TAI
The Reinforced Earth Company
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DESIGN CRITERIA
1. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PRE-FABRICATED MATERIALS SHALL CONFORM TO THE CONTRACTING AGENCY'S TECHNICAL SPECIFICATIONS SECT. 5/4/11 FOR REINFORCED EARTH WALLS.

2. SOIL PARAMETERS
   SEE WALL CONTROL DRAWINGS FOR SOIL CHARACTERISTICS OF FOUNDATION MATERIAL TO BE USED IN THE DESIGN OF THE WALL. THE CONTRACTOR SHALL PROVIDE SOIL DESIGN PARAMETERS FOR BACKFILL MATERIAL BASED ON THE ACTUAL SOIL CHARACTERISTICS UTILIZED AT THE SITE. THE VALUES OF FRICTION ANGLE, φ, COHESION, c, AND VOLUMETRIC UNIT WEIGHT, γ, TO BE PROVIDED IN THE SHOP DRAWINGS.

3. 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 OWNER TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.

4. ANY UNSATURATED 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.

5. REINFORCED STRIPS FOR REINFORCED EARTH WALLS SHALL BE 216" WIDE AND 96" HIGH, AND SHALL CONFORM TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A-572 GRADE 50. ELAVATION SHALL BE APPLIED IN ACCORDANCE WITH ASTM A-143.

6. THE MINIMUM FACTORS OF SAFETY REQUIRED FOR DESIGN
   - OVERTURNING = 1.25
   - SLIDING = 1.5
   - INERTIAL LOADING = 1.5
   - ALLOWABLE DEFORMATION = 0.25 INCH
   - DEVIATION FACTORS = 1.5
   - OVERALL STABILITY = 1.5
   - STEEL SOIL REINFORCEMENT = 0.055 AT END OF DESIGN LIFE AND 0.0475 AT KEY SECTION OF SLANTED CONNECTION
   - MAXIMUM TENSION FACTOR = 1.0 (FOR SAND) = 1.5 (FOR LOAMEROS) = 2.0

WALL CONSTRUCTION
7. REINFORCED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CURVES EACH 4" TO 5" EACH TO MATCH DESIRED WALL ALIGNMENT.
8. FOR LOCATION AND ERECTION OF REINFORCED EARTH WALLS, SEE RETAINING WALL CONTROL PLANS.
9. IF HINGLES AND DROP MIXES ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS.
10. IF FILES ARE LOCATED WITHIN THE REINFORCED EARTH VOLUME, THEY SHALL BE DRIED PRIOR TO CONSTRUCTION OF THE REINFORCED EARTH WALLS UNLESS A METHOD TO PROTECT THE STRUCTURE, WHICH IS ACCEPTABLE TO THE ENGINEER AND THE REINFORCED EARTH COMPANY, IS PROPOSED AND APPROVED IN WRITING.

BIAK FALL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH SEC 5/4/11 TO A LEVEL OF 2'-6" BELOW THE BIAK STRIPS ENGAGED IN THE PANELS. INSTALLATION OF REINFORCED STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACT OF THE BIAK FALL MATERIAL HAS REACHED THE REQUIRED LEVEL.

12. IF STRUCTURES EXCEED 20' IN HEIGHT OR IF THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 20', THE FINISHED GRADE BIAK FALL SHALL BE COMPACTED TO A LEVEL OF ABOUT 1'-0" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY QUADRANT POSTS BEHIND THE REINFORCED EARTH PANELS PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING STRIPS. INDIVIDUAL STRIPS SHALL BE MINIMUM 1'-0" IN Width TO AVOID THE IMPLEMENTATION OF ANY STRUCTURE WHICH IS AUTHORIZED BY THE ENGINEER. ANY DAMAGE DONE TO THE REINFORCING STRIPS DUE TO THE INSTALLATION OF THE QUADRANT SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

14. IF EXISTING OR FUTURE STRUCTURES, PIPELINES, FOUNDATIONS OR QUADRANT POLES WHICH ARE WITHIN THE REINFORCED EARTH VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING STRIPS AND SPECIFIC INSTRUCTIONS HAVE NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.

15. TOP PANELS BENEATH CYPING SHALL HAVE買い物 DOCKS PROCEED FROM THEIR TOP EDGE.

16. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CONSTRUCTION MANUAL.

17. THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DECREASING UPTO REINFORCED STRIPS DOWNWARD TO AVOID CONFLICTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO THE AREAS WHERE GRAVEY SUPERELEVATION AND/OR SOIL MIXING ARE ANTIQUATED.

MATERIALS NOTES
18. NOMINAL STRIP LENGTHS
   - THE REINFORCING STRIPS LENGTHS SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANELS ARE THE NOMINAL LENGTHS REQUIRED FOR CALCULATION. THE ACTUAL FABRICATED STRIP LENGTHS ARE OFTEN LONGER UP TO 6" TO 8" TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL GRANULAR COMPACTION IS THE SAME AS THE NOMINAL STRIP LENGTH.

19. PANEL FINISH
   - THE PRECAST PANELS FOR THIS PROJECT SHALL HAVE A STEEL STEEL FINISH UNLESS OTHERWISE SPECIFIED IN THE RETAINING WALL CONTROL PLANS.

20. NOTE TO CONTRACTORS ONLY
    - ALL OTHER MATERIALS SUPPLIED BY THE REINFORCED EARTH COMPANY
      - PRECAST CONCRETE PANELS
      - REINFORCING STRIPS
      - BOLTS SAE 1 FOR ATTACHING PANELS TO THE REINFORCING STRIPS
      - BEARING BLOCKS
      - RIDGER SHOES
      - FILTER COTTON 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 ON THE PLANS, SPECIFICATIONS OR OTHER DRAWINGS.

21. THE REINFORCED EARTH COMPANY SUPPLIES PRECAST CONCRETE WALL PANELS WITH ALL ACCESSORIES TO BE USED IN COMPLIANCE WITH OTHER MATERIALS IN THE CONSTRUCTION OF THE REINFORCED EARTH WALLS TAILED DETAIL. THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL FURNISHED BY THE REINFORCED EARTH COMPANY IS INTENDED TO PROVIDE A GENERAL EXPLANATION OF THE SYSTEM, IT IS THE CONTRACTOR'S OBLIGATION TO DEVISE AND EXECUTE A PROJECT SPECIFIC ERECTION SEQUENCE. PANEL UNLOADING, HANDLING AND BRACING SYSTEM, AND FALL PROTECTION SYSTEM. THE BRACING SYSTEM SHOWN IN THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL IS A GENERAL IN NATURE AND DOES NOT ACCOUNT FOR PROJECT SPECIFIC REQUIREMENTS. CONTRACTORS SHOULD TAKE SPECIFIC PRECAUTIONS TO PREVENT THE PANELS FROM SHIFTING OR FALLING DURING THE ERECTION PROCESS.

22. THE DESIGN CONTAINED IN THESE DRAWINGS IS BASED ON INFORMATION PROVIDED BY THE OWNER. ON THE BASIS OF THIS INFORMATION, THE REINFORCED EARTH COMPANY IS RESPONSIBLE FOR INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY DESIGN INCLUDING FOUNDATION AND SUBBASE STABILITY IS THE RESPONSIBILITY OF OTHERS.

23. THESE DRAWINGS ARE CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY.

24. THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO THE REINFORCED EARTH COMPANY, AND IS BEING FURNISHED FOR THE USE IN CONNECTION WITH FOOT PROJECTS ONLY, AND THE INFORMATION CONTAINED HEREIN IS NOT TO BE DISCLOSED TO ANY OTHER ORGANIZATION UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY THE REINFORCED EARTH COMPANY. THE REINFORCED EARTH COMPANY IS EXCLUDED FROM ANY LIABILITIES IN THE UNITED STATES UNDER PATENTS ISSUED TO HENRY WIGG AND THE FURNISHING OF THIS DRAWING DOES NOT CONSTITUTE AN EXCLUSIVE OR IMPLIED LICENSE UNDER THE VIGIL PATENTS.