

HYDRAULIC DATA	
Q <sub>50</sub>	= 1440 CFS
Q <sub>10</sub>	= 1140 CFS
HW <sub>10</sub>	= 609.1
HW <sub>50</sub>	= 609.8
A	= 7.6 SQ. MI.

ITEM 603  
PLAN NOTES  
FOR  
PRECAST REINFORCED CONCRETE BOX SECTIONS

**DESCRIPTION**

THIS ITEM SHALL CONSIST OF FURNISHING AND CONSTRUCTING PRECAST REINFORCED CONCRETE BOX SECTIONS AS PER SUPPLEMENTAL SPECIFICATION 955 AT THE LOCATION INDICATED.

**MATERIALS**

MATERIAL FOR THE PRECAST REINFORCED CONCRETE BOX SECTIONS SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 955. GRANULAR BEDDING MATERIAL SHALL MEET THE REQUIREMENTS OF 603.02 AND FILL MATERIAL, WHEN SPECIFIED, SHALL BE IN ACCORDANCE WITH 203.

**INSTALLATION**

THE STRUCTURE SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATION FOR TYPE A CONDUIT IN SECTION 603 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, EXCEPT AS MODIFIED HEREIN.

**603.03**

WHERE THE BOX SECTION IS TO BE PLACED IN A TRENCH, A MINIMUM TRENCH WIDTH OF 2 FEET ON EACH SIDE OF THE BOX SECTION SHALL BE REQUIRED. WHERE THE BOX SECTION IS TO BE PLACED WITHIN AN EMBANKMENT OR THE BOX SECTION IS ABOVE THE EXISTING GROUND, THE REQUIREMENT THAT THE EMBANKMENT SHALL BE CONSTRUCTED AT LEAST TO THE SPRINGLINE BEFORE TRENCHING IS WAIVED.

**603.04**

THE BEDDING SHALL CONSIST OF A BED OF GRANULAR MATERIAL HAVING A THICKNESS OF AT LEAST 6 INCHES BELOW THE BOTTOM OF THE BOX SECTION AND EXTENDING 2 FEET ON EACH SIDE OF THE BOX SECTION.

**603.08**

WHEN THE TOP OF THE TRENCH IS ABOVE THE TOP OF THE BOX, BACKFILLING SHALL BE IN ACCORDANCE WITH TYPE A OR TYPE B CONDUIT. WHEN THE TOP OF THE BOX SECTION IS ABOVE THE TOP OF TRENCH, GRANULAR MATERIAL SHALL BE PLACED AND COMPACTED TO A MINIMUM DEPTH OF 2 FEET OVER THE TOP OF THE BOX SECTIONS (WHERE APPLICABLE) AND FOR A WIDTH OF 4 FEET ON EACH SIDE OF THE BOX SECTION OR AS DIRECTED BY THE ENGINEER. THE REMAINDER OF THE ADJACENT EMBANKMENT MATERIAL SHALL BE FURNISHED, PLACED AND PAID FOR IN ACCORDANCE WITH 203. BACKFILL AND FILL MATERIAL SHALL BE PLACED UNIFORMLY ON BOTH SIDES OF THE BOX SECTION.

FILL MATERIAL AT THE SIDES OF THE BOX SECTIONS MAY BE COMPACTED BY HEAVY COMPACTION EQUIPMENT.

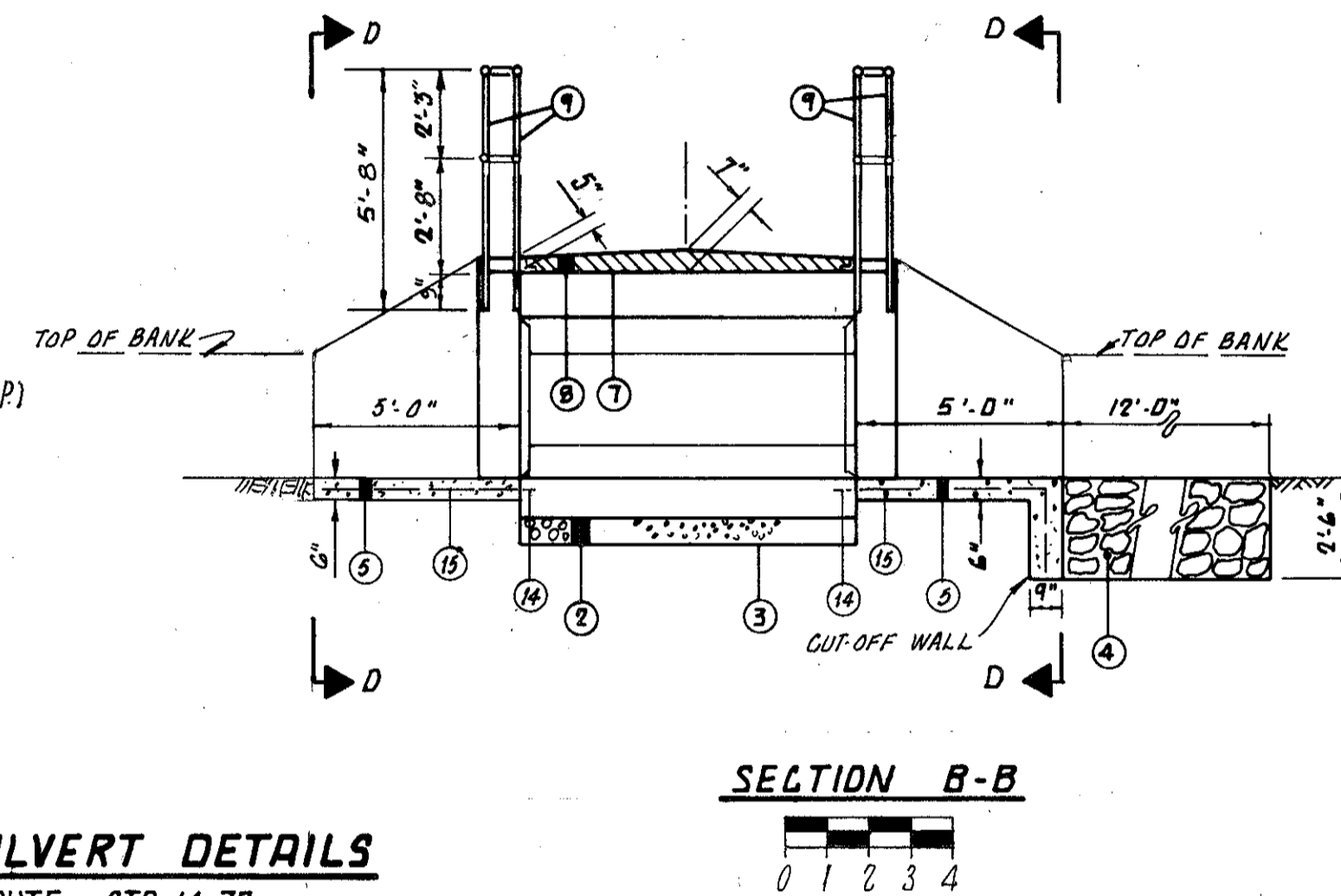
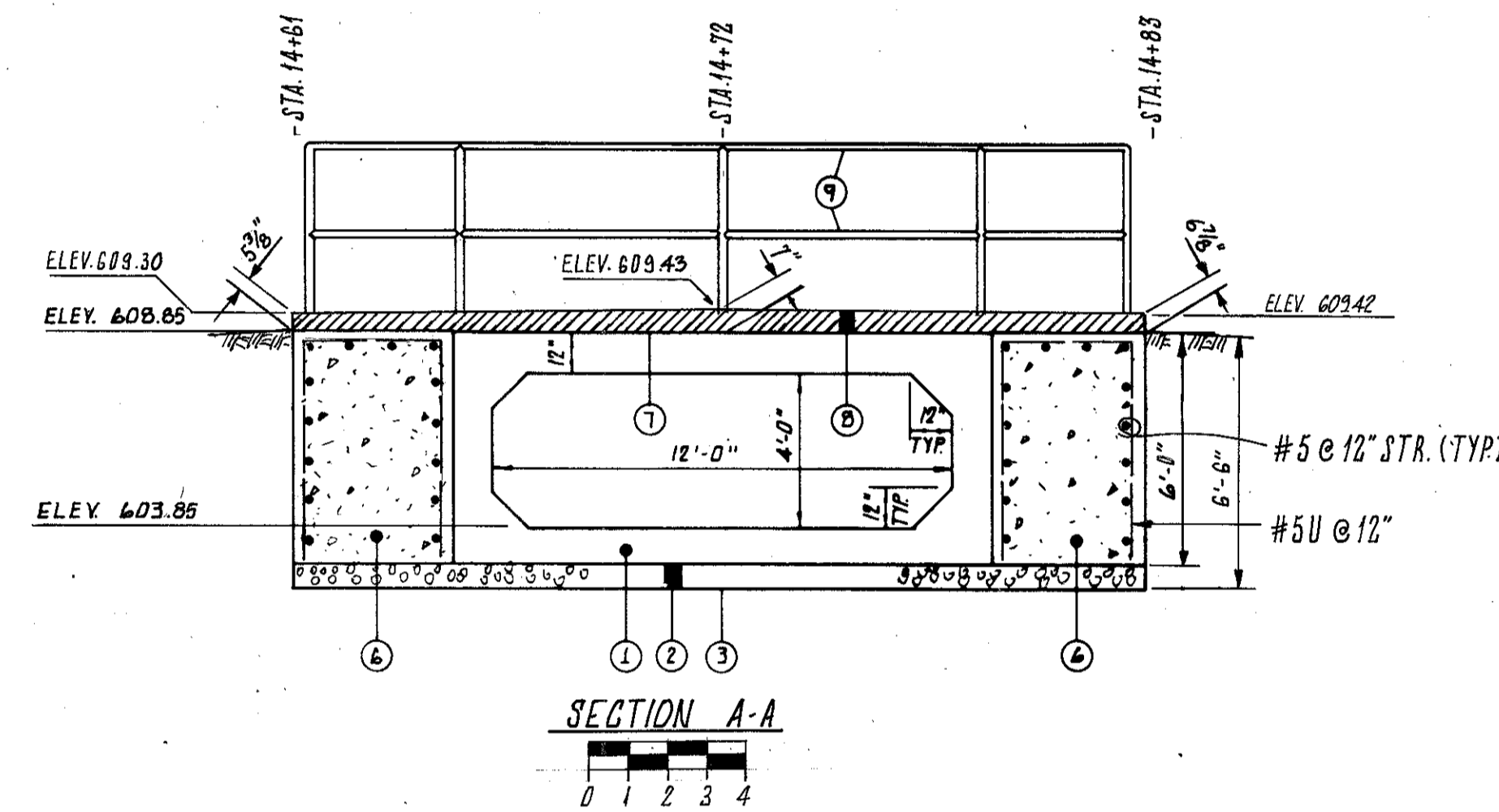
THE UPSTREAM END SHALL BE MITERED AS INDICATED ON PLANS.

**DESIGN**

ITEM 603, 12' x 4' x 8' LG. PRECAST REINFORCED BOX CULVERT SECTION (AS PER S9955) SHALL CONFORM TO ASTM C-789 TABLE 3 AS PER PLAN WITH A DESIGN EARTH COVER OF 2 FOOT.

**BASIS OF PAYMENT**

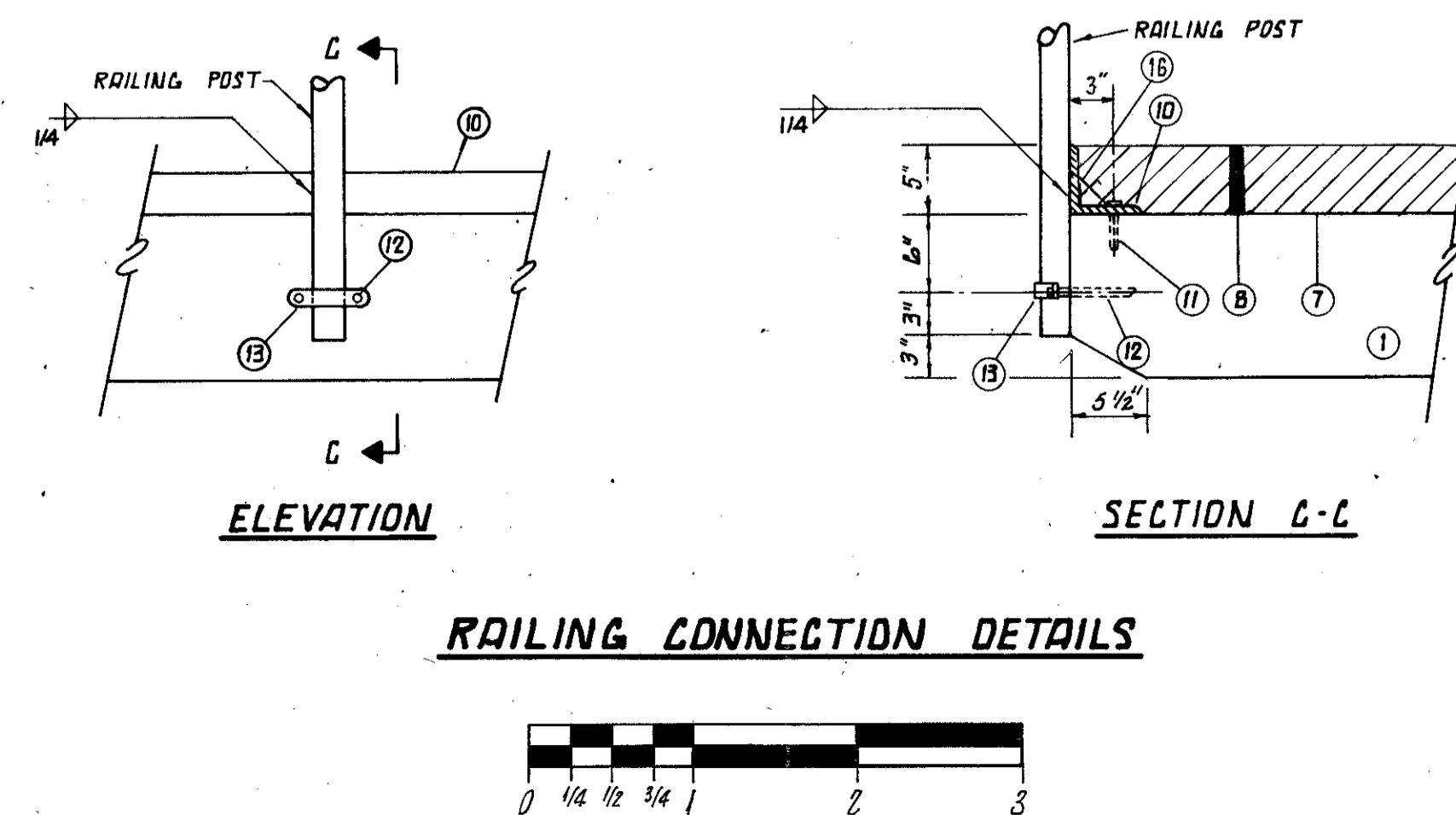
THE LIN. FT. PRICE STIPULATED FOR BOX CULVERT SHALL INCLUDE THE FURNISHING OF THE BOX CULVERT SECTION, COMPLETE WITH EXCAVATION, BEDDING, BACKFILL, RAILING, ASPHALT, CONCRETE ABUTMENTS, RIPRAP, ROCK CHANNEL PROTECTION AND THE FURNISHING OF ALL LABOR, TOOLS, MATERIALS AND APPLIANCES NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.



**BOX CULVERT DETAILS**  
TRAIL ROUTE - STA. 14+72

— VERTICAL CURVE —

STATION	ELEVATION ON CURVE	TANGENT ELEVATION	DIFFERENCE	
14 + 50.00	609.02	609.02	0.00	VPC
14 + 55.00	609.17	609.18	-0.02	
14 + 60.00	609.28	609.35	-0.06	
14 + 65.00	609.36	609.51	-0.15	
14 + 70.00	609.41	609.67	-0.26	
14 + 72.00	609.43	609.74	-0.31	VPI
14 + 75.00	609.43	609.69	-0.25	
14 + 77.21	609.44	609.64	-0.21	HIGH POINT
14 + 80.00	609.43	609.59	-0.16	
14 + 85.00	609.41	609.50	-0.09	
14 + 90.00	609.37	609.41	-0.04	
14 + 95.00	609.31	609.32	-0.01	
15 + 0.00	609.23	609.23	0.00	VPT



**LEGEND**

- ① 603 12' x 4' PRECAST REINFORCED BOX CULVERT SECTION
- ② 310 6" SUBBASE (TYPE I; GRADING "A")
- ③ FILTER FABRIC SPECIAL, TYPE B
- ④ 601 ROCK CHANNEL PROTECTION - TYPE B WITH FILTER FABRIC
- ⑤ 601 RIPRAP - USING 6" REINFORCED CONCRETE SLABS
- ⑥ 602 CONCRETE MASONRY (16 C.Y.)
- ⑦ 407 TACK COAT (APPLIED AT A RATE OF 0.10 GAL. PER S.Y.)
- ⑧ 404 1 1/2" - 404 ASPH CONCRETE, (AC-20) OVER ITEM 301 (THICKNESS VARIES)
- ⑨ 517 RAILING (GALVANIZED) - 2" NOMINAL DIA. SCH. 40 STEEL PIPE
- ⑩ 711 L 5"x5"x 3/8"
- ⑪ 1/2" Ø S.S. "HILTI" ADHESIVE ANCHORS OR APPROVED EQUAL (18 TOTAL)
- ⑫ 712 1/2" Ø x 5 1/4" L.G. SELF DRILLING ANCHOR (2 PER POST)
- ⑬ 711 2" GRINNELL PIPE CLAMP OR APPROVED EQUAL
- ⑭ 712 3/8" Ø THREADED SELF-DRILLING ANCHORS @ 24" c.c.
- ⑮ 509 3/8" Ø THREADED REBAR @ 24" c.c.
- ⑯ 513 3/8" STIFFENER PLATES @ 18" c.c.