BENCH MARK: BM 242
STA. 388+66.10, 89.18' RT., ELEV. 735.64
MARK ON THE WESTERLY FLANGE BOLT OF FIRST HYDRANT WEST OF LOCUST STREET, SOUTH SIDE OF ROUTE 30.

EXISTING STRUCTURE: NO. UNKNOWN
24" Ø X 101' REINFORCED CONCRETE PIPE

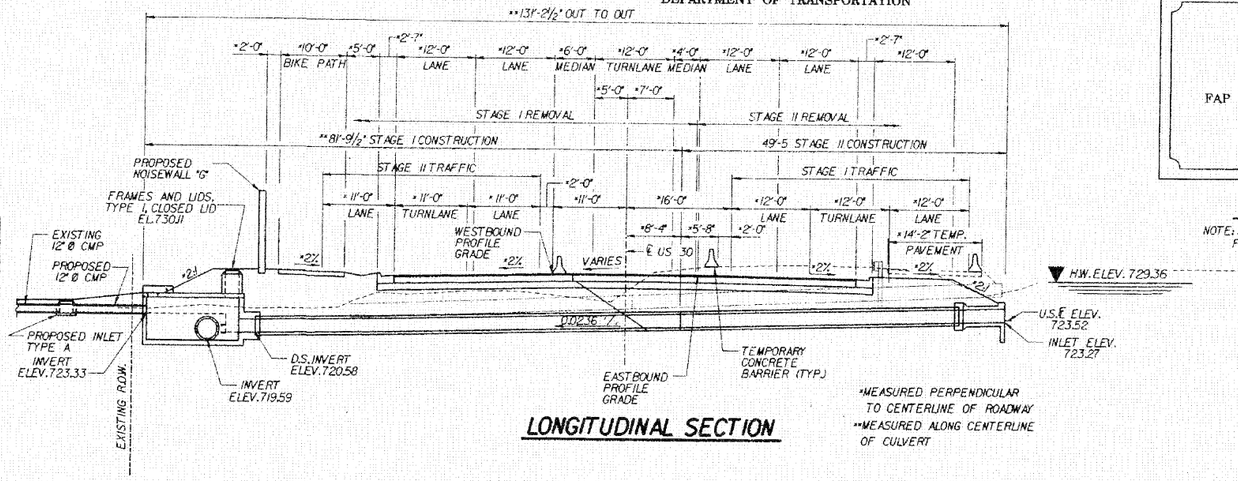
NO SALVAGE.

PROPOSED IMPROVEMENTS:
EXISTING STRUCTURE TO BE REMOVED AND REPLACED WITH A SINGLE 4'-0" X 2'-0" X 117'-6" BOX CULVERT IN STAGES MAINTAINING TWO LANES OF TRAFFIC.

TOTAL BILL OF MATERIALS

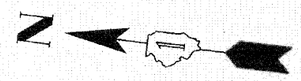
ITEM	UNIT	QUANTITY
STONE RIPRAP, CLASS A5	TON	30
FILTER FABRIC	SQ.YD.	30
REMOVAL OF EXISTING STRUCTURES NO. 9	EACH	1
REINFORCEMENT BARS	POUND	3,690
NAME PLATES	EACH	1
CONCRETE BOX CULVERTS	CU.YD.	19.4
PRECAST CONCRETE BOX CULVERT 4' x 2'	FT.	107.0
FRAMES AND LIDS, TYPE I, CLOSED LID	EACH	1
TEMPORARY SOIL RETENTION SYSTEM	SQ.FT.	185
SPECIAL GRATE NO.2	EACH	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONGITUDINAL SECTION

*MEASURED PERPENDICULAR TO CENTERLINE OF ROADWAY
**MEASURED ALONG CENTERLINE OF CULVERT



PROFILE GRADE

℄ P.G. WBD. & EBD.

DESIGNED	ASP
CHECKED	CDS
DRAWN	BRM
CHECKED	ASP

PLAN

WATERWAY INFORMATION

DRAINAGE AREA (SQ.MI) = 0.037 | LOW GRADE ELEV.(FEET) EXIST = 731.00 AT STA. 385+74, PROPOSED = 729.49 AT STA. 385+75 | MAX. RECORDED H.W.E. =

FLOOD	FREQ. YR.	DISCHARGE C.F.S.	WATERWAY OPENING EXISTING (square feet)	WATERWAY OPENING PROPOSED (square feet)	NATURAL H.W.E. EXISTING U/S Face	NATURAL H.W.E. PROPOSED U/S Face	CREATED HEAD (feet)	CREATED HEAD (Feet)	HEADWATER ELEVATION EXISTING	HEADWATER ELEVATION PROPOSED
OVERTOPPING (EX.)	9	25	3.14		728.26		2.74		731.00	
	10	29	3.14	8.00	728.26	729.36	2.49	0.00	730.75	726.86
DESIGN	50	51	3.14	8.00	728.26	729.36	2.79	0.00	731.05	727.74
BASE	100	62	3.14	8.00	728.26	729.36	2.81	0.00	731.07	728.37
OVERTOPPING (PR.)	190	77		8.00		729.36		0.13		729.49
MAX. CALC.	500	135	3.14	8.00	728.26	729.36	2.87	0.39	731.13	729.75

STATION 387+33.00
BUILT BY
STATE OF ILLINOIS
FAP 353 SECT. (12 & 13) WRS-3
LOADING HS20
STR. NO. 099-C017

NAME PLATE

NOTE: SEE STANDARD DRAWING 515001 FOR NAME PLATE DETAILS.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	715
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

* SECT. (12 & 13) WRS-3
* CONTRACT NO. 62678

SHEET NO. 1
12 SHEETS

DESIGN SPECIFICATIONS

AASHTO 2002 SPECIFICATIONS.

LOADING HS20-44

ALLOW 50#/SQ.FT. FOR FUTURE WEARING SURFACE.

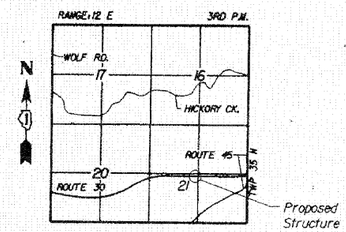
DESIGN STRESSES

FIELD UNITS
f'c = 3,500 PSI
fy = 60,000 PSI (REINFORCEMENT)

PRECAST UNITS
f'c = 5,000 PSI
fy = 60,000 PSI (REINFORCEMENT)

GENERAL NOTES

1. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR60. SEE SPECIAL PROVISIONS.
2. CAST-IN-PLACE BARREL SHALL BE POURED MONOLITHICALLY WITH THE WINGWALLS.
3. EXPOSED EDGES SHALL HAVE A ¾" 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 "REMOVAL OF EXISTING STRUCTURES NO. 9". CLEAN FILL (GRANULAR) MATERIAL WILL ONLY BE ALLOWED.
5. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M259 (DESIGN FILL HEIGHT = 6'-0").
6. A CANTILEVERED SHEET PILING DESIGN DOES NOT APPEAR FEASIBLE AND ADDITIONAL MEMBERS OR OTHER RETENTION SYSTEMS MAY BE NECESSARY. THE CONTRACTOR SHALL SUBMIT A TEMPORARY SOIL RETENTION SYSTEM DESIGN INCLUDING PLAN DETAILS AND CALCULATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER.



LOCATION SKETCH

DLZ
DLZ Illinois, Inc.
85 W. Algonquin Rd. Ste. 220
Arlington Heights Il 60005

WAYNE A. TRUEX
REGISTERED STRUCTURAL ENGINEER
081-005429
STATE OF ILLINOIS
11-30-10

REVISIONS	
NAME	DATE

CULVERT 'L'
GENERAL PLAN

U.S. ROUTE 30 (LINCOLN HIGHWAY)
F.A.P. 353 (U.S. 30)
SECTION (12 & 13) WRS-3
STATION 387+33.00
WILL COUNTY
STRUCTURE NUMBER 099-C017