

## **APPENDIX 'A'**

# **SHAW BELOW GRADE ENCLOSURE INSTALLATION SPECIFICATIONS**

**Below Grade  
Enclosure Installation****Version 1  
March 20, 2015****Summary**

Standardized below grade enclosure installation guideline to be utilized by construction and maintenance personnel.

**Stakeholder(s)**

Planning

**Specifics****Overview**

Shaw needs to ensure that all below grade enclosure installations follow a standardized installation procedure with recommended and approved products. Installation procedures and products are designed for modular installation, ease of repair, and versatile applications. Shaw below grade enclosures should meet the ANSI/SCTE 77-2010 "Specification for Underground Enclosure Integrity". Listed below are the minimum specifications to ensure the safe and reliable performance of below grade enclosures.

**Loading Requirements – Tiers**

|            |   |
|------------|---|
| Light Duty | Pedestrian traffic only. Vertical load rating of 3000 lbs.  |
| Tier 5     | Sidewalk applications with a safety factor for occasional non-deliberate vehicular traffic. Vertical load rating of 5000 lbs.   |
| Tier 8     | Sidewalk applications with a safety factor for non-deliberate vehicular traffic. Vertical load rating of 8000 lbs.  |
| Tier 15    | Driveway, parking lot, railroad right of way and off-roadway applications subject to occasional non-deliberate heavy vehicular traffic. Vertical load rating of 15,000 lbs. |
| Tier 22    | Driveway, parking lot, railroad right of way and off-roadway applications subject to occasional non-deliberate vehicular traffic. Vertical load rating of 22,500 lbs.       |

## Installation Procedures

The installation procedures for the below grade enclosure will be as follows.

### **WARNING:**

**Buried CATV Cables. Call before digging.**

- 1) Secure permits as required by city and company. Ensure that national - local electrical and building codes, Occupational Safety Health and company safety work rules are observed and provisions made for street flags, barricades and cones.
- 2) Plan excavation approximately twelve to sixteen inches (12" -16") longer and wider than actual dimensions of the vault to be installed. Similarly, excavate six inches (6") deeper than the overall dimensions of the vault with cover in place.
- 3) Mark location and begin excavation to appropriate dimension with mechanical excavator, or hand dig as appropriate. Confirm the excavation floor is level.
- 4) Backfill with six inches (6") of crushed rock for drainage and to prevent subsidence over time. Bedding material shall be crushed rock 3/4" or smaller. Desired compaction and equivalent resistance to lateral loading will not be achieved with round stone. The rock should be free of soil and organic material.
- 5) At this stage, if the area is prone to rodent infestation, an optional wire mesh may be installed on the level bedding material. An appropriate sized wire mesh can be utilized to control pest and rodents and prevent possible destruction of cable after installation.
- 6) Tamp base material to level with a mechanical tamper or hand tamper. Lower vault into excavation on top of backfill material and adjust height to grade.
- 7) The cover of the enclosure shall be at final grade. Soil in the immediate vicinity shall be tamped and sloped away from the enclosure.
- 8) Center the vault in the excavation parallel with sidewalk or curb. Mark the vault for any duct entry locations. The thermoplastic vault may be cut with a hole saw and drill motor.
- 9) Replace cover on the underground enclosure before backfilling. Bolting the cover in place is recommended, but not required during backfill.
- 10) Backfill material can vary based on product and installation location. It is customary and acceptable in landscape installations where vehicles are prevented from traffic on or around a

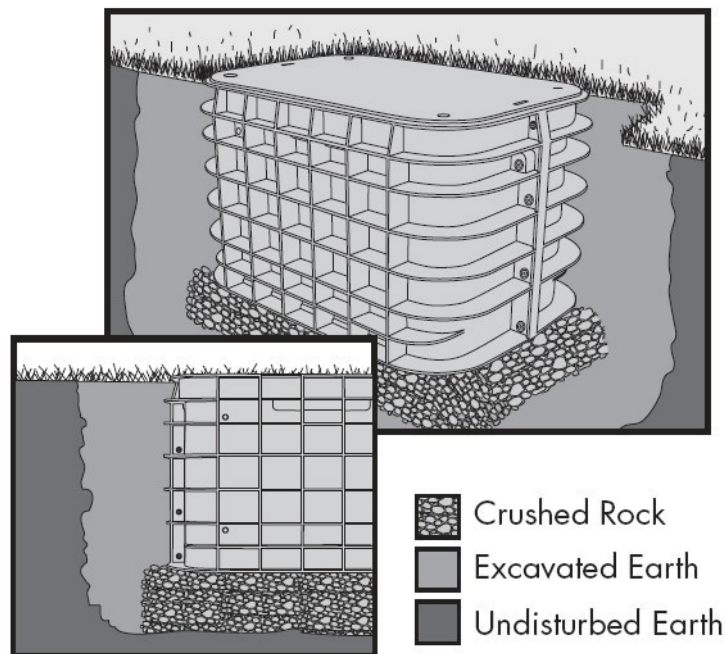
Pedestal Rated vault to use the spoils removed during excavation for backfill. Remove stones three inches (3") and larger. Excess backfill material should be removed from the site.

- 11)** For all product categories, begin the backfilling operation by adding soil, crushed rock or dry lean mix in eight inch (8") lifts or layers. A mechanical tamper may be used with the below grade enclosures.

## Installation Diagrams

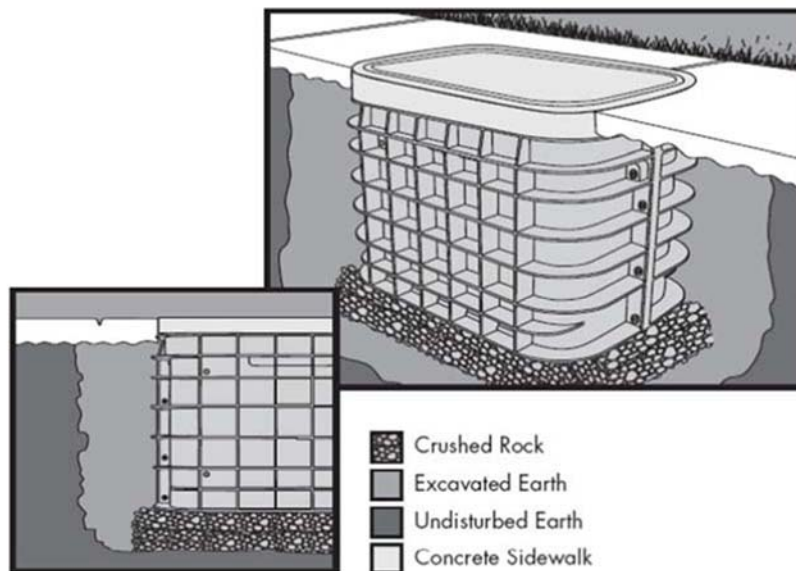
The installation procedures for the below grade enclosures

*Figure #1: Light Duty Application - Typical grass surround installation*



Crushed rock backfill is shown as specified in the Installation Procedures. The tamped crushed rock supports the vault preventing subsidence and providing for drainage. The excavated spoils have been used for backfill. Note the soil is free of rocks larger than three inches.

*Figure #2: 20,000 lb Application - Typical sidewalk installation*



Crushed rock backfill is shown as specified in the Installation Procedures. The tamped crushed rock supports the vault preventing subsidence and providing for drainage. The excavated spoils have been used for backfill. Note the soil is free of rocks larger than three inches. The PC Ring and Cover should be installed and secured to the SGLB vault during the backfill operation. This will eliminate debris from entering into the vault and interfering with the cover fasteners and will insure the cover its properly upon completion of installation.

*Figure #3: Typical below grade enclosures.*

