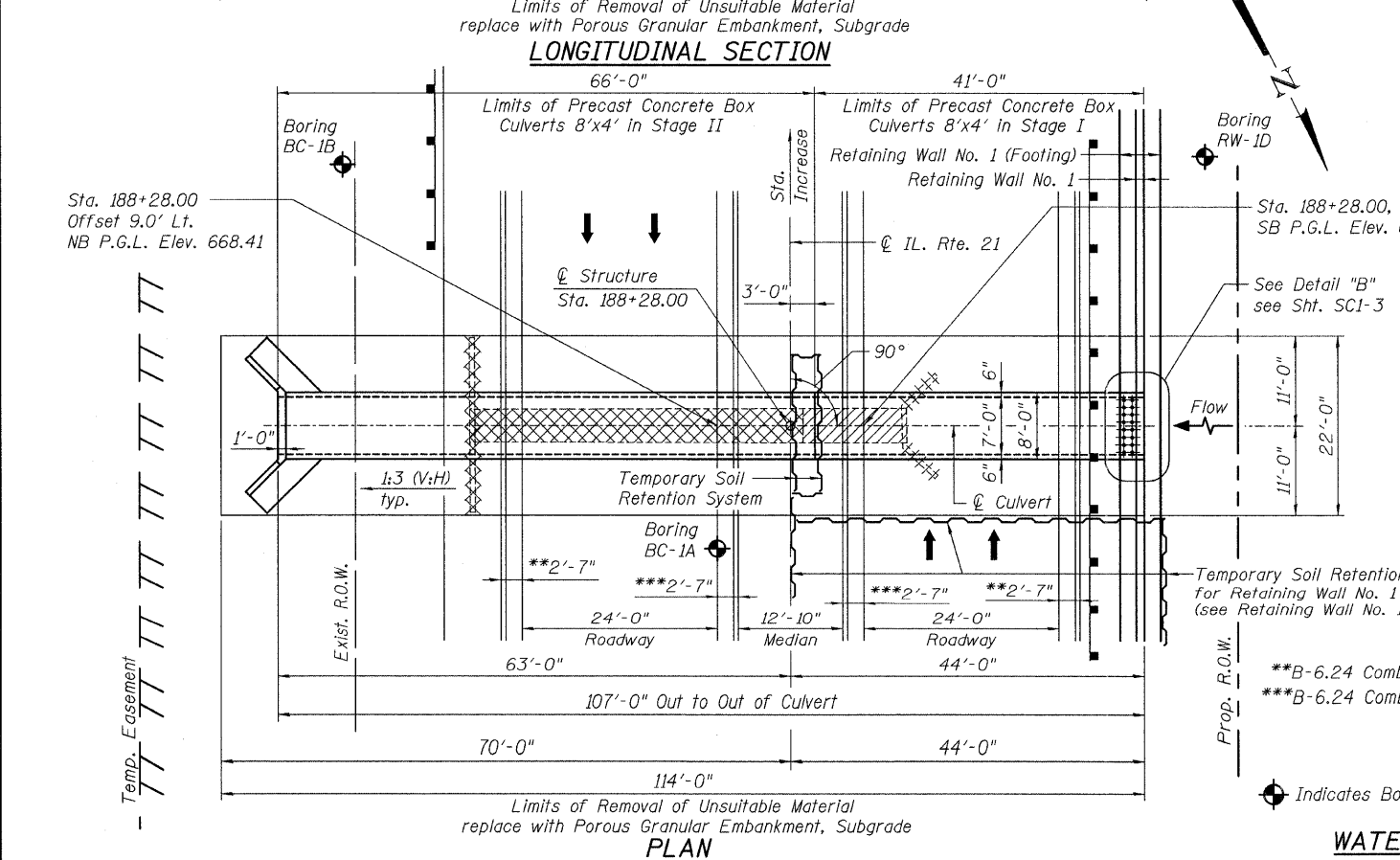
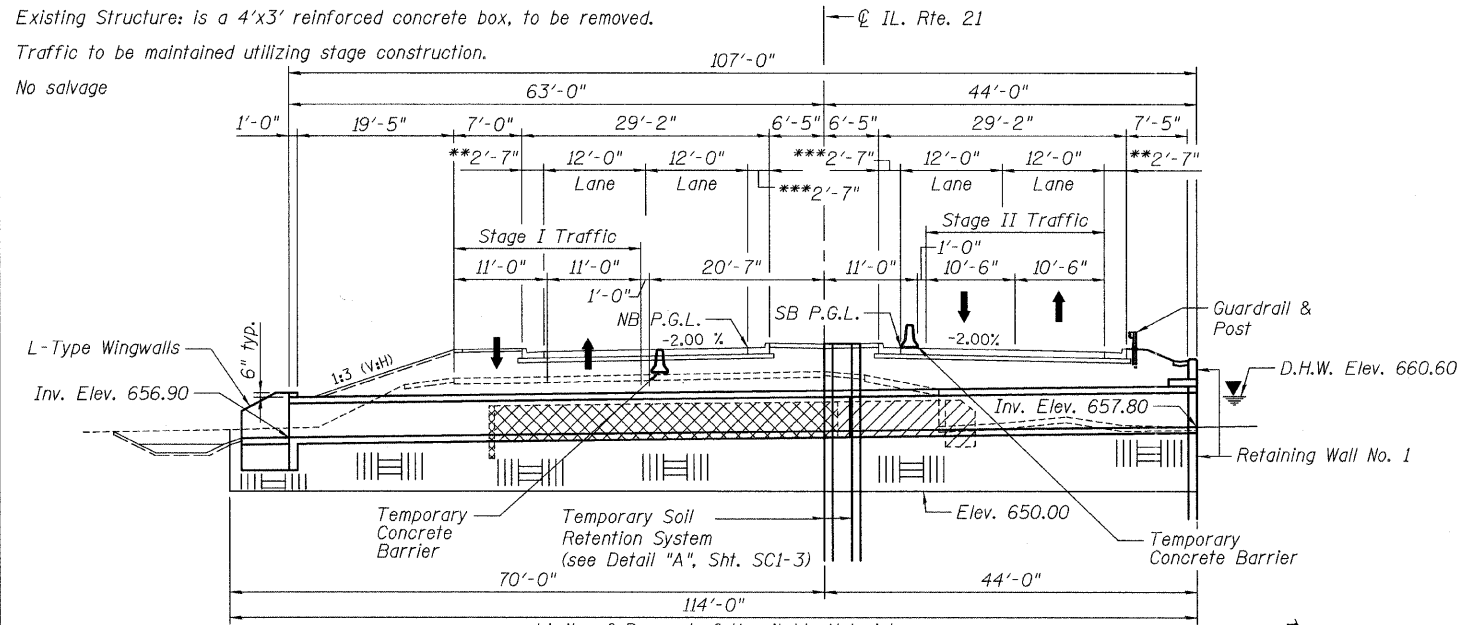


B.M.: Chiseled box on top of S.E. wingwall of bridge over Bull Creek. Elevation 669.64

Existing Structure: is a 4'x3' reinforced concrete box, to be removed.

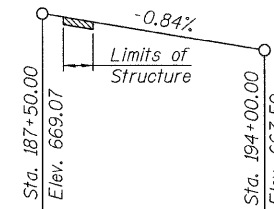
Traffic to be maintained utilizing stage construction.

No salvage



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	653.00	653.90



DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20-44

Allow 50#/#sq. ft. for future wearing surface.

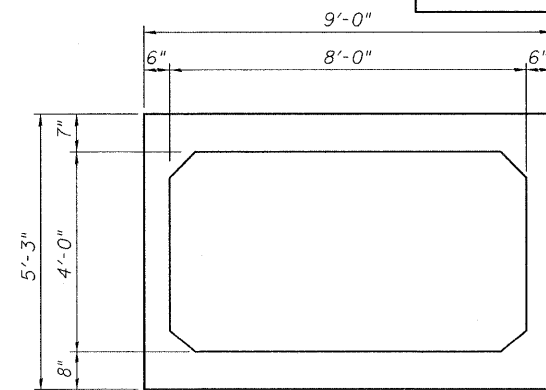
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 5,000 psi
fy = 65,000 psi (Welded wire fabric)



WATERWAY INFORMATION

Drainage Area = 0.8 Sq. Mi. Low Grade Elev.: 661.45 (Exist.) at Sta. 191+00 (Exist.) 663.26 (Prop.) at Sta. 195+08 (Prop.)

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	38	3.2	9.6	658.3	658.1	1.6	1.0	659.9	659.1
Base	50	93	3.6	10.4	658.4	658.2	3.7	2.0	662.1	660.2
Overtopping	100	129	3.6	10.4	658.4	658.2	4.2	2.7	662.6	660.9
Max. Calc.	500	500	2.19	3.6	658.4	-	3.7	-	662.1	-
	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.

WATERWAY INFORMATION TABLE NOTES

- Existing conditions
- Proposed conditions
- FIS Datum Correlation:
FIS RM #55 (Chiseled square on west D/S wingwall of IL. Rte. 21 bridge) Elev. 669.72 = Surveyed BM #36 (Per IDOT survey notes - 12/05/90) Elev. 669.64.
- Based on the Re-Study Data, Des Plaines River water surface elevations are: 50 Year = 660.3 and 100 = 661.3

GENERAL NOTES:

- Reinforcement Bars shall conform to the requirements of ASTM A 706, Gr. 60. See Special Provisions.
- All exposed concrete edges shall be chamfered 3/4" unless otherwise noted.
- Reinforcement Bars designated (E) shall be Epoxy Coated.
- The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.
- The Porous Granular Embankment, Subgrade shall be capped with 6 in. of CA7 and satisfy the Standard Specifications unless otherwise indicated in the Special Provisions. The cost of the capping material shall be included in the Pay Item for "Porous Granular Embankment, Subgrade".

INDEX OF SHEETS

- SC1-1 GENERAL PLAN & ELEVATION
- SC1-2 STAGE CONSTRUCTION DETAILS
- SC1-3 CAST-IN-PLACE END SECTION DETAILS
- SC1-4 SOIL BORING LOGS-I
- SC1-5 SOIL BORING LOGS-II

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	QUANTITY
Removal of Existing Structures No. 1	Each	1
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	1,160
Reinforcement Bars	Pound	300
Reinforcement Bars, Epoxy Coated	Pound	50
Concrete Box Culverts	Cu. Yd.	4.7
Precast Concrete Box Culverts 8'x4'	Foot	107
Temporary Soil Retention System	Sq. Ft.	626
Porous Granular Embankment, Subgrade	Cu. Yd.	625



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LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. NO. 081-004476
EXPIRES: 11-30-12

GENERAL PLAN & ELEVATION

ILLINOIS ROUTE 21
F.A.P. 330 SEC. 128R-3
LAKE COUNTY
STATION 188+28.00
STRUCTURE NO. 049-0239
OUTLET NO. 14

