

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	601
STA.			TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT		

**LEGEND - IDOT TEST BORING LOGS**

Silty Clay Loam Textural classification of soil in accordance with IDOT Triangular Chart.  $Q_u$ , kPa Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.

BLOWS/150mm Number of blows required to drive a standard soil sampling device 150 mm as conducted in accordance with AASHTO T 206 standard specification. Moist, % Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.

Page 1 of 2

Date 8/1/03

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6.7, 8.9-1.90-11.90-12.13.14 LOCATION .SEC., TWP., RING.

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. \_\_\_\_\_  
Station \_\_\_\_\_

BORING NO. K2MJ3-4  
Station 10+564  
Offset 16.00m RL CL  
Ground Surface Elev. 143.50 m

DEPTH (m)	DEPTH (ft)	SOIL DESCRIPTION	UNCONSOLIDATED SOIL	MOISTURE (%)	UNCONFINED COMPRESSIVE STRENGTH (kPa)	REMARKS
0-0.45m		no sample taken 0-45m				
143.04	6	Gray SHALEY CLAY		13.0		
	7					
	9					
	17					
	34			10.6		
	80					
	5					
	17			14.8		
	30					
	11					
	17			13.6		
	23					
	11					
	33			9.3		
	49					
119.23		Light Gray SHALE				
130.08		Borehole continued with rock coring.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Page 2 of 2

Date 8/1/03

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6.7, 8.9-1.90-11.90-12.13.14 LOCATION .SEC., TWP., RING.

COUNTY Peoria & Tazewell CORING METHOD Double Barrel

STRUCT. NO. \_\_\_\_\_  
Station \_\_\_\_\_

BORING NO. K2MJ3-4  
Station 10+564  
Offset 16.00m RL CL  
Ground Surface Elev. 143.50 m

CORING BARREL TYPE & SIZE NWD4  
Core Diameter 52 mm  
Top of Rock Elev. 139.23 m  
Begin Core Elev. 139.00 m

DEPTH (m)	DEPTH (ft)	SOIL DESCRIPTION	UNCONSOLIDATED SOIL	MOISTURE (%)	UNCONFINED COMPRESSIVE STRENGTH (kPa)	REMARKS
139.00	1	Gray SHALE		9.8	72	moisture @ 4.42m
				7.8		moisture @ 4.80m
				8.7		moisture
				8.8		moisture
				8.3		moisture
	2			7.7	56	moisture
				7.8		moisture
				7.1		moisture
				7.8		moisture
				6.9		moisture
		.06m seam of Gray sandstone @ 7.28m		7.2		moisture
	3			8.3		moisture
				8.0		moisture
				8.0		moisture
				7.7		moisture
				8.1		moisture
				8.2		moisture
				7.8		moisture
	4	.03m seam of Gray sandstone @ 9.0m		6.8		moisture
				7.1		moisture
		Gray SANDSTONE		8.2		moisture

Color pictures of the cores No  
Cores will be stored for examination until \_\_\_\_\_  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

2/3/2005

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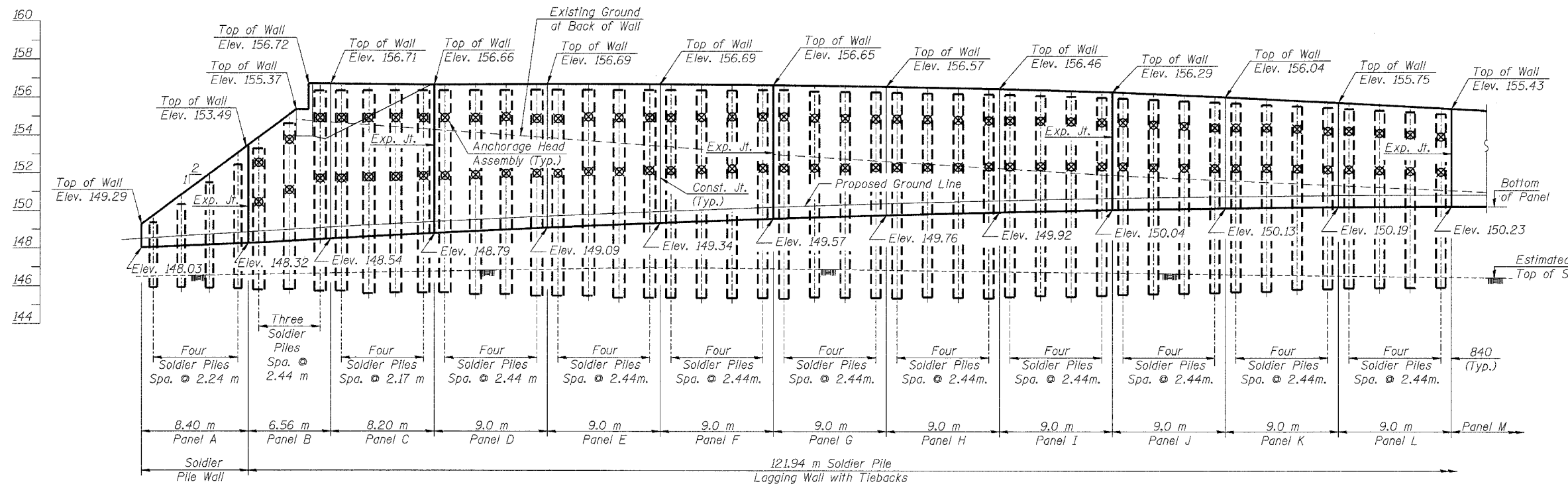
DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM

**alfred benesch & company**  
CONSULTING ENGINEERS  
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601  
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION  
RAMP K-2 OVER  
MAIN ST & RAMP J-3  
F.A.I. ROUTE 74 (I-74)  
SECTION 90-IIHB-5  
**SOIL BORING & ROCK CORE LOGS**  
K2MJ3-4  
SN: 090-0156  
TAZEWELL CO., IL.  
STA. 10+529.222  
DATE: 12-23-04

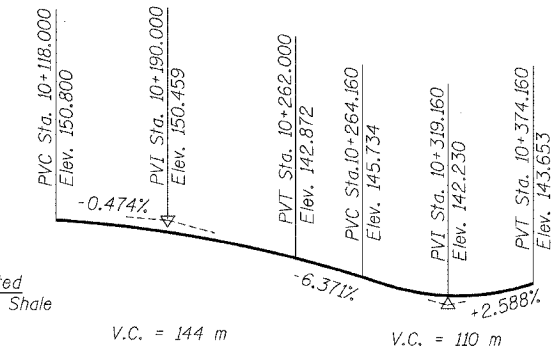
Bench Mark: Chisel '□' S.E. Corner Camp St., bridge parapet concrete wall state point TH 8905. Elev. 149.398

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 1
FAI 74	*	TAZEWELL	1366	602	21 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		
*90-11HB-5					

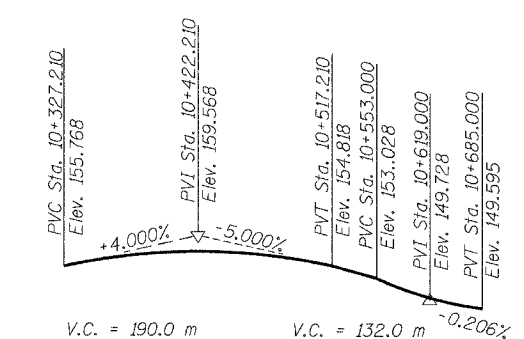


**ELEVATION**  
(Looking East)

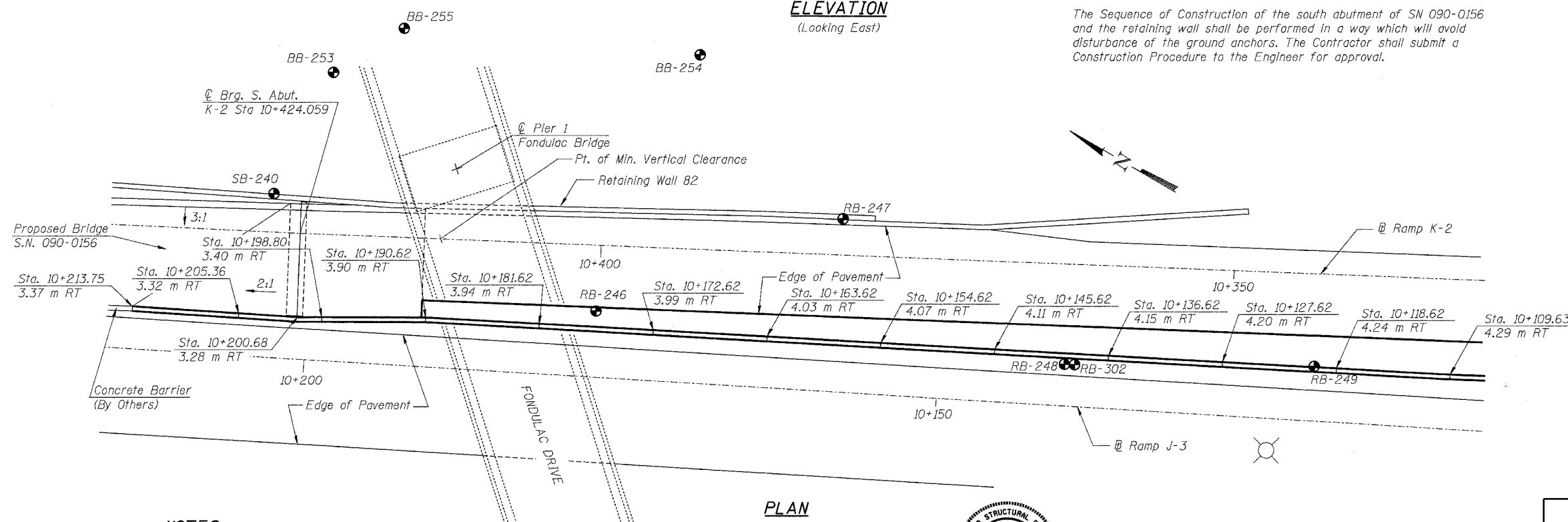
The Sequence of Construction of the south abutment of SN 090-0156 and the retaining wall shall be performed in a way which will avoid disturbance of the ground anchors. The Contractor shall submit a Construction Procedure to the Engineer for approval.



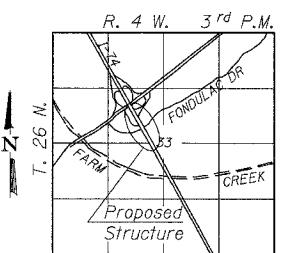
**PROFILE GRADE RAMP J-3**



**PROFILE GRADE RAMP K-2**



**PLAN**



**LOCATION SKETCH**

**NOTES**

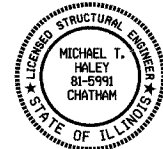
All dimensions are in millimeters (mm) except as noted.  
All retaining wall stations/offsets are off J-3 Baseline.

**DESIGN STRESSES**

- $f'_c = 24 \text{ MPa}$  (Concrete)
- $f'_g = 27.5 \text{ MPa}$  (Grout)
- $f_y = 400 \text{ MPa}$  (Reinf.)
- $f_y = 345 \text{ MPa}$  (Soldier Piles) (M270 M Grade 345)
- $f'_s = 1860 \text{ MPa}$  (15mm  $\phi$  Low Lax Strands)
- $f'_t = 1395 \text{ MPa}$  (15mm  $\phi$  Low Lax Strands)

**DESIGN SPECIFICATIONS**

1996 AASHTO Specifications  
with 1997, thru 2000 Interim



Michael T. Haley  
Licensed Structural Engineer  
State of Illinois No. 81-5991

12-20-04 Date

**LIN ENGINEERING, LTD.**  
20 W. Chestnut  
Chatham, Illinois 62629  
302-433-1488 FAX 302-433-0728  
Designed By: MTH Checked By: KFG Drawn By: JMD  
Date: 09/02 File: rd401-50000502.dgn

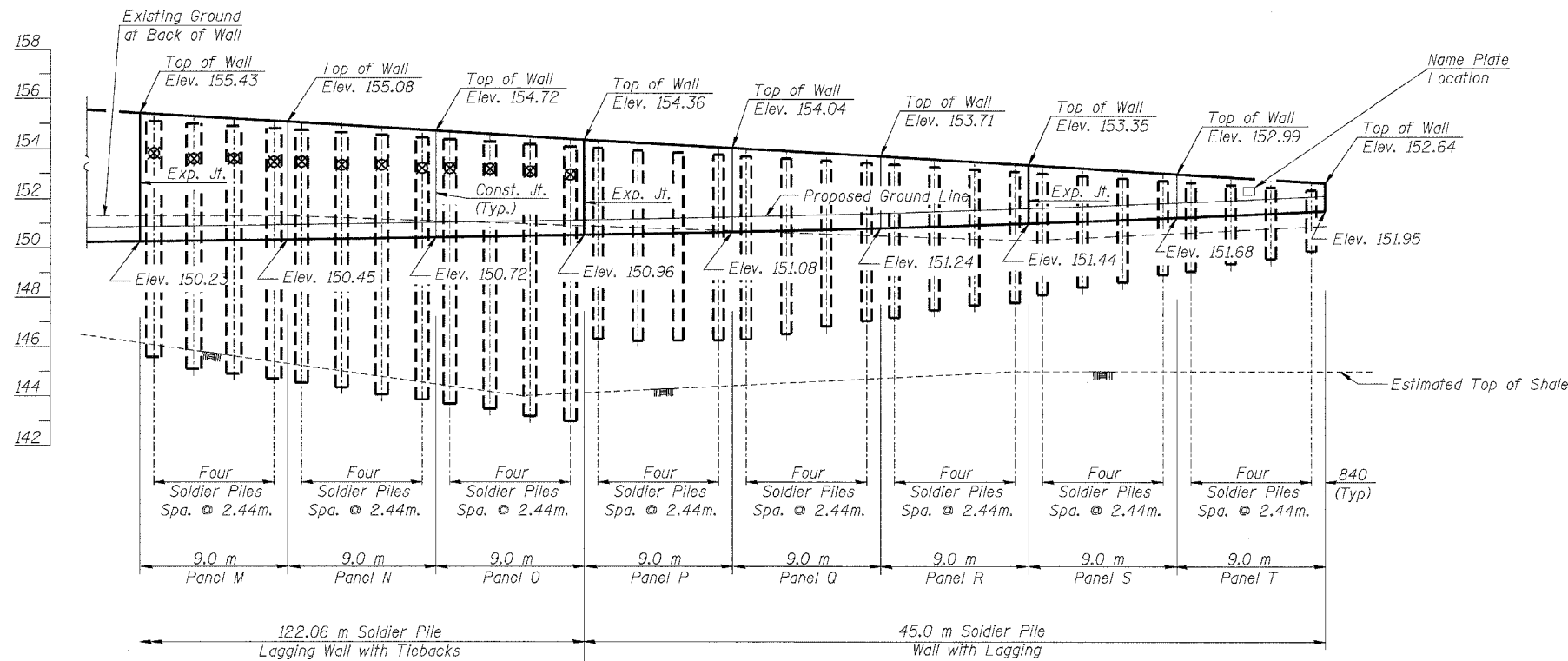
REVISIONS	
NO.	DESCRIPTION

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN AND ELEVATION**  
**RETAINING WALL 81**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP J-3 STATION 10+037 TO 10+213**  
**S.N. 090-8512**

ROUTE NO.	SECTION	COUNTY	SHEET	PAGE	SHEET NO. 2 21 SHEETS
FAI 74	*	TAZEWELL	1366	603	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		
*90-11HB-5					

**GENERAL NOTES**

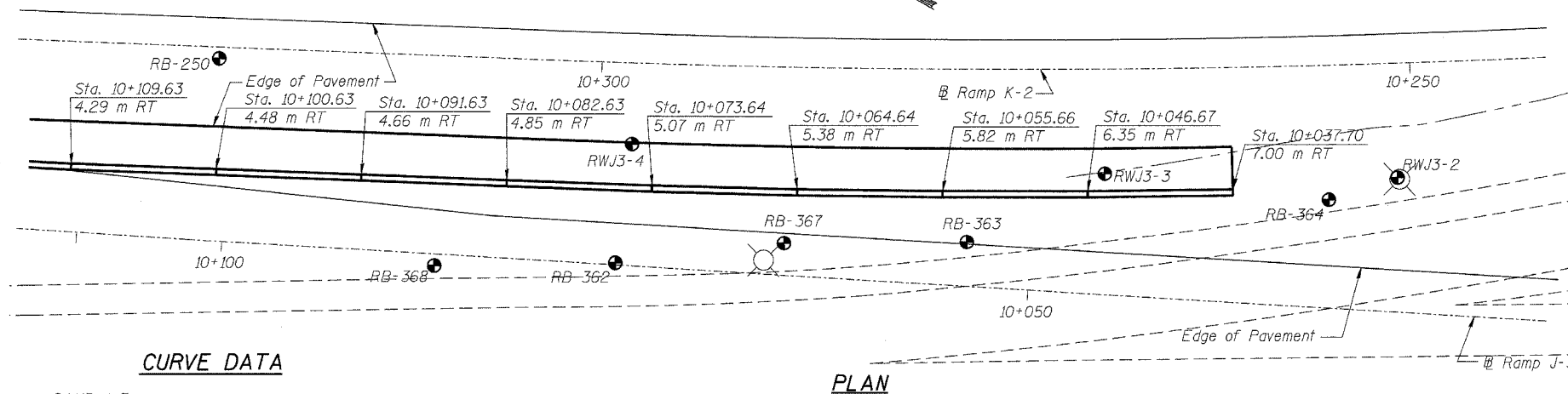
- Reinforcement Bars shall conform to the requirements of AASHTO M-31M, or M-322M Grade 400.
- See Special Provisions for installation and testing of Permanent Ground Anchors.
- Shear Studs shall be 19mm diameter x 200mm granular or Solid flux filled headed studs automatically end welded to the front flange in field.
- The geocomposite wall drain shall be constructed according to section 591 of the Standard Specifications. The contractor shall insure that the bottom, sides and the top edges are protected from soil entering or sealing the drain while placing the pervious fabric side of the drain toward the soil. Geocomposite wall drain shall be installed in stages as the excavation proceeds downward. Splicing should be minimized, following proper splice practices to insure no long term soil contamination.
- All dimensions are in millimeters (mm) except as noted.
- All Construction joints shall be bonded.



**ELEVATION**  
(Looking East)

**TOTAL BILL OF MATERIAL**

Item	Unit	Quantity
Untreated Timber Lagging	m <sup>2</sup>	633
Concrete Structures	m <sup>3</sup>	515.9
Reinforcement Bars, Epoxy Coated	kg	51550
Drilling & Setting Soldier Piles	m <sup>3</sup>	241.7
Permanent Ground Anchors	Each	98
Furnishing Soldier Piles (Built up section)	m	573.0
Furnishing Soldier Piles (W section)	m	131.3
Geocomposite Wall Drain	m <sup>2</sup>	364
French Drains	m <sup>3</sup>	16
Name Plates	Each	1
Stud Shear Connectors	Each	2686
Structure Excavation	m <sup>3</sup>	216
Form Liner Grid and Fin Surface	m <sup>2</sup>	585.3
Porous Granular Embankment	m <sup>3</sup>	1858



**PLAN**

**CURVE DATA**

RAMP J-3		RAMP K-2	
Δ = 6°05'48.00"		Δ = 7°58'57.09"	
R = 450.000 m			
T = 23.964 m		T = 40.469 m	
L = 47.883 m		L = 80.806 m	
E = 0.638 m		E = 1.410 m	
PC = 10+204.232		PC = 10+423.959	
PI = 10+228.196		PI = 10+481.535	
PT = 10+252.115		PT = 10+504.765	
SE = 6.2%		SE = 4.4%	

Transition In: 10+177 to 10+218      Transition In: 10+385 to 10+443  
 Transition out: 10+237 to 10+283      Transition out: 10+486 to 10+544

STATION 10+040  
 BUILT 200\_ BY  
 STATE OF ILLINOIS  
 FAI RTE 74  
 SECTION 90-11HB-5  
 STR. NO. 090-8512

**NAME PLATE**  
 See Std. 515001

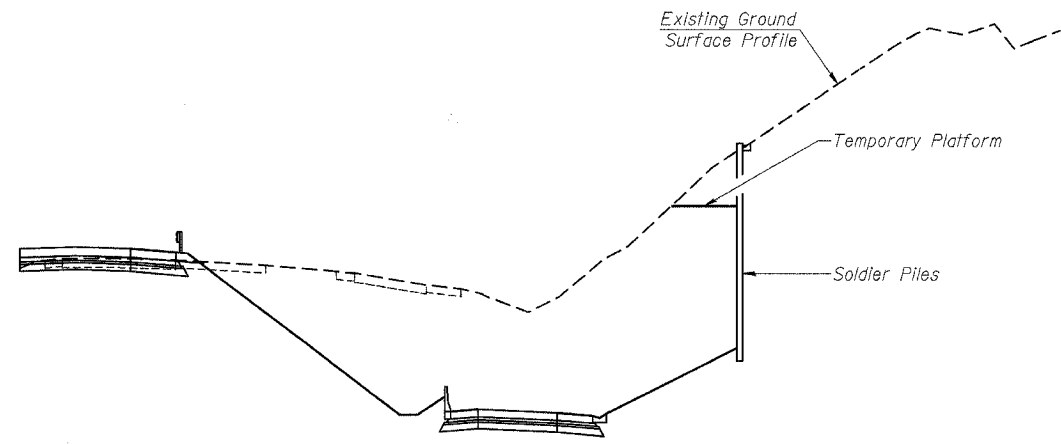
Note: All retaining wall stations/offsets are off J-3 Baseline.

**LIN ENGINEERING, LTD.**  
 20 E. Onehalf  
 Q771 483-488  
 Desiged By: MTH      Checked By: KRS      Drawn By: JMD  
 Date: 09/02      File: rp0402-50808512.dgn

REVISIONS	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN AND ELEVATION**  
**RETAINING WALL 81**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP J-3 STATION 10+037 TO 10+213**  
**S.N. 090-8512**

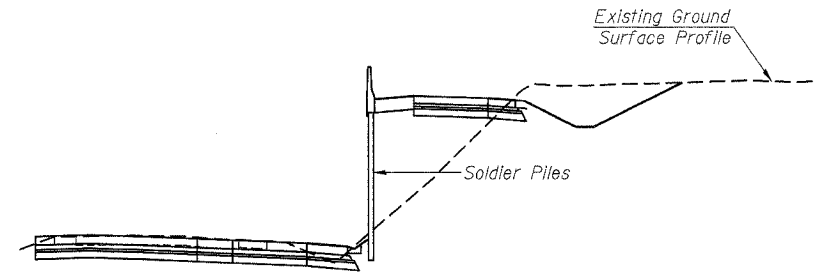
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	TAZEWELL	1366	604	21 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	*90-11HB-5		



**CROSS-SECTION**

**SUGGESTED METHOD OF CONSTRUCTION FOR CUT SITUATION**

1. Install three successive Soldier Piles in permanent locations in the shallow area starting at the south end (Panel T). See the Sequence of Construction.
2. Place timber lagging to an appropriate elevation for creating a temporary platform as shown above. The progressive end of the platform terminates with an embankment cone of the non-excavated area.
3. Use this platform to install the next two soldier piles & lagging.
4. Install first level of Permanent Ground Anchors where necessary as the platform construction progresses.
5. Repeat the above procedure to install all the soldier piles and until the temporary platform is continuous from one end to the other.
6. The remaining operations shall follow the Standard Construction Procedures for tieback walls for top down construction.



**CROSS-SECTION**

**SUGGESTED METHOD OF CONSTRUCTION FOR FILL SITUATION**

1. Install the soldier piles.
2. Backfill behind the wall and place lagging as required concurrently up to approximately midheight between the bottom level anchors and the top level anchors.
3. Install the bottom level of anchors.
4. Stress the bottom level ground anchors to a load that will not result in significant inward movement. This load may be less than the design lock off load.
5. Backfill behind the wall and place lagging as required concurrently up to a minimum of 1 m above the level of the top anchors.
6. Restress the bottom level anchors to the designed lock off load.
7. Install and temporarily stress the top level ground anchors.
8. Backfill and place lagging up to finished grade.
9. Restress the top level ground anchor to the designed lock-off load.

**SEQUENCE OF CONSTRUCTION**

1. Drill hole for soldier pile.
2. Remove loose material and excess water from hole and Set Soldier Pile in hole, using temporary bracing to maintain correct elevation, clearances, and position during and after placement of concrete.
3. Place Encasement Concrete around soldier pile to the level indicated in table on sheet 4 of 21. Place Controlled Low Strength Material (CLSM) concrete to the ground surface.
4. After concrete has cured, excavate in front of wall in stages removing only the soil and CSLM concrete necessary to place each timber lagging and the Geocomposite Wall Drain.
5. After lagging and Geocomposite Wall Drain placement has reached the elevations shown in Table on Sheet 4 of 21, install, test, and lock off Permanent Ground Anchor (see special provisions).
6. Continue the excavation for construction of French Drains and line trench with Geotechnical Filter Fabric.
7. Place the 100 φ perforated corrugated polyethylene (PE) tubing and connect the vertical geocomposite wall drain to the longitudinal French Drain and backfill as shown on the plans.
8. Construct wall panels.

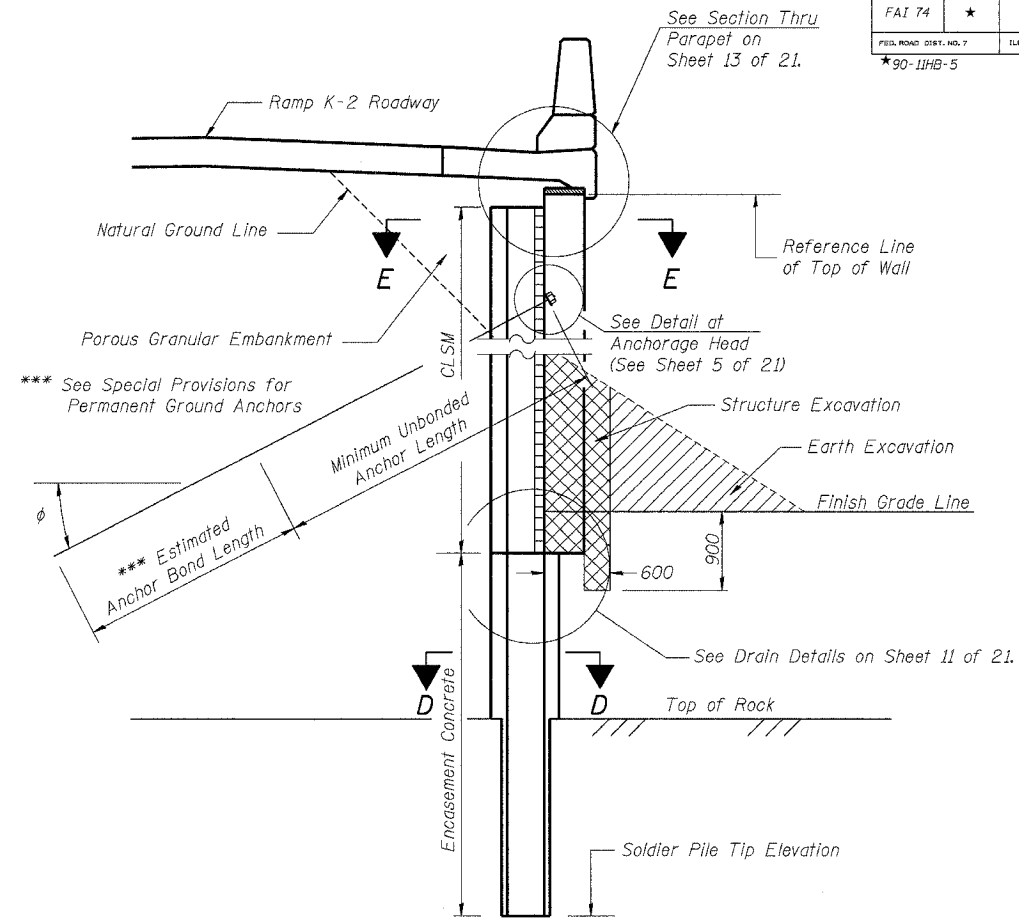
Notes: The Contractor shall submit a detailed Construction Procedure outlining the whole Sequence of Construction along with the computations to the Engineer for review and acceptance. The submitted documents shall be sealed by a Structural Engineer registered in State of Illinois.

REVISIONS	
NO.	NAME

**LIN ENGINEERING, LTD.**  
 20 W. CHESTNUT  
 CHICAGO, ILLINOIS 60629  
 (312) 483-4888  
 FAX (312) 483-4128  
 Designed By: MTH  
 Checked By: KPS  
 Drawn By: JMD  
 Date: 03/02  
 File: r20403-500208512.dgn

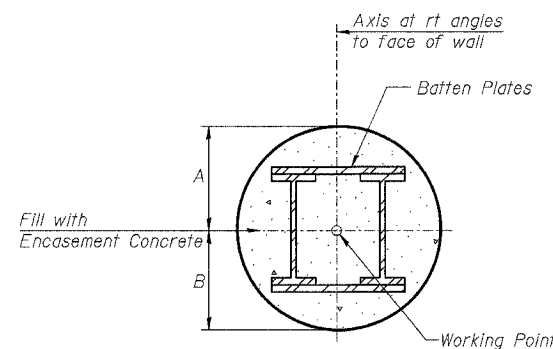
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SEQUENCE OF CONSTRUCTION**  
**RETAINING WALL 81**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP J-3 STATION 10+037 TO 10+213**  
**S.N. 090-8512**

Panel	Soldier Pile Designation	Station	Offset to Working Point	Pile Size	Top of Soldier Pile Elevation	Bottom of Soldier Pile Elevation	Top of Encasement Concrete Elevation	Estimated Length of Soldier Pile (m)	Diameter of Shaft Excavation (m)	Number of Shear Connectors
A	A1	10+212.93	3.523	W310x158	149.365	145.965	148.056	3.400	0.610	6
	A2	10+210.69	3.500	W310x158	150.535	145.935	148.056	4.600	0.610	10
	A3	10+208.47	3.513	W310x158	151.705	145.905	148.135	5.800	0.610	14
	A4	10+206.21	3.512	W310x158	152.875	145.875	148.213	7.000	0.610	18
B	B1	10+204.52	3.482	2-W250x80	153.715	145.815	148.292	7.900	0.914	40
	B2	10+202.08	3.466	2-W250x80	154.935	145.835	148.348	9.100	0.914	48
	B3	10+199.65	3.515	2-W250x80	156.349	145.749	148.430	10.600	0.914	56
C	C1	10+197.97	3.610	2-W250x80	156.351	145.751	148.512	10.600	0.914	56
	C2	10+195.80	3.732	2-W250x80	156.354	145.654	148.568	10.700	0.914	56
	C3	10+193.64	3.854	2-W250x80	156.356	145.656	148.633	10.700	0.914	56
	C4	10+191.47	3.977	2-W250x80	156.359	145.659	148.697	10.700	0.914	56
D	D1	10+189.78	4.045	2-W250x80	156.363	145.663	148.762	10.700	0.914	56
	D2	10+187.34	4.057	2-W250x80	156.371	145.571	148.818	10.800	0.914	56
	D3	10+184.90	4.068	2-W250x80	156.379	145.579	148.899	10.800	0.914	56
	D4	10+182.46	4.079	2-W250x80	156.387	145.487	148.981	10.900	0.914	56
E	E1	10+180.78	4.087	2-W250x80	156.390	145.490	149.062	10.900	0.914	52
	E2	10+178.34	4.099	2-W250x80	156.390	145.490	149.113	10.900	0.914	52
	E3	10+175.90	4.110	2-W250x80	156.390	145.390	149.181	11.000	0.914	52
	E4	10+173.46	4.121	2-W250x80	156.390	145.390	149.249	11.000	0.914	52
F	F1	10+171.78	4.125	2-W250x80	156.386	145.386	149.317	11.000	0.914	52
	F2	10+169.34	4.136	2-W250x80	156.375	145.375	149.361	11.000	0.914	52
	F3	10+166.90	4.147	2-W250x80	156.365	145.365	149.424	11.000	0.914	52
	F4	10+164.46	4.159	2-W250x49	156.354	145.354	149.486	11.000	0.762	52
G	G1	10+162.78	4.167	2-W250x49	156.343	145.343	149.549	11.000	0.762	52
	G2	10+160.34	4.178	2-W250x49	156.321	145.421	149.588	10.900	0.762	48
	G3	10+157.90	4.190	2-W250x49	156.299	145.399	149.639	10.900	0.762	48
	G4	10+155.46	4.201	2-W250x49	156.277	145.377	149.691	10.900	0.762	48
H	H1	10+153.78	4.209	2-W250x49	156.260	145.360	149.742	10.900	0.762	48
	H2	10+151.34	4.220	2-W250x49	156.230	145.430	149.775	10.800	0.762	48
	H3	10+148.90	4.232	2-W250x49	156.200	145.400	149.818	10.800	0.762	48
	H4	10+146.46	4.243	2-W250x49	156.170	145.370	149.862	10.800	0.762	48
I	I1	10+144.78	4.251	2-W250x49	156.144	145.444	149.905	10.700	0.762	48
	I2	10+142.34	4.262	2-W250x49	156.098	145.498	149.931	10.600	0.762	48
	I3	10+139.90	4.274	2-W250x49	156.052	145.452	149.964	10.600	0.762	44
	I4	10+137.46	4.285	2-W250x49	156.006	145.506	149.996	10.500	0.762	44
J	J1	10+135.78	4.293	2-W250x49	155.967	145.567	150.029	10.400	0.762	44
	J2	10+133.34	4.304	2-W250x49	155.899	145.599	150.048	10.300	0.762	44
	J3	10+130.90	4.316	2-W250x49	155.831	145.631	150.073	10.200	0.762	44
	J4	10+128.46	4.327	2-W250x49	155.763	145.663	150.073	10.100	0.762	44
K	K1	10+126.78	4.335	2-W250x49	155.713	145.713	150.122	10.000	0.762	44
	K2	10+124.34	4.346	2-W250x49	155.634	145.734	150.136	9.900	0.762	40
	K3	10+121.90	4.358	2-W250x49	155.556	145.856	150.152	9.700	0.762	40
	K4	10+119.46	4.369	2-W250x49	155.477	145.877	150.168	9.600	0.762	40
L	L1	10+117.78	4.378	2-W250x49	155.420	145.920	150.184	9.500	0.762	40
	L2	10+115.34	4.392	2-W250x49	155.334	145.934	150.194	9.400	0.762	40
	L3	10+112.90	4.406	2-W250x49	155.247	145.947	150.205	9.300	0.762	40
	L4	10+110.46	4.420	2-W250x49	155.161	145.961	150.215	9.200	0.762	36
M	M1	10+108.79	4.433	2-W250x80	155.097	145.597	150.226	9.500	0.914	36
	M2	10+106.35	4.497	2-W250x80	155.002	145.102	150.251	9.900	0.914	36
	M3	10+103.91	4.548	2-W250x80	154.907	144.907	150.310	10.000	0.914	36
	M4	10+101.47	4.598	2-W250x80	154.812	144.712	150.370	10.100	0.914	36
N	N1	10+099.79	4.628	2-W250x80	154.746	144.546	150.429	10.200	0.914	32
	N2	10+097.35	4.678	2-W250x80	154.649	144.349	150.475	10.300	0.914	32
	N3	10+094.91	4.728	2-W250x49	154.551	144.051	150.548	10.500	0.762	32
	N4	10+092.47	4.778	2-W250x49	154.453	143.853	150.622	10.600	0.762	32
O	O1	10+090.79	4.813	2-W250x49	154.386	143.686	150.695	10.700	0.762	28
	O2	10+088.35	4.864	2-W250x49	154.289	143.489	150.742	10.800	0.762	28
	O3	10+085.91	4.914	2-W250x49	154.191	143.191	150.807	11.000	0.762	28
	O4	10+083.47	4.965	2-W250x49	154.093	142.993	150.873	11.100	0.762	28
P	P1	10+081.80	5.031	W310x158	154.030	146.330	150.938	7.700	0.610	12
	P2	10+079.36	5.090	W310x158	153.943	146.243	150.971	7.700	0.610	12
	P3	10+076.92	5.149	W310x158	153.856	146.256	151.004	7.600	0.610	12
	P4	10+074.48	5.208	W310x158	153.770	146.270	151.036	7.500	0.610	12
Q	Q1	10+072.80	5.259	W310x158	153.709	146.309	151.069	7.400	0.610	12
	Q2	10+070.36	5.345	W310x158	153.620	146.520	151.095	7.100	0.610	10
	Q3	10+067.93	5.432	W310x158	153.530	146.830	151.138	6.700	0.610	10
	Q4	10+065.49	5.519	W310x158	153.441	147.041	151.182	6.400	0.610	10
R	R1	10+063.81	5.582	W310x158	153.376	147.176	151.225	6.200	0.610	10
	R2	10+061.38	5.699	W310x158	153.279	147.479	151.259	5.800	0.610	10
	R3	10+058.94	5.817	W310x158	153.181	147.681	151.313	5.500	0.610	8
	R4	10+056.50	5.935	W310x158	153.083	147.783	151.367	5.300	0.610	8
S	S1	10+054.83	5.992	W250x49	153.016	148.116	151.421	4.900	0.610	8
	S2	10+052.39	6.137	W250x49	152.919	148.419	151.462	4.500	0.610	8
	S3	10+049.95	6.282	W250x49	152.821	148.621	151.527	4.200	0.610	6
	S4	10+047.52	6.427	W250x49	152.723	148.923	151.593	3.800	0.610	6
T	T1	10+045.85	6.537	W250x49	152.657	149.057	151.658	3.600	0.610	6
	T2	10+043.41	6.712	W250x49	152.562	149.362	151.705	3.200	0.610	6
	T3	10+040.98	6.887	W250x49	152.467	149.567	151.778	2.900	0.610	6
	T4	10+038.54	7.062	W250x49	152.372	149.872	151.852	2.500	0.610	6



TYPICAL CROSS SECTION

Notes:  
 Hatched area indicates "Earth Excavation." Quantities are included with roadway plans. There shall be no excavation behind the wall.  
 The Timber Lagging shall be installed as the "Structure Excavation" proceeds down the wall.  
 If additional length is required, that length shall be added to the bottom of the pile and shall be paid for at the unit price bid for Furnishing Soldier Piles, with the cost of splicing being included in the unit price and the method of splicing approved by the Engineer.  
 Cross hatched area indicates Structure Excavation.  
 Soldier pile numbering increases from north to south.  
 For Section E-E, see sheet 11 of 21.



SECTION D-D

**LIN ENGINEERING, LTD.**  
 20 W. Chestnut  
 (217) 483-4888  
 Des Moines, Iowa 52828  
 Fax: (217) 483-4708  
 Designed By: MTH  
 Checked By: RRS  
 Date: 09/02  
 Drawn By: JMO  
 File: r2p0404-50208512.dgn

REVISIONS
NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SOLDIER PILES**  
**RETAINING WALL 81**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP J-3 STATION 10+037 TO 10+213**  
**STRUCTURE NUMBER 090-8512**

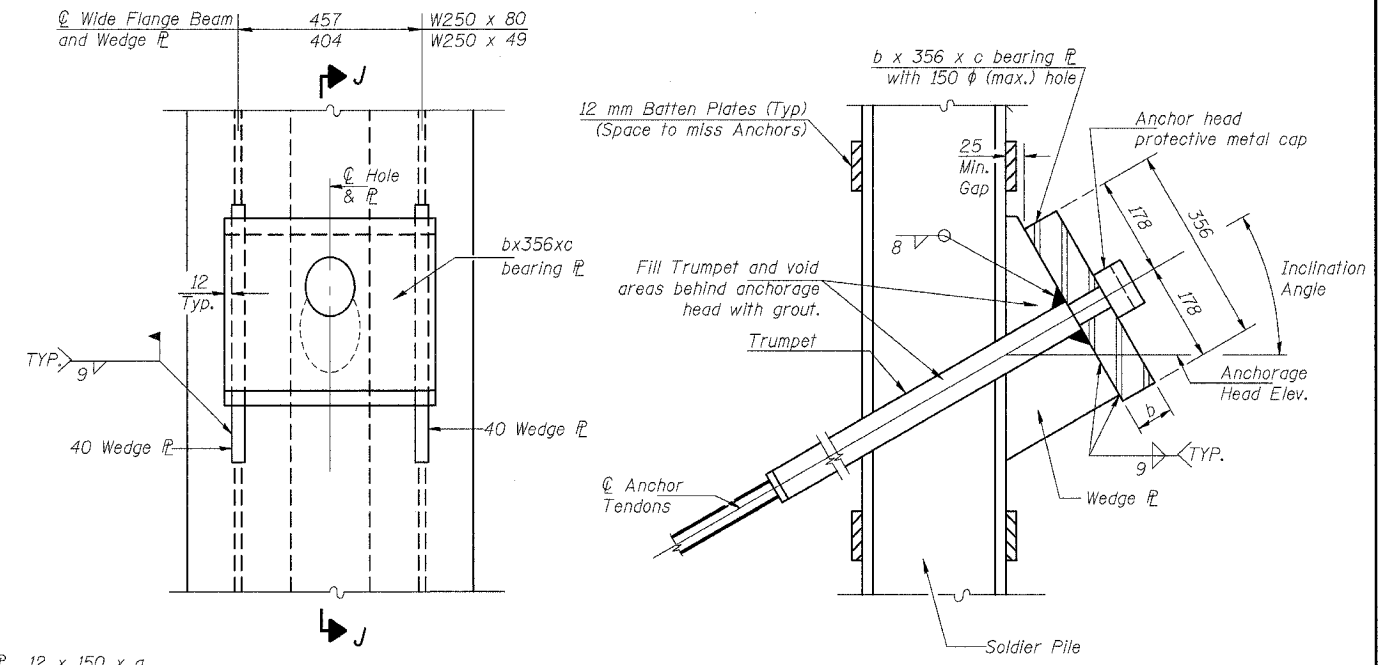
PERMANENT GROUND ANCHOR DATA

Table with columns: Soldier Pile Designation, Anchor Number, Anchor Head Elevation, Design Load (kN), Inclination\* Angle, \*\* # of Prestressing Strands, Minimum Anchor Unbonded Length (m), Estimated Anchor Bond \*\*\* Length (m). Rows include B1, B2, B3, C1, C2, C3, C4, D1, D2, D3, D4, E1, E2, E3, E4, F1, F2, F3, F4, G1, G2, G3, G4, H1, H2, H3, H4, I1, I2, I3, I4, J1, J2, J3, J4, K1, K2, K3, K4.

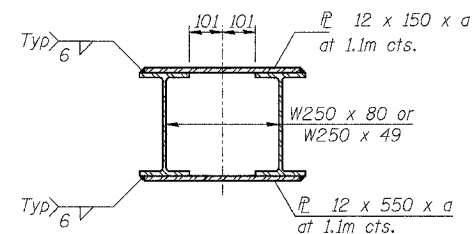
\* Measured from horizontal plane.

\*\* The prestressing steel tendon shall consist of the specified number of seven-wire strands (AASHTO M203M Grade 1860 No. 15) An alternate system using an equivalent High Strength Steel bar is allowed.

\*\*\* Estimated length only. The contractor shall determine the bonded length necessary to satisfy the test load requirements. The Anchor unbonded length may need to be increased to put the Anchor bonded region in a suitable soil.



ELEVATION ANCHOR HEAD DETAILS SECTION J - J



SOLDIER PILE DETAIL Cut plate in field if it interferes with rock anchor.

Table with columns: Pile Size, a, b, c. Rows: W250 x 49 (a=590, b=80, c=454), W250 x 80 (a=700, b=100, c=507).

PERMANENT GROUND ANCHOR DATA

Table with columns: Soldier Pile Designation, Anchor Number, Anchor Head Elevation, Design Load (kN), Inclination\* Angle, \*\*# of Prestressing Strands, Minimum Anchor Unbonded Length (m), Estimated Anchor Bond \*\*\* Length (m). Rows include L1, L2, L3, L4, M1, M2, M3, M4, N1, N2, N3, N4, O1, O2, O3, O4.

Notes: Anchorage Head, consisting of 2 wedge plates, and a bearing plate shall be shop fabricated. Any modifications to the details for the anchor bearing plate and wedge plates required to accommodate the anchor shall be submitted by the Contractor for the Engineer's approval. Cost included with "Permanent Ground Anchors". Cost of furnishing, fabricating, & attaching all structural steel is included with "Permanent Ground Anchors". Soldier pile numbering increases from north to south. Anchor number increases from top to bottom. Wall reinforcement may be moved to avoid conflict with the anchor head. Maintain 1" clearance between reinforcement and anchor head.

LIN ENGINEERING, LTD. 20 W. Chestnut, Chicago, Illinois 60629. (312) 483-4668. Fax: (312) 483-4706. Designed By: WTN, Checked By: KRP, Drawn By: JMD. Date: 09/02, File: rps0405-50088512.dwg

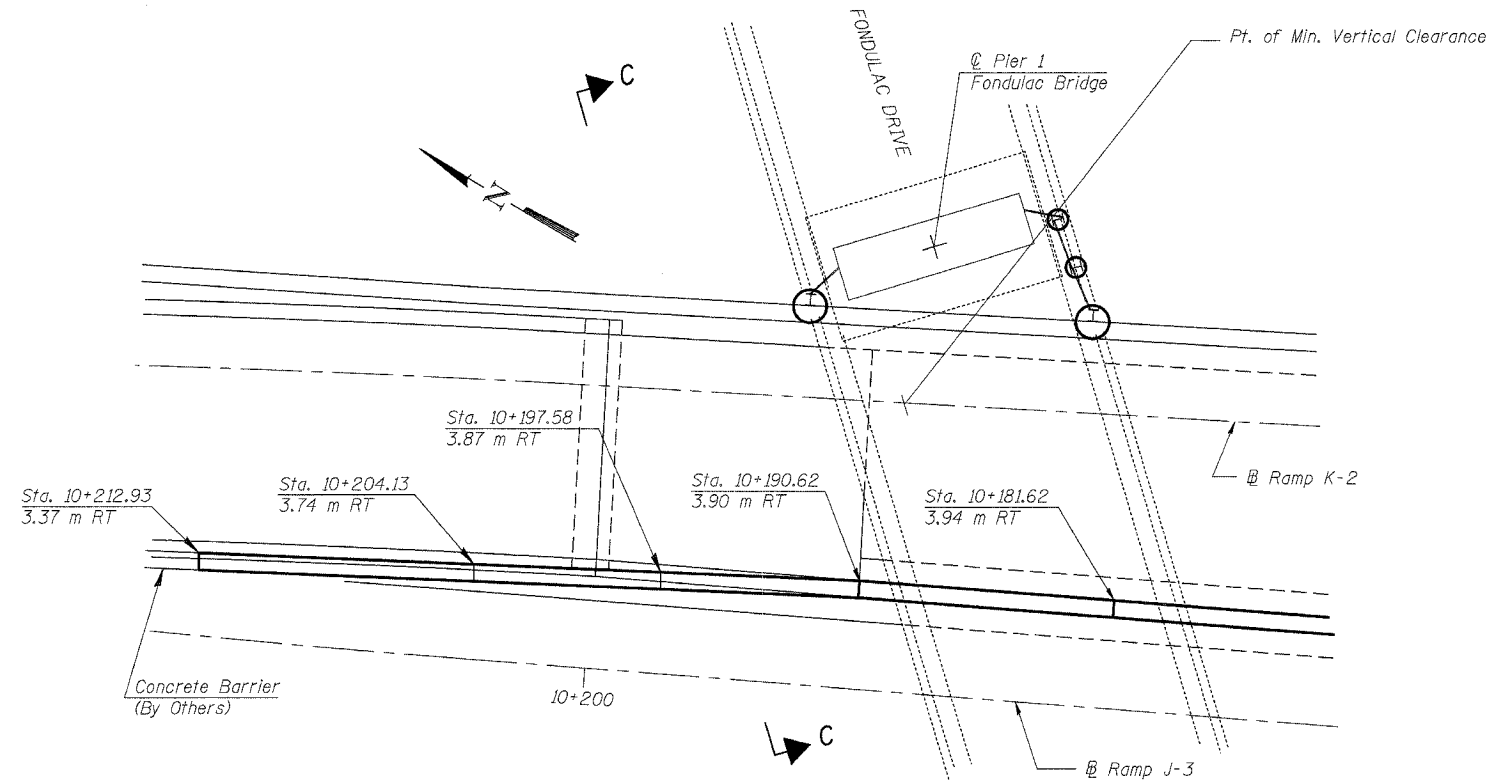
Table with columns: REVISIONS, NAME. Multiple empty rows for revisions.

ILLINOIS DEPARTMENT OF TRANSPORTATION GROUND ANCHOR DETAILS RETAINING WALL 81 F.A.I. RTE. 74 (I-74) SECTION 90-11HB-5 TAZEWELL COUNTY RAMP J-3 STATION 10+037 TO 10+213 STRUCTURE NUMBER 090-8512

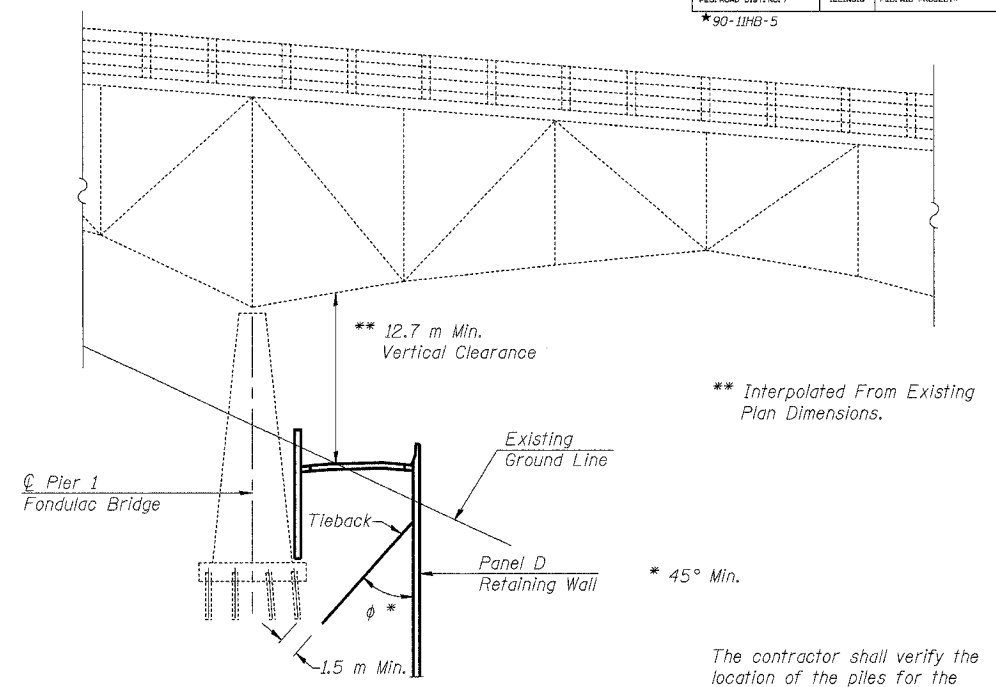
Table with columns: ROUTE NO., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., SHEET NO. Rows: FAI 74, TAZEWELL, 1766, 606, 21 SHEETS.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
FAT 74	*	TAZEWELL	1366	607	21 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

\*90-11HB-5



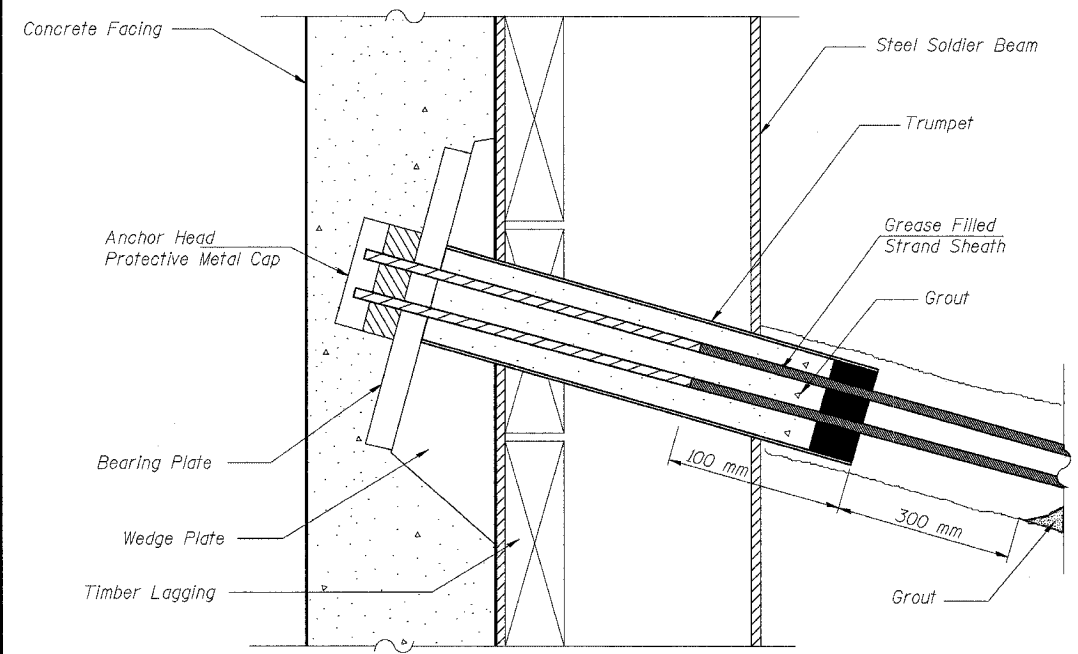
PLAN



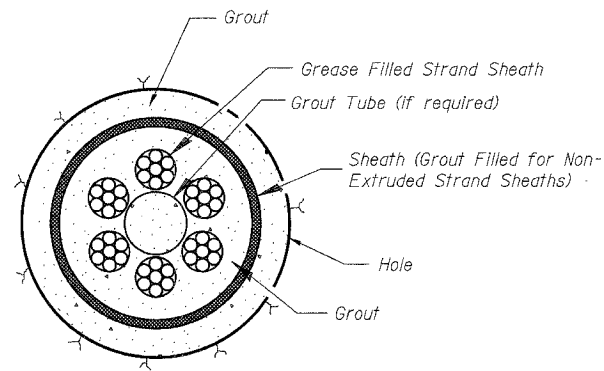
\*\* Interpolated From Existing Plan Dimensions.

The contractor shall verify the location of the piles for the existing pier and wall 82 prior to the installation of tiebacks.

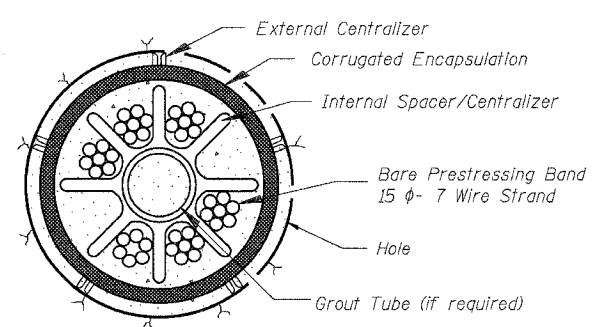
VIEW C-C



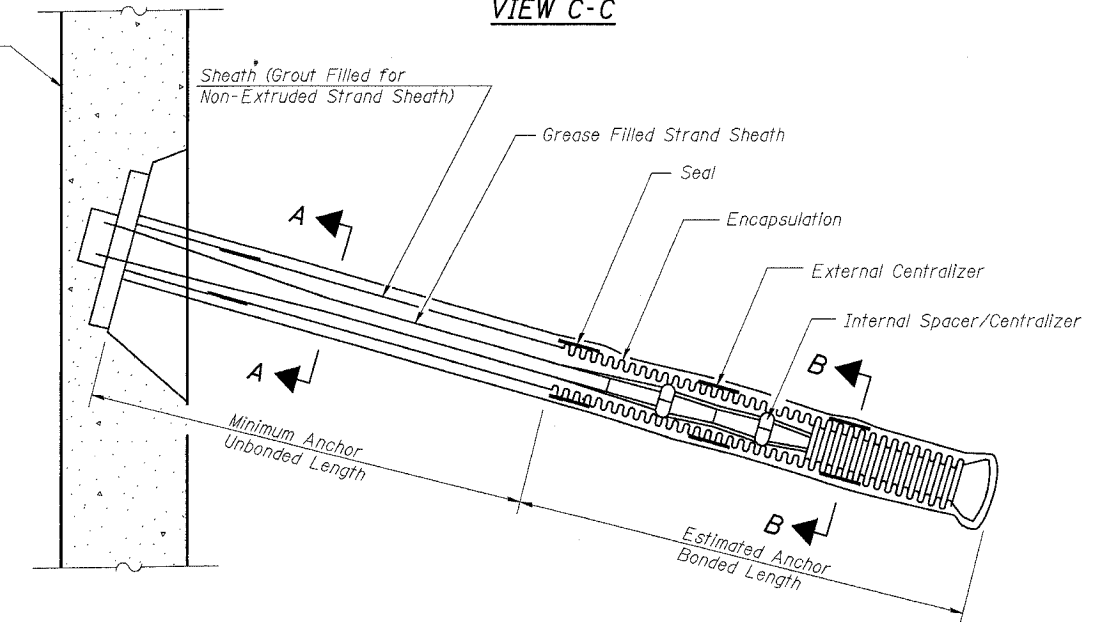
DETAIL AT ANCHORAGE HEAD



SECTION A-A



SECTION B-B



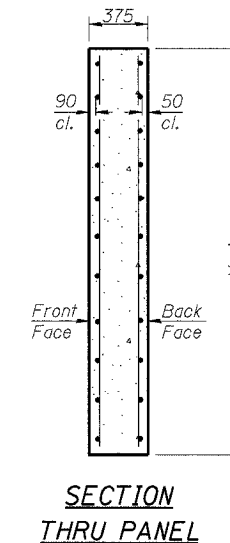
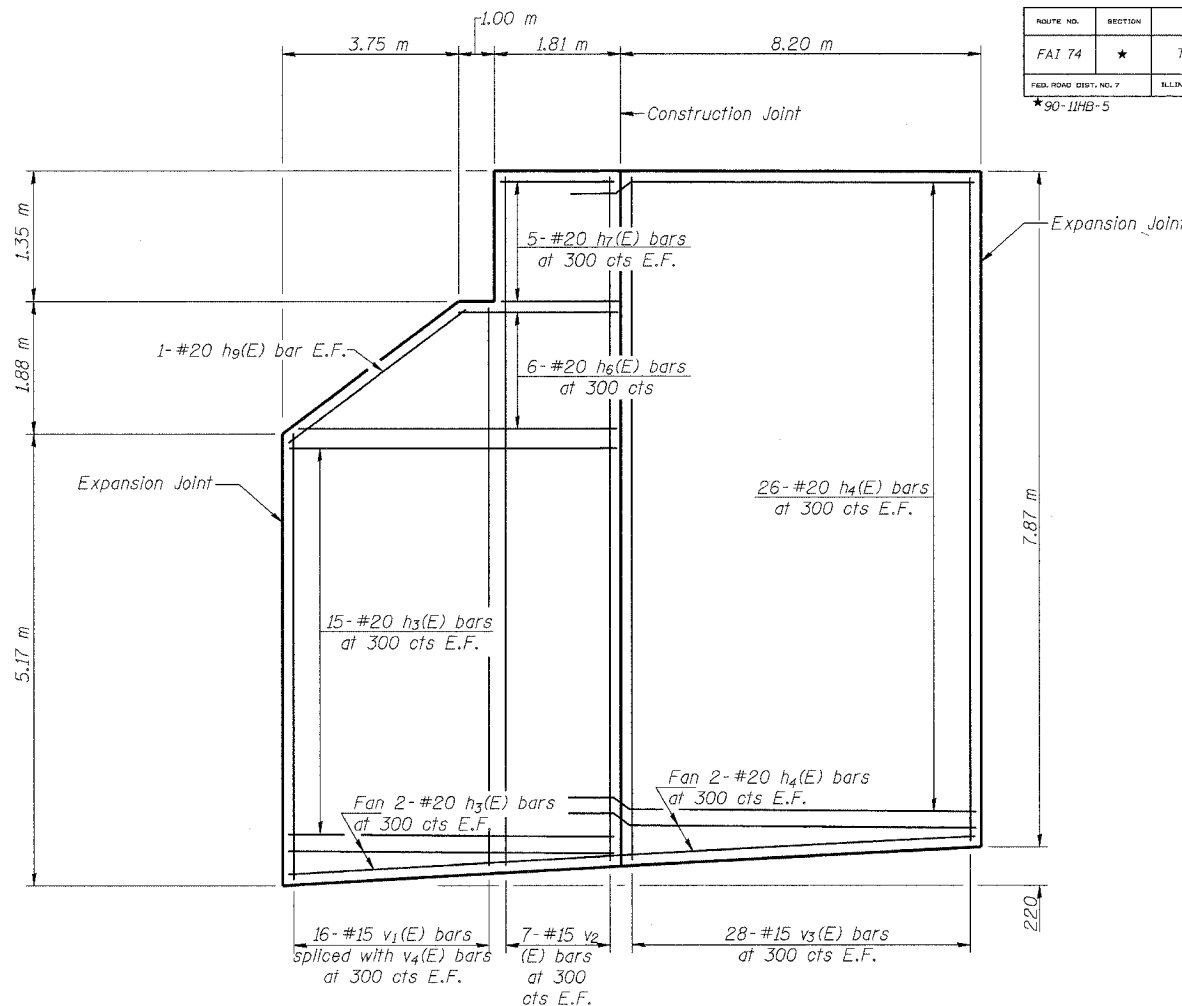
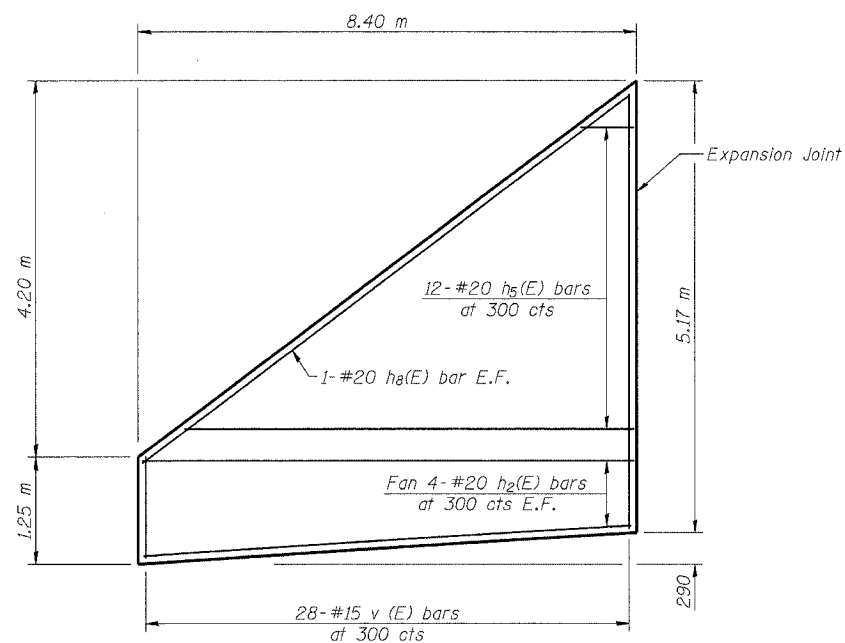
DETAIL OF CORROSION PROTECTION & TENDON DETAILS

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GROUND ANCHOR DETAIL**  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512

REVISIONS	
NAME	

**LIN ENGINEERING, LTD.**  
 200 N. Chestnut, Channahon, Illinois 63229  
 (815) 483-4668 FAX (815) 483-4706  
 Designed By: MTH Checked By: KRG Drawn By: JMO  
 Date: 09/02 File: 790406-50008512.dgn

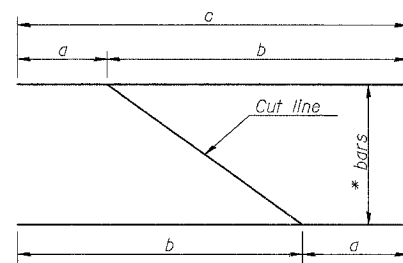
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
FAT 74	*	TAZEWELL	1366	608	21 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		
*90-11HB-5					



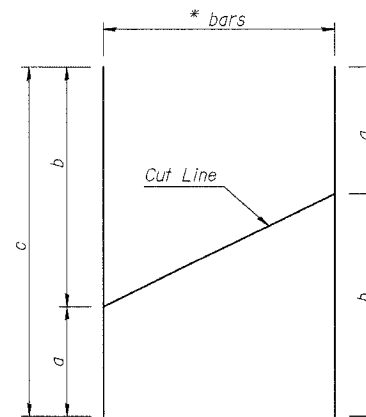
**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h <sub>2</sub> (E)	8	#20	8.24	—
h <sub>3</sub> (E)	34	#20	6.48	—
h <sub>4</sub> (E)	56	#20	8.94	—
h <sub>5</sub> (E)	12	#20	8.24	—
h <sub>6</sub> (E)	6	#20	9.21	—
h <sub>7</sub> (E)	10	#20	1.71	—
h <sub>8</sub> (E)	2	#20	9.14	—
h <sub>9</sub> (E)	2	#20	3.89	—
v(E)	28	#15	6.22	—
v <sub>1</sub> (E)	16	#15	3.24	—
v <sub>2</sub> (E)	14	#15	8.00	—
v <sub>3</sub> (E)	56	#15	7.80	—
v <sub>4</sub> (E)	32	#15	5.00	—
Concrete Structures		m <sup>3</sup>	51.7	
Reinforcement Bars, Epoxy Coated		kg	3790	

Reinforcement Bars designated (E) shall be epoxy coated. Bars indicated thus 1 x 2- #20 etc. indicates 1 line of bars with 2 lengths per line. The horizontal bars shall be bent at the joints to account for the nonlinear wall alignment. Cost included in "Reinforcement Bars, Epoxy Coated."



Bar	a	b	c	*
h <sub>5</sub> (E)	0.77	7.47	8.24	12
h <sub>6</sub> (E)	2.75	6.46	9.21	6



Bar	a	b	c	*
v(E)	1.15	5.07	6.22	28
v <sub>1</sub> (E)	0.84	2.40	3.24	16

**ELEVATION OF PANELS B & C**  
(Looking From Front of Wall)

E.F. indicates each face.

**MIN BAR LAP**  
#15 Bars = 640  
#20 Bars = 790

Note: Order bars full length. Cut bars as shown & use remainder on the other face of wall.

**LIN ENGINEERING, LTD.**

200 W. Chestnut  
Channahon, Illinois 62929  
CITY 483-4668 FAX 815-483-4706  
Designed By: MTH Checked By: KRJ Drawn By: JMD  
Date: 09/02 File: rps0407-500308012.dgn

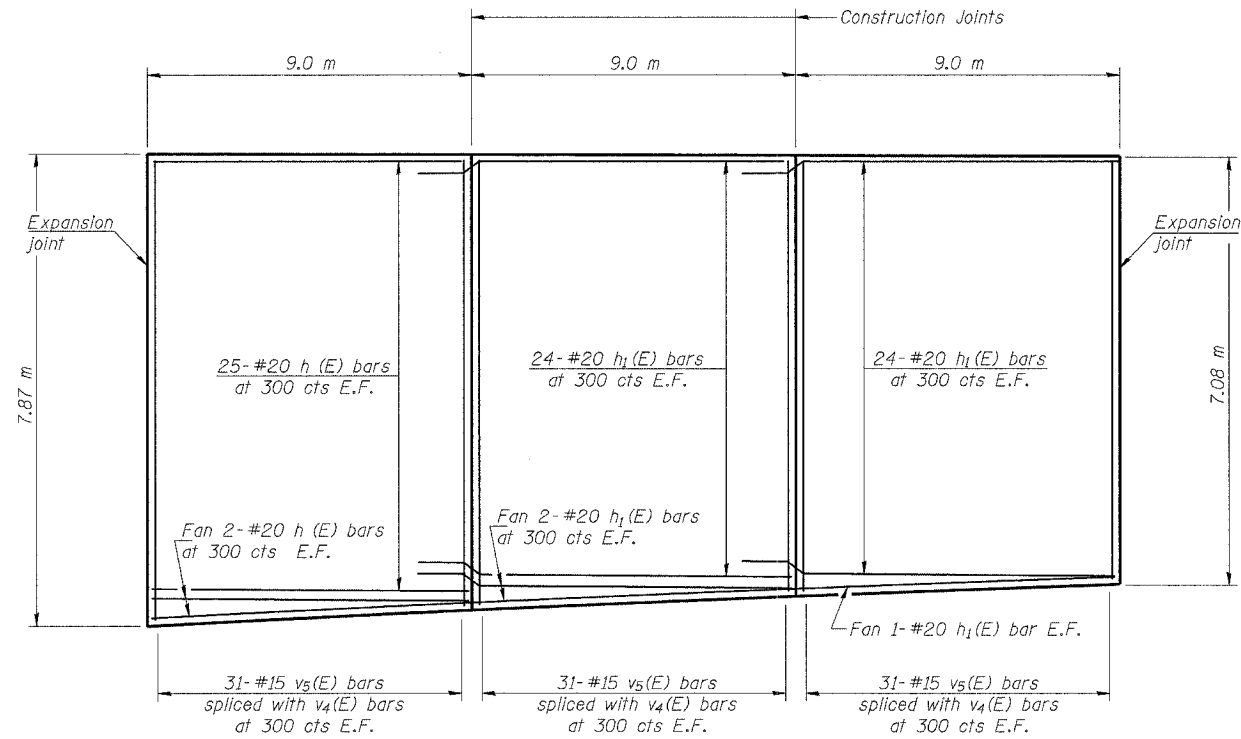
REVISIONS	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE FACING**  
**RETAINING WALL 81**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP J-3 STATION 10+037 TO 10+213**  
**S.N. 090-8512**

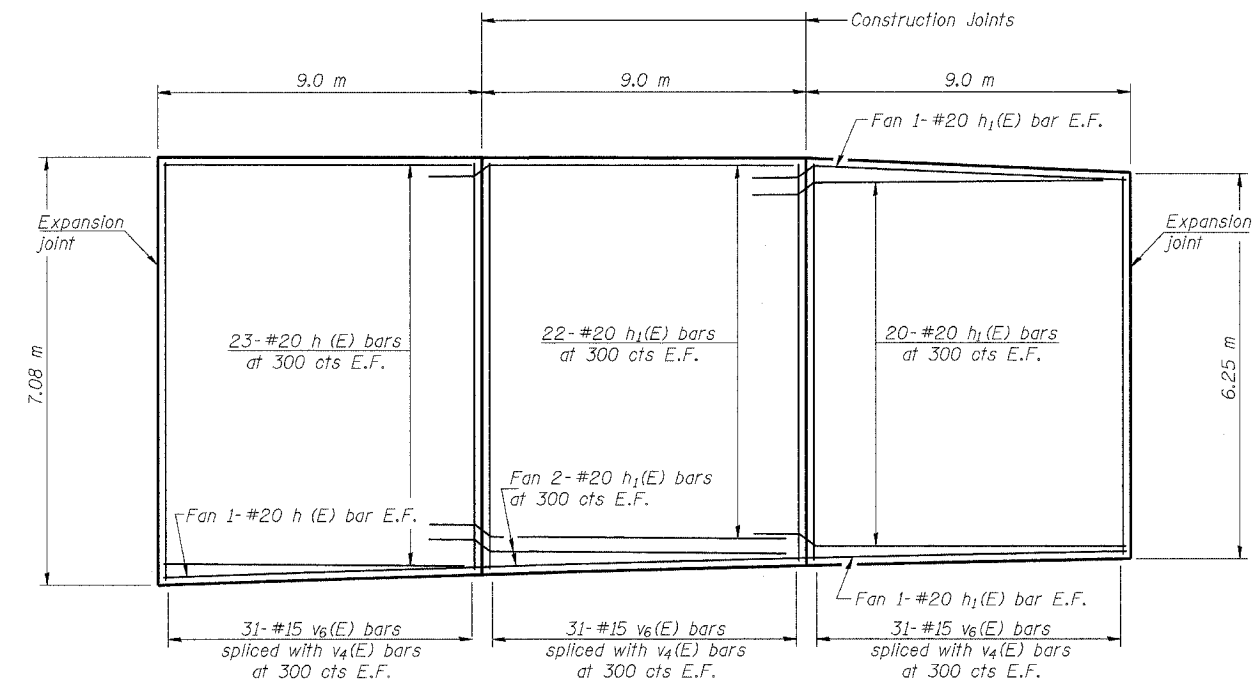


ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAI 74	*	TAZEWELL	1366	689
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
*90-11HB-5				

SHEET NO. 8  
21 SHEETS



**ELEVATION OF PANELS D TO F**  
(Looking From Front of Wall)

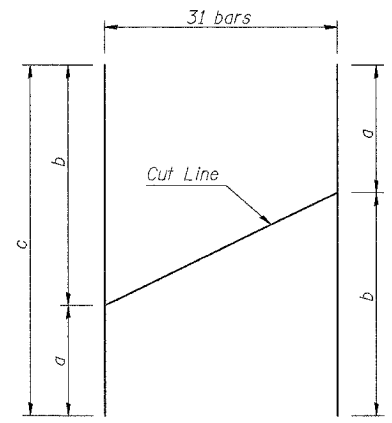


**ELEVATION OF PANELS G TO I**  
(Looking From Front of Wall)

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h(E)	102	#20	8.92	—
h <sub>1</sub> (E)	194	#20	9.79	—
v <sub>4</sub> (E)	372	#15	5.00	—
v <sub>5</sub> (E)	93	#15	6.51	—
v <sub>6</sub> (E)	93	#15	4.93	—
Concrete Structures		m <sup>3</sup>	142.1	
Reinforcement Bars, Epoxy Coated		kg	11210	

Reinforcement Bars designated (E) shall be epoxy coated. Bars indicated thus 1 x 2- #20 etc. indicates 1 line of bars with 2 lengths per line. The horizontal bars shall be bent at the joints to account for the nonlinear wall alignment. Cost included in "Reinforcement Bars, Epoxy Coated."



**BAR CUTTING DIAGRAM #15 BARS**  
(Length in meters)

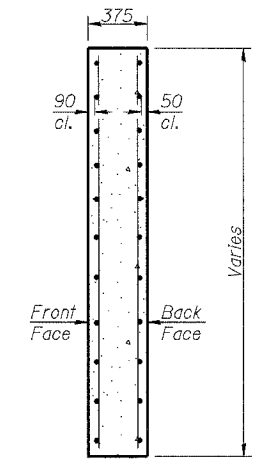
Bar	a	b	c
v <sub>5</sub> (E)	3.39	3.12	6.51
v <sub>6</sub> (E)	2.60	2.33	4.93

Note: Order bars full length. Cut bars as shown & use remainder on the other face of wall.

E.F. indicates each face.

**MIN BAR LAP**

#15 Bars= 640  
#20 Bars= 790

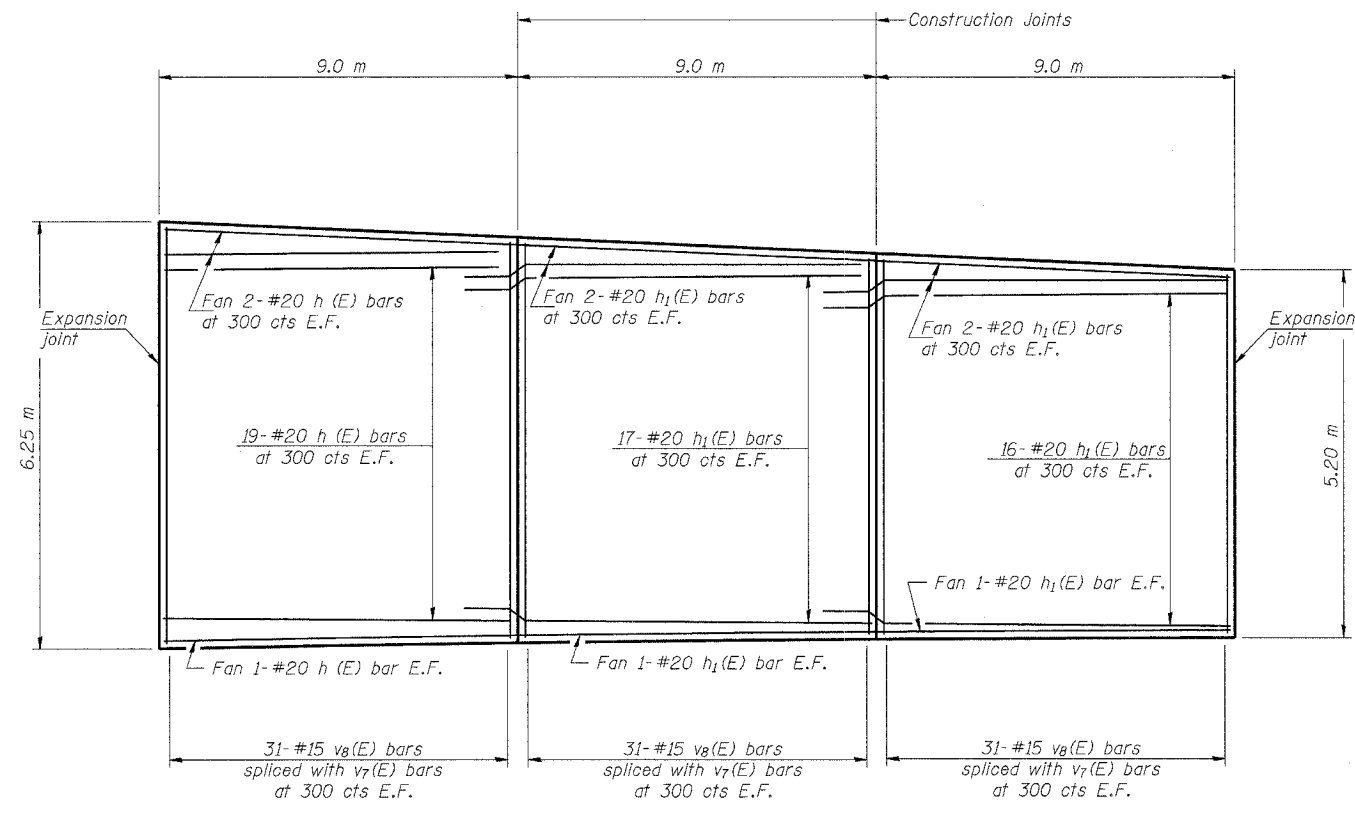


**SECTION THRU PANEL**

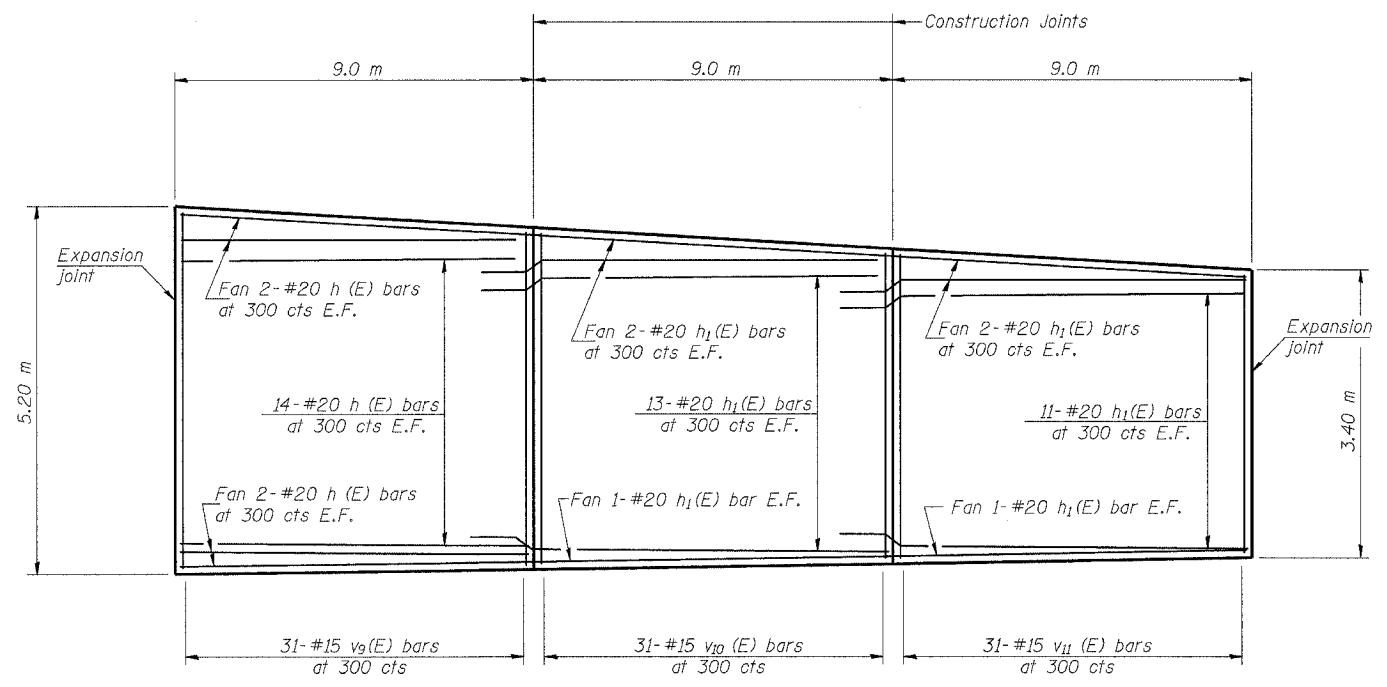
**LIN ENGINEERING, LTD.**  
20 N. Chestnut  
Dixon, Illinois 62629  
Tel: 618-454-4545  
Fax: 618-454-4700  
Designed By: MTH Checked By: KRG Drawn By: JMD  
Date: 05/02 File: r90408-560908512.dgn

REVISIONS	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE FACING**  
**RETAINING WALL 81**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP J-3 STATION 10+037 TO 10+213**  
**S.N. 090-8512**



**ELEVATION OF PANELS J TO L**  
(Looking From Front of Wall)



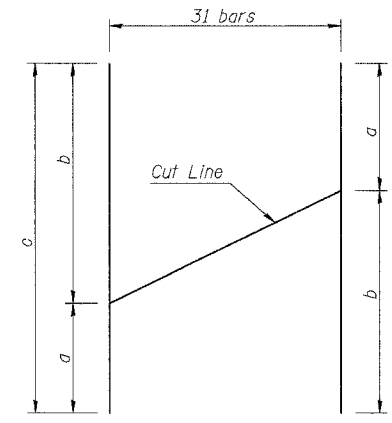
**ELEVATION OF PANELS M TO O**  
(Looking From Front of Wall)

E.F. Indicates each face.

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h(E)	80	#20	8.92	—
h <sub>1</sub> (E)	138	#20	9.79	—
v <sub>7</sub> (E)	186	#15	4.00	—
v <sub>8</sub> (E)	93	#15	5.20	—
v <sub>9</sub> (E)	31	#15	9.59	—
v <sub>10</sub> (E)	31	#15	8.39	—
v <sub>11</sub> (E)	31	#15	7.16	—
Concrete Structures		m <sup>3</sup>	100.9	
Reinforcement Bars, Epoxy Coated		kg	8020	

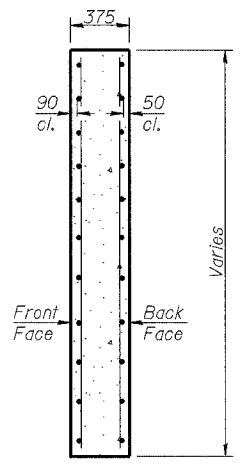
Reinforcement Bars designated (E) shall be epoxy coated. Bars indicated thus 1 x 2- #20 etc. indicates 1 line of bars with 2 lengths per line. The horizontal bars shall be bent at the joints to account for the nonlinear wall alignment. Cost included in "Reinforcement Bars, Epoxy Coated."



**BAR CUTTING DIAGRAM v(E) BARS**  
(Length in meters)

Bar	a	b	c
v <sub>8</sub> (E)	2.77	2.43	5.20
v <sub>9</sub> (E)	5.08	4.51	9.59
v <sub>10</sub> (E)	4.51	3.88	8.39
v <sub>11</sub> (E)	3.88	3.28	7.16

Note: Order bars full length. Cut bars as shown & use remainder on the other face of wall.



**SECTION THRU PANEL**

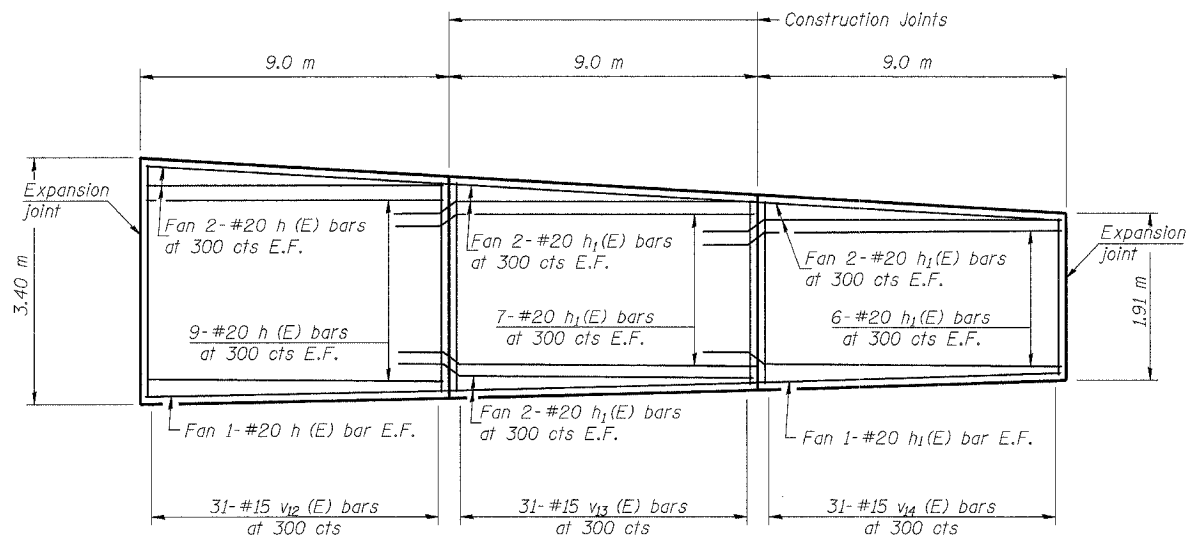
**MIN BAR LAP**  
#15 Bars= 640  
#20 Bars= 790

**LIN ENGINEERING, LTD.**  
20 W. Chestnut  
CITY 483-488  
Chicago, Illinois 60629  
FAX (773) 483-4706  
Designed By: MTH Checked By: KHS Drawn By: JMD  
Date: 09/02 File: r20409-5060852.dgn

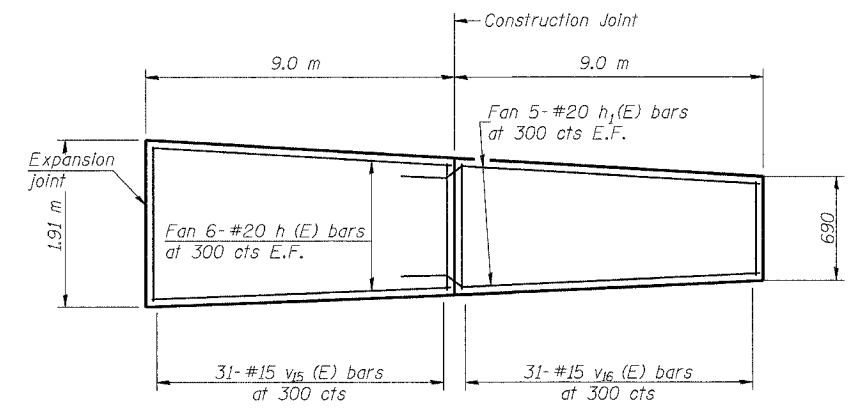
REVISIONS	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE FACING**  
**RETAINING WALL 81**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP J-3 STATION 10+037 TO 10+213**  
**S.N. 090-8512**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FAI 74	*	TAZEWELL	1366	611	21 SHEETS
FED. ROAD DIST. NO. 7	LLINER	FED. RD. PROJECT	*90-11HB-5		



**ELEVATION OF PANELS P TO R**  
(Looking From Front of Wall)



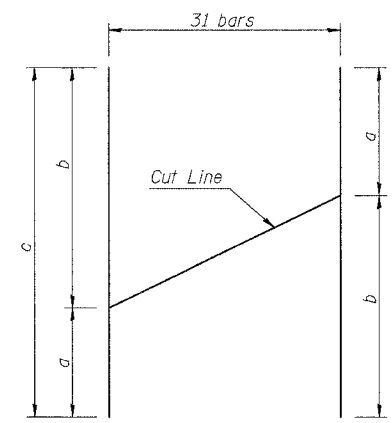
**ELEVATION OF PANELS S & T**  
(Looking From Front of Wall)

E.F. indicates each face.

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h(E)	36	#20	8.92	—
h1(E)	50	#20	9.79	—
v12(E)	31	#15	6.12	—
v13(E)	31	#15	5.19	—
v14(E)	31	#15	4.14	—
v15(E)	31	#15	2.98	—
v16(E)	31	#15	1.76	—
Concrete Structures		m <sup>3</sup>	35.8	
Reinforcement Bars, Epoxy Coated		kg	2900	

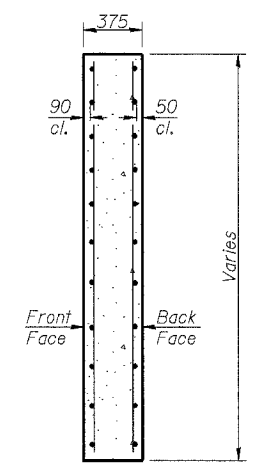
Reinforcement Bars designated (E) shall be epoxy coated. Bars indicated thus 1 x 2- #20 etc. Indicates 1 line of bars with 2 lengths per line. The horizontal bars shall be bent at the joints to account for the nonlinear wall alignment. Cost included in "Reinforcement Bars, Epoxy Coated."



**BAR CUTTING DIAGRAM v(E) BARS**  
(Length in meters)

Bar	a	b	c
v12(E)	3.28	2.84	6.12
v13(E)	2.84	2.35	5.19
v14(E)	2.35	1.79	4.14
v15(E)	1.79	1.19	2.98
v16(E)	1.19	0.57	1.76

Note: Order bars full length. Cut bars as shown & use remainder on the other face of wall.



**SECTION THRU PANEL**

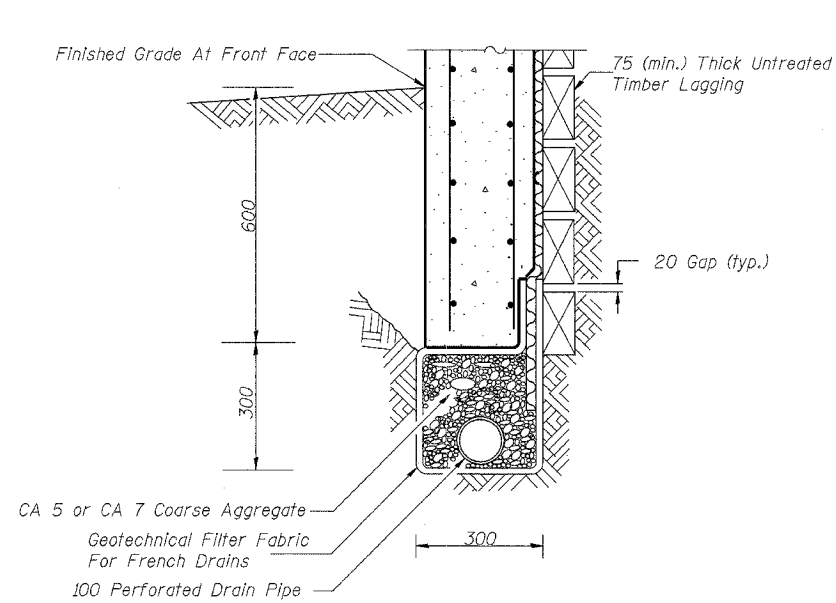
**MIN BAR LAP**  
#15 Bars= 640  
#20 Bars= 790

REVISIONS	NAME

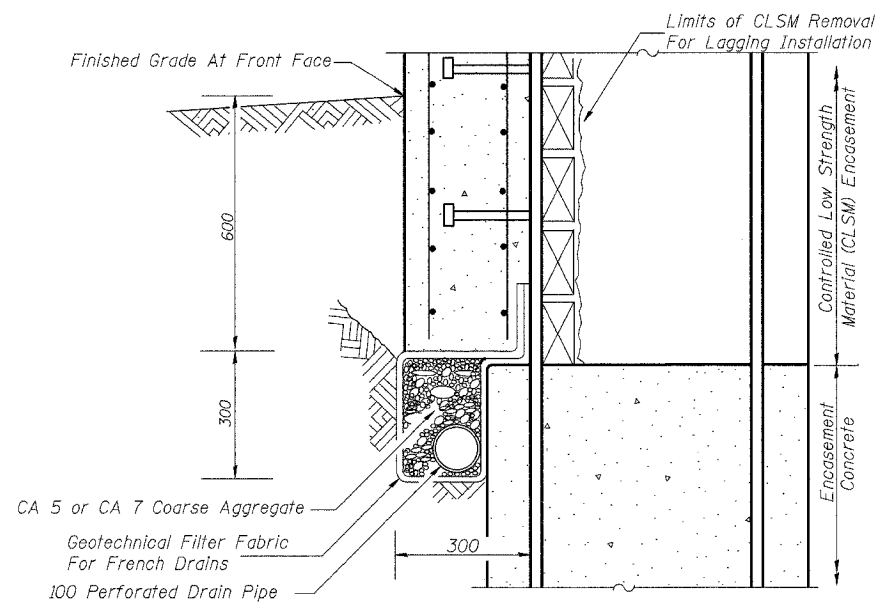
**LIN ENGINEERING, LTD.**  
20 W. Chestnut  
Ottawa, Illinois 62429  
Tel: 618-483-4888 Fax: 618-483-4706  
Designed By: MTH Checked By: KRS Drawn By: JMD  
Date: 05/02 File: r20402-50908512.dgn

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE FACING**  
RETAINING WALL 81  
F.A.I. RTE. 74 (I-74)  
SECTION 90-11HB-5  
TAZEWELL COUNTY  
RAMP J-3 STATION 10+037 TO 10+213  
S.N. 090-8512

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	TAZEWELL	13/16	6/2	21 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. ROAD PROJECT		
*90-11HB-5					



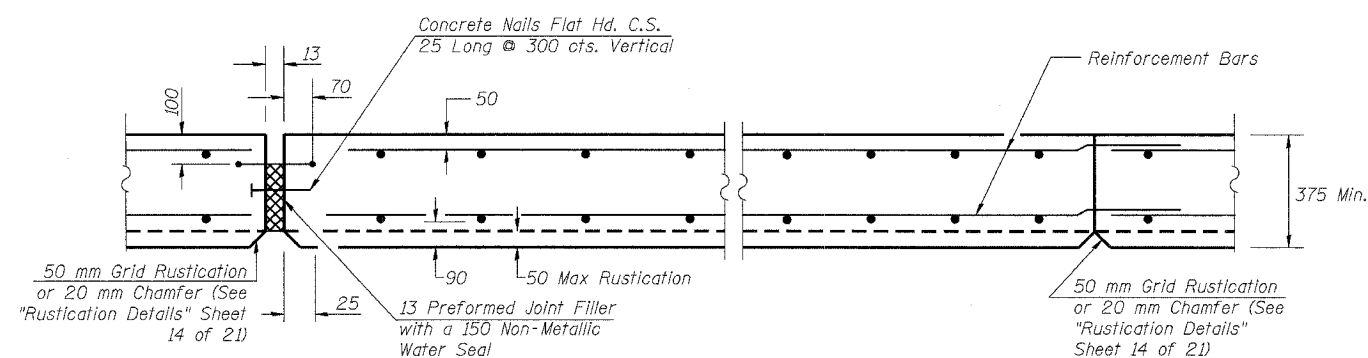
BETWEEN SOLDIER PILES



AT SOLDIER PILES

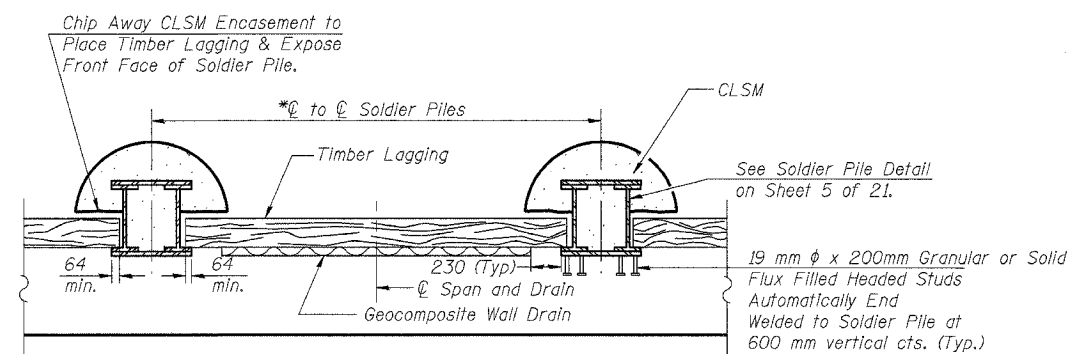
FRENCH DRAIN DETAIL

The French Drain installation shall follow Section 601 of the Standard Specifications except that the trench backfill shall consist of CA-5 or CA-7 coarse aggregate. The trench shall be lined with geotechnical fabric for French Drains and have a 100 mm diameter drain pipe located near the base of the excavation. The cost of the geotechnical fabric and drain pipe is included with the pay item French Drains.



EXPANSION JOINT

CONSTRUCTION JOINT



SECTION E-E

\* The Contractor is Responsible for the Design and Performance of the Temporary Lagging Using No Less than a 75 mm Rough-Sawn Lagging Thickness and Minimum fb = 7 MPa.

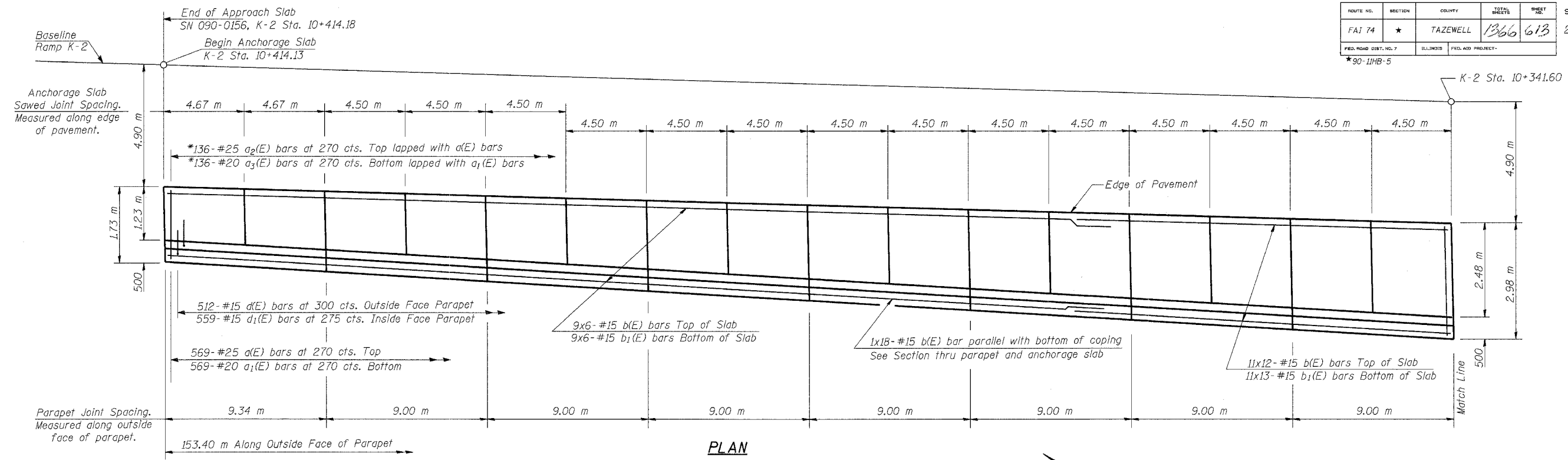
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MISCELLANEOUS DETAILS**  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512

**LIN ENGINEERING, LTD.**

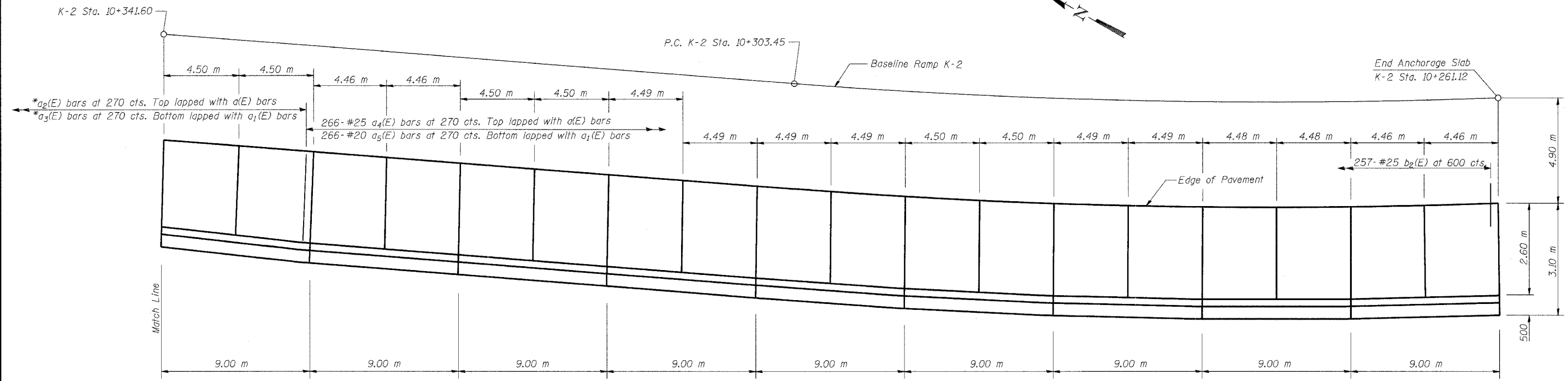
20 N. Chestnut  
 Channahon, Illinois 62629  
 (815) 483-4838  
 FAX (815) 483-4706  
 Designed By: MTH  
 Checked By: KRD  
 Drawn By: JMD  
 Date: 09/02  
 File: rp0411-500908512.dgn

REVISIONS	NAME

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
FAI 74	*	TAZEWELL	1366	613	21 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		
*90-11HB-5					



PLAN



PLAN

\* Cut  $a_2(E)$  and  $a_3(E)$  bars to fit first half of designated length and use remainder in second half.

**MIN. BAR LAP**  
 #15 = 510  
 #20 = 640  
 #25 = 1,060 m

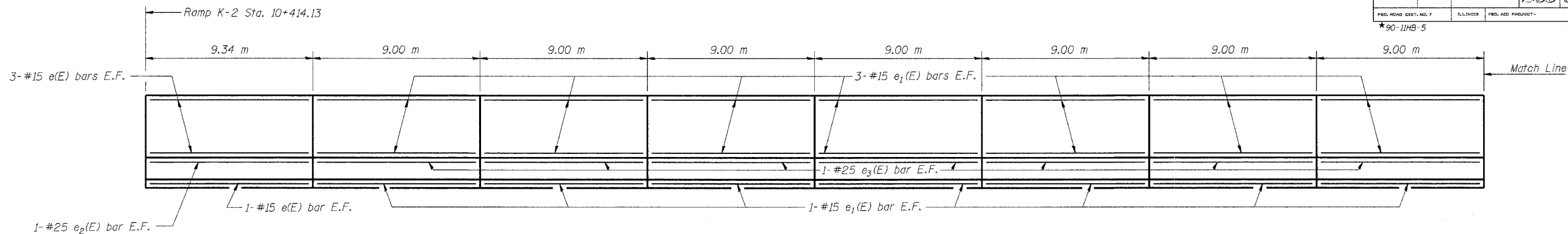
Reinforcement Bars designated (E) shall be epoxy coated.  
 Bars indicated thus 9x6-#15 etc. indicates 9 lines of bars with 6 lengths per line.  
 Work this sheet with Sheet 13 of 21.

**LIN ENGINEERING, LTD.**  
 20 W. Chestnut  
 Channahon, Illinois 62629  
 (815) 483-4668 FAX (815) 483-4706  
 Designed By: MFW Checked By: PBL Drawn By: JMD  
 Date: 05/04 File: r90412-50008512.dgn

REVISIONS	
NO.	NAME

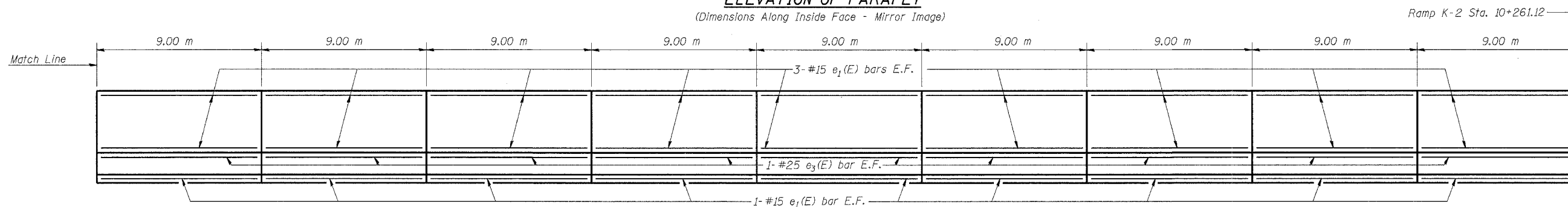
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**PARAPET & ANCHORAGE SLAB DETAILS**  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512

ROUTE NO.	SECTION	COUNTY	TOWNSHIP	SHEET	SHEET NO. 13 21 SHEETS
FAI 74	*	TAZEWELL	1866	614	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		
*90-11HB-5					



**ELEVATION OF PARAPET**

(Dimensions Along Inside Face - Mirror Image)

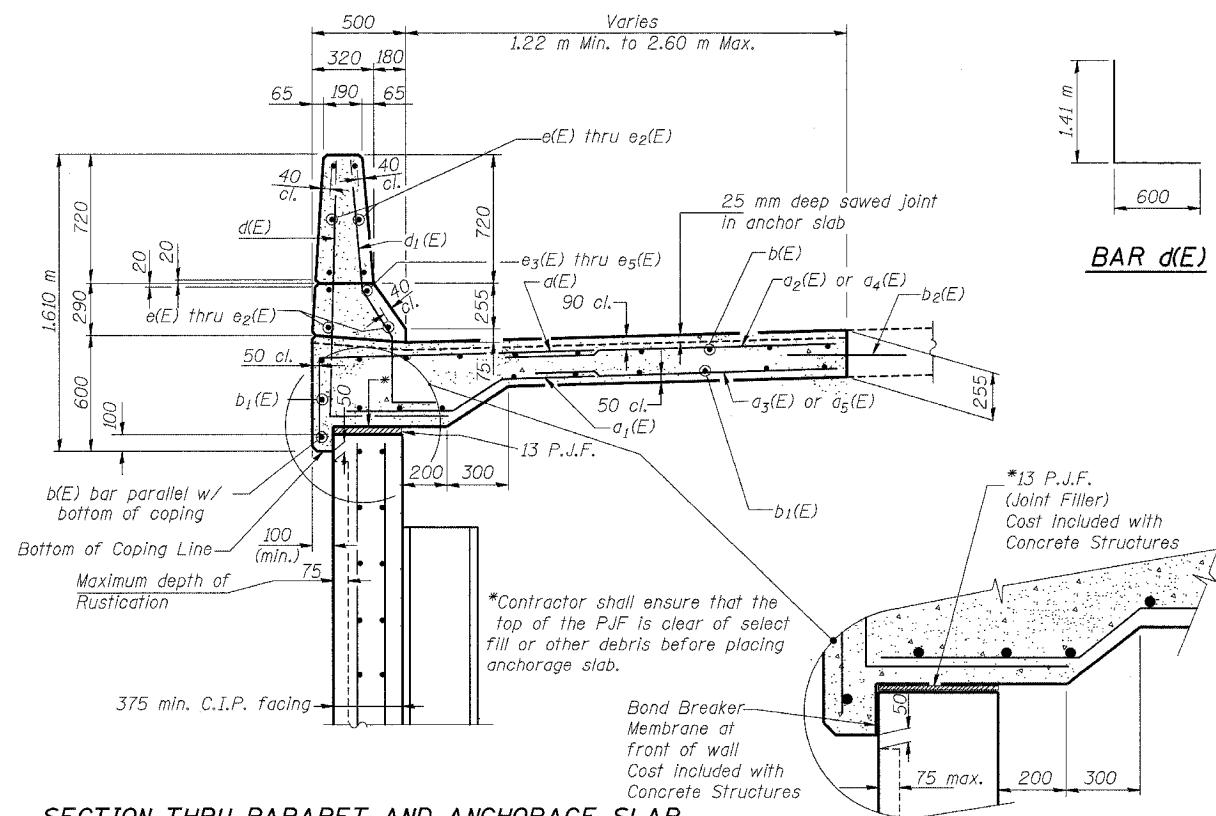


**ELEVATION OF PARAPET**

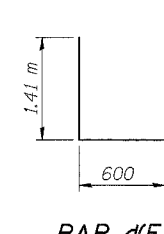
(Dimensions Along Inside Face - Mirror Image)

**BILL OF MATERIAL**

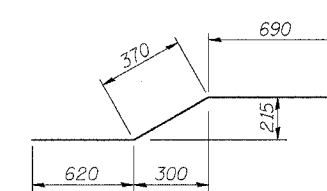
Bar	No.	Size	Length (m)	Shape
a(E)	569	#25	2.05	
a1(E)	569	#20	1.68	
a2(E)	136	#25	3.50	
a3(E)	136	#20	2.66	
a4(E)	266	#25	2.44	
a5(E)	266	#20	2.02	
b(E)	204	#15	9.01	
b1(E)	197	#15	8.56	
b2(E)	257	#25	0.60	
d(E)	512	#15	2.01	
d1(E)	559	#15	1.60	
e(E)	8	#15	9.26	
e1(E)	128	#15	8.92	
e2(E)	2	#25	9.26	
e3(E)	32	#25	8.92	
Concrete Structures		m <sup>3</sup>	183.2	
Reinforcement Bars, Epoxy Coated		kg	25630	



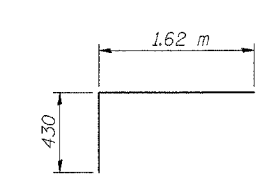
**SECTION THRU PARAPET AND ANCHORAGE SLAB**



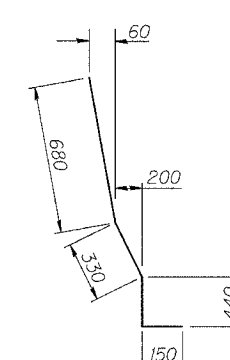
**BAR d(E)**



**BAR a1(E)**

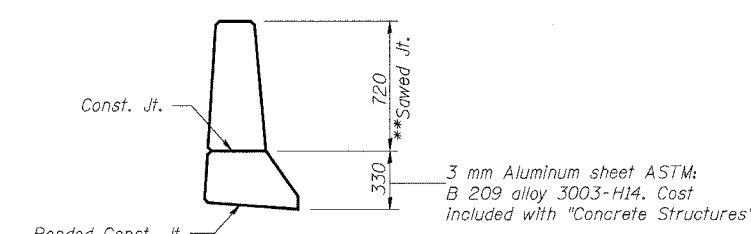


**BAR a(E)**



**BAR d1(E)**

\*\*Saw cut completely through the parapet down to aluminum Sheet. Cost included with Concrete Structures.



**PARAPET JOINT DETAIL**

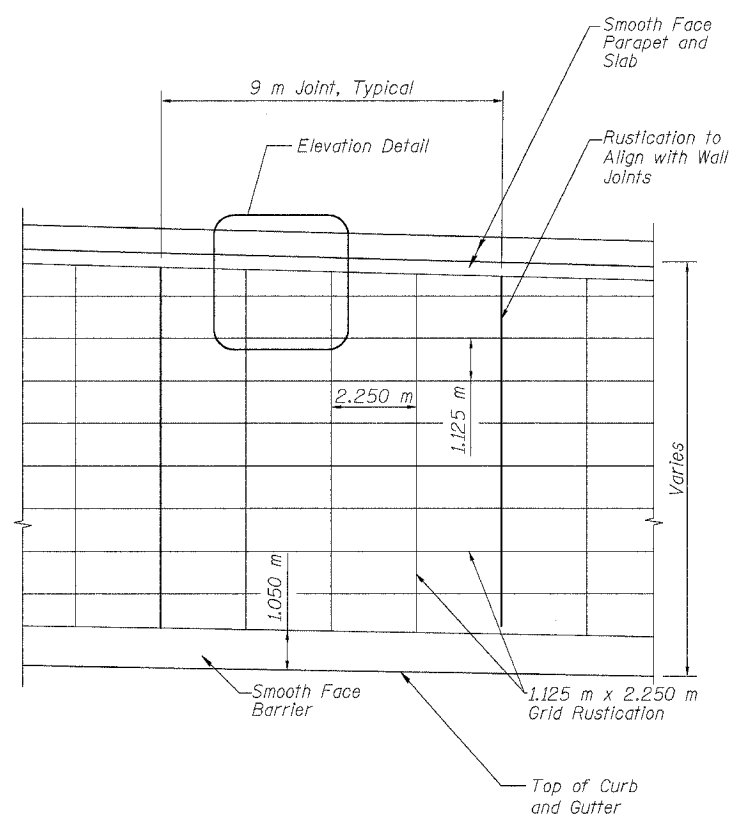
Work this sheet with sheet 12 of 21.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**PARAPET & ANCHORAGE SLAB DETAILS**  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512

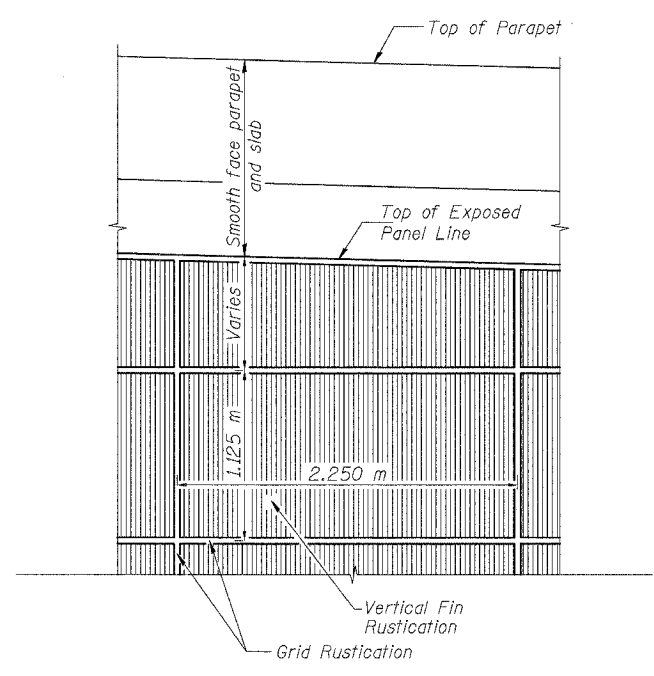
REVISIONS	
NO.	NAME

**LIN ENGINEERING, LTD.**  
 20 W. Chestnut  
 6201-621-4168  
 Chicago, Illinois 60629  
 FAX: 620-483-1705  
 Designed By: MTH  
 Checked By: PBL  
 Drawn By: JMD  
 Date: 06/04  
 File: r0413-50090812.dgn

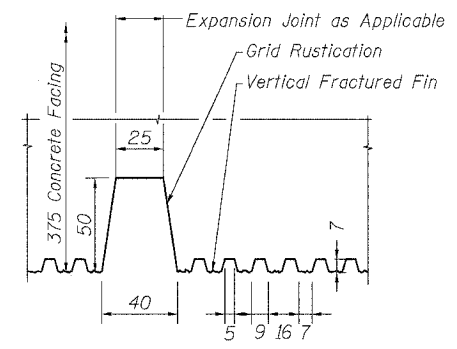
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
FAI 74	*	TAZEWELL	1866	615	14
ILLINOIS FED. AID PROJECT-					21 SHEETS
*90-11HB-5					



**TYPICAL ELEVATION**

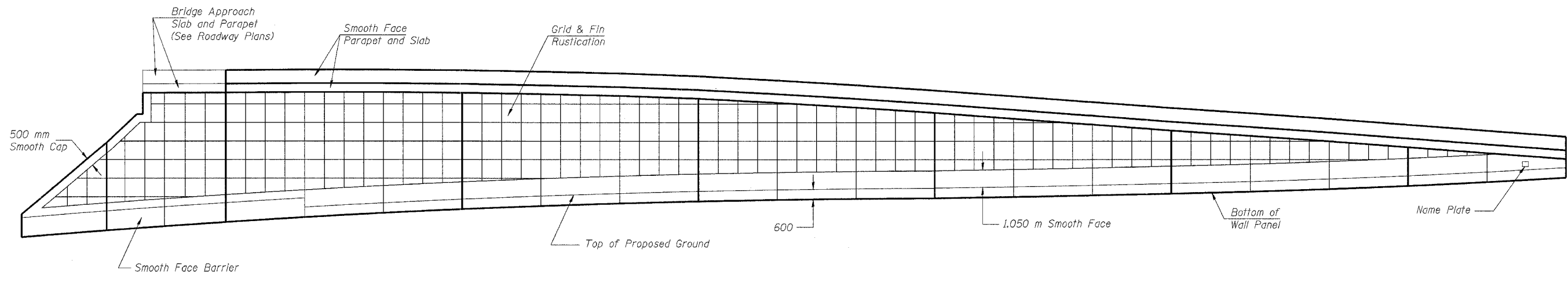


**ELEVATION DETAIL**



**GRID AND FIN RUSTICATION DETAIL**

\*Dimensions subject to minor variations within the group of approved formliners.



**ELEVATION (Looking East)**

**BILL OF MATERIAL**

Item	Unit	Quantity
Form Liner Grid and Fin Surface	m <sup>2</sup>	585.3

**LIN ENGINEERING, LTD.**  
 20 N. Chestnut  
 Channah, Illinois 62629  
 (217) 453-4858  
 FAX (217) 453-4706  
 Designed By: MTH Checked By: KRS Drawn By: JMD  
 Date: 09/02 File: r20414-500908512.dgn

REVISIONS
NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**RUSTICATION DETAILS**  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512

NO. 15	SECTION	DATE	BY	DATE	BY
FAI 74	*	TAZEWELL	1/30/06	6/6	
SHEET NO. 15					
21 SHEETS					

**CLAUDE H. HURLEY COMPANY BORING LOG** BORING NO. BB-246

PROJECT NO. 3-380-D4

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 81 RAMP K-2BL 10+400.2 5.2ft PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-6-96 COMPLETED 3-6-96 SURFACE ELEVATION 155.09

DRILLED BY S. SCOTT LOGGED BY M. DENAUITZ

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD											
			N	Q <sub>v</sub>	W	T <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE								
154.70	ACCESS FILL: BR SANDY LOAM, A-2-4	0																
154.70	TOPSOIL FILL: DK BR SILTY LOAM, A-6	0																
154.48	BR SANDY LOAM, A-2-4	5																
153.11	BR & RD BR TO GR GRAVELLY SAND, A-1-b	10																
151.58	BR & GR SAND, A-3	13																
150.07	BR & GR GRAVELLY SAND, A-1-b	14																
148.23	BLK COAL	15																

**CLAUDE H. HURLEY COMPANY BORING LOG** BORING NO. BB-248

PROJECT NO. 3-380-D4

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 81 RAMP K-2BL 10+363.1 7.9ft PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-7-96 COMPLETED 3-7-96 SURFACE ELEVATION 152.16

DRILLED BY S. SCOTT/B. WOLF LOGGED BY M. DENAUITZ

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD											
			N	Q <sub>v</sub>	W	T <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE								
151.61	BR & RD BR LOAM, A-4	3																
150.18	BR & RD BR TO GR GRAVELLY SAND, A-1-b	6																
149.39	BR & GR SAND, A-3	9																
147.71	BLK & YEL BR COAL	12																
146.52	DK GR TO GR LAMINATED CLAY SHALE	13																
145.82	GR & DK GR Limestone	14																
145.70	END OF BORING	15																

**CLAUDE H. HURLEY COMPANY BORING LOG** BORING NO. BB-302

PROJECT NO. 3-380-D4

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 81 RAMP K-2 10+362.3 7.9ft PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-29-96 COMPLETED 3-29-96 SURFACE ELEVATION 152.02

DRILLED BY B. WOLF LOGGED BY M. DENAUITZ

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD											
			N	Q <sub>v</sub>	W	T <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE								
147.45	BLK & YEL BR COAL	4																
146.23	DK GR TO GR LAMINATED CLAY SHALE	8																
145.31	GR & DK GR Limestone	12																
145.01	END OF BORING	15																

**LIN ENGINEERING, LTD.**  
 20 N. Chestnut  
 Channahon, Illinois 62620  
 (815) 463-1166 FAX (815) 463-1166  
 Designed By: WTH Checked By: KRJ Drawn By: JMD  
 Date: 09/02 File: r0415-50008512.dgn

REVISIONS	
NO.	DESCRIPTION

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512



**CLAUDE H. HURLEY COMPANY BORING LOG** BORING NO. RB-249

PROJECT NO. 3-380-D4  
 PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR  
 LOCATION RETAINING WALL NO. 81 RAMP K-2BL 10+343.4 7.3mL PEORIA & TAZEWELL COUNTIES, ILLINOIS  
 DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
 DATE OF DRILLING: STARTED 3-7-96 COMPLETED 3-7-96 SURFACE ELEVATION 151.61  
 DRILLED BY S. SCOTT LOGGED BY H. DENAULT

CLASSIFICATION	Depth	N	Q <sub>v</sub>	W	T <sub>d</sub>	GROUNDWATER DATA			DRILLING METHOD	
						DATE	DEPTH	HOUR	RIG TYPE	CME-850
ACCESS FILL: BR & RD BR SILTY LOAM, A-4	AU	-	-	7	-	DD	3-7	DRY	-	AUGER TYPE-DEPTH 0.08m HSA-7.8m
151.09	10 12 15	-	-	3	-	DC	3-7	5.0	0	CASING TYPE-DEPTH -
BR & RD BR TO GR GRAVELLY SAND, A-1-b	10 12 15	-	-	3	-	MC	3-8	5.3	1d	SAMPLER TYPE AU-SS
150.38	11 7 11	-	-	5	-	144.45 GR, DK GR & GEN GR MASSIVE CLAY SHALE				
BR & GR SAND, A-3	4 7 8	-	-	4	-	143.84 END OF BORING				
148.10	19 15 24	-	-	7	-	COBBLE BR, GR & RD BR GRAVELLY SAND, A-1-b				
147.19	48 82 119/0m	-	-	20	-	BLK & YEL BR COAL				
146.64	49 44/0.08m	-	-	13	-	DK GR TO GR LAMINATED CLAY SHALE				
144.97	110/0.13m	-	-	11	-	DK GR TO GR LAMINATED CLAY SHALE				

**CLAUDE H. HURLEY COMPANY BORING LOG** BORING NO. RB-250

PROJECT NO. 3-380-D4  
 PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR  
 LOCATION RETAINING WALL NO. 81 RAMP K-2BL 10+323.7 0.7mL PEORIA & TAZEWELL COUNTIES, ILLINOIS  
 DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
 DATE OF DRILLING: STARTED 2-5-96 COMPLETED 2-7-96 SURFACE ELEVATION 151.65  
 DRILLED BY S. SCOTT LOGGED BY H. DENAULT

CLASSIFICATION	Depth	N	Q <sub>v</sub>	W	T <sub>d</sub>	GROUNDWATER DATA			DRILLING METHOD	
						DATE	DEPTH	HOUR	RIG TYPE	CME-850
TOPSOIL FILL: DK BR SILTY LOAM, A-4	AU	-	-	34	-	DD	2-7	7.7	-	AUGER TYPE-DEPTH 0.08m HSA-8.2m
151.53	11 11	-	-	20	-	DC	2-7	DRY	0	CASING TYPE-DEPTH -
BR SILTY LOAM A-4	11 11	-	-	20	-	MC	2-8	6.6	1d	SAMPLER TYPE AU-SS
151.10	10 16 19	-	-	14	-	144.45 GR, DK GR & GEN GR MASSIVE CLAY SHALE				
BR & GR BR LOAM, A-4	5 7 9	305	14	-	-	DK GR TO GR LAMINATED SHALE				
148.63	10 16 19	550	11	-	-	142.60 GR & DK GR LIMESTONE				
BR & GR SAND, A-3	7 12 11	-	-	3	-	142.45 END OF BORING				
147.02	11 13 29	-	-	10	-	BR, GR & RD BR GRAVELLY SAND, A-1-b				
146.50	47 120/0.08m	-	-	19	-	BLK & YEL BR COAL				
144.97	6 7 7	-	-	24	-	DK GR TO GR LAMINATED SHALE				
144.97	33	-	-	-	-	DK GR TO GR LAMINATED SHALE				

**CLAUDE H. HURLEY COMPANY BORING LOG** BORING NO. RB-368

PROJECT NO. 3-380-D4  
 PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR  
 LOCATION RETAINING WALL NO. 81 RAMP K-2BL 10+310.0 13.0mL PEORIA & TAZEWELL COUNTIES, ILLINOIS  
 DRILLING CONTRACTOR D & G DRILLING, INC.  
 DATE OF DRILLING: STARTED 12-12-97 COMPLETED 12-12-97 SURFACE ELEVATION 151.04  
 DRILLED BY J. KODIVEX LOGGED BY J. DALTON

CLASSIFICATION	Depth	N	Q <sub>v</sub>	W	T <sub>d</sub>	GROUNDWATER DATA			DRILLING METHOD	
						DATE	DEPTH	HOUR	RIG TYPE	MOBILE B-57
FILL: BR SANDY GRAVEL, A-1-a	AU	-	-	5	-	DR	12-19	-	0	AUGER TYPE-DEPTH 0.10m FA-1.5m
150.28	8 5 4	-	-	15	-	DC	12-23	3.9	4d	CASING TYPE-DEPTH -
BR & GR SAND, A-3	4 4 5	-	-	11	-	100/0.05m				
DK GR TO GR LAMINATED CLAY SHALE	4 5 7	-	-	14	-	100/0.10m				
BR & GR SAND, A-3	5 7 10	-	-	12	-	100/0.10m				
146.63	6 7 9	-	-	10	-	141.56 END OF BORING				
146.63	13 30	-	-	17	-	146.63 BR TO GR HEAVILY CEMENTED SANDSTONE				
146.32	100/0.10m	-	-	20	-	146.32				
BLK & YEL BR COAL	100/0.05m	-	-	49	-	100/0.05m				
144.18	100/0.08m	-	-	49	-	100/0.08m				
144.18	7	-	-	-	-	144.18 DK GR TO GR LAMINATED CLAY SHALE				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512

REVISIONS	
NO.	DESCRIPTION

**LIN ENGINEERING, LTD.**  
 20 W. Chestnut  
 Chatham, Illinois 62629  
 (618) 483-4968  
 FAX (618) 483-4706  
 Designed By: WTH Checked By: KRG Drawn By: JMD  
 Date: 09/02 File: rpd48-50008512.dgn





RSV ENGINEERING, INC.		BORING LOG		SCHAUMBURG, ILLINOIS	
JOB NO: 98800	CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING NO: RWJ3-2	STATION: 10+251	OFFSET: 7.0m L	SURF ELEV: 149.79
PROJECT: Interstate Route 74 Improvements - Peoria, Illinois					
LOCATION: Retaining Wall Ramp J-3 SN 090-8513					
BORING RIG & METHOD: CME-75 w/Hollow Stem Augers					
SOIL DESCRIPTION	ELEV.	DEPTH	SAMPLE FROM - TO	REC.	WATER CONTENT %
50mm Root Zone Material; FILL: Black Clay Loam A-4; Organic matter noted	148.78		0.00-0.30	Auger 9	
FILL: Br Clay Loam A-4	148.87		0.30-0.76	457 19-15	431*
Medium Dense Br Sand A-3	148.11		1.07-1.52	330 7-10	
			1.83-1.95	127 120mm	
Br & Gr SANDSTONE (very weakly cemented); Severely weathered Coal pockets noted			2.59-2.74	152 100/150mm	
Interbedded Gr Shale (thinly foliated) below 3.4m	146.13		3.35-3.81	457 11-5	48*
Medium Stiff Gr Shaley CLAY (possible filled void; wood fragments noted)	145.59		4.11-4.57	457 5	
Hard Gr Shaley CLAY (slightly foliated)	145.00		4.88-4.97	76 100/75mm	
			5.64-5.94	305 12-100/150mm	
Gr SHALE (thinly foliated)			6.40-6.43	25 25mm	
			7.16-7.41	254 88-100/100mm	
			8.23-8.38	152 210/150mm	
Boring terminated at 8.4m					
REMARKS: * Deviate Calculated Piezometer Estimate					
WATER	Dry m	ELEV.	DURING DRILLING	CORE SIZE	DATE: Jun 21, 00
WATER	m	ELEV.	AT COMPLETION	CASING LENGTH	m DRILLER: Fehl
WATER	Dry m	ELEV.	AFTER 14 HRS.	CASING DIAMETER	mm INSPECTOR: Reed

CLAUDE H. HURLEY COMPANY		BORING LOG		BORING NO. SB-240	
PROJECT NO. 3-380-D4					
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR					
LOCATION BRIDGE NO. 090-0156 RAMP K-2BL 10+426.4 2.6mR PEORIA & TAZEWELL COUNTIES, ILLINOIS					
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY					
DATE OF DRILLING: STARTED 3-29-96 COMPLETED 4-2-96 SURFACE ELEVATION 161.33					
DRILLED BY: E. WULF/S. SCOTT					
CLASSIFICATION		GROUNDWATER DATA		DRILLING METHOD	
Elev	Depth	N	Q <sub>u</sub>	W	T <sub>d</sub>
		Sp0.15m	KPa	%	Kgpm <sup>2</sup>
TOPSOIL FILL: DK BR SILTY LOAM, A-6					
161.09		AU	430	15	-
GR BR, BR GR & GR CLAY LOAM, A-4					
		AU	430	13	-
BR SAND, A-3					
			335	14	-
BR & RD BR LOAM, A-4					
			430	13	-
BR & RD BR SILTY LOAM, A-4					
			335	14	-
BR & RD BR SILTY LOAM, A-4					
			765	13	-
LT BR TO BR SILT, A-4					
			18	-	-
BR & GR SAND, A-3					
			26	-	-
SHALE SEAM					
			23	-	-
BR SAND, A-3					
			11	-	-

CLAUDE H. HURLEY COMPANY		BORING LOG		BORING NO. SB-240 (CONT.)	
PROJECT NO. 3-380-D4					
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR					
LOCATION BRIDGE NO. 090-0156 RAMP K-2BL 10+426.4 2.6mR PEORIA & TAZEWELL COUNTIES, ILLINOIS					
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY					
DATE OF DRILLING: STARTED 3-29-96 COMPLETED 4-2-96 SURFACE ELEVATION 161.33					
DRILLED BY: B. WULF/S. SCOTT					
CLASSIFICATION		GROUNDWATER DATA		DRILLING METHOD	
Elev	Depth	N	Q <sub>u</sub>	W	T <sub>d</sub>
		Sp0.15m	KPa	%	Kgpm <sup>2</sup>
BR & GR HEAVILY CEMENTED SANDSTONE					
148.13		WC	4-2	14.6	0
BR & GR HEAVILY CEMENTED SANDSTONE					
		WC	4-3	14.6	16
VOID					
DK GR TO GR LAMINATED CLAY SHALE					
			100%	42%	
GR, DK GR & GRN GR MASSIVE CLAY SHALE					
			100%	54%	
GR LAMINATED CLAY SHALE					
			5%	9%	
END OF BORING					

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 81  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP J-3 STATION 10+037 TO 10+213  
 S.N. 090-8512

**REVISIONS**

NO.	DATE	DESCRIPTION

**RSV ENGINEERING, LTD.**  
 200 W. Chestnut  
 Channahon, Illinois 62629  
 (815) 433-6666  
 FAX: (815) 433-6766  
 Designed By: MTH Checked By: JRG Drawn By: JMD  
 Date: 09/02 File: rsv0419-50098512.dwg

CLAUDE H. HURLEY COMPANY  
**BORING LOG**  
PROJECT NO. 3-380-D4 BORING NO. BB-254

PROJECT FAI-34 IMPROVEMENTS - MAIN STREET CORRIDOR  
LOCATION BACKSLOPE RAMP K-2BL 10+393.1 17.6mR PEORIA & TAZEWELL COUNTIES, ILLINOIS  
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
DATE OF DRILLING: STARTED 3-27-96 COMPLETED 3-27-96 SURFACE ELEVATION 167.99  
DRILLED BY B. WULF LOGGED BY N. DEMAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD					
			N	Q <sub>u</sub>	W	T <sub>4</sub>	DATE	DEPTH	HOUR	RIG TYPE		
			Bp0.15m	KPa	%	Kgpm						
167.90	TOPSOIL FILL: DK BR SILTY LOAM, A-4		AD	-	28	-	DD	3-27	11.9	-	0.08m	HSA-22.0m
	BR SILTY LOAM, A-4		AD	-	14	-	DC	3-27	13.8	0		
167.26			AD	-	10	-	DC	3-28	9.9	1d		
	GR BR CLAY LOAM, A-4		AD	-	17	-						
			AD	-	12	-						
			AD	-	10	-						
164.52			AD	480	11	-						
			AD	345	13	-						
			AD	295	14	-						
			AD	335	14	-						
			AD	430	13	-						

CLAUDE H. HURLEY COMPANY  
**BORING LOG**  
PROJECT NO. 3-380-D4 BORING NO. BB-254 (CONT.)

PROJECT FAI-34 IMPROVEMENTS - MAIN STREET CORRIDOR  
LOCATION BACKSLOPE RAMP K-2BL 10+393.1 17.6mR PEORIA & TAZEWELL COUNTIES, ILLINOIS  
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
DATE OF DRILLING: STARTED 3-27-96 COMPLETED 3-27-96 SURFACE ELEVATION 167.99  
DRILLED BY B. WULF LOGGED BY N. DEMAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD					
			N	Q <sub>u</sub>	W	T <sub>4</sub>	DATE	DEPTH	HOUR	RIG TYPE		
			Bp0.15m	KPa	%	Kgpm						
153.85	BR SAND, A-3			-	6	-	DD	3-27	11.9	-	0.08m	HSA-22.0m
				-	15	-	DC	3-27	13.8	0		
				-	13	-	DC	3-28	9.9	1d		
147.19	BLK COAL			-	16	-						
153.09	BR & RD BR SILTY LOAM, A-4 W/ SILT, A-4 & SAND, A-3 SEAMS			-	13	-						
152.32				-	3	-						
150.34	BR SILT, A-4			-	22	-						
149.88	BR & GR SAND, A-3			-	4	-						
148.39	BLK COAL			-	13	-						

CLAUDE H. HURLEY COMPANY  
**BORING LOG**  
PROJECT NO. 3-380-D4 BORING NO. BB-247

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR  
LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+381.3 2.9mR PEORIA & TAZEWELL COUNTIES, ILLINOIS  
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
DATE OF DRILLING: STARTED 3-6-96 COMPLETED 3-6-96 SURFACE ELEVATION 158.26  
DRILLED BY S. SCOTT LOGGED BY N. DEMAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD					
			N	Q <sub>u</sub>	W	T <sub>4</sub>	DATE	DEPTH	HOUR	RIG TYPE		
			Bp0.15m	KPa	%	Kgpm						
158.17	ACCESS FILL: DK GR, GR & GR BR SILTY LOAM, A-4		AU	-	13	-	DD	3-6	11.3	-	0.08m	HSA-13.8m
	GR BR, BR GR & GR SILTY LOAM, A-4		DC	-	8.4	0	DC	3-6	8.4	0		
157.53	BR SILTY LOAM, A-4		DC	-	14	-	DC	3-7	8.1	1d		
157.04	BR STRATIFIED SILT, A-4 AND SILTY CLAY, A-6			-	18	-						
156.58	BR & GR GRAVELLY LOAM, A-4			-	4	-						
156.28	BR & RD BR GRAVELLY SAND, A-1-b			-	4	-						
156.52	BR SAND, A-3			-	2	-						
148.66	BR & GR GRAVELLY SAND, A-1-b			-	3	-						
153.99	BR & RD BR LOAM, A-4 W/ SAND A-3 SEAMS			-	15	-						
153.23	BR & RD BR SANDY LOAM, A-2-4			-	9	-						
146.74	DK GR TO GR LAMINATED CLAY SHALE			-	17	-						
146.40	GR & DK GR LIMESTONE			-	-	-						
145.92	GR, DK GR & GRN GR MASSIVE CLAY SHALE			-	15	-						

**LIN ENGINEERING, LTD.**  
200 W. Chestnut  
Channahon, Illinois 63229  
630-482-4688  
FAX 630-482-4706  
Designed By: WTH Checked By: KAC Drawn By: JHO  
Date: 08-02 File: r10420-38090512.dgn

REVISIONS	
NO.	DESCRIPTION

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SOIL BORING DATA  
RETAINING WALL 81  
F.A.I. RTE. 74 (I-74)  
SECTION 90-11HB-5  
TAZEWELL COUNTY  
RAMP J-3 STATION 10+037 TO 10+213  
S.N. 090-8512

ROUTE NO.	SECTION	COUNTY	SHEET NO.
FAI 74	*	TAZEWELL	1366 622
FILLING DIST. NO. 1			21 SHEETS
*90-11HB-5			

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. BB-247 (CONT.)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+381.3 7.8m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-6-96 COMPLETED 3-6-96 SURFACE ELEVATION 158.26

DRILLED BY S. SCOTT LOGGED BY M. DENAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N Bp0.15m	Q <sub>u</sub> KPa	W %	T <sub>4</sub> Kppm <sup>2</sup>	
	GR, DK GR & GRN GR MASSIVE CLAY SHALE	0					DD 3-6 11.3 -
							DC 3-6 8.4 0
144.45	END OF BORING	14					DC 3-7 8.1 1d

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. BB-253

PROJECT FAI-34 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BACKSLOPE RAMP K-2BL 10+423.5 17.3m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 4-3-96 COMPLETED 4-3-96 SURFACE ELEVATION 171.97

DRILLED BY S. SCOTT LOGGED BY M. DENAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N Bp0.15m	Q <sub>u</sub> KPa	W %	T <sub>4</sub> Kppm <sup>2</sup>	
171.88	TOPSOIL FILL: DK BR SILTY LOAM, A-4	0					DD 4-3 8.7 -
170.20							WC 4-3 17.9 0
							WC 4-4 18.0 1d
	GR BR CLAY LOAM, A-4	1					
		2					
		3					
		4					
		5					
		6					
		7					
166.70		8					
		9					
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**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. BB-253 (CONT.)

PROJECT FAI-34 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BACKSLOPE RAMP K-2BL 10+423.5 17.3m PEORIA & TAZEWELL COUNTIES, ILLINOIS

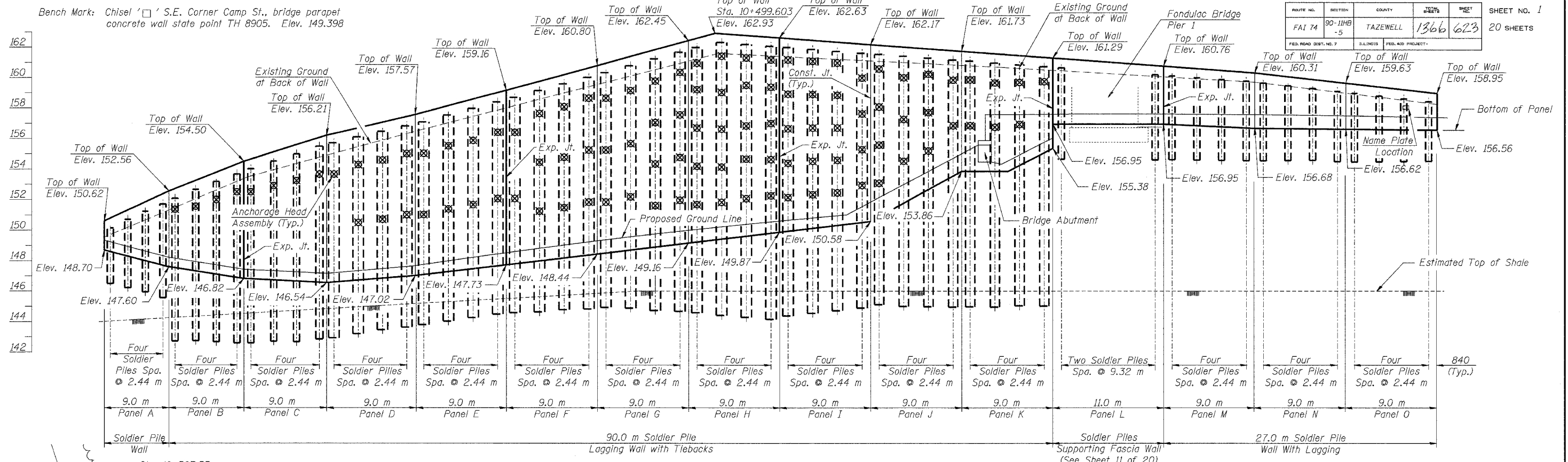
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 4-3-96 COMPLETED 4-3-96 SURFACE ELEVATION 171.97

DRILLED BY S. SCOTT LOGGED BY M. DENAULT

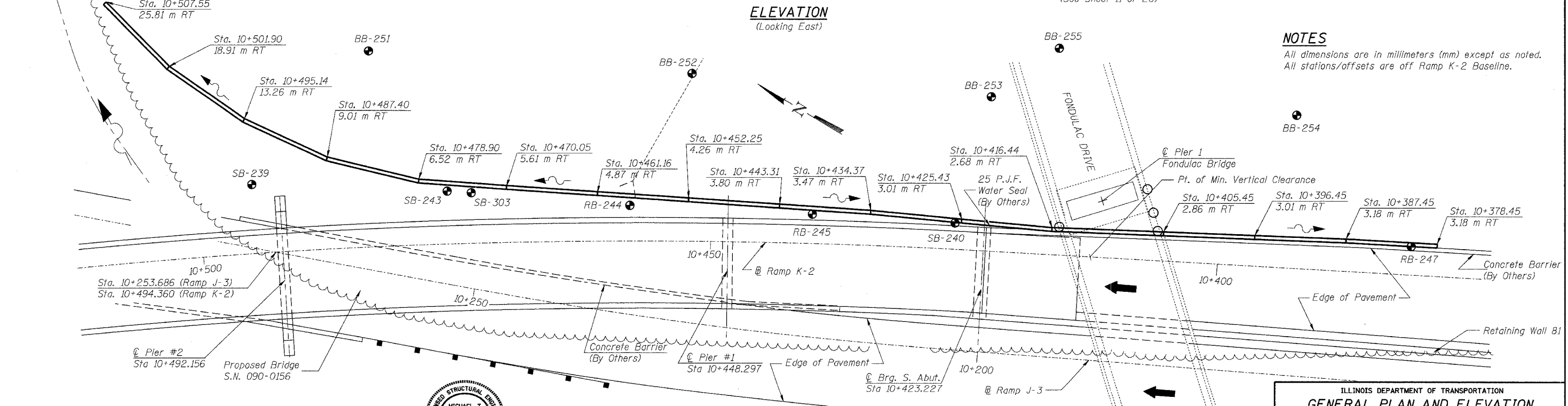
Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N Bp0.15m	Q <sub>u</sub> KPa	W %	T <sub>4</sub> Kppm <sup>2</sup>	
	BR GRAVELLY SAND, A-1-b	1					DD 4-3 8.7 -
		2					WC 4-3 17.9 0
		3					WC 4-4 18.0 1d
157.86		4					
		5					
		6					

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
FAI 74	90-11HB-5	TAZEWELL	1366	623	20 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	



ELEVATION (Looking East)

**NOTES**  
 All dimensions are in millimeters (mm) except as noted.  
 All stations/offsets are off Ramp K-2 Baseline.



PLAN

**DESIGN STRESSES**  
 $f'_c = 24 \text{ MPa (Concrete)}$   
 $f'_g = 27.5 \text{ MPa (Grout)}$   
 $f_y = 400 \text{ MPa (Reinf.)}$   
 $f_y = 345 \text{ MPa (Soldier Piles) (M270 M Grade 345)}$   
 $f'_s = 1860 \text{ MPa (15mm } \phi \text{ Low Lax Strands)}$   
 $f_{st} = 1395 \text{ MPa (15mm } \phi \text{ Low Lax Strands)}$

Michael J. Haley  
 Michael T. Haley  
 Licensed Structural Engineer  
 State of Illinois No. 81-5991  
 12-20-04  
 Date

**DESIGN SPECIFICATIONS**  
 1996 AASHTO Specifications  
 with 1997 thru 2000 Interim



**LI ENGINEERING, LTD.**  
 20 W. Chestnut  
 Chicago, Illinois 60623  
 Tel: (312) 462-4100  
 Designed By: WTH Checked By: KRQ Drawn By: JND  
 Date: 09/02 File: rp0401-580908513.dgn

REVISIONS	
NO.	NAME

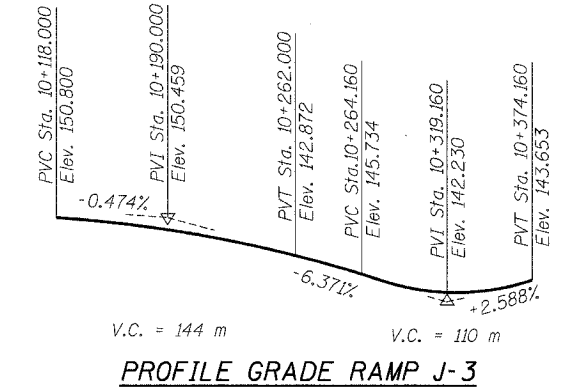
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN AND ELEVATION**  
**RETAINING WALL 82**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP K-2 STATION 10+378 TO 10+507**  
**STRUCTURE NUMBER 090-8513**

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAI 74	*	TAZEWELL	1366	624
SHEET NO. 2				
20 SHEETS				
FED. ROAD DIST. NO. 7				
ILLINOIS				
FED. AID PROJECT-				
*90-11HB-5				

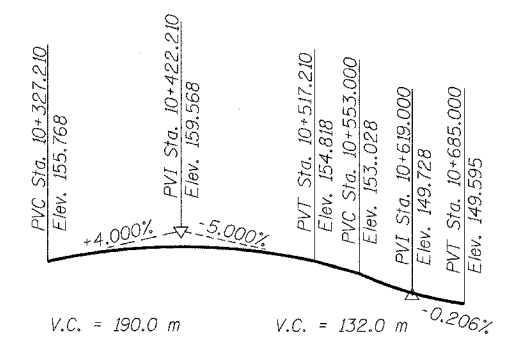
**GENERAL NOTES**

1. Reinforcement Bars shall conform to the requirements of AASHTO M-31M, or M-322M Grade 400.
2. See Special Provisions for installation and testing of Permanent Ground Anchors.
3. Shear Studs Shall be 19mm diameter x 200mm granular or solid flux filled headed studs automatically end welded to the front flange in field.
4. The geocomposite wall drain shall be constructed according to section 591 of the Standard Specifications. The contractor shall insure that the bottom, sides and the top edges are protected from soil entering or sealing the drain while placing the pervious fabric side of the drain toward the soil. Geocomposite wall drain shall be installed in stages as the excavation proceeds downward. Splicing should be minimized, following proper splice practices to insure no long term soil contamination.
5. The treated timber lagging shall conform to the requirements for 1600 F dense southern pine or 1700 F dense Douglas fir. All treated timber lagging shall be treated according to art. 1007.12(a)(2) of the Standard Specifications and each out edge of any timbers shall have those faces covered with additional treatment as required by the Engineer.
6. All dimensions are in millimeters (mm) except as noted.
7. All construction joints shall be bonded.

STATION 10+380  
 BUILT 200\_ BY  
 STATE OF ILLINOIS  
 FAI RTE 74  
 SECTION 90-11HB-5  
 STR. NO. 090-8513  
**NAME PLATE**  
 See Std. 515001



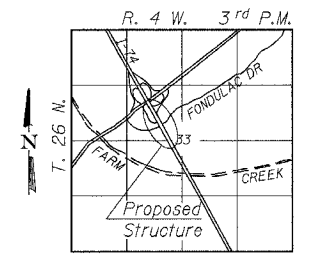
**PROFILE GRADE RAMP J-3**



**PROFILE GRADE RAMP K-2**

**TOTAL BILL OF MATERIAL**

Item	Unit	Quantity
Untreated Timber Lagging	m <sup>2</sup>	738
Treated Timber Lagging	m <sup>2</sup>	23
Concrete Structures	m <sup>3</sup>	410.8
Reinforcement Bars, Epoxy Coated	kg	38210
Drilling & Setting Soldier Piles	m <sup>3</sup>	506.8
Permanent Ground Anchors	Each	106
Furnishing Soldier Piles (Built up section)	m	587.4
Furnishing Soldier Piles (W section)	m	102.0
Geocomposite Wall Drain	m <sup>2</sup>	417
French Drains	m <sup>3</sup>	13
Name Plates	Each	1
Furnishing & Erecting Structural Steel	kg	3290
Stud Shear Connectors	Each	4546
Structure Excavation	m <sup>3</sup>	607
Lightweight Cellular Concrete Fill	m <sup>3</sup>	51.7
Form Liner Grid and Fin Surface	m <sup>2</sup>	907.0



**LOCATION SKETCH**

**CURVE DATA**

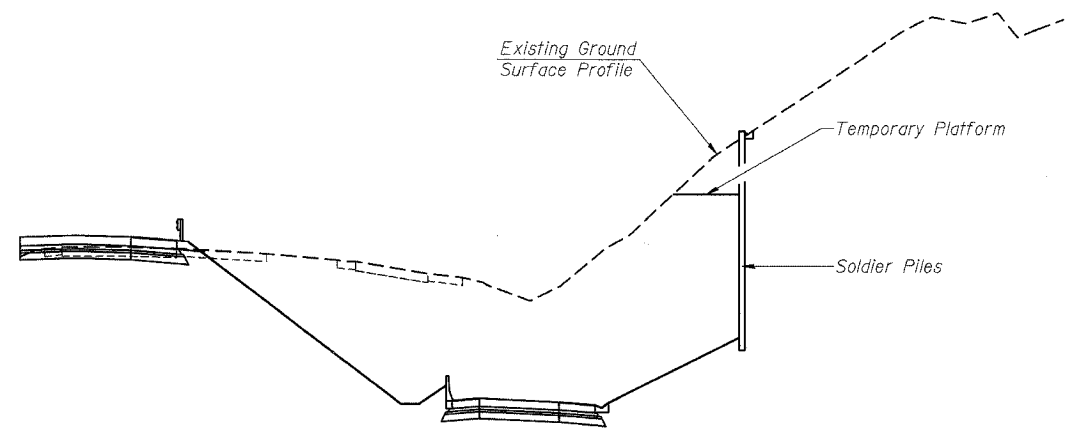
RAMP J-3		RAMP K-2	
Δ =	6°05'48.00"	Δ =	7°58'57.09"
R =	450.000 m	R =	580.000 m
T =	23.964 m	T =	40.469 m
L =	47.883 m	L =	80.806 m
E =	0.638 m	E =	1.410 m
PC =	10+204.232	PC =	10+423.959
PI =	10+228.196	PI =	10+481.535
PT =	10+252.115	PT =	10+504.765
SE =	6.2%	SE =	4.4%
Transition in:	10+177 to 10+218	Transition in:	10+385 to 10+443
Transition out:	10+237 to 10+283	Transition out:	10+486 to 10+544

**LIN ENGINEERING, LTD.**  
 20 N. CHESTNUT  
 CHATTAIN, ILLINOIS 63629  
 (271) 483-4838 FAX (271) 483-4706  
 Designed By: MTH Checked By: BFG Drawn By: JMD  
 Date: 09/02 File: r04002-500908513.dgn

REVISIONS
NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL NOTES**  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513





**CROSS-SECTION**

**SEQUENCE OF CONSTRUCTION**

1. Drill hole for soldier pile.
2. Remove loose material and excess water from hole and Set Soldier Pile in hole, using temporary bracing to maintain correct elevation, clearances, and position during and after placement of concrete.
3. Place Encasement Concrete around soldier pile to the level indicated in Table on sheet 4 of 20. Place Controlled Low Strength Material (CLSM) concrete to the ground surface.
4. After concrete has cured, excavate in front of wall in stages removing only the soil and CSLM concrete necessary to place each timber lagging, and the Geocomposite Wall Drain.
5. After lagging and Geocomposite Wall Drain placement has reached the elevations shown in Table on sheet 4 of 20, install, test, and lock off Permanent Ground Anchor (see special provisions).
6. Continue the excavation for construction of French Drains and line trench with Geotechnical Filter Fabric.
7. Place the 100  $\phi$  perforated corrugated polyethylene (PE) tubing and connect the vertical geocomposite wall drain to the longitudinal French Drain and backfill as shown on the plans. Construct wall panels.

**SUGGESTED METHOD OF CONSTRUCTION FOR CUT SITUATION**

1. Install three successive Soldier Piles in permanent locations in the shallow area starting at the south end (Panel 0). See the Sequence of Construction.
2. Place timber lagging to an appropriate elevation for creating a temporary platform as shown above. The progressive end of the platform terminates with an embankment cone of the non-excavated area.
3. Use this platform to install the next two soldier piles & lagging.
4. Install first level of Permanent Ground Anchors where necessary as the platform construction progresses.
5. Repeat the above procedure to install all the soldier piles and until the temporary platform is continuous from one end to the other.
6. The remaining operations shall follow the Standard Construction Procedures for tieback walls for top down construction.

Notes: The Contractor shall submit a detailed Construction Procedure outlining the whole Sequence of Construction along with the computations to the Engineer for review and acceptance. The submitted documents shall be sealed by a Structural Engineer registered in State of Illinois.

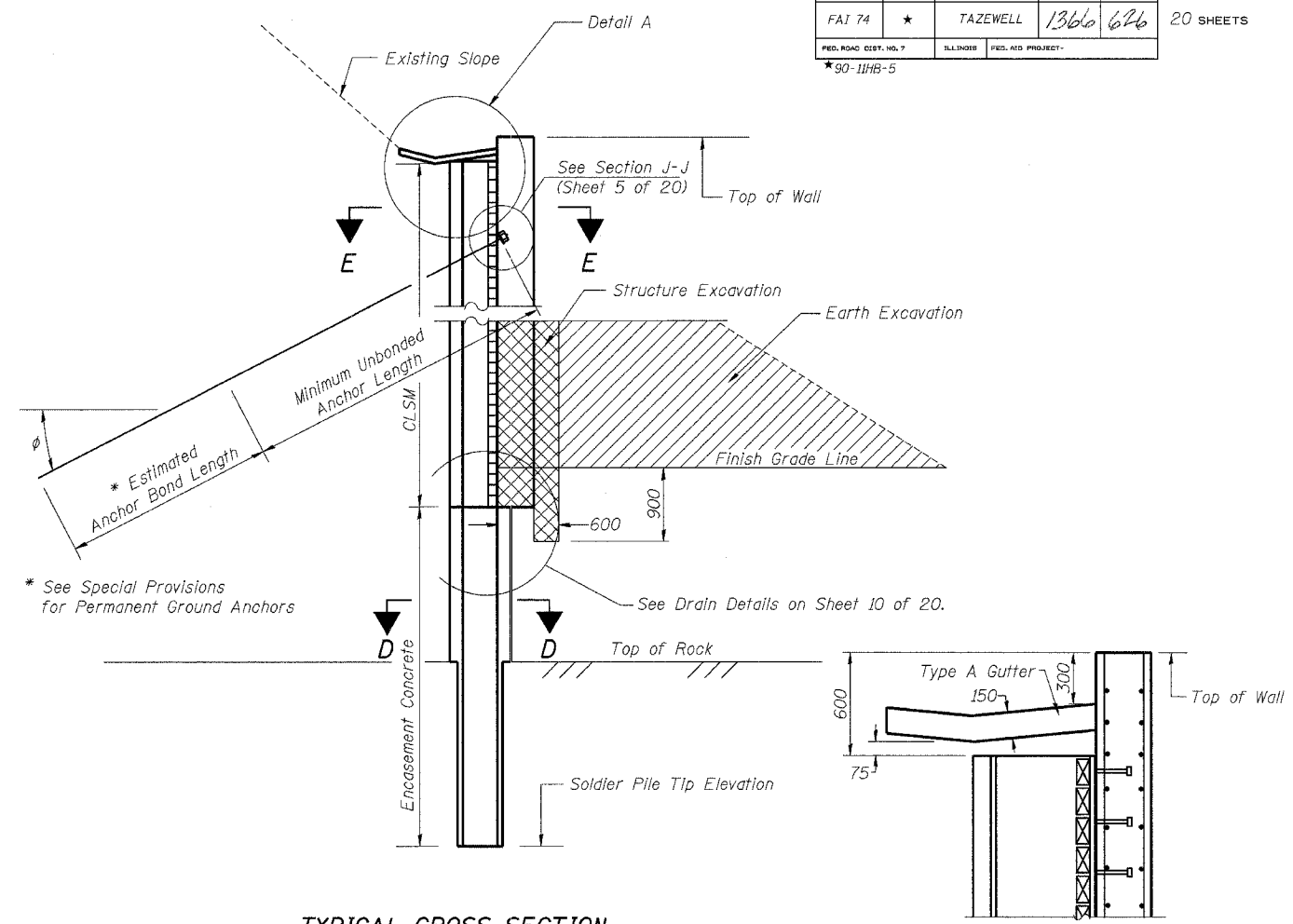
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SEQUENCE OF CONSTRUCTION**  
**RETAINING WALL 82**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP K-2 STATION 10+378 TO 10+507**  
**STRUCTURE NUMBER 090-8513**

REVISIONS	
NO.	NAME

**LIN ENGINEERING, LTD.**  
 260 W. Chestnut  
 Chicago, Illinois 60629  
 (312) 461-4600 FAX (312) 461-4100  
 Designed By: MTH Checked By: KRK Drawn By: JMD  
 Date: 03/02 File: r0403-560908513.dgn

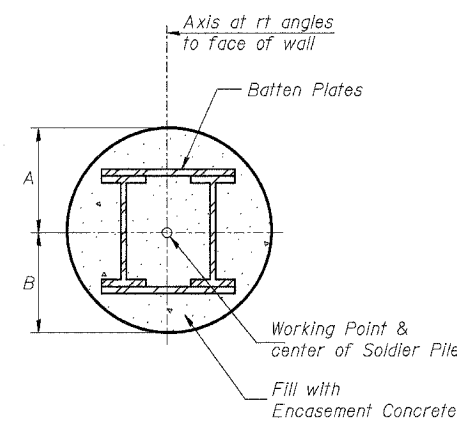
ROUTE NO. FAI 74	SECTION *	COUNTY TAZEWELL	SHEET 1366	SHEET 626	SHEET NO. 4 20 SHEETS
FED. ROAD DIST. NO. 7		ILL. ROAD PROJECT	*90-11HB-5		

Panel	Soldier Pile Designation	Station	Offset to Working Point	Pile Size	Top of Soldier Pile Elevation	Bottom of Soldier Pile Elevation	Top of Encasement Concrete Elevation	Estimated Length of Soldier Pile (m)	Diameter of Shaft Excavation (m)	Number of Shear Connectors
A	A1	10+506.88	25.267	W310x158	150.187	146.213	148.300	3.700	0.610	12
	A2	10+505.31	23.398	W310x158	150.713	146.213	148.000	4.500	0.610	16
	A3	10+503.80	21.514	W310x158	151.239	145.939	147.700	5.300	0.610	20
	A4	10+502.28	19.649	W310x158	151.765	145.565	147.530	6.200	0.610	24
B	B1	10+501.20	18.492	2-W250x80	152.127	142.727	147.320	9.400	0.914	52
	B2	10+499.36	16.949	2-W250x80	152.653	142.753	147.100	9.900	0.914	60
	B3	10+497.52	15.412	2-W250x80	153.179	142.679	146.890	10.500	0.914	68
	B4	10+495.67	13.881	2-W250x80	153.705	142.605	146.790	11.100	0.914	72
C	C1	10+494.35	12.985	2-W250x80	154.049	142.649	146.720	11.400	0.914	76
	C2	10+492.25	11.820	2-W310x107	154.512	142.712	146.640	11.800	1.067	84
	C3	10+490.05	10.664	2-W310x107	154.976	142.676	146.570	12.300	1.067	88
	C4	10+488.03	9.515	2-W310x107	155.440	142.740	146.540	12.700	1.067	92
D	D1	10+486.57	8.908	2-W310x107	155.730	142.930	146.540	12.800	1.067	96
	D2	10+484.26	8.223	2-W250x80	156.099	143.199	146.580	12.900	0.914	100
	D3	10+481.95	7.547	2-W250x80	156.468	143.468	146.710	13.000	0.914	104
	D4	10+479.63	6.881	2-W250x80	156.836	143.636	146.850	13.200	0.914	104
E	E1	10+478.05	6.600	2-W310x107	157.109	143.809	146.980	13.300	1.067	104
	E2	10+475.65	6.343	2-W310x107	157.540	144.040	147.090	13.500	1.067	108
	E3	10+473.25	6.095	2-W310x107	157.971	144.271	147.280	13.700	1.067	112
	E4	10+470.85	5.858	2-W310x107	158.402	144.502	147.470	13.900	1.067	112
F	F1	10+469.19	5.704	2-W310x107	158.703	144.603	147.660	14.100	1.067	116
	F2	10+466.78	5.493	2-W310x107	159.148	144.648	147.800	14.500	1.067	116
	F3	10+464.37	5.292	2-W310x107	159.592	144.792	147.990	14.800	1.067	120
	F4	10+461.96	5.101	2-W310x107	160.037	144.837	148.180	15.200	1.067	124
G	G1	10+460.30	4.975	2-W310x107	160.344	144.944	148.370	15.400	1.067	124
	G2	10+457.89	4.799	2-W310x107	160.791	144.891	148.510	15.900	1.067	128
	G3	10+455.47	4.634	2-W310x107	161.239	144.739	148.700	16.500	1.067	128
	G4	10+453.06	4.478	2-W310x107	161.686	144.686	148.930	17.000	1.067	132
H	H1	10+451.39	4.378	2-W310x107	161.994	144.594	149.090	17.400	1.067	132
	H2	10+448.98	4.243	2-W310x107	162.322	144.422	149.230	17.900	1.067	136
	H3	10+446.56	4.118	2-W310x107	162.197	144.297	149.420	17.900	1.067	132
	H4	10+444.14	4.003	2-W310x107	162.072	144.172	149.610	17.900	1.067	128
I	I1	10+442.47	3.929	2-W310x107	161.986	144.386	149.790	17.600	1.067	128
	I2	10+440.05	3.829	2-W310x107	161.862	144.562	149.940	17.300	1.067	124
	I3	10+437.62	3.740	2-W310x107	161.734	144.734	150.130	17.000	1.067	120
	I4	10+435.20	3.660	2-W310x107	161.612	144.912	150.320	16.700	1.067	116
J	J1	10+433.52	3.559	2-W250x80	161.528	145.128	150.510	16.400	0.914	116
	J2	10+431.10	3.426	2-W250x80	161.409	145.009	150.890	16.400	0.914	108
	J3	10+428.68	3.302	2-W250x80	161.290	144.990	151.780	16.300	0.914	100
	J4	10+426.26	3.188	2-W250x80	161.170	144.970	152.660	16.200	0.914	88
K	K1	10+424.59	3.119	2-W250x80	161.088	144.988	153.550	16.100	0.914	80
	K2	10+422.15	3.030	2-W250x80	160.969	144.969	153.860	16.000	0.914	76
	K3	10+419.71	2.940	2-W250x80	160.850	145.050	153.860	15.800	0.914	76
	K4	10+417.28	2.851	2-W250x80	160.730	145.030	154.270	15.700	0.914	68
L	L1	10+415.62	2.869	W310x158	160.649	154.649	156.650	6.000	0.914	22
	L2	10+406.93	6.163	W310x158	161.700	154.600	156.950	7.100	0.610	0
	L3	10+406.38	4.633	W310x158	160.700	154.600	156.950	6.100	0.610	0
	L4	10+406.30	3.025	W310x158	160.200	156.650	156.650	5.600	0.914	20
M	M1	10+404.62	3.041	W310x158	160.117	153.600	156.720	5.500	0.610	20
	M2	10+402.18	3.094	W310x158	159.995	153.600	156.700	5.400	0.610	18
	M3	10+399.74	3.123	W310x158	159.873	153.600	156.690	5.300	0.610	18
	M4	10+397.30	3.175	W310x158	159.751	153.600	156.670	5.200	0.610	18
N	N1	10+395.62	3.205	W310x158	159.645	154.000	156.660	5.100	0.610	18
	N2	10+393.18	3.250	W310x158	159.460	154.000	156.640	4.900	0.610	16
	N3	10+390.74	3.283	W310x158	159.276	154.000	156.630	4.700	0.610	16
	N4	10+388.30	3.328	W310x158	159.092	154.000	156.610	4.600	0.610	14
O	O1	10+386.61	3.344	W310x158	158.965	154.465	156.600	4.500	0.610	14
	O2	10+384.17	3.356	W310x158	158.780	154.480	156.580	4.300	0.610	14
	O3	10+381.73	3.356	W310x158	158.596	154.496	156.570	4.100	0.610	12
	O4	10+379.29	3.344	W310x158	158.412	154.512	156.570	3.900	0.610	12



TYPICAL CROSS SECTION

DETAIL A

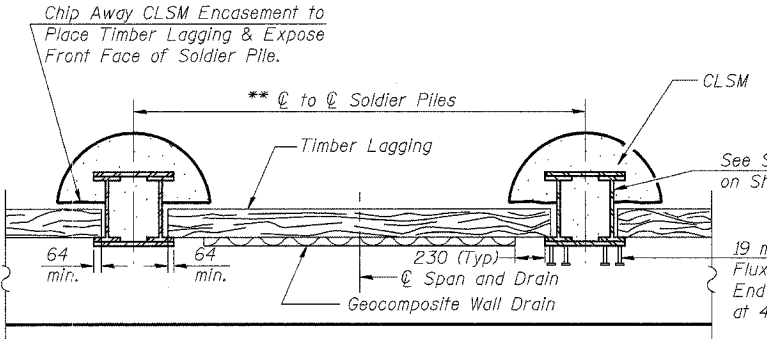


SECTION D-D

Pile Size	A(m)	B(m)
2-W250 x 80	0.457	0.457
2-W310 x 107	0.534	0.534
*** W310 x 158	0.307	0.607
W310 x 158	0.305	0.305

\*\*\* For Piles L1 and L4

Notes:  
 Hatched area indicates "Earth Excavation." Quantity is included with roadway plans. There shall be no excavation behind the wall. The Timber Lagging shall be installed as the "Structure Excavation" proceeds down the wall.  
 If additional length is required, that length shall be added to the bottom of the pile and shall be paid for at the unit price bid for Furnishing Soldier Piles, with the cost of splicing being included in the unit price and the method of splicing approved by the Engineer.  
 Cross hatched area indicates Structure Excavation.  
 Soldier pile numbering increases from north to south.



SECTION E-E

\*\* The Contractor is Responsible for the Design and Performance of the Temporary Lagging Using No Less than a 75 mm Rough-Sawn Lagging Thickness and Minimum fb = 7 MPa.

**LI ENGINEERING, LTD.**  
 20 W. DuSable  
 Chicago, Illinois 60629  
 (312) 461-1100  
 FAX: (312) 461-1100  
 Designed By: MTH Checked By: KRK Drawn By: JMD  
 Date: 09/06 File: r20404-50R08513.dwg

REVISIONS	
NO.	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SOLDIER PILES**  
**RETAINING WALL 82**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP K-2 STATION 10+378 TO 10+507**  
**STRUCTURE NUMBER 090-8513**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
FAI 74	*	TAZEWELL	1366	627	20 SHEETS
FED. ROAD DIST. NO. 7	ILL. MILES	FED. AID PROJECT-			

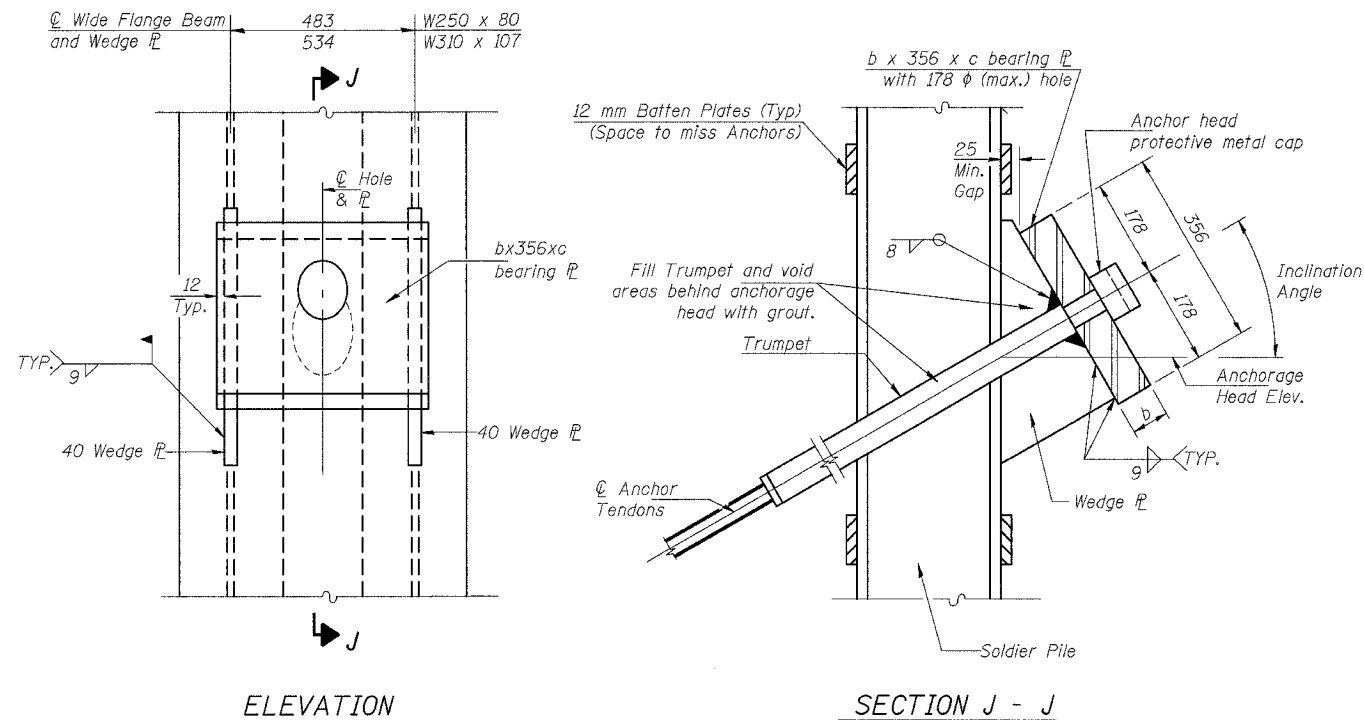
**PERMANENT GROUND ANCHOR DATA**

Soldier Pile Designation	Anchor Number	Anchor Head Elevation	Design Load (kN)	Inclination* Angle	**# of Prestressing Strands	Minimum Anchor Unbonded Length (m)	Estimated Bond *** Length (m)
B1	B1-1	151.362	274.7	15	3	4.3	5.2
B2	B2-1	151.567	460.0	15	3	4.3	5.2
B3	B3-1	151.993	546.3	15	4	4.3	5.2
B4	B4-1	152.500	570.0	15	4	4.3	5.2
C1	C1-1	152.500	570.0	15	4	5.5	8.3
C2	C2-1	152.902	804.3	15	6	5.5	8.3
C3	C3-1	153.237	901.7	15	6	5.5	8.3
C4	C4-1	153.660	904.5	15	6	5.5	8.3
D1	D1-1	153.660	904.5	15	6	6.0	9.1
D2	D2-1	154.276	639.1	15	5	6.0	9.1
D2	D2-2	150.496	674.0	15	5	4.0	5.3
D3	D3-1	154.584	670.3	15	5	6.0	9.1
D3	D3-2	150.714	706.5	15	5	4.0	5.3
D4	D4-1	155.000	602.0	15	5	6.0	9.1
D4	D4-2	151.010	634.3	15	5	4.0	5.3
E1	E1-1	155.020	600.4	15	5	5.9	10.0
E1	E1-2	151.020	625.6	15	5	5.3	7.5
E2	E2-1	155.509	757.3	15	6	5.9	10.0
E2	E2-2	151.389	800.0	15	6	5.3	7.5
E3	E3-1	155.871	791.2	15	6	5.9	10.0
E3	E3-2	151.671	833.0	15	6	5.3	7.5
E4	E4-1	156.410	703.7	15	5	5.9	10.0
E4	E4-2	152.070	747.0	15	5	5.3	7.5
F1	F1-1	156.410	703.7	15	5	9.0	12.0
F1	F1-2	152.070	796.0	25	5	9.0	6.5
F2	F2-1	157.650	600.3	15	5	9.0	12.0
F2	F2-2	154.450	682.4	25	5	9.0	6.5
F2	F2-3	151.250	668.2	25	5	6.0	4.5
F3	F3-1	158.080	626.2	15	5	9.0	12.0
F3	F3-2	154.780	718.9	25	5	9.0	6.5
F3	F3-3	151.480	704.0	25	5	6.0	4.5
F4	F4-1	158.640	557.0	15	4	9.0	12.0
F4	F4-2	155.240	603.0	25	4	9.0	6.5
F4	F4-3	151.840	590.5	25	4	6.0	4.5
G1	G1-1	158.640	557.0	15	4	12.0	12.0
G1	G1-2	155.240	603.0	15	4	5.5	10.5
G1	G1-3	151.840	590.5	15	4	10.0	12.0
G2	G2-1	159.141	701.5	15	5	12.0	12.0
G2	G2-2	155.661	752.0	15	5	5.5	10.5
G2	G2-3	152.181	736.0	15	5	10.0	12.0
G3	G3-1	159.770	584.8	15	4	12.0	12.0
G3	G3-2	157.050	580.6	15	4	5.5	10.5
G3	G3-3	154.330	580.6	15	4	10.0	12.0
G4	G4-1	151.610	568.5	15	4	10.0	8.0
G4	G4-2	160.360	516.2	15	4	12.0	12.0
G4	G4-3	157.560	517.4	15	4	5.5	10.5
G4	G4-4	154.760	517.4	15	4	10.0	12.0
G4	G4-4	151.960	506.6	15	4	10.0	8.0
H1	H1-1	160.960	593.2	15	5	10.0	6.0
H1	H1-2	159.210	720.7	25	6	5.0	7.0
H1	H1-3	156.700	849.3	25	6	4.5	8.0
H1	H1-4	154.190	849.3	25	6	9.0	8.5
H1	H1-5	151.680	833.2	25	6	6.0	6.5
H2	H2-1	161.420	836.7	15	6	12.0	8.5
H2	H2-2	159.020	912.8	15	6	9.0	8.0
H2	H2-3	156.620	912.8	15	6	6.0	8.75
H2	H2-4	154.220	938.2	20	6	14.0	8.5
H2	H2-5	151.820	918.7	20	6	10.0	6.0
H3	H3-1	161.308	706.0	15	6	12.0	7.0
H3	H3-2	159.500	829.7	15	6	9.0	8.0
H3	H3-3	156.850	939.7	15	6	6.0	8.75
H3	H3-4	154.460	916.1	20	6	14.0	8.5
H3	H3-5	152.070	911.7	20	6	10.0	6.0
H4	H4-1	161.170	570.9	15	5	10.0	6.0
H4	H4-2	159.370	677.2	25	5	5.0	7.0
H4	H4-3	157.000	769.7	25	5	4.5	8.0
H4	H4-4	154.630	771.4	25	5	9.0	8.5
H4	H4-5	152.250	756.9	25	5	6.0	6.5
I1	I1-1	161.170	638.7	15	5	9.0	6.25
I1	I1-2	158.910	686.3	15	5	6.8	6.75
I1	I1-3	156.650	686.3	15	5	5.0	6.75
I1	I1-4	154.390	705.5	20	5	4.5	11.0
I1	I1-5	152.130	590.8	20	5	9.0	6.0

\* Measured from horizontal plane.

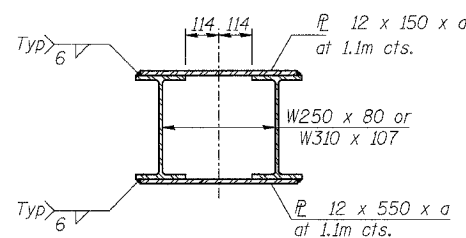
\*\* The prestressing steel tendon shall consist of the specified number of seven-wire strands (AASHTO M203M Grade 1860 No. 15) An alternate system using an equivalent High Strength Steel bar is allowed.

\*\*\*Estimated length only. The contractor shall determine the bonded length necessary to satisfy the test load requirements. The Anchor unbonded length may need to be increased to put the Anchor bonded region in a suitable soil.



**ANCHOR HEAD DETAILS**

Notes: Anchorage Head, consisting of 2 wedge plates and a bearing plate shall be shop fabricated.  
Any modifications to the details for the anchor bearing plate and wedge plates required to accommodate the anchor shall be submitted by the Contractor for the Engineer's approval. Cost included with "Permanent Ground Anchors".  
Cost of furnishing, fabricating, attaching all structural steel & drilling holes in the piles is included with "Permanent Ground Anchors".  
Soldier pile numbering increases from north to south.  
Anchor number increases from top to bottom.  
Wall reinforcement may be moved to avoid conflict with the anchor head. Maintain 1" clearance between reinforcement and anchor head.



**SOLDIER PILE DETAIL**

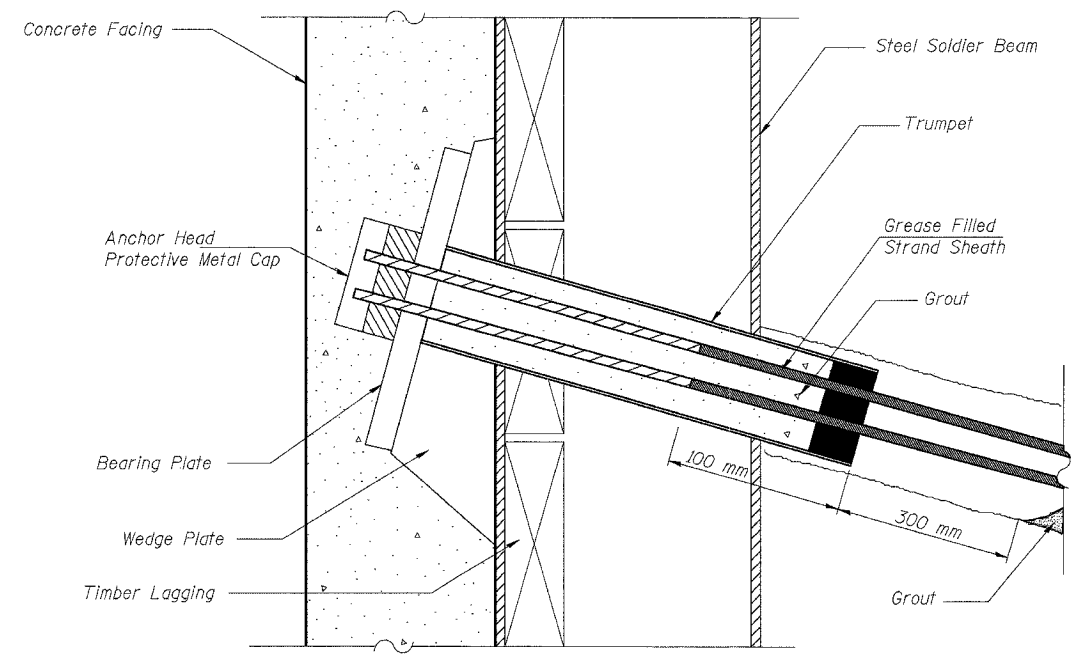
Cut plate in field if it interferes with rock anchor.

Pile Size	a	b	c
W250 x 80	730	2 x 75	548
W310 x 107	830	2 x 75	598

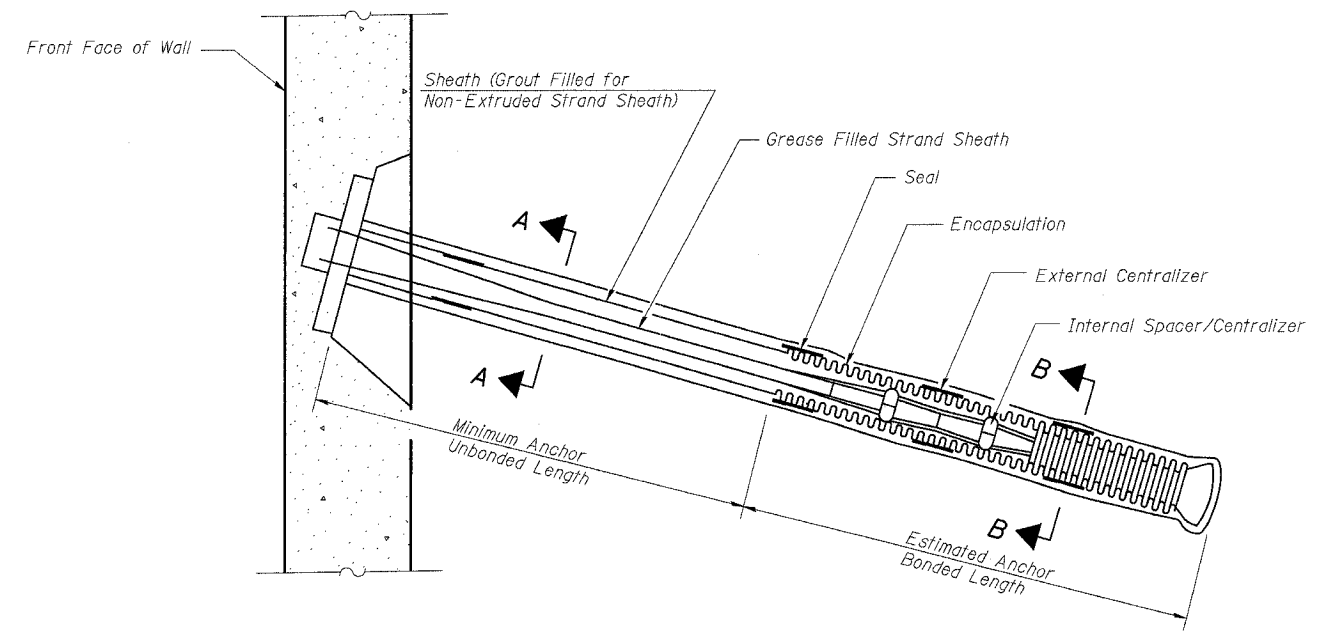
REVISIONS	
NAME	

**LIN ENGINEERING, LTD.**  
20 N. Chestnut  
Channahon, Illinois 62229  
815-463-4164 FAX 815-463-4166  
Designed By: MTH Checked By: KRK Drawn By: JMD  
Date: 09/02 File: rpg405-50908513.dgn

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GROUND ANCHOR DETAILS**  
RETAINING WALL 82  
F.A.I. RTE. 74 (I-74)  
SECTION 90-11HB-5  
TAZEWELL COUNTY  
RAMP K-2 STATION 10+378 TO 10+507  
STRUCTURE NUMBER 090-8513



**DETAIL AT ANCHORAGE HEAD**

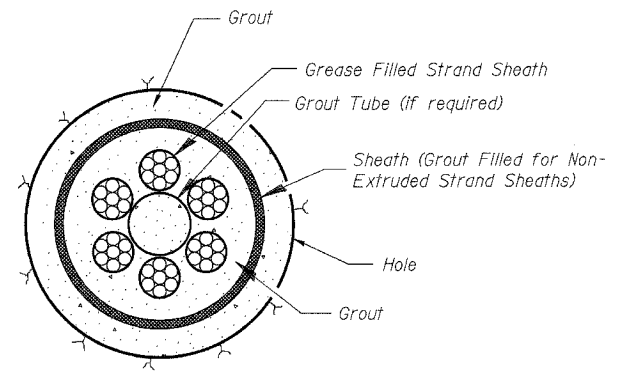


**DETAIL OF CORROSION PROTECTION & TENDON DETAILS**

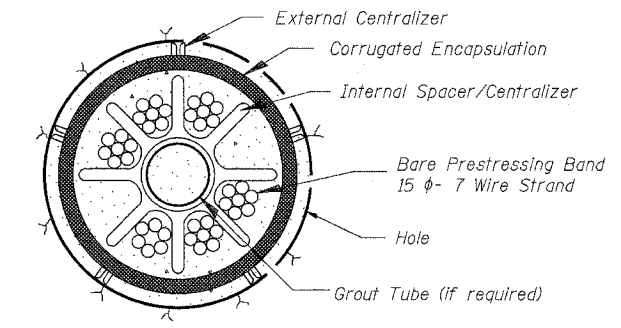
**PERMANENT GROUND ANCHOR DATA**

Soldier Pile Designation	Anchor Number	Anchor Head Elevation	Design Load (kN)	Inclination* Angle	**# of Prestressing Strands	Minimum Anchor Unbonded Length (m)	Estimated Anchor Bond *** Length (m)
I2	I2-1	161.082	700.0	15	5	9.0	6.25
	I2-2	158.892	761.0	15	5	6.8	6.75
	I2-3	156.702	761.0	15	5	5.0	6.75
	I2-4	154.512	762.0	20	5	4.5	11.0
	I2-5	152.322	765.7	20	5	9.0	6.0
I3	I3-1	160.968	670.0	15	5	9.0	6.25
	I3-2	158.838	721.5	15	5	6.8	6.75
	I3-3	156.708	721.5	15	5	5.0	6.75
	I3-4	154.578	741.6	20	5	4.5	11.0
	I3-5	152.448	726.2	20	5	9.0	6.0
I4	I4-1	159.980	754.7	15	5	9.0	6.25
	I4-2	157.630	673.1	15	5	6.8	6.75
	I4-3	155.280	673.1	15	5	5.0	6.75
	I4-4	152.930	677.5	20	5	4.5	11.0
J1	J1-1	160.580	652.0	15	5	7.5	11.0
	J1-2	158.080	705.6	15	5	6.0	10.0
	J1-3	155.580	705.6	15	5	4.0	12.0
	J1-4	153.080	691.0	15	5	7.0	12.0
J2	J2-1	160.000	835.0	15	6	7.5	11.0
	J2-2	157.260	900.0	25	6	6.0	10.0
	J2-3	154.520	881.0	25	6	4.0	12.0
J3	J3-1	160.230	654.5	15	5	7.5	11.0
	J3-2	157.710	742.7	25	5	6.0	10.0
	J3-3	155.190	727.3	25	5	4.0	12.0
	J4-1	159.840	585.2	15	4	7.5	11.0
J4	J4-2	156.850	667.0	25	5	6.0	10.0
	K1-1	159.860	585.2	15	4	4.4	9.5
K1	K1-2	156.860	625.2	15	4	4.5	8.75
	K2-1	159.659	674.6	15	5	4.4	9.5
K2	K2-2	156.759	703.4	15	5	4.5	8.75
	K3-1	159.690	593.6	15	4	6.0	9.25
K3	K3-2	156.940	627.3	15	4	6.0	8.75
	K4-1	159.740	594.8	15	4	8.0	8.5

\* Measured from horizontal plane.  
 \*\* The prestressing steel tendon shall consist of the specified number of seven-wire strands (AASHTO M203M Grade 1860 No. 15) An alternate system using an equivalent High Strength Steel bar is allowed.  
 \*\*\* Estimated length only. The contractor shall determine the bonded length necessary to satisfy the test load requirements. The Anchor unbonded length may need to be increased to put the Anchor bonded region in a suitable soil.



**SECTION A-A**



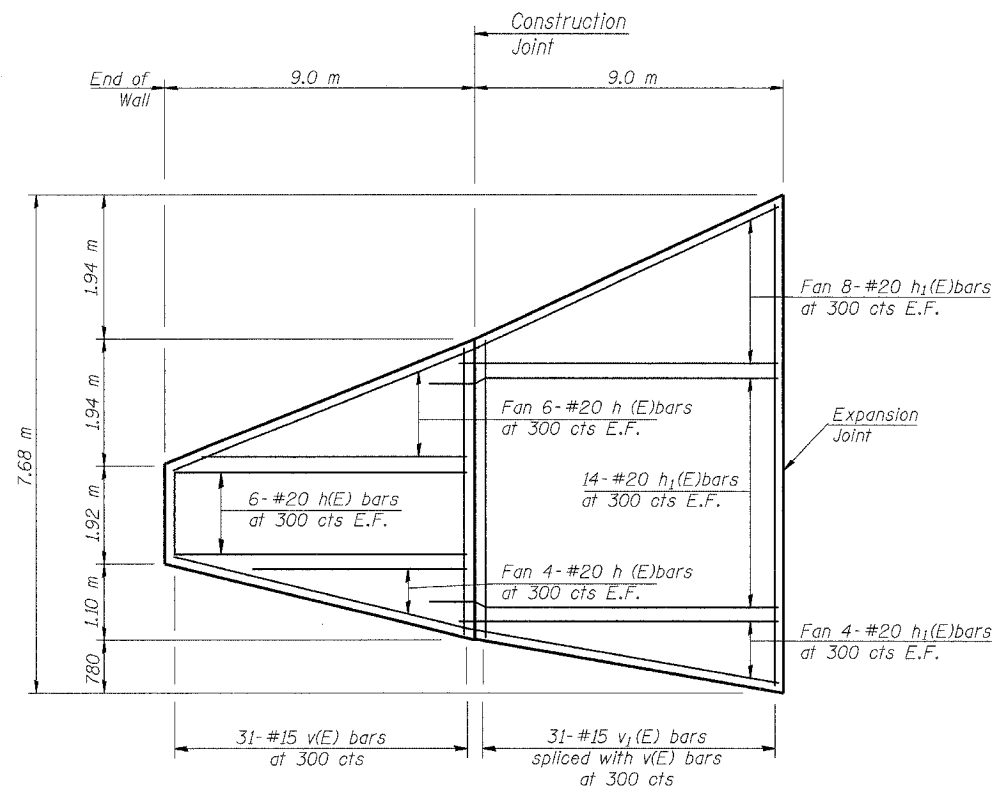
**SECTION B-B**

**LIN ENGINEERING, LTD.**  
 20 N. Chestnut  
 Chatham, Illinois 62829  
 (314) 453-888  
 FAX (314) 453-4706  
 Designed By: MTH Checked By: KHS Drawn By: JMD  
 Date: 09/02 File: rz0406-5008513.dgn

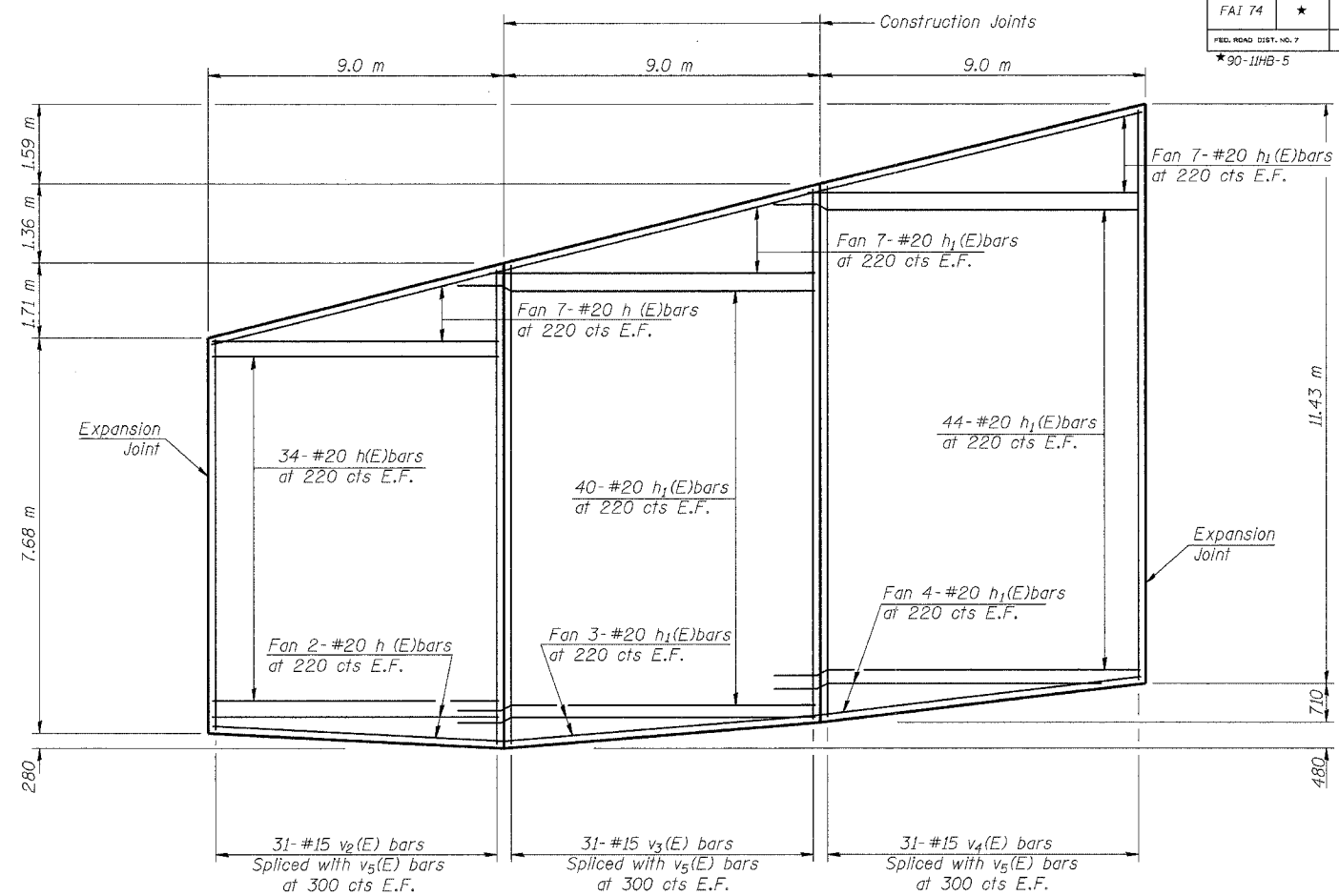
REVISIONS	
NO.	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GROUND ANCHOR DETAILS**  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO.
FAI 74	*	TAZEWELL	1366	629	20 SHEETS
FED. ROAD DIST. NO. 7		ILL. PROJ. NO.	FED. AID PROJECT		
*90-11HB-5					



**ELEVATION OF PANELS A & B**  
(Looking From Front of Wall)



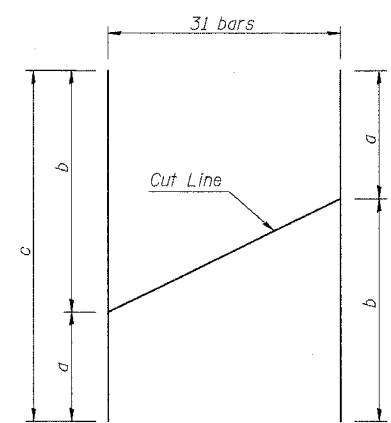
**ELEVATION OF PANELS C TO E**  
(Looking From Front of Wall)

E.F. indicates each face.

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h(E)	118	#20	8.92	—
h1(E)	262	#20	9.79	—
v(E)	62	#15	6.63	—
v1(E)	31	#15	7.05	—
v2(E)	31	#15	4.39	—
v3(E)	31	#15	7.26	—
v4(E)	31	#15	9.02	—
v5(E)	186	#15	7.00	—
Concrete Structures		m <sup>3</sup>	132.4	
Reinforcement Bars, Epoxy Coated		kg	12560	

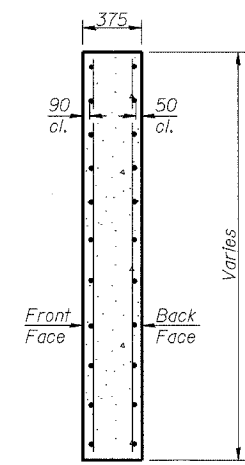
Reinforcement Bars designated (E) shall be epoxy coated. Bars indicated thus 1 x 2- #20 etc. indicates 1 line of bars with 2 lengths per line. The horizontal bars shall be bent at the joints to account for the nonlinear wall alignment. Cost included in "Reinforcement Bars, Epoxy Coated."



**BAR CUTTING DIAGRAM v(E) BARS**  
(Length in meters)

Bar	a	b	c
v(E)	1.81	4.82	6.63
v1(E)	3.68	3.37	7.05
v2(E)	1.21	3.18	4.39
v3(E)	3.19	4.07	7.26
v4(E)	4.07	4.95	9.02

Note: Order bars full length. Cut bars as shown & use remainder on the other face of wall.



**SECTION THRU PANEL**

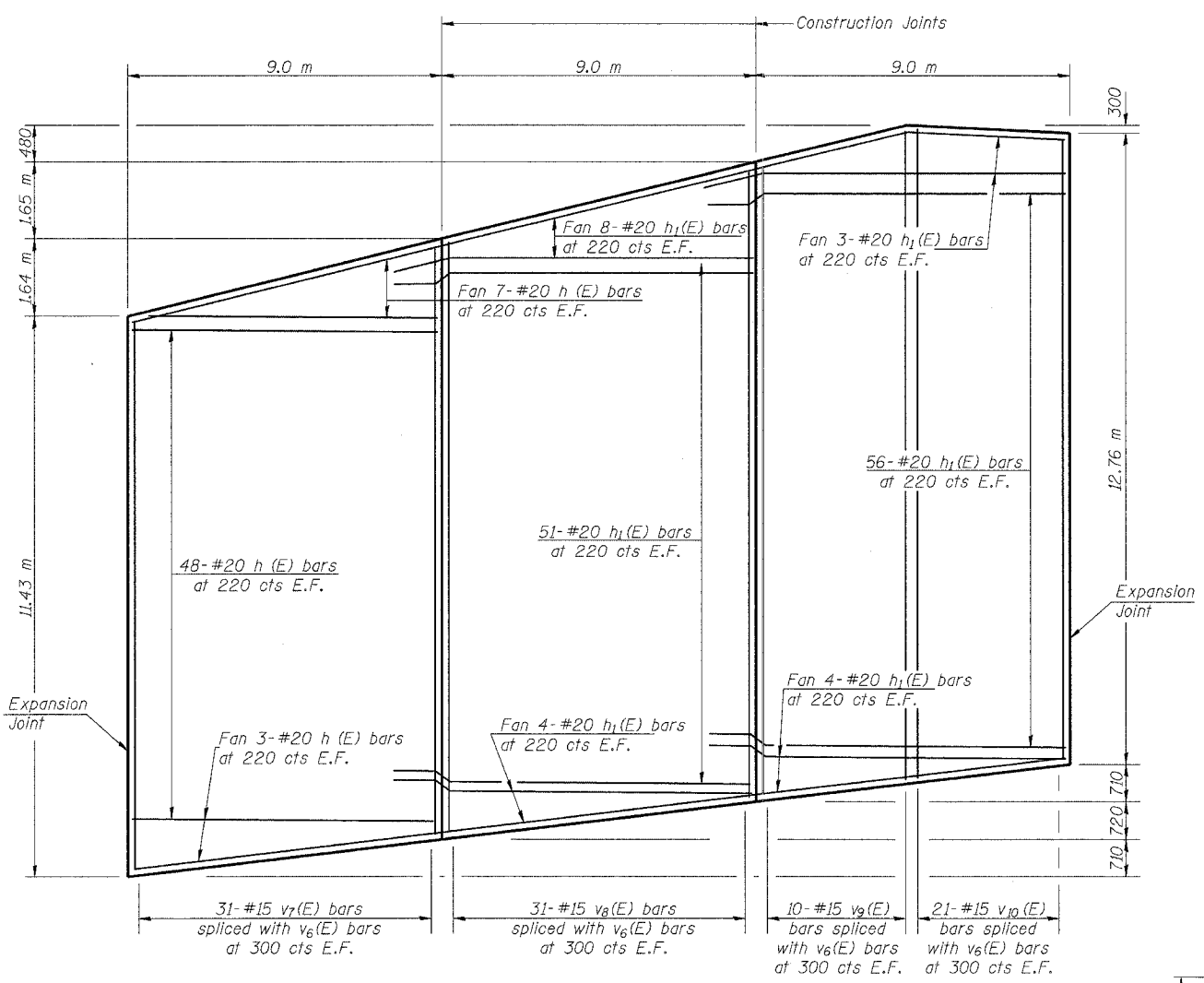
**MIN BAR LAP**  
#15 Bars = 640  
#20 Bars = 790

**LIN ENGINEERING, LTD.**  
260 W. Chestnut  
Channahon, Illinois 62629  
2011-451-4668  
2011-451-4700  
Fax: 815-451-4700  
Designed By: MTH Checked By: KRG | Drawn By: JMD  
Date: 09/02 File: rp04070606513.dgn

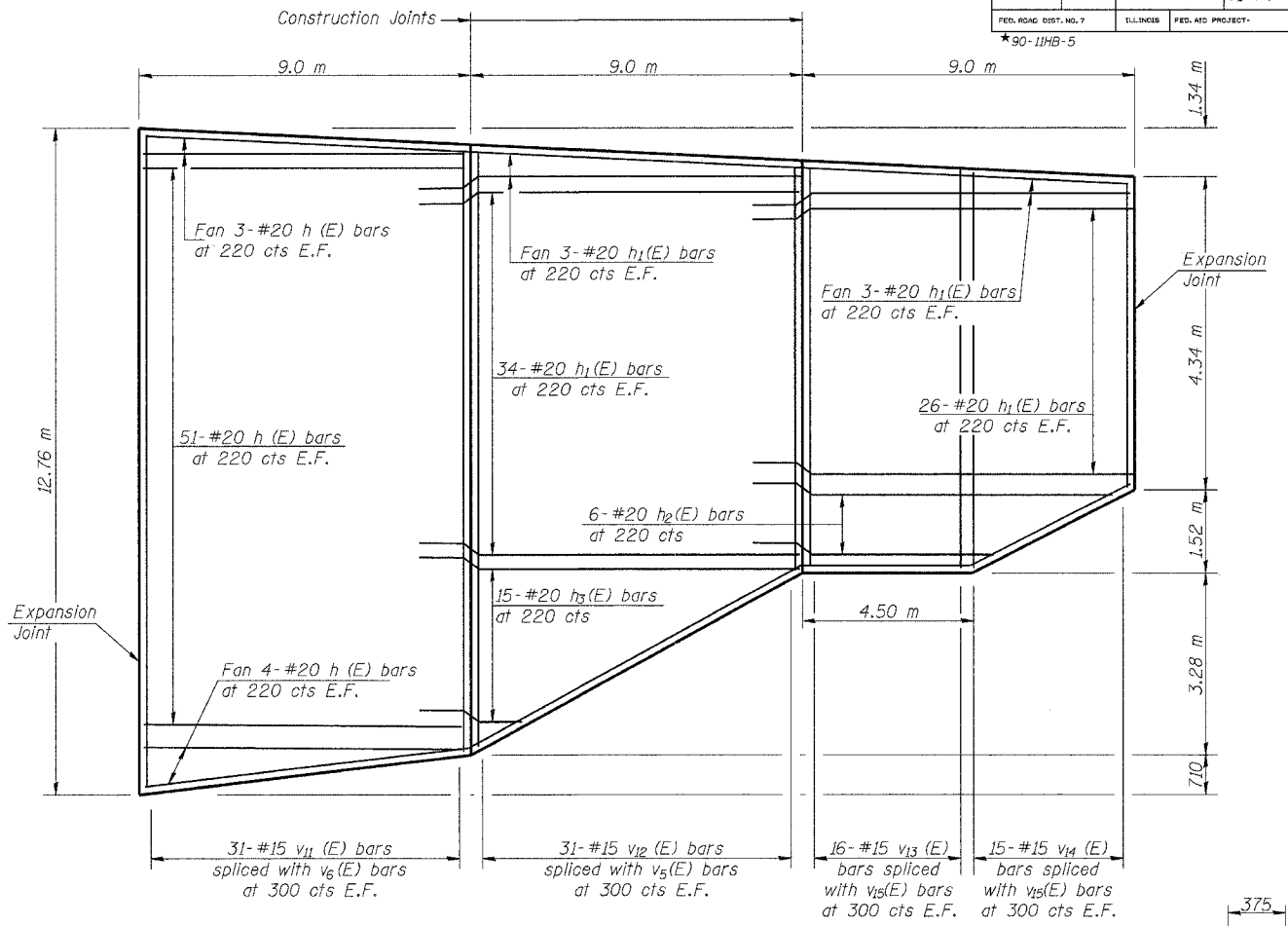
REVISIONS	
NO.	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE FACING**  
**RETAINING WALL 82**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP K-2 STATION 10+378 TO 10+507**  
**STRUCTURE NUMBER 090-8513**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO.
FAI 74	*	TAZEWELL	1366	630	20 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			
*90-11HB-5					



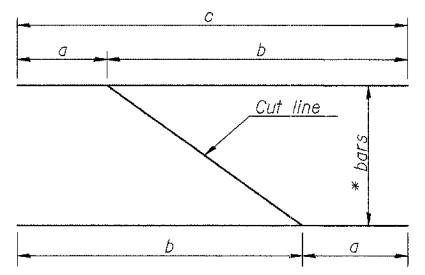
**ELEVATION OF PANELS F TO H**  
(Looking From Front of Wall)



**ELEVATION OF PANELS I TO K**  
(Looking From Front of Wall)

**BILL OF MATERIAL**

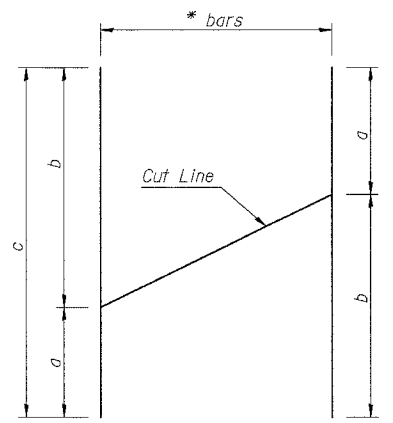
Bar	No.	Size	Length (m)	Shape
h(E)	232	#20	8.92	—
h <sub>1</sub> (E)	384	#20	9.79	—
h <sub>2</sub> (E)	6	#20	14.92	—
h <sub>3</sub> (E)	15	#20	10.31	—
v <sub>5</sub> (E)	62	#15	7.00	—
v <sub>6</sub> (E)	248	#15	9.00	—
v <sub>7</sub> (E)	31	#15	6.82	—
v <sub>8</sub> (E)	31	#15	8.68	—
v <sub>9</sub> (E)	10	#15	9.90	—
v <sub>10</sub> (E)	21	#15	9.37	—
v <sub>11</sub> (E)	31	#15	7.38	—
v <sub>12</sub> (E)	31	#15	6.49	—
v <sub>13</sub> (E)	16	#15	6.56	—
v <sub>14</sub> (E)	15	#15	4.61	—
v <sub>15</sub> (E)	62	#15	5.00	—
Concrete Structures		m <sup>3</sup>	224.8	
Reinforcement Bars, Epoxy Coated		kg	21150	



**BAR CUTTING DIAGRAM h BARS**  
(Length in meters)

Bar	a	b	c	*
h <sub>2</sub> (E)	5.83	9.09	14.92	6
h <sub>3</sub> (E)	1.23	9.08	10.31	15

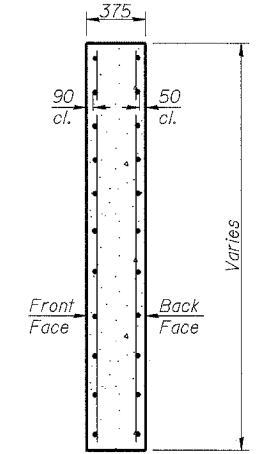
Reinforcement Bars designated (E) shall be epoxy coated. Bars indicated thus 1 x 2- #20 etc. indicates 1 line of bars with 2 lengths per line. The horizontal bars shall be bent at the joints to account for the nonlinear wall alignment. Cost included in "Reinforcement Bars, Epoxy Coated." Note: Order bars full length. Cut bars as shown & use remainder on the other face of wall.



**BAR CUTTING DIAGRAM v(E) BARS**  
(Length in meters)

Bar	a	b	c	*
v <sub>7</sub> (E)	2.95	3.87	6.82	31
v <sub>8</sub> (E)	3.88	4.80	8.68	31
v <sub>9</sub> (E)	4.81	5.09	9.90	10
v <sub>10</sub> (E)	5.09	4.28	9.37	21
v <sub>11</sub> (E)	4.27	3.11	7.38	31
v <sub>12</sub> (E)	5.09	1.40	6.49	31
v <sub>13</sub> (E)	3.39	3.17	6.56	16
v <sub>14</sub> (E)	3.17	1.44	4.61	15

E.F. indicates each face.



**SECTION THRU PANEL**

**MIN BAR LAP**  
#15 Bars= 640  
#20 Bars= 790

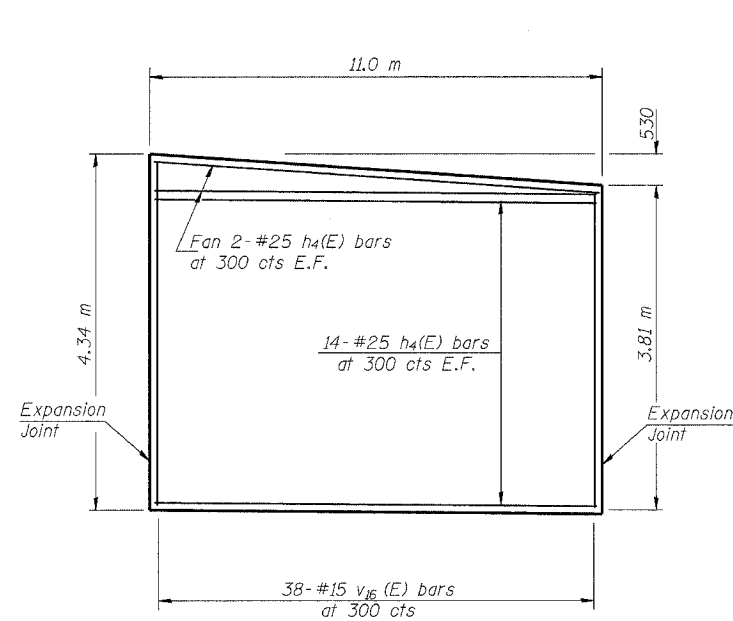
**LIN ENGINEERING LTD.**  
20 W. Chestnut  
CITY 483-468  
Designed By: MTH  
Date: 05/02

2707th St. #1016  
FAX: (773) 483-4706  
Checked By: KRG  
File: r20408-00000815.dgn

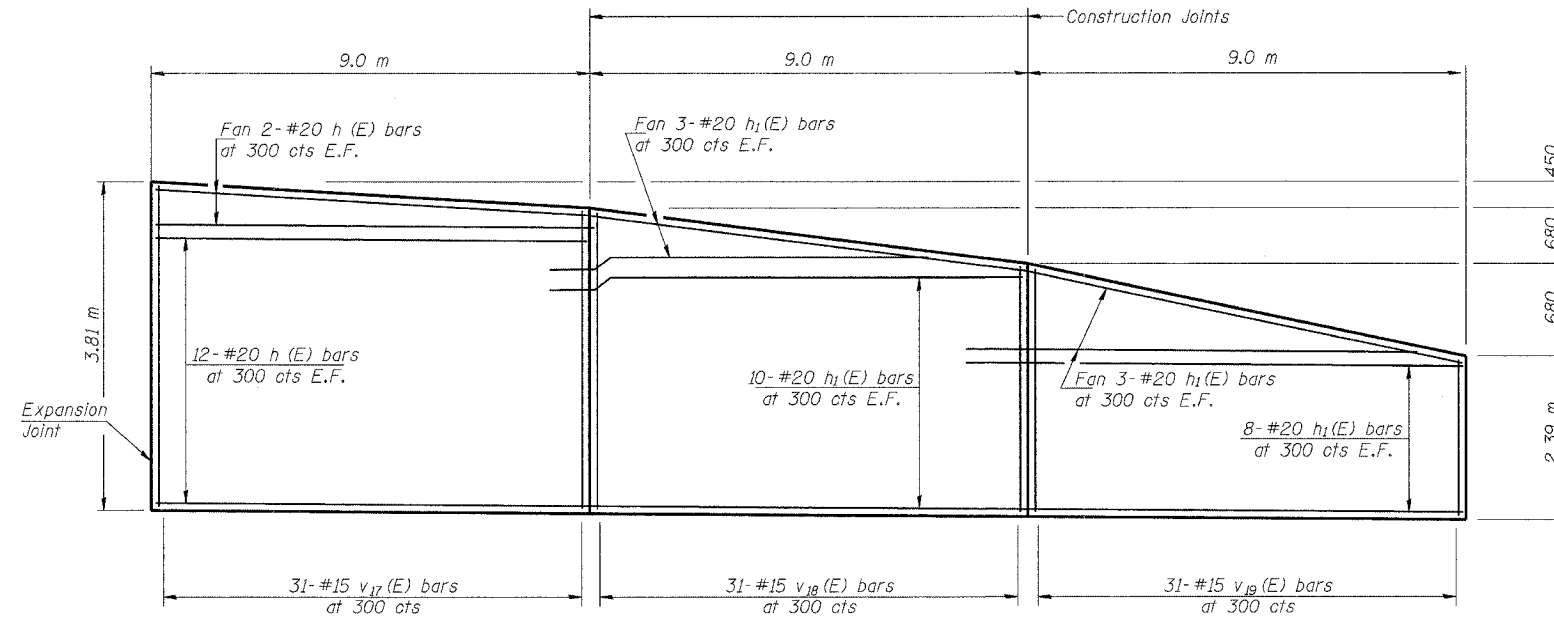
REVISIONS	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE FACING**  
**RETAINING WALL 82**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP K-2 STATION 10+378 TO 10+507**  
**STRUCTURE NUMBER 090-8513**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	13/61	63/1
SHEET NO. 9				
20 SHEETS				
*90-11HB-5				



**ELEVATION OF PANEL L**  
(Looking From Front of Wall)



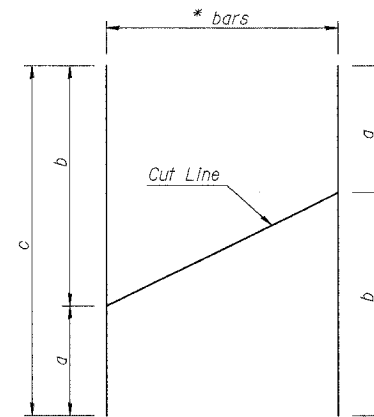
**ELEVATION OF PANELS M TO O**  
(Looking From Front of Wall)

E.F. indicates each face.

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h(E)	28	#20	8.92	—
h1(E)	48	#20	9.79	—
h4(E)	32	#25	10.92	—
v16(E)	38	#15	8.35	—
v17(E)	31	#15	7.49	—
v18(E)	31	#15	6.48	—
v19(E)	31	#15	5.24	—
Concrete Structures			m <sup>3</sup>	50.4
Reinforcement Bars, Epoxy Coated			kg	4500

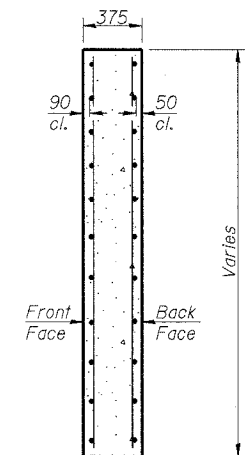
Reinforcement Bars designated (E) shall be epoxy coated. Bars indicated thus 1 x 2- #20 etc. indicates 1 line of bars with 2 lengths per line. The horizontal bars shall be bent at the joints to account for the nonlinear wall alignment. Cost included in "Reinforcement Bars, Epoxy Coated."



**BAR CUTTING DIAGRAM v(E) BARS**  
(Length in meters)

Bar	a	b	c	*
v16 (E)	4.41	3.94	8.35	38
v17 (E)	3.94	3.55	7.49	31
v18 (E)	3.55	2.93	6.48	31
v19 (E)	2.93	2.31	5.24	31

Note: Order bars full length. Cut bars as shown & use remainder on the other face of wall.



**SECTION THRU PANEL**

**MIN BAR LAP**  
#15 Bars = 640  
#20 Bars = 790  
#25 Bars = 1320

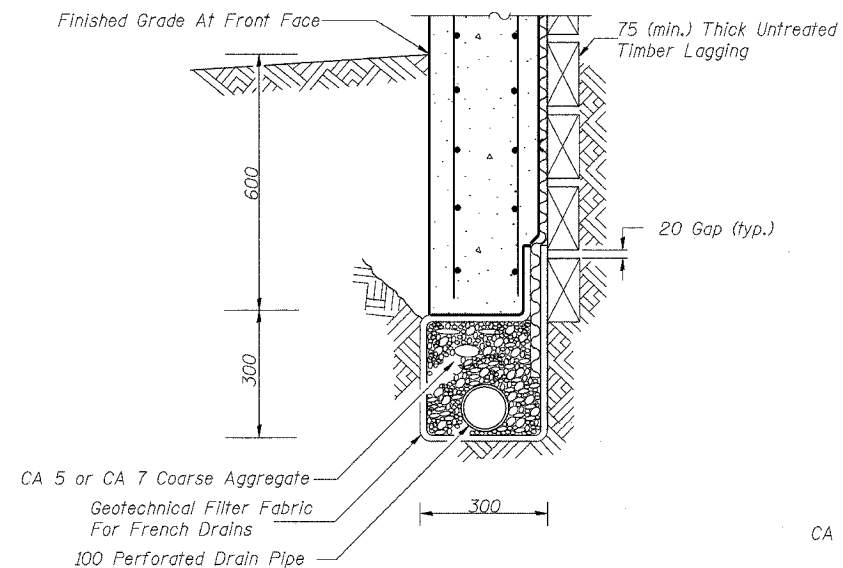
**LIN ENGINEERING, LTD.**

20 W. Chestnut  
Channahon, Illinois 62628  
Tel: 815-483-4668 Fax: 815-483-4128  
Designed By: MTH Checked By: JPH Drawn By: JMO  
Date: 05/02 File: r20409-58260851.dgn

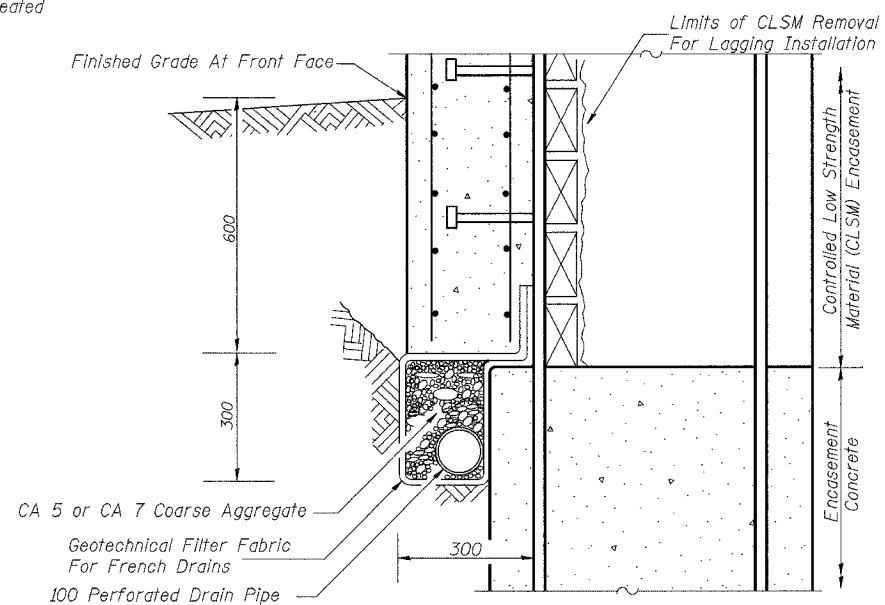
REVISIONS	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE FACING**  
**RETAINING WALL 82**  
**F.A.I. RTE. 74 (I-74)**  
**SECTION 90-11HB-5**  
**TAZEWELL COUNTY**  
**RAMP K-2 STATION 10+378 TO 10+507**  
**STRUCTURE NUMBER 090-8513**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	682
SHEET NO. 10				
20 SHEETS				
FED. ROAD DIST. NO. 7		ILL. PROJ. NO. 90-11HB-5		



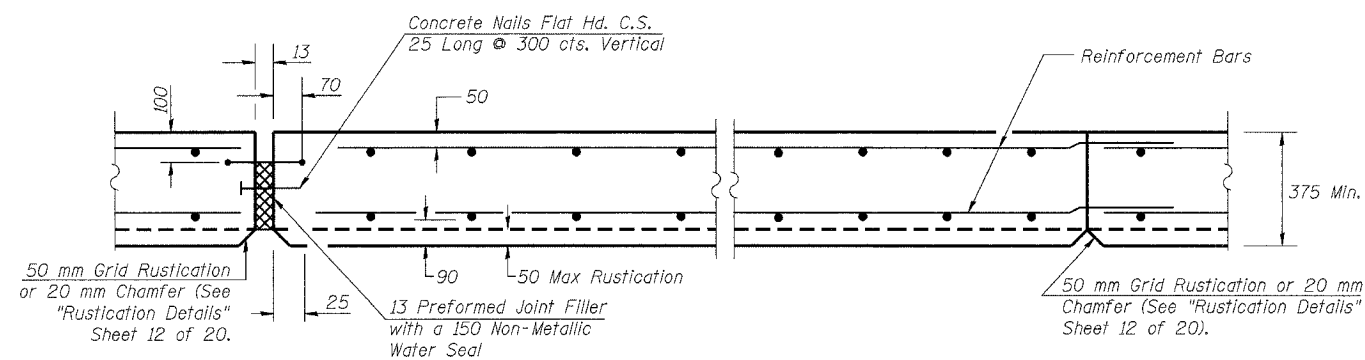
**BETWEEN SOLDIER PILES**



**AT SOLDIER PILES**

**FRENCH DRAIN DETAIL**

The French Drain installation shall follow Section 601 of the Standard Specifications except that the trench backfill shall consist of CA-5 or CA-7 coarse aggregate. The trench shall be lined with geotechnical fabric for French Drains and have a 100 mm diameter drain pipe located near the base of the excavation. The cost of the geotechnical fabric and drain pipe is included with the pay item French Drains.



**EXPANSION JOINT**

**CONSTRUCTION JOINT**

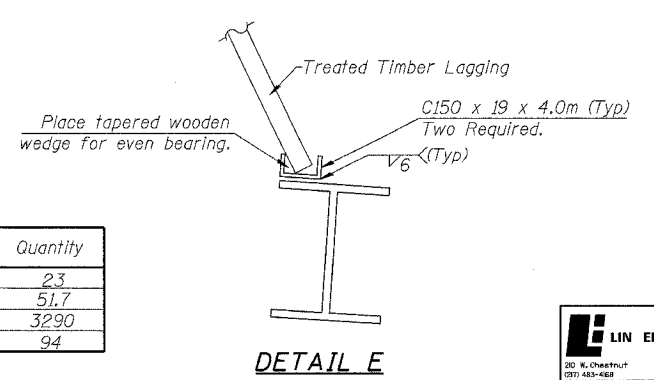
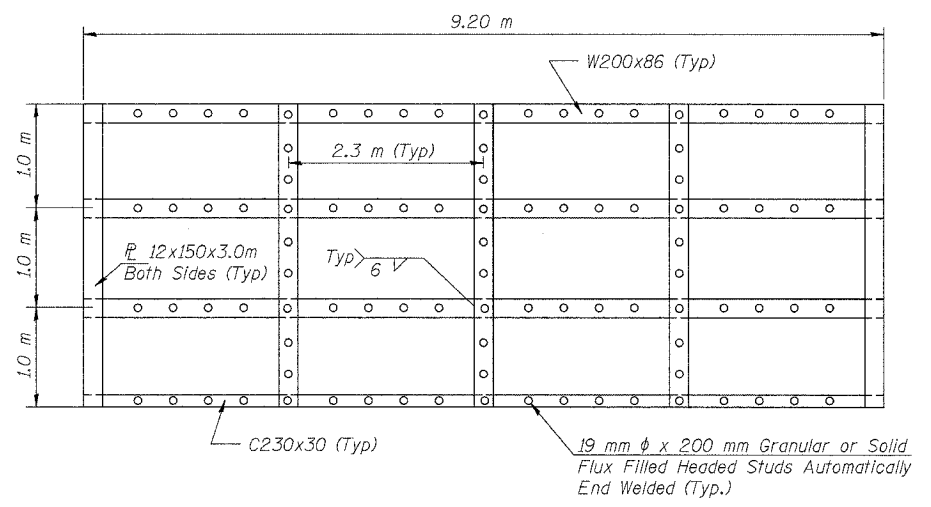
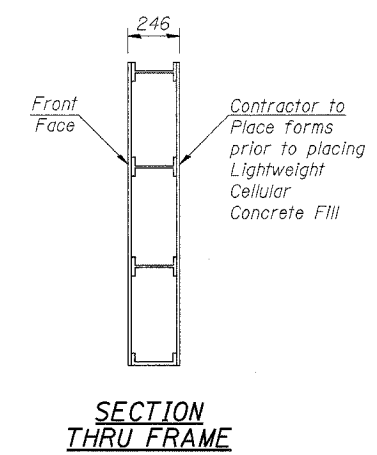
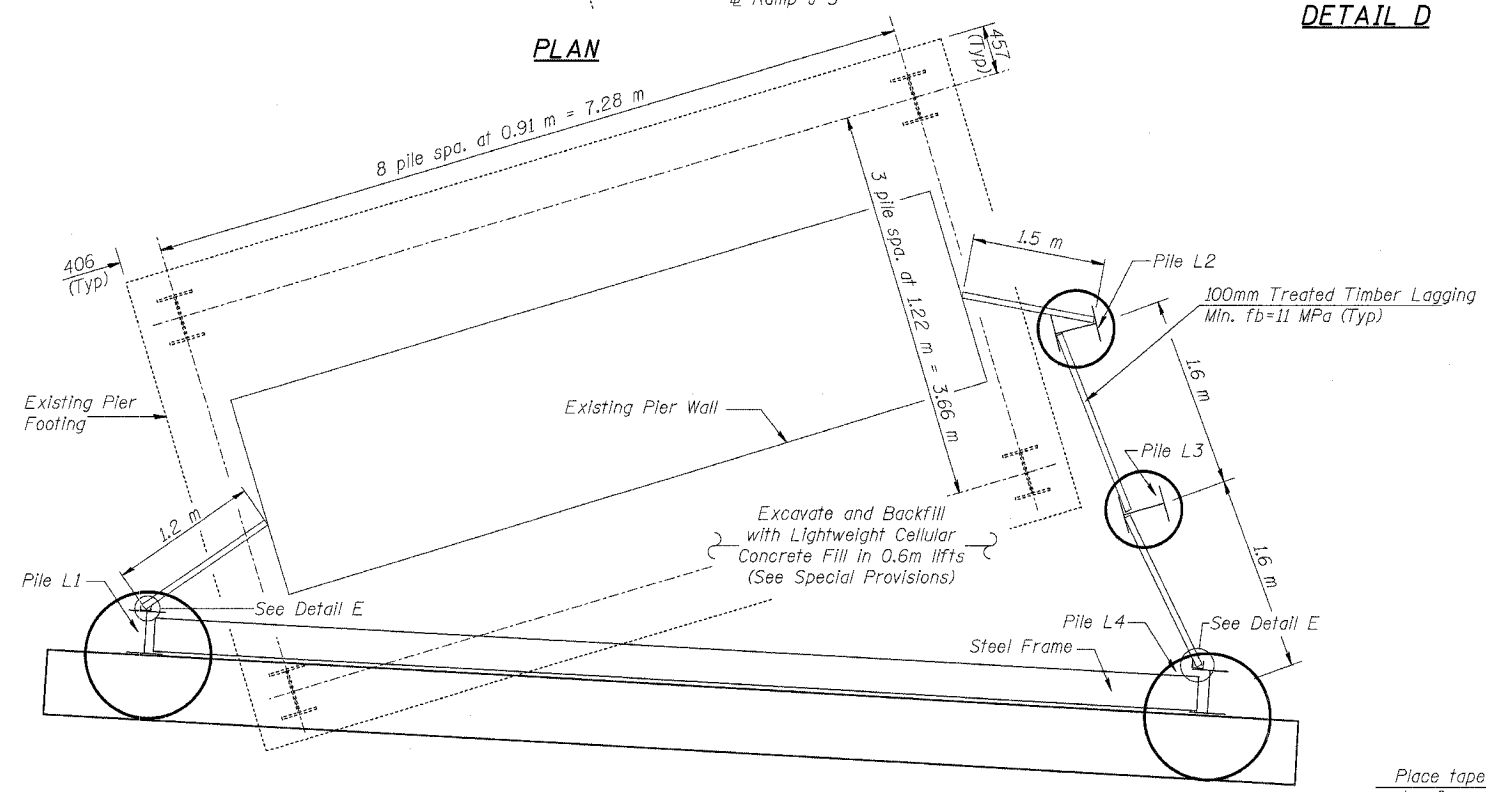
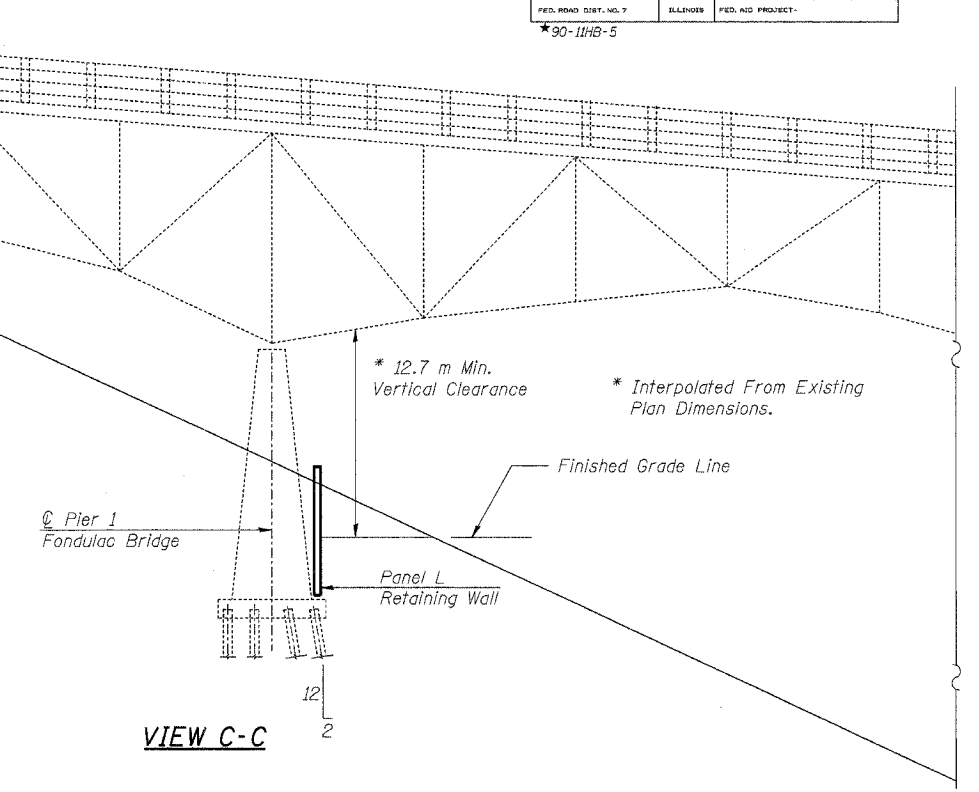
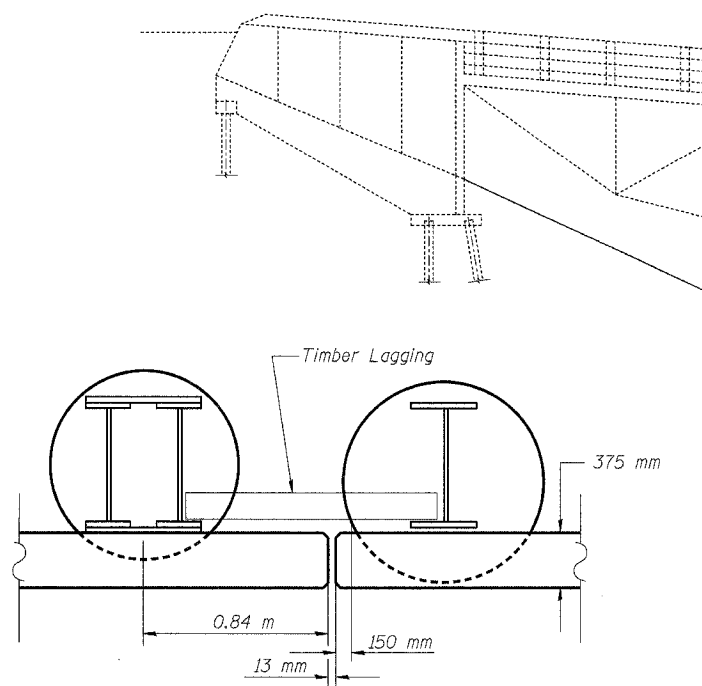
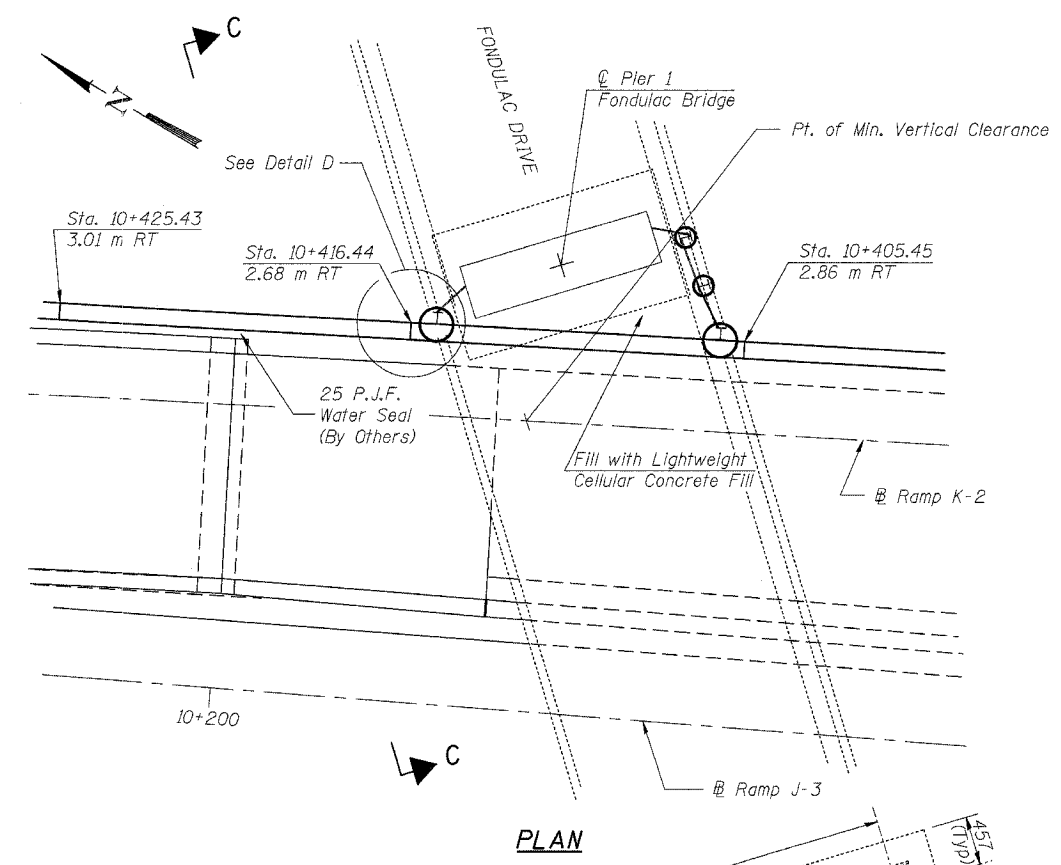
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MISCELLANEOUS DETAILS**  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

**LIN ENGINEERING, LTD.**  
 202 W. Chestnut  
 Chicago, Illinois 60629  
 (312) 463-4668 FAX (312) 463-4706  
 Designed By: MTH Checked By: ERG Drawn By: JND  
 Date: 05/02 File: r90410-500908513.dgn

REVISIONS	
NO.	NAME



ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366 633	20 SHEETS
FED. ROAD DIST. NO. 7		BILL NO.	FED. AID PROJECT	
*90-11HB-5				



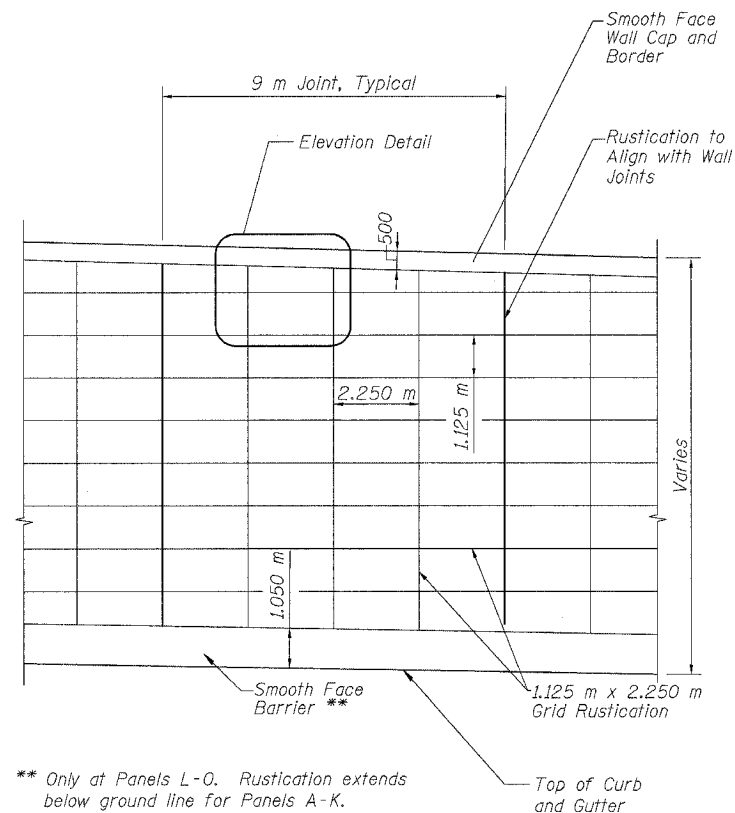
- SEQUENCE OF CONSTRUCTION**
1. Drill and set soldier piles L1 thru L4.
  2. Place treated timber lagging as shown while excavating on west side of pier.
  3. Place steel frame between piles L1 and L4 and provide formwork on east face.
  4. Backfill with Low Weight Material (See Special Provisions).
  5. Place shear connectors and cast concrete panels.

REVISIONS	
NAME	

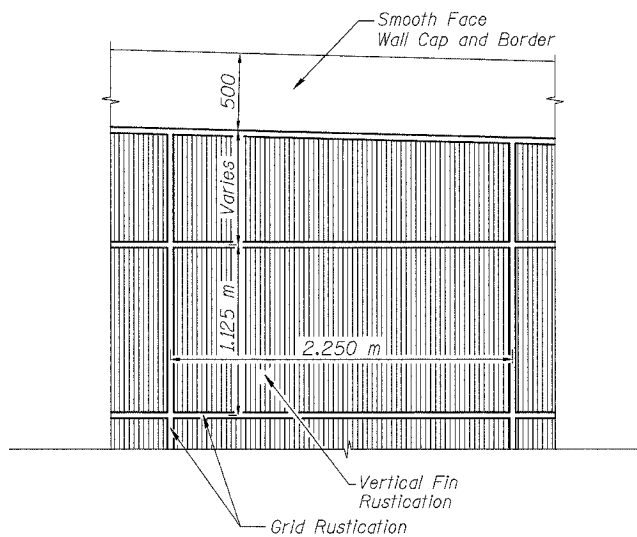
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MISCELLANEOUS DETAILS**  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

**LIN ENGINEERING, LTD.**  
 20 W. Chestnut  
 Chicago, Illinois 60629  
 (312) 461-4644  
 FAX (312) 461-4700  
 Designed By: MTH Checked By: KR6 Drawn By: JMD  
 Date: 09/02 File: r90411-50908513.dgn

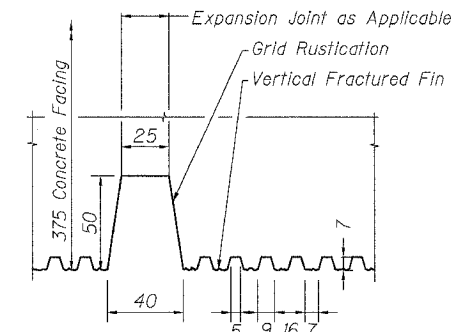
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAI 74	*	TAZEWELL	1366 634	20 SHEETS
FED. ROAD DIST. NO. 7		ILL. PROJ.	FED. AID PROJECT	
*90-11HB-5				



**TYPICAL ELEVATION**

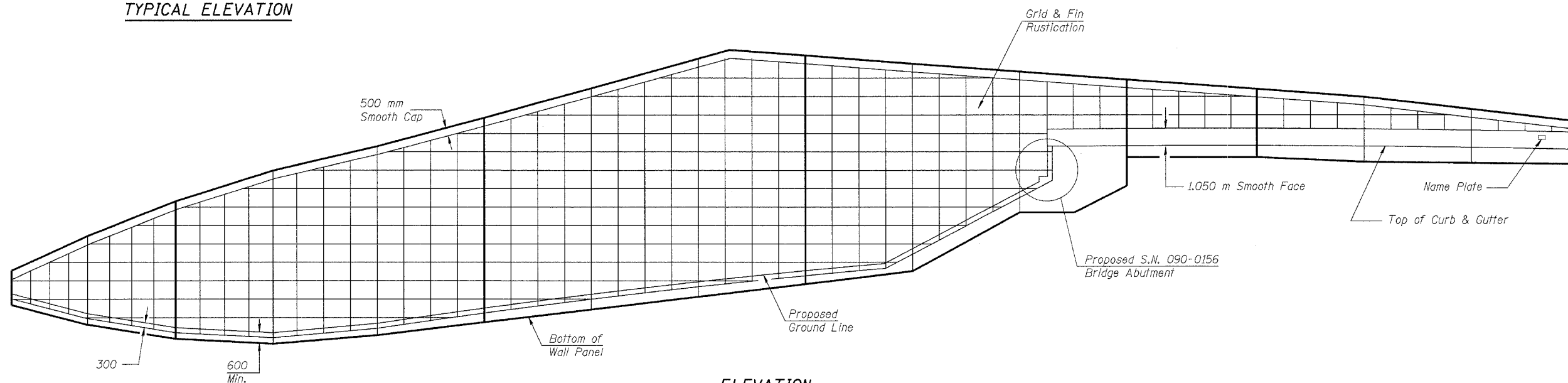


**ELEVATION DETAIL**



\*Dimensions subject to minor variations within the group of approved formliners.

**GRID AND FIN RUSTICATION DETAIL**



**ELEVATION**  
(Looking East)

**BILL OF MATERIAL**

Item	Unit	Quantity
Form Liner Grid and Fin Surface	m <sup>2</sup>	907.0

**LIN ENGINEERING, LTD.**

20 W. Chestnut  
Chicago, Illinois 60629  
Tel: 312-463-4100  
Fax: 312-463-4100  
Designed By: MTH Checked By: KRK Drawn By: JMD  
Date: 08/02 File: 190412-560908513.dwg

REVISIONS
NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**RUSTICATION DETAILS**  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513



**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. SB-251 (CONT.)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BACKSLOPE RAMP K-2BL 10+483.1 23.6m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-8-96 COMPLETED 3-8-96 SURFACE ELEVATION 159.98

DRILLED BY S. SCOTT LOGGED BY M. DEMALIT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD								
			N	Q <sub>u</sub>	W	T <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE					
			Sp0.15m	KPa	%	Kgpm <sup>3</sup>									
145.72	DK GR TO GR WEAKLY CEMENTED SANDSTONE	10	5	-	10	-	DD	3-8	14.3	-	CHD-850	AUGER TYPE-DEPTH 0.08m HSA-16.0m			
146.32	DK GR, GR & BR WEAKLY CEMENTED TO CEMENTED SANDSTONE	10	5	-	10	-	DC	3-8	9.4	0		CASING TYPE-DEPTH -			
146.32	BLK & DK YEL BR COAL	2	-	-	18	-	-	3-9	DRY	40		SAMPLER TYPE AU-SS			
145.11	VOID	9	-	-	30	-									
145.11	DK GR TO GR LAMINATED CLAY SHALE	20	65	-	13	-									
144.28	GR, DK GR & GRN GR MASSIVE CLAY SHALE	39	150/0.10m	-	9	-									
144.01	END OF BORING	150/0.10m													

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. SB-243

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+476.3 5.2m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 4-4-96 COMPLETED 4-5-96 SURFACE ELEVATION 156.75

DRILLED BY S. SCOTT LOGGED BY M. DEMALIT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD								
			N	Q <sub>u</sub>	W	T <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE					
			Sp0.15m	KPa	%	Kgpm <sup>3</sup>									
156.55	TOPSOIL FILL: DK BR SILTY LOAM, A-4	0	-	-	13	-	DD	4-4	DRY	-	CHD-850	AUGER TYPE-DEPTH 0.08m HSA-10.3m			
156.55	BR SILT, A-4	12	-	-	12	-	DC	4-4	5.2	0		CASING TYPE-DEPTH -			
154.32	BR SAND, A-3	4	3	-	4	-	DC	4-5	5.4	1d		SAMPLER TYPE AU-SS			
148.99	BR SAND, A-3	12	16	-	3	-									
148.99	BR TO BR & GR WEAKLY CEMENTED SANDSTONE	16	44	-	8	-									
148.08	DK GR TO GR CEMENTED SANDSTONE	56/0.08m	100/0.10m	-	8	-									
147.36	LT GR, GR & BR WEAKLY CEMENTED TO CEMENTED SANDSTONE	100/0m	100/0.08m	-	10	-									
152.80	BR SANDY LOAM, A-4	6	10	-	13	-									
150.51	BR SAND, A-3	14	18	-	2	-									

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. SB-303

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+474.8 5.2m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 4-5-96 COMPLETED 4-5-96 SURFACE ELEVATION 155.62

DRILLED BY S. SCOTT LOGGED BY M. DEMALIT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD								
			N	Q <sub>u</sub>	W	T <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE					
			Sp0.15m	KPa	%	Kgpm <sup>3</sup>									
148.30	BR TO BR & GR WEAKLY CEMENTED SANDSTONE	8	-	-	100%	-	CHD-850	4-5	10.4	0		AUGER TYPE-DEPTH 0.08m HSA-7.2m			
148.15	DK GR TO GR CEMENTED SANDSTONE	8	-	-	100%	-		4-8	8.4	3d		CASING TYPE-DEPTH -			
147.45	DK GR, GR & BR WEAKLY CEMENTED TO CEMENTED SANDSTONE	8	-	-	100%	-									
146.69	BLK & DK YEL BR COAL	9	-	-	76%	0%									
145.26	DK GR TO GR LAMINATED CLAY SHALE	11	-	-	100%	42%									
144.65	GR, DK GR & GRN GR MASSIVE CLAY SHALE	12	-	-	83%	26%									

**LIN ENGINEERING, LTD.**  
 20 N. Oakhurst  
 Channah, Illinois 62629  
 (618) 483-468  
 Fax: (618) 483-4706  
 Designed By: MTH Checked By: KRG Drawn By: JMD  
 Date: 09/02 File: rps04M-56290813.dgn

REVISIONS	DATE	BY

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

CLAUDE H. HURLEY COMPANY  
**BORING LOG**  
PROJECT NO. 3-380-D4 BORING NO. SB-303 (CONT.)  
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR  
LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+474.8 5.2mR PEORIA & TAZEWELL COUNTIES, ILLINOIS  
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
DATE OF DRILLING: STARTED 4-5-96 COMPLETED 4-3-96 SURFACE ELEVATION 155.62  
DRILLED BY S. SCOTT LOGGED BY M. DENAHUT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD								
			N	Q <sub>v</sub>	W	γ <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE					
			Bp0.15m	KPa	%	Kgpm <sup>3</sup>									
	GR, DK GR & GRN GR MASSIVE CLAY SHALE														
147.21															
14															
15															
16															
17															
18															
19															
20															

CLAUDE H. HURLEY COMPANY  
**BORING LOG**  
PROJECT NO. 3-380-D4 BORING NO. SB-252  
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR  
LOCATION BACKSLOPE RAMP K-2BL 10+452.0 22.3mR PEORIA & TAZEWELL COUNTIES, ILLINOIS  
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
DATE OF DRILLING: STARTED 4-3-96 COMPLETED 4-3-96 SURFACE ELEVATION 167.86  
DRILLED BY S. SCOTT LOGGED BY M. DENAHUT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD								
			N	Q <sub>v</sub>	W	γ <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE					
			Bp0.15m	KPa	%	Kgpm <sup>3</sup>									
	TOPSOIL FILL: DK BR SILTY LOAM, A-4														
167.71															
166.48															
164.35															
157.50															
156.73															

CLAUDE H. HURLEY COMPANY  
**BORING LOG**  
PROJECT NO. 3-380-D4 BORING NO. SB-252 (CONT.)  
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR  
LOCATION BACKSLOPE RAMP K-2BL 10+452.0 22.3mR PEORIA & TAZEWELL COUNTIES, ILLINOIS  
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY  
DATE OF DRILLING: STARTED 4-3-96 COMPLETED 4-3-96 SURFACE ELEVATION 167.86  
DRILLED BY S. SCOTT LOGGED BY M. DENAHUT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD								
			N	Q <sub>v</sub>	W	γ <sub>d</sub>	DATE	DEPTH	HOUR	RIG TYPE					
			Bp0.15m	KPa	%	Kgpm <sup>3</sup>									
154.45															
153.08															
150.49															
146.98															

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SOIL BORING DATA  
RETAINING WALL 82  
F.A.I. RTE. 74 (I-74)  
SECTION 90-11HB-5  
TAZEWELL COUNTY  
RAMP K-2 STATION 10+378 TO 10+507  
STRUCTURE NUMBER 090-8513

**REVISIONS**

NO.	DESCRIPTION	DATE

**LIN ENGINEERING, LTD.**  
210 W. Dearborn  
Chatham, Illinois 62629  
301-663-6668  
FAX 301-663-4100  
Designed By: MTH Checked By: KRC Drawn By: JND  
Date: 05/02 File: r0415-5410028513.dgn

ROUTE NO.	SECTION	COUNTY	SHEET NO.	DATE
FAI 74	*	TAZEWELL	1366	6/30
FED. ROAD DIST. NO.		SECTION	PROJECT	
*90-11HB-5				

SHEET NO. 16  
20 SHEETS

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. RB-244

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+458.0 3.5m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 4-2-96 COMPLETED 4-2-96 SURFACE ELEVATION 158.90

DRILLED BY S. SCOTT LOGGED BY H. DEHAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N	Q <sub>u</sub>	W	T <sub>d</sub>	
			Bp0.15m	KPa	%	Kgpm	
158.94	TOPSOIL FILL: DK BR SILTY LOAM, A-c	0					DD 4-2 0.0
	BR & RD BR SILTY LOAM, A-4	1					DC 4-2 1.7 0
158.29	BR & RD BR SAND, A-3	2					DC 4-3 10.7 1d
156.92	LT BR TO BR SILT, A-4	3					
154.63	BR & RD BR GRAVELLY SAND, A-1-b	4					
153.75	BR SAND, A-3	5					
152.35	BR & RD BR LOAM, A-4	6					

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. RB-244 (CONT.)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+458.0 3.5m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 4-2-96 COMPLETED 4-2-96 SURFACE ELEVATION 158.90

DRILLED BY S. SCOTT LOGGED BY H. DEHAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N	Q <sub>u</sub>	W	T <sub>d</sub>	
			Bp0.15m	KPa	%	Kgpm	
144.94	DK GR TO GR LAMINATED CLAY SHALE	7					DD 4-2 4.0
	GR, DK GR & GW GR MASSIVE CLAY SHALE	8					DC 4-2 10.9 0
142.90	END OF BORING	16					DC 4-3 10.7 1d

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. RB-245

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+440.9 2.9m PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 4-2-96 COMPLETED 4-2-96 SURFACE ELEVATION 161.97

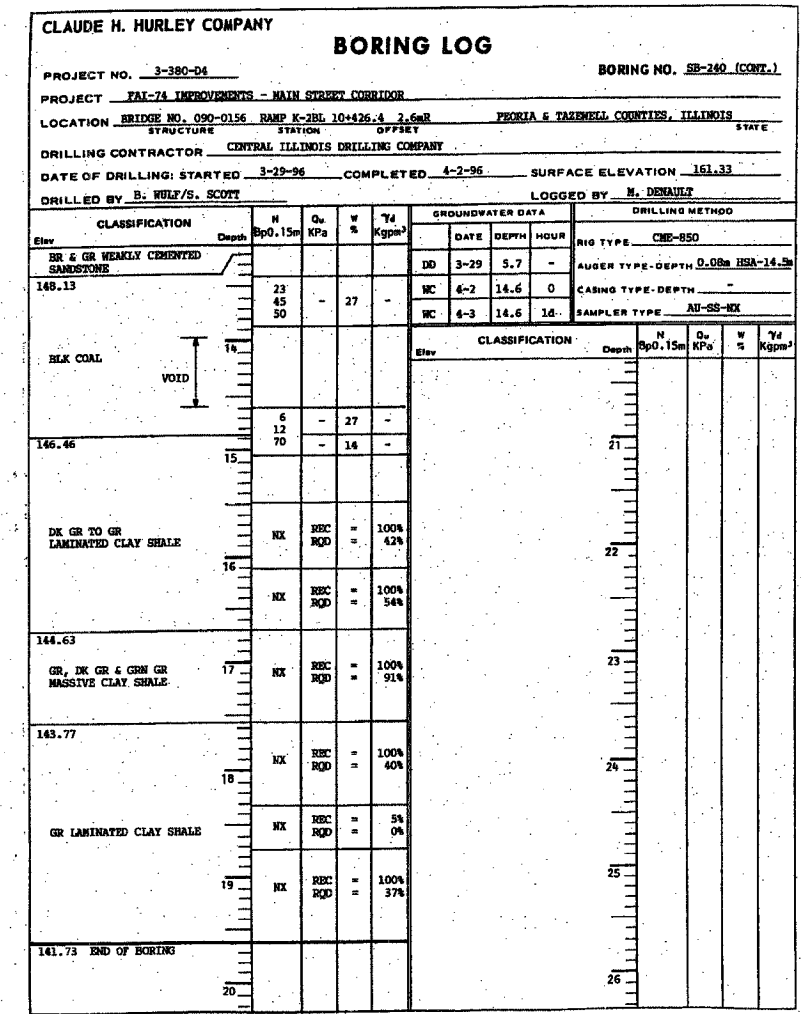
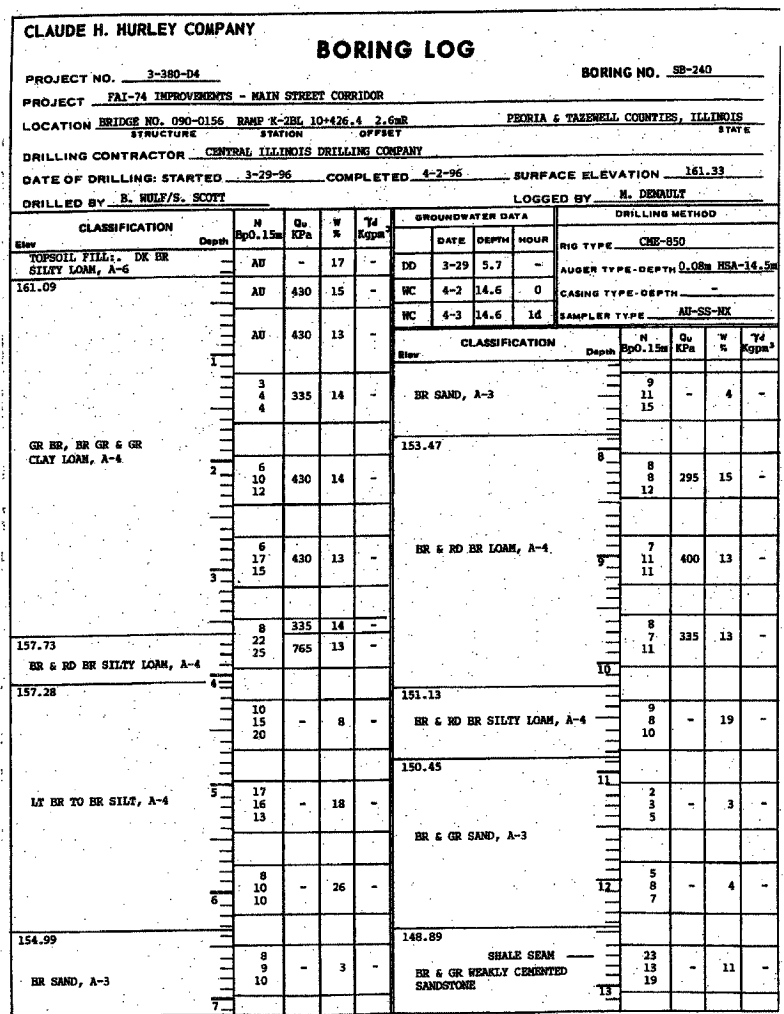
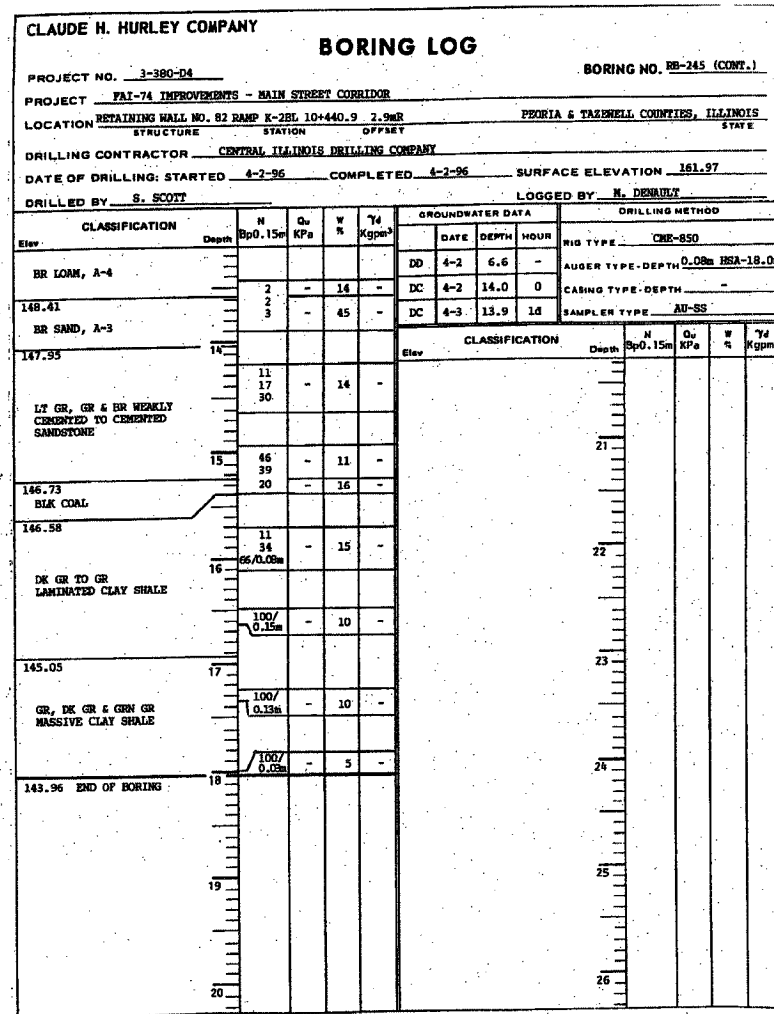
DRILLED BY S. SCOTT LOGGED BY H. DEHAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N	Q <sub>u</sub>	W	T <sub>d</sub>	
			Bp0.15m	KPa	%	Kgpm	
161.82	TOPSOIL FILL: DK BR SILTY LOAM, A-c	0					DD 4-2 6.6
	BR & RD BR SAND, A-3	1					DC 4-2 14.0 0
	GR BR, BR GR & GR CLAY LOAM, A-4	2					DC 4-3 13.9 1d
158.62	BR & GR GRAVELLY LOAM, A-4	3					
157.86	LT BR TO BR SILT, A-4	4					
155.38	BR & RD BR GRAVELLY SAND, A-1-b	5					

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

**LIN ENGINEERING, LTD.**  
 20 N. Chestnut  
 Channah, Illinois 62629  
 (618) 483-4688  
 FAX (618) 483-4706  
 Designed By: MTH Checked By: KRJ Drawn By: JMD  
 Date: 08/02 File: r20485-50908513.dgn

REVISIONS	
NO.	DESCRIPTION



ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

**REVISIONS**

NO.	DATE	DESCRIPTION

**LIN ENGINEERING, LTD.**  
 230 N. Chestnut  
 Chatham, Illinois 62633  
 (618) 483-4688 FAX (618) 483-4706  
 Designed By: MTH Checked By: KRC Drawn By: JMD  
 Date: 05/02 File: r20417-50908513.dgn





ROUTE NO.	SECTION	COUNTY	DATE	TIME
FAI 74	*	TAZEWELL	12/6/04	6:41
FEDERAL DIST. NO. 7		NAME	FED. AID PROJECT	
* 90-11HB-5				

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. BB-254

PROJECT FAI-34 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BACKSLOPE RAMP K-2BL 10+393.1 17.6mR PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-27-96 COMPLETED 3-27-96 SURFACE ELEVATION 167.99

DRILLED BY B. WULF LOGGED BY M. DENAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N	Q <sub>u</sub>	W	T <sub>d</sub>	
			Bp0.15m	KPa	%	Kgpm <sup>3</sup>	
167.90	TOPSOIL FILL: DK BR SILTY LOAM, A-4						
167.26	BR SILTY LOAM, A-4						
167.26	GR BR CLAY LOAM, A-4						
164.52	GR BR, BR GR & GR CLAY LOAM, A-4						

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. BB-254 (CONT.)

PROJECT FAI-34 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BACKSLOPE RAMP K-2BL 10+393.1 17.6mR PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-27-96 COMPLETED 3-27-96 SURFACE ELEVATION 167.99

DRILLED BY B. WULF LOGGED BY M. DENAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N	Q <sub>u</sub>	W	T <sub>d</sub>	
			Bp0.15m	KPa	%	Kgpm <sup>3</sup>	
159.85	BR SAND, A-3						
153.09	BR & RD BR SILTY LOAM, A-4 W/ SILT, A-4 & SAND, A-3 SEAMS						
152.32	BR & RD BR GRAVELLY SAND, A-1-b						
150.34	BR SILT, A-4						
149.88	BR & GR SAND, A-3						
148.39	BLK COAL						

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. BB-247

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION RETAINING WALL NO. 82 RAMP K-2BL 10+381.3 2.8mR PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-6-96 COMPLETED 3-6-96 SURFACE ELEVATION 158.26

DRILLED BY S. SCOTT LOGGED BY M. DENAULT

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD
			N	Q <sub>u</sub>	W	T <sub>d</sub>	
			Bp0.15m	KPa	%	Kgpm <sup>3</sup>	
158.17	GR BR, BR GR & GR SILTY LOAM, A-4						
157.53	BR SILTY LOAM, A-4						
157.04	BR STRATIFIED SILT, A-4 AND SILTY CLAY, A-6						
156.58	BR & GR GRAVELLY LOAM, A-4						
156.28	BR & RD BR GRAVELLY SAND, A-1-b						
156.52	BR SAND, A-3						
153.99	BR & RD BR LOAM, A-4 W/ SAND A-3 SEAMS						
153.23	BR & RD BR SANDY LOAM, A-2-4						
151.71	BR & RD BR TO GR GRAVELLY SAND, A-1-b						

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

**REVISIONS**

NO.	DATE	DESCRIPTION

**LIN ENGINEERING, LTD.**  
 20 N. Chestnut  
 Channah, Illinois 62629  
 (618) 463-4664  
 Fax: (618) 463-4706  
 Designed By: MTH  
 Checked By: KING  
 Drawn By: JMD  
 Date: 08/02  
 File: r20419-50080513.dgn

**CLAUDE H. HURLEY COMPANY BORING LOG**

PROJECT NO. 3-380-D4 BORING NO. RB-247 (CONT.)

PROJECT: FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION: RETAINING WALL NO. 82 RAMP K-2BL 10+381.3 2.8mR PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR: CENTRAL ILLINOIS DRILLING COMPANY

DATE OF DRILLING: STARTED 3-6-96 COMPLETED 3-6-96 SURFACE ELEVATION 158.26

DRILLED BY: S. SCOTT LOGGED BY: M. DENAULT

CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD	
		N	Q <sub>u</sub>	W	T <sub>d</sub>	DATE	DEPTH
GR, DK GR & GRN GR MASSIVE CLAY SHALE	25	100/	0.30	15			
144.45 END OF BORING	14						

RSV ENGINEERING, INC. BORING LOG SCHAUMBURG, ILLINOIS

JOB NO: 98600 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION BORING NO: RWK2-2

PROJECT: Interstate Route 74 Improvements - Peoria, Illinois STATION: 10+333

LOCATION: Retaining Wall Ramp K-2 SN 090-8513 OFFSET: 2.0m R SURF ELEV: 156.07

BORING RIG & METHOD: CME-75 w/Hollow Stem Augers

SOIL DESCRIPTION	ELEV.	DEPTH	SAMPLE FROM - TO	REC.	BLOW/30cm	q <sub>s</sub> kPa	STRAIN %	WATER CONTENT %
Possible FILL: Br Clay Loam A-6; roots and random Silk seams noted	155.15		0.00-0.30	Auger 6				16
Medium Dense Br Silt A-4	154.85		0.30-0.76	457 13-16	431	+		15
Medium Dense Br Sand A-3	153.63		1.07-1.52	457 11-12	10			2
Very Stiff Br Clay Loam A-6	152.11		1.83-2.29	457 10-12	9			2
Medium Dense Br Sandy Loam A-2-4	151.34		2.59-3.05	457 11-15	326	15		15
Medium Dense Br Sand A-1-b	149.82		3.35-3.81	457 7-14	267	15		12
Medium Dense Br Sand A-3	147.82		4.11-4.57	457 13-15	10			9
Dense Br Sand A-1-b	146.77		4.88-5.33	457 9-10	7			4
Black COAL (thinly foliated)	146.18		5.64-6.10	457 7-10	7			3
Medium Stiff Gr Clay A-7-G, (possible filled void); wood fragments noted	145.55	10	6.40-6.86	457 9-16	7			2
Gr Clayey SHALE (slightly to moderately lithified); Limestone fragments noted at 13.7m	145.55	10	7.16-7.62	457 8-12	7			3
			7.92-8.38	457 7-9	6			1
			8.69-9.14	457 13-18	10			9
			9.45-9.91	457 23-18	27			19
			10.21-10.67	457 11-16	1	48*		30
			10.97-11.03	51 100'				25
			11.73-11.77	25 100'				6

REMARKS: \* Denotes Calibrated Penetrometer Estimate

WATER Dry m ELEV. DURING DRILLING  CORE SIZE mm DATE: Jun 20, 00

WATER m ELEV. AT COMPLETION  CASING LENGTH m DRILLER: Fehl

WATER Dry m ELEV. AFTER 14 HRS  CASING DIAMETER mm INSPECTOR: Reed

RSV ENGINEERING, INC. BORING LOG SCHAUMBURG, ILLINOIS

JOB NO: 98600 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION BORING NO: RWK2-2

PROJECT: Interstate Route 74 Improvements - Peoria, Illinois STATION: 10+333

LOCATION: Retaining Wall Ramp K-2 SN 090-8513 OFFSET: 2.0m R SURF ELEV: 156.07

BORING RIG & METHOD: CME-75 w/Hollow Stem Augers

SOIL DESCRIPTION	ELEV.	DEPTH	SAMPLE FROM - TO	REC.	BLOW/30cm	q <sub>s</sub> kPa	STRAIN %	WATER CONTENT %
Gr Clayey SHALE (slightly to moderately lithified); Limestone fragments noted at 13.7m	146.83	15	12.53-12.77	254	28-100/ 100mm	479	10	13
			13.26-13.59	330	32-54 3625			11
			14.02-14.39	356	25-58 3250	594	15	13
			14.94-15.24	305	50-112/ 150mm			8

Boring terminated at 15.2m

REMARKS: \* Denotes Calibrated Penetrometer Estimate

WATER Dry m ELEV. DURING DRILLING  CORE SIZE mm DATE: Jun 20, 00

WATER m ELEV. AT COMPLETION  CASING LENGTH m DRILLER: Fehl

WATER Dry m ELEV. AFTER 14 HRS  CASING DIAMETER mm INSPECTOR: Reed

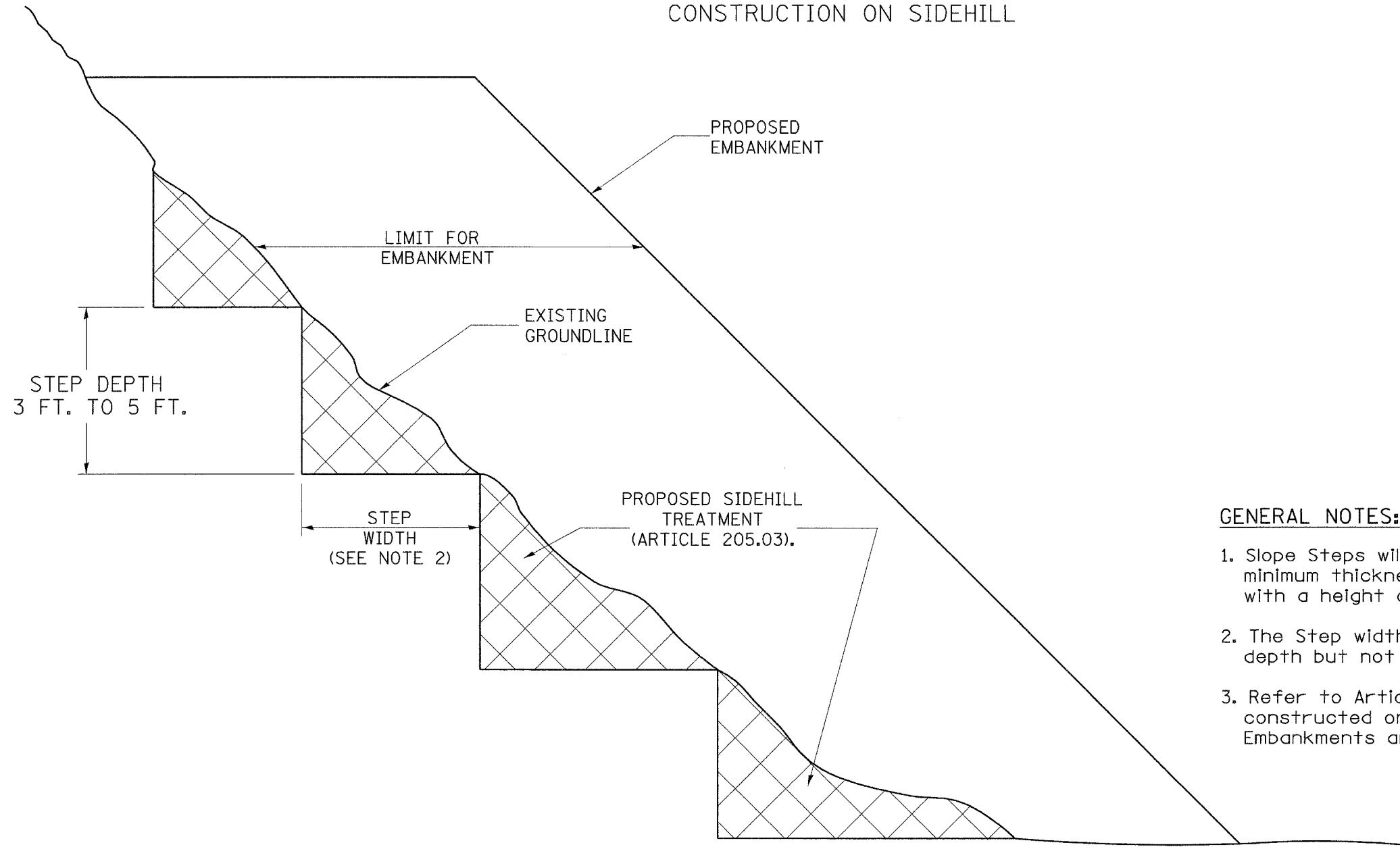
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING DATA  
 RETAINING WALL 82  
 F.A.I. RTE. 74 (I-74)  
 SECTION 90-11HB-5  
 TAZEWELL COUNTY  
 RAMP K-2 STATION 10+378 TO 10+507  
 STRUCTURE NUMBER 090-8513

REVISIONS	
NO.	DESCRIPTION

**LIN ENGINEERING, LTD.**  
 20 N. Chestnut  
 Chatham, Illinois 62629  
 (217) 483-4108  
 Fax (217) 483-4106  
 Designed By: MTH Checked By: KING Drawn By: JMD  
 Date: 06/20/00 File: r20420-520908513.dgn

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	643
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

### SLOPE STEPS DETAIL TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



**GENERAL NOTES:**

1. Slope Steps will be required for all 300(12) minimum thickness "silver fills" and on a fills with a height of 3.0m(10').
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

All dimensions are in millimeters (inches) unless otherwise noted.

**REPLACEMENT MATERIAL:**



STANDARD EMBANKMENT  
(IN ACCORDANCE WITH  
205 OF THE STANDARD SPECIFACATION).

DATE	REVISIONS	BY
1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE BOX, REVISED GENERAL NOTES.	T.P.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

### SLOPE STEPS DETAIL

CADD STD. NO. 205001-D4  
SCALE: NOT DRAWN TO SCALE  
DATE \*\*DATE\*\*  
DRAWN BY CADD  
CHECKED BY

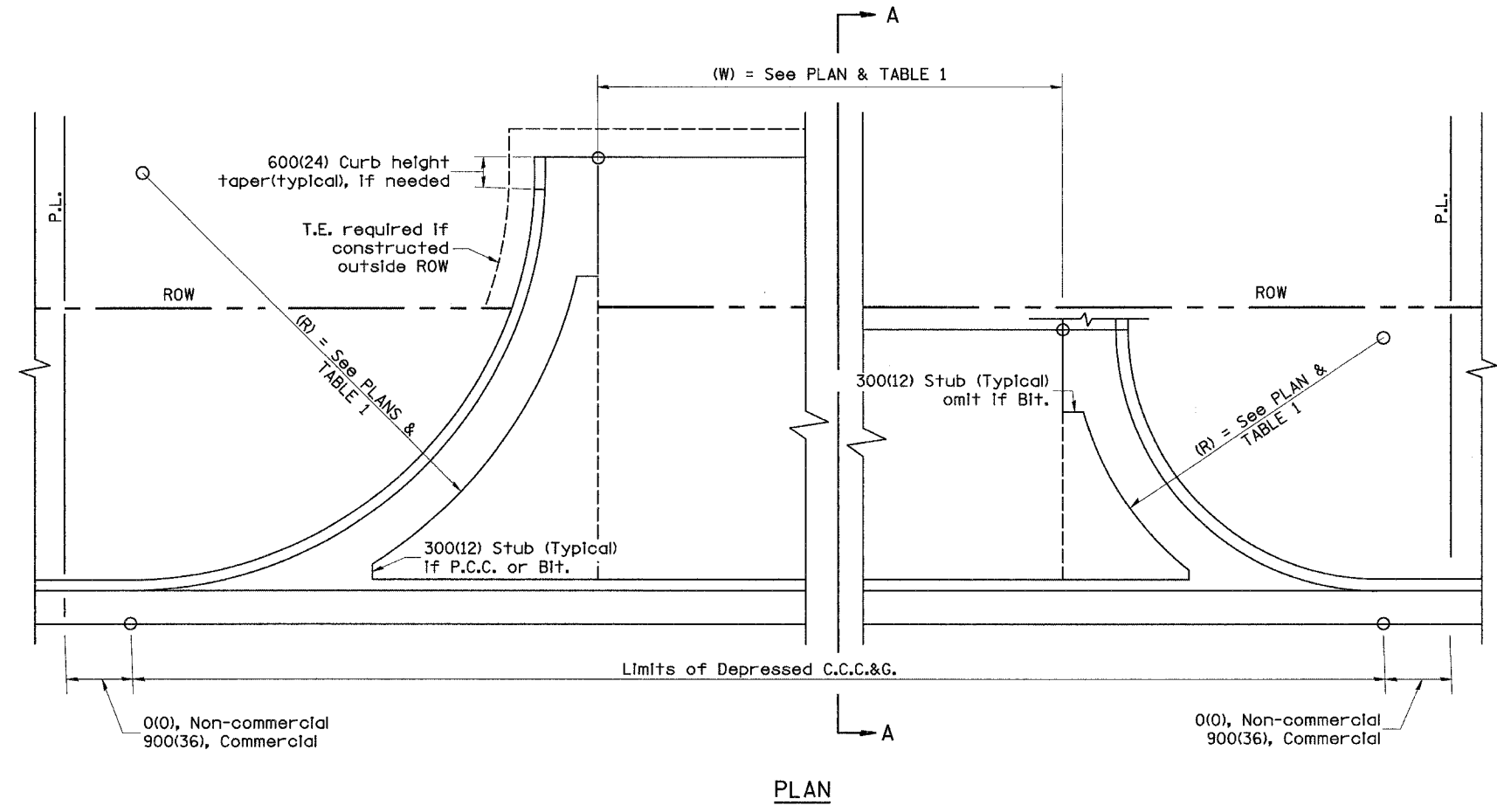
205001-D4

1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.  
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

\*\*DATE\*\*

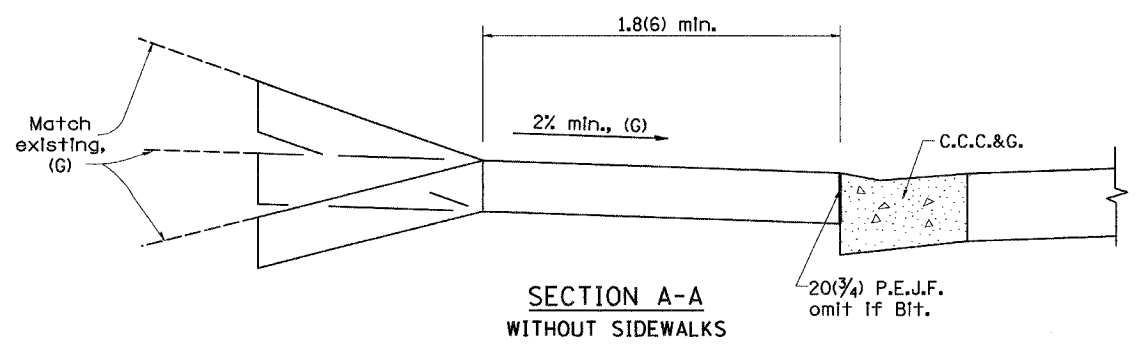


SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		1366	645
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

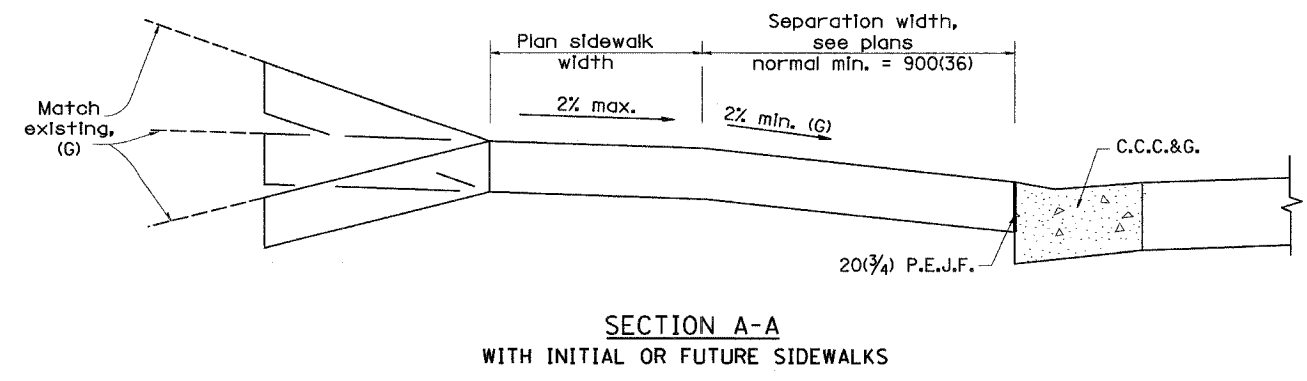


**GENERAL NOTES**

1. C.C.C.&G. will be measured for pavement as specified in Article 606.13 of the Standard Specifications.
2. C.C.C.&G. Construction Joints will be as shown on Standard 606001.



ELEMENT	NON-COMMERCIAL		COMMERCIAL			
			1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	3.6 m(12') MIN.	7.2 m(24') MAX.	4.3 m(14') MIN.	7.2 m(24') MAX.	7.2 m(24') MIN.	10.7 m(35') MAX.
RADIUS EQUIVALENT 1:1 FLARE (F)	1.5 m(5') MIN.	7.6 m(25') MAX.	4.6 m(15') MIN.	12.0 m(40') MAX.	4.6 m(15') MIN.	12.0 m(40') MAX.
MAX. GRADE (G)	8%		6%			



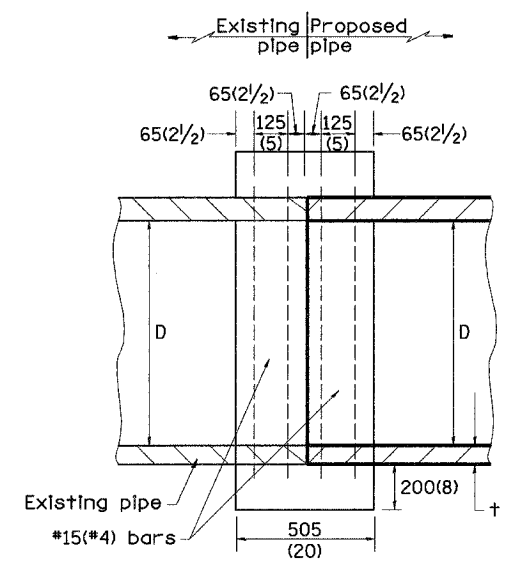
All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DISTRICT CADD STANDARD**  
 SUBURBAN ENTRANCES WITH CURBED RADII  
 CADD STD NO. 423001-D4  
 SCALE: NOT DRAWN TO SCALE DRAWN BY CADD  
 DATE \*\*DATE\*\* CHECKED BY

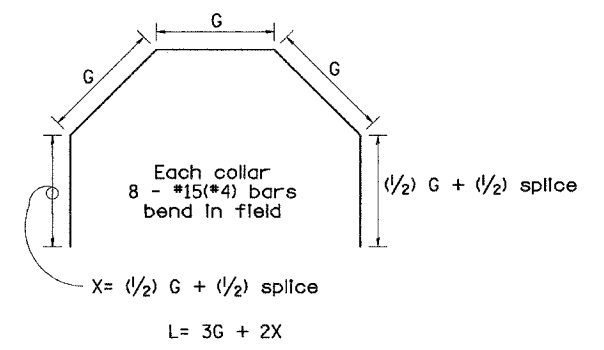
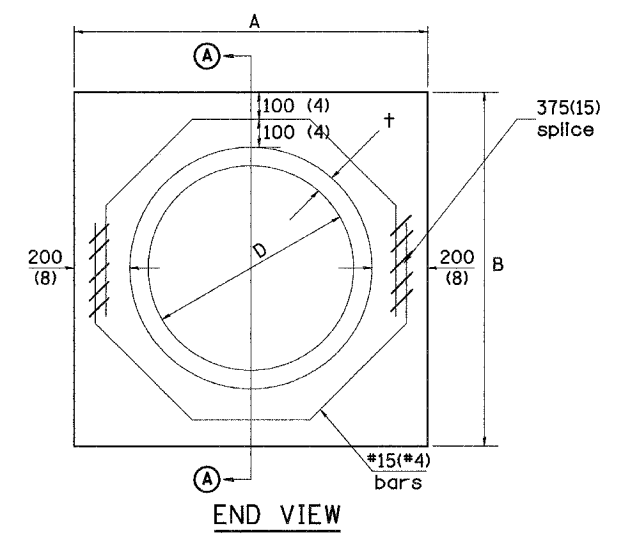
DATE	REVISIONS	BY
1-1-97	RENUM. C-103.05, NEW REVISION BOX, REVISED GENERAL NOTES	T.P.

2. DESIGNER SHOULD REVIEW BUREAU PROCEDURE MEMORANDUM 94-12, DATED 7-1-94 ENTITLED "ACCESSIBILITY STANDARDS FOR THE DISABLED". IF SIDEWALKS ARE TO BE CONSTRUCTED INITIALLY.  
 3. INCLUDE STATE STANDARD 423001 IF SIDEWALKS ARE TO BE CONSTRUCTED INITIALLY.  
 4. INCLUDE STATE STANDARD 606001.  
 \*\*DATE\*\*

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	646
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SECTION A - A



Each Collar									
Reinforcement Bars									
D	t	A	B	CL. SI CONC.	G	X	L	Weight	
m (in)	m (in)	m (ft)	m (ft)	m <sup>3</sup> (cu. yd)	m (in)	m (in)	m (ft)	kg (lb)	
300 (12)	51 (2.00)	0.814 (2.67)	0.814 (2.67)	0.270 (0.4)	253 (9 15/16)	317 (12 7/16)	1.393 (4.57)	11 (24)	
375 (15)	57 (2.25)	0.902 (2.96)	0.902 (2.96)	0.315 (0.4)	290 (11 3/8)	335 (13 3/16)	1.541 (5.05)	12 (27)	
450 (18)	64 (2.50)	0.991 (3.25)	0.991 (3.25)	0.362 (0.5)	327 (12 13/16)	354 (13 7/8)	1.689 (5.54)	14 (30)	
525 (21)	70 (2.75)	1.079 (3.54)	1.079 (3.54)	0.411 (0.5)	364 (14 1/4)	372 (14 5/8)	1.836 (6.02)	15 (32)	
600 (24)	76 (3.00)	1.167 (3.83)	1.167 (3.84)	0.460 (0.6)	401 (15 11/16)	391 (15 5/16)	1.984 (6.51)	16 (35)	
675 (27)	83 (3.25)	1.259 (4.13)	1.259 (4.13)	0.516 (0.7)	438 (17 1/4)	409 (16 1/16)	2.131 (6.99)	17 (37)	
750 (30)	89 (3.50)	1.347 (4.42)	1.347 (4.42)	0.570 (0.7)	475 (18 11/16)	428 (16 3/4)	2.279 (7.48)	18 (40)	
825 (33)	95 (3.75)	1.436 (4.71)	1.436 (4.71)	0.624 (0.8)	512 (20 1/8)	446 (17 1/2)	2.426 (7.96)	19 (43)	
900 (36)	102 (4.00)	1.524 (5.00)	1.524 (5.00)	0.682 (0.9)	549 (21 9/16)	465 (18 3/16)	2.574 (8.44)	20 (45)	
1050 (42)	114 (4.50)	1.701 (5.58)	1.701 (5.58)	0.800 (1.0)	622 (24 7/16)	501 (19 3/4)	2.869 (9.41)	23 (50)	
1200 (48)	127 (5.00)	1.881 (6.17)	1.881 (6.17)	0.930 (1.2)	696 (27 5/16)	538 (21 3/16)	3.164 (10.38)	25 (55)	

GENERAL NOTES

1. THE COLLAR SHALL BE CONSTRUCTED ENTIRELY OF CLASS SI CONCRETE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 503 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL CONFORM TO SECTION 508.

All dimensions are in millimeters (inches) unless otherwise noted.

QUANTITIES	
CALC. BY: R. J. D.	2-2-98
CHECKED BY: R. D. H.	2-6-98
DATE:	
DATE:	
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION	

DATE	REVISIONS	BY
1-1-97	RENUM. B-8.03, NEW REVISION BOX ADDED QUANTITY CALCULATION BOX, REVISED TITLE BOX	T.P.
4-1-97	CORRECT BAR	J.A.
2-10-98	REVISE QUANTITIES	J.A.
9-1-00	CORRECT WEIGHT	J.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DISTRICT CADD STANDARD**  
**PIPE CULVERT  
 EXTENSION COLLAR  
 (WITHOUT END SECTION)**  
 CADD STANDARD 542016-D4  
 SCALE: NOT DRAWN TO SCALE  
 DATE: \*\*DATE\*\*  
 DRAWN BY: CADD  
 CHECKED BY:

\*DGN-ONLY\*



DESIGNER NOTES: 1. Use with DISTRICT CADD Standards: Slope Drains, Buried Pipe and/or Slope Drains, Buried Pipe and/or Slope Drains - Exposed Pipe

68201			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
			1366/648
STA.		TO STA.	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

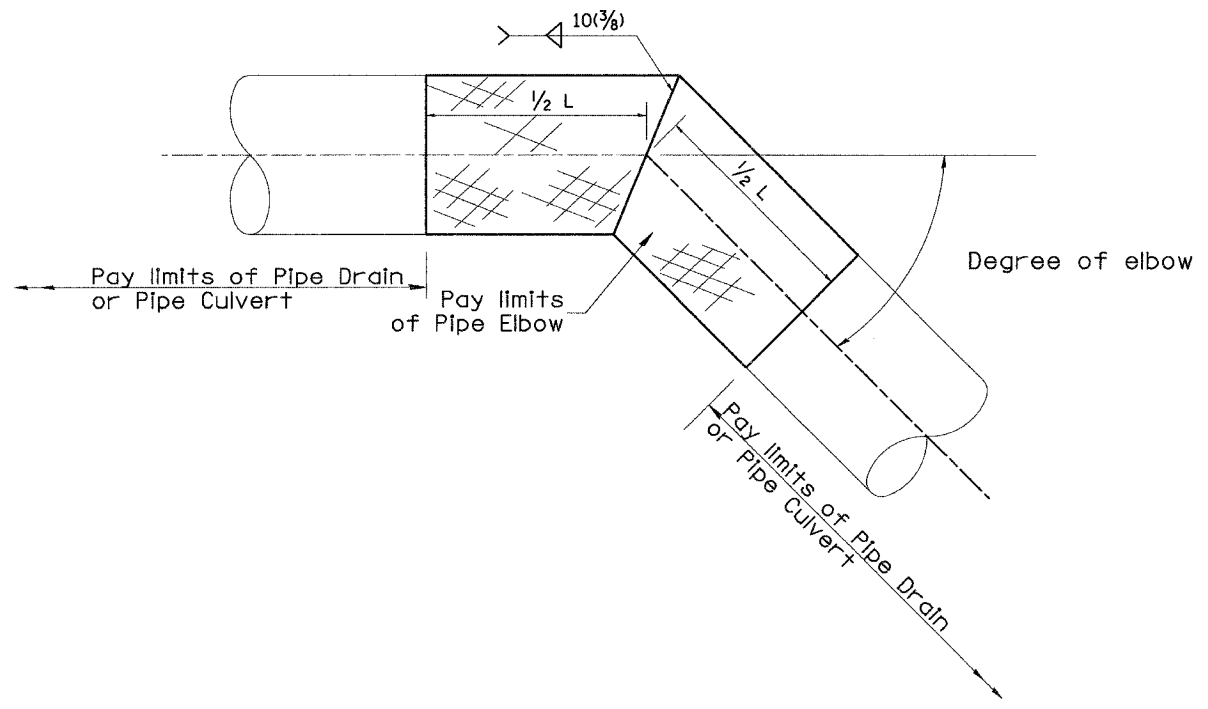
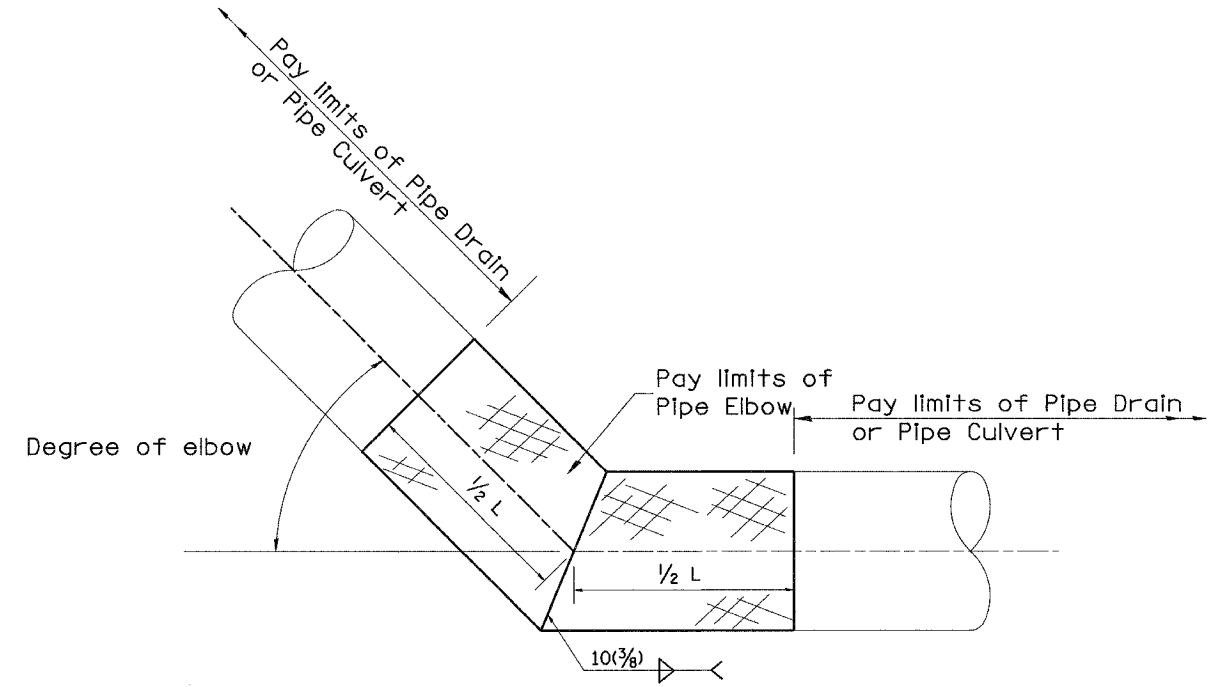


TABLE A		
ELBOW DESIGN CONTROLS		
PIPE DIAMETER	L = Pay limits of Pipe Elbow and minimum length of pipe required for fabrication	
	DEGREE OF ELBOW ≤ 45°	DEGREE OF ELBOW ≥ 46°
300(12)	600(24)	1.22M(4')
375(15)	600(24)	1.22M(4')
450(18)	600(24)	1.22M(4')
525(21)	600(24)	1.22M(4')
600(24)	1.22M(4')	1.22M(4')
750(30)	1.22M(4')	1.83M(6')
900(36)	1.22M(4')	1.83M(6')

TABLE B	
ELBOW DESIGN CONTROLS	
EARTH SLOPE (V:H)	DEGREE OF ELBOW •
1:6	9°
1:4	14°
1:3	18°
1:2	26°
1:1/2	33°

• Approximate - based upon 0.5% inlet and outlet flowlines.



All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

PIPE ELBOW

CADD STD. NO. 601301-D4  
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD  
DATE \*\*DATE\*\* CHECKED BY

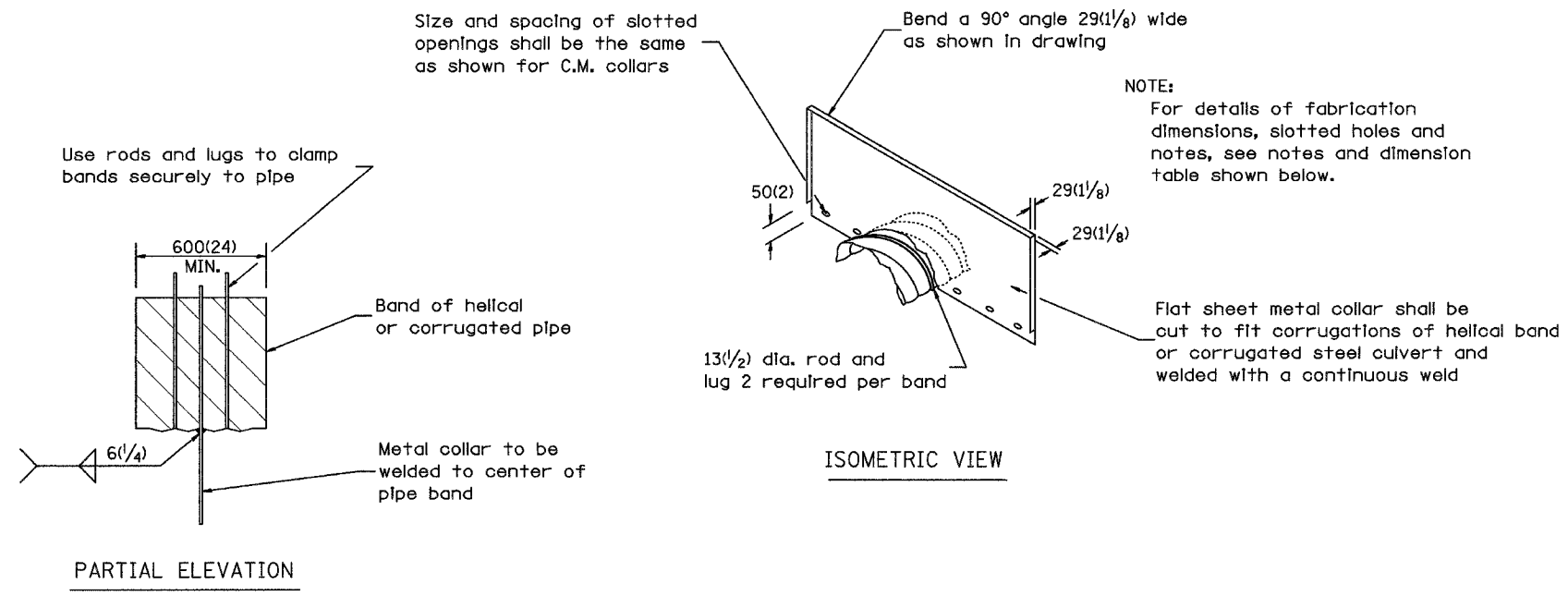
DATE	REVISIONS	BY
1-1-97	RENUM. J-11.05, NEW REVISION BOX, REVISED TITLE BOX	T.P.



No. 80-35-7 7/02/91/721 .dgn 11/28/91/SPD/Venpe/04

1. USE WITH DISTRICT CADD STANDARD: "SLOPE DRAIN FOR BURIED PIPES"  
2. ADD DISTRICT SPECIAL PROVISION.

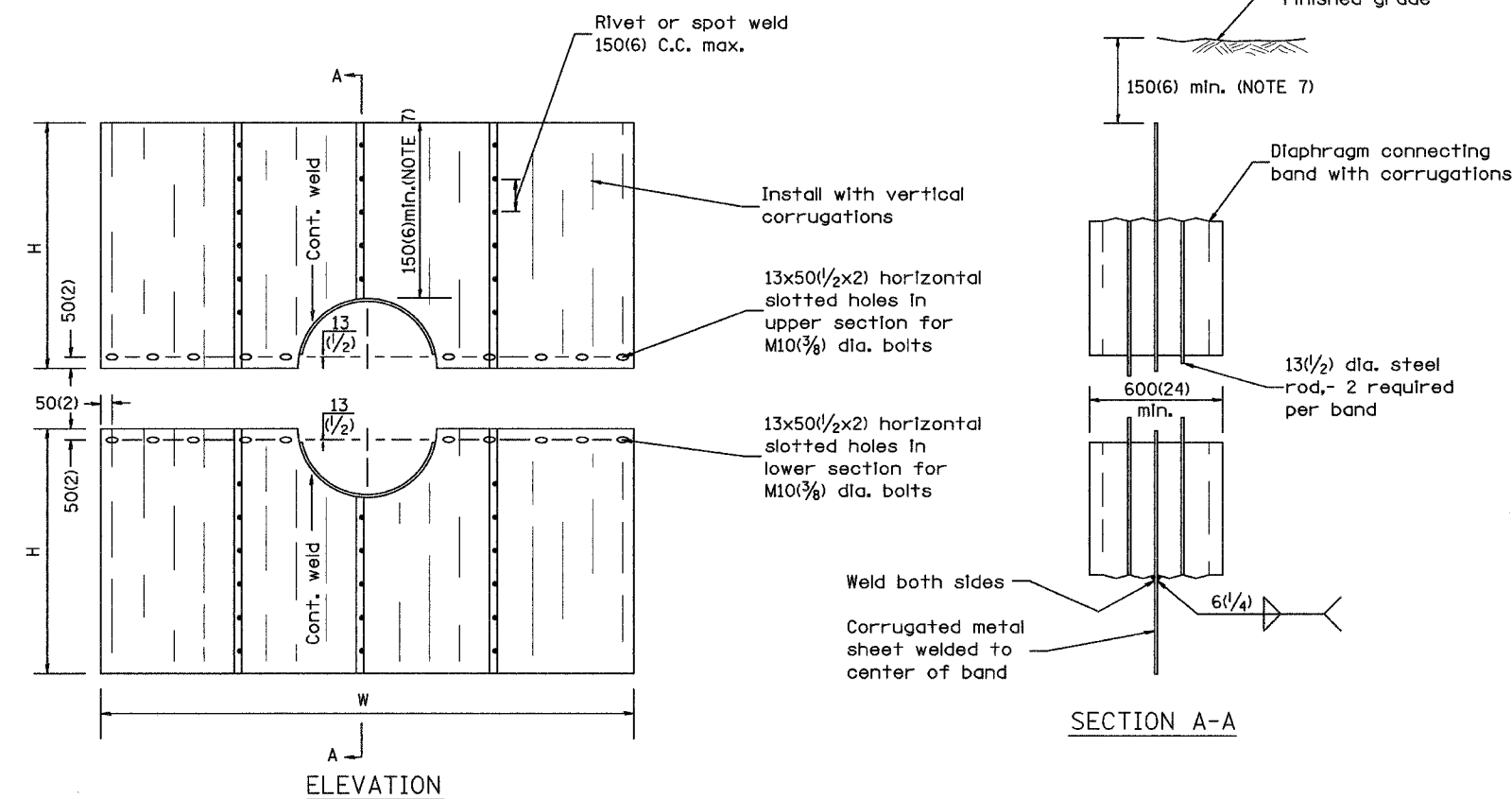
63201			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS SHEET NO.
			1366 (49)
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	



DETAILS OF CORRUGATED PIPE COLLAR

NOTES FOR COLLARS:

1. Materials and coatings for all collars shall be the same as that specified for the pipe.
2. Collars shall be shop fabricated, assembled and marked by painting to identify matching half sections of each collar.
3. The laps between the half sections and between the pipe and connecting bands shall be caulked with fiberized asphalt mastic at the time of installation.
4. All tank lugs, rods, and nuts shall be galvanized steel. Where aluminum collars are used, The rods and lugs shall be separated from the aluminum bands. By at least two (2) layers of 50(2) wide plastic tape with a total thickness of 2(1/4) mils or more.
5. The collars shall be welded to the connecting bands as shown on the drawings, all welds shall be treated as specified for class I, II, and III welds, miscellaneous. (Refer to AWS Standard Specifications)
6. Bands shall be fabricated from material having the same class of corrugations as the pipe to which it is to be attached.
7. Upper half of sheet may be cut shorter to provide 150(6) min. earth cover.



DETAILS OF SEEPAGE COLLAR

SEEPAGE COLLAR DIMENSION TABLE

PIPE DIAMETER	NOMINAL COLLAR SIZE	FABRICATIONS DIMENSIONS	
		W(WIDTH)	H(HEIGHT)
300(12) 375(15), 450(18) 525(21), 600(24)	2.4m x 1.8m (8' x 6')	2.44m (8'-0")	966(38)
675(27) 750(30)	2.4m x 2.1m (8' x 7')	2.44m (8'-0")	1,12m (3'-8")
900(36), 1050(42) 1200(48)	3.0m x 2.1m (10' x 7')	3.05m (10'-0")	1,12m (3'-8")

Collar dimensions shown may be increased to allow fabrication from standard size sheets.

SEEPAGE COLLAR SPACING
Less than 600(24) pipe: 30m (100') spacing or midpoint
Equal to or greater than 600(24) pipe: 24m (80') spacing or midpoint

All dimensions are in millimeters (inches) unless otherwise noted.

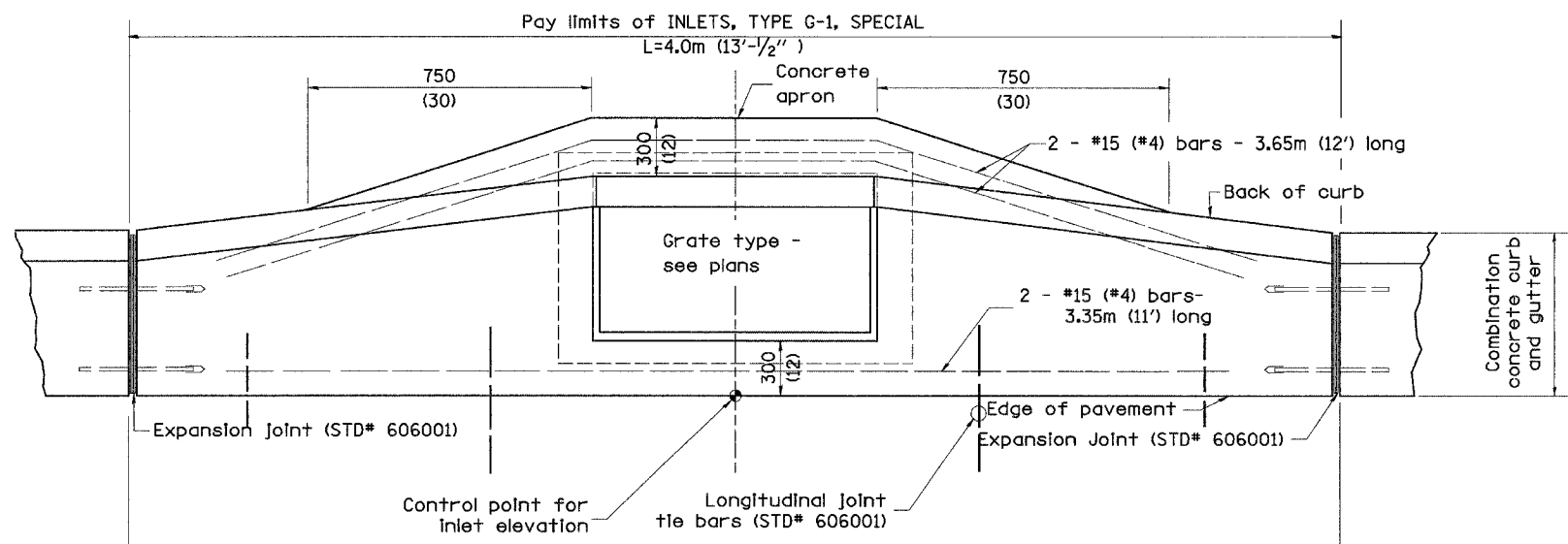
ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD  
DETAILS OF SEEPAGE COLLARS FOR BURIED PIPES  
CADD STD. NO. 601401-D4  
SCALE: NOT DRAWN TO SCALE  
DRAWN BY CADD  
CHECKED BY

DATE	REVISIONS	BY
1-1-97	RENUM. J-10.02, NEW REVISION BOX, REVISED TITLE BOX, REVISED DESIGNER NOTES	T.P.

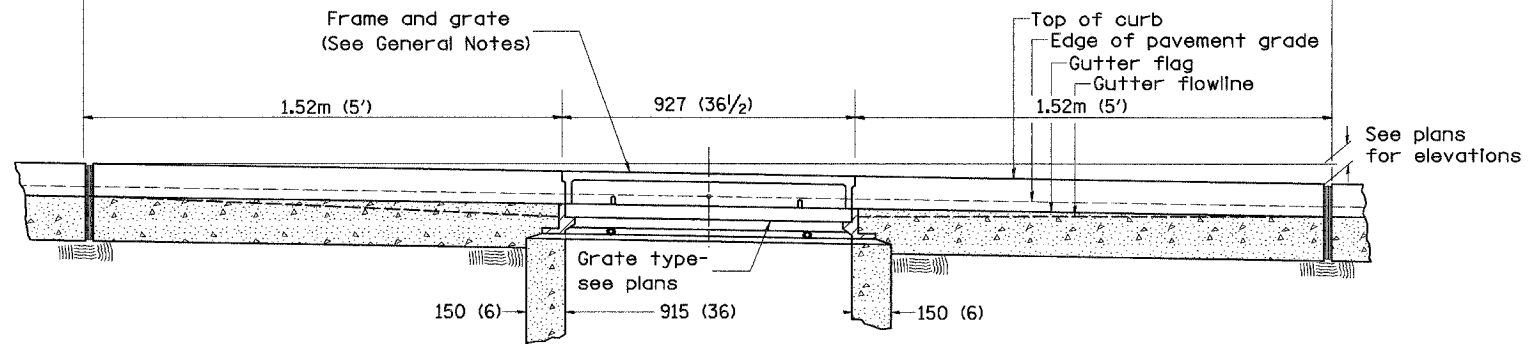
\*DCN-ONLY\*

M:\81.81.7\2002\9121\_06\1\p0206.dwg (Vendor)

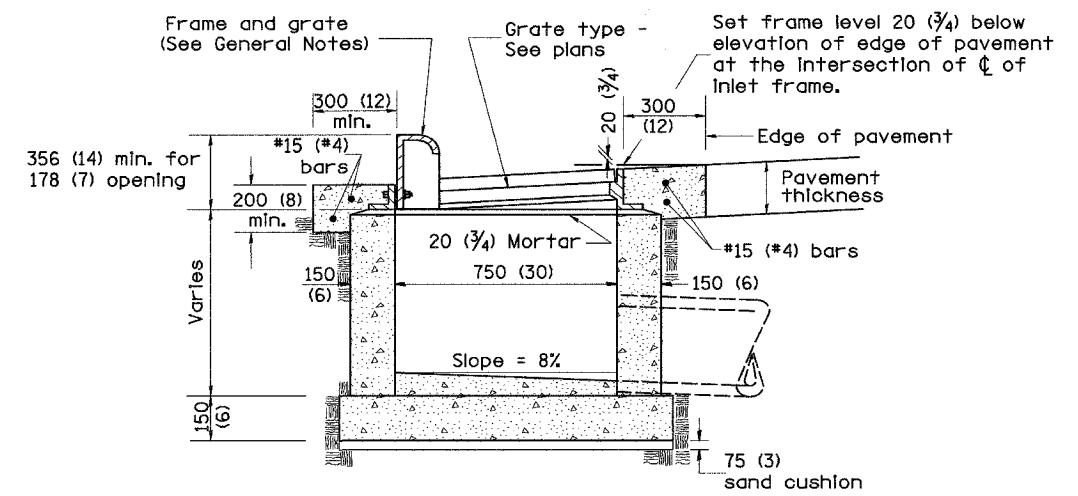
F.A. RTE.		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
						1366		650	
STA.				TO STA.					
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT					



**PLAN**



**ELEVATION (FRONT)**



**ELEVATION (SIDE)**

**GENERAL NOTES**

1. Inlet construction shall be in accordance with Section 602 of the Standard Specifications.
2. Combination Concrete Curb and Gutter shall be constructed in accordance with Section 606 of the Standard Specifications.
3. See District CADD Standard 604001-D4 for frame and grates.

2. Include State Standard #20001 for pavement joints.  
 3. Include District CADD Standard for frame and grates.  
 4. Include District Special Provision. Pay Item Includes transitional c.c.c. &g, Inlet and frame and grate. All work within pay limits.  
 5. Specify grate type in plans

\$\$\$DATE\$\$\$

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

**INLETS, TYPE G-1, SPECIAL**

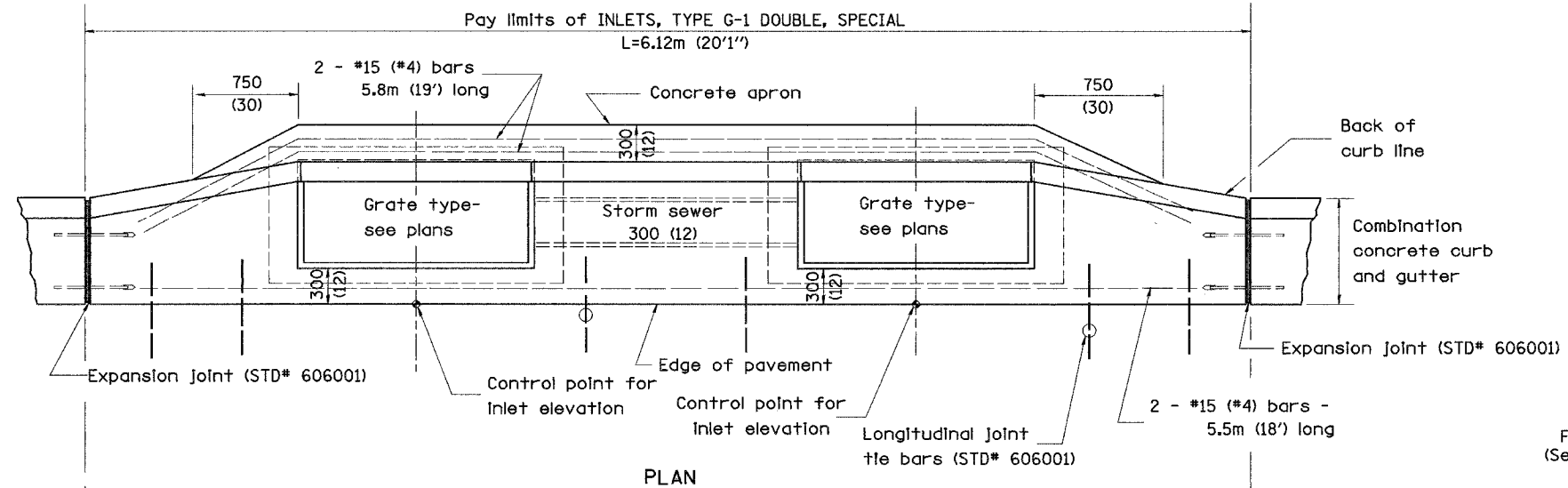
DATE	REVISIONS	BY
1-1-97	RENUM. B-4.02, NEW REVISION BOX	
12-1-98	CORRECT E. O. P. NOTE	J.A.
10-99	REVISION TO GENERAL NOTES	J.A.

CADD STANDARD 602006-D4  
SCALE NOT TO SCALE  
DATE \$\$\$DATE\$\$\$  
DRAWN BY CADD  
CHECKED BY

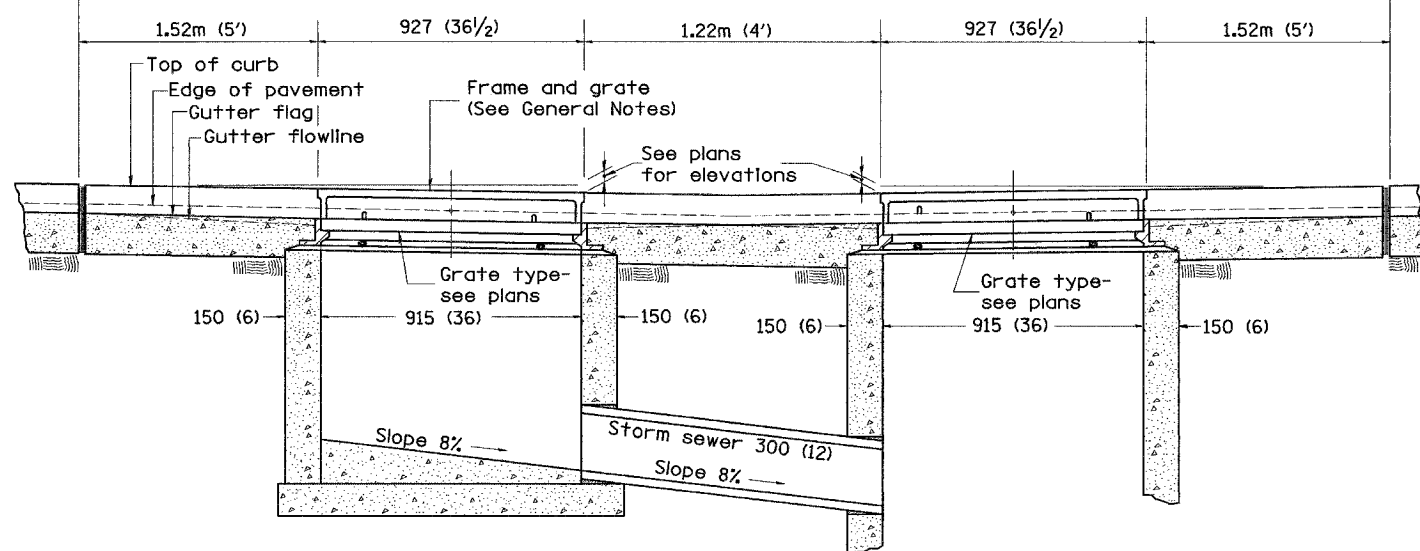
\*DGN-ONLY\*

602006-D4

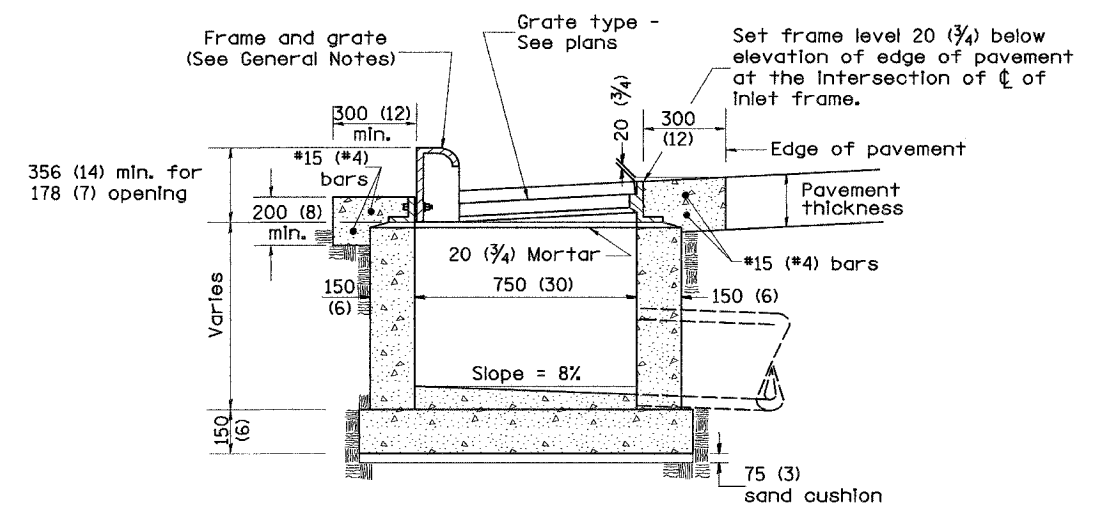
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	651
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



FRONT ELEVATION



ELEVATION (SIDE)

GENERAL NOTES

1. Inlet construction shall be in accordance with Section 602 of the Standard Specifications.
2. Combination Concrete Curb & Gutter shall be constructed in accordance with Section 606 of the Standard Specifications.
3. See District CADD Standard 604001-D4 for frame and grates.

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

INLETS, TYPE G-1 DOUBLE,  
SPECIAL

CADD STANDARD 602016-D4

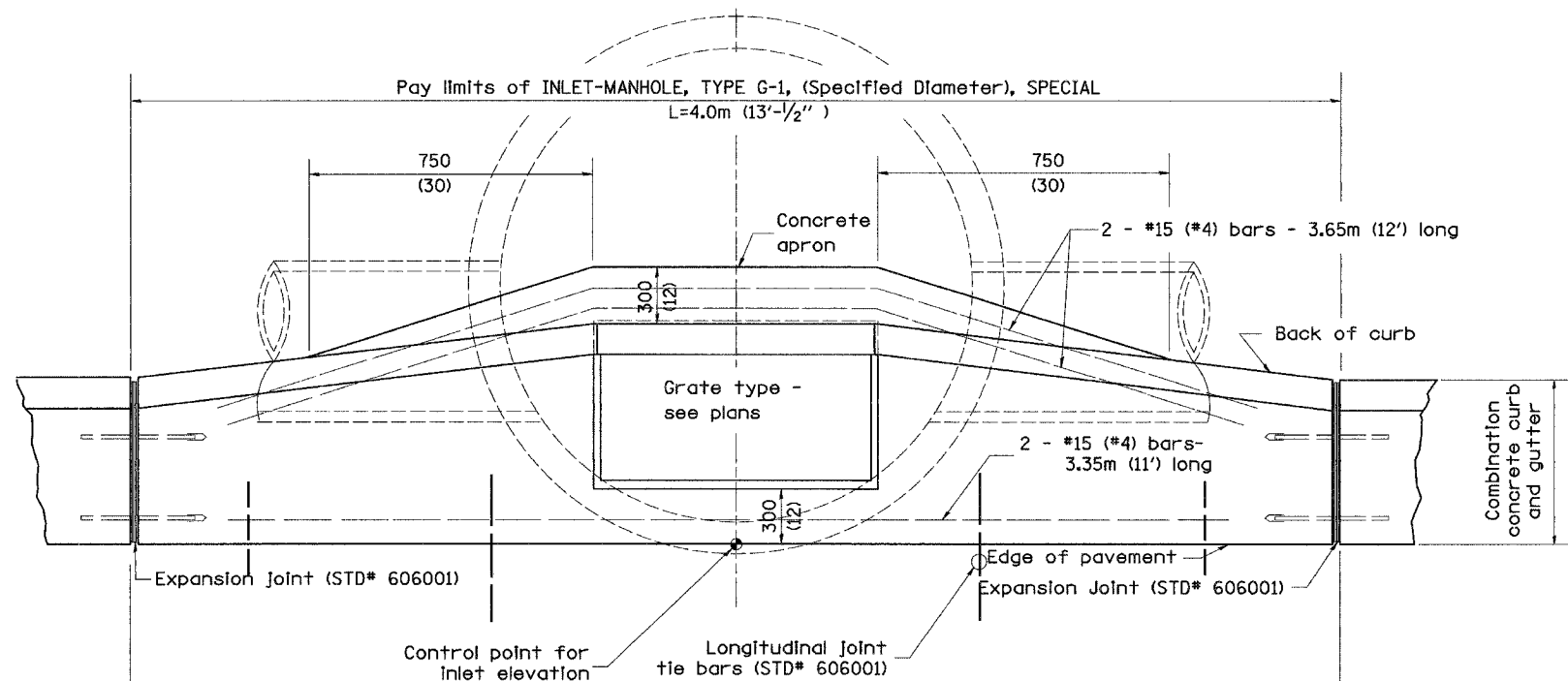
SCALE NOT TO SCALE  
DATE \*\*DATE\*\*

DATE	REVISION	BY
1-1-97	RENUM. B-4.04, NEW REVISION BOX	T.P.
4-1-97	CORRECT DIMENSIONS	J.A.
10-99	REVISION TO GENERAL NOTES	J.A.

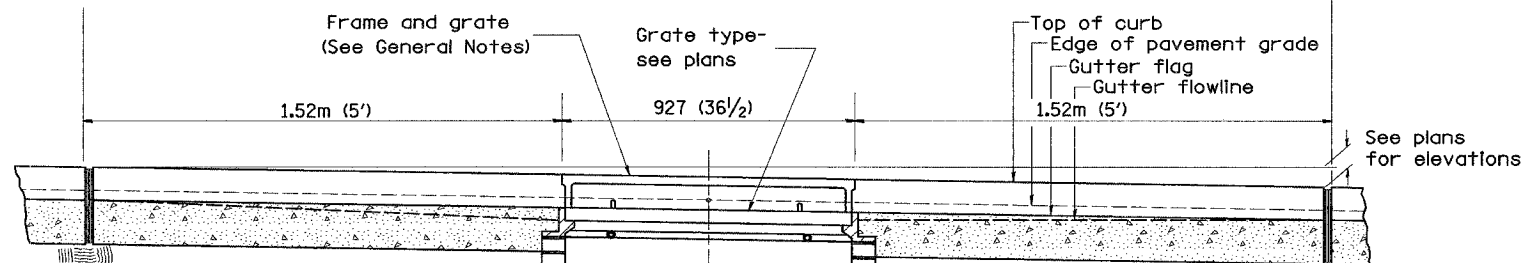
2. Include State Standard 40001 for pavement joints.  
 3. Include District CADD Standard for frame and grates.  
 4. Include District Special Provision. Pay item includes transitional c.c.c. & g., inlet and frame and grate. All work within pay limits.  
 5. Specify grate type in plans.

\$\$\$DATE\$\$\$

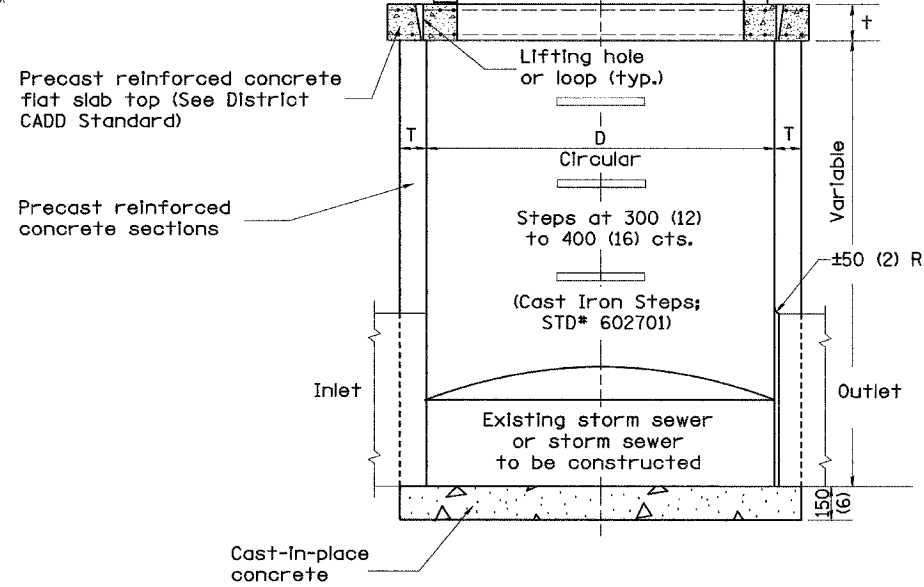
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	652
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



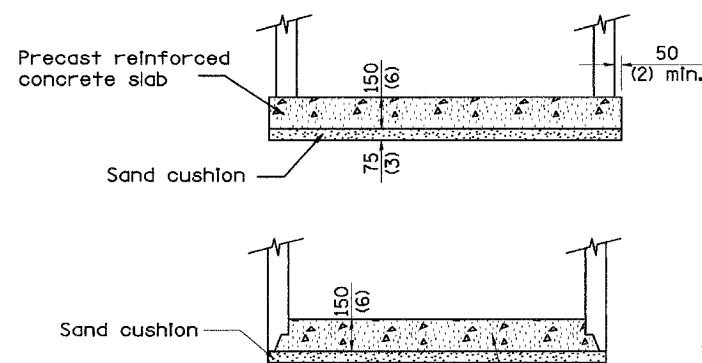
PLAN



ELEVATION (SIDE)

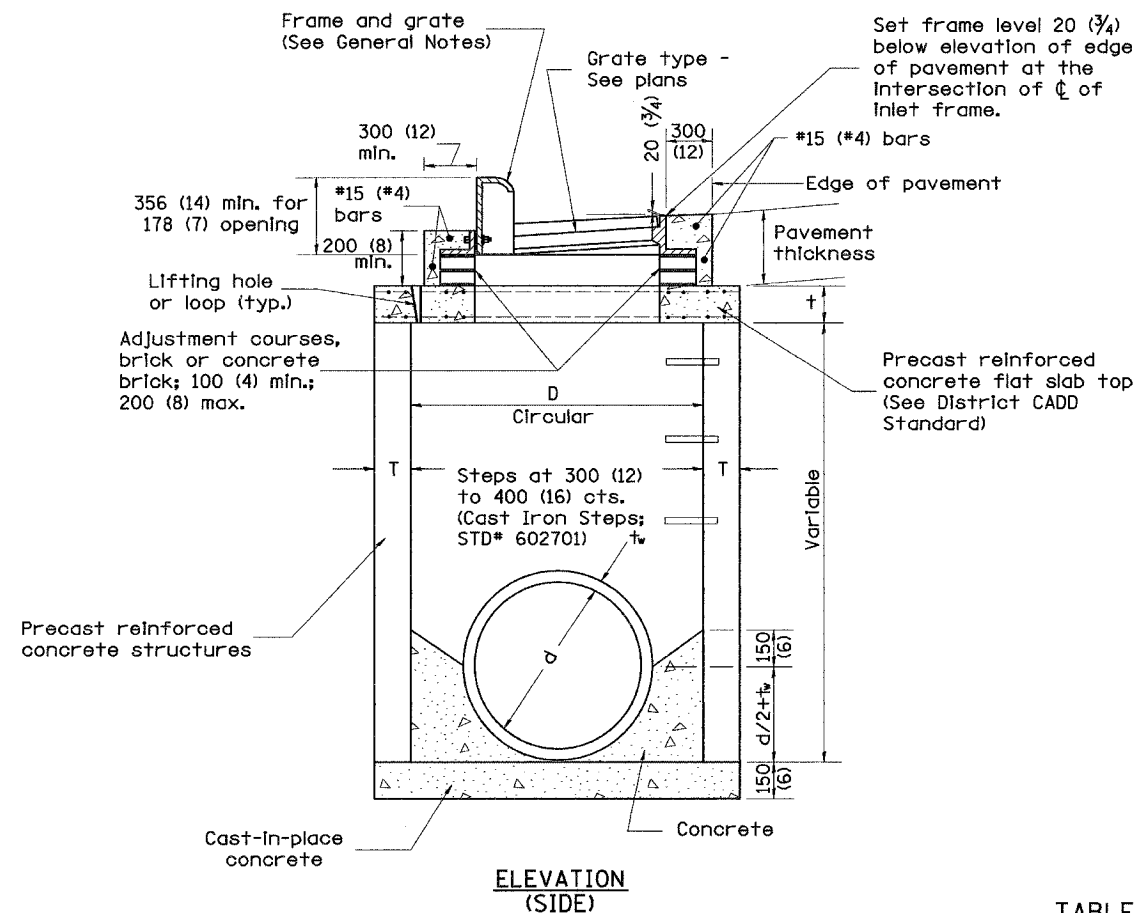


ELEVATION (FRONT)



ALTERNATE BOTTOM SLAB

Prefabricated concrete slab, when the precast reinforced concrete section alternate is used.



ELEVATION (SIDE)

TABLE

D	T	+
1.2m (4')	125 (5)	150 (6)
1.5m (5')	150 (6)	200 (8)
1.8m (6')	195 (7 3/4)	200 (8)
2.4m (8')	225 (9)	250 (10)

GENERAL NOTES

1. Inlet-manhole construction shall be in accordance with Section 602 of the Standard Specifications.
2. Combination concrete curb and gutter shall be constructed in accordance with Section 606 of the Standard Specifications.
3. See District CADD Standard 604001-D4 for frame and grates.
4. See District CADD Standard for precast reinforced concrete flat slab top.

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

INLET-MANHOLE,  
TYPE G-1, SPECIAL

CADD STANDARD 602026-D4  
SCALE NOT TO SCALE  
DATE \*\*DATE\*\*

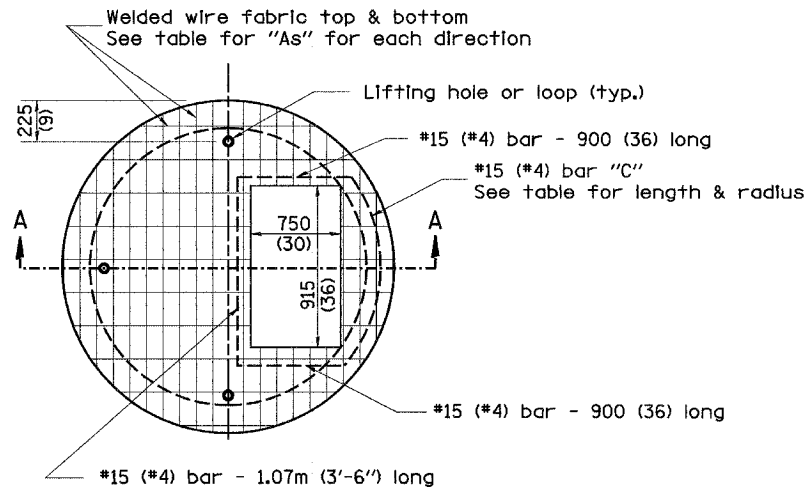
DRAWN BY: CADD  
CHECKED BY:

DATE	REVISIONS	BY
1-1-97	RENJIM B-4.06, NEW REVISION BOX	T.P.
12-1-98	CORRECT E. O. P. NOTE	J.A.
10-99	REVISION TO GENERAL NOTES	J.A.

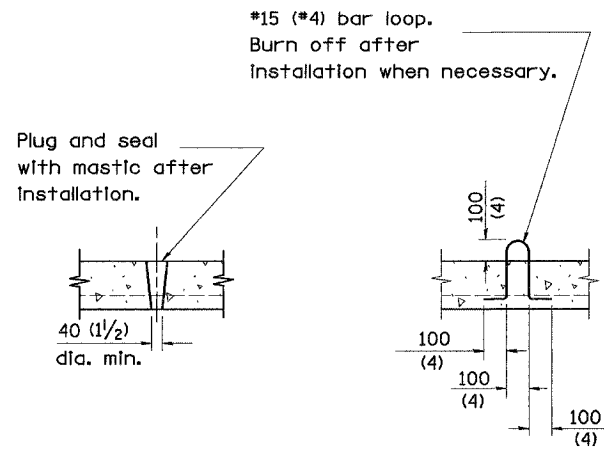
4. Include District CADD Standard for frame and grates.  
 5. Include District CADD Standard for precast reinforced concrete flat slab top.  
 6. Include District CADD Special Provision. Pay Item includes inlet - manhole, flat slab top, transitional c.c.&g. and frame and grate. All work within pay limits.  
 7. Specify diameter of inlet - manhole in plans.  
 8. Specify grate type in plans.

\$\$\$DATE\$\$\$

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	653
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN

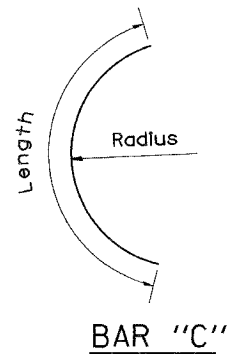


LIFTING HOLE OR LIFTING LOOP  
TYPICAL

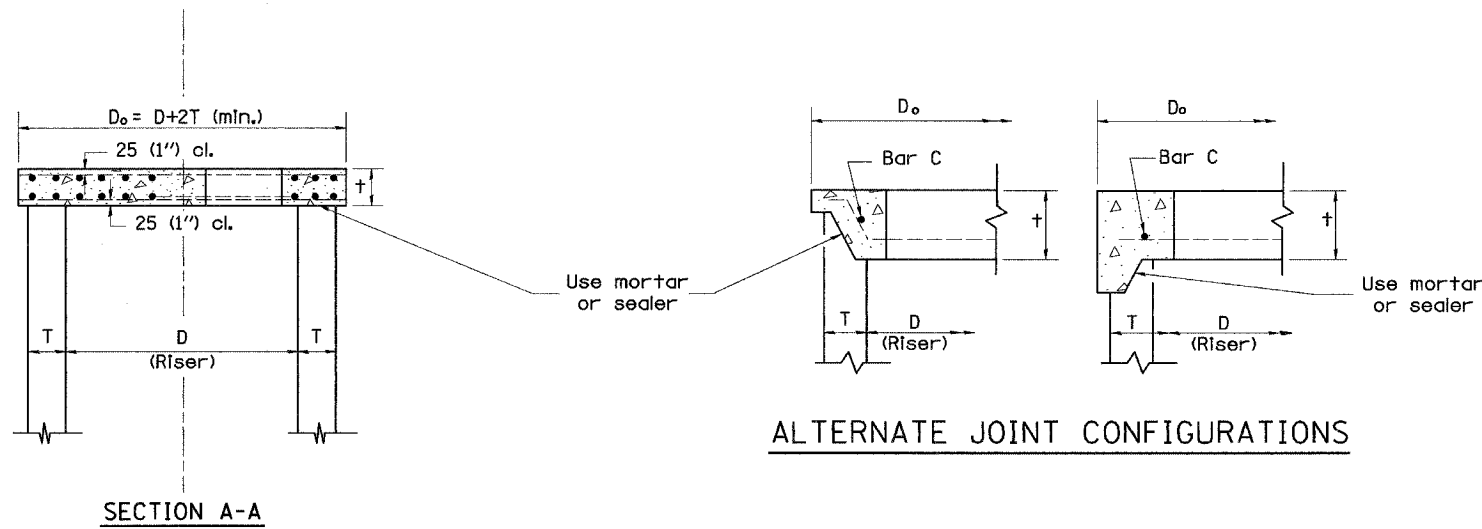
(3 required per slab)

TABLE

D	T	D <sub>o</sub> (min.)	t	Reinforcement "As" W.W.F. each direction	Bar size	No. 15 (No. 4) Bar C	
						Length	Radius
1.2m (4')	125 (5)	1.5m (4'-10")	150 (6)	1480mm <sup>2</sup> / <sub>m</sub> (0.70 sq. Inch/lin. ft.)	No. 15 (No. 5)	1.35m (4'-6")	660 (26)
1.5m (5')	150 (6)	1.8m (6'-0")	200 (8)	1480mm <sup>2</sup> / <sub>m</sub> (0.70 sq. Inch/lin. ft.)	No. 15 (No. 5)	1.5m (5'-0")	810 (32)
1.8m (6')	195 (7 3/4)	2.2m (7'-3 1/2")	200 (8)	1860mm <sup>2</sup> / <sub>m</sub> (0.88 sq. Inch/lin. ft.)	No. 20 (No. 6)	1.8m (6'-0")	965 (38)
2.4m (8')	225 (9)	2.9m (9'-6")	250 (10)	1860mm <sup>2</sup> / <sub>m</sub> (0.88 sq. Inch/lin. ft.)	No. 20 (No. 6)	2.3m (7'-6")	1.27m (4'-2")



BAR "C"



SECTION A-A

ALTERNATE JOINT CONFIGURATIONS

GENERAL NOTES

1. The precast reinforced concrete flat slab top shall be used with INLET-MANHOLE, TYPE G-1 and INLET-MANHOLE, TYPE G-1, SPECIAL.
2. Joint configuration and dimensions of flat slab top shall match and fit the riser joint detail.
3. Lifting devices shall be approved by the Engineer.

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

PRECAST REINFORCED CONCRETE  
FLAT SLAB TOP FOR  
INLET-MANHOLE, TYPE G-1 AND  
TYPE G-1, SPECIAL

CADD STANDARD 602101-D4

SCALE NOT TO SCALE  
DATE \*\*DATE\*\*

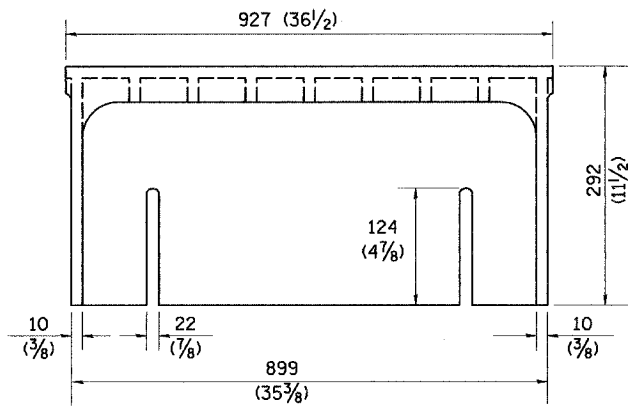
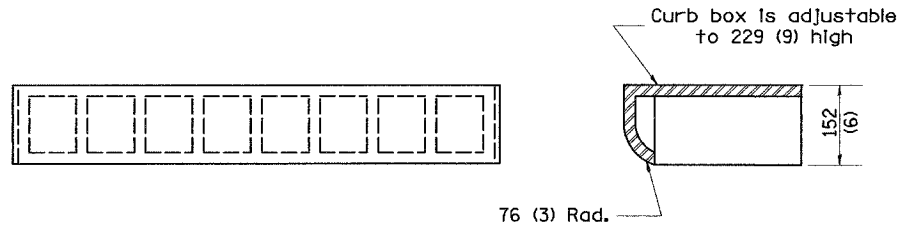
DRAWN BY CADD  
CHECKED BY

DATE	REVISIONS	BY
1-1-97	RENUM. B-4.07, NEW REVISION BOX	T.P.

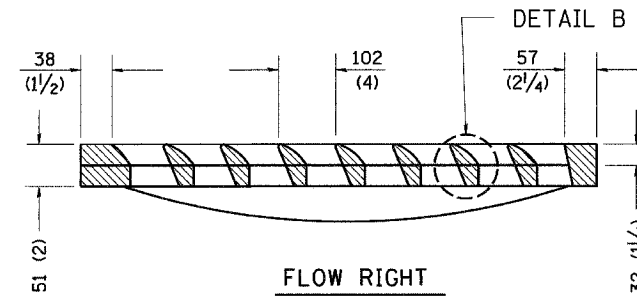
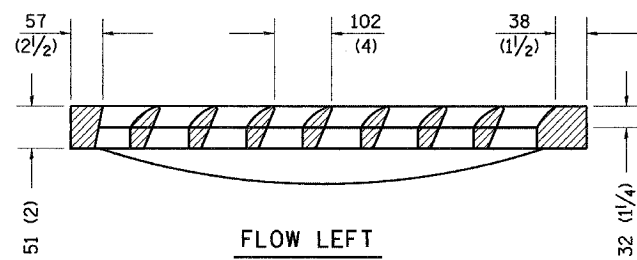
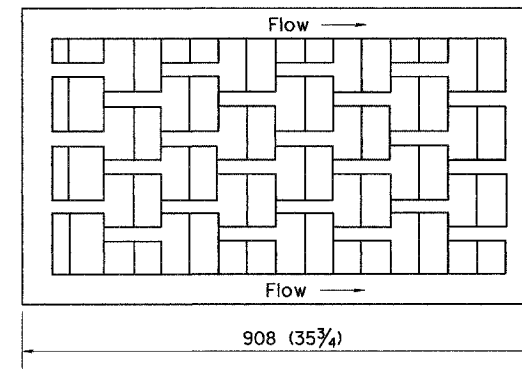
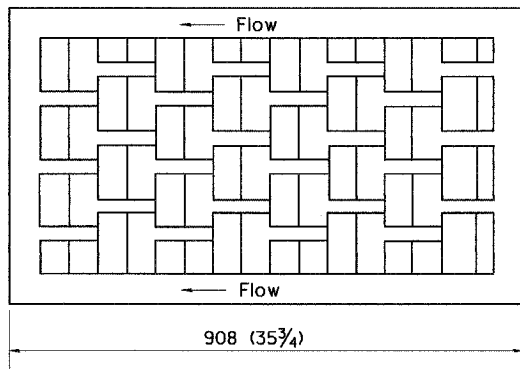
1. Include this standard with Type G-1 and Type G-1, Special Inlet-Manholes.  
2. The flat slab top is included in the cost of INLET-MANHOLES as per District Special Provision.

\$\$\$DATE\$\$\$

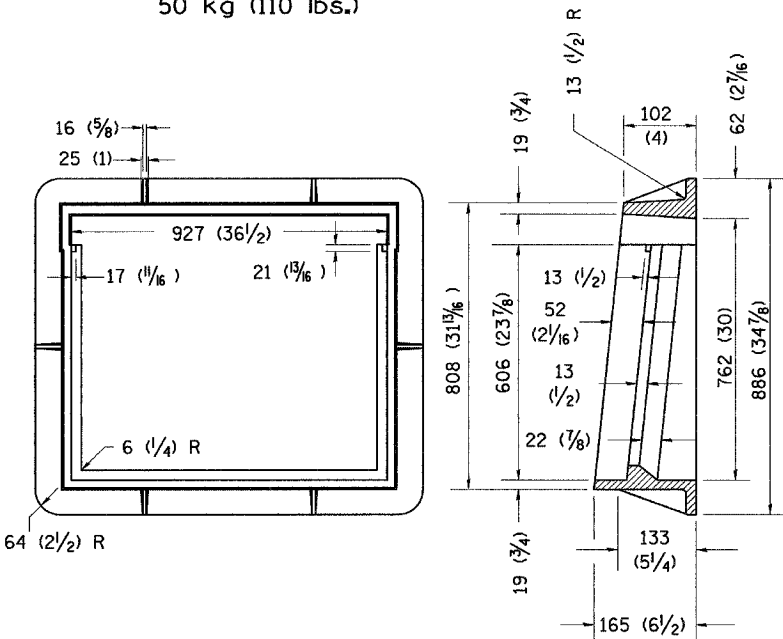
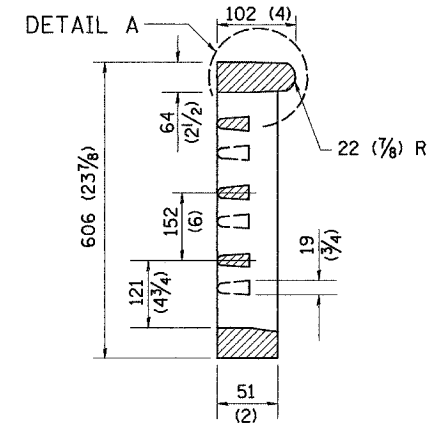
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	659
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



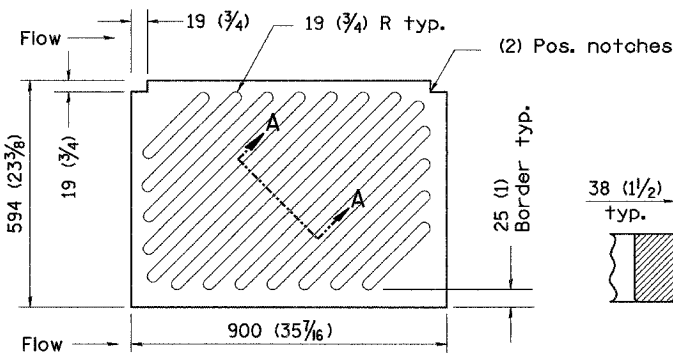
**CAST CURB BOX**  
50 kg (110 lbs.)



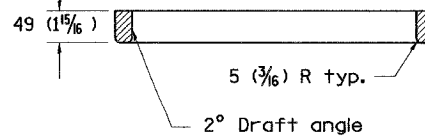
**CAST VANE GRATES**  
(SPECIFY LEFT OR RIGHT FLOW)  
104 KG (230 lbs.)



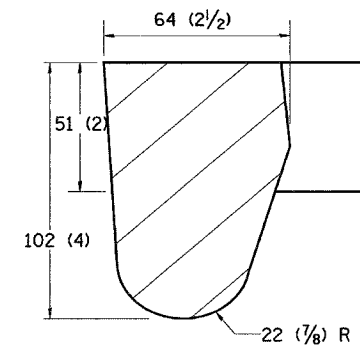
**CAST FRAME**  
123 kg (271 lbs.)



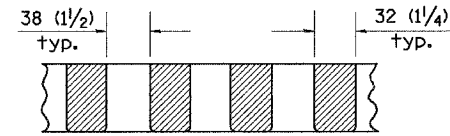
NOTE: Flow right shown



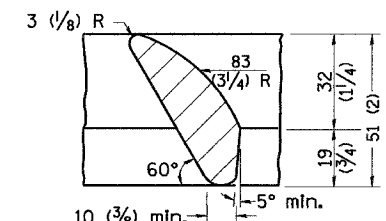
**CAST DIAGONAL GRATE**  
(Reversible for flow)  
98 kg (217 lbs.)



DETAIL A



SECTION A-A



DETAIL B

**GENERAL NOTES**

1. The frame and grate shown on this drawing are for use with all TYPE G-1 and TYPE G-1, SPECIAL DRAINAGE STRUCTURES. See plans for grate type and flow direction.
2. Flow direction: As viewed from street side.
3. Material: cast gray iron.

DATE	REVISIONS	BY
1-1-97	RENUM. B-10.01, NEW REVISION BOX	T.P.

All dimensions are in millimeters (inches) unless otherwise noted.

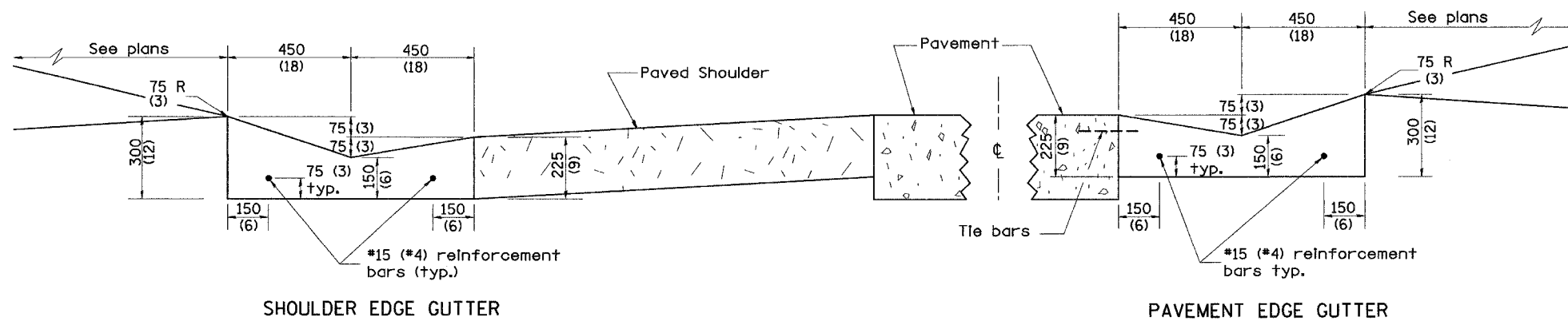
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD
FRAME AND GRATES FOR
TYPE G-1 AND TYPE G-1, SPECIAL
DRAINAGE STRUCTURES
CADD STANDARD 604001-D4
SCALE NOT TO SCALE
DATE ##DATE##

DRAWN BY: CADD  
CHECKED BY:

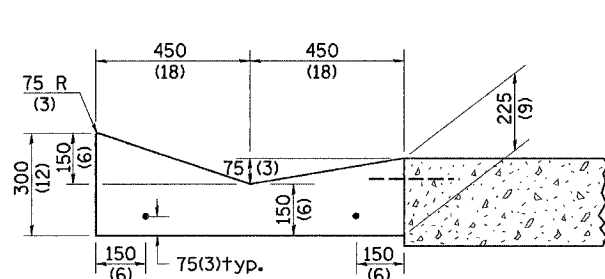
4. This drawing based upon "NEENAH" designs as follows: Inlet Frame: R-3246-A, Curb Box: R-3290, Reversible Diagonal Grate: R-3246-A, Vane Grates: R-3246-AL (flow left), R-3246-AL (flow right)

\$\$\$DATE\$\$\$

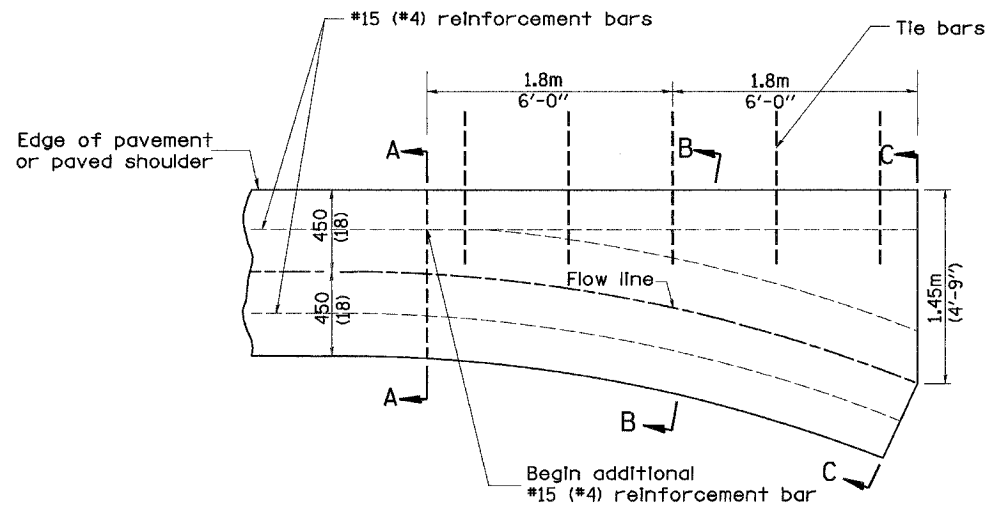
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	655
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**TYPE A GUTTER (MODIFIED)**



**SECTION A-A**

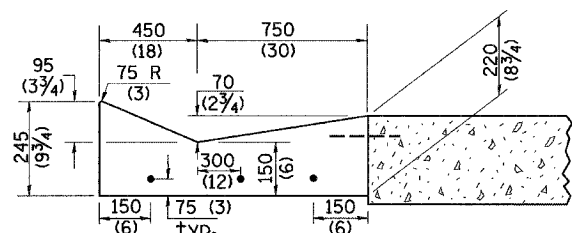


**PLAN**

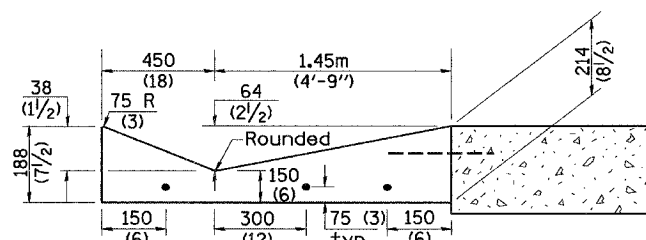
**QUANTITY**  
Section C-C to A-A  
m<sup>3</sup> ( cu. yd.) concrete.

**GENERAL NOTES:**

1. TYPE A GUTTER (MODIFIED) shall conform to the applicable portions of Section 606.
2. Tie bars shall be No. 20 (No. 6) at 600mm (24") centers unless otherwise shown.
3. Gutter, gutter inlets, gutter outlets, and gutter entrances shall be tied to rigid pavement in accordance with details shown on Standard 420001.
4. Joints shall be constructed in accordance with Article 606.06.
5. Welded wire fabric shall conform to Article 1006.10(c)(1), and shall not be less than 2.83 kg/m<sup>2</sup> (58 lbs/100 sq.ft.).



**SECTION B-B**



**SECTION C-C**

**INLET**

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DISTRICT CADD STANDARD**

**TYPE A GUTTER, (MODIFIED)**  
**(INLET, OUTLET & ENTRANCE)**

CADD STANDARD 606101-D4 SHEET 1 OF 3

SCALE: NOT DRAWN TO SCALE DRAWN BY CADD  
DATE \*\*DATE\*\* CHECKED BY

DATE	REVISIONS	BY
1-1-97	RENUM. A-1.02, NEW REVISION	T.P.
	BOX ELIMINATED EXPANSION	
	ANCHOR TIES	
2-28-02	ENTRANCE TYPICALS REVISED	M.A.

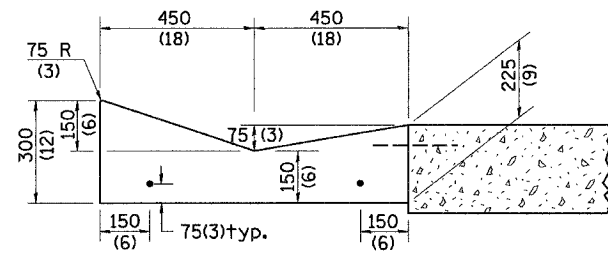
QUANTITIES	
CALC. BY:	DATE:
CHECKED BY:	DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION	

\*DDN-ONLY\*

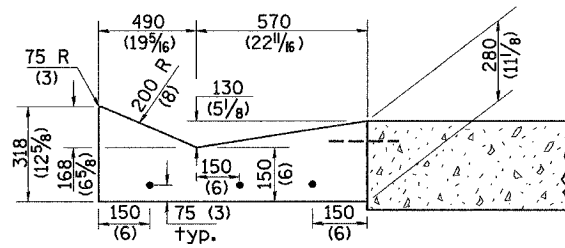
DESIGNER NOTE:  
1. INCLUDE STATE STANDARD 420001.  
2. INCLUDE DISTRICT SPECIAL PROVISION.

DATE

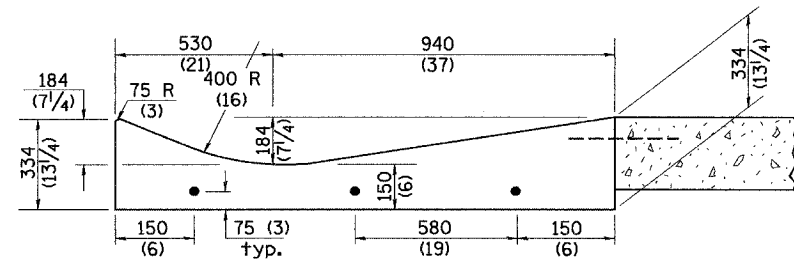
632011			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
			1366/656
SHEET NO.		1366/656	
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	



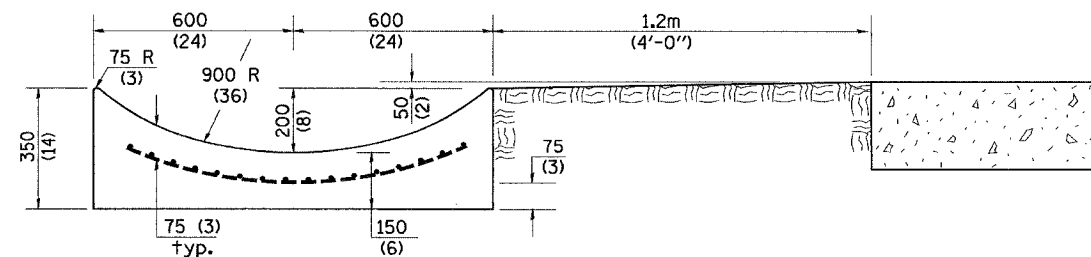
SECTION A-A



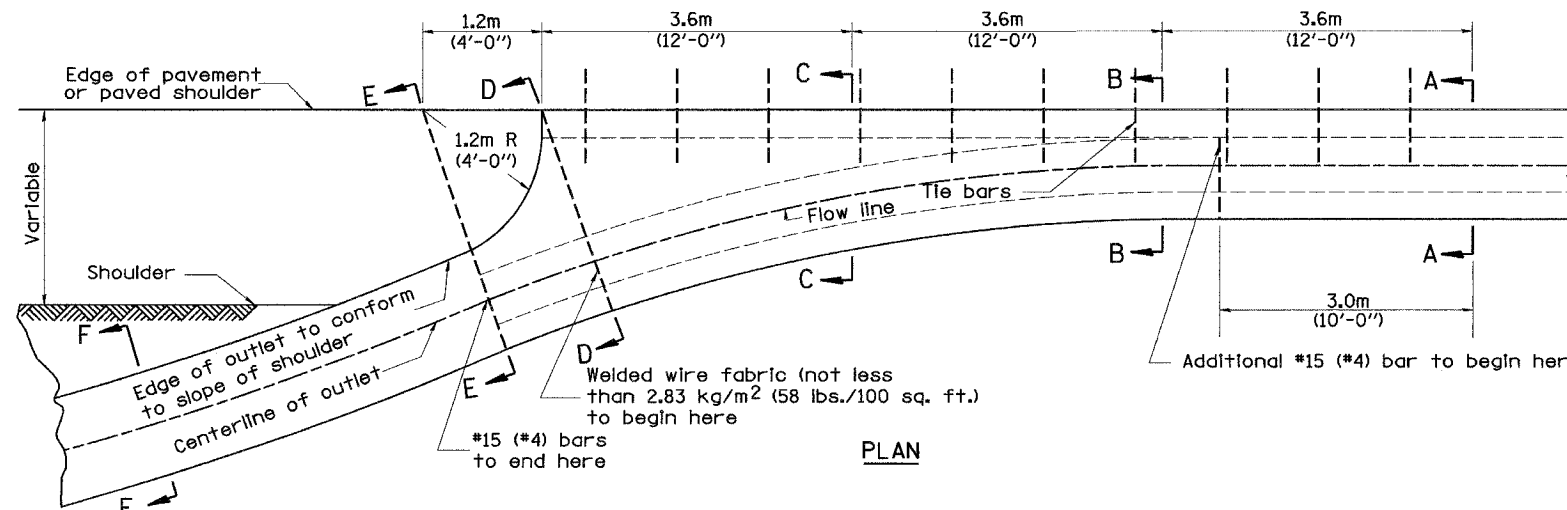
SECTION B-B



SECTION C-C



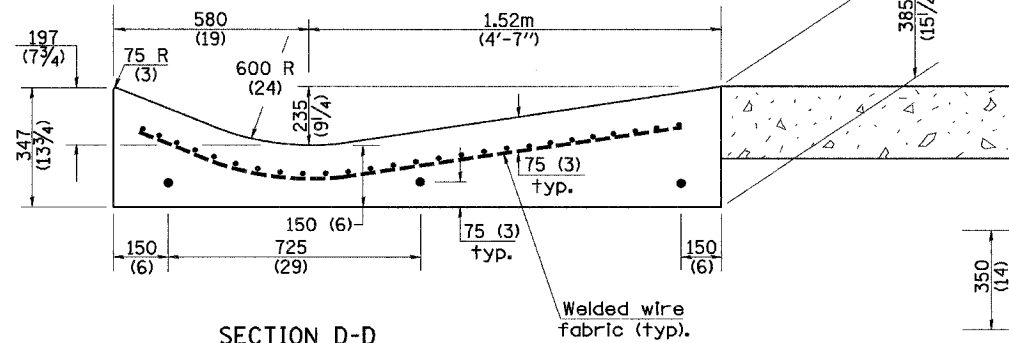
SECTION E-E



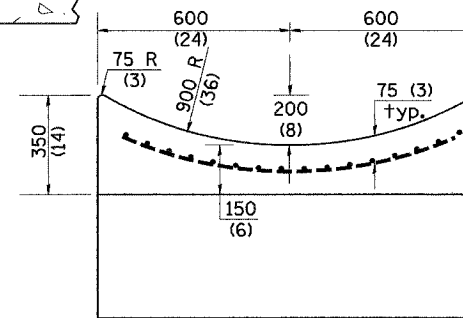
PLAN

**QUANTITY**  
 Section A-A to E-E= m<sup>3</sup> ( cu. yd.) concrete.  
 Section F-F= m<sup>3</sup> ( cu. yd./ft.) concrete.

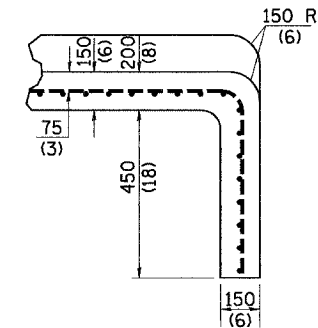
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 1.8 m (6 ft.) for each 1% increase in grade. A quantity adjustment is required.



SECTION D-D



SECTION F-F



SECTIONS AT END OF OUTLET  
(CURTAIN WALL)

**QUANTITY**  
 Curtain Wall  
 m<sup>3</sup> ( cu. yd. ) concrete.

QUANTITIES	
CALC. BY:	DATE:
CHECKED BY:	DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION	

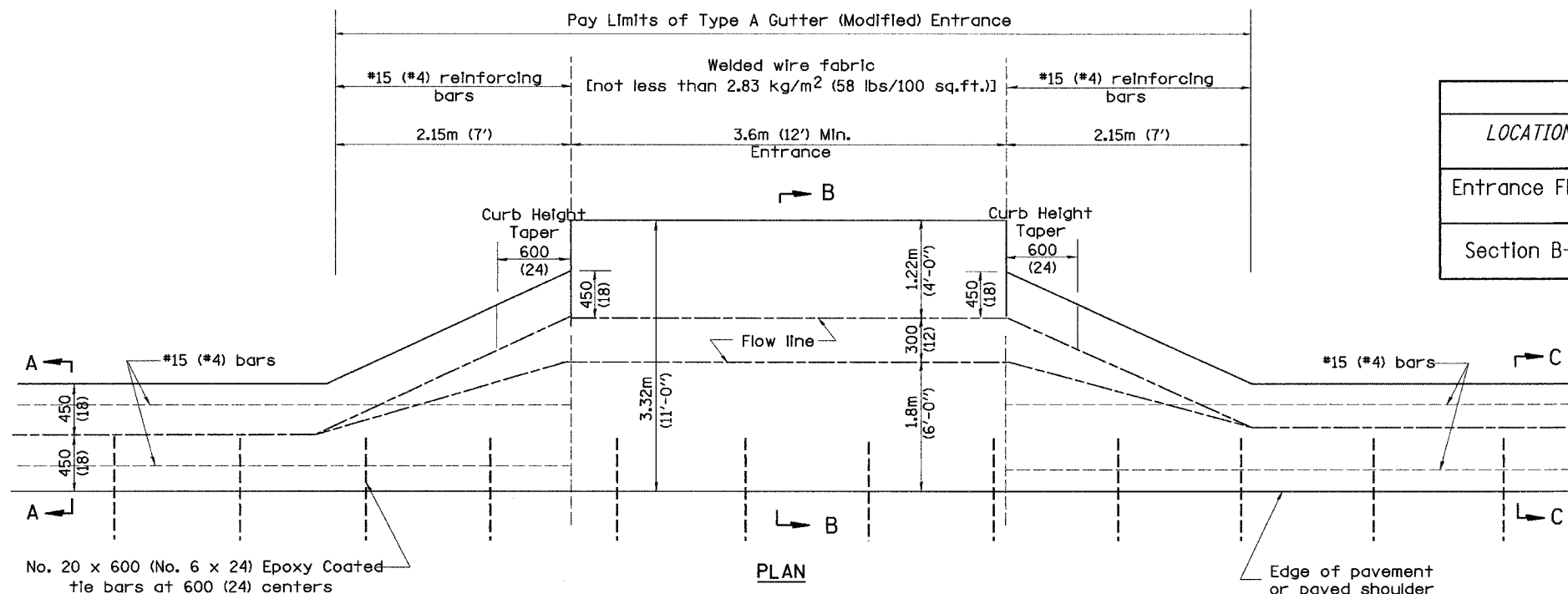
All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
TYPE A GUTTER, (MODIFIED)	
(INLET, OUTLET & ENTRANCE)	
CADD STANDARD 606101-D4	SHEET 2 OF 3
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
DATE **DATE**	CHECKED BY

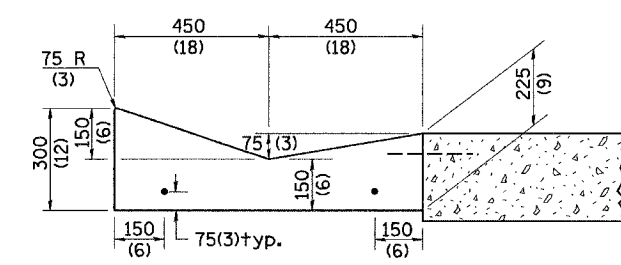


F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1190	(125B)BR	KNOX	1366	657
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

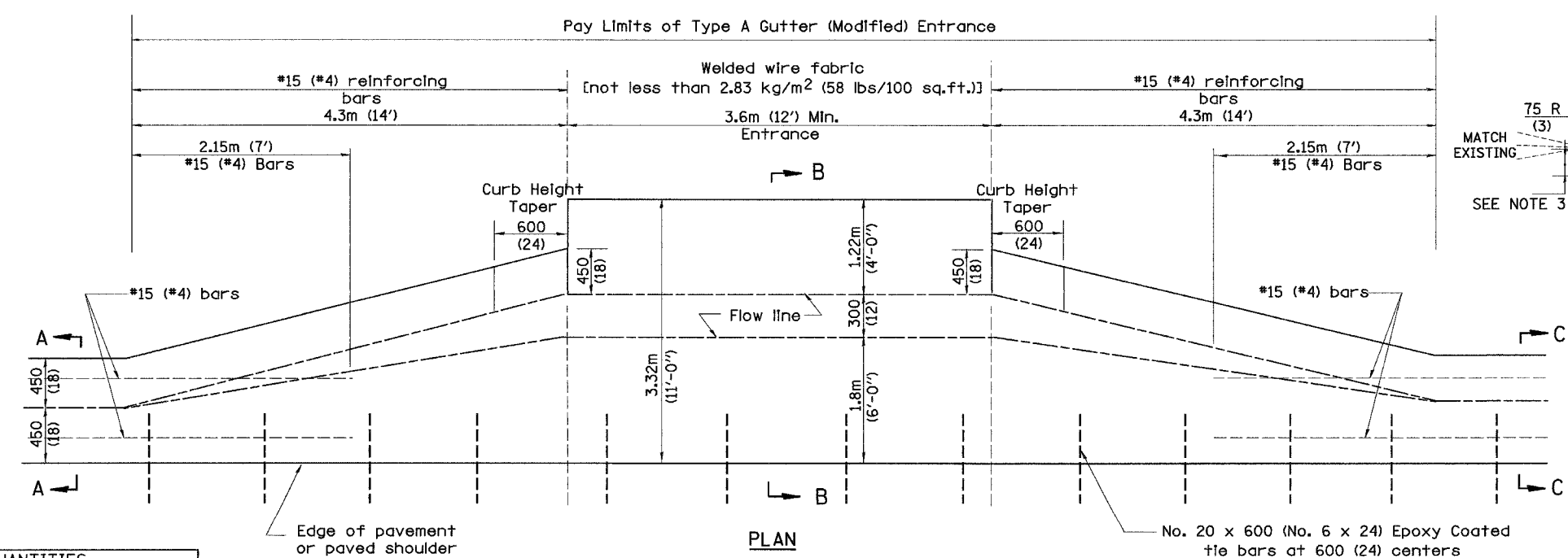
QUANTITY CALCULATION			
LOCATION	LENGTH	NON-COMMERCIAL 150 (6)	COMMERCIAL ENTRANCE 200 (8)
Entrance Flare	2.15 m (7 Ft) Urban 4.30 m (14 Ft) Rural	0.37 Cu M / M (0.15 Cu Yd / Ft)	0.45 Cu M / M (0.18 Cu Yd / Ft)
Section B-B	See Plans	0.57 Cu M / M (0.23 Cu Yd / Ft)	0.70 Cu M / M (0.28 Cu Yd / Ft)



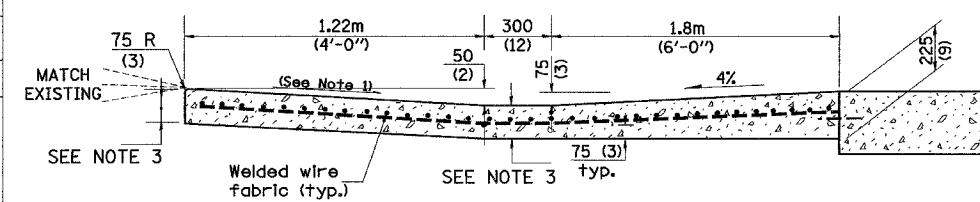
TYPICAL URBAN ENTRANCE



SECTION A-A & C-C



TYPICAL RURAL ENTRANCE



SECTION B-B

- GENERAL NOTES
- 1.) Slope may be increased from 4% (min.) to 6% (max.) in order to match the existing.
  - 2.) The cross-slope is to be constructed as given in the plans from back turnout to where driveway matches existing.
  - 3.) For Non-Commercial Entrances the driveway thickness shall be 150 (6). For Commercial Entrances the driveway thickness shall be 200 (8).

All dimensions are in millimeters (Inches) unless otherwise noted.

QUANTITIES	
CALC. BY:	DATE:
CHECKED BY:	DATE:

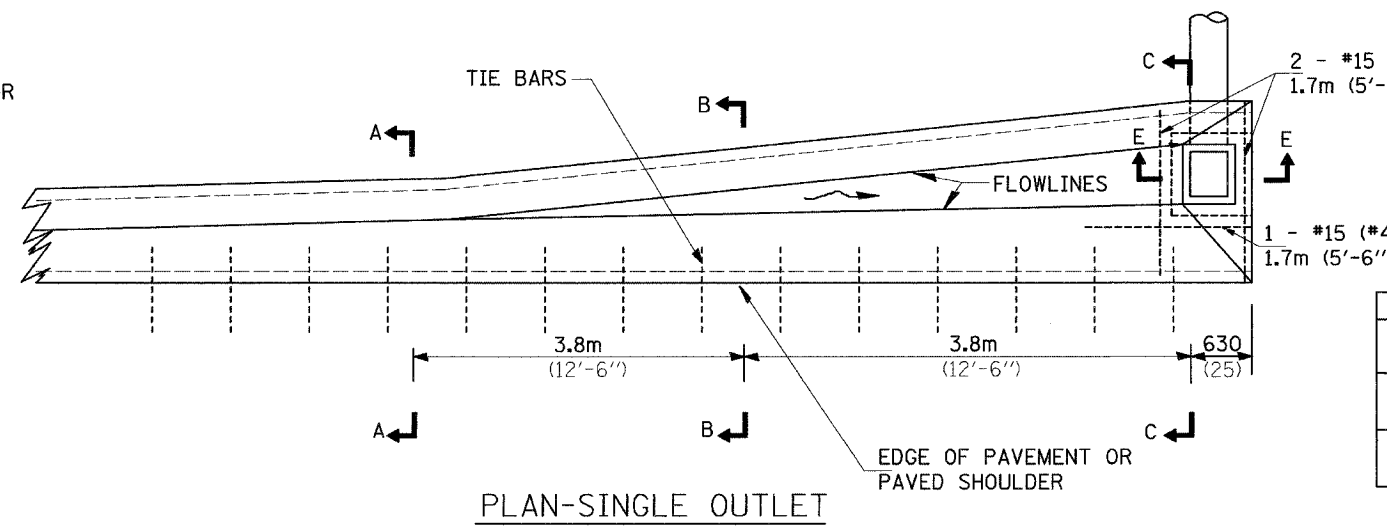
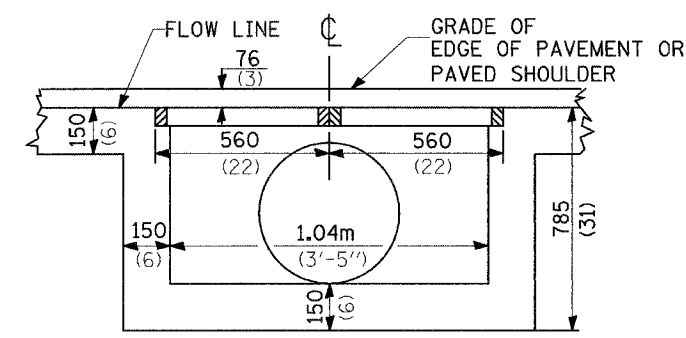
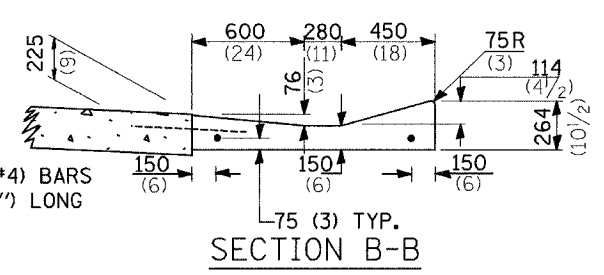
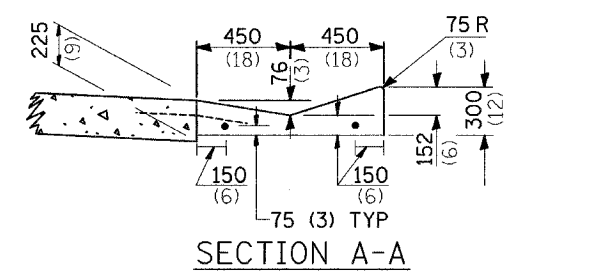
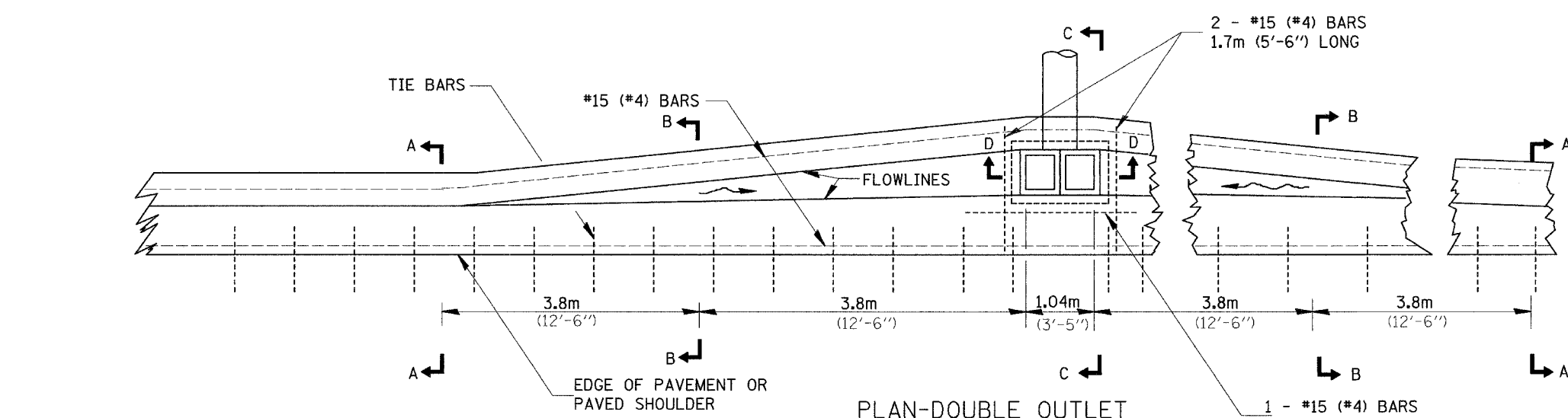
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

**TYPE A GUTTER, (MODIFIED)  
(INLET, OUTLET & ENTRANCE)**

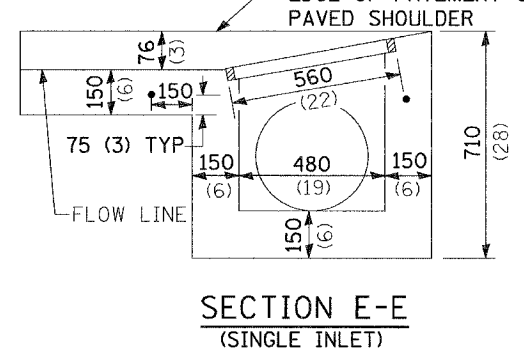
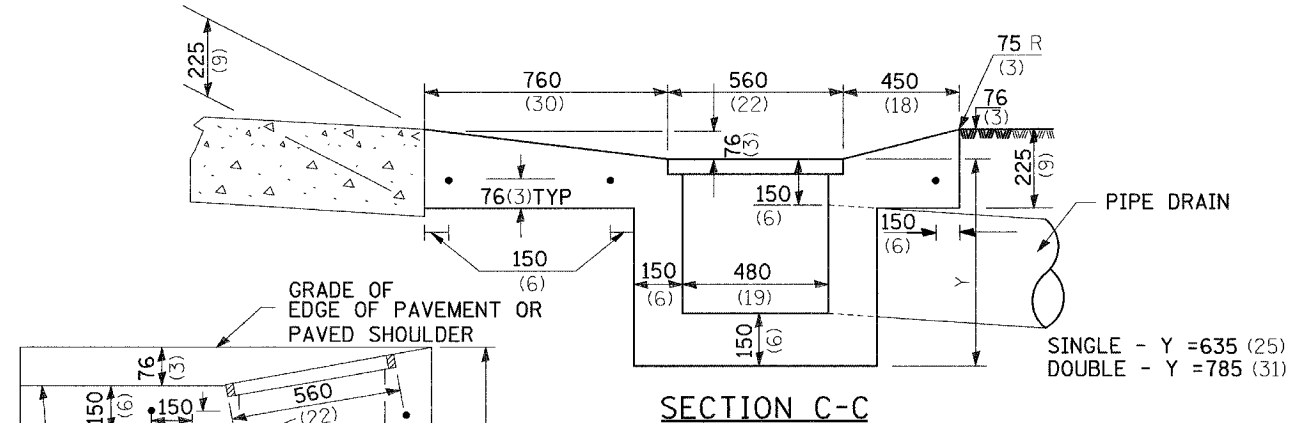
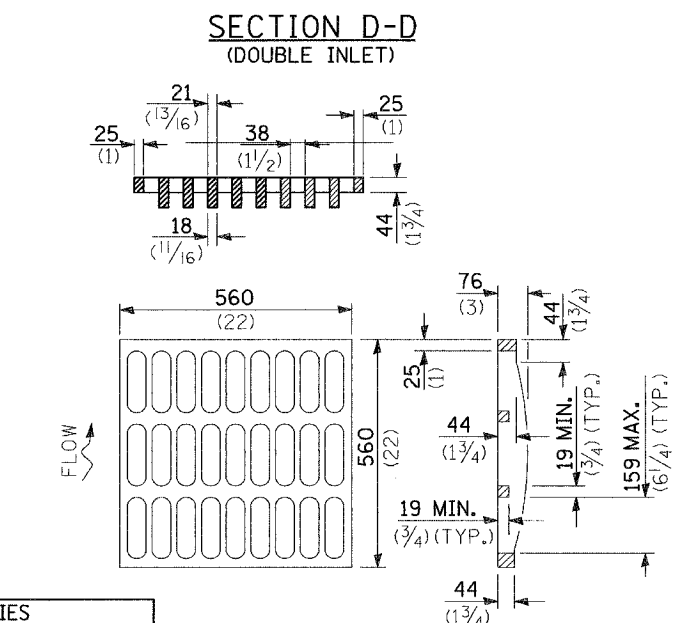
CADD STANDARD 606101-D4 SHEET 3 OF 3  
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD  
DATE \*\*DATE\*\* CHECKED BY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	658
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



QUANTITIES

MATERIAL	SINGLE	DOUBLE
CONCRETE - m <sup>3</sup> (cu.yd.)	( )	( )
CAST IRON GRATE - Ea. 57 kg (125 lbs.)	1	2
PIPE DRAIN - DIA. mm (in.)	400 (15)	450 (18)



**GENERAL NOTES**

The gutter outlet shall be tied to the pavement in accordance with details for longitudinal construction joint shown on Standard 420001.

Tie bars shall be No. 20 (No. 6) at 600mm (24") centers unless otherwise shown.

If the average grade of pavement for the distance A-D exceeds 2%, this distance shall be increased 1.8m (6') for each 1% increase in grade.

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
OUTLET TYPE 1 (MODIFIED) FOR TYPE A GUTTER (MODIFIED)	
CADD STANDARD 606106-D4	
NOT DRAWN TO SCALE	DRAWN BY CADD
DATE **DATE**	CHECKED BY

DATE	REVISIONS	BY
1-1-97	RENUM. A-107, NEW REVISION BOX. ADDED DESIGNER NOTES.	T.P.

QUANTITIES

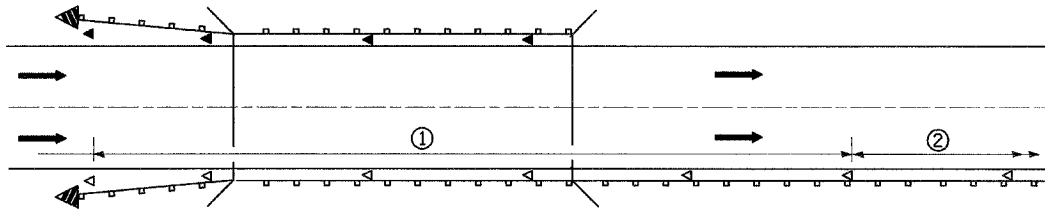
CALC. BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

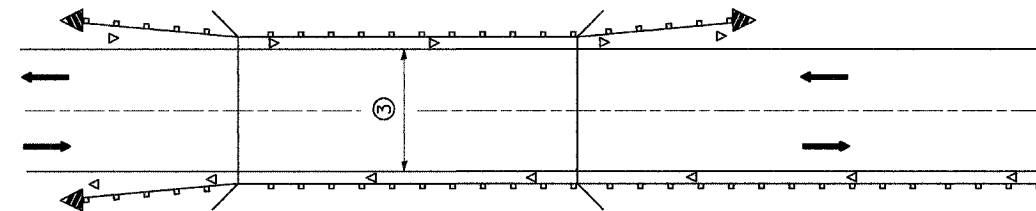
DESIGNER NOTE:  
 1. INCLUDE STATE STANDARD 420001.  
 2. INCLUDE DISTRICT SPECIAL PROVISION.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	689
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



- ① Spacing 24 m (80 ft.) max. for first 122 m (400 ft.) or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).
- ② After 122 m (400 ft.), transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC



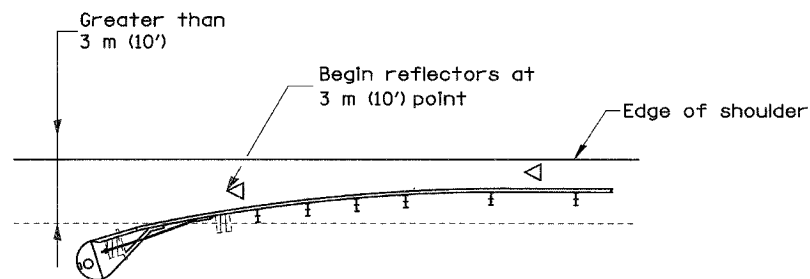
- ③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the bridge pavement is less than 610 (24) wider than the pavement approaching the bridge.

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS

LEGEND

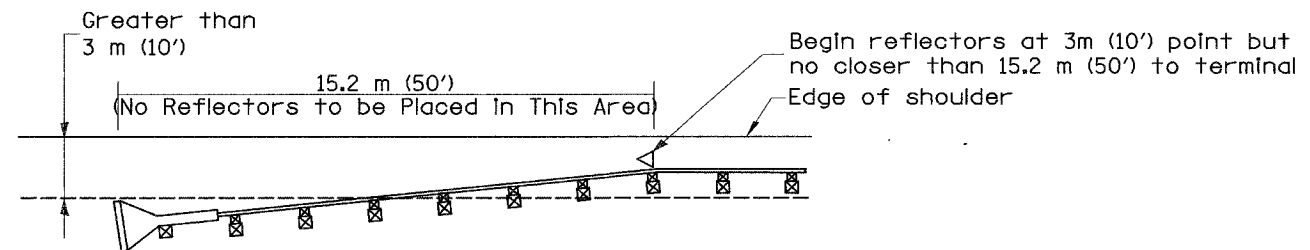
- ◁ Monodirectional silver
- ◀ Monodirectional amber
- ◀ Terminal Marker - Black/Yellow  
Left or Right as appropriate



NOTE: Omit terminal marker when terminal over 3 m (10') from edge of paved shoulder or break point of unpaved shoulder, or when terminal buried in backslope.

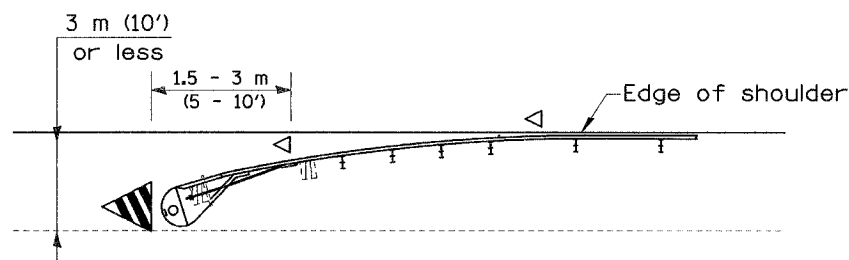
Traffic Barrier Terminal Type(\*) and/or Turned-Down Terminal

[Terminal over 3 m (10') from edge of shoulder]  
•See Plans for Type



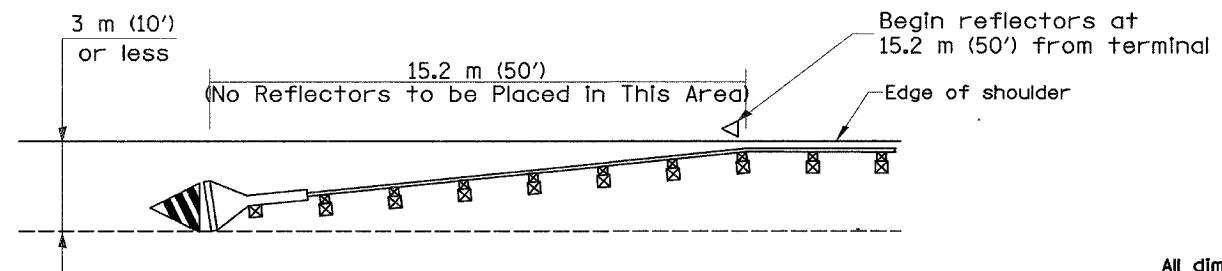
NOTE: Omit terminal marker when terminal over (10') from edge of paved shoulder or break point of unpaved shoulder.

Traffic Barrier Terminal Type 1 (Special)  
[Terminal over 3 m (10') from edge of shoulder]



Traffic Barrier Terminal Type(\*) and/or Turned-Down Terminal

[Terminal over 3 m (10') or less from edge of shoulder]  
•See Plans for Type



Traffic Barrier Terminal Type 1 (Special)  
[Terminal 3 m (10') or less from edge of shoulder]

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

GUARDRAIL AND BARRIER WALL DELINEATION

CADD STD. NO. 635101-D4 SHEET 1 OF 3  
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD  
DATE \*\*DATE\*\* CHECKED BY

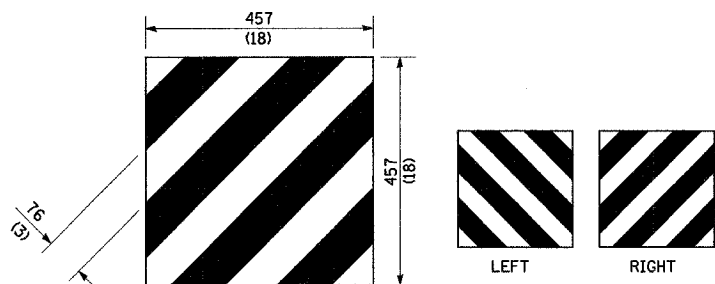
DATE	REVISIONS	BY
1-1-97	RENUM. E-10.02, NEW REVISION BOX	T.P.
3-1-97	CORRECT STD. SPEC. *	J.A.

TERMINAL MARKER PLACEMENT

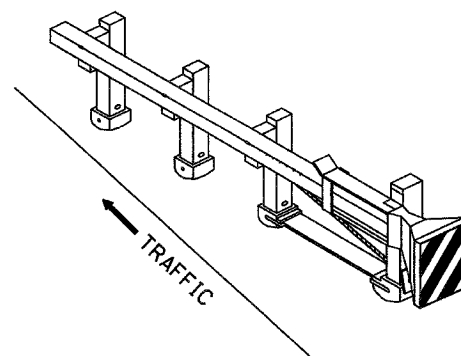
1. INCLUDE APPROPRIATE SPECIAL PROVISIONS FOR GUARD RAIL DELINEATION PROJECTS IN "TERMINAL MARKERS" AND "GUARDRAIL AND BARRIER WALL DELINEATION".  
2. IF POST MOUNT TERMINAL MARKER IS USED, INCLUDE STATE STD. 720011.

\$\$\$DATE\$\$\$

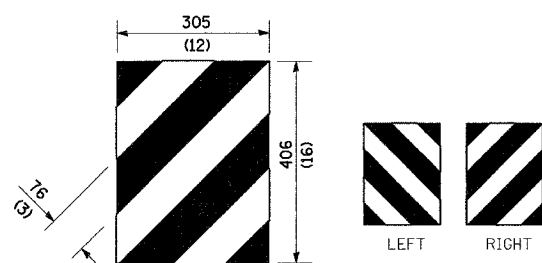
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	660
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



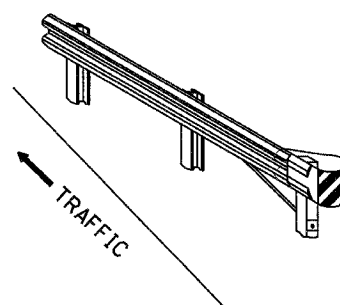
For Traffic Barrier Terminal Type 1 (Special)



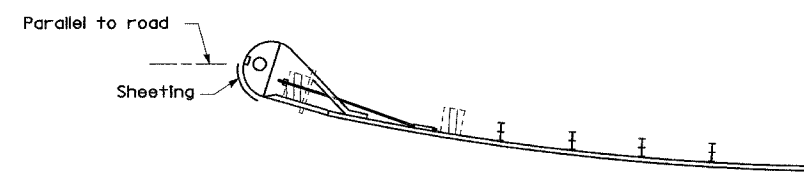
Standard Treatment - Direct Applied Sheeting  
Traffic Barrier Terminal Type 1 (Special)



For Traffic Barrier Terminal Type (\*)  
and Post Mount  
• See Plans for Type



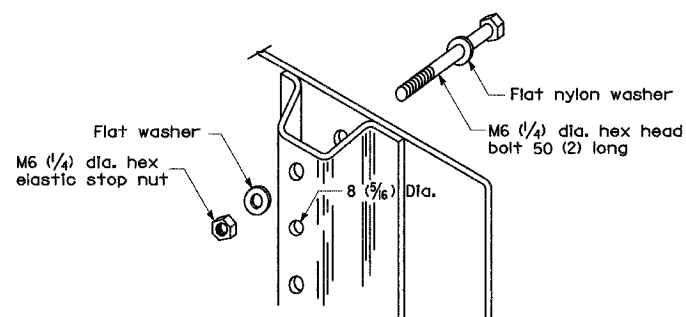
Standard Treatment - Direct Applied Sheeting  
Traffic Barrier Terminal Type (\*)  
• See Plans for Type



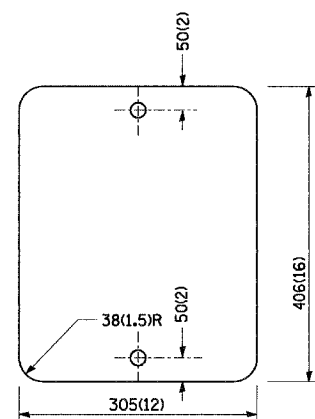
Sheeting Position for  
Traffic Barrier Terminal Type (\*)  
• See Plans for Type

TERMINAL MARKER DETAILS

- Color: Black / Yellow reflectorized
- OM - I100 (L or R) Direct applied reflective sheeting
- OM - I200 (L or R) Post mounted

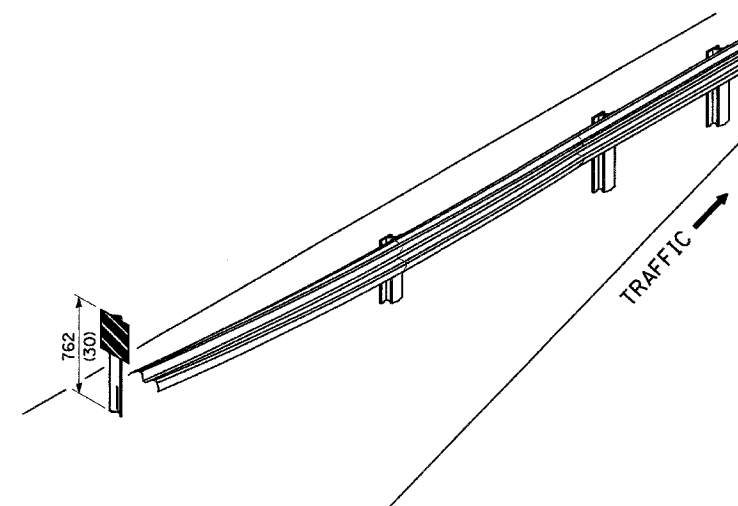


DETAIL OF MOUNTING TERMINAL MARKER TO POST



STANDARD TERMINAL MARKER

POST MOUNTED TERMINAL MARKER ASSEMBLY



ALTERNATE TREATMENT - POST MOUNTED  
(For turned-down terminal where sheeting cannot be direct applied)

TERMINAL MARKER TREATMENTS

GENERAL NOTES

All dimensions are in millimeters (inches) unless otherwise noted.

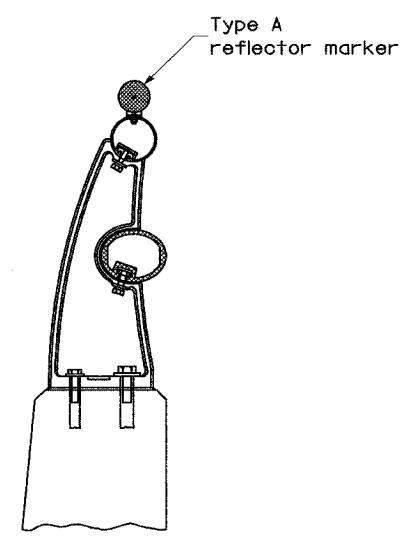
ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT CADD STANDARD

GUARDRAIL AND  
BARRIER WALL DELINEATION

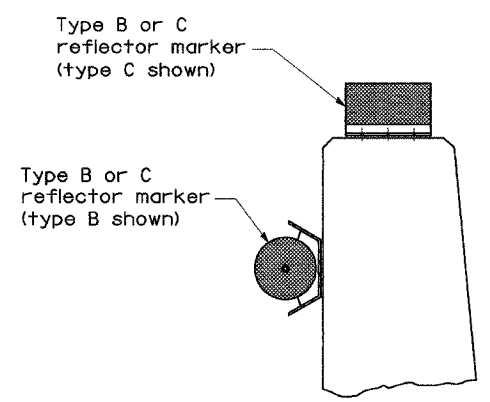
CADD STD. NO. 635101-D4 SHEET 2 OF 3  
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD  
DATE \*\*DATE\*\* CHECKED BY

W:\98101-2-7002\98101-2.dwg, 12/16/2004, 4:16:48 PM

88201			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
			1966/661
SHEET NO.		661	
STA.		TO STA.	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

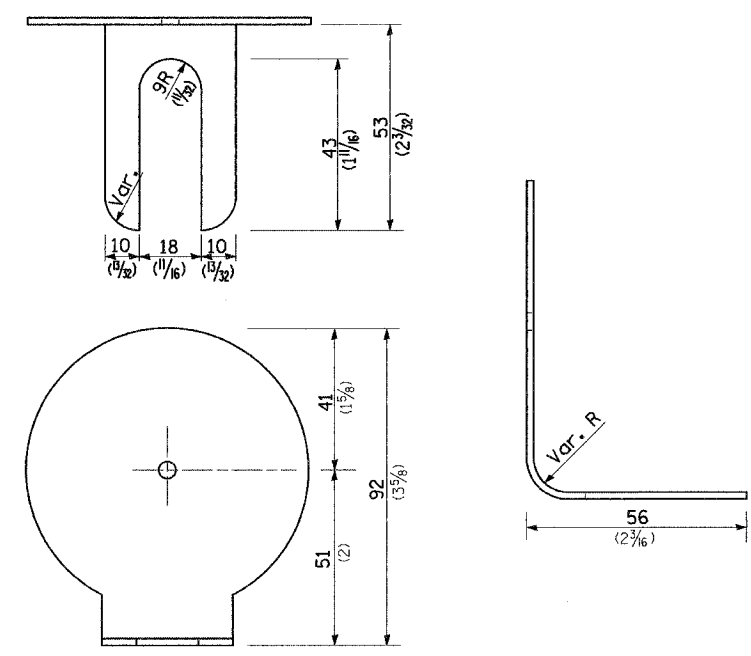


TYPICAL MOUNTING DETAIL FOR BRIDGE RAIL REFLECTOR

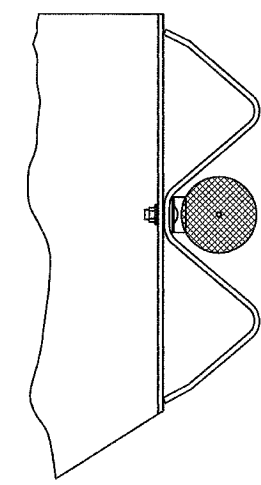


TYPICAL MOUNTING DETAIL FOR BARRIER WALL REFLECTOR

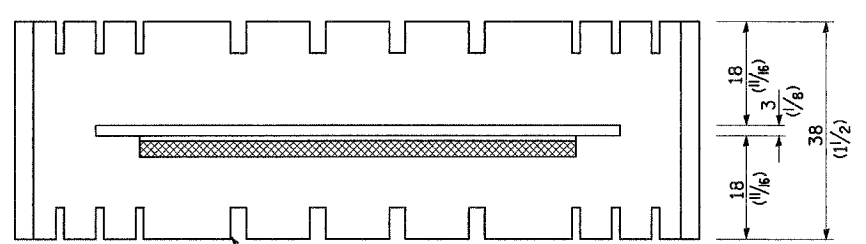
REFLECTOR MOUNTING



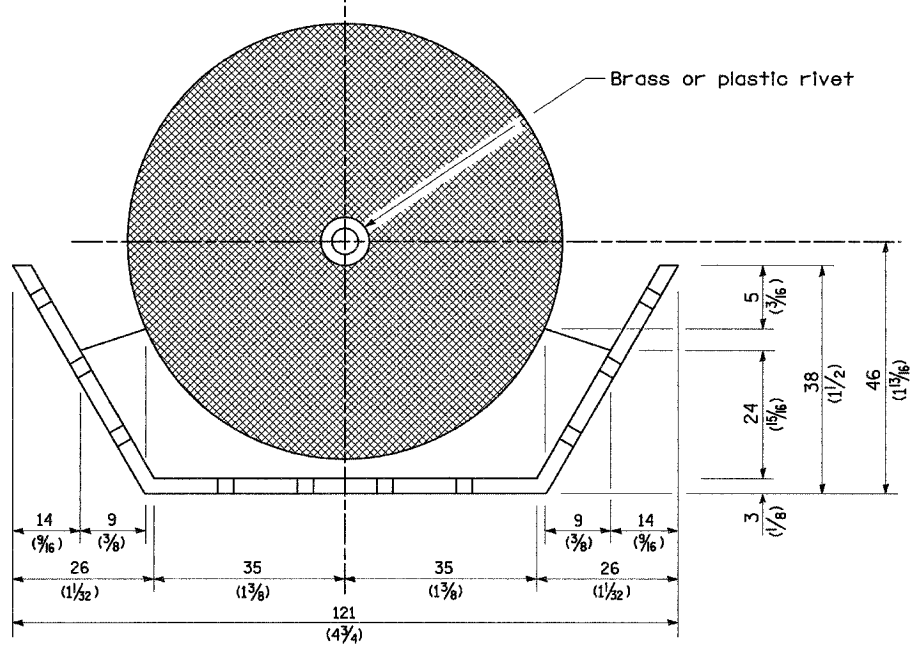
REFLECTOR MARKER TYPE A



TYPICAL GUARDRAIL MOUNTING WITH REFLECTOR MARKER TYPE A

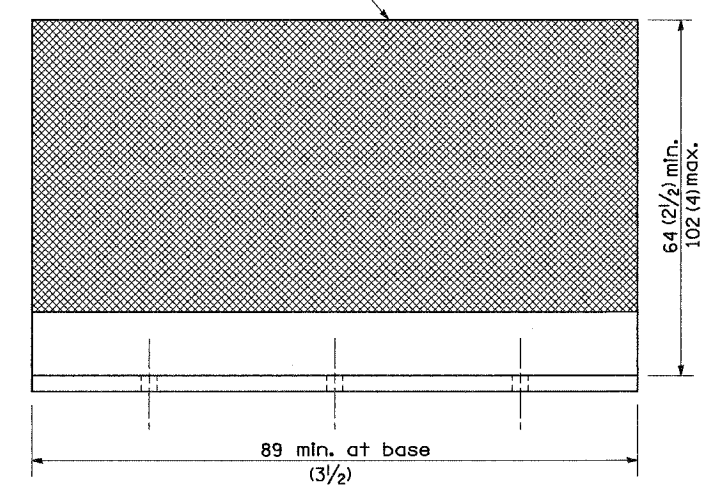


Adhesive weep slots or holes equally spaced on both sides

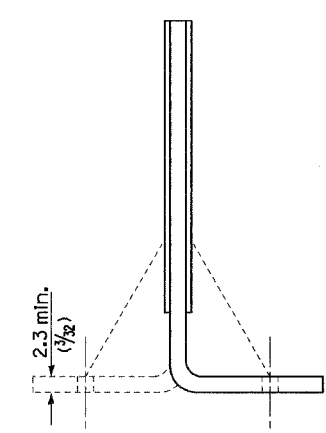


REFLECTOR MARKER TYPE B

Min. reflective area 4,194 mm<sup>2</sup> (6 1/2 Sq. In.) each side. May be rectangular or slight trapezoid.

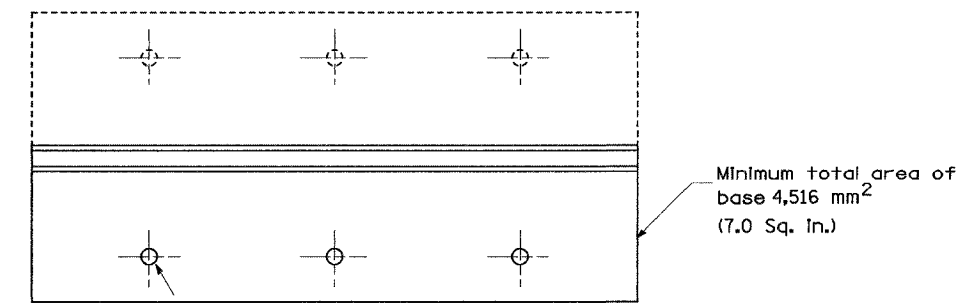


REFLECTOR MARKER TYPE C



Cross section may be "T" or "L" shaped and may have side supports at ends.

REFLECTORS



Minimum total area of base 4,516 mm<sup>2</sup> (7.0 Sq. In.)

3 min. adhesive weep holes or slots each side, variable spacing.

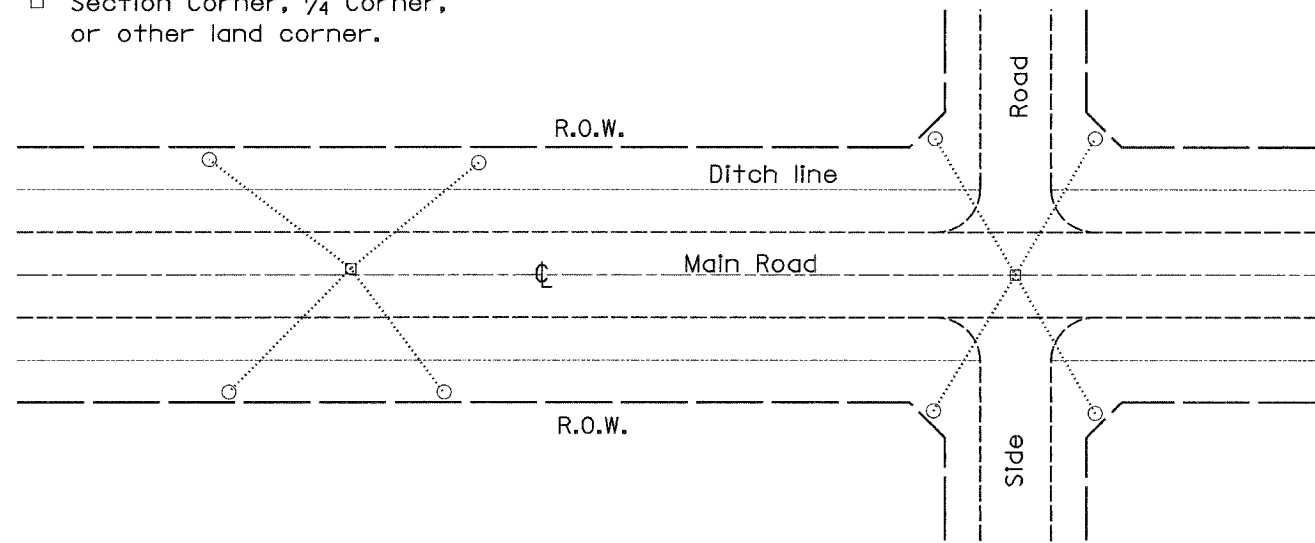
All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
GUARDRAIL AND BARRIER WALL DELINEATION	
CADD STD. NO. 635101-D4	SHEET 3 OF 3
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
DATE **DATE**	CHECKED BY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	667
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

**PERMANENT SURVEY TIES**

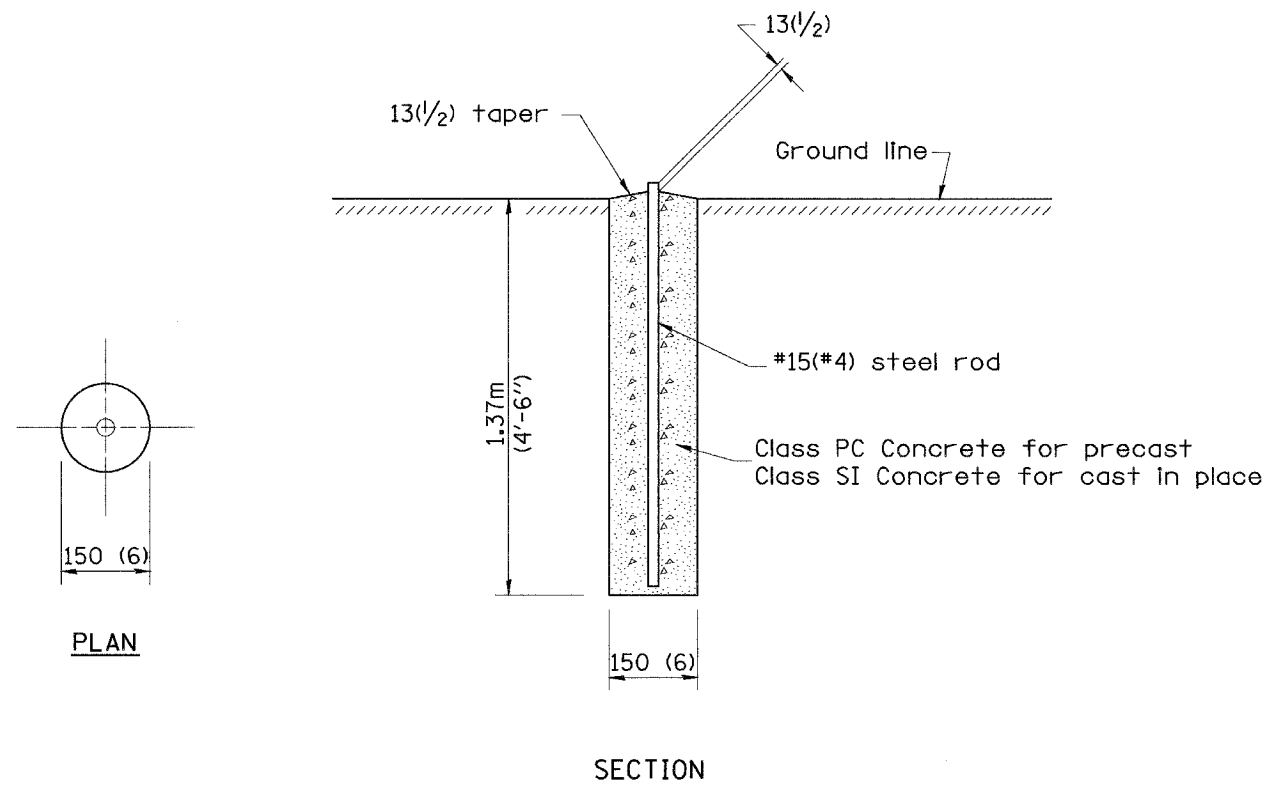
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



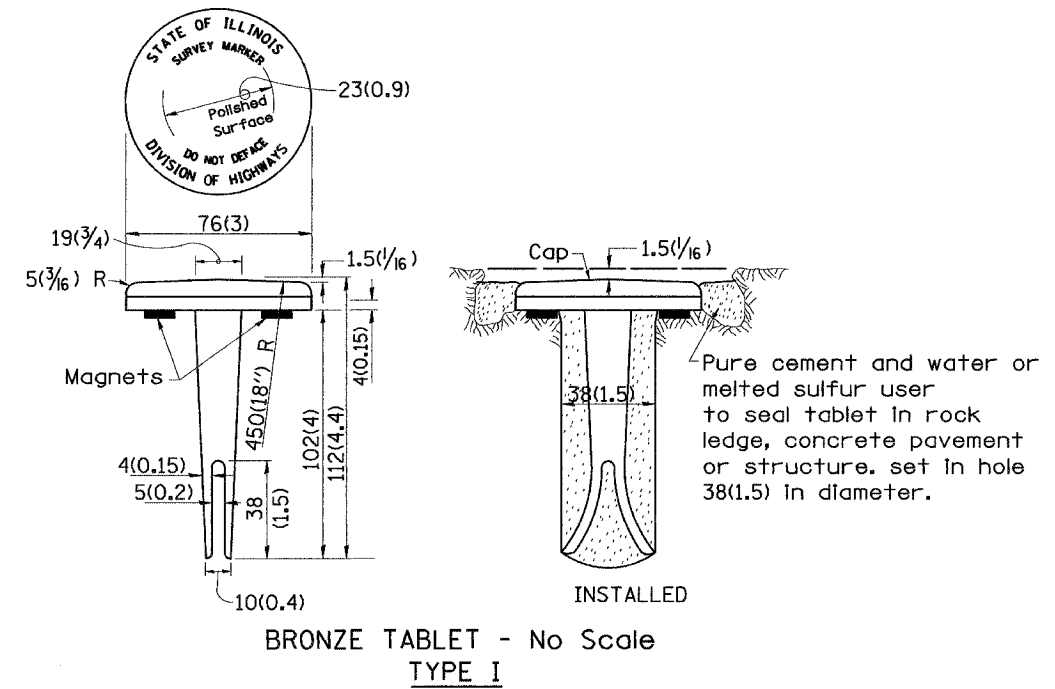
**TYPICAL APPLICATION**

**GENERAL NOTES**

- The marker may be either precast of Class PC Concrete, or cast in place of Class SI Concrete.
- Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
- The tie distances to the section corner shall be measured and recorded by the IDOT Chief of Surveys.



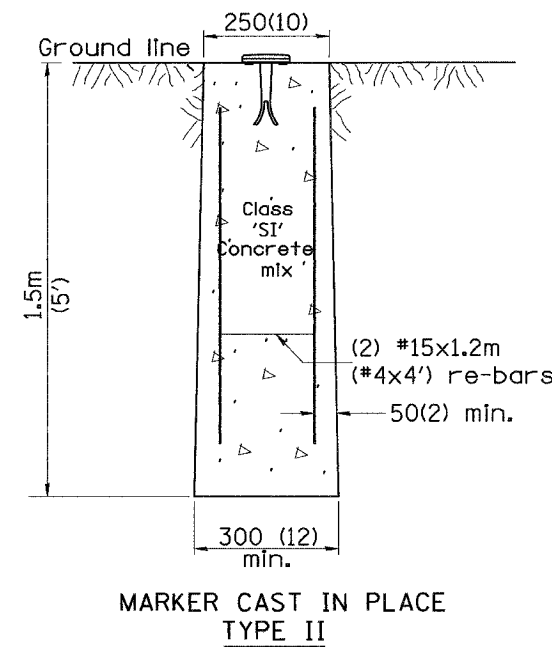
**PERMANENT SURVEY MARKERS**



**BRONZE TABLET - No Scale TYPE I**

**GENERAL NOTES**

- All type II markers shall be cast in place, and precast markers will not be allowed.
- Two permanent magnets, each having a diameter of 19 (3/4) and a thickness of 6 (1/4), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
- The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s and P.C.'s of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 300m(1000').
- The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
- The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.



**MARKER CAST IN PLACE TYPE II**

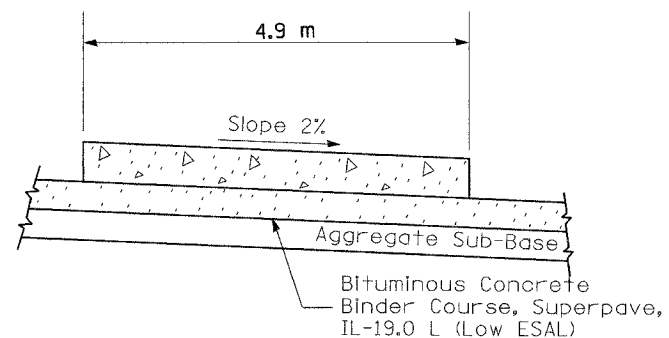
All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
PERMANENT SURVEY TIE & PERMANENT SURVEY MARKERS TY.I - TY.II	
CADD STD. NO. 667101-D4	
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
DATE **DATE**	CHECKED BY

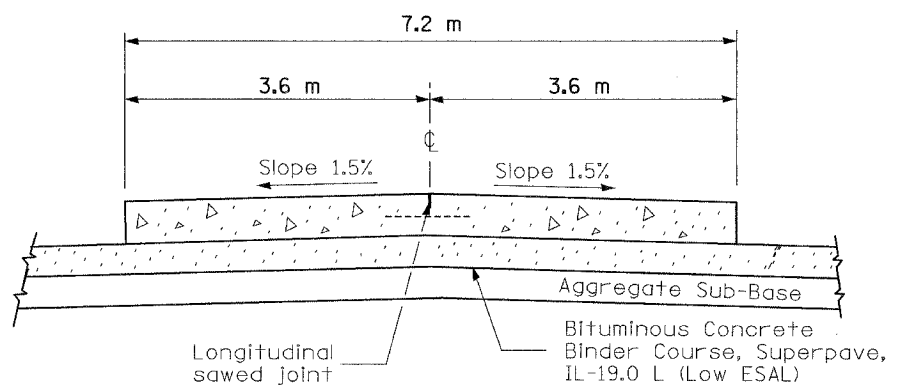
DATE	REVISIONS	BY
1-1-97	RENUM. D-3.01, NEW REVISION BOX	T.P.
7-7-98	ADD DESIGNER NOTE, REVISED TITLE BOX	J.A.
	ADD DESIGNER NOTE	

1. ADD DISTRICT SPECIAL PROVISION.  
2. MODIFIES STATE STD 667101 TO CALL FOR "BRONZE" TABLET.

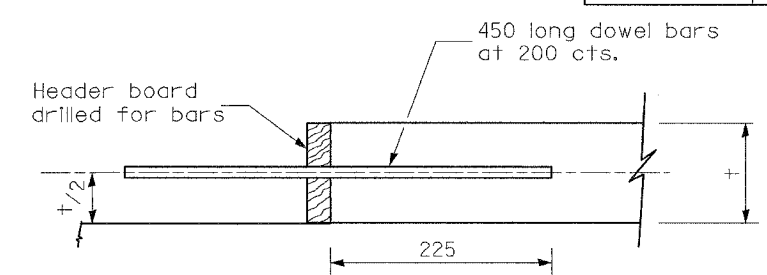
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			136	669
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



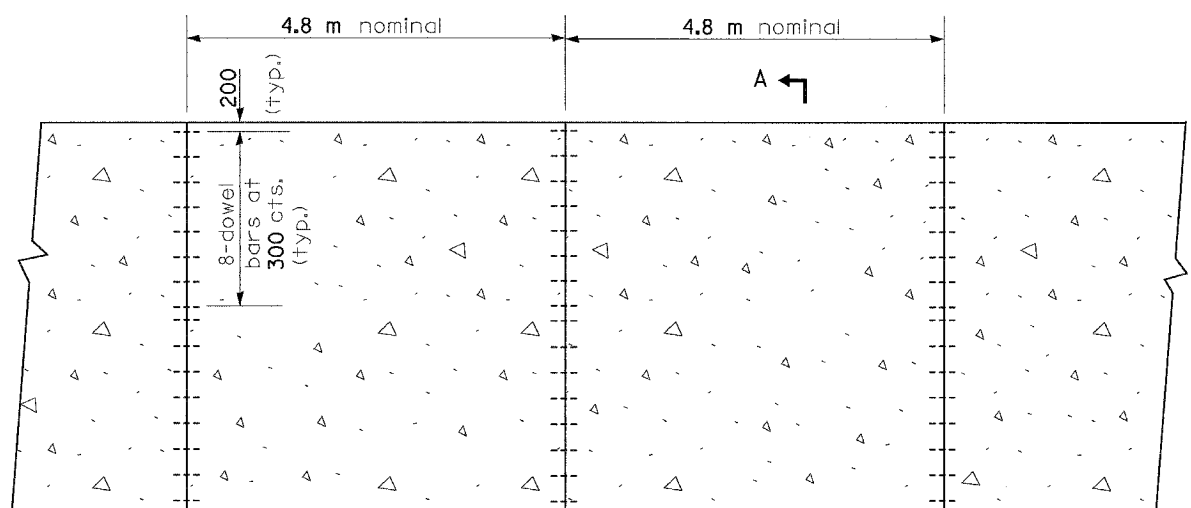
**SECTION A-A**  
(TYPICAL 1-LANE RAMP WITH SHOULDERS)



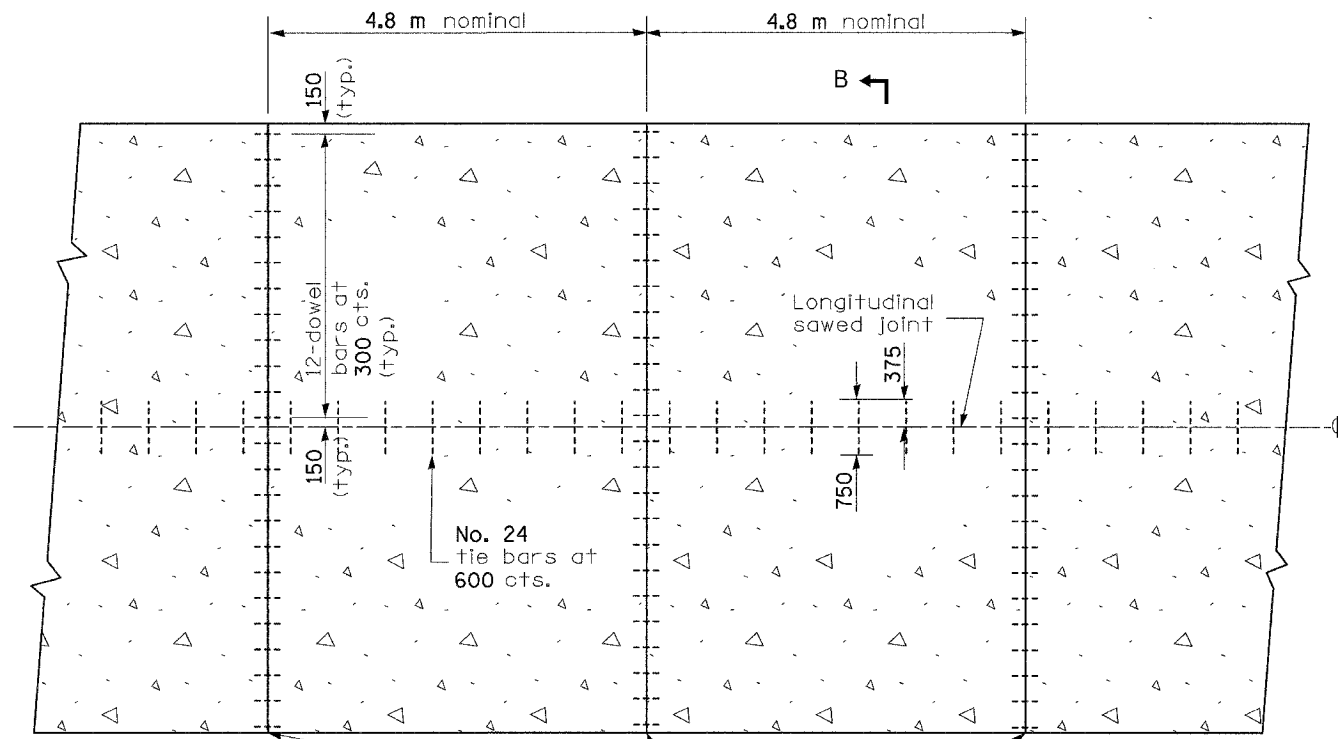
**SECTION B-B**  
(TYPICAL 2-LANE RAMP WITH SHOULDERS)



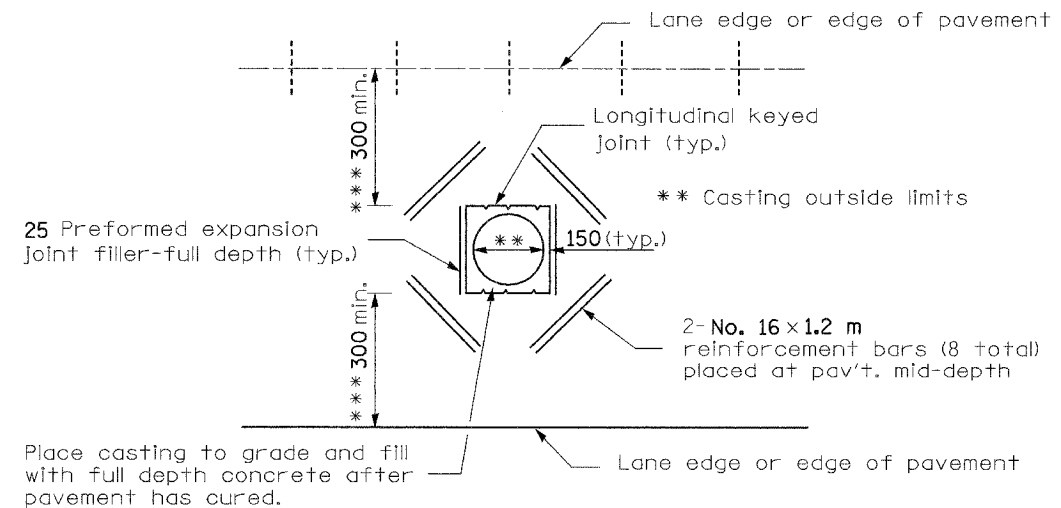
**TRANSVERSE CONSTRUCTION JOINT**



**1-LANE RAMP PLAN**



**2-LANE RAMP PLAN**



**DETAIL OF ADDED REINFORCEMENT FOR PAVEMENT BLOCKS-OUTS**

**GENERAL NOTES**

Details of joints as shown on Standard 420001 except as otherwise shown herein.  
All dimensions are in millimeters unless otherwise shown.

A longitudinal sawed joint or a longitudinal construction joint with No. 24 tie bars at 600 cts. shall be provided when the width of ramp pavement exceeds 4.9 m.

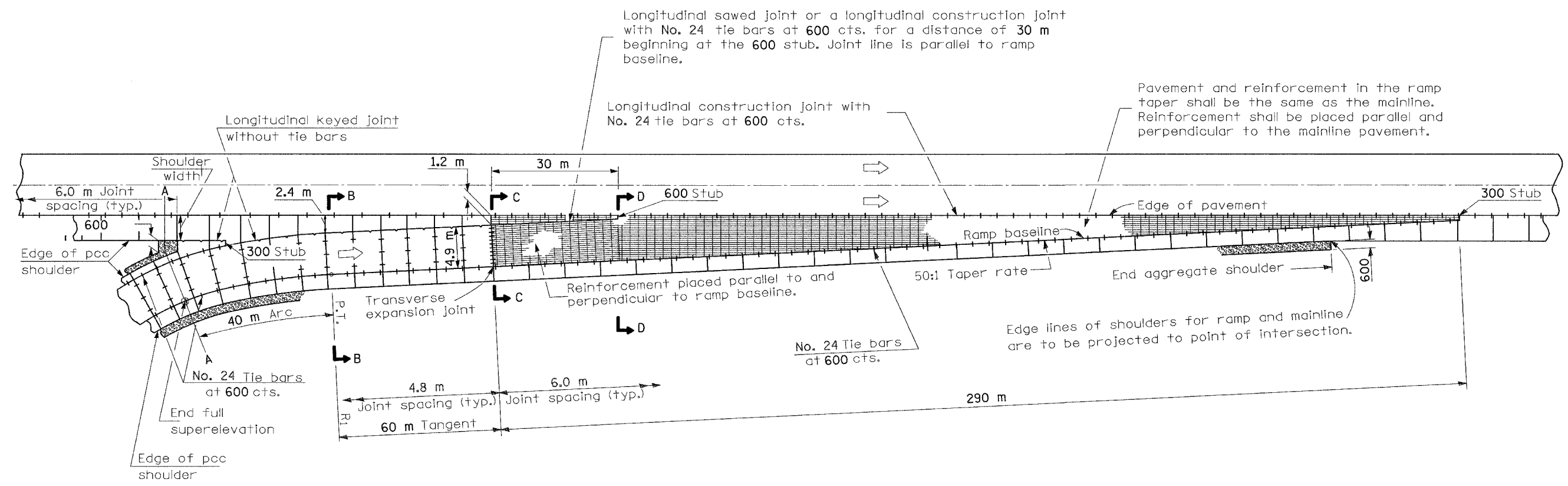
\*\*\* When the 300 minimum cannot be achieved, the transverse joints shall be extended to either the longitudinal joint or edge of pavement.

REVISIONS	
NAME	DATE
INC. COMMENTS	3/7/02
REM. ENGL.	3/22/02
REM. C-JOINT	12/9/02
H.S. 2004	9/26/03

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 420101-174  
JOINTED PCC PAVEMENT FOR RAMPS  
DRAWN BY  
CHECKED BY  
DATE 9/21/01

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 PROJECT NO. I-74/20206-174  
 SHEET NO. 604

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
			1366	604
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



**PLAN**

**GENERAL NOTES**

Detail of ramp terminal as shown on Standard 420206 except as otherwise shown herein.

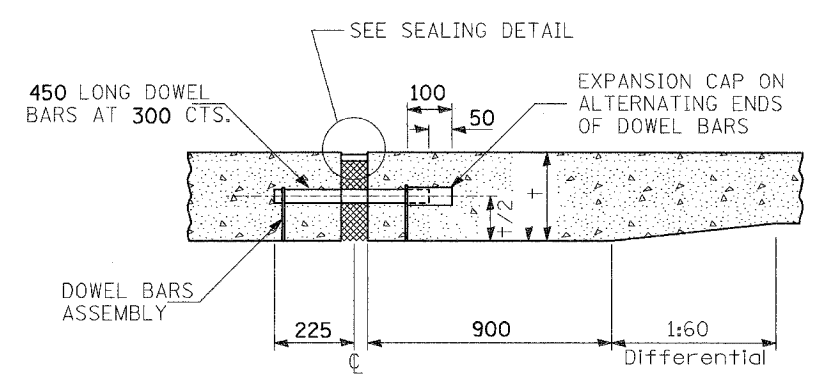
All pavement joints shall be detailed as shown on Standard 420001 and I-74 Project Standard 483001-I74 except as otherwise shown herein.

The mainline pavement/shoulder thickness and the ramp pavement/shoulder thickness should be transitioned at the transverse expansion joint and at the longitudinal keyed joint.

A longitudinal sawed joint or a longitudinal construction joint with No. 24 tie bars at 600 cts. shall be provided when the width of ramp pavement exceeds 4.9 m.

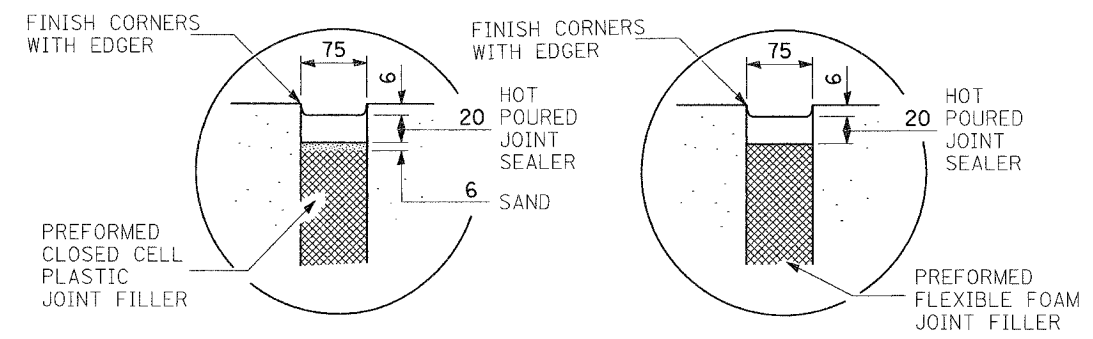
See I-74 Project Standard 483001-I74 for ramp shoulder details.

All dimensions are in millimeters unless otherwise shown.



**TRANSVERSE EXPANSION JOINT \***

\* FOR EXPANSION JOINTS FORMED USING A CONSTRUCTION HEADER, THE EXPANSION CAPS SHALL BE INSTALLED ON THE EXPOSED END OF EACH BAR ONCE THE HEADER HAS BEEN REMOVED AND THE JOINT FILLER MATERIAL HAS BEEN INSTALLED



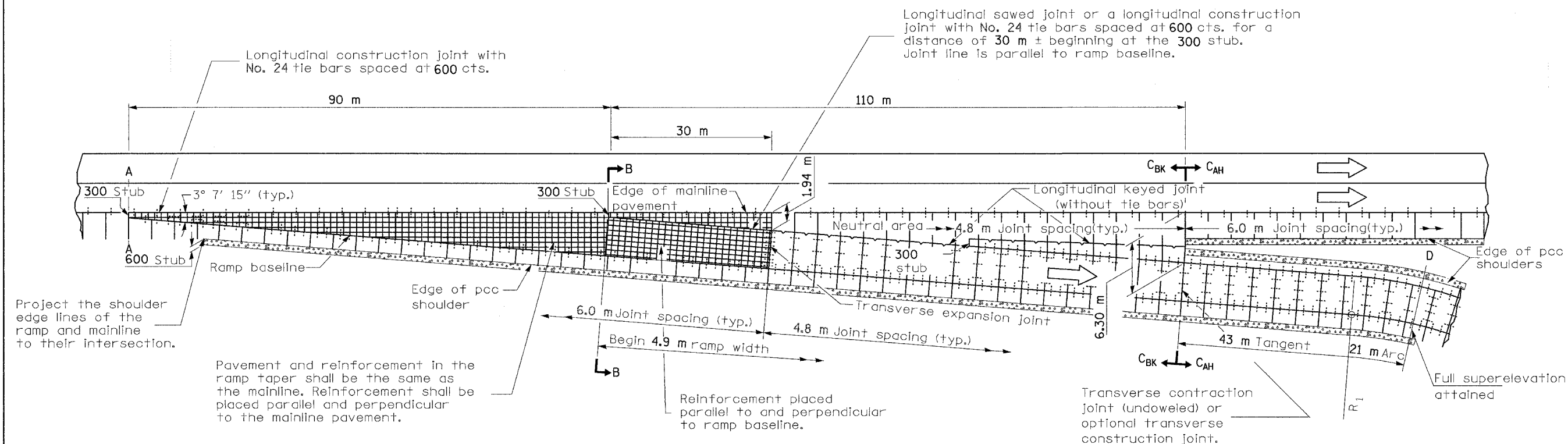
**SEALING DETAIL**

REVISIONS	
NAME	DATE
INC. COMMENTS	3/7/02
REM. ENGL.	3/22/02
REM. C. JOINT	4/17/02
ADD 3RD NOTE	8/15/02
H.S. 2004	9/26/03

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 I-74 PROJECT STANDARD 420206-174  
 TYPICAL ENTRANCE  
 RAMP TERMINAL  
 (JOINTED PCC RAMP ADJACENT TO CRC PAVEMENT)  
 DRAWN BY  
 DATE 02/26/2002  
 CHECKED BY



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			13400	668
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



PLAN

BK = Back  
AH = Ahead

GENERAL NOTES

Detail of ramp terminal as shown on Standard 420306 except as otherwise shown herein.

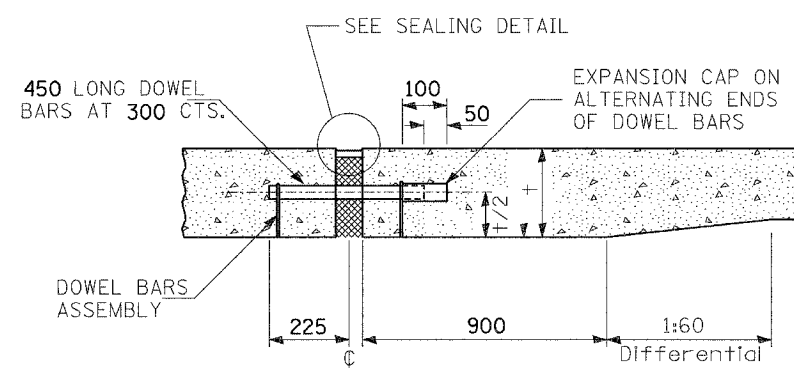
All pavement joints shall be detailed as shown on Standard 420001 and I-74 Project Standard 483001-174, except as otherwise shown herein.

The mainline pavement/shoulder thickness and the ramp pavement/shoulder thickness should be transitioned at the transverse expansion joint and at the longitudinal keyed joint.

A longitudinal sawed joint or a longitudinal construction joint with No. 24 tie bars at 600 cts. shall be provided when the width of ramp pavement exceeds 4.9 m.

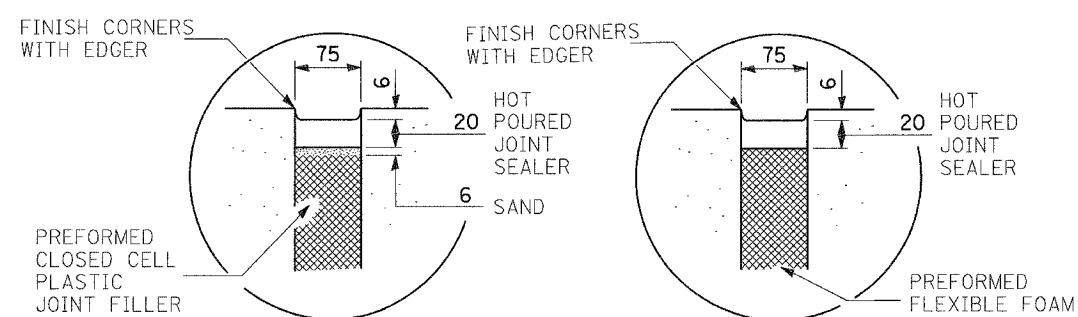
See I-74 Project Standard 483001-174 for ramp shoulder details.

All dimensions are in millimeters unless otherwise shown.



TRANSVERSE EXPANSION JOINT \*

\* FOR EXPANSION JOINTS FORMED USING A CONSTRUCTION HEADER, THE EXPANSION CAPS SHALL BE INSTALLED ON THE EXPOSED END OF EACH BAR ONCE THE HEADER HAS BEEN REMOVED AND THE JOINT FILLER MATERIAL HAS BEEN INSTALLED

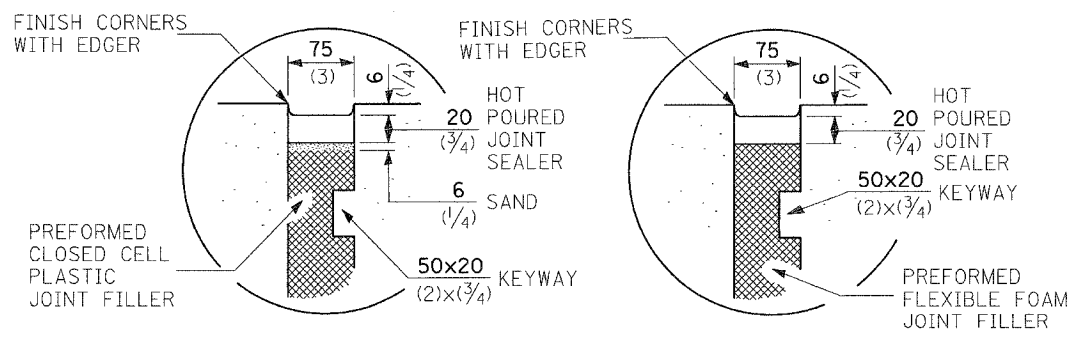
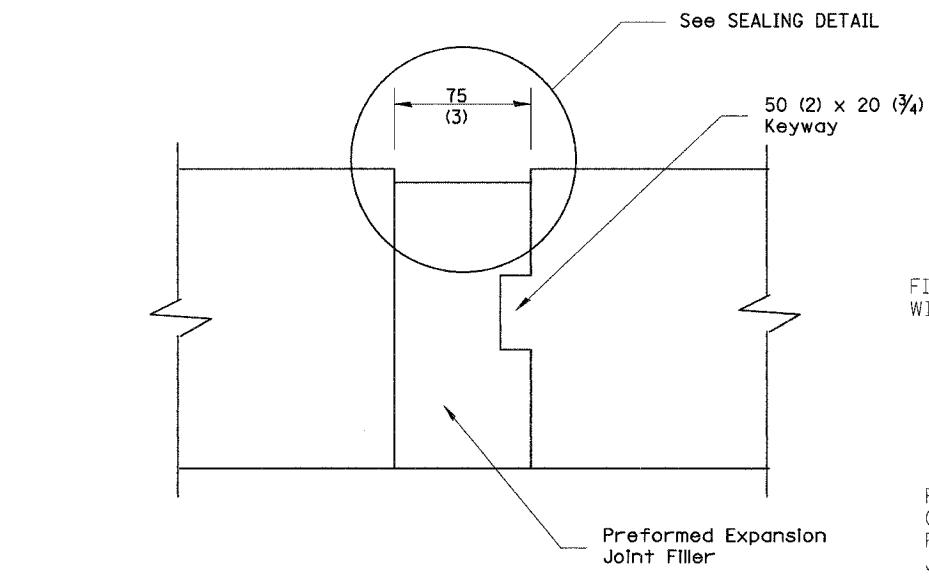
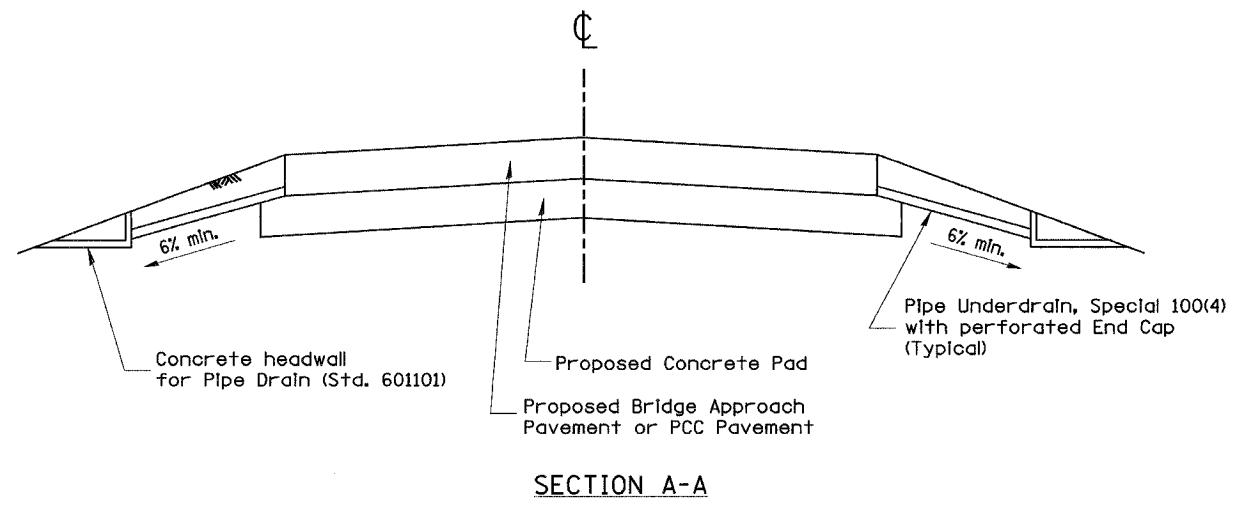
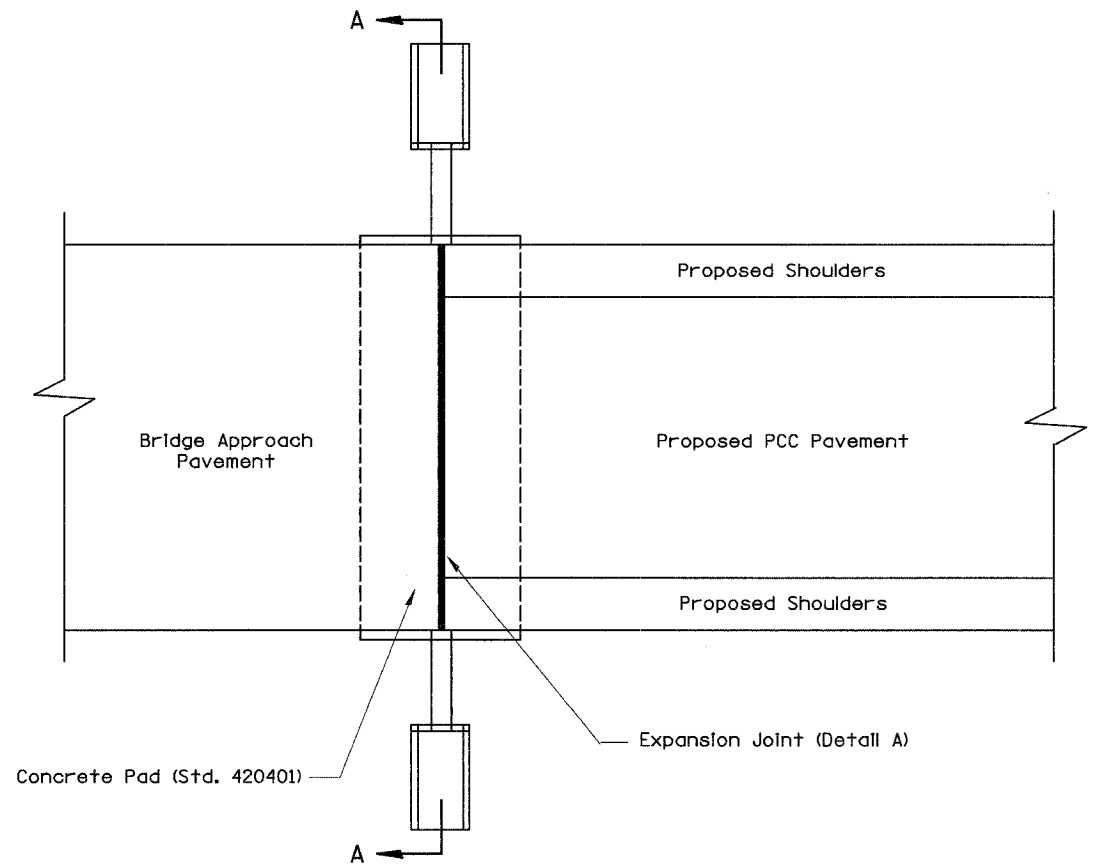


SEALING DETAIL

REVISIONS	
NAME	DATE
INC. COMMENTS	3/7/02
REM. ENGL.	3/22/02
REM. C. JOINT	4/17/02
ADD 3RD NOTE	8/15/02
JOINT SPACING	5/6/03
H.S. 2004	9/26/03

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 420306-174  
TYPICAL EXIT  
RAMP TERMINAL  
(Jointed PCC Ramp Adjacent To CRC Pavement)  
DRAWN BY  
CHECKED BY  
DATE 02/26/2002

F.A. - RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1966	666
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



**GENERAL NOTES:**

1. All work shall be done in accordance with Standard 420401 and other plan details except as shown herein.
2. The concrete headwalls and pipe underdrain special will be in accordance with Section 601.

All dimensions are in millimeters (inches) unless otherwise noted.

DESIGNER NOTES:  
1. Include Standards 420001, 601101 and 420401 in plans.

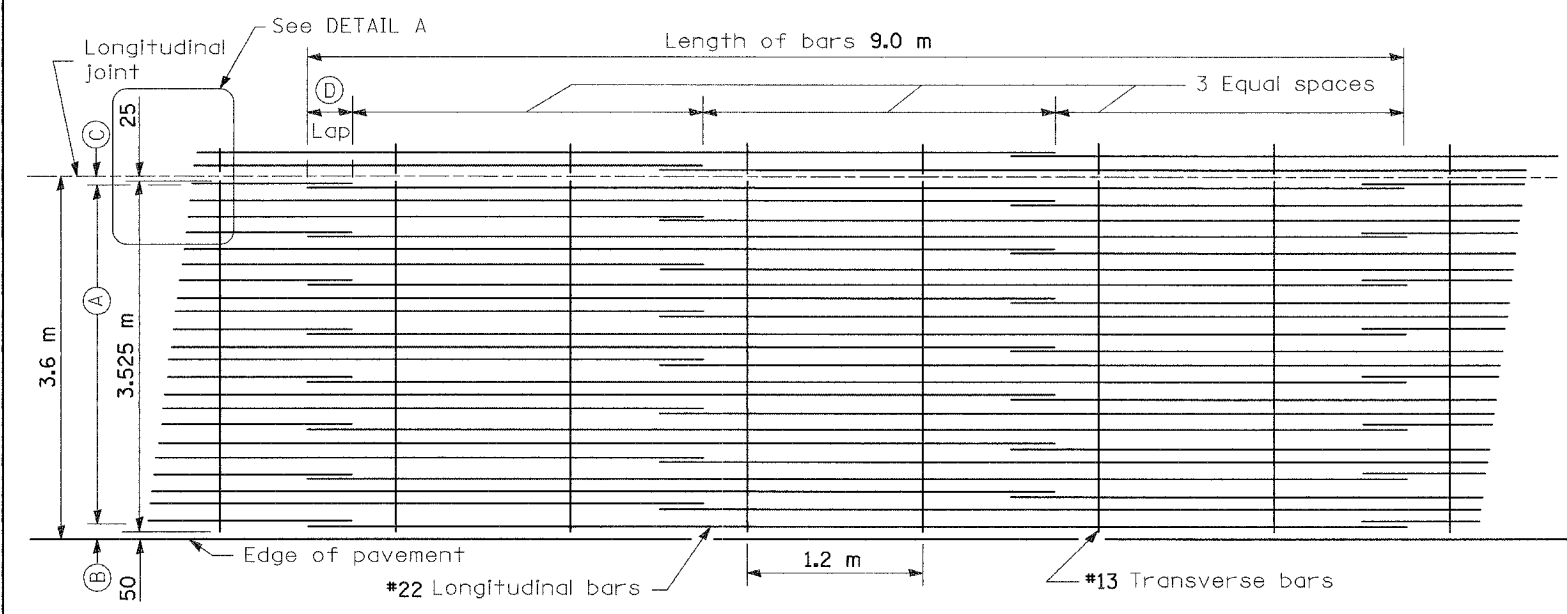
Preformed Expansion Joint Filler shall meet the requirements of Article 1051.08 or 1051.09 and shall be supplied as 75 (3) in width. The expansion joint shall be constructed in accordance with Articles 420.10(c) and 420.14.

REVISIONS	
NAME	DATE
H.S. 2004	9/26/03

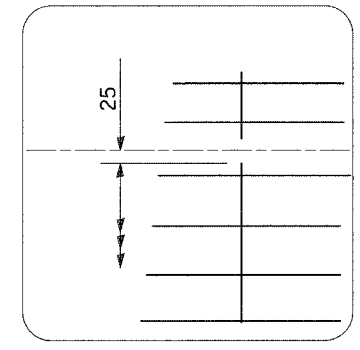
ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 420402-174  
MAINLINE AND RAMP BRIDGE APPROACH EXPANSION JOINT DETAIL  
DRAWN BY  
CHECKED BY  
DATE 11/14/02

I:\Roadway\11745\Drawings\11.dwg 12/16/2004 2:07:06 PM

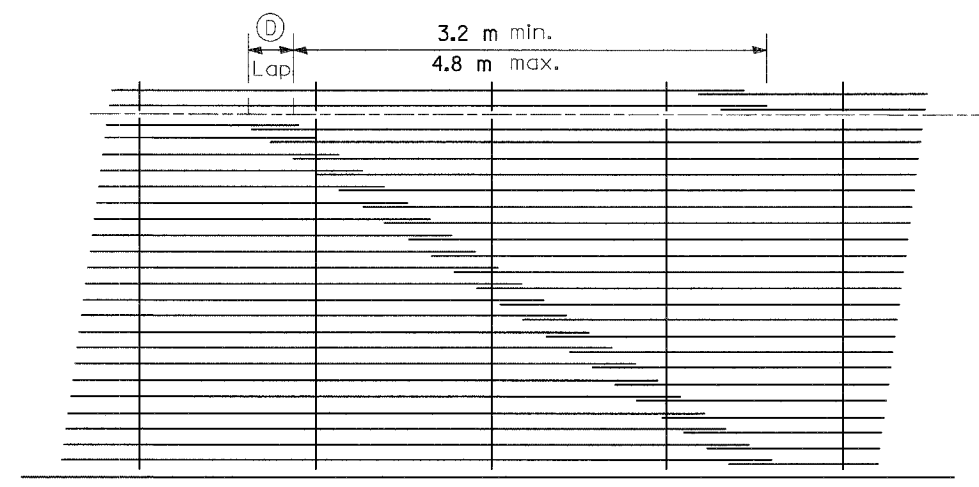
68201				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	667
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



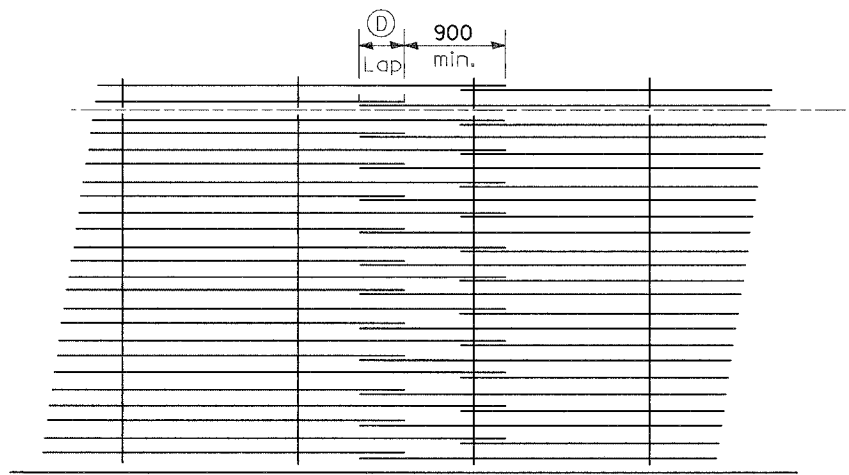
LAP DETAIL I



DETAIL A



LAP DETAIL II



LAP DETAIL III

METRIC (mm)					
Bar Size	Pavement Thickness	(A) (Approx. Spacing)	(B)	(C)	(D)
#22	290	21 spaces (22 bars) @ 163	100	75	660

GENERAL NOTES

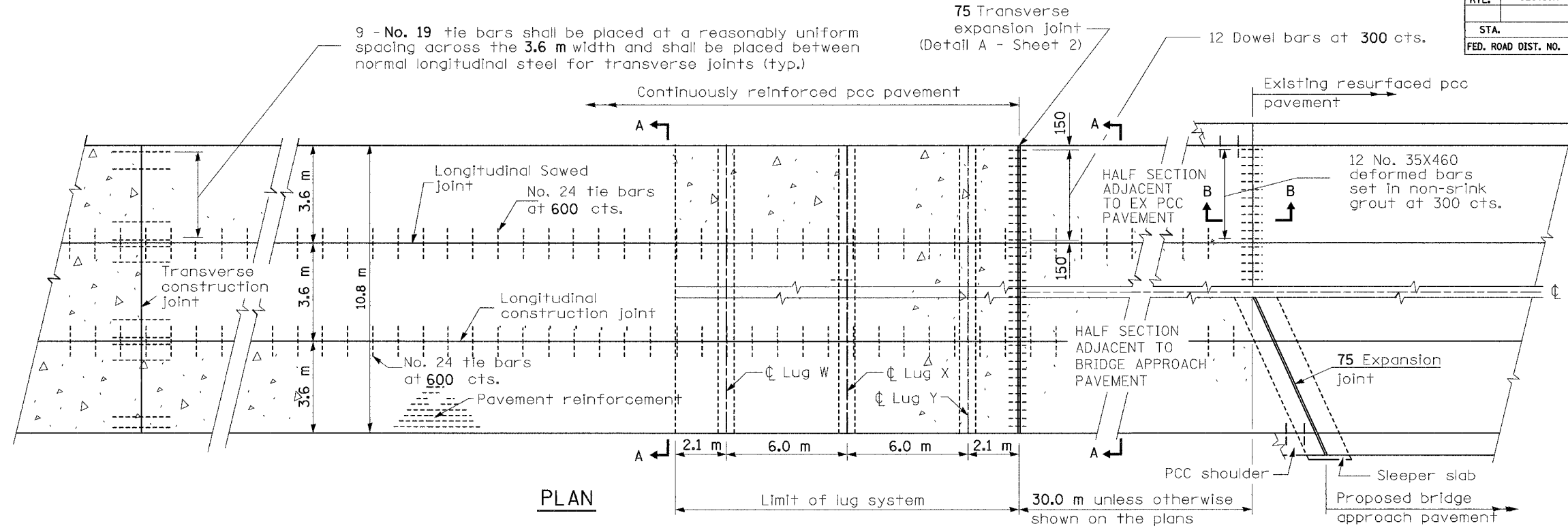
Except as noted or shown the dimensions and notes specified for LAP DETAIL I are typical for LAP DETAIL II and III.

The (B) dimension and the distance from the end of the transverse bar to the edge of pavement may be increased by 25 mm for slip form paving.

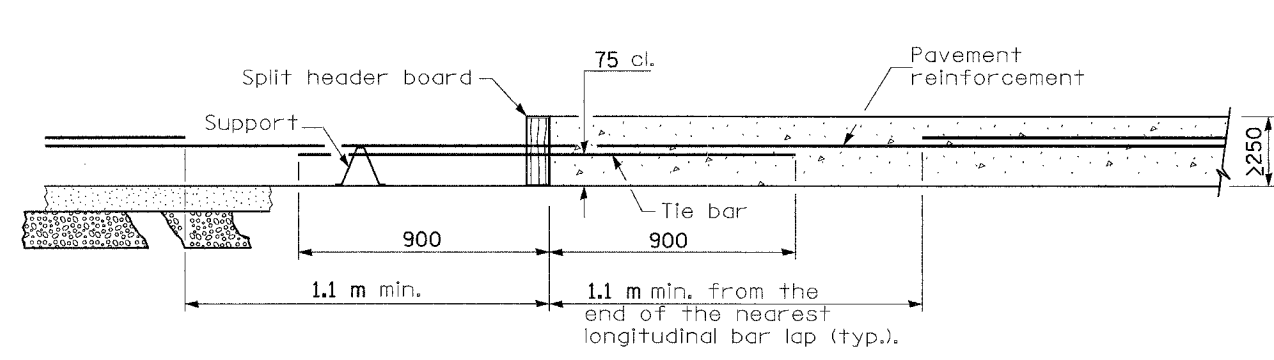
All dimensions are in millimeters unless otherwise shown.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
REVISED TABLE	3/7/02	I-74 PROJECT STANDARD 421001-I74
H.S. 2003	9/26/03	
		BAR REINFORCEMENT FOR CRC PAVEMENT
		DATE 9/21/01

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	666B
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

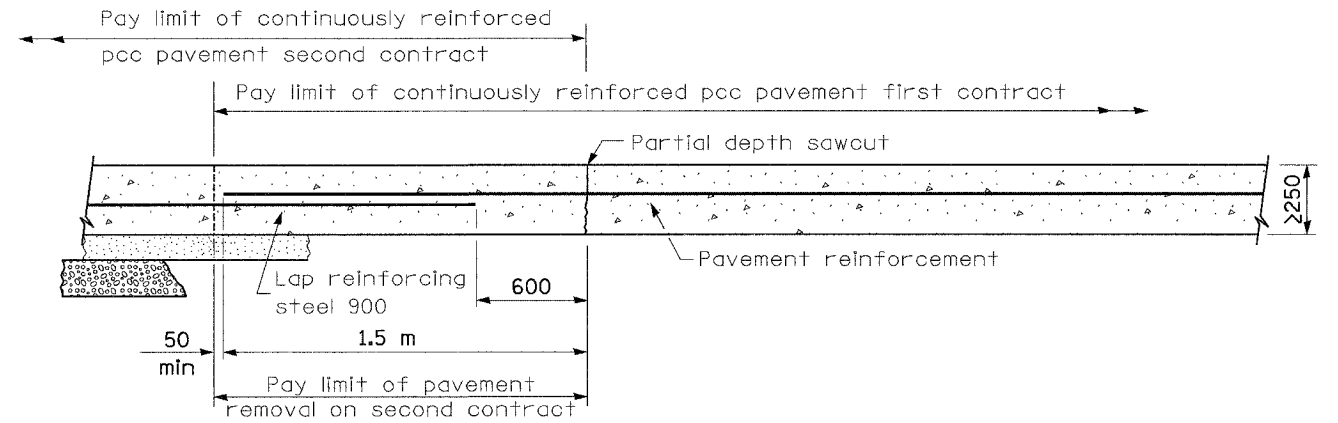


PLAN



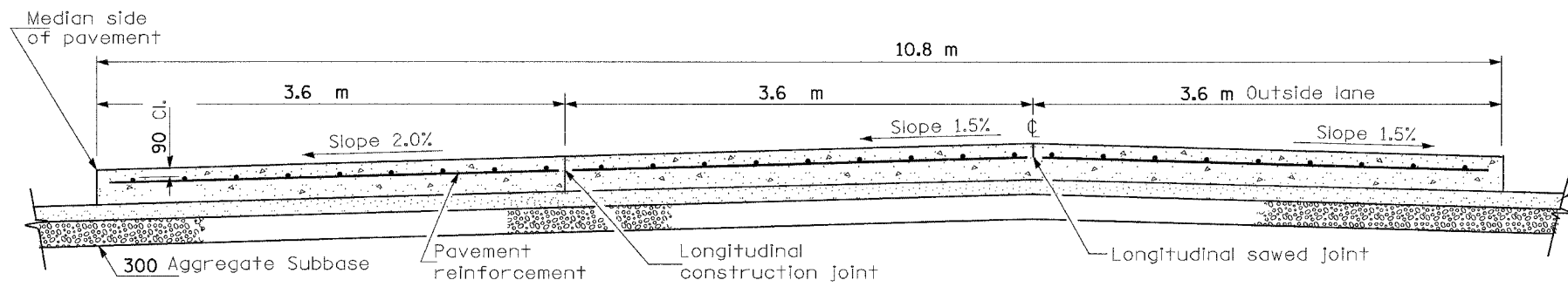
TRANSVERSE CONSTRUCTION JOINT

(Pavement Constructed in the Same Contract)



TRANSVERSE TERMINAL JOINT

(Continuation of a Pavement Constructed in a Previous Contract)



SECTION A-A

(TYPICAL 3-LANE, 1-WAY WITH SHOULDERS)

GENERAL NOTES

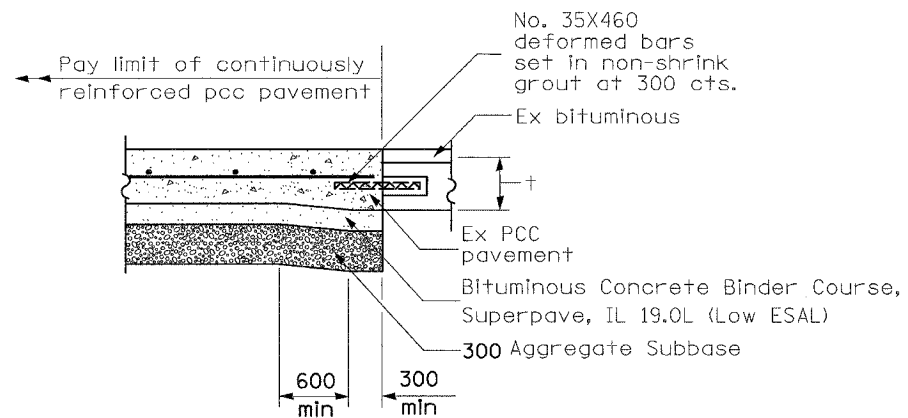
See Project Standard 421001-174 for details of I-74 pavement reinforcement.  
 Detail of joints as shown on Standard 420001 except as otherwise shown herein.  
 All dimensions are in millimeters unless otherwise shown.

REVISIONS	
NAME	DATE
INC. COMMENTS	3/7/02
REM. ENGL.	3/22/02
H.S. 2004	9/30/03
NOTE - 30M	10/6/03
SEC B-B & TERM JT	11/4/04

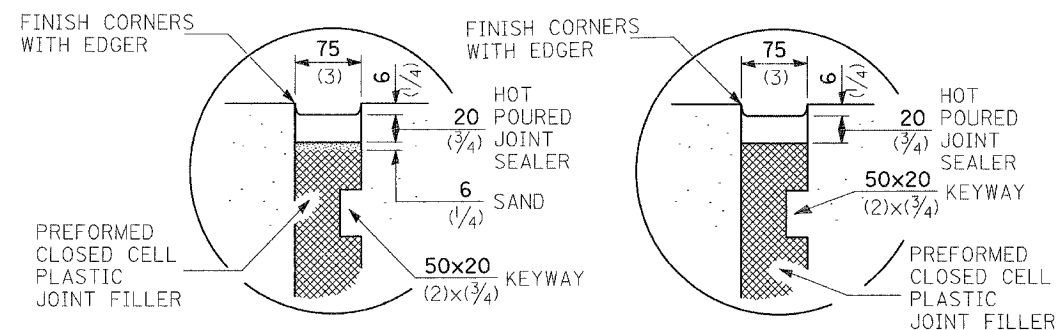
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 I-74 PROJECT STANDARD 421206-174  
 10.8 m  
 CRC PAVEMENT  
 (WITH LUG SYSTEM) (Sheet 1 of 2)  
 DRAWN BY  
 DATE 09/21/01  
 CHECKED BY

C:\paveday\174std\std11.dgn 12/16/2004 4:07:17 PM

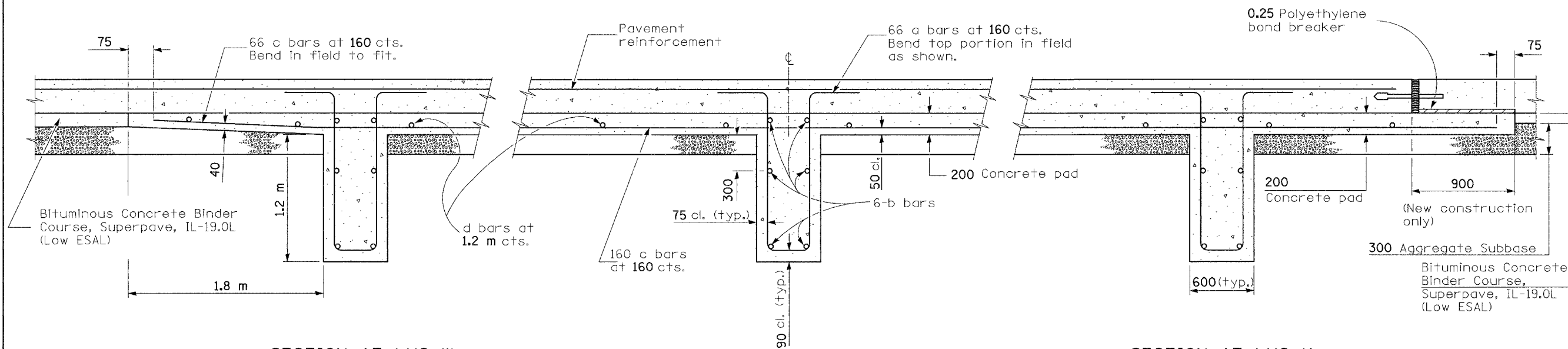
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1306	669
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



SECTION B-B  
(Showing reinforcement)



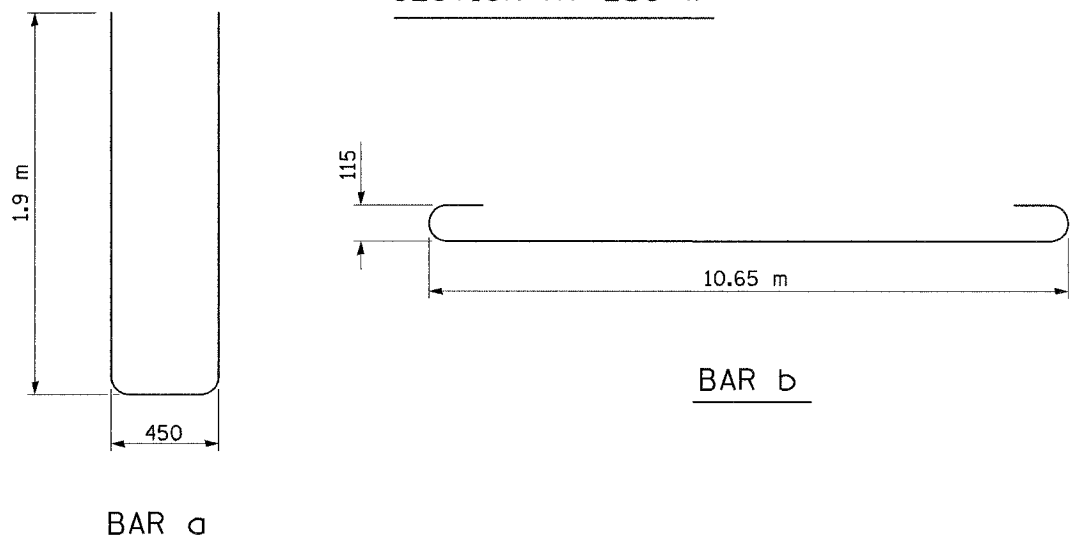
DETAIL A  
SEALING DETAIL



SECTION AT LUG W

SECTION AT LUG X

SECTION AT LUG Y



MATERIALS REQUIRED FOR (1) ONE LUG SYSTEM

(Excluding Pavement Concrete and Pavement Reinforcement)

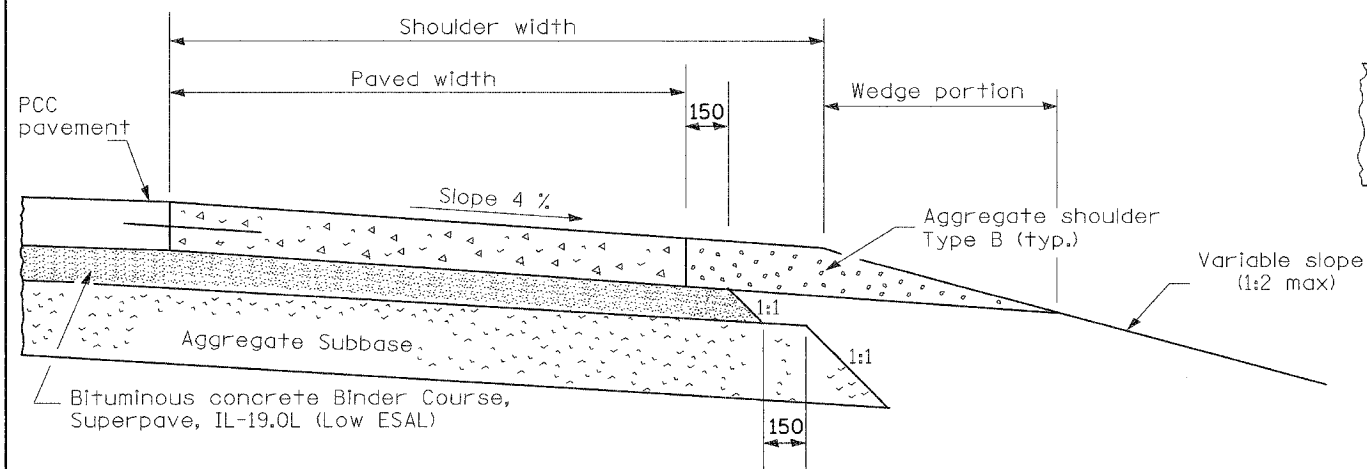
Bar	No.	Size	Length	Shape
a	198	No. 25	4.25 m	
b	18	No. 16	11.30 m	
c	198	No. 16	6.10 m	
d	42	No. 13	3.52 m	

Concrete, m <sup>3</sup>	23.3
Reinforcing Bars, kg	5695
Concrete Pad, m <sup>2</sup>	155.5
Aggregate Subbase, m <sup>2</sup>	168.5

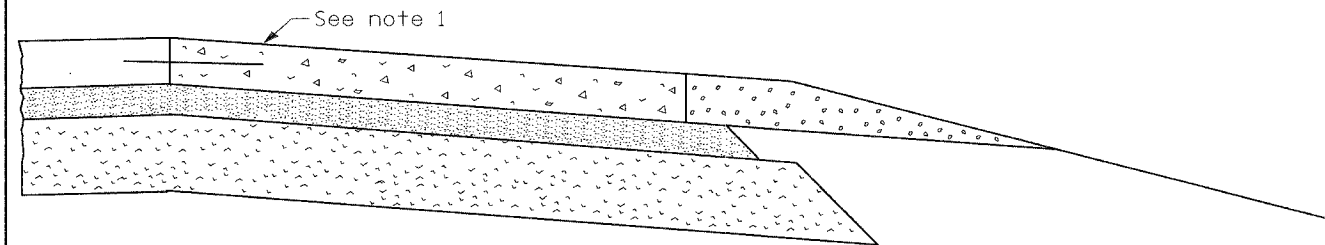
All dimensions are in millimeters unless otherwise shown.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION I-74 PROJECT STANDARD 421206-174 10.8 m CRC PAVEMENT (WITH LUG SYSTEM) (Sheet 2 of 2) DRAWN BY CHECKED BY
NAME	DATE	
INC. COMMENTS	3/7/02	
REM. ENGL.	3/22/02	
H.S. 2004	9/30/03	
NOTE - 30M	10/6/03	
REV & ADD SEC B-B	11/4/04	
		DATE 09/21/01

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1866	670
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

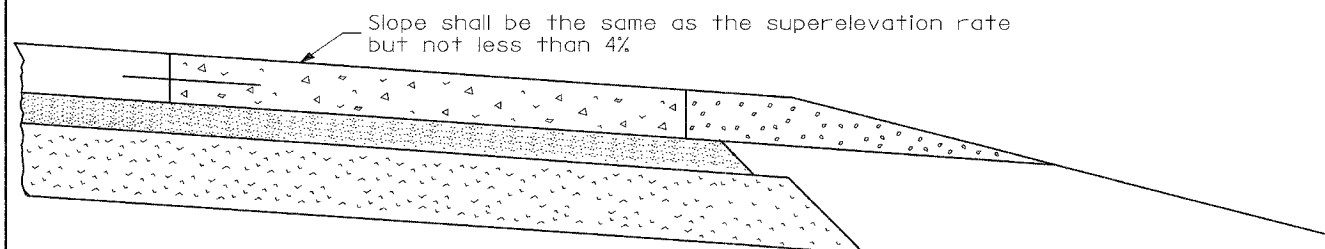


**SHOULDER FOR TANGENT PAVEMENT**



**SHOULDER FOR SUPERELEVATED PAVEMENT**

(Outside of curve)

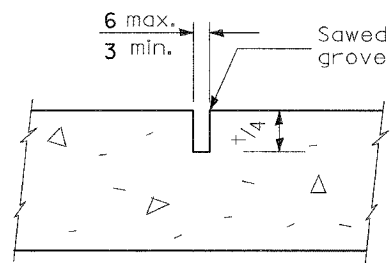


**SHOULDER FOR SUPERELEVATED PAVEMENT**

(Inside of curve)

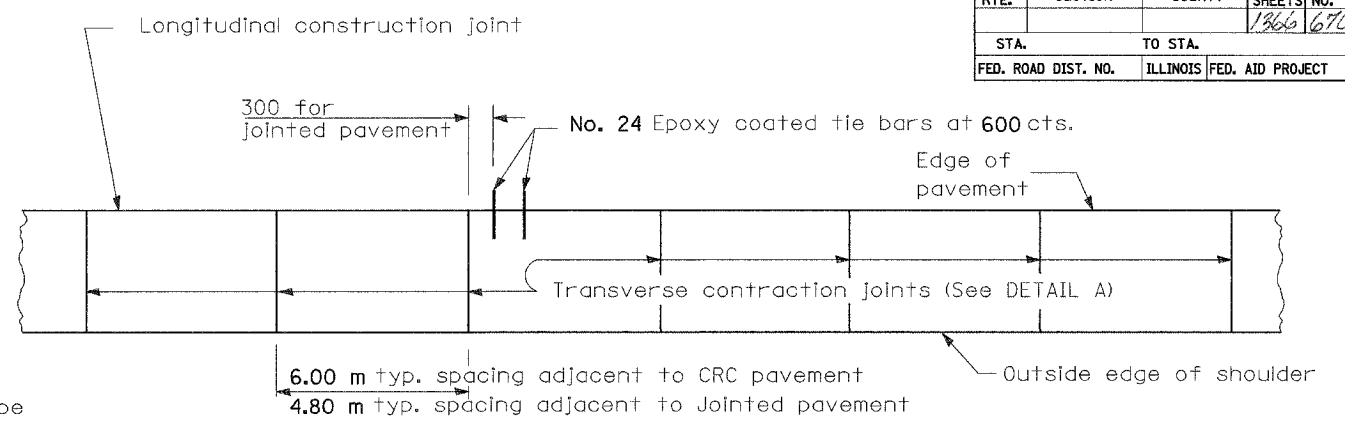
**NOTES**

Note 1: When the super-elevation rate of the pavement is between 0% and 4%, the shoulder shall be sloped at 4%. When the super-elevation rate of the pavement exceeds 4%, the shoulder shall be sloped so that the algebraic difference between pavement and shoulder slopes will not be greater than 8%.

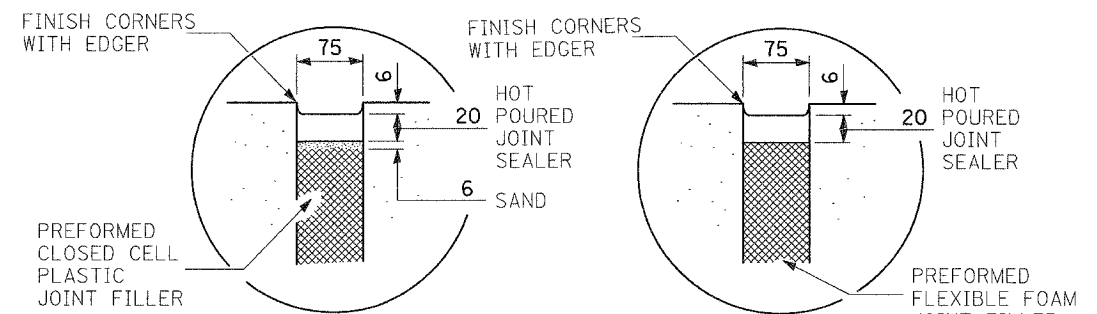


**DETAIL A**

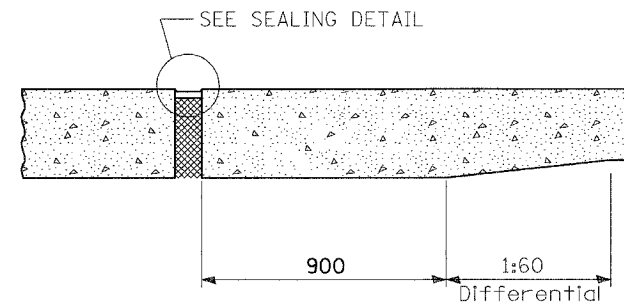
**TRANSVERSE CONTRACTION JOINT**



**PLAN**

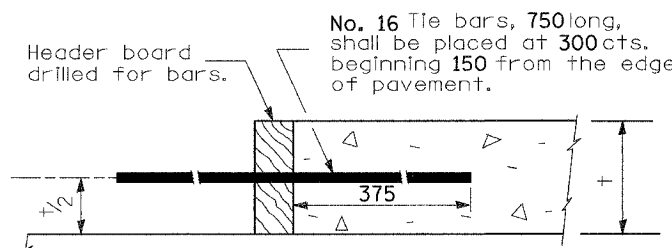


**SEALING DETAIL**



**TRANSVERSE EXPANSION JOINT \***

\* TRANSITION FOR PAVEMENT WITH UNEQUAL THICKNESS AS APPLICABLE



**TRANSVERSE CONSTRUCTION JOINT**

**GENERAL NOTES**

Except as noted or shown, the dimensions and notes specified for the shoulder of the tangent pavement are typical for the shoulders of super-elevated pavement.

Transverse expansion joints thru the pavement, shall be extended thru the PCC shoulder.

Longitudinal construction joint(s) or longitudinal sawed joint(s) as shown on Standard 420001 shall be provided when the width of paved shoulder exceeds 4.5 m so that width between longitudinal joints does not exceed 4.5 m

Details of joints as shown on Standard 420001 except as otherwise shown herein

All dimensions are in millimeters unless otherwise shown.

REVISIONS	
NAME	DATE
INC. COMMENTS	3/7/02
REV. ENGL.	3/22/02
REV. TITLE	7/25/03
H.S. 2004	9/26/03

ILLINOIS DEPARTMENT OF TRANSPORTATION

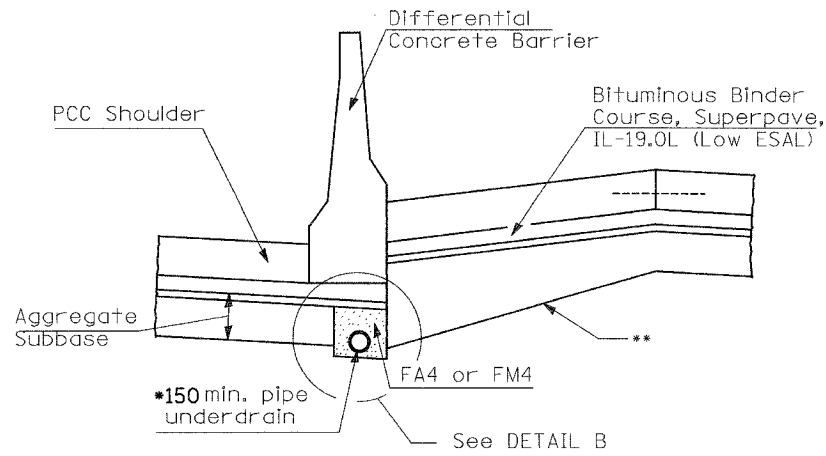
I-74 PROJECT STANDARD 483001-I74

PCC SHOULDER FOR MAINLINE AND RAMPS

DRAWN BY  
CHECKED BY

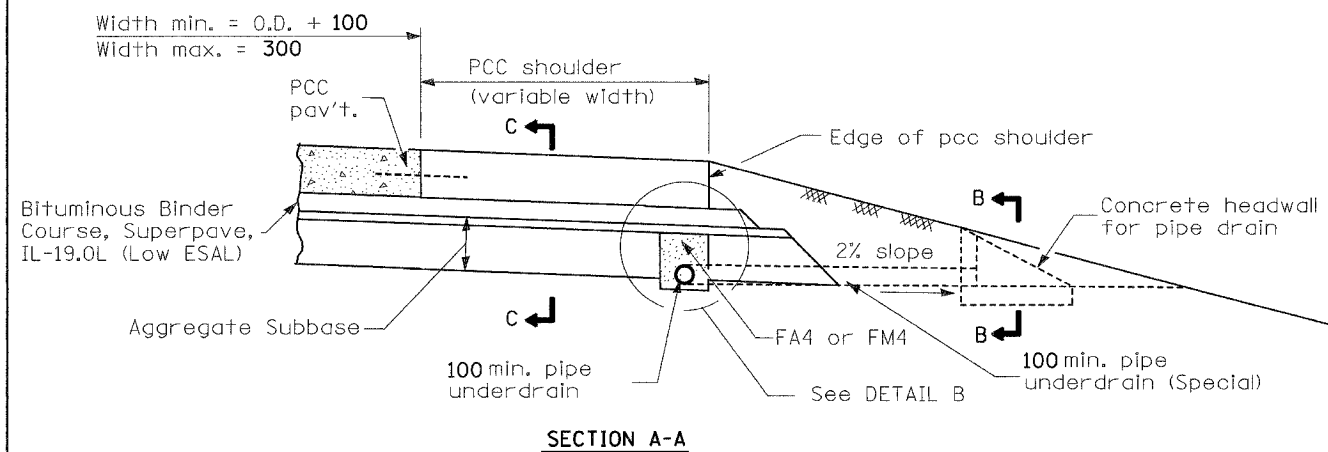
DATE 09/21/01

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
			1266	671
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

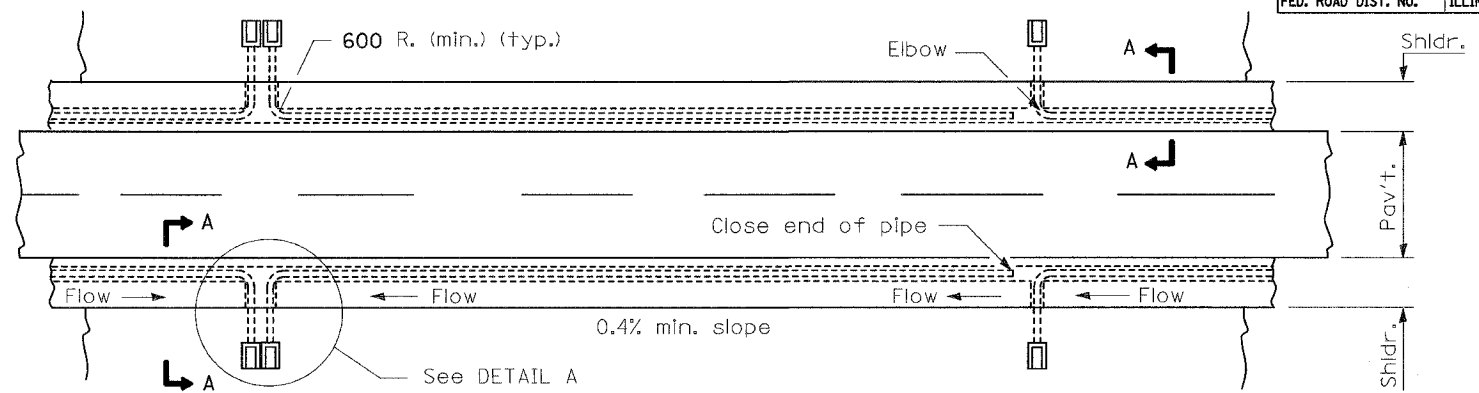


- \* Pipe Underdrain shall be placed in the first stage constructed
- \*\* Transition bottom of aggregate subbase from edge of pavement to match elevation of aggregate subbase on lower side of barrier

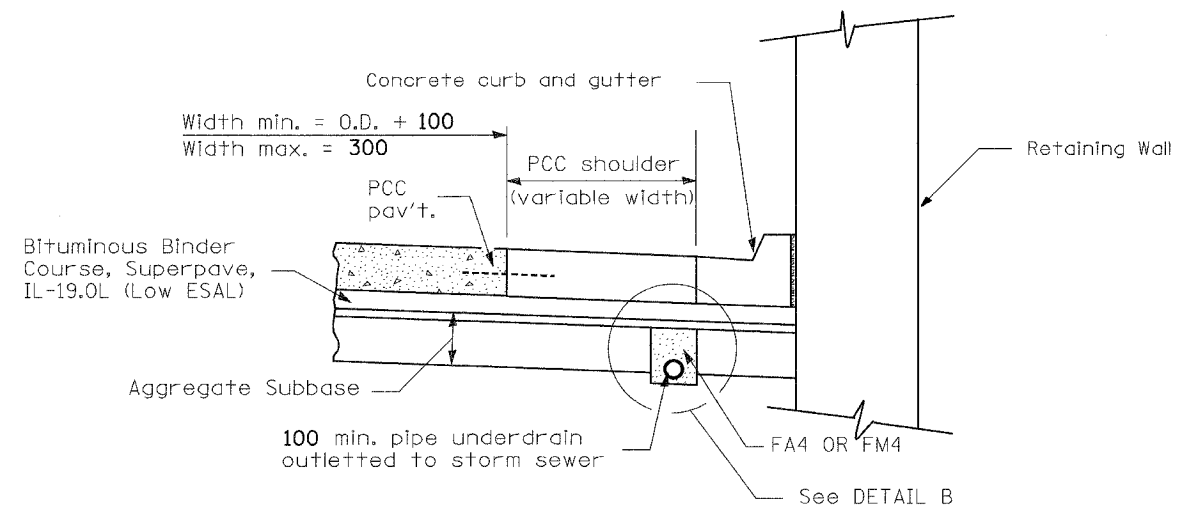
**AT LOCATION WITH DIFFERENTIAL BARRIER**



**SECTION A-A**

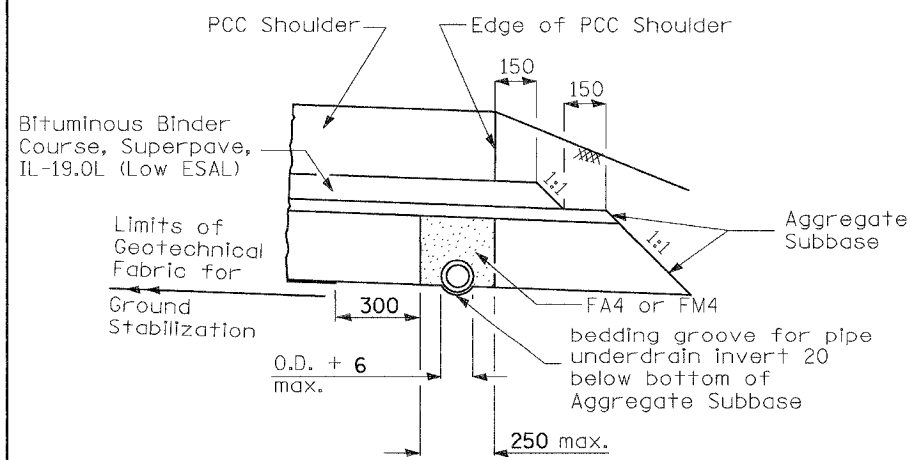


**PLAN**

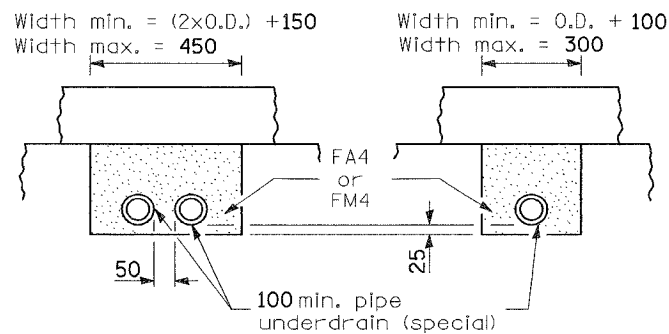


**SECTION A-A**

**AT LOCATION WITH RETAINING WALLS**

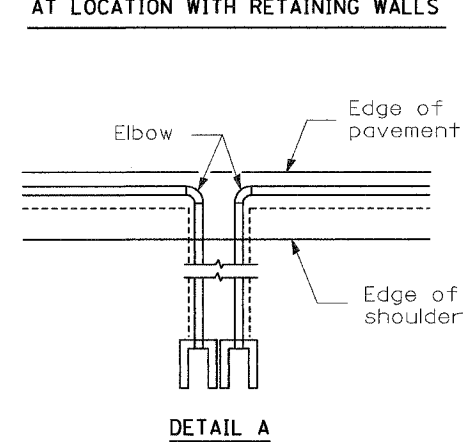


**TRENCH FOR CORRUGATED POLYETHYLENE TUBING ALTERNATE**

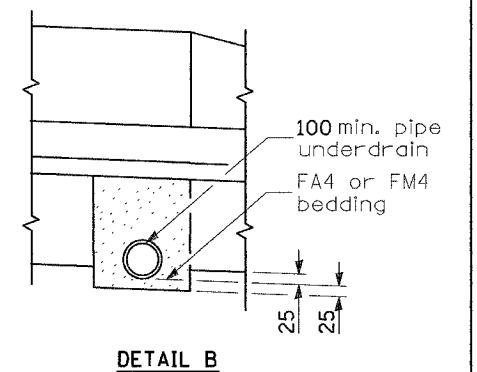


**SECTION C-C**  
(Sag locations)

**SECTION C-C**



**DETAIL A**



**DETAIL B**

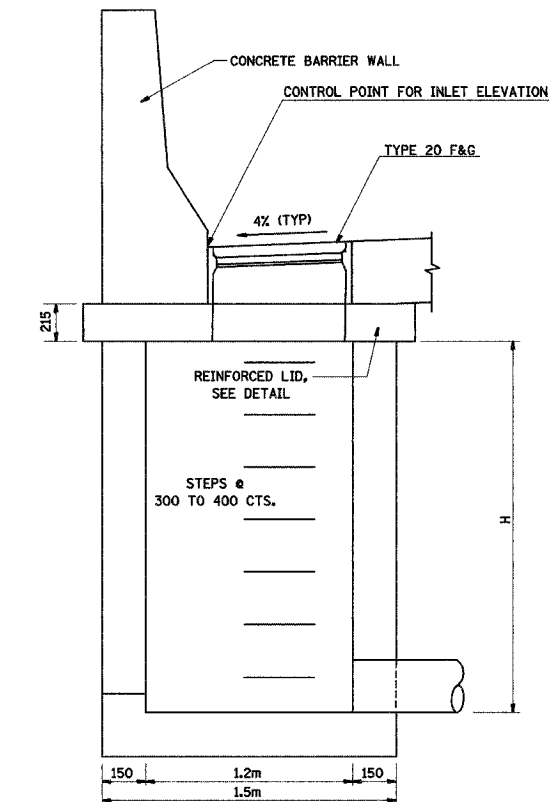
All dimensions are in millimeters unless otherwise shown.

REVISIONS	
NAME	DATE
INC. COMMENTS	3/7/02
REM. ENGL.	3/22/02
FA4 OR FM4	4/17/02
DETAIL B	12/10/03

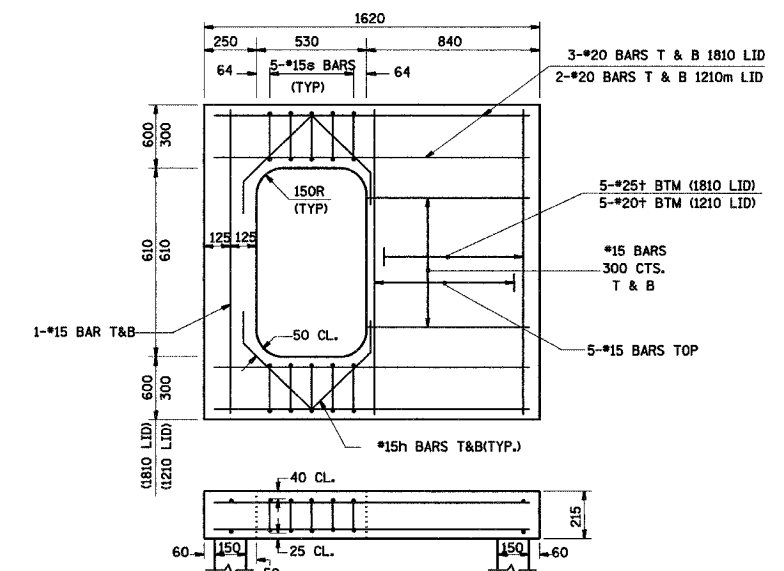
ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 601001-174  
SUB-SURFACE DRAINS

DATE 09/21/01  
DRAWN BY  
CHECKED BY

F. A. I. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	672
STA.	TO STA.			
FED. ROAD DIST. NO.	SLAB NO.	FED. AID PROJECT		

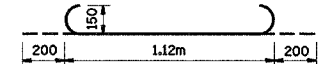


**DRAINAGE STRUCTURE WITH TYPE 20 F&G**

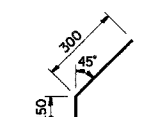


**REINFORCED LID FOR TYPE 20 F&G**

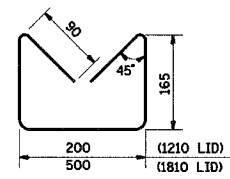
**\*25 BAR +**



**\*20 BAR +**

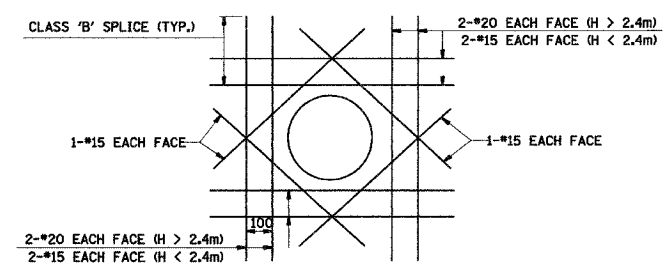


**\*15 BAR h**



**\*15 BAR s**

**BAR DETAILS**



**TYPICAL REINFORCEMENT DETAIL AROUND SIDEWALL OPENINGS**

(OPENING > 300)

WHERE CLASS 'B' SPLICE LENGTH ANCHORAGE IS NOT POSSIBLE, BARS SHOULD BE HOOKED.

**NOTES:**

1. DRAINAGE STRUCTURE SHALL CONFORM TO HIGHWAY STANDARD 602101 EXCEPT AS NOTED.
2. REINFORCEMENT FOR STRUCTURE WALLS AND BASE SLAB SHALL BE IN ACCORDANCE WITH STD. 602101 FOR DEPTHS UP TO H=2.4m

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
1-74 PROJECT STANDARD 602101-174  
DRAINAGE STRUCTURE  
TYPE 1A & 1B  
1.2m x 0.9m AND 1.2m x 1.5m  
FOR H < 2.4m

SCALE: VERT. NONE  
HORIZ. NONE  
DATE 1/15/01

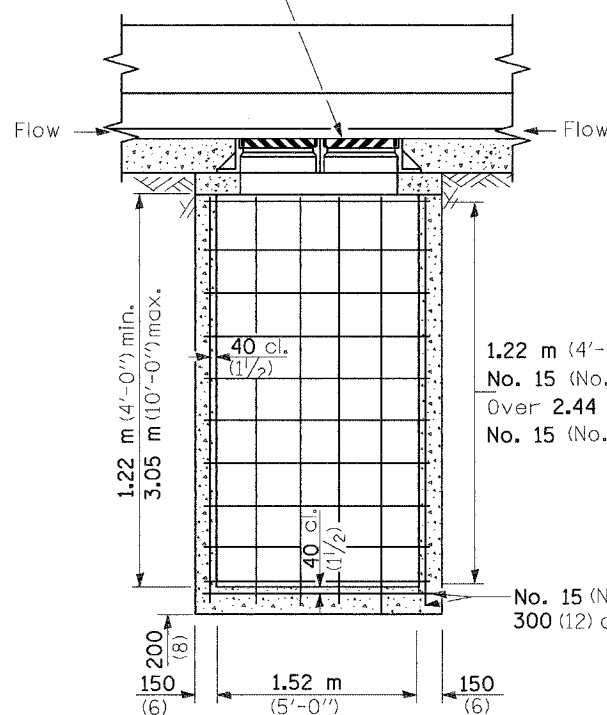
DRAWN BY MAI/CAO  
CHECKED BY

12/7/2004 4:58:00 PM  
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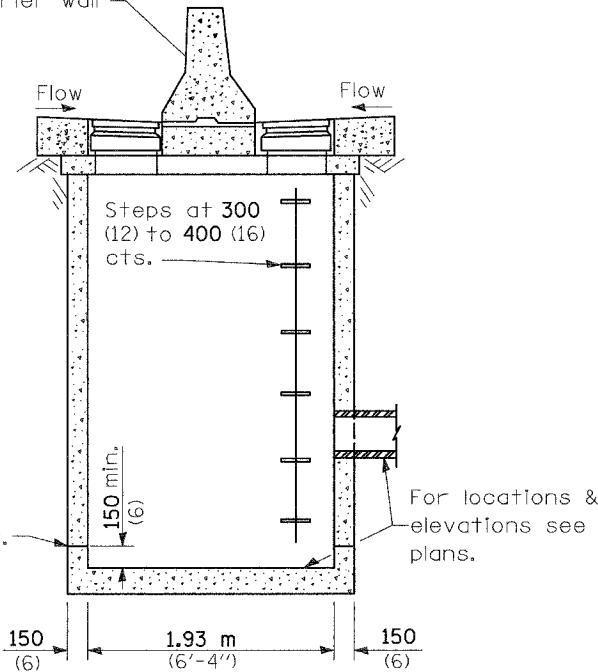
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1326	673
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Type 22 frames and grates



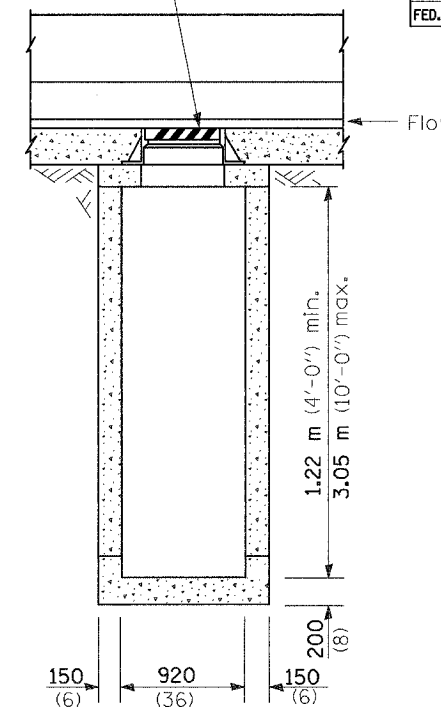
FRONT ELEVATION - TYPE 2

Concrete barrier wall



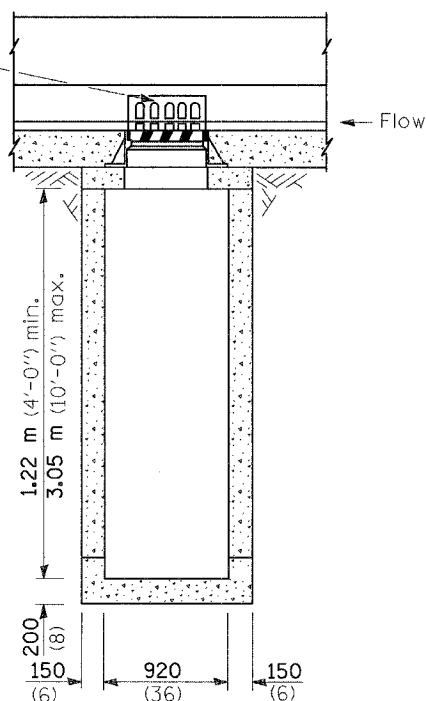
SIDE ELEVATION - TYPE 1 & 2

Type 20 frame grate

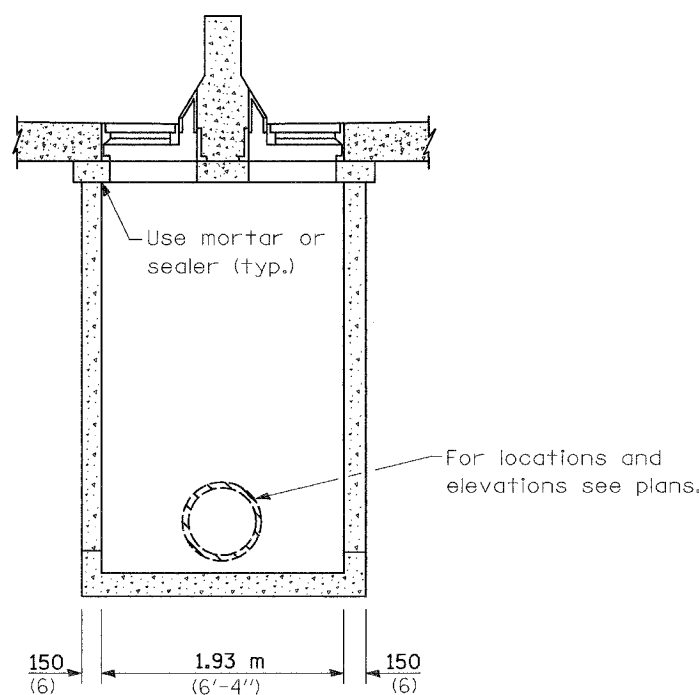


FRONT ELEVATION - TYPE 1

Type 21 frame and grate



FRONT ELEVATION - TYPE 3



SIDE ELEVATION - TYPE 3

### GENERAL NOTES

The reinforcement shown in the front elevation of the type 2 is typical for both elevations of all types.

See Standard 602701 for details of steps.

Exposed edges shall be beveled 19 mm (3/4").

All dimensions are in millimeters (Inches) unless otherwise shown.

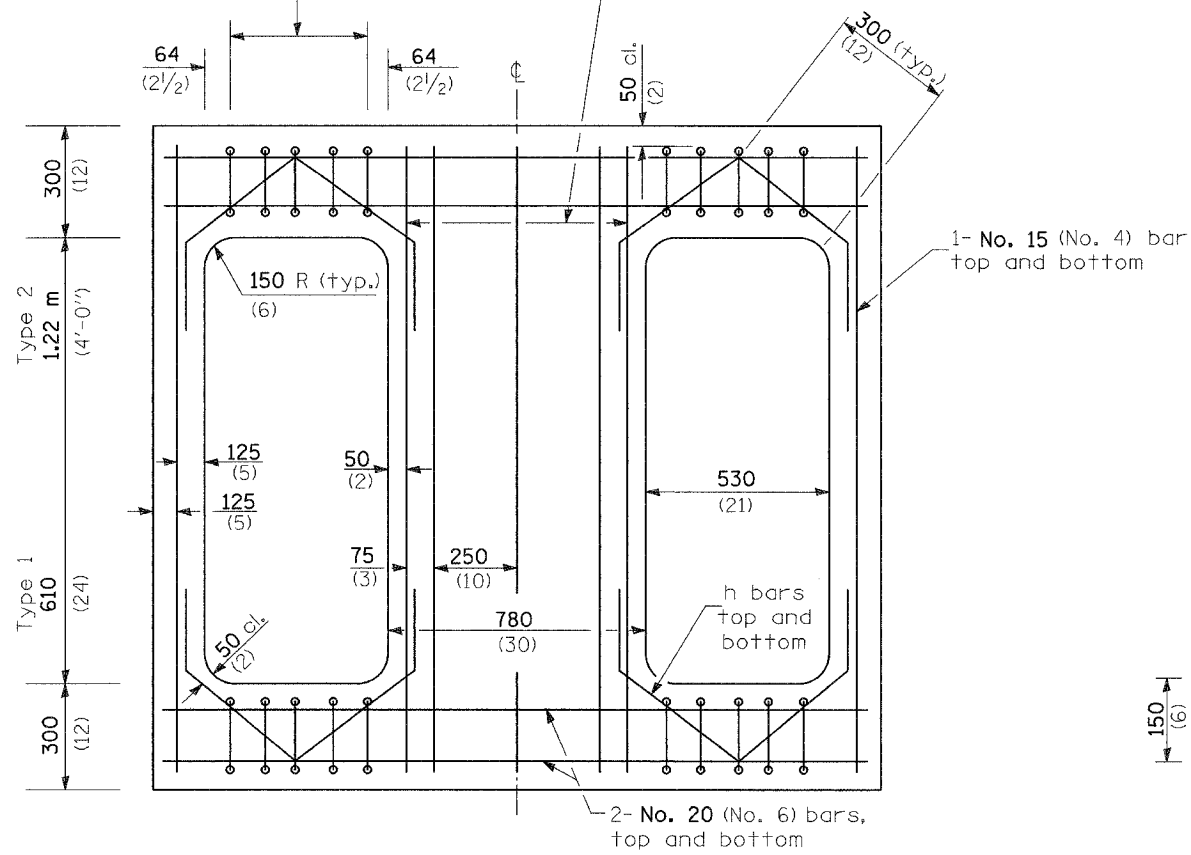
REVISIONS	
NAME	DATE
▲	5-6-04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 I-74 PROJECT STANDARD 602102-174  
 DRAINAGE STRUCTURES  
 TYPES 1, 2 & 3  
 (Sheet 1 of 2)  
 DATE 3/31/04  
 DRAWN BY  
 CHECKED BY

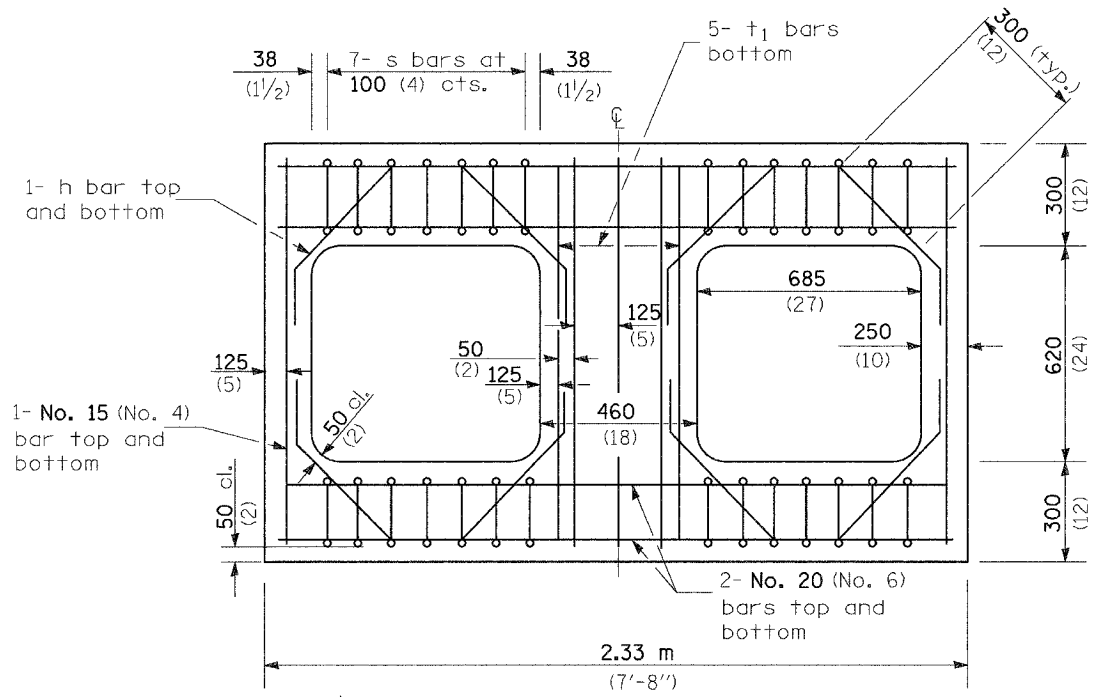
▲ ADDED SCHEDULE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
			1366	674
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

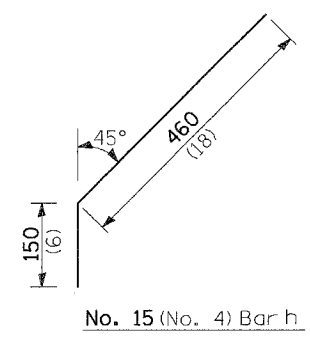
5- s bars at 100 (4) cts. (typ.)  
 5- t bars bottom 1.83 m (6'-0") lid  
 5- t<sub>1</sub> bars bottom 1.22 m (4'-0") lid



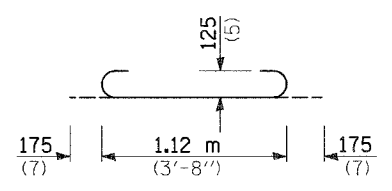
**REINFORCED LID - TYPE 1 & 2**



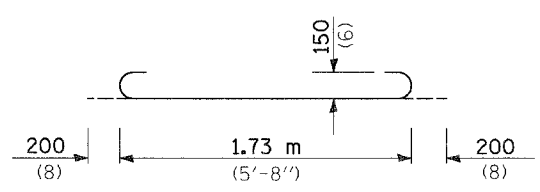
**REINFORCED LID - TYPE 3**



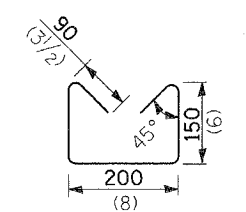
**No. 15 (No. 4) Bar h**



**No. 15 (No. 5) Bar t<sub>1</sub>**



**No. 20 (No. 6) Bar t**



**No. 10 (No. 3) Bar s**

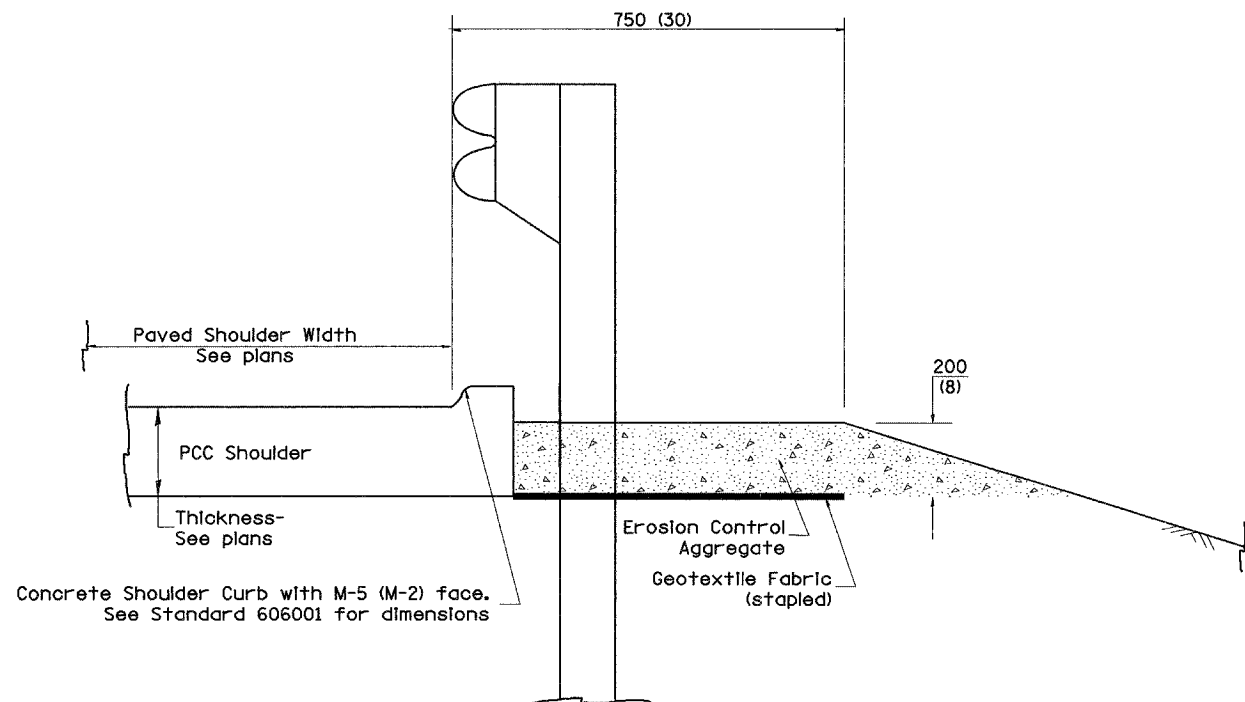
All dimensions are in millimeters (Inches) unless otherwise shown.

▲ ADDED SCHEDULE

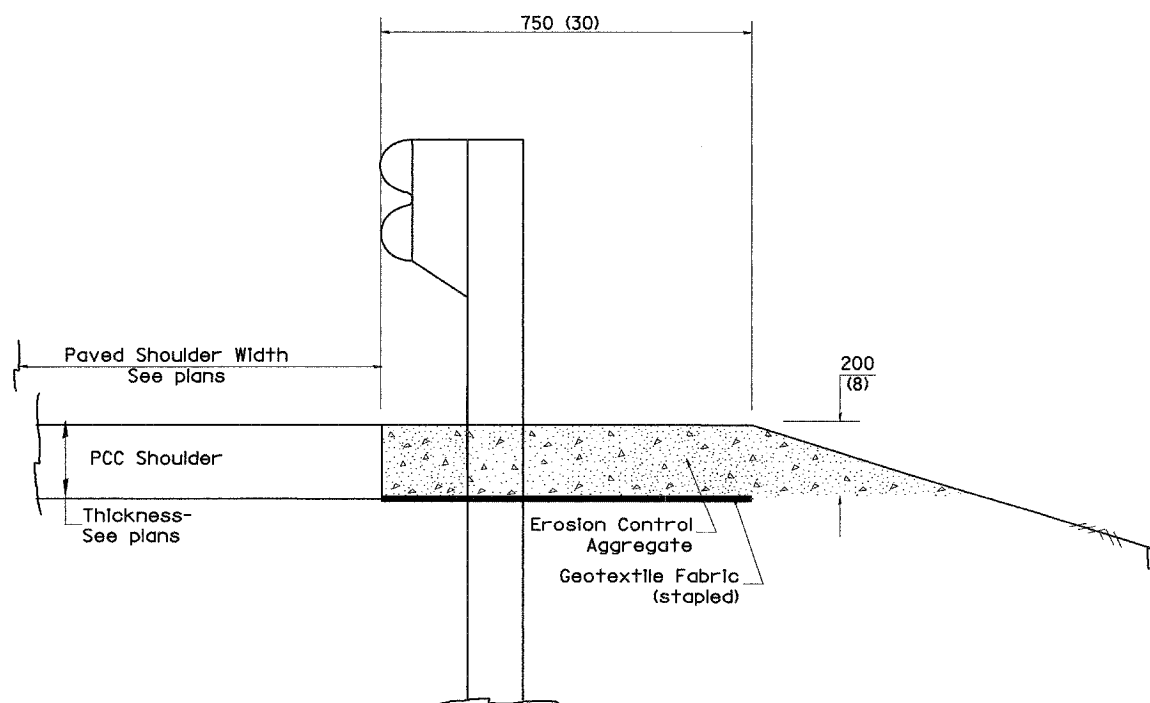
REVISIONS	
NAME	DATE
▲	5-6-04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 I-74 PROJECT STANDARD 602102-174  
**DRAINAGE STRUCTURES**  
 TYPES 1, 2 & 3  
 (Sheet 2 of 2) DRAWN BY  
 DATE 3/31/04 CHECKED BY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	675
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION WITH CONCRETE SHOULDER CURB



TYPICAL SECTION WITHOUT CONCRETE SHOULDER CURB

**GENERAL NOTES: CONCRETE SHOULDER CURB**

1. Concrete shoulder curb shall be constructed in accordance with Section 662 of the Standard Specifications.

**GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL**

1. This work shall consist of furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 300(12) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
  - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
  - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

All dimensions are in millimeters (Inches) unless otherwise noted.

DATE	REVISIONS	BY
3/28/01		

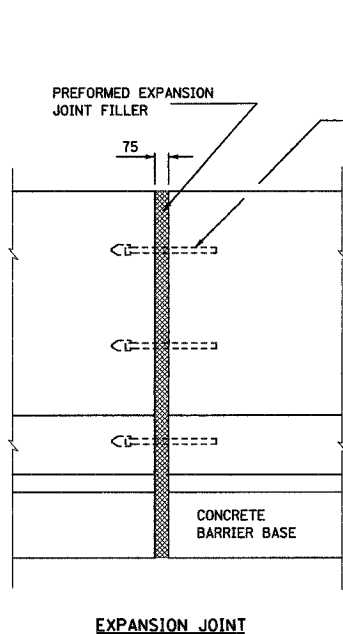
ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 630101-I74

GUARDRAIL AGGREGATE  
EROSION CONTROL TREATMENT  
& CONCRETE SHOULDER CURB

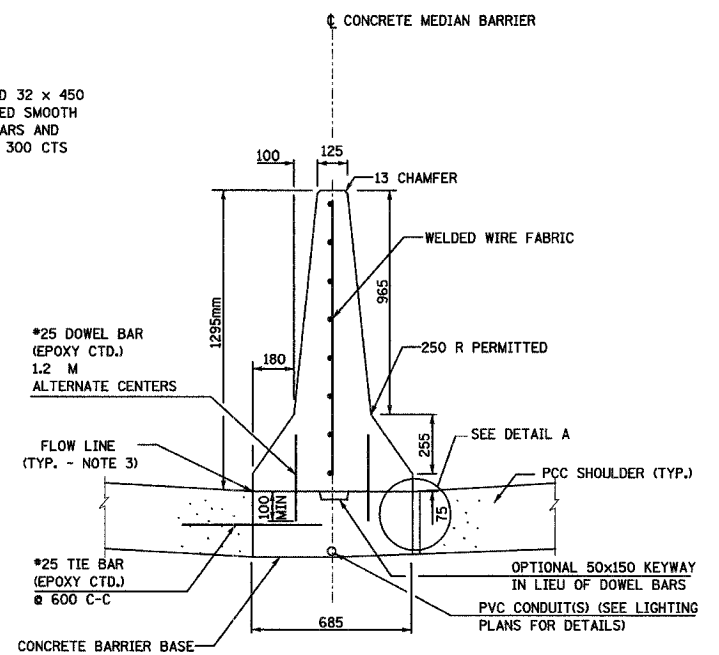
SCALE: NOT DRAWN TO SCALE  
DATE: 12/19/00

DRAWN BY CADD  
CHECKED BY

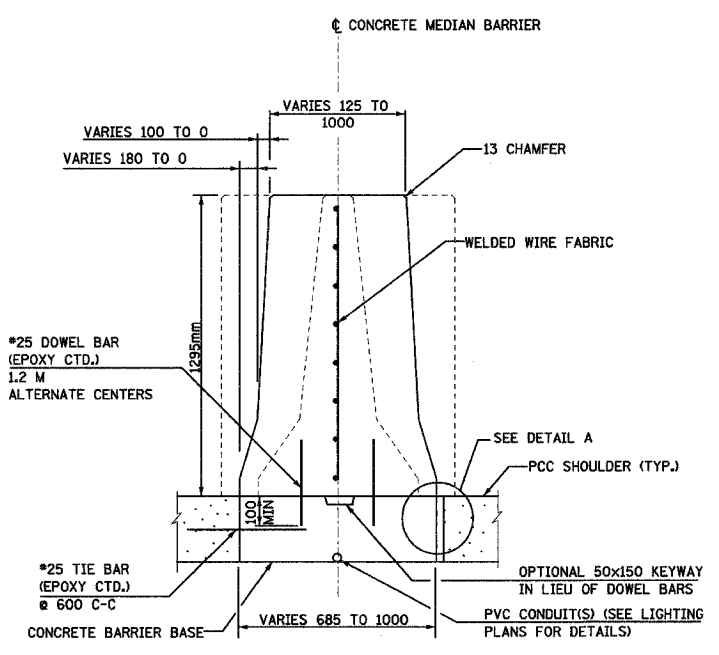
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



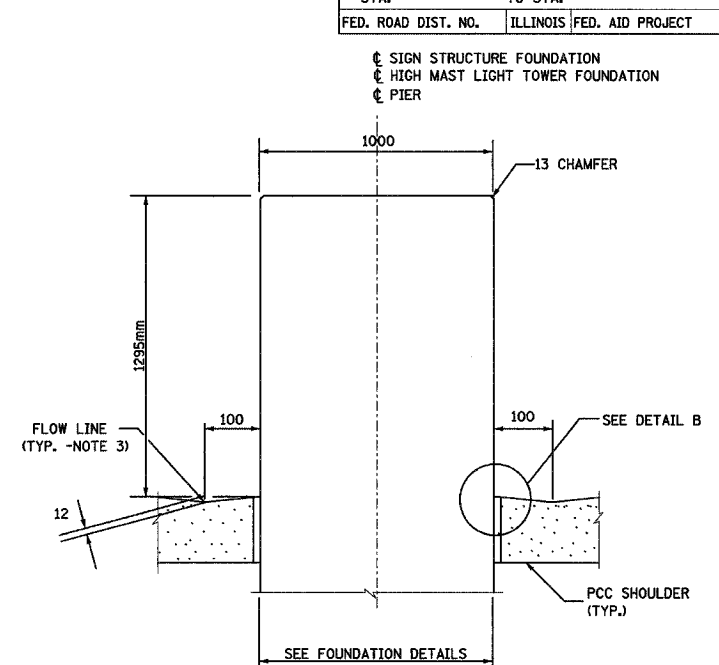
APPROVED 32 x 450 PRECOATED SMOOTH DOWEL BARS AND CAP ON 300 CTS



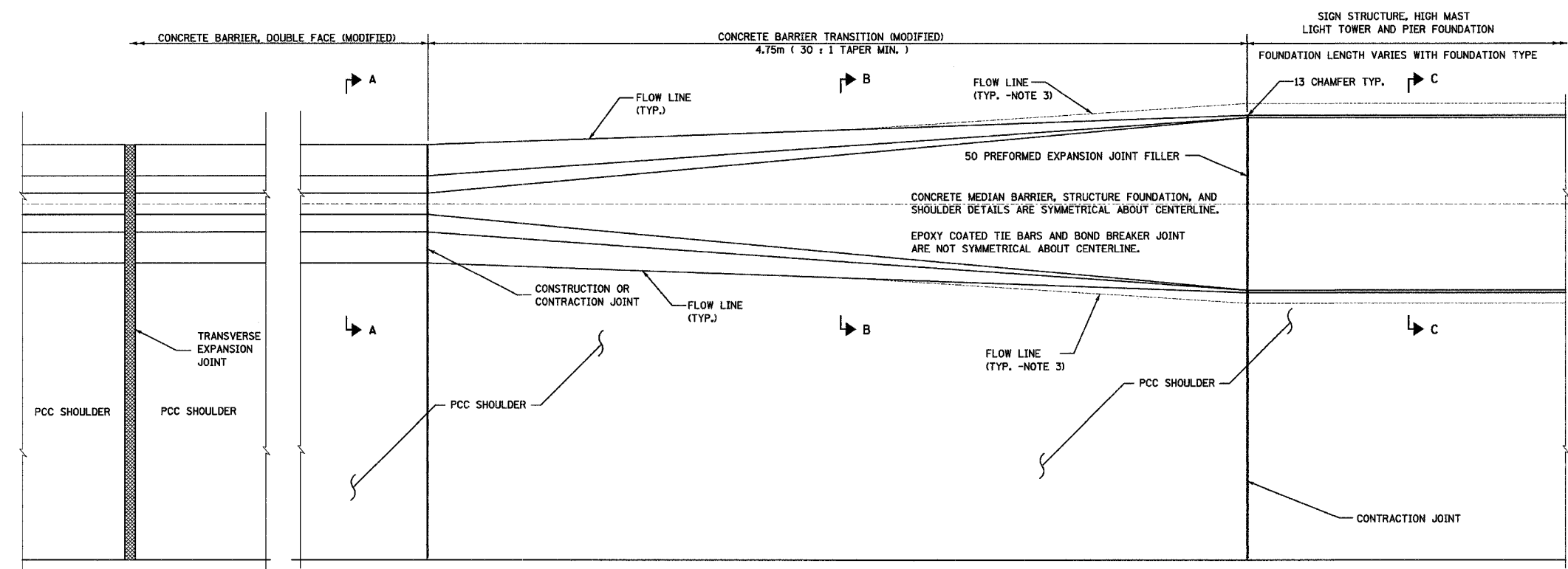
SECTION A-A



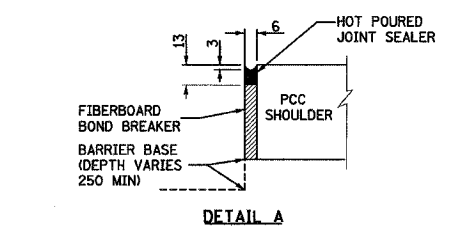
SECTION B-B



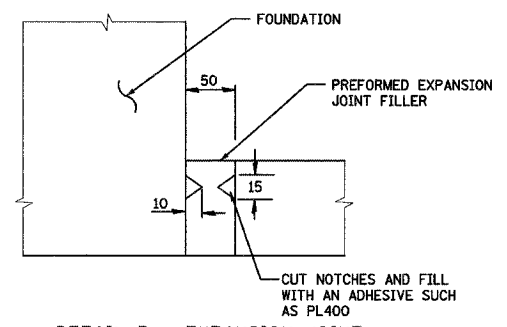
SECTION C-C



PLAN



DETAIL A



DETAIL B - EXPANSION JOINT

PREFORMED EXPANSION JOINT FILLER SHALL MEET THE REQUIREMENTS OF ARTICLE 1051.08 OR 1051.09. THE EXPANSION JOINT SHALL BE CONSTRUCTED IN ACCORDANCE WITH EXPANSION JOINT SEALING DETAIL SHOWN ON STANDARD 420001 AND AS SHOWN HEREIN.

ALL DIMENSIONS IN MILLIMETERS UNLESS SHOWN OTHERWISE

NOTES:

- FOR SHOULDER AND UNDERDRAIN DETAILS SEE I-74 PROJECT STDS 483001-I74 AND 601001-I74.
- TAPER LENGTH REQUIRED FOR TRANSITION TO 1 METER WIDTH WILL BE 4.75m.
- PROPOSED DRAINAGE PROFILE IN THE VICINITY OF SAG VERTICAL CURVES AND ALONG FLAT GRADES SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
- A 25 RADIUS CAN BE SUBSTITUTED FOR THE 13 CHAMFER AT THE TOP OF THE BARRIER WALL.
- REINFORCING BARS AND WELDED WIRE FABRIC SHALL BE SEATED IN THE FINAL POSITION PRIOR TO THE CONCRETE OPERATIONS. BARS CANNOT BE MUCKED INTO PLACE.
- AT FOUNDATION MEDIAN TRANSITIONS, PCC SHOULDER CONTRACTION JOINTS SHOULD BE ALIGNED WITH MEDIAN BARRIER CONTRACTION JOINTS AND EXPANSION JOINTS.
- DETAILS SHOWN FOR I-74 STANDARD BARRIER, DETAILS FOR VARIABLE HEIGHT BARRIER SIMILAR.
- TRANSVERSE EXPANSION JOINT THRU THE PAVEMENT AND THE SHOULDER SHALL BE EXTENDED THRU THE CONCRETE BARRIER

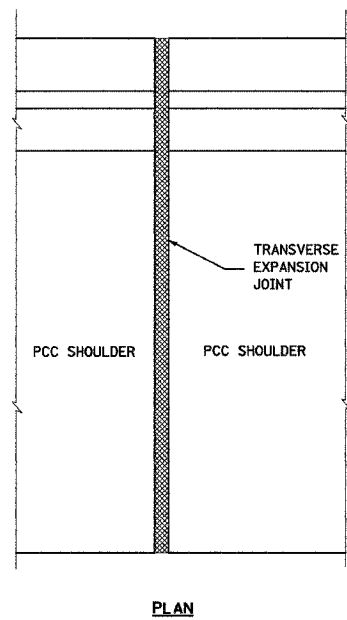
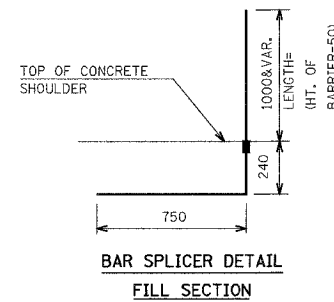
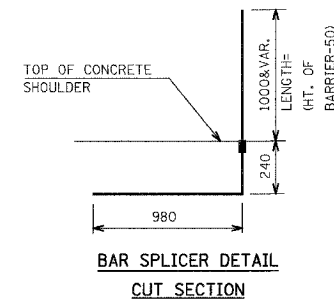
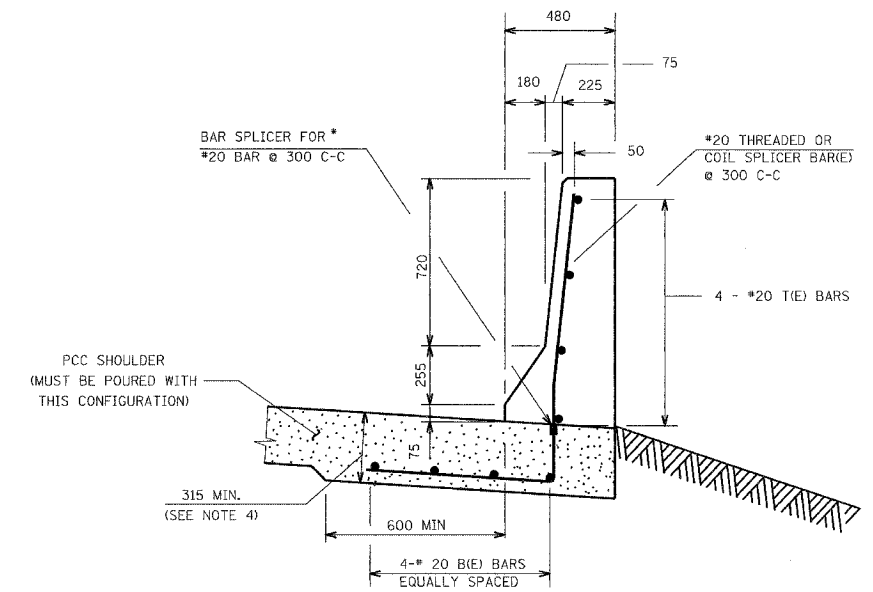
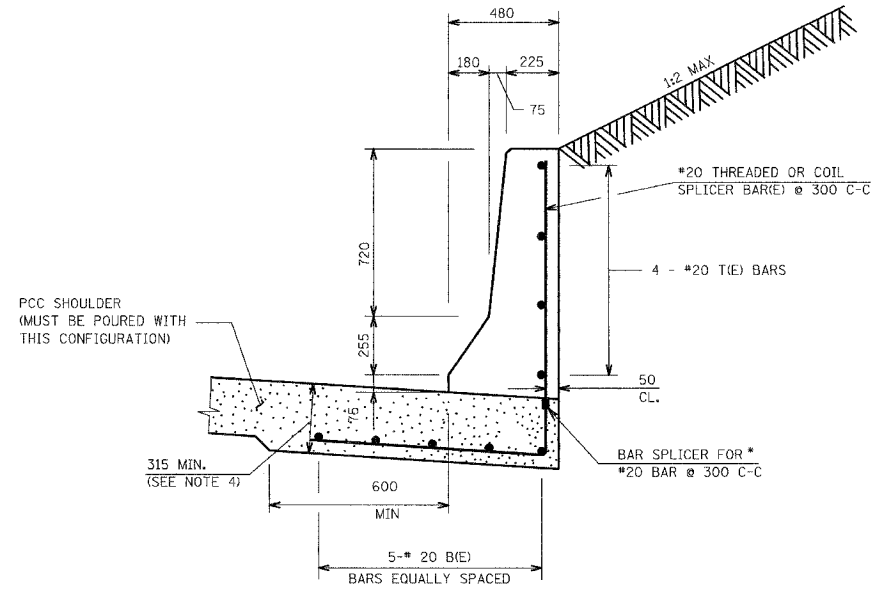
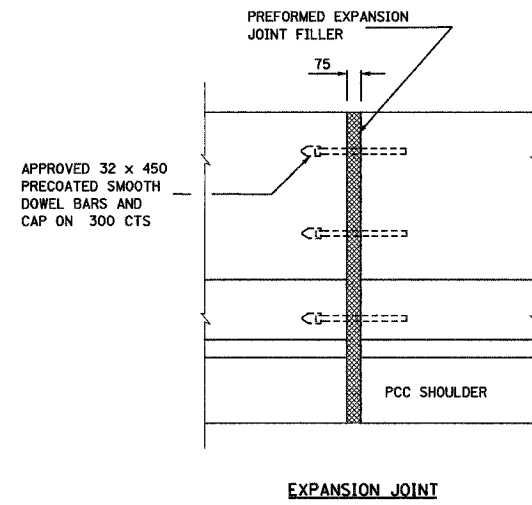
REVISIONS	
NAME	DATE
FLARED BASES	9/23/02
DOWEL BAR SPACING	2/11/03
REM DIFF BARRIER	6/20/03
EXPANSION JOINT	10/7/03

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 637001-I74  
CONCRETE BARRIER, DOUBLE FACE (MODIFIED) & CONCRETE BARRIER TRANSITION (MODIFIED) FOR SIGN STRUCTURE, HIGH MAST LIGHT TOWER, AND PIER FOUNDATIONS  
DRAWN BY  
DATE 08/15/02  
CHECKED BY

C:\p03\p03\174std\std637001.dgn 12/15/2004 2:05:04 PM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1200	677
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

\* THE BAR SPLICER SHALL BE CAPABLE OF DEVELOPING A MINIMUM OF 125% OF THE YIELD STRENGTH OF A #20 BAR



**CUT SECTION**

REINFORCING BARS 6.1 m SECTION				
BAR	NO.	SIZE	LENGTH	SHAPE
B(E)	5	#20	6.00 m	—
T(E)	4	#20	6.00 m	—
REINFORCING BARS (EPOXY COATED)			Kg	128
BAR SPLICERS			EACH	21

\*\* LONGITUDINAL BARS SHOULD NOT EXTEND THROUGH JOINTS.

**FILL SECTION**

REINFORCING BARS 6.1 m SECTION				
BAR	NO.	SIZE	LENGTH	SHAPE
B(E)	4	#20	6.00 m	—
T(E)	4	#20	6.00 m	—
REINFORCING BARS (EPOXY COATED)			Kg	114
BAR SPLICERS			EACH	21

\*\* LONGITUDINAL BARS SHOULD NOT EXTEND THROUGH JOINTS.

**NOTES:**

- FOR ADDITIONAL SHOULDER DETAILS SEE I-74 PROJECT STDs 483001-174 AND 601001-174
- A 25 RADIUS CAN BE SUBSTITUTED FOR THE 13 CHAMFER AT THE TOP OF THE BARRIER WALL.
- THE FURNISHING AND PLACING OF REINFORCING BARS AND BAR SPLICERS AND THE THICKENED PCC SHOULDER WHEN REQUIRED SHALL BE INCLUDED IN THE COST OF THE CONCRETE BARRIER OF THE TYPE SPECIFIED.
- ALL REINFORCING BARS, BAR SPLICERS, TIE BARS AND DOWEL BARS SHALL BE SEATED IN THE FINAL POSITION PRIOR TO THE CONCRETE OPERATIONS. BARS CANNOT BE MUCKED INTO PLACE.
- TRANSVERSE EXPANSION JOINT THRU THE PAVEMENT AND THE SHOULDER SHALL BE EXTENDED THRU THE CONCRETE BARRIER.

ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SHOWN

REVISIONS	
NAME	DATE
EXPANSION JOINT	10/7/03

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 637002-174  
**CONCRETE BARRIER,  
SINGLE FACE (MODIFIED)**

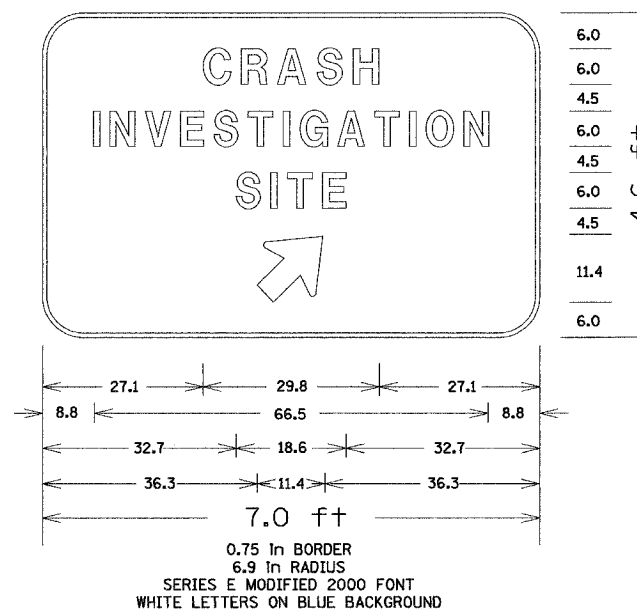
DRAWN BY  
DATE 08/15/02  
CHECKED BY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

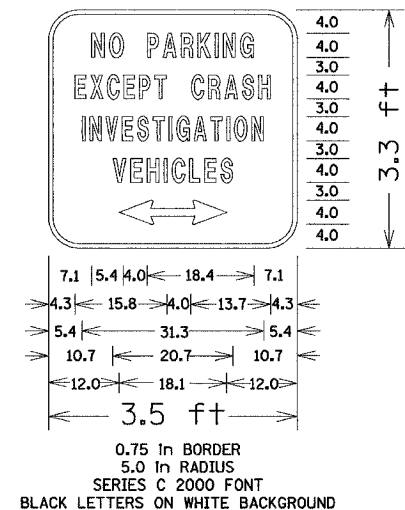
TYPE III SIGN (C)



(B) TYPE III SIGN



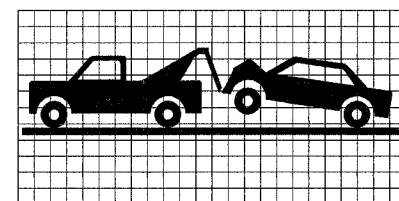
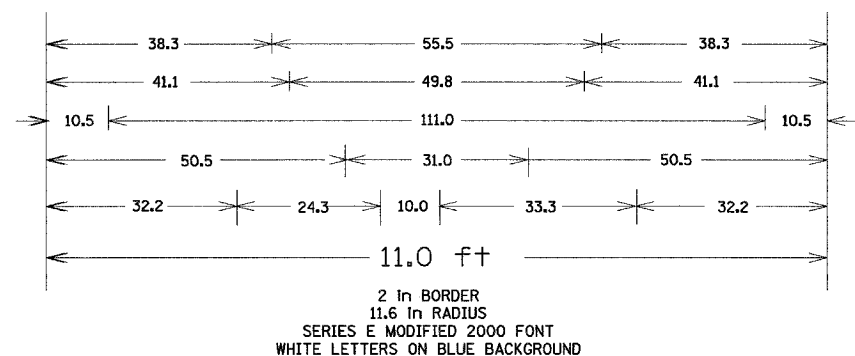
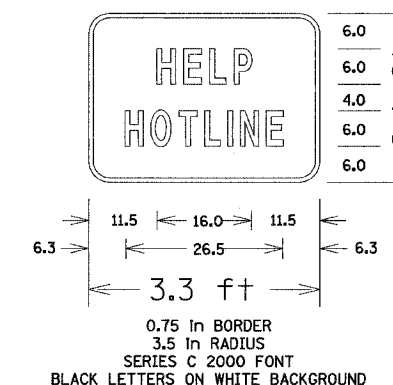
(A) TYPE II SIGN



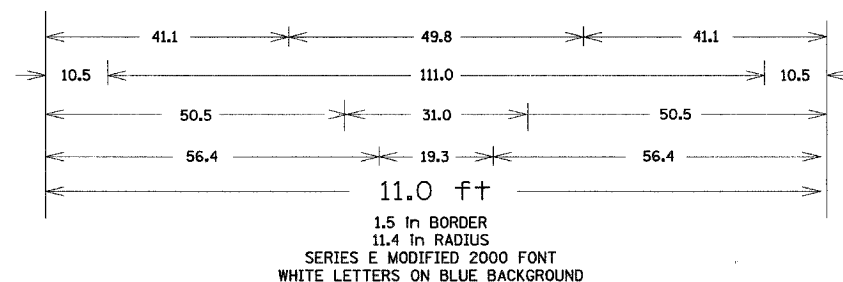
(E) TYPE III SIGN



(D) TYPE I SIGN



DETAIL "A"  
(SIGN C)



NOTES:

- SIGN B SHOULD BE USED AT CIS LOCATIONS WHERE THE DESIGN SPEED ON THE RAMP AT THE CIS ENTRANCE TAPER IS LESS THAN 45 MPH (70 KPH). WHERE RAMP DESIGN SPEEDS ARE EQUAL TO OR GREATER THAN 45 MPH (70 KPH) AT THE CIS ENTRANCE TAPER, SIGN B SHOULD BE MODIFIED TO UTILIZE 8 IN (203 MM) TEXT.

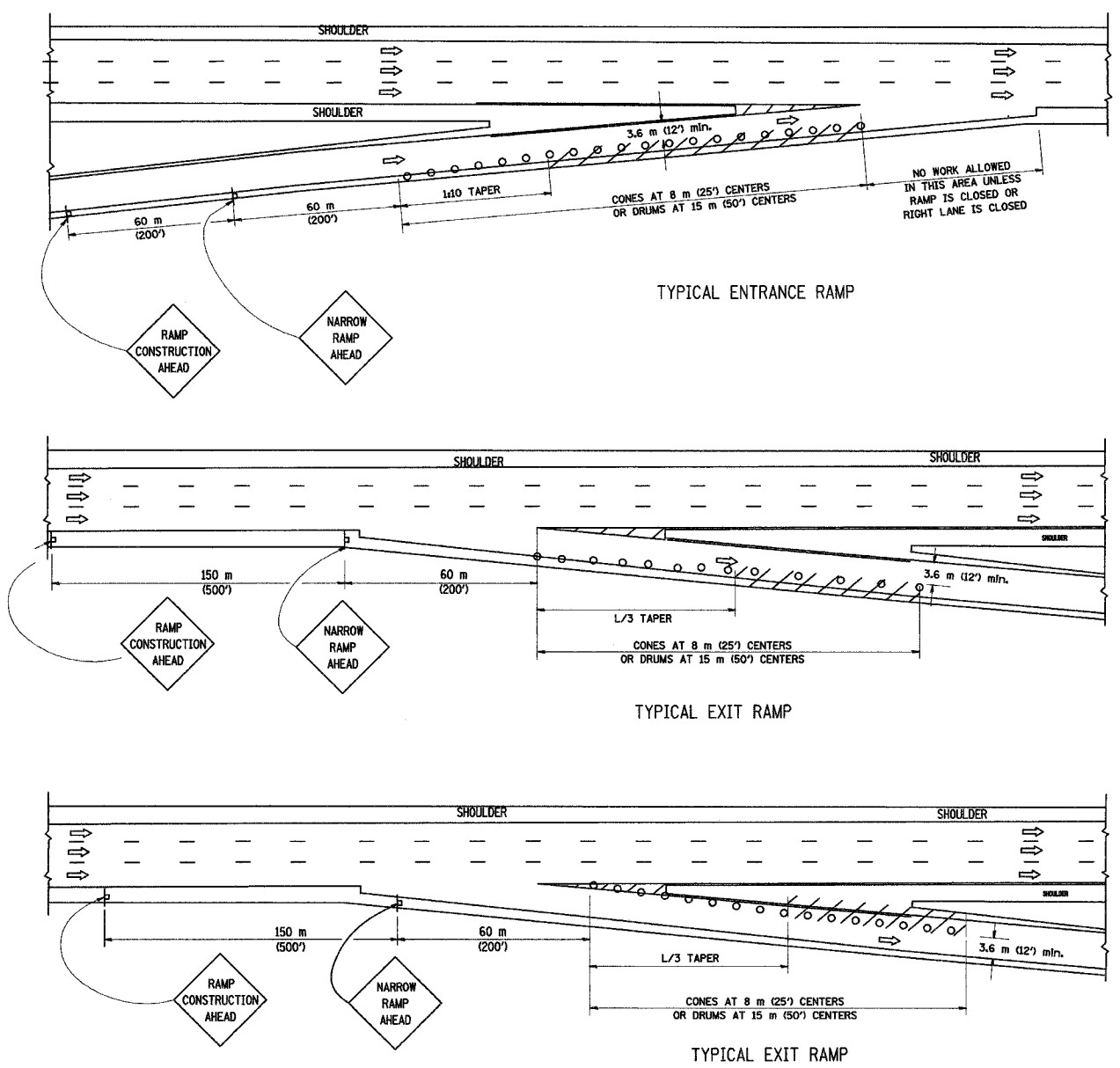
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION I-74 PROJECT STANDARD 701004-I74 TYPICAL CRASH INVESTIGATION SITE (CIS) - SIGNING DETAIL
NAME	DATE	
		DRAWN BY MJL CHECKED BY GFR DATE 02/12/03

I:\Projects\17451050505011.dgn 12/16/2004 4:09:30 PM

68201

F.A. - RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
			1366	679
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

### PARTIAL RAMP CLOSURE DETAILS



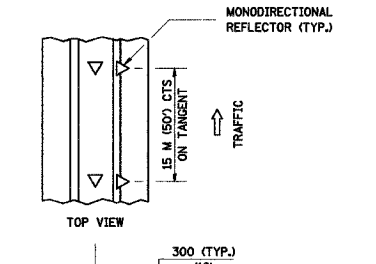
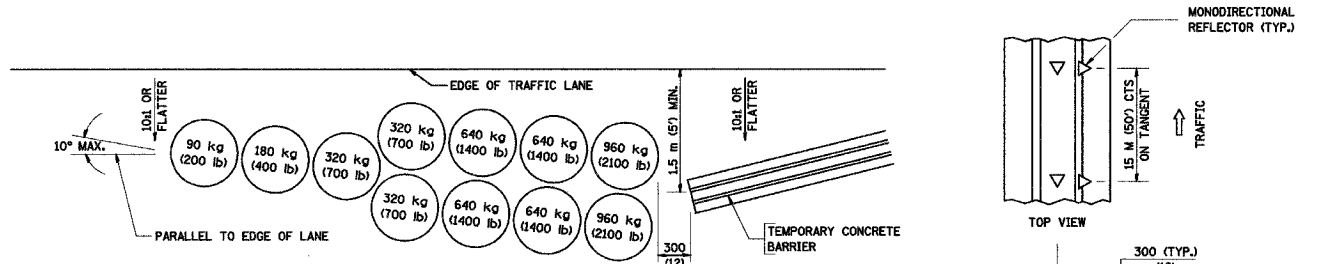
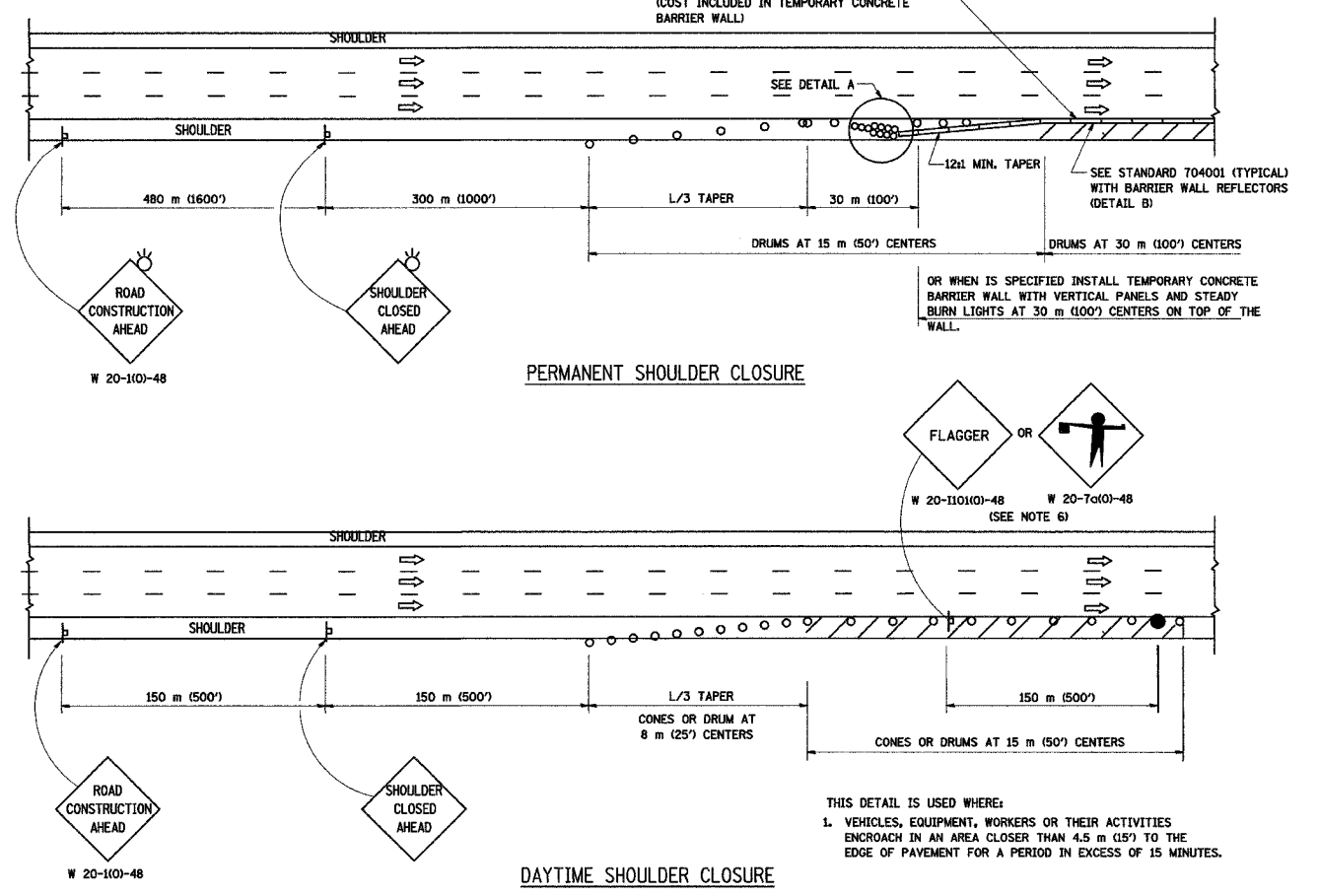
**SYMBOLS**

	WORK AREA
	SIGN ON PORTABLE OR PERMANENT SUPPORT
	FLAGGER WITH CONTROL SIGN
	DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
	CONES - 700 (28) IN HEIGHT

**GENERAL**

- THE "L" DISTANCE EQUALS:  
 SPEED LIMIT      FORMULAS  
 80 km/h (45 mph)      METRIC      ENGLISH  
 OR GREATER:      L=0.65(W)(S)      L=(W)(S)  
 W = WIDTH OF OFFSET IN METERS (FEET)  
 S = NORMAL POSTED SPEED KM/H (MPH)
- PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

### SHOULDER CLOSURE DETAILS



**NOTES**

- THE SAND MODULE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY BARRIER END SECTION IS OUTSIDE THE CLEAR ZONE OR IS TIED INTO THE EXISTING GUARDRAIL.
- THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - THE WORK ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 30 m (100') TO 60 m (200') IN ADVANCE OF THE WORKERS.

**REVISIONS**

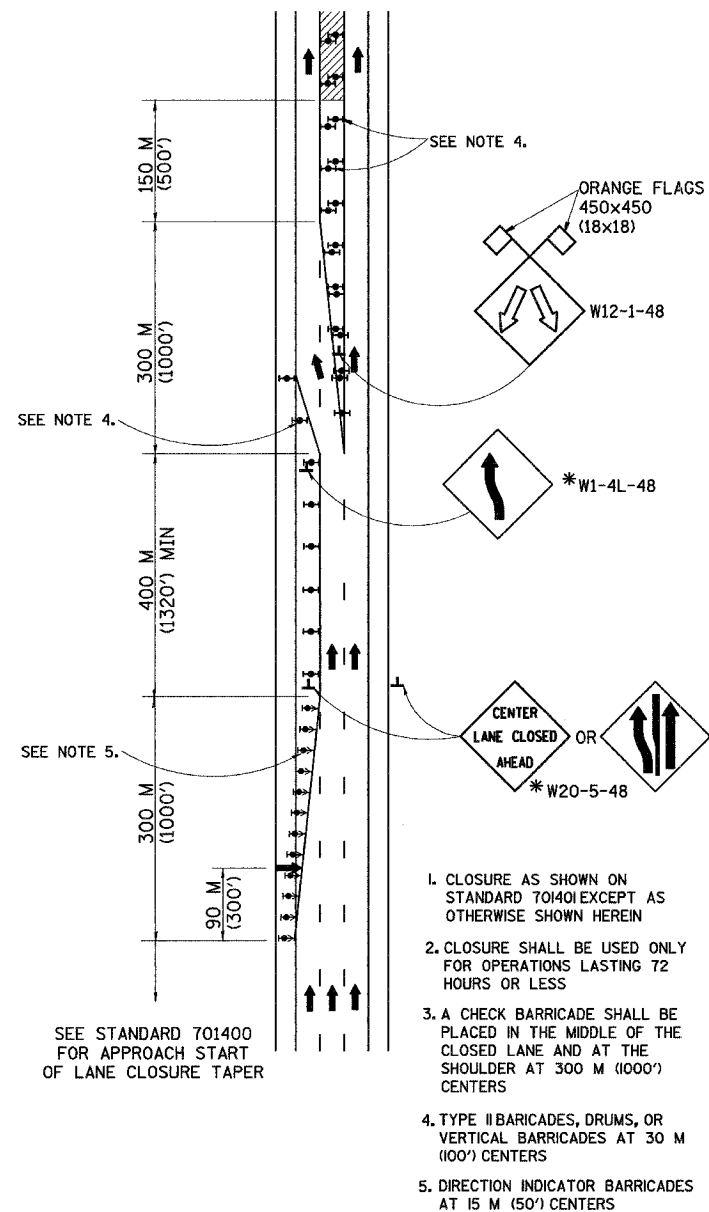
NAME	DATE
REM. END SECTION	4/17/02
REM. ARROWBOARD	8/30/02
MODIFY TO RAMP CONST.	8/30/02

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 I-74 PROJECT STANDARD 701101-174  
 TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES  
 PARTIAL RAMP CLOSURES  
 DRAWN BY  
 DATE 03/28/02  
 CHECKED BY

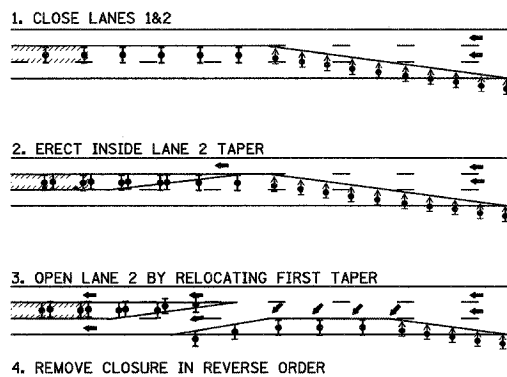
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	680
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

### CENTER LANE CLOSURE

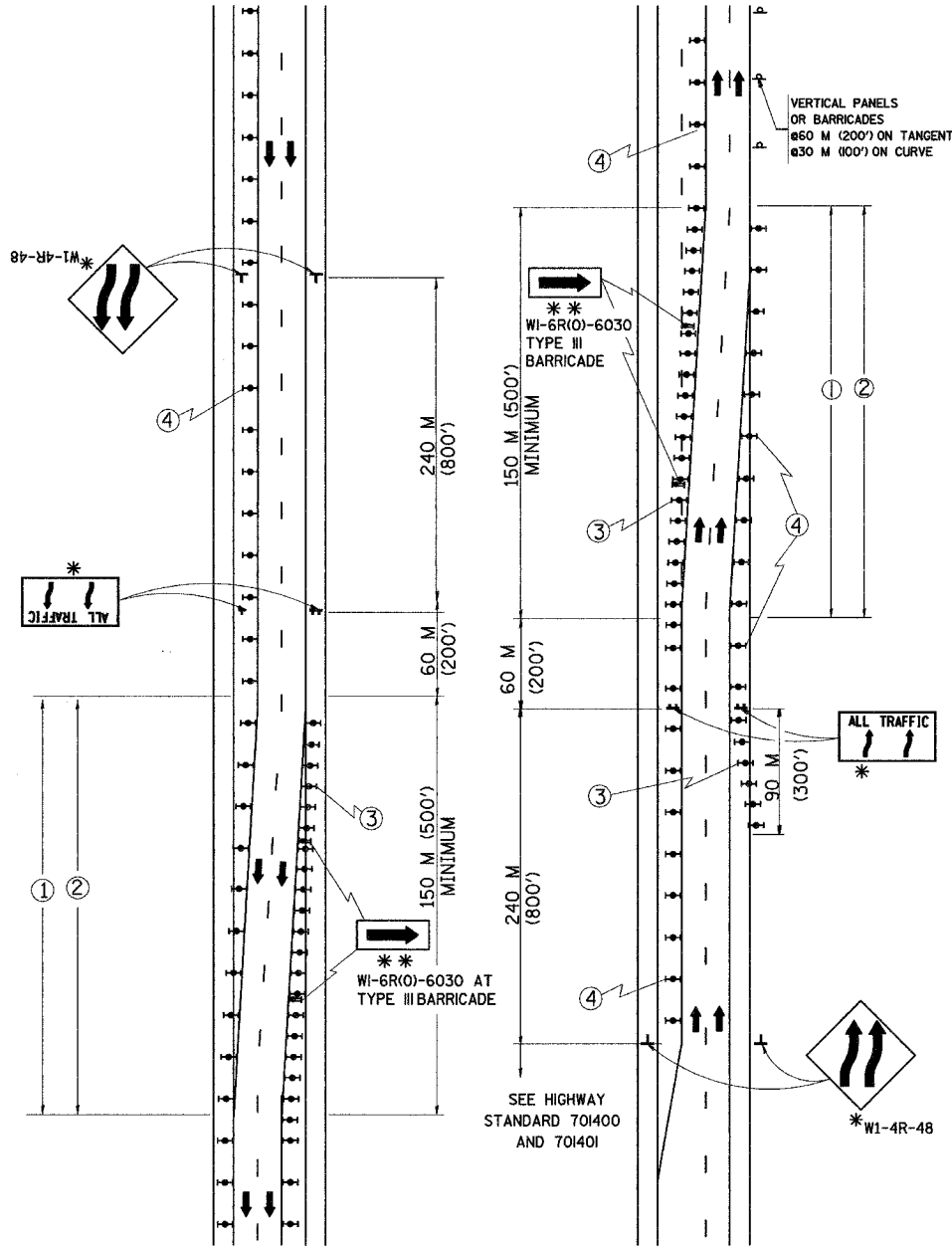


SEE STANDARD 701400 FOR APPROACH START OF LANE CLOSURE TAPER

#### INSTALLATION SEQUENCE



### MULTI-LANE WEAVE



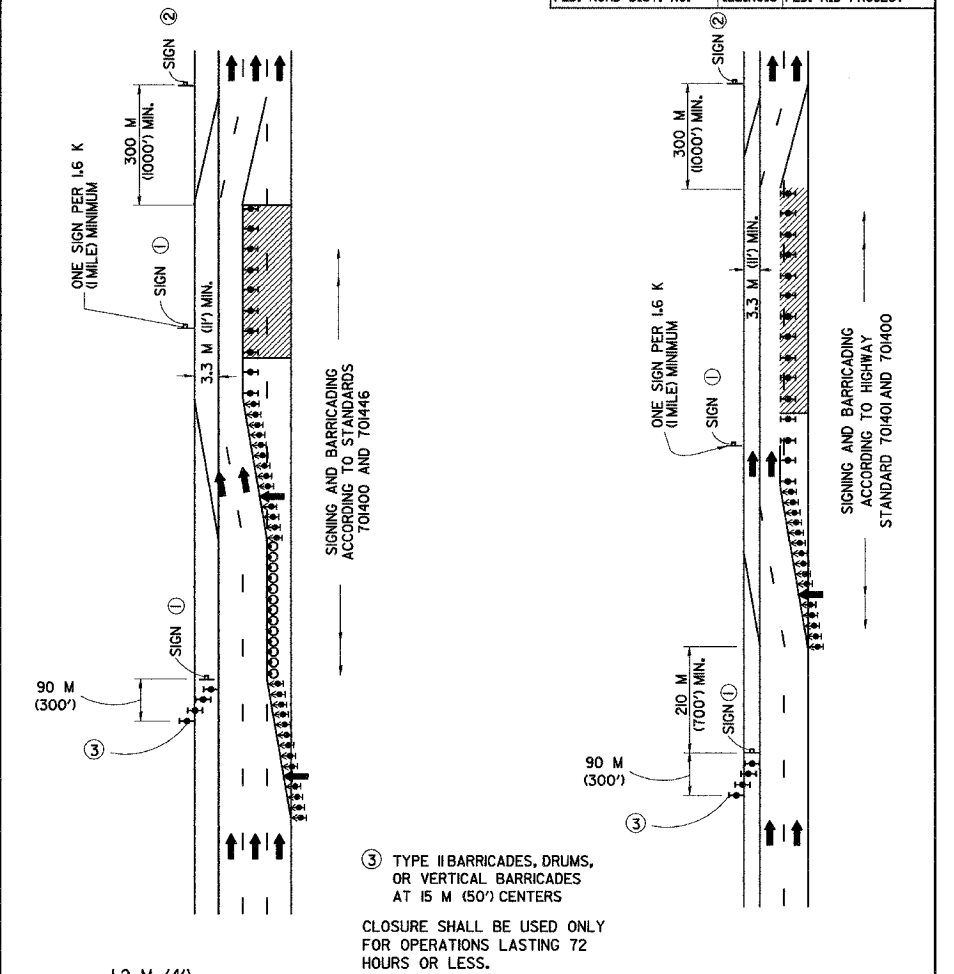
\* THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC

\*\* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEET NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS DIRECTLY IN FRONT OF THE BARRICADE

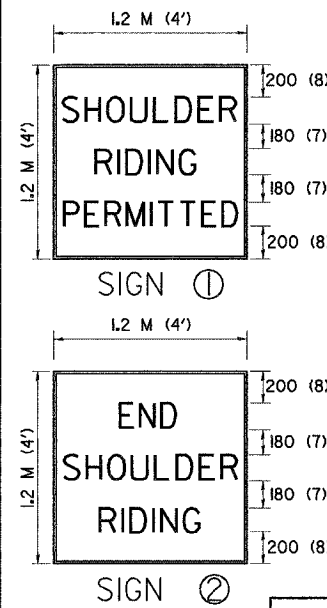
- TEMPORARY PAVEMENT MARKING TO BE INSTALLED: CONTINUOUS YELLOW LEFT EDGE LINE. LANE LINES 3 M-9 M (10'-30') SKIP-DASH, WHITE, CONTINUOUS WHITE RIGHT EDGE LINE.
- EXISTING PAVEMENT MARKING TO BE REMOVED.
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT AT 15 M (50') C-C SPACING.
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT AT 30 M (100') C-C SPACING.

ALL TRAFFIC 1.2 m x 2.4 m (4'x8'); 25 (I) BORDER; 250 (I) CAPITAL LETTERS BACKGROUND SHEETING SHALL BE THE SAME AS ALL DIAMOND SHAPED CONSTRUCTION SIGNS.

### SHOULDER LANE



- TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 15 M (50') CENTERS
- CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.



150 (6) SERIES 'C' LEGEND BLACK LEGEND WHITE REFLECT. BACKGROUND 25 (I) BORDER

REVISIONS	
NAME	DATE
HS 04-2004	4/27/04
MULTI-LANE WEAVE TAPER LENGTH	10/21/04
DEL. PG. 701404-74 AND PG. 701446	10/22/04

**SYMBOLS**

- ARROW BOARD
- WORK AREA
- SIGN WITH 450x450 (18x18) ORANGE FLAG ATTACHED \*
- SIGN ON PORTABLE OR PERMANENT SUPPORT \*
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

\* ALL SIGNS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 1.5 m (5').

**GENERAL NOTE**

WORK ZONE SPEED LIMIT SIGNS AND FLAGGER SIGNS SHALL BE AS SHOWN ON STANDARD 701401

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 701403-174  
TRAFFIC CONTROL DETAILS FOR FREEWAY  
CENTER LANE CLOSURE  
MULTI-LANE WEAVE  
SHOULDER LANE

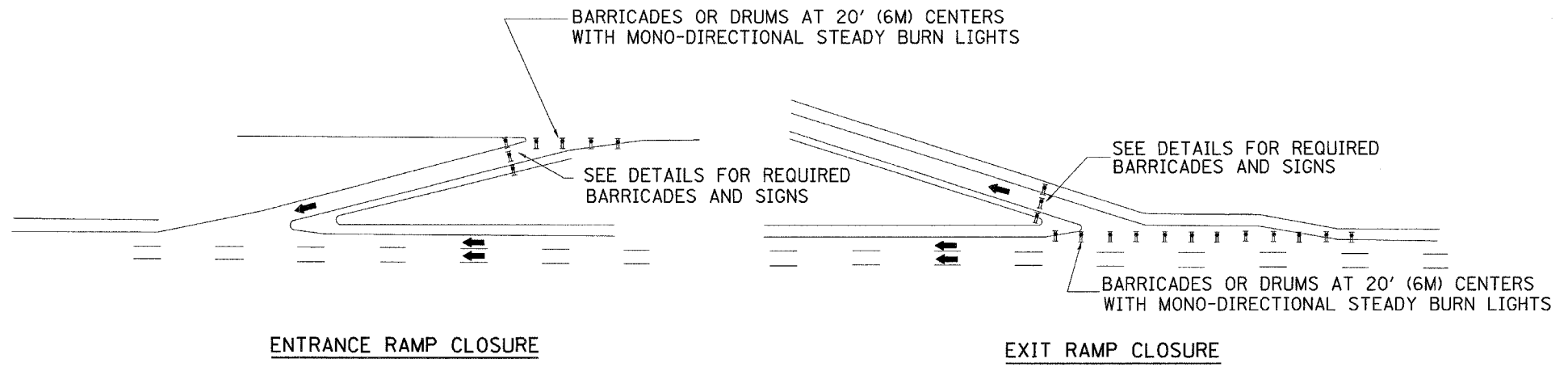
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DATE 7/18/02  
CHECKED BY



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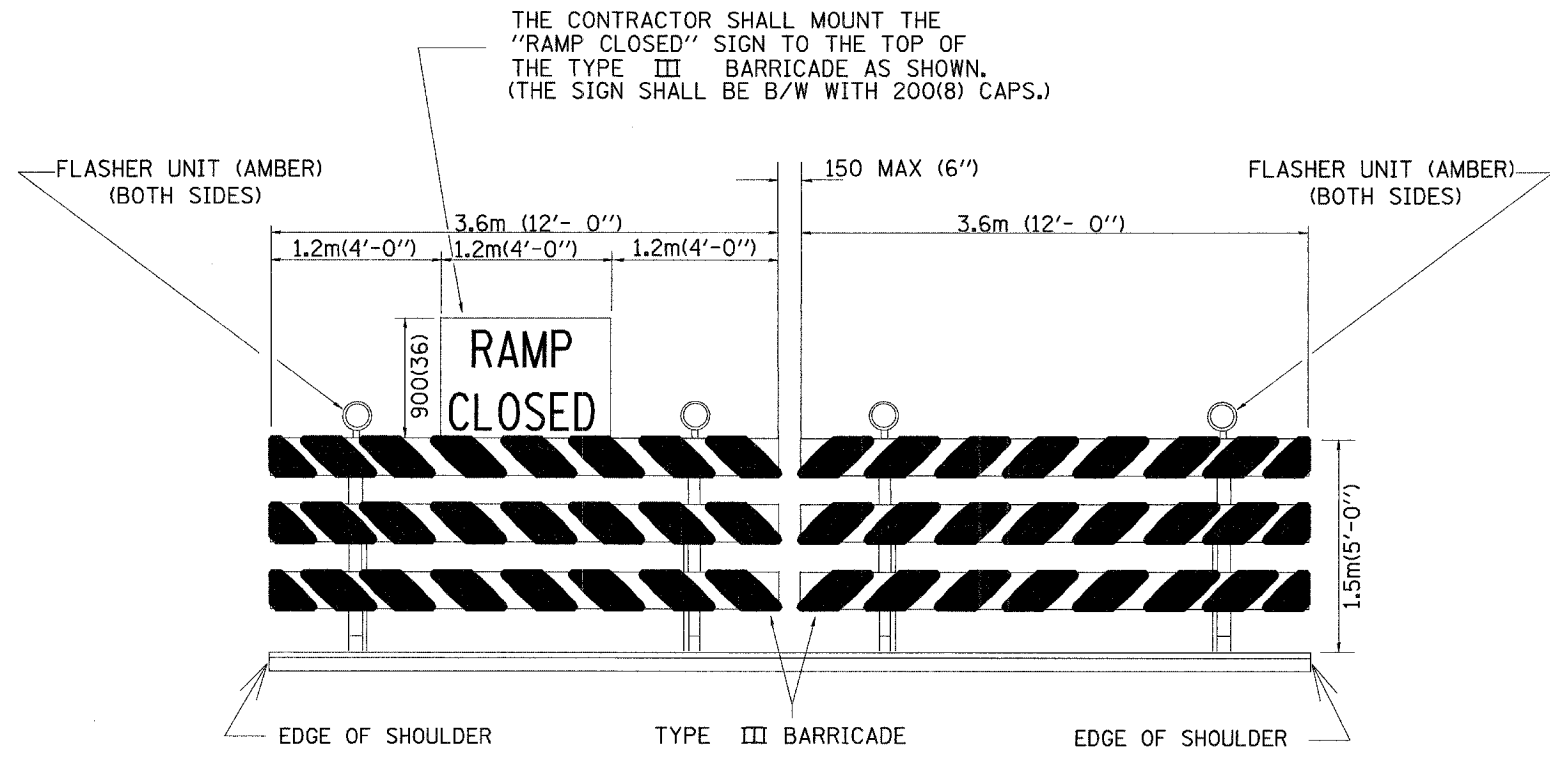
88201

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	681
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



ENTRANCE RAMP CLOSURE

EXIT RAMP CLOSURE



DETAIL FOR REQUIRED BARRICADES & SIGNS



PLACE 150 M (500') IN ADVANCE OF RAMP

BLACK LEGEND ON ORANGE REFLECTORIZED BACKGROUND  
RAMP CLOSED AHEAD SIGN

THE CONTRACTOR SHALL MOUNT THE "RAMP CLOSED" SIGN TO THE TOP OF THE TYPE III BARRICADE AS SHOWN. (THE SIGN SHALL BE B/W WITH 200(8) CAPS.)

**NOTES:**

1. CONES MAY BE SUBSTITUTED FOR TYPE I AND TYPE II BARRICADES AND DRUMS DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 700 (28") IN HEIGHT.
2. STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.

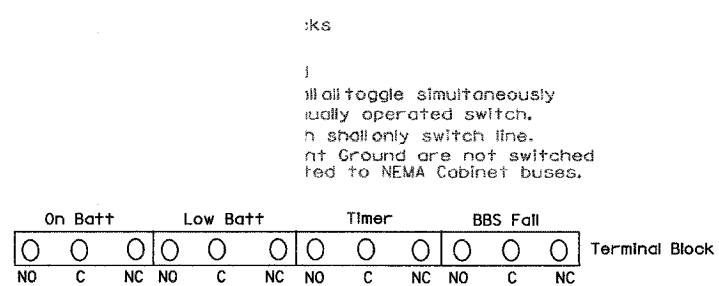
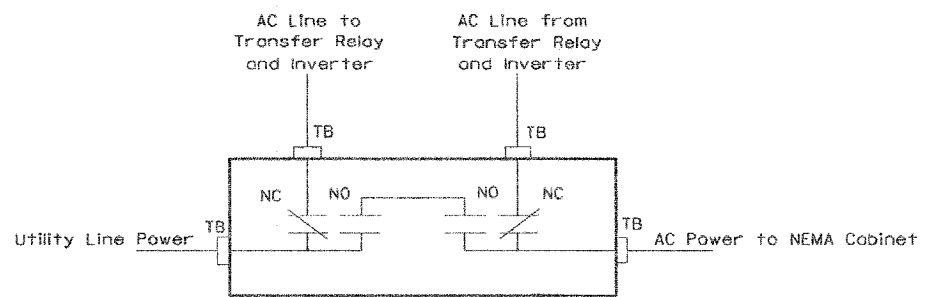
All dimensions are in millimeters (inches) unless otherwise noted.

DATE	REVISIONS	BY

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 701411-174  
ENTRANCE AND EXIT RAMP CLOSURE DETAILS  
SCALE: NONE  
DATE: 10/09/01  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

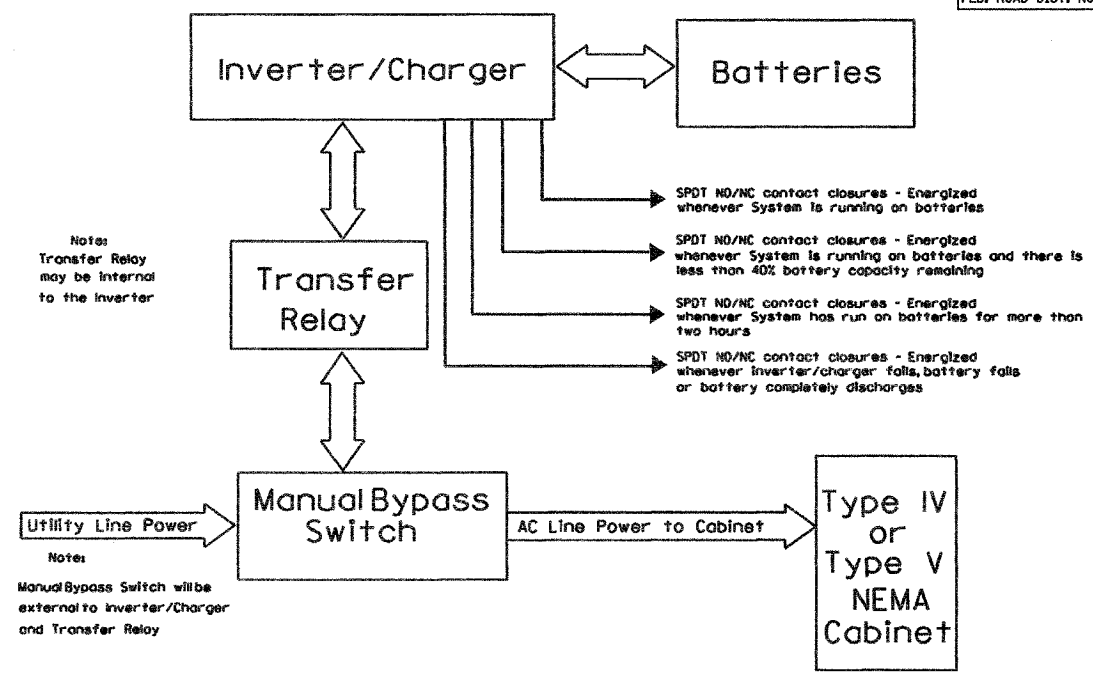
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			1366	682
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

(a) Manual Bypass Switch (typical)



Notes:  
1. NO/NC contacts may either share or use separate commons.

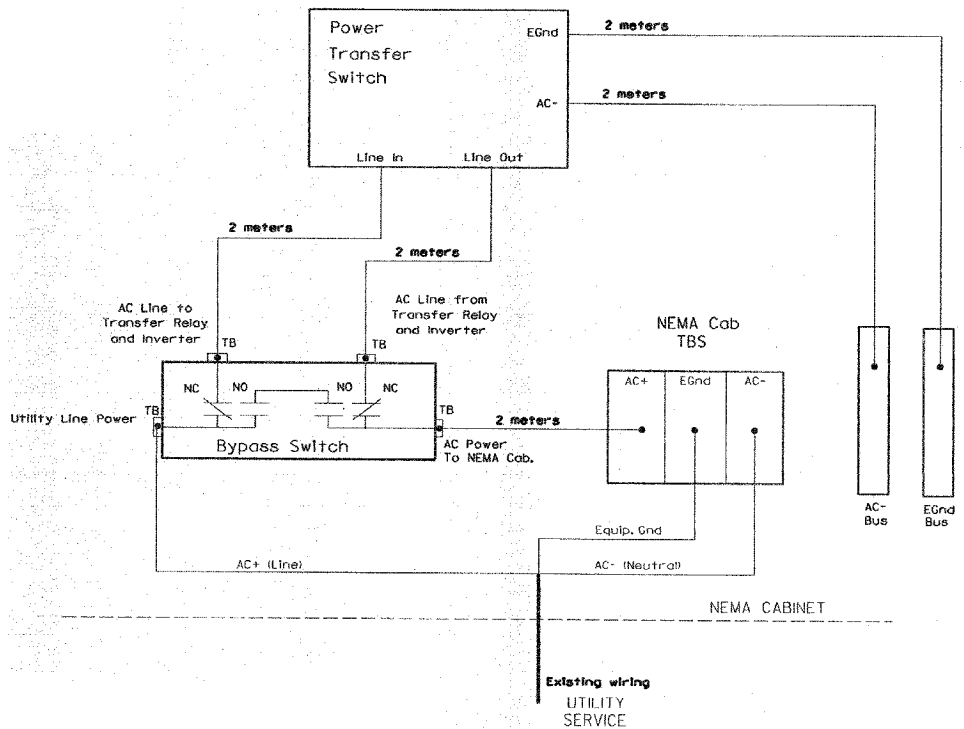
MANUAL BYPASS SWITCH RELAY CONTACTS



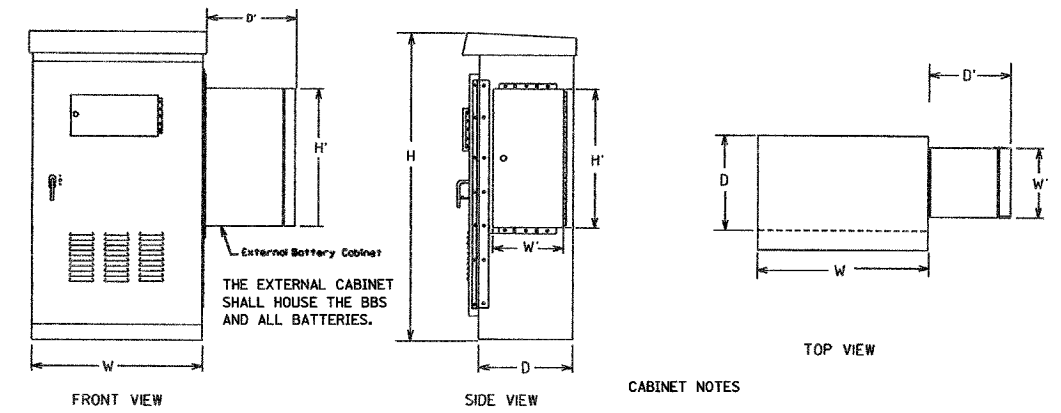
Notes:  
Transfer Relay may be internal to the Inverter

Notes:  
Manual Bypass Switch will be external to Inverter/Charger and Transfer Relay

BLOCK DIAGRAM



UTILITY POWER CONNECTION DIAGRAM



NEMA Standard TS 2 Sheet Aluminum Unpainted Cabinets Nominal Outline Dimensions

Mounting & Use	Cabinet Type & Size	Height H/H' inch	Width W/W' inch	Depth D/D' inch
• Wall Mounted	Type I / Size 1	26	17	15
	Housing Batteries	Type II / Size 2	30	18
Pad Mounted	Type III / Size 5	40	24	17
	Housing Signal Devices	Type IV / Size 6	55	44
	Type V / Size 7	77	44	26

\* Police Compartment not provided.

CABINET DETAIL

CABINET NOTES

1. THE BOTTOM OF THE EXTERNAL BBS CABINET SHALL BE PLACED ON THE OUTER EDGE OF THE CABINET FOUNDATION FOR SUPPORT.
2. THE EXTERNAL BBS CABINET SHALL BE SECURELY FASTENED TO THE EXISTING TRAFFIC SIGNAL CONTROLLER CABINET IN A METHOD THAT IS APPROVED BY THE ENGINEER.
3. THE MANUAL BYPASS SWITCH SHALL BE MOUNTED IN THE EXISTING TRAFFIC SIGNAL CABINET.
4. ALL OTHER BATTERY BACKUP SYSTEM COMPONENTS SHALL BE INSTALLED IN THE EXTERNAL BBS CABINET.
5. THE EXTERNAL BBS CABINET MAY REQUIRE AN EQUIPMENT STAND FOR ADDITIONAL GROUND LEVEL SUPPORT. THE COST FOR THE EQUIPMENT STAND SHALL BE INCLUDED IN THE BID PRICE FOR THE BBS SYSTEM.

REVISIONS	
NAME	DATE
CABINET DETAIL	1/16/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-74 PROJECT STANDARD 857003-I74  
BATTERY BACKUP SYSTEM

DATE 8/25/03  
DRAWN BY  
CHECKED BY

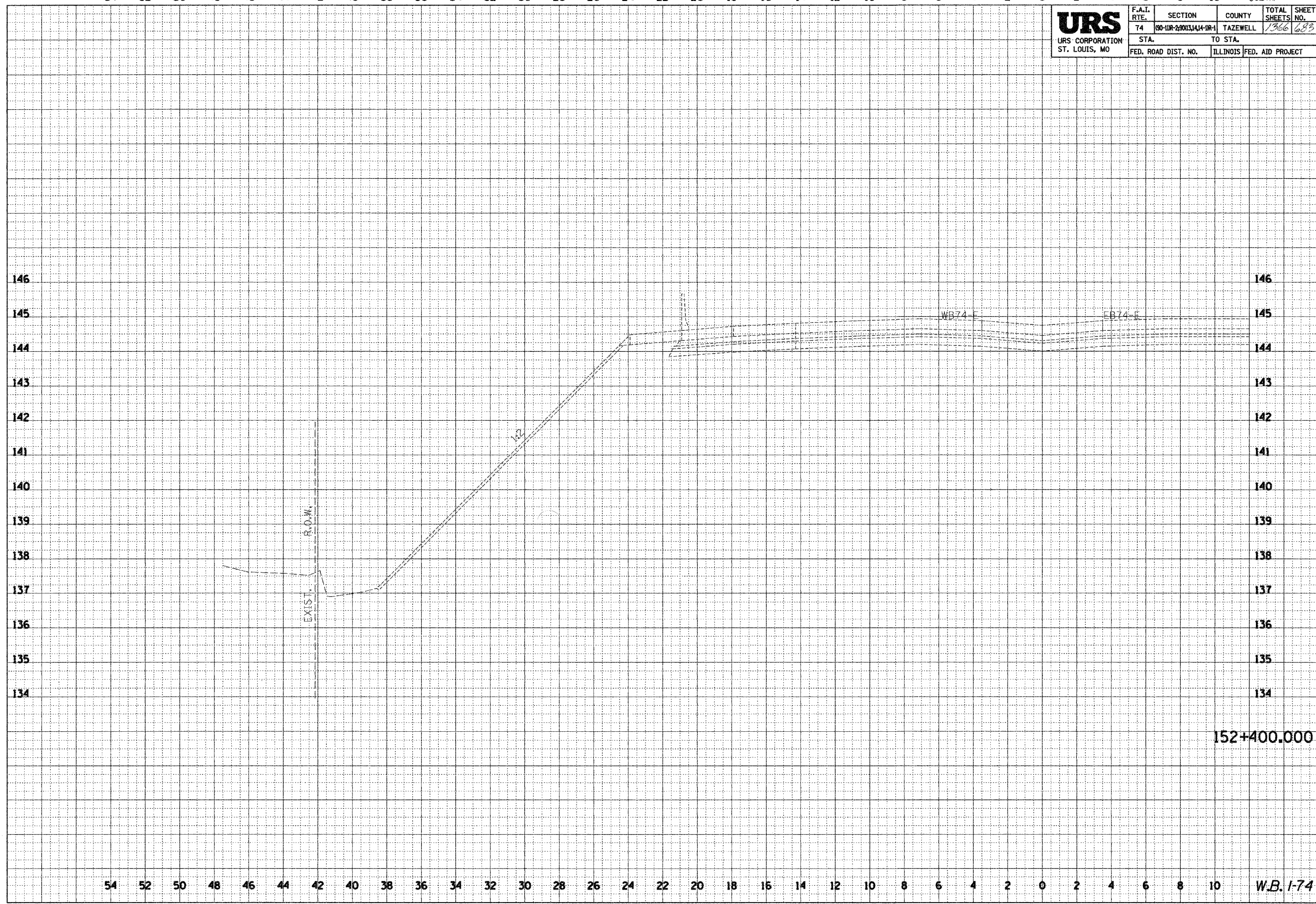
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	STA.		TO STA.		
	FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL	BY	DATE
SURVEYED		
NOTE BOOK		
AREAS CHECKED		
NO.		

ORIGINAL	BY	DATE
SURVEYED		
NOTE BOOK		
AREAS CHECKED		
NO.		



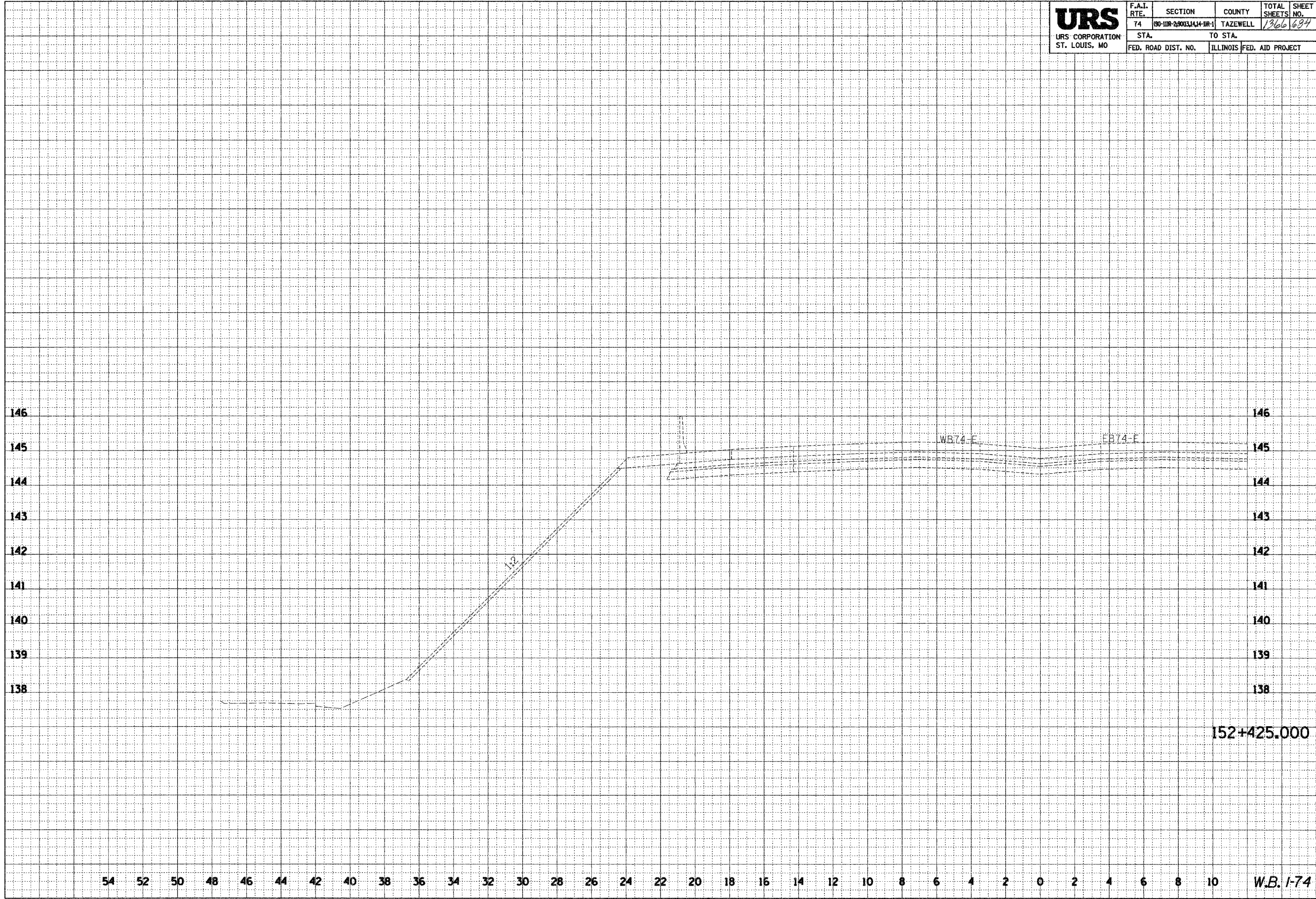
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<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	(99-10R-290034U+1R-1)	TAZEWELL	1366	694
	STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
	AREAS CHECKED	



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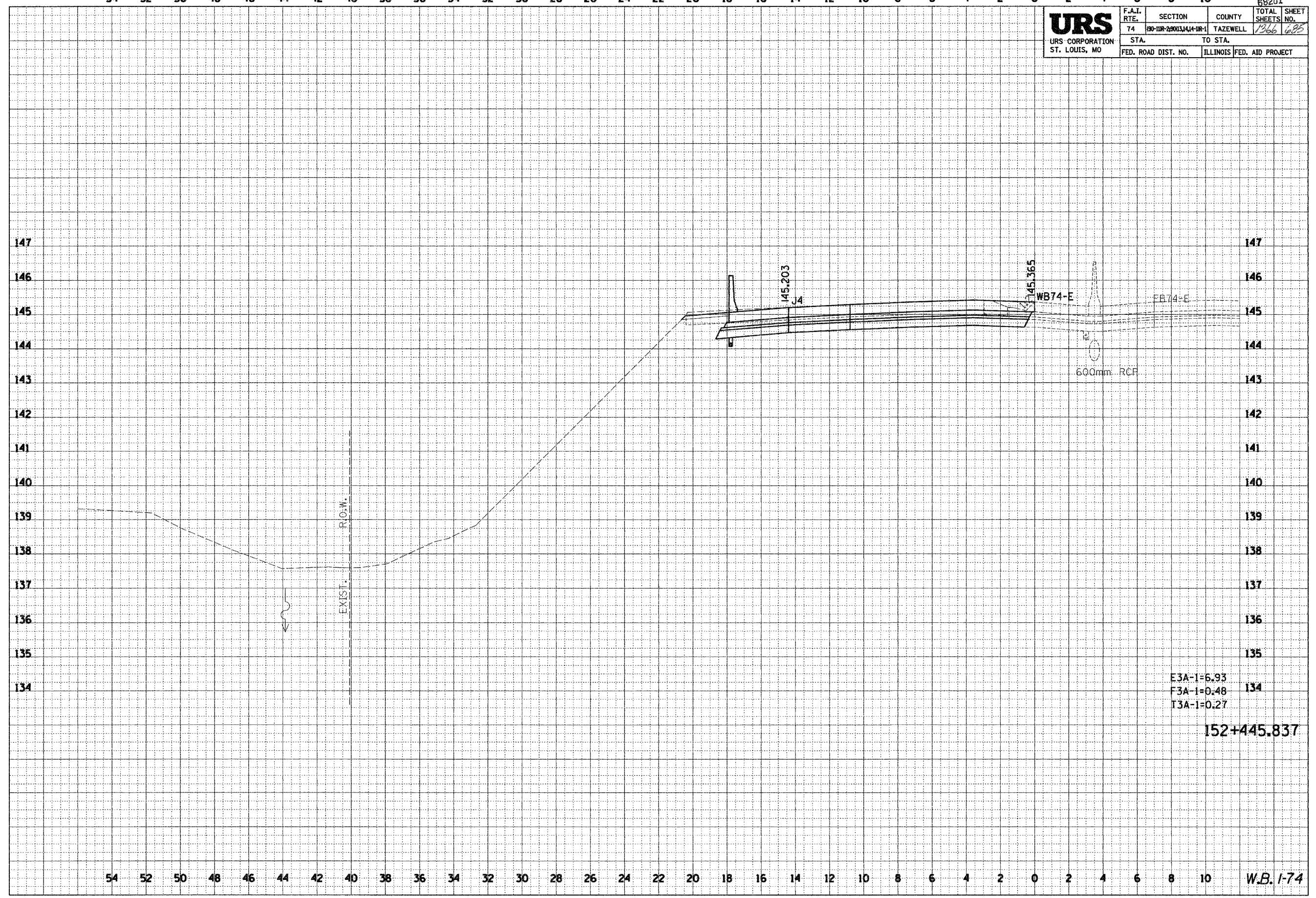
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68201

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	STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS		
CHECKED		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS		
CHECKED		
NO.		



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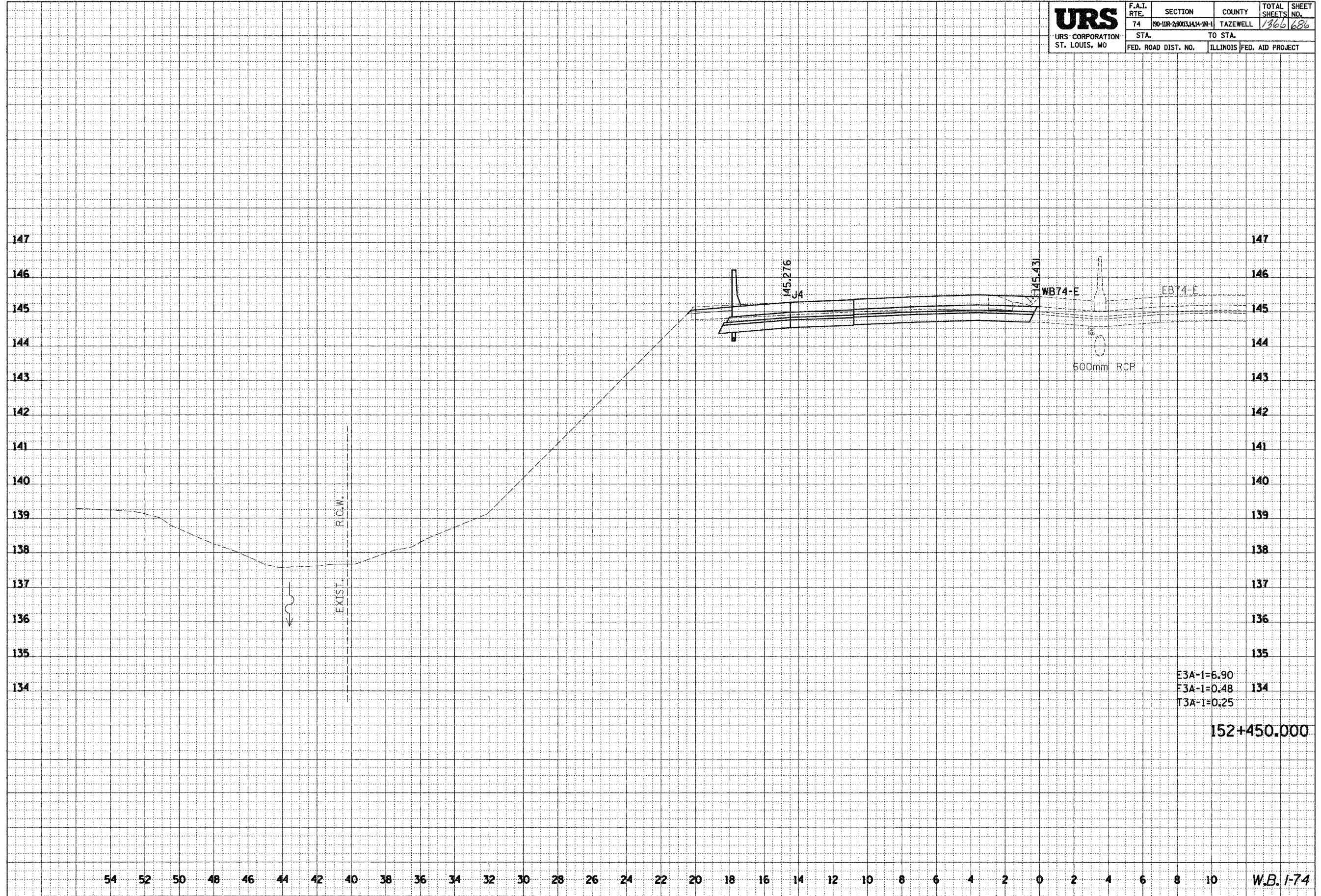
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STA.		TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	NO.
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	NO.
AREAS CHECKED	



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W.B. 1-74

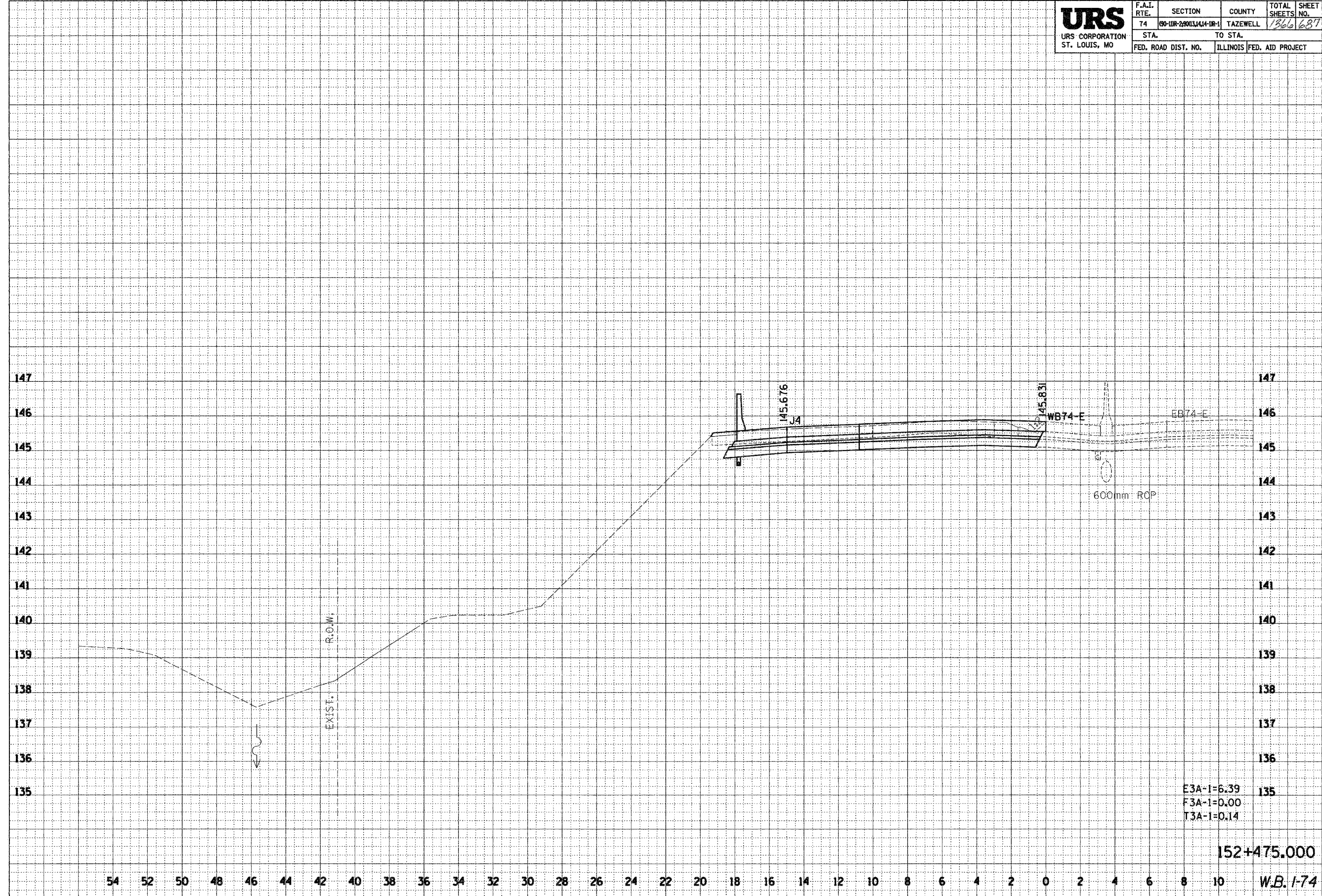
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	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
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AREAS CHECKED	BY	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
AREAS CHECKED	BY	



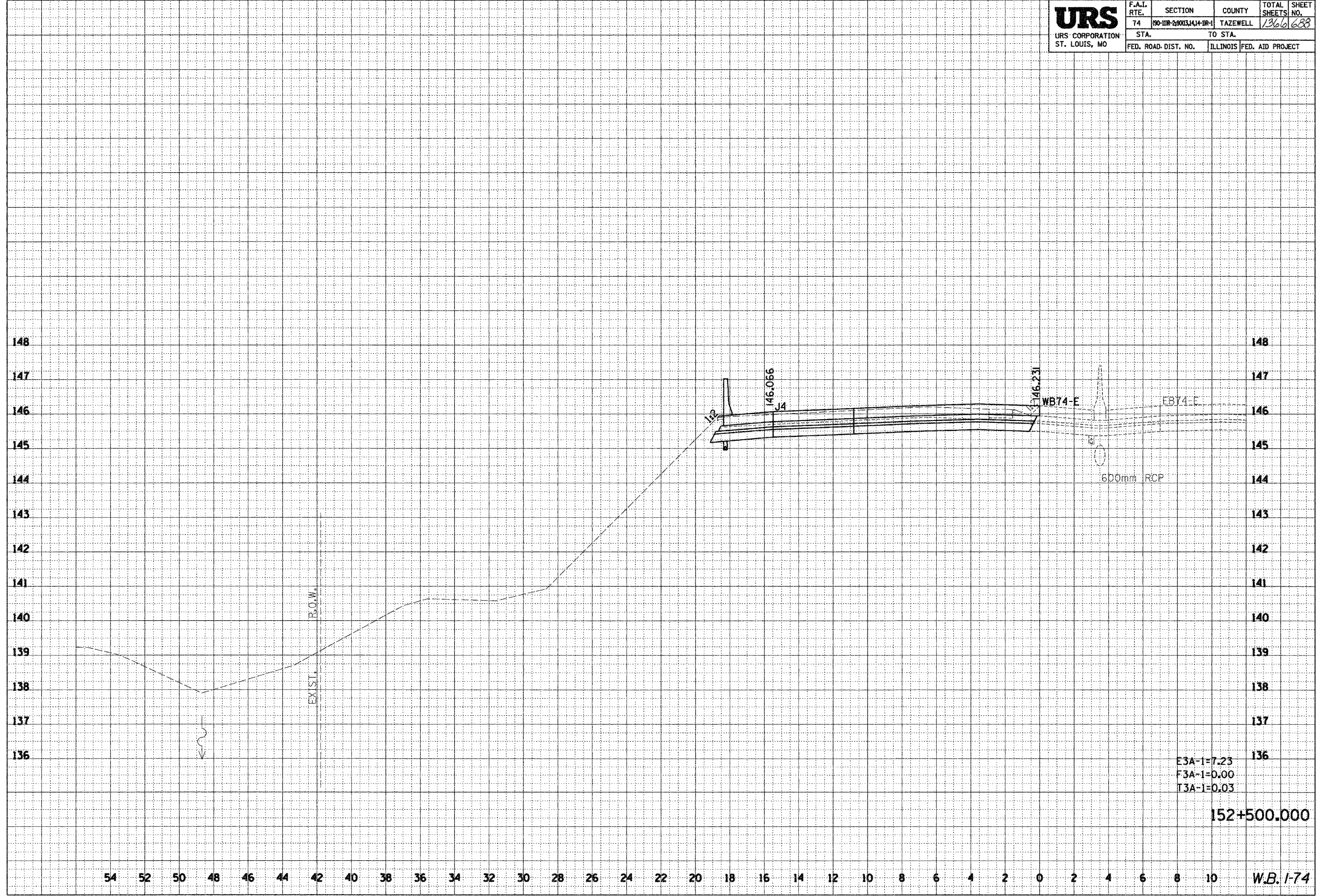
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	STA.	TO STA.		FED. ROAD-DIST. NO.	
			ILLINOIS	FED. AID PROJECT	

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	



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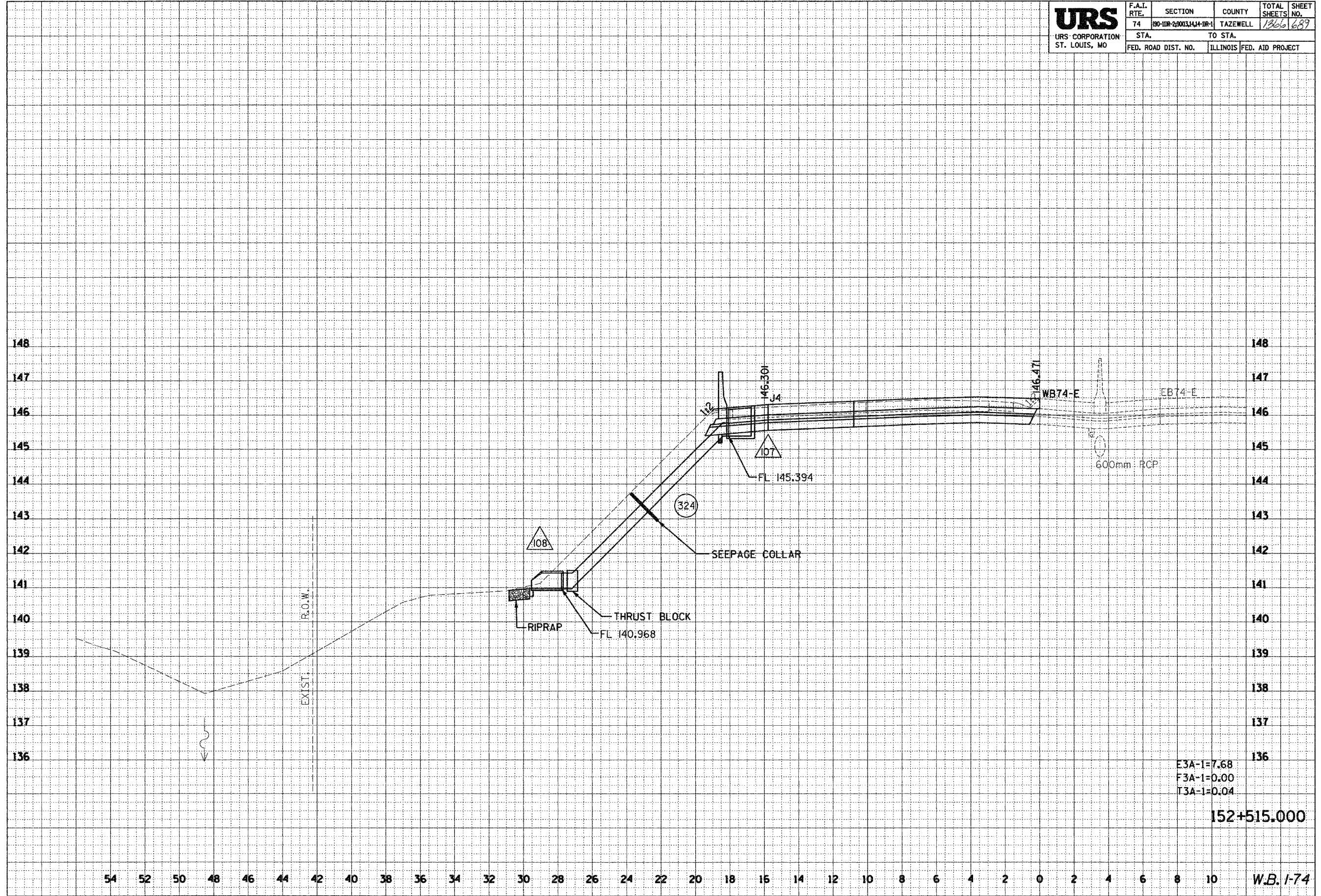
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68204

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	74	190-11R-25003144-1R-1	TAZEWELL	1366	689
STA.		TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
NOTE BOOK		
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AREAS CHECKED		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
NOTE BOOK		
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AREAS CHECKED		

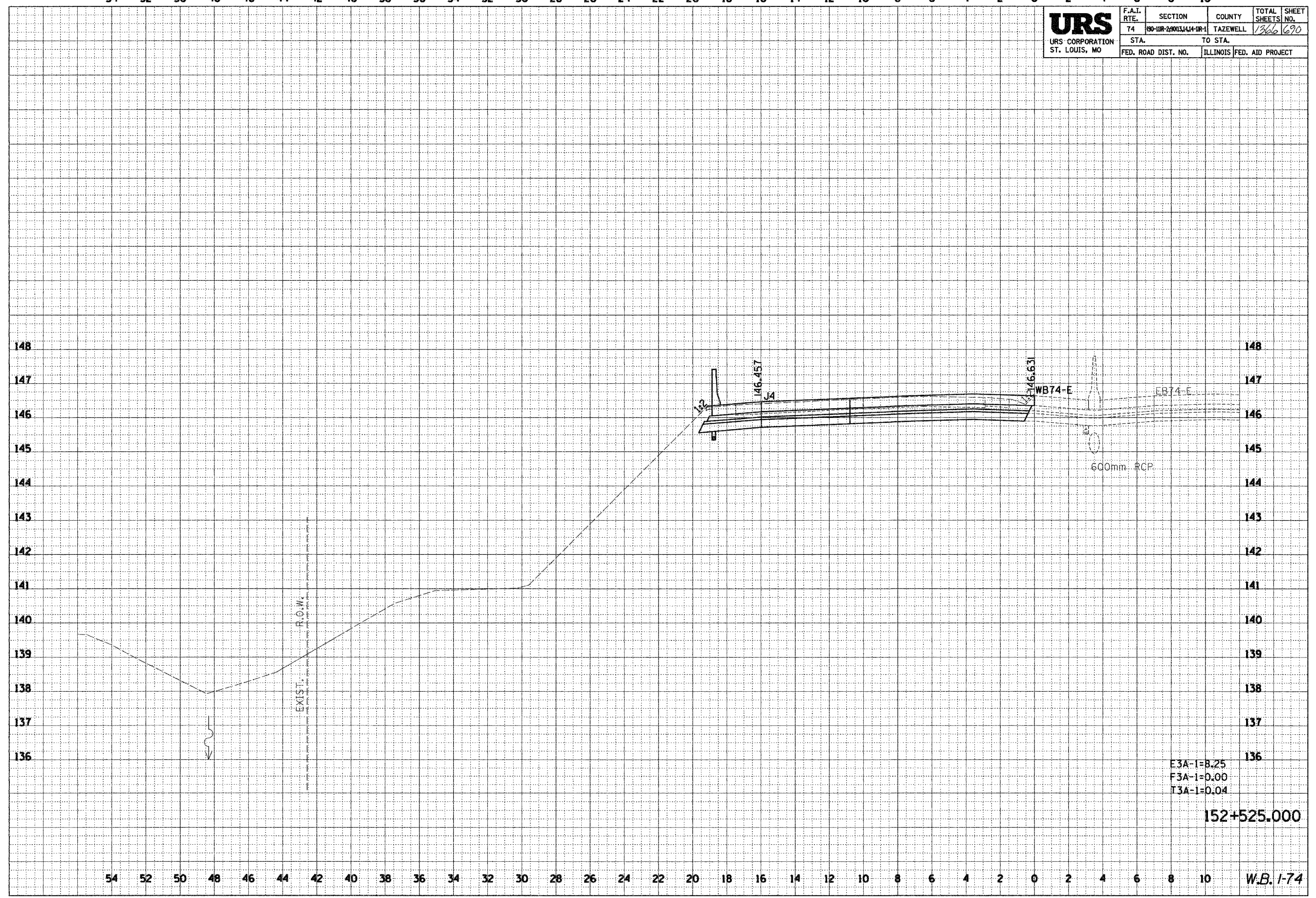


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	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
AREAS CHECKED	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
AREAS CHECKED	AREAS CHECKED	



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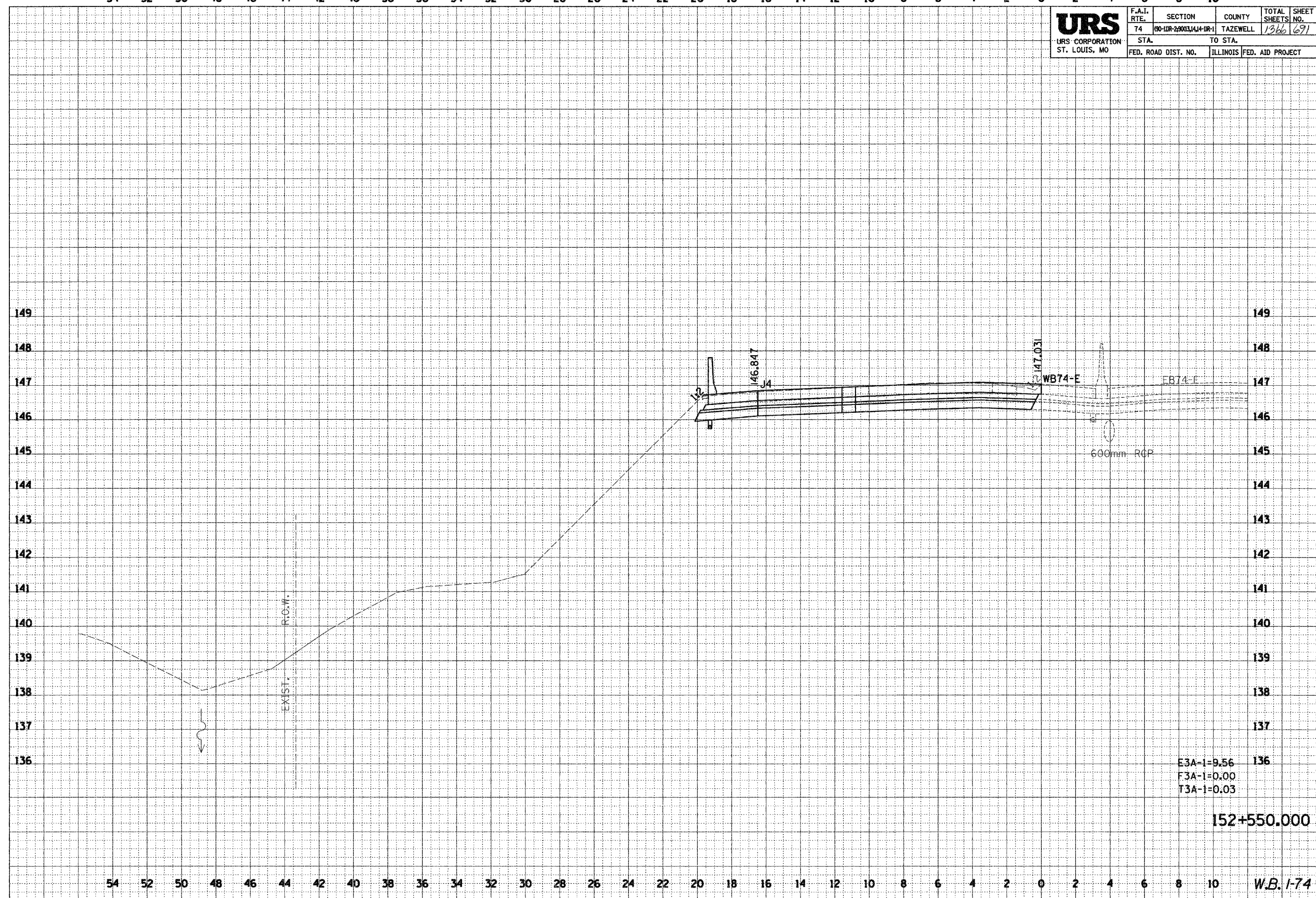
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<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	(90-10R-200)3,4,4+1R-1	TAZEWELL	1366	691
	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
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PLOTTED		
NOTE BOOK		
AREAS CHECKED		
NO.		

ORIGINAL SURVEY	BY	DATE
BLANKET		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		
NO.		



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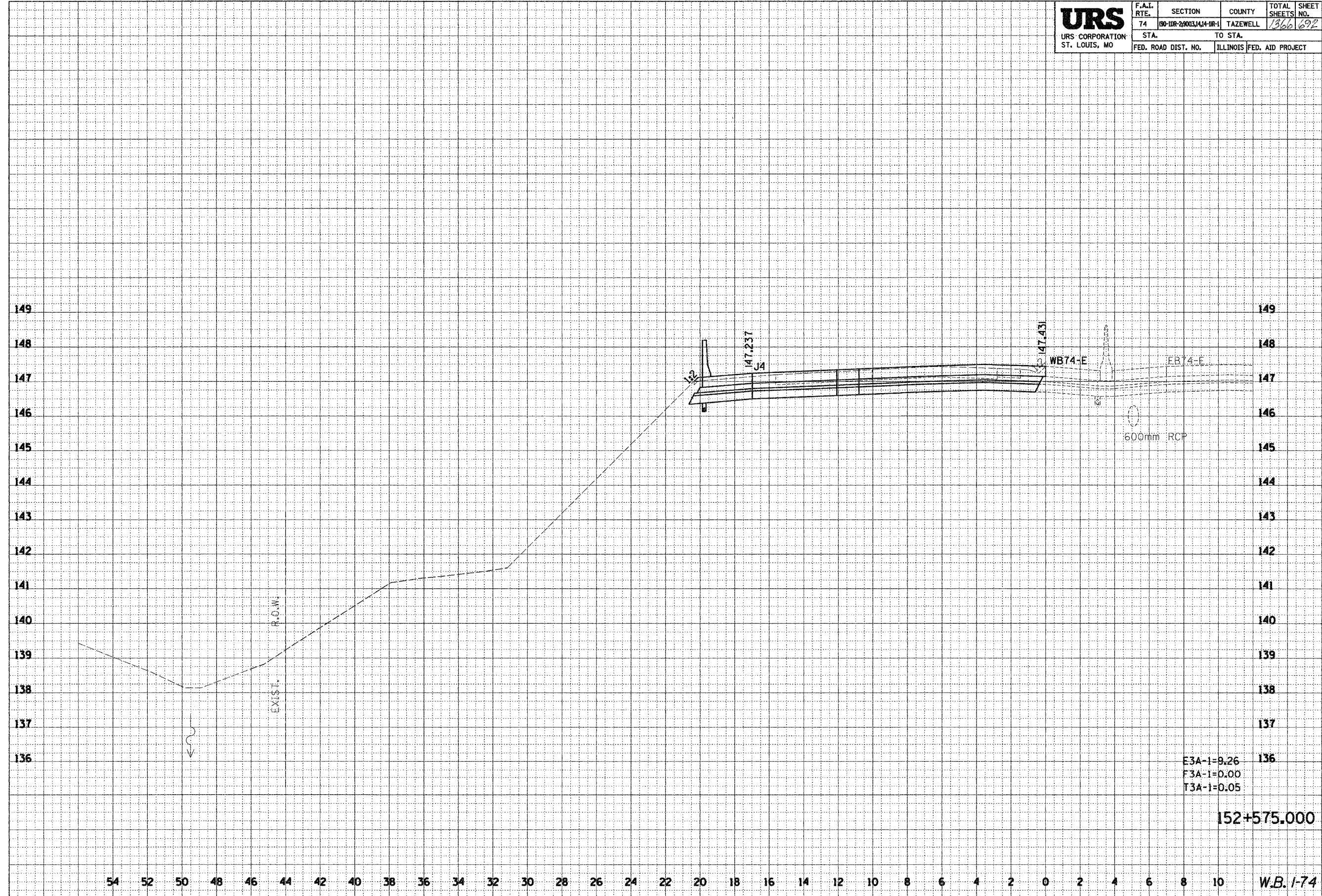
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<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	09-10R-29003,14+1R-1	TAZEWELL	1366	692
	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	AREAS CHECKED	



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W.B. 1-74

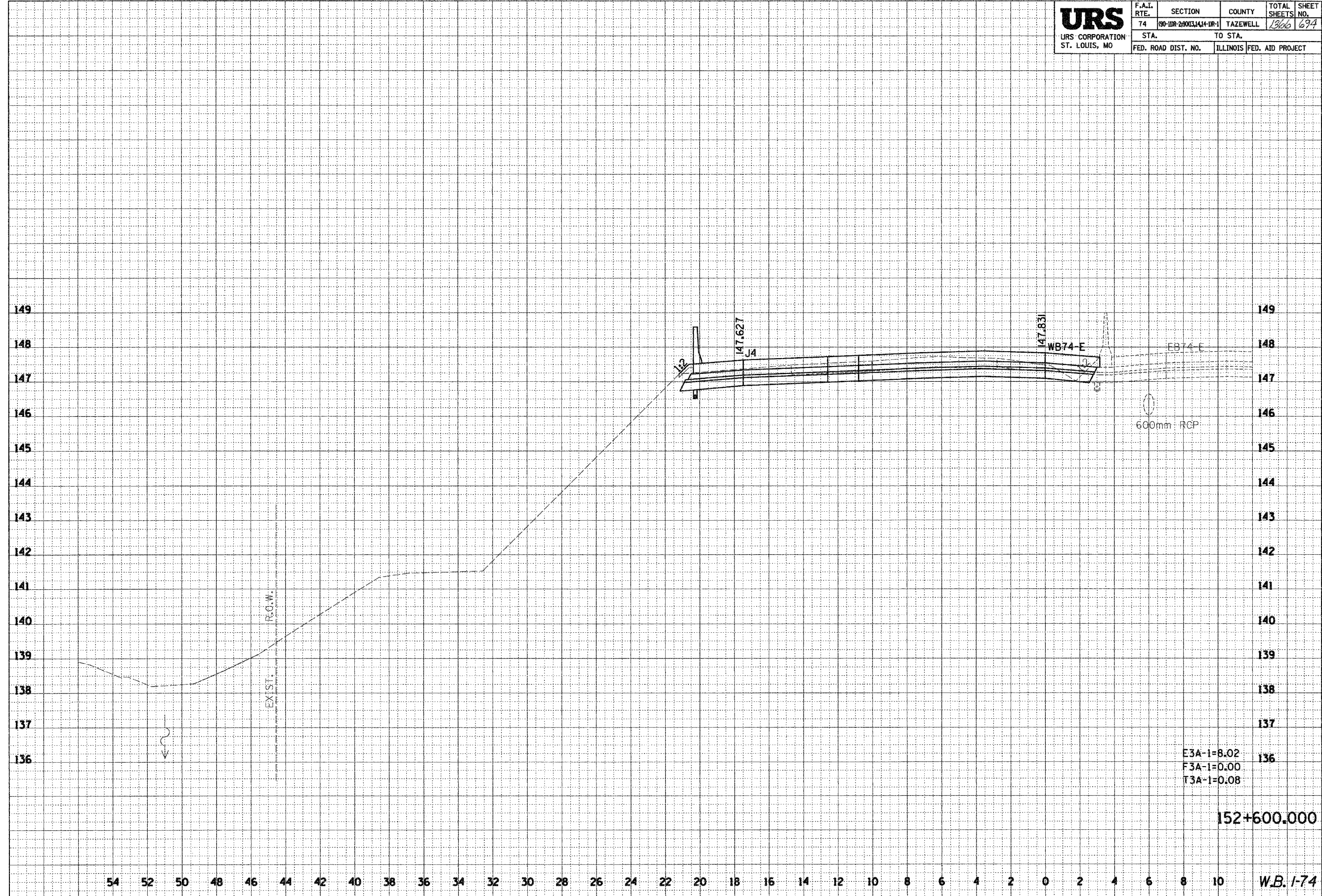


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<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	09-10R-29003,4,4+1R-1	TAZEWELL	1366	694
	STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	AREAS	
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ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	AREAS	
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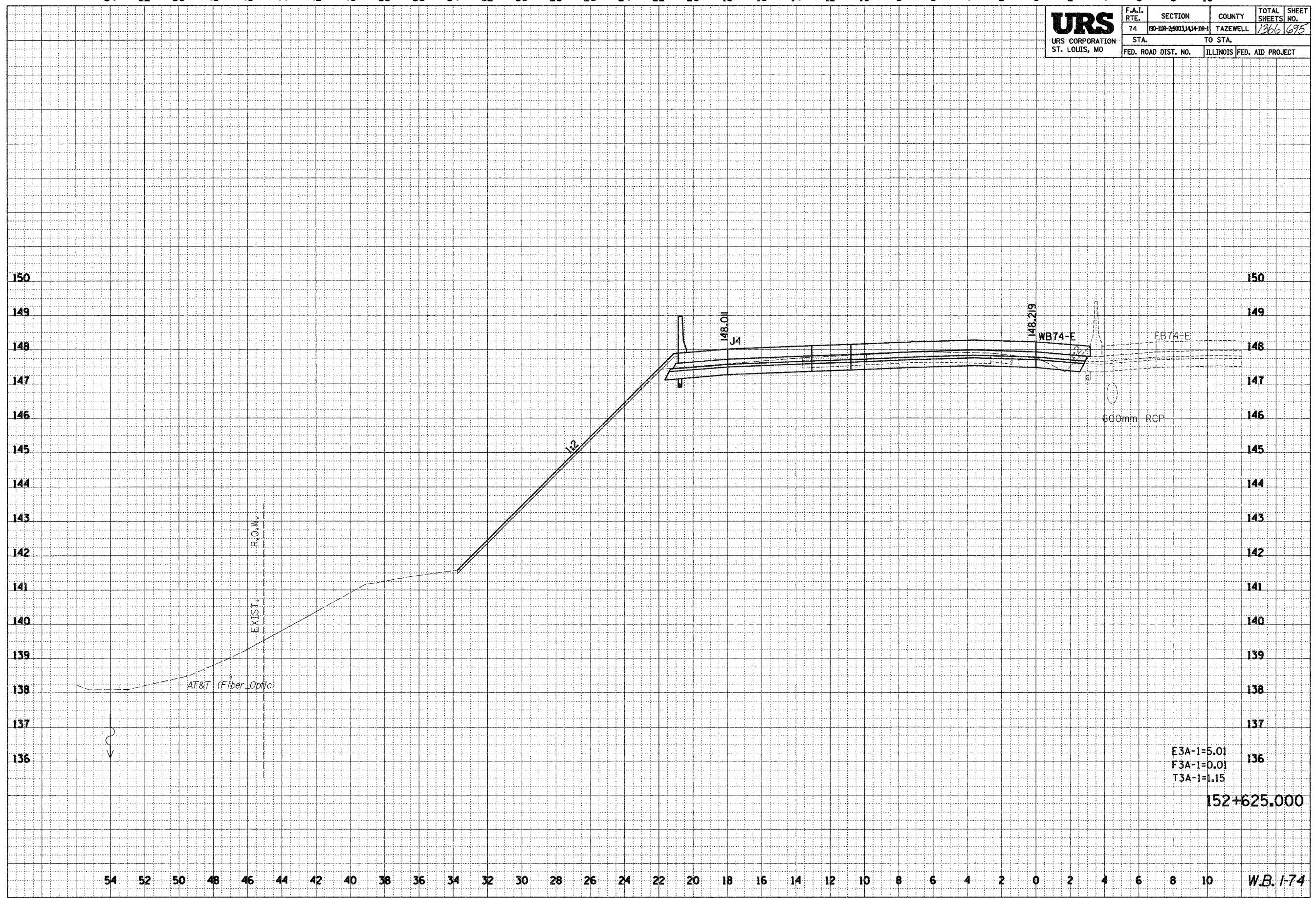
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88201

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	74	60-11R-24003(14)+1R-1	TAZEWELL	1266	675
STA.		TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEYED	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	
NOTE BOOK	
AREAS CHECKED	



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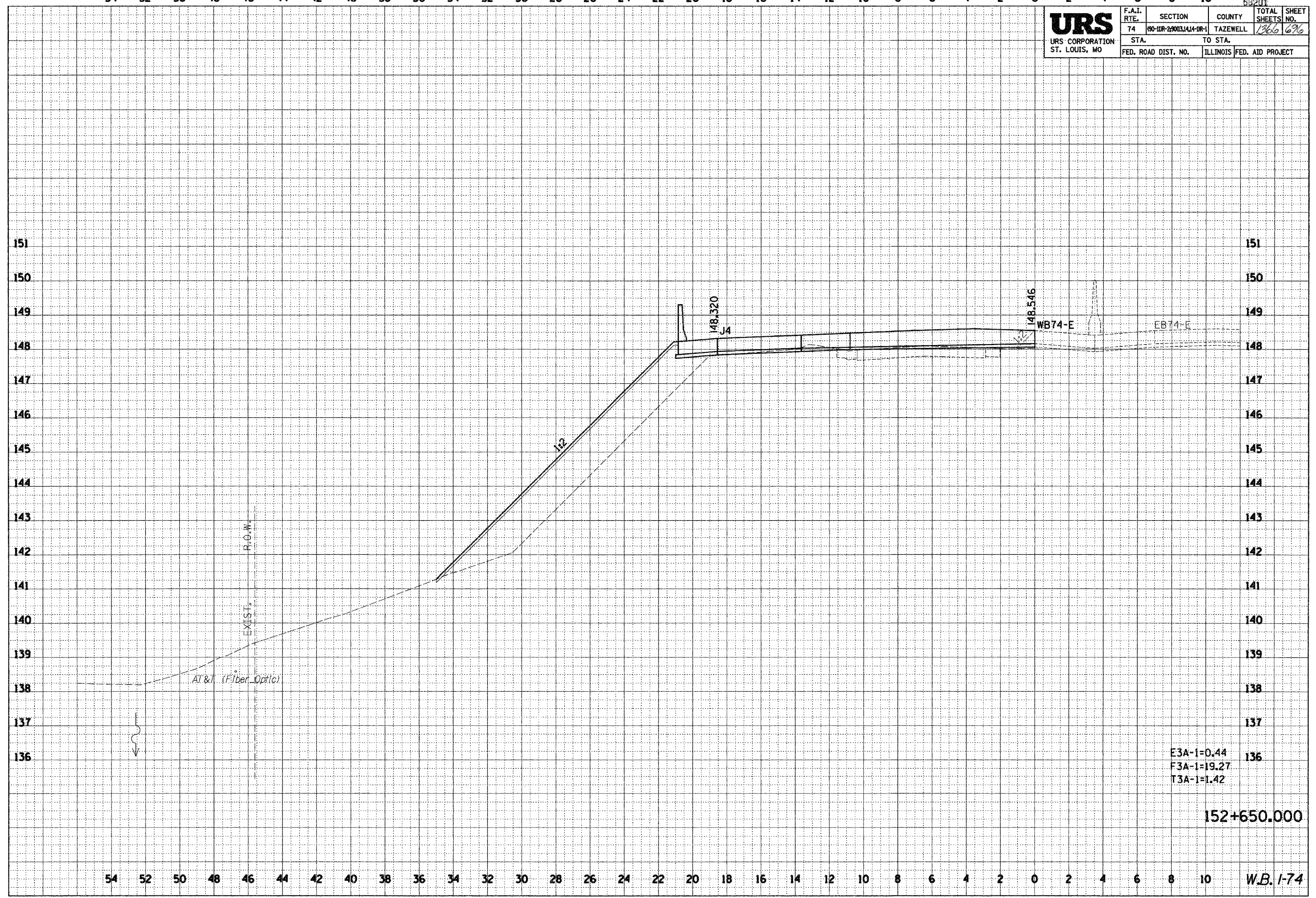
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59201

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	74	190-11R-29003,14,14-1R-1	TAZEWELL	1366	676
	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
NOTE BOOK	BY
AREAS CHECKED	

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
AREAS CHECKED	





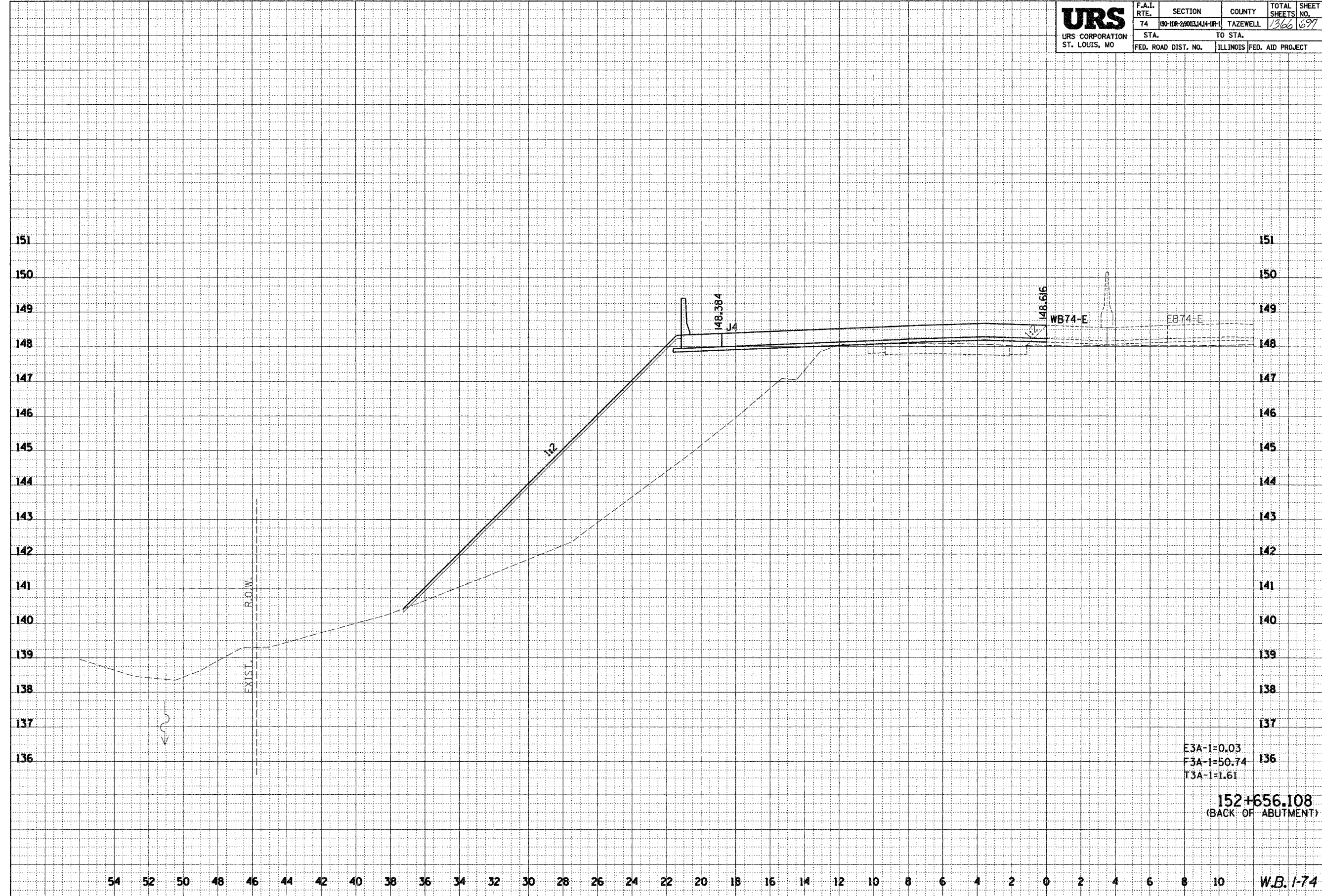
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<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
NO. _____	_____	_____
PLOTTED	BY	DATE
NO. _____	_____	_____
AREAS CHECKED	BY	DATE
NO. _____	_____	_____

ORIGINAL SURVEY	BY	DATE
NO. _____	_____	_____
PLOTTED	BY	DATE
NO. _____	_____	_____
AREAS CHECKED	BY	DATE
NO. _____	_____	_____



E3A-1=0.03	
F3A-1=50.74	136
T3A-1=1.61	

152+656.108  
(BACK OF ABUTMENT)

54 52 50 48 46 44 42 40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 W.B. 1-74

Phase2\ra\1102-5am.dgn 12/19/2006 2:21:32 PM

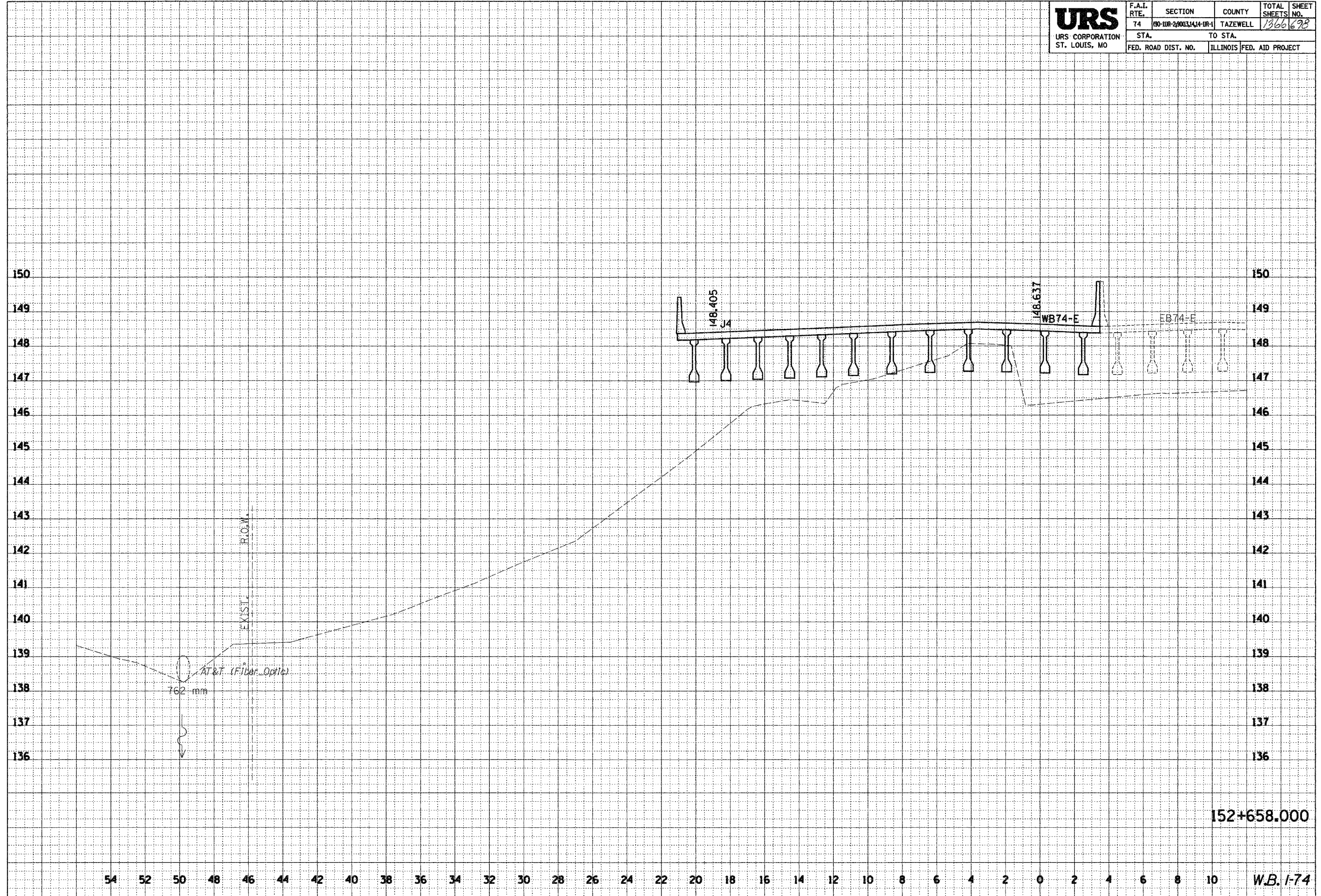
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68201

<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	00-11R-29033(44-1R-1)	TAZEWELL	1366	698
STA.		TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
AREAS CHECKED	
NO.	

ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
AREAS CHECKED	
NO.	



152+658.000

54 52 50 48 46 44 42 40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10

W.B. 1-74

Phase2\ra\101-565-565-12-2 12/19/2007

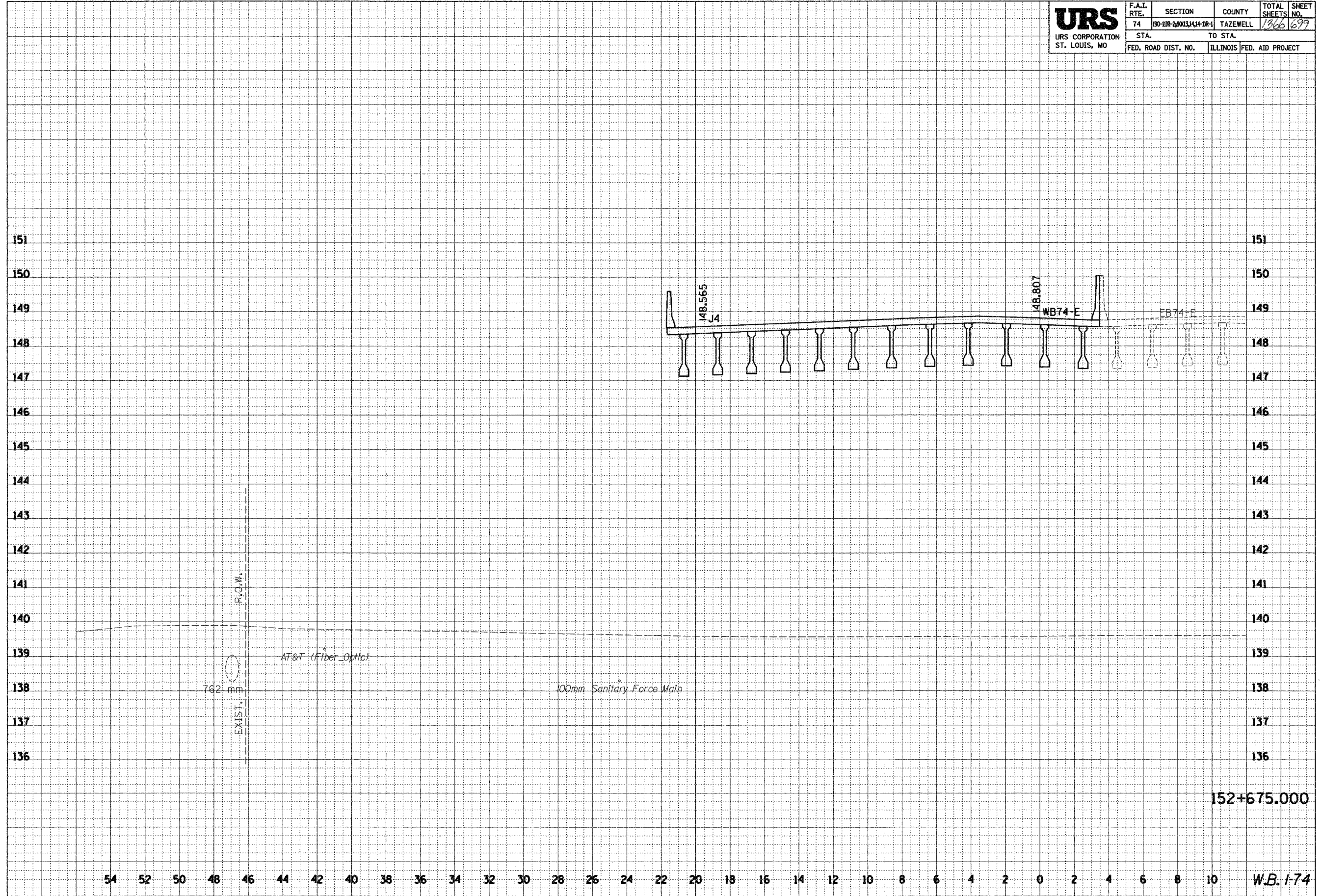
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68201

<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	100-11R-22003(44-1R-1)	TAZEWELL	1966	679
STA.		TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS	
AREAS CHECKED	



152+675.000

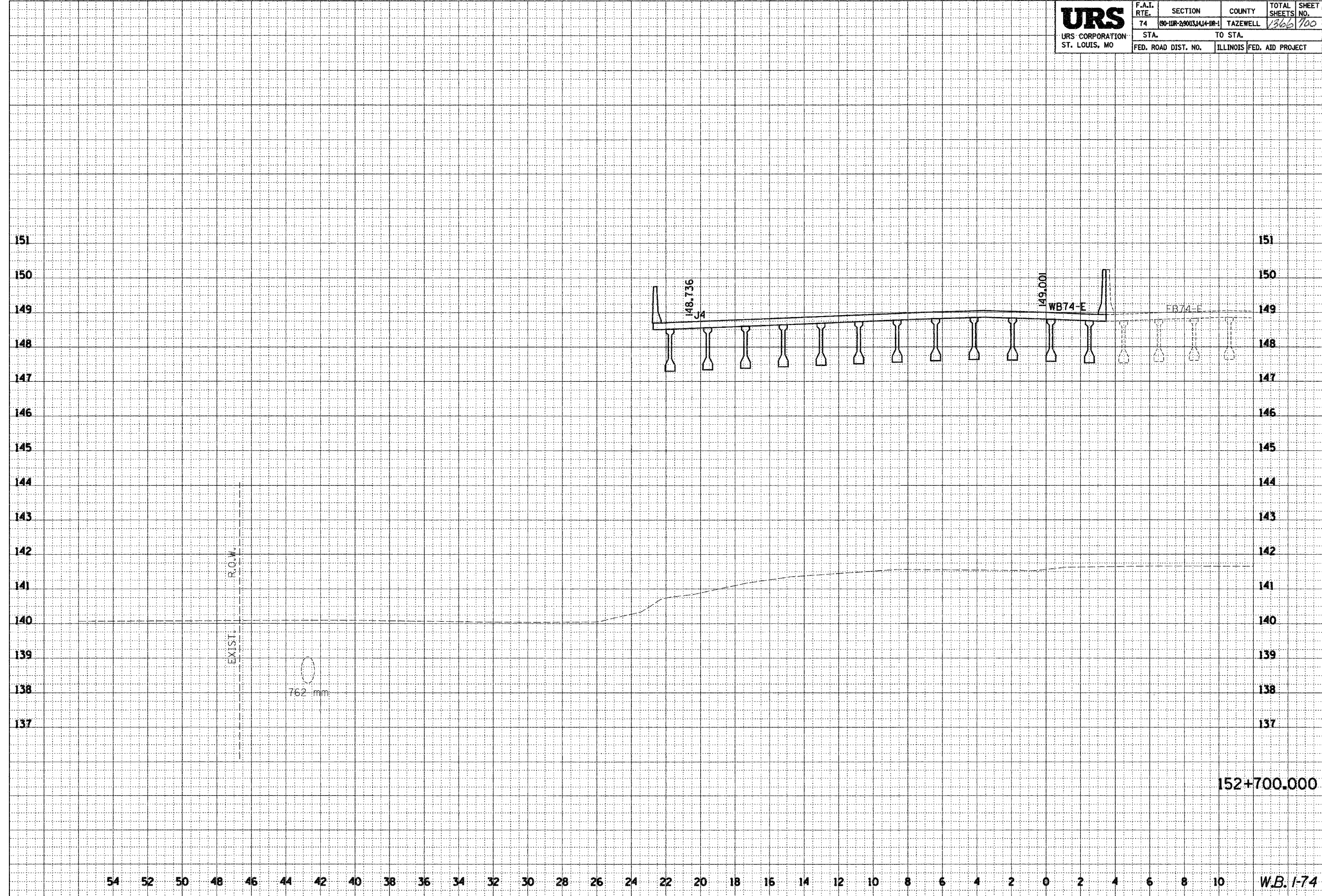
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54 52 50 48 46 44 42 40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 68201

<b>URS</b> URS CORPORATION ST. LOUIS, MO	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	(90-1UR-29003A14+1R-1	TAZEWELL	1366	100
	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS	AREAS	
AREAS CHECKED	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS	AREAS	
AREAS CHECKED	AREAS CHECKED	



152+700.000

54 52 50 48 46 44 42 40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 W.B. I-74

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