

SECTION 31 23 01

RECLAIM TANK SITE PRELOADING

04/06

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM A 36/A 36M	(2008) Standard Specification for Carbon Structural Steel
ASTM A 53/A 53M	(2007) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM D 1785	(2006) Standard Specification for Poly(Vinyl Chloride) (PVC), Plastic Pipe, Schedules 40, 80, and 120

1.2 WORK INCLUDED

This Section covers the Work necessary to preload the Reclaim Tank Area shown on the Drawings, complete.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-05 Design Data

Settlement Records

Submit settlement records to the Engineer for review based on the monitoring schedule presented in Article 3.1 CONSTRUCTION SEQUENCE.

PART 2 PRODUCTS (NOT USED)

2.1 GENERAL

The Contractor shall provide all materials necessary to accomplish the work as shown or specified herein. At the completion of the preload, the Contractor shall remove the materials from the site at no additional cost to the Owner.

2.2 PRELOAD MATERIAL

The preload material shall be natural soil excavated from areas designated

by the Engineer, free from roots or organic materials with maximum particle size of 3 inches.

2.3 SETTLEMENT PLATFORMS

a. Settlement platforms shall be fabricated as shown on Standard Detail 3163-107 in Volume 2. Steel pipe and pipe fittings for the standpipe shall be standard weight steel, conforming to ASTM A 53/A 53M, with screwed fittings.

b. All pipe requiring threading shall be provided with standard taper iron pipe size threads. Sufficient threads shall be provided on each length of pipe to permit lengths of pipe to butt within 1/8 inch when connected with a standard pipe coupling.

c. Steel plate for settlement platforms shall conform to ASTM A 36/A 36M. The settlement platform standpipe housing shall be Schedule 40, Type II polyvinyl chloride (PVC) pipe conforming to ASTM D 1785.

PART 3 EXECUTION

3.1 CONSTRUCTION SEQUENCE

a. The placement of preload material shall be conducted in the following sequence:

1. Install settlement platforms on the top of the new subgrade at locations as shown on Standard Detail No. 3163-105/Volume 2.

2. Install benchmarks at locations at least 200 feet from the center of the preloaded area.

3. Place preload material to the elevations and in accordance with the procedures specified hereinafter. A typical preload cross section is shown on Standard Detail No. 3163-106/Volume 2.

4. Survey the settlement platform at least once a day during the placement of preload material and for the first 2 weeks after the placement of the preload. Survey the settlement platforms twice a week thereafter.

5. Submit Settlement Records at least once per week to the Engineer for review.

b. After the preload has been in place for at least 1 month and recorded settlements are less than 0.01 feet per week, remove preload material and dispose of at locations determined by the Construction Manager and Engineer.

3.2 INSTALLATION OF BENCHMARKS

Furnish and install two 2.5-inch by 2.5-inch precast concrete benchmark posts. Benchmarks shall be installed in areas that preclude disturbance of the benchmark. The Contractor shall be responsible for the protection of the benchmarks.

3.3 INSTALLATION OF SETTLEMENT PLATFORMS

Install settlement platforms on the new subgrade at the locations shown on

Standard Detail No. 3163-105/Volume 2. A typical preload cross section is shown on Standard Detail No. 3163-106/Volume 2. Determine plate elevations prior to placing preload materials. Install the pipe in sections as the fill progresses so that a minimum 6 inches of the settlement platform standpipe housing is exposed. Prior to the addition of any standpipe sections, transfer the proper elevations between old and new sections. No heavy construction equipment shall be operated within 5 feet of settlement platforms. Construct and compact preload material adjacent to settlement platforms by hand methods. All equipment operators shall take care to avoid disturbance of the settlement platforms during the embankment operation. In the event a settlement platform is damaged by construction equipment, the Engineer shall be notified immediately, and the Contractor shall repair or reconstruct the damaged settlement platform before additional embankment is placed. The Contractor shall measure the elevations of the platforms during the preload period as specified hereinbefore. Copies of settlement measurements shall be submitted to the Engineer for review on a weekly basis.

3.4 PLACEMENT OF PRELOAD MATERIAL

Place preload material conforming to Paragraph Preload Material hereinbefore specified in maximum 1 foot lifts. Compaction is not specified; compact each lift using construction equipment so that support for dump trucks or other equipment traffic is provided. The fill material shall be placed to the elevation shown on Standard Detail No. 3163-106/Volume 2 or specified by the Engineer.

3.5 ACCESS TO PRELOAD AREA

The Contractor shall be responsible for constructing or improving the existing subgrade for access to the preload area. The Contractor shall also be responsible for providing any ramps or fill to get trucks to the top of the preload. The details of these roads or ramps shall be submitted for review prior to beginning construction.

-- End of Section --