

BENCHMARK: B.M. - Chiseled square on Southeast wingwall from Bridge Plans. Elevation 245.559 m.

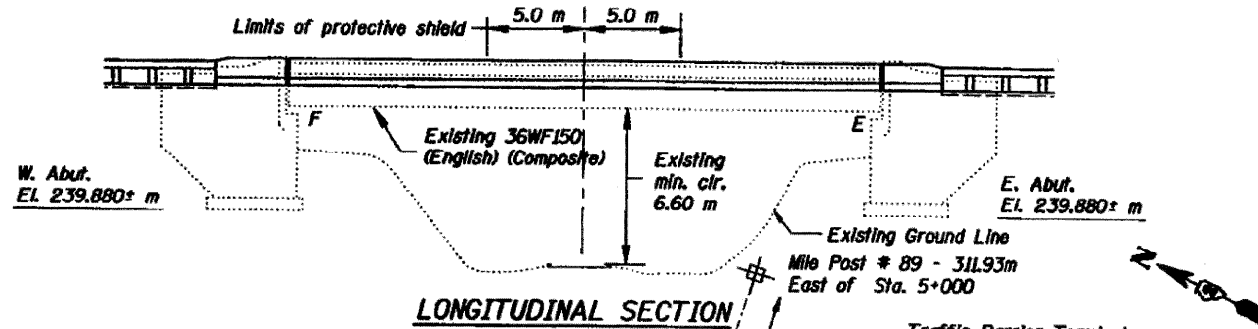
EXISTING STRUCTURE: S.N. 101-0049 (EB) and 101-0050 (WB) built as FA 194, Sec. 1-VB in 1964. Each structure is a single span wide flange beam bridge, 25.75 m Bk.-Bk.abutments and 11.89 m O.-O. deck. Skewed at 18° 20'. The deck is a 178 mm reinforced concrete slab with a wearing surface. Traffic will be maintained by using median crossover.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

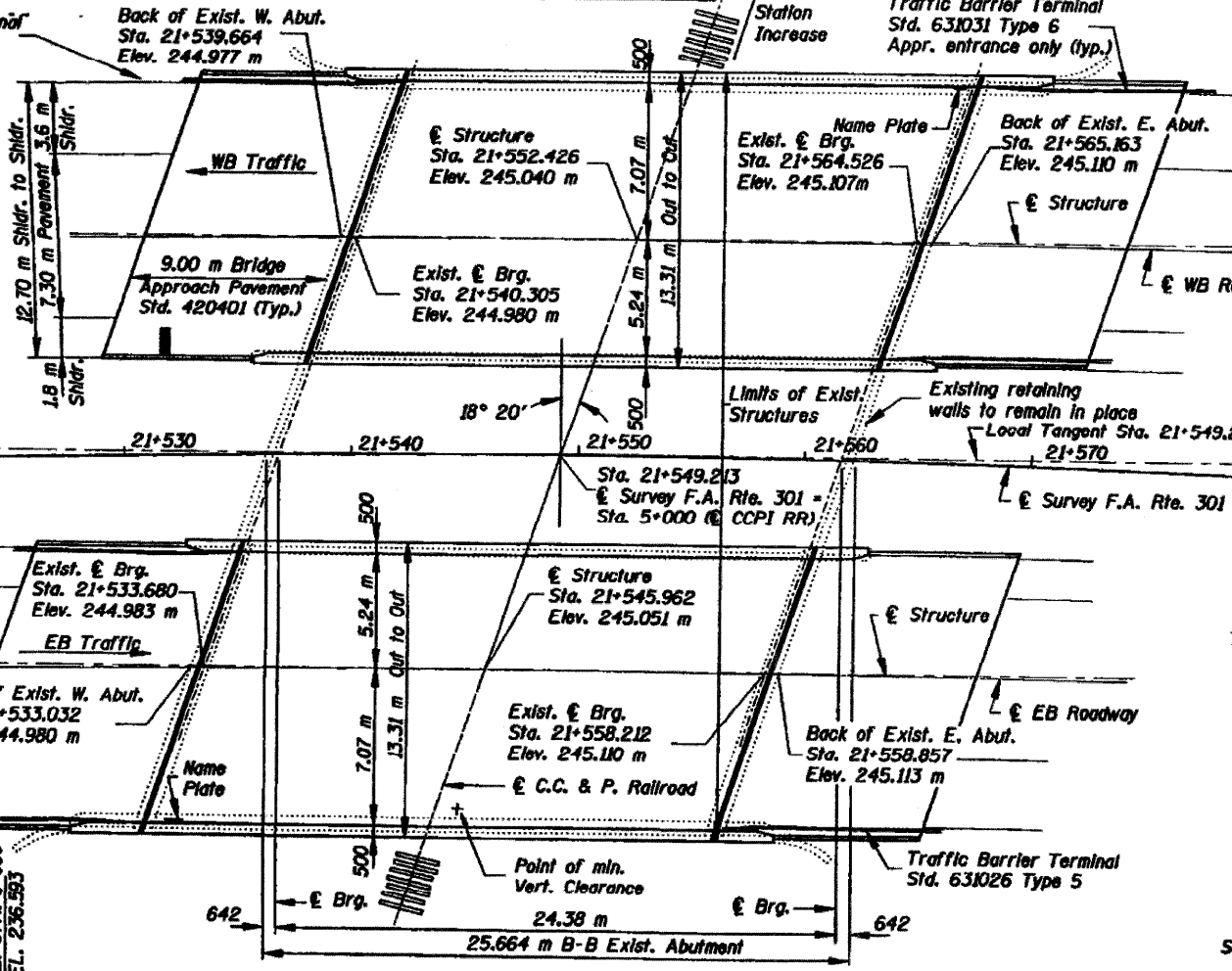
Note: All dimensions are in millimeters (mm) except as noted.

246 m
245 m
244 m
243 m
242 m
241 m
240 m
239 m
238 m
237 m



CURVE DATA

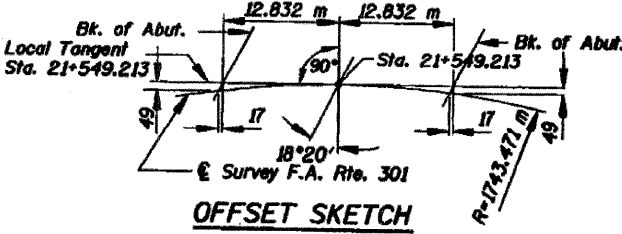
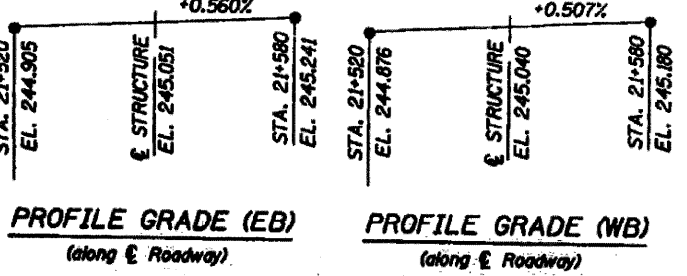
P.I. STA = 20+766.250
 $\Delta = 66^\circ 37' 17''$
 $R = 1,743.471$ m
 $T = 1,145.710$ m
 $L = 2,027.240$ m
 $E = 342.756$ m
 $PC = 19+620.539$
 $PT = 21+647.779$
 $S.E. = 3.2\%$



TOP OF RAIL ELEVATION
(C.C. & P. Railroad)

SHIVE HATTERY

DESIGNED	D. FENDER
CHECKED	M. WALTERS
DRAWN	D. FENDER
CHECKED	M. WALTERS
DATE	10-31-02



SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.033
 Site Coefficient (s) = 1.0

DESIGN SPECIFICATIONS

AASHTO 1997, 1998, 1999, 2000 & 2002 Interims

LOADING MS 18

Allow 1.2 kN/m² for future wearing surface.

DESIGN STRESSES

New Construction
 $f'_c = 24$ MPa
 $f_y = 400$ MPa (reinf.)
 $f_y = 250$ MPa (M270 Grade 250)

Existing Construction
 $f'_c = 17$ MPa
 $f_y = 250$ MPa (reinf.)
 $f_y = 250$ MPa (structural steel)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	each	2		2
Concrete Removal	m ³	22.4		22.4
Concrete Superstructure	m ³	177.2		177.2
Concrete Structures	m ³	23.1	5.5	28.6
Protective Coat	m ²	747		747
Furnishing & Erecting Structural Steel	kg	1890		1890
Reinforcement Bars, Epoxy Coated	kg	25070	610	25680
Elastomeric Bearing Assembly, Type 1	each	18		18
Name Plates	each	2		2
Bar Splicers	each	180		180
Bridge Deck Grooving	m ²	601		601
Jack and Remove Existing Bearings	each	20		20
Jacking Existing Superstructure	L.S.	1		1
High Performance Shotcrete	m ²		23.2	23.2
Epoxy Crack Sealing	m		7	7
Removal of Existing Bearings	each	16		16
Bridge Joint System (Expansion), 40 mm	m	26.6		26.6
Bridge Joint System (Fixed)	m	26.6		26.6
Protective Shield	m ²			280

GENERAL NOTES

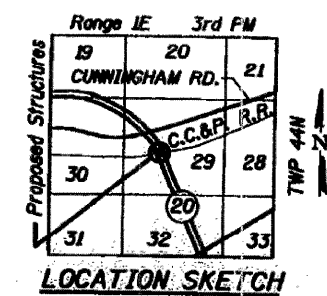
- Fasteners shall be high strength bolts. Bolts M20, open holes 22mm ϕ , unless otherwise noted.
- Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Reinforcement bars shall conform to the requirements of AASHTO M 31M, M 42M or M 53M Grade 400.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
- All existing construction accessories welded to the top flange over the pier(s) between the quarter points of the beams or girder shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that cannot be removed by grinding approximately 6 mm deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be for according to Article 109.04.
- The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
- All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Field painting of structural steel shall be done under a separate painting contract.
- Existing structural steel shall only be cleaned and painted as required by the special provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".
- The existing beams are composite. The existing shear studs shall be reincorporated into the new deck. Any studs damaged during the removal of the existing deck shall be replaced at the Contractor's own expense.

STATION 21+549.213
 BUILT 20 BY
 STATE OF ILLINOIS
 F.A. RTE. 301 - SEC. 1-VBR
 F.A. PROJ.
 LOADING MS18
 STR. NO. 101-0049 (EB)
 STR. NO. 101-0050 (WB)
NAME PLATE (2)
 See Std. 515001

Ralph E. Walters



Signed *Franklin M. Walters* 081-004817 11/20/04
 IL License No. Expires
 Date 11-15-02



GENERAL PLAN
 US 20 OVER C.C. & P. RAILROAD
 F.A. ROUTE 301 - SEC. 1-VBR
 WINNEBAGO COUNTY
 STATION 21+549.213
 STRUCTURE NO. 101-0049 & 101-0050