

ARTICLE XV – STRUCTURAL EXCAVATION AND BACKFILL

15.1 GENERAL

This Article shall serve as an addendum to the Hawaii Department of Transportation standard specifications 2005 Edition. The work consists of furnishing equipment, materials, labor and appliances and perform all work in connection with excavation, backfill and compaction necessary for the job, including providing and installing the exterior waterproofing system to the below-grade structures in accordance with this Article of the specifications and the standard specifications, Sections 206 and 703.20.

15.2 DESCRIPTION

- (A) Excavating and backfill for water and sewer drainage structures
- (B) Excavating and backfill for valve structures
- (C) Disposing of uncontaminated surplus material from excavations
- (D) Provide and install asphalt primer, hot asphalt and fabric waterproofing membrane system where specified on the contract drawings

15.3 MATERIALS

- (A) Structural Backfill shall be per Subsection 703.20 of the standard specifications. Only Structural Backfill Material A is allowed for backfilling of drainage structures.

15.4 STRUCTURE EXCAVATION

- (A) Excavation for structures shall be adequate to accommodate the new structure at the specified elevation. Excavation shall conform to Subsection 206.03(A) of the standard specifications.
- (B) Contractor is responsible for design, construction and inspection of any shoring required for excavations in conformance with OSHA requirements and shall be sufficient in strength to prevent movement of the soil held in place by the shoring.
- (C) Due to anticipated soft and/or loose subsurface soil conditions, some movement of soil around the underground structure excavations should be anticipated due to changes in the earth stresses during and after construction, especially during extraction of a sheet pile system, where utilized.
- (D) Stabilization of soft spots shall comply with Section 15.4(D).

15.5 STRUCTURAL BACKFILL

- (A) Backfill against structures shall be compacted to 90% relative compaction in conformance with Subsection 206.03(B) of the standard specifications.
- (B) Backfill to the elevation of the pavement aggregate subbase or the elevation where installation of CLSM is to occur as indicated on the contract documents.
- (C) CLSM shall be provided for backfill against structures where detailed. The Contractor shall get written approval to use CLSM backfill in location not specifically specified in the project documents.
- (D) Contractor shall submit CLSM mix design for review at least two weeks prior to pouring.
- (E) Furnish batch/delivery tickets to the Construction Engineer at the time CLSM is poured or no later than when the truck leaves the work area where the CLSM was poured.
- (F) Stabilization of soft spots shall comply with Section 15.4(D).

15.6 MEASUREMENT AND PAYMENT

Structure excavation and backfill will not be measured or paid for separately, but will be compensated as part of the bid items specified in Article X of these specifications of which it is a part.

END OF ARTICLE