

Bench Mark: BM cb-01115, Chiseled "□" on existing SE wingwall. Unadj. Elev. NAVD 88-568.948.
Pub/Adj Elev. NAVD 88-568.934.

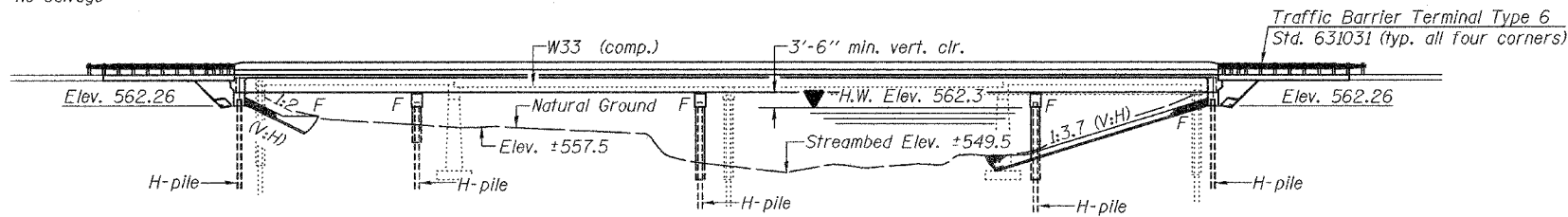
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

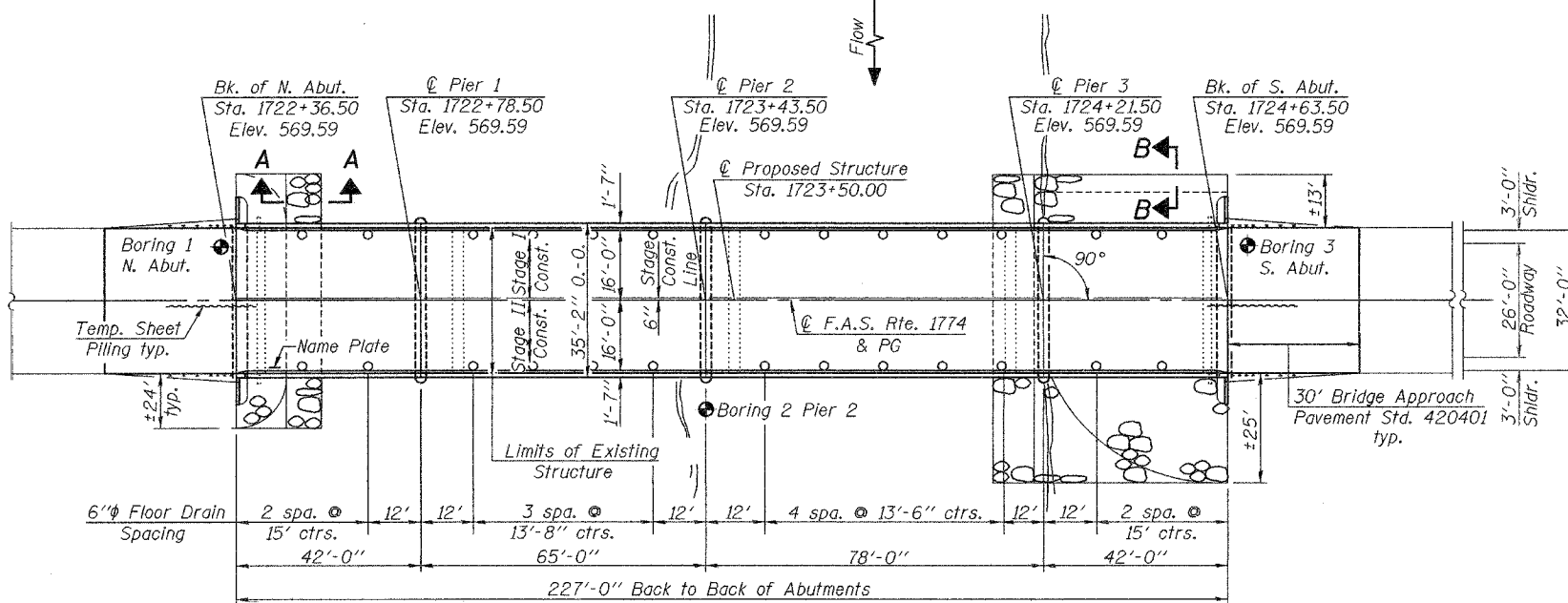
Contract #72760

Existing Structure: SN 054-0019, originally built in 1933 as SBI Route 121, Section 113 B&C.
In 1970 the superstructure was replaced, abutment and pier caps were widened and a pier was added as SBI Route 121, Section 113BCR.
The existing structure is a four simple span PPC deck beam bridge measuring 217'-5 3/4" back to back of abutment and 33'-0" out to out of bridge deck. The existing structure is to be removed and replaced.
Traffic to be maintained utilizing stage construction.

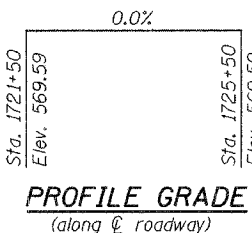
No salvage



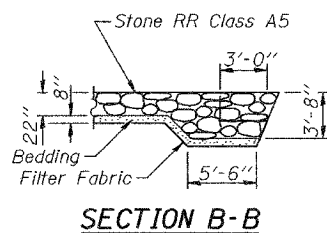
ELEVATION



PLAN



PROFILE GRADE
(along & roadway)



SECTION B-B

WATERWAY INFORMATION

Structure Number		Freq. Yr.	Q CFS	Opening Sq. Ft.	Nat. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
054-0505		10	5891	981	1021	560.9	0.6	0.6	561.5	561.5
054-0083		10	1525	383	383	560.9	0.6	0.6	561.5	561.5
054-0082		10	1624	436	436	560.9	0.6	0.6	561.5	561.5
054-0103		10	2344	635	635	560.9	0.6	0.6	561.5	561.5
054-0505		50	9232	1220	1282	562.3	1.1	1.0	563.4	563.3
054-0083		50	3167	576	576	562.3	1.1	1.0	563.4	563.3
054-0082		50	3251	641	641	562.3	1.1	1.0	563.4	563.3
054-0103		50	4253	837	837	562.3	1.1	1.0	563.4	563.3
054-0505		100	10747	1332	1405	562.9	1.3	1.2	564.2	564.1
054-0083		100	4101	648	648	562.9	1.3	1.2	564.2	564.1
054-0082		100	4176	716	716	562.9	1.3	1.2	564.2	564.1
054-0103		100	5214	911	911	562.9	1.3	1.2	564.2	564.1
054-0505		500	13562	1369	1446	563.4	1.8	1.8	565.2	565.2
054-0083		500	5675	673	673	563.4	1.8	1.8	565.2	565.2
054-0082		500	5745	741	741	563.4	1.8	1.8	565.2	565.2
054-0103		500	7018	936	936	563.4	1.8	1.8	565.2	565.2

DESIGNED *Stephan M. Ryan*
CHECKED *Chris Lynch*
DRAWN *R. Sommer*
CHECKED *SMR/CCC*

October 14, 2005
EXAMINED *Thomas J. Donaghy*
PASSED *Barth C. Adams*



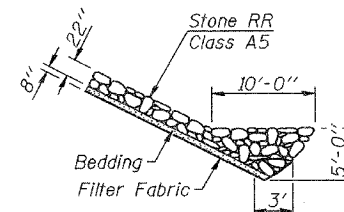
EXPIRES 11-30-2006

INDEX OF SHEETS

1. General Plan
2. General Data & Temporary Sheet Piling
3. Temporary Concrete Barrier
- 4-5. Top of Slab Elevations
6. Superstructure
7. Superstructure Details
8. Diaphragm Details
- 9-10. Structural Steel Details
11. Anchor Bolt Details
12. North Abutment
13. South Abutment
14. Pier 1
15. Piers 2 & 3
16. Bar Splicers
- 17-18. Boring Data

GENERAL NOTES

Fasteners shall be high strength bolts (AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas). Bolts 7/8" φ, open holes 1 1/16" φ, unless otherwise noted.
All structural steel shall be AASHTO M 270 Grade 50W.
Field welding of construction accessories will not be permitted to beams.
Anchor bolts shall be set before bolting diaphragms over supports.
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
The Contractor shall drive one HP 12x53 test pile in a permanent location at each substructure as directed by the Engineer before ordering the remainder of piles.
AASHTO M 270 Grade 50W structural steel shall only be painted, at the ends of the beams, for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with an inorganic zinc rich primer per AASHTO M 300, Type 1. No field painting shall be required. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".
All Construction joints shall be bonded.
Calculated weight of Structural Steel = 191,950 lbs. (AASHTO M270 Grade 50W).



SECTION A-A

STATION 1723+50.00
BUILT 200 BY
STATE OF ILLINOIS
F.A.S. RTE. 1774 - SEC. 113(B-5, B-6)
LOADING HL-93
STR. NO. 054-0505

NAME PLATE
See Std. 515001

LOADING HL 93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

1998 AASHTO LRFD Bridge Design Specifications with 1999 thru 2003 Interims

DESIGN STRESSES

FIELD STRESSES

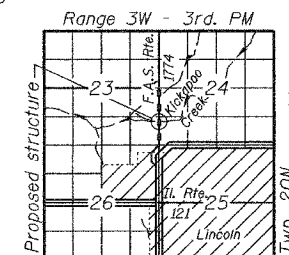
f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 Grade 50W)

SEISMIC DATA

Seismic Performance Category (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.05g
Site Coefficient (S) = 1.5

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 1	Each			1
Structure Excavation	Cu. Yd.		289.6	289.6
Protective Coat	Sq. Yd.	997.3		997.3
Concrete Structures	Cu. Yd.		144.6	144.6
Concrete Superstructure	Cu. Yd.	265.3		265.3
Furnishing and Erecting Structural Steel	L. Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	59180	12840	72020
Name Plates	Each			1
Bridge Deck Grooving	Sq. Yd.	756.7		756.7
Furnishing Steel Piles HP 12x53	Foot		1625	1625
Driving Steel Piles	Foot		1625	1625
Stud Shear Connectors	Each	4266		4266
Bar Splicers	Each	824		824
Floor Drains	Each	26		26
Stone Riprap, Class A5	Sq. Yd.		856.0	856.0
Filter Fabric	Sq. Yd.		856.0	856.0
Temporary Sheet Piling	Sq. Ft.	435.0		435.0
Test Pile Steel HP 12x53	Each		5	5
Underwater Structure Excavation Protection-Location 1	Each		1	1
Underwater Structure Excavation Protection-Location 2	Each		1	1
Porous Granular Embankment (Special)	Cu. Yd.		142.4	142.4



LOCATION SKETCH

GENERAL PLAN
OLD ILLINOIS ROUTE 121 OVER
KICKAPOO CREEK
F.A.S. RTE. 1774-SEC. 113(B-5, B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505