BM * X Chiseled '□' In Northwest Corner of ILL. Rte. 132 Bridge Over Des Plaines River Elev. 668.63

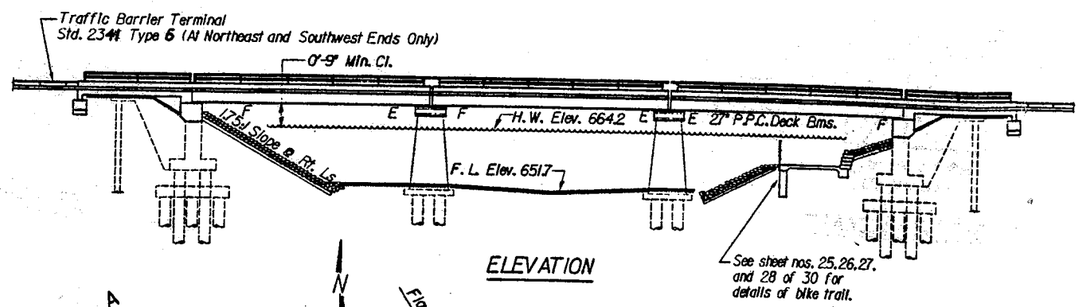
Existing Structure: Sta. 7+80.60, ILL. Rte. 132, Sec X-6B
Built in 1922. Rehabilitated in 1957. Structure Number 049-0062.
Superstructure Simple Span PPC Deck Beams. Substructure R.C.
Closed Abutments. R.C. Piers. Existing Out to Out = 62'-0".
Existing Back to Back Approach Bents = 159'-2¾".
Superstructure to Be Removed and Structure Widened.
Traffic to be Maintained Utilizing Stage Construction.

No Salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

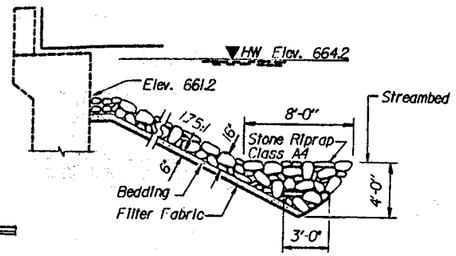
F.A.P. 541	X-6-B-R	LAKE	30	12

SHEET NO. 1 OF 13 SHEETS

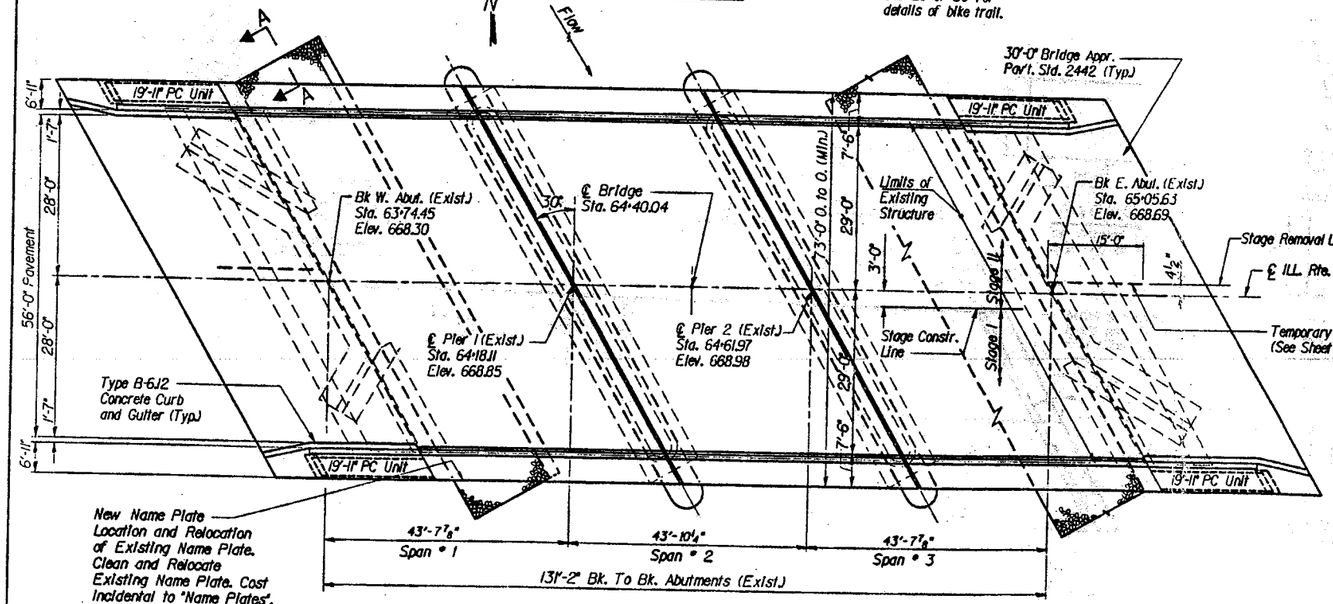


ELEVATION

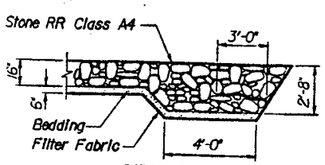
See sheet nos. 25, 26, 27, and 28 of 30 for details of bike trail.



STONE RIPRAP TREATMENT AT WEST ABUTMENT



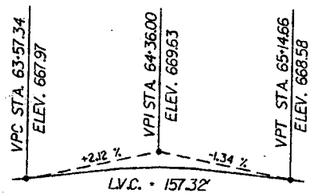
PLAN



SECTION A-A

STATION 64+40.04
REBUILT 19 BY
STATE OF ILLINOIS
F.A.P. RT. 541 SEC. X-6-B-R
F.A. PROJ. ACBHF-541(3)
LOADING HS20
STR. NO. 049-0062

NAME PLATE
See Std. 2113



PROFILE GRADE
ILL RTE 132
(Along ℄ Roadway)

SEISMIC DATA
S.P.C. = A
A = 0.04
S = 1.0

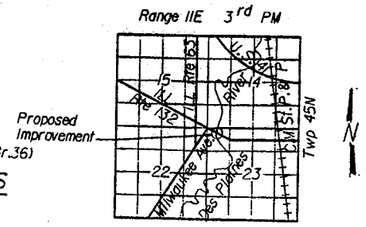
DESIGN SPECIFICATIONS
AASHTO 1992 & 1993 Interim

LOADING HS20-44

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 36,000 psi (Struct.) (M270, Gr.36)

PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (½" ϕ strands)
f'si = 189,000 psi (½" ϕ strands)



LOCATION SKETCH

WATERWAY INFORMATION
(Elevations Shown on This Table are According to F.I.S. Datum. To Convert to Highway Datum Subtract 0.11 feet)

Drainage Area = 225 Sq.Mi. Low Grade Elev. = 663.0 At Station 73+59.44

Flood	Freq. Yr.	Q C.F.S.	Opening Sq.Ft. Exist.	Opening Sq.Ft. Prop.	Nat. H.W.E.	Head (ft) Exist.	Head (ft) Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2580	851	851	662.8	0.1	0.1	662.9	662.9
Design	50	3760	995	995	664.2	0.3	0.3	664.5	664.5
Base		4260	1057	1057	664.8	0.3	0.3	665.1	665.1
Overtopping		2580	851	851	662.8	0.1	0.1	662.9	662.9
Max. Calc.									

DESIGNED	MR
CHECKED	MF
DRAWN	MS
CHECKED	MR

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.

Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.10(c) of the Standard Specifications and are included in quantity of structural steel.

All structural steel shall be shop painted with the zinc-silicate/acrylic/acrylic paint system. The color of the acrylic finish coats shall be Munsell No. 2.5 YR 3/4, reddish brown.

Layout of Stone Riprap may be varied in the field to suit ground conditions as directed by the Engineer.

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of ¼".

A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

Limits of Waterproofing Membrane System shall be from end to end of deck and face to face of sidewalks.

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.

Shoulder transition to wingwall shall be shaped with broken concrete. Cost Incidental.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu.Yd.		188	188
Removal of Existing Superstructures	Each	1		1
Concrete Superstructure	Cu.Yd.	141.9		141.9
Concrete Structures	Cu.Yd.		157.6	157.6
Protective Coat	Sq.Yd.	480		480
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq.Ft.	9388		9388
Reinforcement Bars, Epoxy Coated	Lbs.	12650	15420	28070
Name Plates	Each	1		1
Bituminous Concrete Surface Course, Class I	Ton	85		85
Furnishing and Erecting Structural Steel	Pound	11610		11610
Bicycle Railing	Foot	334		334
Stone Riprap, Class A4	Sq.Yd.		271	271
Temporary Bridge Rail	Foot	193		193
Portland Cement Mortar Fairing Course	Foot	2477		2477
Preformed Joint Seal 2½"	Foot	85		85
Preformed Joint Seal 4"	Foot	85		85
Waterproofing Membrane System	Sq.Yd.	841		841
Filter Fabric For Use With Riprap	Sq.Yd.		271	271
Concrete Removal	Cu.Yd.		140.9	140.9
Precast Concrete Bridge Slab	Sq.Ft.	299		299
Portland Cement Concrete Pavement 10"	Sq.Yd.	29		29
Pavement Fabric	Sq.Yd.	29		29
Temporary Sheet Piling	Sq.Ft.		720	720

STATE OF ILLINOIS
TERESA MESIA RUBINOS
81-3210
REGISTERED STRUCTURAL ENGINEER

Teresa Mesia Rubinos

JUN 16 1995

RUBINOS & MESIA ENGINEERS, INC.

GENERAL PLAN & ELEVATION
F.A.P. RTE. 541 SECTION X-6-B-R
LAKE COUNTY
STA. 64+40.04
S.N. 049-0062