

Benchmarks: 1.) P.K. nail in wood fence post N. one of two post @ the N.W. corner of bridge @ Sta. 11+30/30' Lt., Elevation = 97.91
 2.) Center of bridge deck @ Sta. 10+00, Elevation = 100.02

Existing Structure: Consist of a three-span metal truss bridge with a timber deck on concrete abutments and metal rapped concrete piers. The structure is not skewed to the roadway and is approximately 14' out to out and 122' back to back of abutments. The existing structure has no salvage value.

DESIGN SPECIFICATIONS

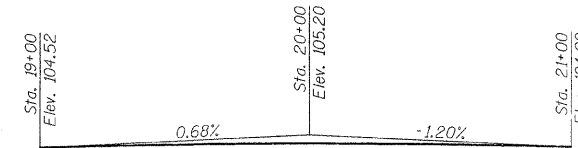
AASHTO 2002
LOADING HS20-44
 Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

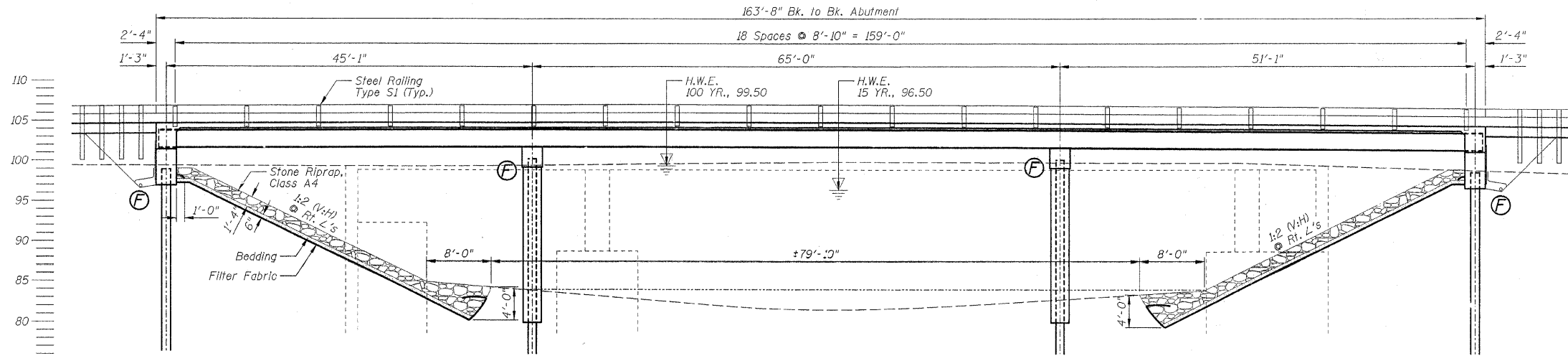
CAST IN PLACE CONCRETE (FIELD UNITS)
 $f'_c = 4,000$ psi
 $f_y = 60,000$ psi (Reinforcement)
 STRUCTURAL STEEL
 $f_y = 50,000$ psi

SEISMIC DATA

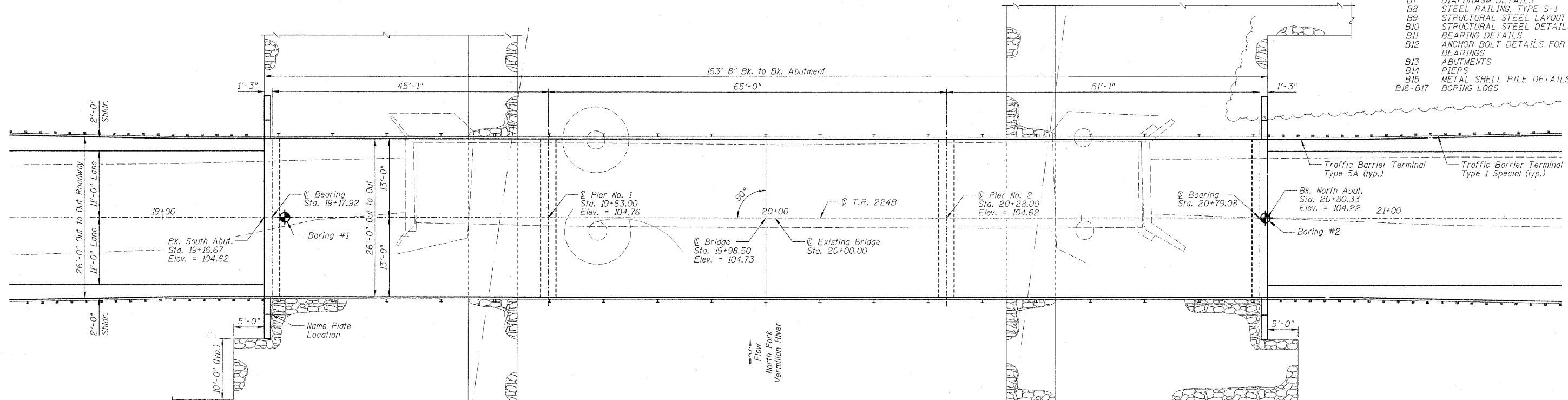
Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.043
 Site Coefficient (S) = 1.0



PROFILE GRADE
 T.R. 224B (along roadway)



ELEVATION



PLAN

WATERWAY INFORMATION

| Flood Year | Freq. | C.F.S. | Opening (Sq. Ft.) | | Nat. H.W.E. | | Head-Ft. | | Headwater El. | |
|-------------|-------|--------|-------------------|-------|-------------|-------|----------|-------|---------------|-------|
| | | | Exist. | Prop. | Exist. | Prop. | Exist. | Prop. | Exist. | Prop. |
| Design | 15 | 6701 | 1252 | 1410 | 96.5 | 0.1 | 0.0 | 96.6 | 96.5 | |
| Base | 100 | 9879 | 1481 | 1888 | 99.5 | 0.2 | 0.3 | 99.7 | 99.8 | |
| 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'.

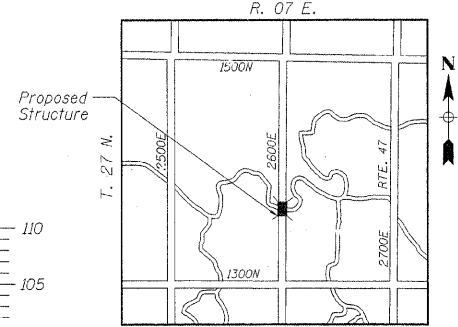


Mark S. Wylie Date 3/17/09
 MARK S. WYLIE
 ILLINOIS STRUCTURAL ENGINEER
 NO. 081-005002
 Exp. Date 11/30/10

T.R. 224B OVER
 NORTH FORK VERMILION RIVER
 BUILT 200... BY
 LIVINGSTON COUNTY
 SECTION 03-26140-00-BR
 SECTION 03-21117-00-BR
 STATION 19+98.50
 LOADING HS20
 STR. NO. 053-4175

NAME PLATE DETAIL
 See Standard 515001

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|----------------|----------------------------|--------------|-----------|
| | 03-26140-00-BR | LIVINGSTON | 28 | 8 |
| | 03-21117-00-BR | LIVINGSTON | | |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. 7 | | ILLINOIS FED. AID PROJECT* | | |
| CONTRACT NO. 87360 | | SHEET NO. B1 | | |
| | | OF 17 SHEETS | | |



LOCATION MAP

INDEX TO SHEETS

| SHEET NO. | TITLE |
|-----------|---|
| B1 | GENERAL PLAN AND ELEVATION |
| B2 | SECTION THRU INTEGRAL ABUTMENT, BILL OF MATERIALS AND GENERAL NOTES |
| B3 | STONE RIPRAP LAYOUT PLAN |
| B4 | ELEVATION LOCATIONS AND DEAD LOAD DEFLECTION DIAGRAM |
| B5 | TOP OF SLAB ELEVATIONS |
| B6 | SUPERSTRUCTURE PLAN AND CROSS SECTION |
| B7 | DIAPHRAGM DETAILS |
| B8 | STEEL RAILING, TYPE S-1 |
| B9 | STRUCTURAL STEEL LAYOUT |
| B10 | STRUCTURAL STEEL DETAILS |
| B11 | BEARING DETAILS |
| B12 | ANCHOR BOLT DETAILS FOR BEARINGS |
| B13 | ABUTMENTS |
| B14 | PIERS |
| B15 | METAL SHELL PILE DETAILS |
| B16-B17 | BORING LOGS |

SECTION 03-26140-00-BR
 SECTION 03-21117-00-BR
 LIVINGSTON COUNTY

GENERAL PLAN AND ELEVATION

| | | |
|-----------------------|---|----------------------|
| DESIGNED BY S.D.H. | | FILE NO. 24-7191 |
| CHECKED BY D.J.M. | | DATE 03/17/09 |
| CHECKED BY M.S.W. | <small>2700 S. Greenwood Drive Bloomington, Illinois 61704 309/838-8438, 309/838-1871 fax</small> | SHEET NO. 8 of 28 |