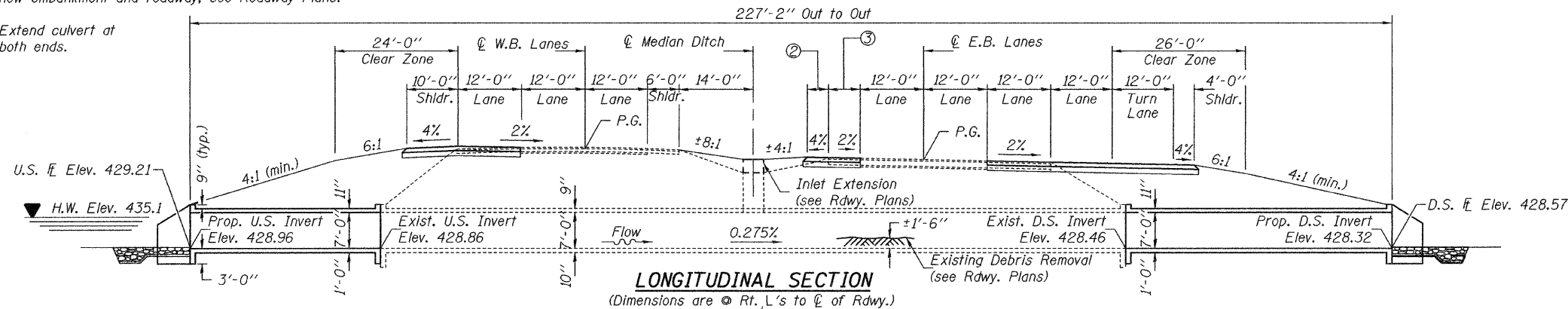


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Bench Mark: Chiseled "□" in concrete foundation of a combination mast arm assembly, 24'-6" right of centerline of eastbound lane Station 763+28 Il. Rte. 13, Elev. 448.32.

Existing Structure: S.N. 100-2007 was constructed in 1959 under F.A. Rte. 14, Section 1X-1. The structure is a double cell rigid frame cast in place concrete culvert. The culvert is 145'-5 5/8" long in the direction of flow. Traffic maintained using staging as required for new embankment and roadway, see Roadway Plans.

Extend culvert at both ends.



GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs. and 3/4" φ x 12" hooked bolts.

Exposed edges shall be chamfered 3/4".

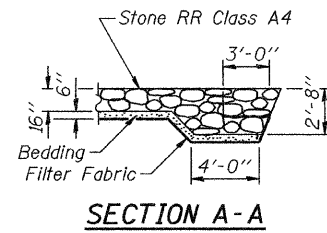
Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

Reinforcement bars designated (E) shall be epoxy coated.

STATION 770+52.47  
RE-BUILT 20 BY  
STATE OF ILLINOIS  
F.A.P. ROUTE 331 - SECTION 1X-1  
LOADING HS20  
STRUCTURE NO. 100-2007

NAME PLATE  
See Std. 515001

- INDEX OF SHEETS
1. General Plan and Elevation
  2. General Data
  3. WestBound Extension
  4. WestBound Details
  5. EastBound Extension
  6. EastBound Details
  7. Boring Logs



VARYING SHOULDER & TURN LANE WIDTHS

- ① Median varies from 28'-0" at Sta. 770+05.85 to 6'-6" at Sta. 772+21.35
- ② Shoulder varies from 6'-0" at Sta. 769+85.98 to 4'-0" at Sta. 770+05.85
- ③ Turn lane varies from 0'-0" at Sta. 769+85.98 to 17'-6" at Sta. 772+21.35

HORIZONTAL CURVE DATA

Centerline of Westbound Lanes  
Δ = 23°01'54" (RT)  
D = 1°00'00"  
R = 5,729.65'  
T = 1,167.36'  
L = 2,303.19'  
E = 117.71'  
P.C. Sta. = 749+10.76  
P.I. Sta. = 760+78.12  
P.T. Sta. = 772+13.96  
S.E. = 0.02 '/ft.

HORIZONTAL CURVE DATA

Centerline of Eastbound Lanes  
Δ = 23°01'54" (RT)  
D = 1°00'41"  
R = 5,665.65'  
T = 1,154.32'  
L = 2,277.47'  
E = 116.39'  
P.C. Sta. = 749+11.32  
P.I. Sta. = 760+65.64  
P.T. Sta. = 771+88.78  
S.E. = 0.02 '/ft.

LOADING HS20-44

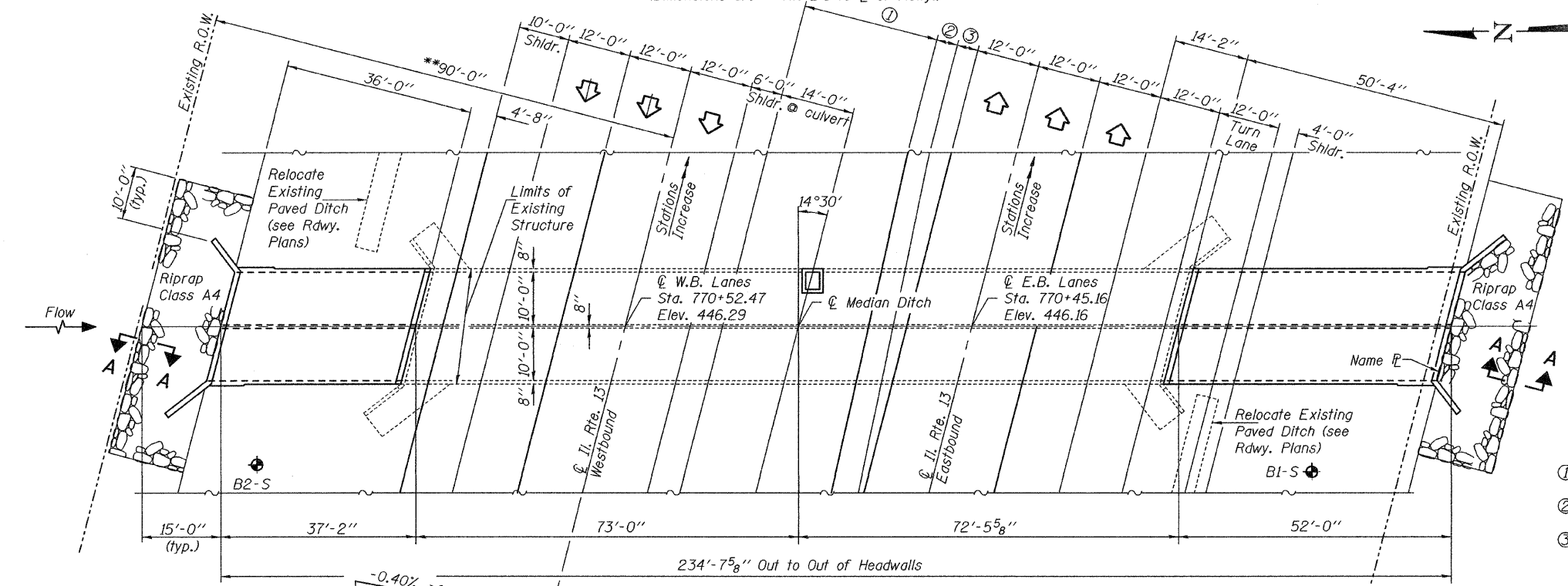
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS  
2002 AASHTO

DESIGN STRESSES

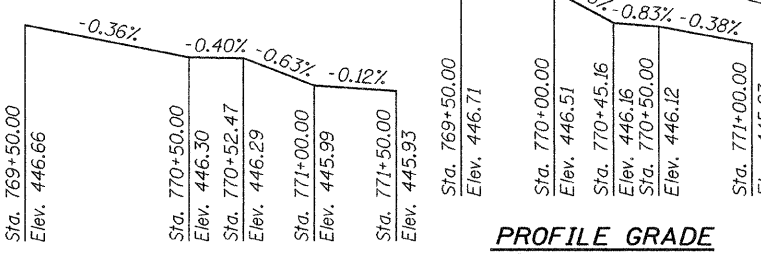
FIELD UNITS  
f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (reinforcement)

EXISTING UNITS  
f<sub>c</sub> = 1,400 psi (barrel)  
f<sub>c</sub> = 1,000 psi (wings & footings)  
f<sub>s</sub> = 20,000 psi (reinforcement)  
n = 10



Notes:  
Precast culvert alternate is not allowed.  
Stationing for Westbound and Eastbound roadways are independent.

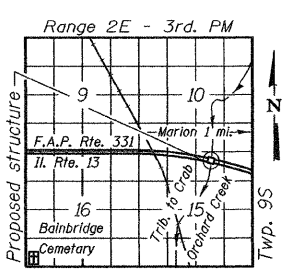
\*\*Additional R.O.W. will be obtained by district.



WATERWAY INFORMATION

Drainage Area = 1.35 sq. mi. Exist. Low Grade Elev. 445.96 @ Sta. 772+17.45  
Prop. Low Grade Elev. 445.96 @ Sta. 772+17.45

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	50	1190	124.8	123.2	435.1	6.2	1.9	441.3	437.0	
Base	100	1290	128.8	127.2	435.3	7.3	2.2	442.6	437.5	
Max. Calc.	500	1620	134.8	133.2	435.6	10.4	4.0	446.0	439.6	
Overtopping	-	-	-	-	-	-	-	-	-	



DESIGNED Patrick M. Bohne  
CHECKED Jay D. Edwards  
DRAWN BECKY M. LEACH  
CHECKED pmp/JDE

EXAMINED June 10, 2009  
PASSED  
ENGINEER OF BRIDGE DESIGN  
ENGINEER OF BRIDGES AND STRUCTURES



GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 100-2007

SHEET NO. 1 7 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	1X-1	WILLIAMSON	1920	94
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
			CONTRACT NO. 78053		