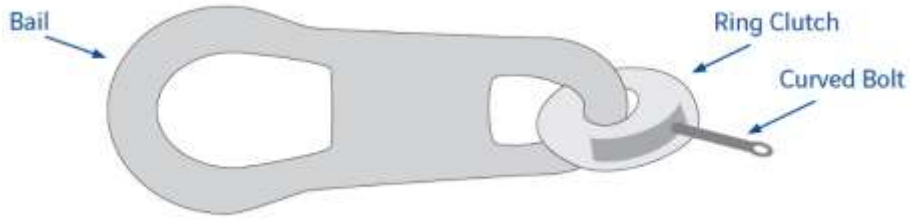

# Construction and Quality Control Manual

## T-WALL® Retaining Wall System

Version v2021.1

# Contents

# Proper Positioning of Ring Clutch for Lifting T-WALL Units




To ensure that the ring clutch properly engages the anchor, position the ring clutch so that the bail is **ABOVE** the clutch. When lifting, ensure both anchors are **EQUALLY** loaded.

# Safety Tips for Unloading T-WALL Units

1. Upon arrival of truck, examine the load for any shifting or unstable conditions prior to removing tie downs.
2. The truck should be on level ground when unloading. Unloading on unlevel ground could result in shifting of precast units or possibly precast units falling from trailer.
3. Lifting equipment (straps, cables, ring clutches, etc.) should be checked for excessive wear or cracking prior to unloading truck.
4. Do not move the tractor while the product is not tied down.
5. If drivers are required to remove chains or binders next to lane of moving traffic, cones and flagman should be used to direct traffic away from the trailer and driver
6. Drivers are not trained as riggers or swampers and should stay in cab or clear away from unloading operations. The drivers are acting in a delivery capacity only.
7. Personal protective equipment required by the general contractor on site should also be required of delivery drivers
8. Personnel should not be allowed under a suspended load.
9. Once removed from the trailer, precast units not placed directly on the wall should be stacked or secured on fl at ground to prevent tipping or falling.
10. Areas between the truck and crane should be restricted to personnel required to unload the trailer.
11. If any unsafe situations exist while loading or unloading RECo products, contact The Reinforced Earth Company immediately to eliminate any hazards or exposure to illness or injury.

# Preface

This Construction and Quality Control Procedures Manual has been prepared as a guide in building T-WALL structures.

Its contents should be thoroughly reviewed by the Contractor, the superintendent and the foreman responsible for construction prior to the delivery of T-WALL materials to the job site. The Reinforced Earth Company will provide construction advisors to assist the Contractor in the implementation of correct construction procedures. However, in the event of any conflict between the Plans, Specifications or Contract Documents and this Manual, the former will prevail. If there is any doubt with regard to any aspect of the T-WALL construction, contact The Reinforced Earth Company (RECo) before commencing or continuing work.

The Reinforced Earth Company supplies precast concrete units and accessories to be used in conjunction with other materials in the construction of T-WALL retaining walls detailed from the construction drawings. 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 system, and fall protection system. Compliance with the guidelines in this manual does not relieve the Contractor of its responsibility to adhere to the project plans, specifications and contract documents or compliance with all fall protection, safety laws, standards and procedures at the job site. Contractors should take special precautions to prevent the units from shifting or falling during the handling and erection processes.

# Non-Disclosure Notice and Disclaimer

1. This Document is the property of The Reinforced Earth Company, with headquarters at 45610 Woodland Road, Sterling, VA, 20166, and contains information, which is proprietary to The Reinforced Earth Company. This Document is being made available solely for use in connection with your interest or participation in the proposed T-WALL project, and for no other purpose.
2. Except as specified in the paragraph above you must not, without the prior express written consent of The Reinforced Earth Company, use any of the information contained in this Document whether to construct, design, manufacture, fabricate, assemble, produce or install, or otherwise utilize - or cause the same or any of them to be done - any elements of T-WALL (whether or not patented), or special forms of equipment unique to the production, manufacture, fabrication, assembly, installation, or utilization of T-WALL, or for any other purpose.
3. This Document and the information contained herein must not be copied or disclosed in any manner or form, in whole or in part, to any third party without the prior express written consent of The Reinforced Earth Company.
4. Receipt of Document gives no entitlement to any property right in the Document or in the information contained therein by virtue of the temporary supply of the Document in accordance herewith.
5. T-WALL structures designed by The Reinforced Earth Company comprise or are based solely upon:
    a. The internal stability of the T-WALL structure based upon the design assumptions noted on all drawings provided by The Reinforced Earth Company relating to the structure and the external loads, surcharges and site geometries supplied by or on behalf of the Owner.
    b. The layout and geometry of the structure based upon survey details, plans and drawings supplied by or on behalf of the Owner.
    c. The Job Specifications.
6. The design does not include a check of the overall stability of the foundation soils below or behind the structure, nor a check of the stability of any permanent or temporary slopes above or below the wall, or temporary excavations. Based on the completeness and accuracy of the above information used or relied upon in designing the structure only.
7. Upon demand, the Document and all copies thereof must be immediately surrendered and returned to The Reinforced Earth Company

# Part 1: Earthwork

## The Structure Depends on It!

The concrete T-WALL units are one part of a two-part structure. The other part is the structural backfill. It is the combination of T-WALL units and specified granular backfill that produces a successful wall structure.

## Important Earthwork Items

**Foundation:** The owner's engineer must inspect and approve the foundation before the CIP or precast leveling pads are placed. If the foundation is soft the wall will settle.

**Granular Backfill Gradation:** Proper backfill gradation is critical to the stability of the T-WALL structure. Backfill requirements are listed in the project specifications and may also be shown on the shop drawings for each project. It is important that gradation tests be performed throughout construction to ensure the backfill meets specifications. Granular backfill gradation affects wall stability, drainage, and settlement.

**Compaction:** Proper compaction of the backfill between and behind the stems is required to prevent settlement, which affects any paving, structure, or rail at the top of the wall. Details for proper compaction are found in Part 3.

***Note: Failure to follow the specifications and notes in the approved T-WALL shop drawings for the project may result in wall movement.***

# Part 2: General Overview

## Work to be Performed by the Contractor

- Site preparation, including excavation and compaction.
- Forming and placing of the cast-in-place (CIP) or precast leveling pads.
- Wall construction, including the process of placing and compacting backfill.
- Installation of fences, guardrails, barriers and/or other necessary items.

## Typical Wall Erection Crew

- Four (4) to Five (5) people.
- One excavator/crane operator for setting units and placing backfill.
- One working foreman to check alignment.
- Two men for setting units, shear keys, and joint material.
- One front-end loader and operator to move backfill and T-WALL units.

## Production Rates

Construction rates for T-WALL depend entirely upon site access and the rate at which backfill can be delivered, placed and compacted—plus time to install/uninstall any necessary shoring.

## Basic Construction Procedures

- Prepare the site with any necessary excavation and compaction.
- Form and place CIP or precast concrete leveling pads.
- Compact fill between leveling pads.
- Set first course of units.
- Place vertical filter fabric.
- Place and compact granular backfill.
- Install rubber blocks and wrapped shear keys.
- Set second course of units and repeat cycle.
- Place horizontal filter fabric.
- Repeat courses as specified.

## Equipment, Materials and Tools Supplied by the Contractor

- T-WALL unit lifting equipment: excavator or crane and correct lifting attachments.
- Equipment for hauling, dumping, and spreading backfill: dump rocks, front-end loaders, and dozers.
- Compaction equipment suitable to project accessibility: ride-on compactor, small walk-behind vibratory roller or trench roller type equipment.
- Tools:
    - Instrument level to check the grade of the leveling pad
    - Broom to sweep the leveling pad
    - Lifting beam

- Ring Clutches for connecting to inserts
- Chalk Line
- Shims
- Pinch bar
- Four foot level (minimum)
- Smooth, 18’ long, ¹/2” diameter steel rod (for gauging vertical joint widths)
- Crow bar
- Short ladder
- Construction adhesive with cartridges and gun(s)
- Hammer drill with 10’’ x ³/4” carbide bit (for drilling bolt holes in corner units-when required by design)

## Materials and Services Supplied by RECo and/or the Precast Manufacturer

- On-site technical assistance
- Engineering and design of the structure
- Delivery of the following wall materials to the site:
  - Precast concrete T-WALL units
  - Shear keys and shear key wrap material
  - Rubber blocks for horizontal joints
  - Filter fabric for horizontal and vertical joints
  - Connection hardware (when required by design)

# Part 3: Construction Procedures for Single Sided Structures

Note: For ease of understanding, the construction procedures described in this section focus on single-sided structures with front or back-of-wall access. Please refer to Parts 4 & 6 for more details on back-to-back structures and walls with limited access.

*Excavated site*


*Incremental site excavation*

*Pouring of leveling pad*

## Site Preparation

- Excavate the site to the elevation shown on the contract plans for the entire footprint of the T-WALL structure (including the area covered by the granular backfill between the stems).
- All unsuitable materials below subgrade must be removed and replaced with compacted, granular backfill at the direction of the owner's engineer or designated representative.

- Compact the subgrade to 95% standard proctor and proof roll the foundation in accordance with the project specifications.
- The foundation is to be inspected and approved (in writing) by the owner/owner's designated representative for required bearing capacity as shown on the approved T-WALL drawings.
- Excavate for the leveling pads-5'-0" x 7'x6" units require both front and rear leveling pads.
- Where possible, the width of excavation should allow sufficient room to set the first course while still leaving access space behind the T-WALL stems for compaction equipment.
- Any under-drains, drainage piping, or drainage blankets should be installed at this time.

## Leveling Pad Construction

- The leveling pads are 15 inches wide and a minimum of 6 inches deep, unless otherwise shown on the approved shop drawings.
- Form the leveling pads similar to forming a sidewalk. The edge forms are screed rail. They must be checked with a level to assure proper elevation and tolerance. Finished surface tolerance is 1/4" in any 10'-0" length with no more than 1/4" overall.
- Checking for alignment. The leading edge of the front pad should be about 31/2" outside the front face line of the wall.
- Check the project drawings for the location of the rear leveling pad.
- The leveling pads are for construction alignment only. The concrete may be low strength, minimum 2,500 psi, without rebar in the leveling pads.
- Check the leveling pad forms for line, grade, tolerances, and correct elevation with a level. If the forms are out of tolerance, make corrections at this time.
- Place the CIP or precast concrete leveling pads. The concrete surface finish must be smooth and flat. A steel trowel finish is desired. Leveling pads are to be checked with an instrument after removing forms. High spots must be corrected.
- Bring the subgrade to the top of the leveling pads and compact before setting units. *Units should not be placed for 24 hours after placing CIP concrete leveling pads.

*Using steel trowel to finish leveling pad*

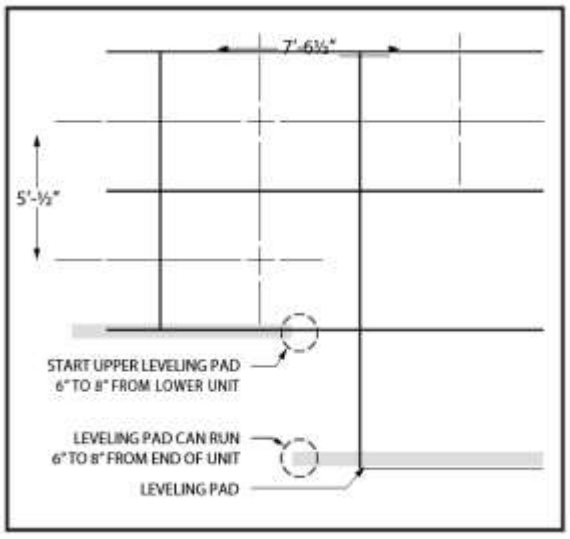
## Precast Leveling Pads

- Where necessary, precast leveling pads may be used if written approval is given by The Reinforced Earth Company.
- Precast leveling pads are cast with rebar and lifting inserts for ease of placement. Leveling pads must be of uniform thickness. Precast leveling pads must be 5,000psi.
- Compaction and grading under precast leveling pads are extremely important because any settlement or tilting will result in an unacceptable joint pattern or spalling of the concrete units.
- Precast leveling pads should be backfilled on both sides prior to setting T-WALL units on top.

*Lowering precast leveling pad*

## Steps in the Leveling Pads

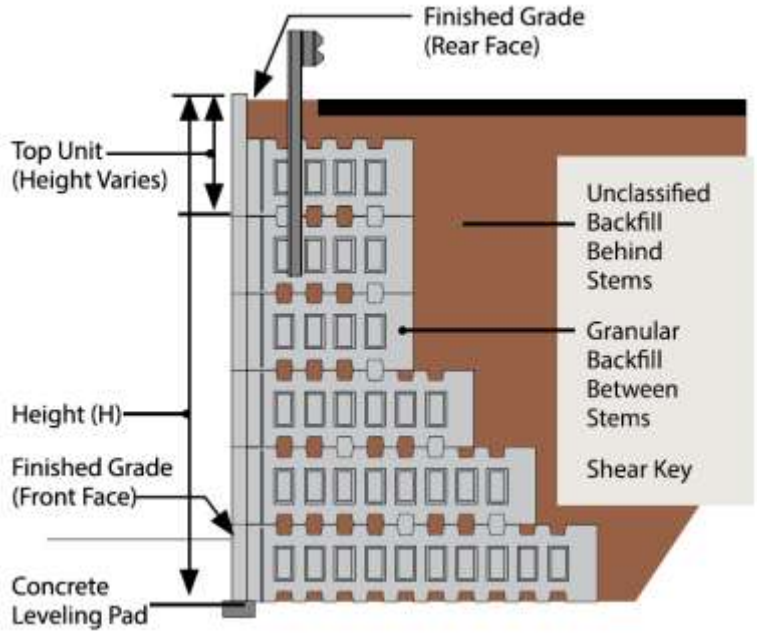
- Construct the lower leveling pads. Leave an 8-inch gap before constructing the higher pads. The gap will ensure that the higher pads to not interfere with the placement of the units on the lower pads.
- For a vertical wall, the typical step (change in elevation) is 2’-6 ½” or 5’-1/2”.




*Front face of units on stepped leveling pads*

## Wall Alignment

- To establish wall alignment, snap a chalk line on the surface of the front leveling pad that marks the front face of the wall. The units should be centered on the leveling pad.
- Fill material should already be graded level with the pads for the entire stem length/area between the pads.




*T-WALL typical section*

## T-WALL Unit Delivery

- Prior to the start of the construction, during the design phase, the contractor and the precast manufacturer should develop a schedule for material deliveries.
- This timetable will allow the producer to match unit production with the construction schedule.

## Unloading the Units

- Under normal circumstances a two-hour maximum unloading time is allowed for each delivery. During this period of time the units may be unloaded and stacked on the ground using the appropriate equipment and lifting device. If permitting and time allows, the units may be placed directly the wall structure.
- A typical truck load is 4 to 5 units.
- Care must be exercised during unloading to protect the units and joint materials from damage.
- Dunnage and plastic edge guards are the property of the precast manufacturer and must be collected and returned as soon as possible.

*Units on a truck*

*Lifting insert and ring clutch*

*Lowering a unit into place*

*Setting a unit*

## Erection of the First Course

- Always begin erecting T-WALL at a fixed point such as a corner, step, or an existing structure tie-in point. If there is no fixed point, simply start on the lowest leveling pad. Using a smooth 1/2” diameter, 18” long steel rod, or ½” x 2” x 18” plywood, create a ½” vertical space between the units.

***Note: Walls have a tendency to expand or shrink in length depending on the amount of care taken to properly layout and align the first course.***

- No joint material is required between the leveling pad and the precast units.
- Set the first units on the leveling pads, aligning the front faces to the chalk line guide.
- Plumb the front faces of the units by adjusting the rear elevation of the stems.
- It may be necessary to plumb the units by placing shims between the rear stem ends. Shims may be pieces of standard asphalt shingles or plastic.
- If you encounter a unit that is out of square it is best to use the face as an alignment guide. Keep in mind that this is purely an aesthetic concern, not a

structural problem. Difficulties with plumbing and alignment should be reported to The Reinforced Earth Company.

- After aligning the front faces, check the tops for correct level and heigh relative to other units in the course. If the top of a unit is irregular, place the level on the line where the top of the front face is chamfered. Shim as necessary. Continually check alignment, level, and plumb as one unit may be disturbed while adjusting others.
- Periodically, step back and sight down the tops of the units. This visual check allows you to fine tune the alignment.
- Every effort should be made to ensure that the first course of units is properly aligned and level.
- Construct the wall in horizontal lifts.

*First course of units on leveling pad*

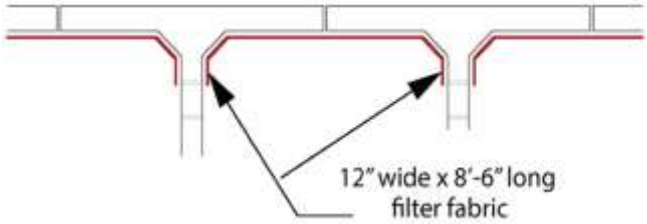
*Second course*


*Placing units into position*

## Filter Fabric and Joint Material

*Filter fabric covering a vertical joint between two units*

*Filter fabric covering a horizontal joint between the first and second courses*




*Horizontal filter fabric layout*

### Vertical Filter Fabric

- Prior to the initial backfilling, cut the 12” wide filter fabric into lengths equal to the height of each vertical joint.
- Center the cut strips over the ½” vertical joints on the interior faces between the units. This procedure prevents migration of the backfill material through the vertical joints.
- Throw any excess filter fabric over the front face of the units during backfilling, then pull it back over the backfill during setting operations.

### Horizontal Filter Fabric

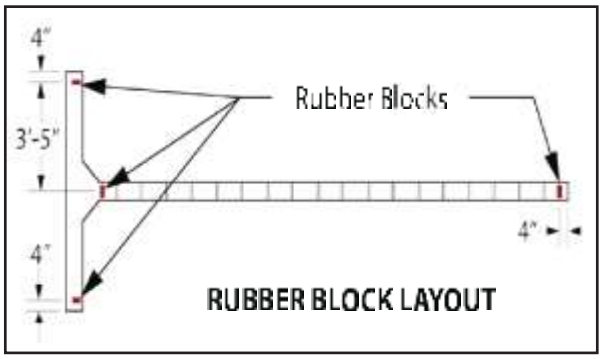
- Cut 8’-6” lengths of fabric for each horizontal joint.
- Place this second strip of filter fabric over the horizontal joints between the stacked units on the interior face. Backfill material migration is now prevented through the horizontal joints as well.
- Adhesive may be placed in spots on the units to hold the fabric during backfilling.

### Horizontal Joint Material

- Four rubber blocks act as a cushion to prevent concrete-to-concrete contact.
- Place two of the four rubber blocks on each end of the horizontal joint between the unit faces, flush with the rear edge.

- Place two rubber blocks on the top of the stem, one at the front where it meets at the haunch and one at the rear where the stem from the unit above will end.

*Rubber blocks*




*Rubber block layout*

## Shear Keys

- Shear keys, wrapped twice with the provided shear key wrap, should be placed stern notches where the unit above will meet the unit below.
- Approved, project specific T-WALL show drawings show section defining the required number and placement of keys per unit.
- The purpose of the shear keys are to:
    - Provide an alignment guide.
    - Prevent movement of the units during backfill placement and compaction.
    - Provide additional pullout resistance at the top of the wall.

*Shear keys wrapped in joint material*

## Backfill

- It is mandatory that the backfill material meets the gradation specification shown on the approved project drawings.
- Dump the granular backfill material directly on top of the stems. Dumping in this manner will fill both sides equally and prevent lateral movement of the unit.
- Backfill and compact each course of units completely before starting the next one. The loose lifts of backfill should not exceed 12” before compaction, or the maximum specified by the state DOT, appropriate local agency, or project specifications. Each lift must be thoroughly compacted before more fill is placed. Failure to adequately compact the backfill will jeopardize the stability of the wall.
- Backfill and compact the fill to the proposed finished grade in front of the wall as soon as possible. This procedure must be accomplished before the wall is 20’-0” high.
- At the minimum, select granular backfill material must be compacted to 95% of maximum density, per AASHTO T-99, methods C or D (with oversize correction as outlined in Note 7).
- If 30% of the select granular backfill material is greater than ¾” in size, AASHTO T-99 is not acceptable. For such material, the acceptance criterion for compacting is either a minimum of 70% of the Relative Density of the material as determined by ASTM D-4254, or a method specification based on a test compaction section which defines the type of equipment, lift thickness, number of passes of the specified equipment, and placement moisture content.
- Moisture content of select granular backfill material during placement should be approximately 1% to 2% less than its optimum moisture content.
- At the end of each day’s work, backfill must be graded to slope away from the back of the wall units in order to divert water runoff from the structure area.

*Placing the backfill*

*Spreading the backfill*

## Staged Construction

- T-Wall should be constructed horizontally, one course at a time. However, there are some situations where staged construction may be necessary.
- Be aware that if the vertical height difference between adjacent columns is greater than one unit, the vertical joints will open due to the unbalanced earth pressure. Backfilling, handling, and compaction techniques may vary for staged projects and are detailed in Part 6.

*Staged construction*

***Note: To avoid problems with the wall alignment when planning for staged construction, contact The Reinforced Earth Company for project specific guidance.***

## Subsequent Courses

- Do not stack the units more than one unit high without backfilling, otherwise visibility of workers may be reduced and shifting of units can occur. In addition, it is unlikely that the subgrade will support the point load of the stem, causing the front face to be out of plumb by the time backfill is placed.
- Repeat the same steps followed when installing the first course when installing subsequent courses. Use the faces as a sight line. Continue the use of filter fabric, joint material, and shear keys. Per project specifications, shear keys may or may not be used at the top of the wall.
- Place units on top of the previous course by aligning the vertical center line of the new unit with the one below. The left and right vertical edges of the T-WALL face may vary SLIGHTLY with those of the unit below it.

*Placing second course*

*Placing second course on completely filled first course*

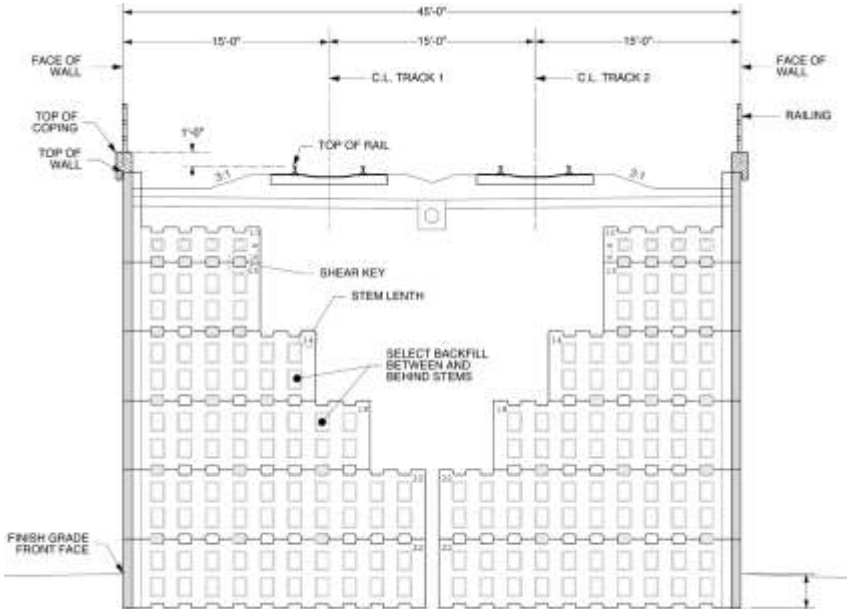
# Part 4: Construction Procedures for Back-to-Back and Interlaced Structures

Construction procedures for back-back structures follow the same construction methodology as that defined for single-sided structures. Backfill, handling, and compaction techniques will vary from single-sided methods and are addressed in Part 6. The following are two examples of back-to-back and interlaced structures:

## Example 1: Back-to-Back Elevated Rail Corridor

Back-to-back structures can be constructed in several ways:

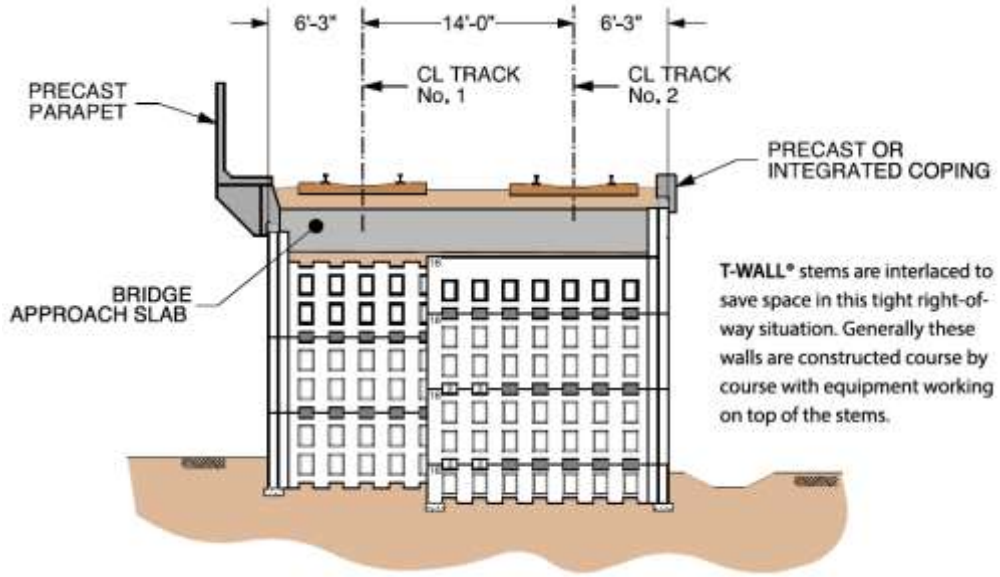
- Phased: one side at a time, working around/under or incorporating existing structures.
- Concurrently: equipment works between the walls as both sides are constructed.
- Simultaneously: course-by-course construction with equipment working on top of the stems.




*Back-to-back wall typical section*

*Wichita Central Rail Corridor Grade Separation*

## Example 2: Interlaced Bridge Approach




*Interlaced bridge approach typical section*

The T-WALL bridge approach for Tri-Rail New River Bridge has a live track on one side and a major highway on the other (Figures 29 and 30):


A cantilevered walkway was built on the field side of the approach to provide maintenance crews safe access to the new tracks (Figures 31 and 32):

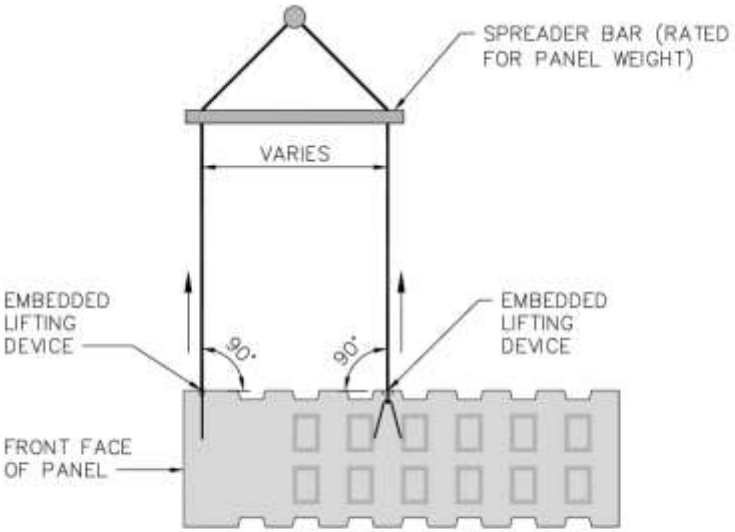
# Part 5: Handling, Backfilling, and Compaction

*Large flat-bed or step deck semi-truck averaging 4 to 5 units per load*

*Small flat bed truck where access is restricted*

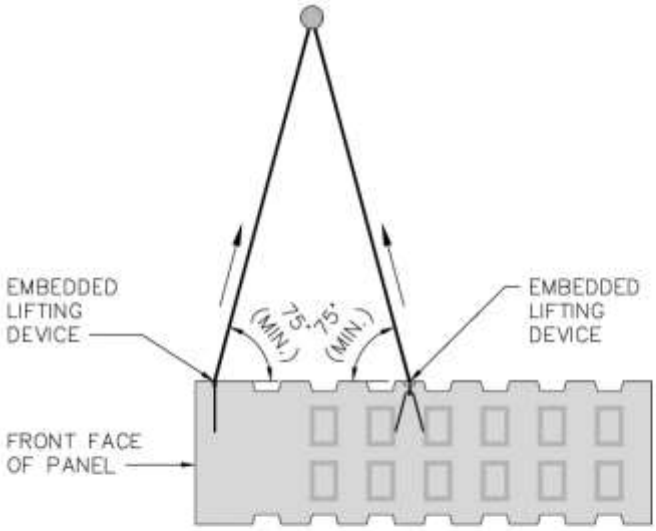
*Front end loader where access is very restricted*

## Setting Units in Place: Lifting Details




T–WALL LIFTING DIAGRAM
(SIDE VIEW)

PREFERRED LIFT OPTION – STANDARD UNIT




T–WALL LIFTING DIAGRAM
(SIDE VIEW)

ALT. LIFT OPTION – STANDARD UNIT

## Construction Alternatives by Access and Wall Type

| | Setting Units | Placing Backfill |
|---|---|---|
| Rear Only Access |  |  |
| | Offload units directly into wall from truck using a tracked excavator. | Front-end loader |
| Front Only Access |  |  |
| | • Offload units into holding area<br>• Transport to excavator with front-end loader<br>• Set with excavator from in front of the wall | Telebelt trucks or towed conveyors. Excavators supply backfill to telebelts. |
| Top/Side Only Access |  |  |
| | • Offload units into holding area<br>• Transport to excavator with front-end loader<br>• Set with excavator from the side/end or top of the wall | Telebelt trucks on backfilled T-WALL. |

# Compaction

Skid Steer Loader

Excavator

Ride-on compactor

Slinger truck

Long boom excavator

Walk-behind compactors
Remote compactors
Vibratory plates

Slinger truck on backfilled T-WALL. Note: equipment on top of stems should always be rolled over timbers or a layer of fill. Never directly on unit stems.

Excavator on backfilled T-WALL stems

Small compactors lifted over the T-WALL stems by on-site equipment

# Compacting Lifts of Backfill: Equipment and Methods

Trench rollers are very maneuverable and effective

Operator driven smooth drum vibrating compactor working between the stems

Compacting with vibrating plate compactors. Note: water truck and hose for moisture

Small jumping jack type compactor

Close up of vibrating plate compactors working between stems

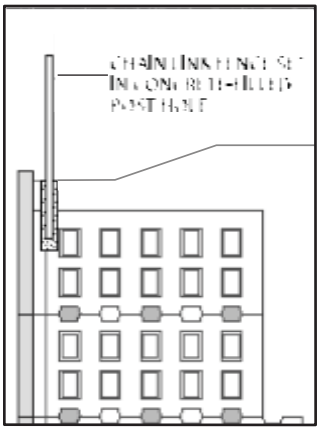
A nuclear density gauge is used to measure density and moisture of the compacted soil. Each lift should be tested

# Part 6: Structural Details

## Fences and Railings

Fabricated fence

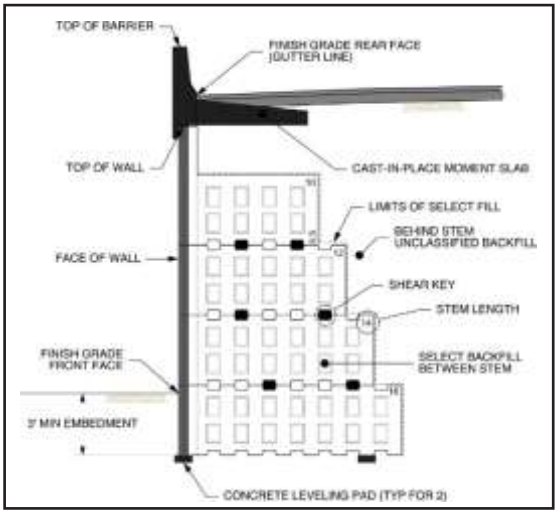
Fabricated fence with coping



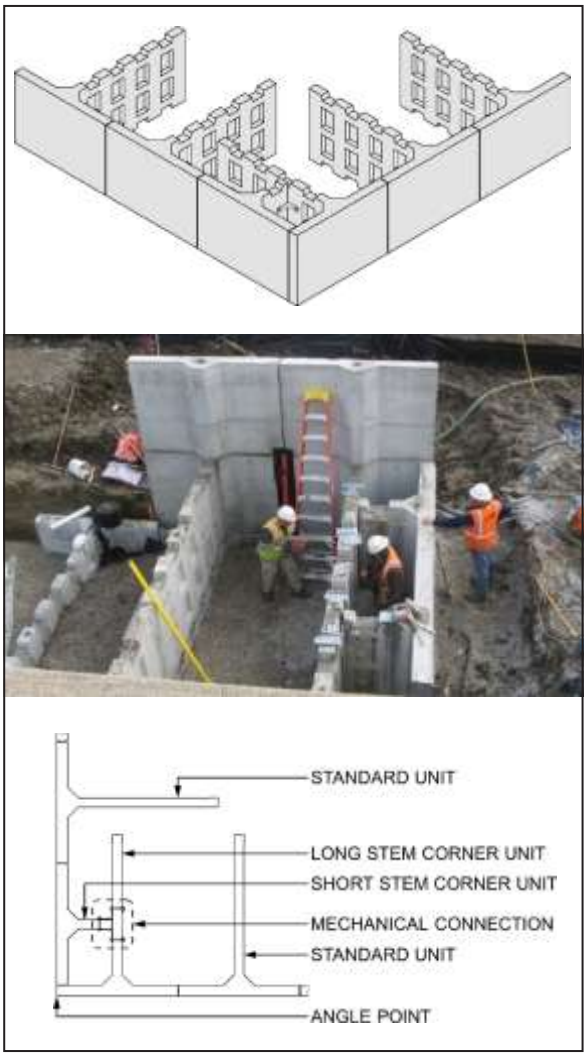
Set chain link fence

Bolted chain link fence posts

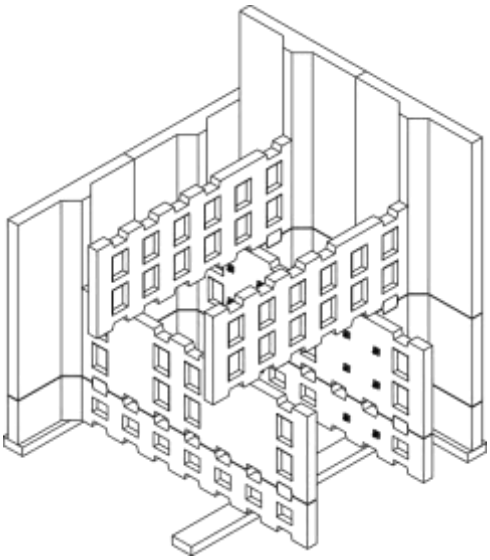
## Barriers



## Corners and Angle Points



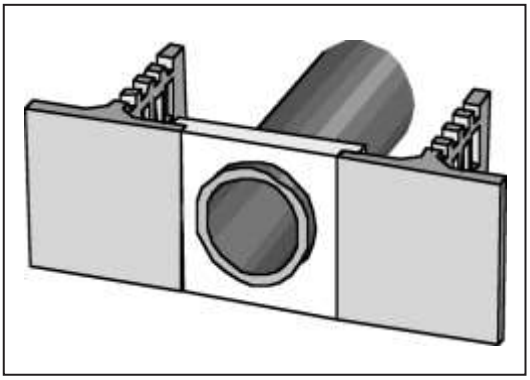

Bolted corner



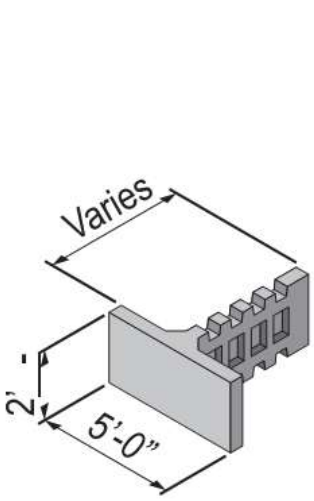
Interlaced corner detail

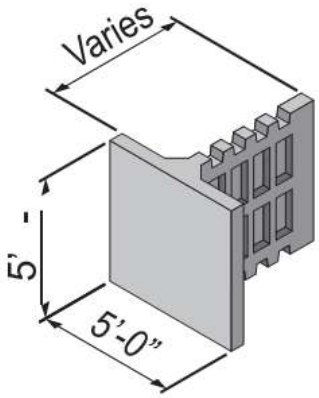
Angle point

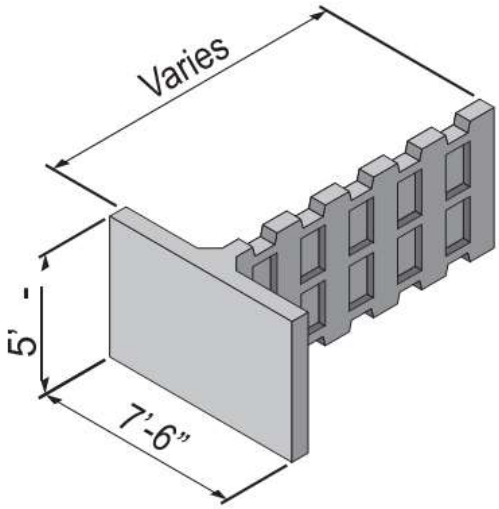
## Large Pipe Penetrations



# Part 7: Unit Dimensions and Weight




Standard Unit

| STEM LENGTH (ft) | UNIT WEIGHT (lbs) |
|---|---|
| 6'-0" | 1,850 lbs |
| 8'-0" | 2,100 lbs |
| 10'-0" | 2,350 lbs |
| 12'-0" | 2,600 lbs |
| 14'-0" | 2,900 lbs |
| 16'-0" | 3,150 lbs |
| 18'-0" | 3,400 lbs |
| 20'-0" | 3,650 lbs |
| 22'-0" | 3,925 lbs |
| 24'-0" | 4,200 lbs |
| 26'-0" | 4,450 lbs |
| 28'-0" | 4,700 lbs |
| 30'-0" | 4,975 lbs |

Double Unit

| STEM LENGTH (ft) | UNIT WEIGHT (lbs) |
|---|---|
| 6'-0" | 3,700 lbs |
| 8'-0" | 4,200 lbs |
| 10'-0" | 4,750 lbs |
| 12'-0" | 5,250 lbs |
| 14'-0" | 5,750 lbs |
| 16'-0" | 6,250 lbs |
| 18'-0" | 6,750 lbs |
| 20'-0" | 7,350 lbs |
| 22'-0" | 7,850 lbs |
| 24'-0" | 8,300 lbs |
| 26'-0" | 8,850 lbs |
| 28'-0" | 9,350 lbs |
| 30'-0" | 9,850 lbs |

Large Unit

| STEM LENGTH (ft) | UNIT WEIGHT (lbs) |
|---|---|
| 8'-0" | 6,900 lbs |
| 10'-0" | 7,600 lbs |
| 12'-0" | 8,300 lbs |
| 14'-0" | 9,000 lbs |
| 16'-0" | 9,700 lbs |
| 18'-0" | 10,500 lbs |
| 20'-0" | 11,200 lbs |

Notes:

1. Stem lengths may extend to 32 feet long.
2. Top units may extend up to 10 feet tall.
3. Refer to shop drawings for unit weights not shown here.

# Glossary of Terms

**Agency:** The person(s), firm, or corporation acting as Agent for the Owner

**Contract Documents:** The Owner-Contract agreement, including the conditions of the Contract (general, supplementary, and other conditions), the drawings, Specifications and the provisions of the agreement between the Contractor and The Reinforced Earth Company; and also including all addenda issued prior to execution of the Contract, all modifications thereto and any other items specifically stipulated as being included in the Contract Documents.

**Contractor:** The individual, firm, or corporation undertaking the execution of the Work under the terms of the Contract, and acting directly through its Agents or employees.

**Engineer:** The person(s) designated by the Owner, as having authoritative charge over certain specific engineering operations and duties.

**Inspector:** The authorized representative assigned to make a detailed inspection of any or all portions of the Work or materials thereof on the Owner's behalf.

**Owner:** The Owner of a project. The agency, person, fi rm, or corporation with which a Contract has been made for the payment of the Work performed under the Contract.

**Plans:** The official approved plans, profiles, typical cross-sections, working drawings, and supplemental drawings, or exact reproductions thereof, which show the locations, character, dimensions and details of the Work to be performed.

**Specifications:** A description, for contract purposes, of the materials and workmanship required in a structure(s), as also shown on the related working drawings. The written material containing the standard provisions and special provisions, as may be necessary, pertaining to the quantities and qualities of materials to be furnished under the Contract.

**Technical Advisor:** Representative of The Reinforced Earth Company or licensed precaster who may be available to assist the Contractor with material scheduling and coordination, and give advice on the recommended construction procedures applicable to The Reinforced Earth Company's structures as set out in this manual.

**Work:** The entire scope of the Work to be performed at the site of the construction project including labor, materials, equipment, transportation and such other facilities as are necessary to fulfill all obligations under the Contract.

# Contact Information

The Reinforced Earth Company maintains full-service offices throughout the United States. Contact the office serving your area for technical service.

| | | |
|---|---|---|
| **Southeast Region**<br>(AL, GA, MS, SC, TN) | Atlanta, GA | (770) 242-9415 |
| **Northeast Region**<br>(VT, MA, ME, NH, NY, RI, VT) | Boston, MA | (978) 664-2830 |
| **Central Region**<br>(AR, LA, NM, OK, TX) | Dallas, TX | (817) 283-5503 |
| **Midwest Region**<br>(IA, IL, IN, MN, MO, WI) | Chicago, IL | (630) 898-3334 |
| **Southwest Region**<br>(AZ, CA, HI, NV, UT) | Los Angeles, CA | (949) 427-3601 |
| **Western Region**<br>(AK, CO, ID, KS, MT, ND,<br>NE, OR, SD, WA, WY) | Denver, CO | (303) 790-1481 |
| **Central-Northeast & Mid-Atlantic Regions**<br>(DC, DE, KY, MD, MI, NC,<br>NJ, OH, PA, VA, WV) | Sterling, VA | (703) 547-8797 |
| **Florida Region**<br>(FL) | Orlando, FL | (407) 226-2840 |

**Corporate Headquarters**
The Reinforced Earth Company
45610 Woodland Rd., Suite 200
Sterling, Virginia 20166

Phone: (703) 547-8797 or (800) 446-5700

www.reinforcedearth.com

# NOTES


**Corporate Headquarters**
45610 Woodland Rd., Suite 200
Sterling, Virginia 20166
(800) 446-5700

www.reinforcedearth.com