

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 74/280 (I-74I-280)
SECTION (37-1HBR)P
TYPE OF IMPROVEMENT:
SN 037-0003 & SN 037-0004 OVER US 6 & BNRR
HENRY COUNTY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74/280	(37-1HBR)P	HENRY	17	1
ILLINOIS CONTRACT NO.			64K84	

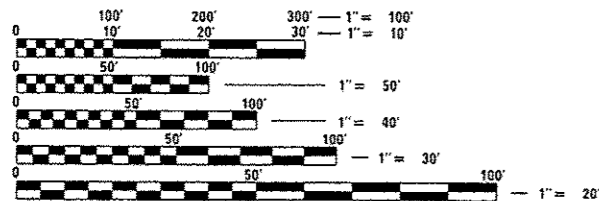
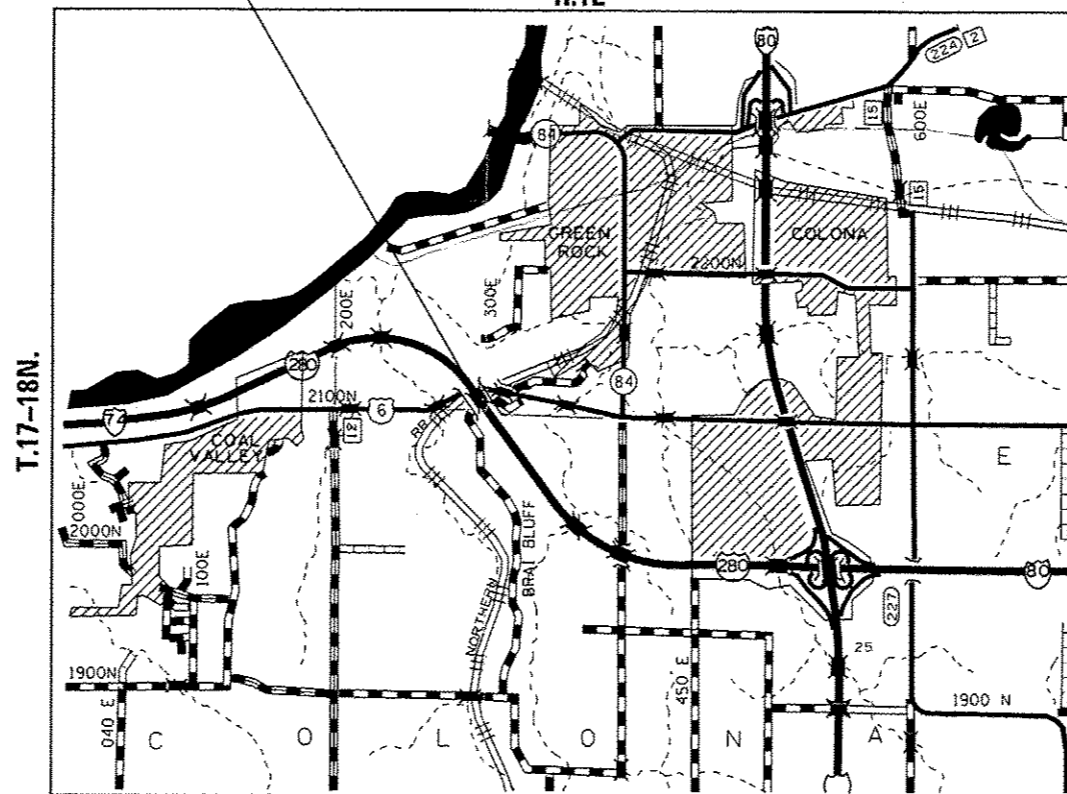
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR STATE STANDARDS, SEE SHEET NO. 2



COLONA TOWNSHIP, SECTION 16

SN 037-0003 &
SN 037-0004

C-92-075-15
R.1E



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

PROJECT ENGINEER: DAVID DOSS (815) 284-5416
PROJECT MANAGER: MAHMOUD ETEMADI (815) 284-5393

CONTRACT NO. 64K84

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Nov 9th 2015*
Paul C. [Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 4 2015
John D. Baranzelli, PE
ENGINEER OF DESIGN AND ENVIRONMENT

Dec 4 2015
Omer Osman, PE
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 STAGING TYPICALS
- 5 - 6 TRAFFIC CONTROL PLAN - STAGE I - FOR SN's 037-0003 & 037-0004
- 7 - 8 TRAFFIC CONTROL PLAN - STAGE II - FOR SN's 037-0003 & 037-0004
- 9 - 17 EXISTING STRUCTURE PLANS FOR SN 037-0003 & SN 037-0004 (FOR INFORMATION ONLY)

STATE STANDARDS

- 701001 - 02 OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15'(4.5m) AWAY
- 701006 - 05 OFF-RD OPERATIONS, 2L, 2W, 15'(4.5m) TO 24"(600mm) FROM PAVEMENT EDGE
- 701101 - 04 OFF ROAD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701201 - 04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS \geq 45 MPH
- 701301 - 04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311 - 03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
- 701321 - 14 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701901 - 04 TRAFFIC CONTROL DEVICES
- 704001 - 07 TEMPORARY CONCRETE BARRIER
- 720011 - 01 METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
- 728001 - 01 TELESCOPING STEEL SIGN SUPPORT
- 729001 - 01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

GENERAL NOTES

All Borrow/Waste/Use sites must be approved by the Department prior to removing any material from the project or initiating any earthmoving activities, including temporary stockpiling outside the limits of construction.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

(Type name & phone number of JULIE companies from attached utility form.)

Electric:

MIDAMERICAN ENERGY
ATTN: NATE TEAGER (563) 333-8706
5955 PENNO ROAD
BETTENDORF, IA 52722

Gas:

MIDAMERICAN ENERGY COMPANY
ATTN: ROD HAWK (309) 793-3760
2811 5TH AVENUE
ROCK ISLAND, IL 61201

Telephone:

GENESEO TELEPHONE CO.
ATTN: ROGER GRANELL (309) 944-8025
111 EAST 1ST STREET
GENESEO, IL 61254

AT&T

ATTN: DAVID CREEN (309) 757-4707
2800 7TH STREET
MOLINE, IL 61265

IDOT is not a member of JULIE. If you are near any overhead lighting, intersection lighting or traffic signals, contact the IDOT Traffic Office at 815284-5469 at least 48 hours prior to work.

A MINIMUM OF 2 AIR MONITORS WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS, SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".

THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 2A SHALL BE USED. THIS WORK WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LUMP SUM FOR CLEANING AND PAINTING STEEL BRIDGE NO. 1.

FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SEEDING OR PLACEMENT OF SOD AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF CLEANING AND PAINTING STEEL BRIDGE NO. 1.

MULCH METHOD II SHALL BE APPLIED OVER ALL SEEDED AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE CLEANING AND PAINTING STEEL BRIDGE NO. 1.

THE SSPC QP1 & QP2 CONTRACT CERTIFICATIONS WILL BE REQUIRED FOR THIS CONTRACT.

FILE NAME : D:\BR\Draw\Henry\64K84 Full Cleaning & Painting SN 037-0003 & 0004\CADD\64K84.dwg	USER NAME : dssedd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES	F.A.I. RTE. 74/280	SECTION (37-1)HR/P	COUNTY HENRY	TOTAL SHEETS 17	SHEET NO. 2
PLOT SCALE : 100.0000 / 1" = 100'	CHECKED -	REVISED -	SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____			ILLINOIS FED. AID PROJECT				
PLOT DATE : Nov-06-2015 09:41:31 AM	DATE -	REVISED -	CONTRACT NO. 64K84							
Default										

URBAN

SUMMARY OF QUANTITIES

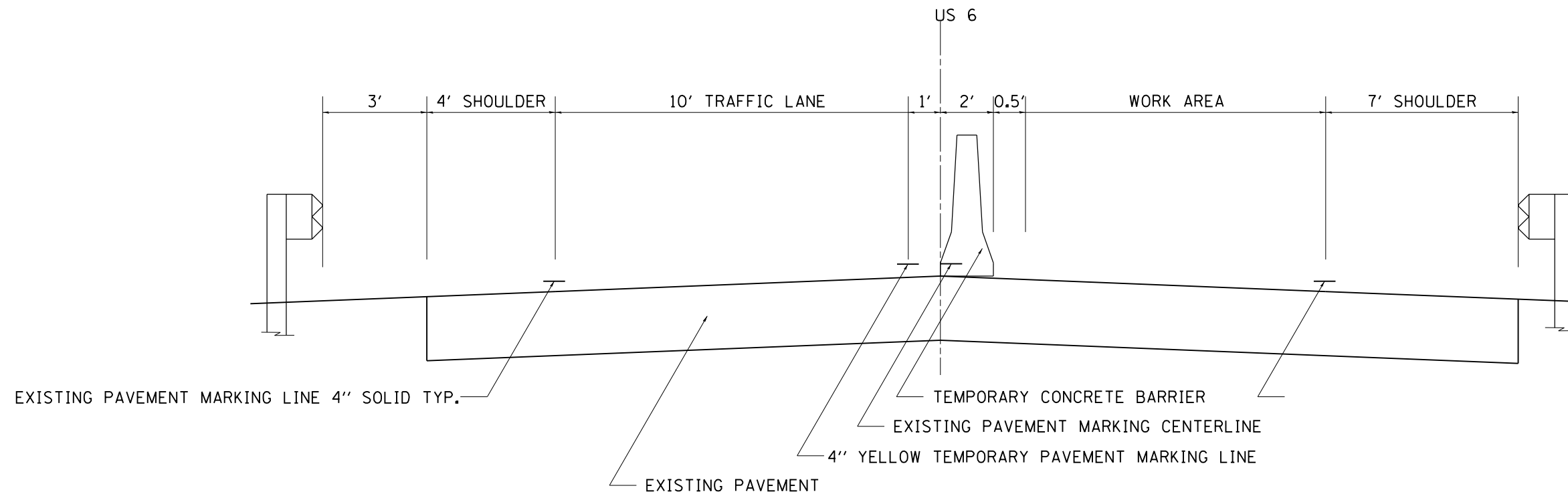
0014
100%
State Funds

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,433
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	22
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	478
70400100	TEMPORARY CONCRETE BARRIER	FOOT	468.79
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	468.79
70600251	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2
70600352	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	457
78300100	PAVEMENT MARKING REMOVAL	SQ FT	152
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NO.1	L SUM	1
X5067502	BRIDGE CLEANING AND PAINTING WARRANTY NO.2	L SUM	1
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO.1	L SUM	1
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO.2	L SUM	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO.1	L SUM	1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO.2	L SUM	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

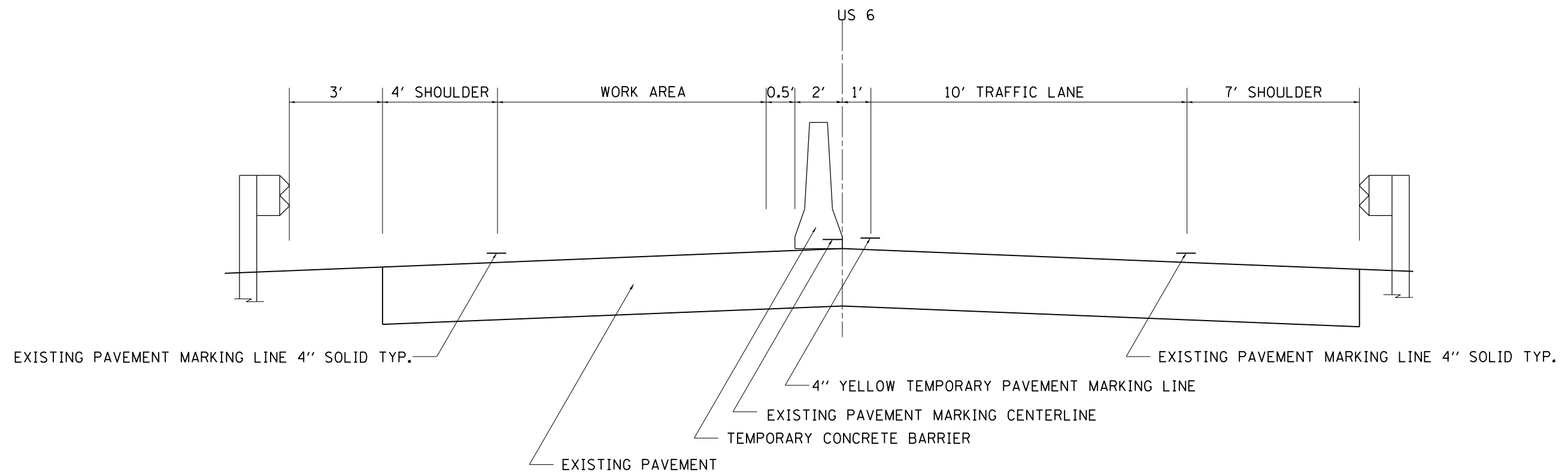
FILE NAME : D:\BR\Draws\Henry\64K84 Full Cleaning & Painting	USER NAME : dssadd Painting SN 037-0803 & 0004\CA00\64K84-11	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.I. RATE: 74/280	SECTION: (37)HBR/P	COUNTY: HENRY	TOTAL SHEETS: 17	SHEET NO.: 3
Default	PLOT SCALE : 100.0000' / 1" / in.	CHECKED - DATE -	REVISED - REVISED -		SCALE: _____	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 64K84 ILLINOIS FED. AID PROJECT				

STAGING TYPICALS

STAGE I - US 6



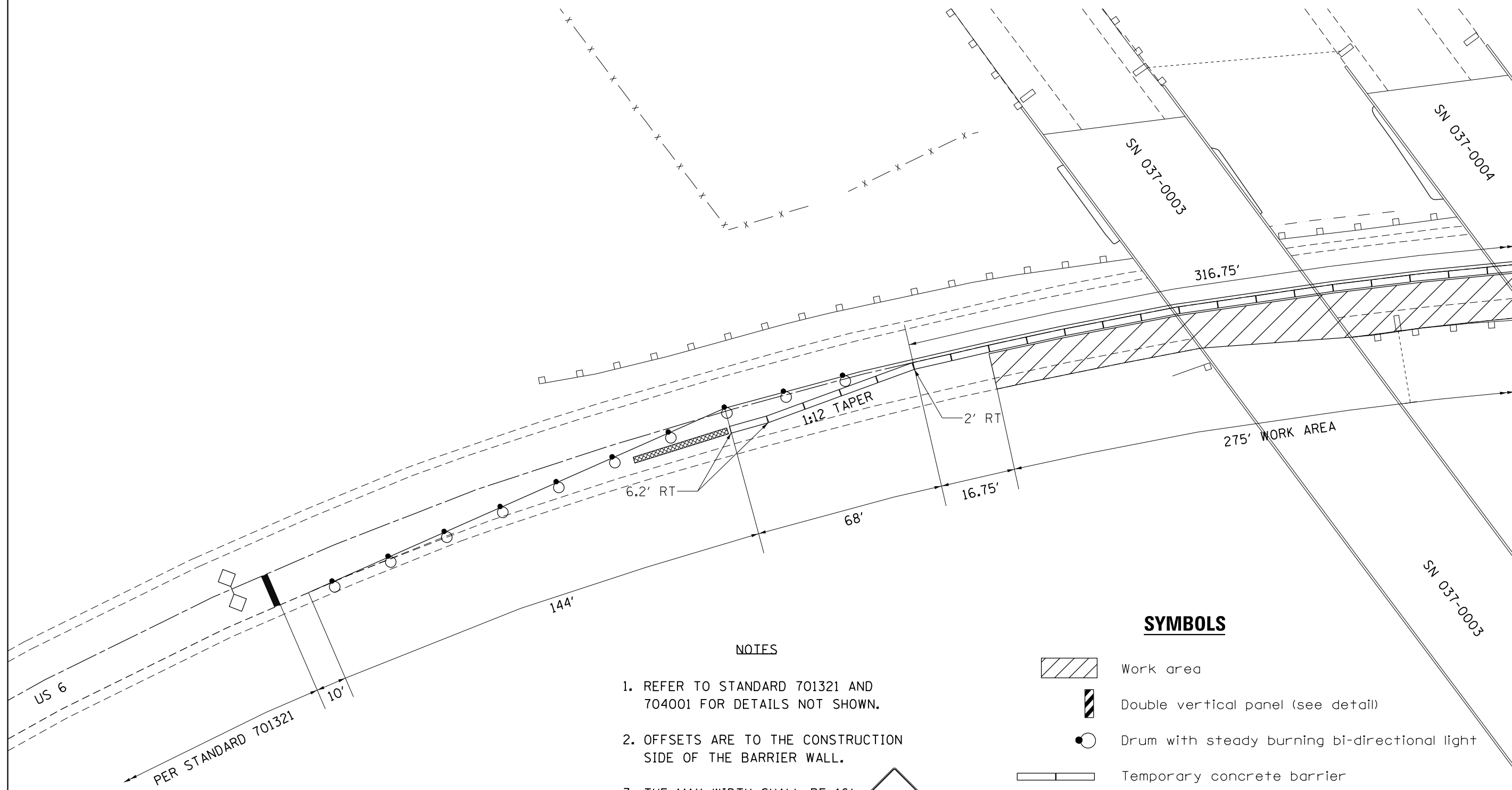
STAGE II - US 6



FILE NAME =	USER NAME = dosddd	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING TYPICALS		F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\Draws\Henry\64K84 Full Cleaning & Painting SN 037-0003 & 0004\CADD\64K84-shd	DRAWN - _____	REVISOR - _____	REVISED - _____		74/280	(371HBR)P	HENRY	13	4		
Default	PLOT SCALE = 100.0000' / 1in.	CHECKED - _____	REVISED - _____		CONTRACT NO. 64K84			ILLINOIS FED. AID PROJECT			
	PLOT DATE = Nov-06-2015 09:41:41 AM	DATE - _____	REVISED - _____		SCALE: _____	SHEET _____	OF _____	SHEETS	STA. _____	TO STA. _____	

TRAFFIC CONTROL PLAN

STAGE I – FOR SN's 037-0003 & 037-0004



NOTES

1. REFER TO STANDARD 701321 AND 704001 FOR DETAILS NOT SHOWN.
2. OFFSETS ARE TO THE CONSTRUCTION SIDE OF THE BARRIER WALL.
3. THE MAX WIDTH SHALL BE 16'.



SYMBOLS

- Work area
- Double vertical panel (see detail)
- Drum with steady burning bi-directional light
- Temporary concrete barrier
- Detector loops
- Impact attenuator

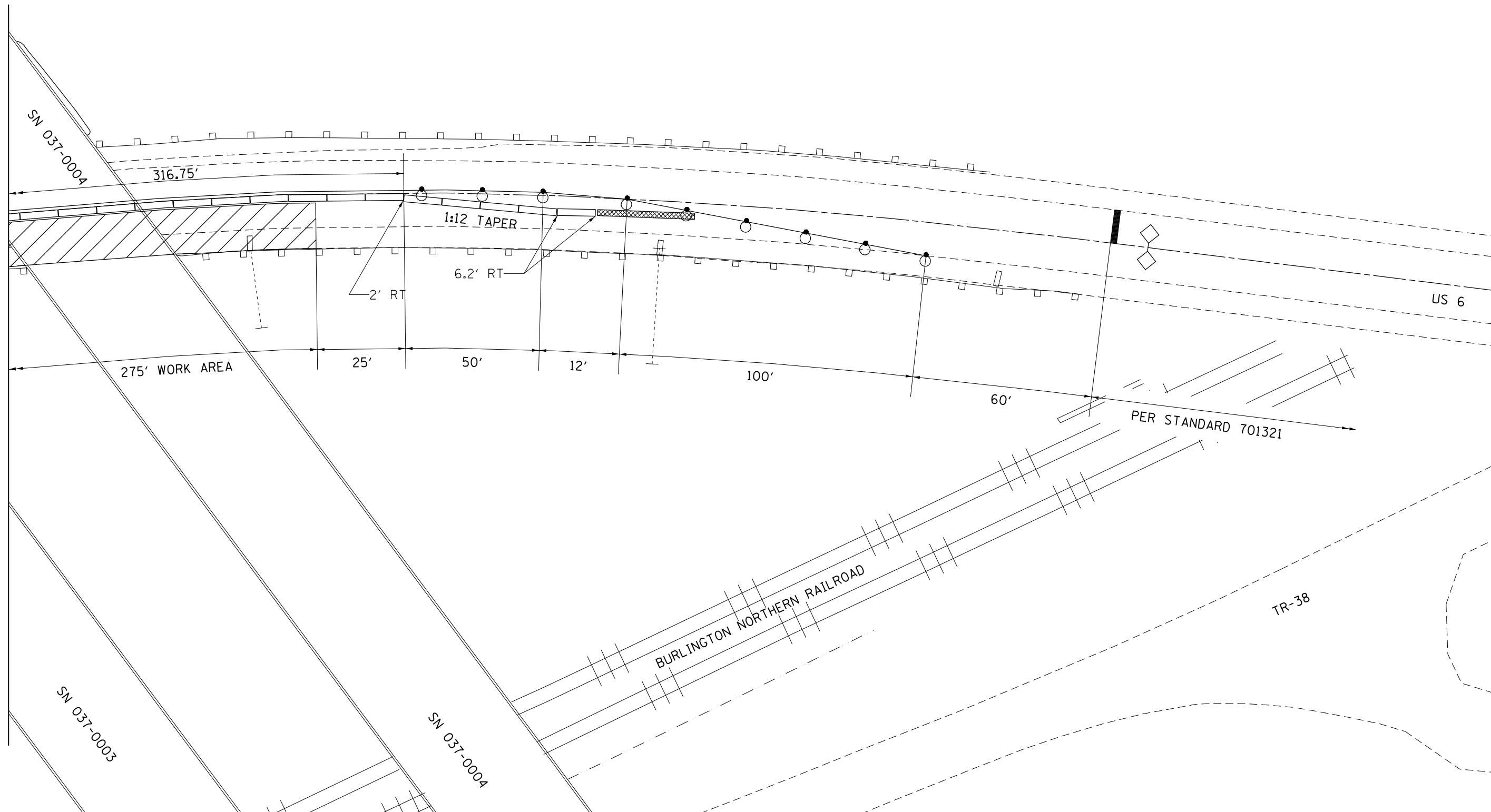
FILE NAME =	USER NAME = dosddd	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL PLAN STAGE I – FOR SN's 037-0003 & 037-0004	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\BR\Draws\Henry\64K84 Full Cleaning & Pointing SN 037-0003 & 0004\CADD\64K84-sh	DRAWN - _____	REVISED - _____	REVISED - _____			74/280	(371HBRP)	HENRY	13	5	
Default	PLOT SCALE = 100.0000' / in.	CHECKED - _____	REVISED - _____			CONTRACT NO. 64K84					
	PLOT DATE = Nov-06-2015 09:41:45 AM	DATE - _____	REVISED - _____			ILLINOIS FED. AID PROJECT					

TRAFFIC CONTROL PLAN

STAGE I – FOR SN's 037-0003 & 037-0004



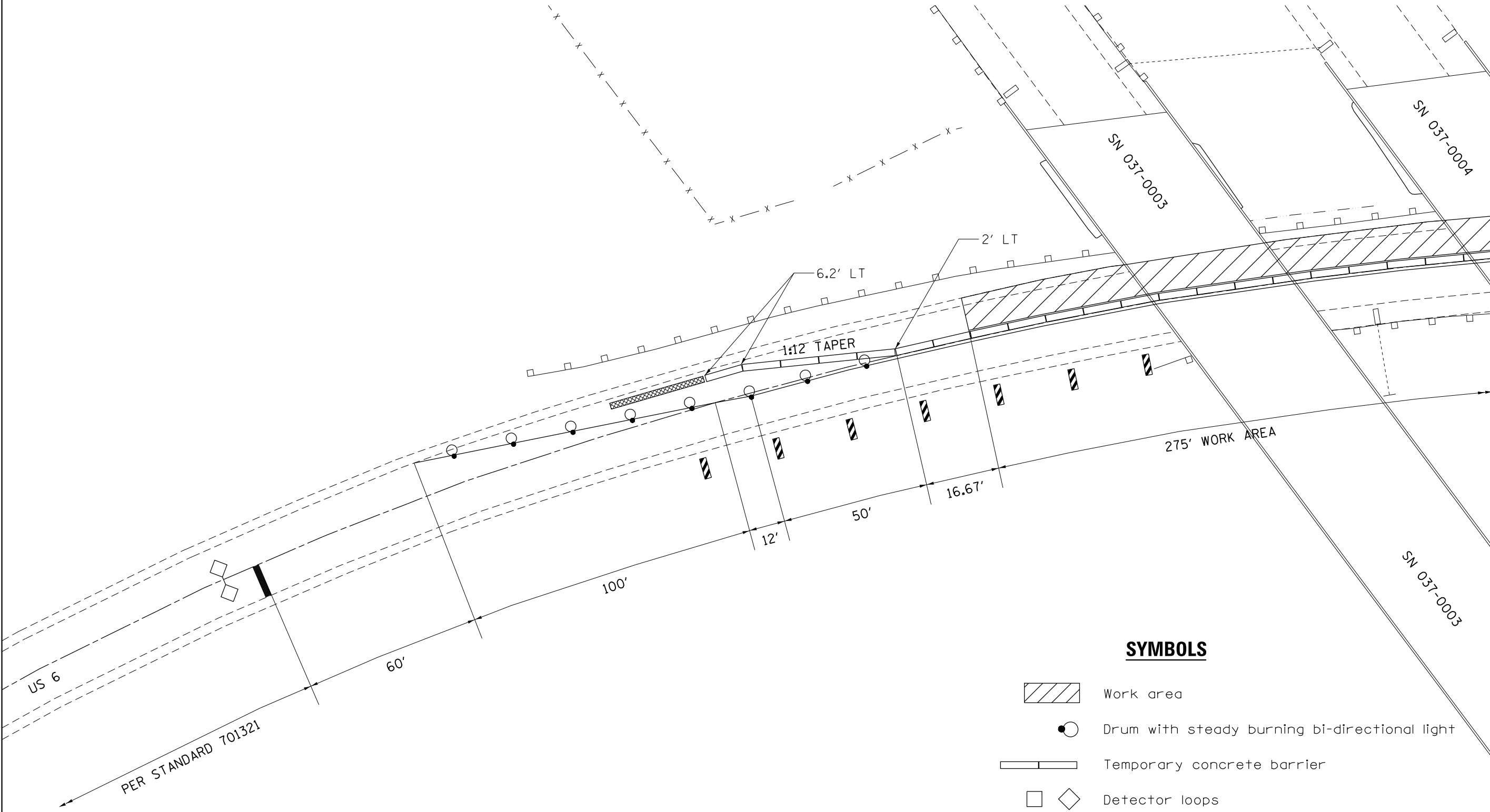
MATCHLINE STAGE I



FILE NAME = D:\BR\Draws\Henry\64K84 Full Cleaning & Pointing SN 037-0003 & 0004\CADD\64K84-sh...	USER NAME = dosddd	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL PLAN STAGE I – FOR SN's 037-0003 & 037-0004	F.A.I RTE. 74/280	SECTION (371HBR)P	COUNTY HENRY	TOTAL SHEETS 13	SHEET NO. 6
Default	PLOT SCALE = 100.0000' / in.	CHECKED - _____	REVISED - _____		SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____			CONTRACT NO. 64K84		
	PLOT DATE = Nov-06-2015 09:41:55 AM	DATE - _____	REVISED - _____					ILLINOIS FED. AID PROJECT		

TRAFFIC CONTROL PLAN

STAGE II – FOR SN's 037-0003 & 037-0004



SYMBOLS

- Work area
- Drum with steady burning bi-directional light
- Temporary concrete barrier
- Detector loops
- Impact attenuator

FILE NAME =	USER NAME = dosddd	DESIGNED - _____	REVISED - _____
Q:\BR\Draws\Henry\64K84 Full Cleaning & Pointing SN 037-0003 & 0004\CADD\64K84-sh...	Pointing SN 037-0003 & 0004\CADD\64K84-sh...	DRAWN - _____	REVISED - _____
Default	PLOT SCALE = 100.0000' / in.	CHECKED - _____	REVISED - _____
	PLOT DATE = Nov-06-2015 09:42:00 AM	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL PLAN	
STAGE II – FOR SN's 037-0003 & 037-0004	
SCALE: _____	SHEET _____ OF _____ SHEETS
STA. _____	TO STA. _____

F.A.I. RTE. 74/280	SECTION (371HBRP)	COUNTY HENRY	TOTAL SHEETS 13	SHEET NO. 7
CONTRACT NO. 64K84				ILLINOIS FED. AID PROJECT

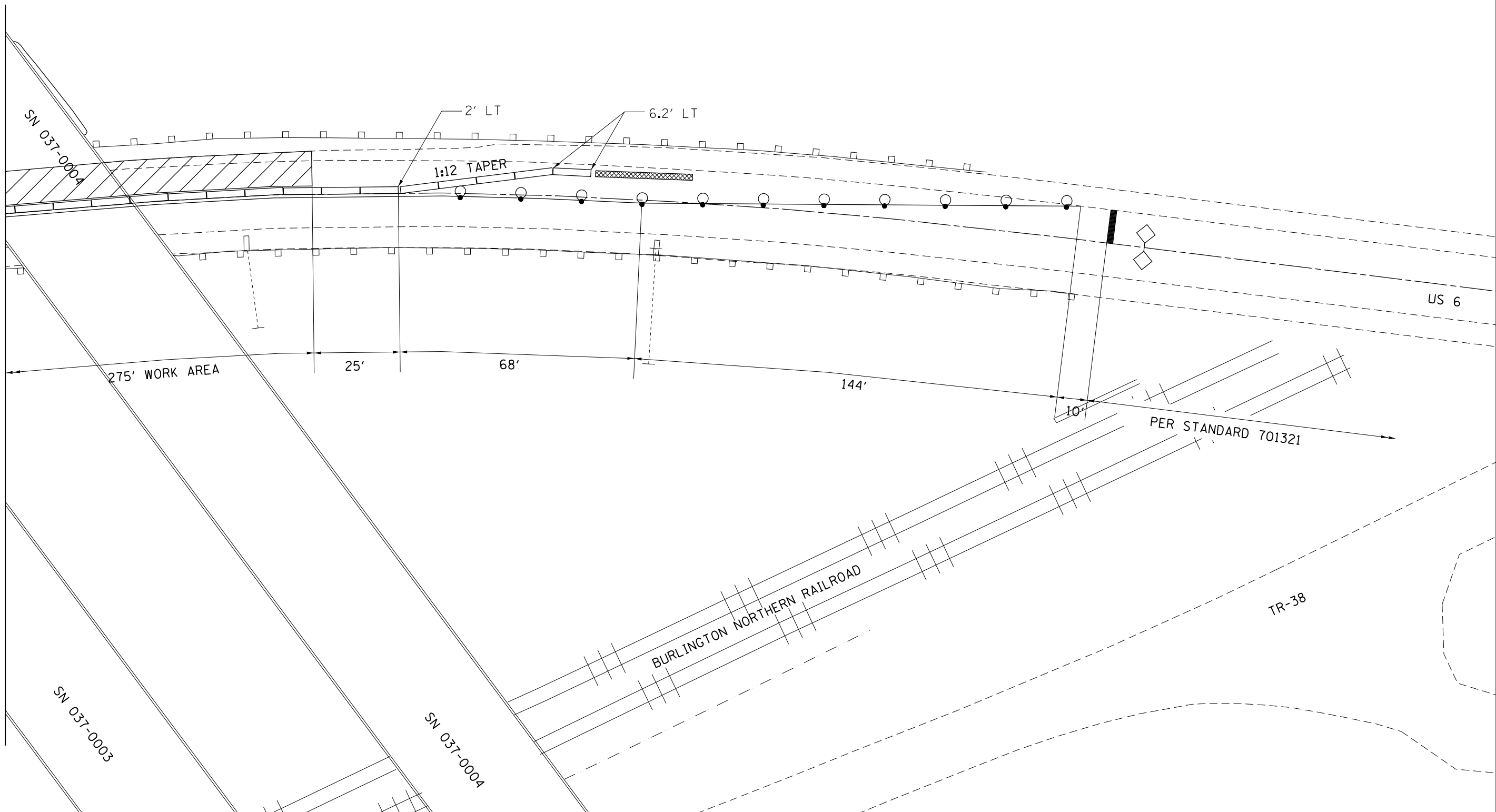
MATCHLINE STAGE II

TRAFFIC CONTROL PLAN

STAGE II – FOR SN's 037-0003 & 037-0004



MATCHLINE STAGE II



FILE NAME =	USER NAME = dosddd	DESIGNED -	REVISOR -
D:\BR\Draw\Henry\64K84 Full Cleaning & Pointing SN 037-0003 & 0004\CADD\64K84-shd		DRAWN -	REVISOR -
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISOR -
	PLOT DATE = Nov-06-2015 09:42:05 AM	DATE -	REVISOR -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL PLAN	
STAGE II – FOR SN's 037-0003 & 037-0004	
SCALE: _____	SHEET ____ OF ____ SHEETS STA. _____ TO STA. _____

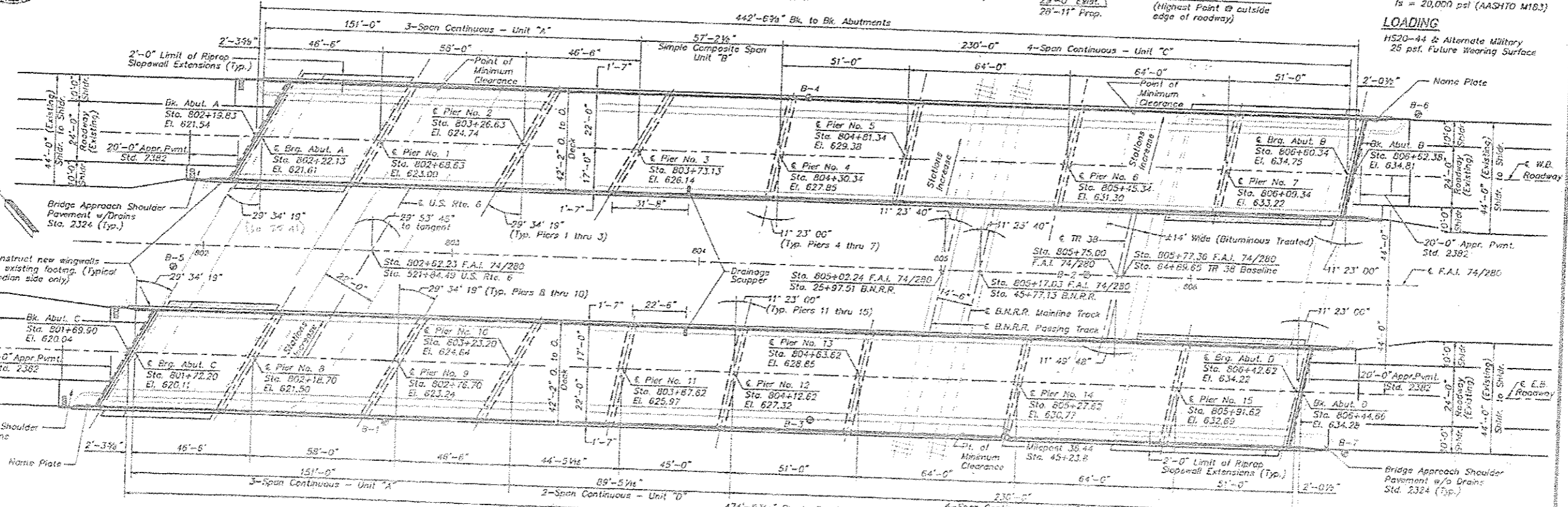
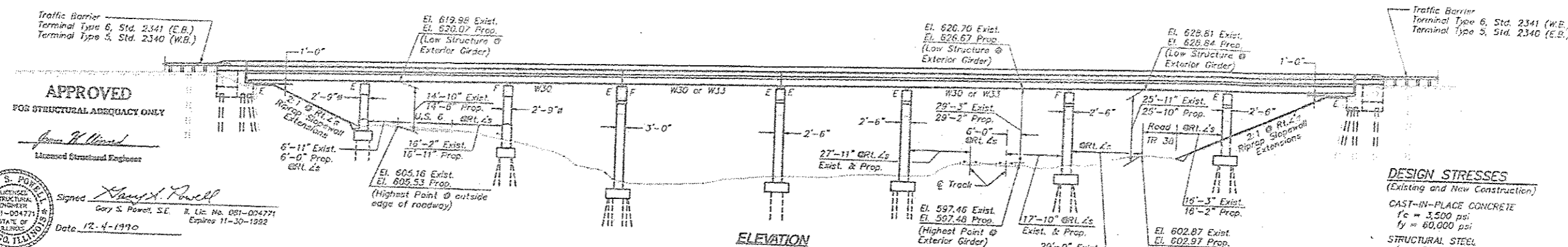
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74/280	(371HBR)P	HENRY	13	8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 64K84	

I.B.M. Railroad Spike in Utility Pole, Sta. 805+96, 153' Left, Elev. 605.53

Existing Structures: Structure No. 037-0003 (Eastbound) and Structure No. 037-0004 (Westbound) built as F.A.I. 74/280, Section 37-1H8 at Sta. 804+24.32 in 1962. An eight span structure 442'-6 5/8" long (W.B.) and a nine span structure 474'-9 3/16" long (E.B.) each 35'-8" wide o. to o. deck. Reinforced concrete deck and steel wide flange beams on four multiple column piers, eleven single hammerhead piers, and pile bent abutments. The existing deck and wingwalls shall be removed. Abutments and piers shall be widened and W30 or W33 steel beams added to accommodate superstructure widening. Expansion bearings at joints shall be replaced and new 42"-2" o. to o. composite concrete decks constructed. Existing abutments, piers, and steel beams shall be incorporated into new construction. Traffic shall be staged during construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
74/280	37-1H8	HENRY	59	10	49
FED. ROAD DIST. NO. 7 FUNDING PROJECT					

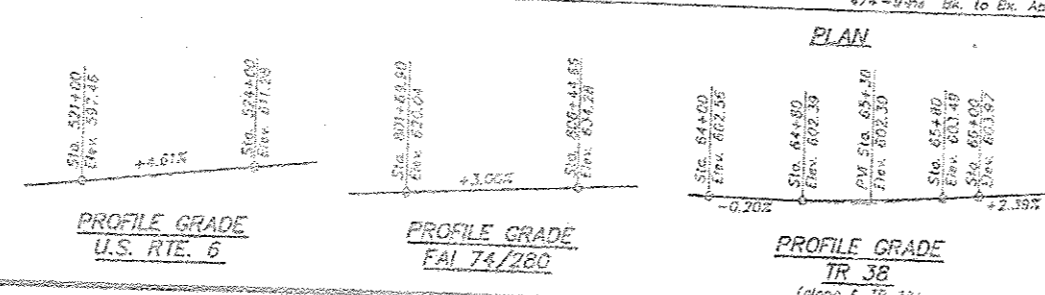


BASCOR, Inc.
consulting engineers and planners

DESIGNED: DAZ
CHECKED: GSP
DRAWN: SAW
DATE: 12-4-1992

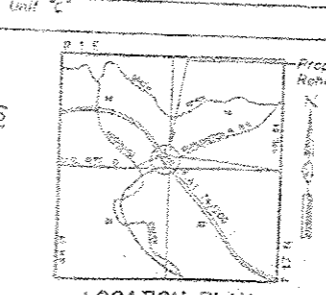
**U.S. RTE. 6
CURVE DATA**

PI Sta. = 520+60.07
Δ = 35° 21' 10"
D = 3' 53' 05"
R = 1,443.95'
L = 460.17'
T = 890.96'
E = 71.55'
SE = 0.087 %
PC Sta. = 516+19.90
PT Sta. = 525+10.86



TOP OF TRACK ELEVATIONS

STATION	MAINLINE	PASSING
43+00	588.01	597.07
44+00	597.75	596.75
45+00	597.51	595.44
46+00	587.24	586.15
47+00	596.89	595.64
48+00	596.73	595.57



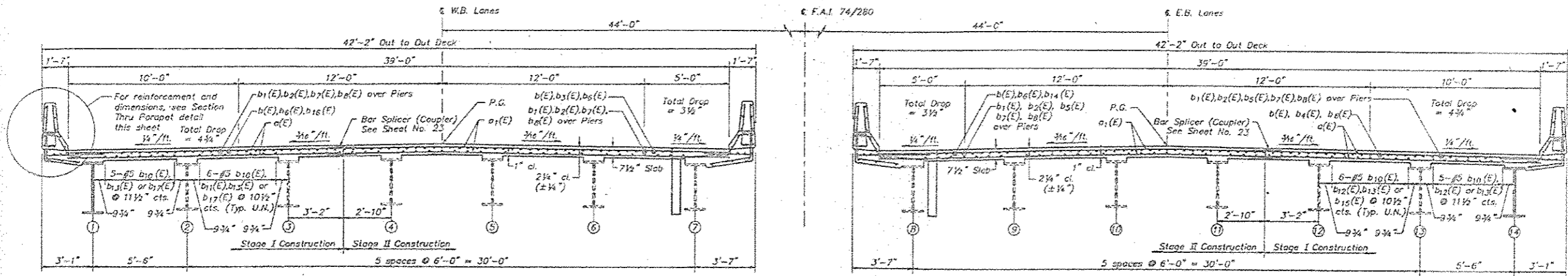
GENERAL PLAN & ELEVATION

F.A.I. 74/280 OVER U.S. 6, B.N.R.R., & T.R. 38
SECTION 37-1H8R
HENRY COUNTY
STA. 804+24.32
S.N. 037-0003 (E.B.)
S.N. 037-0004 (W.B.)

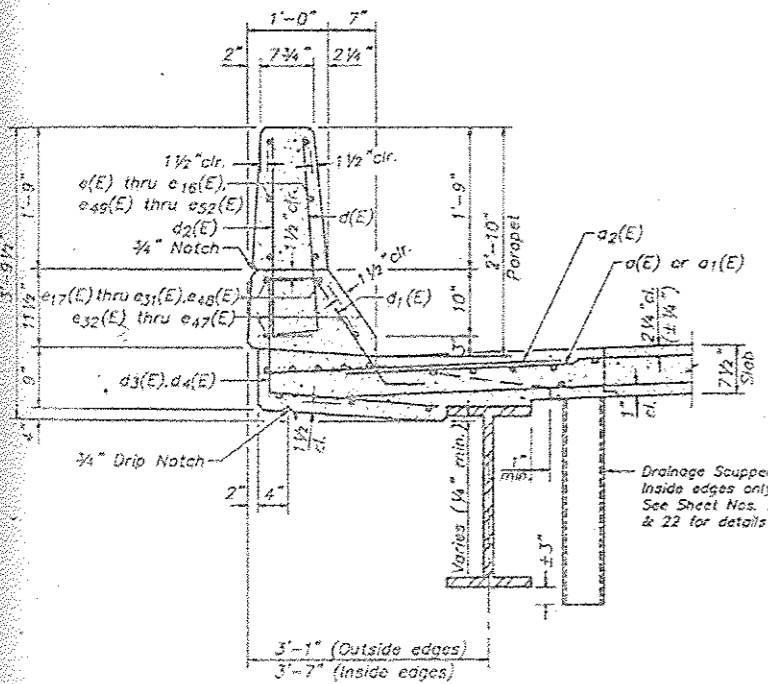
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

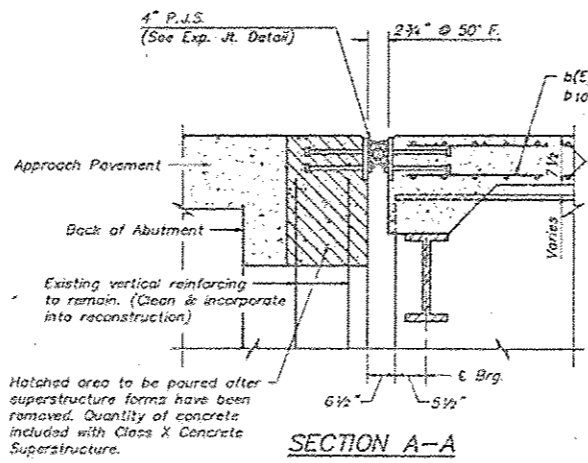
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.I. 74/280	37-1HBR	HENRY	59	25	49
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT					



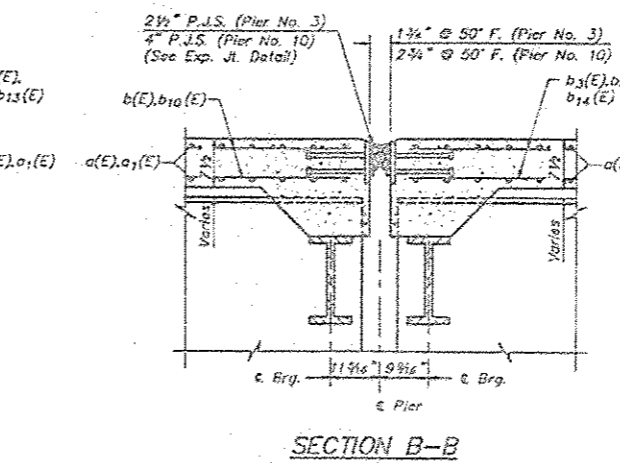
CROSS SECTION
(Looking East)



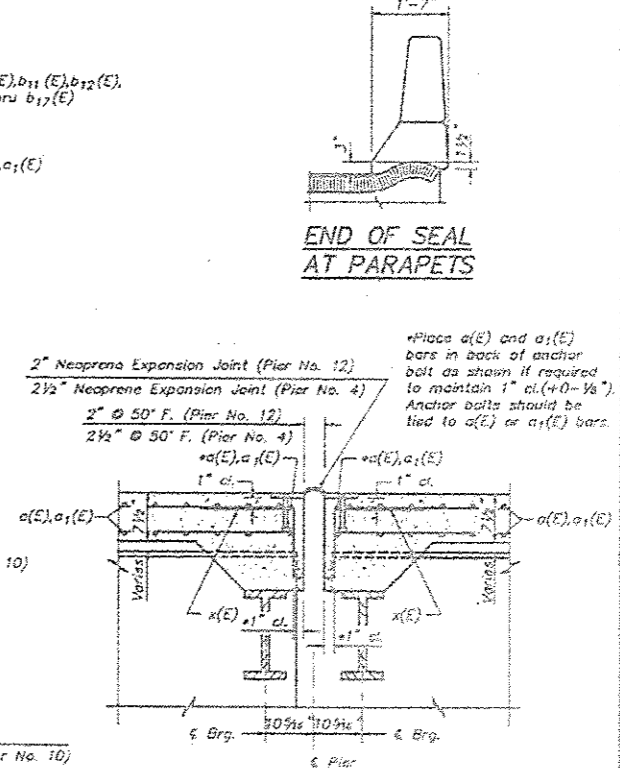
SECTION THRU PARAPET



SECTION A-A



SECTION B-B

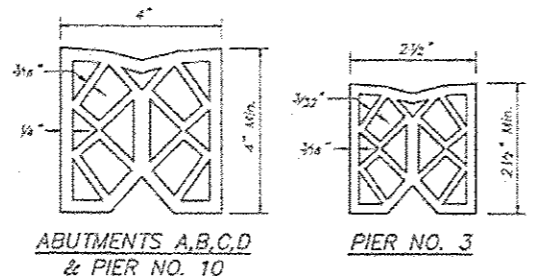


SECTION C-C

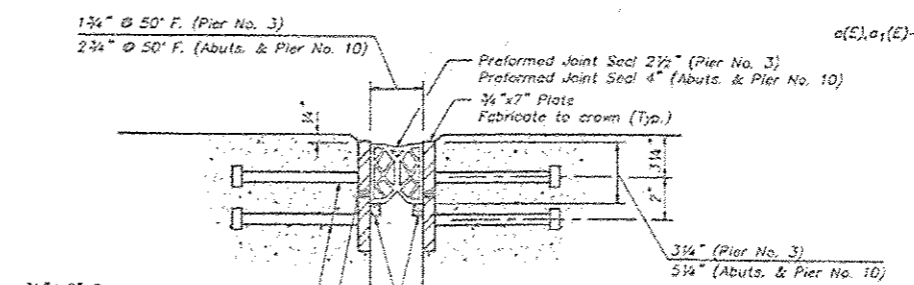
END OF SEAL
AT PARAPETS

PLATE LENGTHS FOR
JOINT SEALS

Location	Stage I	Stage II
Abutment A		
Abutment C	18'-7"	26'-3"
Pier No. 3		
Pier No. 10		
Abutment B	16'-5 7/8"	23'-3 1/2"
Abutment D		



ABUTMENTS A,B,C,D
& PIER NO. 10
PIER NO. 3
PREFORMED JOINT SEALS



EXPANSION JOINT

NOTES:

3/4" Plates for expansion joints are to be furnished in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.
After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel.
See Table of Plate Lengths for Joint Seal at left for total lengths of plates required in each stage of construction.

BASCOR, Inc.
consulting engineers and planners

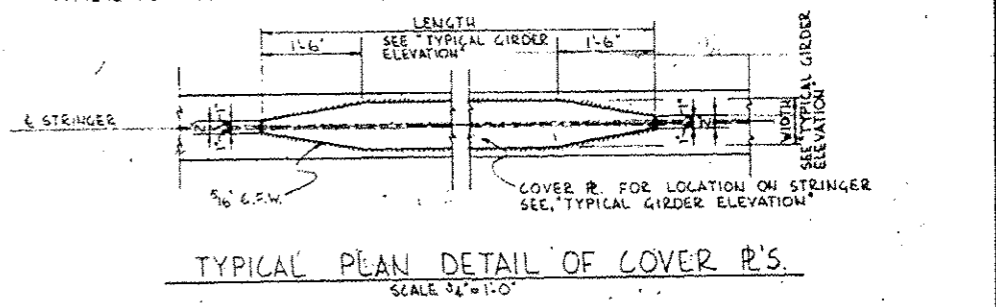
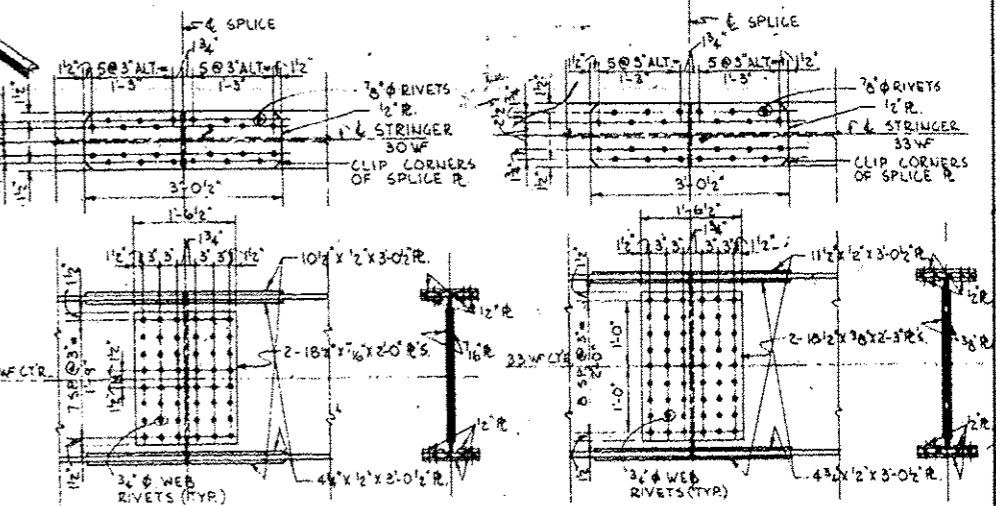
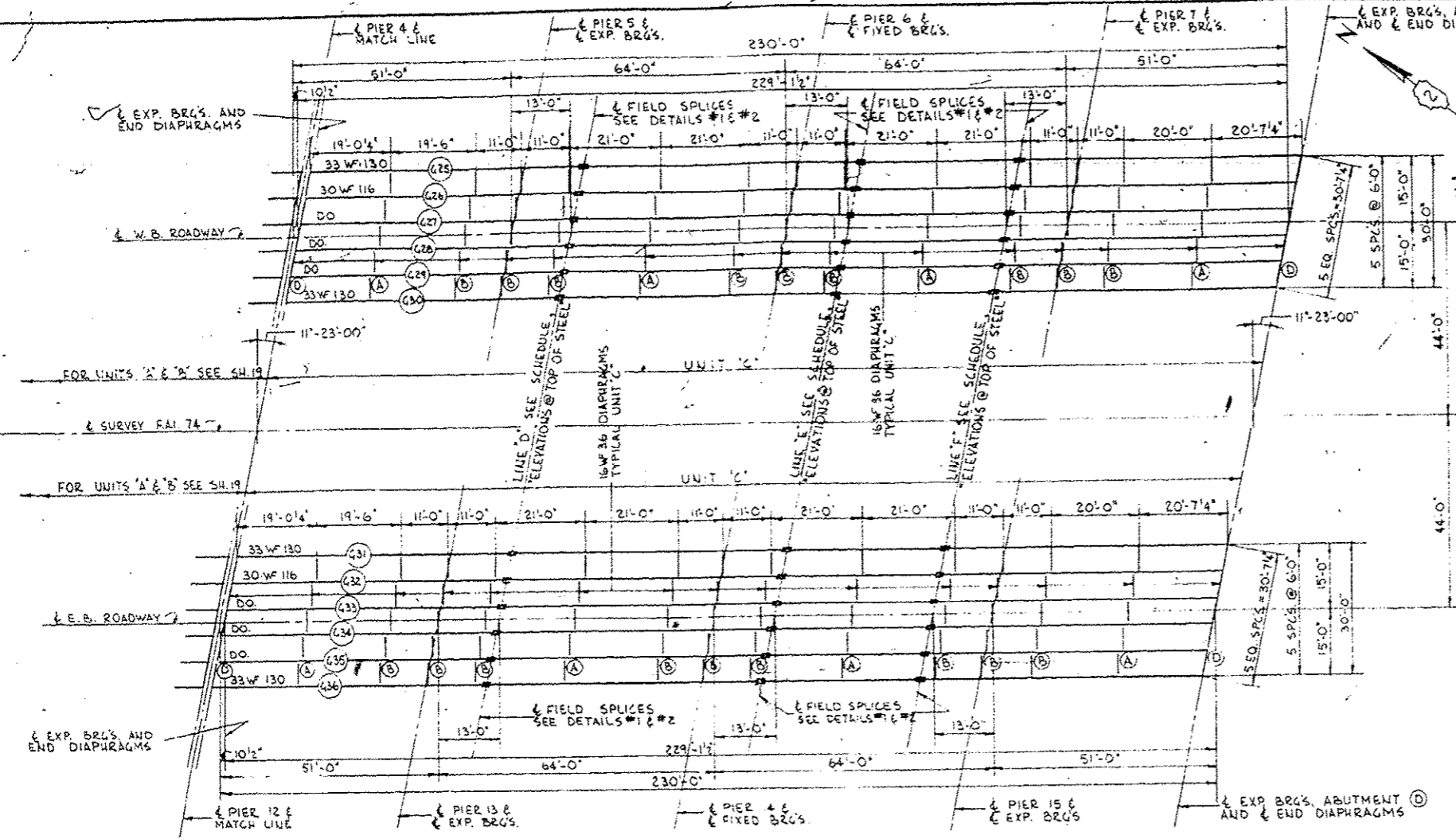
DESIGNED	RRB
CHECKED	GSP
DRAWN	SAW
QUOTED	GSP

DATE 12-4-1990

**SUPERSTRUCTURE
DETAILS 1**

F.A.I. 74/280 OVER U.S. 6, B.N.R.R., & T.R. 38
F.A.I. 74/280 SECTION 37-1HBR
HENRY COUNTY
STA. 80+4-24.32

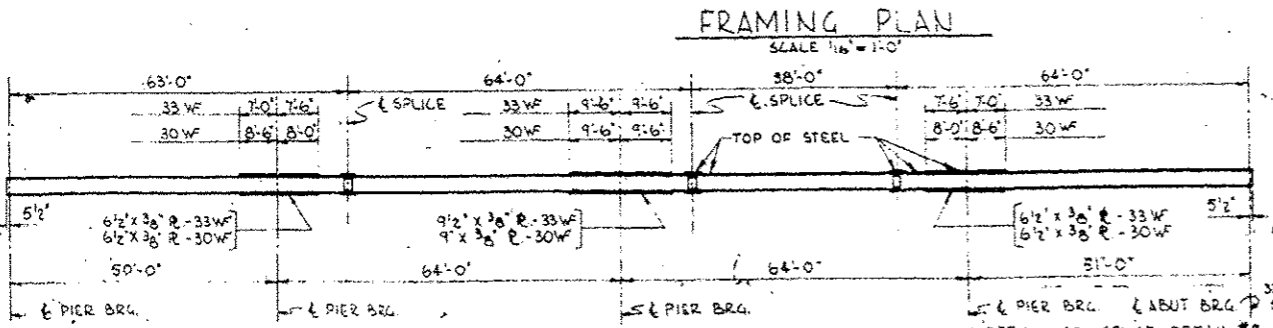
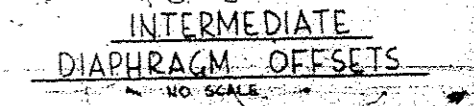
ROUTE NO. 37-114	SECTION 37-114	NO. 20	TOTAL SHEETS 20	SHEET NO. 20
DATE 7-4	DATE 7-11-19	DATE 7-11-19	DATE 7-11-19	DATE 7-11-19
BY HENRY	BY HENRY	BY HENRY	BY HENRY	BY HENRY
SCALE 1/4" = 1'-0"	SCALE 1/4" = 1'-0"	SCALE 1/4" = 1'-0"	SCALE 1/4" = 1'-0"	SCALE 1/4" = 1'-0"



NOTE A
END DIAPHRAGMS SHALL BE MADE LEVEL BETWEEN ADJACENT STRINGERS BY VARYING THE GAUGE AND/OR SIZE OF THE CONNECTION ANGLES AS REQUIRED.

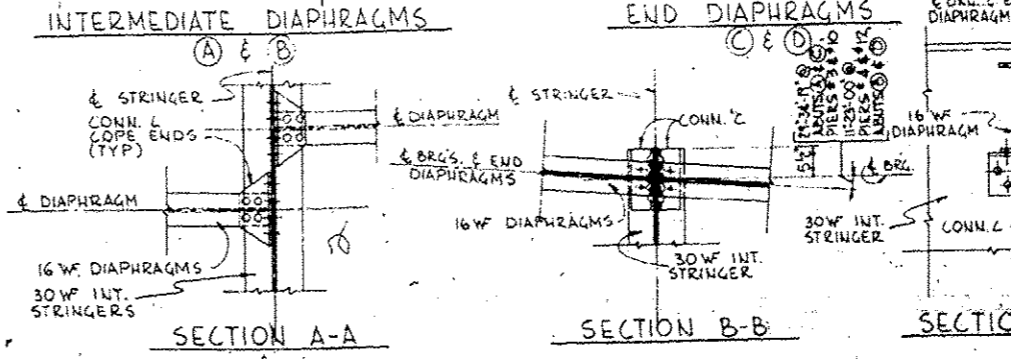
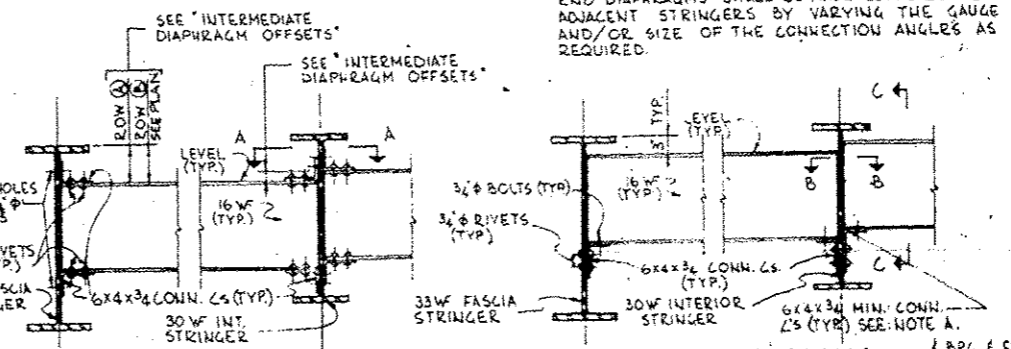
ROW (A)	6'-7 1/2"	6'-0 1/2"	6'-10 1/2"	6'-7 1/2"
ROW (B)	7'-8 1/2"	7'-8 1/2"	8'-0 1/2"	7'-8 1/2"

FOR LOCATION OF DIAPHRAGMS (A) & (B) SEE FRAMING PLAN FOR CONNECTION, SEE DETAIL INTERMEDIATE DIAPHRAGMS (A) & (B)



LOCATION	STEEL	425	426	427	428	429	430	431	432	433	434	435	436
PIERS 4 & 5 EXP BRGS	626.946	627.027	627.053	626.017	626.918	626.764	626.414	626.495	626.521	626.485	626.386	626.733	
PIERS 5 & 6 EXP BRGS	628.481	628.562	628.588	628.552	628.453	628.300	627.949	628.030	628.056	628.020	627.921	627.768	
LINE 'D' & SPICE	628.801	628.962	628.988	628.952	628.853	628.700	628.350	628.431	628.457	628.421	628.322	628.168	
PIERS 6 & 7 EXP BRGS	630.401	630.482	630.508	630.472	630.373	630.220	629.869	629.950	629.976	629.940	629.841	629.688	
LINE 'E' & SPICE	630.801	630.882	630.908	630.872	630.773	630.620	630.270	630.351	630.377	630.341	630.242	630.088	
LINE 'F' & SPICE	631.441	632.022	632.048	632.012	631.913	631.760	631.410	631.491	631.517	631.481	631.382	631.228	
PIERS 7 & 8 EXP BRGS	632.321	632.402	632.428	632.392	632.293	632.140	631.789	631.870	631.896	631.860	631.761	631.608	
ABUT (B) & EXP BRGS	633.820	633.900	633.927	633.890	633.792	633.638	633.288	633.369	633.395	633.359	633.260	633.107	

NOTE: BEAMS ARE ASSUMED STRAIGHT FROM PIER 4 TO ABUT. (B) & PIER 12 TO ABUT. (C). TOP OF STEEL MEANS TOP OF STRINGER, COVER PLATE, OR SPICE PLATE, AS THE CASE MAY BE.



TYPICAL DIAPHRAGM DETAILS
SCALE 3/4" = 1'-0"

BILL OF MATERIAL			
ITEM	UNIT	QUANTITY	
FURNISHING STRUCTURAL STEEL	POUND	404,502	SEC. 37-114
ERECTING STRUCTURAL STEEL	POUND	404,502	SEC. 37-114

NOTE: FOR DESIGNATION OF STEEL REQUIRED, SEE GENERAL NOTES, SHEET 2.

SUPERSTRUCTURE-FRAMING PLAN-UNIT 'C'
F.A.T. 74 SECTION 37-114 & 37-115
F.A.T. 74 - BRIAR BLUFF VIADUCT
HENRY COUNTY
STATION 804 + 24.32
SCALE AS SHOWN

DE LEUW, CATHAR & CO. ENGINEERS
DESIGNED BY D. H. MEHLENBACHER
DRAWN BY N. V. BAYARO
CHECKED BY G. J. MEBAREFS
IN CHARGE E. S. MARTINS
APPROVED L. N. RIAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.I. 74/280	37-1HER	HENRY	59	33	24
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT					

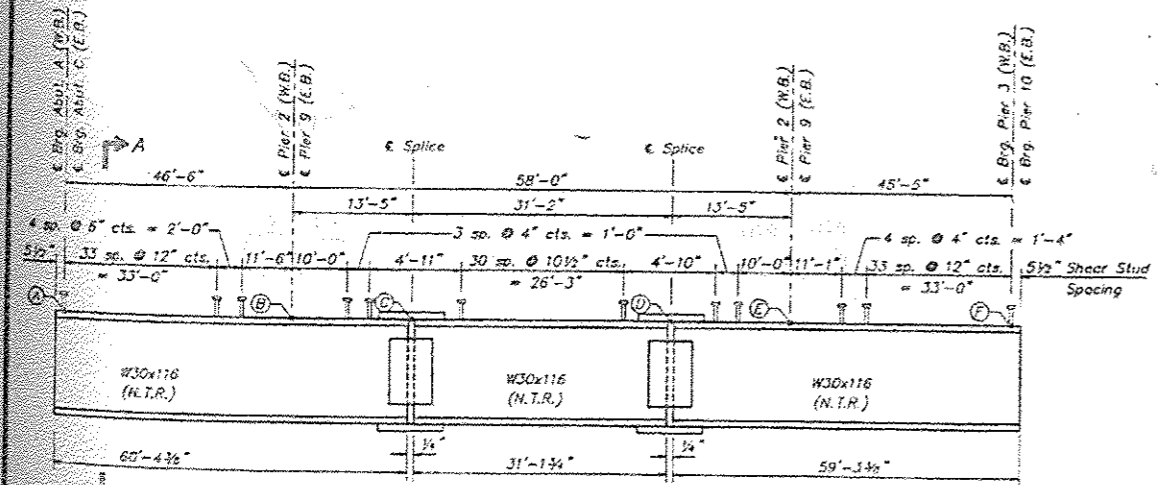
BEAM MOMENT TABLE - UNIT A

Location @	0.4 Span 1			Pier 1 or 8			0.5 Span 2			Pier 2 or 9			0.6 Span 3		
	Exist.	Exist.	New	Exist.	Exist.	New	Exist.	Exist.	New	Exist.	Exist.	New	Exist.	Exist.	New
Beam	W30x116	W30x108	W30x116	W30x116	W30x108	W30x116	W30x116	W30x108	W30x116	W30x116	W30x108	W30x116	W30x116	W30x108	W30x116
I_x (in ⁴)	4,930	4,470	4,930	6,228	5,496	4,930	4,930	4,470	4,930	6,228	5,496	4,930	4,930	4,470	4,930
I_y (in ⁴)	12,869	11,973	12,601	-	-	-	12,869	11,973	12,601	-	-	-	12,869	11,973	12,601
S_x (in ³)	329	299	329	405	359	329	329	299	329	405	359	329	329	299	329
S_y (in ³)	478	441	474	-	-	-	478	441	474	-	-	-	478	441	474
R (K/ft)	0.786	0.723	0.696	1.068	0.990	0.959	0.786	0.723	0.696	1.068	0.990	0.959	0.786	0.723	0.696
M_D (K)	11.3	106	103	310	280	267	108	102	101	301	272	260	106	99	97
I_s (non-comp) (k.s.i.)	4.1	4.3	3.8	9.2	9.4	9.7	3.9	4.1	3.7	6.9	9.1	9.5	3.9	4.0	3.5
I_s (comp) (k.s.i.)	0.262	0.267	0.263	-	-	-	0.282	0.267	0.263	-	-	-	0.262	0.267	0.263
M_4 (K)	41	39	39	-	-	-	38	38	38	-	-	-	38	37	37
M_4 (K)	244	246	248	211	205	200	247	252	255	209	202	199	237	235	240
M_{max} (K)	72	72	72	60	58	58	68	69	69	59	58	56	69	70	70
TOTAL (K)	357	357	359	271	263	258	353	359	362	268	260	255	344	346	347
I_s (comp) (k.s.i.)	9.1	9.8	9.2	8.0	8.8	9.4	9.0	9.9	9.3	7.9	8.7	9.3	8.7	9.8	8.9
I_s (Total) (k.s.i.)	13.2	14.1	13.0	17.2	18.2	19.1	12.9	14.0	13.0	10.8	17.8	18.8	12.6	13.8	12.4
VR (K)	30.9	31.1	31.2	-	-	-	31.8	31.9	32.6	-	-	-	30.4	30.5	30.7

BEAM REACTION TABLE - UNIT A

Location @	Abut. A or C			Pier 1 or 8			Pier 2 or 9			Pier 3 or 10		
	Exist.	Exist.	New	Exist.	Exist.	New	Exist.	Exist.	New	Exist.	Exist.	New
Beam	W30x116	W30x108	W30x116	W30x116	W30x108	W30x116	W30x116	W30x108	W30x116	W30x116	W30x108	W30x116
R ₁ (K)	18.2	15.9	16.5	62.6	57.9	56.0	61.7	57.1	55.2	17.7	15.4	16.1
R ₂ (K)	29.7	29.8	29.8	37.4	37.4	37.2	37.4	37.4	37.2	29.6	29.6	29.7
Imc. (K)	8.7	8.7	8.8	10.6	10.5	10.5	10.6	10.5	10.5	8.6	8.6	8.7
R Total (K)	56.6	55.4	55.1	110.6	105.8	103.7	109.7	105.0	102.9	55.9	54.6	54.5

I_x and S_x are the moment of inertia and section modulus of the steel section used in computing I_s (Total).
 I_y and S_y are the moment of inertia and section modulus of the composite section used in computing I_s (Total).
 VR is the maximum \pm impact shear range in span.



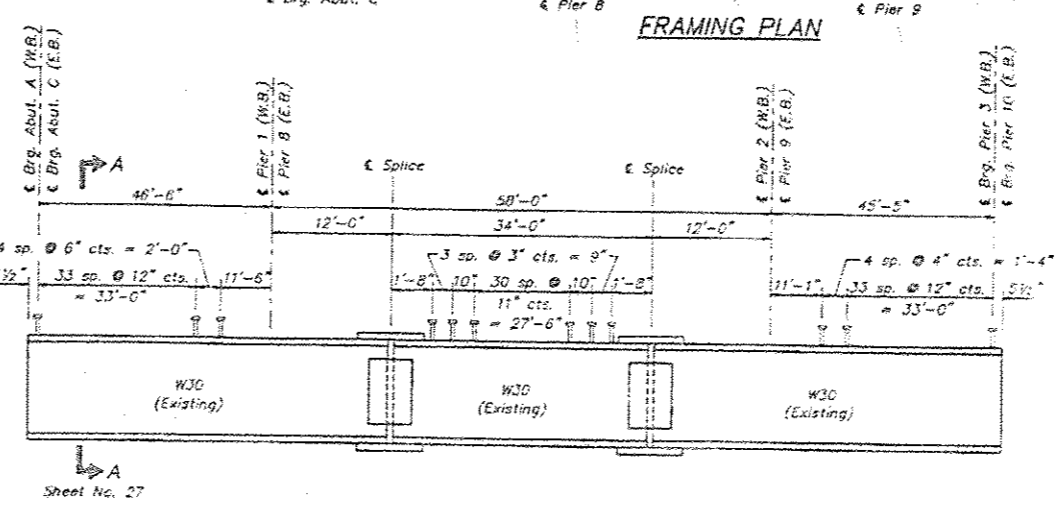
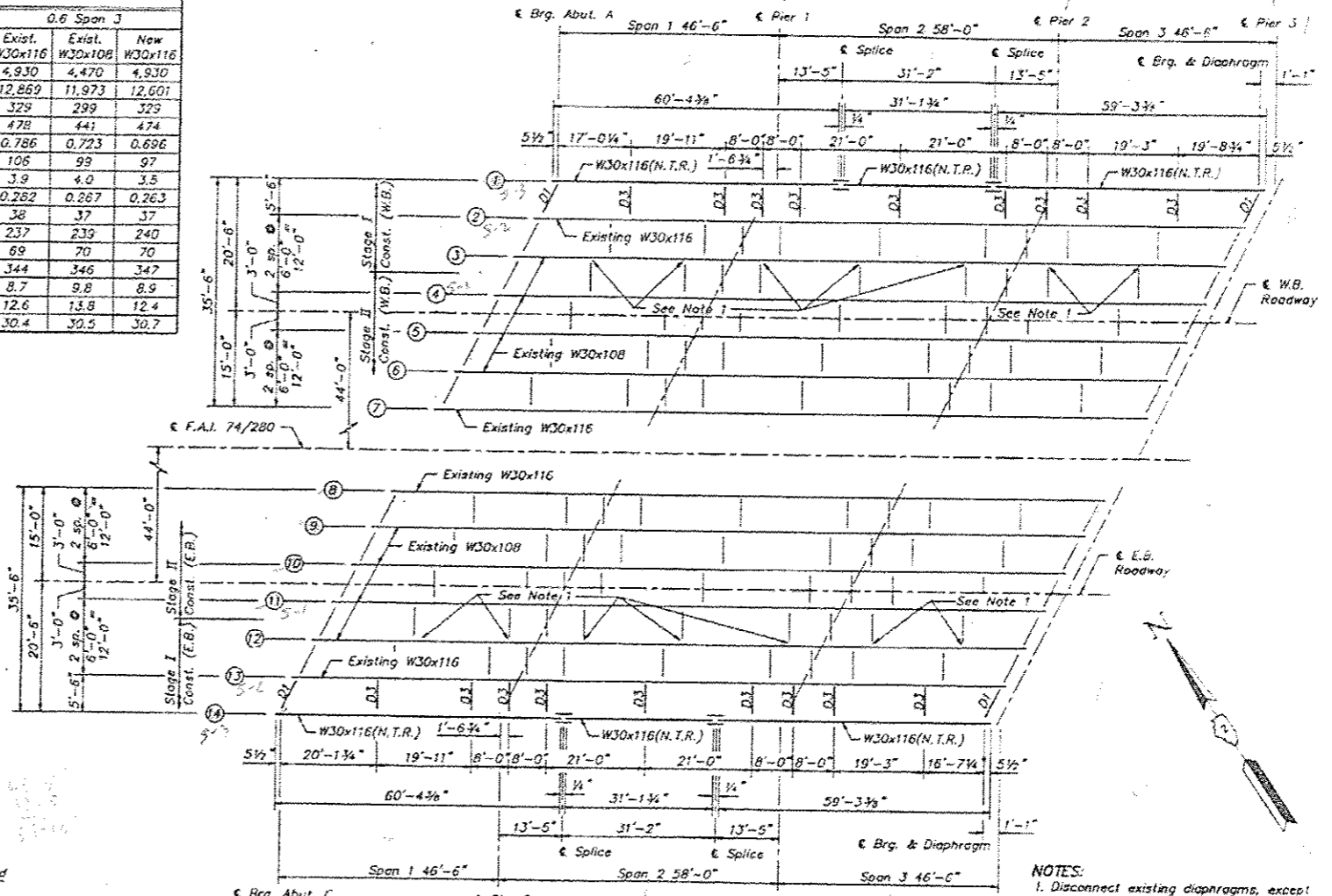
ELEVATION BEAMS (1) & (4), UNIT A
(No. of Stud Required = 345 per Beam)

BASCOR, Inc.
consulting engineers and planners

DESIGNED BY	DAZ
DRAWN BY	GSP
CHECKED BY	SAW
DATE	12-4-1990

TOP OF FLANGE ELEVATIONS UNIT A

Beam No.	@ Brg. Abut. A	@ Brg. Pier 1	@ Splice C	@ Splice D	@ Brg. Pier 2	@ Brg. Pier 3
(1)	620.93	622.27	622.66	623.60	624.02	625.43
(4)	618.73	620.08	620.47	621.41	621.83	623.23



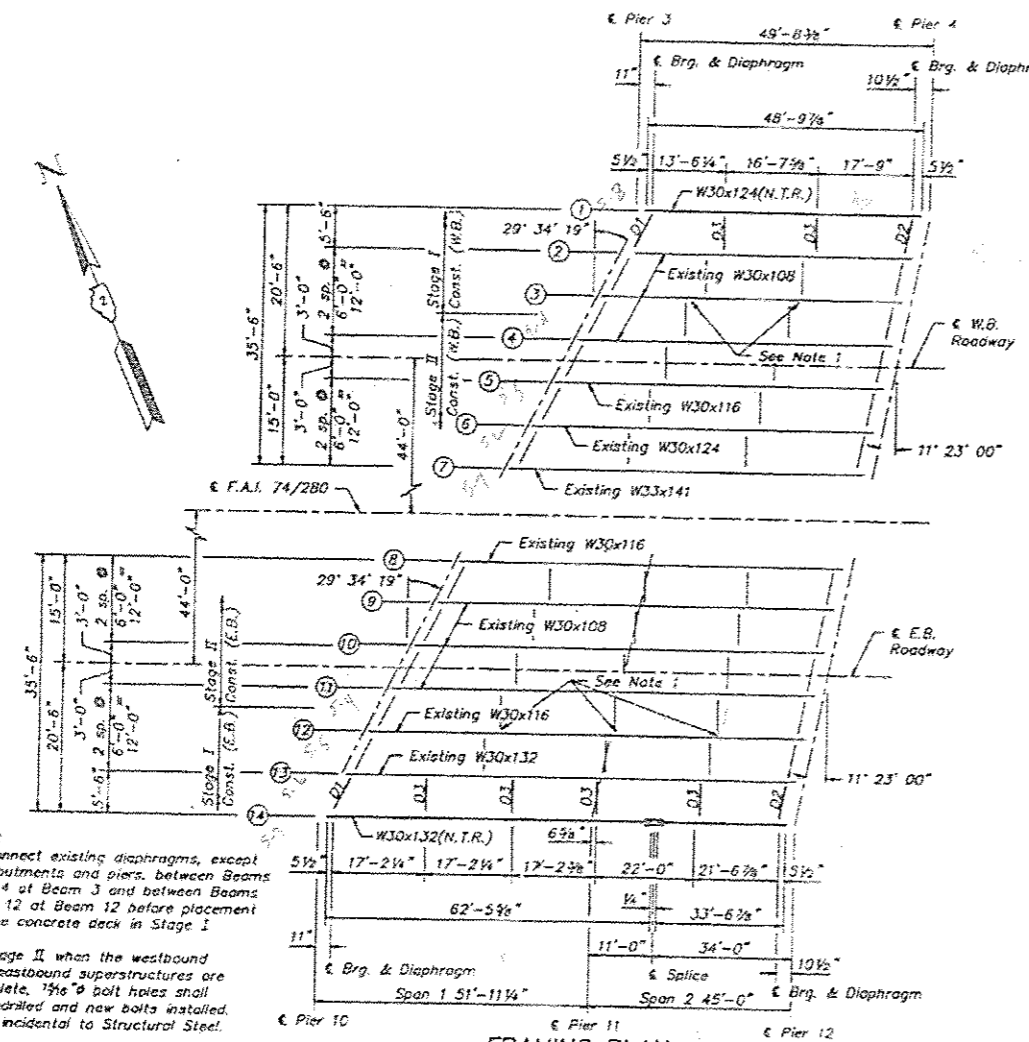
ELEVATION BEAMS (2) THRU (3), UNIT A
(No. of Stud Required = 345 per Beam)

- NOTES:**
- Disconnect existing diaphragms, except at abutments and piers, between Beams 3 & 4 at Beam 3 and between Beams 11 & 12 at Beam 12 before placement of the concrete deck in Stage I.
 - In Stage II when the westbound and eastbound superstructures are complete, 1/2" dia bolt holes shall be drilled and new bolts installed. Cost incidental to Structural Steel.
 - For Splice Details, Diaphragm Details, and Shear Stud Details, see Sheet No. 27.
 - (N.T.R.) denotes Notch Toughness Requirements (Zone 2).

FRAMING PLAN UNITS "A"
 F.A.I. 74/280 OVER U.S. 6, B.N.R.R., & T.R. 38
 F.A.I. 74/280 SECTION 37-1HER
 HENRY COUNTY
 STA. 804+24.32

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74/280	37-1HR	HENRY	59	34
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				



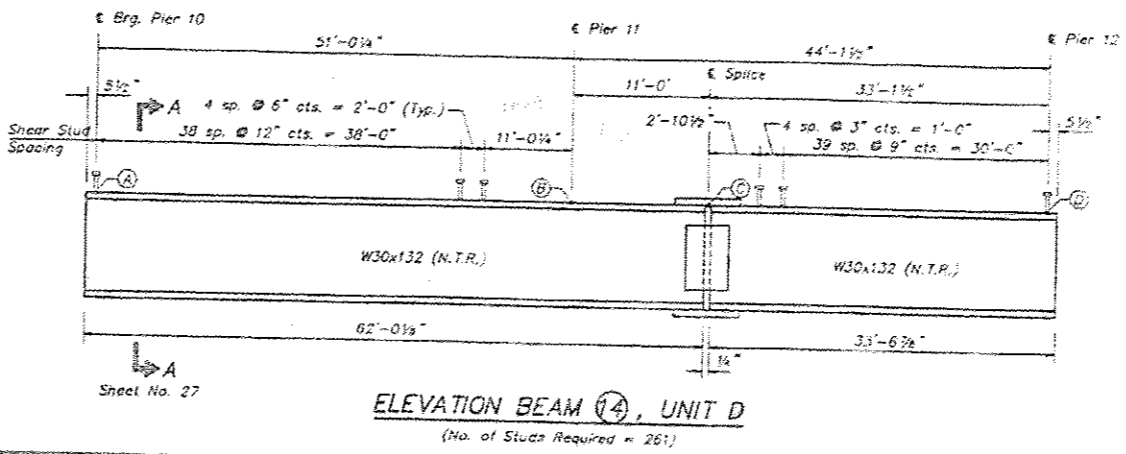
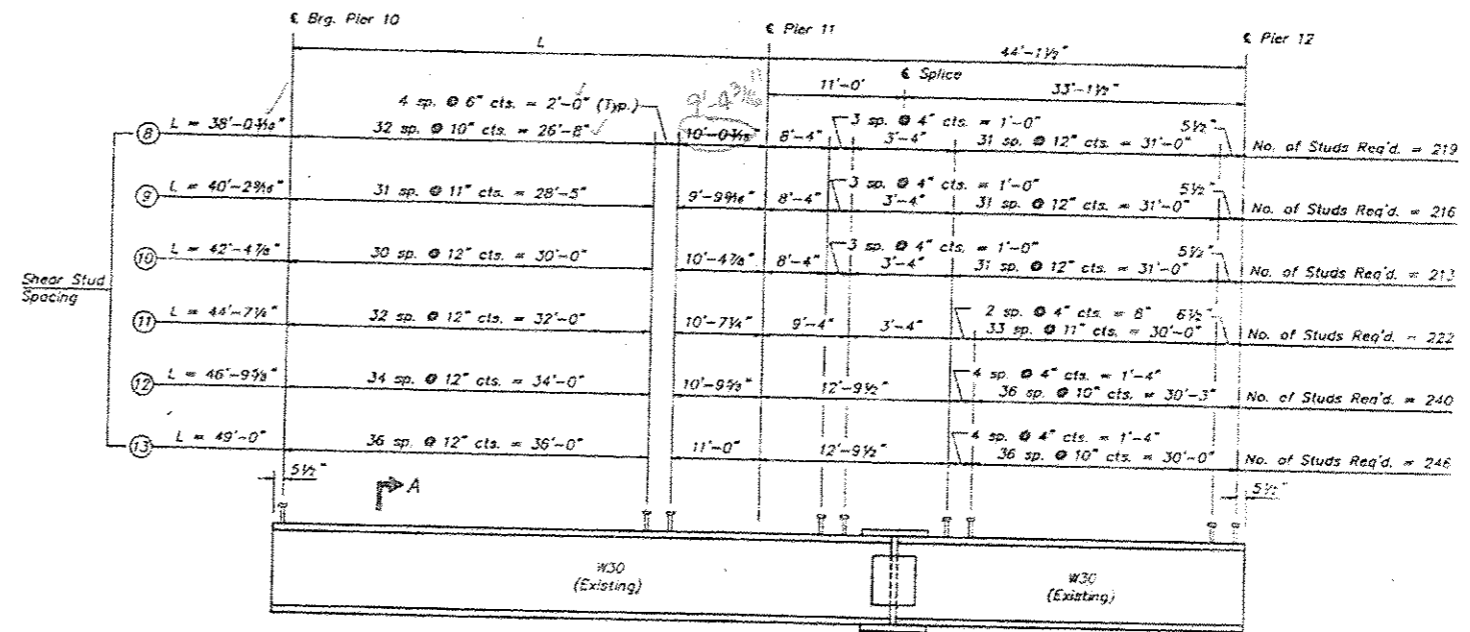
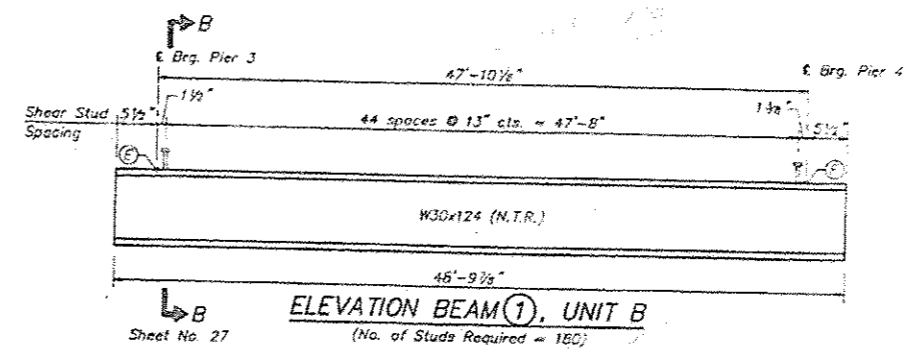
- NOTES:**
- Disconnect existing diaphragms, except at abutments and piers, between Beams 3 & 4 at Beam 3 and between Beams 11 & 12 at Beam 12 before placement of the concrete deck in Stage I.
 - In Stage II when the westbound and eastbound superstructures are complete, 1/2" dia. bolt holes shall be re-drilled and new bolts installed. Cost incidental to Structural Steel.
 - For Splice Details, Diaphragm Details, and Shear Stud Details, see Sheet No. 27.
 - For Beam Design Tables, see Sheet No. 28.
 - (N.T.R.) denotes Notch Toughness Requirements (Zone 2).
 - Existing shear connectors on Beams 2 thru 7 Unit B shall remain in place. Damaged shear connectors shall be replaced at no additional cost to the contract.

TOP OF FLANGE ELEVATIONS UNIT D

Beam No.	€ Brg. Pier	€ Brg. Pier	€ Splice	€ Brg. Pier
14	623.29	624.75	625.07	626.14

TOP OF FLANGE ELEVATIONS UNIT B

Beam No.	€ Brg. Pier	€ Brg. Pier
1	625.49	626.93



BASCOR, Inc.
consulting engineers and planners

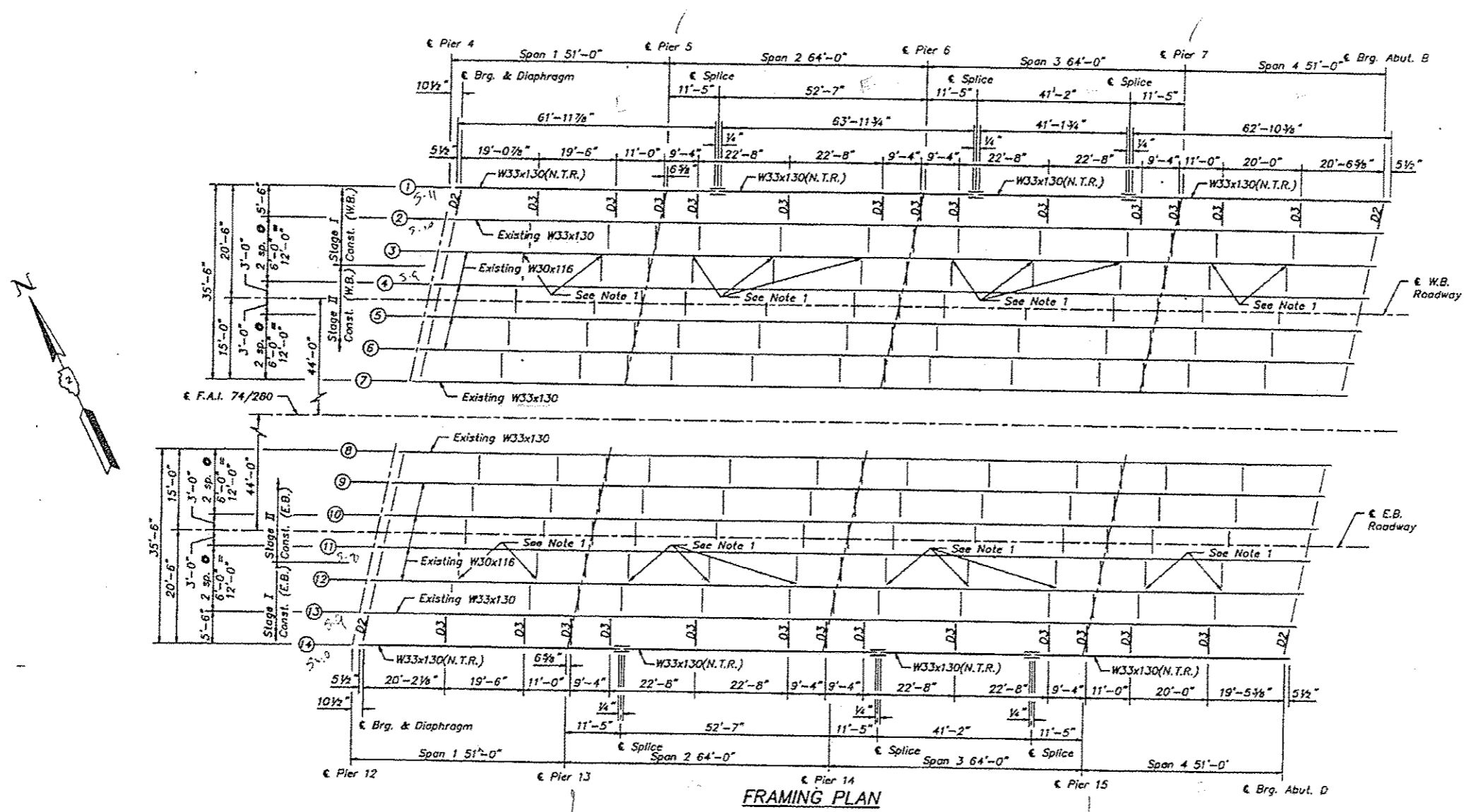
DRAWN BY	DAZ
CHECKED BY	GSP
DESIGNED BY	SAW
DATE	12-4-1990

**FRAMING PLAN
UNITS "B" & "D"**

F.A.I. 74/280 OVER U.S. 6, B.N.R.R., & T.R. 36
F.A.I. 74/280 SECTION 37-1HR
HENRY COUNTY
STA. 804+24.32

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
74/280	37-1HBR	HENRY	59	35	26
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT			SHEETS 49		



FRAMING PLAN

- NOTES:
1. Disconnect existing diaphragms, except of abutments and piers, between Beams 3 & 4 at Beam 3 and between Beams 11 & 12 at Beam 12 before placement of the concrete deck in Stage I
 2. For Splice Details, Diaphragm Details, Beam Elevations and Shear Stud Spacing see Sheet No. 27
 3. For Beam Design Tables, see Sheet No. 28.
 4. (N.T.R.) denotes Notch Toughness Requirements (Zone 2).

BASCOR, Inc.
consulting engineers and planners

DESIGNED	DAZ
CHECKED	GSP
DRAWN	SAW
CHECKED	GSP

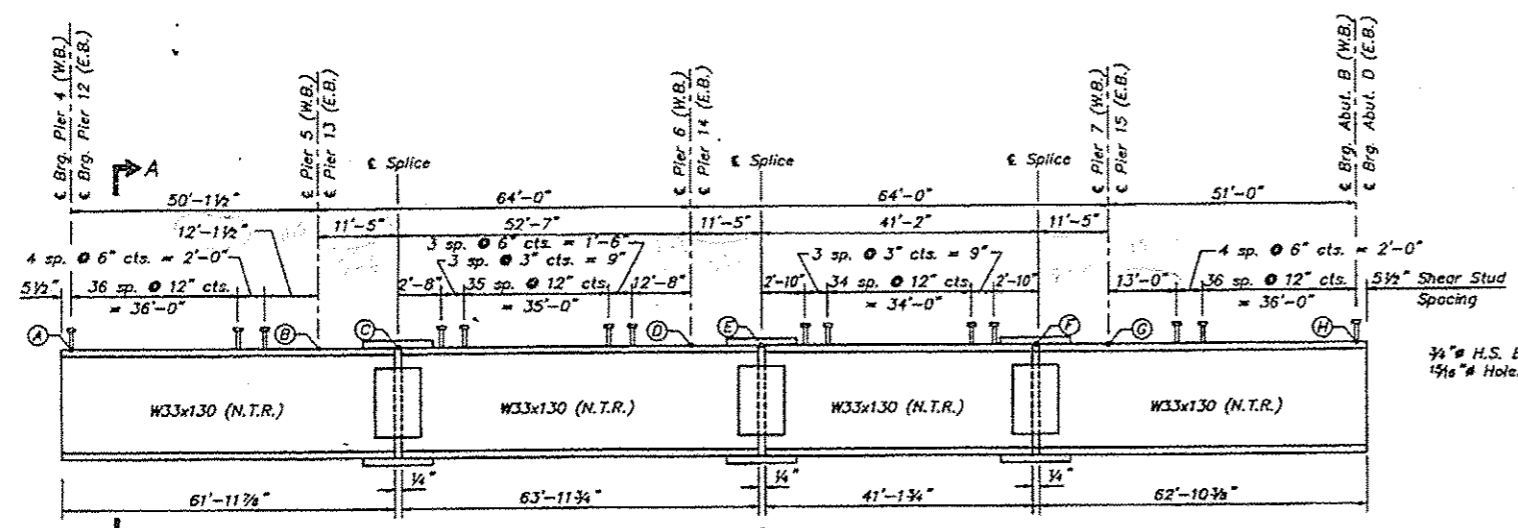
DATE 12-4-1990

**FRAMING PLAN
UNITS "C"**

F.A.I. 74/280 OVER U.S. 6, B.N.R.R., & T.R. 38
F.A.I. 74/280 SECTION 37-1HBR
HENRY COUNTY
STA. 804+24.32

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

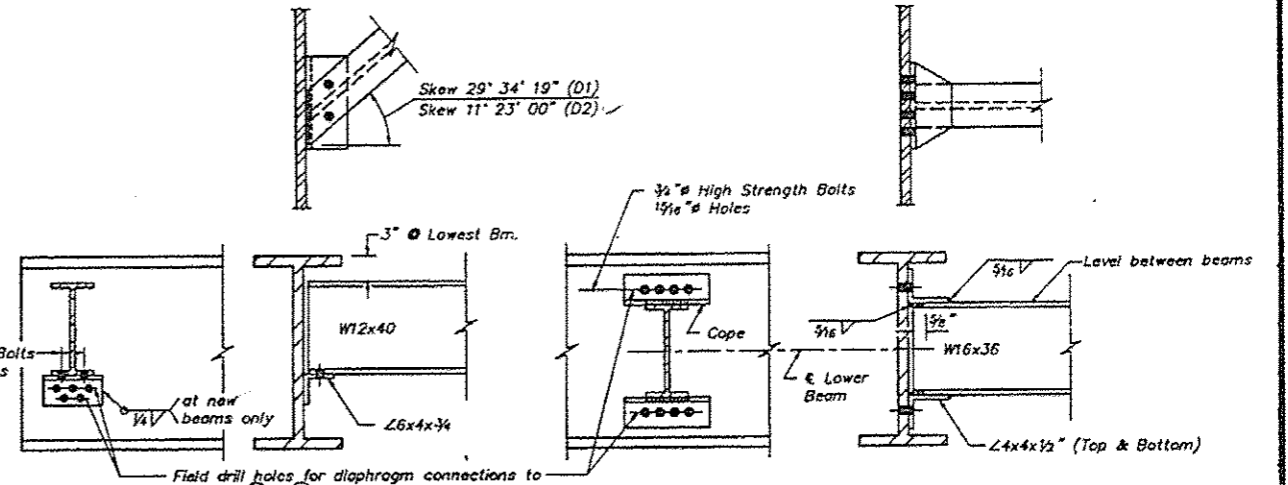
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.I. 74/280	37-1HBR	HENRY	59	36	42
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT			



ELEVATION BEAMS ① & ⑭, UNIT C
(No. of Studs Required = 495 per Beam)

TOP OF FLANGE ELEVATIONS UNIT C

Beam No.	€ Brg. Pier A	€ Brg. Pier B	€ Splice C	€ Brg. Pier D	€ Splice E	€ Splice F	€ Brg. Pier G	€ Brg. Abut. H
①	626.97	628.42	628.75	630.33	630.67	631.95	632.30	633.85
⑭	626.19	627.65	627.98	629.56	629.90	631.17	631.52	633.07



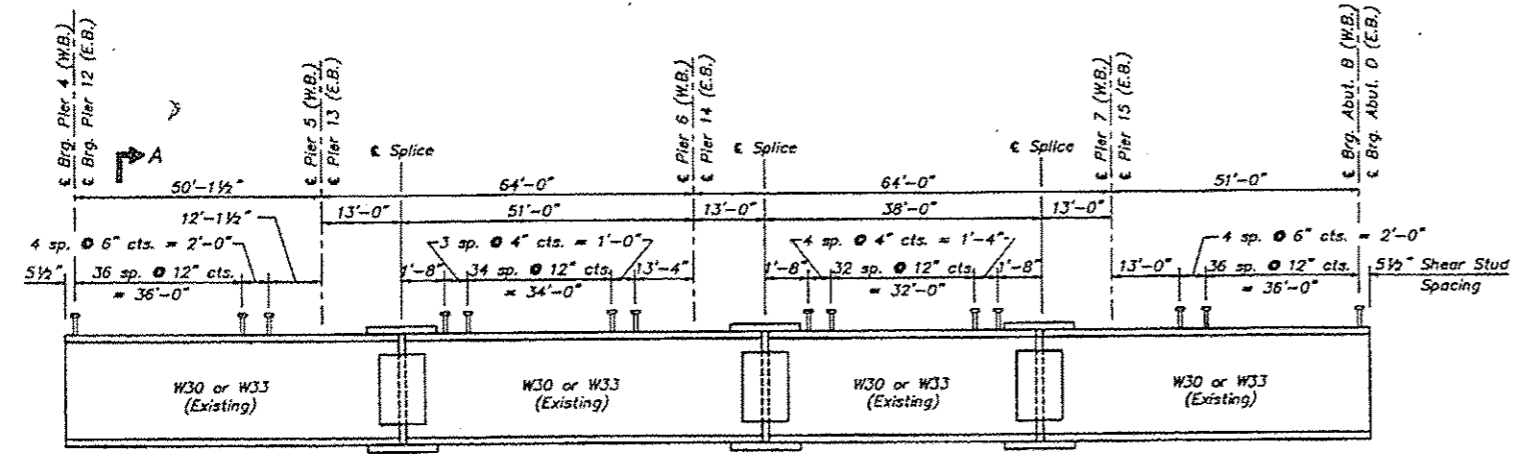
DIAPHRAGM D1 & D2
(See Table)

DIAPHRAGM D3
(See Table)

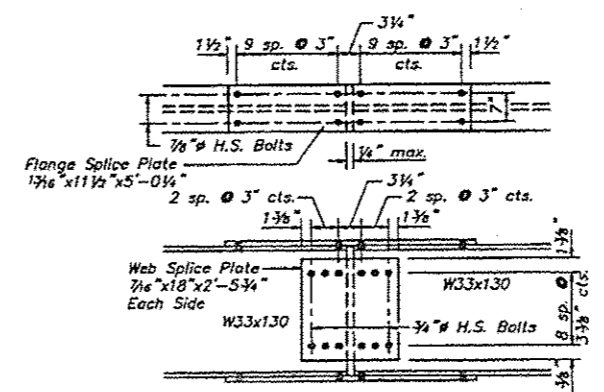
Notes: Two hardened washers shall be required over all 1 1/8 inch holes in diaphragm connections. All contact surfaces of joints shall be free of paint or lacquer.

DIAPHRAGM TABLE

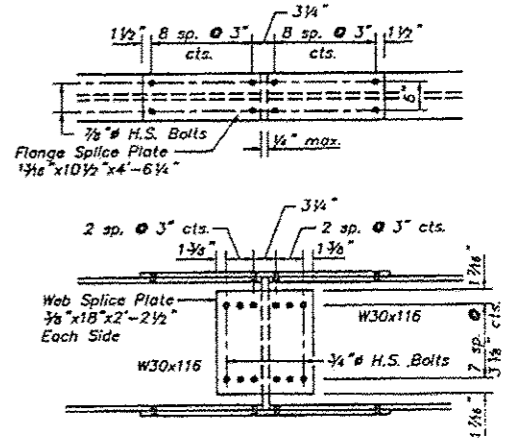
Diaphragm	No. Req'd.	€ to € Beam Spacing
D1	6	6'-3 3/8" (along skew)
D2	6	5'-7 3/8" (along skew)
D3	50	5'-6"



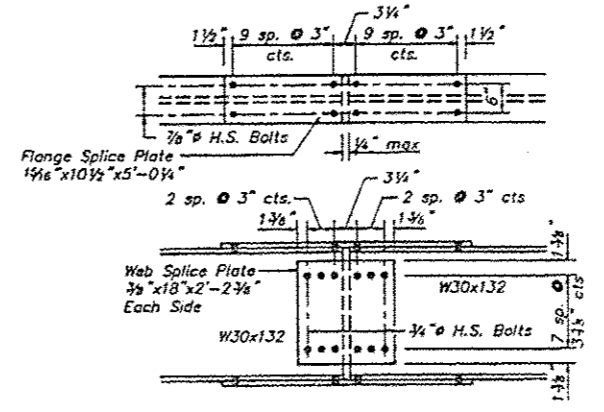
ELEVATION BEAMS ② THRU ⑬, UNIT C
(No. of Studs Required = 492 per Beam)



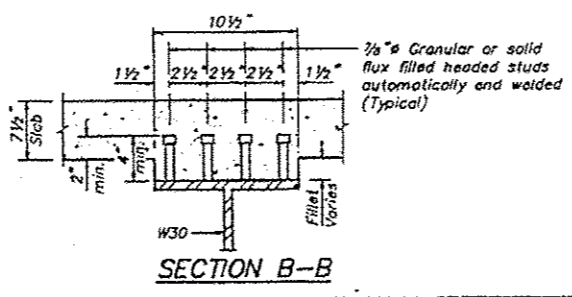
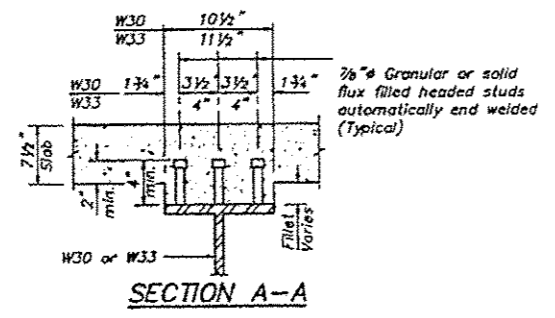
SPLICE DETAIL
(For New Beams ① & ⑭, Unit C)



SPLICE DETAIL
(For New Beams ① & ⑭, Unit A)



SPLICE DETAIL
(For New Beam ⑭, Unit D)



BASCOR, Inc.
consulting engineers and planners

DESIGNED	DAZ
CHECKED	GSP
DRAWN	SAW
CHECKED	GSP

DATE 12-4-1990

FRAMING DETAILS 1

F.A.I. 74/280 OVER U.S. 6, B.N.R.R., & T.R. 38
F.A.I. 74/280 SECTION 37-1HBR
HENRY COUNTY
STA. 804+24.32

