

Benchmarks: 1.) Existing "□", on the N.E. corner of East Bridge Elevation 81.12
 2.) Iron Rod, CP #14 ±1200' S. of bridge on E. side of road;
 3.) N 8807.79, E 10018.98 Elevation = 77.55
 Iron Rod, CP #17 S.E. quadrant TOB Sta. 173+2.3/46' Rt;
 N 9992.61, E 10046.26 Elevation = 73.76

Existing Structure: Structure Number 053-0087, built in 1929 and carries F.A.S. 342 (C.H. 3) over a Tributary to the South Fork of the Vermillion River. Consisting of a 40'-0" single-span reinforced concrete thru girder superstructure with a bituminous wearing surface supported by reinforced concrete closed abutments on spread footings. The slab thickness varies from 20" at the centerline of the bridge to 15" at the face of the parapet. The structure is not skewed to the roadway and is approximately 28'-10" out to out and 43'-0" back to back of abutments. The existing structure has no salvage value.

DESIGN SPECIFICATIONS

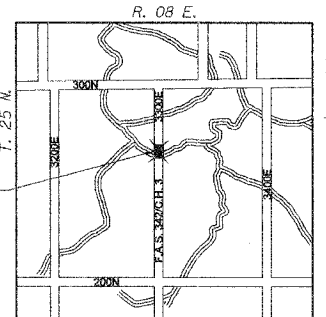
AASHTO 2002
LOADING HS20-44
 Allow 50#/sq. ft. for future wearing surface.
DESIGN STRESSES

CAST IN PLACE CONCRETE (FIELD UNITS)
 $f'_c = 4,000$ psi
 $f_y = 60,000$ psi (Reinforcement)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.043
 Site Coefficient (S) = 1.0

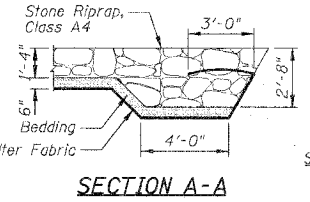
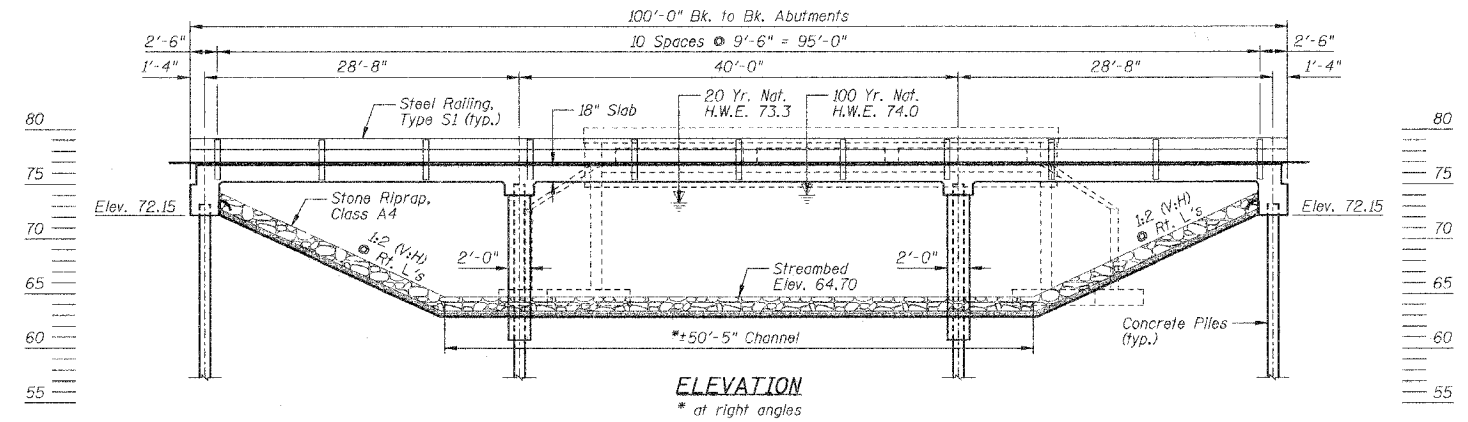
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|------------|--------------|-----------|
| 342 | 02-00208-01-BR | LIVINGSTON | 24 | 6 |
| STA. 171+70 TO STA. 174+70 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |
| CONTRACT NO. 87283 | | | | |



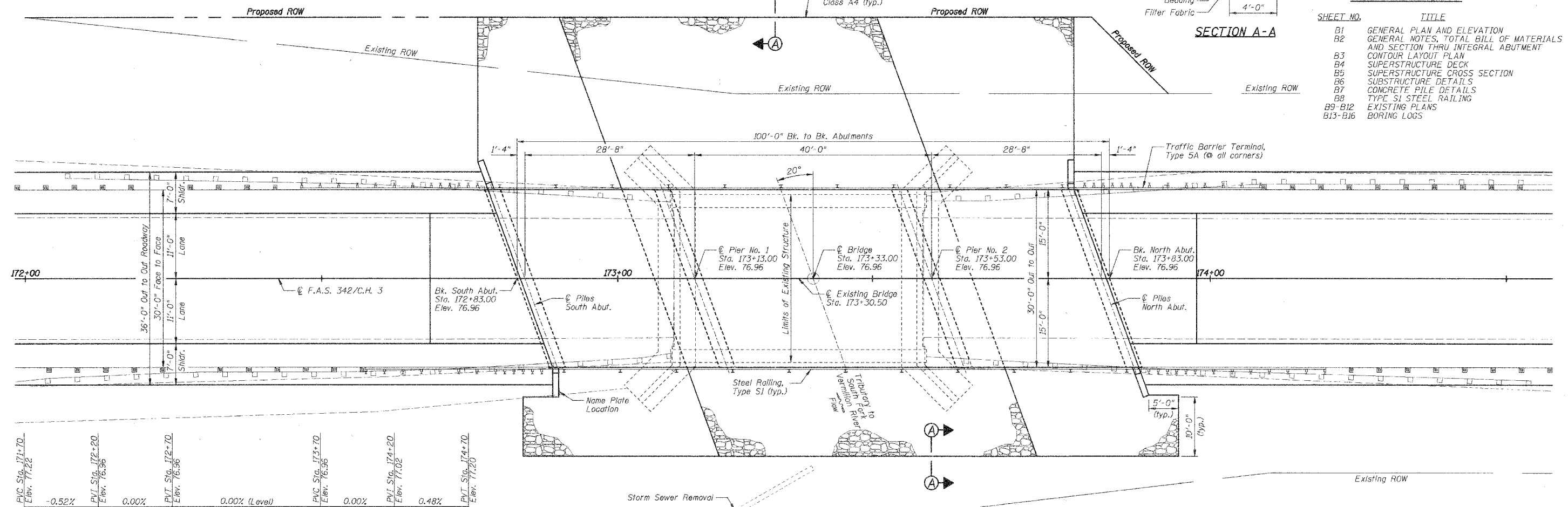
LOCATION MAP

INDEX TO SHEETS

| SHEET NO. | TITLE |
|-----------|---|
| B1 | GENERAL PLAN AND ELEVATION |
| B2 | GENERAL NOTES, TOTAL BILL OF MATERIALS AND SECTION THRU INTEGRAL ABUTMENT |
| B3 | CONTOUR LAYOUT PLAN |
| B4 | SUPERSTRUCTURE DECK |
| B5 | SUPERSTRUCTURE CROSS SECTION |
| B6 | SUBSTRUCTURE DETAILS |
| B7 | CONCRETE PILE DETAILS |
| B8 | TYPE S1 STEEL RAILING |
| B9-B12 | EXISTING PLANS |
| B13-B16 | BORING LOGS |



SECTION A-A



PROFILE GRADE

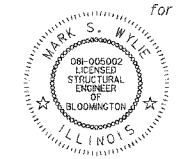
F.A.S. 342/C.H. 3 (along @ roadway)

WATERWAY INFORMATION

Drainage Area (Sq. Mi.) = 7.35 Low Grade Elev. = 76.81 @ Sta. 172+50

| Flood Year | Freq. | Q | Opening (Sq. Ft.) | Nat. H.W.E. | Head-Ft. | Headwater El. |
|-------------|-------|--------|-------------------|--------------|--------------|---------------|
| | | C.F.S. | Exist. Prop. | Exist. Prop. | Exist. Prop. | Exist. Prop. |
| Design | 20 | 830 | 276 374 | 73.2 74.0 | 0.0 0.1 | 73.2 73.3 |
| Base | 100 | 1179 | 306 436 | 74.0 | 0.0 | 74.0 74.0 |
| Max. Freq. | | | | | | |
| Overtopping | | | | | | |

I certify that to the best of my knowledge, this bridge 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'.



Mark S. Wylie Date 12/1/06
 MARK S. WYLIE
 ILLINOIS STRUCTURAL ENGINEER
 NO. 081-005002
 Exp. Date 11/30/08

SECTION 02-00208-01-BR
 LIVINGSTON COUNTY
 F.A.S. 342/C.H. 3

GENERAL PLAN AND ELEVATION

| | |
|-------------------|----------------------|
| DRAWN BY DMM | FILE NO. 24-7131 |
| DATE 12/01/06 | BOOK NO. 2606 |
| CHECKED BY MSW | SHEET NO. 6 OF 24 |

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