

Bench Mark: Railroad spike in power pole on the west side of the road. The first pole south of the existing bridge. Elevation = 533.59.

Existing Structure: Structure Number 036-3002. 3-span, non-composite continuous steel wide flange beam supporting a cast-in-place concrete deck constructed in 1953 as Section 14-1-B1 on FAS-418. The back to back abutments dimension is 150' with an out-to-out deck width of 26' constructed at a 0° skew with the Carman Road alignment. The flowline of Honey Creek is skewed 30° with the centerline of the structure. The structure currently has a 10 tons per axle and 40 tons gross posted weight limit. The structure is to be replaced using stage construction.

No Salvage

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES
FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)
 $f_y = 36,000$ psi (M270 Grade 36)

LOADING HL-93

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

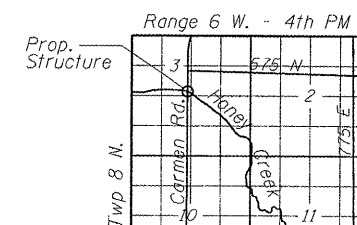
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.100
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.142
Soil Site Class = D

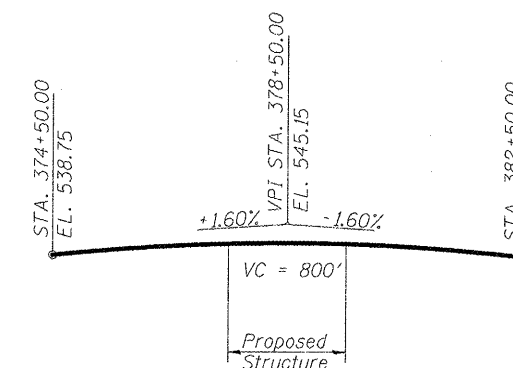
STATION 378+50.00
BUILT 20.. BY
STATE OF ILLINOIS
F.A.P. RT. 522 SEC. (14-1-B)BR
LOADING HL-93
STRUCTURE NO. 036-0071

NAME PLATE

See Std. 515001



LOCATION SKETCH



PROFILE GRADE

(Along \bar{C} of Rdwy.)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	S. Abut.
	535.0	509.8	507.8	507.2	509.2	535.0

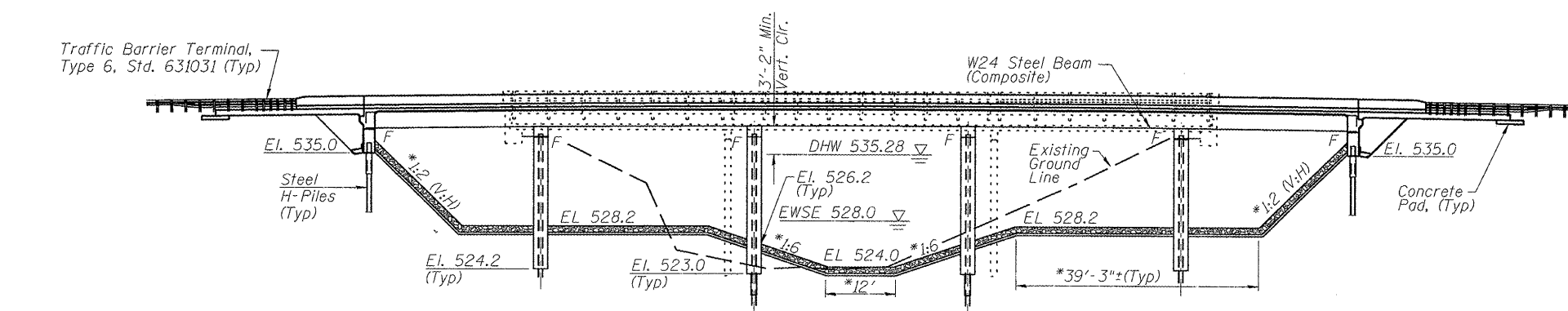
WATERWAY INFORMATION**

Drainage Area = 38450 AC Low Grade Elev. 536.07 @ Sta. 370+25

Flood	Freq. Yr.	Opening Sq. Ft.		Head - Ft.		Headwater El.	
		Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.
Exst. Overtop.	7	4540	955	534.71	1.36	536.07	
Min. Calc.	10	5237	1060	534.82	1.83	536.65	535.38
Prop. Overtop.	21	6450	1620	535.02	1.05	536.07	
Design	50	8061	1175	535.28	2.34	537.62	536.73
Base	100	9344	1260	535.57	2.74	538.31	537.05
Max. Calc.	500	12413	1275	536.25	2.41	538.66	537.58

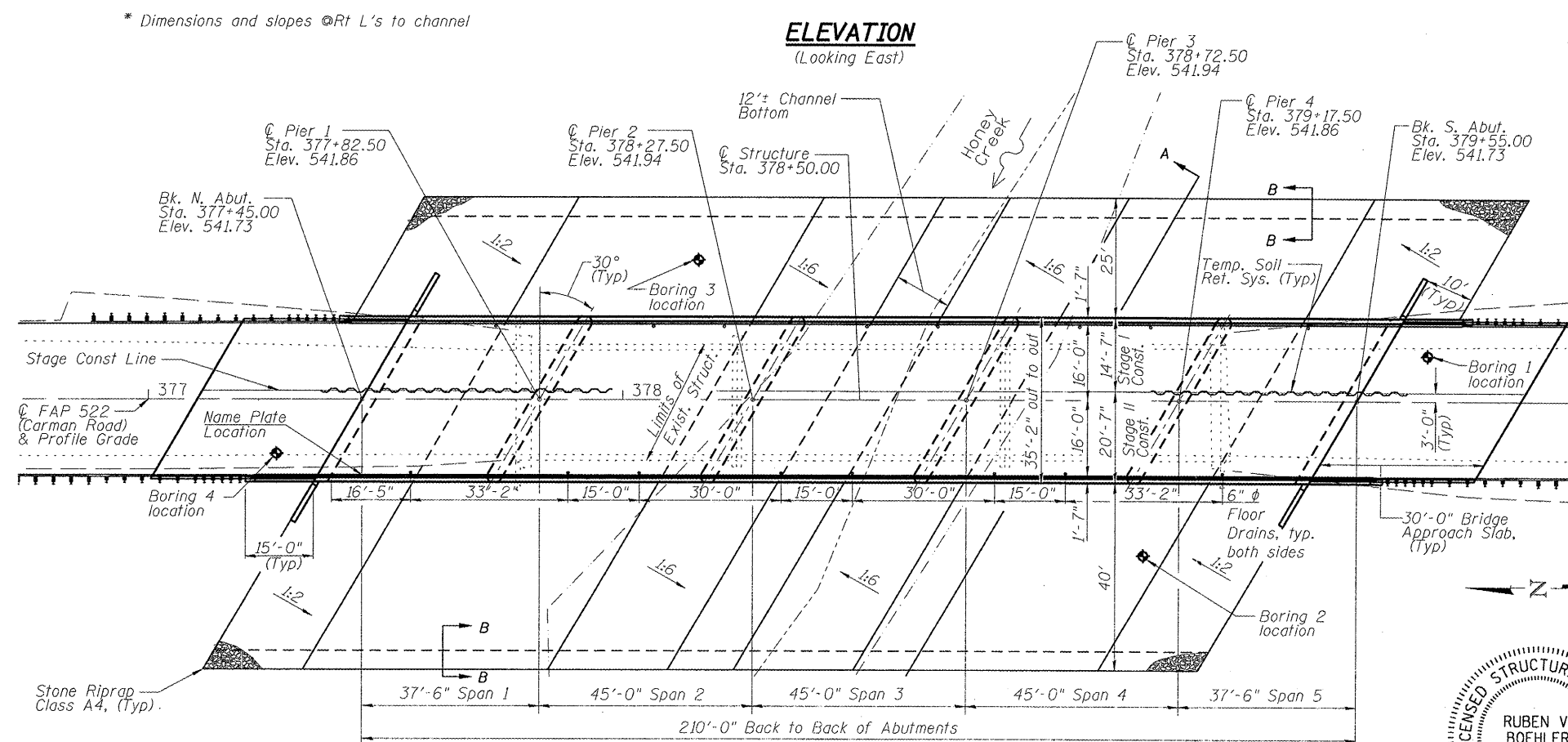
**Waterway Information Table and corresponding elevations have been adjusted by -0.63' to agree with the elevations provided by the local NGVD monuments.

GENERAL PLAN AND ELEVATION
CARMAN RD OVER HONEY CREEK
F.A.P. RTE. 522 - SEC. (14-1-B)BR
HENDERSON COUNTY
STATION 378+50.00
STRUCTURE NO. 036-0071



ELEVATION

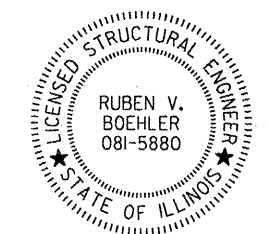
(Looking East)



PLAN

APPROVED
For Structural Adequacy Only

Rubens Boehler
Engineer of Bridges & Structures



Rubens Boehler 2-16-2011
RUBEN V. BOEHLER, S.E.
ILLINOIS STRUCTURAL NO. 5880
EXPIRES: NOVEMBER 30, 2012

NOTE: See sheet 2 of 27 for Sections A-A & B-B.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -
		CHECKED - CJC	REVISED -
		DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B) BR	HENDERSON	70	14
CONTRACT NO. 68298				