

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

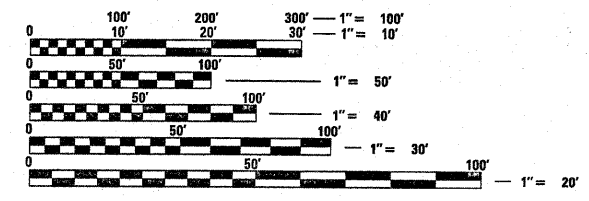
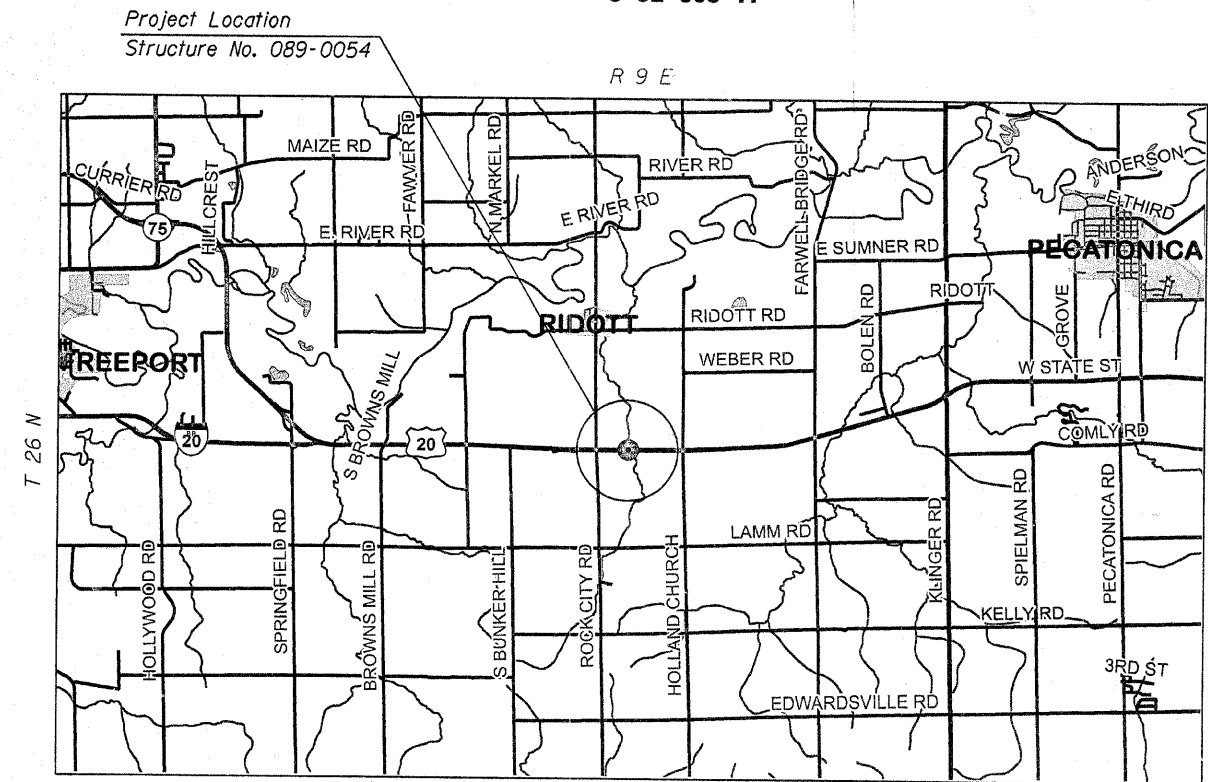
FAP ROUTE 301 (US 20)
 SECTION (18BR-1)M

BRIDGE APPROACH RAISING
 STEPHENSON COUNTY

C-92-063-11

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(18BR-1)M	STEPHENSON	13	1
		ILLINOIS	CONTRACT NO. 64G83	

FOR INDEX OF SHEETS, SEE SHEET NO. 2



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811

BRIDGE MAINTENANCE ENGINEER: Mahmoud Etemadi 815/284-5393
 PLAN TECHNICIAN: Dan Link 815/284-5416

CONTRACT NO. 64G83

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED December 8 2010
 George F. Ryan
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 4 2011
 Scott E. Stitt P.E.
 acting ENGINEER OF DESIGN AND ENVIRONMENT

February 4 2011
 Christine M. Rowland
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES

PAY ITEM #	DESCRIPTION	UNIT	100% STATE
			QUANTITY
67100100	MOBILIZATION	L SUM	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1
X0326223	FOAM, EXPANDING POLYURETHANE, HIGH-DENSITY	POUND	8,000

GENERAL NOTES

The final top 100 mm (four inches) of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 2A shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1. Class 2A shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches. This work will be included in the contract unit price per Lump Sum for MOBILIZATION.

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the MOBILIZATION.

INDEX OF SHEETS

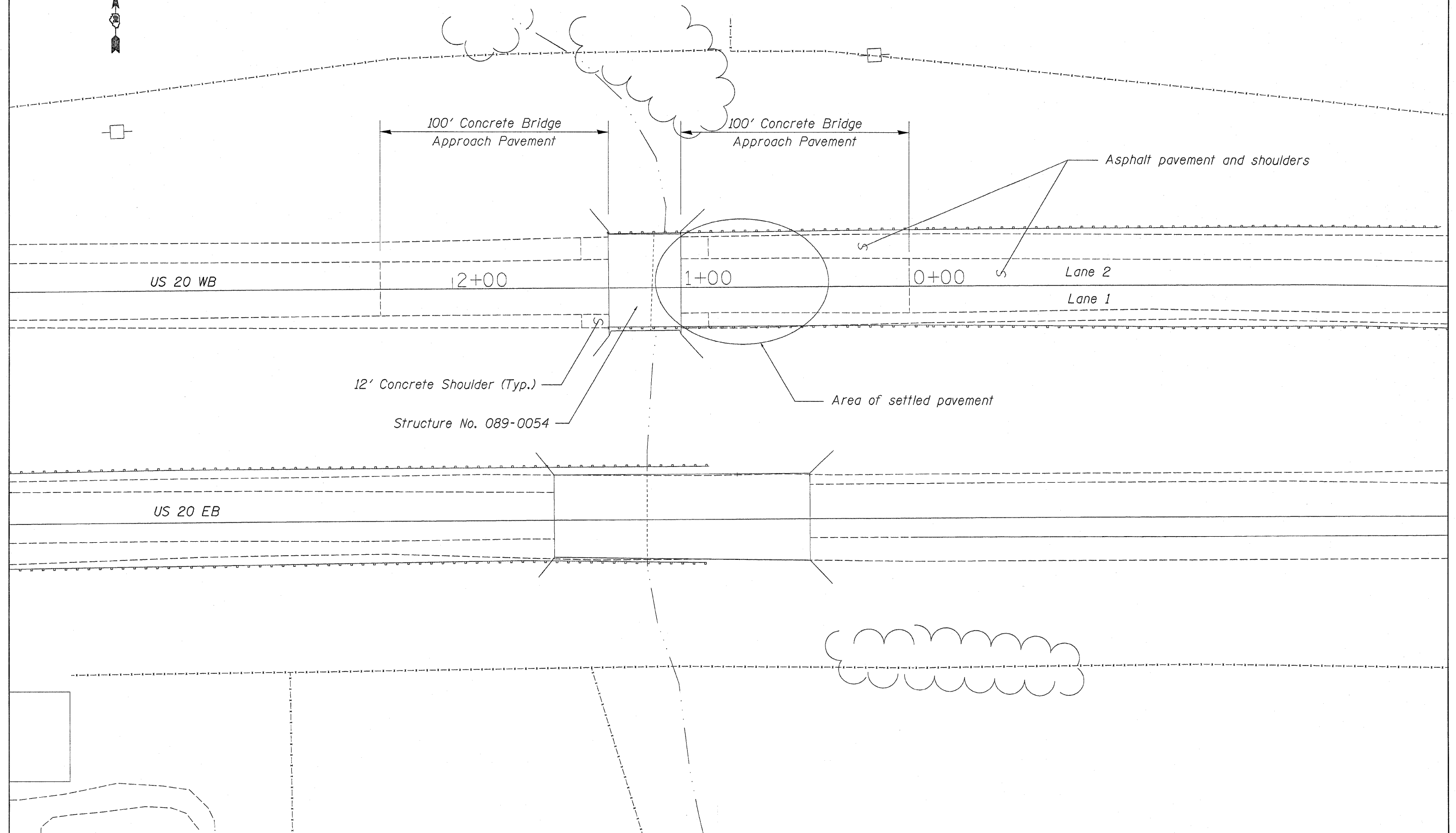
1. Cover Sheet
2. Summary of Quantities, Index of Sheets, General Notes, Standards
3. Existing Plan and Profile
4. General Plan
- 5.-9. Roadway Profiles
10. Typical Sections
11. Bridge Plan and Elevation
12. Bridge Approach Pavement Standard
13. Bridge Approach Shoulder Pavement Standard

STANDARDS

- 701101-02 Off-Road Operations, Multilane, 15' (4.5 m) to 24' (600 mm) From Pavement Edge
- 701400-05 Approach to Lane Closure, Freeway/Expressway
- 701406-06 Lane Closure, Freeway/Expressway, Day Operations Only
- 701901-01 Traffic Control Devices
- 720011-01 Metal Posts for Signs, Markers and Delineators
- 728001-01 Telescoping Steel Sign Support
- 729001-01 Applications of Types A and B Metal Posts (For Signs & Markers)

FILE NAME = C:\BR\CADD plans\Stephenson County\0890254\PLANeng.dgn	USER NAME = linkd	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES, STANDARDS, GENERAL NOTES, INDEX OF SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - ---	REVISED - ---			301	(18BR-1)M	STEPHENSON	13	2	
		CHECKED - ---	REVISED - ---			CONTRACT NO. 64683					
		DATE - ---	REVISED - ---			ILLINOIS FED. AID PROJECT					
PLOT SCALE = 50.0000' / IN.				SCALE: _____		SHEET NO. _____ OF _____ SHEETS		STA. _____ TO STA. _____			
PLOT DATE = Wed Dec 08 09:02:03 2010											

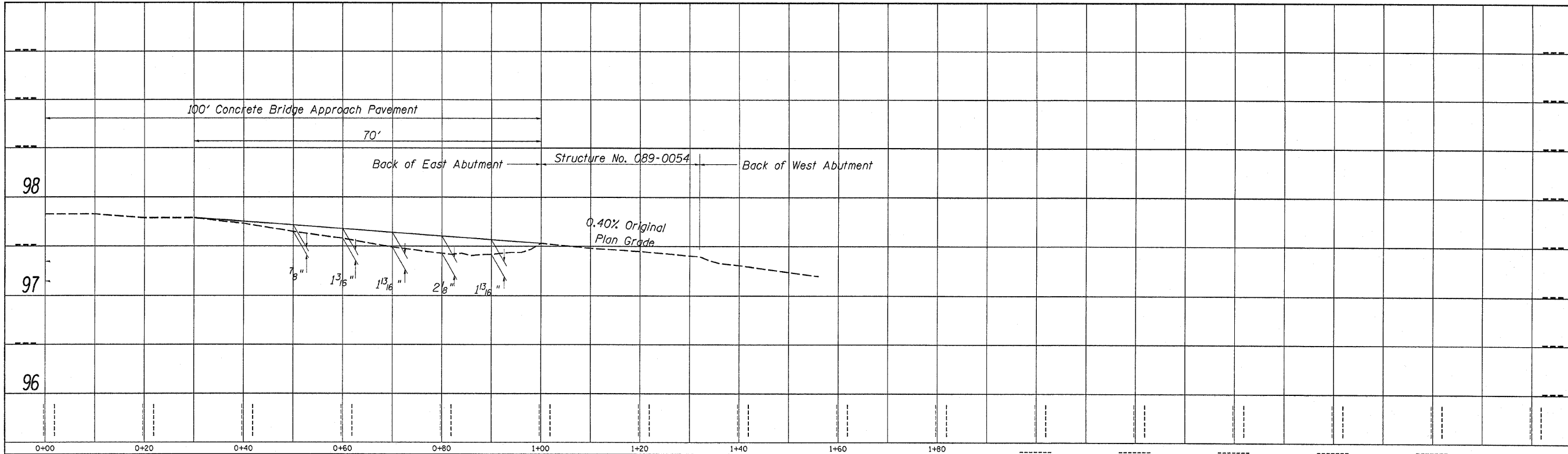
GENERAL PLAN



FILE NAME = D:\BR\CADD plans\Stephenson County\2090054\PLANeng.dgn	USER NAME = linkdj	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	General Plan			F.A.P. RTE. 301	SECTION (18BR-1JM)	COUNTY Stephenson	TOTAL SHEETS 13	SHEET NO. 4
	PLOT SCALE = 20.0000' / IN.	CHECKED - ---	REVISED - ---		SCALE: _____	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 64G83				
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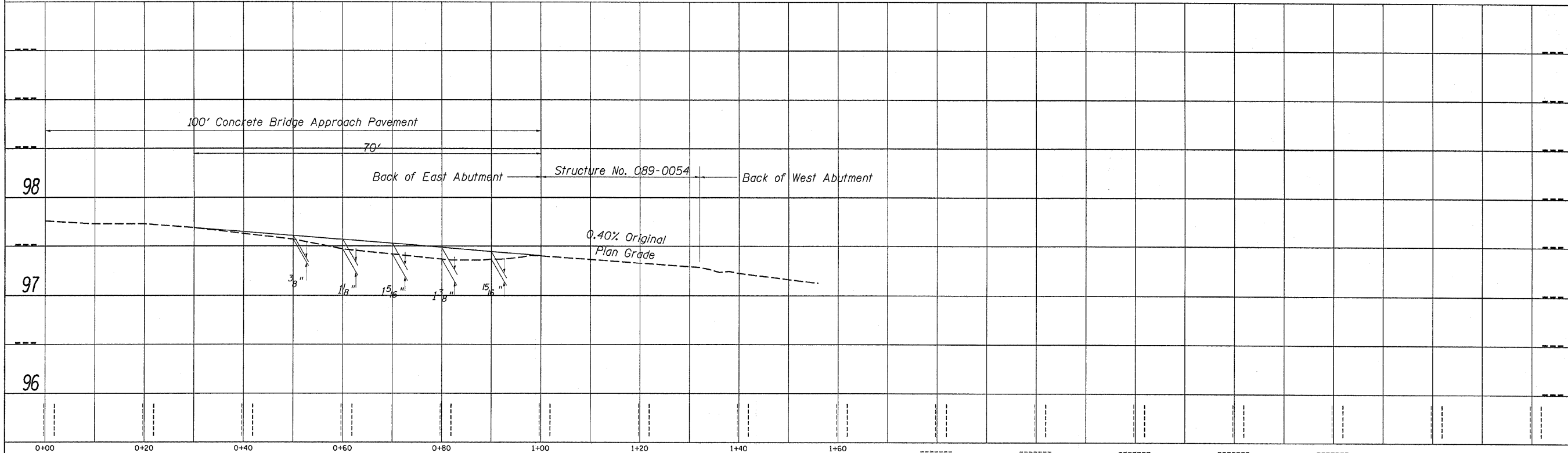
US 20 Westbound Centerline

DATE	
BY	
SUBMITTED	
PLANNED	
NOTED	
NO.	



Center of Lane 1

DATE	
BY	
SUBMITTED	
PLANNED	
NOTED	
NO.	

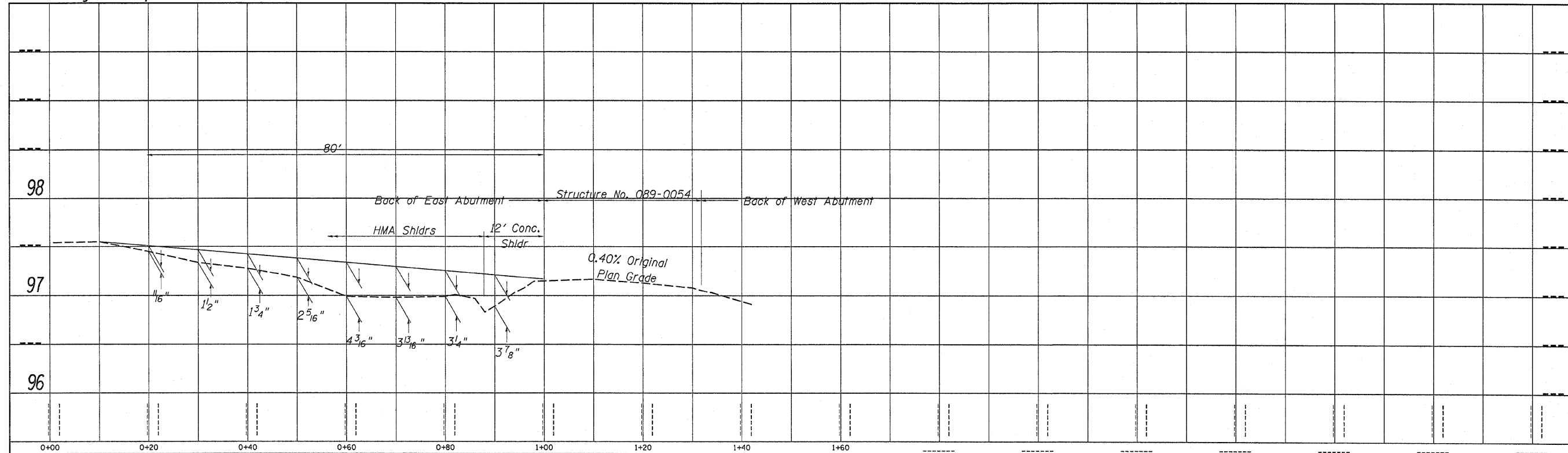


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Q:\BR\CADD plans\Stephenson County\889020\4\PLANeng.dgn	PLOT SCALE = 53.0000' / IN.	DRAWN -	REVISED -			301	(188R-1M)	Stephenson	13	5
PLOT DATE = Wed Dec 08 09:00:50 2010	DATE -	CHECKED -	REVISED -			CONTRACT NO. 64G83				
						ILLINOIS FED. AID PROJECT				
SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____										

Outside edge of Asphalt shoulder (Lane 1)

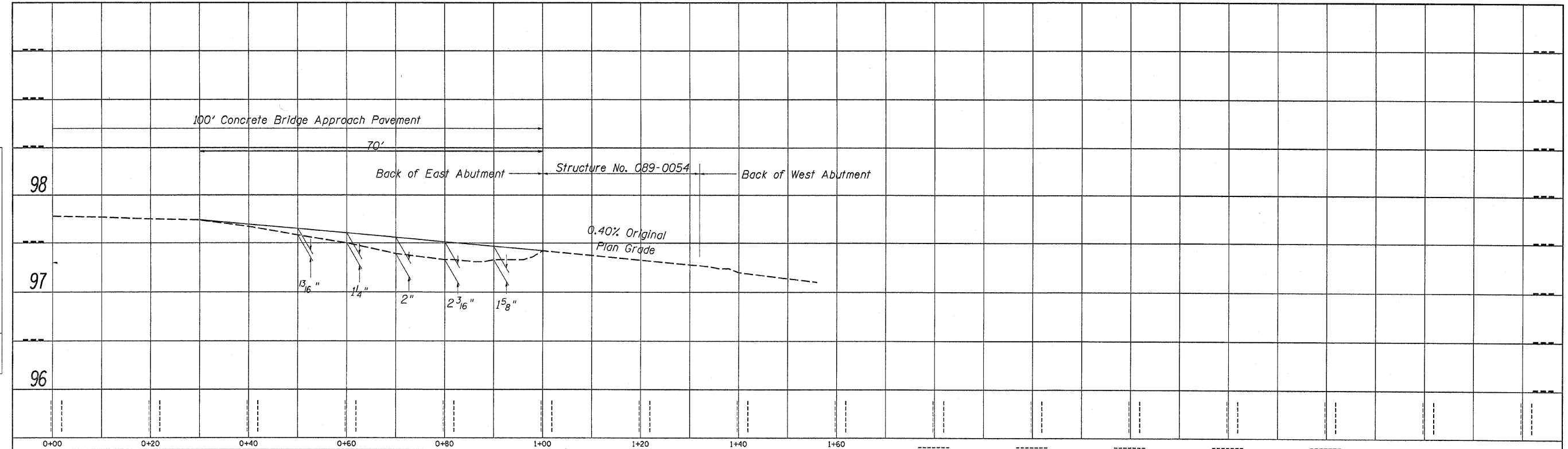
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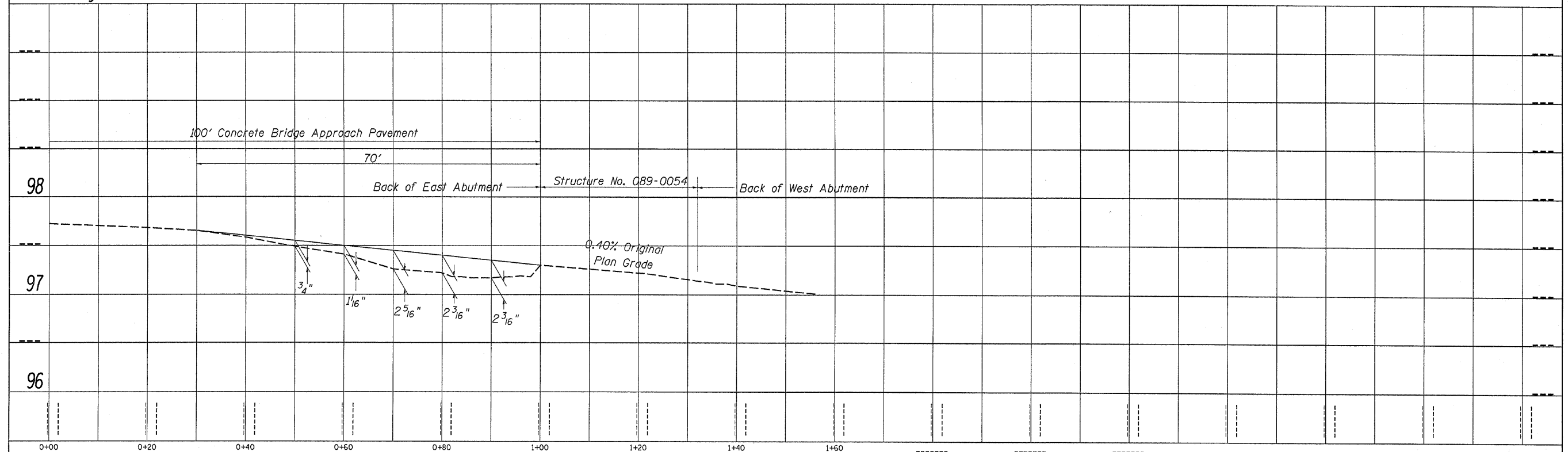
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D:\BR\CADD\plans\Stephenson County\089\089	A\PLAN\ang.dgn	DRAWN -	REVISIONS -			301	(188R-1M)	Stephenson	13	7
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PLOT DATE = Wed Dec 08 09:02:39 2010		DATE -	REVISIONS -			ILLINOIS FED. AID PROJECT				
SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____										

Center of Lane 2



DATE	
BY	
SUBMITTED	
PLOTTED	
DESIGNED	
CHECKED	
BY	
DATE	
NO.	
FILE NAME	

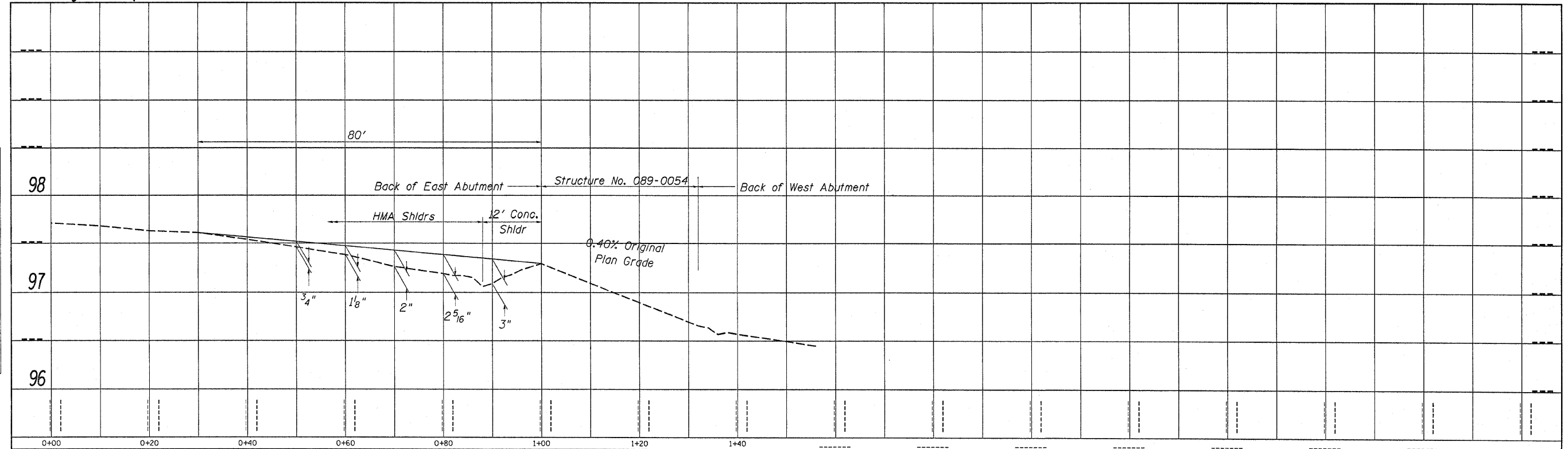
Outside Edge of Concrete Lane (Lane 1)



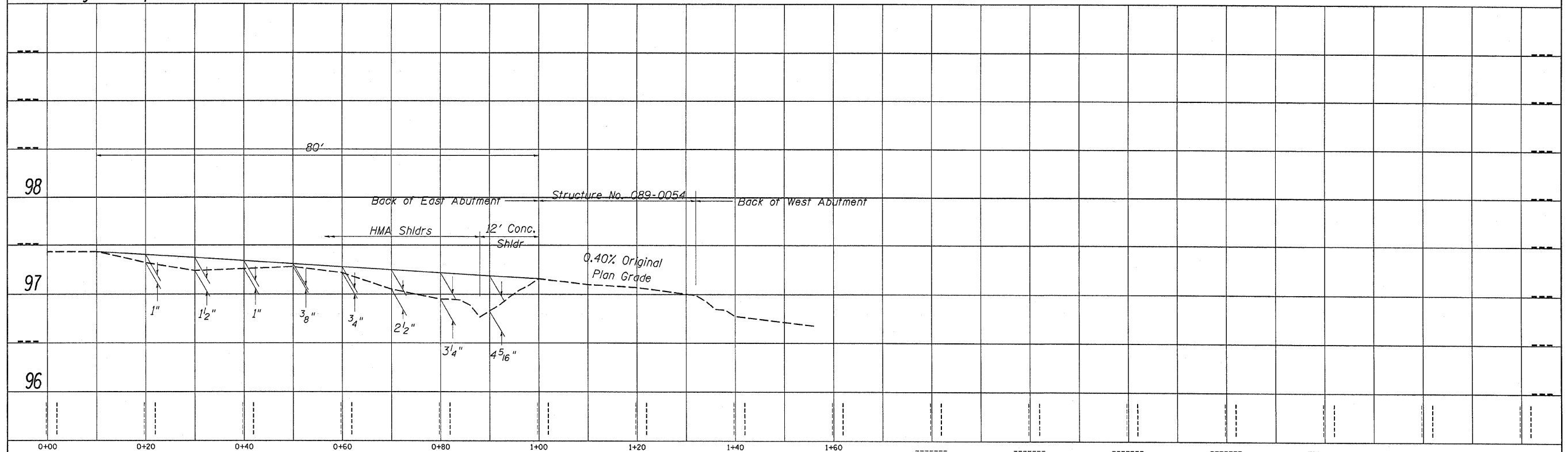
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PLOT DATE = Wed Dec 08 09:00:33 2010		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

Inside Edge of Asphalt Shoulder (Lane 2)



Outside edge of Asphalt shoulder (Lane 2)



PLAN

DATE	BY
APPROVED	CHECKED
PLOTTED	STRUCTURE
NOTE BOOK	NO.
DATE	FILE NAME

PROFILE

DATE	BY
APPROVED	CHECKED
PLOTTED	STRUCTURE
NOTE BOOK	NO.
DATE	FILE NAME

FILE NAME =	USER NAME = lvnkdj	DESIGNED -	REVISED -
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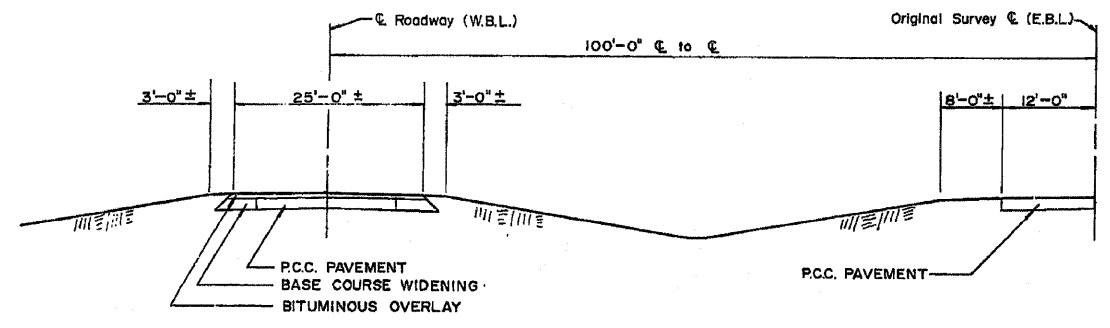
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____

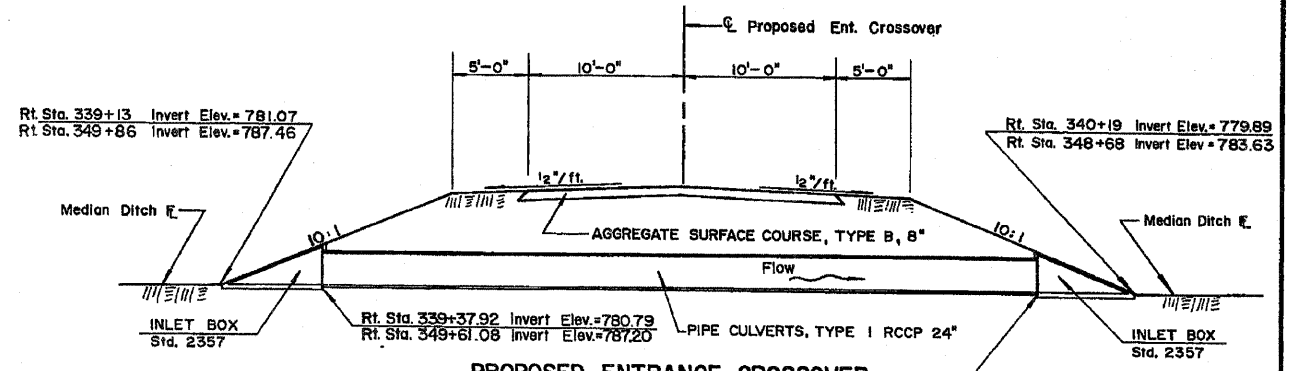
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(188R-1M)	Stephenson	13	9
				CONTRACT NO. 64683
ILLINOIS FED. AID PROJECT				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.401	18BR-1	STEPHENSON	30	5
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		

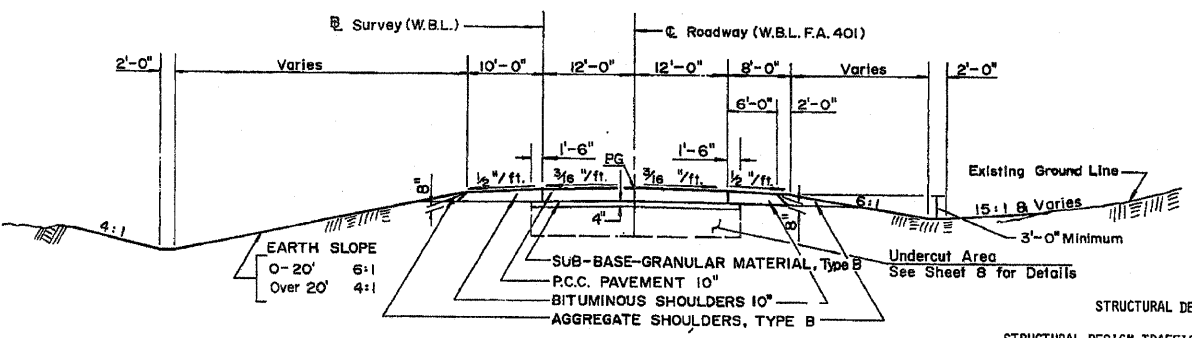
TYPICAL SECTIONS



EXISTING TYPICAL SECTION (FA. 401)

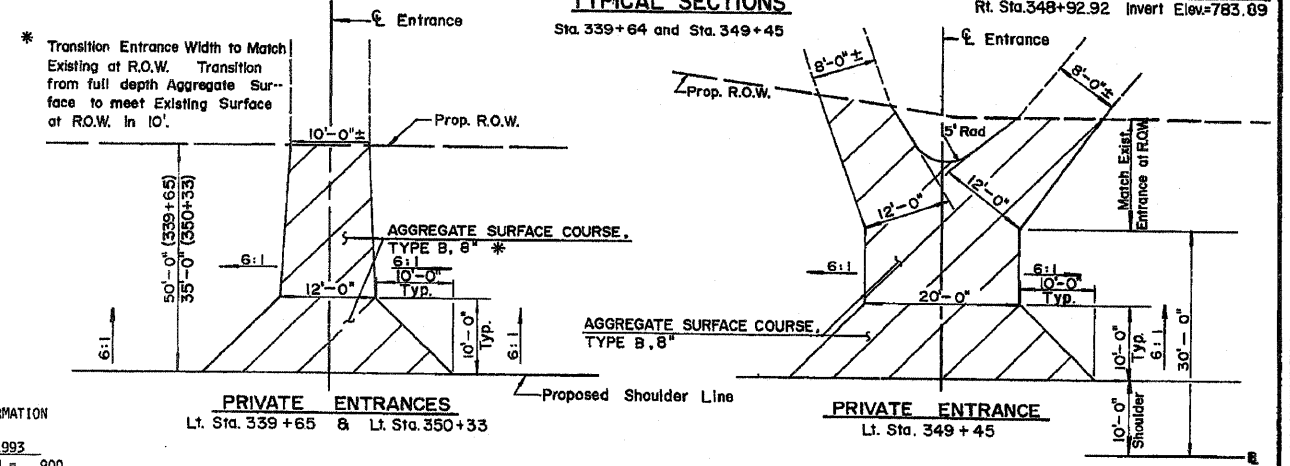


PROPOSED ENTRANCE CROSSOVER TYPICAL SECTIONS

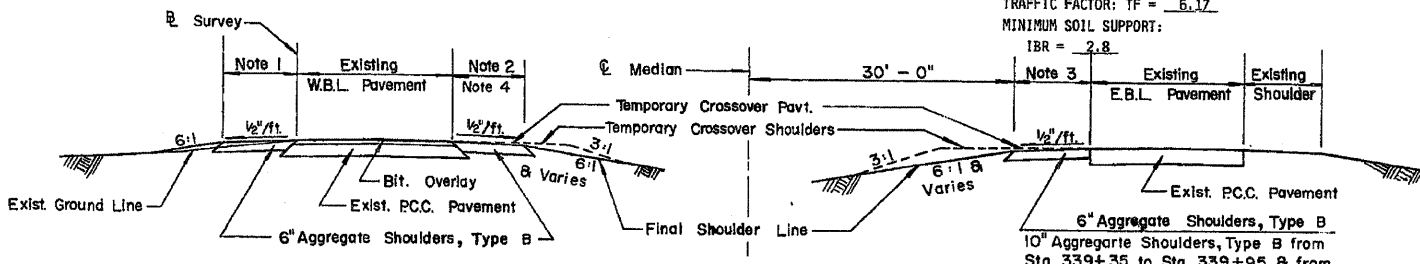


PROPOSED TYPICAL SECTION - W.B.L. (FA. 401)
Sta. 338 + 25.00 to Sta. 351 + 25.00

STRUCTURAL DESIGN INFORMATION
 STRUCTURAL DESIGN TRAFFIC: Year 1993
 PV = 9800 SU = 400 MU = 900
 ROAD/STREET CLASSIFICATION: Class I
 PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:
 P = 32 S = 95 M = 45
 TRAFFIC FACTOR: TF = 6.17
 MINIMUM SOIL SUPPORT:
 IBS = 2.8



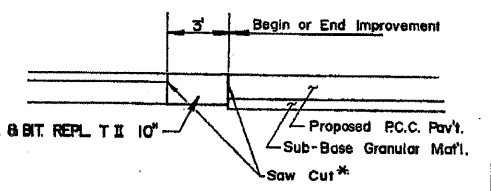
PROPOSED ENTRANCE DETAILS



PROPOSED SHOULDER TYPICAL SECTIONS
To Be Constructed After Temporary Crossover Removal

NOTES

- Bituminous shoulders with a transitional width from 10'-0" to 1'-0" shall be constructed along the outside edge of the West Bound Pavement, after removing the temporary crossover, from Sta. 337+25.00 to Sta. 338+25.00 and from Sta. 351+25.00 to Sta. 352+25.00.
- A 5'-0" aggregate shoulder will be constructed after removing the temporary crossover along the median edge of the West Bound Pavement from Sta. 333+30.00 to Sta. 338+25.00 and from Sta. 351+25.00 to Sta. 355+20.00.
- An 8'-0" aggregate shoulder will be constructed after removing the temporary crossover along the median edge of the East Bound Pavement from Sta. 338+50.00 to Sta. 342+50.00 and from Sta. 346+50.00 to Sta. 351+50.00.
- Bituminous shoulders with a transition width from 6'-0" to 1'-0" shall be constructed from Sta. 337+85 to Sta. 338+25 and from Sta. 351+25 to Sta. 351+65.



* The saw cut shall be full depth and incidental to the PAV'T. REM. & BIT. REPL. T II 10".

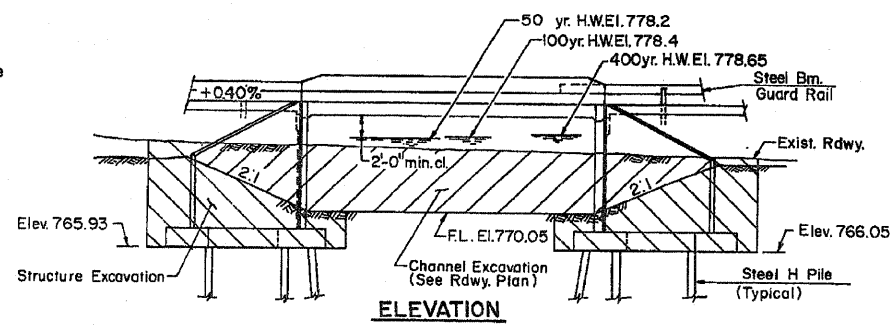
FOR INFORMATION ONLY

TYPICAL SECTIONS AND DETAILS

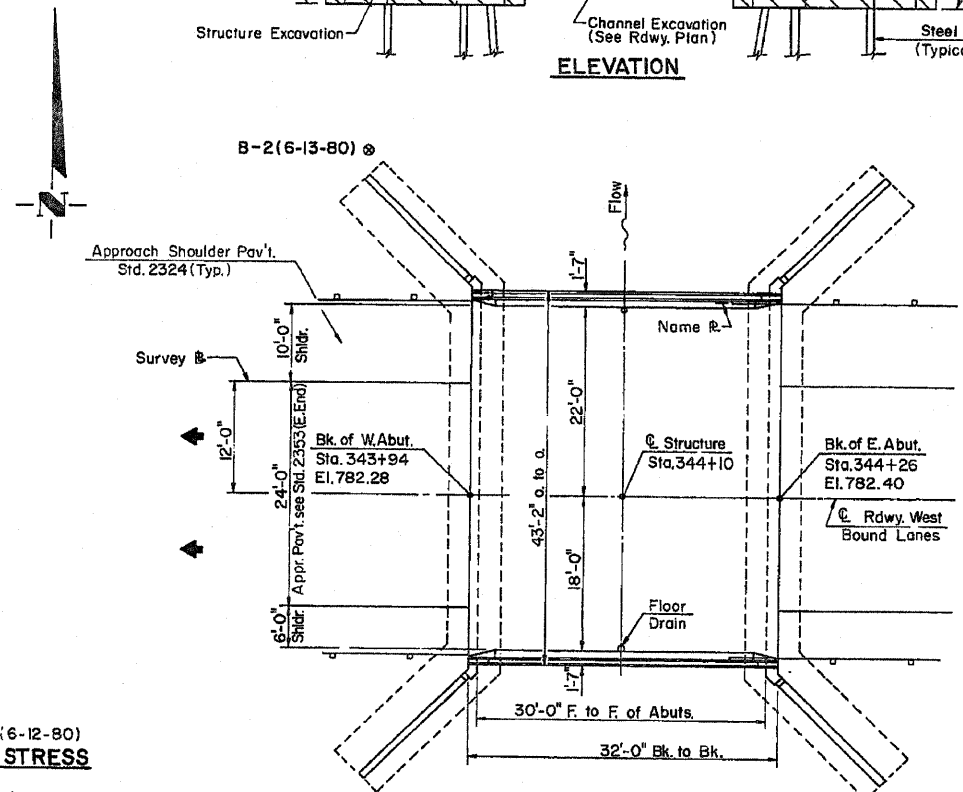
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D:\BR\CADD plans\Stephenson County\2890254\PLA\Neng.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -		SCALE: _____	SHEET NO. ____ OF ____ SHEETS	STA. _____ TO STA. _____	ILLINOIS FED. AID PROJECT		CONTRACT NO. 64G83	
	PLOT DATE = Wed Dec 28 09:00:00 2010	CHECKED -	REVISED -								
		DATE -	REVISED -								

B.M. No. 2 - Chiseled "D" on the N.W. Wingwall of East Bound Lane Bridge, Elev. 782.62.
Existing Structure: R.C. deck slab with Closed concrete abutments, at Sta. 343+69, one span at 20'-0", Rdwy. width = 30'-0". To be removed. Concrete shall be removed to Elev. 768.0. No salvage.
 Traffic to be detoured to East Bound Lanes of F.A. Rt. 401 during construction.
 Existing Structure Number 089-0012

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 401	18 BR-1	STEPHENSON	30	11
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		
SHEET 1 OF 4				

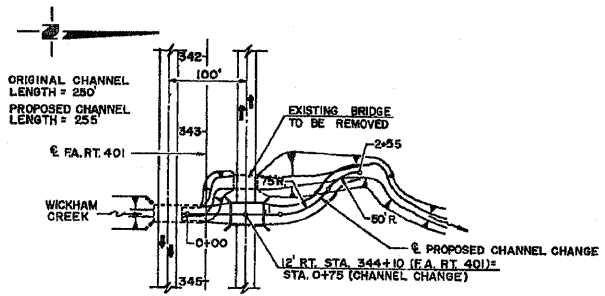


ELEVATION

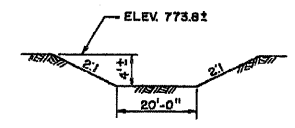


PLAN

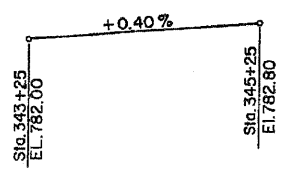
⊙ B-1 (6-12-80)
DESIGN STRESS
 f_c = 3500 psi
 f_y = 60,000 psi
 n = 9.0
 Loading HS 20-44
 Allow 25% d for future W.S.
 Design Specifications: 1977 AASHTO
 Specs. 8, 1978, 1979, 1980 & 1981
 Interim Specs.
 Fatigue life over 2 x 10⁶ Cycles



PLAN CHANNEL CHANGE



PROPOSED CHANNEL SECTION



PROFILE GRADE

STATION 344+10
 BUILT 1983 BY
 STATE OF ILLINOIS
 F.A. RT. 401 SEC. 18 BR-1
 PROJ. MABR-F-401-2101
 LOADING HS 20
 STR. NO. #

NAME PLATE
 (Standard 2113)

* Structure number to be provided by the District.



LOCATION SKETCH

GENERAL NOTES

- See Proposal for Boring Data.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.
- Backfill shall be placed behind the abutment after the superstructure has been poured and the falsework removed. See Article 502.11 of the Std. Specifications.
- The back face of Closed Abutments & Wing Walls shall be waterproofed according to Article 503.11 of the Standard Specifications.
- The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.
- The contractor shall drive one (1) Steel (HP 8x36) test pile in a permanent location at the West Abut. as directed by the Engineer before ordering the remainder of piles.
- Bars indicated thus 3l x 3-#5 etc., indicates 3l lines with 3 length per line.
- See Special Provisions for location of Permanent Bench Mark.

TOTAL BILL OF MATERIALS

Item	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yds.		270	270
Protective Coat	Sq. Yds.	168		168
Class X Concrete	Cu. Yds.	85.3	151.6	236.9
Reinforcement Bars	Lbs.	10,750	12,880	23,630
Reinforcement Bars (Epoxy Coated)	Lbs.	2830		2830
Name Plates	Each			1
Steel Piles (HP 8x36)	Lin. Ft.		705	705
Test Piles, Steel (HP 8x36)	Each			1
Permanent Bench Marks (Type I)	Each			1

APPROVED

PROJ MABR-F-401-2(0)
 F.A. RT. 401 OVER WICKHAM CREEK
 GENERAL PLAN & ELEVATION
 F.A. RT. 401 SEC. 18 BR-1
 STEPHENSON COUNTY
 STA. 344+10

MTA, INCORPORATED

DESIGNED W.H.
 DRAWN R.H.H.
 CHECKED
 DATE 3-3-83 NO. 02002

FOR INFORMATION ONLY

WATERWAY INFORMATION

WEST BOUND LANES

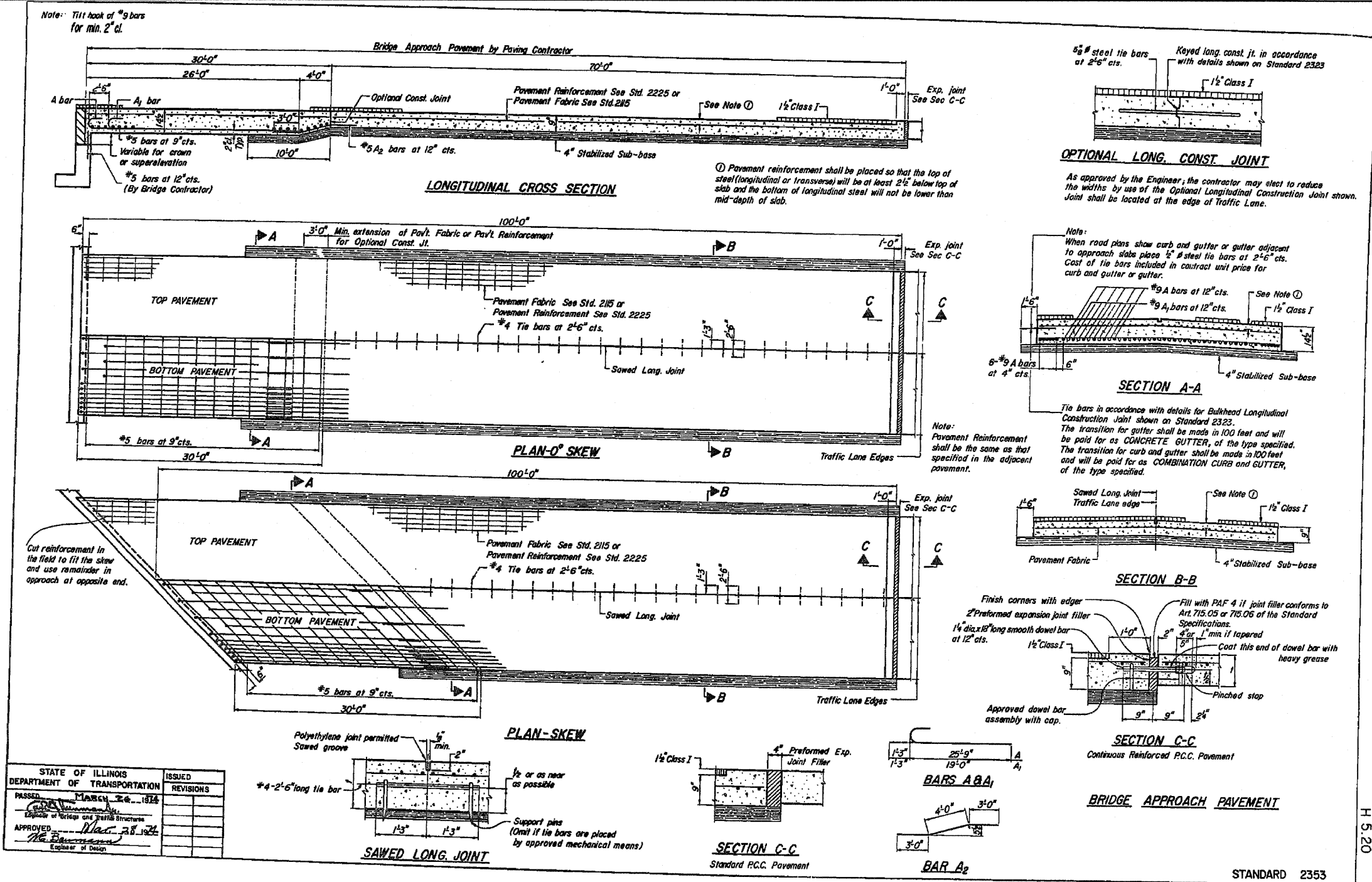
Drainage Area = 2.84 mi. Low Grade Elev.: 780.02 (Prop.), 776.6 (Exist.)

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater EL.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	1086	90	245	778.2'	0.12	0.87	778.32	779.07
Base	100	1253	90	251	778.4'	0.14	1.10	778.54	779.50
Overtopping	400	1585		260	778.65		1.63		780.28
Max. Calc.	500								

EAST BOUND LANES

Drainage Area = 2.84 mi. Low Grade Elev.: 781.90

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater EL.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	1086	165	182	778.5	2.23	2.65	780.73	781.15
Base	100	1253	169	182	778.7	2.87	3.07	781.57	781.77
Overtopping	400								
Max. Calc.	500								



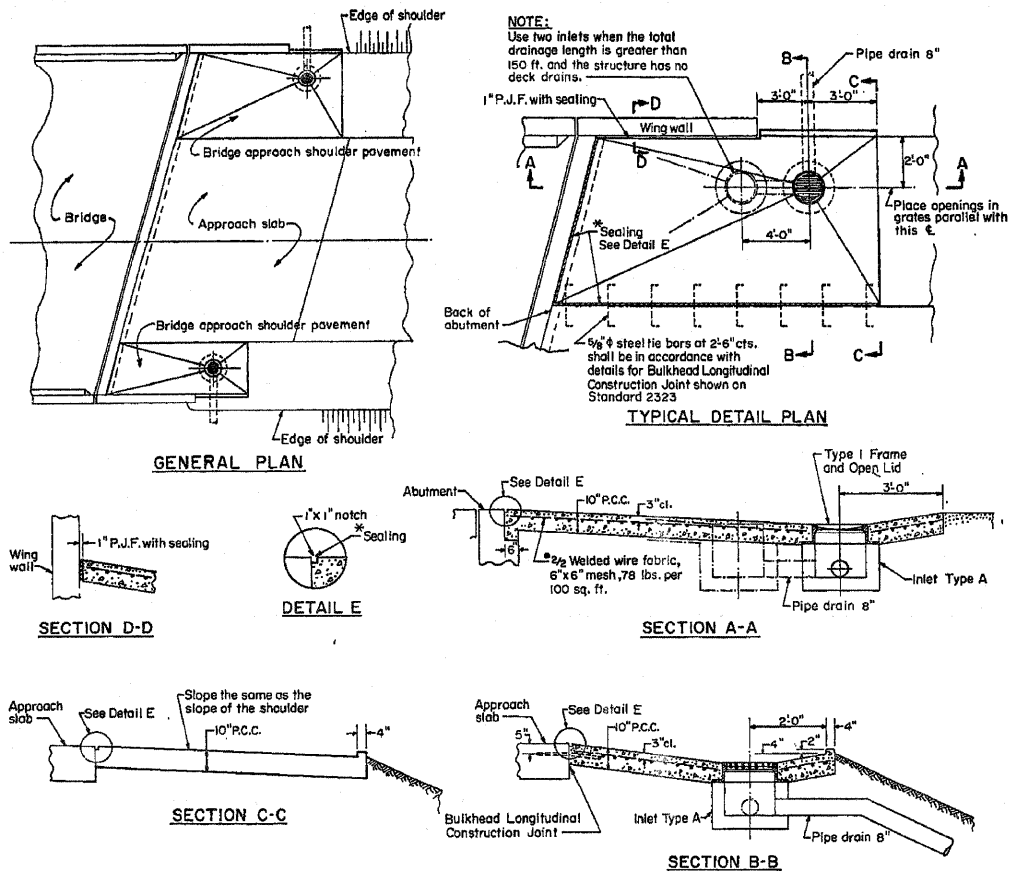
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED REVISIONS
PASSED <i>[Signature]</i> March 26, 1914	
APPROVED <i>[Signature]</i> March 28, 1914	
<i>[Signature]</i> Engineer of Design	

FOR INFORMATION ONLY

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Bridge Approach Pavement Standard	F.A.P. RTE. 301	SECTION (18BR-1)M	COUNTY Stephenson	TOTAL SHEETS 13	SHEET NO. 12		
CONTRACT NO. 64G83	CONTRACT NO. 64G83	PLLOT SCALE = 5/8" = 1' IN.	CHECKED -			SCALE: _____	SHEET NO. _____ OF _____ SHEETS	STA. _____ TO STA. _____	ILLINOIS FED. AID PROJECT			
PLLOT DATE = Wed Dec 08 08:59:47 2010	DATE -	REVISIED -	REVISIED -									

H-1.25 b

**STANDARD DESIGN
BRIDGE APPROACH SHOULDER PAVEMENT**



The material for Pipe Drains 8" shall be either corrugated steel or aluminum alloy pipe.
 Inlets and pipe drains will be paid for in accordance with the Standard Specifications.
 Bridge approach shoulder pavement will be measured in square yards and paid for as P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT which shall include the cost of tie bars, reinforcement, joint fillers, and sealing.

GENERAL NOTES
 * Where indicated, joints shall be sealed with two component, non-staining, gray, sealing compound with polysulfide liquid polymers, gun grade with primers.
 See bridge approach slab plans for location of bridge approach shoulder pavement.
 For placement of drainage elements on existing construction with existing rigid approach pavement, substitute expansion anchor bolts for tie bars. For non-rigid approaches, shoulder pavement will be as shown except omit tie bars and inside edge sealing.
 For bridges with end posts partially or completely on superstructure, locate the center line of 8" drain pipe a minimum of 6 ft. behind the back of abutment measured as an extension of the outside superstructure edge. If end posts are completely on superstructure, use the outer 2"x4" lip for full length of shoulder pavement.

STATE OF ILLINOIS		ISSUED 12-1-69	
DEPARTMENT OF TRANSPORTATION		REVISIONS	
PASSED	Aug. 1 1972	W.F.	12-1-69
APPROVED	Aug. 1 1972	W.F.	3-18-70
		W.F.	8-1-72

STANDARD 2324-2
(Half size)

FOR INFORMATION ONLY

FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISD -
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	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISD -
	PLOT DATE = Wed Dec 08 08:59:41 2010	DATE -	REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bridge Approach Shoulder Pavement Standard

SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(18BR-1M)	Stephenson	13	13
CONTRACT NO. 64G83				
[ILLINOIS] FED. AID PROJECT				