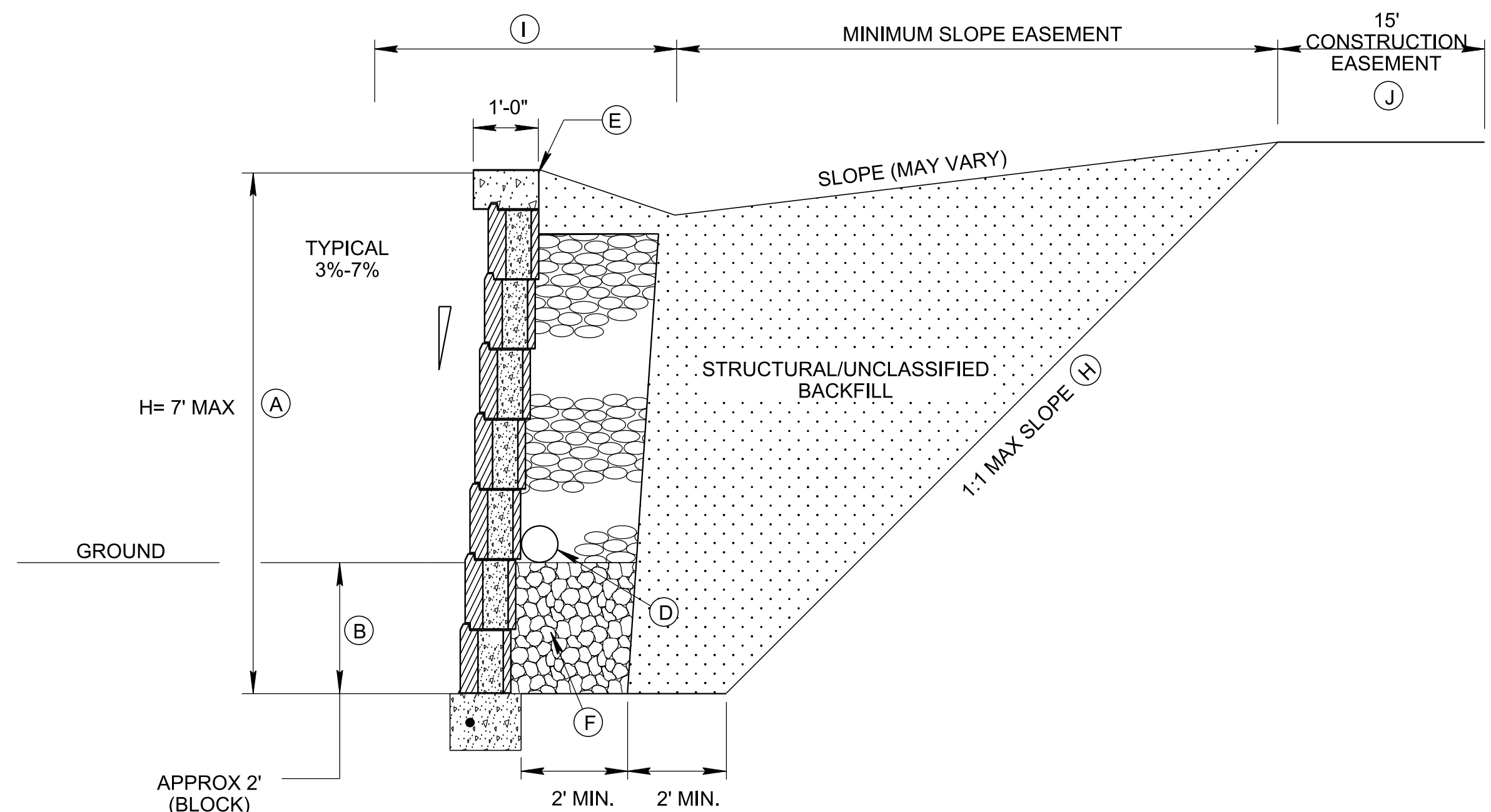
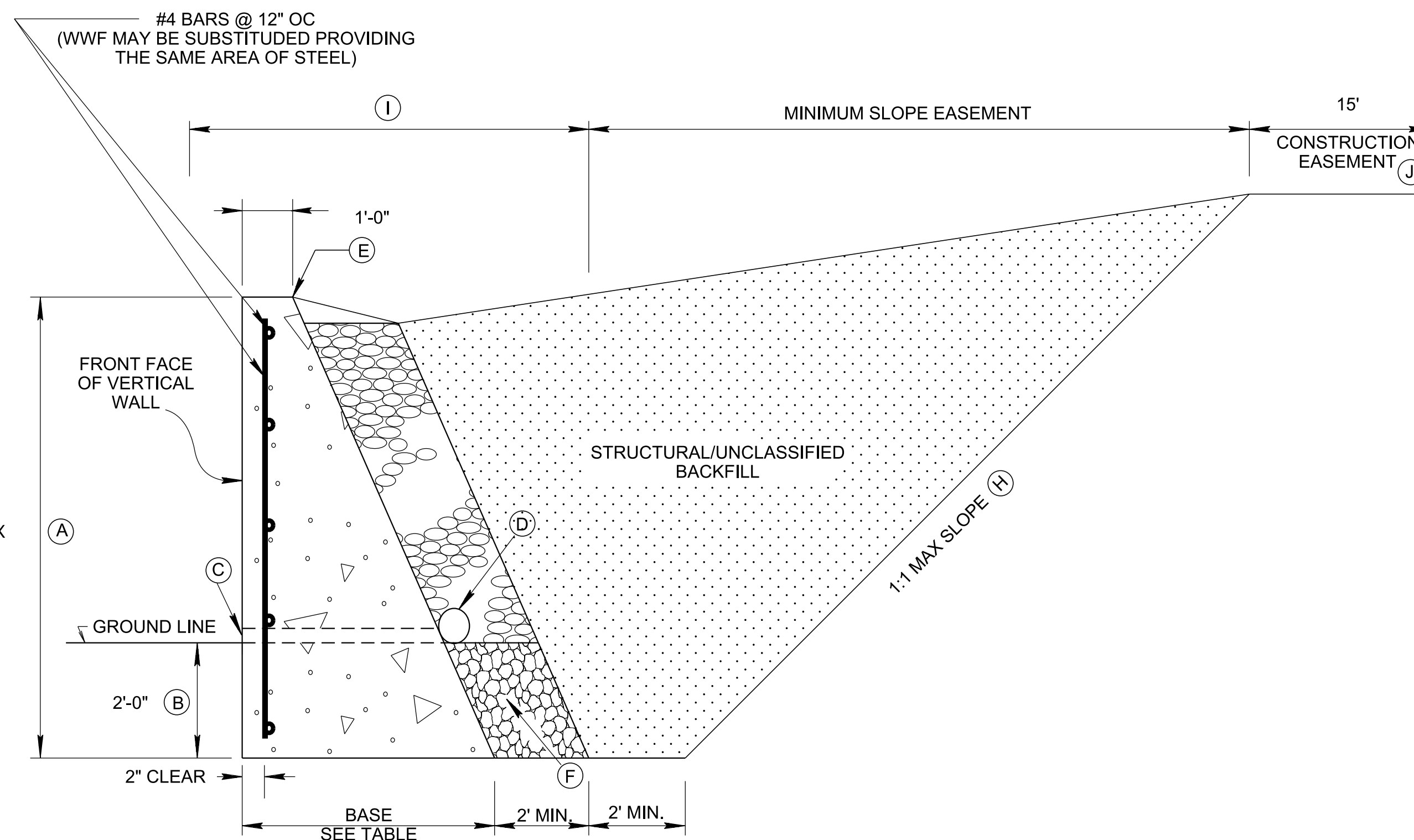


4/16/2020 12:23:27 PM P:\StandDraw\DESIGN STANDARDS\Standards Drawings\Standard Roadway Drawings - CURRENT\In Progress\10-104.00 Roadway, Pavement Appurtenances and Fence IP\104.04 Walls IP\WSG1-2020050



**MODULAR BLOCK GRAVITY RETAINING WALLS**

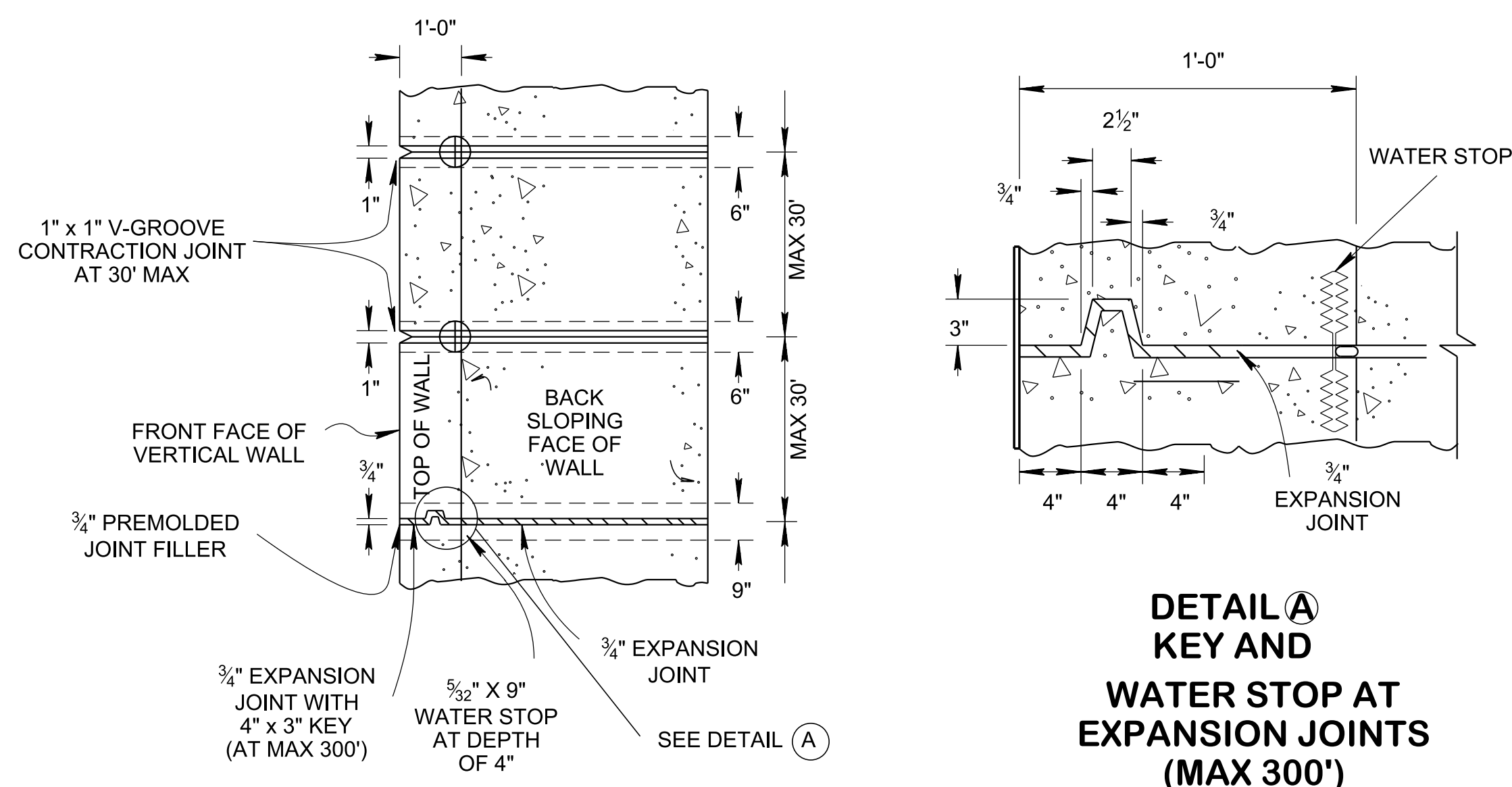
PAYMENT FOR PROPOSED MODULAR BLOCK WALL GRAVITY RETAINING WALLS WILL BE MADE UNDER ITEM NO. 604-07.01 THROUGH 604-07.27, RETAINING WALL (DESCRIPTION) PER SQUARE FOOT.



**CONCRETE GRAVITY RETAINING WALLS**

CONSTRUCTION SHALL MEET THE REQUIREMENTS OF TENN. STD. SPECIFICATION SECTION 604. THE WALL IS TO BE CLASS "A" CONCRETE.

PAYMENT FOR PROPOSED CONCRETE GRAVITY RETAINING WALLS WILL BE MADE UNDER ITEM NO. 604-07.01 THROUGH 604-07.27, RETAINING WALL (DESCRIPTION) PER SQUARE FOOT.



**DETAIL A  
KEY AND  
WATER STOP AT  
EXPANSION JOINTS  
(MAX 300')**

NOTE: CONTRACTION JOINTS ARE TO BE PLACED AT 30' INTERVALS. EXPANSION JOINTS ARE TO BE PLACED AT INTERVALS NOT EXCEEDING 300'. WATER STOPS ARE TO BE ELASTOMERIC OR OTHER APPROVED MATERIALS USED AT EXPANSION JOINTS ONLY. DIMENSIONS SHOWN ARE ABSOLUTE MINIMUM.

**CONCRETE GRAVITY RETAINING WALL  
EXPANSION AND CONTRACTION JOINT DETAIL  
PLAN VIEW**

GRAVITY WALL DIMENSION AND QUANTITY TABLE				
H (ft)	B (ft)	F <sub>T</sub> (psf)	V <sub>W</sub> (cy/ft)	F <sub>T</sub> (psf) *
2	1'-0"	600	0.074	600
3	1'-8"	850	0.148	850
4	2'-3"	1,100	0.241	1,100
5	2'-11"	1,350	0.363	1,350
6	3'-6"	1,600	0.500	1,600
7	4'-1"	1,850	0.659	1,850

\* DESIGN IS BASED ON ALLOWABLE BEARING STRESS AT BASE OF WALL BEING EQUAL TO OR GREATER THAN FT.

LEGEND	
B	= WIDTH AT BASE OF GRAVITY WALL
H	= HEIGHT OF WALL FROM BASE TO TOP INCLUDING ANY PORTION BELOW GROUND
F <sub>T</sub>	= BEARING STRESS AT BASE OF GRAVITY WALL (STONE AND MORTAR OR CLASS "A" CONCRETE)
V <sub>W</sub>	= VOLUME OF GRAVITY WALL (STONE AND MORTAR OR CLASS "A" CONCRETE)

**GENERAL NOTES**

- (A) GRAVITY WALL IS LIMITED TO 5 FEET IN HEIGHT ABOVE GROUND, WALLS GREATER THAN 5 FEET SHALL BE RETAINING WALLS DESIGNED IN CONSULTATION WITH THE SOILS AND GEOLOGY SECTION AND THE STRUCTURES DIVISION.
- (B) BASE OF WALL IS TO BE BELOW THE FROST LINE UNLESS WALL IS PLACED ON SOLID ROCK FOUNDATION. UNLESS OTHERWISE NOTED, PLACE BOTTOM TWO (2) FEET OF WALL BELOW THE GROUND LINE.
- (C) 4" DIAMETER WEEP HOLES AT MAXIMUM 10'-0" CENTER-TO-CENTER ARE TO BE PLACED AT THE LOWEST POINT PRACTICAL FOR PROPER DRAINAGE. THE ENGINEER WILL DETERMINE BOTH HORIZONTAL AND VERTICAL SPACING OF WEEP HOLES. PIPE IS TO BE PAID FOR UNDER THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (D) 6" DIAMETER PERFORATED PIPE IS TO BE CONNECTED TO AN OUTLET PIPE AT LOW POINTS AND AT A MAXIMUM SPACING OF 200'. PIPE IS TO BE PAID FOR UNDER THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (E) THE TREATMENT AT TOE OF FILL IS TO BE DETERMINED ACCORDING TO THE VOLUME AND VELOCITY OF THE RUNOFF (SEE ROADWAY PLANS).
- (F) GRANULAR BACKFILL BEHIND PROPOSED GRAVITY RETAINING WALL AND BELOW FLOW LINE OF OUTLET PIPES IS TO BE INCLUDED IN THE PRICE BID FOR THE WALL.
- (G) AT LOCATIONS WHERE A CONCRETE BARRIER PROTECTION IS ALSO NEEDED USE S-SSMB-2 IN PLACE OF GRAVITY WALL FOR UP TO 2' OF FILL AND S-SSMB-9 FOR UP TO 5' OF FILL.
- (H) ACTUAL UNDERCUT DEPTH AND BACKFILL SLOPE TO BE DETERMINED BY THE GEOTECHNICAL ENGINEER.
- (I) THE ENTIRE WALL, INCLUDING GRANULAR BACKFILL TO BE INCLUDED IN THE RIGHT-OF-WAY.
- (J) IF THE WALL IS A FILL WALL, THERE SHOULD BE A 15' MINIMUM CONSTRUCTION EASEMENT IN FRONT OF THE WALL.