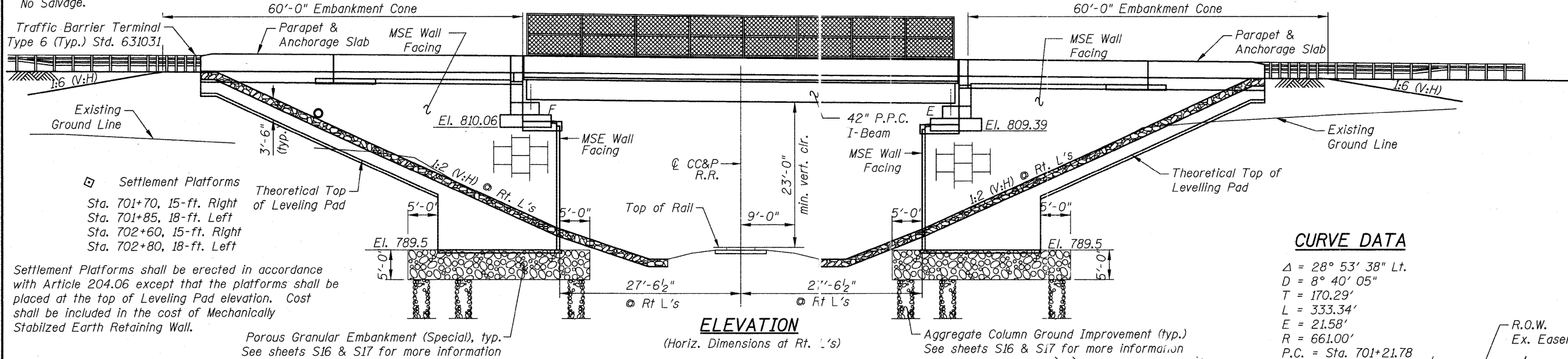


Benchmark: B.M.6 "Chiseled Box Cut" on top of guard wall at the south-east corner of the existing bridge crossing RR tracks, Sta. 702+15.50, Offset 168.85' Lt., Elev. 821.986

Existing Structure: To be removed after the construction of the new bridge. The existing structure (SN 045-3135) was built in 1990 and is a 3 span continuous horizontally curved steel rolled beam bridge. The bridge is supported by two stub abutment founded on driven piles and two piers founded on spread footings. The bridge length is 151'-10 1/8" bk. to bk. of abutments and is 37'-2" wide out to out. (Not visible in plan view).

No Salvage.



Settlement Platforms
Sta. 701+70, 15-ft. Right
Sta. 701+85, 18-ft. Left
Sta. 702+60, 15-ft. Right
Sta. 702+80, 18-ft. Left

Settlement Platforms shall be erected in accordance with Article 204.06 except that the platforms shall be placed at the top of Levelling Pad elevation. Cost shall be included in the cost of Mechanically Stabilized Earth Retaining Wall.

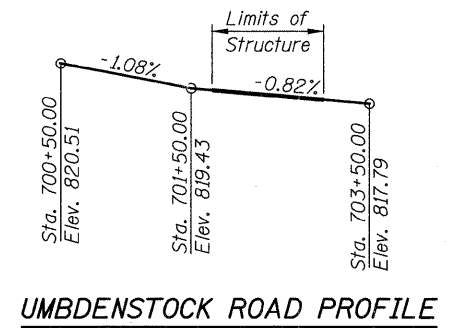
Porous Granular Embankment (Special), typ. See sheets S16 & S17 for more information

ELEVATION

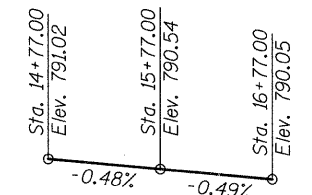
(Horiz. Dimensions at Rt. L's)

CURVE DATA

$\Delta = 28^\circ 53' 38''$ Lt.
 $D = 8^\circ 40' 05''$
 $T = 170.29'$
 $L = 333.34'$
 $E = 21.58'$
 $R = 661.00'$
P.C. = Sta. 701+21.78
P.T. = Sta. 704+55.12
P.I. = Sta. 702+92.07



UMBENSTOCK ROAD PROFILE



CC&P R.R. PROFILE

CIVILTECH ENGINEERING, INC.
GREGORY J. HATLESTAD, S.E.

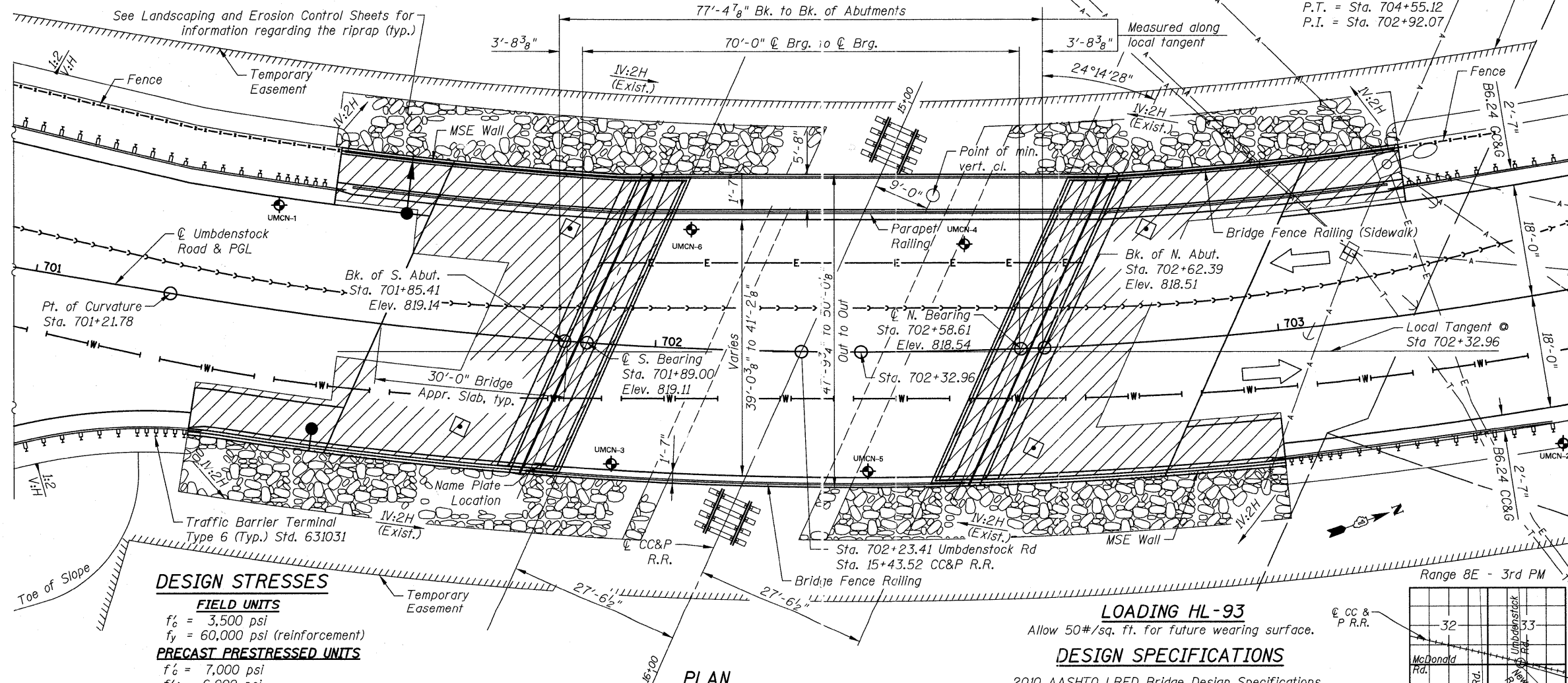


GREGORY J. HATLESTAD, S.E.
081-005562

EXP 11/30/2012

DATE 5/11/2011

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



DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS
 $f'_c = 7,000$ psi
 $f_{ci} = 6,000$ psi
 $f_{pu} = 270,000$ psi (1/2" ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi (1/2" ϕ low lax. strands)

PRECAST UNITS
 $f'_c = 4,500$ psi (Precast MSE Panels)

LOADING HL-93

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

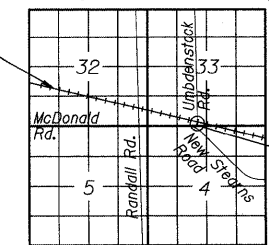
DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.207
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.066
Soil Site Class = D

LOCATION SKETCH



GENERAL PLAN & ELEVATION

**UMBENSTOCK ROAD OVER
CC&P R.R. TRACKS
SECTION 06-00214-27-BR
KANE COUNTY
STATION 702+23.41
STRUCTURE NO. 045-3162**

3:20:34 PM J:\23372\cc&p\struct\01_gpe.dgn

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DESIGNED - D. Atkins	REVISED - 4-11-11
DRAWN - D. Atkins	REVISED -
CHECKED - G. Hatlestad	REVISED -
DATE - March 25, 2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**UMBENSTOCK ROAD OVER CC&P RR
STRUCTURE NO. 045-3162**

SHEET NO. S1 OF S28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-27-BR	KANE	87	34
CONTRACT NO. 63595				
FED. ROAD DISTRICT 1 ILLINOIS FED. AID PROJECT				