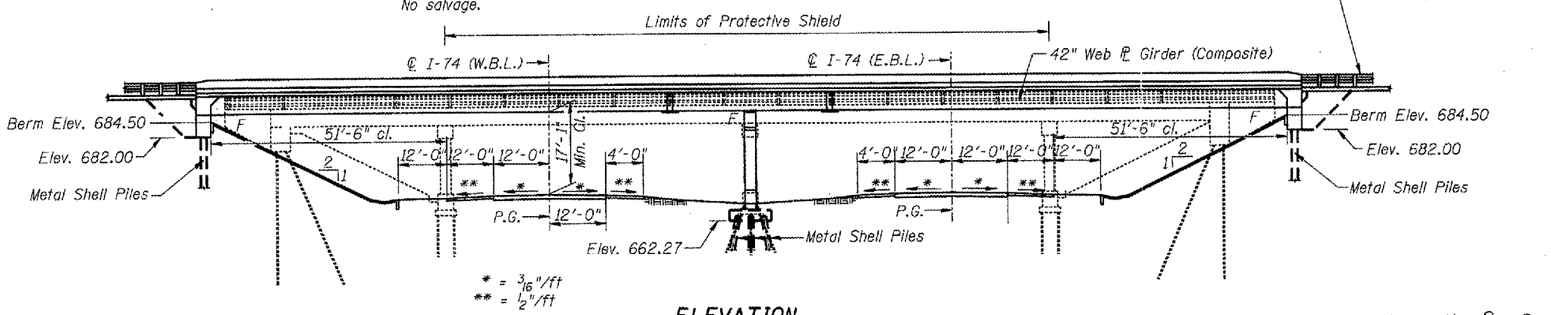
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	★	VERMILION	~~102~~ 77	~~99~~ 38
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
17 SHEETS

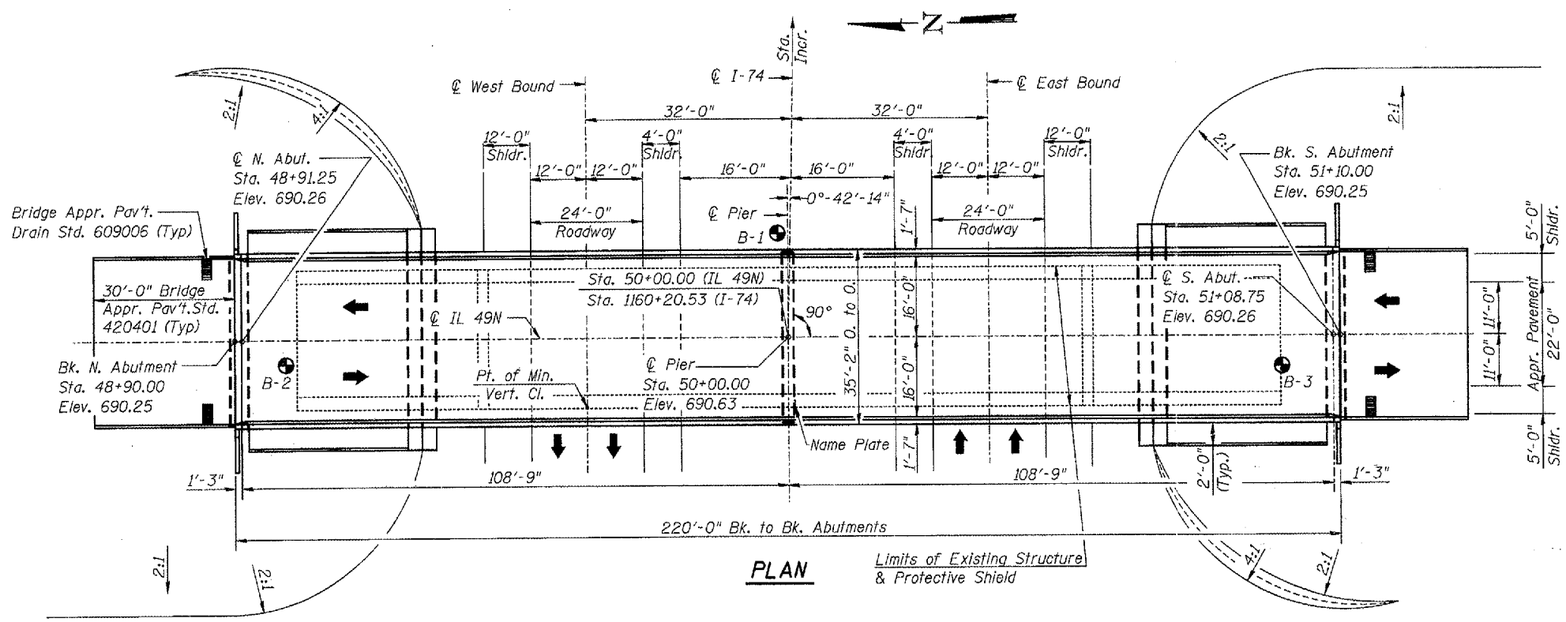
★ (10-92-8HB-4)BR CONTRACT 70001

B.M: Chiseled "□" on west foundation of sign for northbound Route 49, south of entrance ramp for eastbound I-74. Elev. = 671.562

Existing Structure: S.N. 092-0105 Built in 1959. Four Simple Spans R.C.Deck With P.P.C. I-Beams on R.C. Piers and Abutments. The Structure is 28'-0" Wide Between Curbs and Spans 185'-6" Back to Back Abutments. Structure is to Be Removed and Replaced. The proposed structure allows for a third lane in each direction in anticipation of the future widening of I-74. Road will be closed and traffic detoured during construction. No salvage.



ELEVATION
(Looking East)



PLAN

Limits of Existing Structure & Protective Shield

● Indicates Boring

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. yd		89	89
Structure Excavation	Cu. yd		122	122
Concrete Structures	Cu. yd		84.8	84.8
Concrete Superstructure	Cu. yd	265.2		265.2
Bridge Deck Grooving	Sq. yd.	734		734
Reinforcement Bars, Epoxy coated	Pound	~~60380~~	14140	~~74520~~ ~~74410~~ 60270
Furnishing and Erecting Structual Steel	Lump Sum	1		1
Protective Coat	Sq. yd	962		962
Stud Shear Connectors	Each	3852		3852
Name Plates	Each		1	1
~~Furnishing Metal Pile Shells (14" ϕ)~~ Furnishing Metal Shell Piles, 14"x0.25"	Foot		1614	1614
~~Driving and Filling Shells~~ Driving Piles	Foot		1614	1614
Test Pile Metal Shells	Each		1	1
Slope Wall, 4"	Sq. yd		380	380
Bar Splicers	Each	64		64
Removal of Existing Structures ~~No. 2~~	Each	1		1
Protective Shield	Sq. yd	429		429

LOADING HL93 (STRUCT. STEEL, DECK & BEARINGS)
LOADING HS20-44 (SUBSTRUCTURE)

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

Superstructure

1998 AASHTO LRFD Bridge Design Specifications with 1999 thru 2002 interims.

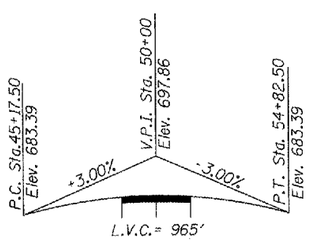
Substructure

1996 AASHTO Standard Specifications with 1997 thru 2002 interims.

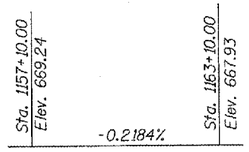
APPROVED
For Structural Adequacy Only
Ralph E. Anderson (TJD)
Engineer of Bridges & Structures

STATE OF ILLINOIS PAUL B. LIN No. 4419 SPRINGFIELD, ILLINOIS LICENSED STRUCTURAL ENGINEER

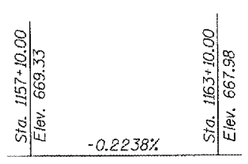
Paul B. Lin 2/23/05
ILLINOIS STRUCTURAL NO. 4419 DATE



PROFILE GRADE
(IL 49N along ℄ Roadway)



PROFILE GRADE
(F.A.I. Rte. 74 E.B.)



PROFILE GRADE
(F.A.I. Rte. 74 W.B.)

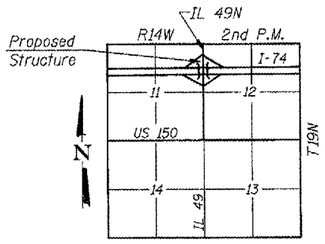
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.048g
Site Coefficient (S) = 1.2

DESIGN STRESSES

FIELD UNITS

f'_c = 3.5 ksi
f_y = 60 ksi (reinf.)
f_y = 50 ksi (Struct. Steel, AASHTO M270 Gr. 36)
f_y = 50 ksi (Struct. Steel, AASHTO M270 Gr. 50)



LOCATION SKETCH

LIN ENGINEERING, LTD.
200 W. Chestnut, Chatham, Illinois 62629
(217) 483-4169 FAX (217) 483-4705
Designed By: MTH | Checked By: STD | Drawn By: JMD
Date: 11/02 | File: 092D203.DGN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
FAP ROUTE 840 (IL 49N)
OVER FAI RTE 74 (I-74)
SECTION (10-92-8HB-4) BR
VERMILION COUNTY
STA. 1160+20.53 (I-74)
STA. 50+00.00 (IL 49N)
STRUCTURE NO. 092-0203