CONTRACT NO. 60B85

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2006-031 BY	WILL	137	64
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BENCHMARK:

BM 3059: Square cut on top of 36 inch box culvert between I-55 and E. Frontage Road and about 100 feet north of a crossover and about 1200 feet north of CSXRR. El. 548.88

EXISTING STRUCTURE:

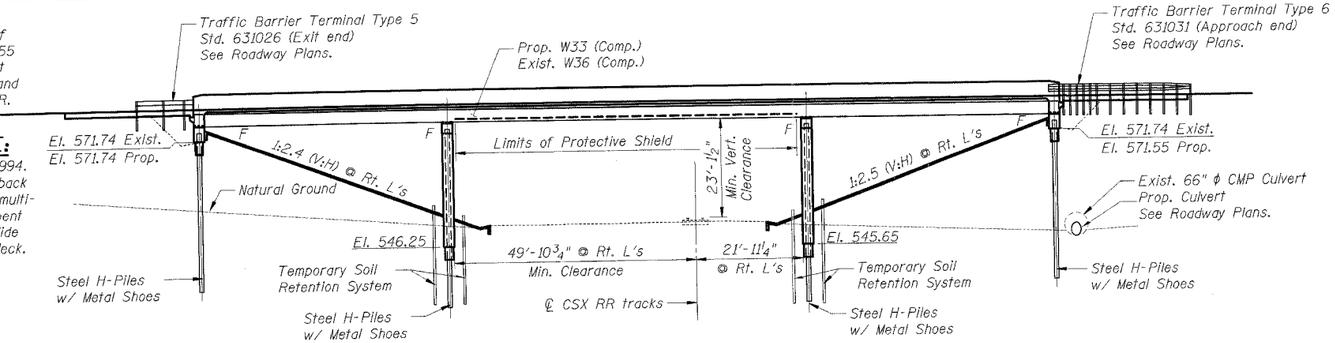
S.N. 099-0312 constructed in 1994. Three span, 202'-10" back to back of abutments, continuous steel multi-beam bridge on solid wall pile bent piers and integral abutments. Wide flange girders composite with deck. 40' between barriers.

SALVAGE:

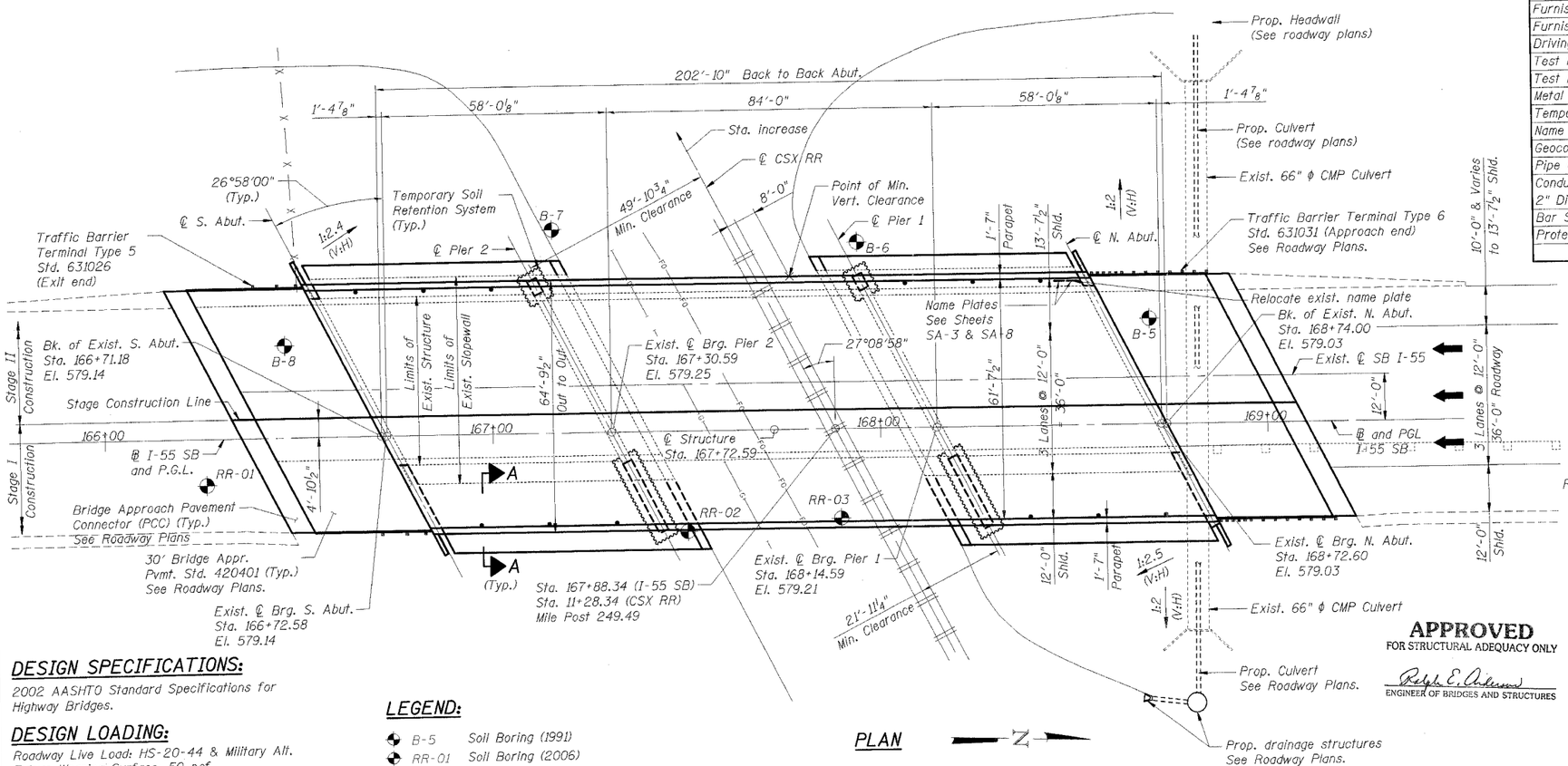
None.

STAGING:

See Sheet SA-2.



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

Item	Unit	Sub	Super	Total
Porous Granular Embankment, Special	Cu Yd	95		95
Concrete Removal	Cu Yd	6.6		6.6
Removal of Existing Concrete Deck	Each		1	1
Structure Excavation	Cu Yd	252		252
Floor Drains	Each		12	12
Concrete Structures	Cu Yd	156.5		156.5
Concrete Superstructure	Cu Yd		395.4	395.4
Bridge Deck Grooving	Sq Yd		1,389	1,389
** Protective Coat	Sq Yd		1,585	1,585
Erecting Structural Steel	L Sum		1	1
Furnishing and Erecting Structural Steel	Lb		110	110
Stud Shear Connectors	Each	3,192		3,192
Reinforcement Bars, Epoxy Coated	Lb	10,510	97,910	108,420
Slope Wall 4 Inch	Sq Yd	341		341
Furnishing Steel Piles HP10x42	Ft	622		622
Furnishing Steel Piles HP12x84	Ft	46		46
Driving Steel Piles	Ft	668		668
Test Pile Steel HP10x42	Each	3		3
Test Pile Steel HP12x84	Each	1		1
Metal Shoes	Each	15		15
Temporary Soil Retention System	Sq Ft	1,249		1,249
Name Plates	Each		1	1
Geocomposite Wall Drain	Sq Yd	52		52
Pipe Underdrains for Structures 6"	Ft	135		135
Conduit Embedded in Structure, 2" Dia., Galvanized Steel	Ft		406	406
Bar Splicers	Each		818	818
Protective Shield	Sq Yd	391		391

** Quantity includes top and inside surfaces of parapets

DESIGN SPECIFICATIONS:

2002 AASHTO Standard Specifications for Highway Bridges.

DESIGN LOADING:

Roadway Live Load: HS-20-44 & Military Alt.
Future Wearing Surface: 50 psf

DESIGN STRESSES:

Concrete, f'c = 3,500 psi
Reinforcement, fy = 60,000 psi
Structural Steel, fy = 50,000 psi (M 270 Grade 50)

SEISMIC DATA:

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

LEGEND:

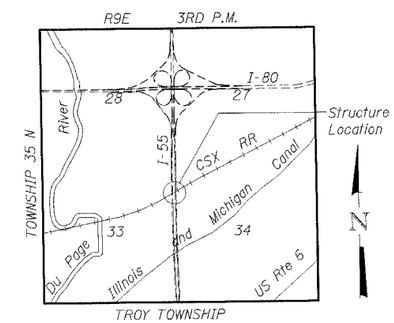
- B-5 Soil Boring (1991)
- RR-01 Soil Boring (2006)
- —G— Gas
- —FO— Fiber Optic
- X — X Fence
- • Floor Drain
- F Fixed
- Temporary Soil Retention System

Notes:

1. For Section A-A, see Sht. SA-3.
2. For PGL of I-55 SB and CSX RR, see Sht. SA-3.
3. See Drainage & Utility Plans for location of aerial utilities.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES
DATE 6/22/06
EXP. 11/30/06

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004737
CHICAGO
IL
REGISTERED STRUCTURAL ENGINEER



LOCATION SKETCH

SHT. SA-1 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (OVER CSX RR AND SUNNYLAND DRAIN)
BRIDGE WIDENING
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2006-031 BY
WILL COUNTY

GENERAL PLAN & ELEVATION TOTAL BILL OF MATERIAL

SCALE:
DATE 08/08/06
DRAWN BY MDB
CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILEL$
PLOT SCALE = $SCALE$
USER NAME = $USER$

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