

NOTES

23 U.S.C 407
NDDOT Reserves All Objections

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-6-032(075)230	170	2

100 SCOPE OF WORK: Work at this site consists of removing existing structural plate pipes and building two new single barrel 14' x 7' x 78'-0" precast concrete box culvert.

202 REMOVAL OF STRUCTURE: The existing structures are two single 10-6X39' Structural Plate Pipes. Include all work required to remove the existing structures in the contract unit price for "Removal of Structure."

210 ORDINARY BACKFILL: Compact material as specified in Section 203.04 G.2.a, "ND T 180."

606 PRECAST COMPONENTS: Provide lift anchors designed to safely lift, handle, ship, and place precast components. Holes cast through the roof, floor, or walls of the precast components will not be permitted unless the weight of components exceed the rated capacity of industry available lift anchor systems. If lift holes are required due to segment weight, plug all lift holes after installation with polymer plugs and seal the outside of the precast component using 12" x 12" min sized waterproof membrane centered on each lift hole. Galvanize all lift anchors or lift hole pipe sleeves permanently incorporated into precast concrete components in accordance with Section 854.

606 PRECAST SECTION DESIGN: The precast concrete structure has been detailed to utilize 2 single lines of precast barrel segments and end sections. Substitution of precast double barrel segments will not be permitted for this project.

The Barrel Information Table provided in the plans lists the minimum required dimensions and reinforcement. Alternate designs using dimensions or reinforcement areas less than those listed in the table will not be permitted. Substitution of precast segments using roof, floor, or wall thicknesses larger than those listed in the table will be permitted with approval by the Engineer.

606 PRECAST END SECTIONS: Fabricate and install the precast cutoff walls at the outlet end of the structure with a stagger matching the detail shown in the plans. Transverse (perpendicular to the flow line) and longitudinal (parallel to the flow line) components are required to form a complete cutoff wall. Provide a system to connect the cutoff walls to the end sections using 3/4" min diameter rebar dowels spaced at 2'-0" max.

Fabricate and install the precast parapet wall at the outlet end of the structure to match the layout shown on the plans. Provide a system to connect the parapet wall to the structure using 3/4" min diameter rebar dowels spaced at 2'-0" max.

Include all costs to fabricate and install the cutoff wall and parapet in the price bid for the Precast RCB End Sections.

606 PRECAST SEGMENT LAYOUT: Provide a distance of 1'-0" between separate precast units. Fill the gap between sections with a controlled density backfill consisting of cement, water, pozzolanic materials, and aggregate per the mix design provided. Use material that is fluid on placement to flow around and fill voids in the backfill area. The mix design yields approximately one cubic yard of controlled density backfill. Mix the material continuously during pumping or placement to keep the solution from separating.

<u>Material</u>	<u>Weight</u>
Cement	175 lbs
Fly Ash	175 lbs
Water	375 lbs (45 gallons)
Fine Aggregate	2600 lbs

Fill the gap between end sections with Class AE concrete meeting Section 602.03 B.

Include all costs to furnish and place the controlled density backfill in the price bid for Precast RCB Culvert.

This document
is preliminary
and not for
construction or
implementation
purposes.

PRELIMINARY