

BENCH MARK: BM 204
 STA. 155+18.11, 54 1/4" RT., EL. 690.723
 CHISELED SQUARE ON WESTERLY CURB OF
 ENTRANCE TO CAR QUEST AUTOPARTS

EXISTING STRUCTURE:
 2'-0" X 2'-0" REINFORCED CONCRETE BOX
 CULVERT WITH 2" Ø CORRUGATED STEEL
 PIPE EXTENSIONS, TOTAL LENGTH OF 79'-0".

NO SALVAGE.

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

STATION 158+00.00
 BUILT BY
 STATE OF ILLINOIS
 FAP 353 SECT. (12 & 13) WRS-3
 LOADING HS20
 STR. NO. 099-C011

NAME PLATE
 NOTE: SEE STANDARD DRAWING 515001
 FOR NAME PLATE DETAILS.

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)

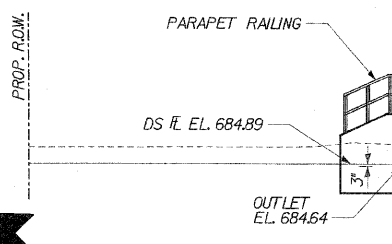
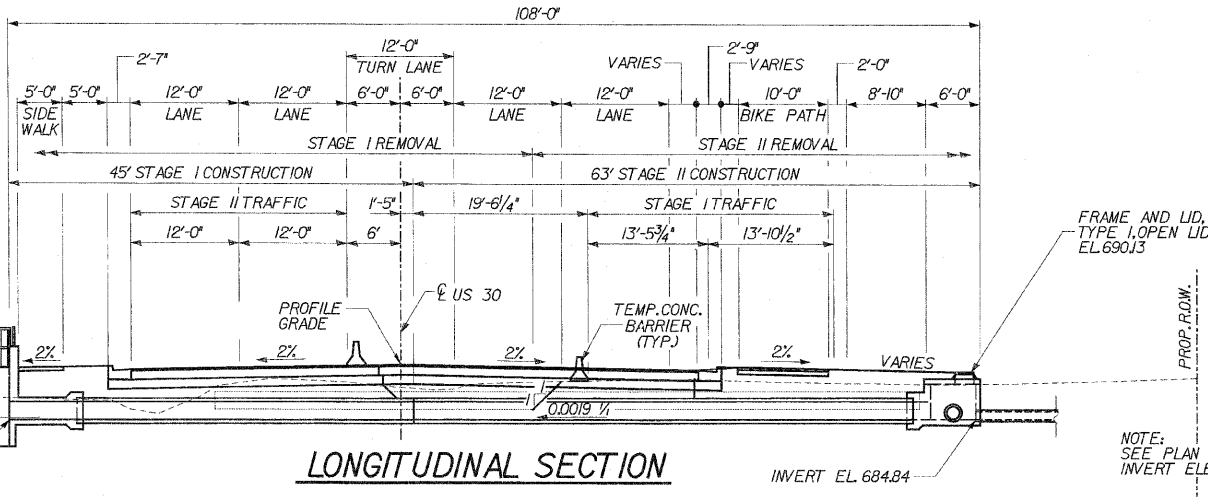
PRECAST UNITS
 f'c = 5,000 PSI
 fy = 60,000 PSI (REINFORCEMENT)

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
STONE RIPRAP, CLASS A4	TON	95
FILTER FABRIC	SQ.YD.	130
REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1
REINFORCEMENT BARS	POUND	3,024
PARAPET RAILING	FOOT	29
NAME PLATES	EACH	1
CONCRETE BOX CULVERTS	CU. YD.	17.6
PRECAST CONCRETE BOX CULVERT 4' x 2'	FOOT	186.0
FRAMES AND LIDS, TYPE 1, OPEN LID	EACH	1

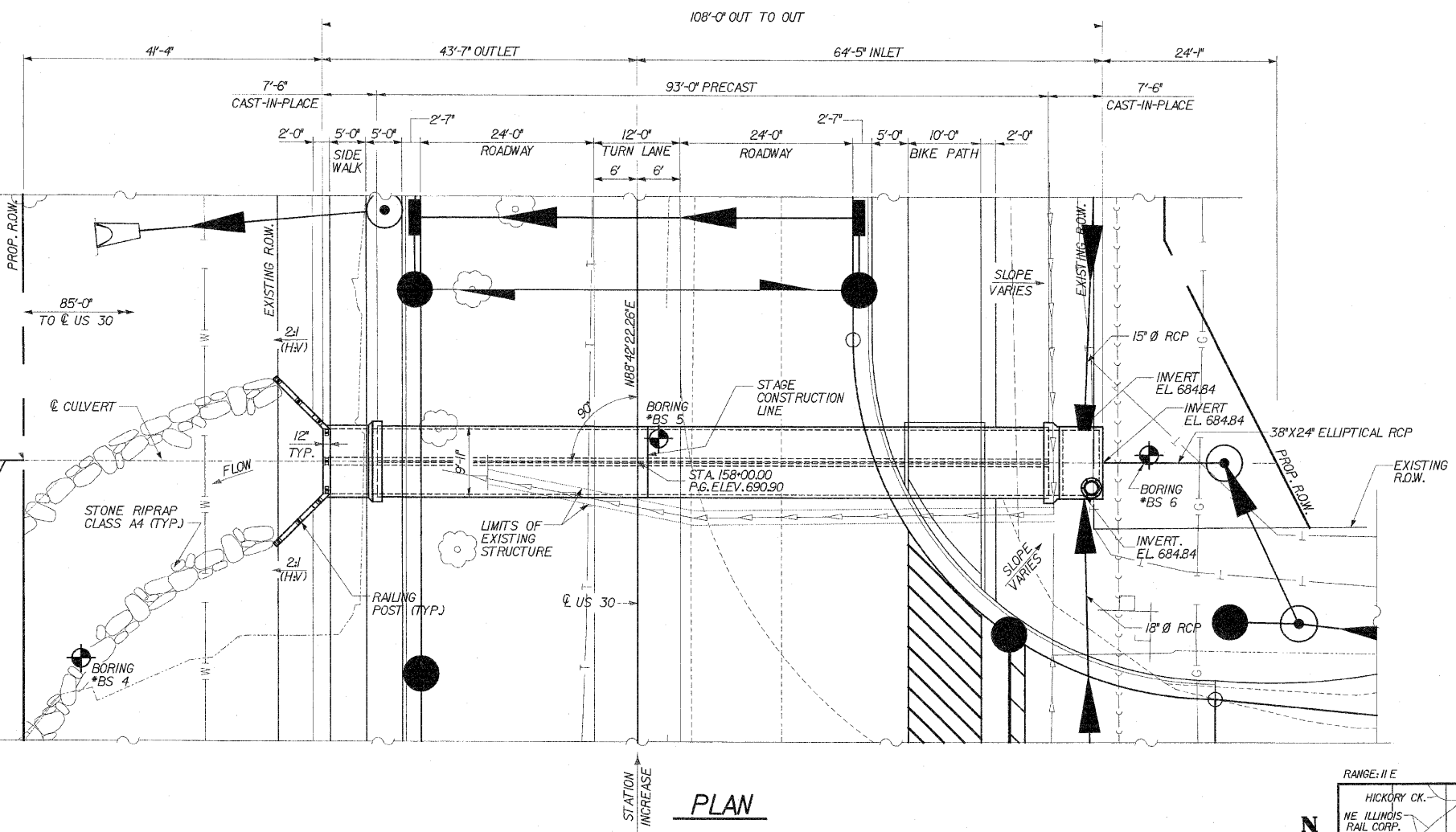
GENERAL NOTES

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 WINGWALLS.
3. EXPOSED EDGES SHALL HAVE A 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 "REMOVAL OF EXISTING STRUCTURES NO. 2." 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 - 3'-0").
6. THE CONTRACTOR SHALL PREPARE IN-STREAM WORK PLANS (ALL COFFERDAMS, WORK PADS, AND EROSION AND SEDIMENT CONTROL, ETC.) AND SUBMIT TO THE ENGINEER AND THE U.S. ARMY CORP OF ENGINEERS FOR REVIEW AND APPROVAL. THE CONTRACTOR SHOULD EXPECT TO HAVE TO ATTEND MEETINGS AT THE USACE OFFICE TO DISCUSS THEIR WORK PLAN IN ORDER TO SECURE THEIR PERMIT. THE COST OF ALL IN-STREAM WORK ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.



H.W. ELEV. 686.56

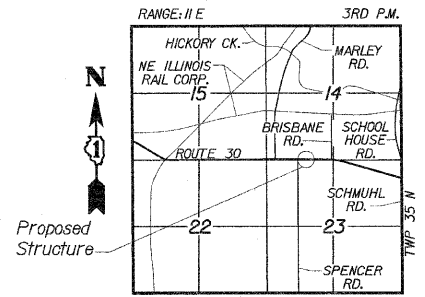
NOTE: SEE PLAN VIEW FOR PIPE INVERT ELEVATIONS



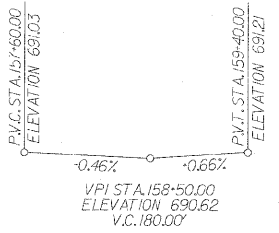
PLAN

WATERWAY INFORMATION

DRAINAGE AREA (SQ. MI) = 0.068		LOW GRADE ELEV. (FEET) EXIST = 689J5 @ STA. 158+38		MAX. RECORDED H.W.E. =						
		PROPOSED = 69074 @ STA. 158+34								
FLOOD	FREQ. YR.	DISCHARGE C.F.S.	WATERWAY OPENING		NATURAL H.W.E.		CREATED HEAD		HEADWATER ELEVATION	
			EXISTING (square feet)	PROPOSED (square feet)	EXISTING U/S FACE	PROPOSED U/S FACE	EXISTING (feet)	PROPOSED (feet)	EXISTING	PROPOSED
OVERTOPPING (EX)	6	21	150	1016	686.97	686.11	2.18	0.24	689J5	686.35
	10	38	210	1016	687.27	686.11	2.04	0.24	689.31	686.35
DESIGN	50	74	2.87	13.76	687.72	686.56	1.70	0.58	689.42	687.14
BASE	100	92	3.07	15.12	687.89	686.73	1.57	0.83	689.46	687.56
OVERTOPPING (PP)	375	167		16.00	687.29	687.29	3.45		690.74	690.74
MAX. CALC.	500	202		16.00	688.66	687.50	1.00	3.52	689.66	691.02



LOCATION SKETCH



PROFILE GRADE
 @ P.G. W.B.D. & E.B.D.

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP



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

CULVERT 'B'
GENERAL PLAN
 U.S. ROUTE 30 (LINCOLN HIGHWAY)
 F.A.P. 353 (U.S. 30)
 SECTION (12 & 13) WRS-3
 STATION 158+00.00
 WILL COUNTY
 STRUCTURE NUMBER 099-C011

REVISIONS	
NAME	DATE