

# 997 LIEDS RD REDI ROCK RETAINING WALL EXTENSION PA STATE POLICE BARRACKS WEST BRADFORD TWP CHESCO PA

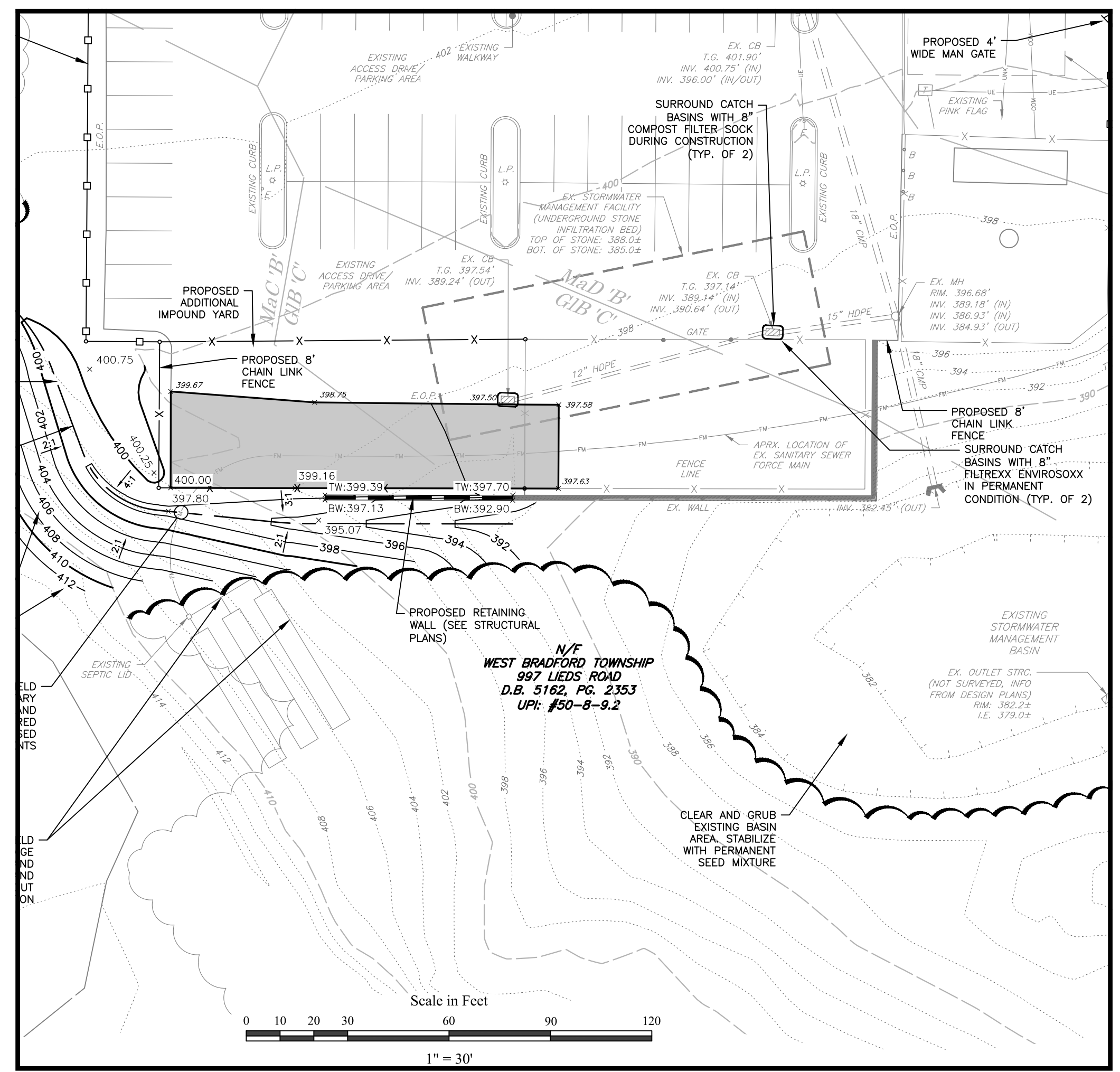
- GENERAL NOTES**
- CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS AND DIMENSIONS. E.O.R. SHALL BE NOTIFIED AND WORK SHALL CEASE. CONTRACTOR SHALL PROVIDE A SKETCH OF THE CONDITIONS WITH THE ANTICIPATED WORK AROUND TO BE REVIEWED BY THE E.O.R.
  - CONTRACTOR RESPONSIBLE FOR ALL BRACING AND SHORING OF THE WORK TO BE PERFORMED.
  - DETAILS AND SECTIONS DEPICTED REPRESENT A GENERAL CONDITION AND ARE INTENDED TO BE FOLLOWED THOROUGHOUT. WHERE NOTED AS 'TYPICAL' OR 'TYP.' THE DETAIL IS INTENDED TO BE FOLLOWED AT OTHER SIMILAR CONDITIONS.
  - CONTRACTOR RESPONSIBLE TO VERIFY ALL FLOOR LEVEL CHANGES, STAIR OPENINGS WINDOW AND SILL HTS. ETC. AND ENSURE SUITABILITY WITH THEIR WORK.
  - CONTRACTOR SHALL PROVIDE DEWATERING AS NEEDED TO PERFORM WORK.
  - CONTRACTOR SHALL COORDINATE ALL COMPLIMENTARY DRAWINGS FROM OTHER ENGINEERS, MECHANICAL, ELECTRICAL, PLUMBING ETC.
  - ANY INCONSISTIES SHALL IMMEDIATELY BE BROUGHT TO THE ENGINEERS ATTENTION.
  - ALL ANGLES ON DRAWING NOT CLEARLY 90 DEGREES ARE TO BE 45 DEGREES U.N.O.
  - CONTRACTOR SHALL OBTAIN ALL PERMITS AS REQUIRED.
  - CONTRACTOR SHALL ENSURE JOB SITE IS CLEANED DAILY AND FREE OF TRASH.
  - MANUFACTURER'S REQUIREMENTS SUCH AS WINDOW FLASHING, FAN VENTING ETC. SHALL BE REVIEWED BY THE CONTRACTOR AND FOLLOWED. WHERE CONFLICTS EXIST THE MORE CONSERVATIVE MEASURE SHALL BE UTILIZED.
  - ALL STAIRS SHALL HAVE A RISE NOT EXCEEDING 7 3/4" AND SHALL PROVIDE FOR A MINIMUM OF 10" TREAD WIDTH MEASURED NOSING TO NOSING. A GRASPABLE HAND RAIL BETWEEN 34 AND 38 INCHES ABOVE THE TREAD SHALL BE PROVIDED AT ONE SIDE OF ALL AREAS WITH MORE THAN 3 STEPS. BALUSTERS SHALL BE INSTALLED AT ALL OPEN STAIRS SUCH THAT A 4" SPHERE IS UNABLE TO PASS BETWEEN THE BALUSTERS. REFER TO THE CODE FOR ADDITIONAL REQUIREMENTS.
  - ALL STAIRS SHALL HAVE ONE LAYER OF 1/2" GWB APPLIED TO THE BOTTOM OF THE STAIR STRINGERS WHERE NOT ENCLOSED WITH GWB IN SOME OTHER MANNER.
- EXCAVATION**
- CONTRACTOR RESPONSIBLE FOR OBTAINING PROPER UTILITY ONE CALL TO PERFORM EXCAVATION LEGALLY.
  - ALL LOAD BEARING AREAS SHALL BE FILLED WITH SUITABLE MATERIAL IN LIFTS NOT EXCEEDING 12 INCHES LOOSE MEASURE AND COMPACTED WITH SUITABLE COMPACTION EQUIPMENT CAPABLE OF OBTAINING 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED VIA ASTM D698. SUITABLE SOILS SHALL BE SM OR COARSER SOILS.
- CONCRETE**
- REINFORCED CONCRETE SHALL BE IN ACCORDANCE WITH THE LOCAL BUILDING CODE REQUIREMENTS, THE GOVERNING CODE FOR THIS PLAN AND ACI 318 LATEST VERSION AND ACI 332 LATEST VERSION.
  - ALL CONCRETE SHALL BE NORMAL WEIGHT WITH A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI U.N.O.
  - EXPOSED CONCRETE SHALL BE AIR ENTRAINED 4% TO 6%.
  - SLUMP: 4 INCHES +/- 1 INCH.
  - CHLORIDE ADMIXTURES NOT PERMITTED.
- FOUNDATIONS**
- FOUNDATION BOTTOM SHALL BE EXTENDED BELOW LOCAL FROST DEPTH OR A MINIMUM OF 12" IF NOT SUBJECTED TO FROST HEAVE (INTERIOR CONDITIONS).
- WELDED WIRE FABRIC: ASTM A185**
- REINFORCING STEEL: ASTM A 615 GRADE 60
  - LEVELING GROUT SHALL BE NON METALLIC TYPE NS GROUT WITH A COMPRESSIVE STRENGTH OF A MINIMUM OF 5000 PSI.
  - CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT MINIMUM SPACINGS OF 25 TIMES SLAB THICKNESS AND AT ALL INTERIOR CORNERS.
  - W.W.F. SHALL BE SET ON CHAIRS AND OVERLAPPED A MINIMUM OF TWO GRIDS AND WIRED TOGETHER. W.W.F. SHALL BE CENTERED WITHIN THE SLAB THICKNESS.
  - WHERE W.W.F. IS SPECIFIED IT MAY BE SUBSTITUTED WITH NO. 3 BAR AT 20 INCHES ON CENTER SPACING EACH WAY.
  - REINFORCEMENT CLEARANCE:
    - FOOTINGS AND FOUNDATIONS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 INCHES
- FOUNDATIONS EXPOSED TO WEATHER AND EARTH: 1 1/2 INCHES**
- ALL OTHER CONDITIONS: 3/4 INCHES
- LAP BARS 60 TIMES BAR DIAMETER MINIMUM OF 2'0". BENT BARS SHALL BE UTILIZED AT ALL CORNERS.**
- REQUIRED MINIMUM 28 DAY COMPRESSIVE STRENGTH: FOOTINGS: 4,000 PSI WALLS: 4,000 PSI**

**CODE AND LOAD INFO**

2021 IBC

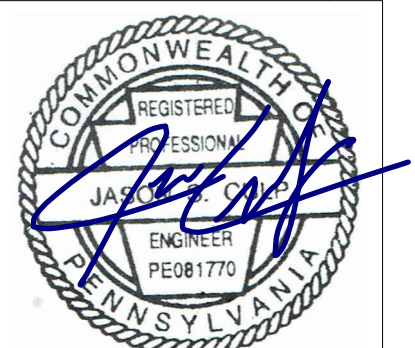
SOIL: FRICTION ANGLE = 30 DEG  
UNIT WEIGHT = 115 PCF  
CONC./SOIL FRICTION = 0.4

ACTIVE/PASSIVE AND AT REST PRESSURE CALCULATED BY COLOUMB METHODOLOGY  
LIVE LOAD SURCHARGE HEEL: 50 PSF  
UNIT WT. WATER = 62.4 PCF



RETAINING WALL PLAN VIEW  
1" = 30'

**UZMAN**  
 ENGINEERING  
 1244 WEST CHESTER PIKE SUITE 402  
 WEST CHESTER PA, 19382  
 (610) 320-2100  
 Job No. PA4454 Date: 4-18-2025

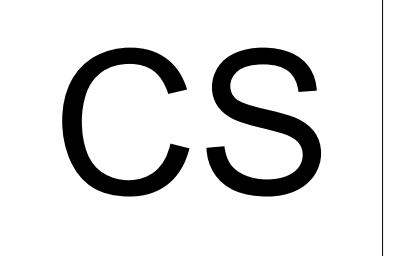


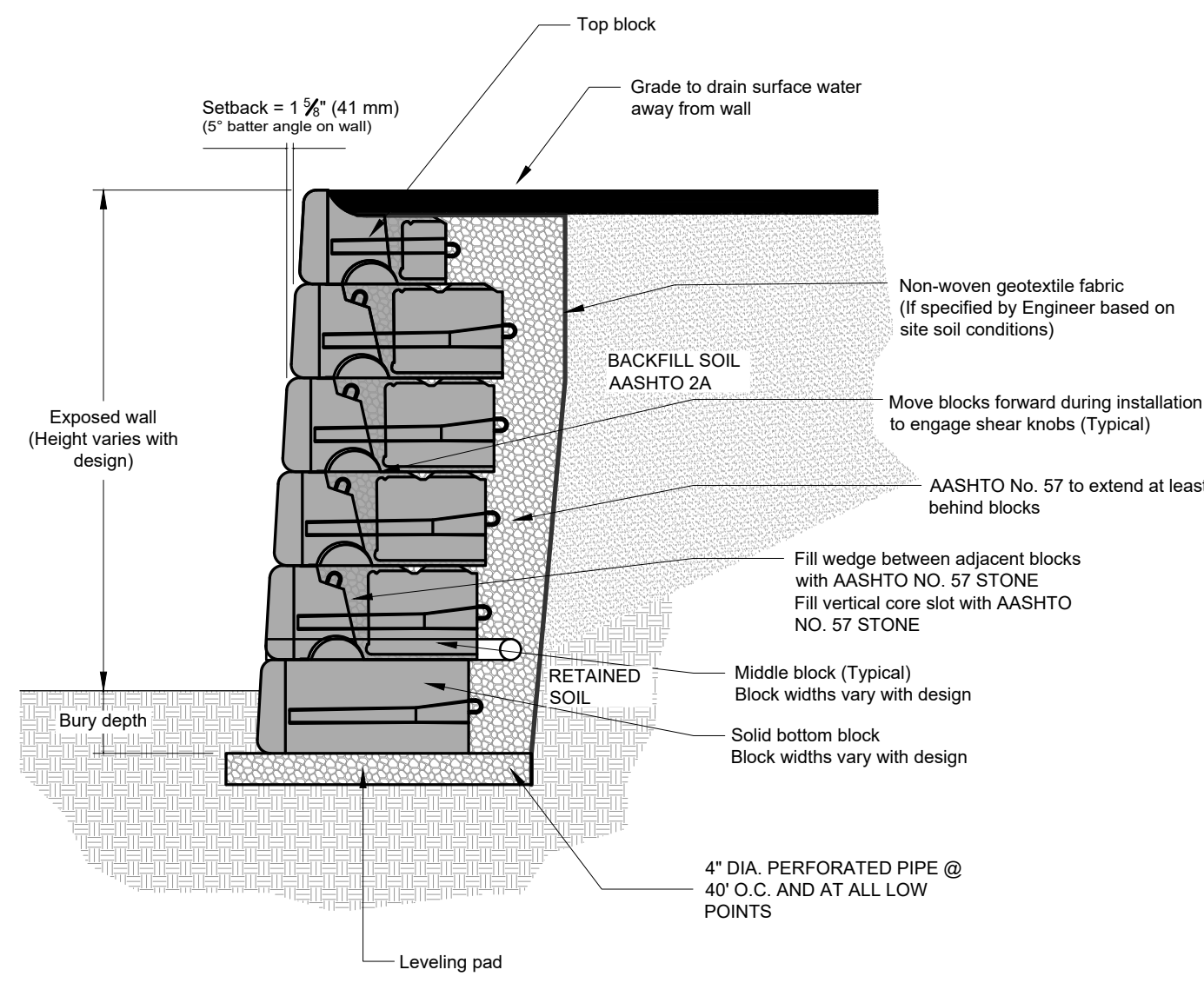
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 REV. BY: JSC  
 SCALE: AS NOTED  
 SHEET NO.: 1 OF 2

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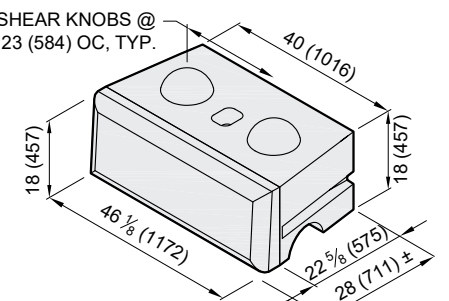
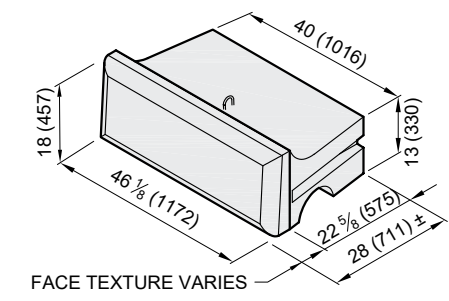
PLAN TITLE: EMBREEVILLE REDI ROCK WALL EXT.  
 PROJ. LOCATION: 997 LIEDS RD  
 COATESVILLE PA  
 CLIENT: JMR ENGINEERING



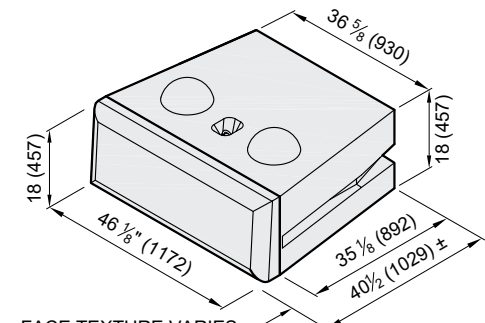
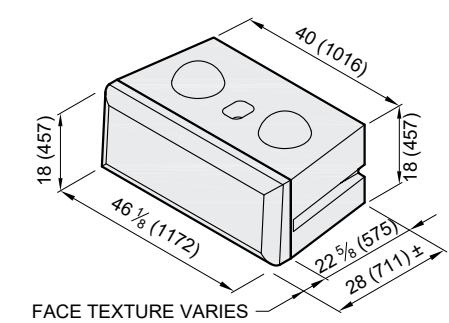


**TYPICAL GRAVITY WALL DETAIL**  
S-1 SCALE: 1/2" = 1'-0"

| R-28T              | 28" (710mm) TOP                              | R-28M  | 28" (710mm) MIDDLE  |
|--------------------|--|--|---|
| Face Texture:      | Cobble / Limestone                           | Kingstone / Ledgestone                       | Face Texture: Cobble / Limestone                            |
| Block Weight:      | 1230 lb (557 kg)                             | 1180 lb (530 kg)                             | Block Weight: 1610 lb (730 kg)                              |
| Block Volume:      | 8.57 ft <sup>3</sup> (0.243 m <sup>3</sup> ) | 8.07 ft <sup>3</sup> (0.229 m <sup>3</sup> ) | Block Volume: 11.28 ft <sup>3</sup> (0.319 m <sup>3</sup> ) |
| Center of Gravity: | 14.9" (378mm)                                | 14.2" (362mm)                                | Center of Gravity: 13.9" (354 mm)                           |



| R-28B              | 28" (710mm) BOTTOM                            | R-41B   | 41" (1030mm) BOTTOM   |
|--------------------|---|---|---|
| Face Texture:      | Cobble / Limestone                            | Kingstone / Ledgestone                        | Face Texture: Cobble / Limestone                            |
| Block Weight:      | 1740 lb (790 kg)                              | 1670 lb (760 kg)                              | Block Weight: 2440 lb (1110 kg)                             |
| Block Volume:      | 12.19 ft <sup>3</sup> (0.345 m <sup>3</sup> ) | 11.70 ft <sup>3</sup> (0.331 m <sup>3</sup> ) | Block Volume: 17.06 ft <sup>3</sup> (0.483 m <sup>3</sup> ) |
| Center of Gravity: | 14.0" (355 mm)                                | 13.5" (343 mm)                                | Center of Gravity: 20.7" (527 mm)                           |



**PART 3 - EXECUTION**

- 3.01 GENERAL
- A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA SAFETY STANDARDS, STATE AND LOCAL BUILDING CODES AND MANUFACTURER'S REQUIREMENTS.
  - B. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UNDERGROUND UTILITIES. ANY NEW UTILITIES PROPOSED FOR INSTALLATION IN THE VICINITY OF THE RETAINING WALL, SHALL BE INSTALLED CONCURRENT WITH RETAINING WALL CONSTRUCTION. THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF SUBCONTRACTORS AFFECTED BY THIS REQUIREMENT.
  - C. NEW UTILITIES INSTALLED BELOW THE RETAINING WALL SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM OF 98% MAXIMUM DRY DENSITY PER ASTM D698 STANDARD PROCTOR.
  - D. THE GENERAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SAFE EXCAVATIONS AND EMBANKMENTS ARE MAINTAINED THROUGHOUT THE COURSE OF THE PROJECT.
  - E. ALL WORK SHALL BE INSPECTED BY THE INSPECTION ENGINEER AS DIRECTED BY THE OWNER.

- 3.02 EXAMINATION
- A. PRIOR TO CONSTRUCTION, THE GENERAL CONTRACTOR, GRADING CONTRACTOR, RWIC AND GEOTECHNICAL ENGINEER (OR REPRESENTATIVE THEREOF) SHALL EXAMINE THE AREAS IN WHICH THE RETAINING WALL WILL BE CONSTRUCTED TO EVALUATE COMPLIANCE WITH THE REQUIREMENTS FOR INSTALLATION TOLERANCES, WORKER SAFETY AND ANY SITE CONDITIONS AFFECTING PERFORMANCE OF THE COMPLETED STRUCTURE. INSTALLATION SHALL PROCEED ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

- 3.03 PREPARATION
- A. FILL SOIL.
    1. THE INSPECTION ENGINEER SHALL VERIFY THAT REINFORCED BACKFILL PLACED IN THE REINFORCED SOIL ZONE SATISFIES THE CRITERIA OF THIS SECTION.
    2. THE INSPECTION ENGINEER SHALL VERIFY THAT ANY FILL SOIL INSTALLED IN THE FOUNDATION AND RETAINED SOIL ZONES OF THE RETAINING WALL SATISFIES THE SPECIFICATION OF THE E.O.R. AS SHOWN ON THE CONSTRUCTION DRAWINGS.
  - B. EXCAVATION.
    1. THE GRADING CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES REQUIRED FOR CONSTRUCTION OF THE PRECAST MODULAR BLOCK RETAINING WALL AS SHOWN ON THE CONSTRUCTION DRAWINGS. THE GRADING CONTRACTOR SHALL MINIMIZE OVER-EXCAVATION. EXCAVATION SUPPORT, IF REQUIRED, SHALL BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR.
    2. OVER-EXCAVATED SOIL SHALL BE REPLACED WITH COMPACTED FILL IN CONFORMANCE WITH THE SPECIFICATIONS OF THE RWDE AND "DIVISION 31, SECTION 31 20 00 - EARTHMOVING" OF THESE PROJECT SPECIFICATIONS.
    3. EMBANKMENT EXCAVATIONS SHALL BE BENCH CUT AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER AND INSPECTED BY THE INSPECTION ENGINEER FOR COMPLIANCE.

- C. FOUNDATION PREPARATION.
  1. PRIOR TO CONSTRUCTION OF THE PRECAST MODULAR BLOCK RETAINING WALL, THE LEVELING PAD AREA AND UNDERCUT ZONE (IF APPLICABLE) SHALL BE CLEARED AND GRUBBED. ALL TOP SOIL, BRUSH, FROZEN SOIL AND ORGANIC MATERIAL SHALL BE REMOVED. ADDITIONAL FOUNDATION SOILS FOUND TO BE UNSATISFACTORY BEYOND THE SPECIFIED UNDERCUT LIMITS SHALL BE UNDERCUT

- AND REPLACED WITH APPROVED FILL AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER. THE INSPECTION ENGINEER SHALL ENSURE THAT THE UNDERCUT LIMITS ARE CONSISTENT WITH THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER AND THAT ALL SOIL FILL MATERIAL IS PROPERLY COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS. THE INSPECTION ENGINEER SHALL DOCUMENT THE VOLUME OF UNDERCUT AND REPLACEMENT.
- 2. FOLLOWING EXCAVATION FOR THE LEVELING PAD AND UNDERCUT ZONE (IF APPLICABLE), THE INSPECTION ENGINEER SHALL EVALUATE THE IN-SITU SOIL IN THE FOUNDATION AND RETAINED SOIL ZONES.
  - A. THE INSPECTION ENGINEER SHALL VERIFY THAT THE SHEAR STRENGTH OF THE IN-SITU SOIL ASSUMED BY THE E.O.R. IS APPROPRIATE. THE GEOTECHNICAL ENGINEER SHALL IMMEDIATELY STOP WORK AND NOTIFY THE OWNER IF THE IN-SITU SHEAR STRENGTH IS FOUND TO BE INCONSISTENT WITH THE RETAINING WALL DESIGN ASSUMPTIONS.
  - B. THE INSPECTION ENGINEER SHALL VERIFY THAT THE FOUNDATION SOIL EXHIBITS SUFFICIENT ULTIMATE BEARING CAPACITY TO SATISFY THE REQUIREMENTS INDICATED ON THE RETAINING WALL CONSTRUCTION SHOP DRAWINGS PER PARAGRAPH 1.06 I OF THIS SECTION.

- D. LEVELING PAD.
  1. THE LEVELING PAD SHALL BE CONSTRUCTED TO PROVIDE A LEVEL, HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF PRECAST MODULAR BLOCK UNITS. THE LEVELING PAD SHALL BE PLACED IN THE DIMENSIONS SHOWN ON THE RETAINING WALL CONSTRUCTION DRAWINGS AND EXTEND TO THE LIMITS INDICATED.
  2. CRUSHED STONE LEVELING PAD. CRUSHED STONE SHALL BE PLACED IN UNIFORM MAXIMUM LIFTS OF 6" (150 MM). THE CRUSHED STONE SHALL BE COMPACTED BY A MINIMUM OF 3 PASSES OF A VIBRATORY COMPACTOR CAPABLE OF EXERTING 2,000 LB (8.9 KN) OF CENTRIFUGAL FORCE AND TO THE SATISFACTION OF THE INSPECTION ENGINEER.
  3. UNREINFORCED CONCRETE LEVELING PAD. THE CONCRETE SHALL BE PLACED IN THE SAME DIMENSIONS AS THOSE REQUIRED FOR THE CRUSHED STONE LEVELING PAD. THE RWIC SHALL ERECT PROPER FORMS AS REQUIRED TO ENSURE THE ACCURATE PLACEMENT OF THE CONCRETE LEVELING PAD ACCORDING TO THE RETAINING WALL CONSTRUCTION DRAWINGS.

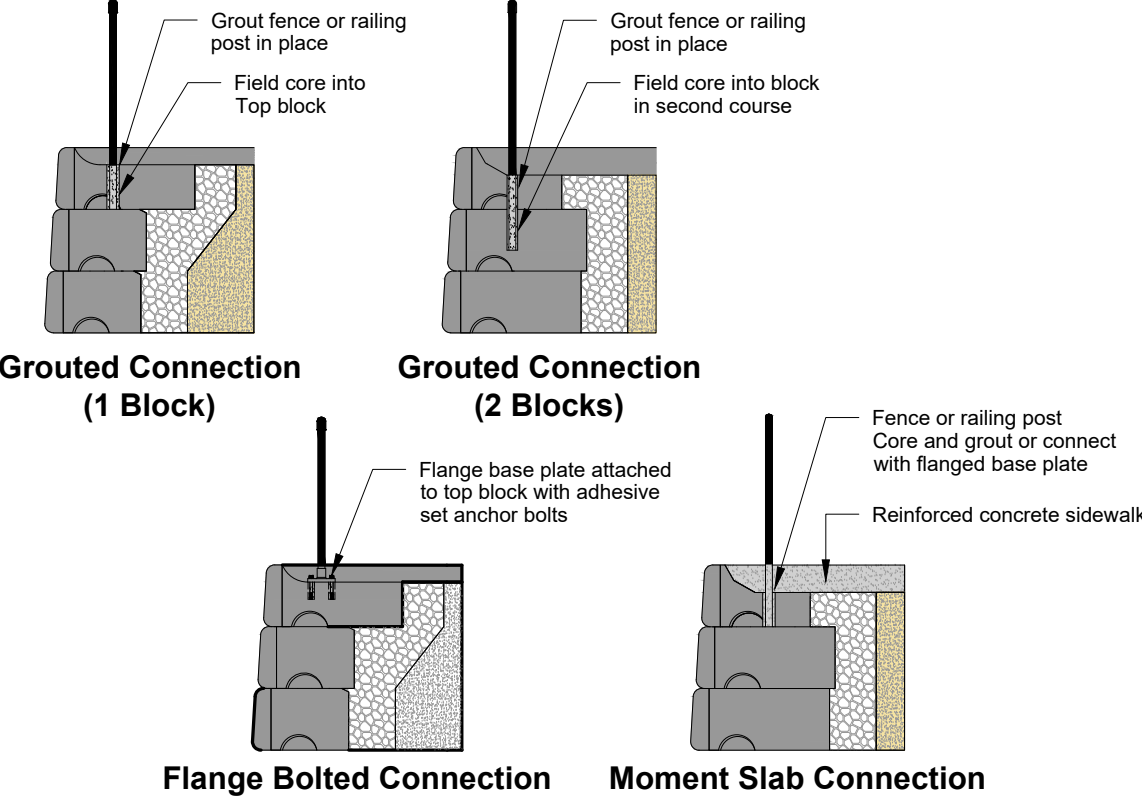
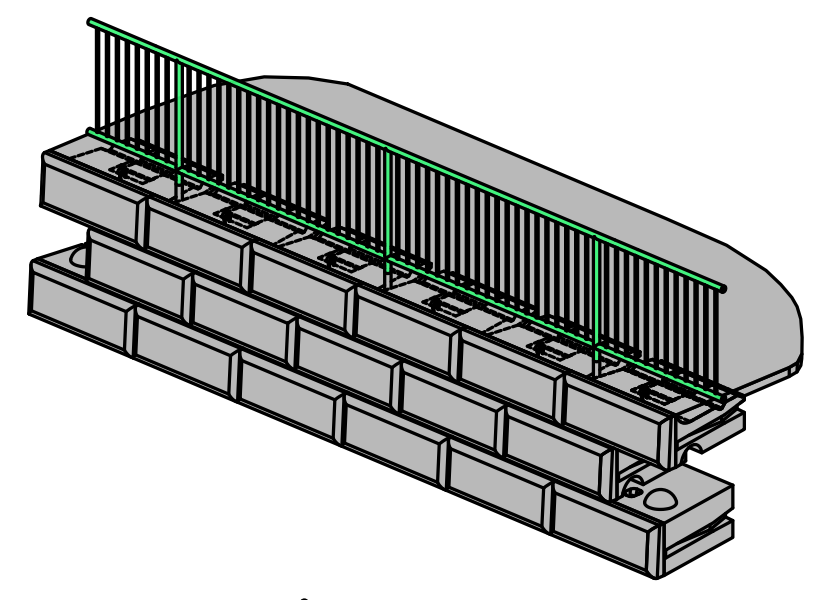
- 3.04 PRECAST MODULAR BLOCK WALL SYSTEM INSTALLATION
- A. THE PRECAST MODULAR BLOCK STRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS, THESE SPECIFICATIONS AND THE RECOMMENDATIONS OF THE RETAINING WALL SYSTEM COMPONENT MANUFACTURERS. WHERE CONFLICTS EXIST BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE SPECIFICATIONS, THESE SPECIFICATIONS SHALL PREVAIL.
  - B. DRAINAGE COMPONENTS. PIPE, GEOTEXTILE AND DRAINAGE AGGREGATE SHALL BE INSTALLED AS SHOWN ON THE CONSTRUCTION SHOP DRAWINGS.
  - C. PRECAST MODULAR BLOCK INSTALLATION
    1. THE FIRST COURSE OF BLOCK UNITS SHALL BE PLACED WITH THE FRONT FACE EDGES TIGHTLY ABUTTED TOGETHER ON THE PREPARED LEVELING PAD AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS. THE RWIC SHALL TAKE SPECIAL CARE TO ENSURE THAT THE BOTTOM COURSE OF BLOCK UNITS ARE IN FULL CONTACT WITH THE LEVELING PAD, ARE SET LEVEL AND TRUE AND ARE PROPERLY ALIGNED ACCORDING TO THE LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS.
    2. BACKFILL SHALL BE PLACED IN FRONT OF THE BOTTOM COURSE OF BLOCKS PRIOR TO PLACEMENT OF SUBSEQUENT BLOCK COURSES. NONWOVEN GEOTEXTILE FABRIC SHALL BE PLACED IN THE V-SHAPED JOINTS BETWEEN ADJACENT BLOCKS. DRAINAGE AGGREGATE SHALL BE PLACED IN THE V-SHAPED JOINTS BETWEEN ADJACENT BLOCKS TO A MINIMUM DISTANCE OF 12" (300 MM) BEHIND THE BLOCK UNIT. IF STONE INFILL OF HOLLOW CORE BLOCKS EXCEEDS 45% OF THE BLOCK DESIGN VOLUME, DRAINAGE AGGREGATE WILL NOT BE REQUIRED TO EXTEND BEYOND THE BACK OF THE BLOCKS, WITH THE APPROVAL OF THE RWDE.
    3. DRAINAGE AGGREGATE SHALL BE PLACED IN 9-INCH MAXIMUM LIFTS AND COMPACTED BY A MINIMUM OF THREE (3) PASSES OF A VIBRATORY PLATE COMPACTOR CAPABLE EXERTING A MINIMUM OF 2,000

- LB (8.9 KN) OF CENTRIFUGAL FORCE.
- 4. UNIT CORE FILL SHALL BE PLACED IN THE PRECAST MODULAR BLOCK UNIT VERTICAL CORE SLOT. THE CORE FILL SHALL COMPLETELY FILL THE SLOT TO THE LEVEL OF THE TOP OF THE BLOCK UNIT. THE TOP OF THE BLOCK UNIT SHALL BE BROOM-CLEANED PRIOR TO PLACEMENT OF SUBSEQUENT BLOCK COURSES. NO ADDITIONAL COURSES OF PRECAST MODULAR BLOCKS MAY BE STACKED BEFORE THE UNIT CORE FILL IS INSTALLED IN THE BLOCKS ON THE COURSE BELOW.
- 5. BASE COURSE BLOCKS FOR GRAVITY WALL DESIGNS (WITHOUT GEOSYNTHETIC SOIL REINFORCEMENT) MAY BE FURNISHED WITHOUT VERTICAL CORE SLOTS. IF SO, DISREGARD ITEM 4 ABOVE, FOR THE BASE COURSE BLOCKS IN THIS APPLICATION.
- 6. NONWOVEN GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE DRAINAGE AGGREGATE AND THE RETAINED SOIL (GRAVITY WALL DESIGN) OR BETWEEN THE DRAINAGE AGGREGATE AND THE REINFORCED FILL (REINFORCED WALL DESIGN) AS REQUIRED ON THE RETAINING WALL CONSTRUCTION DRAWINGS.
- 7. SUBSEQUENT COURSES OF BLOCK UNITS SHALL BE INSTALLED WITH A RUNNING BOND (HALF BLOCK HORIZONTAL COURSE-TO-COURSE OFFSET). WITH THE EXCEPTION OF 90-DEGREE CORNER UNITS, THE SHEAR CHANNEL OF THE UPPER BLOCK SHALL BE FULLY ENGAGED WITH THE SHEAR KNOBS OF THE BLOCK COURSE BELOW. THE UPPER BLOCK COURSE SHALL BE PUSHED FORWARD TO FULLY ENGAGE THE INTERFACE SHEAR KEY BETWEEN THE BLOCKS AND TO ENSURE CONSISTENT FACE BATTER AND WALL ALIGNMENT. GEOGRID DRAINAGE AGGREGATE, UNIT CORE FILL, GEOTEXTILE AND PROPERLY COMPACTED BACKFILL SHALL BE COMPLETE AND IN-PLACE FOR EACH COURSE OF BLOCK UNITS BEFORE THE NEXT COURSE OF BLOCKS IS STACKED.
- 8. THE ELEVATION OF RETAINED SOIL FILL SHALL NOT BE LESS THAN 1 BLOCK COURSE (18 INCHES (457 MM)) BELOW THE ELEVATION OF THE REINFORCED BACKFILL THROUGHOUT THE CONSTRUCTION OF THE RETAINING WALL.
- 9. IF INCLUDED AS PART OF THE PRECAST MODULAR BLOCK WALL DESIGN, CAP UNITS SHALL BE SECURED WITH AN ADHESIVE IN ACCORDANCE WITH THE PRECAST MODULAR BLOCK MANUFACTURER'S RECOMMENDATION.

- D. CONSTRUCTION TOLERANCE. ALLOWABLE CONSTRUCTION TOLERANCE OF THE RETAINING WALL SHALL BE AS FOLLOWS:
  1. DEVIATION FROM THE DESIGN BATTER AND HORIZONTAL ALIGNMENT, WHEN MEASURED ALONG A 10' (3 M) STRAIGHT WALL SECTION, SHALL NOT EXCEED 3/4" (19 MM).
  2. DEVIATION FROM THE OVERALL DESIGN BATTER SHALL NOT EXCEED 1/2" (13 MM) PER 10' (3 M) OF WALL HEIGHT.
  3. THE MAXIMUM ALLOWABLE OFFSET (HORIZONTAL BULGE) OF THE FACE IN ANY PRECAST MODULAR BLOCK JOINT SHALL BE 1/2" (13 MM).
  4. THE BASE OF THE PRECAST MODULAR BLOCK WALL EXCAVATION SHALL BE WITHIN 2" (50 MM) OF THE STAKED ELEVATIONS, UNLESS OTHERWISE APPROVED BY THE INSPECTION ENGINEER.
  5. DIFFERENTIAL VERTICAL SETTLEMENT OF THE FACE SHALL NOT EXCEED 1" (300 MM) ALONG ANY 200' (61 M) OF WALL LENGTH.
  6. THE MAXIMUM ALLOWABLE VERTICAL DISPLACEMENT OF THE FACE IN ANY PRECAST MODULAR BLOCK JOINT SHALL BE 1/2" (13 MM).
  7. THE WALL FACE SHALL BE PLACED WITHIN 2" (50 MM) OF THE HORIZONTAL LOCATION STAKED.

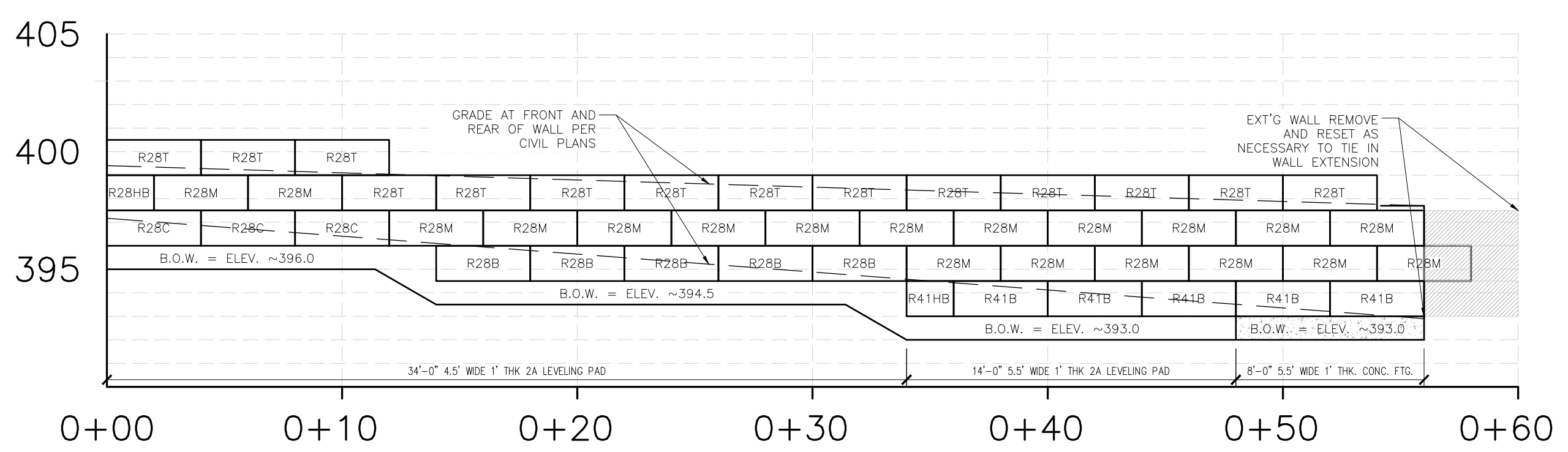
- WALL INFILL AND REINFORCED BACKFILL PLACEMENT
  - A. BACKFILL MATERIAL PLACED IMMEDIATELY BEHIND THE DRAINAGE AGGREGATE SHALL BE COMPACTED AS FOLLOWS:
    1. 98% OF MAXIMUM DRY DENSITY AT ± 2% OPTIMUM MOISTURE CONTENT PER ASTM D698 STANDARD PROCTOR.
  - B. COMPACTIVE EFFORT WITHIN 3' (0.9 M) OF THE BACK OF THE PRECAST MODULAR BLOCKS SHOULD BE ACCOMPLISHED WITH WALK-BEHIND COMPACTORS. COMPACTION IN THIS ZONE SHALL BE WITHIN 95% OF MAXIMUM DRY DENSITY AS MEASURED IN ACCORDANCE WITH ASTM D698 STANDARD PROCTOR. HEAVY EQUIPMENT SHOULD NOT BE OPERATED WITHIN 3' (0.9 M) OF THE BACK OF THE PRECAST MODULAR BLOCKS.

- C. BACKFILL MATERIAL SHALL BE INSTALLED IN LIFTS THAT DO NOT EXCEED A COMPACTED THICKNESS OF 9" (230 MM).
- D. AT THE END OF EACH WORK DAY, THE RWIC SHALL GRADE THE SURFACE OF THE LAST LIFT OF THE GRANULAR WALL INFILL TO A 3% ± 1% SLOPE AWAY FROM THE PRECAST MODULAR BLOCK WALL FACE AND COMPACT IT.
- E. THE GENERAL CONTRACTOR SHALL DIRECT THE GRADING CONTRACTOR TO PROTECT THE PRECAST MODULAR BLOCK WALL STRUCTURE AGAINST SURFACE WATER RUNOFF AT ALL TIMES THROUGH THE USE OF BERMS, DIVERSION DITCHES, SILT FENCE, TEMPORARY DRAINS AND/OR ANY OTHER NECESSARY MEASURES TO PREVENT SOIL STAINING OF THE WALL FACE, SCOUR OF THE RETAINING WALL FOUNDATION OR EROSION OF THE REINFORCED BACKFILL OR WALL INFILL.
- 3.06 OBSTRUCTIONS IN THE INFILL AND REINFORCED FILL ZONE
  - A. THE RWIC SHALL MAKE ALL REQUIRED ALLOWANCES FOR OBSTRUCTIONS BEHIND AND THROUGH THE WALL FACE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SHOP DRAWINGS.
  - B. SHOULD UNPLANNED OBSTRUCTIONS BECOME APPARENT FOR WHICH THE APPROVED CONSTRUCTION SHOP DRAWINGS DO NOT ACCOUNT, THE AFFECTED PORTION OF THE WALL SHALL NOT BE CONSTRUCTED UNTIL THE RWDE CAN APPROPRIATELY ADDRESS THE REQUIRED PROCEDURES FOR CONSTRUCTION OF THE WALL SECTION IN QUESTION.
- 3.07 COMPLETION
  - A. FOR WALLS SUPPORTING UNPAVED AREAS, A MINIMUM OF 12" (300 MM) OF COMPACTED, LOW-PERMEABILITY FILL SHALL BE PLACED OVER THE GRANULAR WALL INFILL ZONE OF THE PRECAST MODULAR BLOCK RETAINING WALL STRUCTURE. THE ADJACENT RETAINED SOIL SHALL BE GRADED TO PREVENT PONDING OF WATER BEHIND THE COMPLETED RETAINING WALL.
  - B. FOR RETAINING WALLS WITH CREST SLOPES OF 5H:1V OR STEEPER, SILT FENCE SHALL BE INSTALLED ALONG THE WALL CREST IMMEDIATELY FOLLOWING CONSTRUCTION. THE SILT FENCE SHALL BE LOCATED 3' TO 4' (0.9 M TO 1.2 M) BEHIND THE UPPERMOST PRECAST MODULAR BLOCK UNIT. THE CREST SLOPE ABOVE THE WALL SHALL BE IMMEDIATELY SEEDED TO ESTABLISH VEGETATION. THE GENERAL CONTRACTOR SHALL ENSURE THAT THE SEEDED SLOPE RECEIVES ADEQUATE IRRIGATION AND EROSION PROTECTION TO SUPPORT GERMINATION AND GROWTH.
  - C. THE GENERAL CONTRACTOR SHALL CONFIRM THAT THE AS-BUILT PRECAST MODULAR BLOCK WALL GEOMETRIES CONFORM TO THE REQUIREMENTS OF THIS SECTION. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER OF ANY DEVIATIONS.

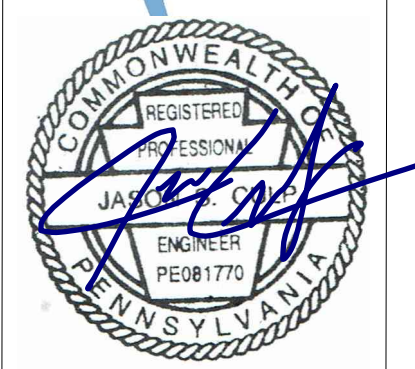


**TYP FENCE/RAIL CONNX DETAIL**  
S-1 SCALE: 1/2" = 1'-0"

**GENERAL NOTES:**  
 1. WALL ELEVATION IS A GENERAL LAYOUT AND SHALL BE FIELD FIT TO THE EXISTING CONDITIONS.  
 2. RAILING/FENCE BY OTHERS.  
 3. GRADING AND LAYOUT BY OTHERS.  
 4. REFER TO WALL DETAILS FOR WALL BLOCK SIZES.  
 5. WALL SHALL BE "TOOTHED" IN TO EXISTING WALL AFTER PARTIAL DEMO OF EXISTING WALL.



**FRONT PROFILE**  
S-1 SCALE: 1" = 5'



DRAWN BY: JSC  
 REV. BY: JSC  
 SCALE: AS NOTED  
 SHEET NO.: 2 OF 2

| COMMENTS                                    | DATE | REV. NO. |
|---|------|----------|
| PLAN TITLE: EMBREEVILLE REDI ROCK WALL EXT. |      |          |
| PROJ. LOCATION: 997 LIEDS RD COATESVILLE PA |      |          |
| CLIENT: JMR ENGINEERING                     |      |          |