

Benchmark: D2129 Sign  
Sta. 62+73.66, 22.1141' Rt. Elev. 794.5490

Existing Structure: No. 071-2015  
IL 39 Section (14-1) M-1, Constructed 1978  
Double 6'-0" x 12'-0" x 302'-0" Concrete Box Culvert.  
No Salvage.

Proposed Improvements:  
East Side of Existing Structure to be extended 10'-0"  
with Double 6'-0" x 12'-0" Cast-in-Place Concrete  
Box Culvert with Cast-in-Place Wingwalls.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**DESIGN SPECIFICATIONS**

AASHTO 2002 Specifications.

**LOADING HS20-44**

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

**DESIGN STRESSES**

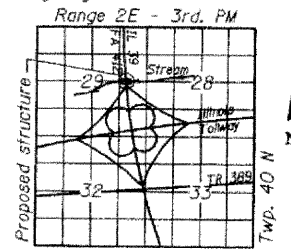
$f'_c = 3,500$  PSI  
 $f_y = 60,000$  PSI (Reinforcement)

**GENERAL NOTES**

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Cast-in-Place barrel shall be poured monolithically with wingwalls.
3. Exposed edges shall have a  $\frac{3}{4}$ " chamfer.
4. In accordance with Article 540.04 of the standard specifications, it shall be the responsibility of the contractor to divert stream flow during construction in order to keep the construction areas free of water. The method of water diversion shall be subject to the approval of the engineer and the cost shall be included with "Concrete Box Culverts". Clean fill (granular) material will only be allowed.
5. 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.

**INDEX OF DRAWINGS**

Sheet No.	Sheet Title
1.	General Plan & Elevation
2.	Culvert Extension Plan and Elevation
3.	Extension Connection Detail
4.	Soil Boring Log



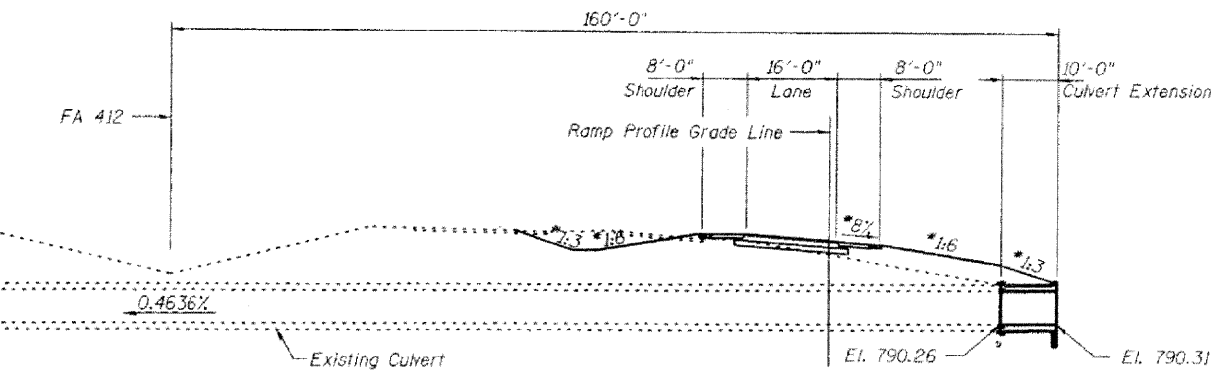
LOCATION SKETCH

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Concrete Box Culverts	Cu. Yd.	29.5
Expansion Bolts $\frac{3}{4}$ Inch	Each	48
Reinforcement Bars	Pound	6,890

**GENERAL PLAN & ELEVATION**  
FA RTE. 412 OVER DOUBLE 12'X6' CULVERT  
FA RTE. 412 - SEC. (141-1)M-1  
OGLE COUNTY  
STATION 1428+50.00  
STRUCTURE NO. 071-2015

SHEET NO. 1	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4	412	(141-1) M-1	OGLE	82	31
CONTRACT NO. 64E60					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			



LONGITUDINAL SECTION

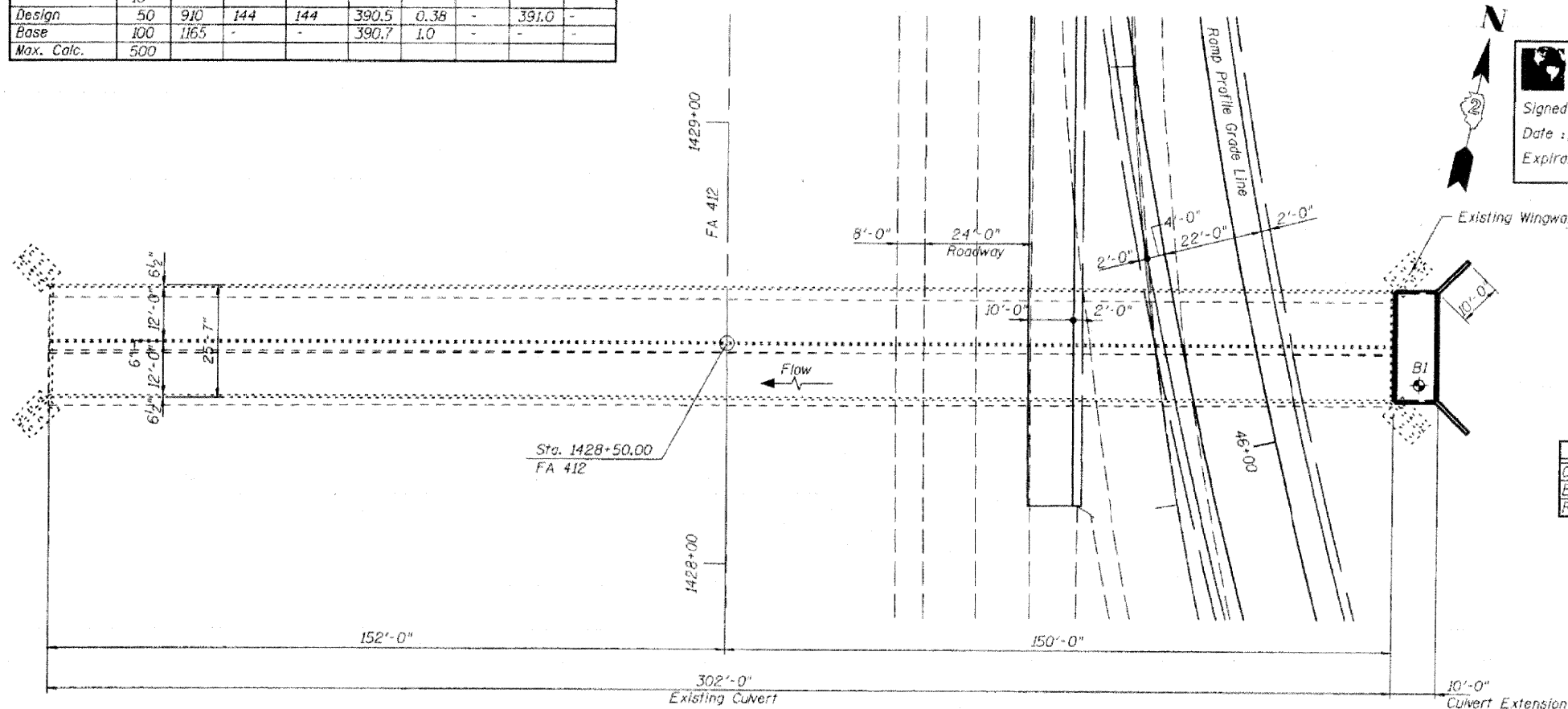
\*Measured  $\perp$  to Roadway

**WATERWAY INFORMATION**

Flood Yr.	Freq.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	910	144	144	390.5	0.38	-	391.0	-
Base	100	1165	-	-	390.7	1.0	-	-	-
Max. Calc.	500	-	-	-	-	-	-	-	-

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	Cut Off Wall Elevation (ft.)
	786.31



PLAN

**DLZ ILLINOIS, INC.**  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
Signed: *[Signature]*  
Date: 2-23-2009  
Expiration Date: 11/30/10

DESIGNED	PRD
CHECKED	WAT
DRAWN	CJS
CHECKED	PRD

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005