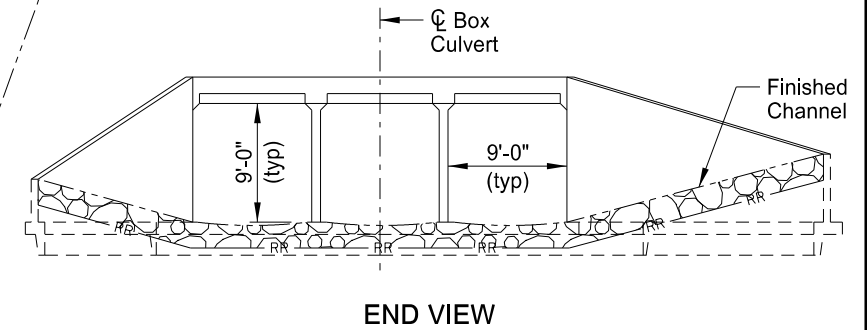
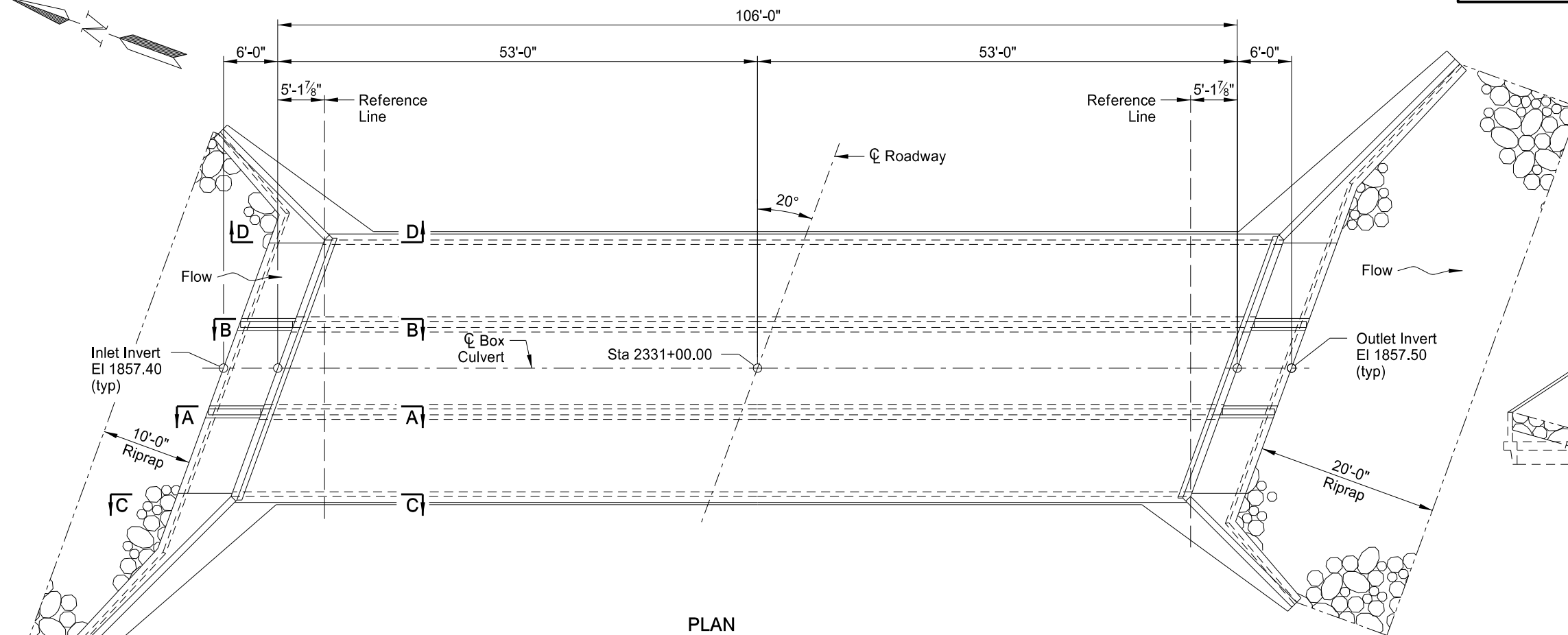


STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
ND	project number	170	1

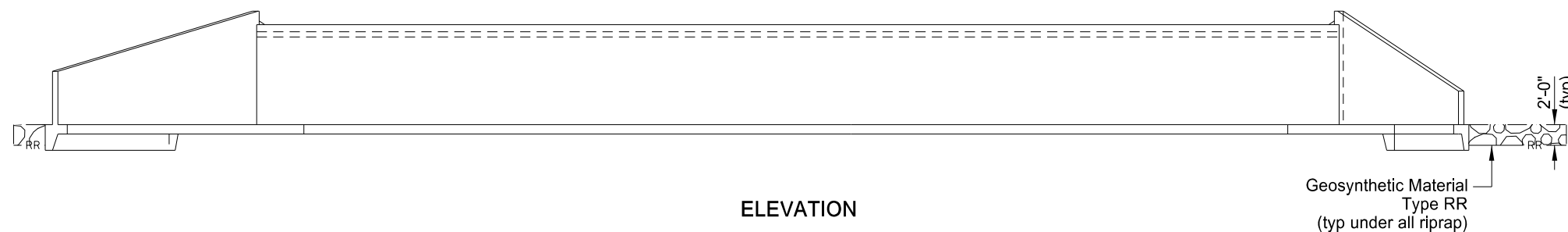


**NOTE:**  
See Dwg 0-000.000-10 for Sections A-A and B-B.  
See Dwg 0-000.000-11 for Sections C-C and D-D.

**DESIGN STRENGTHS:**

f'c = 3,000 psi ~ Class AE-3 Concrete  
fy = 60,000 psi ~ Reinforcing Steel

Load & Resistance Factor Design



**HYDRAULIC DATA:**

Drainage Area	93.3 sq mi
Stream Gradient	0.0002 ft/ft
Design Frequency	50 yr
Design Discharge	1255 cfs
Design Headwater Stage	1867.5 ft
Design Tailwater Stage	1867.0 ft
Velocity Through Bridge	5.8 fps
100-Year Frequency Discharge	1687 cfs
100-Year Frequency Headwater	1869.5 ft
Overtopping Stage	1873.30 ft
Overtopping Discharge	2159± cfs

**BOX CULVERT BID ITEMS**

SPEC	CODE	ITEM DESCRIPTION	UNIT	QUANTITY
L SUM				1
202	0105	REMOVAL OF STRUCTURE	EA	1
210	0050	BOX CULVERT EXCAVATION	CY	725
210	0210	FOUNDATION FILL	EA	1
210	0405	FOUNDATION PREPARATION-BOX CULVERT	CY	95
256	0200	RIPRAP GRADE II	CY	323.5
602	1131	CLASS AE-3 CONCRETE-BOX CULVERT	LBS	45,747
612	0114	REINFORCING STEEL-GRADE 60-BOX CULVERT	SY	530
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	190
709	0155	GEOSYNTHETIC MATERIAL TYPE RR		

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

SPECIAL PROVISIONS	
SSP 2	MIGRATORY BIRD TREATY ACT
HL-93 DESIGN LOADING	
LOCATION 20° SKEW	
CLEAR SPAN 3 x 9' CLEAR HEIGHT 9' MAXIMUM FILL 0' STATION: 2331+00.00	
REINFORCED CONCRETE TRIPLE BOX CULVERT LAYOUT	
ND DEPARTMENT OF TRANSPORTATION BRIDGE DIVISION	