

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Bench Mark: Chiseled Square on top of Southeast Wingwall on Overhead Bridge carrying US 51 BUS over NSRR approx. 70' North of US 36, Sta. 1230+50.71, 23.88' Rt. elev 685.00  
Existing Structure: S.N. 058-0014 built 1966 as F.A. Route 2, Section 50Z-VB at Station 1236+06.66. Ten span, 508'-11 1/8" back to back of abutments, 48'-0" out to out. Superstructure consists of a partially curved R.C. deck on straight WF beams supported on three-column piers on timber piles, and pile bent abutments. Deck to be removed and replaced. Piers 5, 6, & 8 to be removed and replaced above the footings.

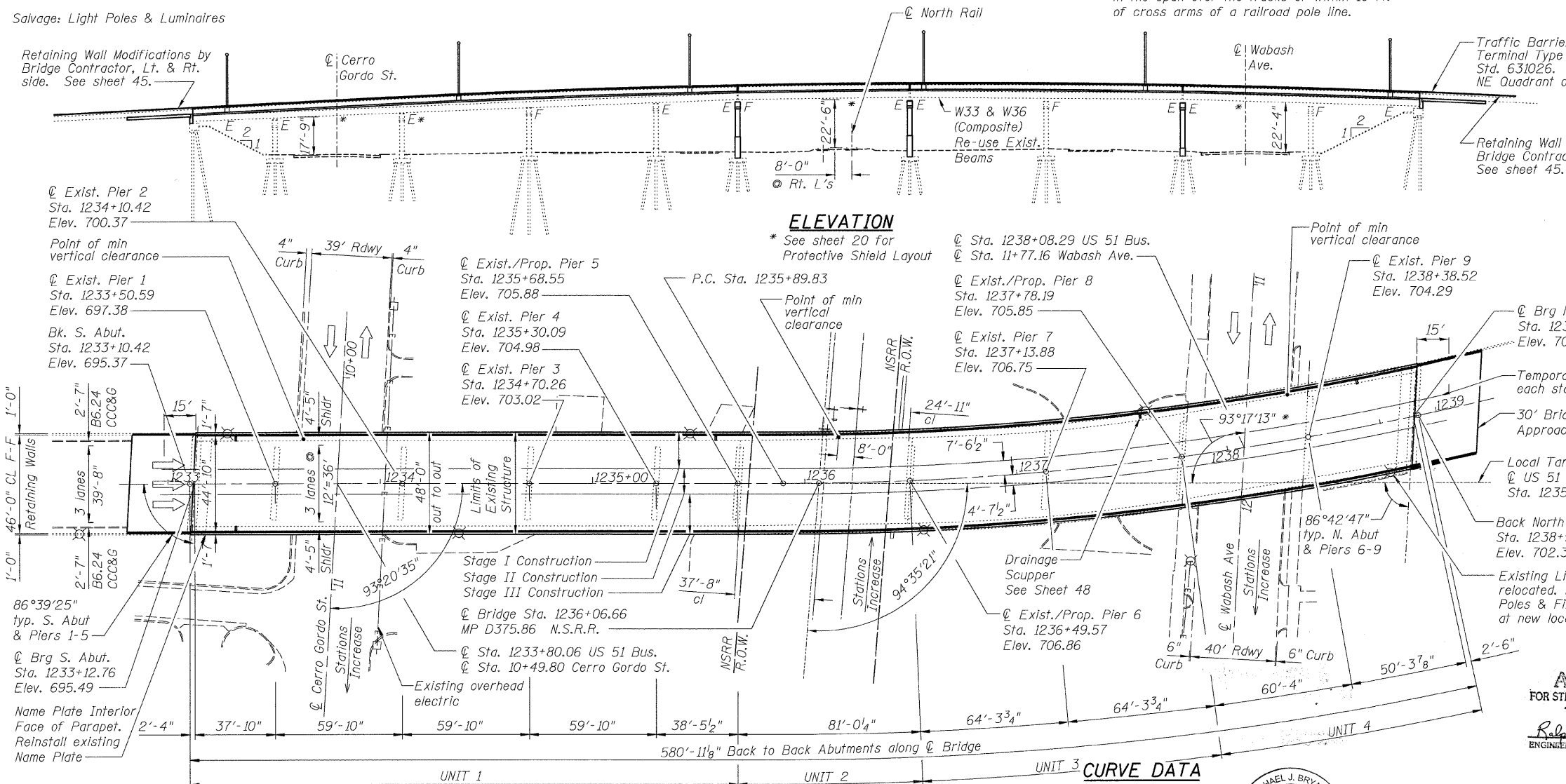
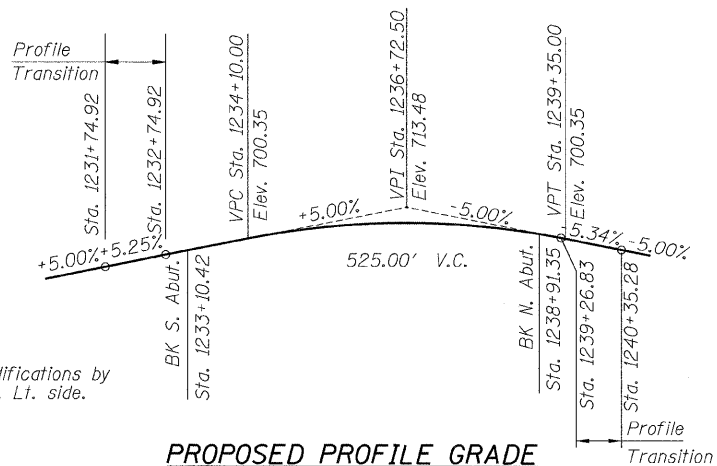
Staging: Traffic to be maintained during the rehabilitation by staged construction. 2 lanes to remain open, 3 stages.

Salvage: Light Poles & Luminaires

Note:  
No freefall deck drains will be permitted in the span over the tracks or within 10 ft. of cross arms of a railroad pole line.

Retaining Wall Modifications by Bridge Contractor, Lt. & Rt. side. See sheet 45.

Traffic Barrier Terminal Type 5, Std. 631026, NE Quadrant only  
Retaining Wall Modifications by Bridge Contractor, Lt. side. See sheet 45.



**ELEVATION**

\* See sheet 20 for Protective Shield Layout

Station	Elevation	Description
Sta. 1234+10.42	Elev. 700.37	Exist. Pier 2
Sta. 1233+50.59	Elev. 697.38	Exist. Pier 1
Sta. 1233+10.42	Elev. 695.37	Bk. S. Abut.
Sta. 1235+68.55	Elev. 705.88	Exist./Prop. Pier 5
Sta. 1235+30.09	Elev. 704.98	Exist. Pier 4
Sta. 1234+70.26	Elev. 703.02	Exist. Pier 3
Sta. 1238+08.29	-	US 51 Bus
Sta. 11+77.16	-	Wabash Ave.
Sta. 1237+78.19	Elev. 705.85	Exist./Prop. Pier 8
Sta. 1237+13.88	Elev. 706.75	Exist. Pier 7
Sta. 1238+38.52	Elev. 704.29	Exist. Pier 9
Sta. 1238+88.85	Elev. 702.45	Brg North Abut.
Sta. 1233+12.76	Elev. 695.49	Brg S. Abut.
Sta. 1236+49.57	Elev. 706.86	Exist./Prop. Pier 6
Sta. 1233+80.06	-	US 51 Bus
Sta. 10+49.80	-	Cerro Gordo St.

**PROPOSED PROFILE GRADE U.S. 51 BUSINESS**

Sta. Equations:  
Sta. 1232+81.92 (BK) (2005 IDOT) = Sta. 1232+80.92 (AH) (1963 Plans)  
Sta. 1239+20.83 (BK) (1963 Plans) = Sta. 1239+20.71 (AH) (2005 IDOT)

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications

**LOADING HS20-44**  
Allow 25#/#.sq. ft. for future wearing surface.

**SEISMIC DATA**  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.045  
Site Coefficient (S) = 1.2

**DESIGN STRESSES**

**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 36,000 psi (M270 Grade 36)  
**EXISTING CONSTRUCTION**  
fc = 1,400 psi (Concrete w/o earth pressure)  
fs = 20,000 psi (Reinforcement)  
fs = 20,000 psi (Structural Steel A36)  
vc = 75 psi (Footings)  
n = 10

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Michael J. Bryant (T) ENGINEER OF BRIDGES AND STRUCTURES

MICHAEL J. BRYANT  
081-005324  
LICENSED STRUCTURAL ENGINEER  
OF CHAMPAIGN  
ILLINOIS NO. 5324 EXPIRES 11-30-10  
SHEETS 1-27, 45-49  
DATE 3/12/10

MARY COOMBE-BLOXDORF  
LICENSED STRUCTURAL ENGINEER  
STATE OF ILLINOIS  
4859  
DATE 3/12/10

MARY COOMBE-BLOXDORF  
ILLINOIS NO. 4859 EXPIRES 11-30-10  
SHEETS 28-44

GENERAL PLAN AND ELEVATION  
U.S. 51 BUSINESS OVER CERRO GORDO ST., N.S.R.R. & WABASH AVE.  
F.A.P. ROUTE 710 SECTION (50Z-VB)BR  
MACON COUNTY  
STATION 1236+06.66  
STRUCTURE NO. 058-0014

**LEGEND**

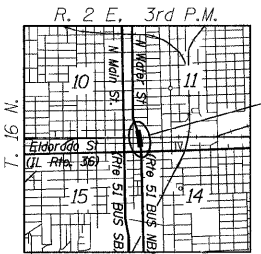
⊗ Luminair

**PLAN**

Horizontal Geometry from 1963 plans.

**CURVE DATA**

Δ = 16° 00' 00"  
D = 4° 00' 00"  
T = 201.31'  
L = 400.00'  
E = 14.08'  
R = 1432.39'  
S.E. = 0.04'/FT  
P.C. = Sta. 1235+89.83  
Begin S.E. Transition = Sta. 1234+95.83  
End S.E. Transition = Sta. 1236+19.83  
P.T. = Sta. 1239+89.83  
P.I. = Sta. 1237+91.14



**EXISTING PROFILE GRADE WABASH AVENUE**

Sta. 10+00	Elev. 678.24
Sta. 11+00	Elev. 677.86
Sta. 12+00	Elev. 677.30
Sta. 13+00	Elev. 676.91
Sta. 11+77.16	Elev. 677.38

**TOP OF RAIL ELEVATIONS SOUTH RAIL SOUTH TRACK N.S.R.R.**

MP D375.84	Elev. 679.77	MP D375.86	Elev. 679.49	MP D375.87	Elev. 679.36	MP D375.88	Elev. 679.22
MP D375.84	Elev. 678.92	MP D375.86	Elev. 679.05	MP D375.87	Elev. 679.23	MP D375.89	Elev. 679.61

**TOP OF RAIL ELEVATIONS NORTH RAIL NORTH TRACK N.S.R.R.**

MP D375.86	Elev. 679.44
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**EXISTING PROFILE GRADE CERRO GORDO ST.**

Sta. 9+00	Elev. 676.75
Sta. 10+00	Elev. 676.50
Sta. 10+50	Elev. 676.28
Sta. 11+00	Elev. 676.39
Sta. 12+00	Elev. 675.91

DESIGNED	MJB/MAJ
CHECKED	JFS
DRAWN	MSJ/MLB
CHECKED	MJB

**Foth**  
Foth Infrastructure & Environment, LLC  
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Champaign, IL 61821  
Phone: 217-352-4169 Fax: 217-352-0065  
Illinois Registration Number 184.004913

SHEET NO. 1	F.A.P. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 27
49 SHEETS	SN 058-0014		CONTRACT NO. 74215		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	