

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 1
F.A.I. 70	25-4HB-1B	EFFINGHAM	67	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #94785

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{15}{16}$ " ϕ unless otherwise noted.
Calculated weight of Structural Steel = 309220 pounds (AASHTO M270 Gr. 50) = 21260 pounds (AASHTO M270 Gr. 36).

Anchor bolts shall be set before bolting diaphragms over supports. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Field welding of construction accessories will not be permitted to girders. Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The Contractor shall drive one steel HP 12x53 test pile in a permanent location at the South Abutment as directed by the Engineer before ordering the remainder of piles.

All construction joints shall be bonded.

If the Contractor elects to use cantilever forming brackets on the exterior girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06 of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

The inorganic zinc rich primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5 G 4/8. See special provisions for Cleaning and Painting New Metal Structures.

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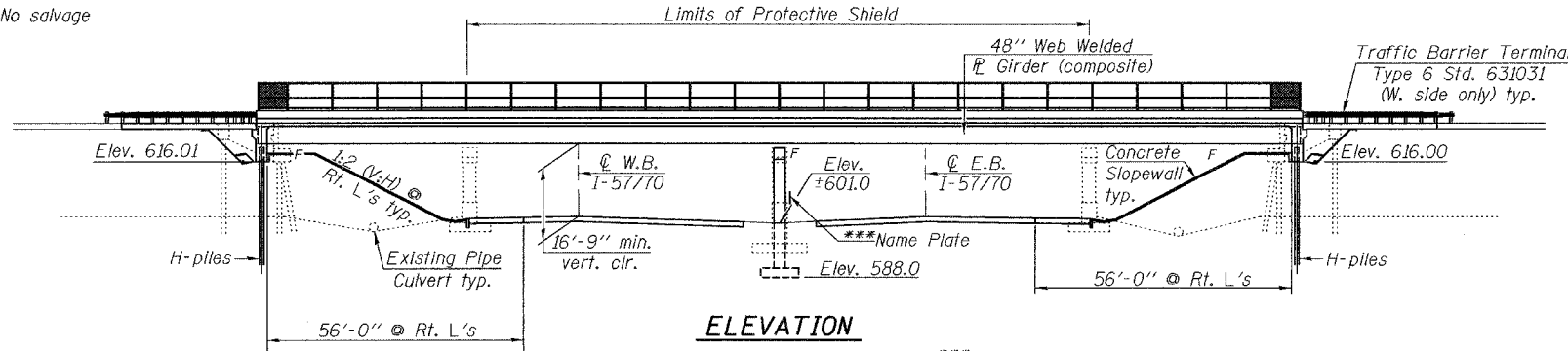
1. General Plan
2. General Details
- 3-4. Top of Slab Elevations
5. Superstructure
- 6-7. Superstructure Details
8. Bridge Fence Railing, Parapet Mounted
9. Diaphragm Details
10. Structural Steel
11. Structural Steel & Bearing Details
12. Anchor Bolt Details
13. North Abutment
14. South Abutment
15. Pier
16. Bar Splicer Assembly Details
- 17-18. Boring Data

Bench Mark: Chiseled "□" on crashwall under 4th. Street overpass on north side of I-57/70.
Sta. 2270+67, 67' Lt., Elev. 603.83; Chiseled "□" on sign base of "Chicago, E. Indianapolis,"
Sta. 2248+93, 0.7' Lt., I-57/70, Elev. 600.99.

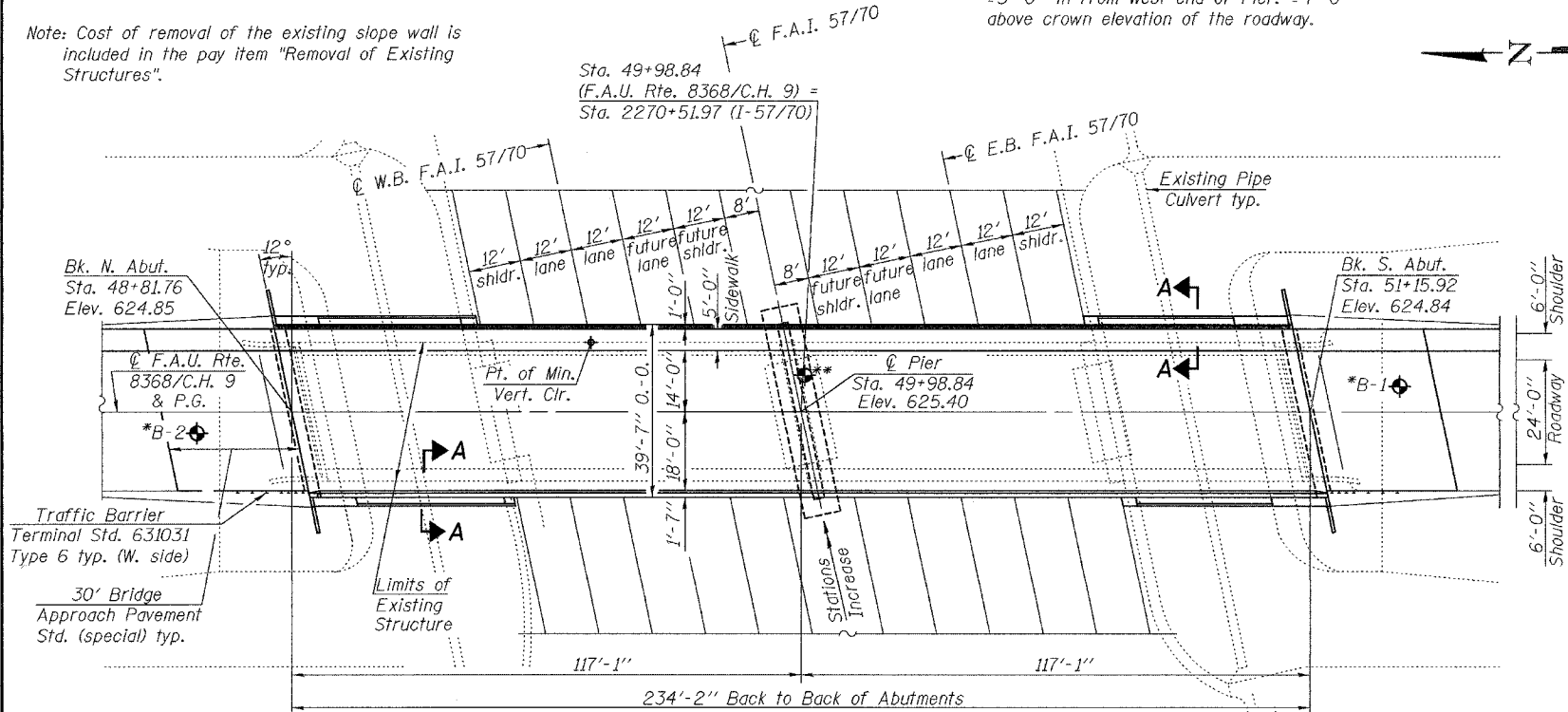
Existing Structure: S.N. 025-0049 built in 1960 as F.A.I. Rte. 70, Section 25-4HB-1 at Sta. 2270+51.97.

The substructure consists of 3-double hammerhead piers on spread footings and pile bent abutments founded on concrete piles. The 4 span superstructure consists of a reinforced concrete deck on wide flange girders. The 2 end spans are simple spans while the 2 interior spans are continuous. The Bk. to Bk. abutments measures 226'-2" while the O.-O. deck width measures 31'-8". The existing structure is to be removed and replaced. Traffic to be detoured.

No salvage



Note: Cost of removal of the existing slope wall is included in the pay item "Removal of Existing Structures".



STATION 49+98.84
BUILT 200 BY
STATE OF ILLINOIS
F.A.I. RTE. 70 - SEC. (25-4HB-1B)
LOADING HL93
STR. NO. 025-0102

NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		151.6	151.6
Concrete Superstructure	Cu. Yd.	350.1		350.1
Concrete Structures	Cu. Yd.		184.3	184.3
Removal of Existing Structures	Each	1		1
Reinforcement Bars, Epoxy Coated	Pound	69780	23890	93670
Protective Coat	Sq. Yd.	1163		1163
Name Plates	Each	1		1
Porous Granular Embankment (Special)	Cu. Yd.		225.8	225.8
Stud Shear Connectors	Each	2448		2448
Bar Splicers	Each	76		76
Furnishing and Erecting Structural Steel	L. Sum	1		1
Braced Excavation	Cu. Yd.		373.6	373.6
Furnishing Steel Piles HP12x53	Foot		615	615
Test Pile Steel HP12x53	Each		1	1
Driving Piles	Foot		615	615
Slope Wall 4"	Sq. Yd.	485.8		485.8
Bridge Fence Railing	Foot	234		234
Bridge Deck Grooving	Sq. Yd.	780.8		780.8
Pile Shoes	Each		12	12
Geocomposite Wall Drain	Sq. Yd.		94.0	94.0
Pipe Underdrain For Structures, 4"	Foot		166	166
Form Liner Textured Surface	Sq. Ft.		2080	2080
Protective Shield	Sq. Yd.	489.3		489.3

LOADING HL-93

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

DESIGN SPECIFICATIONS

2004 AASHTO LRFD Bridge Design Specifications, with 2005 & 2006 Interims

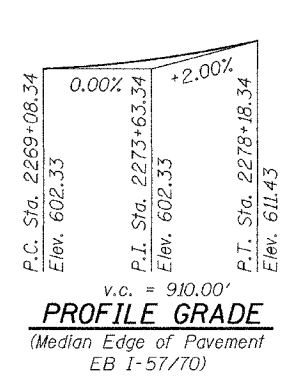
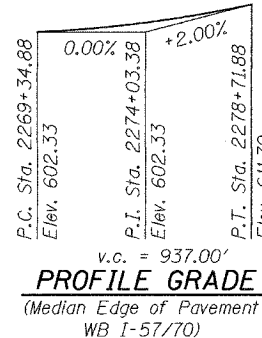
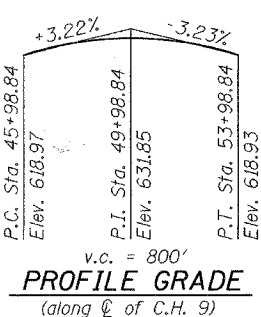
DESIGN STRESSES

FIELD UNITS

- $f'_c = 3,500$ psi
- $f_y = 60,000$ psi (reinforcement)
- $f_y = 50,000$ psi (structural steel) (M270, Grade 50)
- $f_y = 36,000$ psi (Structural Steel) (M270, Grade 36)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 7.2%g
Site Coefficient (S) = 1.5

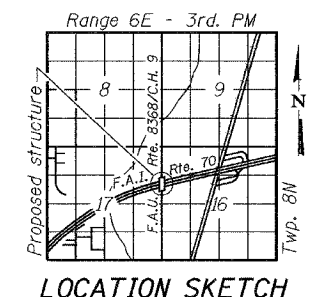


DESIGNED *Philip P. Navitoban*
CHECKED *Stephen M. Ryan*
DRAWN *R. Sommer*
CHECKED *DPN/SHR*

September 28 2006
EXAMINED *Thomas J. Danville*
PASSED *Ralph E. Anderson*



Expires 11-30-2006



GENERAL PLAN
4th. ST. ROAD (F.A.U. RTE. 8368/CH9)
OVER I-57/70
F.A.I. RTE. 70 - SEC. (25-4HB-1B)
EFFINGHAM COUNTY
STATION 49+98.84
STRUCTURE NO. 025-0102