CONSTRUCTION NOTES:
1. Excavate for concrete apron and toe wall in undisturbed soil. Side slopes above the top of concrete shall be 1:1 or flatter.
2. Set aluminum structure to grade and place reinforcing bars before placing concrete for apron and toe wall. Wrap reinforcing bars with three layers of electrical tape or equivalent where they pass through the aluminum sheets (see Detail 10 Page 2).
3. Place drain fill and lay tile to outlet stub. Drain fill shall be IDOT CA 12, 13, or 18.
4. Backfill around structure with moist soil. Place backfill in 6" layers and tamp well. Remove dry soil from sides of excavation as backfill is placed so that moist soil is tamped against moist soil. Keep backfill approximately level around all parts of the structure.
5. Place rip rap and complete shaping and grading. Rip rap shall be IDOT GRAD NO. 6. Quality Designation A. Rip rap can be replaced with 8" concrete blocks, set with core openings up and filled with soil.
6. Seed all disturbed areas, as required in Conservation Practice Standard 342, Critical Area Planting.

NOTES:
1. Concrete shall be designed to provide a minimum 28 day compressive strength of 3000 psi.
2. Steel in the floor shall be #4 steel reinforcing bars both ways, at 12" on center.
3. Minimum steel cover shall be as shown on the drawings.
4. Aluminum sheets shall be structural plate (2.5" x 9.0" corrugations) 0.100" thickness.
5. Apply asphalt mastic between aluminum sheets before bolting together.
6. Top geotextile splices a minimum of 18 inches.
7. Geotextile (non-woven, needle punched) min. criteria: Grab Tensile strength (lbs) ASTM D 4632_202,
   Elongation at failure (%) ASTM D 4632_350,
   Trapezoidal tear strength (lbs) ASTM D 4533_79,
   Puncture strength (lbs) ASTM D 6241_433,
   Ultraviolet light (% retained strength) ASTM 4355_50 min 50,
   Apparent opening size (AOS) ASTM D 4754_max 0.22 mm (US sieve size 70),
   Permittivity sec^-1 ASTM D 4491_min 0.70.
CONCRETE & REINFORCING PLAN VIEW

SECTION A–A

REINFORCING STEEL SCHEDULE

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ALUMINUM STRUCTURE

1. Field Drill 3/8" Holes As Required In Aluminum. Place Rebar Through Hole (See Detail 10)
2. Wrap Each Rebar With Electrical Tape to Prevent Contact with Aluminum (See Note 2, Page 1)

QUANTITIES:
- Steel #4 Bars_________lin.Ft._________pounds
- Concrete____________cu.yds.
- Drain Fill____________cu.yds.
- Riprap______________cu.yds.
- Geotextile___________sq.yds.
FABRICATED CORRUGATED ALUMINUM DOUBLE WINGWALL DROP SPILLWAY

**DETAIL 1**
- Concrete Footing
- Drain Fill
- Weir
- Location of Field Bolting Will Vary To Fit Sheets Furnished
- Mastic
- 3/4" Bolts & Nut With Extruded Curve Washer (Typ Both Ends)
- 3/4" x 1/2" Steel Bolt & Nut @ 10" Max Spacing

**DETAIL 2**
- Headwall
- Corner Gusset As Required
- 2" x 2" x 3/8" Aluminum Angle
- Miter Cut And Weld Down Legs Typ Both Ends
- Sidewall Wall Cap SC-3

**DETAIL 3**
- Aluminum Angle
- 3/4" @ 9" O.C.

**DETAIL 4**
- Aluminum Angle
- 3/4" @ 9" O.C.
- Corner Gusset As Required
- 3/4" x 1/2" Steel Bolt & Nut
- Wingwall
- Continuous Weld
- Sidewall Wall Cap SC-3

**NOTE**
- On Details 2 & 4
- Paint Angle Face With Asphalt Mastic Before Field Bolting Together

**PLAN VIEW**
- S
- B
- W/2
- U
- Flow
- T
- W

IL-ENG-123
Page 3 of 4
Sheet of
SECTION ON CENTERLINE

DETAIL 5
- 3/8" Dia Bolts @ 9 3/8" O.C.
- Drain Fill Extending Completely Around Weir & Sidewall Completely Encased With Geotextile
- 2 2" x 1/2" x 3 3/8" Aluminum Angle For Support & Prior To Pouring Concrete Base
- 2 3/4" Bolt Nut With Extruded Curve Washer
- 2" x 2" x 1/8" Aluminum Angle Miter Cut And Weld Outstanding Leg (Typ Both Ends)
- 2 3/4" Bolt & Nut

DETAIL 6
- 3" Minimum Level Section
- 7/8" Holes 12" O.C. (Typ)
- Support See Detail 7 (Typ)

DETAIL 7
- 2 3/4" x 3" x 1/4" Bulb Angle
- 2/4" O.C. At Each Contact Point
- 7/8" Holes 12" O.C. (Typ)
- Support See Detail 7 (Typ)

DETAIL 8
- Auxiliary Spillway
- Cap SC-3
- 6" 24" 3 3/8"
- Plug Weld Thru Holes In Cap Or Bolt With 3/4" Bolts At 18" O.C. Alternate Sides To Corrugation Crests At Manufacturers Option.