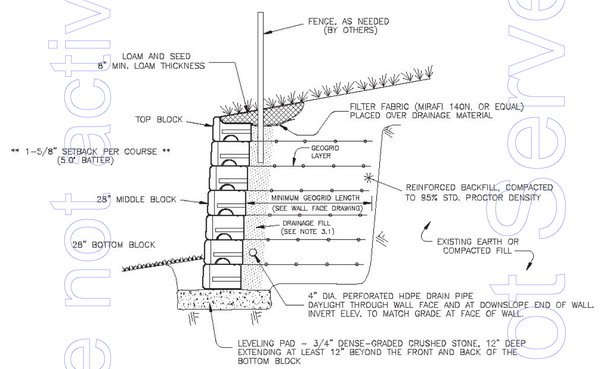
THIS SHEET IS SIZED AT 24" X 36" - PLEASE PRINT AT SCALE FOR FULL SCALE DRAWINGS (APPLIES TO PAGES 22 & 23 OF THIS PACKAGE)



MAXIMUM APPLIED BEARING PRESSURE: 2900 psf

TYPICAL SECTION – REINFORCED WALL
(TYPICAL DETAIL ONLY – SEE WALL FACE DRAWING FOR SPECIFIC BLOCK CONFIGURATIONS)
"REDI-ROCK" SEGMENTAL RETAINING WALL
(NOT TO SCALE)

REINFORCED BACKFILL
GENERAL REQUIREMENTS

SIEVE SIZE	% PASSING
3"	100%
#4	45-75%
#100	0-12%
#200	0-6%

VT AOT 704.08A
GRANULAR BACKFILL FOR STRUCTURES

DENSE GRADED 3/4" CRUSHED STONE
GRADATION REQUIREMENTS

SIEVE SIZE	% PASSING
1"	100%
3/4"	90-100%
3/8"	60-85%
#8	25-60%
#200	10-20%

NOTE: ALTERNATE MATERIALS SHALL ONLY BE USED WITH THE APPROVAL OF THE WALL DESIGN ENGINEER.

DESIGN ASSUMPTIONS

SOIL	SOIL UNIT WEIGHT	Φ
REINFORCED BACKFILL	140	34
RETAINED EARTH	135	34
FOUNDATION SOIL	135	34

APPLIED SURCHARGE LOADING: NONE
SEISMIC ACCELERATION = 0.08
MAX. SLOPE ABOVE WALL = 2H:1V

DRAINAGE FILL – VT AOT 704.02B
GRADATION REQUIREMENTS

SIEVE SIZE	% PASSING
1"	100
3/4"	90 – 100
3/8"	20 – 55
#4	0 – 10
#8	0 – 5

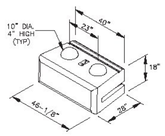
AASHTO LRFD LOAD/RESISTANCE FACTORS

INTERNAL STABILITY:		
VERTICAL EARTH PRESSURE – EV	1.35	
EARTHQUAKE LOADS – EQ	1.00	
LIVE LOAD SURCHARGE – LS	1.75	
DEAD LOAD SURCHARGE – ES	1.50	
GEOGRID STRENGTH/CONNECTION/PULLOUT	0.90	(STATIC)
	1.20	(COMBINED STATIC/SEISMIC)
EXTERNAL STABILITY:		
VERTICAL EARTH PRESSURE – EV		
SLIDING & ECCENTRICITY:	1.00	(STATIC)
	1.00	(COMBINED STATIC/SEISMIC)
BEARING CAPACITY:	1.35	(STATIC)
	1.35	(COMBINED STATIC/SEISMIC)
ACTIVE EARTH PRESSURE – EH	1.50	
ACTIVE EARTH PRESSURE (EARTHQUAKE)	1.50	
EARTHQUAKE LOADS – EQ	1.00	
BEARING CAPACITY	0.65	(STATIC)
	0.65	(COMBINED STATIC/SEISMIC)

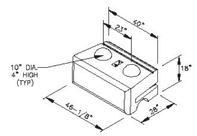
BLOCK SPECIFICATION NOTES:

1. ALL BLOCKS SHALL BE MANUFACTURED BY A LICENSED REDI-ROCK (TM) MANUFACTURER.
2. BLOCKS SHALL MEET THE MINIMUM REDI-ROCK SPECIFICATIONS OF 4000 psi WITH AN AIR CONTENT OF 4%-8%.
3. THE REDI-ROCK UNITS MAY UTILIZE EITHER THE SPLIT LIMESTONE OR COBBLESTONE FACE CONFIGURATION AS CHOSEN BY THE OWNER OR OWNER'S REPRESENTATIVE.

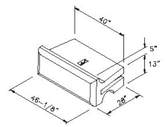
NOTE: HALF-BLOCKS HAVE THE SAME FEATURES AS SHOWN HERE FOR FULL BLOCKS BUT THEY ARE 23-1/16" WIDE, NOT THE FULL 46-1/8" WIDE.



28" BOTTOM BLOCK
NOT-TO-SCALE



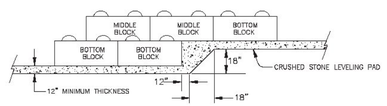
28" MIDDLE BLOCK
NOT-TO-SCALE



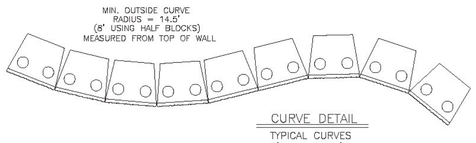
28" TOP BLOCK
NOT-TO-SCALE

HALF GARDEN CORNER BLOCK
NOT-TO-SCALE

COMPACTION NOTE: WHERE THE RETAINING WALL PASSES OVER ANY UTILITY LINES, COMPACTION OF THE SOIL WITHIN THE UTILITY TRENCH IS CRITICAL IN ORDER TO PREVENT SETTLEMENT OF THE WALL. COMPACTION OF ALL FILL MATERIAL IN UTILITY TRENCHES WHICH PASS UNDER THIS RETAINING WALL MUST BE AT LEAST 95% OF THE MAXIMUM DENSITY OF THE FILL MATERIAL.



BASE STEP DETAIL
(NOT TO SCALE)



CURVE DETAIL
TYPICAL CURVES
(NOT TO SCALE)

GENERAL NOTES:

1. SITE PREPARATION:
   - 1.1. STRIP ALL VEGETATION, ORGANIC SOILS AND UNSUITABLE FILL SOILS FROM THE WALL ALIGNMENT AREA.
   - 1.2. BENCH CUT ALL EXCAVATED SLOPES.
   - 1.3. DO NOT OVER EXCAVATE UNLESS DIRECTED TO DO SO BY THE OWNER'S SITE REPRESENTATIVE IN ORDER TO REMOVE UNSUITABLE SOIL.
   - 1.4. THE OWNER'S SITE REPRESENTATIVE SHALL VERIFY THE COMPETENCY OF THE FOUNDATION SOILS.
2. LEVELING PAD & BOTTOM BLOCK:
   - 2.1. LEVELING PAD SHALL CONSIST OF DENSE GRADED 3/4" CRUSHED STONE, 12" THICK AND EXTENDING AT LEAST 12" TO EITHER SIDE OF THE BASE BLOCK.
   - 2.2. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE AS INDICATED ON THE WALL FACE DRAWING.
   - 2.3. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE.
3. WALL DRAIN:
   - 3.1. DRAINAGE FILL SHALL CONSIST OF VT AOT 704.02B 3/4" CRUSHED STONE PLACED FOR A DEPTH OF AT LEAST 12" BEHIND THE WALL. A FILTER FABRIC SHALL BE PLACED OVER THE CUT OR FILL FACE BEHIND THE WALL TO PREVENT THE MIGRATION OF SOIL INTO THE DRAINAGE MATERIAL.
   - 3.2. THE 4" DIA. PERFORATED HDPE WALL DRAIN SHALL OUTLET THROUGH THE WALL FACE AND AT THE DOWNHILL END OF THE WALL. SEE THE WALL FACE DRAWING FOR OUTLET LOCATIONS.
   - 3.3. PLACE A FILTER FABRIC (MIRAFI 140N, OR EQUAL) OVER THE DRAINAGE MATERIAL TO MINIMIZE SOIL MIGRATION FROM THE SURFACE MATERIAL (TOPSOIL) INTO THE DRAINAGE MATERIAL.
4. BACKFILLING & COMPACTION:
   - 4.1. BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL AS THE WALL IS INSTALLED.
   - 4.2. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE OWNER'S SITE REPRESENTATIVE.
   - 4.3. COMPACTION SHALL BE TO A MINIMUM OF **95%** OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
   - 4.4. RECOMMENDED COMPACTION EQUIPMENT WITHIN 15 FEET OF THE BACK OF THE WALL IS AS FOLLOWS:
     0 – 4 FEET HAND TAMP OR VIBRATORY PLATE COMPACTOR
     4 – 15 FEET NOTHING LARGER THAN TWO-DRUM, WALK-BEHIND VIBRATORY ROLLER
     (LARGER ROLLERS CAN BE USED STATICALLY, PROVIDED LIFT SIZE DOES NOT COMPROMISE ACHIEVEMENT OF NECESSARY COMPACTION RATES.)
5. GENERAL WALL LAYOUT & CONSTRUCTION:
   - 5.1. FINAL WALL ALIGNMENT SHALL BE LOCATED IN THE FIELD BY THE OWNER'S SITE REPRESENTATIVE.
   - 5.2. PROVIDE LATERAL DRAINAGE SWALES TO DIRECT FLOWS AROUND THE ENDS OF THE WALL AND AWAY FROM THE WALL DURING CONSTRUCTION. PERMANENT SWALES SHALL BE PITCHED TO THE WALL ENDS TO PROMOTE DRAINAGE OF SURFACE WATER RUNOFF.
   - 5.3. TURF, OR SOME ACCEPTABLE FORM OF SOIL EROSION PROTECTION, SHOULD BE ESTABLISHED AT THE TOP OF THE WALL (WHERE REQUIRED) BY THE LANDSCAPE CONTRACTOR AS SOON AS THE WALL IS COMPLETED.
   - 5.4. ENDS OF THE RETAINING WALLS SHALL BE BLENDED INTO THE PROPOSED/EXISTING GRADE IN A MANNER SATISFACTORY TO THE OWNER'S SITE REPRESENTATIVE. AT THE ENDS OF A WALL WHERE BLENDING TAKES PLACE, THE ISSUE IS NOT A STRUCTURAL FACTOR BUT AN AESTHETIC FACTOR AND THE OWNER'S SITE REPRESENTATIVE IS QUALIFIED TO MAKE THIS JUDGEMENT.
   - 5.5. IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.
   - 5.6. THESE WALLS HAVE BEEN DESIGNED WITH CONSIDERATION OF SEISMIC LOADINGS.
   - 5.7. WALL CERTIFICATIONS: OCCASIONALLY A "SIGN OFF" BY THE DESIGN ENGINEER IS NEEDED AFTER COMPLETION OF WALL CONSTRUCTION. IF THIS SERVICE IS NEEDED ARRANGEMENTS MUST BE MADE WITH THE DESIGN ENGINEER PRIOR TO WALL CONSTRUCTION FOR A SERIES OF SITE VISITS TO OBSERVE WALL CONSTRUCTION. ACCEPTANCE LETTERS, SIGN OFFS, CERTIFICATIONS, WARRANTYS, ETC. WILL NOT BE PROVIDED WITHOUT PERIODIC SITE VISITS.
   - 5.8. GEOGRID LENGTHS ARE MEASURED FROM THE REAR FACE OF THE RETAINING WALL. ALL GEOGRID IS TO BE PLACED PERPENDICULAR TO THE WALL FACE, i.e. THE GRID ROLL IS PLACED ON THE WALL, ROLLED OUT BEHIND THE WALL (PERPENDICULAR TO THE WALL FACE) AND CUT TO LENGTH. BE SURE TO ADD SUFFICIENT LENGTH TO CONSTRUCT THE "TAIL" PORTION OF THE TYPE 1AT CONNECTION (ABOUT 4').

IT IS THE RESPONSIBILITY OF THE INSTALLER TO REVIEW THE NOTES AND DETAILS ON ALL SHEETS OF THIS PLAN SET

NOTE: THIS DRAWING WAS PREPARED FOR USE WITH REDI-ROCK (TM) RETAINING WALL SYSTEMS. CONTACT REDI-ROCK WALLS OF NEW ENGLAND AT (603) 863-1000.

ERIC MERLUZZI, P.E.
184 ROWENTOWN ROAD, WENTWORTH, NH 03282
PHONE: (603) 786-2751 E-MAIL: em35@earthlink.net

CLIENT: REDI-ROCK WALLS OF NEW ENGLAND
8 REEDS MILL ROAD, NEWPORT, NH 03773

PROJECT: QUARRY STREET MEGC M 6000(12)C/1
BARRE, VT

SHEET TITLE: RETAINING WALL DESIGN SHEET 1

DATE: FEBRUARY 27, 2017 SCALE: AS SHOWN PROJECT No.: 2017-001

SHEET 1 OF 2