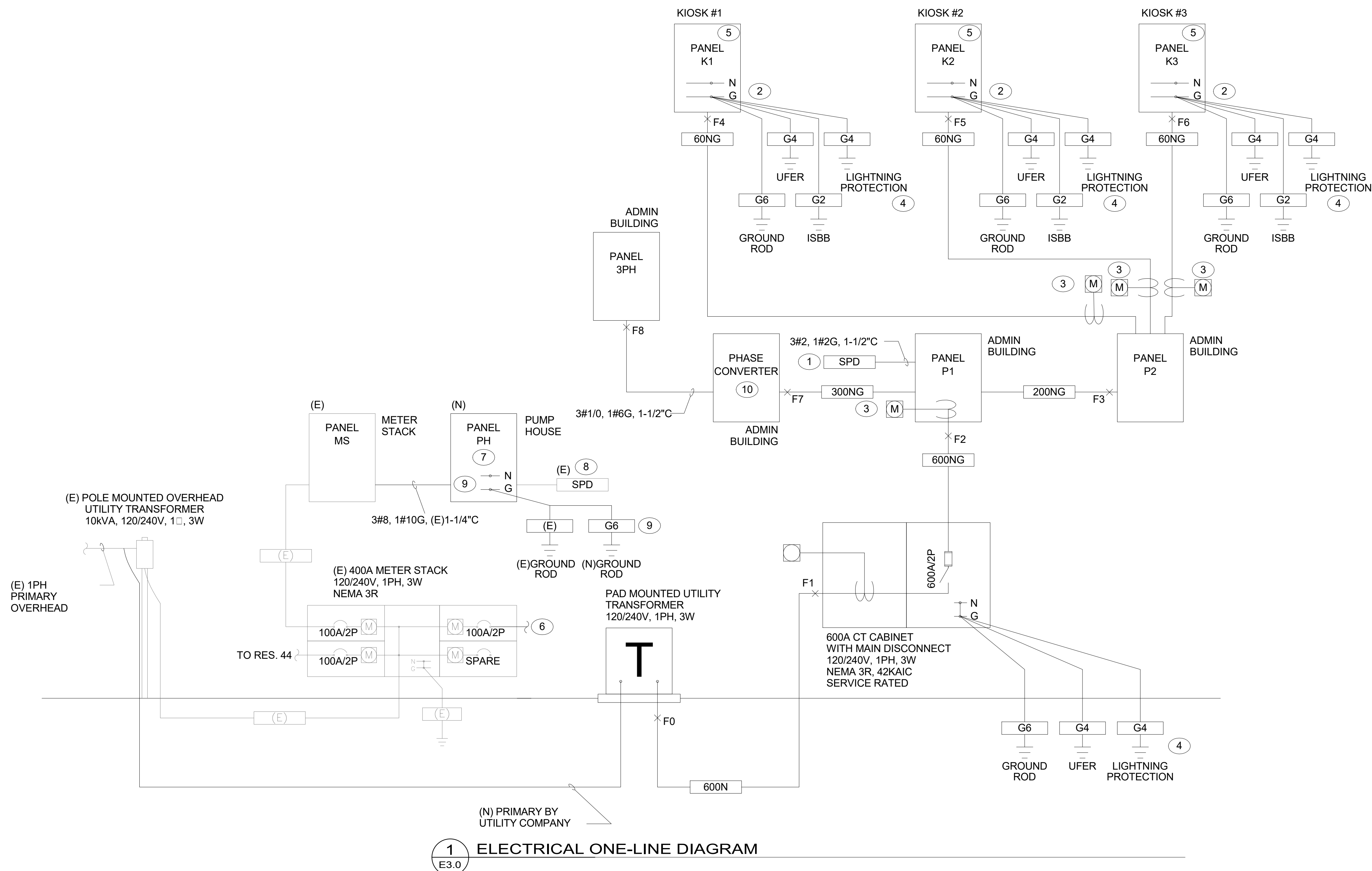
E2.0

TITLE OF SHEET

**ELECTRICAL
LIGHTING PLAN**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO. 121 176678
PMIS/PKG NO. 160755
SHEET 152 OF 165



KEYNOTE LEGEND	
KEY VALUE	
○	
1.	TRANSIENT VOLTAGE SURGE SUPPRESSION UNIT IS TO BE CURRENT TECHNOLOGY TG3-200-240-2G-PN-B-M2-F (OR APPROVED EQUAL). DO NOT EXCEED MANUFACTURER'S RECOMMENDED LEAD LENGTHS, NO 90 DEGREE BENDS.
2.	CONTRACTOR SHALL PROVIDE NEW GROUNDING SYSTEM AT THIS STRUCTURE PER THE REQUIREMENTS OF NEC 250. DO NOT BOND THE GROUND TO THE NEUTRAL AT THIS LOCATION.
3.	CONTRACTOR SHALL PROVIDE EMON DMON CLASS 5000, OR EQUAL, METER TO FEEDER INDICATED.
4.	BONDING OF LIGHTNING PROTECTION SYSTEM IS ONLY REQUIRED IF BID OPTION #8 IS ACCEPTED.
5.	PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION.
6.	FEEDER TO EXISTING ENTRANCE STATION SHALL BE DEMOLISHED/ REMOVED. UTILITY METER SHALL BE RETURNED TO EPP&C. CONDUIT SHALL BE ABANDONED IN PLACE.
7.	EXISTING 240/120V, 40A ELECTRICAL PANEL WITHIN PUMP HOUSE SHALL BE DEMOLISHED AND REPLACED AT SAME LOCATION WITH NEW 240/120V, 40A PANEL. REFER TO PANEL SCHEDULE FOR MORE INFORMATION.
8.	RE-USE AND RECONNECT EXISTING SPD DEVICE.
9.	RE-CONNECT EXISTING GROUNDING ELECTRODE SYSTEM TO NEW ELECTRICAL PANEL. DO NOT BOND THE GROUND TO THE NEUTRAL AT THIS LOCATION. PROVIDE ADDITIONAL GROUND ROD AS SHOWN. REFER TO SPECIFICATION SECTION 26 05 26 - 3.4 FOR TESTING REQUIREMENTS.
10.	EC SHALL PROVIDE SINGLE-PHASE TO THREE-PHASE, SOLID STATE, DIGITAL POWER CONVERTER CAPABLE OF PROVIDING A MINIMUM OF 43.5KVA OUTPUT POWER. BASIS OF DESIGN IS A PHASE PERFECT #PT040 (OR APPROVED EQUAL).

FEEDER SCHEDULE (SINGLE PHASE)			
KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS	KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS
SERVICE ENTRANCE FEEDERS			
400N	2[3#3/0, 2"C]		
600N	2[3#350, 3"C]		
EQUIPMENT FEEDERS			
20NG	3#12, #12G, 3/4"C	20G	2#12, #12G, 3/4"C
30NG	3#10, 1#10G, 3/4"C	30G	2#10, 1#10G, 3/4"C
40NG	3#8, 1#10G, 1"C	40G	2#8, 1#10G, 1"C
50NG	3#6, 1#10G, 1-1/4"C	50G	2#6, 1#10G, 1"C
60NG	3#4, 1#10G, 1-1/4"C	60G	2#4, 1#10G, 1"C
70NG	3#4, 1#8G, 1-1/4"C	70G	2#4, 1#8G, 1-1/4"C
80NG	3#3, 1#8G, 1-1/4"C	80G	2#3, 1#8G, 1-1/4"C
90NG	3#2, 1#8G, 1-1/2"C	90G	2#2, 1#8G, 1-1/4"C
100NG	3#1, 1#8G, 1-1/2"C	100G	2#1, 1#8G, 1-1/2"C
110NG	3#1, 1#6G, 2"C	110G	2#1, 1#6G, 1-1/2"C
125NG	3#1/0, 1#6G, 2"C	125G	2#1/0, 1#6G, 1-1/2"C
150NG	3#1/0, 1#6G, 2"C	150G	2#1/0, 1#6G, 1-1/2"C
175NG	3#2/0, 1#6G, 2"C	175G	2#2/0, 1#6G, 2"C
200NG	3#3/0, 1#6G, 2-1/2"C	200G	2#3/0, 1#6G, 2"C
225NG	3#4/0, 1#4G, 2-1/2"C	225G	2#4/0, 1#4G, 2"C
250NG	3#250, 1#4G, 3"C	250G	2#250, 1#4G, 2-1/2"C
300NG	3#350, 1#4G, 3"C	300G	2#350, 1#4G, 2-1/2"C
350NG	3#500, 1#3G, 3-1/2"C	350G	2#500, 1#3G, 3"C
400NG	2[3#3/0, 1#3G, 2-1/2"C]	400G	2[2#3/0, 1#3G, 2"C]
450NG	2[3#4/0, 1#2G, 2-1/2"C]	450G	2[2#4/0, 1#2G, 2"C]
500NG	2[3#250, 1#2G, 3"C]	500G	2[2#250, 1#2G, 2-1/2"C]
600NG	2[3#350, 1#1G, 3"C]	600G	2[2#350, 1#1G, 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
G4	1#4, 3/4" C		
NOTES:			
1. ALL CONDUCTORS ARE SINGLE CONDUCTOR COPPER THWN UNLESS NOTED OTHERWISE. AMPACITY BASED ON THE NEC TABLE INCLUDED IN ARTICLE 310.			
2. ALL CONDUITS ARE EMT UNLESS NOTED OTHERWISE, FILL RATIOS BASED ON NEC ANNEX C TABLE C.1.			

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												29.600		F0
F1	C/T CABINET/MAIN	50	240	120	1	350	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	22736	2	29.600	23.285	F1
F2	PANEL P1'	20	240	120	1	350	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	22736	2	23.285	21.454	F2
F3	PANEL P2'	20	240	120	1	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	1	21.454	17.070	F3
F4	PANEL K1'	100	240	120	1	4	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	3825	1	17.070	3.617	F4
F5	PANEL K2'	125	240	120	1	4	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	3825	1	17.070	3.022	F5
F6	PANEL K3'	150	240	120	1	4	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	3825	1	17.070	2.595	F6
F7	PHASE CONVERTER	15	240	120	1	350	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	22736	1	21.454	19.190	F7
F8	PANEL 3PH	5	240	120	3	1X	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	8924	1	19.190	17.808	F8

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. 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.

DESIGNED:
BJL/BDJ/KMD
CADD
BJL/BDJ/KMD
TECH REVIEW:
BJJ/JEB
DATE:
03/10/2022

SUB SHEET NO.

E3.0

TITLE OF SHEET

**ELECTRICAL
ONE-LINE DIAGRAM**

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
76678

MIS/PKG NO.
160755

SHEET
53 OF 165



PANEL: P2															
LOCATION: ELEC/IT 105 SUPPLY FROM: P1 MOUNTING: Surface ENCLOSURE: Type 1						VOLTS: 120/240 Single PHASES: 1 WIRES: 3				A.I.C. RATING: 22KAIC MAINS TYPE: M.L.O. MAINS RATING: 200 A PROTECTION RATING: 200 A					
CKT	CCT TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	CCT TYPE	CKT
1	L	LTG - EXTERIOR	20	1		63	675				2	60	K1 - KIOSK	L; E; R; M	2
3	L	LTG - INTERIOR	20	1				644	592		--	--	--	--	4
5	L	LTG - ATTIC	20	1		228	525				2	60	K2 - KIOSK	L; E; R	6
7	L	LTG - SITE	20	1				246	592		--	--	--	--	8
9	R	REC - A.C. BREAK	20	1		360	525				2	60	K3 - KIOSK	L; E; R	10
11	R	REC - A.C. BREAK	20	1				180	592		--	--	--	--	12
13	R	REC - A.C. BREAK	20	1		180	0				1	20	SPARE	--	14
15	E	REC - FRIDGE	20	1				900	0		1	20	SPARE	--	16
17	R	REC - ENTRY/BREAK	20	1		540	0				1	20	SPARE	--	18
19	R	REC - STORAGE	20	1				900	0		1	20	SPARE	--	20
21	R	REC - PRIVATE OFFICE	20	1		900	0				1	20	SPARE	--	22
23	R	REC - OPEN OFFICE	20	1				1260	0		1	20	SPARE	--	24
25	E	REC - OPEN OFFICE COPIER	20	1		1200	0				1	20	SPARE	--	26
27	R	REC - OPEN OFFICE COUNTER	20	1				360	0		1	20	SPARE	--	28
29	R	REC - RESTROOM	20	1		360	0				1	20	SPARE	--	30
31	R	REC - ELEC RM	20	1				360	0		1	20	SPARE	--	32
33	R	REC - DED QUAD IT	20	1		360	0				1	20	SPARE	--	34
35	R	REC - DED QUAD IT	20	1				360	0		1	20	SPARE	--	36
37	E	LIGHTING CONTROL PANEL - RP1	20	1		200	0				1	20	SPARE	--	38
39	E	VMS SIGN	20	1				200	0		1	20	SPARE	--	40
41	E	FACP	20	1		200	0				1	20	SPARE	--	42
43	--	SPARE	20	1				0	0		1	20	SPARE	--	44
45	--	SPARE	20	1		0	0				1	20	SPARE	--	46
47	--	SPARE	20	1				0	0		1	20	SPARE	--	48
49	--	SPARE	20	1		0	0				1	20	SPARE	--	50
51	--	SPARE	20	1				0	0		1	20	SPARE	--	52
53	--	SPARE	20	1		0	0				1	20	SPARE	--	54
55	--	SPARE	20	1				0	0		1	20	SPARE	--	56
57	--	SPARE	20	1		0	0				1	20	SPARE	--	58
59	--	SPARE	20	1				0	0		1	20	SPARE	--	60
Total Load:						6316 VA		7186 VA							
Total Amps:						53 A		60 A							
CB TYPE LEGEND															
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER						HC(ON/OFF): HANDLE CLAMP FOR LOCKING IN...						CIRCUIT PHASE CODE LEGEND			
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT						HT#: HANDLE TIE WITH GROUPING #						N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.			
AFCI: ARC FAULT CIRCUIT INTERRUPTER						ST: SHUNT TRIP						N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.			
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER						LOCK: PERMANENTLY LOCKABLE BREAKER						N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.			
CCT TYPE:						LOAD		DEMAND LOAD		PANEL TOTALS					
LIGHTING:						1370 VA		1713 VA							
RECEPTACLE:						9900 VA		9900 VA		TOTAL CONN. LOAD: 14782 VA					
MOTOR:						200 VA		250 VA		TOTAL EST. LOAD: 15175 VA					
EQUIPMENT:						3312 VA		3312 VA		TOTAL CONN.: 62 A					
KITCH EQUIP:										TOTAL EST. DEMAND: 63 A					

PANEL: K

LOCATION: KIOSK (TYP OF 3)

SUPPLY FROM: P2

MOUNTING: Surface

ENCLOSURE: Type 3R

VOLTS: 120/240 Single

PHASES: 1

WIRES: 3

A.I.C. RATING: 10K AIC

MAINS TYPE: MCB

MAINS RATING: 125 A

MCB RATING: 60 A

CKT	CCT TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	CCT TYPE	CKT
1	L	LTS	20	1		63	200				1	20	OPEN/CLOSE SIGN	E	2
3	R	RECS	20	1				360	180		1	20	REC - EXTERIOR	R	4
5	R	REC - DESK QUAD	20	1		0	0				1	20	ENTRY GATE	M	6
7	R	REC - DESK QUAD	20	1				0	0		1	20	SPARE	--	8
9	E	AC-4	15	2		52	0				1	20	SPARE	--	10
11	--	--	--	--				52	0		1	20	SPARE	--	12
13	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	14
15	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	16
17	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	18
19	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	20
21	--	SPARE	20	1		0	0				--	--	SURGE PROTECTION	--	22
23	--	SPARE	20	1				0	0		--	--	SURGE PROTECTION	--	24
Total Load:						675 VA		592 VA							
Total Amps:						6 A		5 A							

CB TYPE LEGEND

GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER

GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT

AFCI: ARC FAULT CIRCUIT INTERRUPTER

CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER

HC(ON/OFF): HANDLE CLAMP FOR LOCKING IN...

HT#: HANDLE TIE WITH GROUPING #

ST: SHUNT TRIP

LOCK: PERMANENTLY LOCKABLE BREAKER

CIRCUIT PHASE CODE LEGEND

N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.

N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.

N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

CCT TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS
LIGHTING:	63 VA	79 VA	
RECEPTACLE:	1260 VA	1260 VA	TOTAL CONN. LOAD: 1827 VA
MOTOR:	200 VA	250 VA	TOTAL EST. LOAD: 1893 VA
EQUIPMENT:	304 VA	304 VA	TOTAL CONN.: 8 A
KITCH EQUIP:			TOTAL EST. DEMAND: 8 A

PANEL: P1													
LOCATION: MECH 104 SUPPLY FROM: MAIN DISCONNECT MOUNTING: Surface ENCLOSURE: Type 1						VOLTS: 120/240 Single PHASES: 1 WIRES: 3				A.I.C. RATING: 42KAIC MAINS TYPE: M.L.O. MAINS RATING: 600 A PROTECTION RATING: 600 A			

CKT	CCT TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	CCT TYPE	CKT
1	R	REC - MECH	20	1		540	25500				2	350	EDH-1	E	2
3	R	REC - ATTIC	20	1				180	25500		--	--	--	--	4
5	M	SEPTIC TANK PUMP	20	1		1127	21588				2	300	PHASE CONVERTER	E	6
7	R	REC - EXTERIOR	20	1				540	21588		--	--	--	--	8
9	--	SPARE	20	1		0	6316				2	200	PANEL P2	L; E; R; M	10
11	--	SPARE	20	1				0	7186		--	--	--	--	12
13	--	SPARE	20	1		0	5000				2	60	EUH-1	E	14
15	--	SPARE	20	1				0	5000		--	--	--	--	16
17	--	SPARE	20	1		0	1500				2	20	EWH-1	E	18
19	--	SPARE	20	1				0	1500		--	--	--	--	20
21	--	SPARE	20	1		0	654				2	15	AC-1, AC-2, AC-3	E	22
23	--	SPARE	20	1				0	654		--	--	--	--	24
25	--	SPARE	20	1		0	472				2	15	ERV-1	E	26
27	--	SPARE	20	1				0	472		--	--	--	--	28
29	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	30
31	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	32
33	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	34
35	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	36
37	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	38
39	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	40
41	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	42

Total Load:						62697 VA		62620 VA	
Total Amps:						522 A		522 A	

CB TYPE LEGEND				CIRCUIT PHASE CODE LEGEND			
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER				HC(-ON/OFF): HANDLE CLAMP FOR LOCKING IN...			
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT				HT# : HANDLE TIE WITH GROUPING #			
AFC: ARC FAULT CIRCUIT INTERRUPTER				ST: SHUNT TRIP			
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER				LOCK: PERMANENTLY LOCKABLE BREAKER			
CCT TYPE:		LOAD		DEMAND LOAD		PANEL TOTALS	
LIGHTING:		1370 VA		1713 VA		TOTAL CONN. LOAD: 126596 VA	
RECEPTACLE:		11160 VA		10580 VA		TOTAL EST. LOAD: 126640 VA	
MOTOR:		1327 VA		1609 VA		TOTAL CONN.: 527 A	
EQUIPMENT:		112739 VA		112739 VA		TOTAL EST. DEMAND: 528 A	
KITCH EQUIP:							

LIGHTING CONTROL DEVICES			
TYPE	DESCRIPTION	PROGRAMMING REQUIREMENTS	DETAILS
ROOM CONTROLLED COMPONENTS			
RDW2	ROOM CONTROLLER MANUAL DIMMING BUTTONS, 0-10V	EC SHALL COORDINATE MINIMUM LEVEL FOR DIMMING WITH THAT NOTED ON LUMINAIRE FIXTURE SCHEDULE	
RVS1	ROOM CONTROLLER CEILING MOUNT VACANCY SENSOR	ON VIA LOCAL SWITCH, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE.	
STANDALONE CONTROL SYSTEMS			
OS1	CEILING MOUNTED, DUAL TECH, OCCUPANCY SENSOR, LINE VOLTAGE	AUTOMATIC ON, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE. LOCAL OFF FOR MAINTENANCE VIA LOCAL KEYED SWITCH (IF APPLICABLE)	
OSW1	WALLSWITCH MOUNT, DUAL TECH, OCCUPANCY SENSOR SET TO VACANCY MODE, SINGLE RELAY	AUTOMATIC ON VIA SWITCH SENSOR, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE.	
VS1	CEILING MOUNTED, DUAL TECH, OCCUPANCY SENSOR SET TO VACANCY MODE, LOW VOLTAGE	ON VIA LOCAL SWITCH, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE.	
VSW1	WALLSWITCH MOUNT, DUAL TECH, OCCUPANCY SENSOR SET TO VACANCY MODE, SINGLE RELAY	ON VIA LOCAL SWITCH, AUTOMATIC OFF AFTER 15 MINUTES OF UNOCCUPIED SPACE.	
W1	PROGRAM RELAY ZONES AS INDICATED ON BUTTON DETAIL DIAGRAM	LOW VOLTAGE TOGGLE SWITCH	

LIGHTING RELAY SCHEDULE - RP1					
RELAY ID	RELAY DESCRIPTION	VOLTAGE	PANEL	CIRCUIT NUMBER	CONTROL SEQUENCE
RP1-1	SITE AREA LIGHTING	120V	P2	7	T1
RP1-2	SITE AREA LIGHTING	120V	P2	7	T1
RP1-3	BUILDING MOUNTED EXTERIOR LIGHTING	120V	P2	1	T1

SEQUENCE OF OPERATION	
T1	NETWORKED SYSTEM PROGRAMMED VIA ASTRONOMIC TIMECLOCK ON 30 MINUTES PRIOR TO SUNSET, OFF 30 MINUTES AFTER SUNRISE. ADDITIONALLY OFF DURING THE HOURS OF 12AM AND 5AM FOR ADDITIONAL ENERGY SAVINGS.

PANEL: PH

LOCATION: PUMP HOUSE
SUPPLY FROM: MS
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/240 Single
PHASES: 1
WIRES:

A.I.C. RATING: 10KAIC
MAINS TYPE: 40A/2P
MAINS RATING: 100 A
MCB RATING: 40 A

CKT	CCT TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	CCT TYPE	CKT
1	E	HEATER	20	2		1000	38				1	20	LIGHT	L	2
3	--	--	--	--				1000	720		1	20	RECEPTACLES	R	4
5	M	WELL PUMP	20	2		920	0				--	--	BUSSED SPACE	--	6
7	--	--	--	--				920	0		--	--	BUSSED SPACE	--	8
9	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	10
11	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	12
13	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	14
15	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	16
17	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	18
19	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	20
21	--	SPARE	20	1		0	0				--	--	BUSSED SPACE	--	22
23	--	SPARE	20	1				0	0		--	--	BUSSED SPACE	--	24
Total Load: Total Amps:						1958 VA 16 A		2640 VA 22 A							

CB TYPE LEGEND
GFCl: 5mA GROUND FAULT CIRCUIT INTERRUPTER
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT
AFCl: ARC FAULT CIRCUIT INTERRUPTER
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER
CB TYPE:
LIGHTING:
RECEPTACLE:
MOTOR:
EQUIPMENT:
KITCH EQUIP:

LOAD
38 VA
720 VA
1840 VA
2000 VA

DEMAND LOAD
48 VA
720 VA
2300 VA
2000 VA

HC(ON/OFF): HANDLE CLAMP FOR LOCKING IN...
HT#: HANDLE TIE WITH GROUPING #
ST: SHUNT TRIP
LOCK: PERMANENTLY LOCKABLE BREAKER

CIRCUIT PHASE CODE LEGEND
N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

PANEL TOTALS			
TOTAL CONN. LOAD:	4598 VA		
TOTAL EST. LOAD:	5068 VA		
TOTAL CONN.:	19 A		
TOTAL EST. DEMAND:	21 A		

NOTES:

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMP QUAN.	LAMP WATTAGE	LAMP / CCT / CRI	MAX WATTAGE	LUMEN OUTPUT	DIMMING	FIXTURE FINISH	LOCATION	BOF/RFD/OFH	NOTES
D1	6" LED DOWNLIGHT	COOPER (OR APPROVED EQUAL)	HC615D010-HM6129 35-61WDC	120V	1	14 W	LED/3500/90	14 VA	1410	0-10V	WHITE	RECESSED CEILING	RFD = 4.2"	
D1EM	6" LED DOWNLIGHT, EMERGENCY	COOPER (OR APPROVED EQUAL)	HC615D010IEM7-H M612935-61WDC	120V	1	14 W	LED/3500/90	14 VA	1410	0-10V	WHITE	RECESSED CEILING	RFD = 4.2"	
L1	4' LINEAR SUSPENDED FIXTURE	STRUCTURA (OR APPROVED EQUAL)	ELLE-4-LSA-SDW-DIW-35-80-MO-W1-01-UNV	120V	1	52 W	LED/3500/80	52 VA	5736	0-10V	WALNUT	PENDANT CEILING	BOF = 9'-7"	
L1EM	4' LINEAR SUSPENDED FIXTURE, EMERGENCY	STRUCTURA (OR APPROVED EQUAL)	ELLE-4-LSA-SDW-DIW-35-80-MO-W1-01-UNV-EM	120V	1	52 W	LED/3500/80	52 VA	5736	0-10V	WALNUT	PENDANT CEILING	BOF = 9'-7"	
S1	4' LED STRIP FIXTURE	COOPER (OR APPROVED EQUAL)	4SNLED-LD5-44-SL-LW-UNV-L835-CD-1	120V	1	38 W	LED/3500/80	38 VA	4511	0-10V	WHITE	SURFACE CEILING	OFH = 2-5/8"	
S1EM	4' LED STRIP FIXTURE, EMERGENCY	COOPER (OR APPROVED EQUAL)	4SNLED-LD5-44-SL-LW-UNV-EL7W-L835-CD-1	120V	1	38 W	LED/3500/80	38 VA	4511	0-10V	WHITE	SURFACE CEILING	OFH = 2-5/8"	
W1	2' LED VANITY FIXTURE	COOPER (OR APPROVED EQUAL)	605-25-W-L3/835-UN V-MW	120V	1	20 W	LED/3500/80	20 VA	2000	0-10V	WHITE	SURFACE WALL	BOF = 7'-0"	
X1	EMERGENCY EXIT SIGN, LED	SURE LITE (OR APPROVED EQUAL)	LPX7SD-GREEN	120V	--	1 W	LED	1 VA	--	--	WHITE/GREEN	SURFACE CEILING	ABOVE DOOR	
EA1	EXTERIOR LED AREA POLE LIGHT, DUAL HEAD TYPE V RECTANGULAR	KIM LIGHTING (OR APPROVED EQUAL)	ALT1-54L-120-AM-5 R-UNV-ASQ-DBT-	120V	1	120 W	LED/AMBER	120 VA	3858	--	DARK BRONZE	POLE	OFH = 18'	
EB1	LED FULL CUTOFF BOLLARD WITH HOUSE SIDE SHIELD	KIM LIGHTING (OR APPROVED EQUAL)	PA7S-FT-NU-3HS-12 L-010-AMB-42A-DB-UNV	120V	1	14 W	LED/AMBER	14 VA	841	--	DARK BRONZE	SURFACE GRADE	OFH = 42.3"	
ED2	6" LED DOWNLIGHT, WET RATED	COOPER (OR APPROVED EQUAL)	HC620D010-HM6128 27-61WDC	120V	1	21 W	LED/2700/80	21 VA	1861	0-10V	WHITE	RECESSED CEILING	RFD = 4.2"	
ED2EM	6" LED DOWNLIGHT, WET RATED, EMERGENCY	COOPER (OR APPROVED EQUAL)	HC620D010IEM7-H M612827-61WDC	120V	1	21 W	LED/2700/80	21 VA	1861	0-10V	WHITE	RECESSED CEILING	RFD = 4.2"	

MECHANICAL EQUIPMENT SCHEDULE										
KEY		EQUIPMENT DESCRIPTION	LOAD	ELECTRICAL	MOC/P MFS	FEEDER	DISCONNECT	PANEL	CIRCUIT	NOTES
AC	1	AIR CONDITIONER	2.1 MCA	240 V/1-436 VA	15 A	2#12, 1#12G, 3/4"C	30A/2P	P1	22,24	1
AC	2	AIR CONDITIONER	2.1 MCA	240 V/1-436 VA	15 A	2#12, 1#12G, 3/4"C	30A/2P	P1	22,24	1
AC	3	AIR CONDITIONER	2.1 MCA	240 V/1-436 VA	15 A	2#12, 1#12G, 3/4"C	30A/2P	P1	22,24	1
AC	4-6	AIR CONDITIONER - KIOSK 1	0.5 MCA	240 V/1-104 VA	15 A	2#12, 1#12G, 3/4"C	30A/2P	K	9,11	1
CU	1	CONDENSING UINT	44 MCA	240 V/3-17526 VA	60 A	3#4, 1#10G, 1"C	60A/3P	3PH	1,3,5	2
CU	2	CONDENSING UINT	43 MCA	240 V/3-17130 VA	60 A	3#4, 1#10G, 1"C	60A/3P	3PH	2,4,6	2
EDH	1	ELECTRIC DUCT HEATER	51 KW	240 V/1-51000 VA	350 A	3#500MCM, 1#3G, 3"C	INTEGRAL	P1	2,4	
ERV	1	ENERGY RECOVERY VENT	4.1 MCA	240 V/1-943 VA	15 A	2#12, 1#12G, 3/4"C	\$TO	P1	26,28	
EUH	1	ELECTRIC UNIT HEATER	10 KW	240 V/1-10000 VA	60 A	2#4, 1#10G, 1"C	INTEGRAL	P1	14,16	
EWH	1	ELECTRIC WATER HEATER	3 KW	240 V/1-3000 VA	20 A	2#12, 1#12G, 3/4"C	30/2P	P1	18,20	
MAU	1	MAKEUP AIR UNIT	20.5 MCA	240 V/3-8520 VA	35 A	3#8, 1#10G, 1"C	INTEGRAL	3PH	7,9,11	2

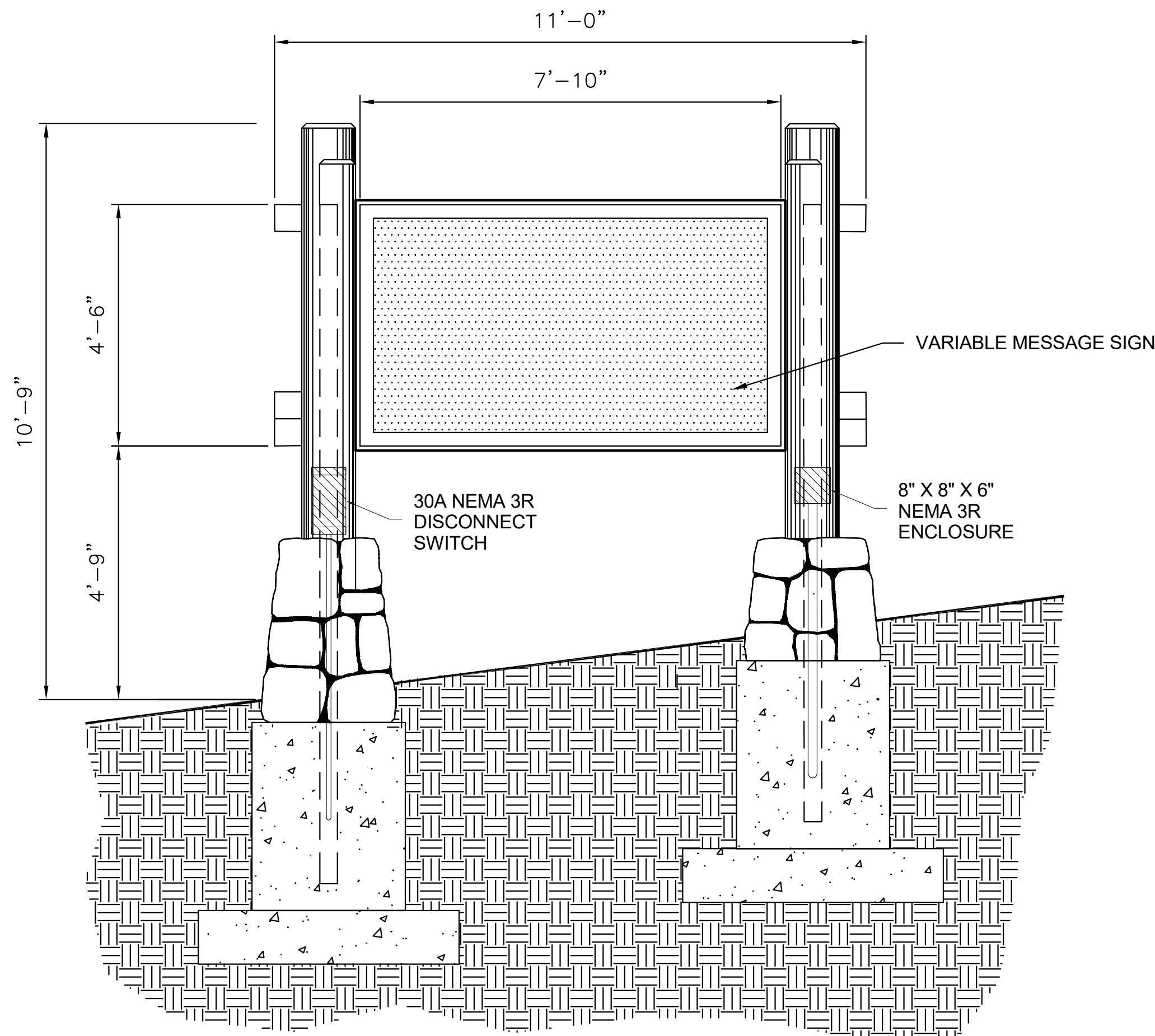
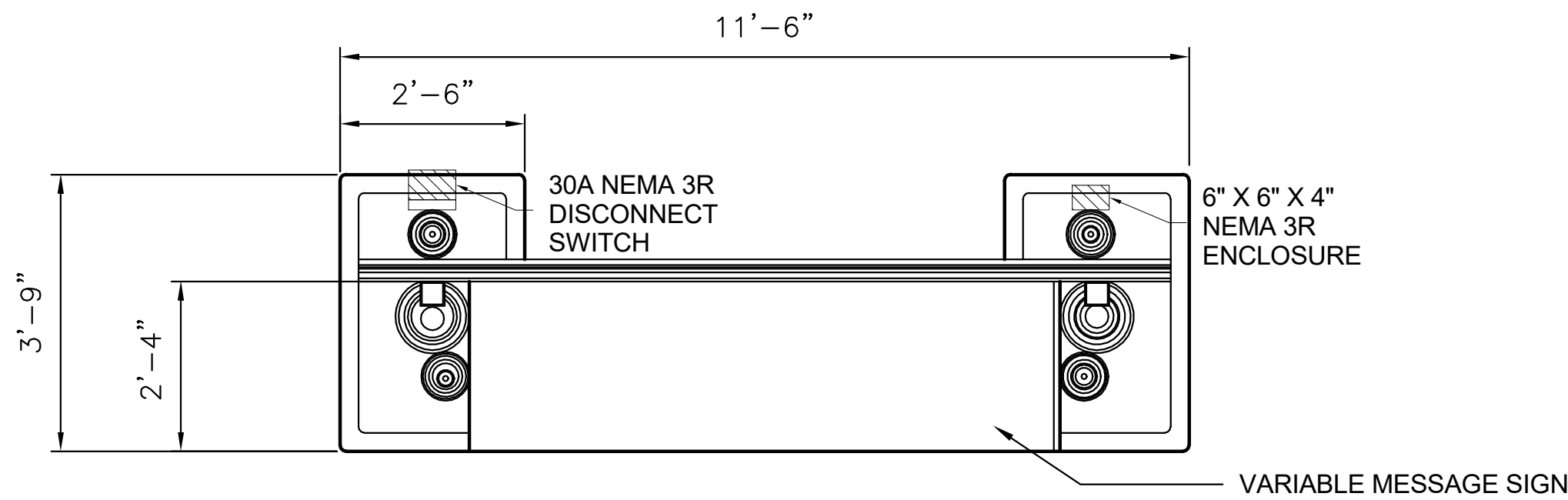
MECHANICAL EQUIPMENT GENERAL NOTES	
A	REFER TO MECHANICAL PLANS FOR SPECIFIC EQUIPMENT LOCATIONS AND REQUIREMENTS.
B	PRIOR TO ROUGH-IN, COORDINATE ALL MECHANICAL EQUIPMENT POWER AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR'S FINAL SHOP DRAWINGS.
C	PROVIDE ALL 120V CONTROL WIRING, REFER TO SPECIFICATIONS FOR FURTHER CONTROL WIRING CLARIFICATION.
D	EXTERIOR DISCONNECT SWITCHES ARE TO BE PROVIDED AS NEMA 3R EQUIPMENT UNLESS OTHERWISE NOTED.
E	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.
F	EC TO PROVIDE HAND/OFF/AUTO STARTERS FOR ALL MOTORS WHEN NOT INDICATED AS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR ON THE MECHANICAL PLANS. SIZE OF STARTER TO BE BASED UPON SIZE OF MOTOR HORSEPOWER INDICATED.
MECHANICAL EQUIPMENT SPECIFIC NOTES	
1	EC TO PROVIDE LINE VOLTAGE CONNECTION FOR THERMOSTAT. COORDINATE FINAL LOCATION WITH MECHANICAL.
2	EC SHALL VERIFY THAT ANY TRANSFORMERS FOR CONTROL VOLTAGE DO NOT REQUIRE 'B' PHASE POWER FROM PHASE CONVERTER. ONLY USE 'A' OR 'C' PHASE POWER FOR CONTROL VOLTAGE NEEDS.



DESIGNED: BJL/BDJ/KMD	SUB SHEET NO. E4.1	TITLE OF SHEET ELECTRICAL SCHEDULES	DRAWING NO. 121 176678
CADD BJL/BDJ/KMD			PMIS/PKG NO. 160755
TECH REVIEW: BJJ/JEB		FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	SHEET 155 OF 165
DATE: 03/10/2022			

GENERAL NOTES:

1. MOUNT DISCONNECT AND COMMUNICATIONS ENCLOSURE DIRECTLY TO BACK SIZE OF SIGNAGE SUPPORT STRUCTURE.
2. REFER TO LANDSCAPE DETAIL 1, SHEET L 2.6 FOR VARIABLE MESSAGE SIGN DETAILS.



5 DIGITAL MESSAGE BOARD DETAIL
E5.0

TYPICAL EACH FIRE
ALARM CONTROL UNIT(S)
AT EACH KIOSK

TYPICAL EACH FIRE
ALARM CONTROL UNIT(S)

AT FACP

INSTALL A FRAMED,
MYLAR GRAPHIC
MAP NEXT TO FAA

FAA

LOCATED AT MAIN
BUILDING ENTRY

DEDICATED 120V 20A CIRCUIT

FACP
BATT
BATT
TELEPHONE
DIALER

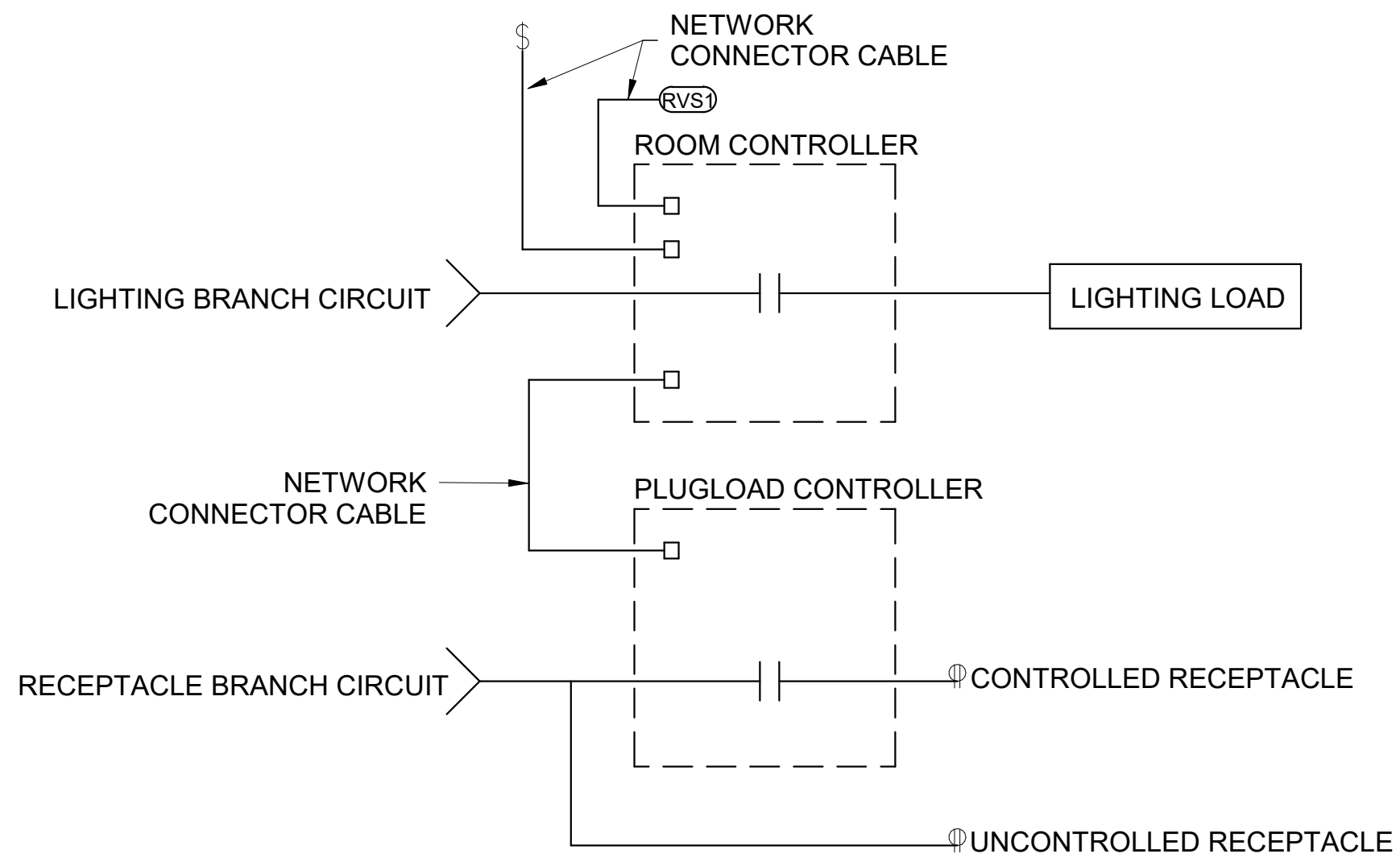
1/2" CONDUIT TO
MTTB

TYPICAL STROBE
TYPICAL HORN/STROBE

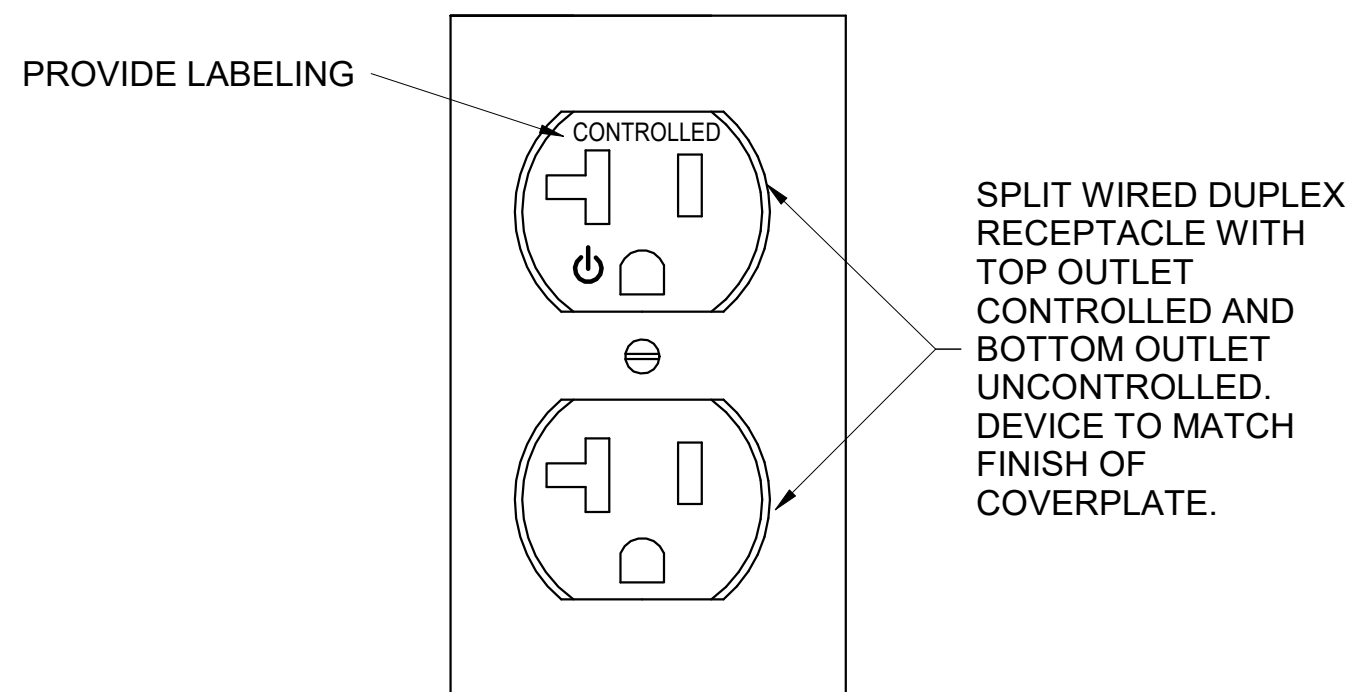
FIRE ALARM GENERAL NOTES:

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 THROUGHOUT ENTIRE BUILDING. 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 LOCAL FIRE DEPARTMENT.
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 CONTRACTING OFFICER) VIA DIALER PROVIDED IN FIRE ALARM CONTROL PANEL.
8. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THEIR BID AN ADDITIONAL 10% SPARE STROBES AND HORN/STROBES, INCLUDING INSTALLATION, AS MAY BE REQUIRED BY AHJ.
9. PROVIDE SURGE PROTECTION DEVICE ON EACH LINE OUT TO EACH KIOSK.

3 FIRE ALARM RISER DIAGRAM
E5.0



2 ROOM CONTROLLER - RECEPTS + LIGHTS
E5.0



1 CONTROLLED DUPLEX SPLIT WIRE RECEPTACLE DETAIL
E5.0



DESIGNED:
BJL/BDJ/KMD
GADD
BJL/BDJ/KMD
TECH REVIEW:
BJJ/JEB
DATE:
03/10/2022

SUB SHEET NO.

E5.0

TITLE OF SHEET
ELECTRICAL DETAILS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
156 OF 165

TELECOM SYSTEMS GENERAL NOTES

1. THE COMMUNICATIONS CONTRACTOR RESPONSIBLE FOR ALL OF THE WORK DESCRIBED IN THESE CONTRACT DRAWINGS AND SPECIFICATIONS SHALL BE REFERRED TO THROUGHOUT THESE DOCUMENTS AS THE "CONTRACTOR".
2. THE CONTRACTOR SHALL ADHERE TO ALL BUILDING AND DISTRICT RULES AND REGULATIONS.
3. ALL CABLES SHALL HOMERUN FROM THE COMMUNICATION/SECURITY OUTLETS TO ELEC/IT 105.
4. 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.
5. ALL CONDUITS AND SLEEVES DESIGNATED FOR COMMUNICATIONS USE, WHETHER THEY ARE UTILIZED BY THE CONTRACTOR OR NOT, SHALL BE FIRE STOPPED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH OTHER TRADES AND DRAWINGS. FURTHERMORE, THE CONTRACTOR SHALL COORDINATE THE SEQUENCE OF WORK WITH THE CONSTRUCTION MANAGER.
7. BACKBOXES, CONDUITS, STUB-UPS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
8. THE ENTIRE CABLE PLANT SHALL BE TESTED AS OUTLINED IN THE SPECIFICATIONS.
9. THE CONTRACTOR SHALL PROVIDE ALL CABLE, HARDWARE AND EQUIPMENT SHOWN ON THESE DRAWINGS EXCEPT WHERE OTHERWISE NOTED.
10. THE CONTRACTOR MUST MAINTAIN A RUNNING UPDATE OF ALL FIELD OR CONTRACT DOCUMENT CHANGES AND UPDATE HIS "AS BUILT" DRAWINGS AS AN ON GOING PROCESS.
11. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER FOR ALL MOUNTING HEIGHTS OF ALL COMMUNICATIONS OUTLETS. UNLESS DIRECTED OTHERWISE, ALL WALL MOUNTED OUTLETS SHALL BE MOUNTED 18" ABOVE FINISH FLOOR, WALL MOUNTED TELEPHONE DEVICES SHALL BE MOUNTED AT 42" ABOVE FINISH FLOOR.
12. ALL EQUIPMENT, CABLING, RACEWAY, ETC. SHALL BE GROUNDED IN ACCORDANCE WITH THE SPECIFICATIONS 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 (AS REQUIRED). TELECOMMUNICATIONS GROUND AND BONDING SYSTEM SHALL BE PROVIDED BY DIVISION 26, TELECOMMUNICATIONS BONDING, BACKBONE, TELECOMMUNICATIONS GROUNDING BURBAR(S), GROUNDING EQUALIZER AND BONDING CONDUCTORS TO BUILDING STEEL (WHERE APPLICABLE), POWER PANELS (WHERE APPLICABLE) AND CONDUITS.
13. NOT ALL PARTS AND PIECES ARE SHOWN FOR A COMPLETE SYSTEM. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COMPLETE END-TO-END WARRANTED SOLUTION FOR THE HORIZONTAL CABLING.
14. TELECOMMUNICATIONS OUTLETS TO BE MOUNTED AT +18" A.F.F. UNLESS OTHERWISE NOTED. DEVICES SPECIFIED AT +18" A.F.F. SHALL MATCH THE STANDARD MOUNTING HEIGHT FOR POWER RECEPTACLES AND TELECOMMUNICATIONS OUTLETS. DEVICES SPECIFIED AT +48" A.F.F. SHALL MATCH THE STANDARD MOUNTING HEIGHT FOR LIGHT SWITCHES ETC.
15. LABEL NEXT TO TELECOMMUNICATIONS OUTLET SYMBOL REPRESENTS NUMBER OF CABLES TO BE INSTALLED AND TERMINATED AT THAT LOCATION.
16. FOR ALL EXTERIOR WALL-MOUNTED DEVICES, PROVIDE BACKBOX AND EXTENSION RING, TOTAL DEPTH AS REQUIRED TO MATCH THICKNESS OF COMPLETE WALL & INSULATION ASSEMBLY.
17. CONTRACTOR TO VERIFY ALL CABLE COUNTS AND NUMBER OF PATCH PANELS REQUIRED.
18. GROUP DATA OUTLETS TOGETHER WITH POWER OUTLETS (WHERE APPLICABLE).
19. EACH CONDUIT INSTALLED SHALL INCLUDE A PULL STRING THROUGHOUT THE ENTIRE LENGTH OF THE CONDUIT FOR FUTURE CABLES.
20. CONTRACTOR SHALL REMOVE ALL EXISTING DATA / COMMUNICATION / SECURITY DEVICES ON THE SITE AND IN THE EXISTING BUILDING UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL INCLUDE IN THEIR SCOPE THE REMOVAL OF ALL EXISTING TECHNOLOGY DEVICES, CONDUITS, FIXTURES AND EQUIPMENT, UNLESS NOTED OTHERWISE.

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
EC	ELECTRICAL CONTRACTOR
(ER)	EXISTING TO BE RELOCATED
FM	FREQUENCY MODULATION
FPD	FLAT PANEL DISPLAY
GC	GENERAL CONTRACTOR
GPC	GENERAL PURPOSE COMPUTER
IG	ISOLATED GROUND
IP	INTERNET PROTOCOL
IR	INFRARED
IT	INFORMATION TECHNOLOGY
LAN	LOCAL AREA NETWORK
LCD	LIQUID CRYSTAL DISPLAY
LTG	LIGHTING
MATV	MASTER ANTENNA TELEVISION
(N)	NEW
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OAE	OR APPROVED EQUAL
OFCI	NPS FURNISHED/CONTRACTOR INSTALLED
OFE	NPS FURNISHED EQUIPMENT
OH	OVERHEAD
PA	PUBLIC ADDRESS
PC	PERSONAL COMPUTER
PDP	PLASMA DISPLAY PANEL
PH	PHASE
RCPT	RECEPTACLE
(R)	EXISTING TO BE REMOVED
RF	RADIO FREQUENCY
(RL)	RELOCATED LOCATION
RU	RACK UNIT (TIA/EIA RACK)
TO	TELECOMMUNICATIONS OUTLET
TV	TELEVISION
UC	UNDER COUNTER/CABINET
UG	UNDERGROUND
UHF	ULTRA HIGH FREQUENCY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY.
USB	UNIVERSAL SERIAL BUS
V	VOLT(S)
VHF	VERY HIGH FREQUENCY
VP	VIDEO PROJECTOR
W	WATT(S)
WAN	WIDE AREA NETWORK
WG	WIREGUARD
WP	WEATHERPROOF OR WATERPROOF



DETAIL NOTE



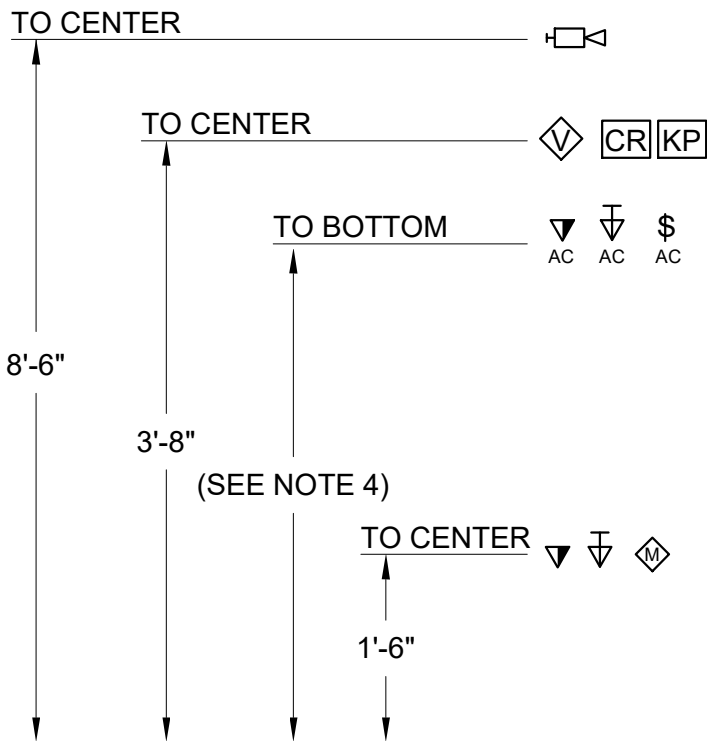
REVISION (DELTA) TAG

SYSTEMS LEGEND

	TTB, MDF OR IDF SYSTEM BACKBOARD
	TELECOMMUNICATION OUTLET
	FLOOR MOUNTED TELECOMMUNICATION OUTLET
	TELEVISION OUTLET
	TECHNOLOGY SYSTEMS DEVICES TAG
	PUSH BUTTON
	CCTV CAMERA (CLG MOUNT)
	CCTV CAMERA (WALL MOUNT)
	CCTV CAMERA (360 DEGREE)
	CABLE TRAY (LENGTH) AS INDICATED ON PLANS)
	WIRELESS ACCESS POINT
	CARD READER
	KEYPAD - ACCESS CONTROL OR BURGLAR ALARM
	DOOR CONTACT
	PANIC BUTTON
	MOTION DETECTOR
	INTERCOM - KIOSK STATION
	INTERCOM - MASTER STATION

DISTRIBUTION, RACEWAY AND WIRING

	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
	CONDUIT EXPOSED OR CONCEALED IN WALL OR CEILING
	RACEWAY UP
	RACEWAY DOWN
	CAPPED CONDUIT



NOTES:

1. WHERE MULTIPLE LINE VOLTAGE DEVICES ARE SHOWN ADJACENT TO EACH OTHER, THEY ARE ALL TO SHARE THE SAME JUNCTION BOX, UP TO FOUR GANGS.
2. 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.
3. SEPARATELY GANGED DEVICES ARE NOT ALLOWED TO BE INSTALLED ADJACENT TO ONE ANOTHER HORIZONTALLY WITHIN THE SAME STUD BAY.
4. 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
T.O.0

DEVICE MOUNTING HEIGHT



DESIGNED: BJL/BDJ/KMD	SUB SHEET NO. T.O.0
TECH REVIEW: BJJ/JEB	
DATE: 03/10/2022	

TECHNOLOGY COVER SHEET

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

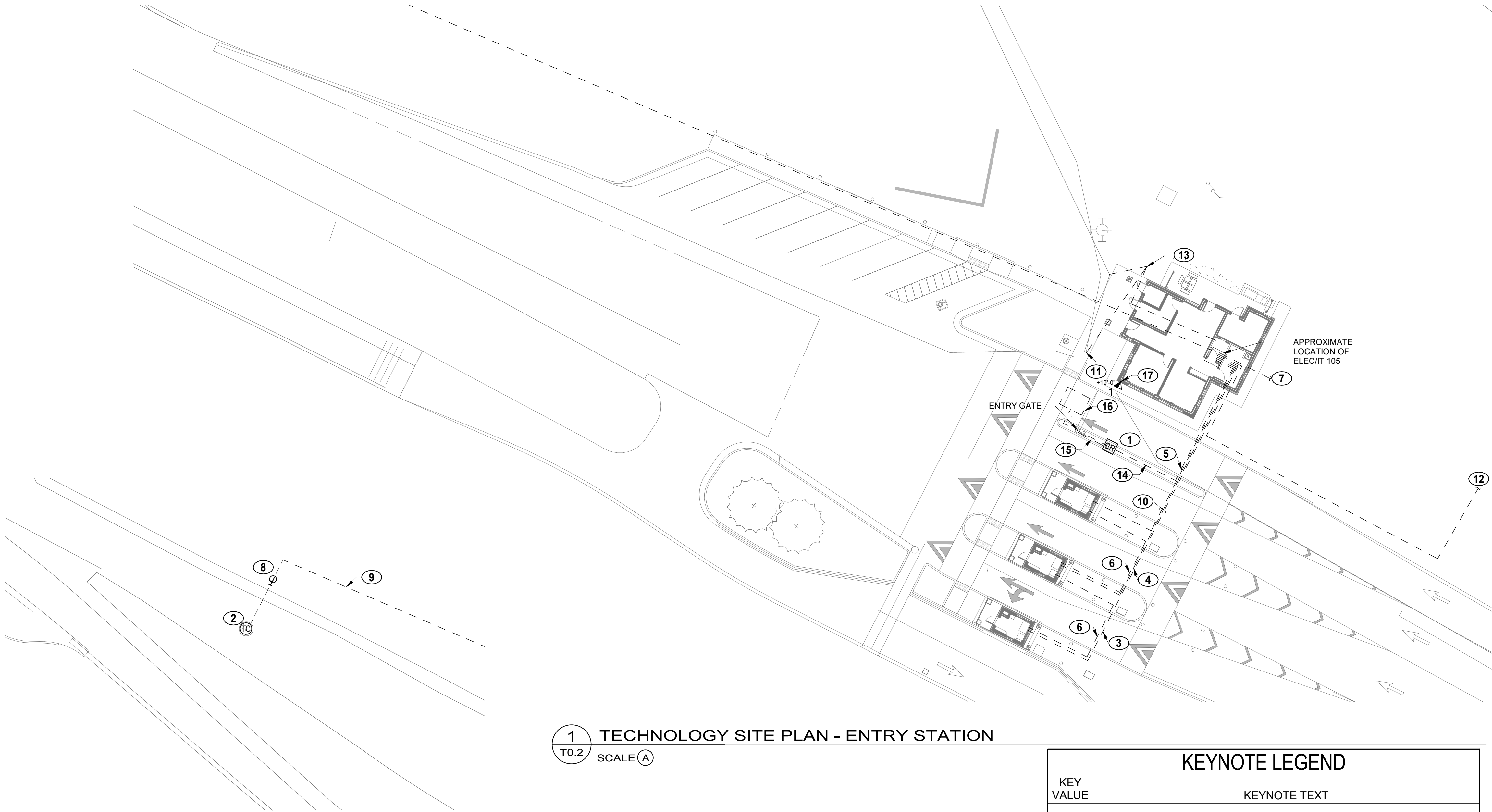
DRAWING NO. 121
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RESPONSIBILITY MATRIX															
THE RESPONSIBILITIES LISTED HEREIN ARE PROVIDED AS A RECOMMENDATION AND DO NOT SUPERSEDE OR REPLACE ANY CONTRACTS OR OTHERWISE DEFINED RESPONSIBILITIES BETWEEN THE DESIGNATED PARTIES. IN ADDITION, 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		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	
SECURITY - ACCESS CONTROL (ACS)															
ACS HEADEND / CONTROLLER / PANEL											X	X			
ACS SOFTWARE, PROGRAMMING, & INTEGRATION											X	X			
CARD READER / KEYPAD (AUTHENTICATION DEVICE)											X	X			
REQUEST TO EXIT (WHEN NOT INTEGRAL TO DOOR HARDWARE)											X	X			
DOOR POSITION SWITCH											X	X			
DOOR RELEASE BUTTON											X	X			
DOOR HARDWARE / COMPONENTS	X	X													
ACTIVE LONG-RANGE IDENTIFICATION DEVICE					X	X									
SECURITY - VIDEO SURVEILLANCE SYSTEM (VSS)															
VSS NETWORK VIDEO RECORDER (NVR)												X	X		
VSS SOFTWARE, PROGRAMMING, & INTEGRATION												X	X		
VSS DEDICATED SWITCH												X	X		
CAMERA												X	X		
SECURITY - INTRUSION DETECTION (ID)															
ID HEADEND / CONTROLLER / PANEL											X	X			
ID SOFTWARE, PROGRAMMING, & INTEGRATION											X	X			
MOTION SENSOR											X	X			
GLASS BREAK SENSOR											X	X			
PANIC BUTTON											X	X			
AUTO-DIALER & DIAL DESTINATION COORDINATION											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 THROUGH, 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.															



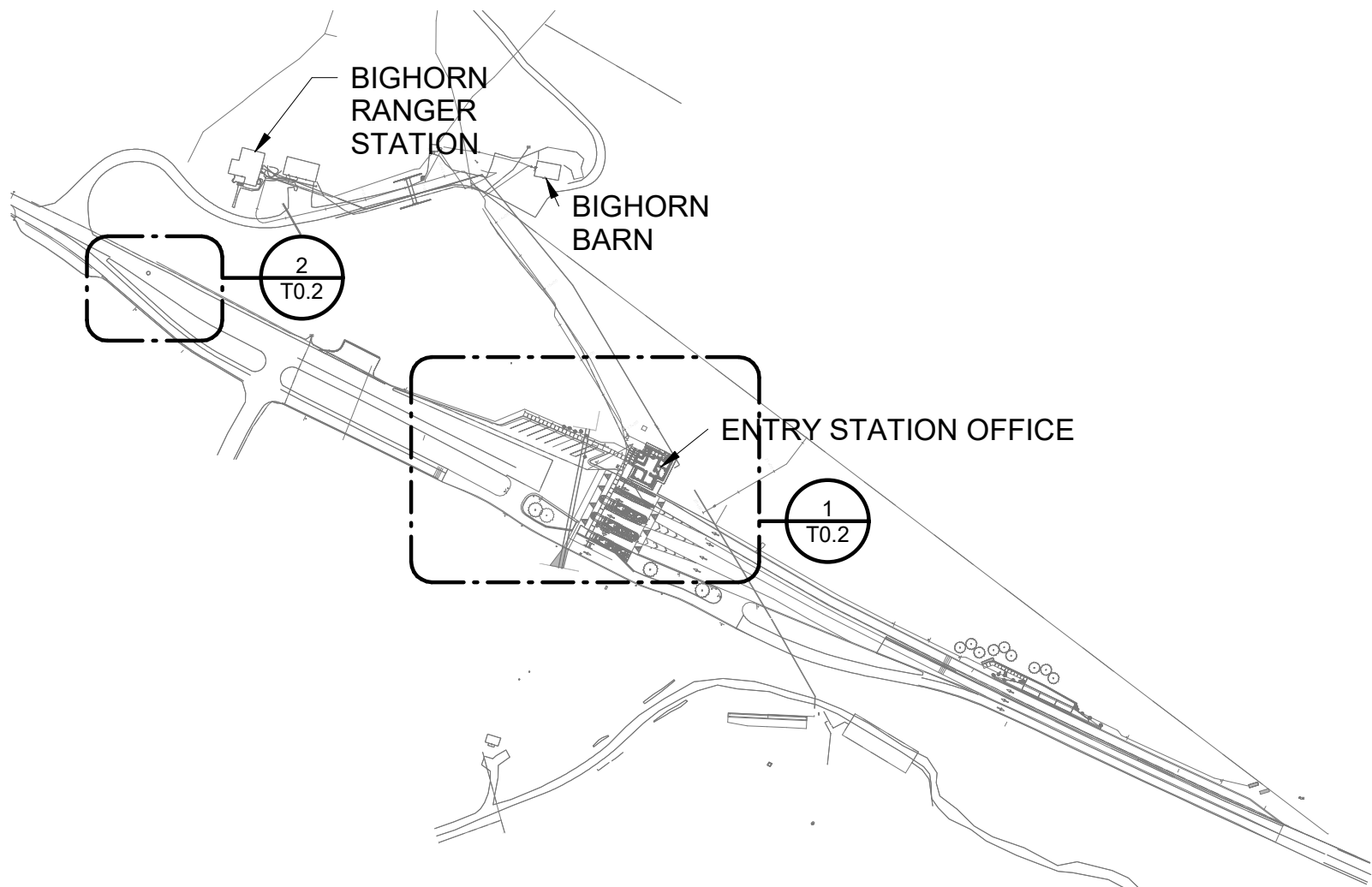
DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. T0.1	TITLE OF SHEET TECHNOLOGY RESPONSIBILITY MATRIX FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 158 OF 165
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1
T0.2
TECHNOLOGY SITE PLAN - ENTRY STATION
SCALE (A)

2
T0.2
TECHNOLOGY SITE PLAN TRAFFIC LOOP
SCALE (A)

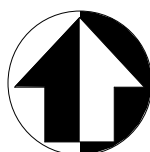
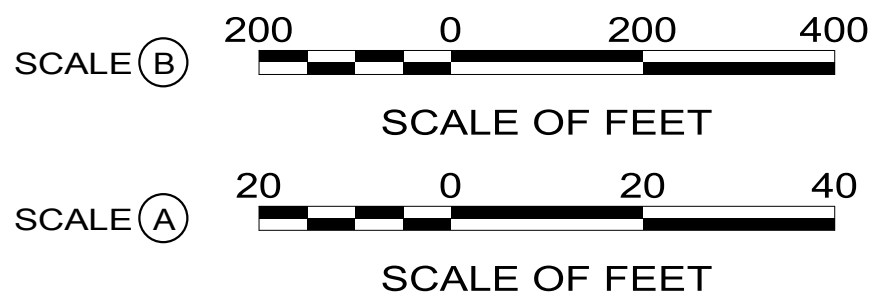


3
T0.2
TECHNOLOGY SITE PLAN - OVERALL
SCALE (B)

TECHNOLOGY SITE NOTES	
A.	REFER TO ELECTRICAL SERIES DRAWINGS FOR ELECTRICAL DEVICE LAYOUTS.
B.	TYPICAL FOR ALL CARD READERS: INSTALL RECESSED JUNCTION BOX IN GOOSENECK PEDESTAL WITH 1" CONDUIT ROUTED TO AUTOMATIC GATE OPERATOR FOR CONTROL WIRING AND 1" CONDUIT ROUTED BACK TO TELECOM ROOM IN ENTRANCE STATION. PROVIDE BLANK FACEPLATE. REFER TO ACCESS CONTROL ROUGH-IN MOUNTING DETAIL #3/T6.0 FOR MORE INFORMATION.
C.	THE MINIMUM CONDUIT SIZE FOR ALL VOICE/DATA CABLING IS 1.25". ALL CABLING SHALL BE ROUTED WITHIN CONDUIT AND THERE SHALL BE NO MORE THAN (4) CAT6A CABLES FOR EACH 1.25" CONDUIT.
D.	REFER TO CIVIL SHEET C9.6 FOR ALL TRENCH DETAILS.
E.	ALL CABLING LEAVING THE BUILDING FOR EXTERIOR DEVICE CONNECTIONS SHALL BE OSP RATED.

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	PROVIDE INFRASTRUCTURE (ROUGH-IN AND CONDUIT) FOR CARD READER AT FAST PASS LANE FOR GATE ACTIVATION. RUN (1) 2" CONDUIT WITH CAT6A CABLE FROM GRADE-MOUNTED PULL BOX BACK TO ENTRANCE STATION ELEC/IT 105 FOR NETWORK TIE-IN CAPABILITIES. COORDINATE EXACT LOCATION WITH CONTRACTING OFFICER PRIOR TO TRENCHING.
2	PROVIDE TRAFFIC COUNTER WITHIN PAVEMENT TO RECORD THE NUMBER OF VEHICLES ENTERING THE PARK. BASIS OF DESIGN IS TRAFFIC A.C.E. + TRAFFIC COUNTER BY INTERNATIONAL ROAD DYNAMICS OR APPROVED EQUAL. CABLES FOR EACH LOOP DETECTOR SHALL BE ROUTED BACK TO PULL BOX LOCATED ON THE NORTH SIDE OF THE HIGHWAY. VERIFY LOOP LOCATION WITH CONTRACTING OFFICER AND PARK.
3	APPROXIMATE CONDUIT ROUTING FROM ENTRANCE STATION ELEC/IT 105 TO KIOSK #3. COORDINATE EXACT ROUTING IN FIELD PRIOR TO TRENCHING. REFER TO LOW-VOLTAGE RISER DIAGRAM, #3/T6.3.
4	APPROXIMATE CONDUIT ROUTING FROM ENTRANCE STATION ELEC/IT 105 TO KIOSK #2. COORDINATE EXACT ROUTING IN FIELD PRIOR TO TRENCHING. REFER TO LOW-VOLTAGE RISER DIAGRAM, #3/T6.3.
5	APPROXIMATE CONDUIT ROUTING FROM ENTRANCE STATION ELEC/IT 105 TO KIOSK #1. COORDINATE EXACT ROUTING IN FIELD PRIOR TO TRENCHING. REFER TO LOW-VOLTAGE RISER DIAGRAM, #3/T6.3.

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
6	APPROXIMATE CONDUIT ROUTING BETWEEN KIOSKS. COORDINATE EXACT ROUTING IN FIELD PRIOR TO TRENCHING. REFER TO LOW-VOLTAGE RISER DIAGRAM, #3/T6.3.
7	PROVIDE FIBER CONNECTION TO VARIABLE MESSAGE SIGN, AND COORDINATE ROUTING WITH CONDUIT PLAN ON SHEET E0.3. FIBER MUST BE ROUTED IN CONDUIT; DIRECT BURIAL IS NOT PERMITTED.
8	CONTRACTOR SHALL PROVIDE GRADE MOUNTED PULL BOX AT THIS LOCATION FOR TERMINATION OF TRAFFIC COUNTER LOOP CONDUCTORS. BOX TO BE APPROXIMATELY 12"x12"x12" WITH A T22 LOAD RATING, OPEN BOTTOM, AND PROVIDED WITH A NEOPRENE GASKET SIMILAR TO A QUAZITE #B16121212G WITH 2-BOLT COVER #C16121202A017 (OR APPROVED EQUAL). PROVIDE SCREENING ON ALL OPENINGS TO PREVENT ANIMAL INTRUSION INTO THE BOX.
9	PROVIDE (1) 2" CONDUIT WITH (2) #14 AWG CABLES FROM THE TRAFFIC COUNTER PULL BOX BACK TO ELEC/IT 105.
10	APPROXIMATE ROUTING OF UNDERGROUND CONDUITS IN SHARED UTILITY TRENCH BETWEEN ENTRY STATION OFFICE BUILDING AND KIOSKS. REFER TO CIVIL DRAWINGS (C5.3) FOR EXACT LOCATIONS AND TRENCH DETAILS (5/C9.7). REFER TO LOW VOLTAGE RISER DIAGRAM FOR MORE INFORMATION.
11	APPROXIMATE LOCATION OF EXISTING INTERNET SERVICE PEDESTAL. PROVIDE NEW CONDUIT INFRASTRUCTURE FOR RELOCATED PEDESTAL AS SHOWN ON PLANS TO AVOID NEW CONSTRUCTION AND SIDEWALK.
12	EC SHALL PROVIDE (1) 2" CONDUIT WITH PULL STRING FROM ELEC/IT ROOM TO WOODEN POLE AT THIS LOCATION FOR CONNECTION TO POINT-TO-POINT DISH (PROVIDED BY NPS). PROVIDE CAPS ON BOTH ENDS OF CONDUIT. ROUTE CONDUIT TO TOP OF POLE AND PAINT TO MATCH COLOR OF POLE. COORDINATE EXACT POLE LOCATION WITH CIVIL DRAWINGS AND CONTRACTING OFFICER.
13	APPROXIMATE LOCATION OF RELOCATED SERVICE PEDESTAL. CONTRACTOR SCOPE OF WORK SHALL CONSIST OF PROVIDING CONDUIT INFRASTRUCTURE FOR PEDESTAL RELOCATION BY OTHERS. FROM EXISTING PEDESTAL LOCATION, ROUTE NEW 4-INCH CONDUIT UNDERGROUND TO NEW PEDESTAL LOCATION AND STUB UP. ROUTE AN ADDITIONAL 4-INCH CONDUIT FROM NEW PEDESTAL LOCATION BACK TO ELEC/IT 105.
14	APPROXIMATE CONDUIT ROUTING FROM ENTRANCE STATION ELEC/IT 105 TO AUTOMATIC GATE OPERATOR LOCATION IN MEDIAN. PROVIDE 2" CONDUIT AND STUB UP WITHIN GATE OPERATOR. VERIFY LOCATIONS WITH MANUFACTURER SHOP DRAWINGS AND CONTRACTING OFFICER IN FIELD.
15	APPROXIMATE CONDUIT ROUTING FROM FUTURE CARD READER TO AUTOMATIC GATE OPERATOR. PROVIDE 1" CONDUIT AND STUB UP AT BOTH LOCATIONS. VERIFY LOCATIONS WITH CONTRACTING OFFICER IN FIELD.
16	PROVIDE INDUCTIVE LOOP FOR AUTOMATIC GATE OPERATOR TO SIGNAL THE GATE TO CLOSE AFTER A CAR PASSES THROUGH. BASIS OF DESIGN IS STRONGARM PARK DC. VERIFY LOW VOLTAGE WIRING REQUIREMENTS WITH CONTRACTING OFFICER PRIOR TO INSTALLATION.
17	PROVIDE ACTIVE LONG-RANGE IDENTIFICATION DEVICE AIMED AT INCOMING VEHICLES IN FASTPASS LANE. BASIS OF DESIGN IS DEISTER ELECTRONIC #TAL 700 OR APPROVED EQUAL, ALONG WITH CONTROLLER AND CONVERTER REQUIRED TO TIE INTO NETWORK. VERIFY MOUNTING HEIGHT AND LOCATION WITH CONTRACTING OFFICER PRIOR TO ROUGH-IN. THE "COMMANDER CONNECT" TRANSPONDER SOFTWARE AND ALL VEHICLE TRANSPONDER DEVICES ARE TO BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO PROVIDE TESTING TO ENSURE FULL FUNCTIONALITY OF TRANSPONDER SYSTEM. REFER TO ACCESS CONTROL SCHEDULE.



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GADD
BJL/BDJ/KMD
TECH REVIEW:
BJJ/JEB
DATE:
03/10/2022

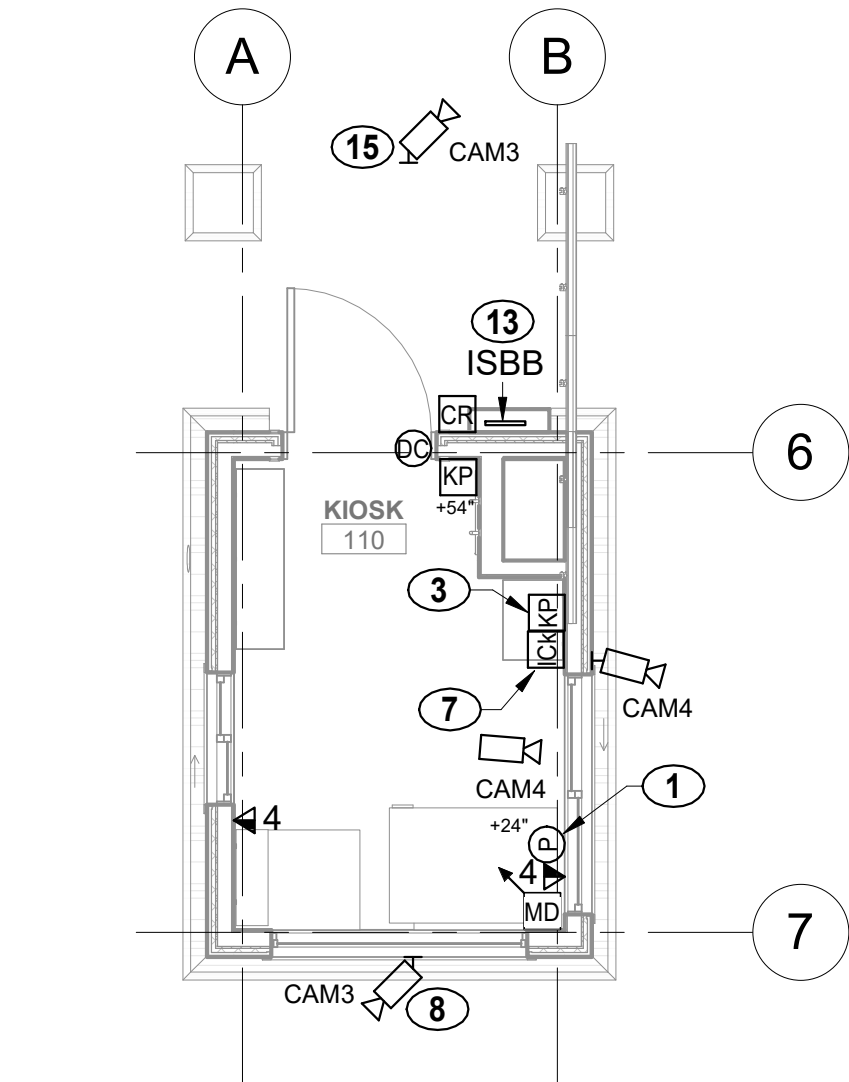
SUB SHEET NO.
T0.2

TITLE OF SHEET
TECHNOLOGY SITE PLAN

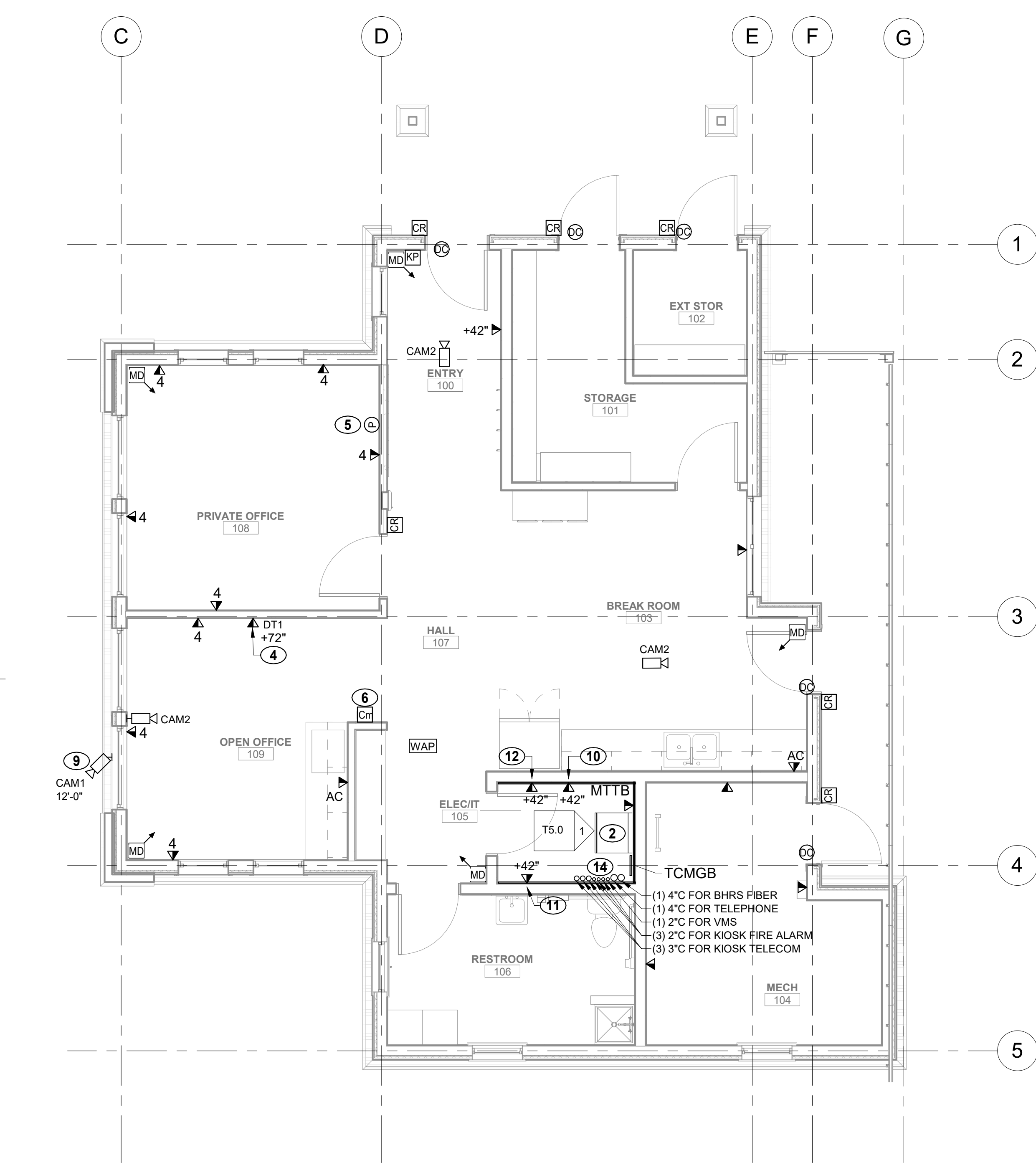
FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
159 OF **165**

2 TECHNOLOGY PLAN - KIOSK - TYPICAL



1 TECHNOLOGY PLAN - ENTRY STATION OFFICE



TECHNOLOGY GENERAL NOTES

A	REFER TO ELECTRICAL SERIES DRAWINGS FOR ELECTRICAL DEVICE LAYOUTS. WHERE APPLICABLE, NEW TELECOMMUNICATIONS OUTLETS SHALL BE PLACED DIRECTLY ADJACENT TO ELECTRICAL OUTLETS.
B	TYPICAL FOR ALL CARD READERS: INSTALL RECESSED, WALL-MOUNTED JUNCTION BOX AT +44" AFF, ADJACENT TO DOOR LOCK, AND 1/2" CONDUIT TO JUNCTION BOX ABOVE DOOR FOR ACCESS TO ELECTRIC STRIKE CARD READER. VERIFY MOUNTING HEIGHT WITH THE CONTRACTING OFFICER PRIOR TO ROUGH-IN. REFER TO ACCESS CONTROL ROUGH-IN MOUNTING DETAIL #3/T6.0 FOR MORE INFORMATION. BASIS OF DESIGN IS IDENTIV SCRAMBLE PAD CARD READER. REFER TO ACCESS CONTROL SCHEDULE ON SHEET T5.0.
C	THE MINIMUM CONDUIT SIZE FOR ALL VOICE/DATA CABLING IS 1.25". ALL CABLING SHALL BE ROUTED WITHIN CONDUIT WITH PULL STRING AND THERE SHALL BE NO MORE THAN (6) CAT6A CABLES FOR EACH 1.25" CONDUIT.
D	KIOSK 110 IS TYPICAL OF THREE SEPARATE KIOSKS. REFER TO TECHNOLOGY SITE PLAN FOR KIOSK LOCATIONS.
E	ALL CONDUITS ORIGINATING IN IT/ELEC 105 AND THE KIOSKS SHALL BE LABELED WITH THE FINAL DESTINATION (E.G. 'K1' FOR KIOSK 1, 'VMS' FOR VARIABLE MESSAGE SIGN, 'BHRS', ETC.)
F	ALL CABLING LEAVING THE BUILDING FOR EXTERIOR DEVICE CONNECTIONS SHALL BE OSP RATED.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	NEW PANIC BUTTON / DURESS ALARM SWITCH TO BE MOUNTED TO NORTH KIOSK WALL. SWITCH SHALL CONTAIN A SHROUD OVER THE ACTIVATING LEVER TO ALLOW AN INDIVIDUAL TO COVERTLY SEND A DURESS SIGNAL.
2	LOCATION OF NEW WALL-MOUNTED TELECOM RACK.
3	PROVIDE OVERRIDE CONTROL SWITCH FOR FAST PASS LANE GATE ACTIVATION ONLY AT THE CLOSEST KIOSK TO THE GATE. RUN (1) 2" CONDUIT WITH CAT6A CABLE BACK TO THE ENTRANCE STATION ELEC/IT 105 FOR NETWORK TIE-IN CAPABILITIES.
4	PROVIDE 22-INCH MONITOR FOR LIVE CAMERA VIDEO DISPLAY. EXACT LOCATION OF SECURITY CAMERA VIDEO DISPLAY TO BE COORDINATED WITH CONTRACTING OFFICER PRIOR TO ROUGH-IN.
5	NEW PANIC BUTTON / DURESS ALARM SWITCH TO BE MOUNTED AT PRIVATE OFFICE DESK. SWITCH SHALL CONTAIN A SHROUD OVER THE ACTIVATING LEVER TO ALLOW AN INDIVIDUAL TO COVERTLY SEND A DURESS SIGNAL.
6	PROVIDE VIDEO INTERCOM MASTER STATION TO COMMUNICATE WITH KIOSK SUBSTATIONS. BASIS OF DESIGN IS AIPHONE IX SERIES OR APPROVED EQUAL. ROUTE 1" CONDUIT WITH CAT6A CABLE BACK TO ELEC/IT 105.
7	PROVIDE VIDEO INTERCOM KIOSK STATION TO COMMUNICATE WITH MASTER STATION. BASIS OF DESIGN IS AIPHONE IX SERIES OR APPROVED EQUAL. ROUTE 1" CONDUIT WITH CAT6A CABLE BACK TO ELEC/IT 105.
8	PROVIDE LICENSE PLATE RECOGNITION CAMERA TO CAPTURE OUTBOUND VEHICLES. CAMERA TO BE LOCATED AT SOUTH KIOSK (#3) ONLY. ROUTE NEW CAT 6A CABLE BACK TO NEW WALL-MOUNTED TELECOM RACK IN MAIN BUILDING. COORDINATE MOUNTING WITH NPS STANDARDS AND MANUFACTURER'S RECOMMENDATION.
9	NEW WEBCAM TO TIE INTO THE PARK'S WEBCAM SYSTEM TO SHOW VISITORS TRAFFIC CONDITIONS ENTERING THE PARK. COORDINATE MOUNTING HEIGHT AND AIMING SUCH THAT INCOMING TRAFFIC IS CLEARLY VISIBLE.
10	PROVIDE QTY(1) 2-PORT OUTLET FOR FIRE ALARM CONTROL PANEL. COORDINATE FINAL LOCATION WITH TRADE CONTRACTOR PRIOR TO ROUGH-IN.
11	PROVIDE QTY(1) 2-PORT OUTLET FOR LIGHTING CONTROL PANEL. COORDINATE FINAL LOCATION WITH TRADE CONTRACTOR PRIOR TO ROUGH-IN.
12	PROVIDE QTY(1) 2-PORT OUTLET FOR SECURITY/BURGLAR ALARM SYSTEM CONTROL PANEL. COORDINATE FINAL LOCATION WITH TRADE CONTRACTOR PRIOR TO ROUGH-IN.
13	CONTRACTOR TO PROVIDE INTERSYSTEMS BONDING BRIDGE (ISBB) BENEATH ELECTRICAL PANEL PER NEC 250.94(A). REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR MORE INFORMATION.
14	CONDUITS SHOWN FOR GENERAL COORDINATION ONLY. CONTRACTOR TO PROVIDE ALL CONDUITS SHOWN ON PLANS AND DETAILS AND LABEL EACH CONDUIT ACCORDINGLY.
15	PROVIDE LICENSE PLATE RECOGNITION CAMERA TO CAPTURE INBOUND VEHICLES. CAMERA TO BE LOCATED AT NORTH AND SOUTH KIOSKS (#1 AND #3) ONLY. ROUTE NEW CAT 6A CABLE BACK TO NEW WALL-MOUNTED TELECOM RACK IN MAIN BUILDING. COORDINATE MOUNTING WITH NPS STANDARDS AND MANUFACTURER'S RECOMMENDATION.



DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. T1.0	TITLE OF SHEET TECHNOLOGY PLAN FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 160 OF 165
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COPPER CONNECTIVITY				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
CC1	CAT 6A CABLE, PLENUM, UTP	COMMSCOPE	CS44P	
CJ1	CAT 6A JACK	COMMSCOPE	UKJ10G	
CW2	2-PORT FACEPLATE, VERT. ORIENTATION, LABELED	COMMSCOPE	2111037-x	FINISH SHALL MATCH COLOR OF POWER RECEPTACLE DEVICE FACEPLATES
CW4	4-PORT FACEPLATE, VERT. ORIENTATION, LABELED	COMMSCOPE	2111039-x	FINISH SHALL MATCH COLOR OF POWER RECEPTACLE DEVICE FACEPLATES
CW6	SURFACE MOUNT BOX, (BISCUIT), PLENUM, 1 PORT	COMMSCOPE	SMB-1P-xxx PLENUM	SECURITY CAMERA LOCATIONS
CW7	SURFACE MOUNT BOX, (BISCUIT), PLENUM, 2 PORT	COMMSCOPE	SMB-2P-xxx PLENUM	WIRELESS ACCESSSS POINT LOCATIONS
CP2	CAT 6A PATCH PANEL, 48 PORTS, BLACK, FLAT	COMMSCOPE	UNP-6A-DM-2U-48	

FIBER CONNECTIVITY				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
FC2	6 STRAND SM FIBER, OS2, RISER RATED, ARMORED	PANDUIT	FSGP906Y	TO BE USED BETWEEN BIG HORN RANGER STATION AND FALL RIVER ENTRANCE.
FM1	FIBER CASSETTE, 12 STRAND, SM, LC CONNECTOR	PANDUIT	FCS9N-12-10P	
FP1	1 RU FIBER PANEL	PANDUIT	FRME-1U	

GROUNDING				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
GC1	STRANDED GROUND CABLE			
GB1	PRIMARY BONDING BUSBAR (PBB) COMPLIANT WITH ANSI/TIA-607	CPI	40153-020	
GH1	2-HOLE GROUND LUG			
GH2	GROUNDING BUSHING			
GH3	H-TAP			WITH CLEAR COVER
GA1	GROUND DISCONNECT WARNING LABEL			

RACKS AND ACCESSORIES				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
RR1	LOCKABLE WALL-MOUNTED RACK TO REPLACE EXISTING, 36"H, 24"W, 18"D, 19RU; BLACK	CPI	CUBE-IT #11901-736	
RH1	HORIZONTAL WIRE MANAGER, 1U, 5" DEEP	CPI	35441-701	
RH2	HORIZONTAL WIRE MANAGER, 2U, 5" DEEP	CPI	35441-702	
RA2	UPPER TROUGH/JUMPER TRAY	CPI	13183-719	
RA1	BAG OF (50) SCREWS, THREAD TO FIT RACK RAILS	CPI	NA	INCLUDE (2) BAGS PER RACK. LEAVE ON SITE TAPED TO RACKS FOR TENANT USE

	KEY	RACK 01	
19	DVR1	SECURITY DVR	19
18	FP1	FIBER PANEL	18
17		OPEN	17
16		NPS SWITCH	16
15	CP2	PATCH PANEL 'A'	15
14			14
13	RH2	WIRE MANAGER	13
12			12
11	CP2	PATCH PANEL 'B'	11
10			10
9	RH2	WIRE MANAGER	9
8			8
7			7
6			6
5			5
4			4
3			3
2			2
1			1
		RR1	

1 RACK01 ELEVATION
T5.0

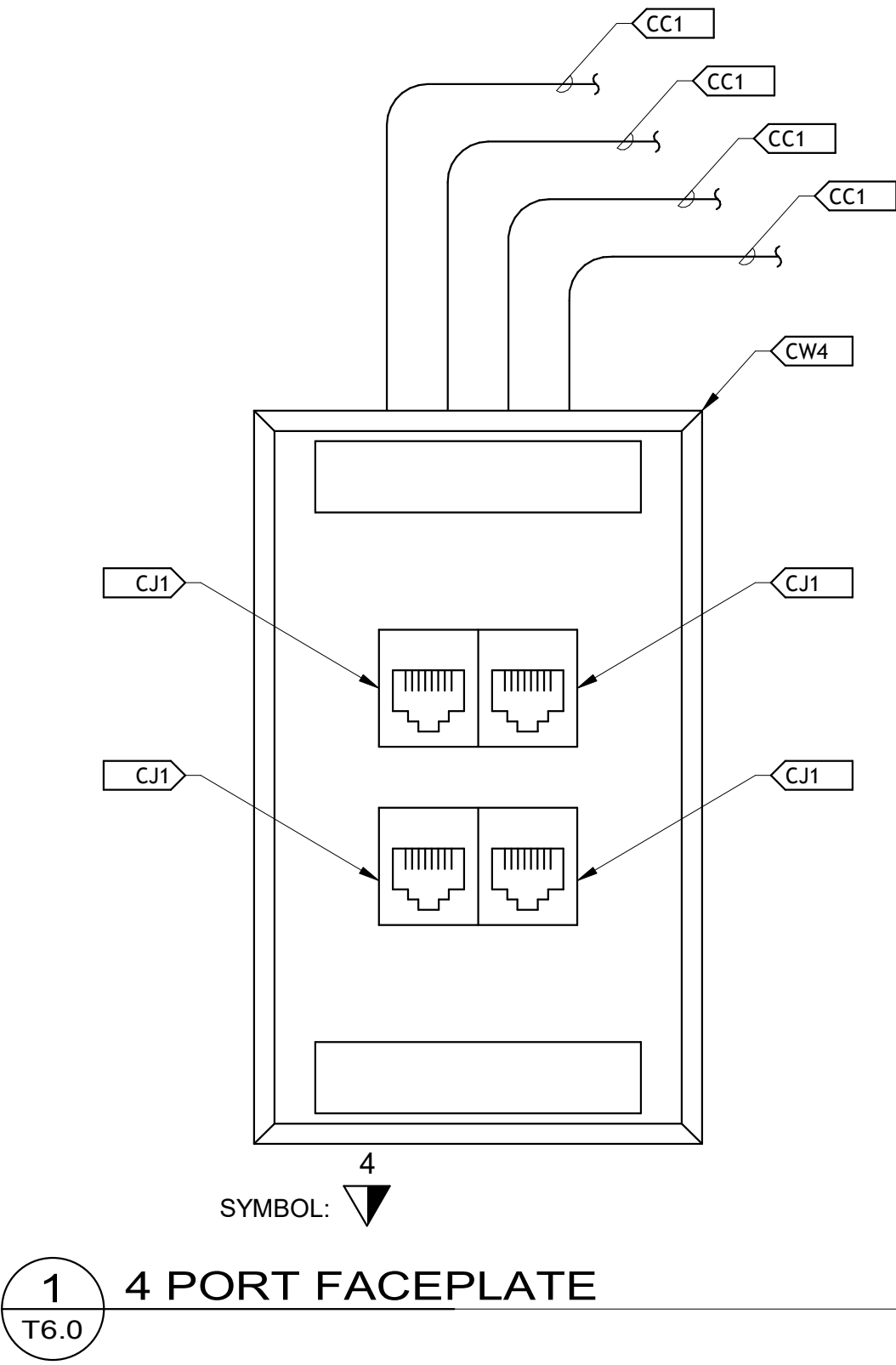
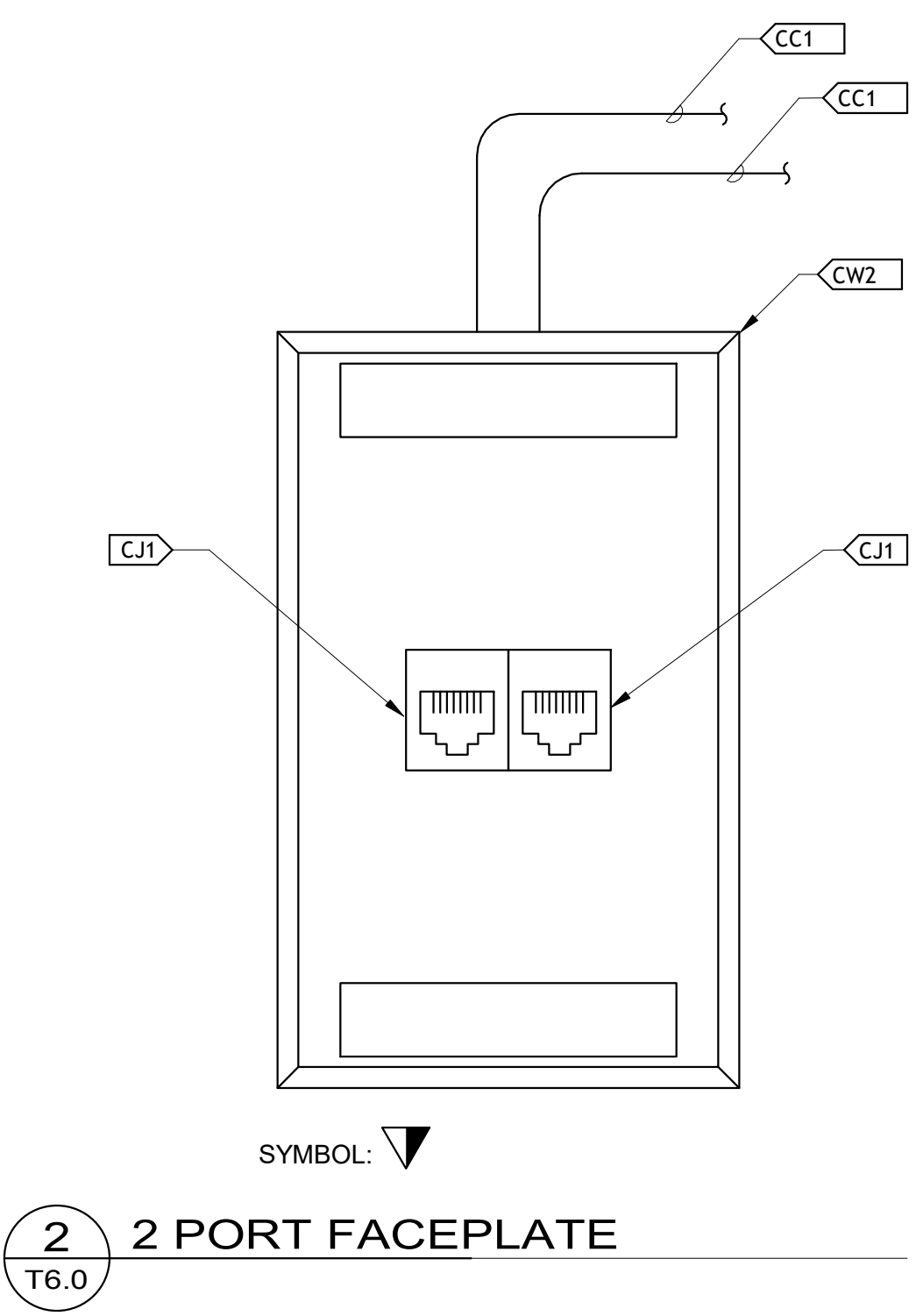
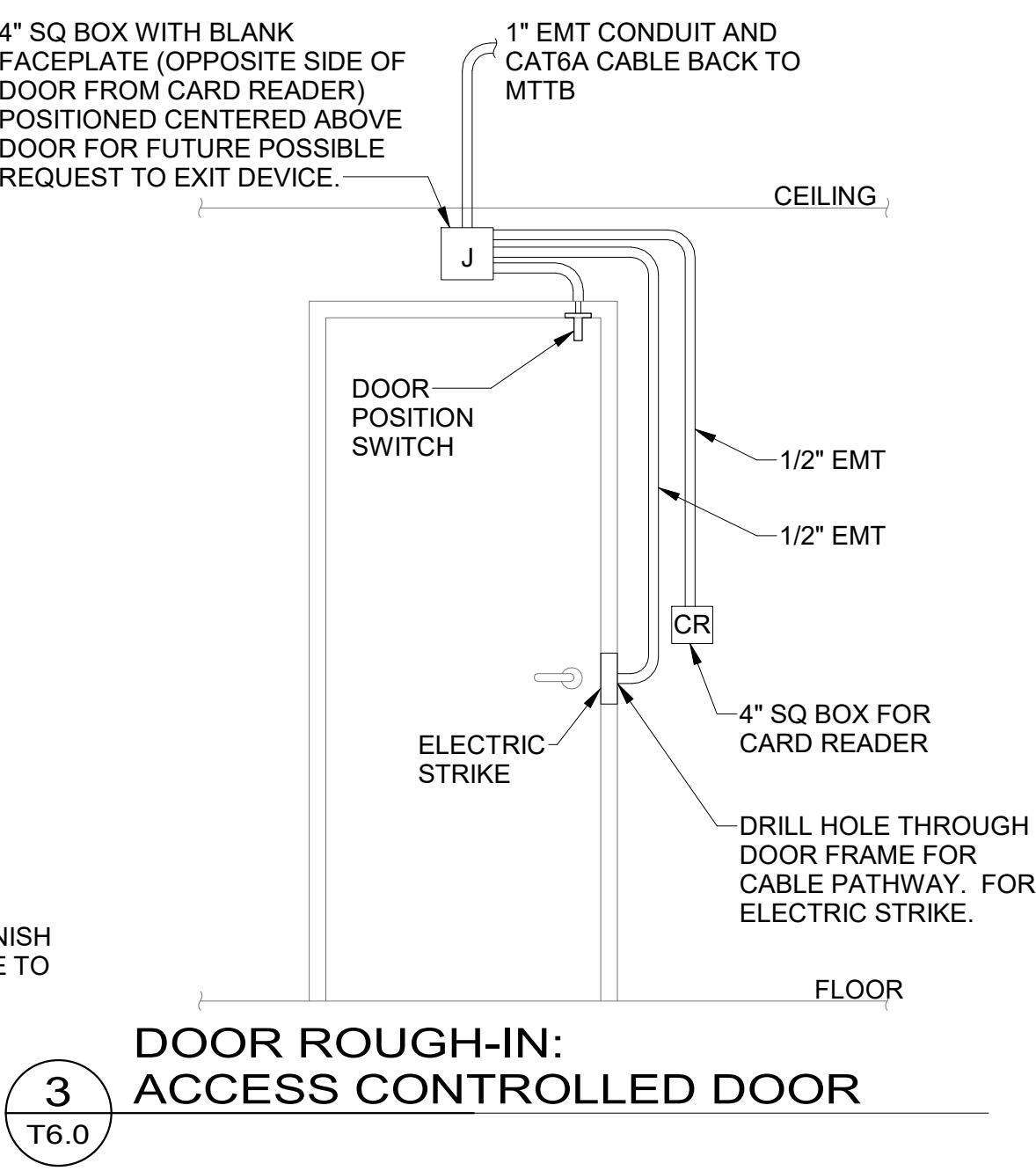
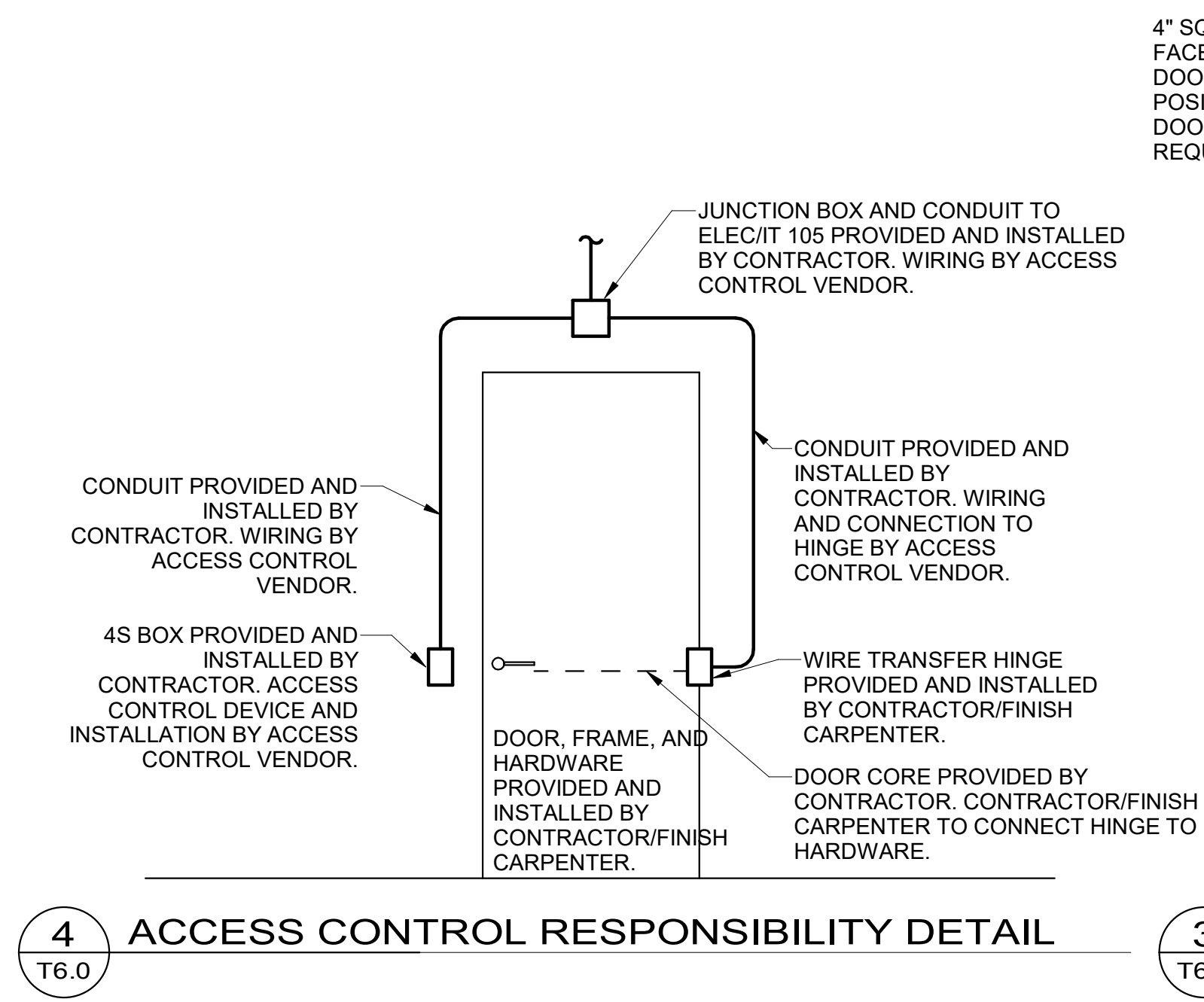
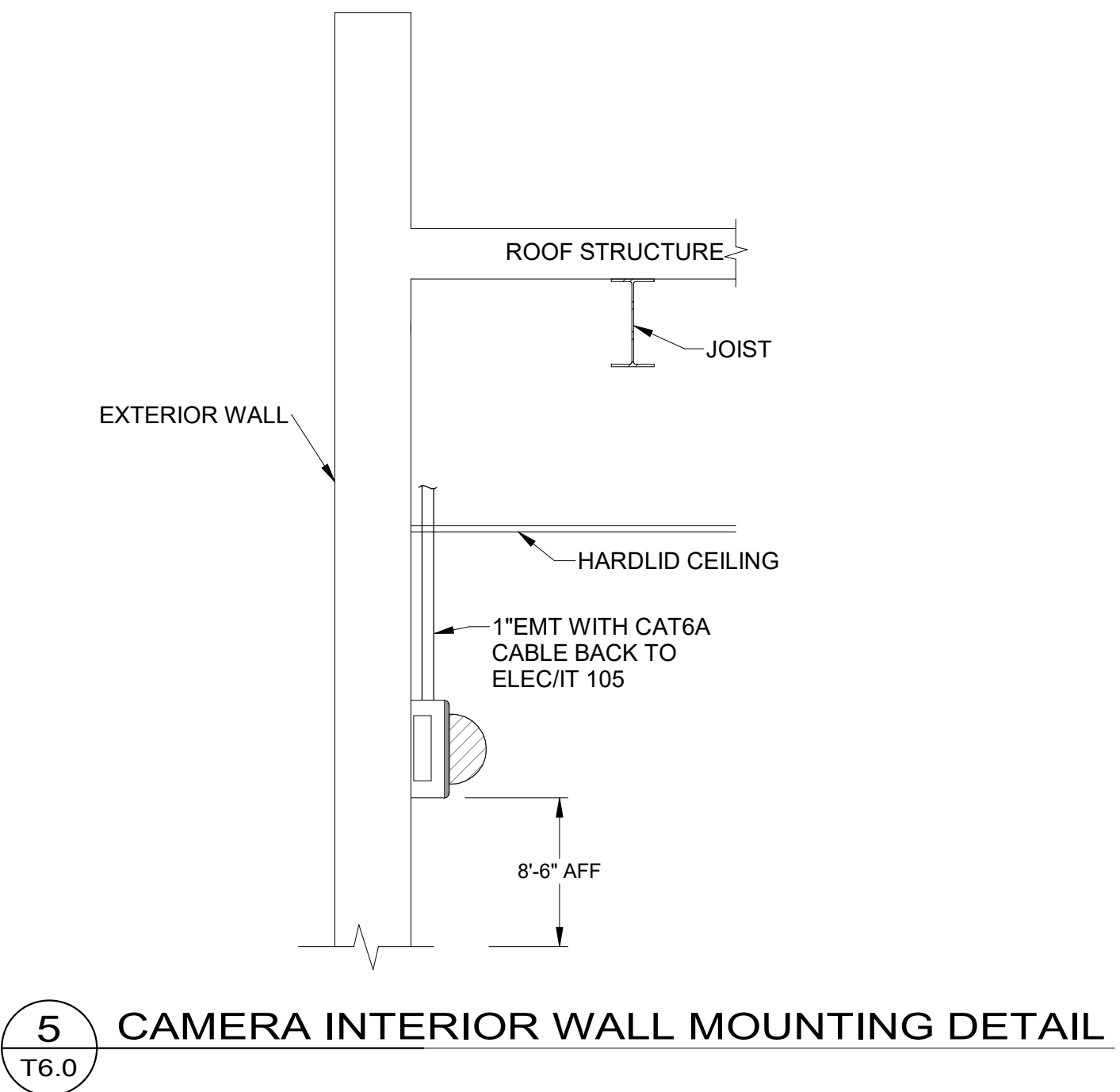
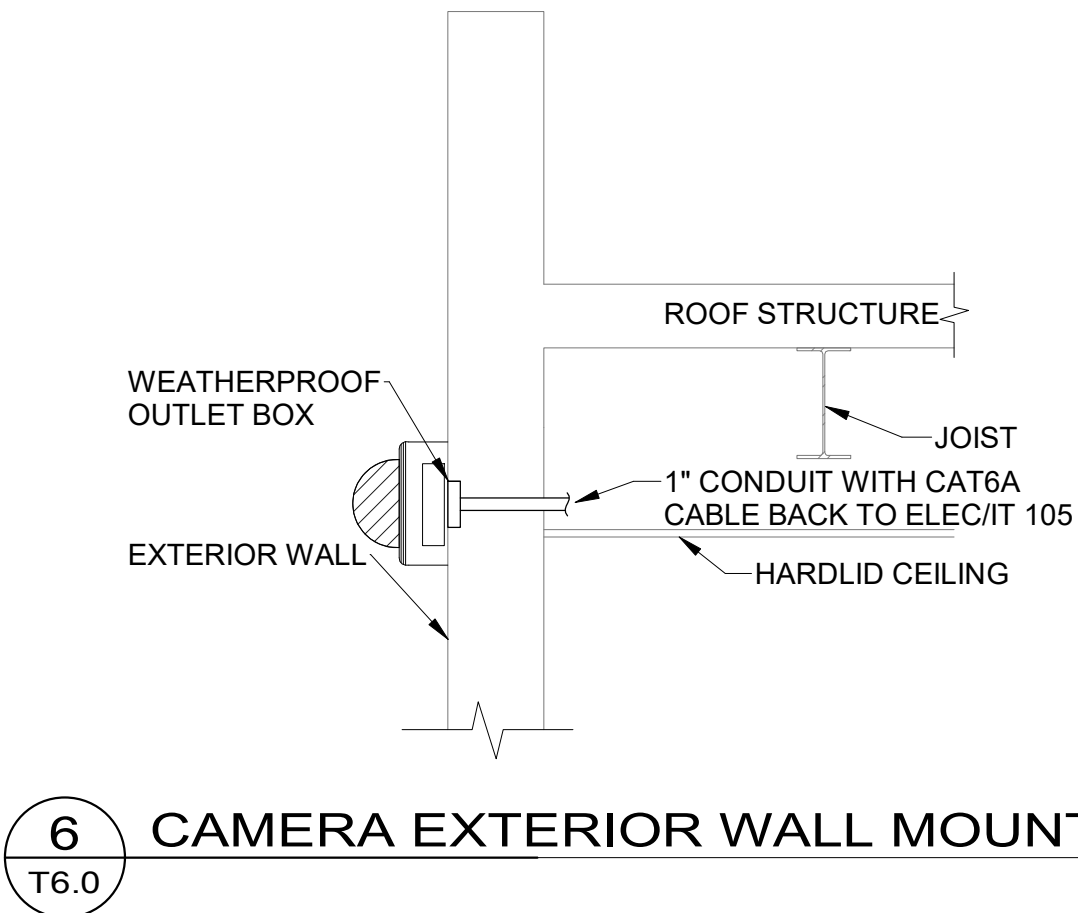
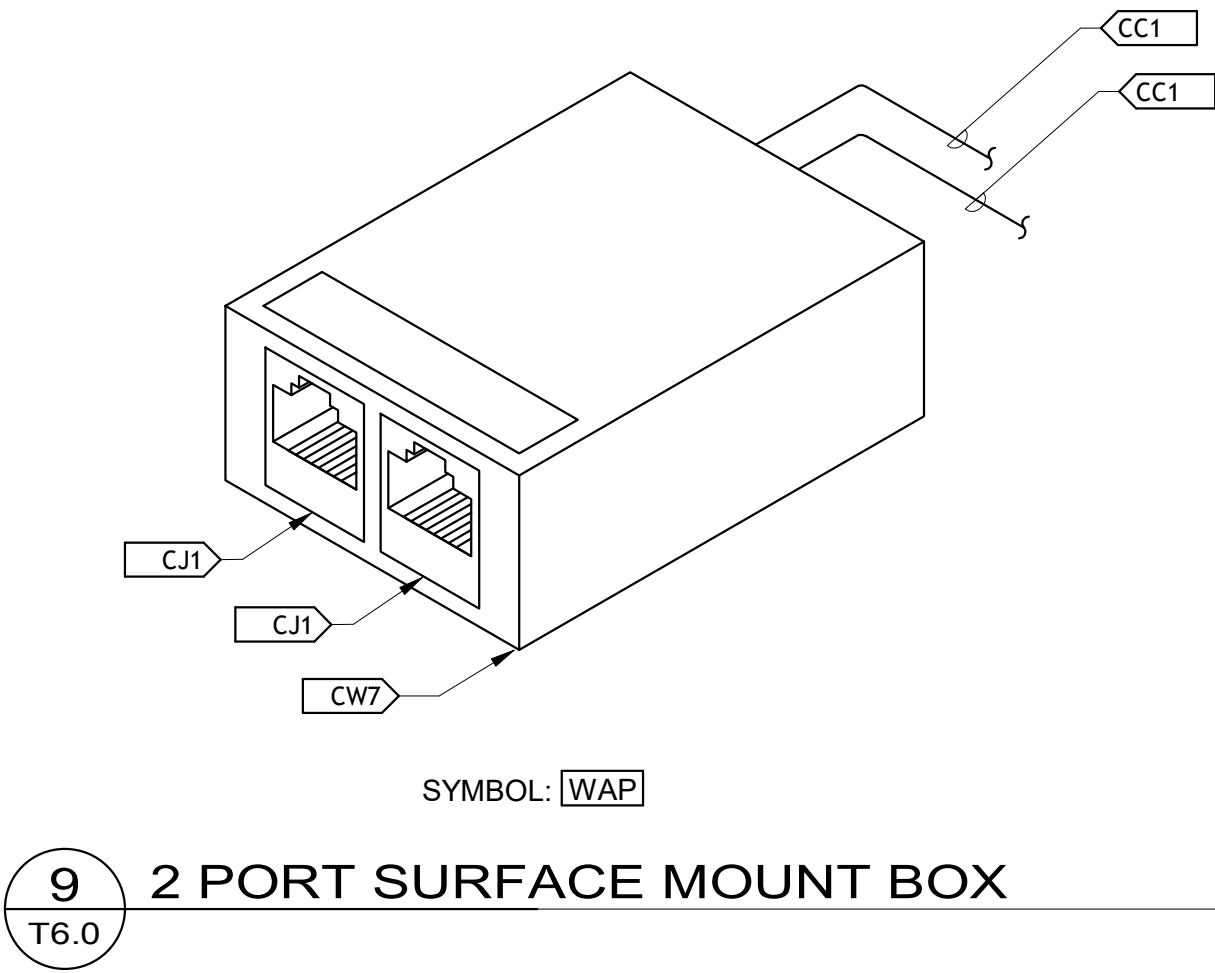
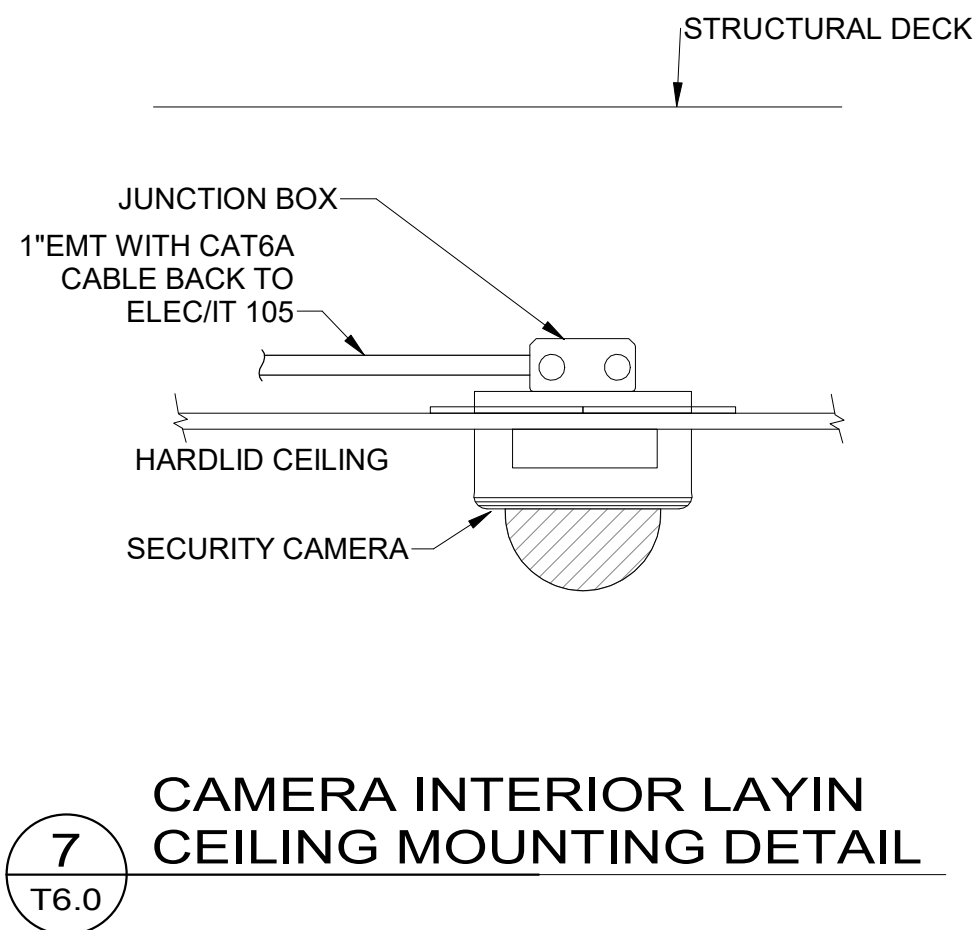
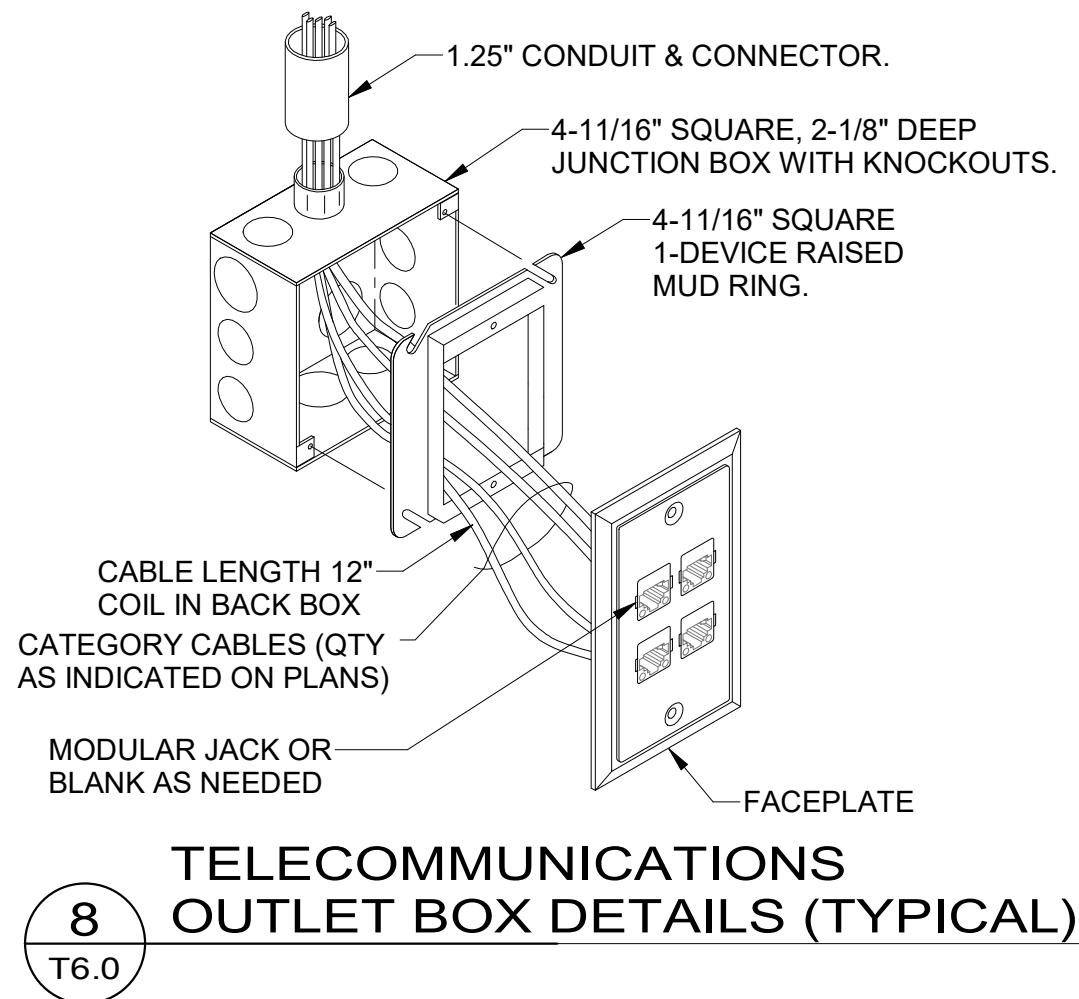
SECURITY - VIDEO SURVEILLANCE SYSTEM (VSS)				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
CAM1	EXTERIOR WALL MOUNTED TRAFFIC WEBCAM, PROVIDE CAT 6A CABLE BACK TO IT RACK.	--	--	PARK-FURNISHED - PROVIDE INFRASTRUCTURE ONLY. PARK TO PROVIDE EXISTING MOUNT FOR RE-USE.
CAM2	WALL/CEILING MOUNTED, FIXED DOME CAMERA, 5MP, NDAA COMPLIANT, PROVIDE CAT 6A CABLE BACK TO IT RACK.	AXIS	P3247-LV	OR APPROVED EQUAL
CAM3	LICENSE PLATE RECOGNITION CAMERA, NDAA COMPLIANT, PROVIDE CAT 6A CABLE BACK TO IT RACK.	AVIGILON	H4 LPC	OR APPROVED EQUAL
CAM4	WALL/CEILING MOUNTED, FIXED DOME CAMERA WITH BUILT-IN MICROPHONE, 6MP WITH DEWARPED VIEW, NDAA COMPLIANT, PROVIDE CAT 6A CABLE BACK TO IT RACK.	AXIS	M3077-PLVE	OR APPROVED EQUAL
DT1	DESKTOP TERMINAL SURVEILLANCE WORKSTATION	AXIS	S9101 Mk II	OR APPROVED EQUAL
DVR1	DIGITAL VIDEO RECORDER, 24 CHANNEL, INTEGRATED PoE SWITCH	MILESTONE	XPROTECT PROFESSIONAL+	PARK-FURNISHED. PROVIDE INFRASTRUCTURE ONLY. NOTE: LOCAL VIDEO STORAGE IS PROVIDED ON-SITE FOR REDUNDANCY AND CONVENIENCE WHEN NETWORK CONNECTIVITY IS INTERRUPTED. STANDARD OPERATION IS FOR THE MILESTONE SYSTEM TO RECORD TO THE MAIN SERVER AT HEADQUARTERS VIA THE NETWORK. NPS CURRENTLY HAS A MILESTONE ENTERPRISE LICENSE.

SECURITY - ACCESS CONTROL SYSTEM (ACS)				
KEY	DESCRIPTION	MANUFACTURER	PART NUMBER	COMMENTS
CR	FICAM READY SCRAMBLEPAD CARD READER	HIRSCH BY IDENTIV	8332ABTR000	REFER TO DETAIL #3/T6.0
--	TRANSPONDER RECEIVER	DEISTER ELECTRONIC	TAL 700	PROVIDE COMMANDER CONNECT SOFTWARE LICENSE FOR PARK
--	TRANSPONDER DEVICES	DEISTER ELECTRONIC	TPU 3082	PROVIDE QTY(50) STICKER TRANSPONDERS
ACP	FICAM READY ACCESS CONTROL PANEL	HIRSCH BY IDENTIV	MX-8-S30B	PROVIDE (2) PANELS TO ACCOMMODATE ALL CARD READERS IN PROJECT

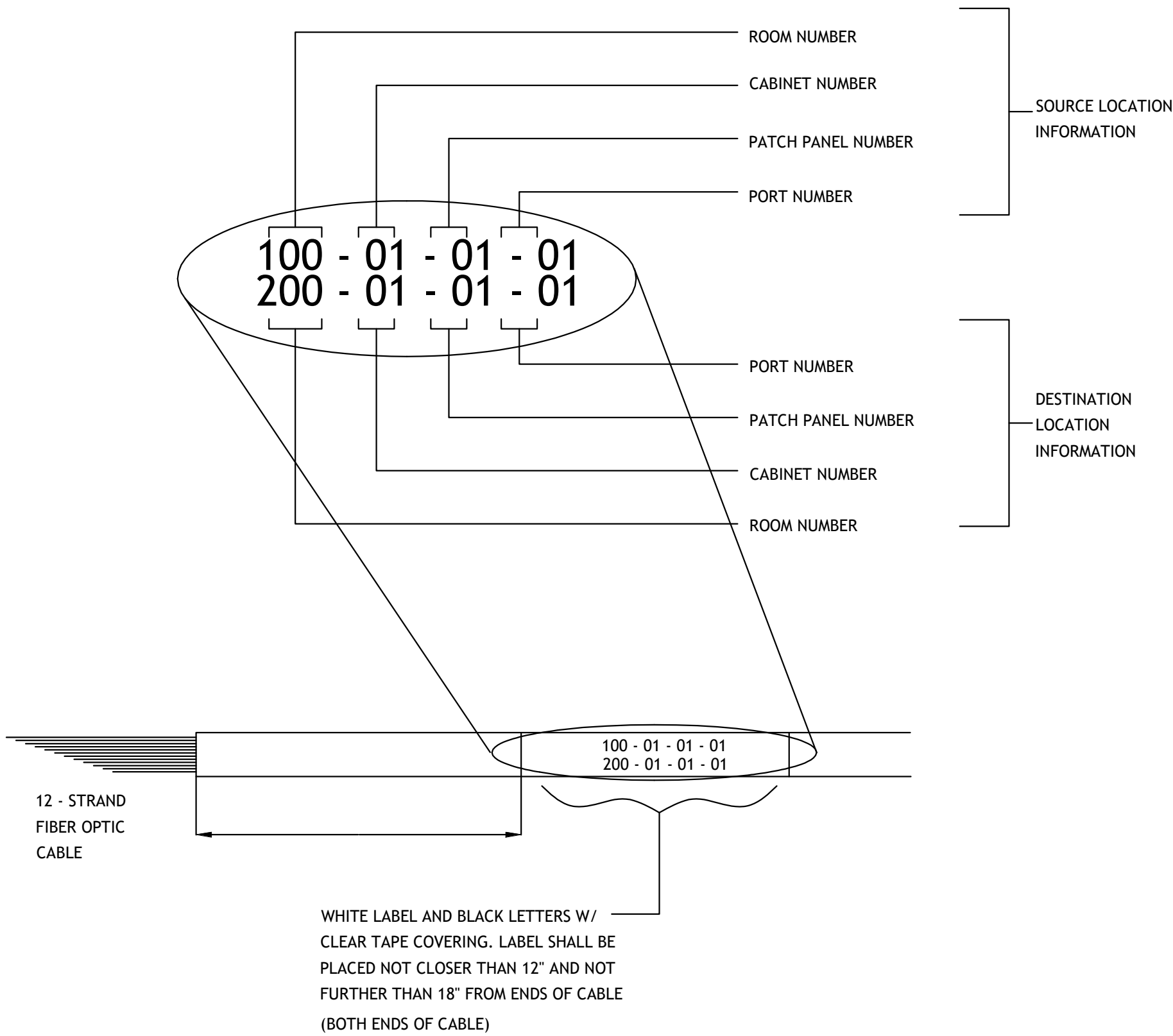


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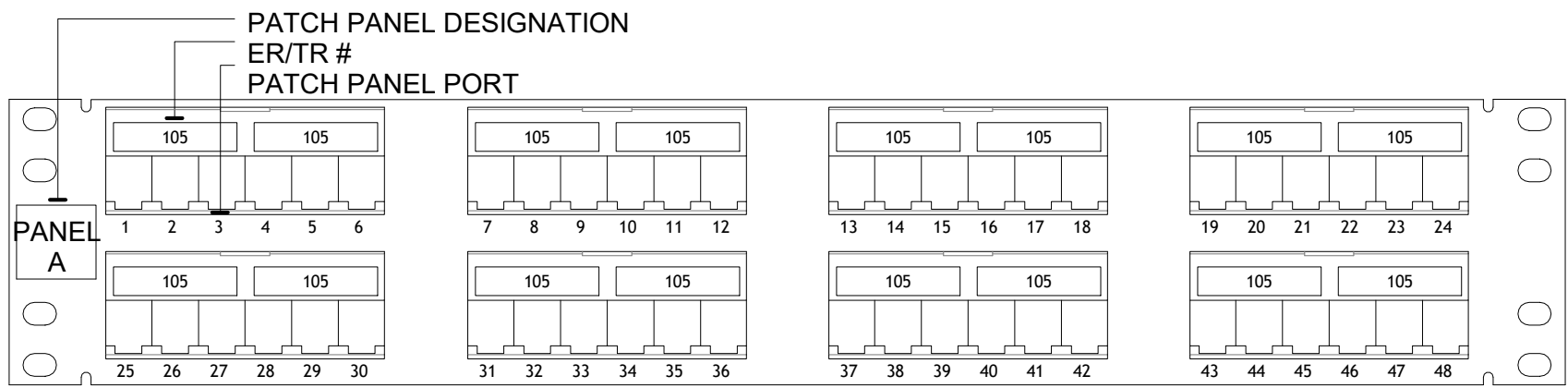
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DESIGNED: BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. T6.0	TITLE OF SHEET TECHNOLOGY DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 162 OF 165
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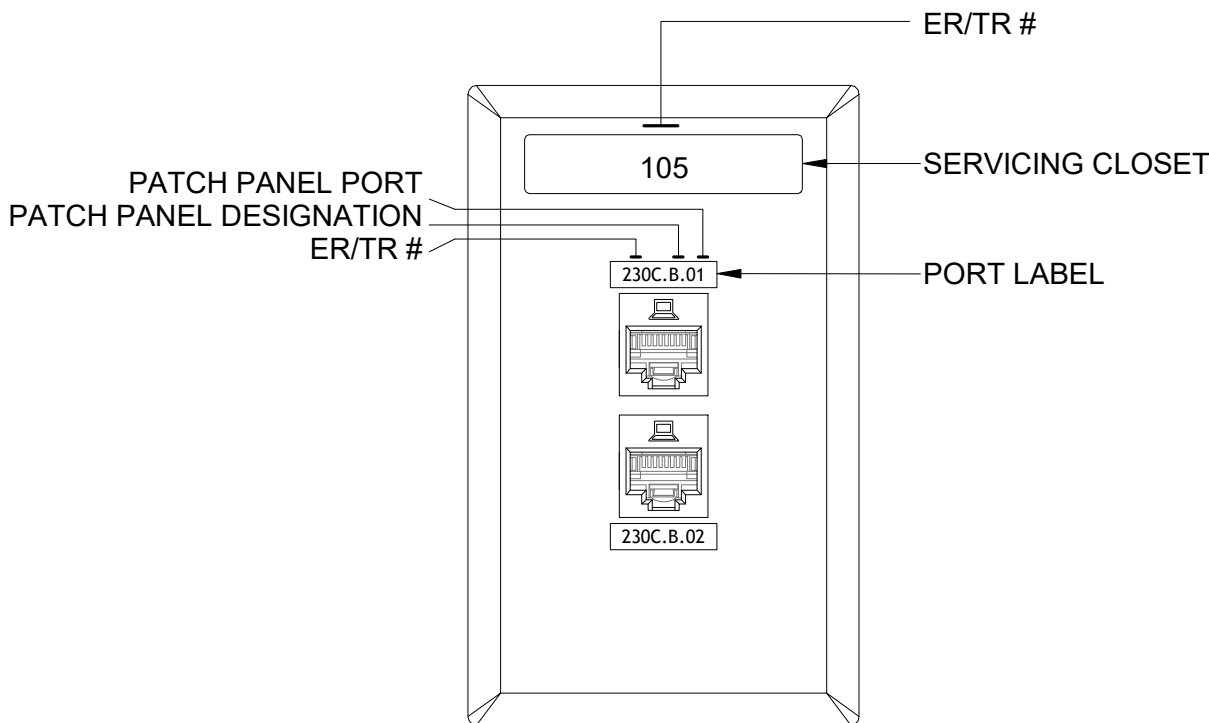
8 BACKBONE FIBER LABELING DETAIL
T6.1



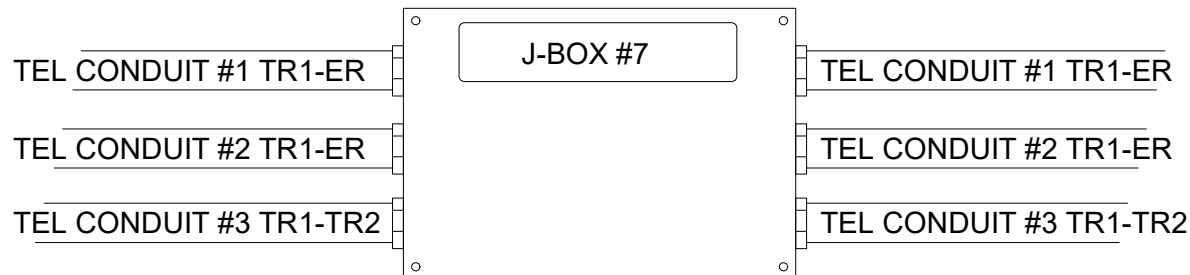
4 PATCH PANEL LABELING (TYPICAL)
T6.1

CONTRACTOR SHALL INSTALL 2 PLASTIC ENGRAVED ID PLATES TO EACH RACK, ONE FRONT, ONE REAR, AT TOP. PLATE SHALL BE WHITE, 1-1/2" TALL WITH 1" BLACK LETTERING

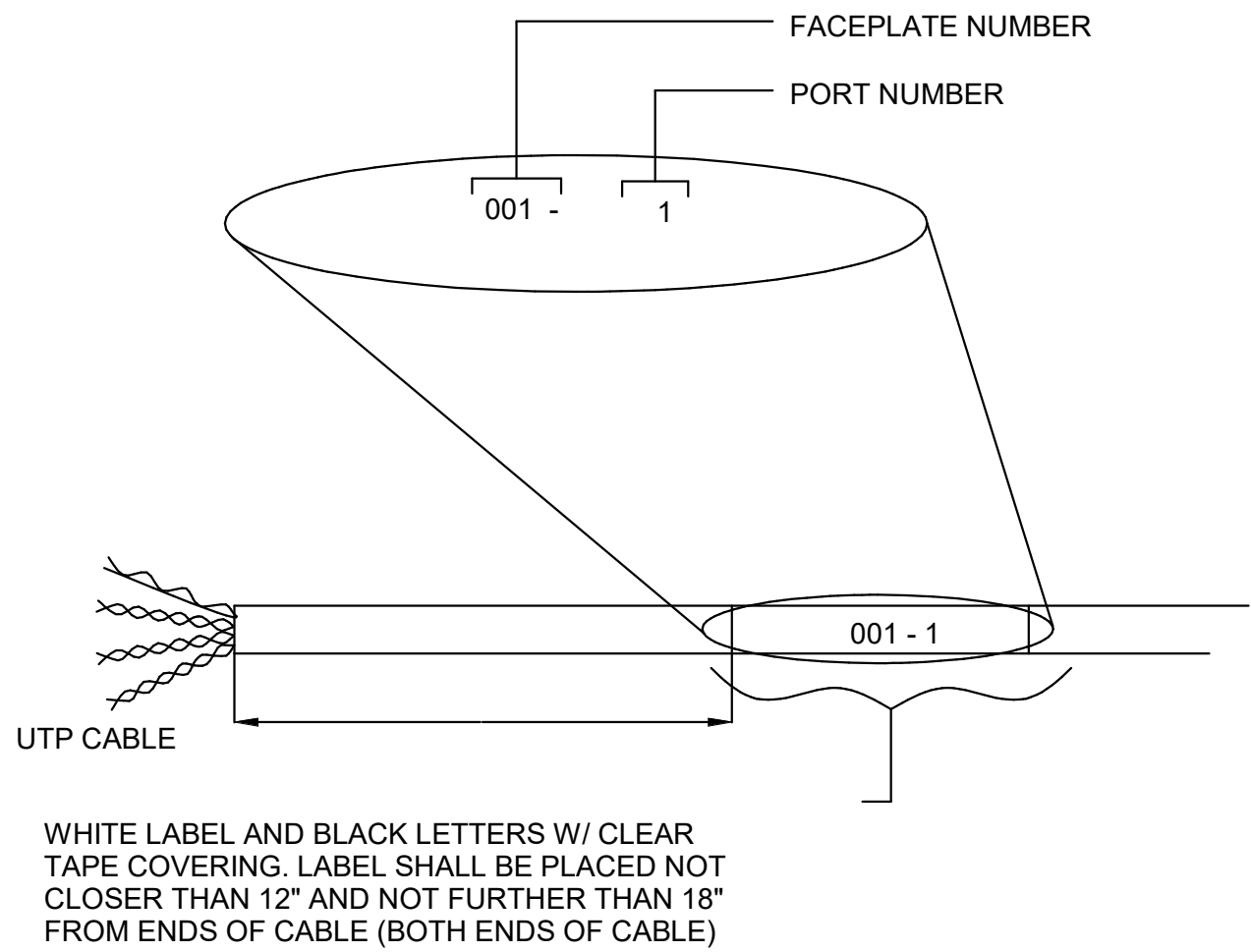
7 RACK ID TAG DETAIL
T6.1



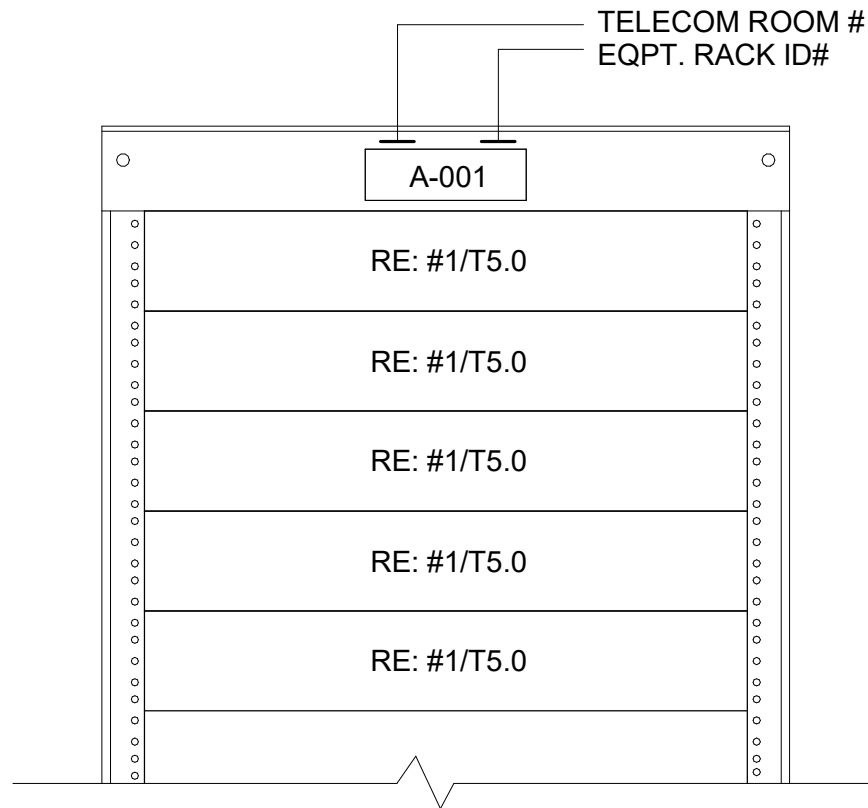
3 CEILING TELECOM OUTLET IDENTIFICATION SCHEME (TYPICAL)
T6.1



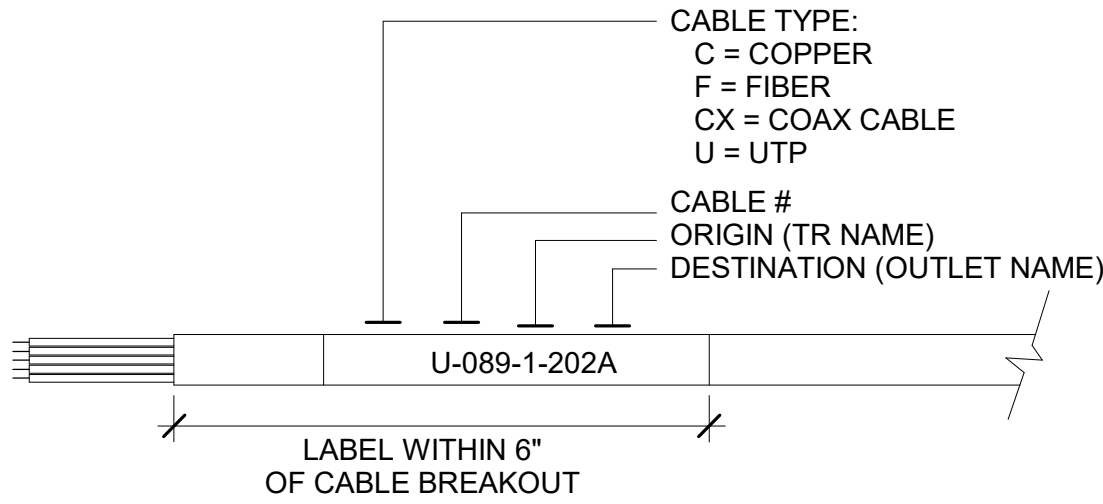
2 TELECOMMUNICATIONS CONDUIT IDENTIFICATION SCHEME
T6.1



9 HORIZONTAL COPPER CABLE LABELING
T6.1



5 TELECOMMUNICATIONS EQUIPMENT RACK IDENTIFICATION SCHEME
T6.1

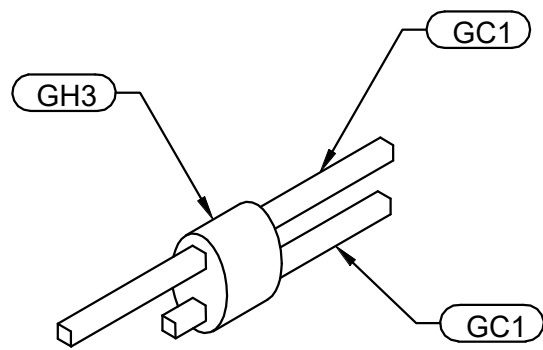


1 TYPICAL CABLE IDENTIFICATION SCHEME
T6.1



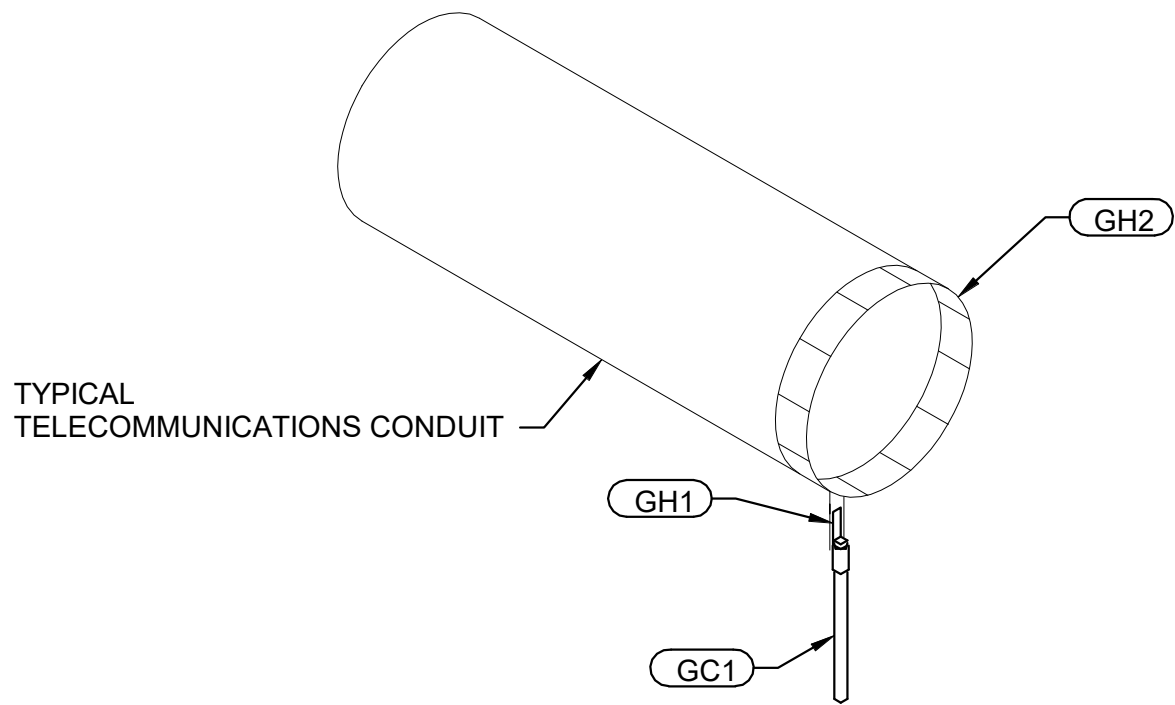
DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. T6.1	TITLE OF SHEET TECHNOLOGY DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 163 OF 165
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CONTRACTOR SHALL SIZE H-TAP
ACCORDING TO BOTH BONDING
CONDUCTOR GAUGES

4 BONDING H-TAP DETAIL
T6.2



NOTE: CONTRACTOR SHALL BOND EVERY CONDUIT
CARRYING COMMUNICATIONS CABLES

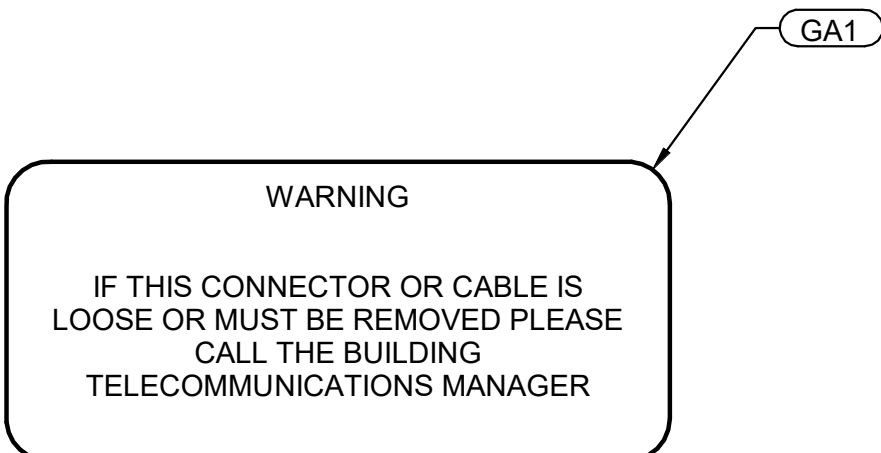
3 BONDING CONDUIT
T6.2

GROUND CABLE LENGTH M (FT)	GROUND CABLE SIZE AWG
LESS THAN 4 (13)	6
4-6 (14-20)	4
6-8 (21-26)	3
8-10 (27-33)	2
10-13 (34-41)	1
13-16 (42-52)	1/0
16-20 (53-66)	2/0
20-26 (67-84)	3/0
26-32 (85-105)	4/0
32-38 (106-125)	250 kcmil
38-46 (126-150)	300 kcmil
46-53 (151-175)	350 kcmil
53-76 (176-250)	500 kcmil
76-91 (251-300)	600 kcmil
GREATER THAN 91 (301)	750 kcmil

CONTRACTOR SHALL REFER TO THIS CHART FOR SIZING OF ALL OF THE FOLLOWING
GROUNDING CABLES:

- TELECOMMUNICATIONS BACKBONE (T.B.B.), BONDING CABLES CONNECTING THE PBB AND SBB'S.
- BACKBONE BONDING CONDUCTOR (BBC), BONDING CABLES CONNECTING THE SBB'S TO EACH OTHER.
- BONDING CONDUCTOR (B.C.), BONDING CABLES TYPICALLY USED TO CONNECT ANY PART OF THE TELECOMMUNICATIONS GROUNDING SYSTEM, TO BUILDING STEEL.
- TELECOMMUNICATIONS BONDING CONDUCTOR (TBC), BONDING CONDUCTOR CONNECTING THE TELECOMMUNICATIONS GROUNDING SYSTEM TO THE BUILDING SERVICE EQUIPMENT (POWER) GROUND.
- GROUNDING CONDUCTOR (G.C.) BONDING CONDUCTOR CONNECTING THE GROUNDING ELECTRODE (GROUND ROD) TO THE BUILDING MAIN GROUNDING BUSBAR

6 BONDING CONDUCTOR SIZING CHART
T6.2



BONDING CONDUCTOR LABEL

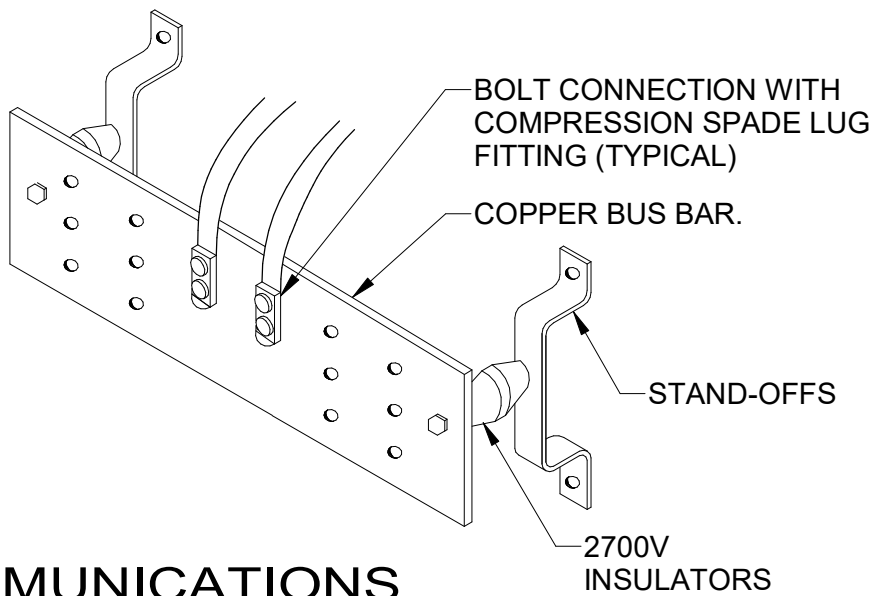
NOTE: CONTRACTOR SHALL ATTACH THIS LABEL
TO EVERY TELECOMMUNICATIONS
BONDING CONDUCTOR AT BOTH ENDS.

2 BONDING CONDUCTOR WARNING LABEL
T6.2

- GENERAL NOTES:
- CONTRACTOR SHALL
 - BOND THE PBB TO THE TENANT MAIN ELECTRICAL SERVICE GROUND
 - BOND THE PBB TO ALL ELECTRICAL PANEL GROUNDS WITHIN THE SAME ROOM
 - BOND THE PBB TO ALL SBB'S ON THE SAME FLOOR
 - BOND THE TENANT GROUND RISER CONDUCTOR TO THE PBB
 - BOND EACH SBB TO ALL ELECTRICAL PANEL GROUNDS WITHIN THE SAME ROOM
 - BOND EACH SBB TO ALL OTHER PBB ON THE SAME FLOOR
 - CONTRACTOR SHALL INSTALL GROUND DISCONNECT WARNING LABEL AT EACH ENDPOINT OF EVERY MAIN GROUND CABLE.
 - CONTRACTOR SHALL BOND EVERY TELECOMMUNICATIONS CONDUIT EXPOSED WITHIN ANY TELECOMMUNICATIONS ROOM.
 - CONTRACTOR SHALL BOND EACH RACK OR CABINET WITH A CONTINUOUS #6 AWG STRANDED GROUND CONDUCTOR.

5 GROUND NOTES
T6.2

PROVIDE BONDING TO
CONNECTIONS TO
CABLE TRAY SYSTEMS
AND EQUIPMENT RACKS
(TYPICAL)



1 TELECOMMUNICATIONS
GROUNDING BUS BAR (TYPICAL)
T6.2



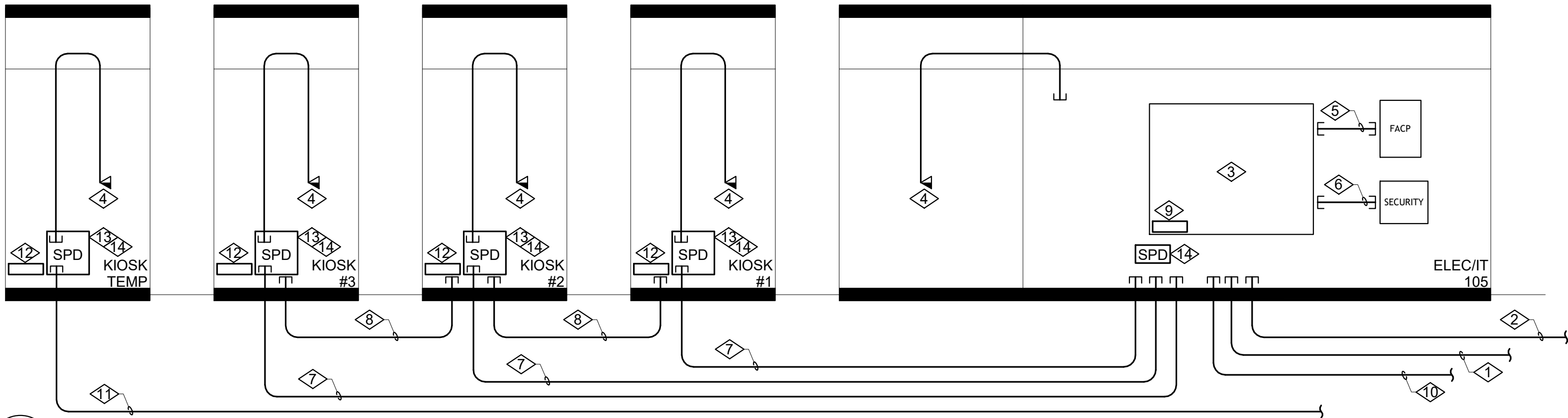
DESIGNED: BJL/BDJ/KMD GADD BJL/BDJ/KMD TECH REVIEW: BJJ/JEB DATE: 03/10/2022	SUB SHEET NO. T6.2	TITLE OF SHEET TECHNOLOGY DETAILS FALL RIVER ENTRANCE ROCKY MOUNTAIN NATIONAL PARK	DRAWING NO. 121 176678 PMIS/PKG NO. 160755 SHEET 164 OF 165
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GENERAL NOTES

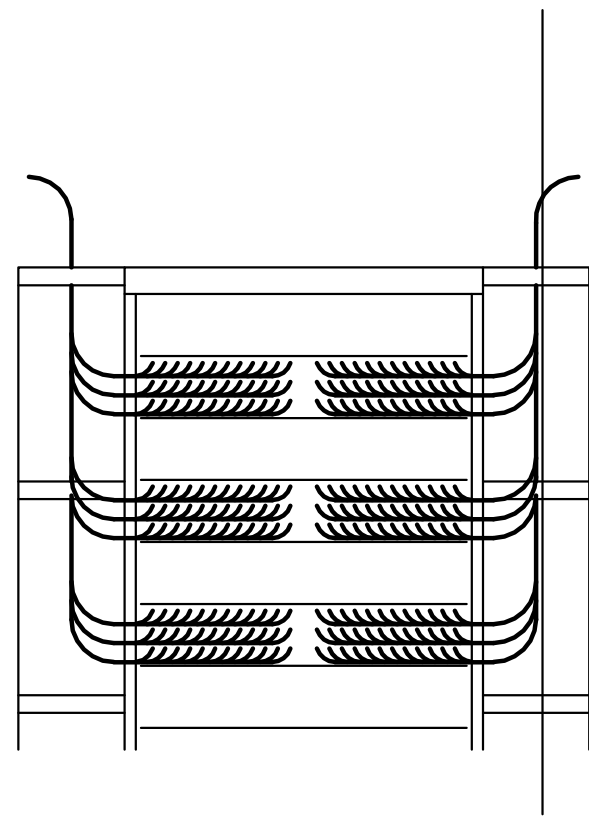
1. PROVIDE EMT FOR ALL CABLING ROUTED THROUGH ALL AREAS. COORDINATE CONDUIT SIZE REQUIREMENTS WITH CABLE INSTALLER.
2. ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS, PAINT CONDUIT TO MATCH ADJACENT FINISHES.
3. PROVIDE PULLCORD FOR ALL CONDUIT INSTALLED FOR CABLE.
4. PROVIDE PULLBOXES AS REQUIRED BY ABLE INSTALLER FOR RUNS EXCEEDING MAXIMUM PULL DISTANCE, AS IDENTIFIED BY CABLE INSTALLER.
5. FOR ALL FREELY RUN ARMORED METALLIC FIBER OPTIC CABLING, CONTRACTOR SHALL GROUND CABLING ARMOR TO THE NEAREST PBB OR SBB.
6. ALL CONDUITS AND JUNCTION BOXES ARE TO BE INSTALLED BY ELECTRICAL CONTRACTOR. ALL CABLING, JACKS, AND TERMINATIONS ARE TO BE INSTALLED BY CONTRACTOR. COORDINATE WITH THE CONTRACTOR AS NECESSARY.

KEYNOTE LEGEND

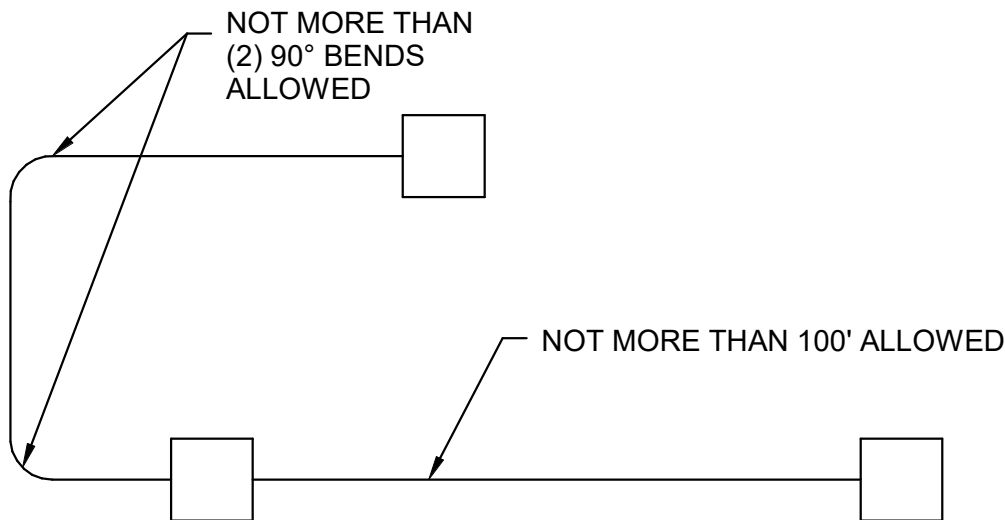
KEY	VALUE
◇	
1.	CONTRACTOR SHALL RE-ROUTE EXISTING CONDUIT FROM EXISTING FEE STATION TO NEW ENTRANCE STATION FOR CONNECTION TO SITE TELEPHONE SERVICE POINT. CONTRACTOR SHALL SPLICE AND EXTEND CABLING AS NECESSARY TO ACCOMMODATE NEW DEMARCATION POINT.
2.	NEW (1) 4" PVC CONDUIT ROUTED 30" BELOW GRADE FOR FUTURE FIBER OPTIC CONNECTION TO BIGHORN RANGER STATION. CONTRACTOR SHALL VERIFY CONDUIT SIZING AND QUANTITY WITH SERVICE PROVIDER PRIOR TO INSTALLATION. BID OPTION: PROVIDE AN ADDITIONAL 4" CONDUIT BETWEEN THE BIGHORN RANGER STATION AND WILDERNESS FIELD OFFICE FOR FUTURE FIBER OPTIC CONNECTION. REFER TO SHEET E0.4 FOR ROUTING.
3.	MAIN TELEPHONE TERMINAL BOARD 'MTTB' SHALL CONSIST OF 3/4". 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. EC SHALL PROVIDE 2" DEEP, 2-GANG BOX WITH 1-GANG PLASTER RING. EC SHALL PROVIDE 1.25" CONDUIT TO ELEC/IT 105 IN MAIN BUILDING OR JUNCTION BOX IN KIOSK FOR ROUTING BACK TO MAIN ENTRANCE BUILDING. RECEPTACLE FACEPLATE, JACK, CABLING, AND TERMINATIONS BY CONTRACTOR.
5.	ROUTE (1) 3/4" CONDUIT FOR FIRE ALARM CONTROL PANEL COMMUNICATIONS CABLING RACEWAY.
6.	ROUTE (1) 3/4" CONDUIT FOR SECURITY ALARM CONTROL PANEL COMMUNICATIONS CABLING RACEWAY.
7.	ROUTE (1) 3" CONDUIT FROM THE ENTRANCE STATION TO EACH KIOSK. STUB OUT CONDUITS 6" AFF IN ELEC/IT 105 OR IN WALL OF KIOSK. ROUTE ALL NEW CAT6A CABLING THROUGH CONDUIT BACK TO MAIN TELECOM ROOM. ALSO PROVIDE (1) 2" CONDUIT FROM THE ENTRANCE STATION TO EACH KIOSK FOR ROUTING OF FIRE ALARM CABLING BETWEEN FACP AND FIRE ALARM DEVICES.
8.	ROUTE (1) 2" CONDUIT BETWEEN KIOSKS. STUB OUT CONDUITS 6" AFF IN EACH KIOSK.
9.	PRINCIPAL GROUND POINT AND TELECOMMUNICATIONS MAIN GROUNDING BAR 'TCMGB' FUNCTIONING AS INTERSYSTEM BONDING TERMINATION DEVICE, COMPLYING WITH NEC 250.94.
10.	ROUTE (1) 2" CONDUIT FOR FIBER OPTIC CABLE ROUTING TO VARIABLE MESSAGE SIGN. REFER TO SHEET E0.2 FOR CONDUIT ROUTING.
11.	ROUTE (1) 2" CONDUIT FROM TEMPORARY POINT-TO-POINT DISH NEAR PARK BORDER TO THE TEMPORARY KIOSK FOR TELECOMMUNICATIONS SERVICE THROUGHOUT CONSTRUCTION. CONDUIT TO BE ROUTED ON-GRADE WITH A COVER FOR PROTECTION. COORDINATE FINAL LOCATION WITH CIVIL SHEET C10.0 AND C10.1 AS WELL AS CONTRACTING OFFICER.
12.	PROVIDE INTERSYSTEM BONDING BUS 'ISBB'. RE: ELECTRICAL FOR MORE INFORMATION.
13.	PROVIDE 12"X12" JUNCTION BOX IN KIOSK. REFER TO ELECTRICAL POWER PLAN FOR JUNCTION BOX LOCATION. INCOMING CAT6A CABLES TO BE RE-ROUTED THROUGH OUTGOING 1-1/4" CONDUITS. PROVIDE WIEGMANN #SC121204G OR APPROVED EQUAL.
14.	PROVIDE SURGE PROTECTION DEVICE ON EITHER END OF THE KIOSK. KIOSK SIDE SPD TO BE LOCATED IN JUNCTION BOX ENCLOSURE. PROVIDE CIRCAMAX #604-75RJ OR APPROVED EQUAL.



LOW VOLTAGE RISER DIAGRAM



CONTRACTOR SHALL DRESS EACH ROW OF CABLES EVENLY FROM BOTH SIDES OF PATCH PANEL FOR TERMINATION. CABLES SHALL NOT CROSS THE CENTERLINE, AND SHALL NOT BLOCK RACK SPACES ABOVE, BELOW OR BETWEEN THE PATCH PANELS.



NOTE:
CONTRACTOR SHALL NOT EXCEED 100' OF CONDUIT BETWEEN PULL BOXES OR EXCEED (2) 90° BENDS BETWEEN PULL BOXES.

CABLE DRESSING IN RACK

TYPICAL PULLBOX GUIDELINES



DESIGNED:
BJL/BDJ/KMD
GADD
BJL/BDJ/KMD
TECH REVIEW:
BJJ/JEB
DATE:
03/10/2022

SUB SHEET NO.

T6.3

TITLE OF SHEET
TECHNOLOGY
DETAILS

FALL RIVER ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

DRAWING NO.
121
176678
PMIS/PKG NO.
160755
SHEET
165 OF 165