

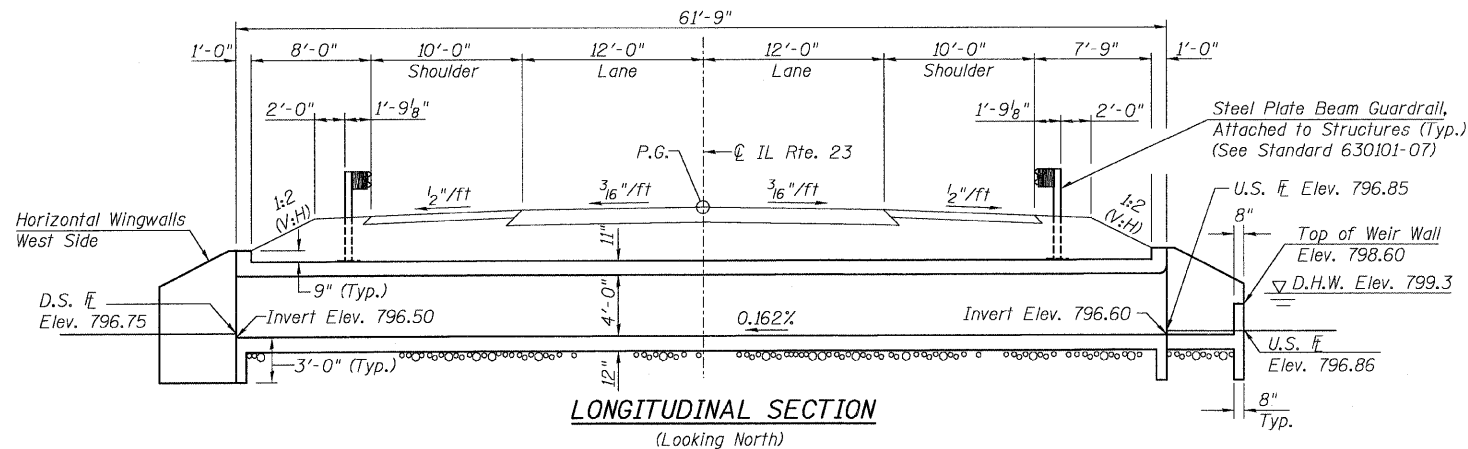
Bench Mark: #1 - Square cut in top of wingwall at southwest corner of existing S.N. 056-0009, Elevation 802.58

Existing Structure: None; Road is to be closed during construction; Precast alternate is not allowed.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
F.A.P. 324	23B-1	McHENRY	97	71	4 SHEETS
FED. ROAD DIST. NO. 1	BILLINGS	FED. AID PROJECT-			

Contract # 62892



WATERWAY INFORMATION

Drainage Area = 174.5 mi² Exist. Low Grade Elev. 800.30 @ Sta. 81+00
Prop. Low Grade Elev. 803.60 @ Sta. 81+00

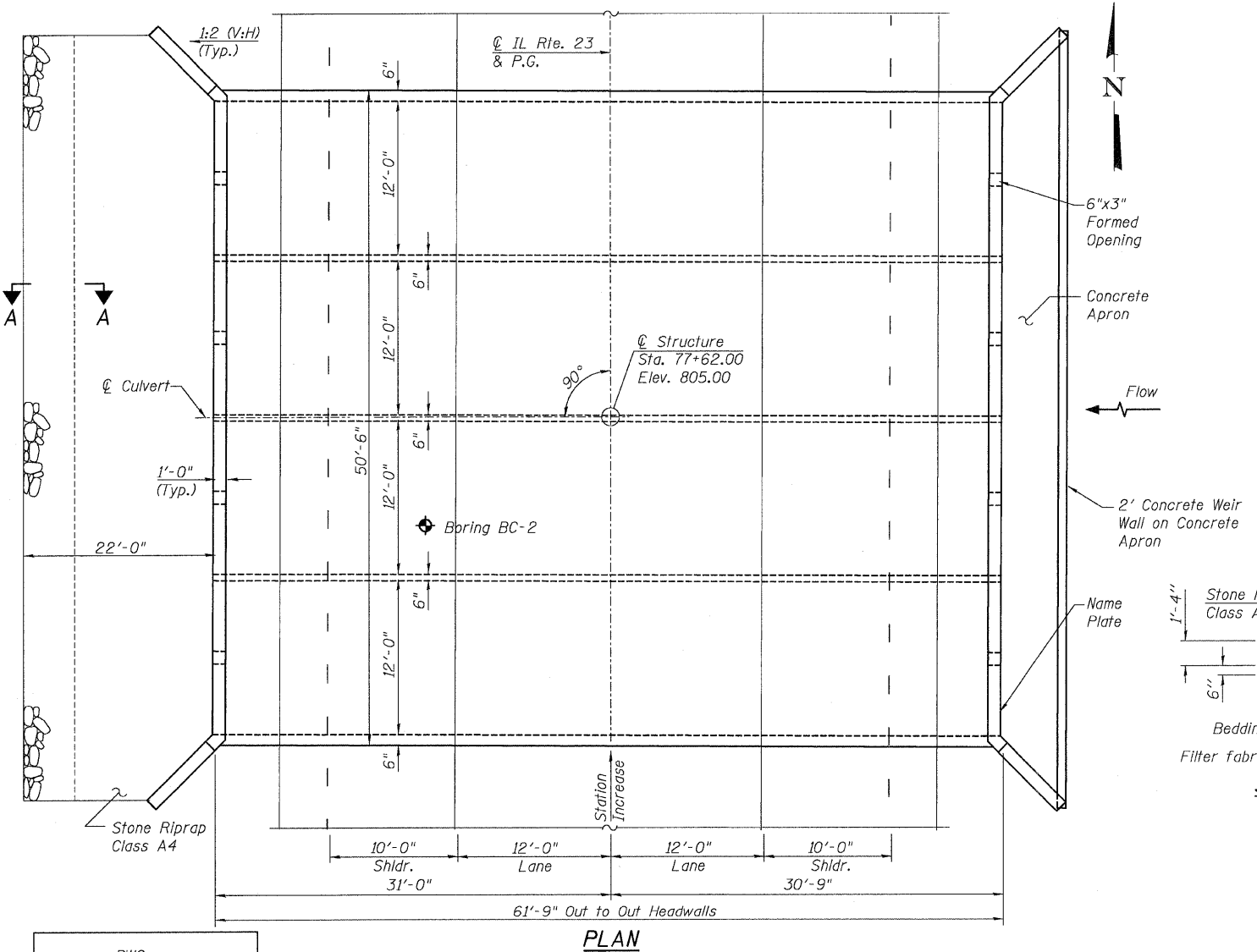
Flood Freq. Yr.	Structure	Q C.F.S.		Opening SqFt.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	Main Channel	3441	2559	767.0	1057.0					
	Overflow 1	1874	2133	389.2	304.9					
	Overflow 2	n/a	623	n/a	95.5					
	Total	5315	5315	1156.2	1457.4	798.61	1.13	0.70	799.74	799.31
Design 50	Main Channel	4951	4328	875.0	1228.3					
	Overflow 1	2679	2453	429.9	330.8					
	Overflow 2	17*	866	n/a	130.1					
	Total	7647	7647	1304.9	1689.2	799.33	1.39	0.77	800.72	800.10
Base 100	Main Channel	5858	5015	914.0	1287.4					
	Overflow 1	2546	2582	442.6	340.2					
	Overflow 2	177*	983	n/a	142.6					
	Total	8581	8581	1356.6	1770.2	799.59	1.71	0.80	801.32	800.39
Max. Calc. 500	Main Channel	6944	6824	995.0	1402.5					
	Overflow 1	3076	2676	469.1	359.6					
	Overflow 2	699*	1219	n/a	168.5					
	Total	10719	10719	1464.1	1930.7	800.13	2.03	0.87	802.16	801.00

INDEX OF SHEETS

- GENERAL PLAN, GENERAL NOTES AND TOTAL BILL OF MATERIAL,
- SLAB REINFORCEMENT PLAN
- SECTIONS AND DETAILS
- BORING LOGS

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
- Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.



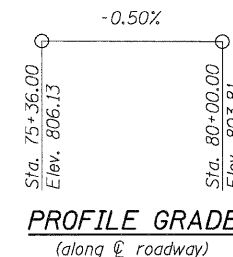
10 year velocity through existing bridge (main channel) = 3.76 fps
10 year velocity through proposed bridge (main channel) = 2.12 fps

Notes:

- * Indicates flow over the road in existing condition.
- A 2 foot berm/wall will be built at the upstream side of Overflow 2 structure, to maintain existing drainage patterns.
- Overflow 1 is the 3-cell box culvert in the overflow channel, Overflow 2 is the 4-cell box culvert north of Overflow 1.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Concrete Box Culverts	Cu. Yd.	264.3
Name Plates	Each	1
Filter Fabric	Sq. Yd.	159
Stone Riprap, Class A4	Sq. Yd.	133
Reinforcement Bars	Pound	58,820
Structure Excavation	Cu. Yd.	829
Porous Granular Embankment	Cu. Yd.	218



STATION 77+62
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 324 SEC. 23B-1
LOADING HS20
STR. NO. 056-0084

LETTERING FOR NAME PLATE

See Plan View & Std 515001 for name plate location

LOADING HS20-44

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

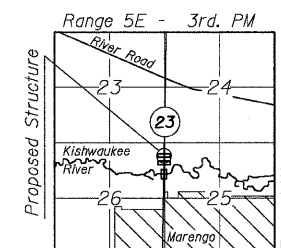
DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)



LOCATION SKETCH

GENERAL PLAN, GENERAL NOTES
AND TOTAL BILL OF MATERIAL,
ILLINOIS ROUTE 23 OVER
KISHWAUKEE RIVER OVERFLOW NO. 2

F.A.P. ROUTE 324

McHENRY COUNTY

STA. 77+62.00

STRUCTURE NO. 056-0084

DESIGNED	PWO
CHECKED	CJB
DRAWN	DRP
CHECKED	PJM

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	D.S. Invert	U.S. Invert
	793.5	793.6

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

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ENGINEER OF BRIDGES AND STRUCTURES



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