

Bench Mark: A bronze disk monument located at Northeast corner of bridge, in concrete headwall of Thorndale Avenue bridge over Salt Creek.  
 Bench Mark No. ADO4001 Station 107+88.66, El. 683.51, Offset 34.46 Left, North = 10064.23, East = 10788.66.  
 Existing Structure: S.N.022-3007 was built in 1957 under F.A.S. Route 147, Section 153 B, widened in 1976 under Section 76-00245-00-WR. Structure consists of 4-Span 17" P.P.C. deck beams, 120'-0" Bk. to Bk. of Abutments, 69'-0" Out to Out width. Existing Structure to be removed and replaced. Traffic to be maintained by utilizing stage construction.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	1/4" SHEETS	SHEET NO.	SHEET NO.
345	++	DU PAGE	65	31	25 SHEETS

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJ. CT. ++ 98-00153-02-BR Contract No. 63077

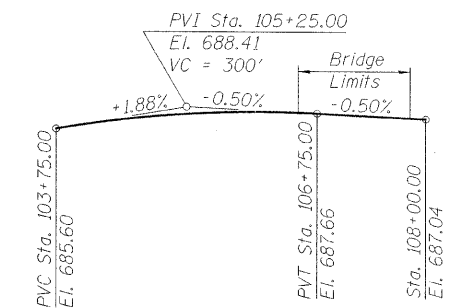
WATERWAY INFORMATION

Drainage Area = 54.27 mi <sup>2</sup>	Exist. Low Grade Elev. 680.76	Sta. 107+81.83							
	Prop. Low Grade Elev. 683.00	Sta. 107+81.83							
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	1650	774.25	829.78	680.0	0.01	680.01	680.01	
Base	50	2310	864.17	949.28	681.0	0.36	0.06	681.36	681.06
Max. Calc.	100	2590	864.17	997.08	681.4	0.46	0.08	681.86	681.48
	500	3260	864.17	1068.78	682.0	0.66	0.10	682.66	682.10

10 year velocity through existing bridge = 2.50 fps  
 10 year velocity through prop. bridge = 1.88 fps  
 \* 50 year and larger events are above existing low beam.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier	E. Abut.
	677.10	666.55	676.40



PROPOSED PROFILE  
 (Along Roadway)

LOADING HS20-44  
 Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS  
 2002 AASHTO

DESIGN STRESSES  
 FIELD UNITS

f'c = 3,500 psi  
 fy = 60,000 psi (reinforcement)  
 fy = 50,000 psi (M270, Grade 50W)

SEISMIC DATA

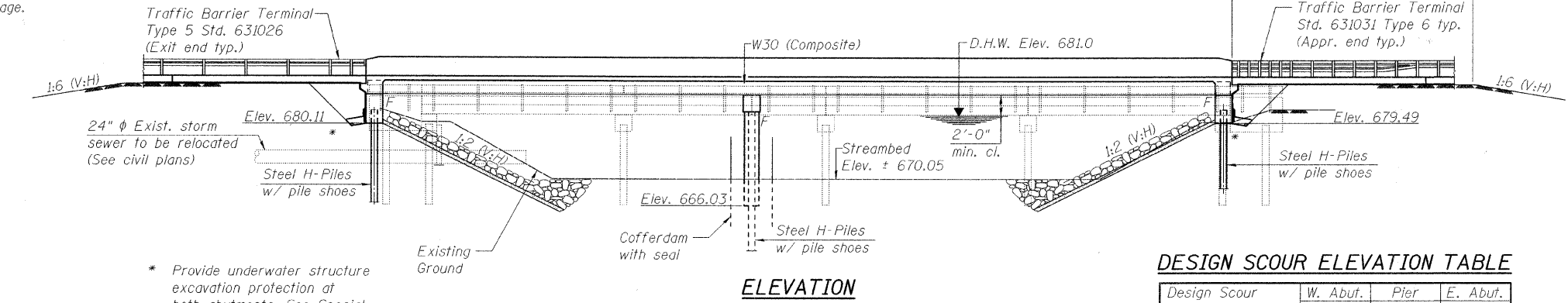
Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.04g  
 Site Coefficient (S) = 1.0

CERTIFICATION

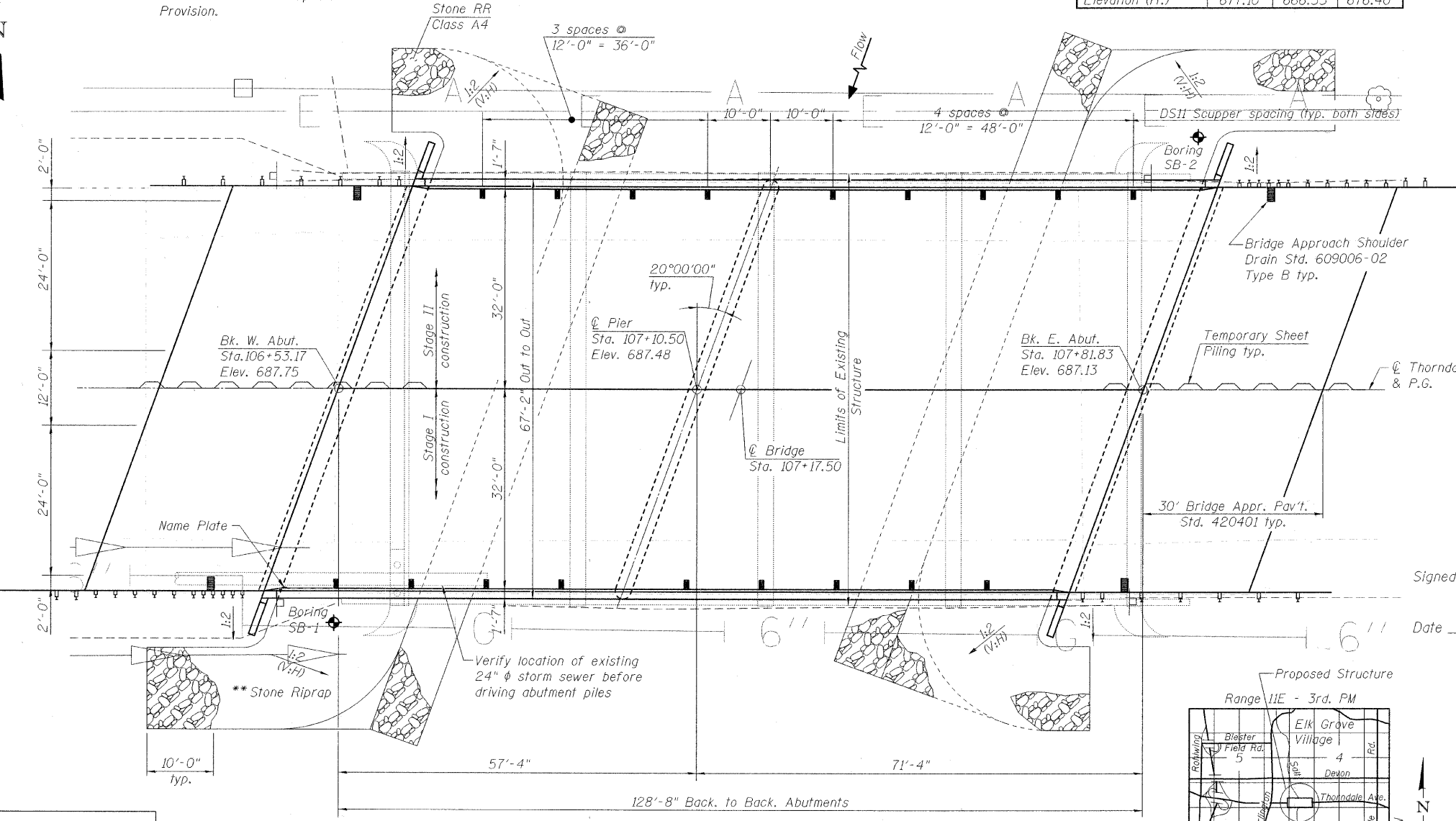
I certify that to the best of knowledge, information and belief, this bridge/box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



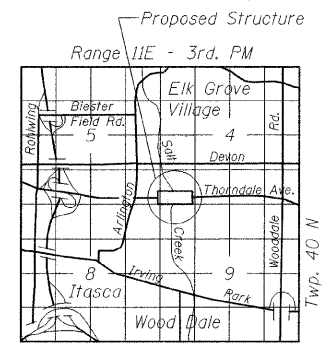
Signed *Jamal Grainawi*  
 Jamal I. Grainawi, S.E. IL. Lic. No. 081-005161  
 Expires 11-30-2008  
 Date *July 30, 2008*



ELEVATION



PLAN



LOCATION SKETCH

DESIGNED	J. ZUO
CHECKED	J. MUHAMMAD
DRAWN	D.C. PATEL
CHECKED	J. GRAINAWI

\*\* Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

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GENERAL PLAN AND ELEVATION  
 CH 26 THORNDALE BRIDGE  
 OVER SALT CREEK  
 F.A.P. RT. 345 - SEC. 98-00153-02-BR  
 DU PAGE COUNTY  
 STATION 107+17.50  
 STRUCTURE NO. 022-3011