NOTES

Tightly wrap galvanized anchor cable one time completely around the circumference of the conduit. Furnish hook at least 4" long at the ends of the anchor cable as shown above.

Cut galvanized anchor cable to length required.

Form or drill 1/4" diameter openings for anchor cable at locations shown. Alternatively, place anchor cable in wet concrete at the dimensions shown above to secure conduit to headwall.

Fill any openings made for anchor cables with grout after the cables are placed to a taut fit.

Secure cables such that they are taut after the grout or concrete has cured.
PLASTIC & METAL PIPE PROFILE
W/ ANCHOR CABLE EYE BOLT OPTION

ANCHOR CABLE DETAIL FOR EYEBOLT OPTION

NOTES

Drill openings a min. of 3' deep for eyebolts at the locations shown. Insert entire length of bolt shank into opening, fill openings with grout and allow to harden before securing anchor cable. Alternatively, use eyebolts in wet concrete at the locations shown above.

Tightly wrap galvanized anchor cable one time completely around the circumference of the conduit.

Cut galvanized anchor cable to length required.

Place cable through eyebolt and form a loop as shown in the above detail. Ensure the cable is pulled to a tight fit and secured with a galvanized wire rope clip.

Provide improved inlet of upstream end of plastic pipe (see detail sheet 3/3).

PLASTIC & METAL PIPE END TREATMENT "A"
W/ ANCHOR CABLE EYE BOLT OPTION

METAL PIPE END TREATMENT "B"
W/ ANCHOR CABLE EYE BOLT OPTION

Top surface of 6" inlet headwall extension

Headwall extension

6" Galvanized eyebolt 1/2" (min.) inside diameter

Galvanized anchor cable 1/4" (min.) diameter

1/2" min. diameter galvanized anchor cable

1/2" min. inside diameter galvanized eyebolt

1/4" min. diameter galvanized anchor cable

1/2" min. inside diameter galvanized eyebolt
GENERAL: Provide a riprap reinforced concrete slab according to SCD DM-1.1 if the pipe is depressed or if it is specified in the plans. Payment for the slab is made per square yard of Item 601 Riprap using 6” Reinforced Concrete Slab and includes the cost of the outlet wall. This drawing is for cast-in-place half-height concrete headwalls. Precast half-height headwalls are only approved for round conduits with a maximum conduit diameter of 8". When precast headwalls are furnished, provide openings for the anchor cable as shown and fill with grout after placement of the anchor cable. If anchor bolts are used with a precast headwall, fill the anchor cable openings with grout.

CONCRETE: Use 4000 psi compressive strength concrete for headwall. Concrete openings are based on headwalls without the 6” extension under the channel protection.

ANCHOR BOLT: Furnish bolts (see detail sheet 2/3) that meet ASTM A 307 for anchoring both ends of metal pipe. The top 6” of the bolt must be galvanized according to ASTM A 153. Cost of anchors is included in the price bid per foot of Item 611.

ANCHOR CABLE: Furnish galvanized anchor cable (see detail sheet 2/4 & 3/4) that meet ASTM A 489 for anchoring both ends of plastic pipe. The top 6” of the cable must be galvanized according to ASTM A 153. Cost of anchor cable and wire rope clip is included in the unit price bid per foot of Item 611.

EYEBOLTS: Furnish eyebolts (see detail sheet 3/4) that meet ASTM A 499 for anchoring both ends of metal or plastic pipe. The eyebolts must be galvanized according to ASTM A 153. Cost of eyebolts is included in the price bid per foot of Item 611.

IMPROVED INLET FOR HDPE PIPE: Furnish improved inlet of upgradient end of culverts and open-ended storm sewers using plastic pipe when specified in the plans. Use HDPE smooth cap and flange materials according to ASTM D 3350 345464C.