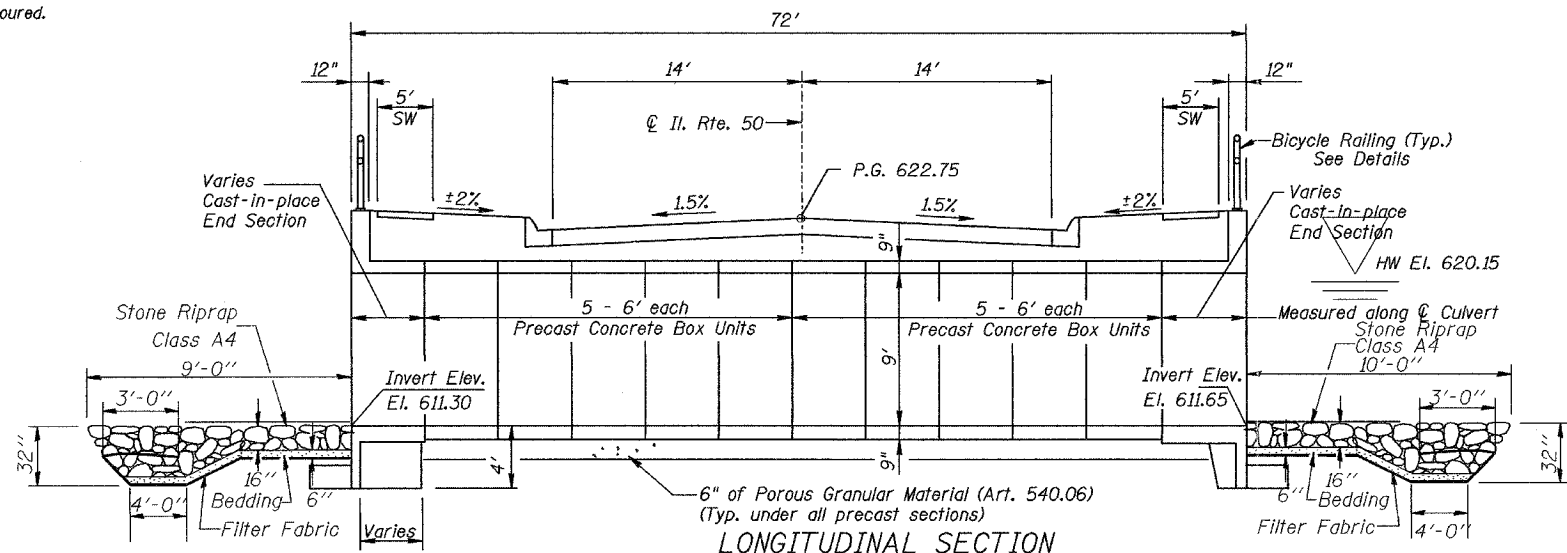


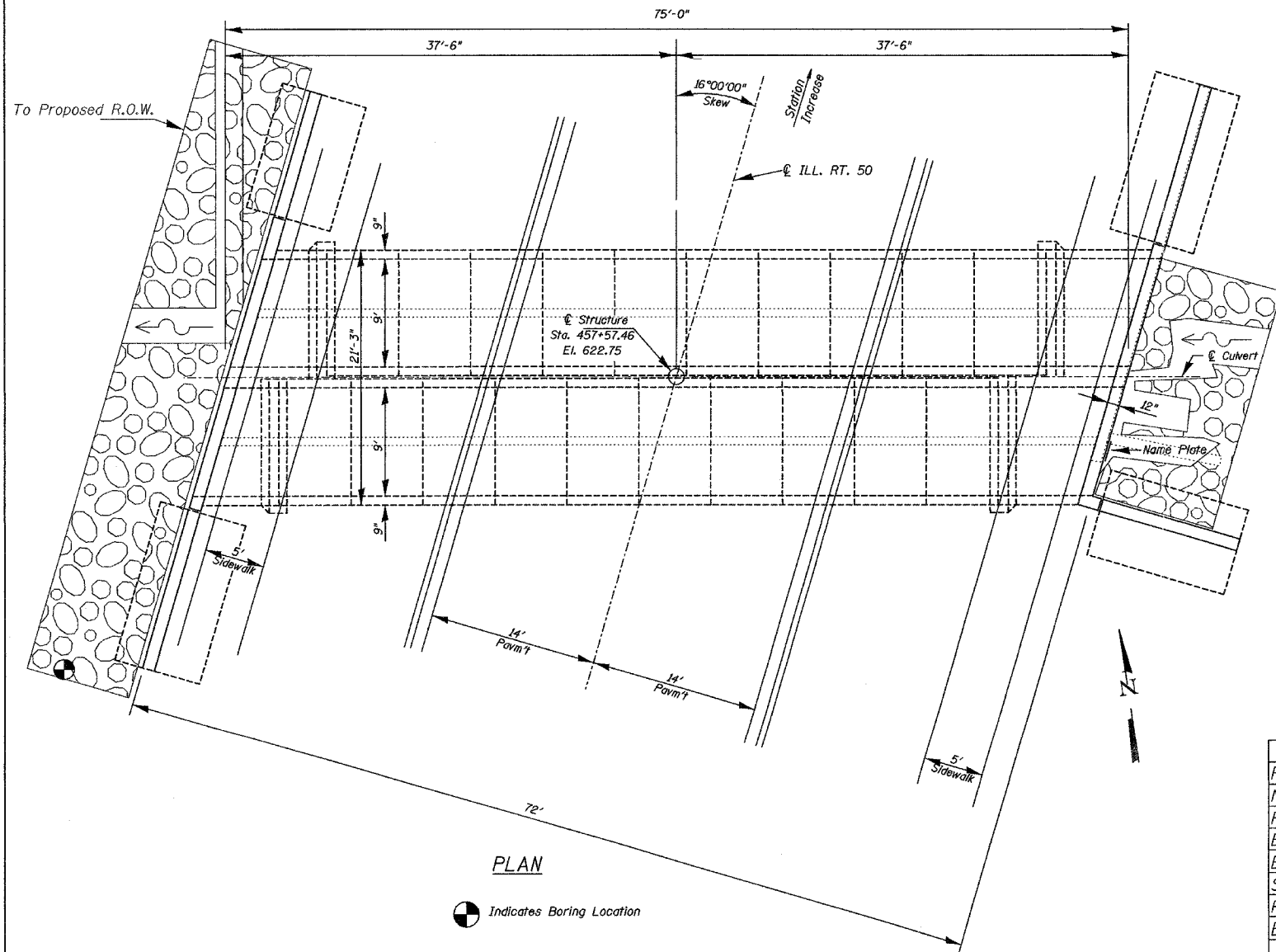
Bench Mark: Railroad Spike in Power Pole, Sta. 458+88.4 72.2' Lt, El. 627.54

Existing Structure: S.N. 046-CB02 built around the mid-1930's as a single 10'x8' box culvert.
Traffic to be detoured.

No salvage

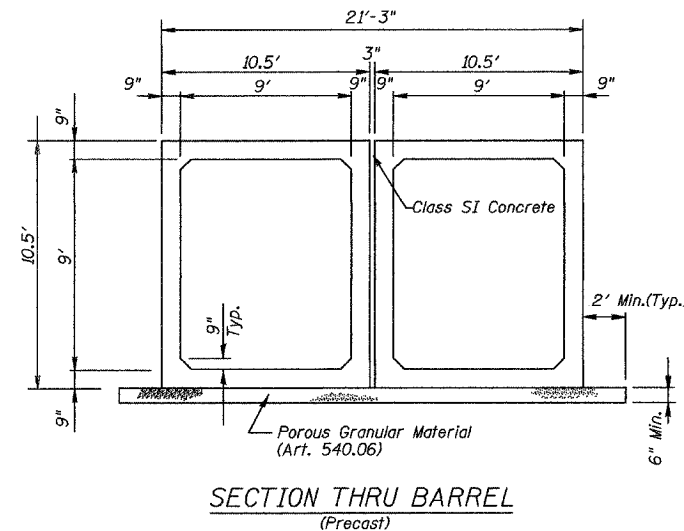


Note:
Dimensions are given at Right L's to ϕ of Roadway



PLAN

Indicates Boring Location



SECTION THRU BARREL
(Precast)

LOADING HS20

Allow 50 lbs/sq ft for future wearing surface

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

Cast-in-Place:
 $f'_c = 3500$ psi
 $f_y = 60,000$ psi (Reinf.)

Precast:
 $f'_c = 5000$ psi
 $f_y = 65,000$ psi (Reinf.)

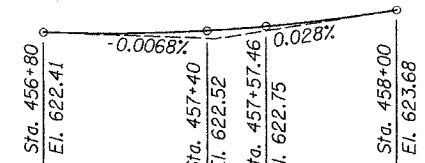
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

WATERWAY INFORMATION

FLOOD	FREQUENCY (YR.)	Q (CFS)	OPENING - SQ FT		NAT. H.W.E.	HEAD		HEADWATER EL.**	
			EXIST.*	PROP.*		EXIST.	PROP.	EXIST.	PROP.
DESIGN	10	279	80	162	617.10	1.65	0	618.75	616.92
BASE	50	763	80	162	620.15	4.35	1.31	624.50	621.46
OVERTOPPING (EXIST.)	100	838	80	162	620.52	4.56	1.63	625.15	622.15
OVERTOPPING (PROP.)	20	591	80	162	619.20	3.74		622.22***	
OVERTOPPING (PROP.)	100	850		162	620.58		1.70		622.22***

- * GROSS AREA OPENING
- ** TAKEN AT THE UPSTREAM FACE OF STRUCTURE, WHICH HAS THE HIGHEST CREATED HEAD
- *** OVERTOPPING ELEVATION



PROFILE GRADE
(Along ϕ Roadway)

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
REMOVAL OF EXISTING STRUCTURES	EACH	1
NAME PLATES	EACH	1
PRECAST CONCRETE BOX CULVERT 9'X9' (M273)	FOOT	120
BOX CULVERT END SECTION, CULVERT NO. 1	EACH	1
BOX CULVERT END SECTION, SPECIAL, CULVERT NO. 1	EACH	1
STONE RIPRAP, CLASS 4	SQ YD	83
FILTER FABRIC FOR USE WITH RIPRAP	SQ YD	83
BICYCLE RAILING	FOOT	102

REVISIONS	
NAME	DATE
BDD	9/20/04
BDD	1/31/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
F.A.P. ROUTE 840A (ILL. ROUTE 50) OVER DRAINAGE DITCH
KANKAKEE COUNTY
SECTION (1392-II)
STA. 457+57.46 STRUCTURE NO. 046-2015
SCALE: NONE
DATE
DRAWN BY
CHECKED BY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(1392-II)	KANKAKEE	24	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT# 66131

STATION 457+57.46
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. 840A SEC. (1392-II)
F.A. PROJECT
LOADING HS20
STR. NO. 046-2015
NAME PLATE
(See Standard 51500)

General Notes:

1. Precast Concrete Box Culvert sections shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M273.
2. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322.
3. Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.

January 31, 2005
ep05899/sheets.dgn