# BOX CULVERT - NOTES

**GENERAL NOTES:**

1. The following notes shall apply unless noted otherwise on the plans or specifications. In the case of conflict with the plans or specifications, the more restrictive requirements shall apply.

**REFERENCE SPECIFICATIONS:**

1. Design Criteria: LRFD Bridge Design Specifications
2. Manufacture: ASTM C1577

**MATERIALS:**

1. Aggregate conforms to ASTM C33.
2. Portland cement conforms to ASTM C150.
3. Fly Ash conforms to ASTM C618.
4. All bar reinforcing steel conforms to ASTM A615 Grade 60.
5. Welded Wire Fabric conforms to ASTM A1064, 70 or 80 KSI.
6. Admixtures conform to ASTM C494.
7. Concrete minimum compressive strength (at 28 days) 4000 PSI, unless greater strength is required.

**DELIVERY AND INSTALLATION:**

1. The contractor provides rigging and off loading at the job site.
2. The contractor provides all weld plates and accessories which are not cast directly into the concrete.
3. Follow any installtion procedures described in the project documents. More restrictive requirements outlined in the project documents or a corresponding geotechincal report take precedence.
4. The subgrade preparation and backfill sections of these notes provide basic installation criteria.

**SUBGRADE PREPARATION:**

1. All loose and disturbed soil shall be removed prior to placing box sections.
2. The box sections shall be underlain by at least 6 inches of screeded compacted gravel over compacted structural fill or undisturbed native soils.
3. If no project specifications apply, follow WSDOT Standard 7-02.3(6) A4.

**BOX JOINTS:**

1. Box culverts are supplied with a joint mastic which prevents dirt from infiltrating the joint. This gasket is not water tight.
2. For projects requiring a watertight joint, prepare the joint as shown on page 4. After fitting the joint with the joint mastic gasket and adhesive tape, use a non-shrink grout conforming to ASTM C1107; mastic gasket conforming to ASTM C990, and butyl tape conforming to ASTM C877.

**BACKFILL:**

1. Backfill shall consist of well graded soil free of organics and deleterious material and large stones.
2. Backfill shall be placed in 12 inch lifts and compacted to a minimum of 90% modified proctor density.