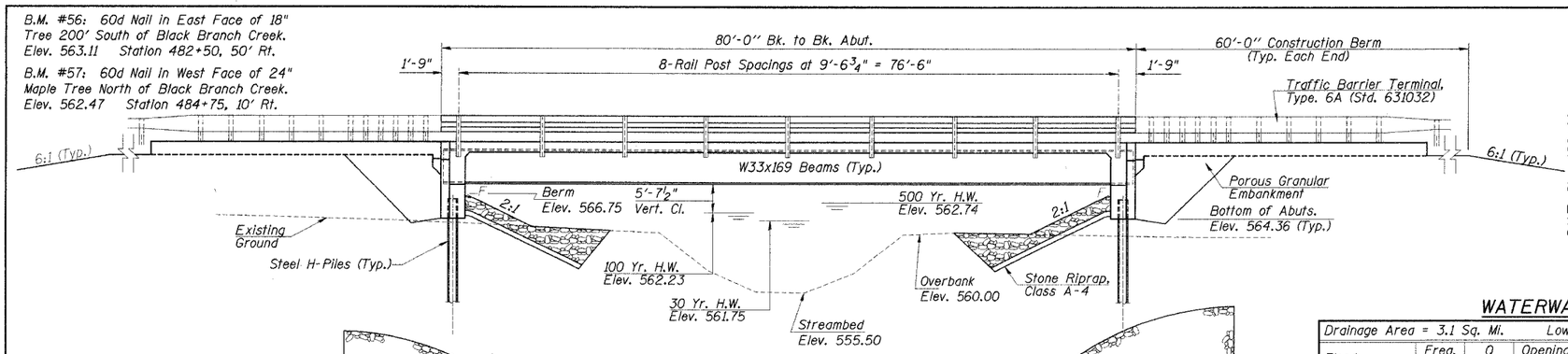
93423

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8075	03-00167-04-FP	SANGAMON	109	65
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Sheet 1 of 11

B.M. #56: 60d Nail in East Face of 18" Tree 200' South of Black Branch Creek. Elev. 563.11 Station 482+50, 50' Rt.

B.M. #57: 60d Nail in West Face of 24" Maple Tree North of Black Branch Creek. Elev. 562.47 Station 484+75, 10' Rt.



ELEVATION

PROFILE GRADE

WATERWAY INFORMATION

Drainage Area = 3.1 Sq. Mi. Low Grade Elev. - 572.00 @ Sta. - 484+47.00

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.
Design	30	800	N/A	208	561.75	N/A	0.23	N/A	561.98
Base	100	1070	N/A	239	562.22	N/A	0.44	N/A	562.66
Overtopping	N/A	-	-	-	-	-	-	-	-
Max. Calc.	500	1430	N/A	274	562.73	N/A	0.72	N/A	563.45

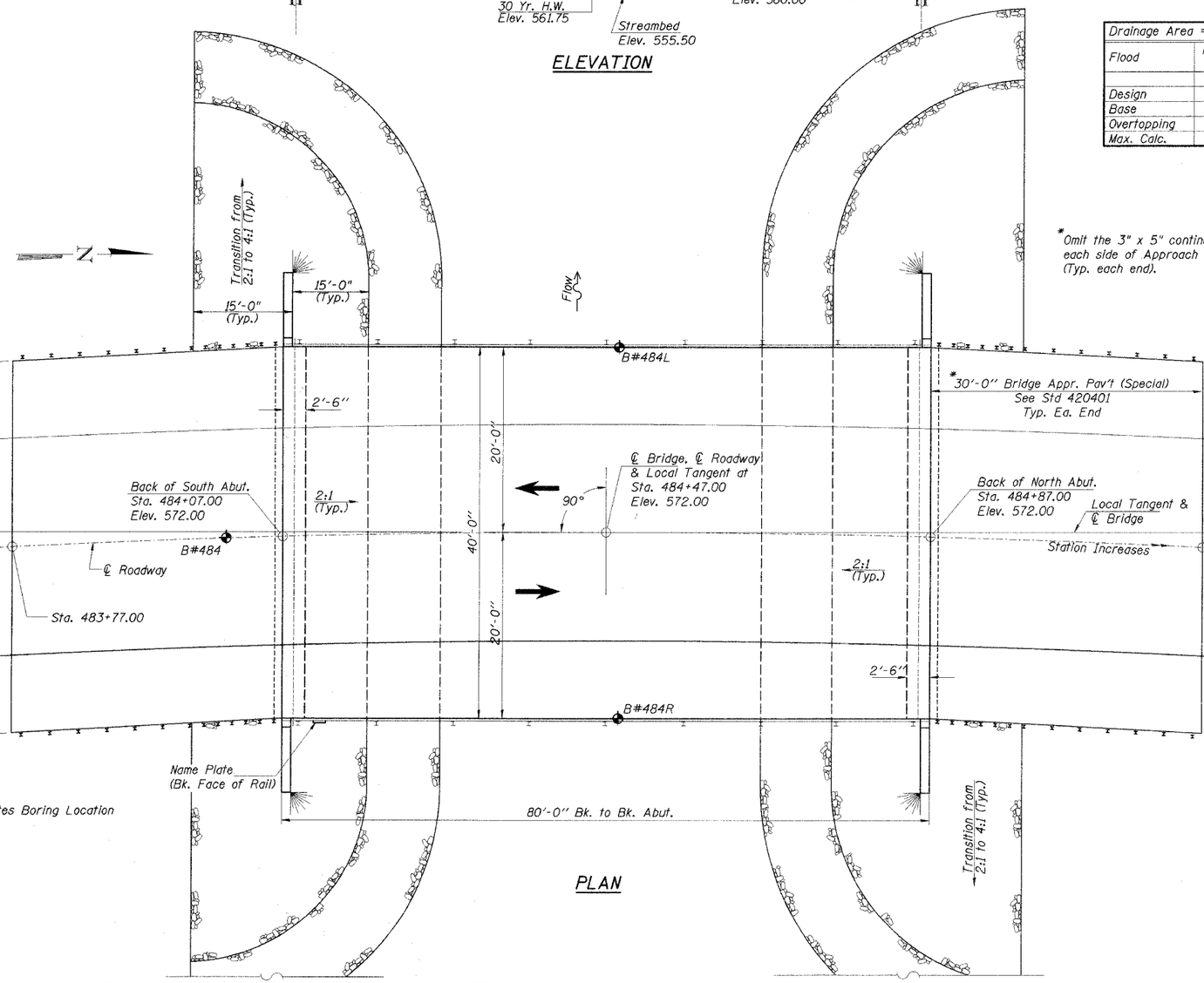
CURVE DATA

P.I. = Sta. 477+23.91
Δ = 37°-24'-48"
D = 00°-59°-16"
T = 1963.94'
R = 5800.00'
L = 3787.31'
E = 323.48'
P.C. Sta. 457+59.97
P.T. Sta. 495+47.28
S.E. = 2.70%
S.E.A.
Sta. 456+43.00 to Sta. 458+18.00
Sta. 494+89.00 to Sta. 496+64.00

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 50,000 psi (Beams)



PLAN

*Omit the 3" x 5" continuous curbs each side of Approach Pavement (Typ. each end).

DESIGN SPECIFICATIONS

AASHTO 2002 & Interims

LOADING HS20-44

Allow 50 psf for future wearing surface.

SEISMIC DATA

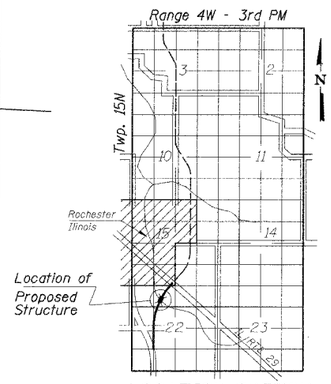
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.05g
Site Coefficient (S) = 1.0

INDEX of BRIDGE SHEETS

1 of 11 - General Plan & Eevation
2 of 11 - General Notes & Bill of Material
3 of 11 - Top of Slab Elevations
4 of 11 - Superstructure
5 of 11 - Superstructure Details
6 of 11 - Steel Bridge Rail, Type SM (Special)
7 of 11 - Structural Steel Framing Details
8 of 11 - Abutment Details
9 of 11 - Anchor Bolt Details
10 of 11 - Bar Splicer Assembly Details
11 of 11 - Soil Borings

LICENSED STRUCTURAL ENGINEER
THOMAS E. HAVENAR
081-004723
STATE OF ILLINOIS

SIGNATURE
7/27/06
DATE
LIC. EXP. DATE : 11/30/06



LOCATION SKETCH

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."

GENERAL PLAN & ELEVATION
CARDINAL ROAD over BLACK BRANCH CREEK
SECTION 03-00167-04-FP
SANGAMON COUNTY
STATION 484+47
STRUCTURE NO. 084-3640

© Copyright Hanson Professional Services Inc. 2006

HANSON

JOB NO. 03S2035B
DATE 6/21/06

LAYOUT	M.V.M.	3/13/04
DRAWN	Rod	3/16/04
REVIEWED	G.G.R.	3/20/04

07/27/2006 10:09:36 AM
I:\03JOBS\03S2035B\Structures\Black Branch Creek\Bridge Plans\FIG-GPE.dgn