

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8009	05-00445-00-BR	SANGAMON	17	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SHEET 1 OF 9 SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A3	Sq. Yd.	60
Filter Fabric	Sq. Yd.	60
Removal of Existing Structures	L. Sum	1
Protective Coat	Sq. Yd.	36
Reinforcement Bars	Pound	56220
Reinforcement Bars, Epoxy Coated	Pound	2450
Concrete Box Culverts	Cu. Yd.	274.4
Bicycle Railing	Foot	140
Name Plates	Each	1
Granular Culvert Backfill	Cu. Yd.	311
Rockfill - Replacement	Ton	472
Parapet Railing	Foot	54

WATERWAY INFORMATION

Drainage Area = 3.31 Sq. Mi. Low Grade Elev. 540.90 Sta. 5+50

Flood Yr.	Freq. Q	C.F.S.	Opening	Sq. Ft. Nat.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	30	2616.4	193.3	255.2	536.21	0.00	0.00	536.21
Base	100	3294.4	218.6	288.7	537.07	1.12	1.12	538.19

Over-topping: Greater than 500 Year

Max Calc	500	3514.5	225.4	297.7	537.30	1.32	1.32	538.62
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Construction Permits: This project has been approved for construction under statewide Permit No. 12, as issued by the Department of Natural Resources/Office of Water Resources.

DESIGN SPECIFICATIONS

2002 AASHTO "Standard Specifications for Highway Bridges"

DESIGN STRESSES

FIELD UNITS
 f'c = 3,500 psi (Cast-in-place)
 fy = 60,000 psi (reinforcement)

LOADING HS20-44

Allow 50 lbs/sq. ft. for future wearing surface

GENERAL NOTES:

1. Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
3. All construction joints shall be bonded.
4. Exposed edges shall have a 3/4" chamfer.
5. At least 8 ft. of barrel shall be poured monolithically with the wingwalls.
6. Precast culvert alternate is not allowed.
7. For details and quantity of sidewalks. See Roadway Plans.
8. Protective coat shall be applied to the top and inside face of the F shape parapet only.

I certify that to the best of my knowledge, information and belief, that this bridge 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 "AASHTO Standard Specifications for Highway Bridges."

Gerald B. Rotherham
 Gerald B. Rotherham, P.E., S.E.
 Illinois Licensed Structural Engineer
 License Number: 081-005673
 Expiration Date: November 30, 2006



Bench Mark #1: Chiseled "□" on Northwest corner of North Abut. Amos Avenue bridge over drainage ditch. Elev. 541.45

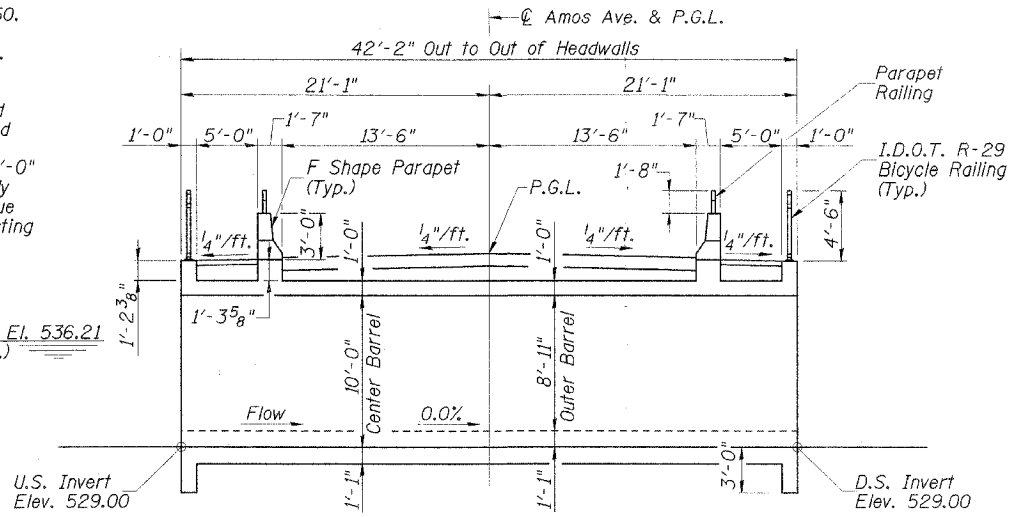
Bench Mark #2: Mueller bolt fire hydrant East side Amos Avenue Broughton entrance. Elev. 546.83

Existing Structure:

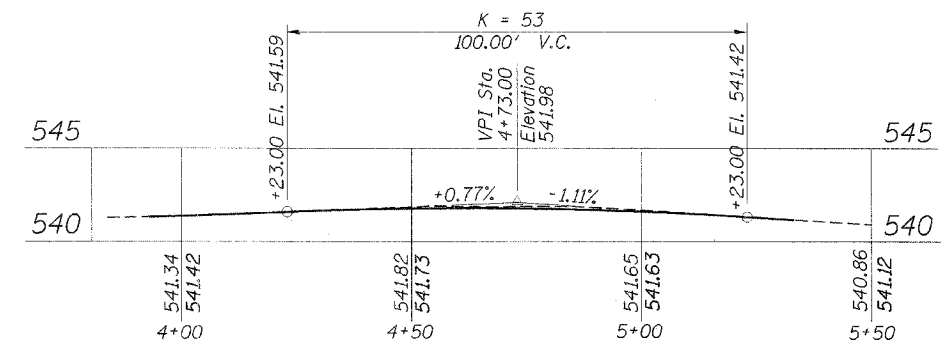
No. 084-3218 - Built as Project 14 in 1950. Superstructure consists of a R.C. deck supported on single span WF 21x68 beams. The superstructure is supported on closed abutments composed of timber piles and metal planking. The abutment walls are tied back to a dead man. The wingwalls are tied together by 1" dia. rods. The structure is 34'-6" back to back of abutments and 24'-0" out-to-out. The wingwalls are approximately 15'-6" in length. Traffic along Amos Avenue shall be detoured during construction. Existing structure to be removed.

No Salvage

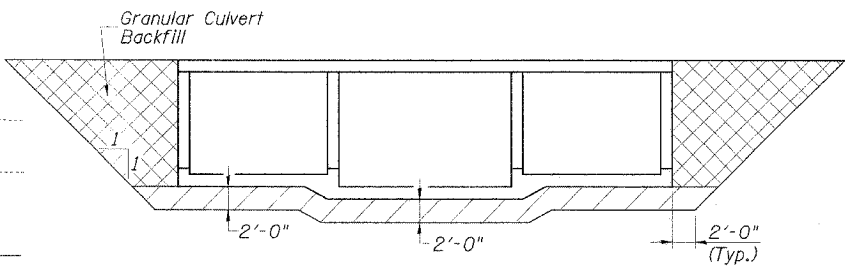
D.H.W. El. 537.07 (100 Yr.)
 D.H.W. El. 536.21 (30 Yr.)



LONGITUDINAL SECTION
 (Looking South)

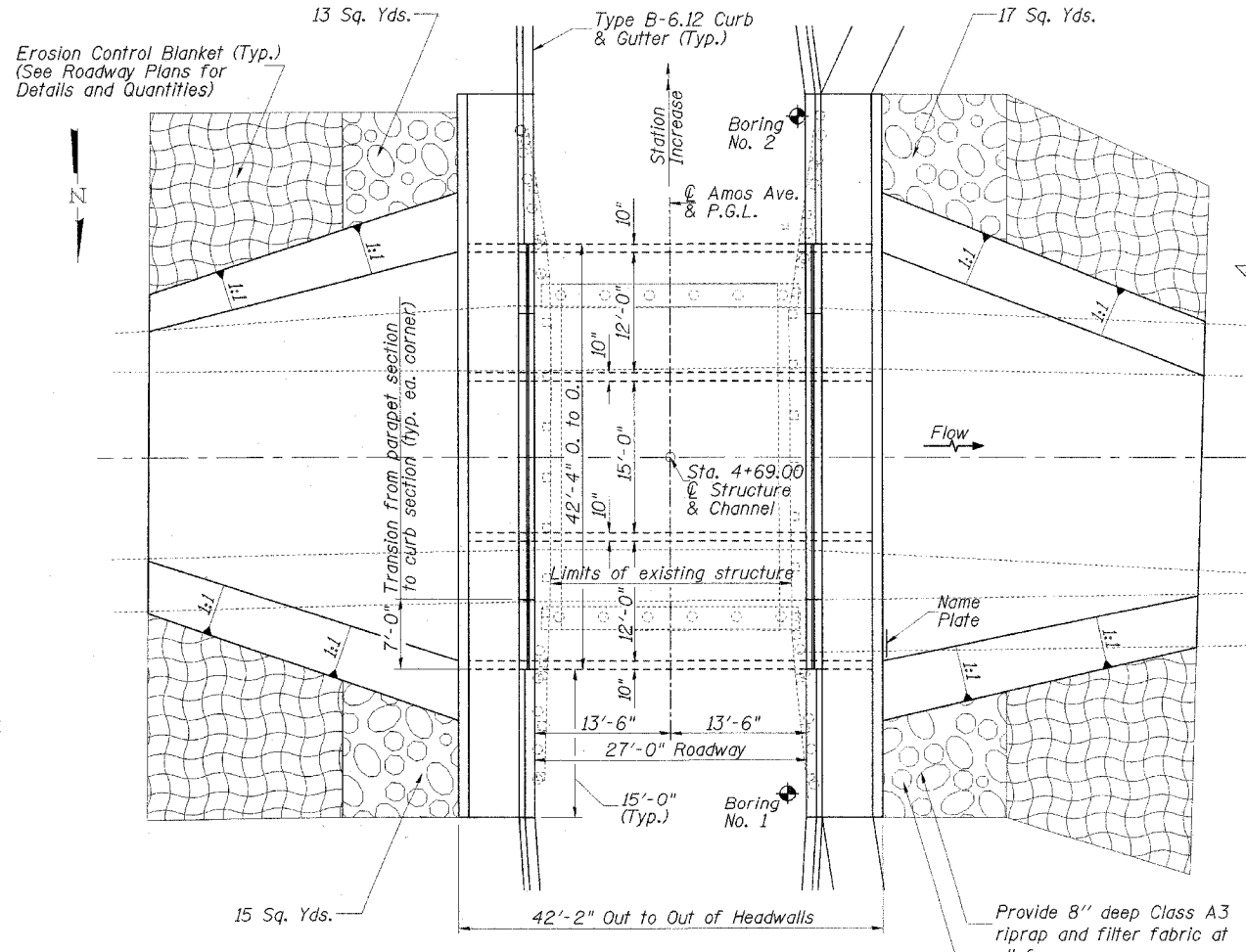
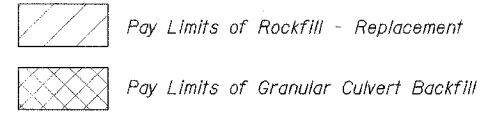


ROADWAY PROFILE
 (Along Centerline of Roadway)



SECTION THRU BARREL

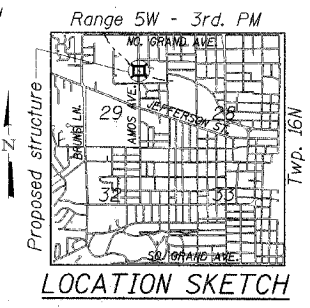
Note: Remove unsuitable soil 2'-0" below bottom of culvert and 2'-0" outside the footprint of box. Replace with Rockfill - Replacement.



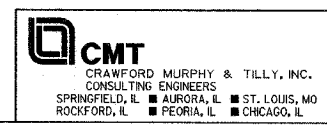
PLAN

BUILT 2006 BY
 CITY OF SPRINGFIELD
 SEC. 05-00445-00-BR
 F.A.U. RT. 8009 STA. 4+69.00
 LOADING HS20
 STR. NO. 084-8009

NAME PLATE
 See Std. 515001



LOCATION SKETCH



REVISIONS	
NAME	DATE

CITY OF SPRINGFIELD, ILLINOIS
GENERAL PLAN & ELEVATION
 FAU 8009-AMOS AVE. OVER DRAINAGE DITCH
 SECTION 05-00445-00-BR
 SANGAMON COUNTY
 STATION 4+69.00 S.N. 084-8009
 SCALE: NONE DRAWN BY: GLD
 DATE: 5/26/06 CHECKED BY: GBR