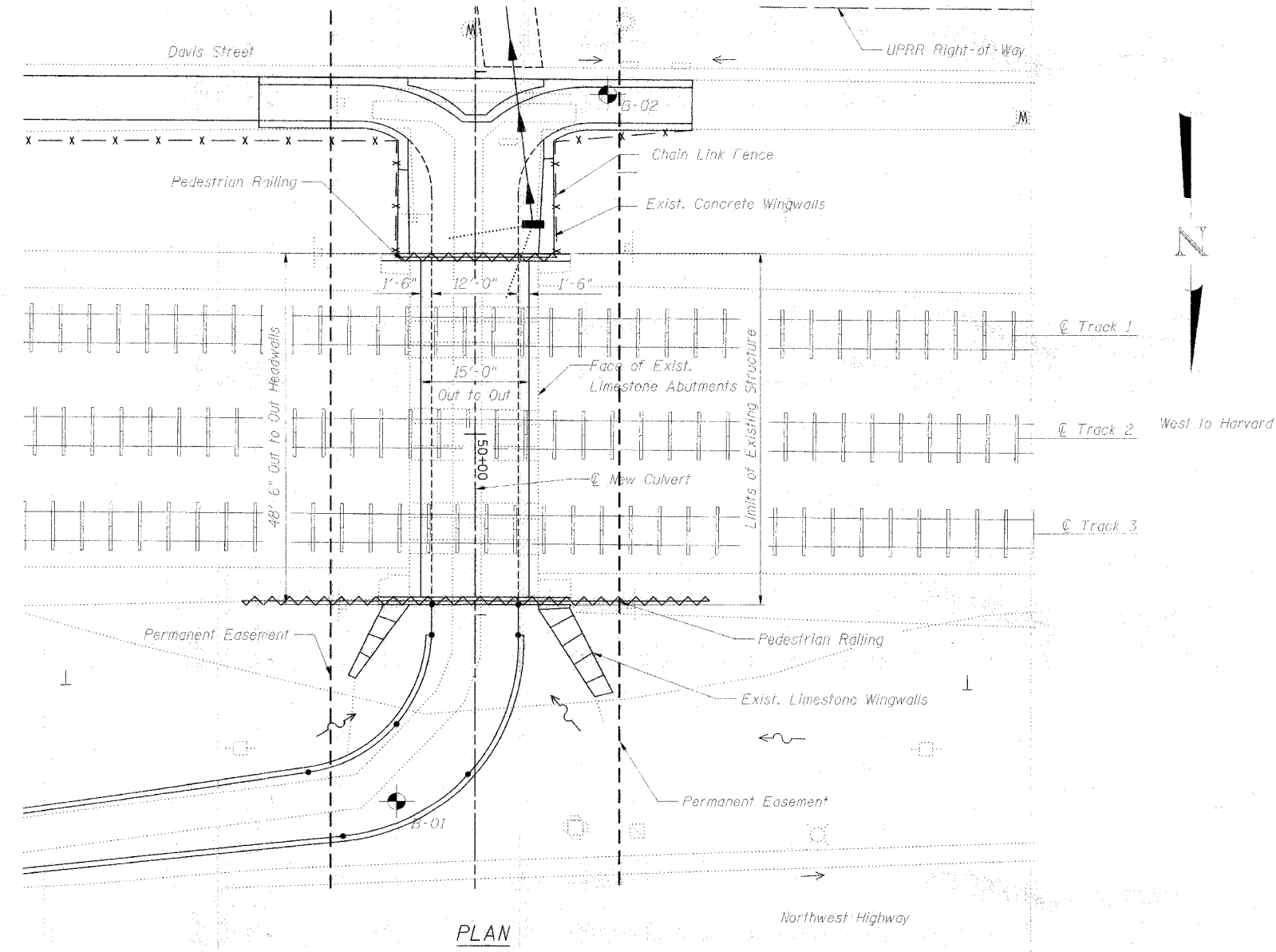
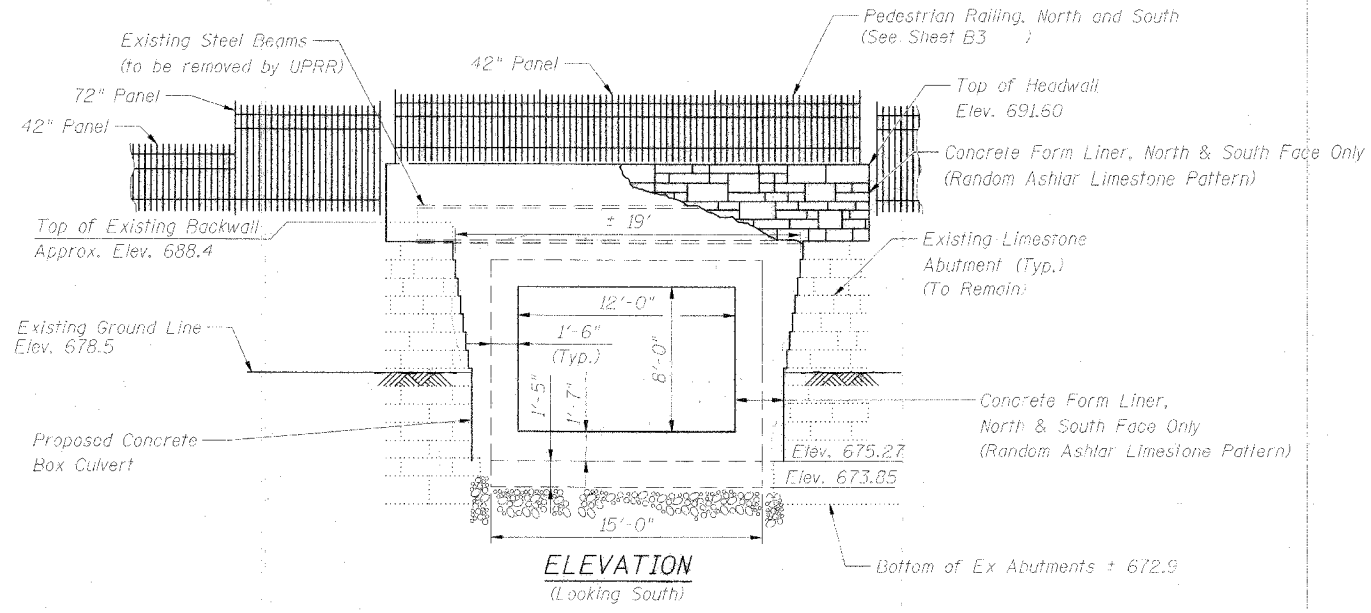


Benchmark: Bm #54 1" Dia Brass disc in southeast side of light pole concrete base ±30' southwest of centerline of Northwest Highway and ±39' north of centerline of Kensington Road. El. 680.12.

Existing Structure: A single span 17'-9" face-to-face of abutments and a width of approximately 48'. Four 24³/₈" deep steel beams, under each railroad track, on limestone abutments.



DESIGNED	JMH
CHECKED	RLP
DRAWN	DMG
CHECKED	RLP

PROJECT NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. OF SHEETS
14	14	COOK	10	10
FED. ROAD DIST. NO. 7		ILL. HIGHWAY PROJECT	Contract No. 83822	

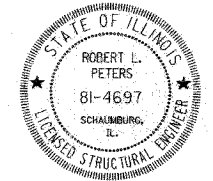
GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M31 (ASTM A615), Grade 60.
2. Exposed concrete edges shall be beveled ³/₄".
3. The back face of wingwalls and sidewalls and top of the top slab of the culvert shall be waterproofed according to article 503.18 of the Standard Specifications. Cast included in Concrete Box Culverts.
4. Plan dimensions and details relative to the existing structure have been taken from field measurements and are subject to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be a cause for additional compensation for a change in the scope of work.
5. All reinforcement bars designated (E) shall be epoxy coated.
6. The voids between the culvert sidewalls and existing abutments shall be filled with Porous Granular Embankment. The cost of this work shall be included in the Concrete Box Culverts. The contractor, at his option, may bank pour the culvert sidewalls against the existing abutments. The pay limits will be based on the concrete lines shown on the plans. No additional payment will be made for use of concrete in lieu of Porous Granular Embankment.
7. Care shall be taken to avoid undermining the existing abutment footings by excavating for proposed culvert.
8. Culvert wingwalls shall be poured to meet the face of the existing abutments. Reinforcing shall be adjusted to fit actual conditions as necessary. Cost included in Concrete Box Culverts.
9. Precast structure is not allowed.
10. Temporary abutment bracing shall be installed prior to excavation for Concrete Box Culverts. See sheet 12 for details.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Reinforcement Bars, Epoxy Coated	pound	30,900
Pedestrian Railing, 42"	foot	88
Pedestrian Railing, 72"	foot	16
Clear Protective Coating for Concrete	sq ft	2,380
Concrete Box Culverts	cu yd	155
Concrete Formliner	sq ft	500
Temporary Abutment Bracing	1 sum	1

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BOX CULVERT DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH REQUIREMENTS OF THE CURRENT "AREMA MANUAL FOR RAILWAY ENGINEERING."



Robert L. Peters, P.E., S.E.
NO. 081-04697
EXP. DATE 11/30/06

DESIGN STRESSES

f'c = 4,000 psi
fy = 60,000 psi (REINFORCEMENT)

DESIGN LOADING

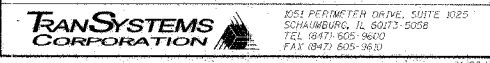
COOPER E-80

DESIGN SPECIFICATIONS

AREMA 2004 "MANUAL FOR RAILWAY ENGINEERING"

CULVERT GENERAL PLAN AND ELEVATION

PEDESTRIAN UNDERPASS CULVERT UNDER THE UNION PACIFIC RAILROAD COOK COUNTY M.P. 22.05 - HARVARD SUBDIVISION DOT NO. 176922D



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