

RTL Robinson Enterprises Ltd.

for:

GNWT Department of Transportation

Contract CT 100915

Bridge Construction - Fort Smith Highway (No.5) N.W.T., Km 25.6, Km 31.0 and Km 52.7

Watercourse Protection and Erosion & Sediment Control Plan

RTL intends to start mobilizing to site on or about July 15th, with actual site construction starting in the streambed to comply with the zone timing window (not prior to July 15). Our intent is to start at the Km 25.6 site first, then progress to 31.0 and lastly to 52.7.

In general: equipment going to site will arrive clean, serviced and inspected to ensure it is free of fluid leaks. Equipment will be serviced and fuelled well back from the stream. The only onsite stored fuel will be in pickup truck mounted "tidy tank(s)". An emergency spill kit will be kept on site to clean up any fluid leaks or accidental spills. RTL has a comprehensive Spill Contingency Plan which is on file with GNWT and the 24 Hour Spill Report Line. RTL Site Superintendent will maintain a copy on site.

The methodology: for all three sites will be similar to the following description, however, the detour for Km 31.0 is better suited to be constructed on the upstream side of the proposed bridge. In this case, the silt curtain will be placed just downstream from the existing culverts.

To start, RTL plans to construct a 1 lane, 5m wide top detour on the downstream side of the existing culverts, within the highway right of way. The detour will start deviation from the existing road shoulder approximately 50m before the stream and enter back on to the road shoulder approximately 50m past the stream. We will install a temporary 1.5m diameter x 10m long culvert in the stream bed for the detour to cross over the stream. The upstream end of the detour culvert will be 3m+/- from the downstream end of the existing culvert. The detour fill will be kept to the minimum required to construct a safe travel way.

Initially, the detour area will be hand cleared of brush and other vegetation to provide a clear view of the existing conditions for installing silt fence prior to operating any equipment on the road slope or ditch. All clearing of vegetation will be kept to the minimum required to carry out the scope of work and will be kept within the highway right of way.

Silt fence will then be installed just beyond the toe of the slope on each side of the detour, prior to starting the detour fill operation, to protect against siltation of the waterway from the detour fill material.

The temporary culvert will be carefully placed in the existing stream bed with aid of an excavator, keeping stream bed disturbance to a minimum. Some cobbles may have to be removed from the streambed to ensure good placement of the culvert. Prior to placing the culvert, a silt curtain will be placed across the full width of the stream just downstream from the end of the culvert to minimize downstream siltation. Silt fencing and silt curtain will be inspected on a regular basis and repaired/adjusted as necessary.

Suitable fill to construct the detour will be imported from within the highway right of way, however, will not be taken from any areas that will affect the existing watercourse(s)

Once the detour is in place and traffic rerouted, excavation and removal of the existing culverts will take place and streambed slopes excavated. Actual instream work for this will be minimal but some minor shaping where the old culverts were bedded may be required to keep a natural and consistent streambed profile. After the culverts have been removed, silt fence will be installed just above the water level on each side of the stream, prior to excavation of the 2:1 slopes that will be under the future bridge.

Upon completion of slope excavation, geotextile filter fabric and rip rap will be placed to cover all disturbed soil areas on the banks and minimum 1m above the high water mark, ensuring no infilling or narrowing of the streambed occurs.

All silt fence and downstream silt curtain will remain in place until the new bridge and guardrail work is completed, traffic re-routed and detour and temporary culvert removed. The downstream silt curtain will then be removed. A field determination will be made, in consultation with DoT representative on site, to determine which silt fence, if any, can be removed.

All disturbed slopes will be seeded.