

BENCH MARK "B"

SQUARE CUT FOUND ON N.W. WINGWALL OF THE BRIDGE OVER PISCASAW CREEK, STR. NO. 056-0028, EL. 872.99

EXISTING STRUCTURE: S.N. 056-0028, WAS ORIGINALLY BUILT IN 1929 AND WAS 24'-2" WIDE OUT TO OUT OF DECK. IN 1971 THE BRIDGE WAS WIDENED TO THE CURRENT 42'-0" WIDE OUT TO OUT OF DECK ON CLOSED ABUTMENTS AND SOLID PIERS. THE EXISTING BRIDGE HAS SIX SPANS OF PPC BOX BEAMS. THE TOTAL STRUCTURE LENGTH 160'-6" FROM BACK TO BACK OF THE ABUTMENTS.

THE EXISTING STRUCTURE IS TO BE REMOVED AND REPLACED UTILIZING STAGE CONSTRUCTION.

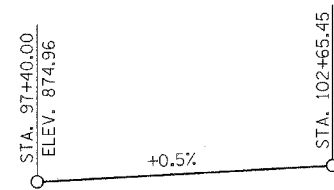
SALVAGE: NONE

SHEET 501 OF 525		F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		303	131B(1&2)BR	McHENRY	107	65
STA.		TO STA.				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT			

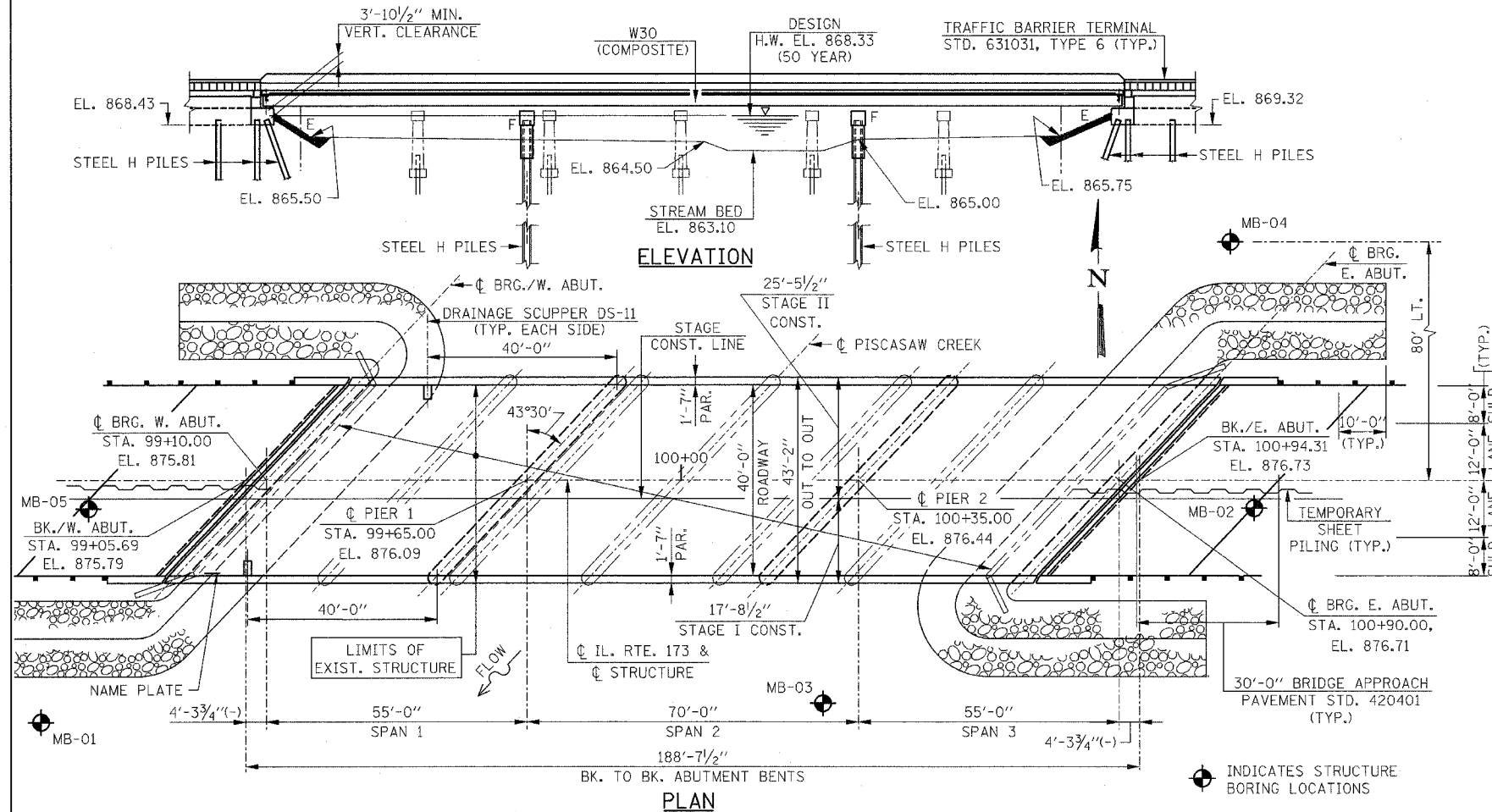
CONTRACT NO. 60B83

INDEX OF SHEETS

- S01 GENERAL PLAN & ELEVATION
- S02 GENERAL NOTES & TOTAL BILL OF MATERIAL
- S03 CONSTRUCTION STAGING & TEMPORARY SHEET PILING
- S04 DECK ELEVATIONS-I
- S05 DECK ELEVATIONS-II
- S06 DECK ELEVATIONS-III
- S07 DECK PLAN & CROSS SECTION
- S08 PARAPETS, DECK DETAILS & SUPERSTRUCTURE BILL OF MATERIAL
- S09 DRAINAGE SCUPPER, DS-11
- S10 PREFORMED JOINT STRIP SEAL
- S11 FRAMING PLAN & STRUCTURAL STEEL DETAILS
- S12 STRUCTURAL STEEL DETAILS
- S13 BEARING DETAILS
- S14 WEST ABUTMENT
- S15 WEST ABUTMENT DETAILS
- S16 EAST ABUTMENT
- S17 EAST ABUTMENT DETAILS
- S18 PIER 1 & 2
- S19 BAR SPLICER ASSEMBLY DETAILS
- S20 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
- S21 STEEL H-PILE DETAILS
- S22 WEST APPROACH PAVEMENT-ELEVATIONS
- S23 EAST APPROACH PAVEMENT-ELEVATIONS
- S24 SOIL BORING LOGS-I
- S25 SOIL BORINGS LOGS-II



PROFILE GRADE
(ALONG CL. RTE. 173)



STATION 100+00
BUILT 2008 BY
STATE OF ILLINOIS
F.A.P. RT. 303 SEC. 131B(1&2)BR
LOADING HS20
STRUCTURE NO. 056-0090

NAME PLATE
SEE STD. 515001

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Paul E. Adams
ENGINEER OF BRIDGES AND STRUCTURES



Bhadresh N. Shah
BHADRESH N. SHAH APRIL 13, 2007
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. NO. 081-004476
EXPIRES: 11-30-08

DESIGN SCOUR ELEVATION TABLE

LOCATION	W. ABUT.	PIER 1	PIER 2	E. ABUT.
DESIGN SCOUR ELEVATIONS	868.50	849.34	849.34	869.42

WATERWAY INFORMATION TABLE

DRAINAGE AREA = 57.22 SQ. MI.		EXIST. LOW GRADE ELEV. = 872.56		MAX. RECORDED H.W.E. = 871.53						
		PROP. LOW GRADE ELEV. = 874.4								
FLOOD (YEAR)	FREQ. (YEAR)	DISCHARGE (CFS) EXIST.	DISCHARGE (CFS) PROP.	WATERWAY OPENING (SQ. FT.) EXIST.	WATERWAY OPENING (SQ. FT.) PROP.	NATURAL H.W.E.	HEAD (FT.) EXIST.	HEAD (FT.) PROP.	HEADWATER ELEV. EXIST.	HEADWATER ELEV. PROP.
DESIGN	10	1,358.8	1,326.18	318	355	867.73	0.78	0.77	868.51	868.5
BASE	50	1,886.8	1,863.64	375	430	868.33	1.07	1.05	869.40	869.38
OVERTOPPING	100	2,183.83	2,080.18	396	458	868.55	1.21	1.16	869.76	869.71
MAX. CALC.	500	2,740.3	2,586.64	442	520	869.03	1.52	1.38	870.55	870.41

COMMENTS: ALL ELEVATIONS ARE IN HIGHWAY DATUM
MAX. RECORDED HWE ESTIMATED FROM HYDROLOGIC INVESTIGATION ATLAS, HA-498
INVERT ELEVATIONS - UPSTREAM 863.3, DOWNSTREAM 862.9
TABLE IS PREPARED FOR ANALYSIS WHERE THE RAILROAD BRIDGE IS NOT INCLUDED IN THE HEC-RAS MODEL

LOADING HS20-44

ALLOW 50*/SQ. FT. FOR FUTURE WEARING SURFACE

DESIGN SPECIFICATIONS

AASHTO 17TH EDITION - 2002

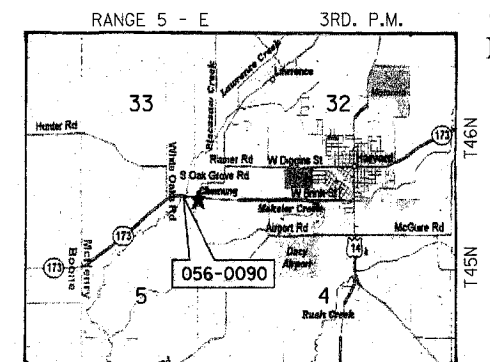
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 PSI
fy = 60,000 PSI (REINFORCEMENT)
fy = 50,000 PSI (M270 GR. 50 STRUCTURAL STEEL)

SEISMIC DATA

SEISMIC PERFORMANCE CATEGORY (SPC) = A
BEDROCK ACCELERATION COEFFICIENT (A) = 0.033g
SITE COEFFICIENT (S) = 1.0



LOCATION SKETCH

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
IL. RTE. 173
OVER
PISCASAW CREEK
F.A.P. RTE. 303 SECTION: 131B(1&2)BR
McHENRY COUNTY STATION 100+00.00
STRUCTURE NO. 056-0090
SCALE: DATE: APRIL 2, 2007 DRAWN BY: D.L./F.M. CHECKED BY: B.N.S./J.C.N.
CHRISTIAN-ROGE & ASSOC., INC.
CHICAGO ILLINOIS