

1.1 BRIDGE STRUCTURES

1.1.1 General

Bridge structures include culverts with an equivalent diameter of 1500 mm and greater. They are indicated on the mosaics by a specific bridge file number.

Work on bridge structures shall be done in accordance with the applicable sections of the Bridge Construction Specifications, as shown on the drawings, and as directed by the Consultant.

1.1.2 Material

All material for bridge installations shall be supplied by the Contractor.

The Contractor shall supply the **woven/non-woven** geotextile fabric. This material shall be **Terrafix 360R/Terrafix 400R** or equivalent.

The Contractor shall supply the necessary concrete, reinforcing bars and anchors for the concrete end treatment.

All screening for pit-run granular material shall be done at the source.

Any culvert material removed from existing installations shall become the property of the Contractor unless otherwise specified for use in the project. Any culvert material removed and not specified for use in the contract shall be disposed of as approved by the Consultant.

1.1.3 Construction

1.1.3.1 Bridge File _____ in _____, _____

The Contractor shall install a _____ mm dia. x _____ m invert length C.S.P. culvert on a _____ degree _____ skew at Station _____, in accordance with drawing S1418 and as directed by the Consultant.

The Contractor shall install a new _____ mm dia. x _____ m invert length S.P.C.S.P. on a _____ degree _____ skew at Station _____ in accordance with drawings _____ and S-1418 and as directed by the Consultant.

The existing _____ mm S.P.C.S.P. underpass is to be extended using a _____ mm diameter S.P.C.S.P.

The Contractor shall remove the existing _____ mm dia. x _____ m invert length S.P.C.S.P. and install a new _____ mm dia. x _____ m invert length S.P.C.S.P. on a _____ degree _____ skew at Station _____ in accordance with drawing S-1418 and as directed by the Consultant.

A concrete floor is to be placed the full length of the pipe.

The Contractor shall remove the existing _____ mm dia. x _____ metre S.P.C.S.P. as directed by the Consultant. The Contractor shall salvage _____ metres of the downstream end of the culvert. The remaining _____ metres shall

be hauled to the landfill site in _____ and disposed of as directed by the Consultant. The salvaged portion shall be loaded, hauled and reinstalled at station _____, approximately _____ m right of centreline, at a location determined by the Consultant, in accordance with drawing S1418.

The Contractor shall load, haul, and reinstall the salvaged S.P.C.S.P. as part of the detour constructed for Bridge File _____, at Station _____.

The Contractor shall construct a concrete end treatment in accordance with drawings _____.

The Contractor shall clean out brush and debris from the stream channel _____ m upstream and _____ m downstream from the inverts and fill in the scour area the downstream invert. The Contractor shall place _____ cubic metres of Class 1 Rip-Rap at the upstream end and _____ cubic metres of Class 2 Rip-Rap at the downstream end of the culvert in accordance with drawing S-1418 and as directed by the Consultant.

Perforated pipes may be required to control seepage at Bridge Files _____. If so directed by the Consultant, the Contractor shall install perforated pipes and geotextile filter fabric as per Specification 2.8, Perforated Pipe Subdrain Installation and as directed by the Consultant.

A concrete floor is to be placed the full length of the new pipe. The concrete is to be tapered and adjusted as necessary over a length of 10 m to tie into the floor of the existing pipe.

The Contractor shall construct, surface with granular base course and asphalt stabilized base course and implement traffic on a temporary detour, the standard, location and alignment of which will be established by the Consultant. upon completion of the bridge structure, the traffic shall be restored on the original alignment, the detour removed and the surface area restored. If practical, the material excavated shall be used in the permanent grade construction.

1.1.4 Construction Signing For Detour At Bridge Sites

In addition to Section 1.2.49, Traffic Accommodation and Construction Signing in the General Specifications, the following shall apply for the detour at the bridge sites.

The Contractor shall supply and install two sets of barricades on each side of the bridge sites. One set shall be installed at the immediate vicinity of the bridge and the second set shall be installed at the start of the detour in both directions.

The construction of the structure at Bridge File _____ is by other forces. When the other forces move on site they will maintain the barricades at the immediate vicinity of the structure. The Contractor shall continue to maintain all other barricades, signs and delineators until such time as the bridges are opened to the public.

1.1.5 Measurement And Payment

1.1.5.1 Bridge File _____

Payment for the construction of the concrete end treatment will be made at the lump sum price bid for "Concrete End Treatment". This payment shall be full compensation for the supply and installation of all concrete reinforcing bar and anchor bolts and all labour, equipment, tools

and incidentals necessary to complete the work.

The cost of removing and disposing of the concrete floor from the existing pipes will be considered incidental to the removal and salvage of the existing pipes.

The construction and removal of the detour will be paid for at the applicable unit prices bid for the classes of work involved.

The cost of maintenance of the detour will not be paid for directly but shall be considered incidental to the work.

No separate or additional payment will be made for removing debris from the channel and filling in the scour area as this work shall be incidental to placing the Rock Rip-Rap.

No separate or additional payment will be made for the work involved in overlapping the two pipes or filling the space between with concrete, as this work will be considered to be incidental to the installation of the new pipe.

There will be no separate or additional payment for placing the filter cloth at the joints between the existing culverts and their extensions, or the work associated with rejoining the sections of the salvaged _____ mm diameter S.P.C.S.P., as these costs will be considered incidental to the work.

Payment for geotextile installation will be made at the unit price bid for "Geotextile Installation". This payment will be full compensation for all labour, equipment, tools and incidentals necessary to complete the work.

Payment for the supply and installation of the _____ mm diameter R.G.R.C.P. will be made at the unit price bid for "Culvert Supply and Install... _____ mm dia. Reinforced Concrete Pipe". This payment will be full compensation for the supply of the pipe and gaskets, all handling of these materials, placing and assembly of the pipe, placement of backfill and for all equipment, tools, labour and incidentals necessary to complete the work.