

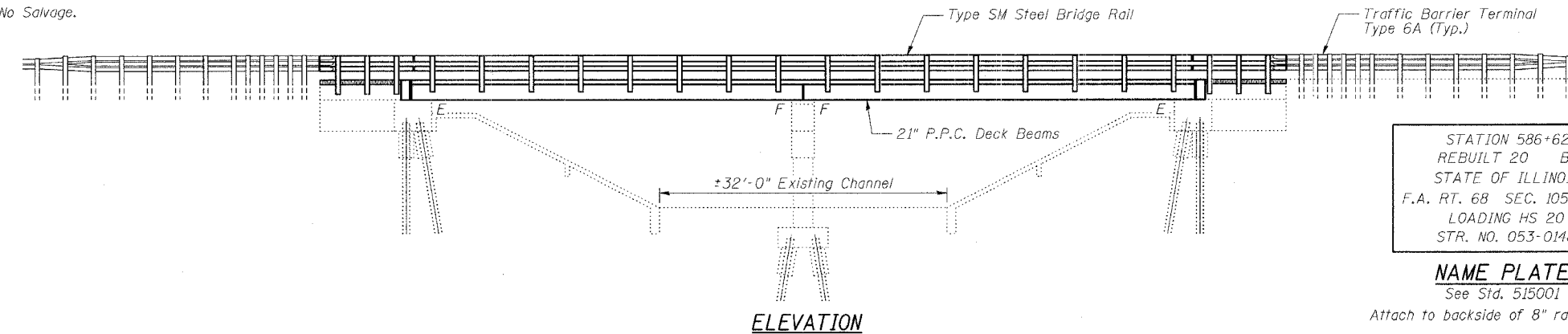
Bench Mark: Chiseled "□" on S.W. corner of parapet. S.N. 053-0148 Elev. 546.55

Existing Structure: S.N. 053-0148, two span 91'-0" bk. to bk. abutments, 46'-0" o. to o. precast, prestressed concrete deck beams on open pile bent abutments and solid concrete pier. Built as F.A. Route 105, Section 105 BR-1 in 1975. Traffic to be maintained utilizing stage construction.

No Salvage.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
FAP 68	105 BR-1	LIVINGSTON	45	12	14 SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		Contract #66566

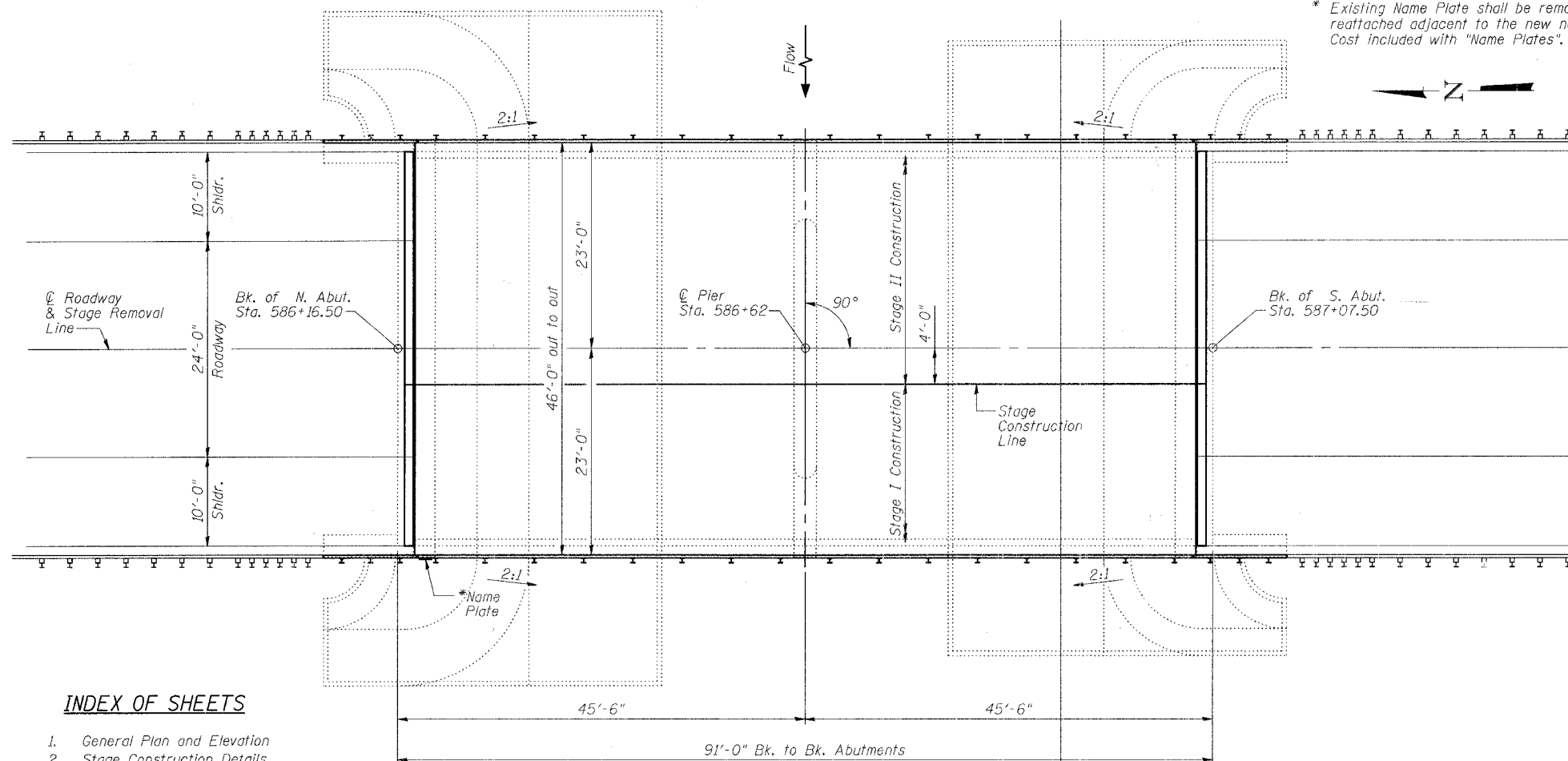


STATION 586+62  
REBUILT 20 BY  
STATE OF ILLINOIS  
F.A. RT. 68 SEC. 105 BR-1  
LOADING HS 20  
STR. NO. 053-0148

**NAME PLATE**  
See Sid. 515001

Attach to backside of 8" rail element

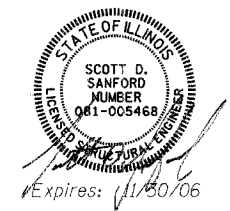
\* Existing Name Plate shall be removed, cleaned and reattached adjacent to the new name plate. Cost included with "Name Plates".



PLAN

**INDEX OF SHEETS**

- General Plan and Elevation
- Stage Construction Details
- Temporary Concrete Barrier for Stage Construction
- Superstructure Details
- Bridge Joint System-Exp. (PJS)
- Bridge Joint System-Exp. (Alt.-Strip Seal)
- Superstructure Details
- Superstructure Details
- Type SM Steel Bridge Rail Side Mounted
- Rail Details
- Concrete Removal Details
- North Abutment
- South Abutment
- Bar Splicer Assembly Details



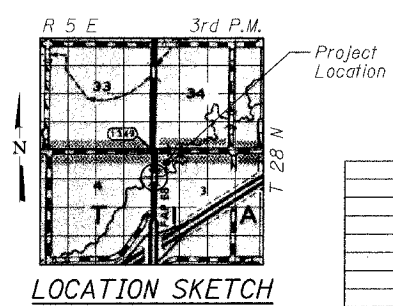
**LOADING HS20-44**  
Allow 50#/sq. ft. for future wearing surface

**DESIGN SPECIFICATIONS**  
2002 AASHTO

**DESIGN STRESSES**

**FIELD UNITS**  
 $f'_c = 3,500$  psi  
 $f'_c = 5,000$  psi (concrete wearing surface)  
 $f_y = 60,000$  psi (reinforcement)

**PRECAST PRESTRESSED UNITS**  
 $f'_c = 5,000$  psi  
 $f'_{ci} = 4,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ " low lax strands)  
 $f'_{si} = 202,000$  psi ( $\frac{1}{2}$ " low lax strands)



LOCATION SKETCH

**GENERAL NOTES**

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

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 for the work.

The Contractor is advised that the existing PPC Deck Beams are in deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedures shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels, and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats, the following shall be done: placements and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum, and grouting and curing the shear keys.

A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

All structural steel shall conform to AASHTO classification M270 Gr. 36 unless otherwise noted.

All structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1.

All construction joints shall be bonded.

No in-stream work will be allowed on this project.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		10.9	10.9
Concrete Structures	Cu. Yd.		7.8	7.8
Bridge Deck Grooving	Sq. Yd.	426		426
Protective Coat	Sq. Yd.	446		446
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4008		4008
Reinforcement Bars Epoxy Coated	Lb.	5830	3660	9490
Steel Bridge Rail, Type SM	Foot	215		215
Name Plates	Each	1		1
Bridge Joint System (Expansion), 1"	Foot	92		92
Concrete Wearing Surface, 5"	Sq. Yd.	446		446
Bar Splicers	Each	94	12	106
Asbestos Bearing Pad Removal	Each	48		48

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN AND ELEVATION**

FAP RTE 68 (IL 23) OVER WOLF CREEK  
SECTION 105 BR-1  
LIVINGSTON COUNTY  
STATION 586+62  
S.N. 053-0148

SCALE: VERT. \_\_\_\_\_  
HORIZ. \_\_\_\_\_  
DATE: 9/6/05

DRAWN BY: LANDREY  
DESIGNED BY: SANFORD  
CHECKED BY: TRELLO

GREENE & BRADFORD, INC.  
OF SPRINGFIELD

COMPUTER FILE NO.  
SN053-0148.GPE  
PROJECT 03236 W0-11  
12/16/05-MML

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OPERATOR = mitchell