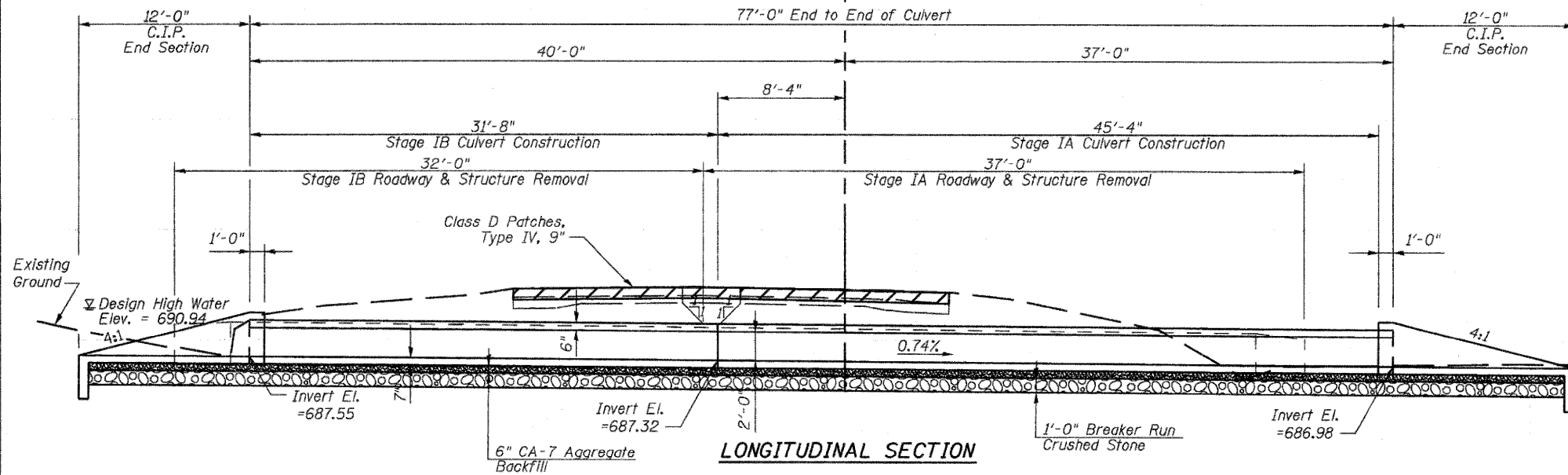


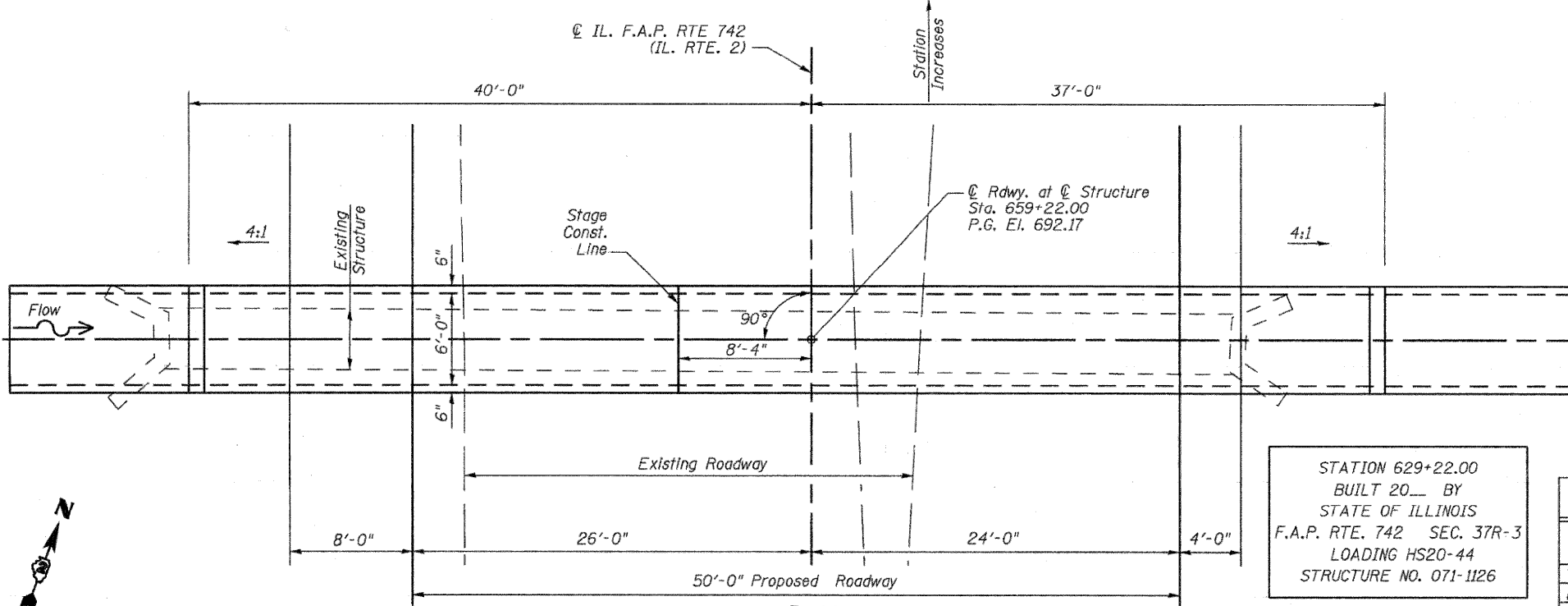
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark:
Existing Structure: Built in 1952 as a single barrel 4'-0" x 2'-0" R.C. Box Culvert with a length of ±69'-0". Traffic to be Maintained Utilizing Stage Construction. No Salvage.

Proposed IL. F.A.P. RTE 742
(IL. RTE. 2)



LONGITUDINAL SECTION



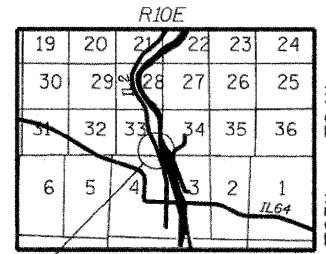
PLAN

STATION 629+22.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE. 742 SEC. 37R-3
LOADING HS20-44
STRUCTURE NO. 071-1126

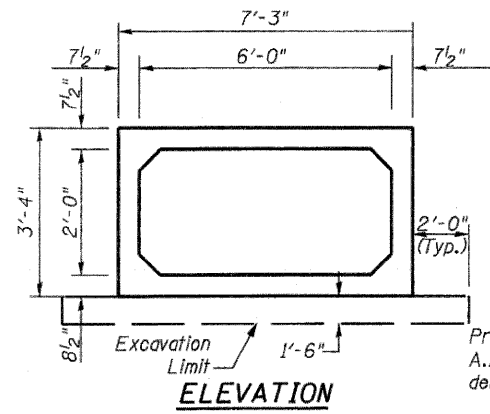
NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIALS

DESCRIPTION	UNIT	QTY.
Removal of Existing Structures No. 5	Each	1
Concrete Box Culverts	Cu. Yd.	11.2
Precast Concrete Box Culvert 6' X 2' (Special)	Foot	77
Breaker-Run Crushed Stone	Ton	78
Reinforcement Bars	Pound	1336



LOCATION SKETCH

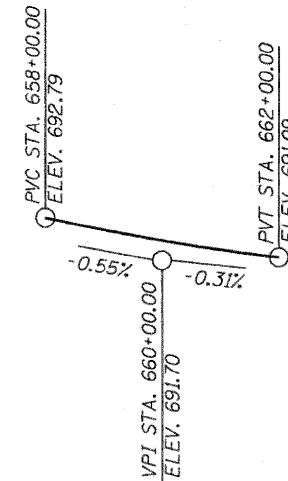


ELEVATION

DESIGN STRESSES

$f_y = 60,000$ psi
 $f_y = 65,000$ psi (Welded Wire Fabric)
 $f'_c = 3,500$ psi
 $f'_c = 5,000$ psi (Precast)

PROFILE GRADE



WATERWAY INFORMATION TABLE

	Frequency Year	Discharge (cfs)	Waterway Opening Sq. Ft.		Natural H.W.E.	Head (ft)		Headwater Elev. (ft)	
			Existing	Proposed		Existing	Proposed	Existing	Proposed
Ten-Year	10	57	8.0	12.0		3.15	2.45	690.68	690.00
Design	50	79	8.0	12.0		3.63	3.39	691.16	690.94
Base	100	91	8.0	12.0		3.72	3.98	691.25	691.53
EX OVT	3	45	8.0	12.0		2.64		690.17	
PR OVT	118	94		12.0			4.76		692.31
Max Calc									

10-Year Velocity through Existing Structure = 9.5 fps
10-Year Velocity through Proposed Structure = 7.3 fps

GENERAL PLAN & ELEVATION
IL. RTE. 2 OVER
TRIBUTARY TO ROCK RIVER
STA. 659+22.00

SHEET INDEX

NO.	DESCRIPTION
1	GENERAL PLAN
2	END SECTION DETAILS
3	BARREL DETAILS

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications & Supplements
LOADING HS 20-44

Allow 50#/Sq. Ft. for future wearing surface

GENERAL NOTES

Precast Box shall conform to the requirements of A.A.S.H.T.O. M273 (A.S.T.M. C850). The maximum design fill height for this structure is 3'-0".

Culvert Concrete thickness shown shall be considered the minimum acceptable. Other thickness will be allowed if approved by the engineer.

Breaker-Run Crushed Stone to be placed as a subbase. Min. depth is 1'-0".

Work this sheet with Staging sheets.

Reinforcement bars shall conform to the requirements of ASTM A706 grade 60.

All construction joints shall be bonded.

Reinforcement bars designated (E) shall be epoxy coated.

The bars in the walls may be spliced as follows:

Bar Size Number	4	5	6	7	8
Minimum Splice Length	20"	26"	31"	43"	54"

This work shall be done according to the applicable portion of 503, 508, 540, and 542 of the standard specifications.

All exposed corners 90° or sharper shall be filleted with a 3/4" dressed and beveled strip.

Place 1/2" P.J.F. between pipe culvert and wall.

The contract unit price per Cu. Yd. for Concrete Box Culverts shall include the expansion bolts, J bolts, anchor bolts, bolts, nuts, washers, steel plates, P.J.F. earth excavation and backfilling as required.

DESIGNED GTH

CHECKED DSG

DRAWN EBS

CHECKED DFM

DAVID F. MAXWELL
081-005455
ST. LOUIS, MO

David F. Maxwell, S.E. Reg. No. 081-005455

Date: 2/19/07
My registration expires November 30, 2010.

Howard R. Green Company

SHEET NO. 1	F.A.P. RTE. 742	SECTION 37 R-3	COUNTY OGLE	TOTAL SHEETS 345	SHEET NO. 186
3 SHEETS		SN 071-1126	CONTRACT NO. 84788		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					