

DESIGN LOADS

- | | |
|--|---------|
| A. BASIC DESIGN WIND SPEED, V , (3-SECOND GUST) | 115 MPH |
| B. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD} , (3-SECOND GUST) | 90 MPH |
| C. WIND EXPOSURE | C |
| D. GROUND ELEVATION FACTOR | 0.78 |

4. SEISMIC

- 0.5930

FOUNDATION DESIGN:

- ## OOTINGS

- | | |
|---------------------------------------|---------------------------------|
| A. MAXIMUM ALLOWABLE BEARING PRESSURE | |
| a. NATURAL BEDROCK MATERIALS | 5,000 PSF (10,000 PSF ULTIMATE) |
| b. ENGINEERED FILL | 2,500 PSF (5,000 PSF ULTIMATE) |
| B. MINIMUM DEAD LOAD PRESSURE | 1,000 PSF |

EARTH RETAINING STRUCTURES

- | | |
|---------------------------------|---|
| A. CANTILEVERED WALLS (ACTIVE) | 35 PCF (IMPORTED GRANULAR BACKFILL. SEE NOTE 6 BELOW) |
| B. PASSIVE RESISTING | 250 PCF |
| COEFFICIENT OF SLIDING FRICTION | |
| A. NATURAL BEDROCK MATERIALS | 0.40 |
| B. ENGINEERED FILL | 0.35 |
| UNIT WEIGHT | |
| A. OVERBURDEN MATERIALS | 112.3 PCF |
| B. BEDROCK MATERIALS | 129.6 PCF |
| C. GRANULAR BACKFILL | 145.0 PCF |
| ANGLE OF INTERNAL FRICTION | |
| A. OVERBURDEN MATERIALS | 0 DEGREES |
| B. BEDROCK MATERIALS | 30 DEGREES |
| C. GRANULAR BACKFILL | 40 DEGREES |

REINFORCED CONCRETE:

- | INTENDED USE | EXPOSURE CLASS | f _c , PSI
28 DAYS | MAX
W/C
RATIO | MAXIMUM
AGGREGATE | SLUMP,
INCHES
(+/- 1") | AIR
CONTENT
(+/- 1.5%) | CEMENT TYPE | AD MIXTURES
/ COMMENTS |
|---------------------------------------|----------------|---------------------------------|---------------------|----------------------|------------------------------|------------------------------|----------------------------------|---------------------------|
| INGS | F0-S0-W0-C1 | 3000 | 0.52 | 3/4" STONE | 5 | N/A | ASTM C150 III OR
ASTM C595 IL | |
| IN-PLACE WALLS,
CAST MODULAR
KS | F2-S0-W0-C1 | 4500 | 0.45 | 3/4" STONE | 4 | 6% | ASTM C150 III OR
ASTM C595 IL | |

- CONCRETE MIX TABLE NOTES:
- CONCRETE MIX SUBMITTAL SHALL INCLUDE A SINGLE PAGE LIST OF MIXES, IN TABULAR FORMAT, WITH KEY MIX REQUIREMENTS.
- SUMP 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.
- AIR CONTENT:
- a. N/A: NOT APPLICABLE, NO STRUCTURAL AIR CONTENT REQUIREMENTS
- INSTALLATION, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318 RETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
- LESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, LAP BARS PER THE CONCRETE LAP SPLICE SCHEDULE.
- CORNERS AND INTERSECTIONS, MAKE HORIZONTAL BARS CONTINUOUS OR PROVIDE MATCHING CORNER BARS FOR EACH LAYER OF REINFORCEMENT.
- FORM INTERMITTENT SHEAR KEYS AT ALL CONSTRUCTION JOINTS AND AS SHOWN ON THE STRUCTURAL DRAWINGS.
- 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"
- B. EXPOSED TO EARTH OR WEATHER:
- | | |
|------------------------|--------|
| 1. #5 THROUGH #18 BARS | 2" |
| 2. #5 BAR AND SMALLER | 1-1/2" |

PRECAST MODULAR BLOCKS (PMB'S):

2. ALL PMB UNITS FOR THE PROJECT SHALL BE OBTAINED FROM THE SAME MANUFACTURER. THE MANUFACTURER SHALL BE LICENSED AND AUTHORIZED TO PRODUCE THE UNITS BY THE PRECAST MODULAR BLOCK SYSTEM MANUFACTURERS ASSOCIATION (PMA). THE MANUFACTURER SHALL BE LICENSED TO THE PMA UNDER RED-ROCK'S PUBLISHED QUALITY CONTROL STANDARDS FOR THE PREVIOUS THREE YEARS, OR THE TOTAL TIME THE MANUFACTURER HAS BEEN LICENSED, WHICHEVER IS LESS.
3. CONCRETE USED IN THE PRODUCTION OF THE PMB UNITS SHALL BE FIRST-PURPOSE, FRESH CONCRETE. IT SHALL NOT CONSIST OF RETURNED, RECONSTITUTED, SURPLUS OR WASTE CONCRETE. IT SHALL BE AN ORIGINAL PRODUCTION MIX MEETING THE REQUIREMENTS OF ASTM C94 AND EXHIBIT THE PROPERTIES SHOWN IN THE TABLE ABOVE.
4. EACH PMB UNIT SHALL BE CAST IN A SINGLE CONTINUOUS POUR WITHOUT COLD JOINTS. PMB UNITS AND THEIR INTEGRAL SHEAR KNOBS SHALL CONFORM TO THE DIMENSIONS AND TOLERANCES PUBLISHED BY RED-ROCK. ALL PMB UNITS SHALL BE SHOWN A FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER INSTALLATION AND FUNCTIONALITY OF THE UNITS OR THE PERFORMANCE OF THE CONSTRUCTED WALL.
5. PMB WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH RED-ROCK'S PUBLISHED RECOMMENDATIONS. SUBSEQUENT COURSES OF PMB UNITS SHALL BE INSTALLED WITH A RUNNING BOND.

SHOP DRAWINGS

1. THE STRUCTURAL DRAWINGS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS. USE OF JVA'S ELECTRONIC FILES AS THE BASIS FOR SHOP DRAWINGS REQUIRES PRIOR APPROVAL BY JVA. A SIGNED RELEASE OF LIABILITY BY THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS, AND DELETION OF JVA'S LOGO FROM ALL SHEETS SO USED.
2. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE STRUCTURAL 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 STRUCTURAL ENGINEER'S REVIEW. SHOP DRAWING SUBMITTALS NOT CHECKED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER WILL BE RETURNED TO THE GENERAL CONTRACTOR.
4. FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR:
 - A. CONCRETE MIX DESIGNS
 - B. CONCRETE REINFORCING STEEL
 - C. PRECAST MODULAR BLOCKS
5. SUBMIT A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE STRUCTURAL ENGINEER.
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 STRUCTURAL DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED.
2. THE STRUCTURAL DRAWINGS ILLUSTRATE TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE GENERAL CONTRACTOR IN DETERMINING THE NECESSITY AT ALL CONSTRUCTION CONDITIONS OTHER THAN THOSE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN MADE 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 MANUFACTURER'S 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 AND VENDORS. THE GENERAL CONTRACTOR SHALL MAINTAIN RECORDS OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR RESOLUTION.
6. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE ARCHITECT AND STRUCTURAL ENGINEER FROM ALL CONSEQUENCES.
7. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE STRUCTURAL 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, AND ALL PROTECTIVE AND SAFETY DEVICES AND CRANES AND OTHER ERECTION EQUIPMENT.
9. THE ARCHITECT AND STRUCTURAL ENGINEER BEAR NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTIONS OF THESE ITEMS.

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. PRECAST MODULAR BLOCKS
 - B. PERMANENT SOIL-NAILED RETAINING WALL
5. DEFERRED SUBMITTALS WILL BE REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD FOR COMPLIANCE WITH THE SPECIFIED DESIGN REQUIREMENTS, STAMPED AS "REVIEWED," AND RETURNED TO THE CONTRACTOR. THE GENERAL CONTRACTOR SHALL FORWARD THE REVIEWED DEFERRED SUBMITTALS TO THE LOCAL BUILDING AUTHORITY FOR REVIEW AND APPROVAL BEFORE INSTALLATION OF DEFERRED SUBMITTAL ITEMS.
6. FINAL ISSUE OF THE BUILDING PERMIT MAY, AT THE APPROVAL AUTHORITY'S OPTION, BE CONTINGENT ON ITS APPROVAL OF THE DEFERRED SUBMITTAL DOCUMENTS.
7. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN CALCULATIONS AND DRAWINGS HAVE BEEN REVIEWED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND/OR LOCAL BUILDING AUTHORITY AS REQUIRED.

SPECIAL INSPECTIONS:

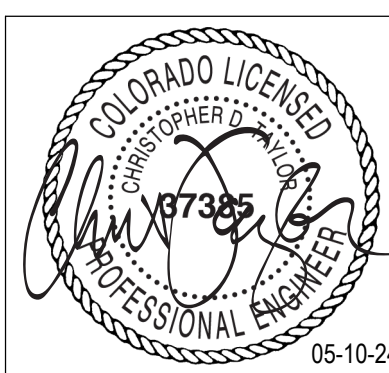
1. THE FOLLOWING SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR RETAINED BY THE OWNER, IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF IBC CHAPTER 17:
 - A. SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTIONS:
 1. 1704.2 SPECIAL INSPECTIONS AND TESTS
 2. 1704.2.1 STATEMENT OF SPECIAL INSPECTIONS
 - B. SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
 1. 1705.3 CONCRETE CONSTRUCTION
 2. 1705.6 SOILS
 - C. SECTION 1706 DESIGN STRENGTHS OF MATERIALS
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, 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 THE FOLLOWING:
 - A. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION
 - B. PER SECTION 1704.2.4 THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, CORRECTION OF PREVIOUSLY REPORTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE STRUCTURAL ENGINEER OF RECORD.
6. THE SPECIAL INSPECTION REPORT SHALL BE 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. EXCEPT AS NOTED, THE SPECIAL INSPECTIONS OUTLINED ABOVE ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS AS OUTLINED IN SECTION 1704.6. STRUCTURAL OBSERVATIONS ARE INCLUDED IN THE STRUCTURAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY THE STRUCTURAL ENGINEER.

CONCRETE SPECIAL INSPECTION (IBC 1705.3)			
ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
Reinforcing steel	ACI-CCI ICC-RC/SI	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Use of required mix design	ACI-CCI ICC-RC/SI	Periodic	Verify that all mixes used comply with the approved construction documents ACI 318: Ch. 19, 26.4.3, 26.4.4; and IBC 1904.1, 1904.2, 1908.2, 1908.3.
Concrete sampling for strength tests, slump, air content, and temperature	ACI-CFTT ACI-SIT	Continuous	
Concrete placement	ACI-CCI ICC-RC/SI	Continuous	
Curing treatment and techniques	ACI-CCI ICC-RC/SI	Periodic	Verify that the ambient temperature for concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 26.4.7-26.4.9). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Strength verification	ACI-STT	Periodic	Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons.
Formwork		Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.

SOIL SPECIAL INSPECTION (IBC 1705.6)			
ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
SHALLOW FOUNDATIONS			(IBC 1705.6)
Verify subgrade	PE/GE	Periodic	Prior to placement of concrete inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.
CONTROLLED STRUCTURAL FILL			(IBC 1705.6)
Excavations	PE/GE	Periodic	Verify excavations extend to proper depth and material prior to placement of compacted fill or concrete.
Fill materials	PE/GE	Periodic	Perform classification and testing of compacted fill materials. Check for proper classifications and gradations at each lift and not less than once for each 10,000SF of surface area.
Placement and compaction		Continuous	Verify proper materials, densities and lift thicknesses during placement and compaction.
Subgrade preparation	PE/GE	Periodic	Verify that subgrade has been appropriately prepared prior to placing compacted fill.
Density		Continuous	Test density of each lift by nuclear methods (ASTM D2922).

STRUCTURAL DRAWING LIST	
SHEET NO	SHEET TITLE
S001	GENERAL NOTES
S101A	SITE RETAINING WALL KEY PLAN - NORTH
S101B	SITE RETAINING WALL KEY PLAN - SOUTH
S501	CIP SCHEDULES & TYPICAL DETAILS
S502	CIP DETAILS
S503	PMB SCHEDULES & TYPICAL DETAILS

**REVIEWED
FOR
CODE
COMPLIANCE**
04/01/2025



NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every discrepancy cannot be anticipated. Any ambiguity or discrepancy discovered by the owner or these consultants shall be immediately notified to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arising out of such changes.

All design, documents and data prepared by Eric Smith Associates, P.C. as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied, changed or disclosed in any form whatsoever without first obtaining the express written consent of Eric Smith Associates, P.C.

Eric Smith Associates, P.C.

REVISIONS

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**THE ASTRID
SITE RETAINING WALLS**
2410 SKI TRAIL LANE
STEAMBOAT SPRINGS, CO



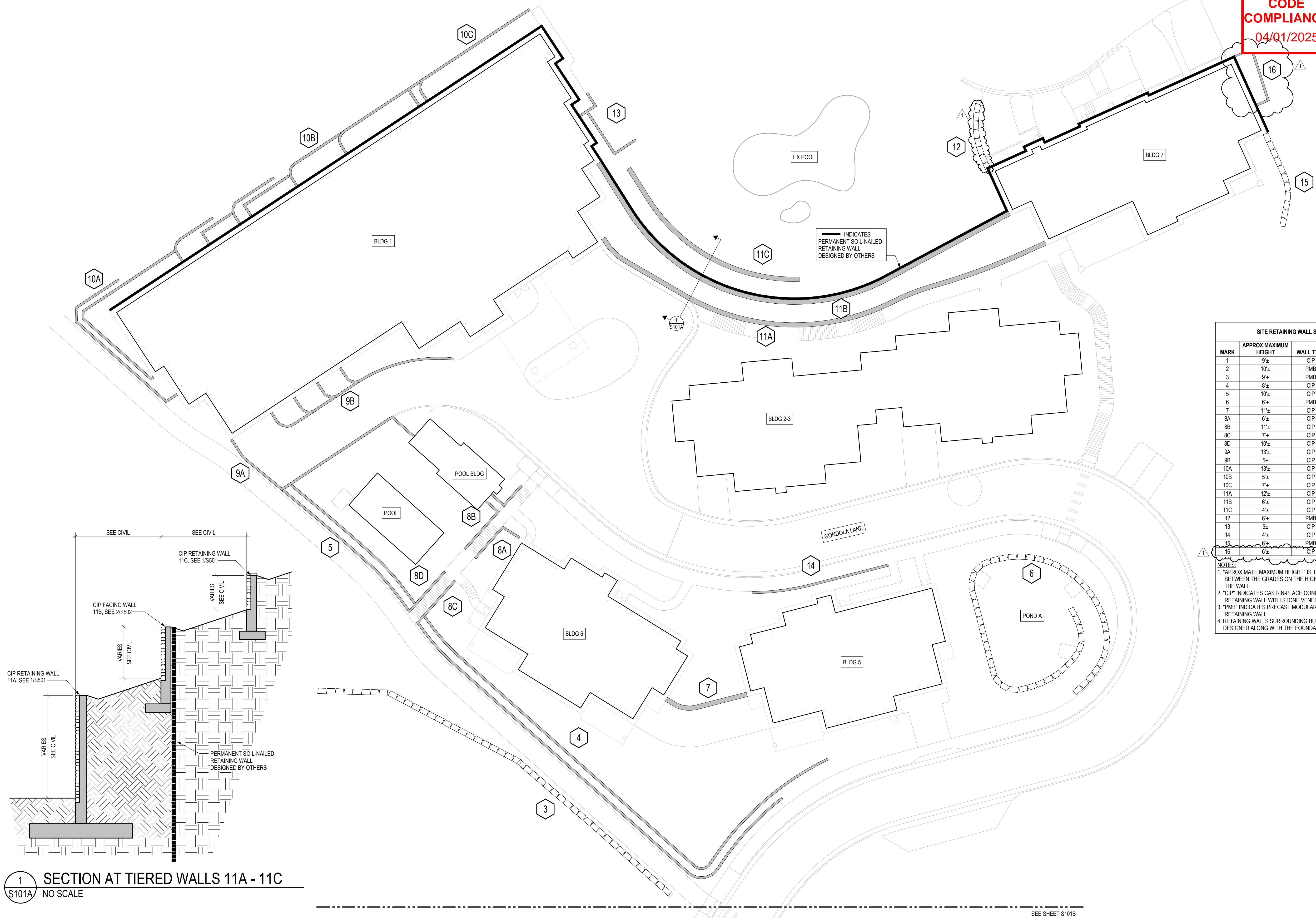
Job Number:	-
Date:	02/23/24
Drawn By:	DJM
Checked By:	CDT

Project Phase

Sheet Title
GENERAL NOTES

Sheet Number

S001



SECTION AT TIERED WALLS 11A - 11C

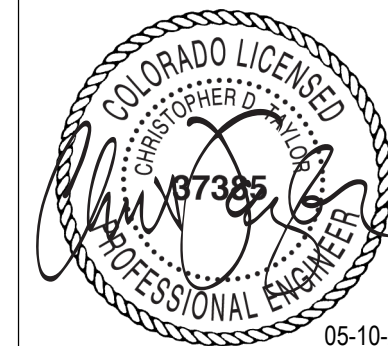
NORTH

SITE RETAINING WALL KEY PLAN - NORTH

1" = 20'-0"

- SEE CIVIL FOR TOP OF WALL AND GRADE ELEVATIONS
- PMB LAYOUT SHOWN IS CONCEPTUAL

**REVIEWED
FOR
CODE
COMPLIANCE**
04/01/2025



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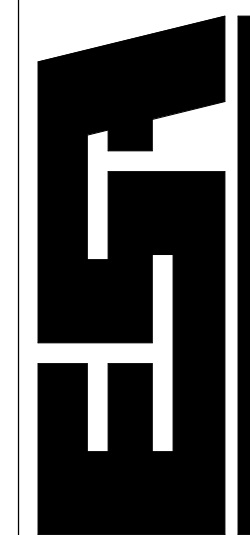
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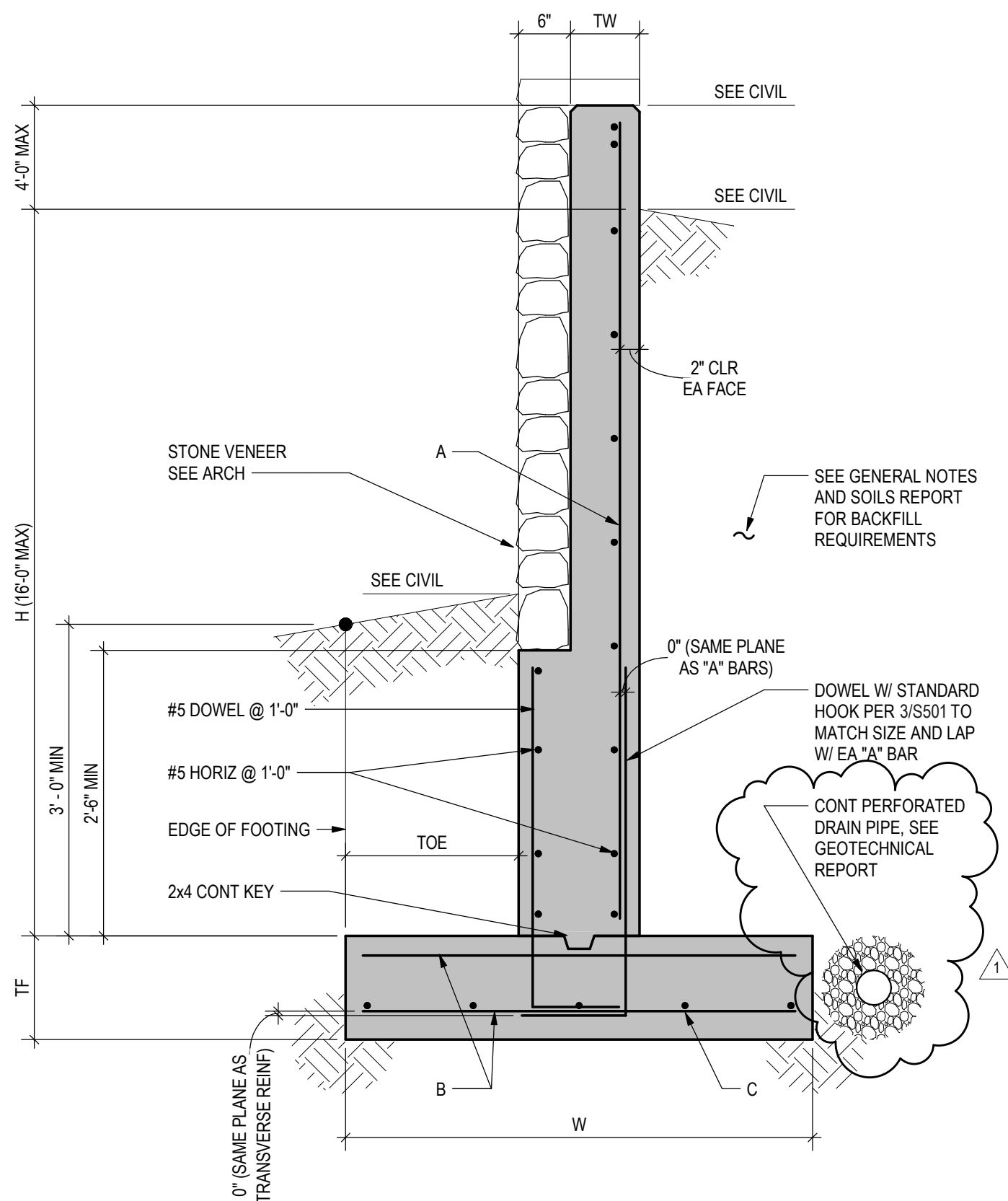


ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302

Job Number:	-
Date:	02/23/2
Drawn By:	DJM
Checked By:	CDT

Project Phase
PERMIT
Sheet Title
SITE RETAINING WALL KEY PLAN - NORTH

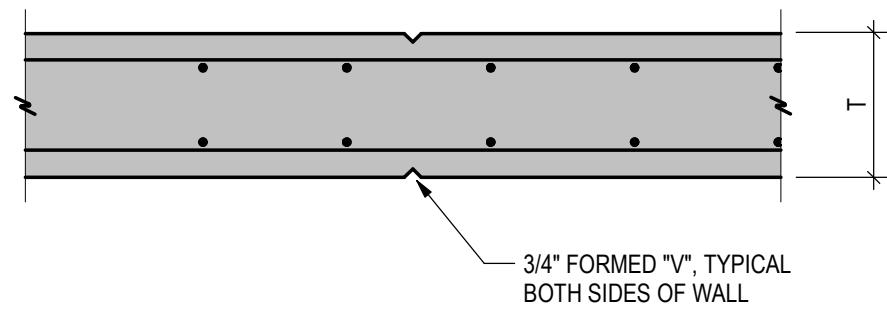
Sheet Number
S101A



CIP RETAINING WALL SCHEDULE							
H	REINFORCEMENT			TW	W	TOE	TF
	A	B	C				
3'-0" TO 4'-0"	#5 @ 12"	#5 @ 12" TOP & BOTTOM	(3) #5 BOTTOM	8"	3'-0"	1'-1"	1'-0"
4'-1" TO 7'-0"	#5 @ 12"	#5 @ 12" TOP & BOTTOM	(5) #5 BOTTOM	8"	4'-6"	1'-8"	1'-0"
7'-1" TO 10'-0"	#6 @ 12"	#5 @ 12" TOP & BOTTOM	(7) #5 BOTTOM	8"	6'-6"	2'-8"	1'-2"
10'-1" TO 13'-0"	#7 @ 12"	#6 @ 12" TOP & BOTTOM	(9) #6 BOTTOM	10"	9'-0"	3'-10"	1'-6"
13'-1" TO 16'-0"	#8 @ 9"	#7 @ 12" TOP & BOTTOM	(12) #7 BOTTOM	10"	12'-0"	5'-4"	1'-8"

NOTES

1. SEE CIVIL DRAWINGS FOR RETAINING WALL LOCATIONS AND GRADING INFORMATION.
2. PROVIDE REINFORCING LAP SPLICES PER 2/S501. PROVIDE REINFORCING HOOKS PER 3/S501
3. PROVIDE REINFORCING AT CORNERS AND INTERSECTIONS PER 4/S501
4. PROVIDE WALL CONTROL JOINTS PER 5/S501 AND WALL CONSTRUCTION JOINTS PER 6/S501.
5. STEP FOOTING AS REQUIRED PER 7/S501
6. PROVIDE TWO CONTINUOUS HORIZONTAL BARS AT TOP OF WALL.
7. SEE STRUCTURAL GENERAL NOTES FOR REINFORCING BAR CONCRETE COVER REQUIREMENTS NOT NOTED.
8. WALL IS DESIGNED FOR DRAINED SOIL CONDITION. SEE GENERAL NOTES AND SOILS REPORT FOR BACKFILL REQUIREMENTS.



PROVIDE FULL-HEIGHT VERTICAL "V" GROOVE CONTROL JOINTS:
JOINT SPACING = $3 \times$ WALL HEIGHT FOR WALLS $\leq 8'-0"$ HIGH.
JOINT SPACING = $2 \times$ WALL HEIGHT FOR WALLS $8'-0"$ TO $12'-0"$ HIGH.
JOINT SPACING = WALL HEIGHT FOR WALLS $\geq 12'-0"$ HIGH.
JOINT SPACING NOT TO EXCEED $25'-0"$.

5 TYP CIP CONC WALL CONTROL JOINTS
S501 3/4" = 1'-0"

TYPICAL CONCRETE REINFORCING LAP & EMBEDMENT LENGTHS (UNO)							
BAR SIZE	TYPE	Fc = 3000 PSI		Fc = 4000 PSI		Fc = 5000 PSI	
		TOP BAR	OTHER BAR	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR
#4	EMBED	29	22	25	19	22	17
	LAP	37	29	32	25	29	22
#5	EMBED	36	28	31	24	28	22
	LAP	47	36	40	31	36	28
#6	EMBED	43	33	37	29	33	26
	LAP	56	43	48	37	43	33
#7	EMBED	63	48	54	42	49	37
	LAP	81	63	70	54	63	49
#8	EMBED	72	55	62	48	55	43
	LAP	93	72	80	62	72	55
#9	EMBED	81	62	70	54	63	48
	LAP	105	81	91	70	81	63
#10	EMBED	91	70	79	61	70	54
	LAP	118	91	102	79	91	70
#11	EMBED	101	78	87	67	78	60
	LAP	131	101	113	87	101	78

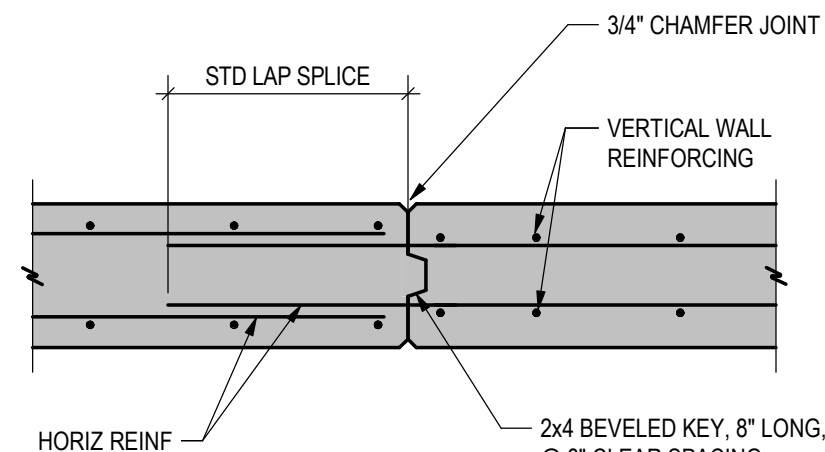
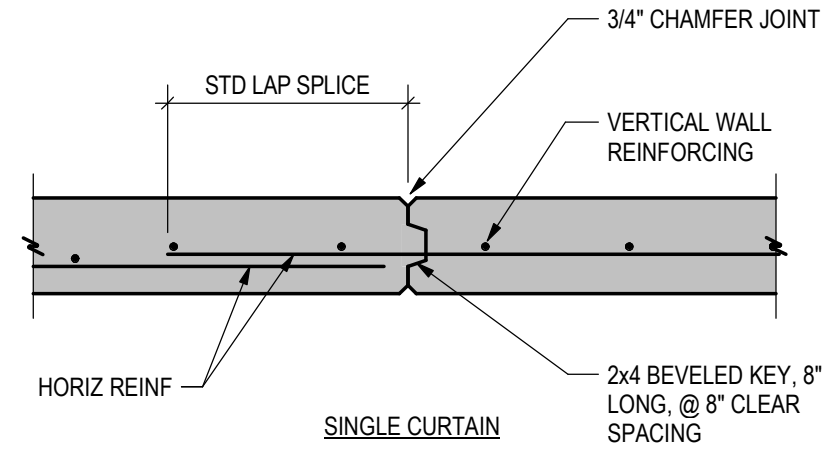
NOTES:

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

2
S501

TYP CONC REINF LAP & EMBEDMENT
LENGTH SCHEDULE

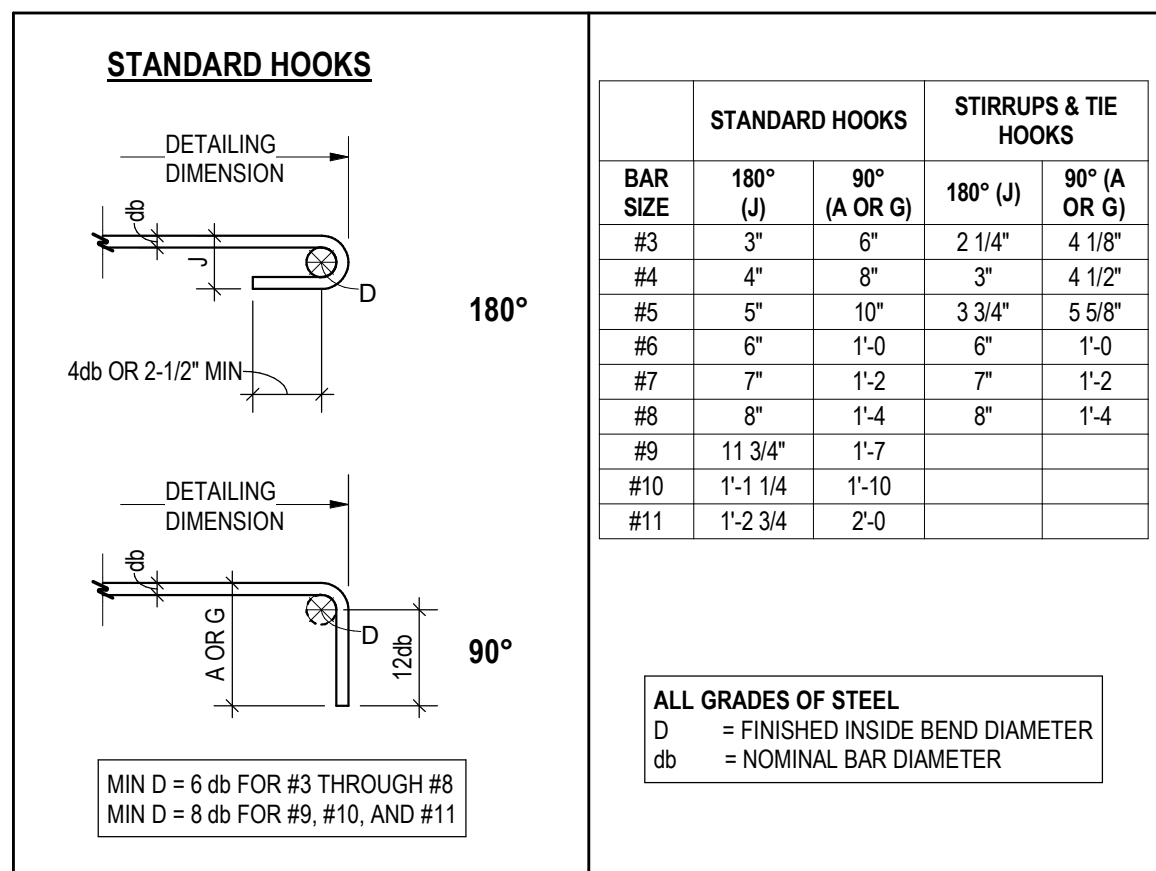
3/4" = 1'-0"



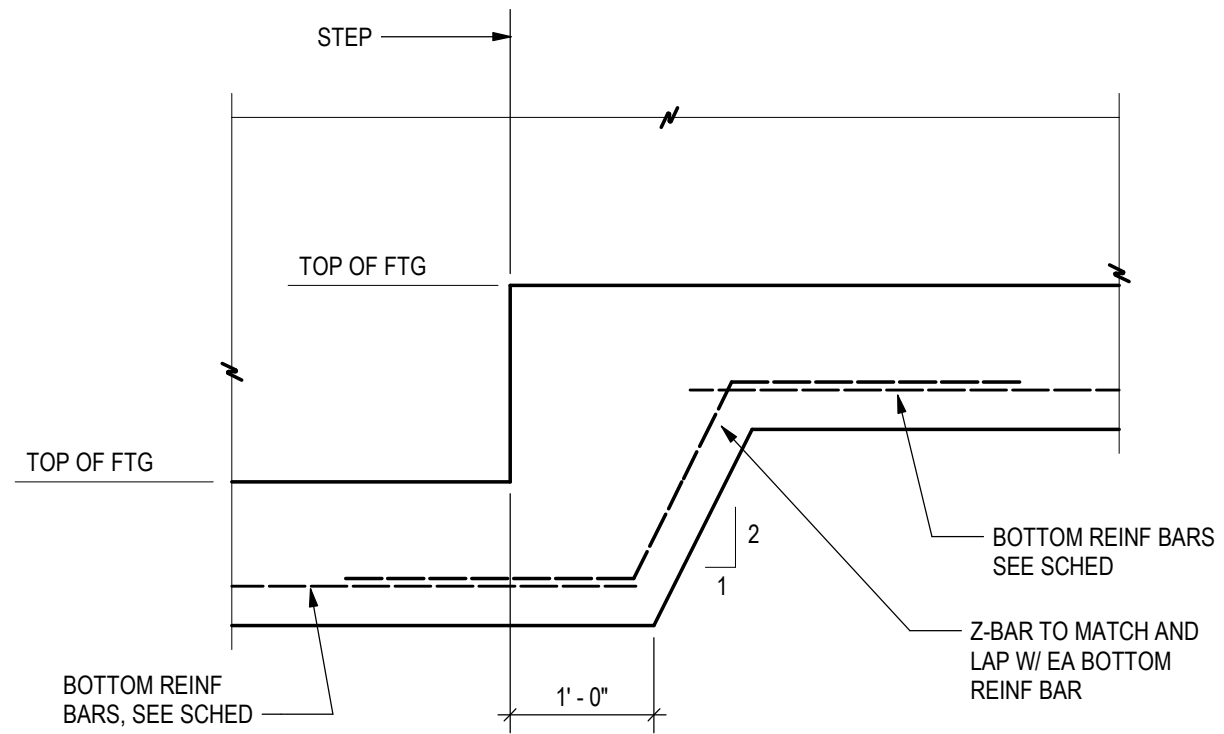
6
S501

TYP CIP CONC WALL CONST JOINT

3/4" = 1'-0"



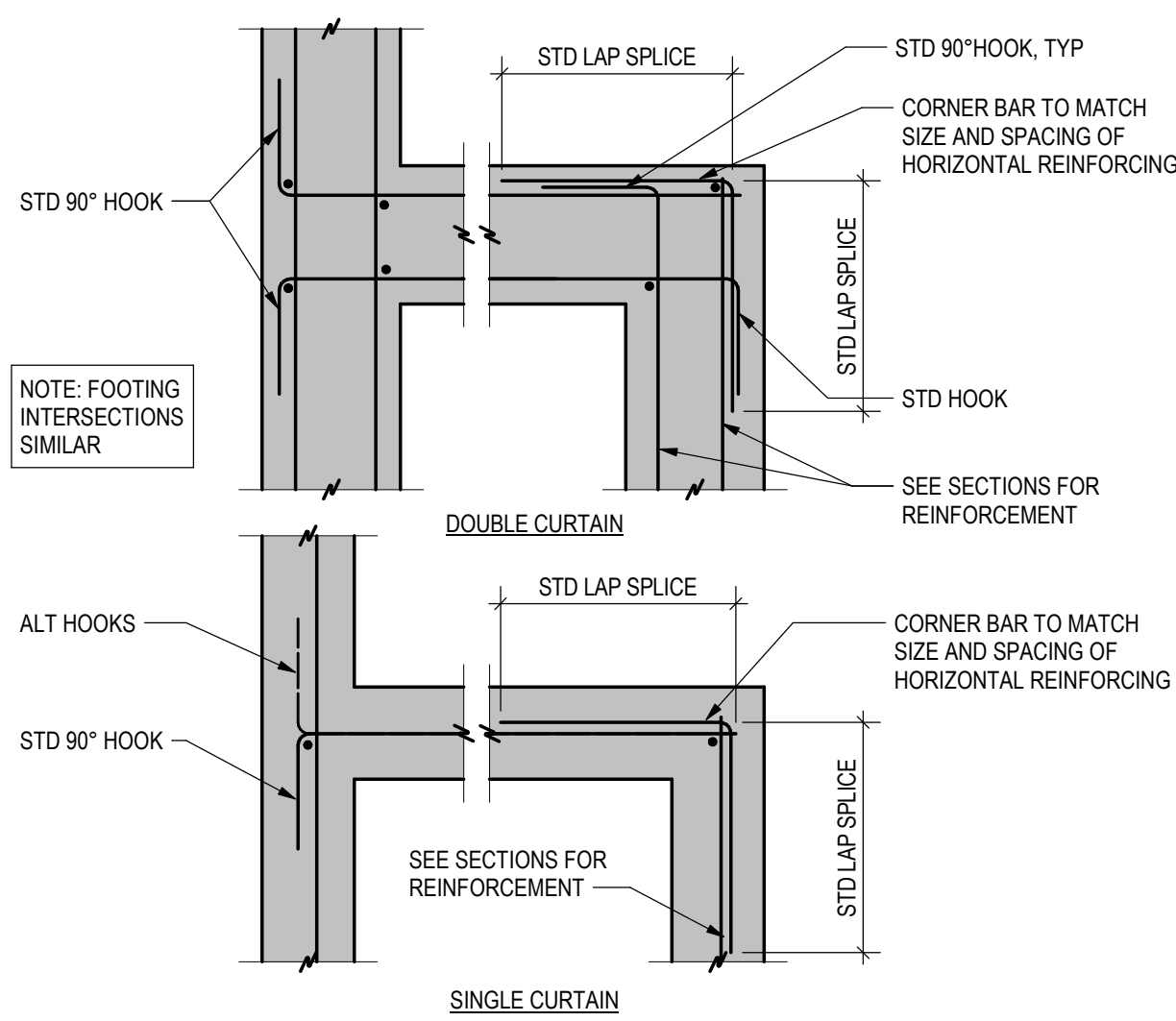
3 TYP CONC REINF HOOK SCHEDULE



7
S501

TYP CONC FOOTING STEP

3/4" = 1'-0"



TYP REINF AT CONC WALL
CORNERS & INTERSECTIONS

4
S501 3/4" = 1'-0"

[illegible]

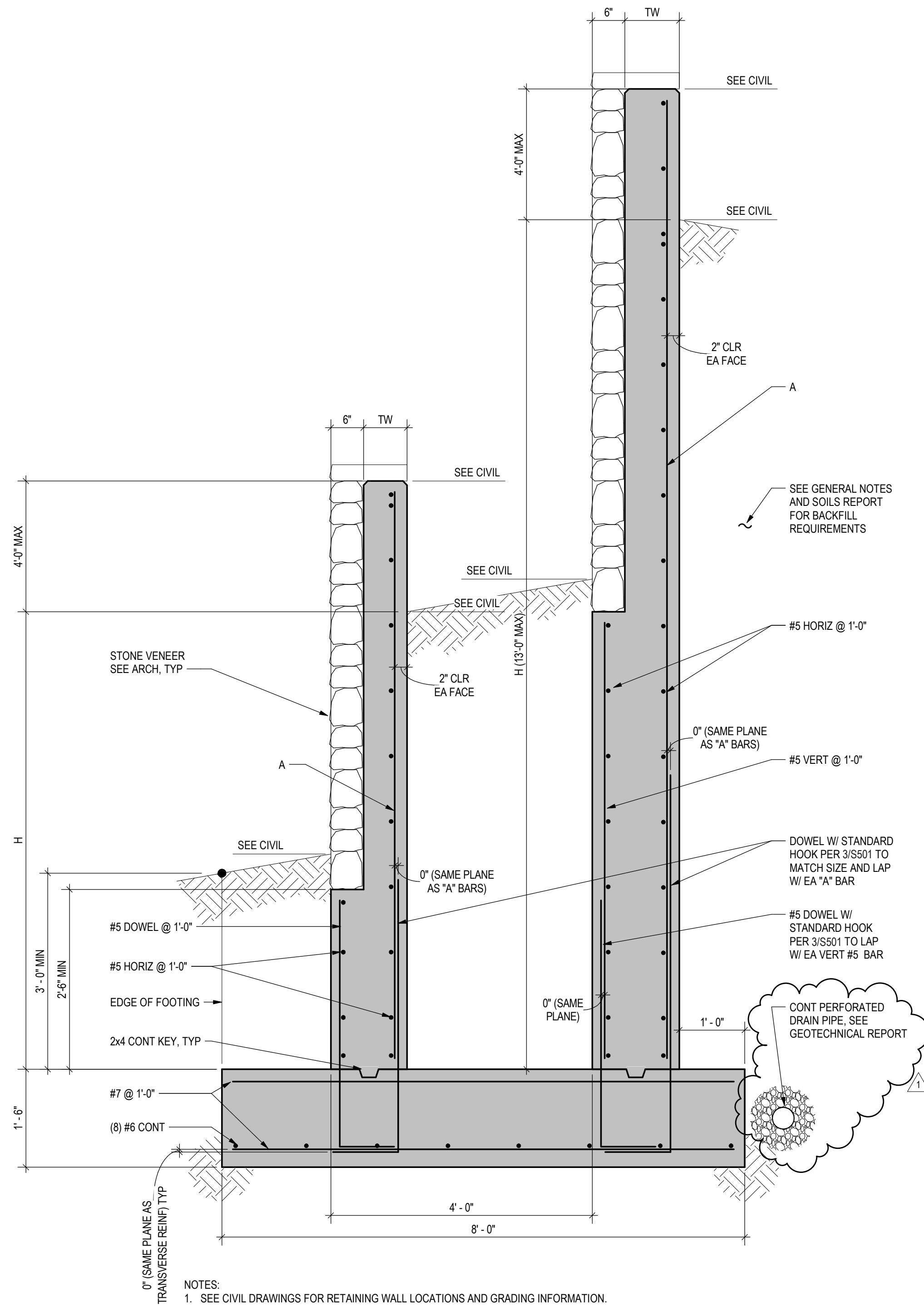
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SITE RETAINING WALLS**
2410 SKI TRAIL LANE
STEAMBOAT SPRINGS, CO



Job Number:	-
Date:	02/23/24
Drawn By:	DJM
Checked By:	CDT

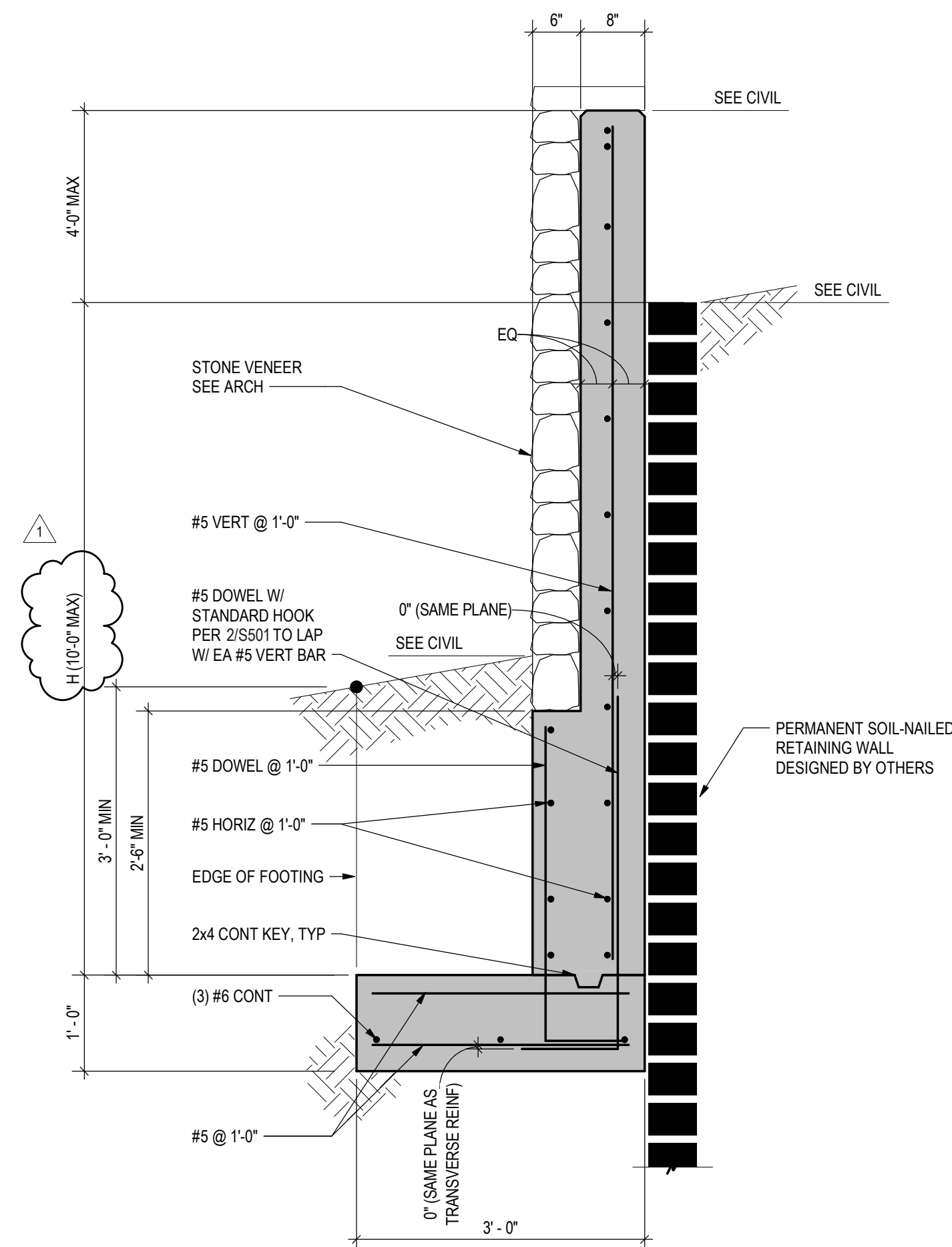
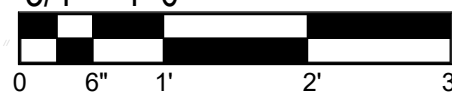
Project Phase
PERMIT
Sheet Title
CIP DETAILS

Sheet Number
S502



- NOTES:
1. SEE CIVIL DRAWINGS FOR RETAINING WALL LOCATIONS AND GRADING INFORMATION.
 2. SEE 1/5501 FOR WALL THICKNESS AND REINFORCING NOTED.
 3. PROVIDE REINFORCING LAP SPLICES PER 2/5501. PROVIDE REINFORCING HOOKS PER 3/5501.
 4. PROVIDE REINFORCING AT CORNERS AND INTERSECTIONS PER 4/5501.
 5. PROVIDE WALL CONTROL JOINTS PER 5/5501 AND WALL CONSTRUCTION JOINTS PER 6/5501.
 6. STEP FOOTING AS REQUIRED PER 7/5501.
 7. PROVIDE TWO CONTINUOUS HORIZONTAL BARS AT TOP OF WALL.
 8. SEE STRUCTURAL GENERAL NOTES FOR REINFORCING BAR CONCRETE COVER REQUIREMENTS NOT NOTED.
 9. WALL IS DESIGNED FOR DRAINED SOIL CONDITION. SEE GENERAL NOTES AND SOILS REPORT FOR BACKFILL REQUIREMENTS.

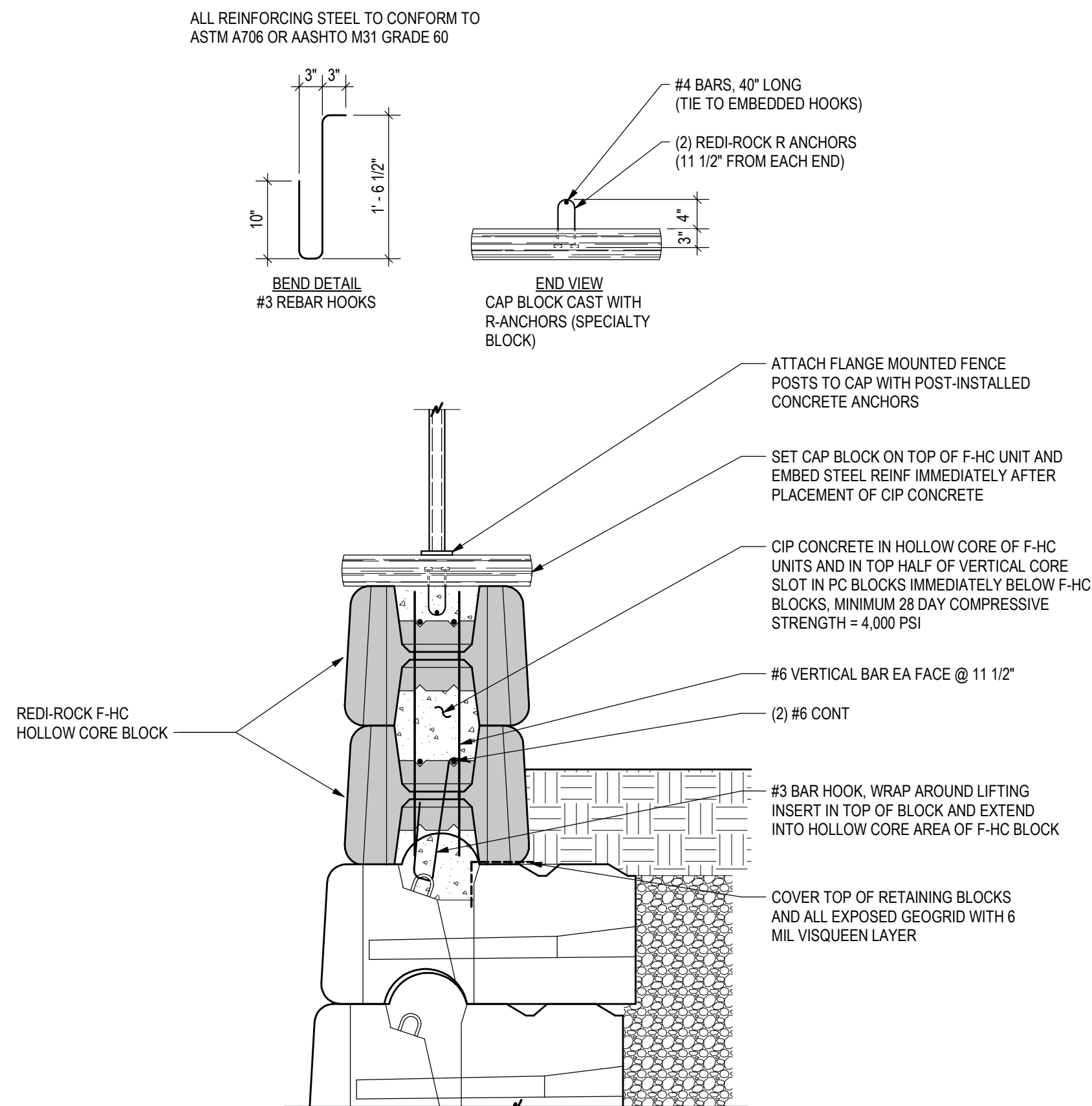
1 2-TIER RETAINING WALL
S502 3/4" = 1'-0"



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2
S502

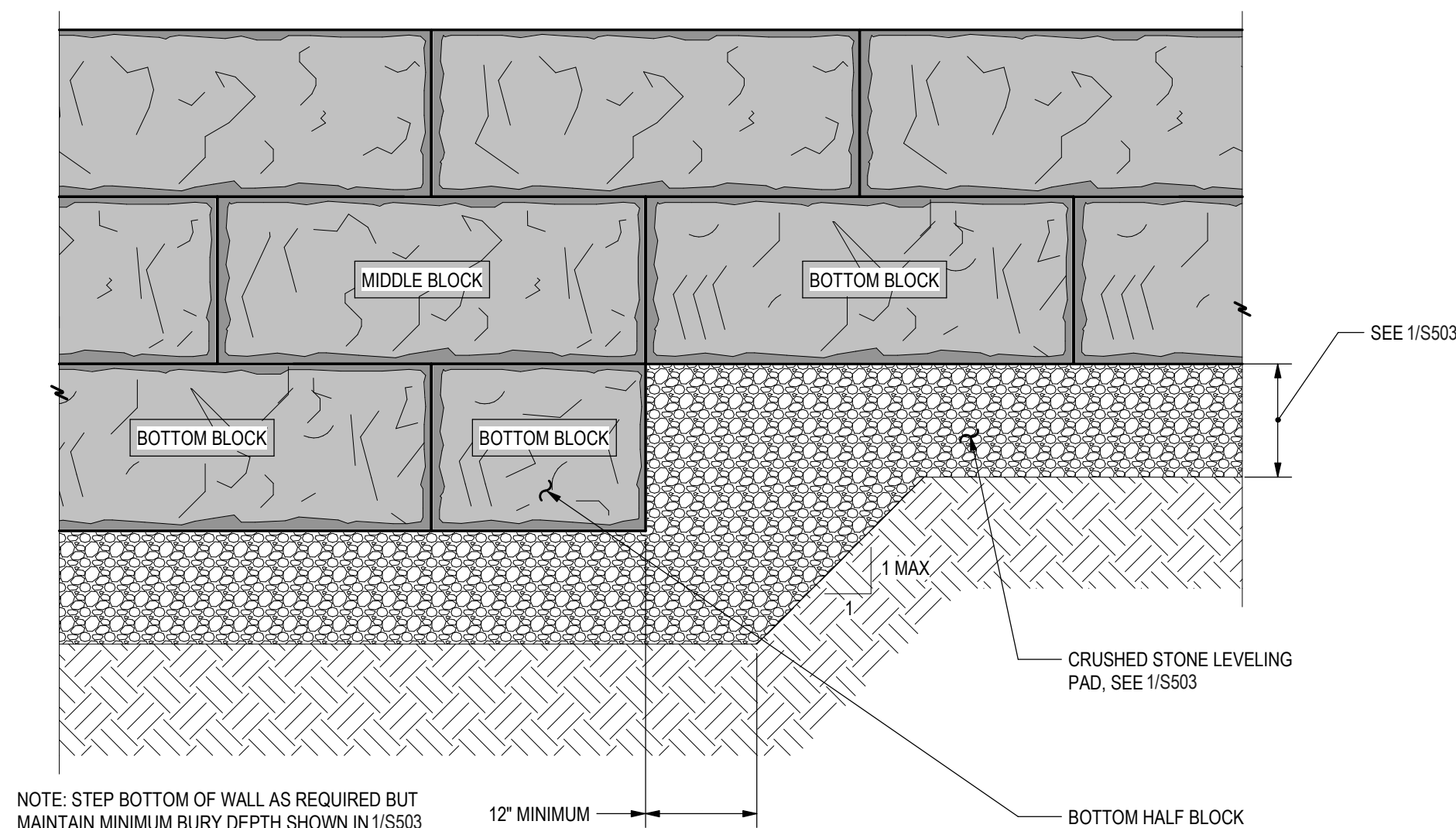
FACING WALL
3/4" = 1'-0"



3
S503

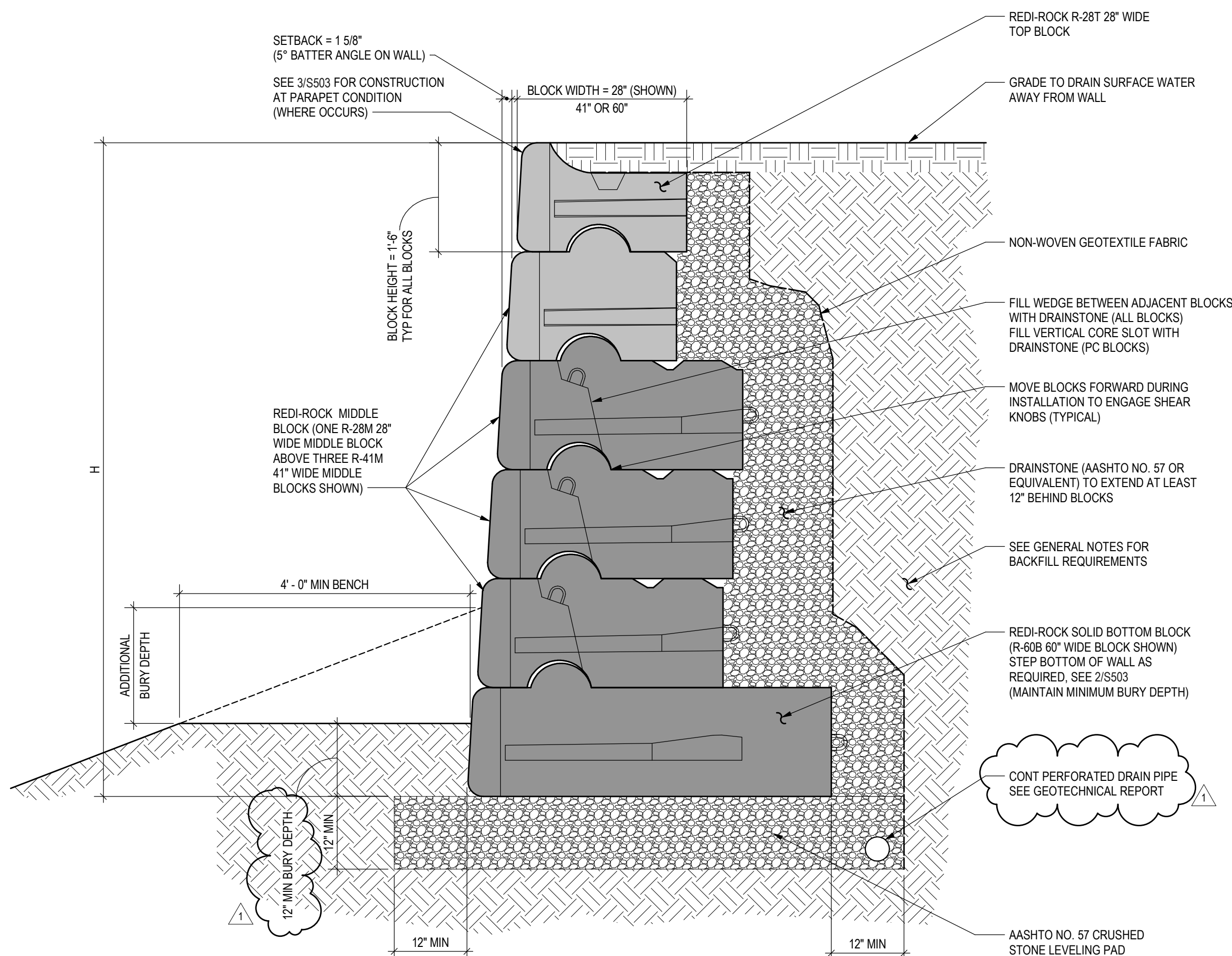
TYP PMB GRAVITY RETAINING WALL PARAPET

3/4" = 1'-0"



ELEVATION VIEW - TYP BOTTOM OF PMB GRAVITY
RETAINING WALL STEP

PMB RETAINING WALL SCHEDULE							
	H						
	3'-0"	4'-6"	6'-0"	7'-6"	9'-0"	10'-6"	12'-0"
# OF 28" WIDE BLOCKS	1	1	1	1	1	1	1
# OF 41" WIDE BLOCKS	1	2	2	3	4	4	4
# OF 60" WIDE BLOCKS	0	0	1	1	1	2	3
TOTAL # OF BLOCKS	2	3	4	5	6	7	8



1
S503

TYP PMB GRAVITY RETAINING WALL

3/4" = 1'-0"

0 6" 1' 2' 3'

- SEE CIVIL DRAWINGS FOR RETAINING WALL LOCATIONS AND GRADING INFORMATION
- SEE SCHEDULE FOR THE REQUIRED NUMBER OF BLOCKS FOR EACH GIVEN RETAINED HEIGHT, H. INSTALL THE WIDEST UNITS ON THE BOTTOM AND NARROWER UNITS FURTHER UP THE WALL
- SUBSEQUENT COURSES OF BLOCKS SHALL BE INSTALLED WITH A RUNNING BOND
- PROVIDE CORNER BLOCKS AT OUTSIDE CORNERS AND ENDS, SEE REDI-ROCK TYPICAL DETAILS