

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 01 35 43 – Environmental Procedures
- .2 Section 33 42 13 – Pipe Culverts
- .3 Section 31 24 13 – Roadway Embankments.

1.2 ENVIRONMENTAL REQUIREMENTS

- .1 Operation of construction equipment in water is prohibited.
- .2 Use borrow material from watercourse beds only after receipt of written approval from Departmental Representative.
- .3 Design and construct temporary crossings to minimize environmental impact to watercourse.
- .4 Constructing temporary crossings of watercourses where spawning beds are indicated is prohibited.
- .5 Dumping excavated fill, waste material, or debris in watercourse or wetland is prohibited.

1.3 REFERENCES

- .1 U.S. Environmental Protection Agency (EPA) / Office of Water
 - .1 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Sustainable Design Submittals:
 - .1 Erosion and Sedimentation Control: submit copy of erosion and sedimentation control plan in accordance with EPA 832/R-92-2005 and authorities having jurisdiction.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 EXISTING CONDITIONS

- .1 Maintain existing flow pattern in natural watercourse systems.

- .2 In natural systems maintain existing riffle pool and step pool patterns.

3.2 SITE CLEARING AND PLANT PROTECTION

- .1 Temporary Erosion and Sedimentation Control:
 - .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
 - .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
 - .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- .2 Minimize disturbance to vegetated buffer zones and protect trees and plants on site and adjacent properties where indicated.
- .3 Wrap trees and shrubs adjacent to construction work, storage areas and trucking lanes in burlap.
- .4 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage.
 - .1 Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .5 Leave cuttings from trees and other vegetation on site as brush piles to allow for natural degradation.
 - .1 Secure large piles with degradable materials to prevent interference with watercourse.
- .6 Remove only trees that may offer future blockage problems as instructed by Departmental Representative.
- .7 Leave roots mass and stumps in place.
- .8 Maintain temporary erosion and pollution control features installed under this contract.

3.3 DRAINAGE

- .1 Pumping water containing suspended materials into watercourse is prohibited.
- .2 Establish rock chute spillways to accommodate safe surface water entry to watercourse as directed by Departmental Representative.

3.4 SITE RESTORATION

- .1 Establish vegetated buffer zones with suitable vegetation to minimum 3 m along edge of watercourse banks as determined by Departmental Representative.
- .2 Plant vegetation natural to area, suitable for application without requirement for fertilizers, pesticides and other chemicals.
- .3 Control stream bank erosion in lower section of watercourse with irregular shaped riprap underlain with non-toxic filter cloth of size determined by Departmental Representative.

- .4 Control stream bank erosion in upper section of watercourse by planting suitable vegetation as directed by Departmental Representative].
 - .1 Ensure planting occurs within 7 days after work on watercourse is complete.

END OF SECTION