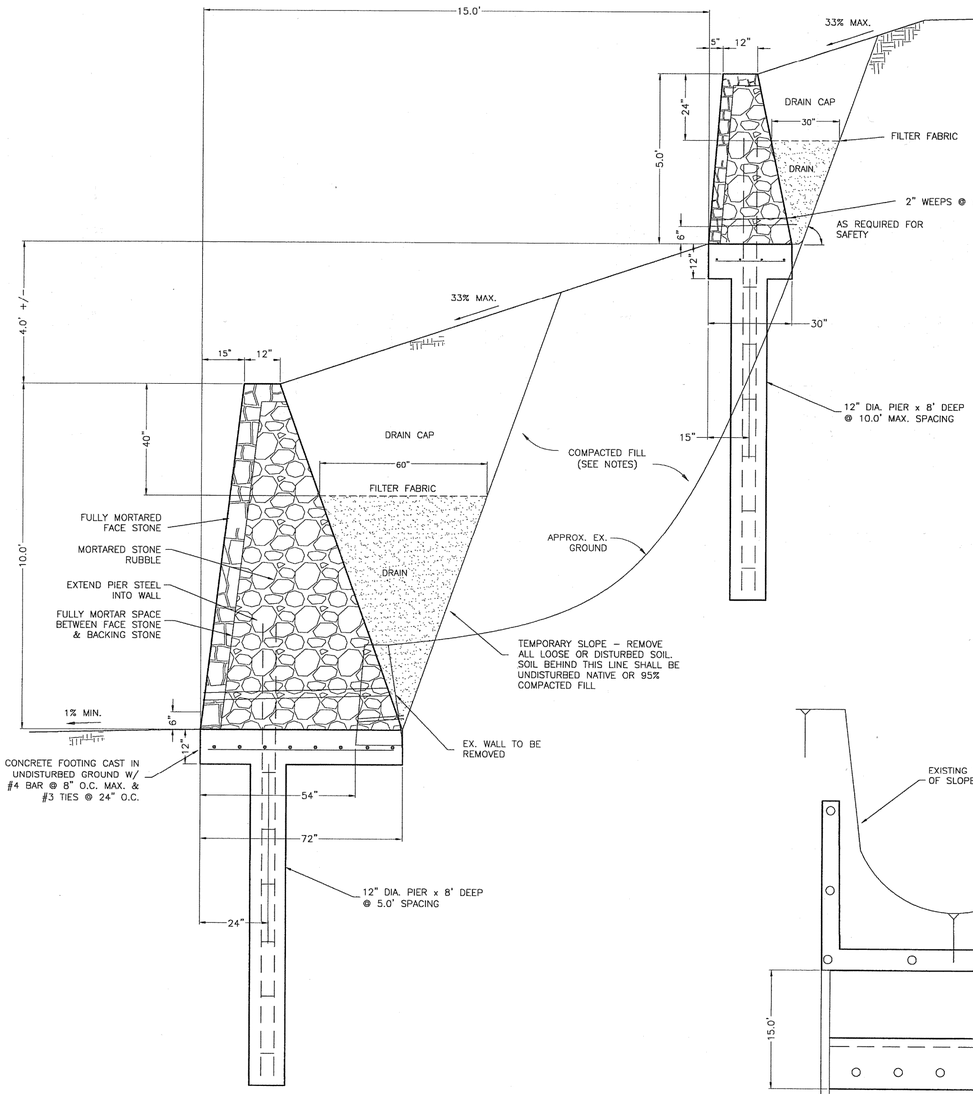
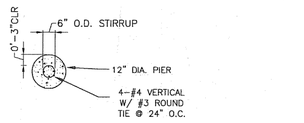
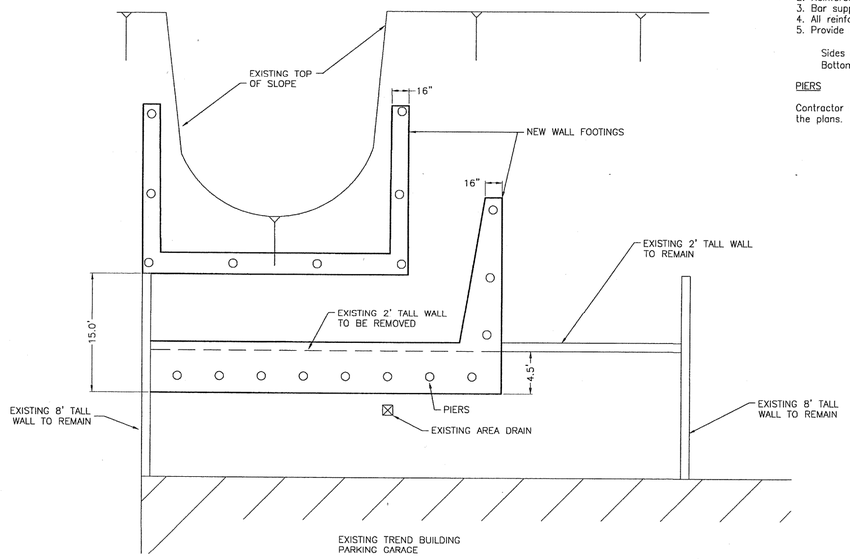


A RETAINING WALL DETAIL
N.T.S.



B 12" DIAMETER PIER
N.T.S.



A RETAINING WALL PLAN
N.T.S.
NOTE: THIS IS NOT A SURVEY. USE FOR ILLUSTRATION ONLY.

DESIGN CRITERIA:
EFP = 40 pcf
FRICTION = 0.35
PASSIVE = 150 psf + 200 pcf
F.S. = 1.50
MAX. BEARING = 2,100 psf

GENERAL

1. These plans are applicable only for the site, grades, slopes & retained heights (H) shown herein. If conditions change from those described herein, the engineer should be notified immediately to determine the effect, if any, on the retaining wall design. No re-use or revision without Engineer consent. This plan is for structure dimensions and material requirements only. Horizontal and vertical control is by others.
2. Periodic observation during construction is recommended by or under the direction of a licensed professional engineer experienced in retaining wall design and construction. Observations are made only to develop a general opinion regarding the contractors compliance with project specifications. No warranty or guarantee is provided.
3. Wall design complies with 2012 International Building Code Sections 1610 & 1806.
4. SURCHARGE LOADS - NONE ALLOWED. No surcharge is expected for structures located greater than 1.5H distance from retaining walls.
5. TEMPORARY SLOPE - By Contractor, as required for safety. All fill placed behind the temporary slope should be placed in accordance with the Earthwork recommendations in the geotechnical report.
6. Minor movement & cracking is normal and expected for this type of construction. Maintaining ground moisture as uniform as possible through regular irrigation & positive drainage will reduce but not eliminate cracking.

MATERIALS

1. All MORTAR shall be minimum 1,800 psi.
2. STONE - Face stone & pattern shall be approved by owner. Minimum compressive strength - 5,000 psi.
3. BACKING STONE shall be clean 8"x12" rip-rap or face stone rubble. Stones shall be sorted & nested by size to minimize voids.
4. DRAIN - ASTM C33 type 57 or 67 angular gravel or crushed stone. Provide filter fabric cover with min. 2 oz/yd weight. Provide min. 2" diameter weep holes @ 10' max. spacing. The drain shall be at least as wide as the minimum dimension (W) provided herein.
5. DRAIN CAP - Moist native soil compacted sufficiently to prevent settlement and sinkholes then the ground surface should be graded and sealed to reduce infiltration of runoff. Use equipment & methods that will not damage walls.
6. COMPACTED FILL - Clean soil w/ no organics or rock greater than 3" size placed in max. 12" loose lifts & compacted to 95% relative compaction @ +/- 3% of optimum moisture content for lean clay (CL) & clayey sand (SC) or +0 to +5% optimum moisture for heavy clay (CH) as determined by ASTM D 698 & ASTM D 2487. Any imported fill should have plasticity index (PI) less than on-site soil. No sand (SP/SW) is permitted.
7. CONTROL JOINTS shall be provided @ max. 25' spacing.
8. BACK FILL - Stone rubble mixed with moist native soil and compacted sufficiently to prevent sink holes and low spots. Use only for H < 3.5'.

FOOTINGS

1. The footings shall be cast in UNDISTURBED SOIL OR ROCK to the minimum depth (D) specified on these plans. No forming of the front face shall be permitted.

UTILITIES

1. The contractor shall field verify the horizontal and vertical locations of all utilities prior to start of work and shall notify the engineer of any conflicts or if locations are different than shown on the plans.
2. Contractor is responsible for protecting existing utilities (shown or not shown) within scope of construction. If any existing utilities are damaged, the contractor shall replace them at his own expense.

DRAINAGE

1. The contractor shall maintain adequate drainage during all phases of construction. The contractor shall use silt fences and/or straw bales (or any method approved by the regulating agency) as required to prevent silt & water from flowing into or behind walls during construction.
2. Contractor shall comply with all applicable federal, state, or local erosion, conservation, and siltation ordinances. Contractor shall remove all temporary erosion control devices upon completion of work.

REINFORCED CONCRETE

1. Complete concrete work in compliance with "Building Code Requirements for Structural Concrete" (ACI 318-99). Use materials and methods in compliance with "Specifications for Structural Concrete for Buildings" (ACI 301). Structural concrete shall be of normal weight aggregate with specified properties as described below. Use Type I or II cement conforming to ASTM C 150. Reject any concrete with non-complying slump and return to the supplier.

28-day strength	slump	max. aggregate	Entrained Air
3,000psi	4"+/-1"	1"	3% max.

2. Reinforcing bars: Use deformed Grade 60 bars conforming to ASTM A-615.
3. Bar supports: Tie or stake all steel or use wide-base plastic chairs @ maximum 24 inch spacing.
4. All reinforcing shall lap 30 bar diameters at splices unless noted otherwise.
5. Provide minimum concrete protection for reinforcing as listed below, unless noted otherwise on sections or details.

Sides & top - 2"
Bottom - 3"

PIERS

Contractor shall anticipate ground water and caving soil and be prepared to pump or case piers as necessary to install piers to depth indicated on the plans.

STATE OF TEXAS
GERALD J. JORDAN
77545
REGISTERED
PROFESSIONAL ENGINEER
7/8/14

RETAINING WALL PLAN & DETAIL

THE TREND BUILDING
CITY OF ROCKWALL, TEXAS

JORDAN CONSULTING ENGINEERS
2405 W. PIONEER PARKWAY, SUITE 130, TEXAS 76013 (817) 860-0166
FIRM #4430

DATE: 7-8-14	CHECKED BY: GJJ	SHEET NO. 1 OF 1
SCALE: N.T.S.	PROJECT NO. 3237	