STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

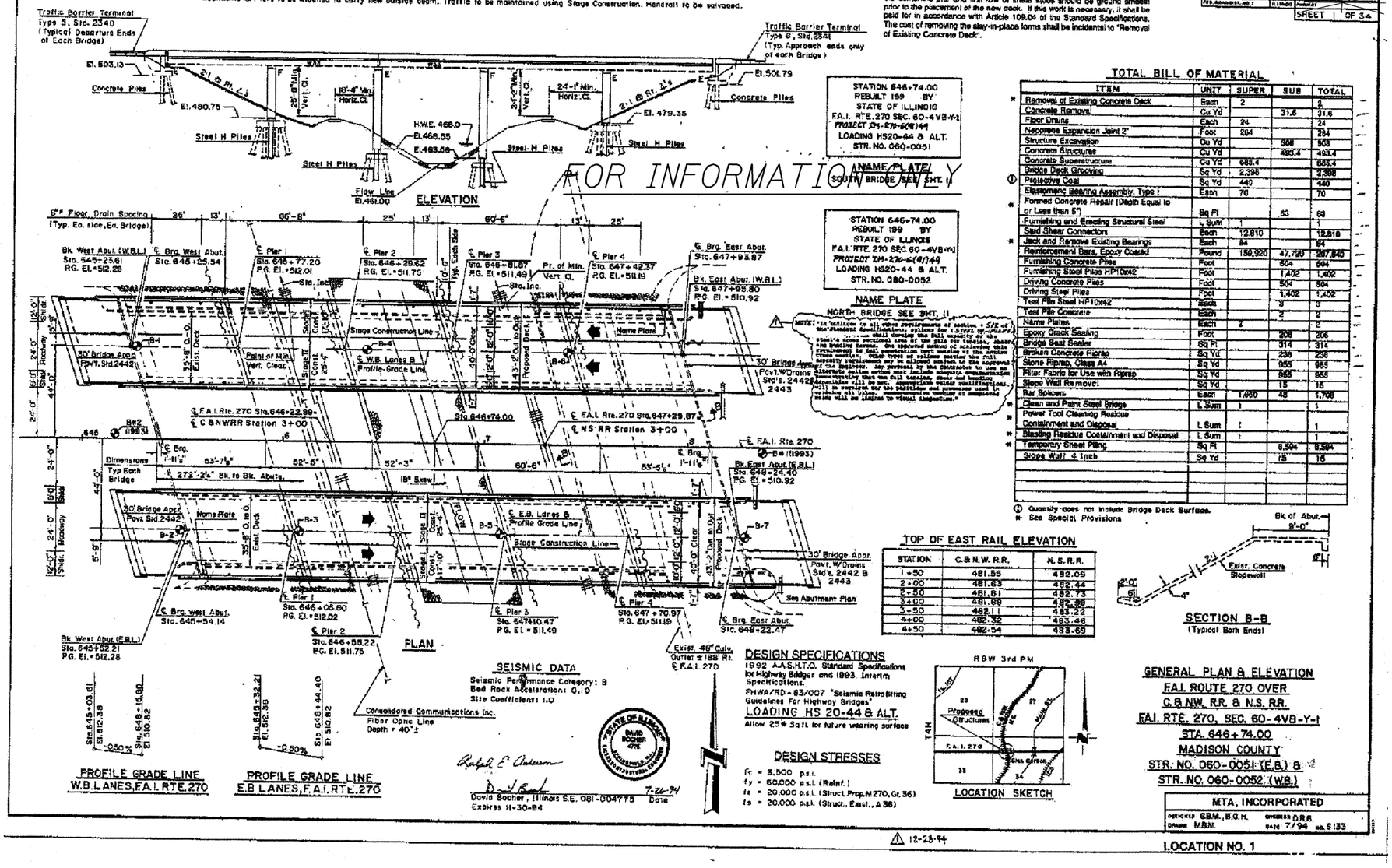
B.M. #7- Chiseled "□" Top of abutment seat, S.E. Corner of structure no. 060-0051. Elev. 503.87

Existing Structures: Built in 1963 as F.A.I. Route 270, Sec. 60-4VB-1. Superstructure consists of a non-composite 7" concrete deck on steel W.F. beams. 2-span continuous unit from West Abut. to Pier 2, 3-span continuous unit from Pier 2 to East Abut. Substructure consists of pile bent abutments & single column hammerhead piers. Concrete deck to be removed & replaced. Abutments & Piers to be widened to carry new outside beam. Traffic to be maintained using Stage Construction. Handrail to be salvaged.

The existing metal stay-in-place forms may have been tack welded to the top flanges of the existing beams. If this is the case, the welded areas between the centerline pier and first row of shear studs should be ground smooth prior to the placement of the new deck. If this work is necessary, it shall be paid for in accordance with Article 109.04 of the Standard Specifications. The cost of removing the stay-in-place forms shall be incidental to "Removal of Existing Concrete Deck".

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 270 60-4VB-1		MADISON	228	31
FED. ROAD DIST. NO. 7	ILLINOIS	Project 27		

SHEET 1 OF 34



STATION 646+74.00
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RTE. 270 SEC. 60-4VB-Y-1
PROJECT IM-270-6(9)144
LOADING HS20-44 & ALT.
STR. NO. 060-0051

NAME PLATE
SOUTH BRIDGE SEE SHT. I

STATION 646+74.00
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RTE. 270 SEC. 60-4VB-Y-1
PROJECT IM-270-6(9)144
LOADING HS20-44 & ALT.
STR. NO. 060-0052

NAME PLATE
NORTH BRIDGE SEE SHT. II

NOTE: "In addition to all other requirements of section 4.5.2 of the Standard Specifications, options for (Type of Material) shall consider the full capacity of the steel's gross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement in full penetration weld splices of the section cross sections. Other types of splices possible but full capacity requirements may be different relative to the approved splice detailed. Any proposal by the Contractor to use an alternate splice method must include adequate documentation that the full capacity of the pile is developed. Shop drawings and calculations will be sent appropriate review qualifications. It is possible for the substitution and processing used to be about six (6) weeks. Contractor is cautioned to consider all of these items and allow for adequate time in his schedule."

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER.	SUB	TOTAL
*	Removal of Existing Concrete Deck	Each	2		2
	Concrete Removal	Cu Yd		31.6	31.6
	Floor Drains	Each	24		24
	Neoprene Expansion Joint 2"	Foot	284		284
	Structure Excavation	Cu Yd		508	508
	Concrete Structures	Cu Yd		483.4	483.4
	Concrete Superstructure	Cu Yd	685.4		685.4
	Bridge Deck Grooving	Sq Yd	2,398		2,398
①	Protective Coat	Sq Yd	440		440
	Elastomeric Bearing Assembly, Type I	Each	70		70
*	Formed Concrete Repair (Depth Equal to or Less than 5")	Sq Ft		83	83
	Furnishing and Erecting Structural Steel	L Sum	1		1
	Steel Shear Connectors	Each	12,810		12,810
*	Jack and Remove Existing Bearings	Each	84		84
	Reinforcement Bars, Epoxy Coated	Pound	159,920	47,720	207,640
	Furnishing Concrete Piles	Foot		504	504
	Furnishing Steel Piles HP10x42	Foot		1,402	1,402
	Driving Concrete Piles	Foot		504	504
	Driving Steel Piles	Foot		1,402	1,402
	Test Pile Steel HP10x42	Each		3	3
	Test Pile Concrete	Each		2	2
	Name Plates	Each	2		2
	Epoxy Crack Sealing	Foot		208	208
	Bridge Seal Sealer	Sq Ft		314	314
	Broken Concrete Riprap	Sq Yd		236	236
	Stone Riprap, Class A4	Sq Yd		955	955
	Filter Fabric for Use with Riprap	Sq Yd		955	955
	Slope Wall Removal	Sq Yd		15	15
*	Bar Splicers	Each	1,660	48	1,708
*	Clean and Paint Steel Bridge	L Sum	1		1
*	Power Tool Cleaning Reduce Containment and Disposal	L Sum	1		1
*	Blasting Residue Containment and Disposal	L Sum	1		1
	Temporary Sheet Piling	Sq Ft		8,594	8,594
	Slope Wall, 4 Inch	Sq Yd		15	15

① Quantity does not include Bridge Deck Surfaces.
* See Special Provisions

TOP OF EAST RAIL ELEVATION

STATION	C.& N.W. R.R.	N. S. R.R.
1+50	481.55	482.09
2+00	481.63	482.44
2+50	481.81	482.73
3+00	481.89	482.89
3+50	482.11	483.22
4+00	482.32	483.46
4+50	482.54	483.65

SECTION B-B
(Typical Both Ends)

SEISMIC DATA

Seismic Performance Category: B
Bed Rock Acceleration: 0.10
Site Coefficient: 1.0

DESIGN SPECIFICATIONS

1992 A.A.S.H.T.O. Standard Specifications for Highway Bridges and 1993 Interim Specifications.
FHWA/RD-83/007 "Seismic Retrofitting Guidelines For Highway Bridges"

LOADING HS 20-44 & ALT.
Allow 25# Soil for future wearing surface

DESIGN STRESSES

f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinf.)
fs = 20,000 p.s.i. (Struct. Prop. M270, Gr. 36)
fs = 20,000 p.s.i. (Struct., Exist., A 36)

LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.I. ROUTE 270 OVER
C.& N.W. RR. & N.S. RR.
F.A.I. RTE. 270, SEC. 60-4VB-Y-1
STA. 646+74.00
MADISON COUNTY
STR. NO. 060-0051 (E.B.) &
STR. NO. 060-0052 (W.B.)

MTA; INCORPORATED
DESIGNED G.B.M., B.G.M. CHECKED O.R.S.
DRAWN M.B.M. DATE 7/94 No. 6133

LOCATION NO. 1

12-28-94

DESIGNED AYV
CHECKED JAU
DRAWN AYV
CHECKED JAU

March 5, 2010

EXAMINED
ENGINEER OF STRUCTURAL SERVICES

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 7 OF 10 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	270	D-8 Bridge Cleaning 2010-1	MADISON	12	9
			CONTRACT NO. 76D45		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		