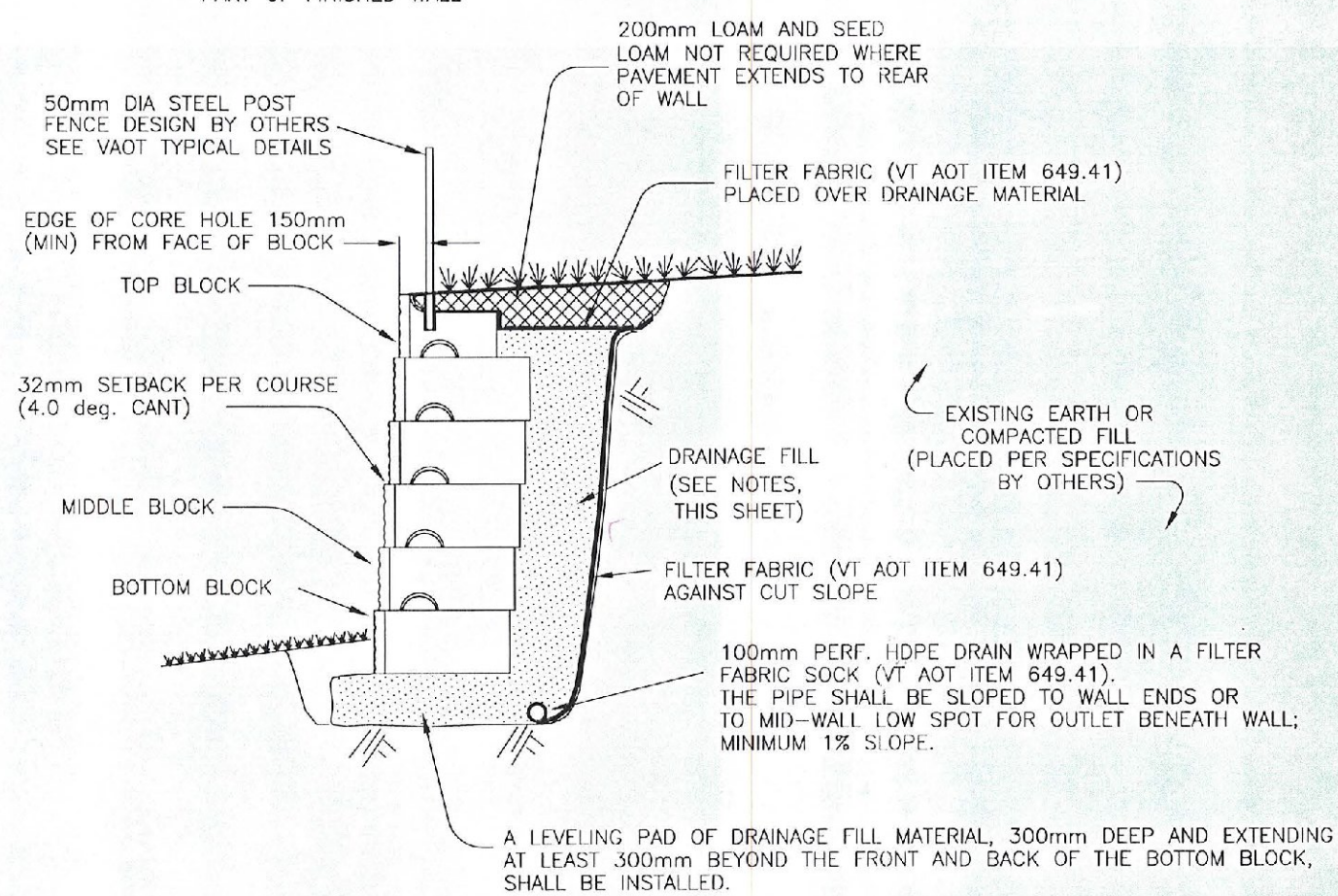


DO NOT CONSTRUCT SWALE BEHIND WALL AS PART OF FINISHED WALL



THE MINIMUM REQUIRED BEARING CAPACITY OF THE SOIL BENEATH THE BASE SHALL BE GREATER THAN OR EQUAL TO: 53 kPa (ALL WALLS)

**TYPICAL SECTION - GRAVITY WALL
(TYPICAL DETAIL ONLY - SEE WALL FACE DRAWING FOR SPECIFIC BLOCK CONFIGURATIONS)**

"REDI-ROCK" SEGMENTAL RETAINING WALL
(NOT TO SCALE)

COMPACTED FILL/REINFORCED BACKFILL GENERAL REQUIREMENTS	
SIEVE SIZE	% PASSING
75 mm	100%
12.5 mm	50-85%
4.75 mm	40-75%
0.297 mm	8-28%
0.075 mm	0-10%

NOTE: THE DESIGN ENGINEER MUST BE MADE AWARE WHENEVER THE PERCENT PASSING THE 0.075 mm SIEVE EXCEEDS 10% GROUNDWATER CONTROL METHODS MAY BE REQUIRED.

MATERIAL MEETING VI DOT ITEM 704.08 "GRANULAR BACKFILL FOR STRUCTURES" IS ALSO ACCEPTABLE

IMPERVIOUS MATERIAL GENERAL REQUIREMENTS	
SIEVE SIZE	% PASSING
75mm	100%
#4	80-100%
#10	50-90%
#100	40-80%
#200	30-80%

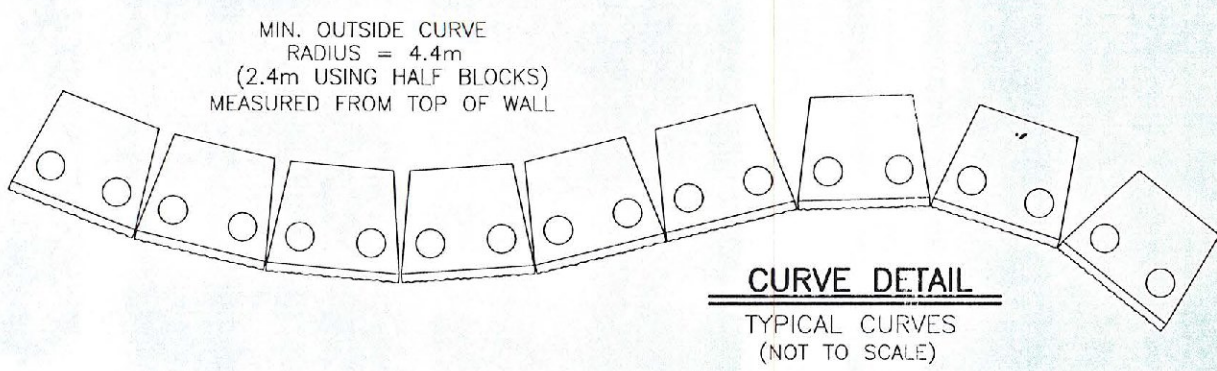
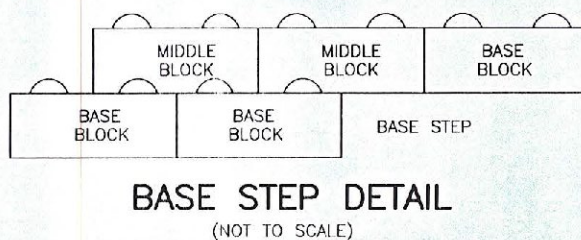
200mm OF TOPSOIL IS AN ACCEPTABLE ALTERNATE FOR IMPERVIOUS FILL ALONG THE TOP OF THE WALL.

DESIGN ASSUMPTIONS	
SOIL	SOIL UNIT WEIGHT (k)
SELECT FILL/BACKFILL	20.1
RETAINED EARTH	18.9
FOUNDATION SOIL	18.9

APPLIED SURCHARGE LOADING = 11.98 kPa
SEISMIC ACCELERATION = 0.09

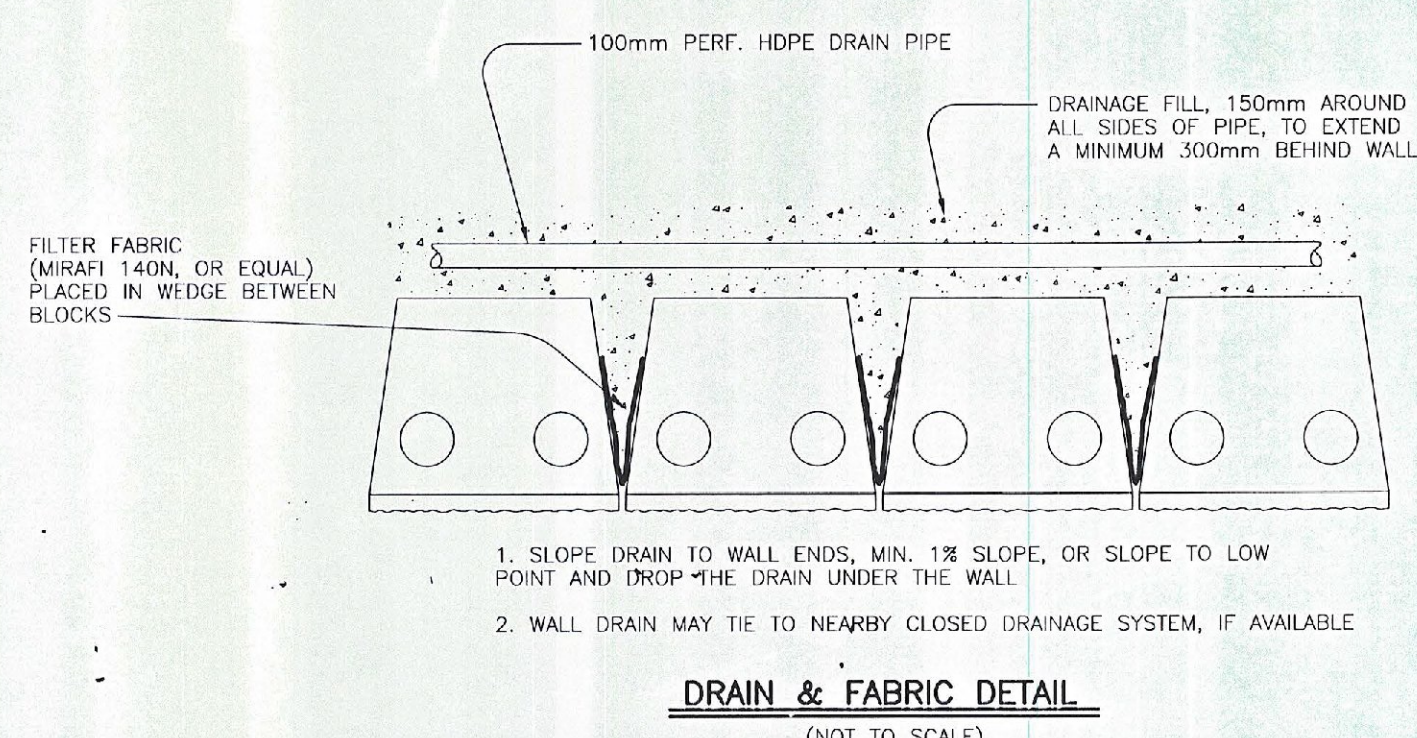
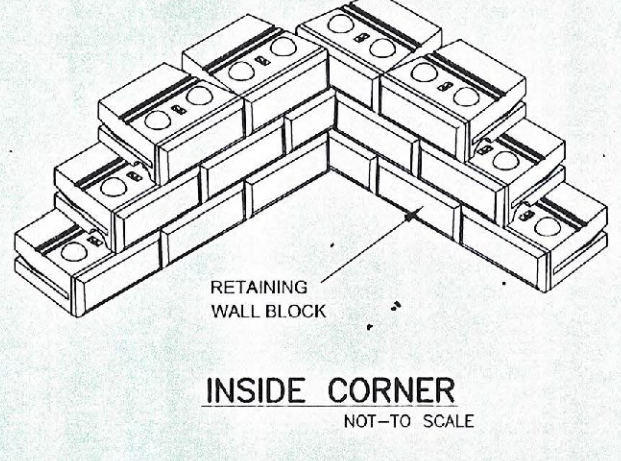
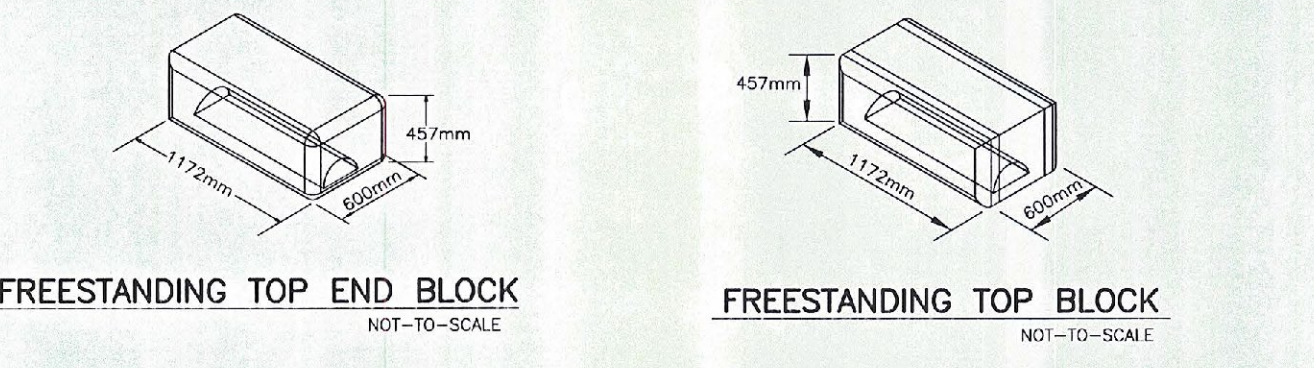
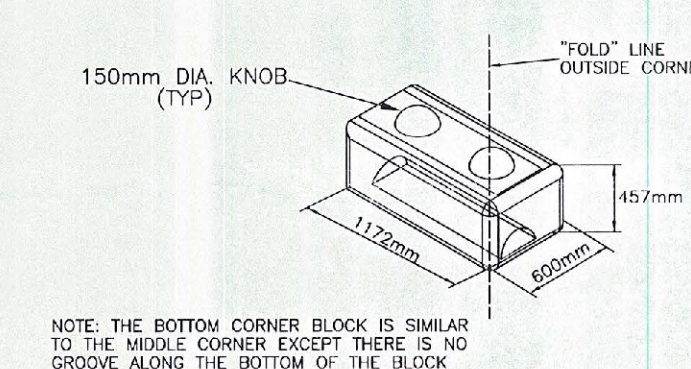
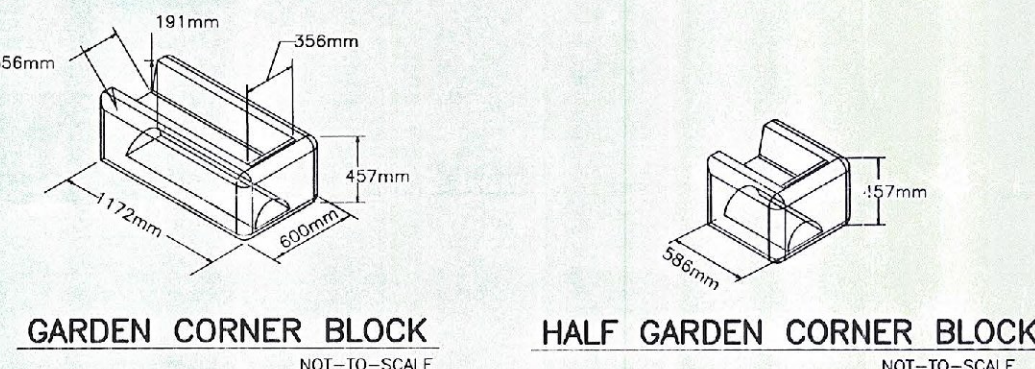
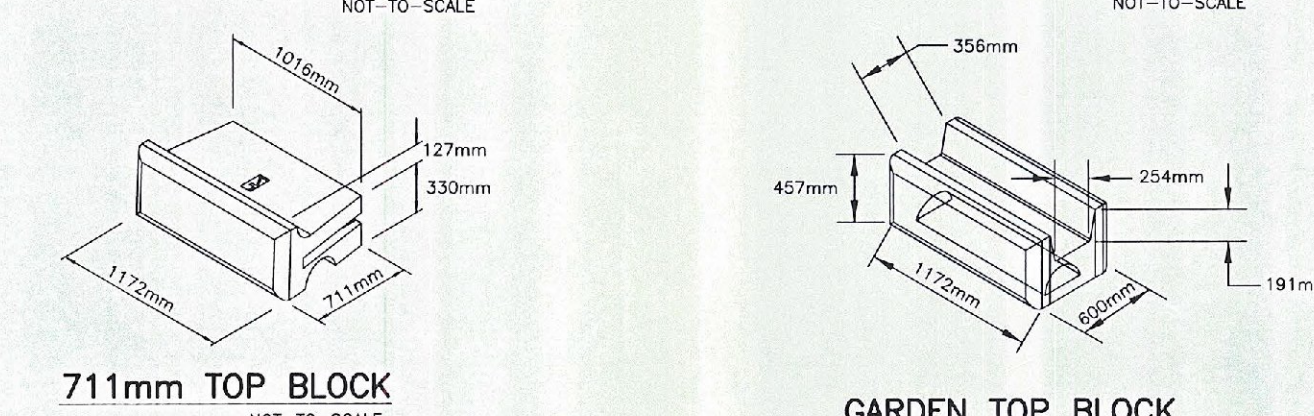
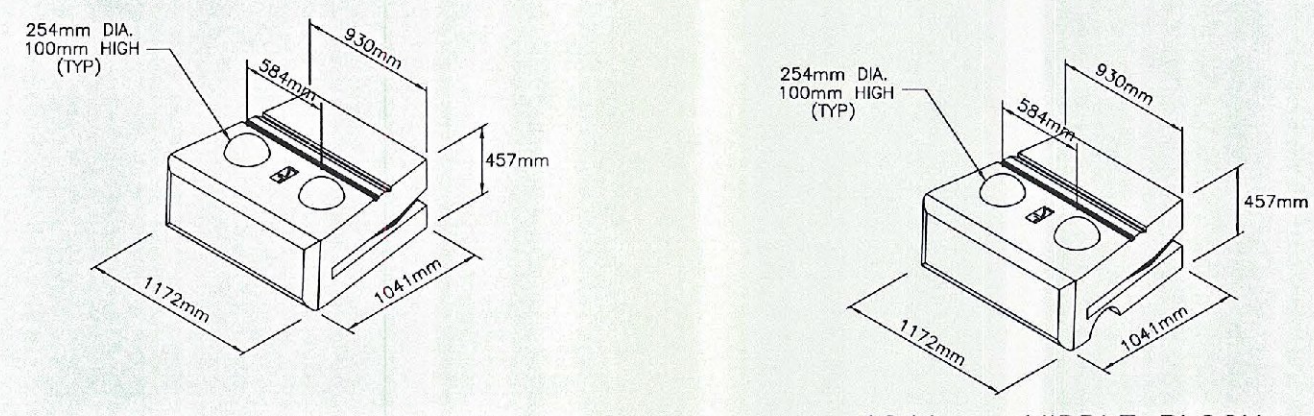
MINIMUM FACTORS OF SAFETY	
OVERTURNING	2.0
SLIDING	1.5
BEARING CAPACITY	3.0
GEOGRID PULL-OUT	1.5

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.



- BLOCK SPECIFICATION NOTES:**
- ALL BLOCKS SHALL BE MANUFACTURED BY A LICENSED REDI-ROCK (TM) MANUFACTURER.
 - CONCRETE FOR BLOCKS SHALL MEET THE REQUIREMENTS OF SECTION 501 FOR CONCRETE, HIGH PERFORMANCE CLASS "B".
 - THE REDI-ROCK UNITS MAY UTILIZE EITHER THE SPLIT-LIMESTONE-OR COBBLESTONE FACE CONFIGURATION AS CHOSEN BY THE OWNER OR CONTRACTOR'S REPRESENTATIVE.

NOTE: HALF-BLOCKS HAVE THE SAME FEATURES AS SHOWN HERE FOR FULL BLOCKS BUT THEY ARE 586mm WIDE, NOT THE FULL 1172mm WIDE.



- SLOPE DRAIN TO WALL ENDS, MIN. 1% SLOPE, OR SLOPE TO LOW POINT AND DROP THE DRAIN UNDER THE WALL.
- WALL DRAIN MAY TIE TO NEARBY CLOSED DRAINAGE SYSTEM, IF AVAILABLE.

GENERAL NOTES:

- SITE PREPARATION:**
 - STRIP ALL VEGETATION, ORGANIC SOILS AND UNSUITABLE FILL SOILS FROM THE WALL ALIGNMENT AREA.
 - DO NOT OVER EXCAVATE UNLESS DIRECTED TO DO SO BY THE ENGINEER IN ORDER TO REMOVE UNSUITABLE SOIL.
 - THE OWNER'S SITE REPRESENTATIVE SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
- LEVELING PAD & BOTTOM BLOCK:**
 - LEVELING PAD SHALL CONSIST OF COMPACTED, GRANULAR FILL, 300mm THICK AND EXTENDING AT LEAST 300mm TO EITHER SIDE OF THE BASE BLOCK. GRANULAR BACKFILL SHALL MEET THE REQUIREMENTS OF DRAINAGE FILL.
 - MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE AS INDICATED ON THE WALL FACE DRAWING.
 - FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE.
- WALL DRAIN:**
 - DRAINAGE FILL SHALL CONSIST OF AASHTO #57 SIZE CRUSHED STONE, LESS THAN 5% FINER .075mm SIEVE, PLACED FOR A DEPTH OF AT LEAST 300mm BEHIND THE WALL. A FILTER FABRIC SHALL BE PLACED OVER THE CUT OR FILL FACE BEHIND THE WALL AREA TO PREVENT THE MIGRATION OF SOIL INTO THE DRAINAGE MATERIAL.
 - WHERE PERFORATED HDPE DRAINS ARE USED, PROVIDE OUTLETS AT THE ENDS OF THE WALL OR AT A LOW COLLECTION POINT ALONG THE WALL. ALTERNATELY, THE DRAIN MAY BE TIED TO A NEARBY STORM DRAINAGE SYSTEM.
 - IF THE PERFORATED WALL DRAIN IS TO BE CARRIED UNDER THE WALL TO OUTLET, IT SHALL BE CARRIED DOWNSLOPE ENOUGH DISTANCE TO ALLOW FOR A PROPER DRAINING SLOPE (MIN. 2% SLOPE FROM WALL TO DAYLIGHT) OR TIED TO A CLOSED DRAINAGE SYSTEM.
 - DRAIN LINES (100mm HDPE) WHICH PASS UNDER THE WALL BASE SHOULD BE CENTERED UNDER THE BASE BLOCK. THE PIPE TRENCH SHALL BE MINIMIZED SO THAT THE BASE BLOCK ACTS AS A LINTEL OVER THE PIPE AND TRENCH.
 - PLACE A FILTER FABRIC (VI DOT ITEM 649.41) OVER THE DRAINAGE MATERIAL TO MINIMIZE SOIL MIGRATION FROM THE SURFACE MATERIAL (TOPSOIL OR IMPERVIOUS) INTO THE DRAINAGE MATERIAL.
- BACKFILLING & COMPACTION:**
 - BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL AS THE WALL IS INSTALLED.
 - COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED, THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE OWNER'S SITE REPRESENTATIVE.
 - COMPACTION SHALL BE TO 95% OF AASHTO T-99 (STANDARD PROCTOR).
 - RECOMMENDED COMPACTION EQUIPMENT WITHIN 15 FEET OF THE BACK OF THE WALL IS AS FOLLOWS:
0 - 1.2m HAND TAMP OR VIBRATORY PLATE COMPACTOR
1.2m - 4.6m NOTHING LARGER THAN TWO-DRUM, WALK-BEHIND VIBRATORY ROLLER (LARGER ROLLERS CAN BE USED STATISTICALLY, PROVIDED LIFT SIZE DOES NOT COMPROMISE ACHIEVEMENT OF NECESSARY COMPACTION RATES.)
- GENERAL WALL LAYOUT & CONSTRUCTION:**
 - FINAL WALL ALIGNMENT SHALL BE LOCATED IN THE FIELD BY THE OWNER'S SITE REPRESENTATIVE. ALL STEPS IN THE WALL AND GEOGRID LOCATIONS DETERMINED IN THE FIELD SHALL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO THE WALL BEING CONSTRUCTED.
 - PROVIDE LATERAL DRAINAGE: SWALES TO DIRECT FLOWS AROUND THE ENDS OF THE WALL AND AWAY FROM THE WALL DURING CONSTRUCTION. DO NOT CONSTRUCT A SWALE BEHIND THE WALL AS PART OF THE FINISHED WALL GRADE ABOVE THE WALL SO THAT WATER FLOWS OVER THE WALL FACE OR TO A POINT AT LEAST AS FAR BEHIND THE WALL AS THE WALL HEIGHT.
 - 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.
 - 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 BLENDED 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.
 - IT IS ACCEPTABLE TO USE GARDEN CORNER UNITS IN THE PLACE OF HALF GARDEN CORNER UNITS PROVIDED ADEQUATE SPACE EXISTS BEHIND THE PROPOSED WALL. THE GARDEN CORNER UNITS SHALL BE INSTALLED WITH THE LONG AXIS PERPENDICULAR TO THE WALL FACE AND THE CLOSED END OF THE BLOCK AT THE WALL FACE.
 - WHERE ANGLES IN THE WALL ARE SHOWN, THE CONTRACTOR MAY UTILIZE A CURVED SECTION AS DETAILED ON THIS SHEET. CURVED REDI-ROCK WALLS WORK WELL WITH INSIDE AND OUTSIDE CORNERS. OUTSIDE CORNERS/CURVES HAVE A MINIMUM 4.41m RADIUS (AS MEASURED FROM THE TOP OF THE WALL) WITH STANDARD BLOCK AND A MINIMUM 2.44m RADIUS USING HALF BLOCKS. THE USE OF A CURVED SECTION RATHER THAN THE SHARP ANGLE DEPICTED ON THE SITE PLANS REQUIRES THE APPROVAL OF THE OWNER'S SITE REP.
 - 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.
 - THESE WALLS HAVE BEEN DESIGNED WITH CONSIDERATION OF SEISMIC LOADINGS.
 - ALLOWABLE CONSTRUCTION TOLERANCE AT THE WALL FACE IS 2 DEGREES VERTICALLY AND 1 INCH IN 10 FEET HORIZONTALLY.

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

STATE OF VERMONT
SEAL OF THE ENGINEER
SVE
New England's
SVE
Retaining Wall Designers

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

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434 LEAR HILL ROAD
NEWPORT (UNITY), NEW HAMPSHIRE 03773
TEL: (603) 863-5454 FAX: (603) 863-3629
Est. 1990 Available On The Web At www.SVEngineering.com

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

PROJECT: **BENNINGTON - AC NH 019-1(51)**
BENNINGTON, VT

SHEET TITLE: **RETAINING WALL DESIGN SHEET 1**

DATE: **APRIL 7, 2010** SCALE: **AS SHOWN** PROJECT No.: **09-227**

SHEET 1 OF 2

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