

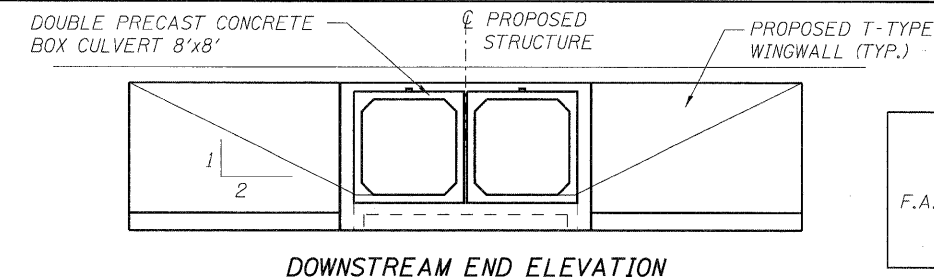
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

INDEX OF STRUCTURAL SHEETS

SHT. NO.	DESCRIPTION
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GENERAL NOTES

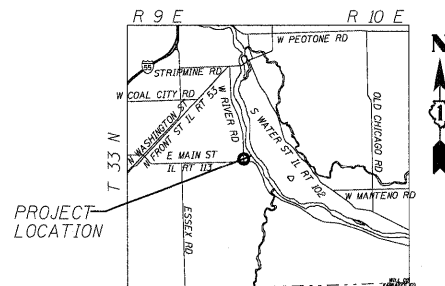
- EXISTING STRUCTURE: NOT SALVAGEABLE. THE NEW STRUCTURE NUMBER IS 099-0520.
- THE PROPOSED PRECAST CONCRETE BOX CULVERT SHALL BE DESIGNED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OF AASHTO M273. COST IS INCLUDED IN PRECAST CONCRETE BOX CULVERT 8'x8' ITEM.
- FLOW OF THE CREEK UNDER WEST RIVER ROAD IS TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION BY PLACE A TEMPORARY STREAM DIVERSION AT THE UPSTREAM END OF THE BOX CULVERT/WINGWALLS AND TEMPORARILY PUMPING OR OTHERWISE CONVEYING THE STREAM FLOW THROUGH THE WORK ZONE. THE DESIGN AND CONSTRUCTION OF THE TEMPORARY DIVERSION SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND THE COST SHALL BE INCLUDED IN PRECAST CONCRETE BOX CULVERT PAY ITEM. THE TEMPORARY STREAM DIVERSION PLAN TO BE USED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.
- ALL CONSTRUCTION JOINTS SHALL BE BONDED.
- THE INFORMATION SHOWN IN THESE PLANS CONCERNING THE TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE EXISTENCE, TYPE, SIZE AND LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES AS MAY BE NECESSARY TO AVOID CONFLICT WITH CONSTRUCTION OPERATIONS AND/OR DAMAGE TO THE UTILITY.
- THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO PRECAST CONCRETE BOX CULVERT 8'x8'.
- THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL TREES WITHIN AND ADJACENT TO THE WORK ZONE FOR THIS PROJECT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO PRECAST CONCRETE BOX CULVERT 8'x8'.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60 (IL MODIFIED). SEE SPECIAL PROVISIONS.
- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- THE CONTRACTOR SHALL SUBMIT A PLAN AND SCHEDULE OF CONSTRUCTION ACTIVITIES TO THE ENGINEER FOR APPROVAL BEFORE STARTING ANY WORK FOR THIS PROJECT.
- AS-BUILT/ACTUAL DETAILS OF EXISTING BOX CULVERT AND WINGWALLS ARE NOT AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY ACTUAL EXISTING STRUCTURE TO BE REMOVED.
- THE COST OF 6" OF CA 7 UNDER CULVERT SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 8'x8' ITEM.



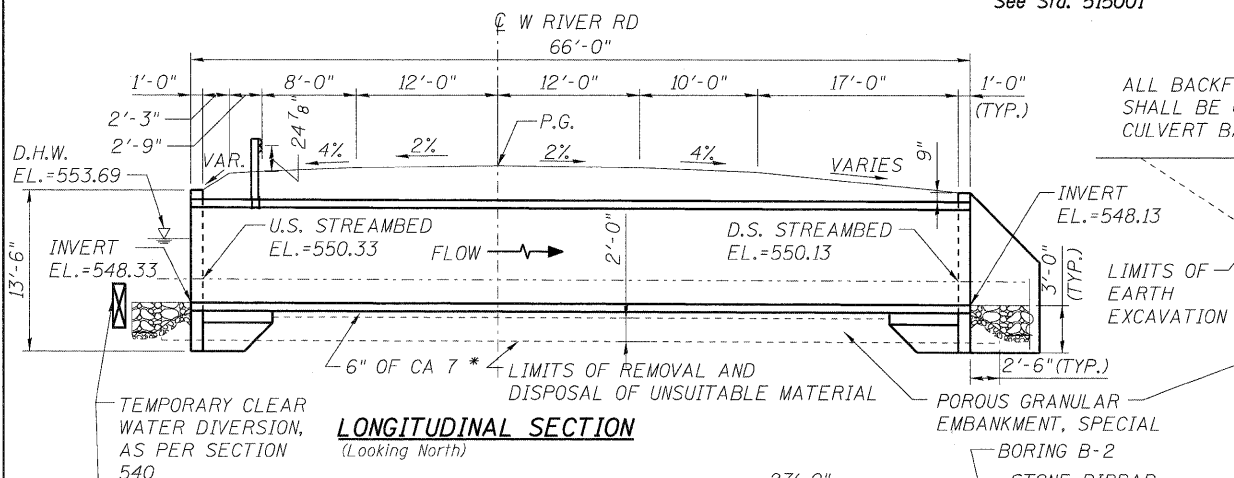
DOWNSTREAM END ELEVATION

STATION 82+55.73  
BUILT 20XX BY  
STATE OF ILLINOIS  
F.A.U. ROUTE 0327 SEC. 112 T-1  
LOADING HS20-44  
STR. NO. 099-0520

NAME PLATE  
See Std. 515001



LOCATION SKETCH



LONGITUDINAL SECTION  
(Looking North)

ALL BACKFILL MATERIAL  
SHALL BE GRANULAR  
CULVERT BACKFILL

LIMITS OF  
EARTH  
EXCAVATION

8'-0" x 8'-0" PRECAST CONCRETE BOX  
CULVERT, THICKNESS OF WALLS AND  
SLAB TO BE DETERMINED BY  
MANUFACTURER IN FINAL DESIGN (TYP.)

\* - THE COST OF 6" OF CA 7 WILL BE INCLUDED IN THE  
PRECAST CONCRETE BOX CULVERT 8'x8' ITEM.

SECTION THRU CULVERT

HIGHWAY CLASSIFICATION

F.A.U. Rte. 0327 - West River Road  
Functional Class: Minor Arterial (Urban)  
ADT: 2,650 (2008) DHV = 265 ADTT: 14%  
Design Speed: 60 m.p.h.  
Posted Speed: 55 m.p.h.

LOADING HS20-44

Allow 50 psf for future wearing surface  
Design unit weight of soil = 120 pcf

DESIGN SPECIFICATIONS

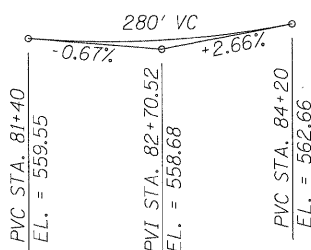
American Association of State Highway and  
Transportation Officials (AASHTO) Standard  
Specifications for Highway Bridges, 2002

DESIGN STRESSES

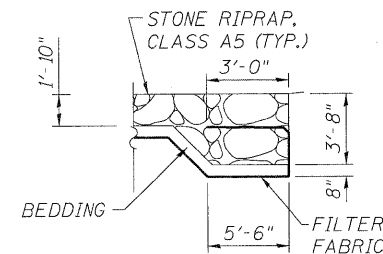
FIELD UNITS PRECAST UNITS  
f'c = 3,500 psi f'c = 5,000 psi  
fy = 60,000 psi fy = 65,000 psi (WWF)  
(REINFORCEMENT) fy = 60,000 psi  
(REINFORCEMENT)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Horizontal Bedrock Acceleration Coefficient (A) = 3.5%g  
Site Coefficient (S) = 1.0



PROFILE GRADE  
(ALONG & ROADWAY)



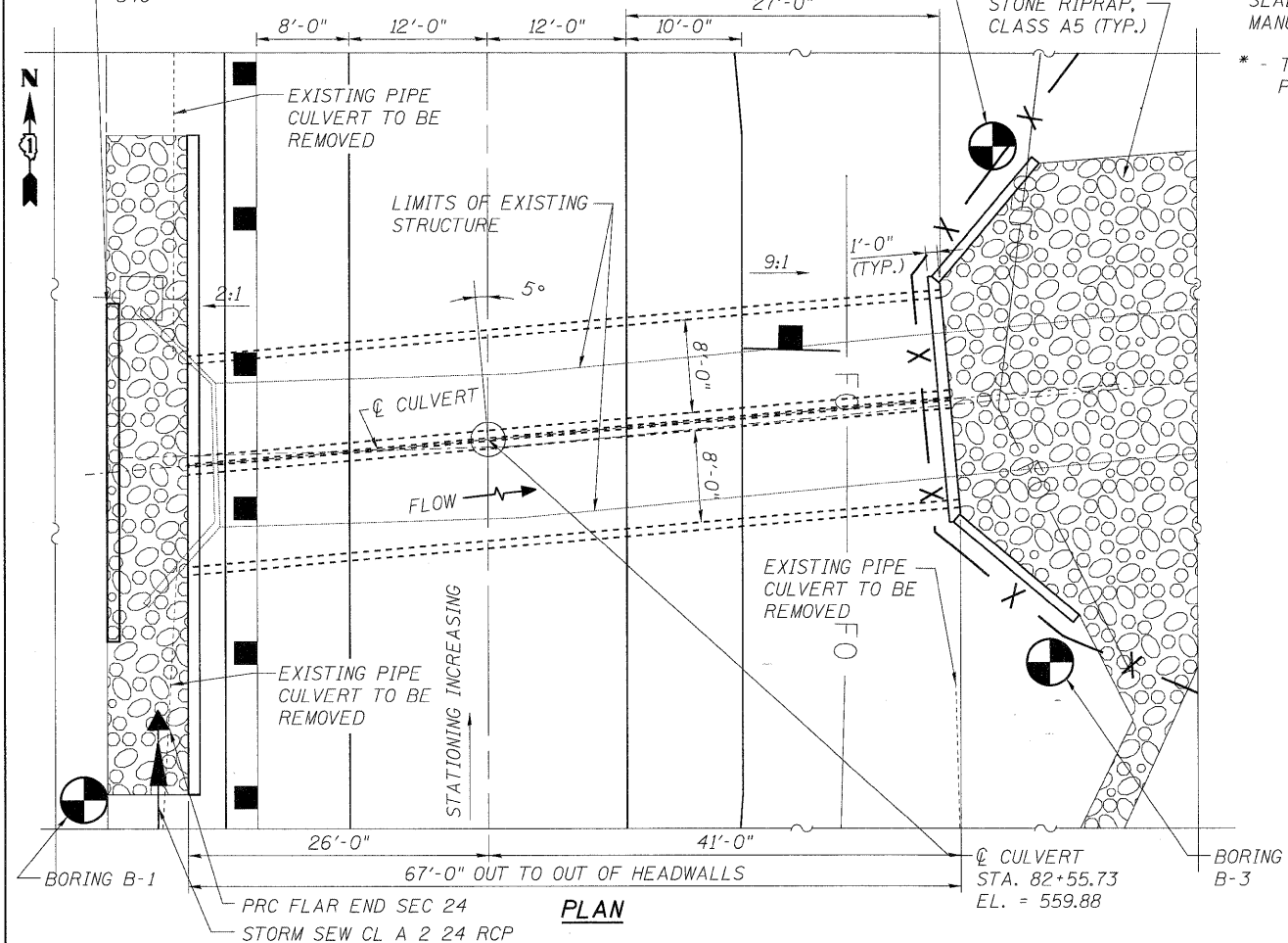
SECTION THRU RIPRAP  
(AT WEST SIDE OF CULVERT)

WATERWAY INFORMATION

Drainage Area = 1,621 m<sup>2</sup> Exist. Low Grade Elev. = 559.69 ft. Sta. 82+55.73  
Prop. Low Grade Elev. = 559.69 ft. Sta. 82+55.73

Flood	Freq. Yr.	Q C.F.S.	Opening	Sq. Ft.	Nat. Head - Ft.	Headwater EL.			
	10	285	27.3	46.1	553.21	1.87	0.00	555.08	553.21
Design	50	398	27.3	53.8	553.69	5.51	0.03	559.20	553.72
Base	100	441	27.3	56.3	553.85	5.39	0.13	559.24	553.98
Overtopping									
Max. Calc.	500	561	27.3	63.0	554.27	5.03	0.46	559.30	554.73

GENERAL PLAN & ELEVATION  
WEST RIVER ROAD OVER  
UNNAMED TRIBUTARY TO KANKAKEE RIVER  
(0.1 MI NORTH OF IL ROUTE 113)  
F.A.U. RT. 0327  
SECTION 112 T-2  
WILL COUNTY  
STA. 82+55.73  
STRUCTURE NO. 099-0520



PLAN

DESIGNED	ST
CHECKED	SLV
DRAWN	ST
CHECKED	DJB

LONGCO, INC.  
CONSULTING ENGINEERS  
1560 WALL ST, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGN SCOUR ELEVATION TABLE

DESIGN SCOUR ELEVATION (FT.)	UPSTREAM	DOWNSTREAM
	545.33	545.13

SHEET NO. S1	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
OF S5 SHEETS	0327	112 T-2	WILL	22	13
D-91-198-10			CONTRACT NO. 60J17		
FED. ROAD DIST. NO. _		ILLINOIS	FED. AID PROJECT		