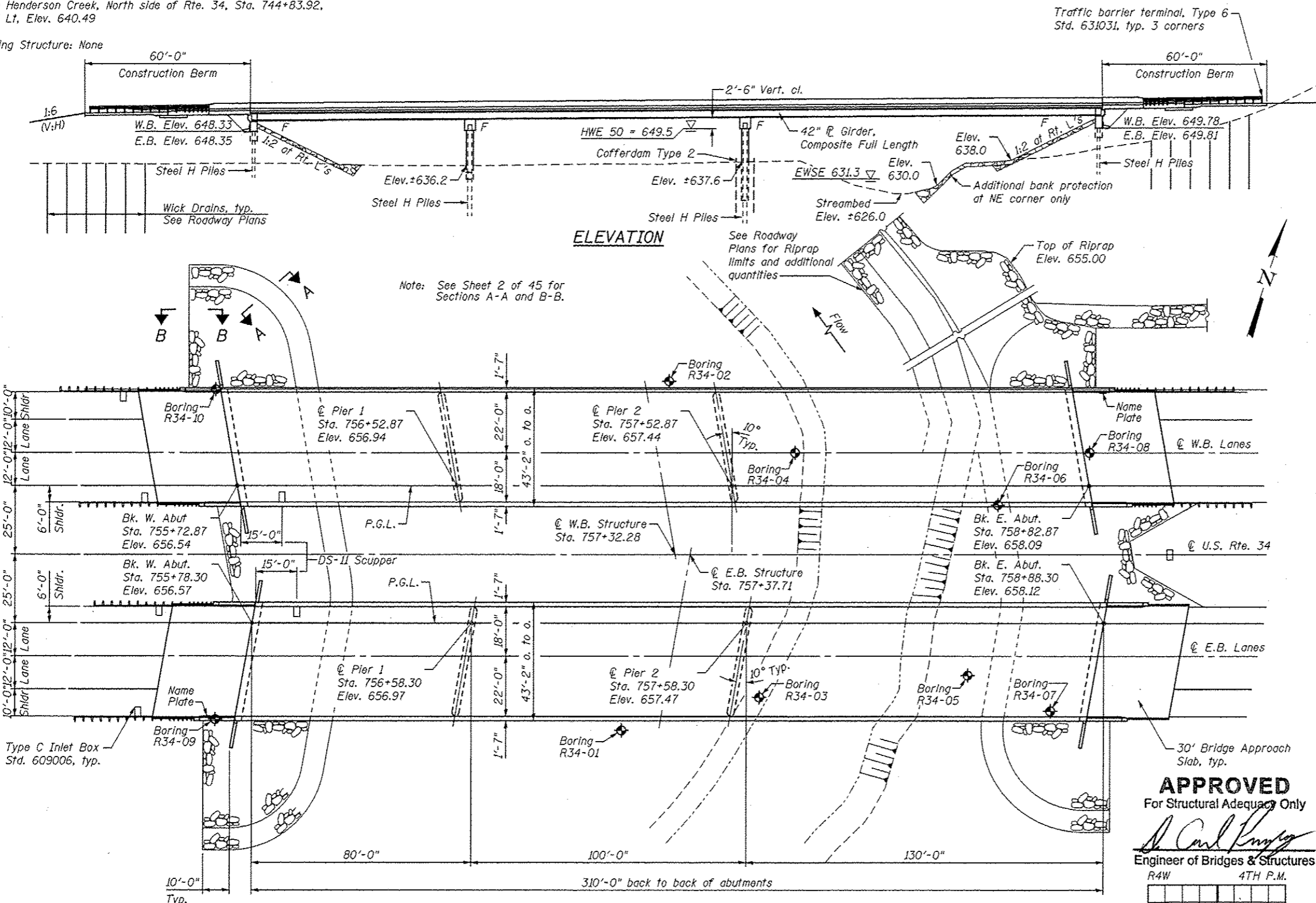


Benchmark: Chiseled wingwall, N.E. corner of bridge over South Henderson Creek, North side of Rte. 34, Sta. 744+83.92, 1463' Lt, Elev. 640.49

Existing Structure: None



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DESIGN STRESSES

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

LOADING HL 93

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

SEISMIC DATA

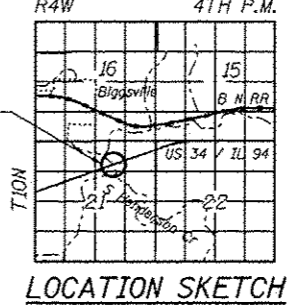
Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S₁) = 0.07g
 Design Spectral Acceleration at 0.2 sec. (S_{0.2}) = 0.11g
 Soil Site Class = C

APPROVED
 For Structural Adequacy Only
Mary Coombe Bloxdorf
 Engineer of Bridges & Structures
 R4W 4TH P.M.



Mary Coombe Bloxdorf
 ILLINOIS STRUCTURAL NO. 4859
 EXPIRES 11/30/14
 DATE: 10/16/2012

GENERAL PLAN & ELEVATION
U.S. RTE. 34 OVER S. HENDERSON CREEK
FAP RTE 313 SECTION 7-2, 6-1
HENDERSON COUNTY
STATION 757+32.28 (WB)
STATION 757+37.71 (EB)
STRUCTURE NO. 036-0062 (EB)
STRUCTURE NO. 036-0063 (WB)



WATERWAY INFORMATION

Drainage Area = 64.2 sq. mi. Proposed Low Grade Elev. 655.6 @ Sta. 753+03

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Not. H.W.E. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	10	4100	-	2058	646.0	-	0.1	-	646.1	646.1
Base	50	7010	-	3032	649.5	-	0.2	-	649.7	649.7
Overtopping	100	8530	-	3465	651.0	-	0.2	-	651.2	651.2
Max. Calc.	500	12700	-	3962	654.6	-	0.2	-	654.8	654.8

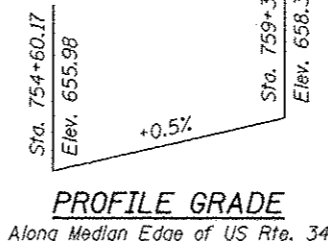
10 year velocity thru proposed bridge = 2.0 f.p.s.

PLAN

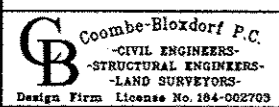
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Design Discharge	W. Abut.	Pier 1	Pier 2	E. Abut.
SN 036-0062, EB	Q ₁₀₀₀	648.35	632.2	622	649.81
SN 036-0062, EB	Q ₅₀₀	648.35	631.2	621	649.81
SN 036-0063, WB	Q ₁₀₀₀	648.33	632.2	622	649.78
SN 036-0063, WB	Q ₅₀₀	648.33	631.2	621	649.78

PROFILE GRADE



FILE NAME: C:\Users\mcbloxd\Documents\781314-081\proj\p1.dgn



USER NAME: .MHL	DESIGNED: CME	REVISIONS:
PLOT SCALE: 480' = 1" IN.	CHECKED: MCB	REVISIONS:
PLOT DATE: 10/16/2012	DRAWN: CFC	REVISIONS:
	CHECKED: MCB	REVISIONS:

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 45 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2, 6-1	HENDERSON	976	454
CONTRACT NO. 68409			ILLINOIS FED. AID PROJECT	