

**REINFORCED EARTH WALL NOTES :**

**DESIGN CRITERIA**

- DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION TECHNICAL SPECIFICATIONS FOR REINFORCED EARTH WALLS.
- SOILS CHARACTERISTICS ASSUMED FOR DESIGN:  
SELECT GRANULAR BACKFILL  
 $\phi = 34$  degrees,  $c = 0$  p.s.f.,  $\gamma = 140$  p.c.f.  
RANDOM BACKFILL  
 $\phi = 30$  degrees,  $c = 0$  p.s.f.,  $\gamma = 140$  p.c.f.  
FOUNDATION MATERIAL  
 $\phi = 30$  degrees,  $c = 0$  p.s.f.
- THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF THE VAOT TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION AND HAVE BEEN PREVIOUSLY CALCULATED BY VAOT.
- ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED EARTH VOLUME, AS DETERMINED BY THE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE STABILIZED AS DIRECTED BY THE ENGINEER.
- REINFORCING STRIPS FOR REINFORCED EARTH WALLS SHALL BE 50mm WIDE AND 4mm THICK, AND SHALL CONFORM TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A-572 GRADE 65. GALVANIZATION SHALL BE APPLIED IN ACCORDANCE WITH ASTM A-123.

**WALL CONSTRUCTION**

- STATIONS SHOWN ARE ALONG CENTERLINE OF ROADWAY.
- REINFORCED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 4.92' EACH TO MATCH DESIRED WALL ALIGNMENT.
- BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR REINFORCED EARTH WALLS TO A LEVEL OF 2" (+) ABOVE THE TIE STRIPS EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.
- COMPACTION AND OPERATION EQUIPMENT SHALL BE KEPT A MINIMUM DISTANCE OF 3'-0" FROM THE BACK FACE OF THE REINFORCED EARTH PANELS. COMPACTION WITHIN 3'-0" OF THE REINFORCED EARTH PANELS SHALL BE ACHIEVED WITH AT LEAST THREE (3) PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, ROLLER OR VIBRATORY SYSTEM. NO COMPACTION DENSITY TESTS SHALL BE TAKEN WITHIN THE 3 FT. ZONE.

**WALL CONSTRUCTION (CONT.)**

- IF STRUCTURES IN EXCESS OF 20' IN HEIGHT OCCUR, THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 20'. FINISHED GRADE BACKFILL SHALL BE COMPACTED TO 95% OF ASTM D-698, METHODS 'C' OR 'D', UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUARDRAIL POSTS BEHIND THE REINFORCED EARTH PANELS. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING STRIPS, INDIVIDUAL STRIPS MAY BE SKEWED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE REINFORCED EARTH COMPANY. ANY DAMAGE DONE TO THE REINFORCING STRIPS DUE TO THE INSTALLATION OF THE GUARDRAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUARDRAIL POSTS WHICH ARE WITHIN THE REINFORCED EARTH VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING STRIPS AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE REINFORCED EARTH COMPANY TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.
- TOP PANELS BENEATH CAST-IN-PLACE COPING SHALL HAVE #4 DOWELS PROTRUDING FROM THEIR TOP EDGE.
- FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CO. 10 TOWER OFFICE PARK SUITE 318, WOBURN, MA 01801.
- THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING STRIPS DOWNWARD TO AVOID CONFLICTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPERELEVATION AND/OR SOIL MIXING ARE ANTICIPATED.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER DRAINAGE IN THE VICINITY OF THE WALL DURING CONSTRUCTION. STORM WATER RUNOFF IS TO BE COLLECTED AND DISCHARGED AWAY FROM THE WALL AND REINFORCED BACKFILL.

**MATERIALS NOTES**

- NOMINAL STRIP LENGTHS**  
 THE REINFORCING STRIP LENGTHS SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANEL, ARE THE NOMINAL LENGTHS REQUIRED BY CALCULATION. THE ACTUAL FABRICATED STRIP LENGTHS ARE OFTEN LONGER (UP TO 6") DUE TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL LIMIT OF GRANULAR BACKFILL IS EQUAL TO THE NOMINAL STRIP LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL STRIP LENGTH IS NOT REQUIRED BY CALCULATION.

**MATERIALS NOTES (CONT.)**

- SELECT BACKFILL QUANTITY**  
 THE SELECT BACKFILL QUANTITY INDICATED BY THE REINFORCED EARTH COMPANY IS CALCULATED BY MULTIPLYING THE NOMINAL STRIP LENGTHS SHOWN ON THE PLANS (PLUS 0 FT.) BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEATLINE CUBIC YARD QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY.
- PANEL FINISH**  
 THE PRECAST PANELS FOR THIS PROJECT SHALL HAVE AN ASHLER STONE FINISH UNLESS OTHERWISE SPECIFIED. THE CONCRETE SHALL BE COLORED BAYFERROX 3950 3 1/2 %
- CAST-IN-PLACE CONCRETE COPING**  
 CONCRETE FOR THE CAST-IN-PLACE COPING SHALL BE PAID FOR AS PART OF ITEM 501.22, CLASS A CONCRETE. REINFORCING IN THE COPING SHALL BE PAID FOR AS PART OF ITEM 507.17 EPOXY COATED REINFORCING STEEL.
- NOTE TO CONTRACTORS**  
 ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY THE REINFORCED EARTH COMPANY:  
 - PRECAST CONCRETE FACING PANELS  
 - REINFORCING STRIPS  
 - BOLT SETS (FOR ATTACHING PANELS TO THE REINFORCING STRIPS)  
 - BEARING BLOCKS  
 - RUBBER SHIMS  
 - FILTER CLOTH AND ADHESIVE (FOR PANEL JOINTS ONLY)  
 ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFACE OF PRECAST PANELS AND CAST-IN-PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTION CONTRACTOR. ALL SANDBLASTING, PAINTING, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE ALSO SUPPLIED/INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION.
- CONSTRUCTION SEQUENCE**  
 REINFORCED EARTH WALLS SHALL BE CONSTRUCTED AT ONE ABUTMENT AT A TIME. THE WALL SHALL BE CONSTRUCTED AND BACKFILLED TO THE BOTTOM OF THE ABUTMENT FOOTING ELEVATION, THEN A WAITING PERIOD OF 30 DAYS SHALL BE OBSERVED BEFORE CONTINUING WITH CONSTRUCTION AT THAT ABUTMENT. THIS PROCEDURE SHALL BE USED FOR REINFORCED EARTH WALL CONSTRUCTION AT BOTH ABUTMENTS.

<b>STATE OF VERMONT</b>			
<b>AGENCY OF TRANSPORTATION</b>			
Town Of	WALLINGFORD	Bridge No.	80
Highway No.	U.S. ROUTE 7	Log Sta.	
		Surv. Sta.	
<b>U.S. ROUTE 7 OVER RAILROAD</b>			
<b>MSE WALLS - NOTES</b>			
Designed By	LJW	Drawn By	REC
Checked By	AJP	Bridge Design Supervisor	EMM
	Date	Date	4/95
	10/94		
PROJECT	WALLINGFORD	PROJECT NO.	BRS 0137 (13)
I.G.C. Info.		Bridge Sheet No.	BR225
		Sheet	85 of 113

