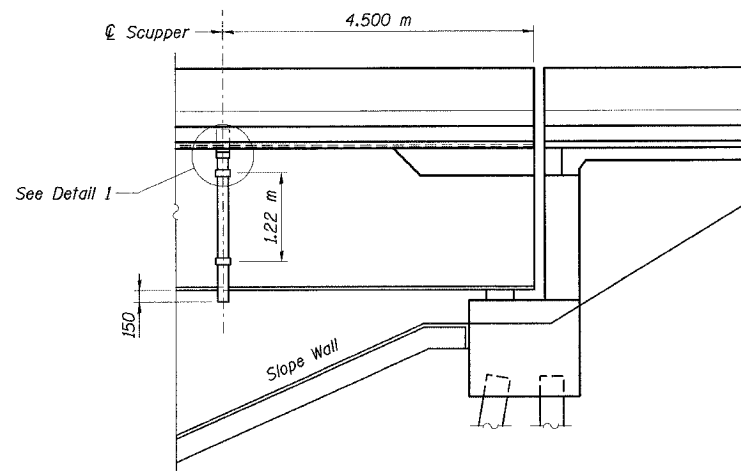
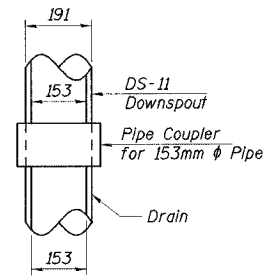


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

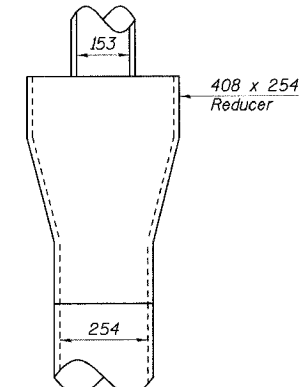
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F. A. I. 80/94	0203.1B	COOK	200	102	91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-			CONTRACT NO. 62854		



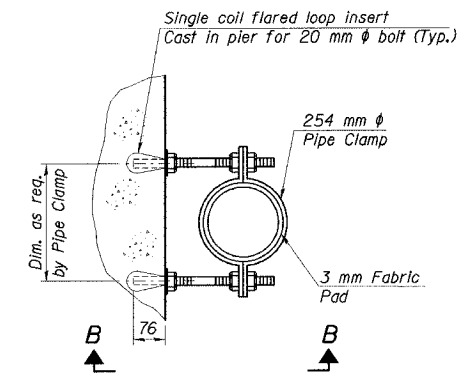
ABUTMENTS



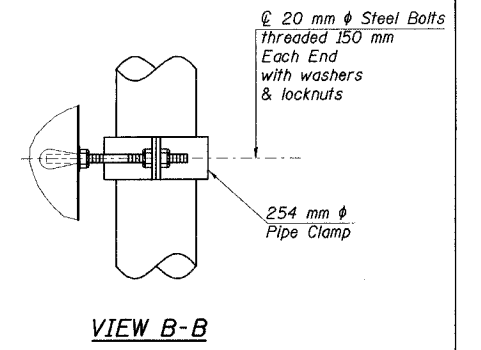
DETAIL 1



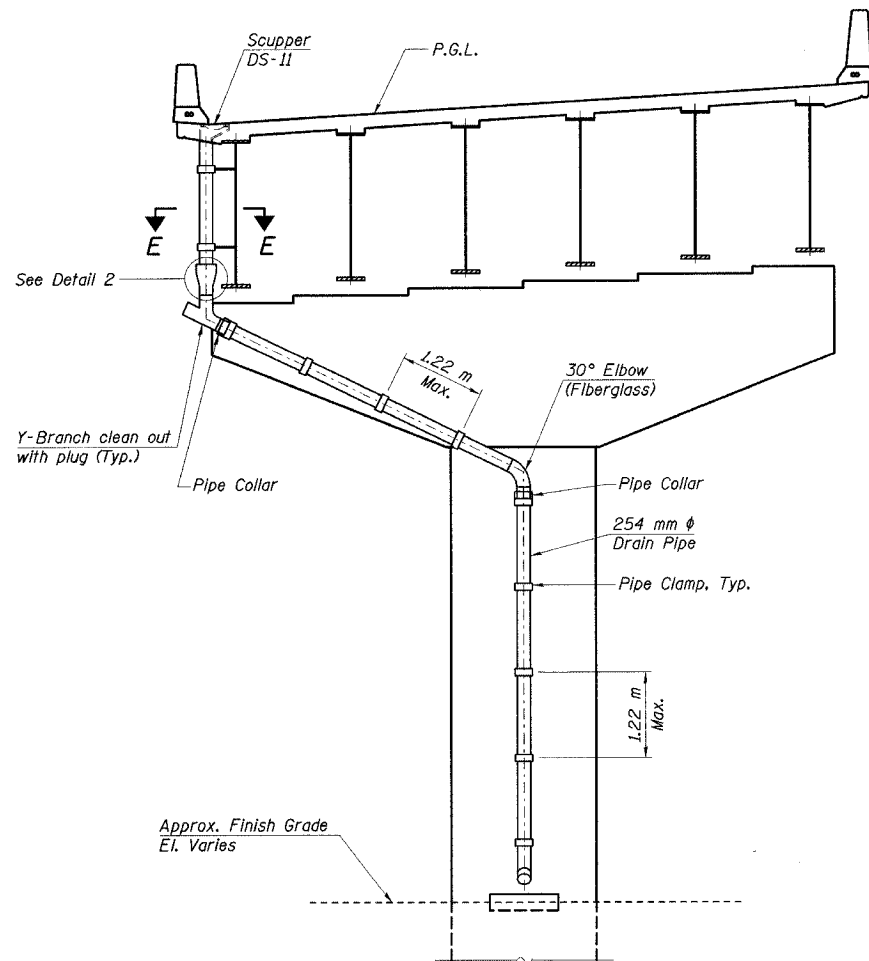
DETAIL 2



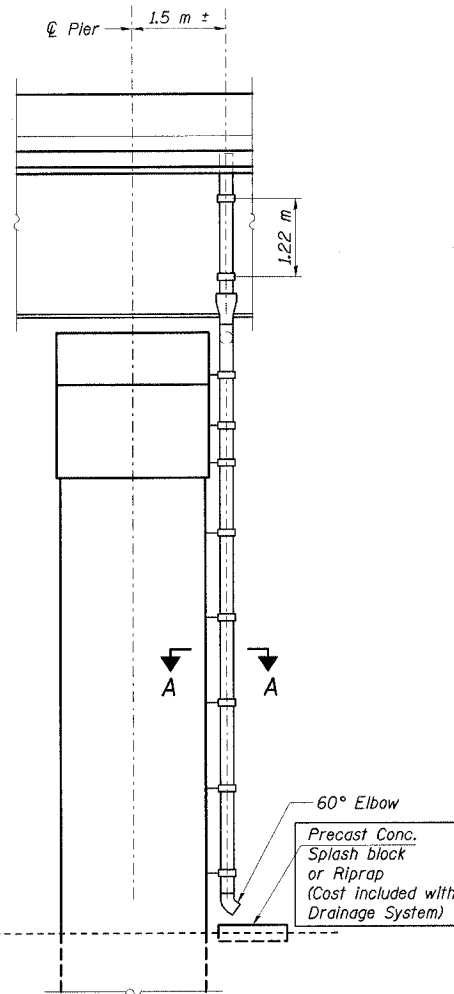
SECTION A-A



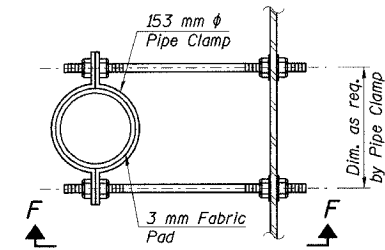
VIEW B-B



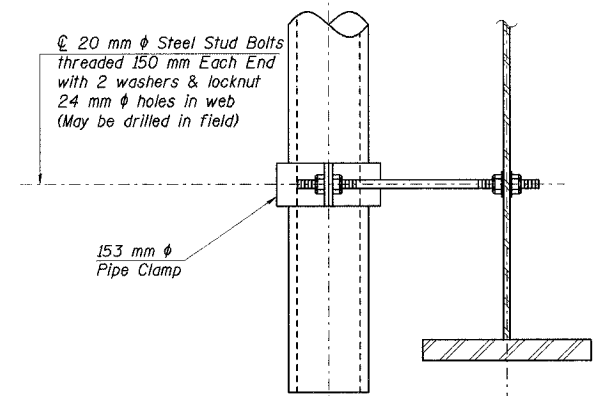
ELEVATION
PIERS 2, 3 & 6



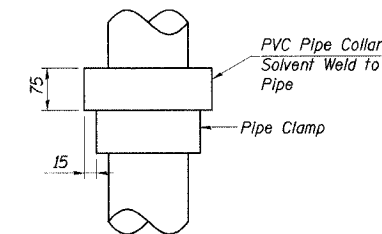
END VIEW



SECTION E-E



VIEW F-F



PIPE COLLAR DETAIL

DESIGNED	GPM
CHECKED	JJK
DRAWN	GPM
CHECKED	JJK

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Notes:

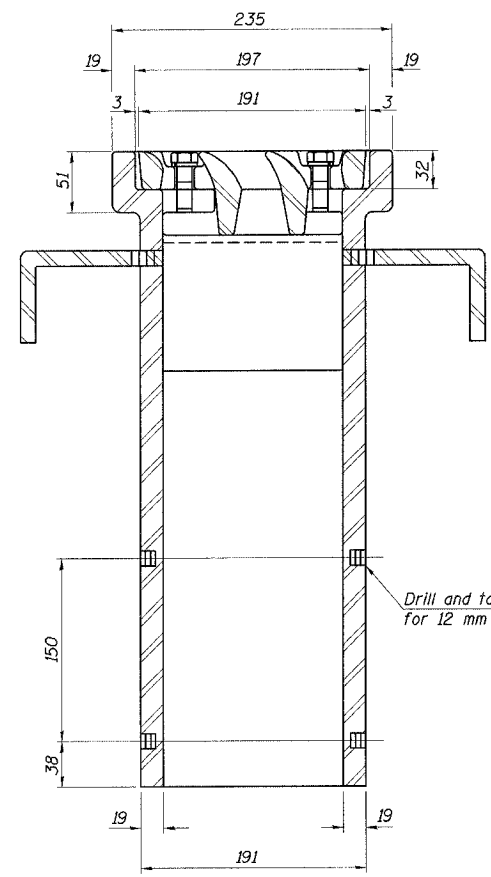
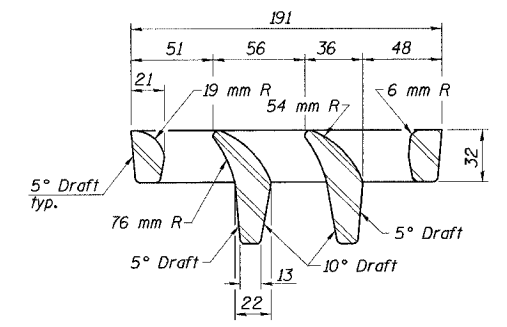
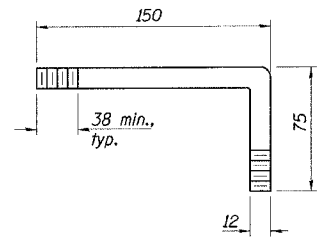
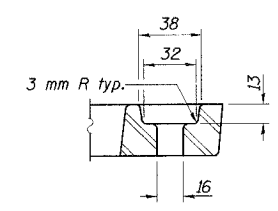
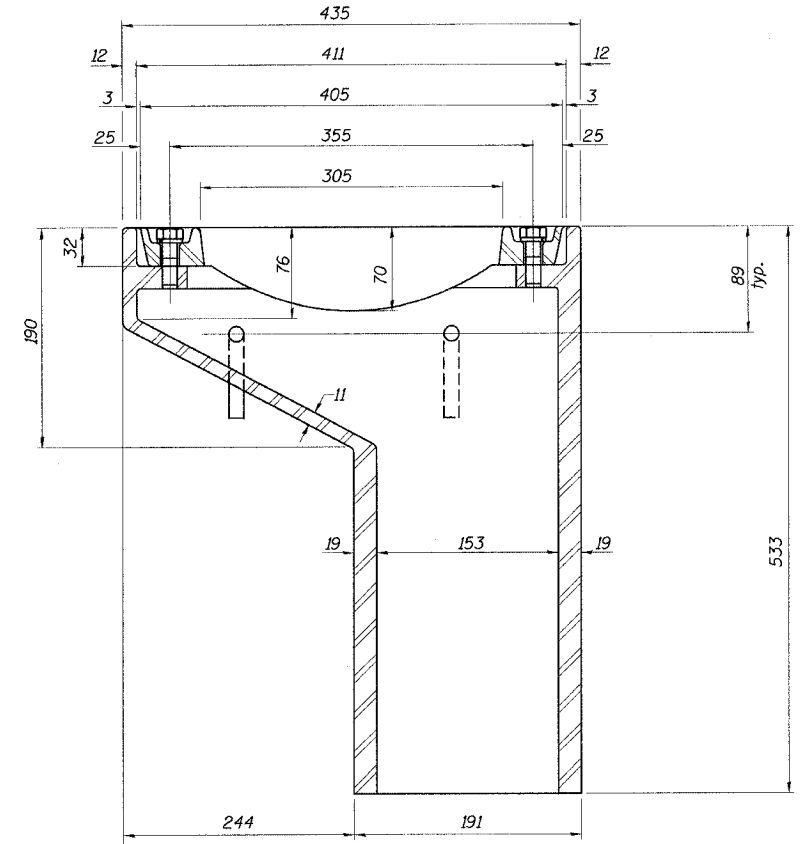
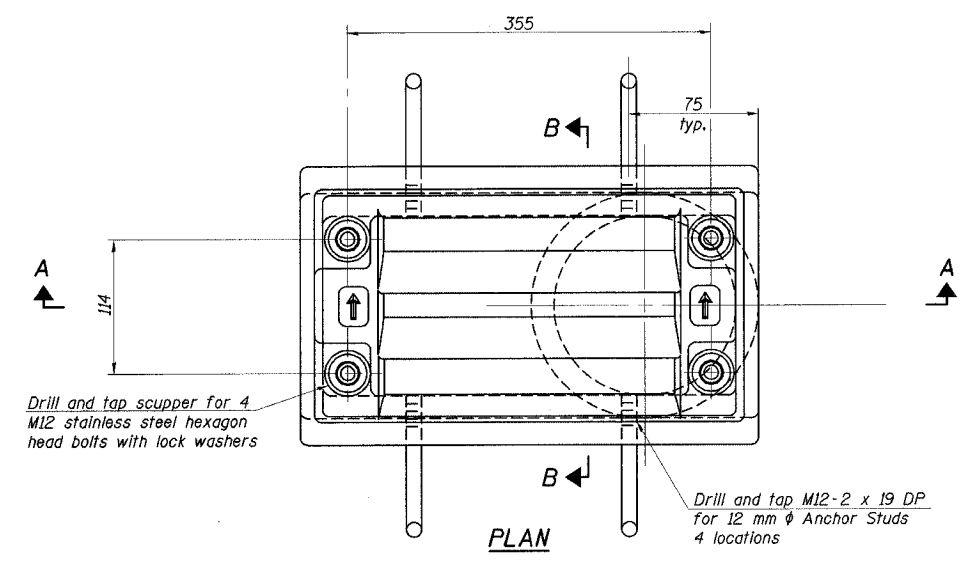
1. All dimensions are in mm except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
DRAINAGE DETAILS
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 41 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	103	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		



Notes:

- All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
- Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232M.
- The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
- As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
- Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
- The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
- Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.
- All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-11	Each	5

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DESIGNED	---
CHECKED	---
DRAWN	GPM
CHECKED	JJK

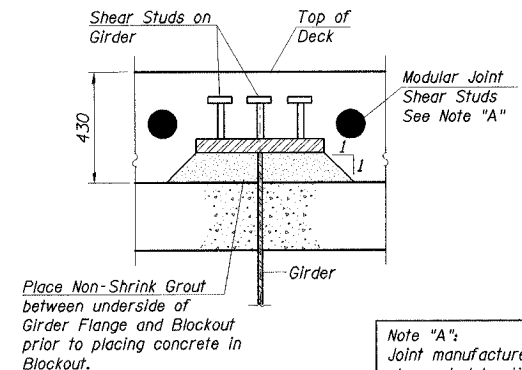
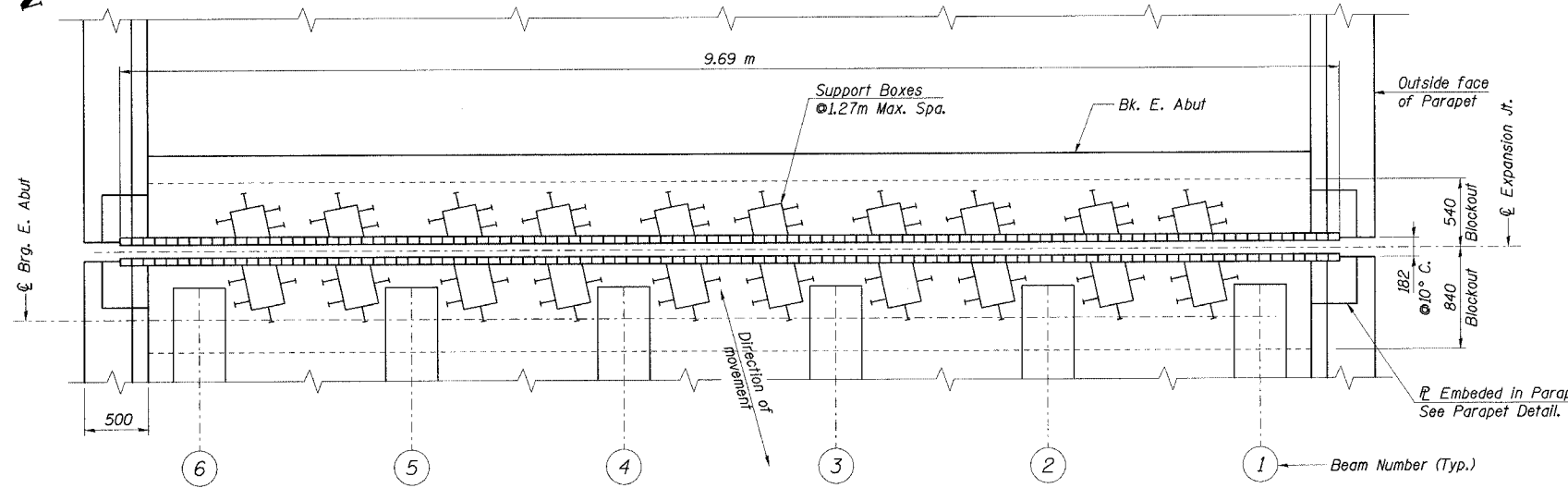
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
DRAINAGE SCUPPER DS-11
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 42 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	104	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			

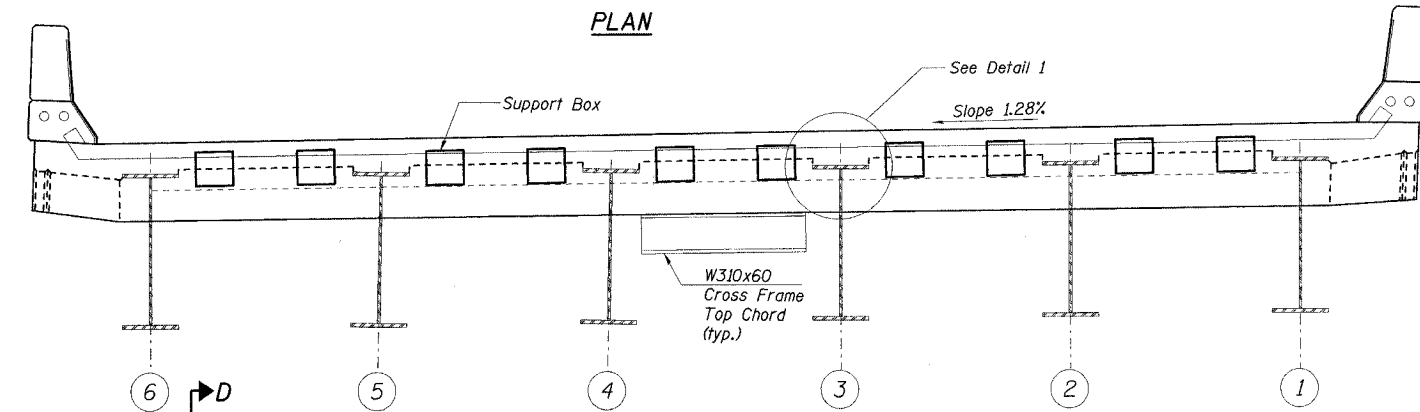
CONTRACT NO. 62854



Note "A":
Joint manufacturer shall design joint shear stud location to miss the girder's end shear studs.

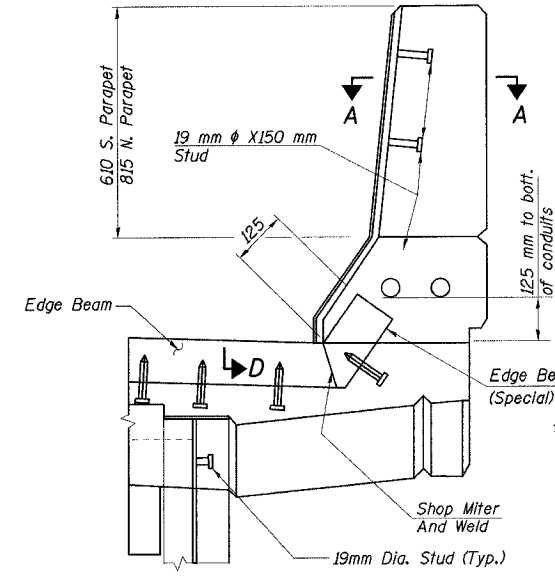
DETAIL 1

- Notes:
1. Modular Expansion Joint shall be designed in accordance with the latest AASHTO Specifications for MS-18 truck loading with impact.
 2. The expansion joint device shall be prefabricated modular assembly with multiple support bars and separator beams, providing a continuous seal across the deck.
 3. Joint shall be fabricated and installed according to the manufacturer's recommendations and as shown in Special Provisions for Modular Expansion Joints and as approved by the Engineer.
 4. Joint shall be fabricated to conform to the roadway profile and cross-slopes.
 5. All exposed structural steel elements such as separator and edge beams support bars and cover plate shall be fabricated with AASHTO M270M Grade 345 Steel unless specified otherwise by the manufacturer.
 6. Cost of furnishing all material and installing of the sliding plate assembly at the parapets shall be included with Modular Expansion Joints. Sliding Plate Assembly shall be galvanized.
 7. Modular Expansion Joints shall be shipped in one piece unless noted.
 8. No aluminum components shall be allowed.
 9. All splices of center beams and edge beams shall be full penetration welds (Uprun splices may be partial penetration welds).
 10. See Deck Plans for reinforcement bar details and block-out dimensions.
 11. All dimension are in millimeters (mm) except as noted.
 12. CTSK, bolts and Concrete inserts to be Hot-Dipped Galvanized according to AASHTO M232.
 13. The Cost of Furnishing the Barrier Plates, the CTSK, bolts, the Stud Anchors and the installation of these items are included with Modular Expansion Joint.
 14. Concrete anchor shall be according to Article 1006.32 of the Standard Specifications.
 15. All anchor studs shall be included with Modular Expansion Joint (unless noted otherwise).
 16. Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the blockout is cast at an ambient temperature other than 10°C.



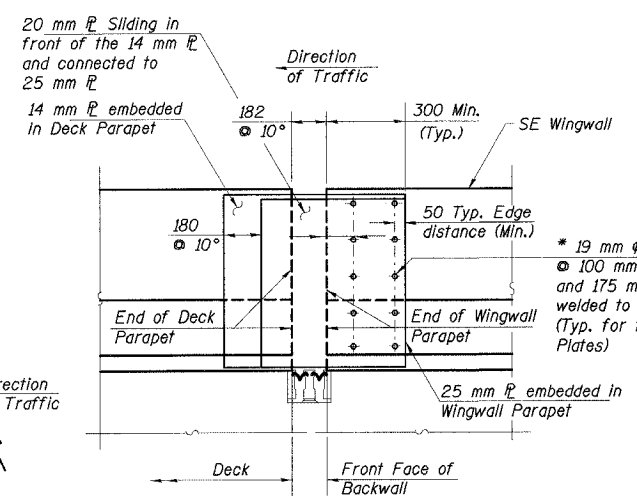
CROSS SECTION

Looking East at Abutment
All dimensions are measured radially



PARAPET DETAIL

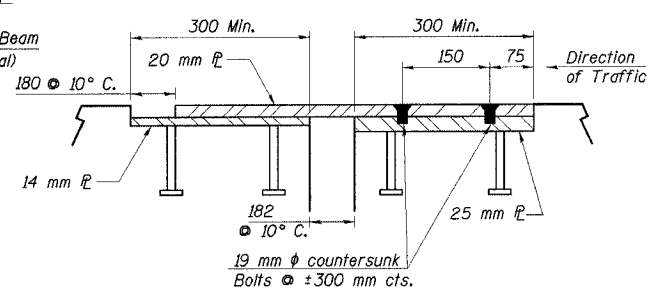
DESIGNED	GPM
CHECKED	DD
DRAWN	JRB/LK
CHECKED	GPM



ELEVATION VIEW D-D

North Parapet shown (Looking North)
South Parapet similar

* Countersunk Bolts 20 mm ϕ not shown for clarity.



SECTION A-A

BILL OF MATERIAL

Item	Unit	Total
Erecting Modular Expansion Joint 160mm	m	9.7

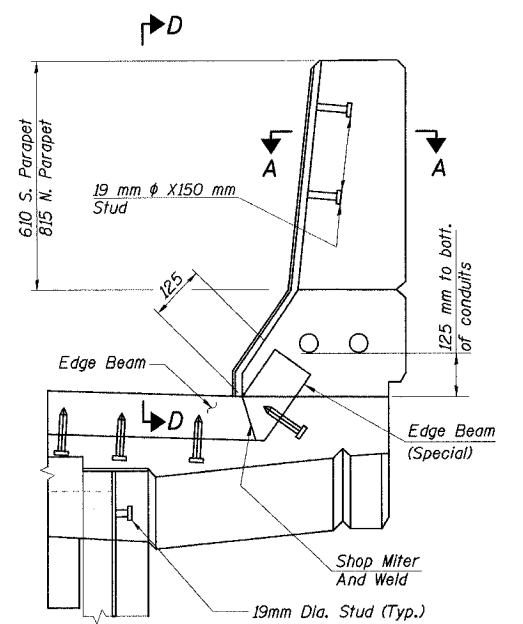
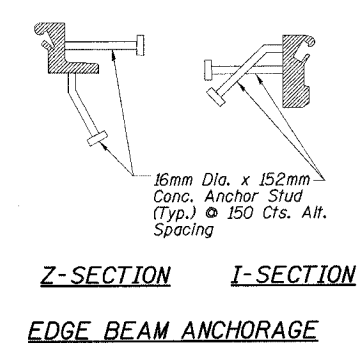
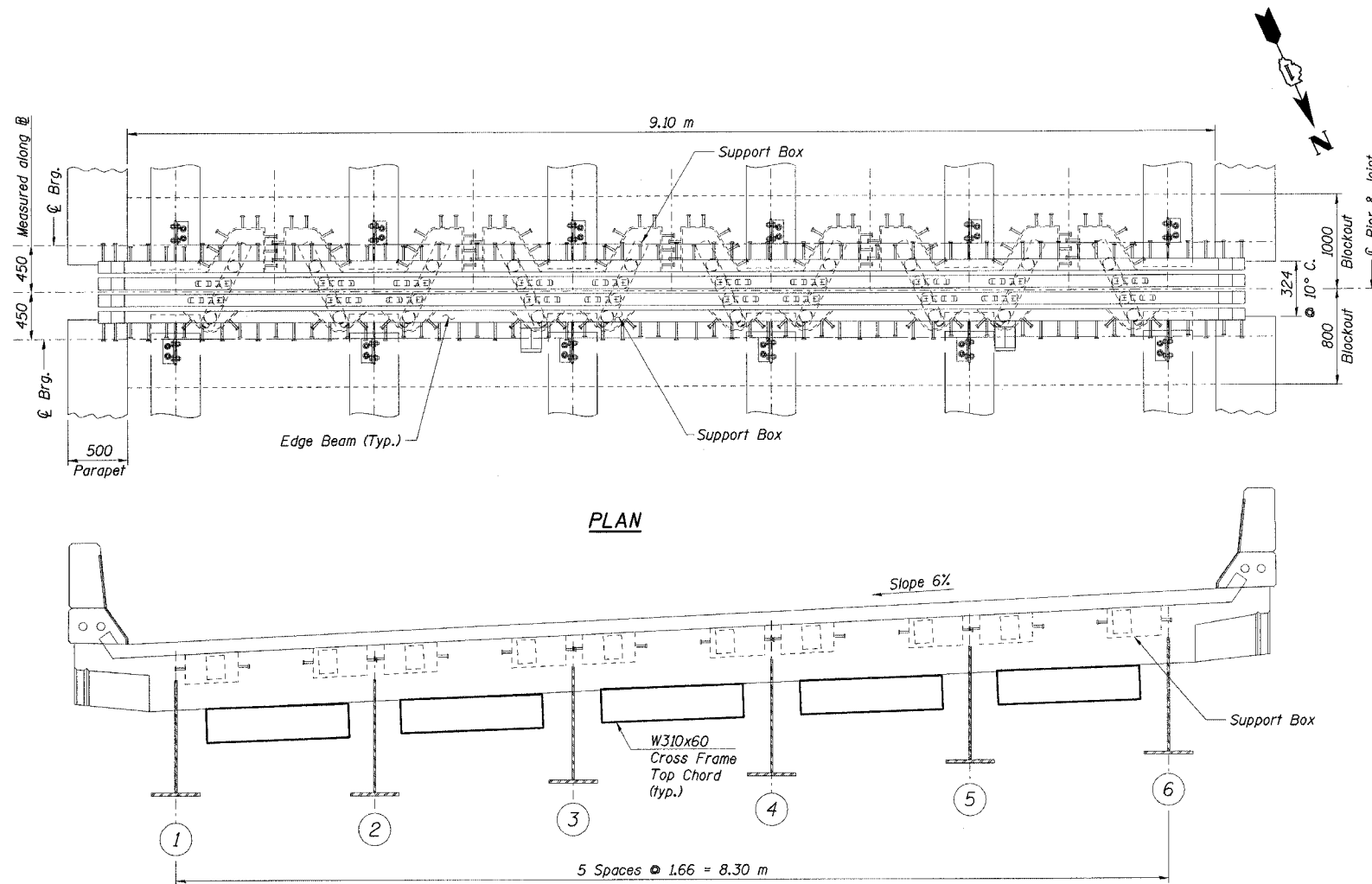
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
MODULAR EXPANSION JOINT DETAILS
AT EAST ABUTMENT
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 43 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	105	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



CROSS SECTION

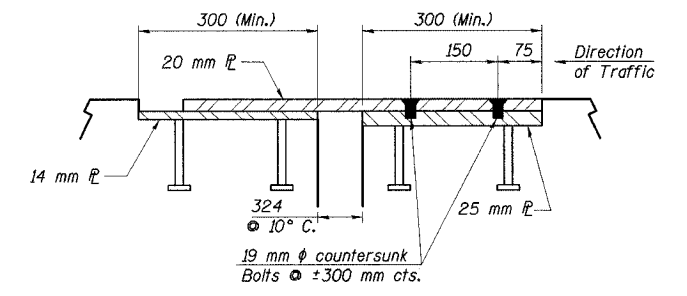
Looking Up Station
All dimensions are measured radially

Notes:

- Modular Expansion Joint shall be designed according to the latest AASHTO Specifications for MS18 truck loading with impact.
- Joint shall be fabricated and installed according to the manufacturer's recommendations and as shown in Special Provisions for Modular Joint System and as approved by the Engineer.
- Joint shall be fabricated to conform to the roadway profile and cross-slopes.
- All Structural Steel elements such as separator beams, edge beams & support bars shall be fabricated with AASHTO M 270M Grade 345 Steel unless specified otherwise by the manufacturer.
- Barrier Plates to be AASHTO M270, Grade 36 and to be Hot-Dipped Galvanized according to AASHTO M111 after fabrication.
- CTSK. bolts and Concrete Inserts to be Hot-Dipped Galvanized according to AASHTO M232.
- The Cost of Furnishing the Barrier Plates, the CTSK. bolts, the Stud Anchors and the installation of these items are included with Modular Expansion Joint.
- Modular Expansion Joints shall be shipped in one piece unless noted.
- Concrete Anchor Studs shall satisfy Article 1006.32 of the Standard Specifications.
- All splices of center beams and edge beams located in the roadway shall use full penetration welds. (Upturn splices may be partial penetration welds).
- The Swivel modular expansion joint shall be either the MAURER Swivel system by the D. S. Brown Company, or the WABO X-CEL system by the Watson Bowman Acme Corporation. The joint shall provide the following movement:
- Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the blockout is cast at an ambient temperature other than 10°C.
- See Deck Reinforcement plans for bar sizes and designation and blockout dimensions.
- All dimensions are in mm except as noted.
- The expansion joint device shall be prefabricated modular assembly with multiple support bars and separator beams, providing a continuous seal across the deck.
- Modular Expansion Joints shall be shipped in one piece unless noted.
- No aluminum components shall be allowed.

Location	Longitudinal Movement (mm)	Differential Non-Parallel Long. Movement (mm)	Size (mm)
Piers 3 & 6	200	150	240

All Anchor Studs Shall Be Included With Modular Expansion Joint. (Unless Noted)



SECTION A-A

BILL OF MATERIAL

Item	Unit	Total
Erecting Modular Expansion Joint - Swivel 240mm	m	19.4

Note:
All dimensions are in millimeters except as noted.

DESIGNED	GPM
CHECKED	DD
DRAWN	JRB
CHECKED	GPM

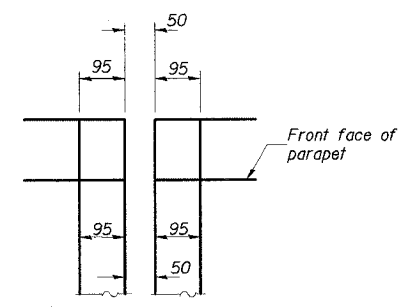
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
SWIVEL MODULAR EXPANSION JOINT
DETAILS AT PIERS 3 & 6
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

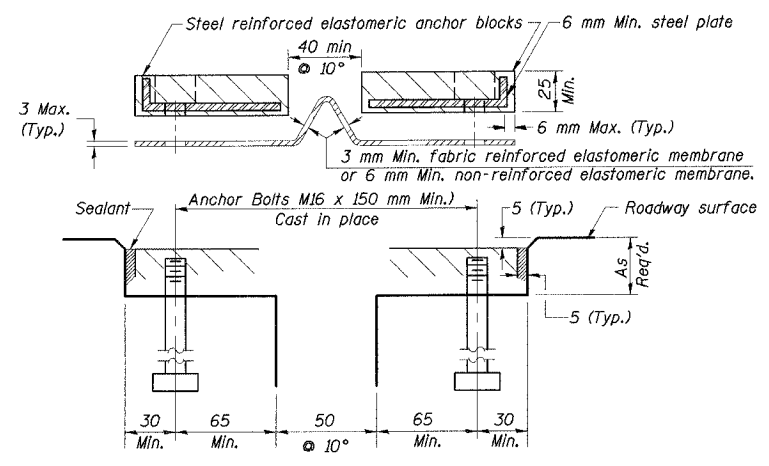
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F. A. I. 80/94	0203.1B	COOK	200	106	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62854	



FORMING BLOCKOUT SKETCH



CROSS SECTION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be preformed with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

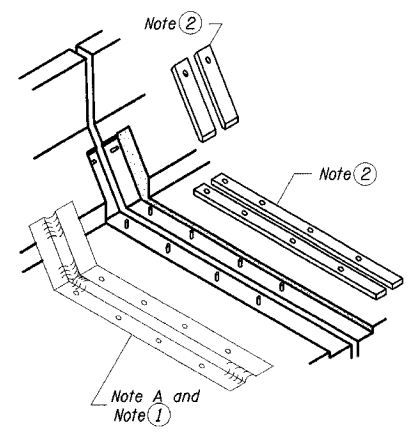
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 10 °C.

The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

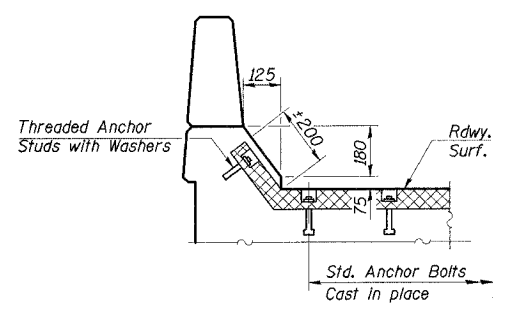
All dimensions are in millimeters (mm) except as noted.

- INSTALLATION NOTES**
- Install continuous seal in roadway, parapet, curb, and sidewalk.
 - Install anchor blocks as indicated.
- NOTE A: Maximum spacing of anchor bolts shall be 300 centers.

Item	Unit	Quantity
Neoprene Expansion Joint 50 mm.	m	9.50

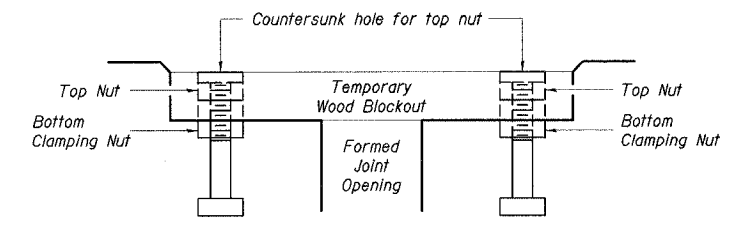


AT PARAPET



AT PARAPET

TYPICAL END TREATMENT



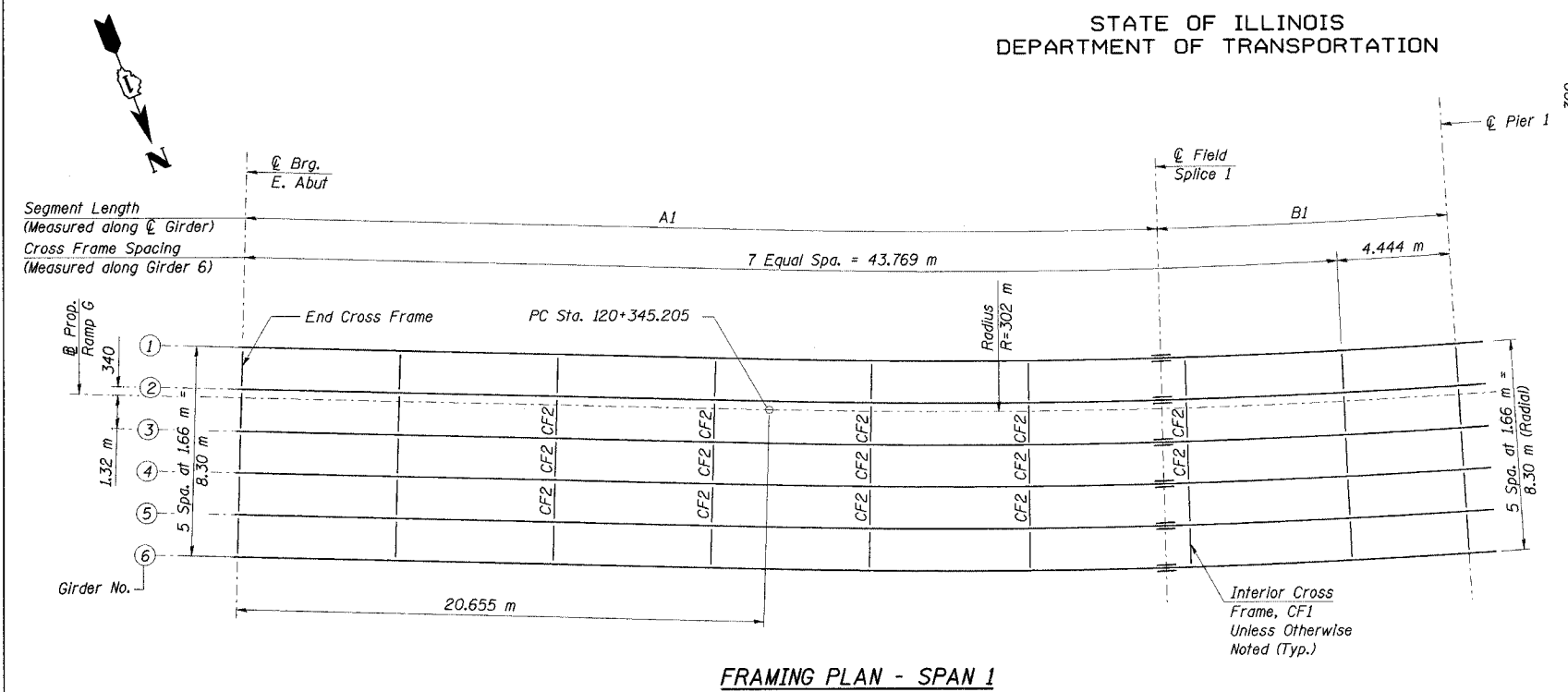
RECOMMENDED BLOCKOUT DETAIL

Note: Stud needs to be threaded lower to allow for use of clamping nut.

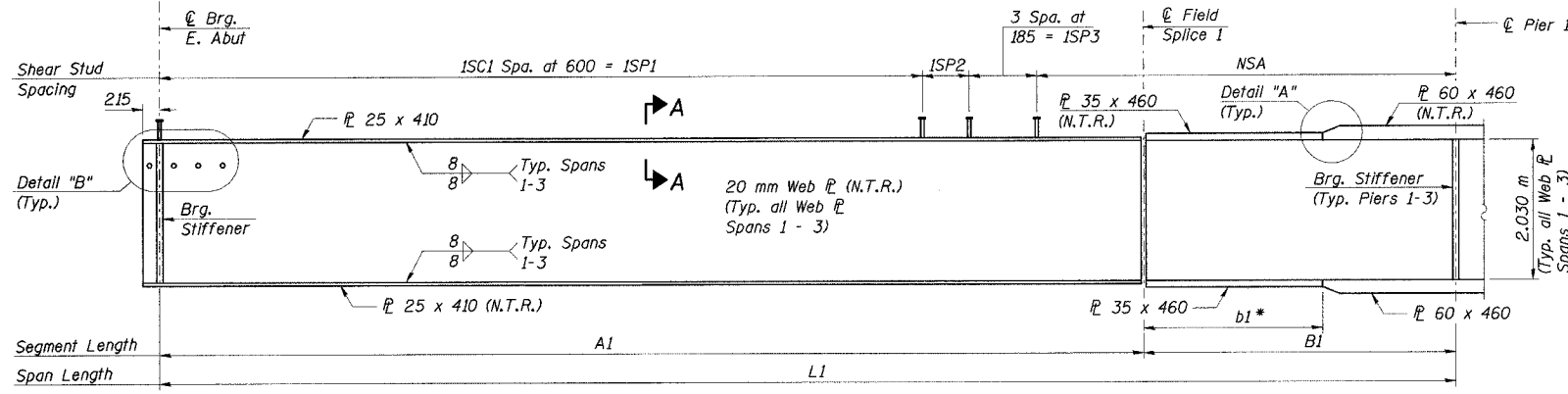
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DESIGNED	GPM
CHECKED	DD
DRAWN	JRB
CHECKED	GPM

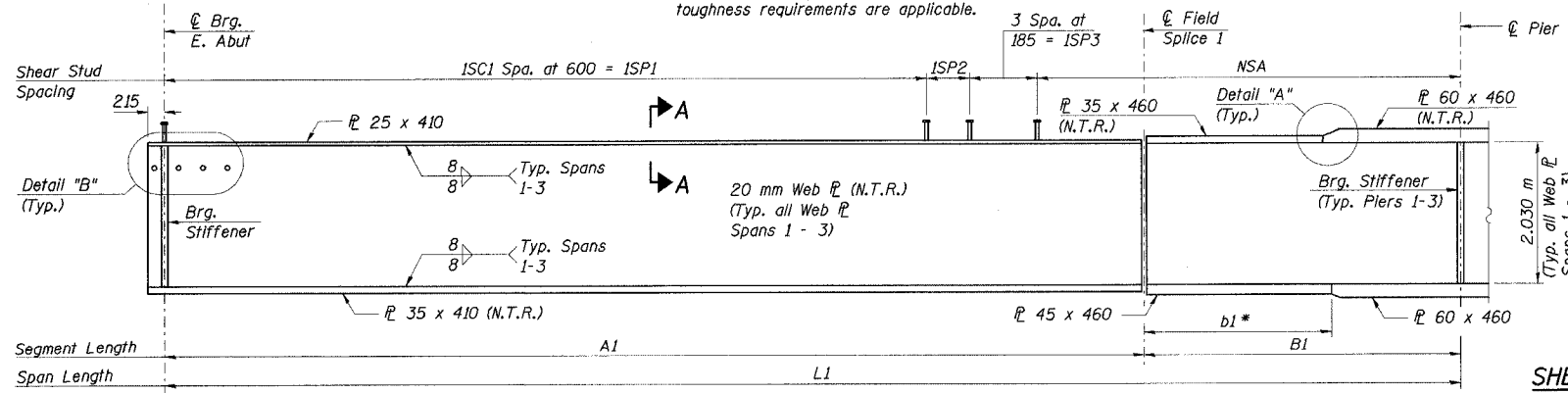
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/I1 394 SOUTH BOUND
NEOPRENE EXPANSION JOINT
AT WEST ABUTMENT
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB



FRAMING PLAN - SPAN 1

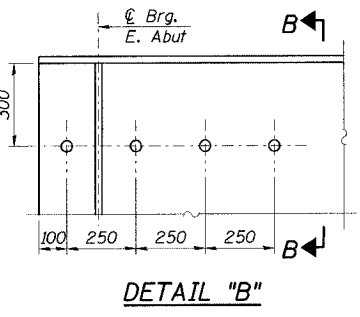


ELEVATION - GIRDERS 1 THRU 3



ELEVATION - GIRDERS 4 THRU 6

DESIGNED	ACF
CHECKED	GPM
DRAWN	JRB
CHECKED	PCA/MEA



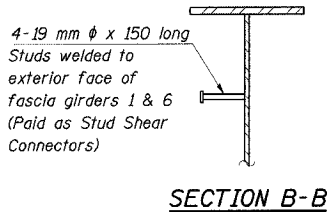
DETAIL "B"

GIRDER DIMENSIONS (Meters)

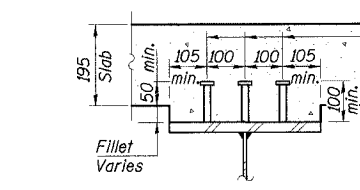
Girder	Radius	L1	A1	B1	b1
1	300.00	47.471	35.630	11.841	7.371
2	301.66	47.620	35.713	11.907	7.412
3	303.32	47.768	35.796	11.972	7.452
4	304.98	47.917	35.879	12.038	7.493
5	306.64	48.065	35.962	12.103	7.534
6	308.30	48.213	36.044	12.169	7.575

BEARING STIFFENER WIDTH DIMENSION "A" AT PIERS (Millimeters)

Girder	Pier 1,4,7,8	Pier 5	Pier 2	Pier 3 East	Pier 6 East	Pier 3 & 6 West
1 thru 3	220	220	220	190	190	190
4 thru 6	220	270	270	220	270	190

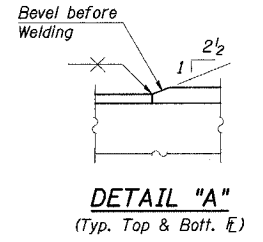


SECTION B-B

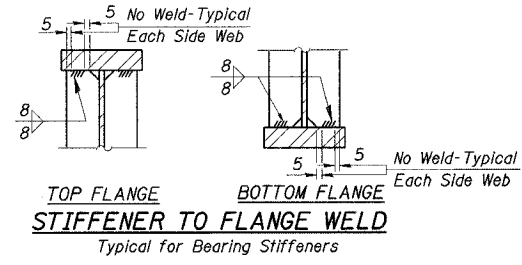


SECTION A-A

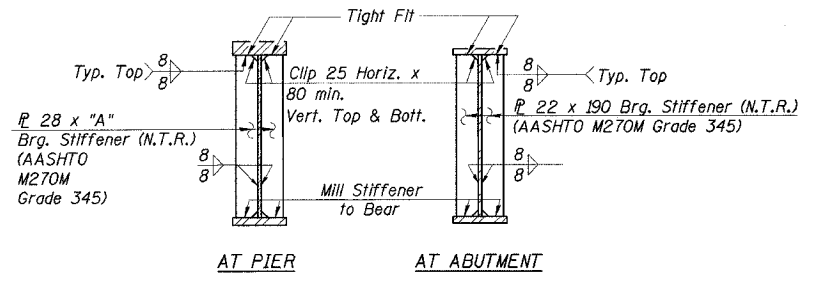
19 mm ϕ Granular or solid flux filled headed studs automatically end welded to flange. (No. Req'd. = 11,438) Includes 44 at end of girder at modular joint.



DETAIL "A" (Typ. Top & Bott. E)



TOP FLANGE
BOTTOM FLANGE
STIFFENER TO FLANGE WELD
Typical for Bearing Stiffeners



BEARING STIFFENERS

- Notes:
- All flange plates and web plates shall be AASHTO M270M Grade 345.
 - Work this sheet with Sheet Nos. 46, 47 & 48 of 91.
 - Place all cross frames radially, except the End Cross Frame at Piers 3.
- * Top & Bottom

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	ISC1	ISP1	ISP2	ISP3	NSA
1	51	30.600	0.556	0.555	15.760
2	51	30.600	0.265	0.555	16.200
3	50	30.000	0.571	0.555	16.642
4	50	30.000	0.275	0.555	17.087
5	49	29.400	0.576	0.555	17.534
6	49	29.400	0.275	0.555	17.983

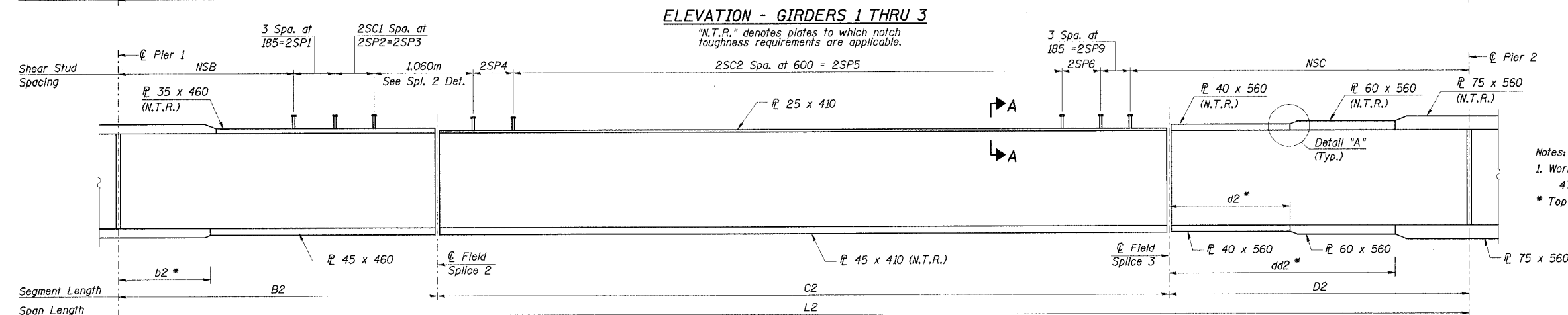
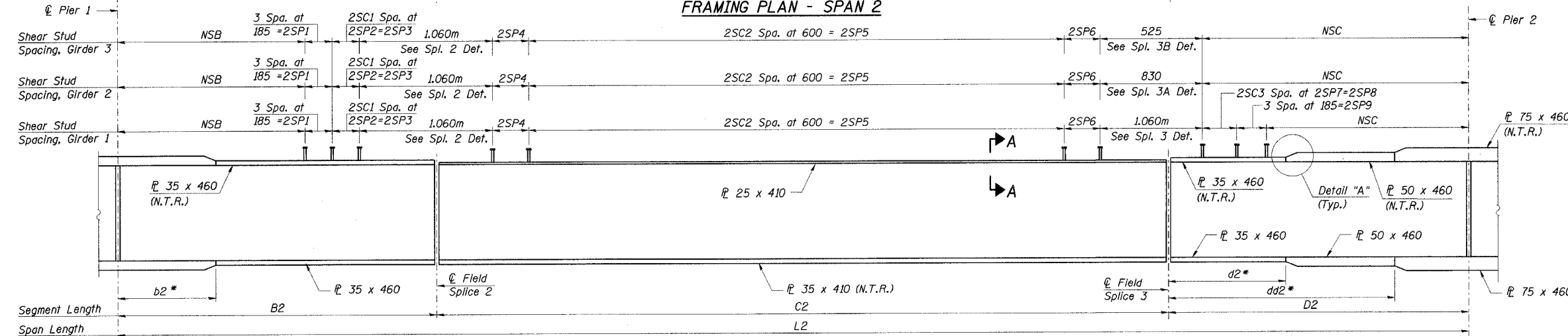
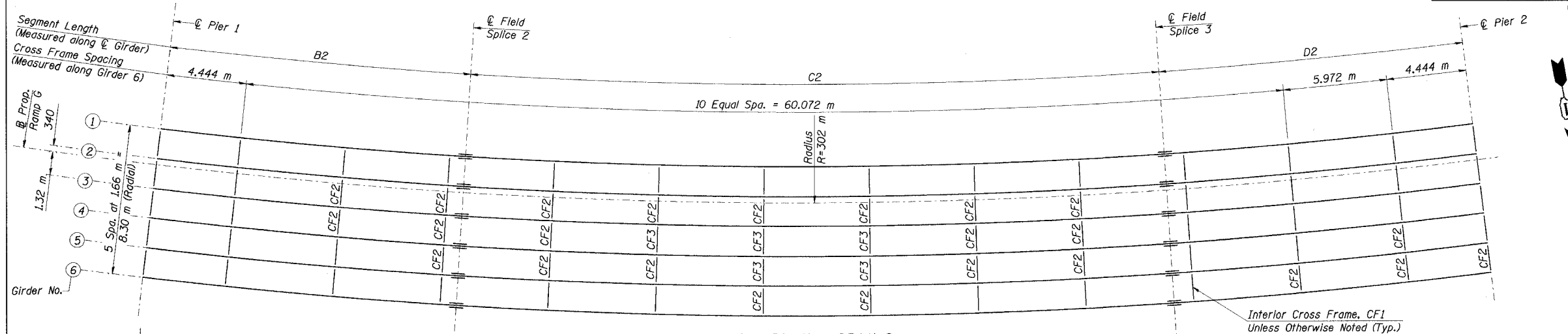
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 1
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 46 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	108	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



GIRDER DIMENSIONS (Meters)

Girder	Radius	L2	B2	b2	C2	D2	d2	dd2
1	300.00	72.914	17.464	4.470	36.755	18.695	8.414	14.225
2	301.66	73.317	17.560	4.495	36.958	18.799	8.460	14.304
3	303.32	73.721	17.657	4.520	37.162	18.902	8.507	14.383
4	304.98	74.124	17.753	4.544	37.365	19.006	8.554	14.461
5	306.64	74.527	17.850	4.569	37.568	19.109	8.600	14.540
6	308.30	74.932	17.947	4.594	37.772	19.213	8.647	14.619

ELEVATION - GIRDERS 4 THRU 6

"N.T.R." denotes plates to which notch toughness requirements are applicable.

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	NSB	2SP1	2SC1	2SP2	2SP3	2SP4	2SC2	2SP5	2SP6	2SC3	2SP7	2SP8	2SP9	NSC
1	15.239	0.555	2	0.570	1.140	0.148	59	35.400	0.147	1	0.075	0.075	0.555	17.535
2	15.029	0.555	3	0.482	1.446	0.249	59	35.400	0.249	0	0.000	0.000	0.000	18.499
3	14.817	0.555	3	0.585	1.755	0.095	59	35.400	0.095	0	0.000	0.000	0.000	19.419
4	14.604	0.555	4	0.516	2.064	0.088	58	34.800	0.088	0	0.000	0.000	0.555	20.310
5	14.385	0.555	4	0.595	2.380	0.076	57	34.200	0.076	0	0.000	0.000	0.555	21.240
6	14.162	0.555	5	0.540	2.700	0.360	55	33.000	0.360	0	0.000	0.000	0.555	22.180

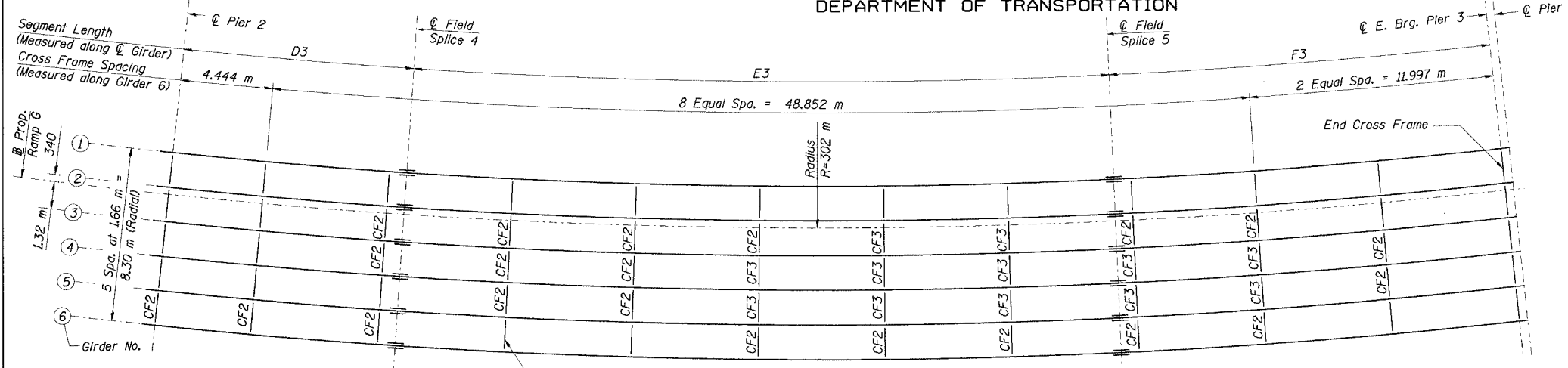
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 2
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---



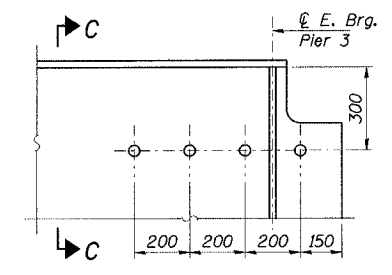
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

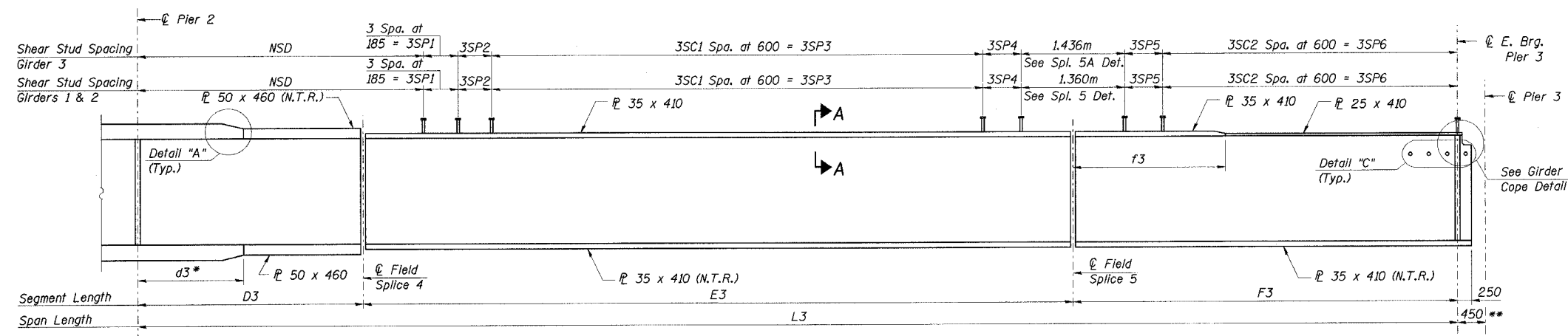
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 47 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	109	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854	



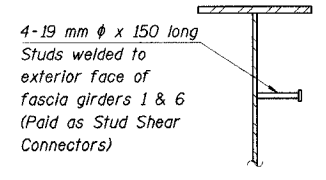
FRAMING PLAN - SPAN 3



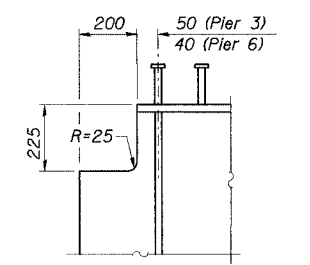
DETAIL "C"



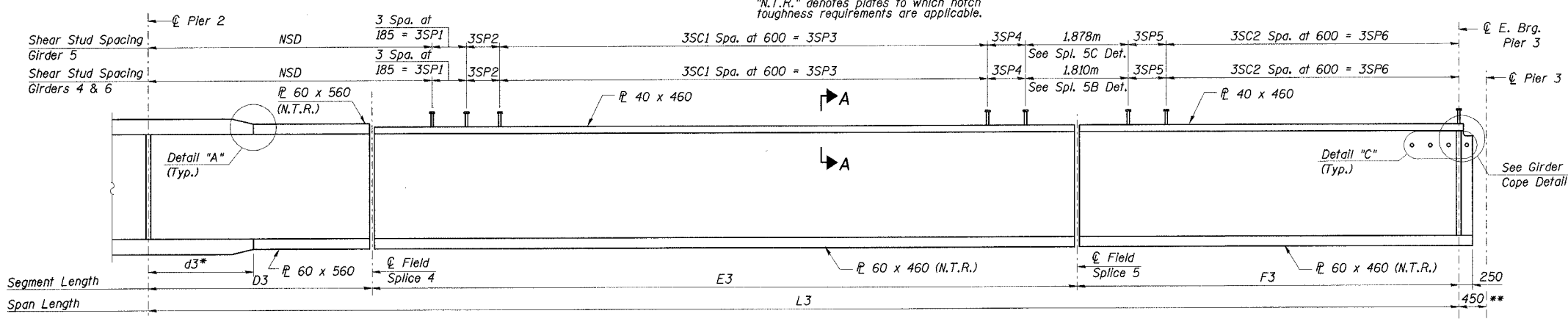
ELEVATION - GIRDERS 1 THRU 3



SECTION C-C



GIRDER COPE DETAIL



ELEVATION - GIRDERS 4 THRU 6

GIRDER DIMENSIONS (Meters)

DESIGNED	ACF
CHECKED	GPM
DRAWN	JRB
CHECKED	PCA/MEA

Girder	Radius	L3	D3	d3	E3	F3	f3
1	300.00	63.524	11.851	4.470	32.533	19.140	7.331
2	301.66	63.877	11.917	4.495	32.713	19.247	7.372
3	303.32	64.231	11.982	4.520	32.893	19.356	7.412
4	304.98	64.585	12.048	4.544	33.073	19.464	-
5	306.64	64.939	12.113	4.569	33.253	19.573	-
6	308.30	65.293	12.179	4.594	33.433	19.681	-

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	NSD	3SP1	3SP2	3SC1	3SP3	3SP4	3SP5	3SC2	3SP6
1	18.295	0.555	0.127	41	24.600	0.127	0.460	30	18.000
2	18.244	0.555	0.276	41	24.600	0.275	0.567	30	18.000
3	18.190	0.555	0.125	42	25.200	0.125	0.000	31	18.600
4	18.134	0.555	0.163	42	25.200	0.164	0.559	30	18.000
5	18.077	0.555	0.314	42	25.200	0.315	0.000	31	18.600
6	18.018	0.555	0.167	43	25.800	0.167	0.176	31	18.600

Notes:
1. Work this sheet with Sht. Nos. 45, 46 & 48 of 91.
* Top & Bottom.
** Dimension measured along @ Ramp G only.

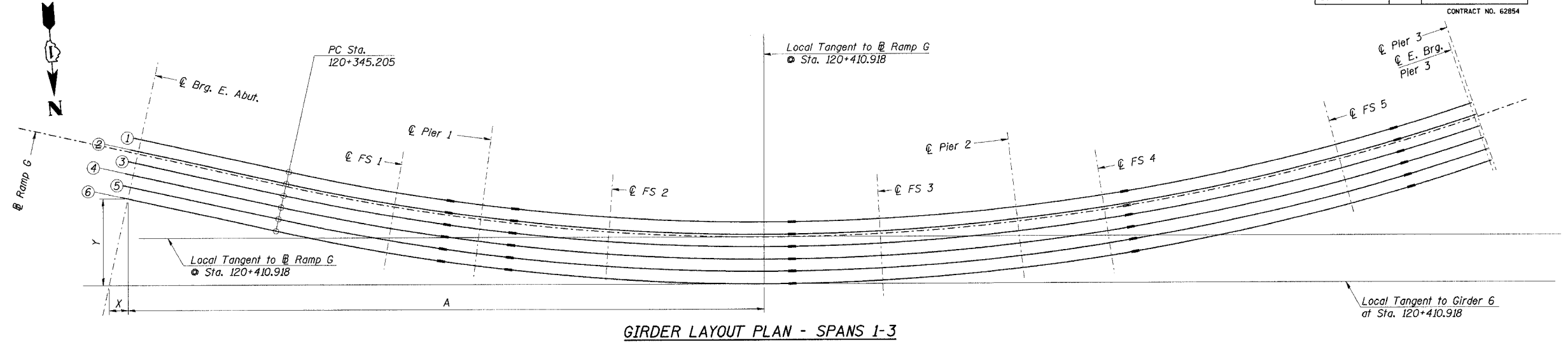
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 3
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---



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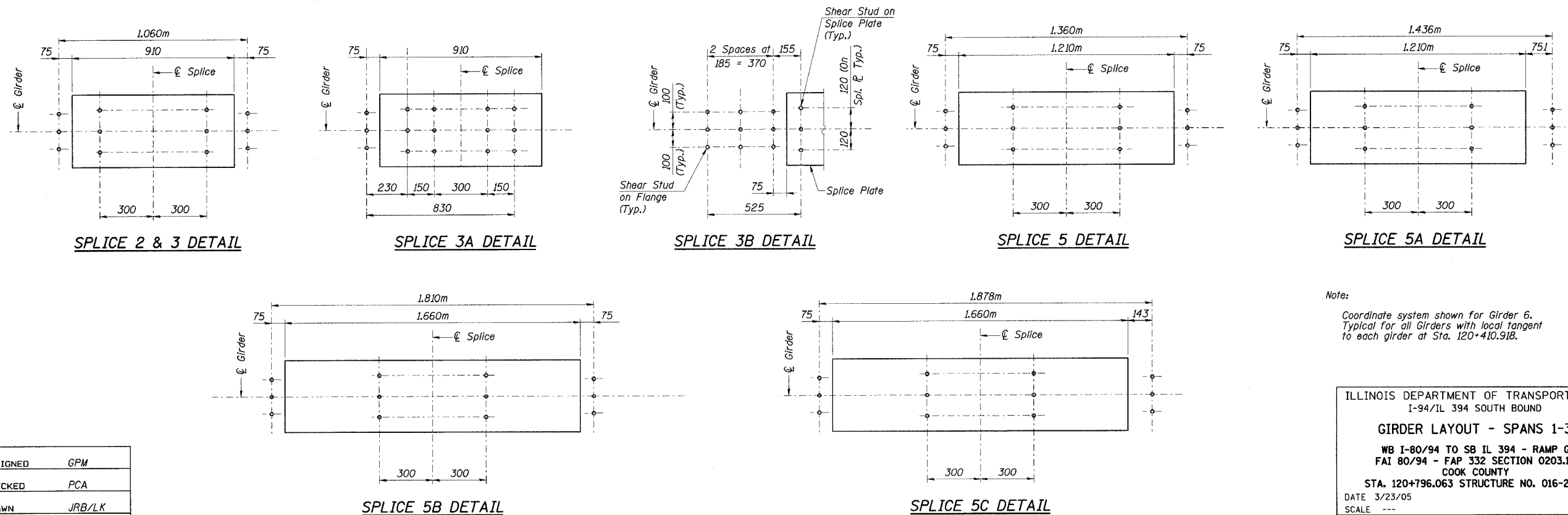
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 48 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	110	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



LAYOUT DIMENSIONS

Girder	Station Radius	Brg. E. Abut 120+324.550			PC 120+345.205			FS 1 120+360.280			Pier 1 120+372.200			FS 2 120+389.780			FS 3 120+426.780			Pier 2 120+445.600			FS 4 120+457.530			FS 5 120+490.280			E. Brg. Pier 3 120+509.550		
		A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y			
1	300.00	84.932	2.550	11.533	64.764	1.564	7.074	50.067	0.712	4.207	38.356	0.317	2.462	20.981	0.051	0.735	15.750	0.022	0.414	34.377	0.228	1.976	46.120	0.555	3.566	77.932	2.771	10.299	96.243	5.397	15.857
2	301.66	85.290	2.559	11.572	65.122	1.573	7.113	50.344	0.716	4.231	38.569	0.319	2.476	21.097	0.052	0.739	15.837	0.022	0.416	34.567	0.229	1.987	46.375	0.558	3.586	78.363	2.786	10.356	96.779	5.428	15.946
BL	302.00	85.364	2.560	11.580	65.196	1.574	7.121	50.401	0.717	4.235	38.612	0.320	2.479	21.121	0.052	0.739	15.855	0.022	0.416	34.606	0.229	1.989	46.427	0.559	3.590	78.452	2.789	10.368	96.888	5.434	15.964
3	303.32	85.649	2.567	11.611	65.481	1.581	7.152	50.621	0.720	4.254	38.781	0.321	2.489	21.213	0.052	0.743	15.924	0.022	0.418	34.757	0.230	1.998	46.630	0.561	3.606	78.795	2.801	10.413	97.313	5.458	16.034
4	304.98	86.007	2.576	11.650	65.839	1.590	7.191	50.898	0.724	4.277	38.993	0.323	2.503	21.329	0.052	0.747	16.011	0.022	0.421	34.947	0.232	2.009	46.885	0.564	3.625	79.226	2.817	10.470	97.848	5.488	16.123
5	306.64	86.365	2.584	11.690	66.197	1.599	7.231	51.175	0.728	4.301	39.205	0.324	2.517	21.445	0.053	0.751	16.098	0.022	0.423	35.138	0.233	2.020	47.140	0.567	3.645	79.657	2.832	10.527	98.383	5.518	16.211
6	308.30	86.724	2.593	11.729	66.556	1.607	7.270	51.452	0.732	4.324	39.418	0.326	2.530	21.561	0.053	0.755	16.185	0.022	0.425	35.328	0.234	2.031	47.396	0.570	3.665	80.088	2.847	10.584	98.918	5.549	16.300



Note:
Coordinate system shown for Girder 6.
Typical for all Girders with local tangent
to each girder at Sta. 120+410.918.

DESIGNED	GPM
CHECKED	PCA
DRAWN	JRB/LK
CHECKED	MEA

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
GIRDER LAYOUT - SPANS 1-3
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 49 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	111	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		

GIRDER MOMENT TABLE						
GIRDER 3						
		0.4 Sp.1	Pier 1	0.5 Sp.2	Pier 2	0.6 Sp.3
I_s	(10^6 mm^4)	35585	74222	39780	90378	44538
I_c (n)	(10^6 mm^4)	69559	---	78489	---	80122
I_c (3n)	(10^6 mm^4)	50790	---	56873	---	60058
S_s	(10^3 mm^3)	34254	69081	40365	82941	42457
S_c (n)	(10^3 mm^3)	46337	---	54118	---	54293
S_c (3n)	(10^3 mm^3)	40725	---	47742	---	48552
S_{b1}	(10^3 mm^3)	697	2114	976	2642	976
Q	(kN/m)	14	21	14	22	14
$M \bar{P}$	(kN-m)	1674	8115	2680	11557	3293
$s \bar{P}$	(kN/m)	4	---	4	---	4
$Ms \bar{P}$	(kN-m)	667	---	1094	---	1215
$M \bar{t}$	(kN-m)	1109	2005	1455	2348	1449
M (Imp)	(kN-m)	222	401	291	470	290
$^5_3[M \bar{t} + M$ (Imp)]	(kN-m)	2218	4011	2910	4697	2899
Ma	(kN-m)	5928	15763	8689	21130	9629
M_{b1}	(kN-m)	7	36	38	52	43
$f_s \bar{P}$ (non-comp)	(MPa)	49	117	66	139	78
$f_s \bar{P}$ (comp)	(MPa)	16	---	23	---	25
$f_s^5_3[M \bar{t} + M$ (Imp)]	(MPa)	48	58	54	57	53
f_t	(MPa)	11	17	38	19	45
f_s (Overload)	(MPa)	113	176	143	196	156
f_s (Total)	(MPa)	147	228	186	255	203
F_{cr} (Overload)	(MPa)	328	293	328	289	328
VR	(kN)	267	---	311	---	298
F_{cr}	(MPa)	345	323	345	323	345

GIRDER REACTION TABLE					
GIRDER 3					
	E. Abut.	Pier 1	Pier 2	Pier 3E	
$R \bar{P}$	(kN)	294	1343	1664	383
$R \bar{t}$	(kN)	164	356	377	171
Imp.	(kN)	41	89	94	43
R (Total)	(kN)	499	1788	2135	597

GIRDER MOMENT TABLE						
GIRDER 6						
		0.4 Sp.1	Pier 1	0.5 Sp.2	Pier 2	0.6 Sp.3
I_s	(10^6 mm^4)	39780	74222	43554	106994	62684
I_c (n)	(10^6 mm^4)	81262	---	90087	---	112269
I_c (3n)	(10^6 mm^4)	58665	---	64463	---	83984
S_s	(10^3 mm^3)	40365	69081	46595	98190	65115
S_c (n)	(10^3 mm^3)	54595	---	62332	---	80218
S_c (3n)	(10^3 mm^3)	48319	---	55293	---	72990
S_{b1}	(10^3 mm^3)	976	2114	1254	3903	2114
Q	(kN/m)	15	29	15	31	17
$M \bar{P}$	(kN-m)	1716	9592	3552	16164	6218
$s \bar{P}$	(kN/m)	11	---	11	---	11
$Ms \bar{P}$	(kN-m)	847	---	1790	---	2510
$M \bar{t}$	(kN-m)	1990	3406	2967	4362	3624
M (Imp)	(kN-m)	398	681	593	872	725
$^5_3[M \bar{t} + M$ (Imp)]	(kN-m)	3981	6812	5933	8723	7248
Ma	(kN-m)	8508	21325	14657	32354	20768
M_{b1}	(kN-m)	4	39	72	69	109
$f_s \bar{P}$ (non-comp)	(MPa)	43	139	76	165	95
$f_s \bar{P}$ (comp)	(MPa)	18	---	32	---	34
$f_s^5_3[M \bar{t} + M$ (Imp)]	(MPa)	73	99	95	89	90
f_t	(MPa)	4	19	57	18	51
f_s (Overload)	(MPa)	133	237	204	253	220
f_s (Total)	(MPa)	173	309	265	329	286
F_{cr} (Overload)	(MPa)	328	291	328	298	328
VR	(kN)	338	---	423	---	427
F_{cr}	(MPa)	345	323	345	334	345

GIRDER REACTION TABLE					
GIRDER 6					
	E. Abut.	Pier 1	Pier 2	Pier 3E	
$R \bar{P}$	(kN)	374	1437	1775	743
$R \bar{t}$	(kN)	189	406	445	270
Imp.	(kN)	47	101	111	68
R (Total)	(kN)	610	1944	2331	1081

F_{cr} - Critical average flange stress (smaller of F_{cr1} or F_{cr2} for partially braced flanges and F_y for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

F_{cr} (Overload) - Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).

I_c (n) and S_c (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.

I_c (3n) and S_c (3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead load (see AASHTO 10.3B).

VR is the maximum t + impact shear range in span.

Ma (Applied Moment) = $1.3 [M \bar{P} + Ms \bar{P} + 5/3 (M \bar{t} + M$ (Imp))]

f_s (Overload) is the sum of stresses due to $M \bar{P} + Ms \bar{P} + 5/3 (M \bar{t} + M$ (Imp))

f_s (Total) is the sum of stresses due to $1.3 [M \bar{P} + Ms \bar{P} + 5/3 (M \bar{t} + M$ (Imp))]

S_{b1} is the section modulus for one flange plate for lateral flange bending.

M_{b1} is the lateral bending moment for flange plate (factored).

f_t is the calculated normal stress at the edge of flange due to lateral bending (factored).

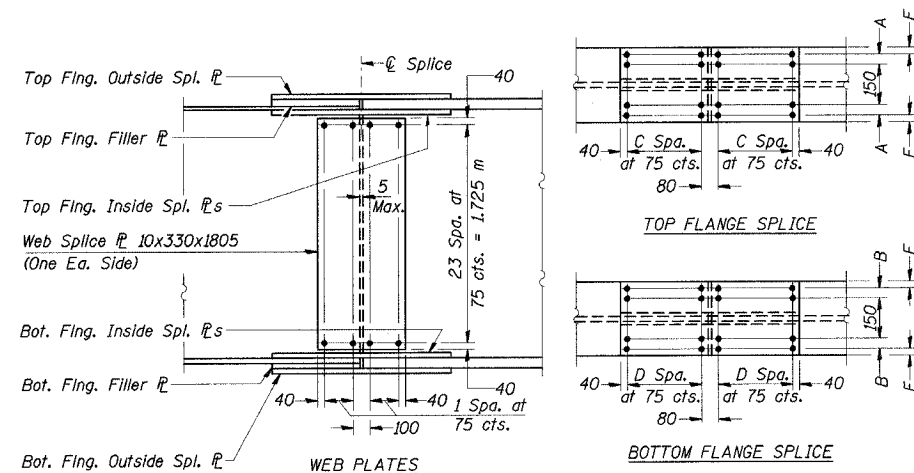
$M \bar{t}$ and $R \bar{t}$ include the effects of centrifugal force and superelevation.

TABLE OF DIMENSIONS													
Girder Location	Field Splice No.	Top Flange Splice \bar{P} Dimensions		Bottom Flange Splice \bar{P} Dimensions		Filler \bar{P} Dimension		Bolt Spacing Dimensions					
		Outside \bar{P}	Inside \bar{P}	Outside \bar{P}	Inside \bar{P}	Top \bar{P}	Bottom \bar{P}	A	B	C	D	E	F
Girders G1, G2, & G3	1	20x410x910	25x170x910	20x410x910	25x170x910	10x410x450	10x410x450	90	90	5	5	40	40
	2	20x410x910	25x170x910	25x410x1210	30x170x1210	10x410x450	-	90	90	5	7	40	40
	3	20x410x910	25x170x910	25x410x1210	30x170x1210	10x410x450	-	90	90	5	7	40	40
	4	25x410x1210	30x170x1210	25x410x1210	30x170x1210	15x410x600	15x410x600	90	90	7	7	40	40
	5	25x410x1210	30x170x1210	25x410x1210	30x170x1210	-	-	90	90	7	7	40	40
Girders G4, G5, & G6	1	20x410x910	25x170x910	25x410x1210	30x170x1210	10x410x450	10x410x600	90	90	5	7	40	40
	2	20x410x910	25x170x910	30x410x1510	35x170x1510	10x410x450	-	90	90	5	9	40	40
	3	20x410x910	25x170x910	30x410x1510	35x170x1510	15x410x450	5x410x750	90	90	5	9	40	40
	4	30x460x1660	35x195x1660	35x460x2410	40x195x2410	20x460x825	-	115	115	10	15	40	40
	5	30x460x1660	35x195x1660	35x460x2410	40x195x2410	-	-	115	115	10	15	40	40

Notes:
1. All field splice plates, except fill plates to be AASHTO M270M, Grade 345 and meet N.T.R.

2. All Bolts are 22mm ϕ AASHTO M164 (ASTM A325).

3. Bolt Spacing Dimensions E and F are measured from the edge of the smaller width flange when flange plates at field splices are different widths.



FIELD SPLICE 1, 2, 3, 4, & 5

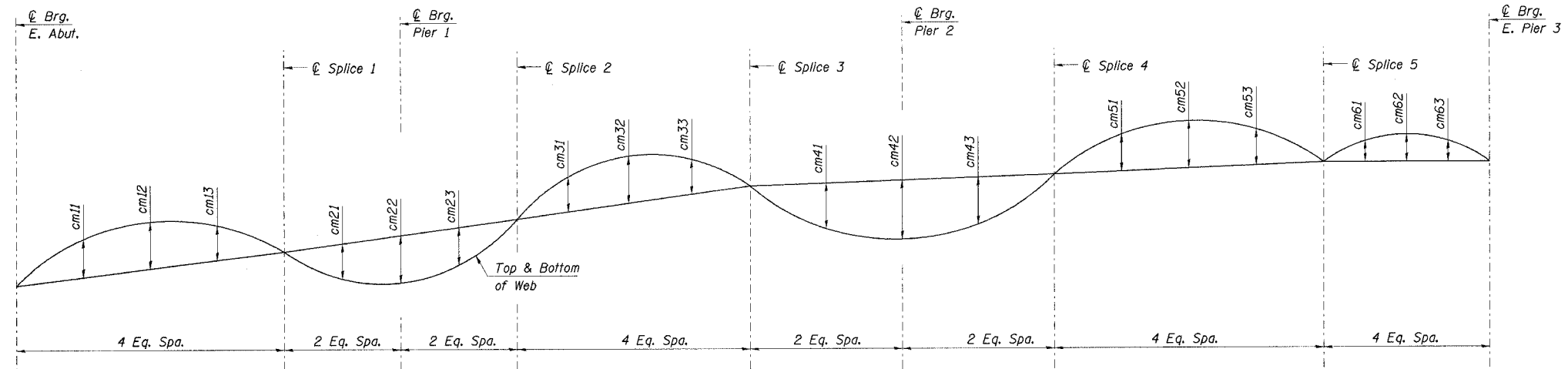
DESIGNED	MAS
CHECKED	GPM
DRAWN	LK
CHECKED	GPM/ACF

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
MOMENT & REACTION TABLES & FIELD SPLICES, SPANS 1-3
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 50 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	112	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



CAMBER DIAGRAM

GIRDER DIMENSIONS (Millimeters)

Girder	cm11	cm12	cm13	cm21	cm22	cm23	cm31	cm32	cm33	cm41	cm42	cm43	cm51	cm52	cm53	cm61	cm62	cm63
1	29	44	41	20	40	20	69	89	75	0	25	0	66	77	65	30	35	22
2	28	42	40	20	36	20	72	92	77	20	28	0	68	81	68	31	36	23
3	28	42	39	0	31	0	75	96	79	20	31	0	70	85	72	32	38	24
4	27	41	38	0	27	0	81	103	86	20	23	0	82	97	82	39	36	24
5	26	40	37	0	23	0	84	107	88	20	27	0	85	101	85	40	38	25
6	26	39	37	0	20	0	87	111	91	20	30	0	87	105	89	42	40	26

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters)

(Elevations are after deflections due to girder self-weight and slab and are to be used for fabrication only)

Girder	℄ Brg. E. Abut.	℄ Splice 1	℄ Brg. Pier 1	℄ Splice 2	℄ Splice 3	℄ Brg. Pier 2	℄ Splice 4	℄ Splice 5	℄ Brg. E. Pier 3
1	191.623	192.936	193.387	194.152	195.592	196.192	196.613	197.683	198.147
2	191.644	193.025	193.487	194.258	195.692	196.292	196.718	197.797	198.247
3	191.664	193.113	193.586	194.363	195.791	196.391	196.823	197.910	198.346
4	191.684	193.201	193.686	194.468	195.883	196.488	196.910	198.011	198.429
5	191.705	193.289	193.786	194.574	195.982	196.587	197.015	198.125	198.529
6	191.725	193.377	193.883	194.680	196.081	196.687	197.119	198.239	198.629

DESIGNED	JJK
CHECKED	JWD
DRAWN	LK
CHECKED	JWD

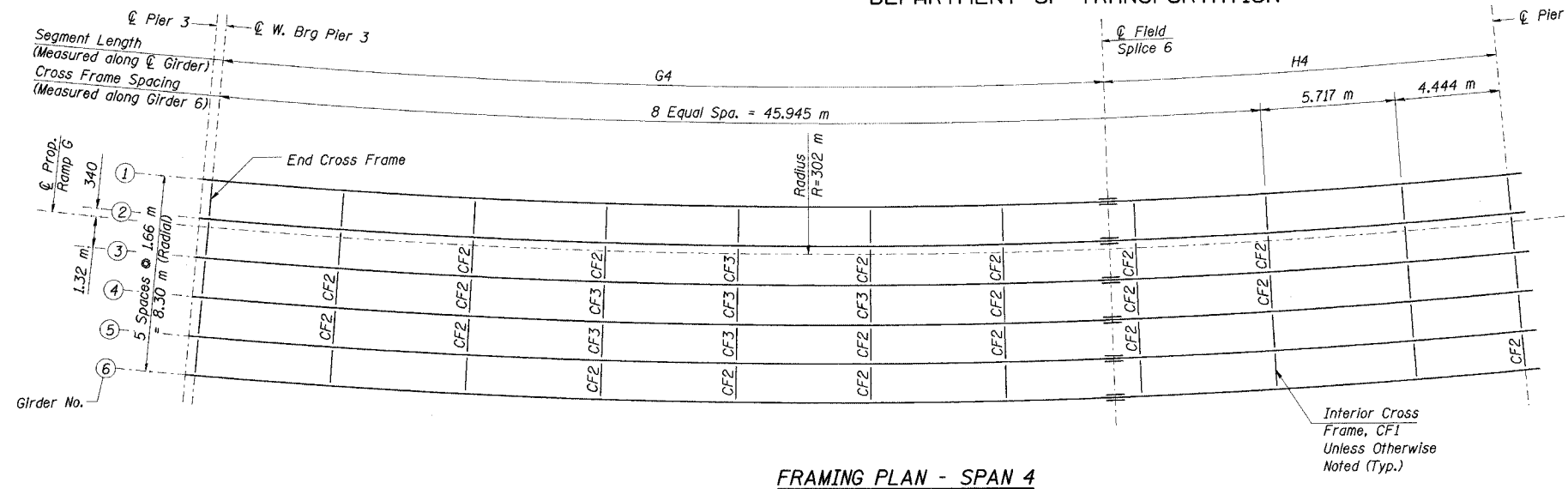
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94/IL 394 SOUTH BOUND
CAMBER AND TOP OF WEB ELEVATION
 SPAN 1-3
 WB I-80/94 TO SB IL 394 - RAMP G
 FAI 80/94 - FAP 332 SECTION 0203.1B
 COOK COUNTY
 STA. 120+796.063 STRUCTURE NO. 016-2804
 DATE 3/23/05
 SCALE ---

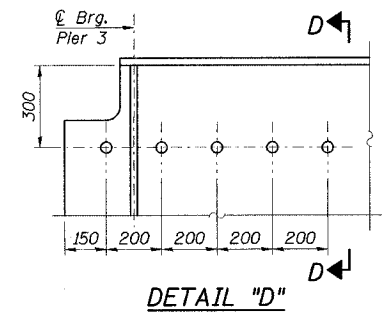
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

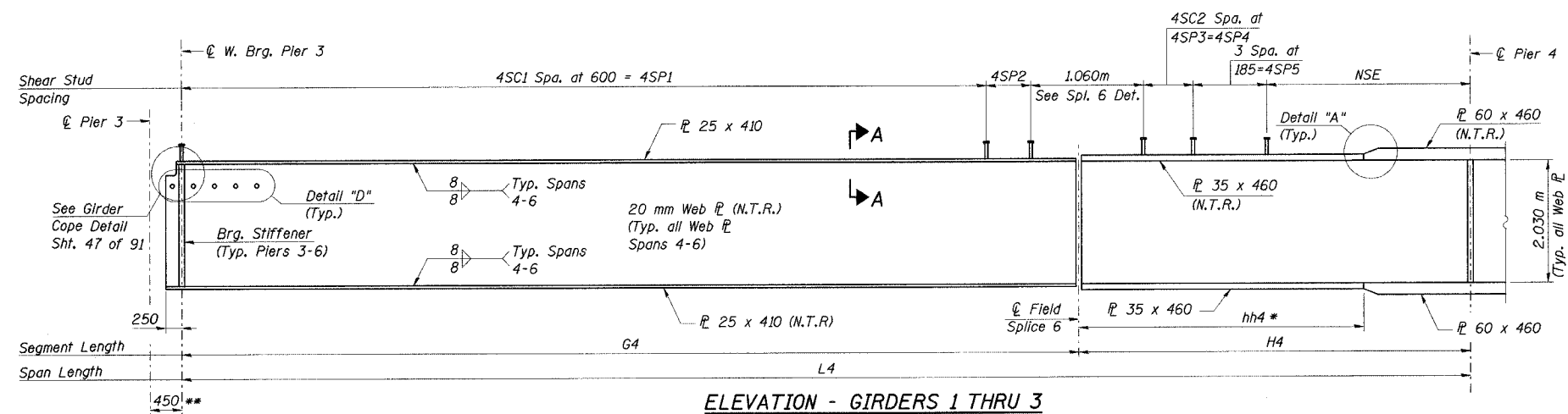
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 51 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	113	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



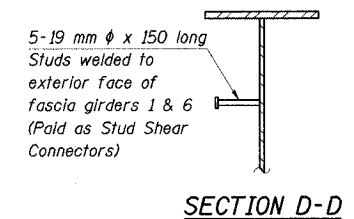
FRAMING PLAN - SPAN 4



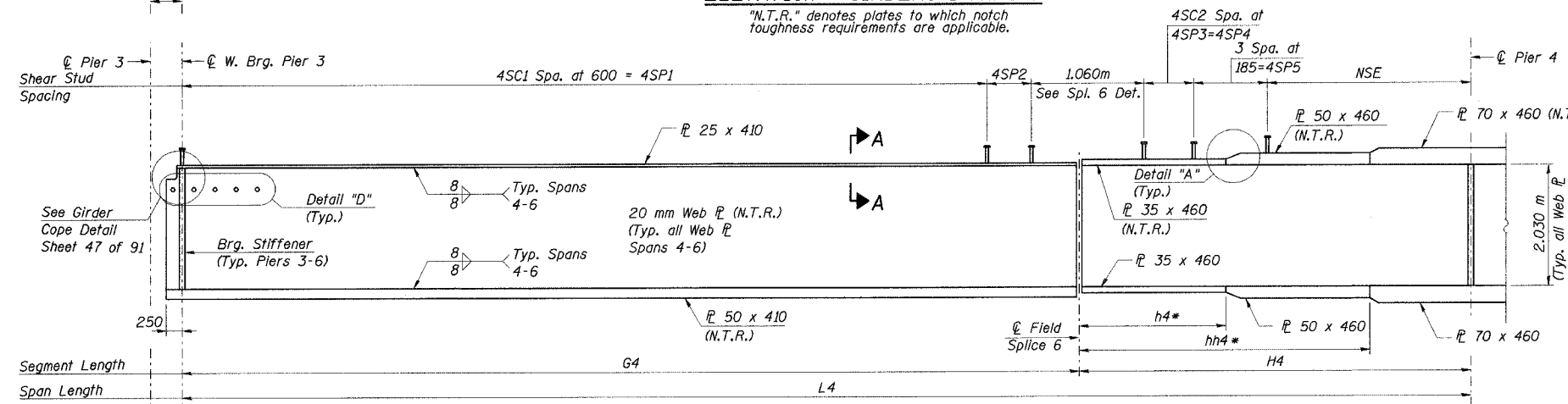
DETAIL "D"



ELEVATION - GIRDERS 1 THRU 3



SECTION D-D



ELEVATION - GIRDERS 4 THRU 6

- Notes:
- All flange plates and web plates shall be AASHTO M270M Grade 345.
 - Work this sheet with Sht. Nos. 52, 53 & 54 of 91.
 - For Section A-A, Detail A, & Bearing Stiffeners Detail, see Sht. No. 45 of 91.
 - Place all cross frames radially, except End Cross Frame at Piers 3 & 6.
- * Top & Bottom.
** Dimension measured along @ Ramp G only.

GIRDER DIMENSIONS (Meters)

Girder	Radius	L4	G4	H4	h4	hh4
1	300.00	54.583	36.464	18.119	-	13.649
2	301.66	54.888	36.669	18.219	-	13.725
3	303.32	55.192	36.872	18.320	-	13.800
4	304.98	55.497	37.077	18.420	8.220	13.876
5	306.64	55.801	37.281	18.520	8.265	13.951
6	308.30	56.106	37.485	18.621	8.310	14.027

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	4SC1	4SP1	4SP2	4SC2	4SP3	4SP4	4SP5	NSE
1	59	35.400	35.400	0.534	1	0.222	0.222	0.555
2	60	36.000	36.000	0.139	1	0.558	0.558	0.555
3	60	36.000	36.000	0.342	2	0.449	0.898	0.555
4	60	36.000	36.000	0.547	3	0.414	1.242	0.555
5	61	36.600	36.600	0.151	3	0.530	1.590	0.555
6	61	36.600	36.600	0.355	4	0.485	1.940	0.555

DESIGNED	ACF
CHECKED	GPM
DRAWN	JRB
CHECKED	PCA/MEA

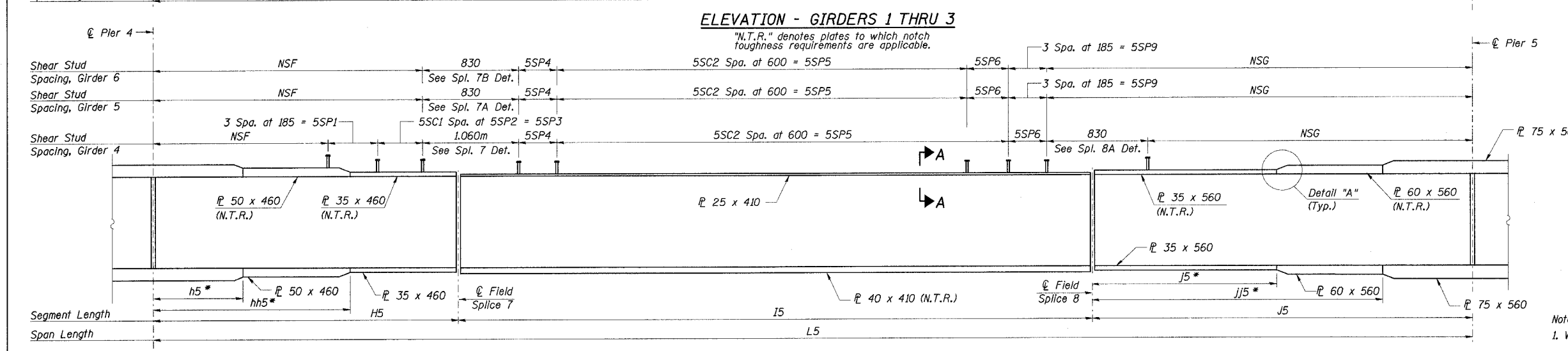
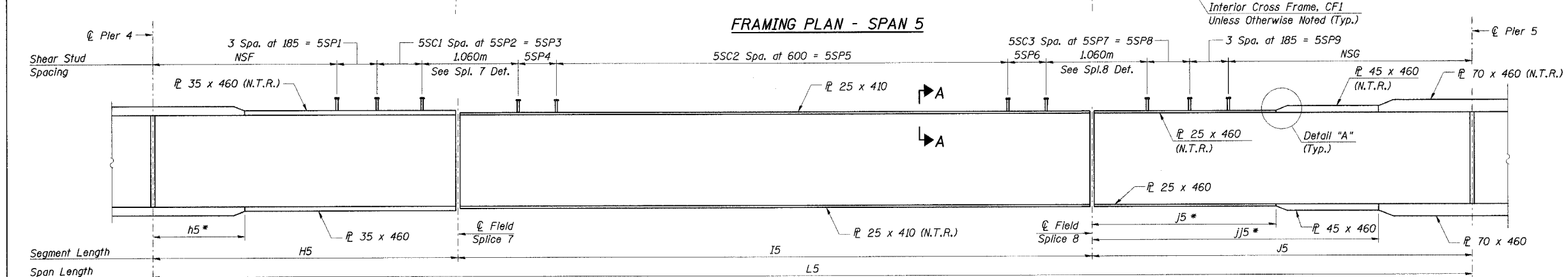
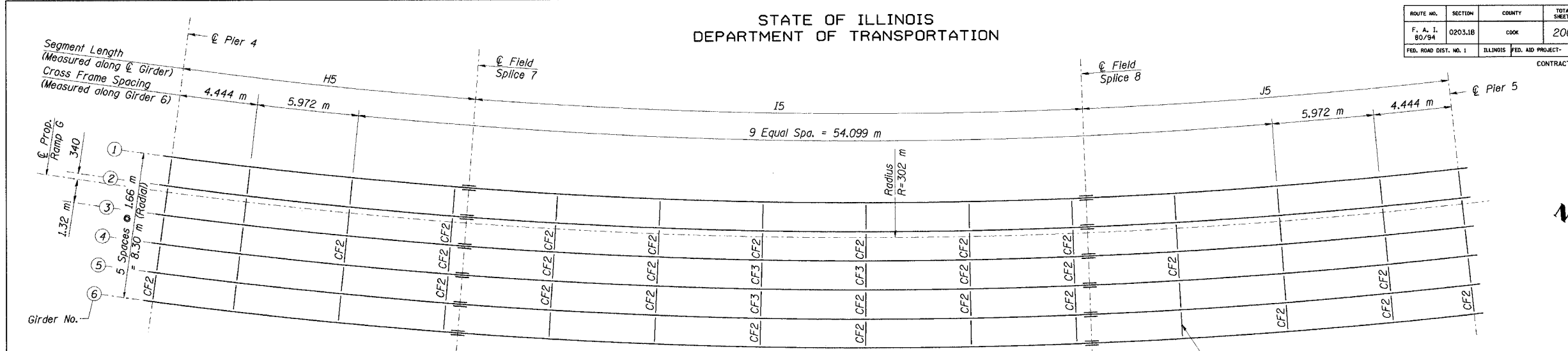
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 4
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 52 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	114	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



Notes:
1. Work this sheet with Sht. Nos. 51, 53 & 54 of 91.
* Top & Bottom

GIRDER DIMENSIONS (Meters)

Girder	Radius	L5	H5	h5	hh5	I5	J5	J5	JJ5	
DESIGNED ACF	1	300.00	72.914	17.146	4.470	-	34.967	20.801	10.520	16.331
CHECKED GPM	2	301.66	73.317	17.241	4.495	-	35.160	20.916	10.578	16.421
DRAWN JRB	3	303.32	73.721	17.335	4.520	-	35.354	21.032	10.636	16.512
CHECKED PCA/MEA	4	304.98	74.124	17.430	4.544	10.452	35.547	21.147	10.694	16.602
	5	306.64	74.528	17.525	4.569	10.509	35.741	21.262	10.753	16.693
	6	308.30	74.931	17.620	4.594	10.566	35.934	21.377	10.811	16.783

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	NSF	5SP1	5SC1	5SP2	5SP3	5SP4	5SC2	5SP5	5SP6	5SC3	5SP7	5SP8	5SP9	NSG
1	15.677	0.555	1	0.384	0.384	0.153	56	33.600	0.154	5	0.487	2.435	0.555	17.281
2	16.056	0.555	1	0.100	0.100	0.250	56	33.600	0.250	3	0.452	1.356	0.555	18.475
3	15.885	0.555	1	0.365	0.365	0.347	56	33.600	0.347	1	0.263	0.263	0.555	19.684
4	16.270	0.555	1	0.075	0.075	0.144	57	34.200	0.143	0	0	0	0	20.847
5	17.225	0	0	0.000	0.000	0.092	56	33.600	0.091	0	0	0	0.555	22.135
6	17.320	0	0	0.000	0.000	0.217	54	32.400	0.217	0	0	0	0.555	23.392

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 5
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

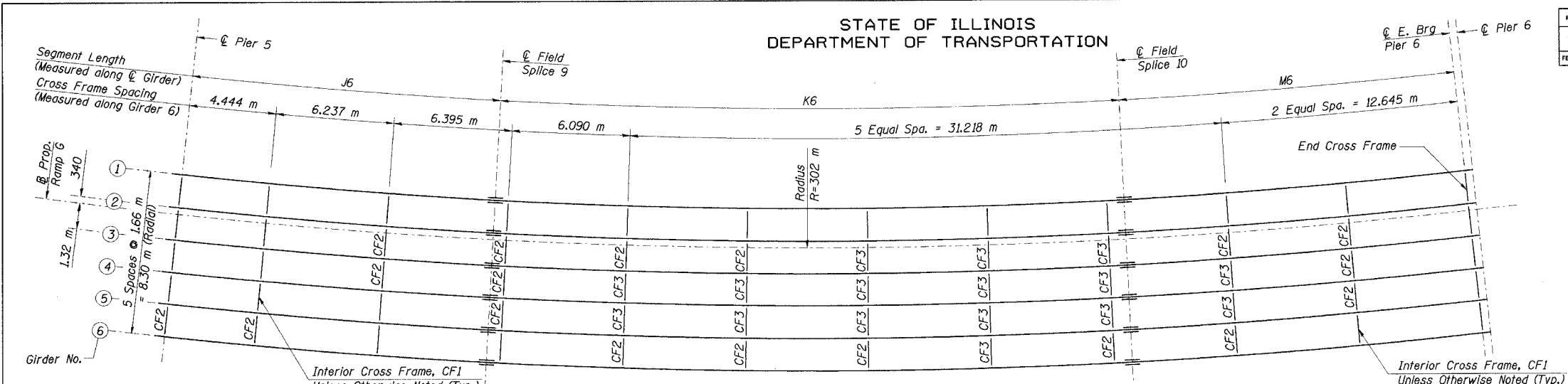


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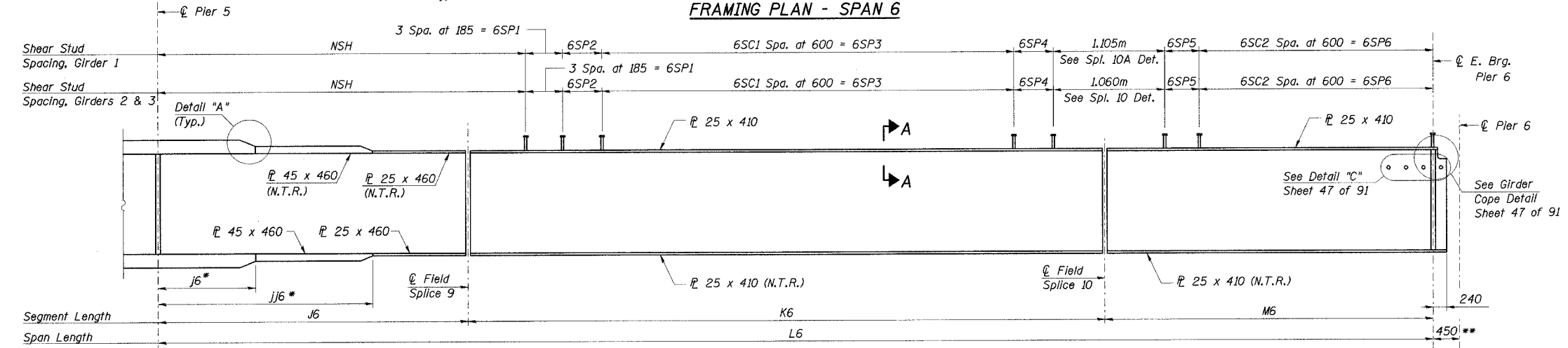
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 53 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	115	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			

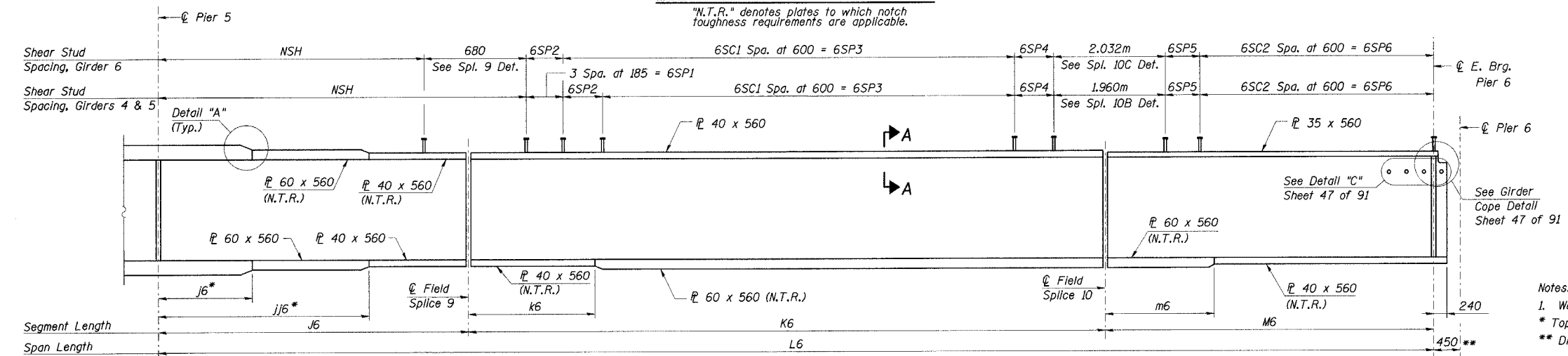
CONTRACT NO. 62854



FRAMING PLAN - SPAN 6



ELEVATION - GIRDERS 1 THRU 3



ELEVATION - GIRDERS 4 THRU 6

GIRDER DIMENSIONS (Meters)

Girder	Radius	L6	J6	j6	jj6	K6	k6	M6	m6
1	300.00	65.212	15.159	4.470	10.540	33.278	-	16.775	-
2	301.66	65.576	15.243	4.495	10.598	33.462	-	16.871	-
3	303.32	65.939	15.327	4.520	10.656	33.646	-	16.966	-
4	304.98	66.302	15.411	4.544	10.715	33.831	7.655	17.060	4.706
5	306.64	66.666	15.494	4.569	10.773	34.015	7.696	17.157	4.732
6	308.30	67.029	15.578	4.594	10.831	34.199	7.738	17.252	4.757

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	NSH	6SP1	6SP2	6SC1	6SP3	6SP4	6SP5	6SC2	6SP6
1	19.369	0.555	0.192	46	27.600	0.191	0.000	27	16.200
2	18.729	0.555	0.346	47	28.200	0.345	0.141	27	16.200
3	18.080	0.555	0.204	49	29.400	0.204	0.236	27	16.200
4	17.423	0.555	0.142	50	30.000	0.142	0.480	26	15.600
5	16.758	0.555	0.308	51	30.600	0.308	0.577	26	15.600
6	15.960	0	0.179	53	31.800	0.178	0.000	27	16.200

Notes:
1. Work this sheet with Sht. Nos. 51, 52 & 54 of 91
* Top & Bottom
** Dimension measured along @ Ramp G only.

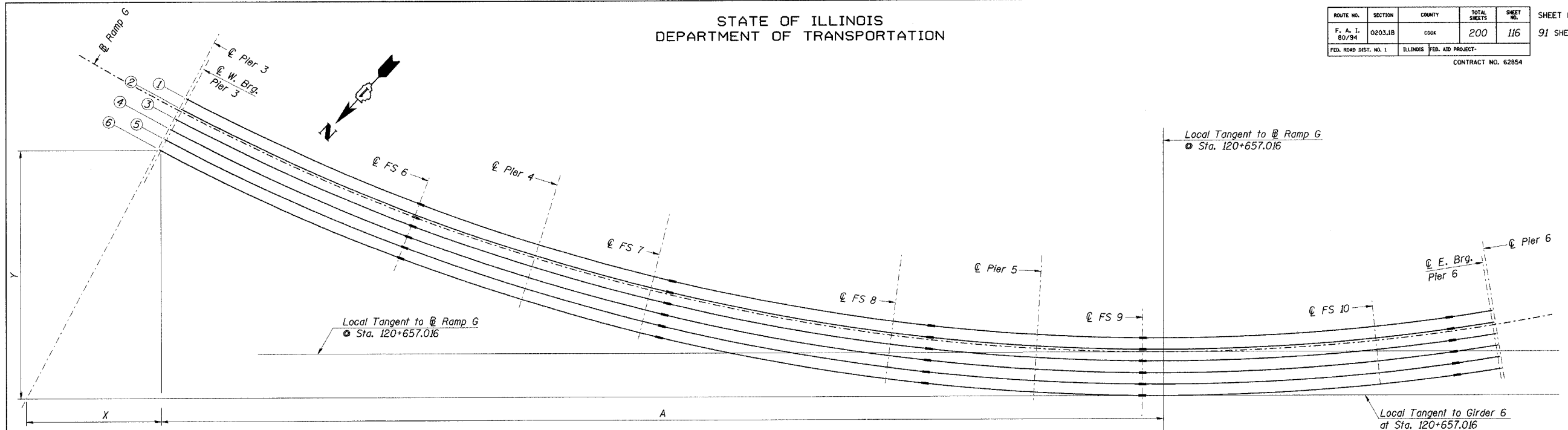
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 6
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

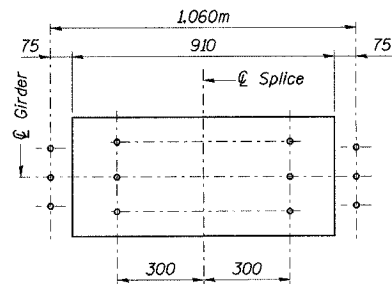
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F. A. I. 80/94	0203.1B	COOK	200	116	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		



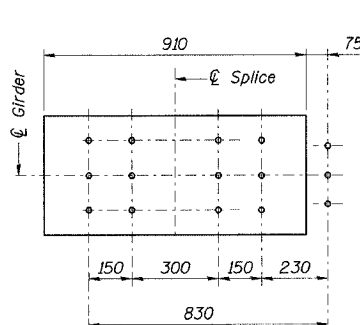
GIRDER LAYOUT PLAN - SPANS 4-6

LAYOUT DIMENSIONS

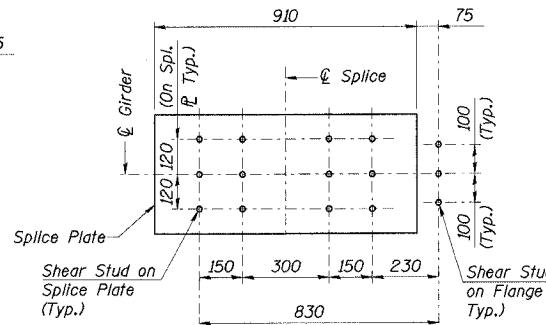
Girder	Station	W. Brg. Pier 3 120+510.450			FS 6 120+547.160			Pier 4 120+565.400			FS 7 120+582.660			FS 8 120+617.860			Pier 5 120+638.800			FS 9 120+654.060			FS 10 120+687.560			E. Brg. Pier 6 120+704.450		
		A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y			
1	300.00	139.944	18.335	34.641	106.738	7.473	19.630	89.620	4.288	13.699	73.120	2.274	9.047	38.788	0.328	2.518	18.084	0.033	0.546	2.936	0.000	0.014	30.290	0.156	1.533	46.924	0.590	3.692
2	301.66	140.721	18.437	34.833	107.328	7.515	19.739	90.116	4.312	13.775	73.524	2.286	9.097	39.002	0.330	2.532	18.184	0.033	0.549	2.953	0.000	0.014	30.458	0.156	1.542	47.186	0.594	3.713
BL	302.00	140.880	18.458	34.873	107.449	7.523	19.761	90.217	4.317	13.790	73.607	2.289	9.108	39.046	0.331	2.535	18.205	0.033	0.549	2.956	0.000	0.014	30.492	0.157	1.543	47.239	0.594	3.717
3	303.32	141.498	18.540	35.027	107.919	7.556	19.848	90.612	4.336	13.851	73.929	2.299	9.147	39.217	0.332	2.546	18.285	0.033	0.552	2.969	0.000	0.015	30.625	0.157	1.550	47.448	0.597	3.734
4	304.98	142.274	18.642	35.219	108.510	7.597	19.956	91.107	4.359	13.926	74.333	2.311	9.197	39.432	0.334	2.560	18.385	0.033	0.555	2.985	0.000	0.015	30.793	0.158	1.559	47.709	0.600	3.755
5	306.64	143.050	18.744	35.412	109.100	7.639	20.065	91.603	4.383	14.002	74.738	2.324	9.247	39.646	0.336	2.574	18.485	0.034	0.558	3.001	0.000	0.015	30.960	0.159	1.567	47.972	0.604	3.776
6	308.30	143.827	18.847	35.605	109.691	7.680	20.174	92.099	4.407	14.078	75.143	2.337	9.298	39.861	0.337	2.588	18.585	0.034	0.561	3.018	0.000	0.015	31.128	0.160	1.575	48.234	0.607	3.797



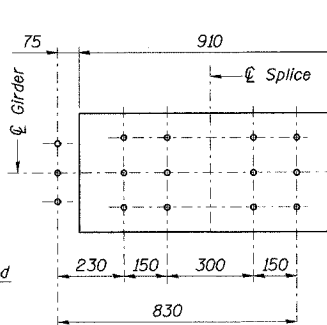
SPICES 6, 7, 8 & 10 DETAIL



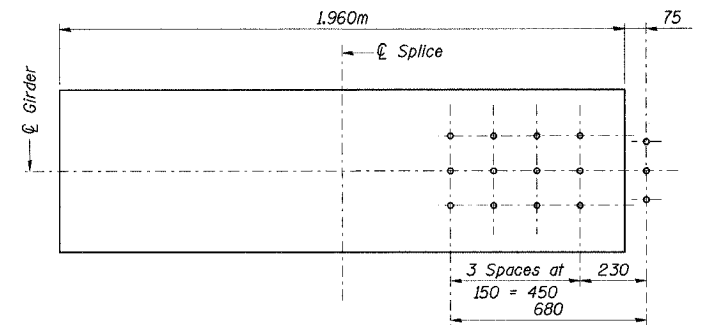
SPICE 7A DETAIL



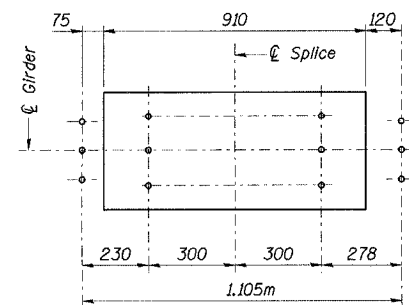
SPICE 7B DETAIL



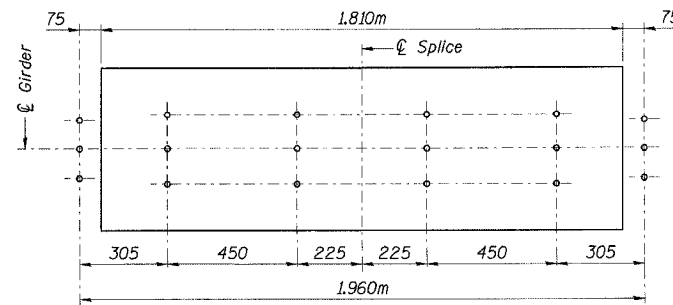
SPICE 8A DETAIL



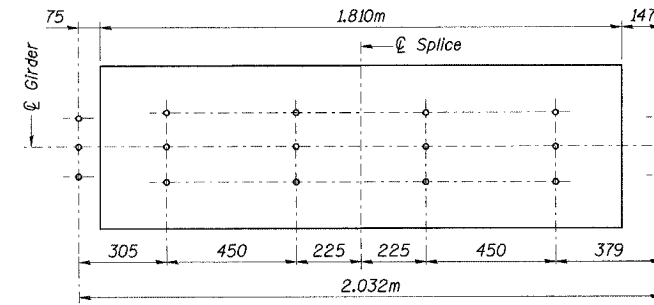
SPICE 9 DETAIL



SPICE 10A DETAIL



SPICE 10B DETAIL



SPICE 10C DETAIL

Notes

Coordinate system shown for Girder 6.
Typical for all Girders with local tangent
to each girder at Sta. 120+657.016

DESIGNED	GPM
CHECKED	PCA
DRAWN	JRB/LK
CHECKED	MEA

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
GIRDER LAYOUT - SPANS 4-6
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 55 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	117	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		

GIRDER MOMENT TABLE						
GIRDER 3						
		0.4 Sp.4	Pier 4	0.5 Sp.5	Pier 5	0.6 Sp.6
I_s	(10^6 mm^4)	35585	74222	35585	84943	35585
$I_c (n)$	(10^6 mm^4)	69559	---	69559	---	69559
$I_c (3n)$	(10^6 mm^4)	50790	---	50790	---	50791
S_s	(10^3 mm^3)	34254	69081	34254	78319	34254
$S_c (n)$	(10^3 mm^3)	46337	---	46337	---	46338
$S_c (3n)$	(10^3 mm^3)	40725	---	40725	---	40726
S_{b1}	(10^3 mm^3)	697	2114	697	2466	697
\bar{Q}	(KN/m)	14	21	14	21	14
$M \bar{P}$	($\text{KN}\cdot\text{m}$)	2375	8734	2346	10988	2911
$s \bar{P}$	(KN/m)	4	---	4	---	4
$M_s \bar{P}$	($\text{KN}\cdot\text{m}$)	891	---	960	---	1113
$M \bar{t}$	($\text{KN}\cdot\text{m}$)	1231	2119	1395	2375	1349
$M (Imp)$	($\text{KN}\cdot\text{m}$)	246	424	279	475	270
$^5_3[M \bar{t} + M (Imp)]$	($\text{KN}\cdot\text{m}$)	2462	4238	2790	4751	2698
M_a	($\text{KN}\cdot\text{m}$)	7447	16864	7924	20460	8739
M_{b1}	($\text{KN}\cdot\text{m}$)	22	42	34	50	41
$f_s \bar{P} (non-comp)$	(MPa)	69	126	68	140	85
$f_s \bar{P} (comp)$	(MPa)	22	---	24	---	27
$f_s ^5_3[M \bar{t} + M (Imp)]$	(MPa)	53	61	60	61	58
f_i	(MPa)	31	20	48	20	60
$f_s (Overload)$	(MPa)	144	188	152	201	171
$f_s (Total)$	(MPa)	188	244	198	261	222
$F_{cr} (Overload)$	(MPa)	328	289	328	290	328
VR	(KN)	258	---	294	---	311
F_{cr}	(MPa)	345	323	345	323	345

GIRDER MOMENT TABLE						
GIRDER 6						
		0.4 Sp.4	Pier 4	0.5 Sp.5	Pier 5	0.6 Sp.6
I_s	(10^6 mm^4)	45306	84943	41715	106994	73157
$I_c (n)$	(10^6 mm^4)	94307	---	85741	---	125344
$I_c (3n)$	(10^6 mm^4)	67191	---	61625	---	95125
S_s	(10^3 mm^3)	49547	78319	43447	98190	76805
$S_c (n)$	(10^3 mm^3)	66183	---	58402	---	92067
$S_c (3n)$	(10^3 mm^3)	58784	---	51842	---	84539
S_{b1}	(10^3 mm^3)	1394	2466	1115	3903	3123
\bar{Q}	(KN/m)	16	30	15	31	18
$M \bar{P}$	($\text{KN}\cdot\text{m}$)	3890	11077	2712	15627	7598
$s \bar{P}$	(KN/m)	11	---	11	---	11
$M_s \bar{P}$	($\text{KN}\cdot\text{m}$)	1673	---	1487	---	2884
$M \bar{t}$	($\text{KN}\cdot\text{m}$)	2911	3796	3002	4469	3990
$M (Imp)$	($\text{KN}\cdot\text{m}$)	582	759	600	894	798
$^5_3[M \bar{t} + M (Imp)]$	($\text{KN}\cdot\text{m}$)	5822	7593	6004	8938	7980
M_a	($\text{KN}\cdot\text{m}$)	14800	24270	13263	31934	24001
M_{b1}	($\text{KN}\cdot\text{m}$)	39	44	65	68	145
$f_s \bar{P} (non-comp)$	(MPa)	79	141	62	159	99
$f_s \bar{P} (comp)$	(MPa)	28	---	29	---	34
$f_s ^5_3[M \bar{t} + M (Imp)]$	(MPa)	88	97	103	91	87
f_i	(MPa)	29	18	58	17	46
$f_s (Overload)$	(MPa)	195	238	194	250	220
$f_s (Total)$	(MPa)	253	310	252	325	286
$F_{cr} (Overload)$	(MPa)	328	291	328	302	328
VR	(KN)	405	---	427	---	431
F_{cr}	(MPa)	345	323	345	330	345

GIRDER REACTION TABLE					
GIRDER 3					
		Pier 3W	Pier 4	Pier 5	Pier 6E
$R \bar{P}$	(KN)	338	1397	1624	378
$R \bar{t}$	(KN)	167	359	384	171
$Imp.$	(KN)	42	90	96	43
$R (Total)$	(KN)	547	1846	2104	592

GIRDER REACTION TABLE					
GIRDER 6					
		Pier 3W	Pier 4	Pier 5	Pier 6E
$R \bar{P}$	(KN)	574	1535	1788	814
$R \bar{t}$	(KN)	246	427	455	285
$Imp.$	(KN)	61	107	114	71
$R (Total)$	(KN)	881	2069	2357	1170

F_{cr} - Critical average flange stress (smaller of F_{cr1} or F_{cr2} for partially braced flanges and F_y for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

$F_{cr} (Overload)$ - Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).

$I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.

$I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead load (see AASHTO 10.38).

VR is the maximum \bar{t} + impact shear range in span.

M_a (Applied Moment) = $1.3 [M \bar{P} + M_s \bar{P} + 5/3 (M \bar{t} + M (Imp))]$

$f_s (Overload)$ is the sum of stresses due to $M \bar{P} + M_s \bar{P} + 5/3 (M \bar{t} + M (Imp))$

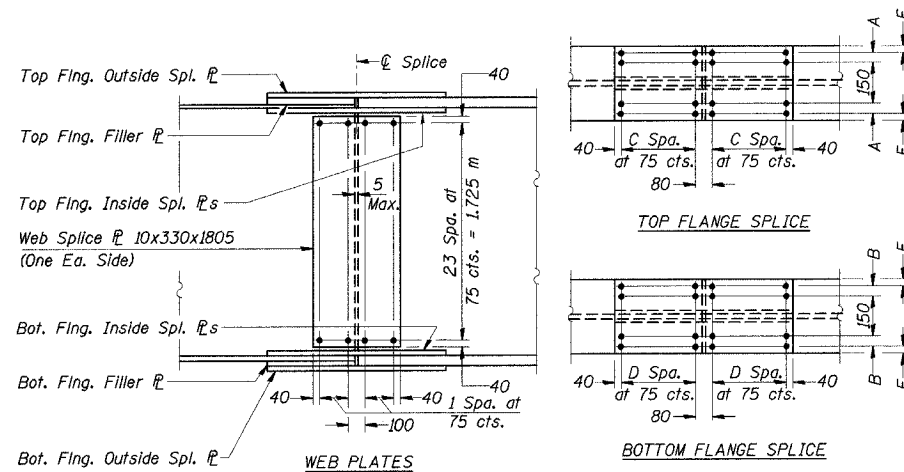
$f_s (Total)$ is the sum of stresses due to $1.3 [M \bar{P} + M_s \bar{P} + 5/3 (M \bar{t} + M (Imp))]$

S_{b1} is the section modulus for one flange plate for lateral flange bending.

M_{b1} is the lateral bending moment for flange plate (factored).

f_i is the calculated normal stress at the edge of flange due to lateral bending (factored).

$M \bar{t}$ and $R \bar{t}$ include the effects of centrifugal force and superelevation.



FIELD SPLICE 6, 7, 8, 9, & 10

TABLE OF DIMENSIONS													
Girder Location	Field Splice No.	Top Flange Splice P Dimensions		Bottom Flange Splice P Dimensions		Filler P Dimension		Bolt Spacing Dimensions					
		Outside P	Inside P	Outside P	Inside P	Top P	Bottom P	A	B	C	D	E	F
Girders G1, G2, & G3	6	20x410x910	25x170x910	20x410x910	25x170x910	10x410x450	10x410x450	90	90	5	5	40	40
	7	20x410x910	25x170x910	20x410x910	25x170x910	10x410x450	10x410x450	90	90	5	5	40	40
	8	20x410x910	25x170x910	20x410x910	25x170x910	-	-	90	90	5	5	40	40
	9	20x410x910	25x170x910	20x410x910	25x170x910	-	-	90	90	5	5	40	40
Girders G4, G5, & G6	6	20x410x910	25x170x910	25x410x1510	30x170x1510	10x410x450	15x460x600	90	90	5	9	40	40
	7	20x410x910	25x170x910	30x410x1360	35x170x1360	10x410x450	5x410x675	90	90	5	8	40	40
	8	20x410x910	25x170x910	30x410x1360	35x170x1360	10x410x450	5x410x675	90	90	5	8	40	40
	9	30x560x1960	35x245x1960	30x560x1960	35x245x1960	-	-	165	165	12	12	40	40
	10	25x560x1810	30x245x1810	35x560x2860	40x245x2860	5x560x900	-	165	165	11	18	40	40

Notes:
1. All field splice plates, except fill plates to be AASHTO M270M, Grade 345 and meet N.T.R.

2. All Bolts are 22mm ϕ AASHTO M164 (ASTM A325).

3. Bolt Spacing Dimensions E and F are measured from the edge of the smaller width flange when flange plates at field splices are different widths.

DESIGNED	MAS
CHECKED	GPM
DRAWN	LK
CHECKED	GPM/ACF

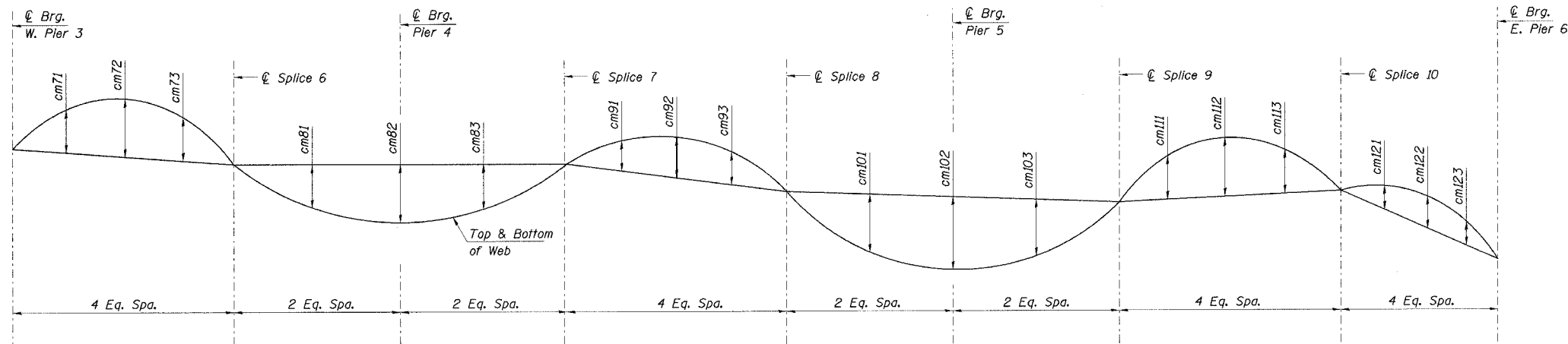
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
MOMENT & REACTION TABLES & FIELD
SPLICES, SPANS 4-6
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 56 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	118	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		



CAMBER DIAGRAM

GIRDER DIMENSIONS (Millimeters)

Girder	cm71	cm72	cm73	cm81	cm82	cm83	cm91	cm92	cm93	cm101	cm102	cm103	cm111	cm112	cm113	cm121	cm122	cm123
1	55	80	71	0	25	0	73	87	69	20	49	20	58	76	65	26	24	0
2	59	86	75	0	26	0	73	86	68	20	52	20	63	82	69	27	25	0
3	63	91	80	0	27	0	72	85	67	21	55	20	69	91	79	33	30	20
4	67	98	84	20	38	20	75	91	76	25	45	20	79	100	84	37	33	22
5	71	103	89	20	40	20	75	90	75	28	48	20	83	106	89	38	34	23
6	76	110	93	20	41	20	75	90	74	32	51	20	88	113	94	39	36	24

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters)

(Elevations are after deflections due to girder self weight and slab and are to be used for fabrication only)

Girder	℄ Brg. W. Pier 3	℄ Splice 6	℄ Brg. Pier 4	℄ Splice 7	℄ Splice 8	℄ Brg. Pier 5	℄ Splice 9	℄ Splice 10	℄ Brg. E. Pier 6
1	198.170	199.000	199.302	199.635	200.091	200.188	200.344	200.483	200.393
2	198.269	199.107	199.401	199.729	200.181	200.288	200.455	200.599	200.492
3	198.369	199.215	199.501	199.824	200.272	200.387	200.567	200.707	200.592
4	198.469	199.322	199.590	199.919	200.349	200.479	200.651	200.805	200.677
5	198.568	199.430	199.690	200.013	200.439	200.578	200.763	200.921	200.777
6	198.668	199.538	199.790	200.108	200.530	200.678	200.874	201.037	200.876

DESIGNED	JJK
CHECKED	JWD
DRAWN	LK
CHECKED	JWD

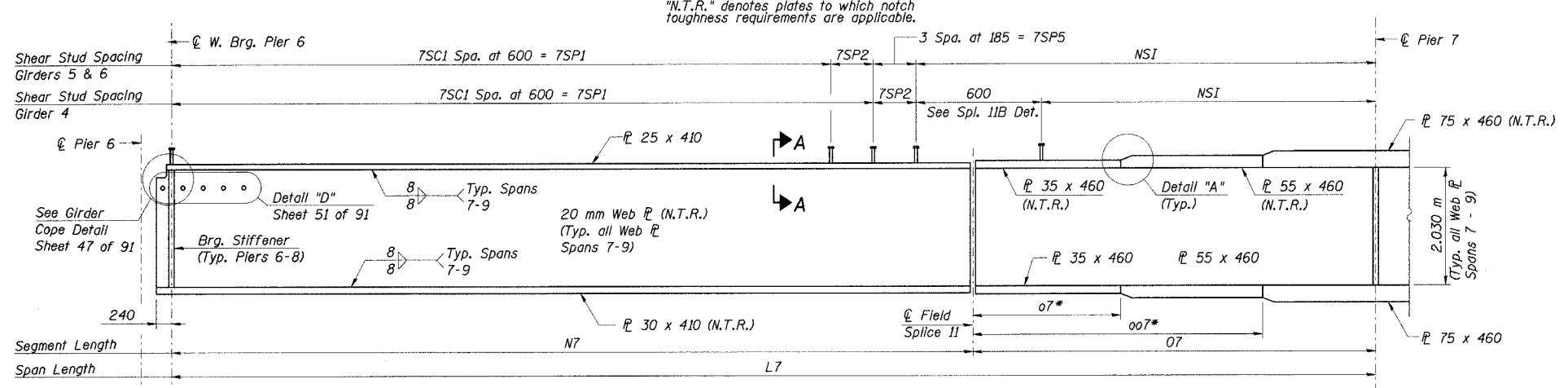
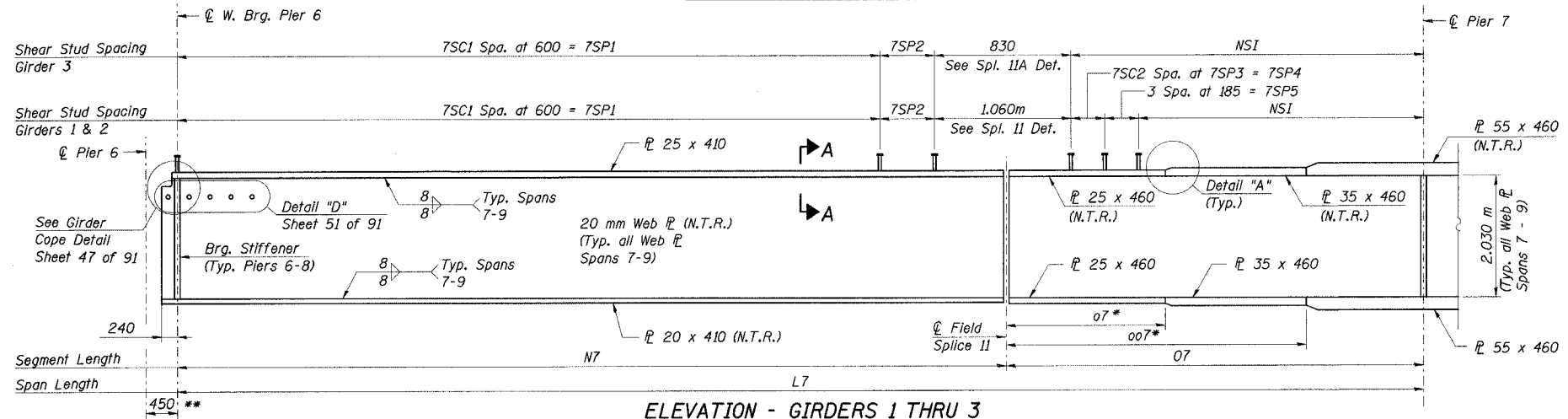
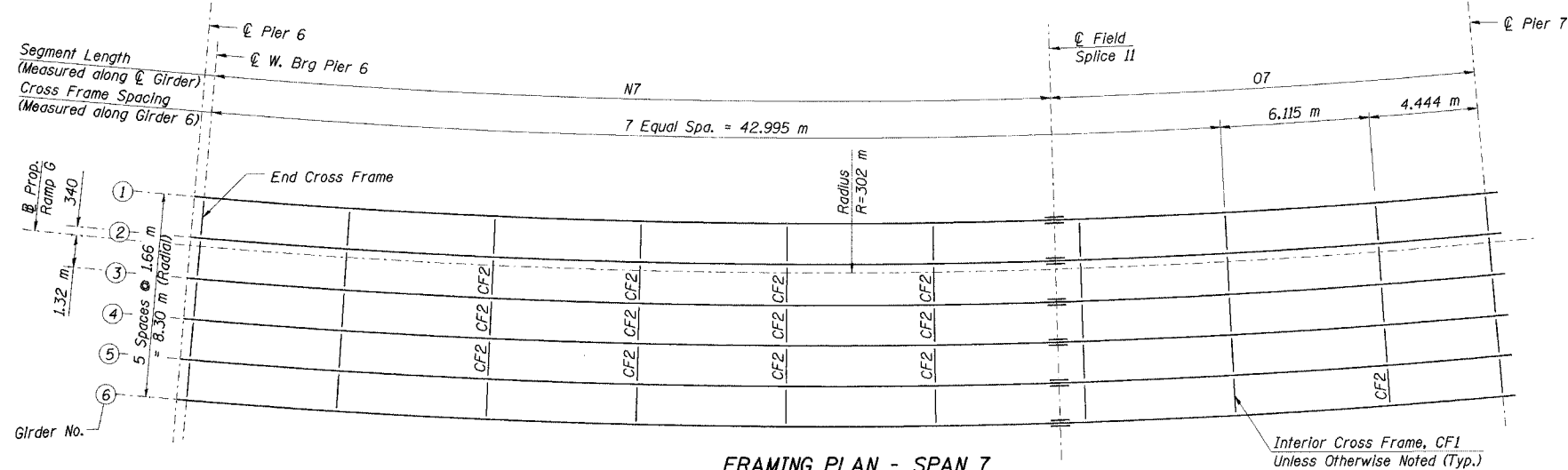
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
CAMBER AND TOP OF WEB ELEVATION
SPAN 4-6
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 57 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	119	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



- Notes:
- All flange plates and web plates shall be AASHTO M270M Grade 345.
 - Work this sheet with Sht. Nos. 58, 59 & 60 of 91.
 - For Section A-A, Detail A, & Bearing Stiffener Details, see Sht. No. 45 of 91.
 - Place all cross frames radially, except End Cross Frame at Pier 6.
- * Top & Bottom.
** Dimension measured along @ Ramp G only.

GIRDER DIMENSIONS (Meters)

Girder	Radius	L7	N7	07	o7	oo7
1	300.00	52.100	34.219	17.881	7.460	13.411
2	301.66	52.390	34.410	17.980	7.502	13.485
3	303.32	52.681	34.602	18.079	7.543	13.559
4	304.98	52.972	34.794	18.178	7.584	13.633
5	306.64	53.263	34.986	18.277	7.625	13.707
6	308.30	53.554	35.179	18.375	7.667	13.782

ELEVATION - GIRDERS 4 THRU 6

"N.T.R." denotes plates to which notch toughness requirements are applicable.

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	7SP1	7SP2	7SP3	7SP4	7SP5	NSI		
1	56	33.600	0.089	2	0.322	0.644	0.555	16.152
2	56	33.600	0.280	1	0.465	0.465	0.555	16.430
3	56	33.600	0.472	0	0.000	0.000	0.000	17.779
4	56	33.600	0.294	0	0.000	0.000	0.000	18.478
5	55	33.000	0.174	0	0.000	0.000	0.555	19.534
6	54	32.400	0.199	0	0.000	0.000	0.555	20.400

DESIGNED	MAS
CHECKED	GPM
DRAWN	JRB
CHECKED	PCA/MEA

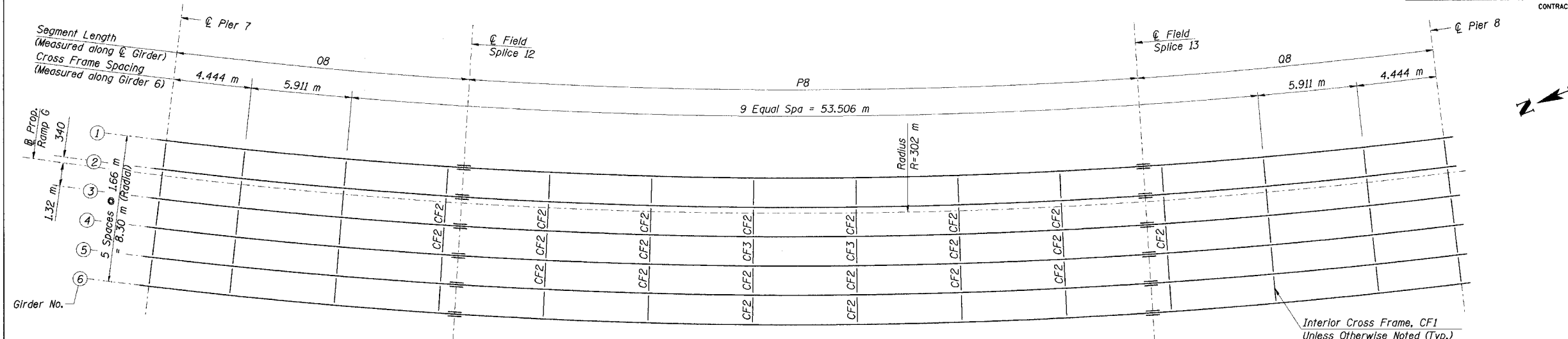
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
**FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 7**
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

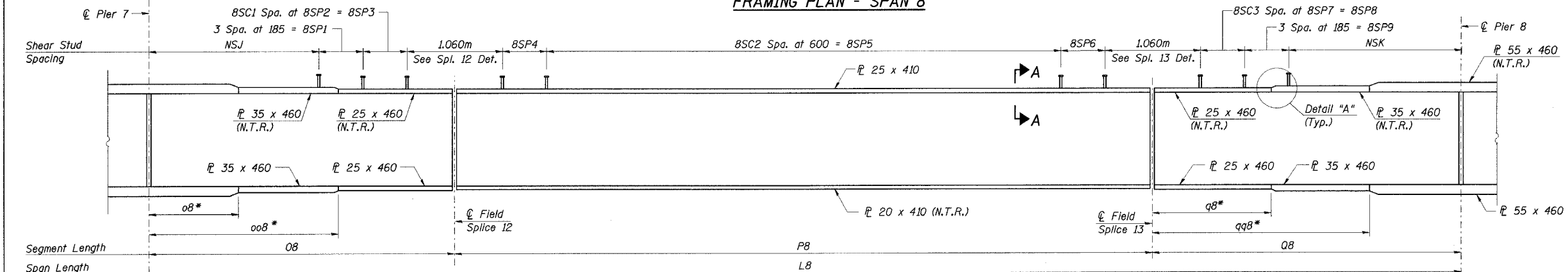
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

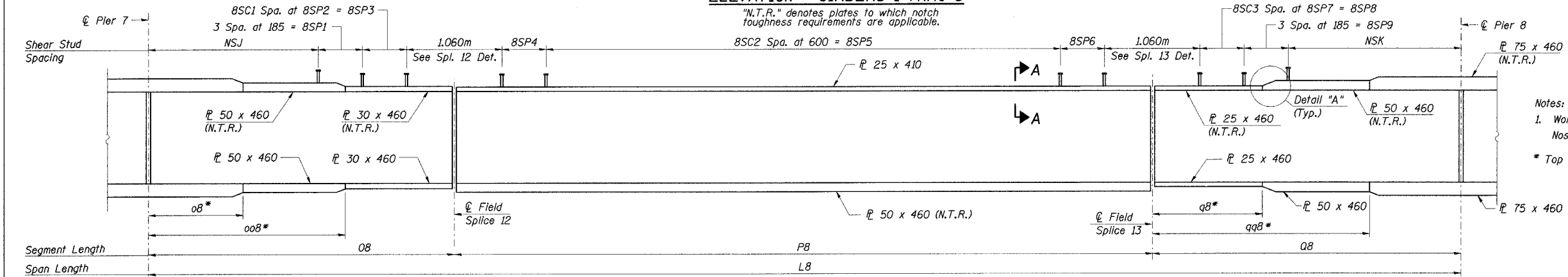
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 58 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	120	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



FRAMING PLAN - SPAN 8



ELEVATION - GIRDERS 1 THRU 3



ELEVATION - GIRDERS 4 THRU 6

GIRDER DIMENSIONS (Meters)

Girder	Radius	L8	08	o8	oo8	P8	08	q8	qq8
1	300.00	72.218	17.583	4.470	10.222	36.854	17.781	7.560	13.311
2	301.66	72.618	17.680	4.495	10.278	37.058	17.880	7.601	13.385
3	303.32	73.017	17.777	4.520	10.335	37.262	17.978	7.643	13.459
4	304.98	73.418	17.875	4.544	10.392	37.466	18.077	7.685	13.532
5	306.64	73.817	17.972	4.569	10.448	37.670	18.175	7.727	13.606
6	308.30	74.216	18.069	4.594	10.505	37.874	18.273	7.769	13.680

SHEAR CONNECTOR DIMENSIONS (Meters)

Girder	NSJ	8SP1	8SC1	8SP2	8SP3	8SP4	8SC2	8SP5	8SP6	8SC3	8SP7	8SP8	8SP9	NSK
1	16.177	0.555	1	0.321	0.321	0.197	59	35.400	0.197	3	0.438	1.314	0.555	15.382
2	16.208	0.555	1	0.387	0.387	0.299	59	35.400	0.299	3	0.452	1.356	0.555	15.439
3	16.239	0.555	1	0.453	0.453	0.101	60	36.000	0.101	3	0.466	1.398	0.555	15.495
4	16.269	0.555	1	0.521	0.521	0.203	60	36.000	0.203	3	0.481	1.443	0.555	15.549
5	16.299	0.555	1	0.588	0.588	0.305	60	36.000	0.305	3	0.495	1.485	0.555	15.605
6	16.328	0.555	2	0.328	0.656	0.107	61	36.600	0.107	3	0.509	1.527	0.555	15.661

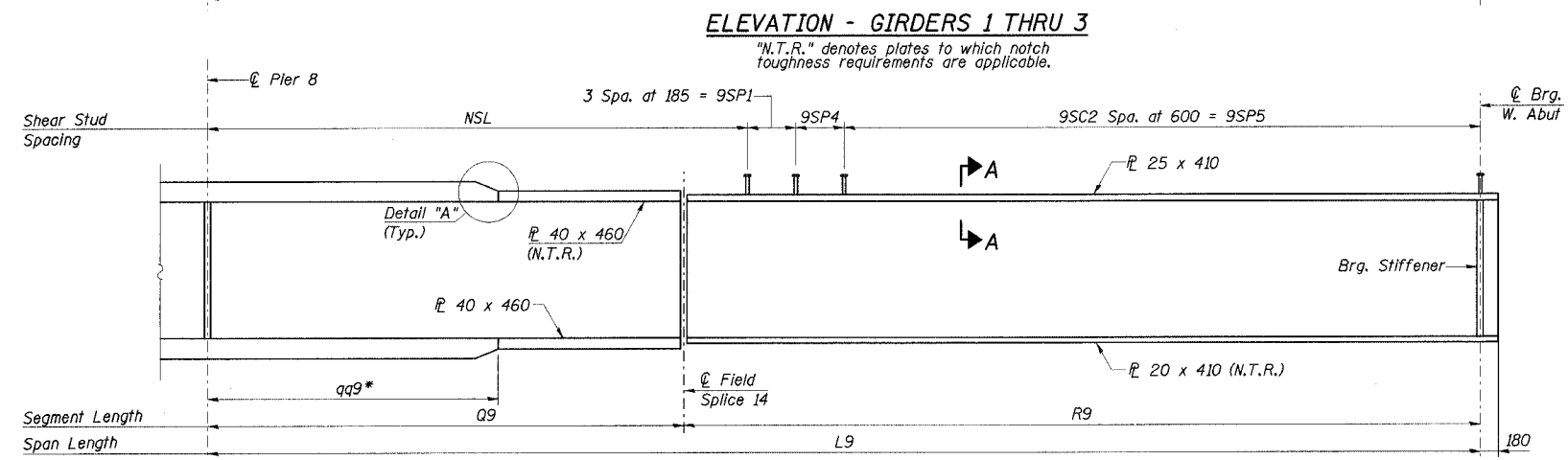
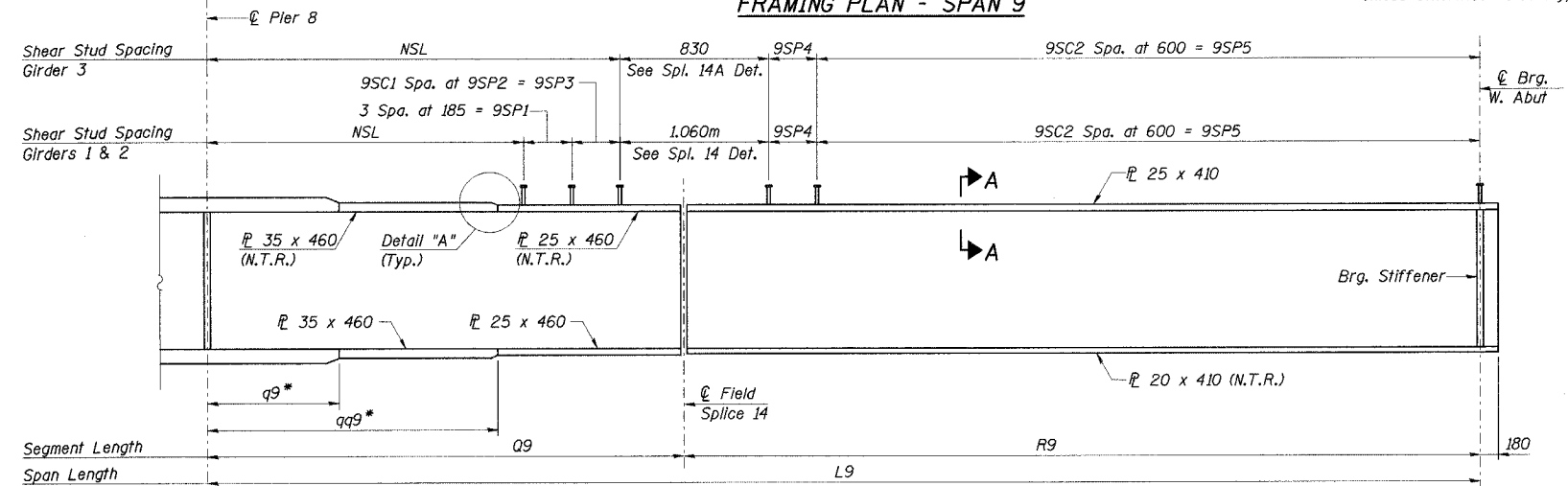
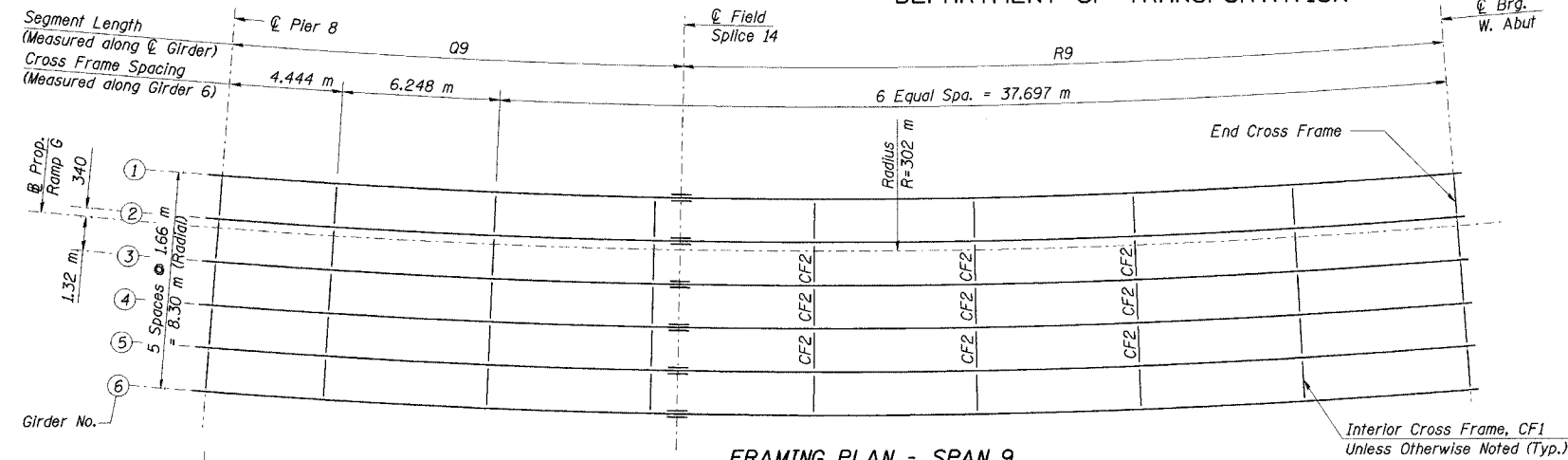
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 8
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 59 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	121	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854	



Notes:
1. Work this sheet with Sht. Nos. 57, 58 & 60 of 91
* Top & Bottom

GIRDER DIMENSIONS (Meters)

		Girder	Radius	L9	Q9	q9	qq9	R9
DESIGNED	MAS	1	300.00	47.086	18.079	4.470	10.550	29.007
CHECKED	GPM	2	301.66	47.347	18.180	4.495	10.608	29.167
DRAWN	JRB	3	303.32	47.608	18.280	4.520	10.666	29.328
CHECKED	PCA/MEA	4	304.98	47.868	18.380	-	10.725	29.488
		5	306.64	48.129	18.480	-	10.783	29.649
		6	308.30	48.389	18.580	-	10.842	29.809

SHEAR CONNECTOR DIMENSIONS (Meters)

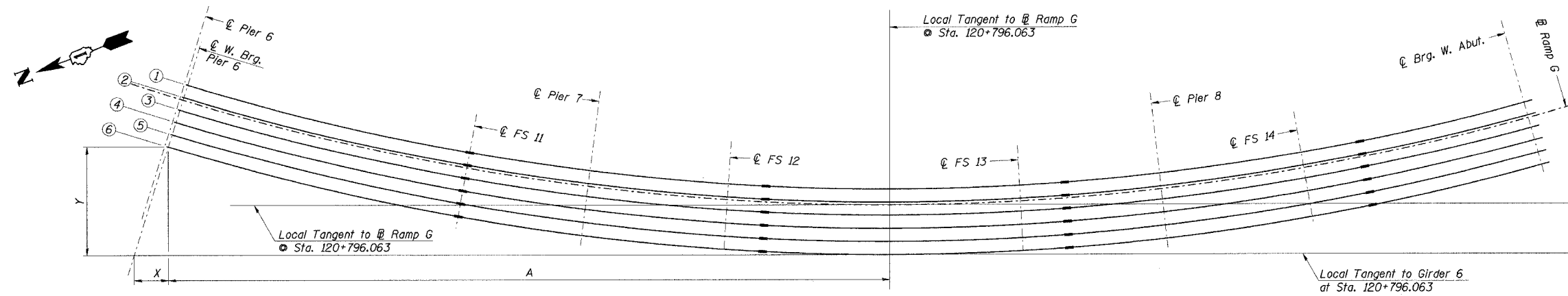
Girder	NSL	9SP1	9SC1	9SP2	9SP3	9SP4	9SC2	9SP5
1	16.104	0.555	2	0.445	0.890	0.277	47	28.200
2	16.660	0.555	1	0.435	0.435	0.437	47	28.200
3	18.064	0.000	0	0	0.000	0.514	47	28.200
4	19.473	0.555	0	0	0.000	0.240	46	27.600
5	20.618	0.555	0	0	0.000	0.556	44	26.400
6	21.775	0.555	0	0	0.000	0.259	43	25.800

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FRAMING PLAN, GIRDER ELEVATION
AND DETAILS-SPAN 9
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

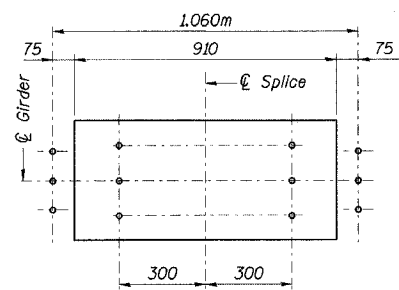
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F. A. I. 80/94	0203.1B	COOK	200	122	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



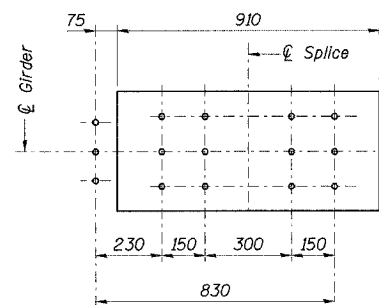
GIRDER LAYOUT PLAN - SPANS 7-9

LAYOUT DIMENSIONS

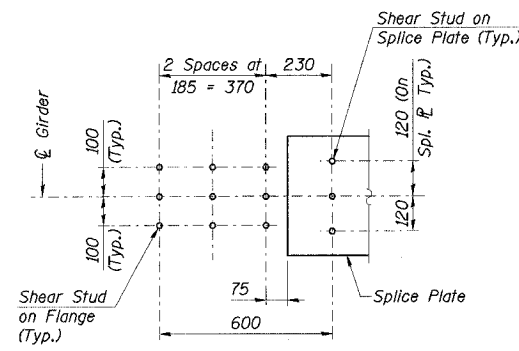
Girder	Station	W. Brg. Pier 6 120+705.350			FS 11 120+739.800			Pier 7 120+757.800			FS 12 120+775.500			FS 13 120+812.600			Pier 8 120+830.500			FS 14 120+848.700			Brg. W Abut 120+877.900		
		A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y			
1	300.00	88.761	4.182	13.431	55.568	0.978	5.191	37.908	0.306	2.405	20.411	0.047	0.695	16.419	0.025	0.450	34.135	0.223	1.948	52.024	0.800	4.545	80.304	3.041	10.948
2	301.66	89.254	4.206	13.506	55.875	0.984	5.220	38.118	0.308	2.418	20.524	0.048	0.699	16.510	0.025	0.452	34.324	0.224	1.959	52.312	0.805	4.570	80.748	3.058	11.008
BL	302.00	89.355	4.210	13.522	55.938	0.985	5.226	38.161	0.308	2.421	20.547	0.048	0.700	16.529	0.025	0.453	34.362	0.225	1.961	52.371	0.806	4.576	80.839	3.062	11.021
3	303.32	89.747	4.229	13.581	56.183	0.989	5.249	38.328	0.310	2.431	20.637	0.048	0.703	16.601	0.025	0.455	34.513	0.226	1.970	52.600	0.809	4.596	81.192	3.075	11.069
4	304.98	90.241	4.253	13.657	56.490	0.995	5.277	38.537	0.311	2.445	20.750	0.048	0.707	16.692	0.025	0.457	34.701	0.227	1.981	52.888	0.814	4.621	81.637	3.092	11.129
5	306.64	90.735	4.276	13.732	56.798	1.000	5.306	38.747	0.313	2.458	20.863	0.048	0.711	16.783	0.025	0.460	34.890	0.228	1.991	53.176	0.818	4.646	82.081	3.109	11.190
6	308.30	91.228	4.300	13.807	57.105	1.006	5.335	38.957	0.315	2.471	20.976	0.049	0.714	16.874	0.025	0.462	35.079	0.229	2.002	53.463	0.822	4.671	82.525	3.126	11.250



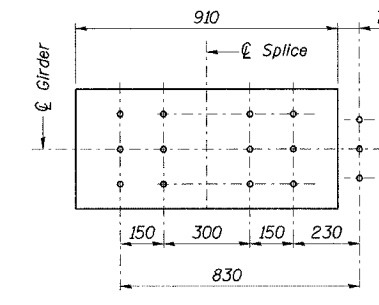
SPICES 11, 12, 13 & 14 DETAIL



SPICE 11A DETAIL



SPICE 11B DETAIL



SPICE 14A DETAIL

Notes:
Coordinate system shown for Girder 6.
Typical for all Girders with local tangent
to each girder at Sta. 120+796.063.

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DESIGNED	GPM
CHECKED	PCA
DRAWN	JRB/LK
CHECKED	MEA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
GIRDER LAYOUT - SPANS 7-9
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	0203.1B	COOK	200	123
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62854
				91 SHEETS

GIRDER MOMENT TABLE
GIRDER 3

	0.4 Sp.7	Pier 7	0.5 Sp.8	Pier 8	0.6 Sp.9
Is	(10 ⁶ mm ⁴) 33302	68935	33302	68935	33302
Ic (n)	(10 ⁶ mm ⁴) 64858	---	64858	---	64857
Ic (3n)	(10 ⁶ mm ⁴) 47527	---	47527	---	47527
Ss	(10 ³ mm ³) 31069	64465	31069	64465	31069
Sc (n)	(10 ³ mm ³) 42487	---	42487	---	42486
Sc (3n)	(10 ³ mm ³) 37200	---	37200	---	37199
Sb _f	(10 ³ mm ³) 557	1938	557	1938	557
Q	(kN/m) 13	20	13	20	13
M _P	(kN-m) 1917	8703	2588	8054	1384
s _P	(kN/m) 4	---	4	---	4
Ms _P	(kN-m) 803	---	978	---	603
M _L	(kN-m) 1169	1973	1220	1900	1093
M (Imp)	(kN-m) 234	395	244	380	219
⁵ ₃ [M _L + M (Imp)]	(kN-m) 2337	3945	2440	3799	2186
Ma	(kN-m) 6574	16443	7808	15408	5425
Mb _f	(kN-m) 28	38	32	36	13
fs _P (non-comp)	(MPa) 62	135	83	125	45
fs _P (comp)	(MPa) 22	---	26	---	16
fs ⁵ ₃ [M _L + M (Imp)]	(MPa) 55	61	57	59	51
f _i	(MPa) 51	20	58	19	23
fs (Overload)	(MPa) 138	196	167	184	112
fs (Total)	(MPa) 180	255	217	239	146
Fcr (Overload)	(MPa) 328	289	328	289	328
VR	(kN) 240	---	276	---	276
Fcr	(MPa) 345	323	345	323	345

GIRDER REACTION TABLE
GIRDER 3

	Pier 6W	Pier 7	Pier 8	W. Abut.
R _P	(kN) 307	1361	1321	276
R _L	(kN) 171	349	342	174
Imp.	(kN) 43	87	85	44
R (Total)	(kN) 521	1797	1748	494

GIRDER MOMENT TABLE
GIRDER 6

	0.4 Sp.7	Pier 7	0.5 Sp.8	Pier 8	0.6 Sp.9
Is	(10 ⁶ mm ⁴) 37141	90378	47214	90378	33302
Ic (n)	(10 ⁶ mm ⁴) 71704	---	92113	---	62795
Ic (3n)	(10 ⁶ mm ⁴) 52575	---	66247	---	46359
Ss	(10 ³ mm ³) 37333	82941	53414	82941	31069
Sc (n)	(10 ³ mm ³) 49526	---	69473	---	41831
Sc (3n)	(10 ³ mm ³) 43760	---	61805	---	36723
Sb _f	(10 ³ mm ³) 836	2642	1761	2642	557
Q	(kN/m) 15	30	16	30	15
M _P	(kN-m) 2160	11242	4286	10546	1169
s _P	(kN/m) 11	---	11	---	11
Ms _P	(kN-m) 1112	---	1895	---	691
M _L	(kN-m) 2186	3258	2800	3190	1863
M (Imp)	(kN-m) 437	652	560	638	373
⁵ ₃ [M _L + M (Imp)]	(kN-m) 4371	6516	5600	6380	3726
Ma	(kN-m) 9936	23086	15315	22004	7262
Mb _f	(kN-m) 49	45	76	42	16
fs _P (non-comp)	(MPa) 58	136	80	127	38
fs _P (comp)	(MPa) 25	---	31	---	19
fs ⁵ ₃ [M _L + M (Imp)]	(MPa) 88	79	81	77	89
f _i	(MPa) 60	17	43	16	29
fs (Overload)	(MPa) 172	214	192	204	146
fs (Total)	(MPa) 223	278	249	265	189
Fcr (Overload)	(MPa) 328	294	328	293	328
VR	(kN) 320	---	360	---	320
Fcr	(MPa) 345	323	345	323	345

GIRDER REACTION TABLE
GIRDER 6

	Pier 6W	Pier 7	Pier 8	W. Abut.
R _P	(kN) 418	1410	1370	329
R _L	(kN) 192	359	352	181
Imp.	(kN) 48	90	88	45
R (Total)	(kN) 658	1859	1810	555

Fcr - Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and Fy for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

For (Overload) - Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total and Overload).

Ic(n) and Sc(n) are the moment of Inertia and section modulus of the composite section used in computing stresses due to live load.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead load (see AASHTO 10.3B).

VR is the maximum $t +$ impact shear range in span.

Ma (Applied Moment) = $1.3 [M_P + Ms_P + 5/3 (M_L + M (Imp))]$

fs (Overload) is the sum of stresses due to $M_P + Ms_P + 5/3 (M_L + M (Imp))$

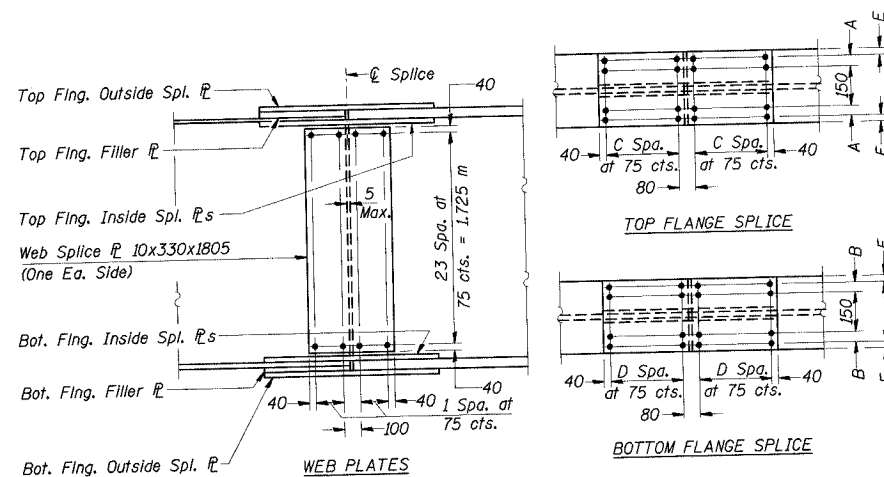
fs (Total) is the sum of stresses due to $1.3 [M_P + Ms_P + 5/3 (M_L + M (Imp))]$

Sb_f is the section modulus for one flange plate for lateral flange bending.

Mb_f is the lateral bending moment for flange plate (factored).

f_i is the calculated normal stress at the edge of flange due to lateral bending (factored).

M_L and R_L include the effects of centrifugal force and superelevation.



FIELD SPLICE 11, 12, 13, & 14

DESIGNED	MAS
CHECKED	GPM
DRAWN	LK
CHECKED	GPM/ACF

TABLE OF DIMENSIONS

Girder Location	Field Splice No.	Top Flange Splice ϕ Dimensions		Bottom Flange Splice ϕ Dimensions		Filler ϕ Dimension		Bolt Spacing Dimensions					
		Outside ϕ	Inside ϕ	Outside ϕ	Inside ϕ	Top ϕ	Bottom ϕ	A	B	C	D	E	F
Girders G1, G2, & G3	11	20x410x910	25x170x910	20x410x760	25x170x760	-	5x410x375	90	90	5	4	40	40
	12	20x410x910	25x170x910	20x410x760	25x170x760	-	5x410x375	90	90	5	4	40	40
	13	20x410x910	25x170x910	20x410x760	25x170x760	-	5x410x375	90	90	5	4	40	40
	14	20x410x910	25x170x910	20x410x760	25x170x760	-	5x410x375	90	90	5	4	40	40
Girders G4, G5, & G6	11	20x410x910	25x170x910	25x410x1060	30x170x1060	10x410x450	5x410x525	90	90	5	6	40	40
	12	20x410x910	25x170x910	25x460x1360	30x195x1360	5x410x450	20x460x675	90	115	5	8	40	40
	13	20x410x910	25x170x910	20x460x1210	25x195x1210	-	25x460x600	90	115	5	7	40	40
	14	20x410x910	25x170x910	20x410x760	25x170x760	15x410x450	20x410x375	90	90	5	4	40	40

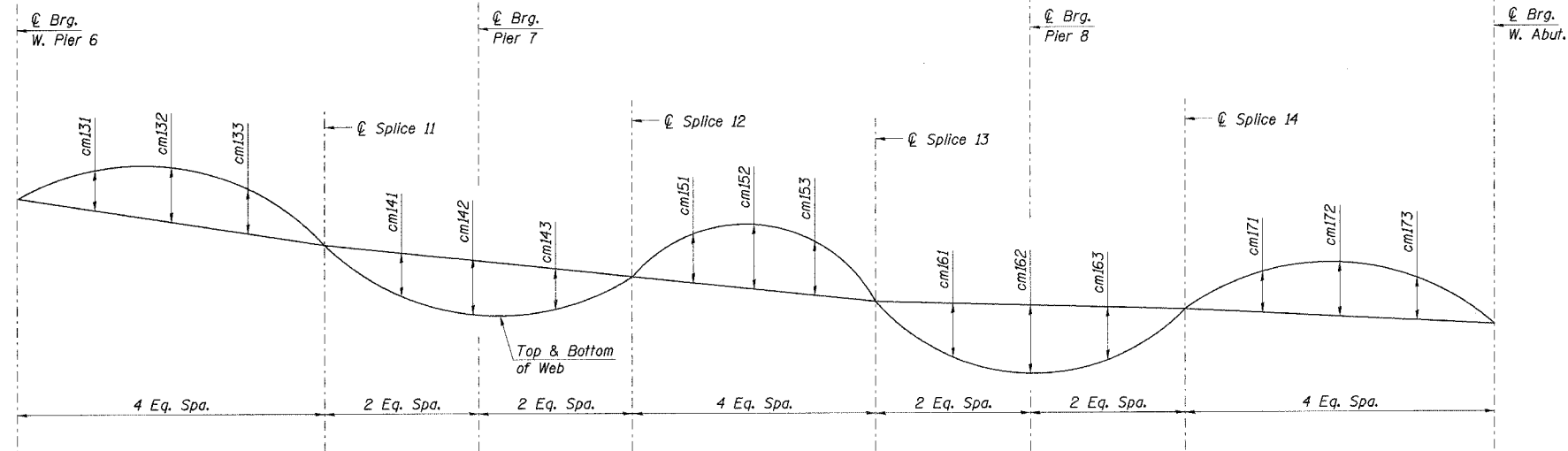
- Notes:
- All field splice plates, except fill plates to be AASHTO M270M, Grade 345 and meet N.T.R.
 - All Bolts are 22mm ϕ AASHTO M164 (ASTM A325).
 - Bolt Spacing Dimensions E and F are measured from the edge of the smaller width flange when flange plates at field splices are different widths.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
MOMENT & REACTION TABLES & FIELD SPLICES, SPANS 7-9
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 62 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	124	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		



CAMBER DIAGRAM

GIRDER DIMENSIONS (Millimeters)

Girder	cm131	cm132	cm123	cm141	cm142	cm143	cm151	cm152	cm153	cm161	cm162	cm163	cm171	cm172	cm173
1	45	65	56	20	47	20	57	71	57	20	51	20	32	31	20
2	46	65	56	20	48	20	60	76	61	20	50	20	33	32	20
3	46	65	56	20	50	20	63	80	63	20	51	20	33	32	20
4	49	70	63	26	64	27	70	86	68	31	67	49	39	35	22
5	49	71	63	27	65	28	73	91	71	31	68	50	38	35	21
6	49	71	62	29	67	29	76	95	74	32	70	51	37	34	21

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters)

(Elevations are after deflection due to girder self weight and slab and are to be used for fabrication only)

Girder	℄ Brg. W. Pier 6	℄ Splice 11	℄ Brg. Pier 7	℄ Splice 12	℄ Splice 13	℄ Brg. Pier 8	℄ Splice 14	℄ Brg. W. Abut.
1	200.391	200.231	200.043	199.951	199.609	199.364	199.218	198.953
2	200.490	200.328	200.143	200.056	199.714	199.464	199.310	199.053
3	200.590	200.424	200.242	200.162	199.820	199.563	199.405	199.152
4	200.690	200.511	200.322	200.263	199.926	199.643	199.492	199.252
5	200.789	200.607	200.421	200.368	200.032	199.743	199.587	199.352
6	200.889	200.703	200.521	200.474	200.137	199.842	199.682	199.451

DESIGNED	JJK
CHECKED	JWD
DRAWN	LK
CHECKED	JWD

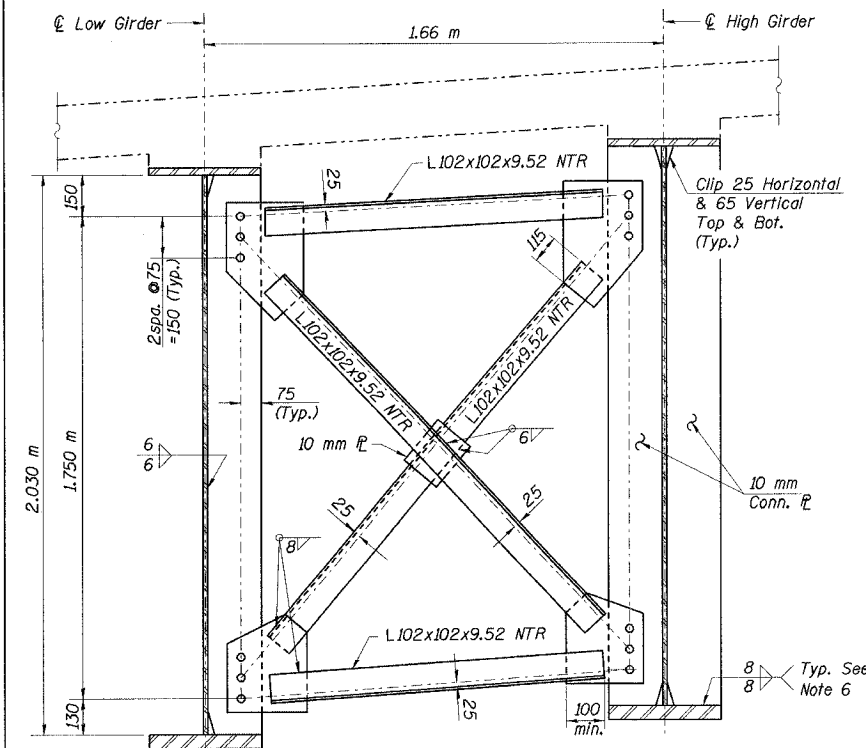
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
CAMBER AND TOP OF WEB ELEVATION
SPAN 7-9
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

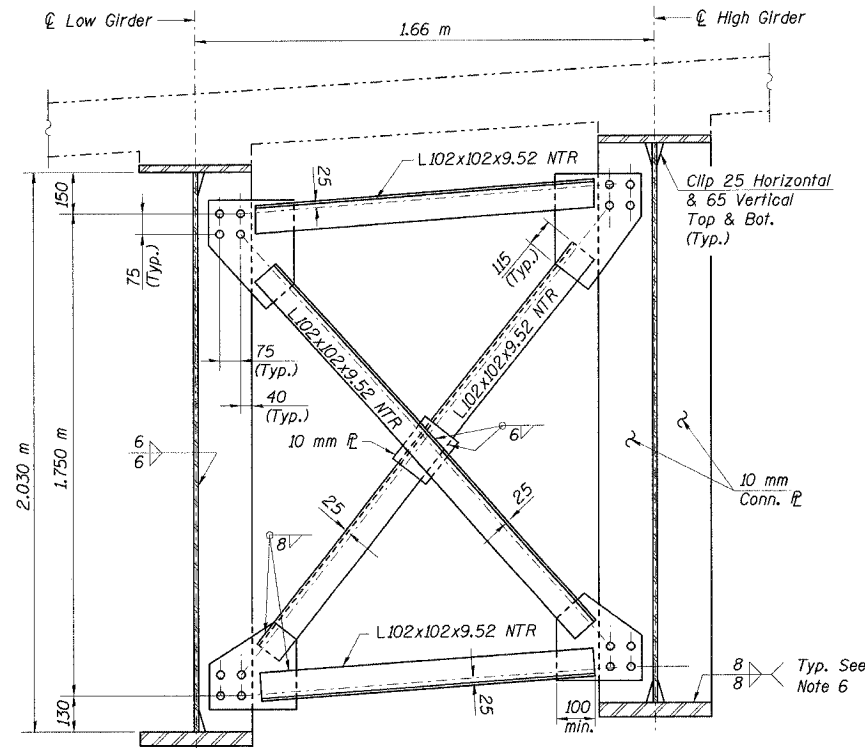
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

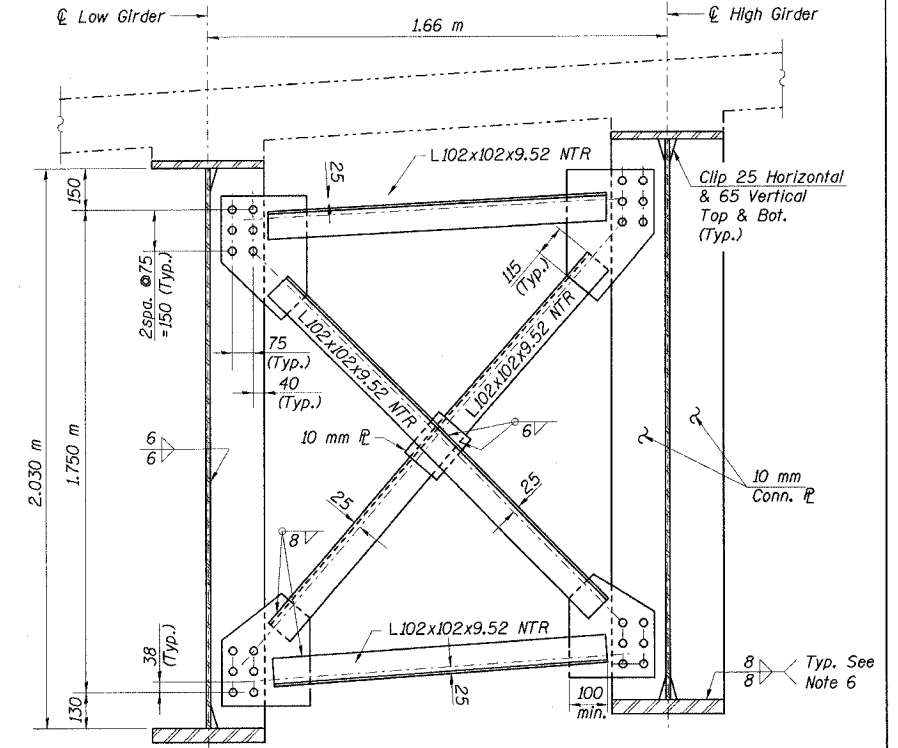
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F. A. I. 80/94	0203.1B	COOK	200	125	91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-			CONTRACT NO. 62854		



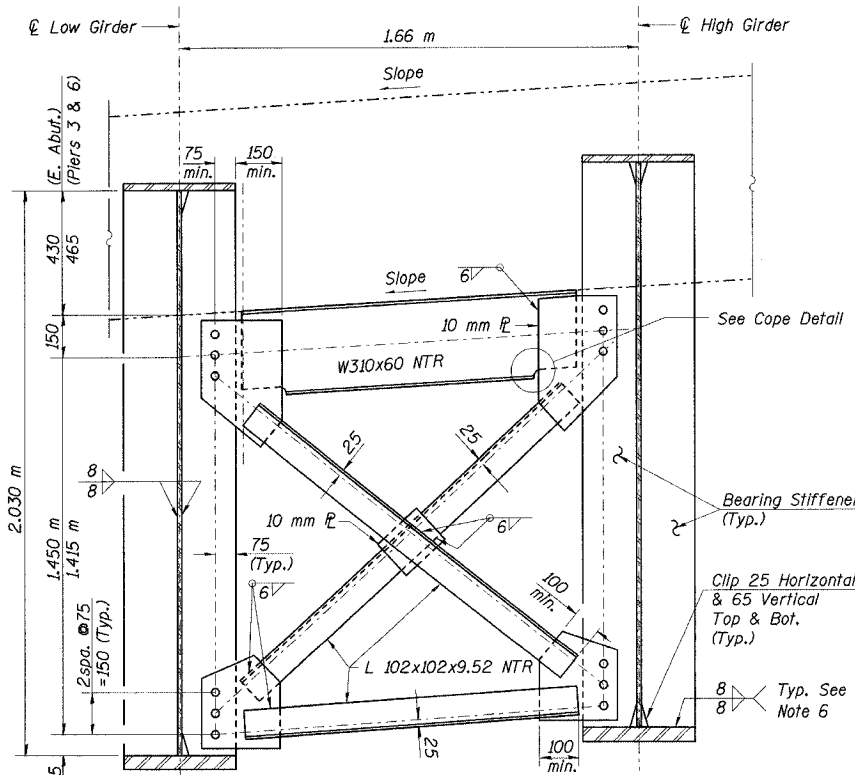
TYPICAL INTERIOR CROSS FRAME-CF1
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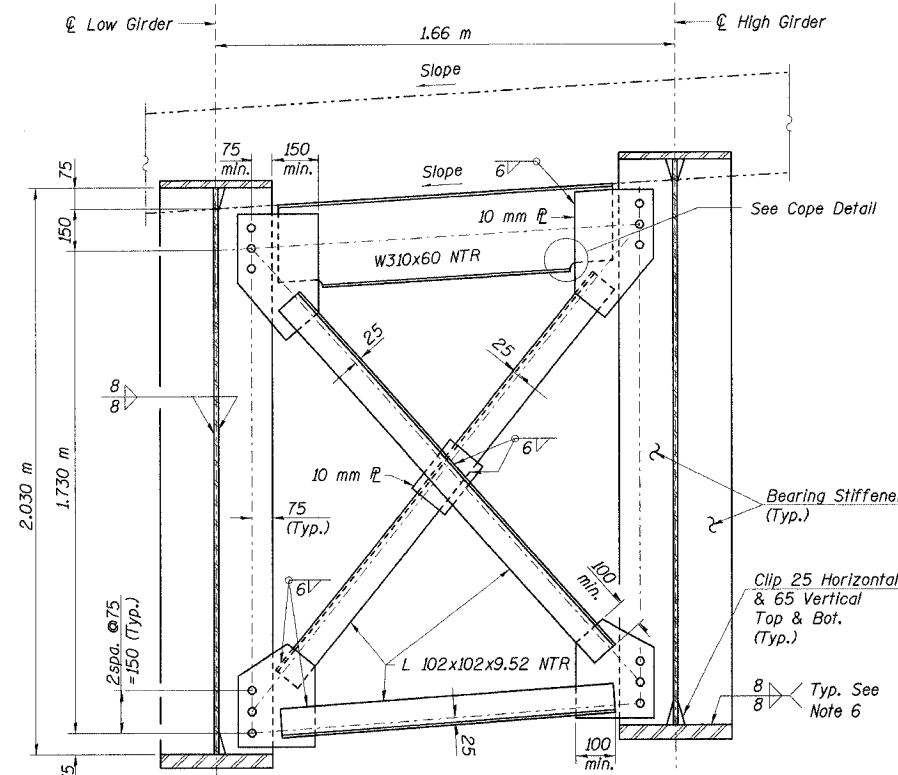
INTERIOR CROSS FRAME-CF2
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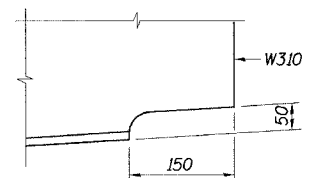
INTERIOR CROSS FRAME-CF3
(43 Required)



END CROSS FRAME AT E. ABUT., PIER 3 & PIER 6
(25 Required)



END CROSS FRAME AT W. ABUTMENT
(5 Required)



COPE DETAIL

Notes:

- All dimensions are in millimeters (mm) except as noted.
- All structural steel for cross frames shall be M 270M Grade 345.
- Fasteners shall be AASHTO M 164M, M22 H.S. bolts. Open holes 28 mm for cross frame members. All others 24 mm.
- All cross frames shall comply with NTR.
- NTR denotes Notch Toughness Requirements.
- Terminate welds 5 mm from end of plate.

DESIGNED	JJK
CHECKED	GPM
DRAWN	JJK
CHECKED	MEA

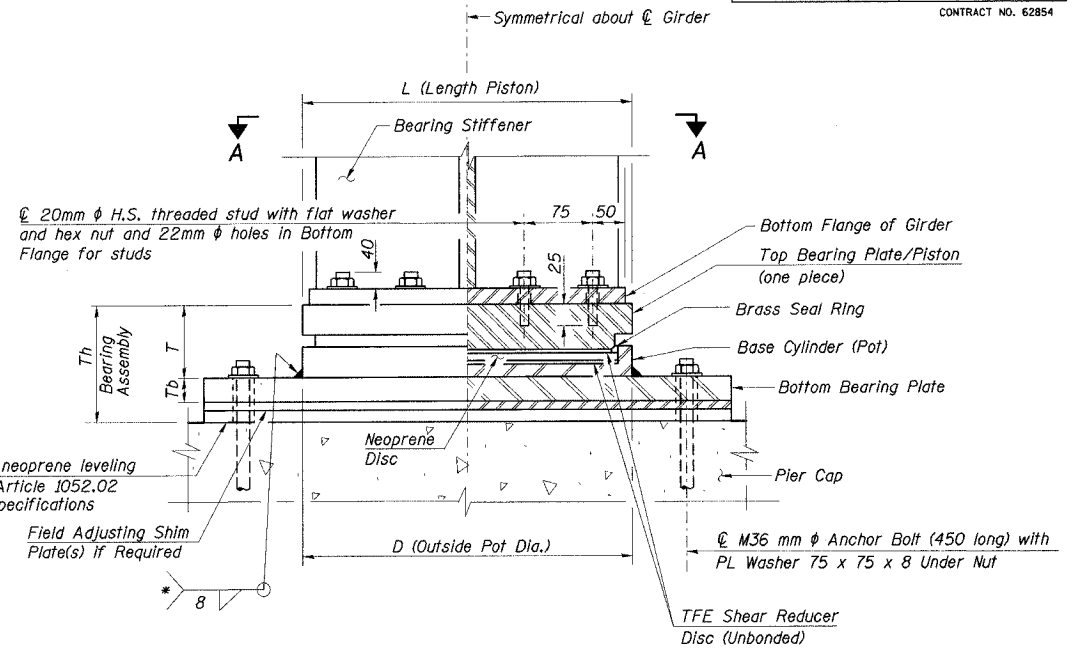
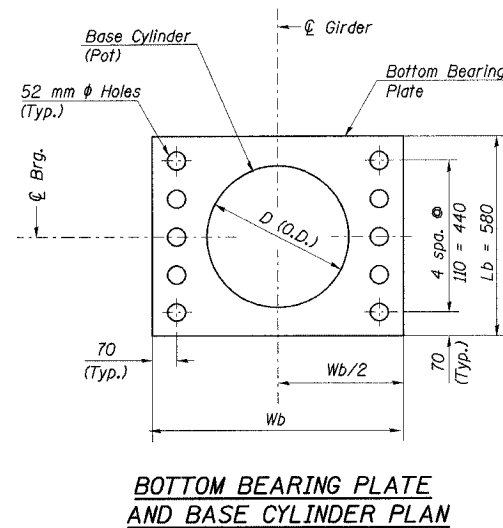
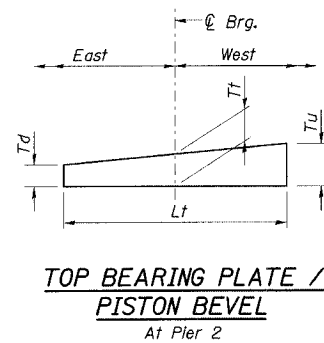
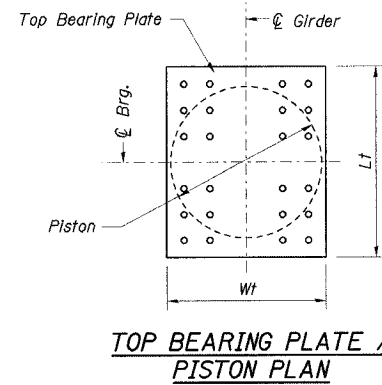
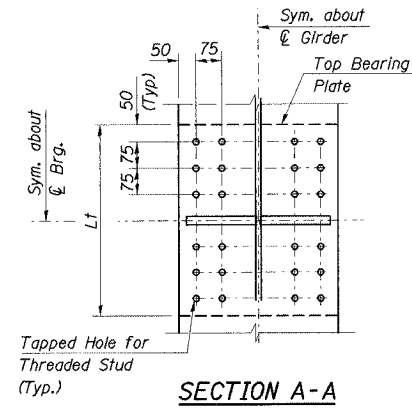
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
CROSS FRAME DETAILS
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 64 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	126	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



* Weld may be omitted if base cylinder is recessed into bottom bearing plate.

BEARING ASSEMBLY DIMENSIONS

Member	Dimension	Location		
		Pier 2	Pier 5	Pier 8
Top Plate	Wt (G1-G3)	460	460	460
	Wt (G4-G6)	560	560	460
	Lt	550	550	550
	Td	70	70	60
	Tt	70	70	60
	Tu	70	70	60
Bearing	D	440	440	410
	L	440	440	410
	T	191	194	171
Bottom Plate	Wb (G1-G3)	725	725	725
	Wb (G4-G6)	825	825	725
	Lb	580	580	580
	Tb	55	55	45
Bearing Assembly	Th	249	252	219

BEARING DESIGN INFORMATION

Design Information	Location		
	Pier 2	Pier 5	Pier 8
Vertical Design Load (kN)	2345	2348	2029
Pay Item Size (kN)	2500	2500	2250
Longitudinal Lateral Load (kN)	898	970	801

Note:
Vertical Design Load = Total Vertical Dead Load + Live Load (No Impact)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Erecting Floating Bearings, Fixed, 2250 kN	Each	6
Erecting Floating Bearings, Fixed, 2500 kN	Each	12

- Notes:
- All dimensions are in millimeters (mm) except as shown.
 - The structural steel for the top bearing plate/piston and bottom bearing plate shall be AASHTO M 270M Grade 345.
 - Cost of top and bottom bearing plates, 3 mm elastomeric neoprene, and threaded studs with washer shall be included with Floating Bearings.
 - For anchor bolt type and details, see Sht. No. 69 of 91 sheets.

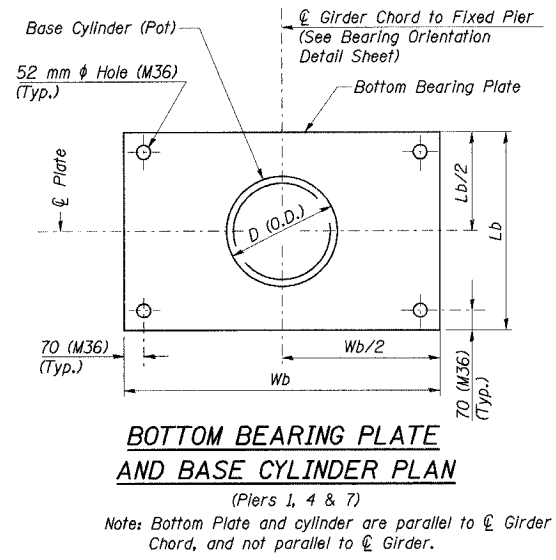
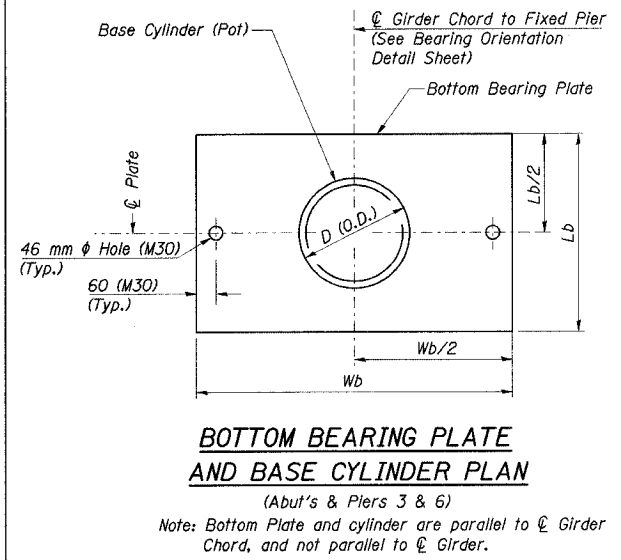
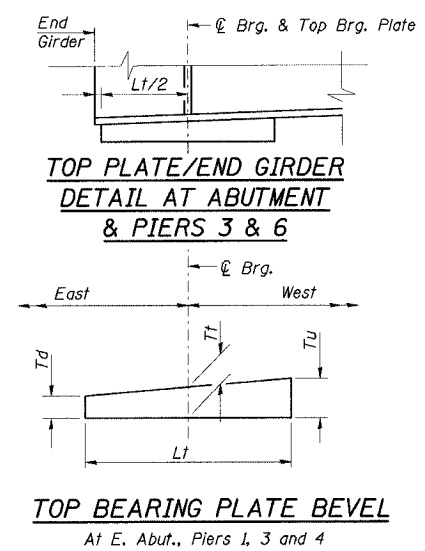
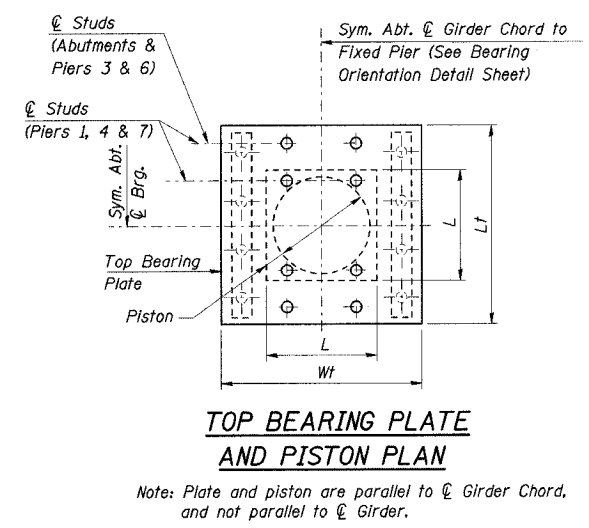
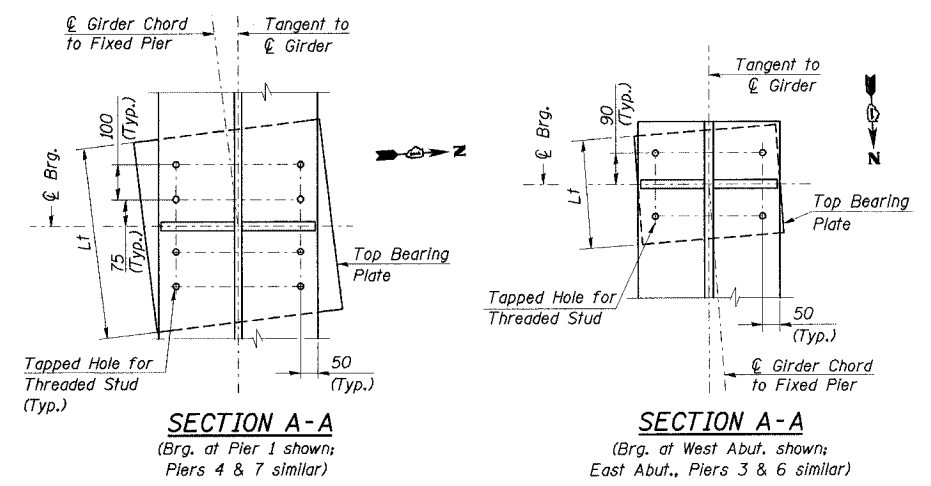
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CHECKED	GPM
DRAWN	LK
CHECKED	PCA

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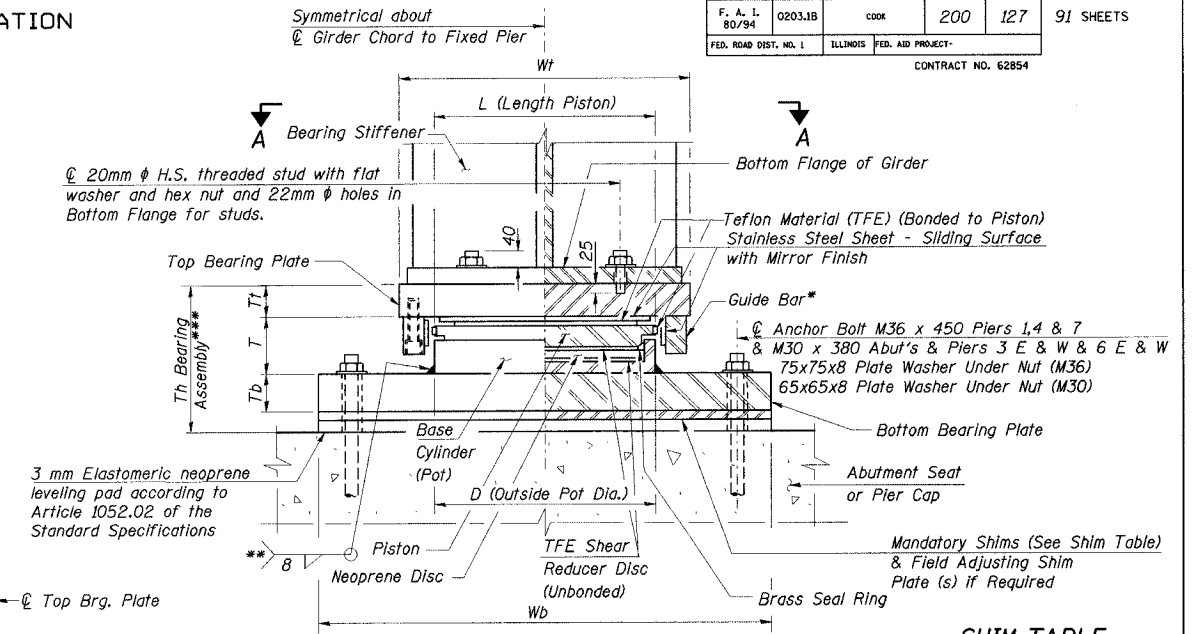
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
FLOATING FIXED BEARINGS
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 65 91 SHEETS
F. A. L. 80/94	0203.1B	COOK	200	127	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					

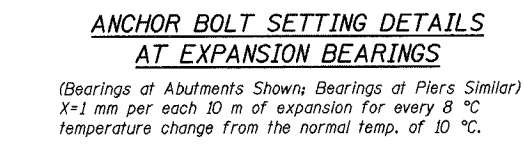


DESIGNED	JJK
CHECKED	GPM
DRAWN	LK
CHECKED	PCA



SHIM TABLE

Location	Shim
East Abut. G2	21
East Abut. G4	10
East Abut. G6	21
Pier 3 W G1-3	43
Pier 3 W G4-6	58
Pier 6 W G1-3	33
Pier 6W G4-6	53



BEARING ASSEMBLY DIMENSIONS

Member	Dimension	Location									
		E. Abut.	Pier 1	Pier 3 E	Pier 3 W	Pier 4	Pier 6 E	Pier 6 W	Pier 7	W. Abut.	
Top Plate	Wf (G1-G3)	410	540	440	410	540	440	410	540	410	
	Wf (G4-G6)	410	540	460	410	540	560	410	540	410	
	Lt	380	550	450	450	550	430	430	550	310	
	Td	40	55	40	40	60	45	40	70	40	
	Tt	48	68	45	45	65	45	40	70	40	
Bearing	Tu	55	80	50	50	70	45	40	70	40	
	D	195	410	295	255	410	295	195	410	195	
	L	195	410	295	255	410	295	195	410	195	
Bottom Plate	T	90	140	110	100	140	110	90	140	90	
	Wb (G1-G3)	625	800	650	625	800	650	625	800	625	
	Wb (G4-G6)	625	800	675	625	800	775	625	800	625	
Bearing Assembly	Lb	245	460	350	310	460	350	245	460	245	
	Tb	55	60	50	50	60	60	55	60	50	
Bearing Assembly	Th	223	298	235	225	295	245	215	300	210	

BEARING DESIGN INFORMATION

Design Information	Location									
	E. Abut.	Pier 1	Pier 3 E	Pier 3 W	Pier 4	Pier 6 E	Pier 6 W	Pier 7	W. Abut.	
Vertical Design Load (kN)	562	2028	1013	819	2134	1099	610	2173	511	
Pay Item Size (kN)	750	2250	1250	1000	2250	1250	750	2250	750	
Total Required Movement (mm)	126	76	67	134	76	69	131	76	49	

Note:
Vertical Design Load = Total Vertical Dead Load + Live Load (No Impact)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Erecting Floating Bearings, Guided Expansion, 750 kN	Each	18
Erecting Floating Bearings, Guided Expansion, 1000 kN	Each	6
Erecting Floating Bearings, Guided Expansion, 1250kN	Each	12
Erecting Floating Bearings, Guided Expansion, 2250 kN	Each	18

- Notes:
- All dimensions are in millimeters (mm) except as shown.
 - The structural steel for the top and bottom bearing plates shall be AASHTO M 270M Grade 345.
 - Cost of top and bottom bearing plates, 3mm Elastomeric Neoprene, shim plates and threaded studs with washer shall be included with Floating Bearings.
 - For anchor bolt type and details, see Anchor Bolt Details Sht. No. 69 of 91 Shts.

ILLINOIS DEPARTMENT OF TRANSPORTATION
1-94/IL 394 SOUTH BOUND

FLOATING EXPANSION BEARINGS

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804

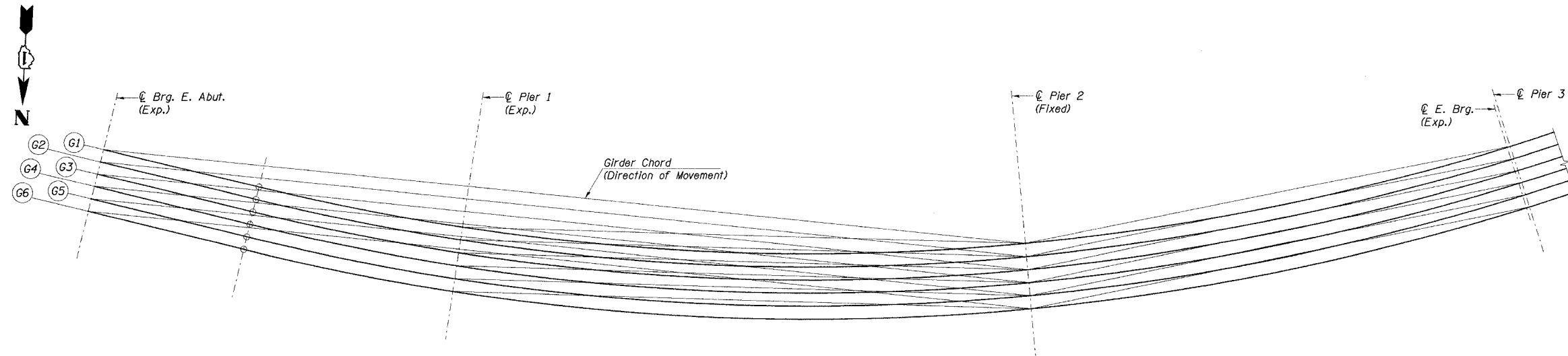
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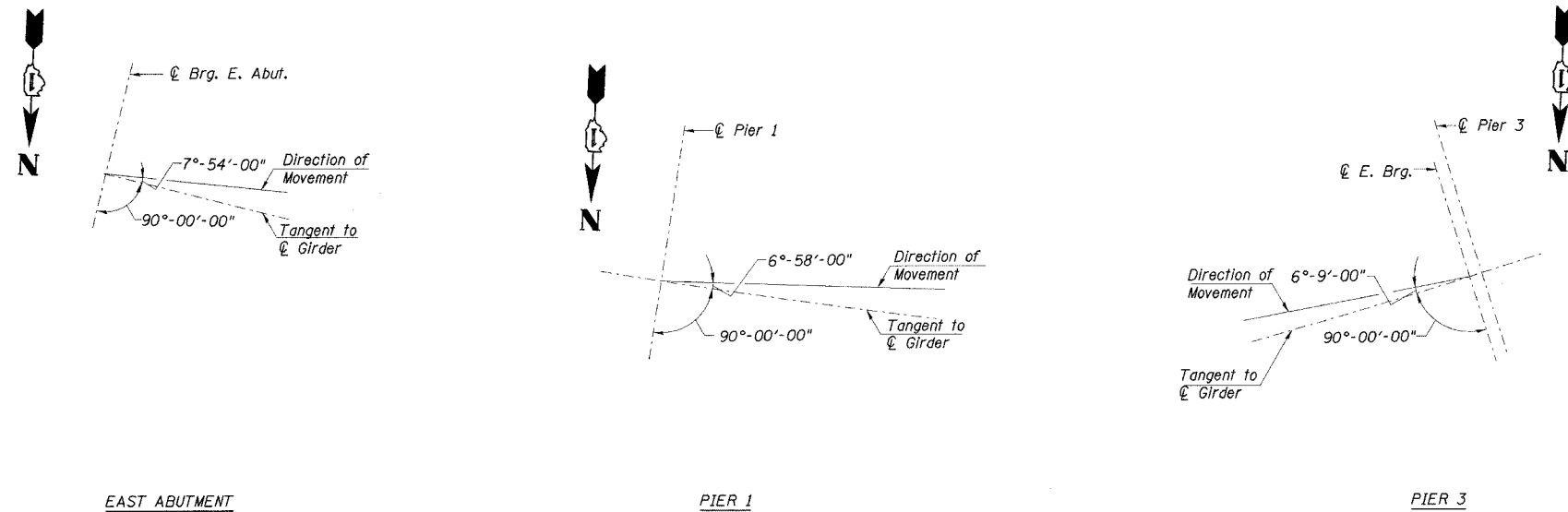
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 66 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	128	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



BEARING LAYOUT PLAN - UNIT 1



BEARING ORIENTATION

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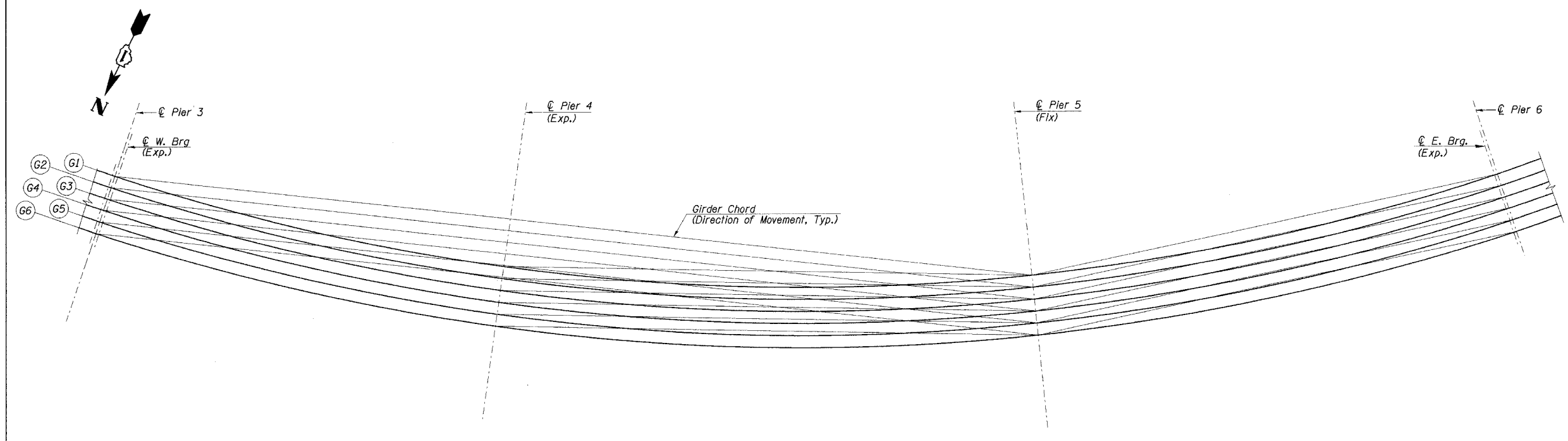
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CHECKED	PCA
DRAWN	JRB
CHECKED	PCA

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94/IL 394 SOUTH BOUND
 BEARING ORIENTATION DETAILS
 SPANS 1-3
 WB I-80/94 TO SB IL 394 - RAMP G
 FAI 80/94 - FAP 332 SECTION 0203.1B
 COOK COUNTY
 STA. 120+796.063 STRUCTURE NO. 016-2804
 DATE 3/23/05
 SCALE ---

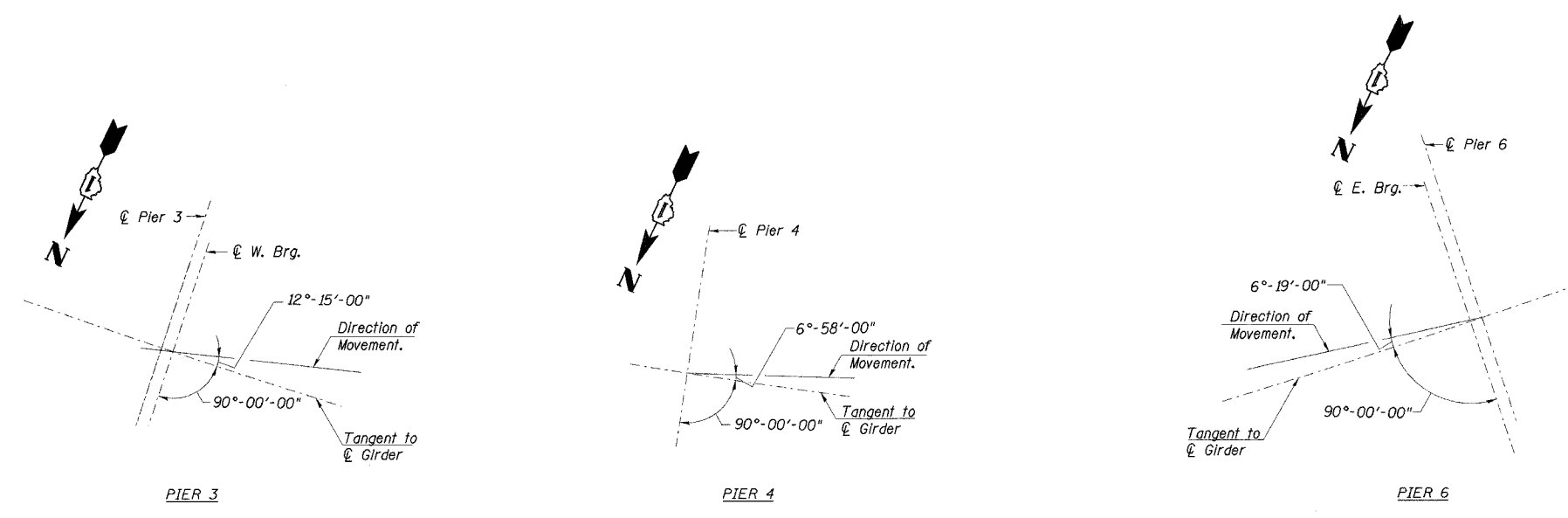
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 67 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	129	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		



BEARING LAYOUT PLAN - UNIT 2



BEARING ORIENTATION

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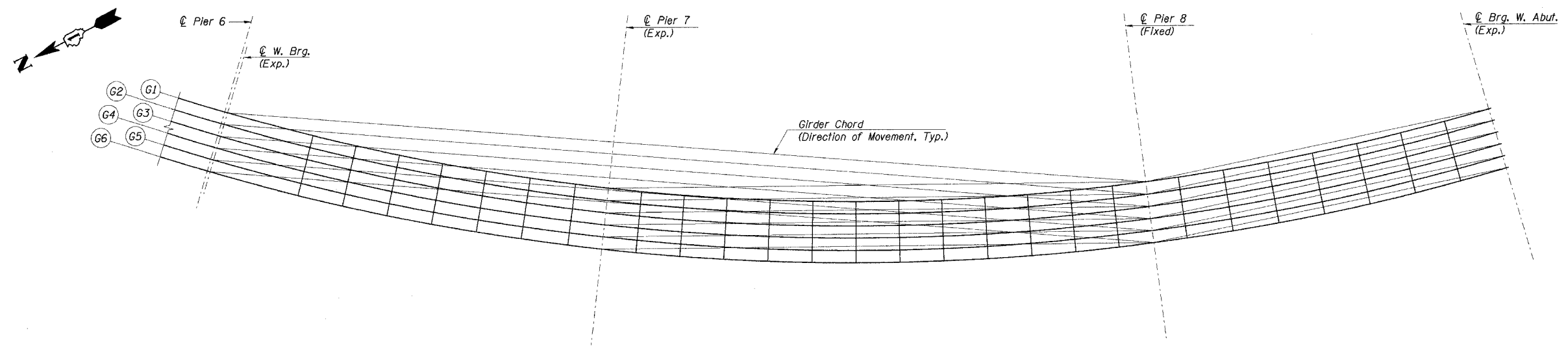
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CHECKED	PCA
DRAWN	JRB
CHECKED	PCA

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94/IL 394 SOUTH BOUND
BEARING ORIENTATION DETAILS
 SPANS 4-6
 WB I-80/94 TO SB IL 394 - RAMP G
 FAI 80/94 - FAP 332 SECTION 0203.1B
 COOK COUNTY
 STA. 120+796.063 STRUCTURE NO. 016-2804
 DATE 3/23/05
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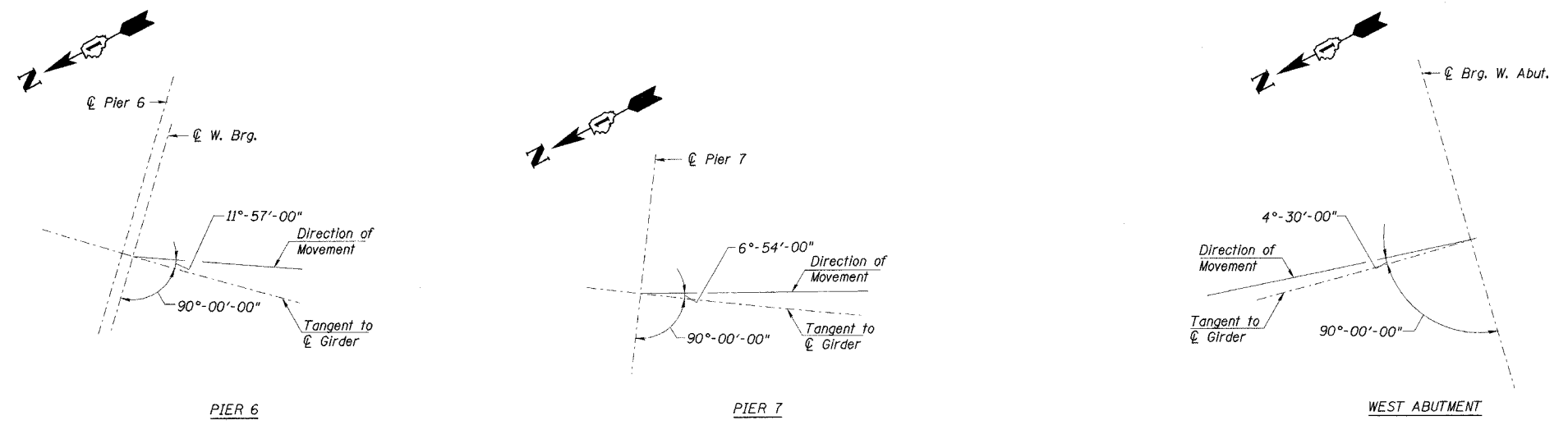
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 68 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	130	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		



BEARING LAYOUT PLAN - UNIT 3



BEARING ORIENTATION

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DESIGNED	GPM
CHECKED	PCA
DRAWN	JRB
CHECKED	PCA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BEARING ORIENTATION DETAILS
SPANS 7-9
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

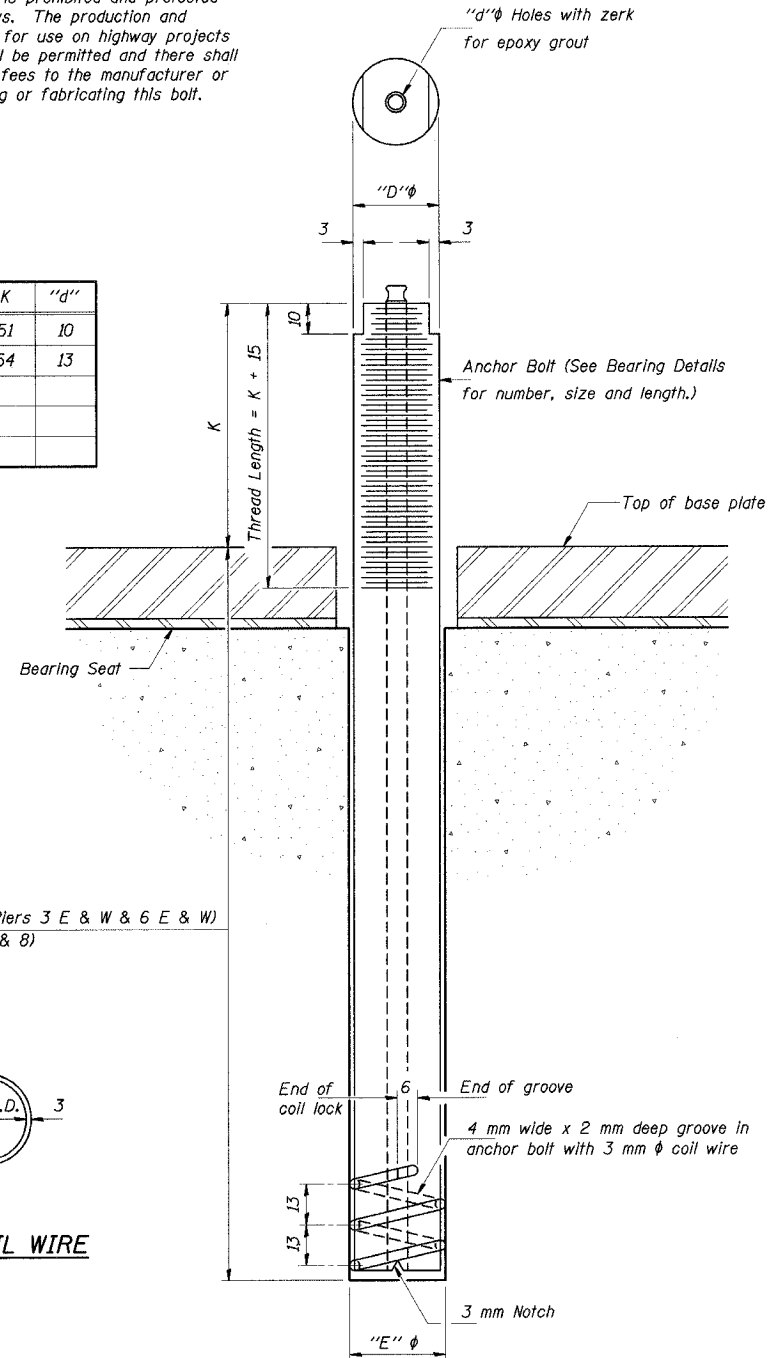
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

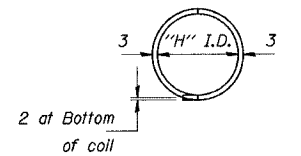
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F. A. I. 80/94	0203.1B	COOK	200	131	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62854		

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
30	33	26	51	10
36	39	32	54	13



329 (E. Abut., W. Abut., Piers 3 E & W & 6 E & W)
396 Piers 1, 2, 4, 5, 7, & 8)



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

DESIGNED	JJK
CHECKED	GPM
DRAWN	LK
CHECKED	PCA

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

LOCATION	TYPE (A307)
E. Abut.	M30 x 380
Pier 1	M36 x 450
Pier 2	M36 x 450
Pier 3 E	M30 x 380
Pier 3 W	M30 x 380
Pier 4	M36 x 450
Pier 5	M36 x 450
Pier 6 E	M30 x 380
Pier 6 W	M30 x 380
Pier 7	M36 x 450
Pier 8	M36 x 450
W. Abut.	M30 x 380

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".
All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	kg	1170

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
ANCHOR BOLT DETAILS
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 70 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	132	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT - CONTRACT NO. 62854					

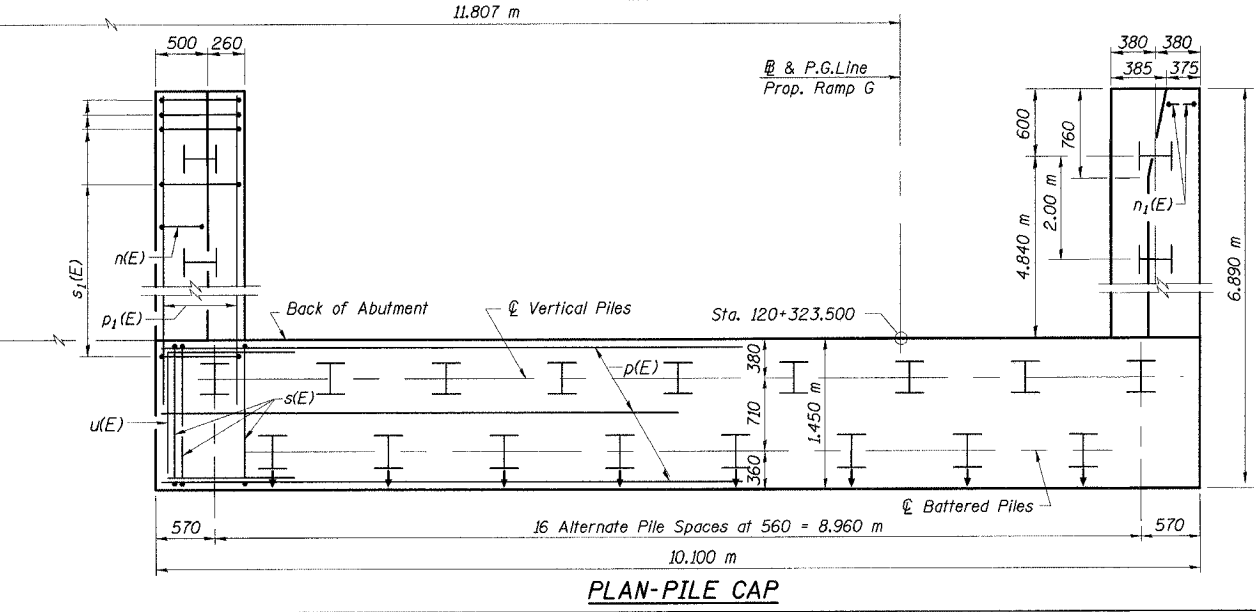
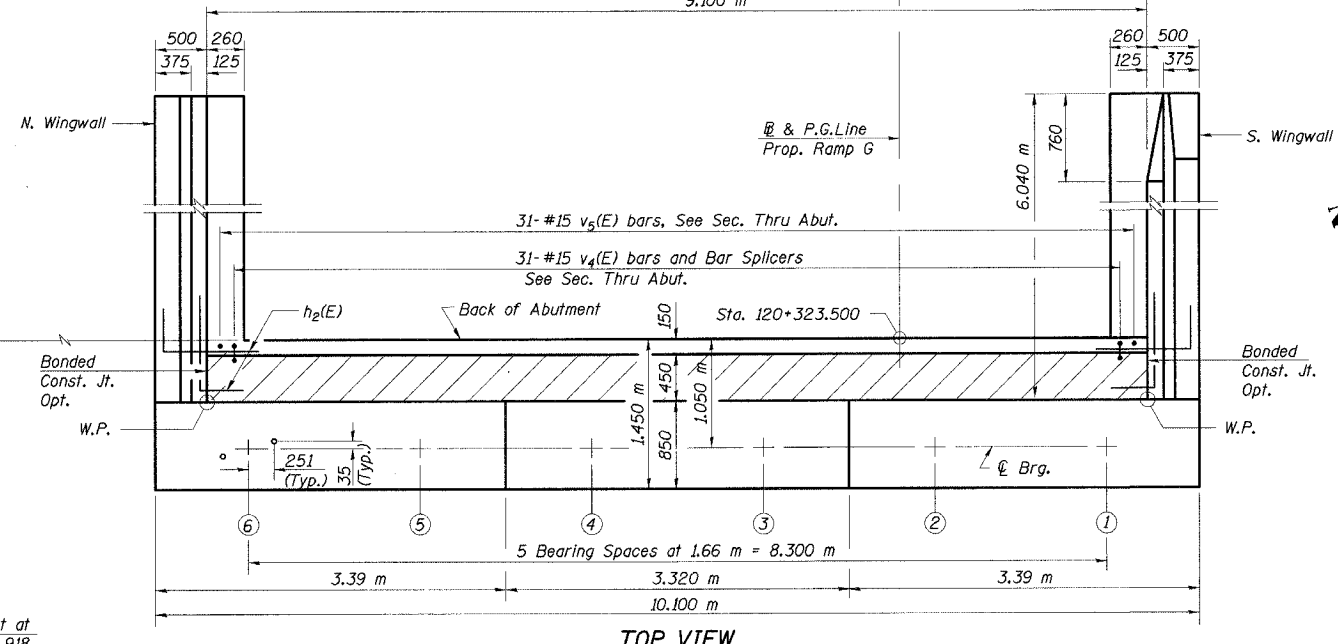
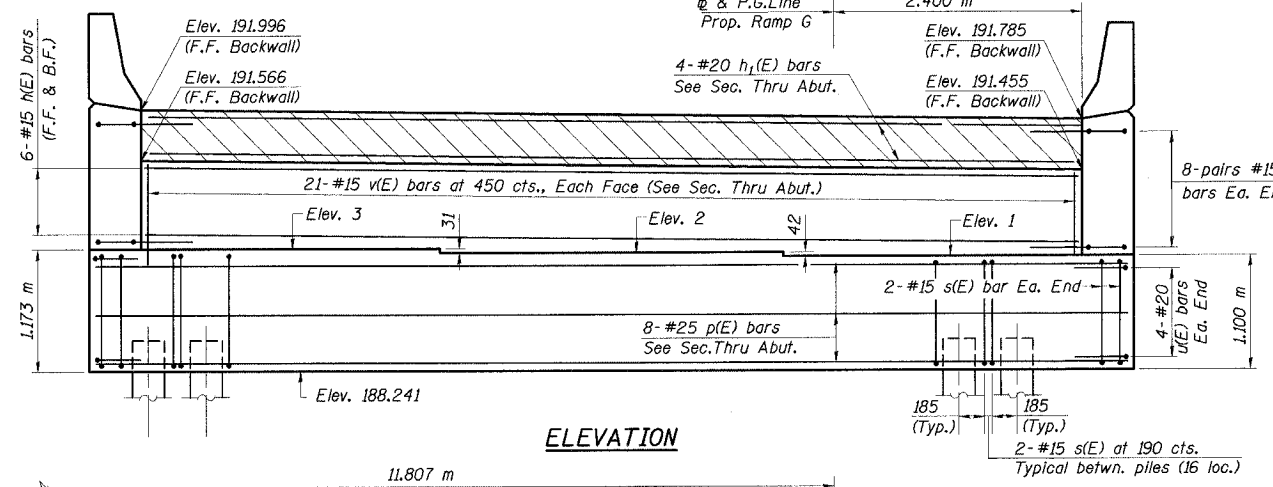
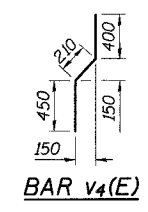
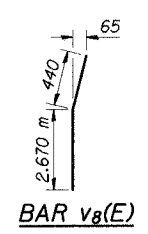
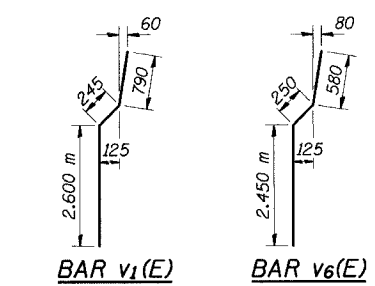
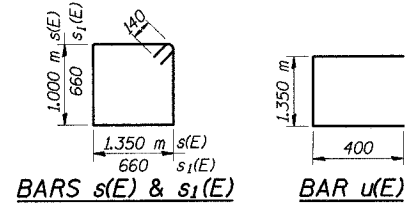
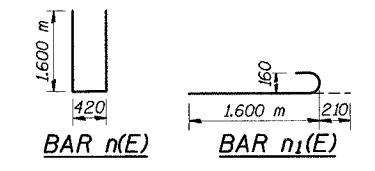
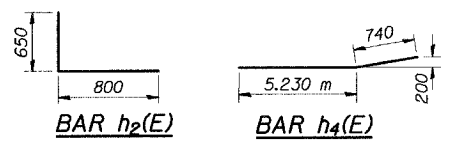
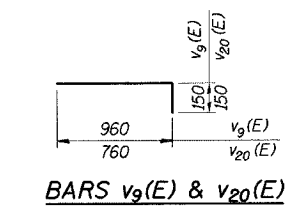
EAST ABUTMENT
BILL OF MATERIAL

ABUTMENT SEAT ELEV.

	ELEV.
Elev. 1	189.341
Elev. 2	189.383
Elev. 3	189.414

Bar	No.	Size	Length(m)	Shape
h(E)	12	#15	9.000	
h ₁ (E)	4	#20	9.000	
h ₂ (E)	32	#15	1.450	
h ₃ (E)	24	#15	5.940	
h ₄ (E)	16	#15	5.970	
h ₅ (E)	4	#15	2.400	
n(E)	39	#20	3.620	
n ₁ (E)	6	#20	1.810	
p(E)	8	#25	10.000	
p ₁ (E)	12	#25	6.770	
s(E)	36	#15	4.980	
s ₁ (E)	38	#15	2.920	
u(E)	8	#20	2.150	
v(E)	42	#15	3.300	
v ₁ (E)	21	#20	3.635	
v ₂ (E)	21	#20	3.400	
v ₃ (E)	31	#15	1.060	
v ₄ (E)	31	#15	0.600	
v ₅ (E)	18	#20	3.280	
v ₆ (E)	21	#20	3.450	
v ₇ (E)	3	#20	3.110	
v ₈ (E)	8	#15	1.110	
v ₂₀ (E)	8	#15	0.910	

ITEM	UNIT	QUANTITY
Structure Excavation	m ³	169.2
Concrete Structures	m ³	55.6
Reinforcement Bars, Epoxy Coated	kg	3230
Furnishing Steel Piles HP 310x79	m	440.0
Driving Steel Piles	m	440.0
Test Pile Steel HP 310x79	Each	1
Bar Splicers	Each	31
Porous Granular Embankment	m ³	75.0



PILE DATA

Type: HP 310 x 79
Capacity: 500 kN (Driven to 750 kN bearing)
Est. Length: 22 m
No. Required: 21 (Includes 1 Test Pile)
Test Pile Driven to 1125 kN

- Notes:
1. Work this sheet with Sheet 71 of 91.
 2. Reinforcement bars designated (E) shall be epoxy coated.
 3. All dimensions are in millimeters (mm) except as noted.
 4. Min. bar laps (Unless otherwise shown):
#15 bars - 640 mm
#20 bars - 790 mm
#25 bars - 1320 mm
 5. Piles shall be driven in holes precored through the embankment, to Elev. 185.0, according to 512.10 (c) of the Standard Specifications
 6. All piles shall be encased in concrete, see detail on Sheet 73 of 91.

DESIGNED	MEA
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

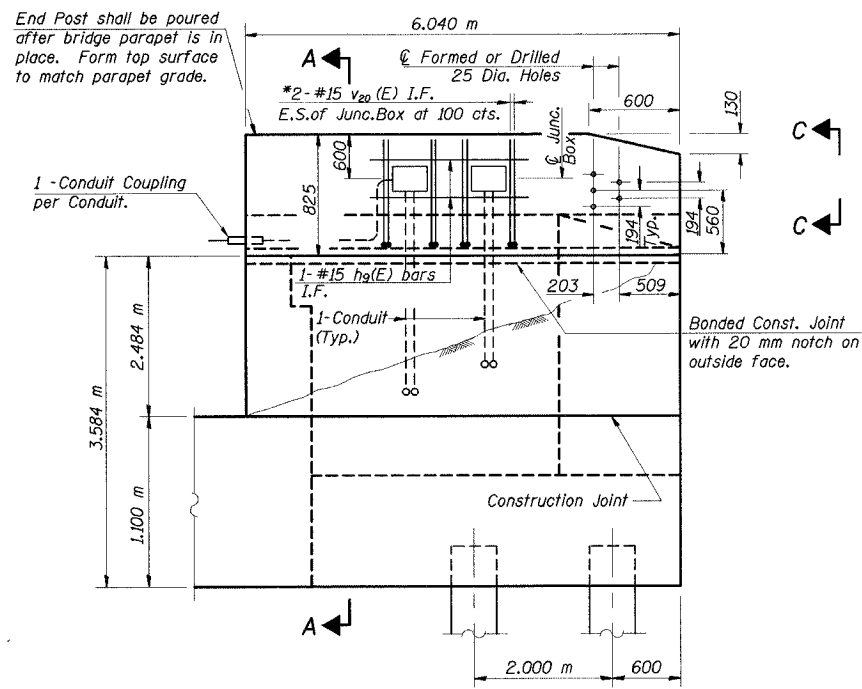
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
EAST ABUTMENT PLAN & ELEVATION
WB I-80/94 TO SB IL 394 - RAMP G
FAT 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

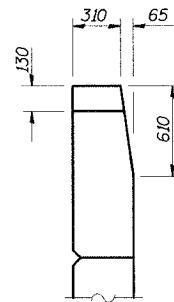
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 71
F. A. I. 80/94	0203.1B	COOK	200	133	91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-					

CONTRACT NO. 62854

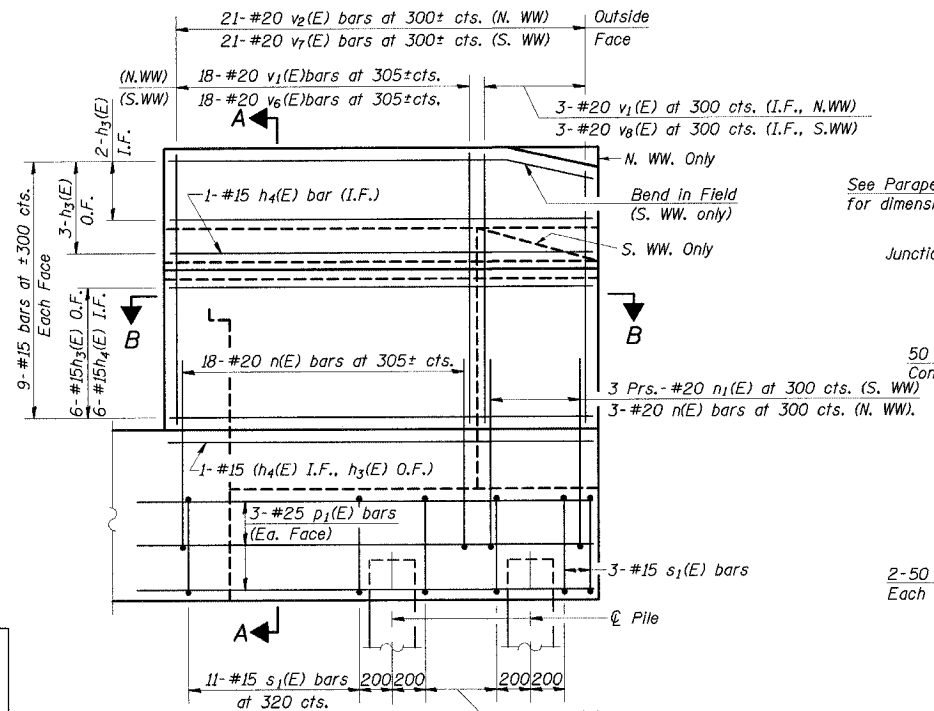


SOUTH WING WALL ELEVATION
Showing Dimensions

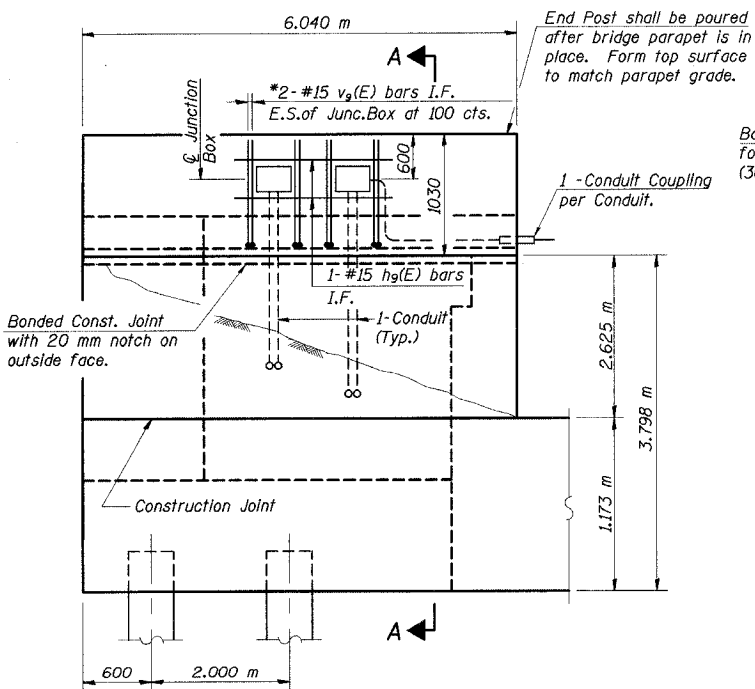


Abbreviations:
N.W.W.: North Wingwall
S.W.W.: South Wingwall
O.F.: Outside Face
I.F.: Inside Face
E.S.: Each Side

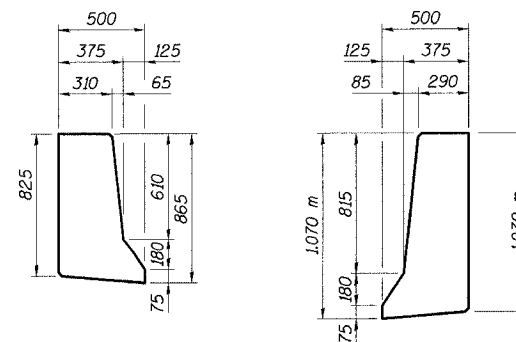
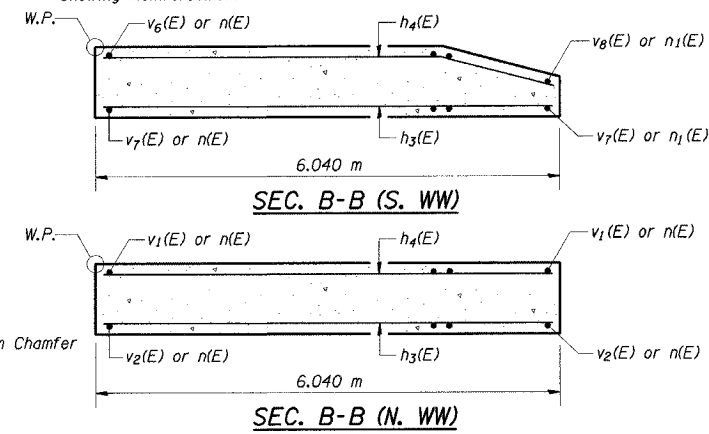
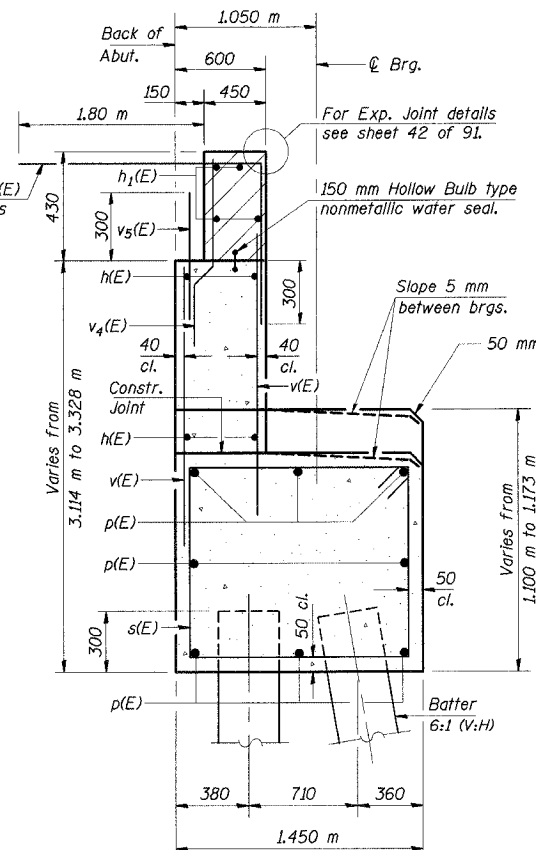
General Contractor to coordinate with the Electrical Contractor before embedding the conduits and junction boxes.



WING WALL ELEVATION
Showing Reinforcement



NORTH WING WALL ELEVATION
Showing Dimensions



- Notes:
1. Work this sheet with Sheet 70 of 91.
 2. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
 3. For details of Junction Box and method of payment, see Electrical Drawings.
 4. For method of payment of conduit, see Electrical Drawings.
 5. Space reinforcement in cap to clear anchor bolts.
 6. Pour steps monolithically with cap.
 7. See Sheet 73 of 91 for Pile Encasement Detail.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

EAST ABUTMENT DETAILS

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804

DATE 3/23/05
SCALE ---

HNTB

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DESIGNED	MEA
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 72 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	134	
ILLINOIS FED. AID PROJECT - CONTRACT NO. 62854					

WEST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length(m)	Shape	
h ₁₂ (E)	12	#15	9.070	—	
h ₁₄ (E)	4	#20	9.070	—	
h ₂₄ (E)	32	#15	1.450	—	
h ₂₅ (E)	24	#15	6.800	—	
h ₂₆ (E)	16	#15	6.830	—	
h ₂₇ (E)	4	#15	2.400	—	
h ₃₀ (E)	42	#20	3.860	—	
h ₃₁ (E)	12	#20	1.930	—	
p ₁₀ (E)	3	#25	6.450	—	
p ₁₁ (E)	5	#25	10.070	—	
p ₁₂ (E)	3	#25	5.500	—	
p ₁₃ (E)	12	#25	3.050	—	
p ₁₄ (E)	3	#25	2.050	—	
p ₁₅ (E)	12	#25	7.630	—	
s ₁₀ (E)	12	#15	4.980	—	
s ₁₁ (E)	38	#15	2.920	—	
s ₁₂ (E)	12	#15	5.180	—	
s ₁₃ (E)	12	#15	5.380	—	
u ₁₀ (E)	8	#20	2.150	—	
v ₁₀ (E)	42	#15	3.300	—	
v ₁₁ (E)	20	#20	3.585	—	
v ₁₂ (E)	23	#20	3.470	—	
v ₁₃ (E)	3	#20	3.200	—	
v ₁₄ (E)	3	#15	1.060	—	
v ₁₅ (E)	31	#15	0.600	—	
v ₁₆ (E)	20	#20	3.330	—	
v ₁₇ (E)	23	#20	3.220	—	
v ₁₈ (E)	3	#20	3.160	—	
v ₁₉ (E)	8	#15	1.110	—	
v ₂₀ (E)	8	#15	0.910	—	
ITEM				UNIT	QUANTITY
Structure Excavation				m ³	180.9
Concrete Structures				m ³	56.9
Reinforcement Bars, Epoxy Coated				kg	3750
Furnishing Steel Piles HP 310x79				m	550
Driving Steel Piles				m	550
Test Pile Steel HP 310x79				Each	1
Bar Splicers				Each	31
Porous Granular Embankment				m ³	75.6

ABUTMENT SEAT ELEV.

ELEV.	
Elev. 1	196.690
Elev. 2	196.790
Elev. 3	196.890
Elev. 4	196.990
Elev. 5	197.090
Elev. 6	197.190

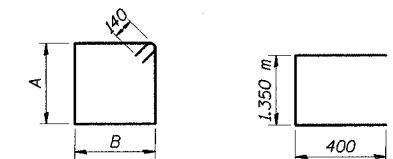
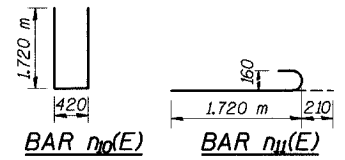
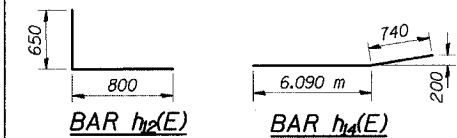
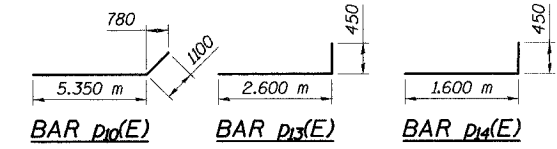
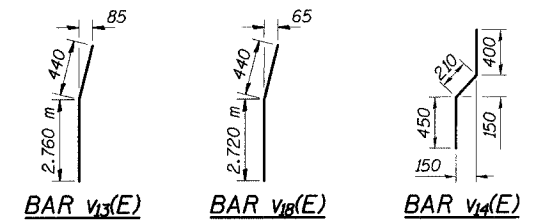
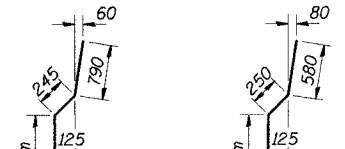
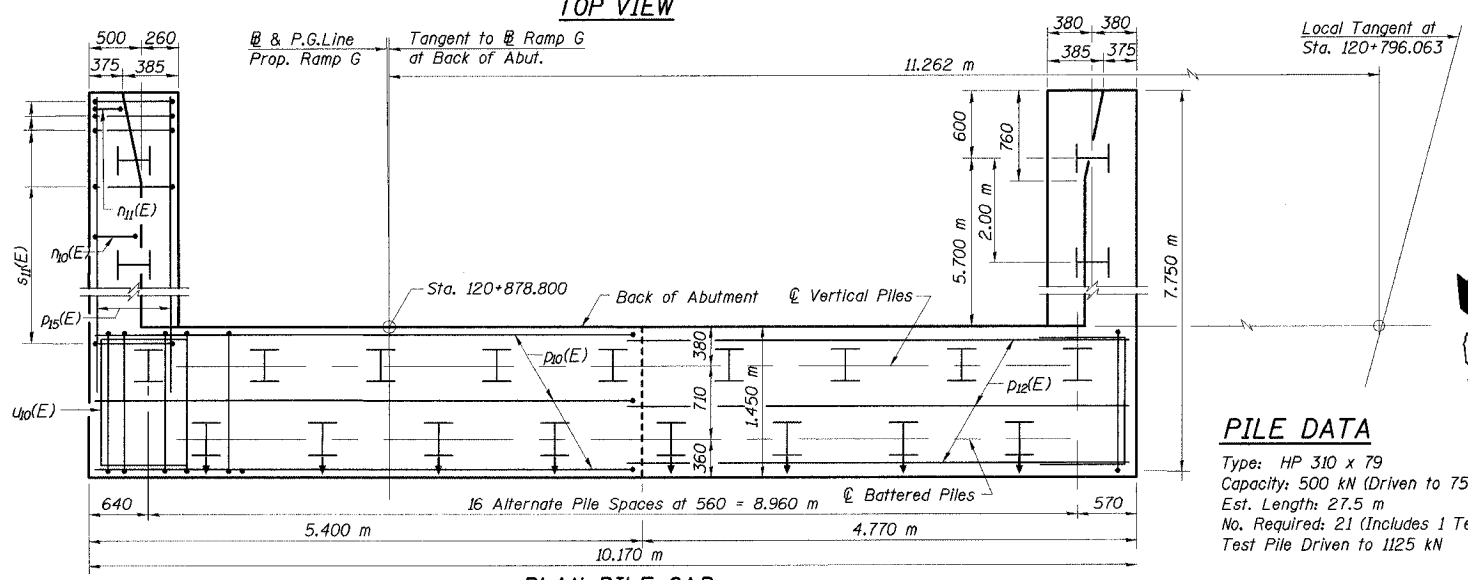
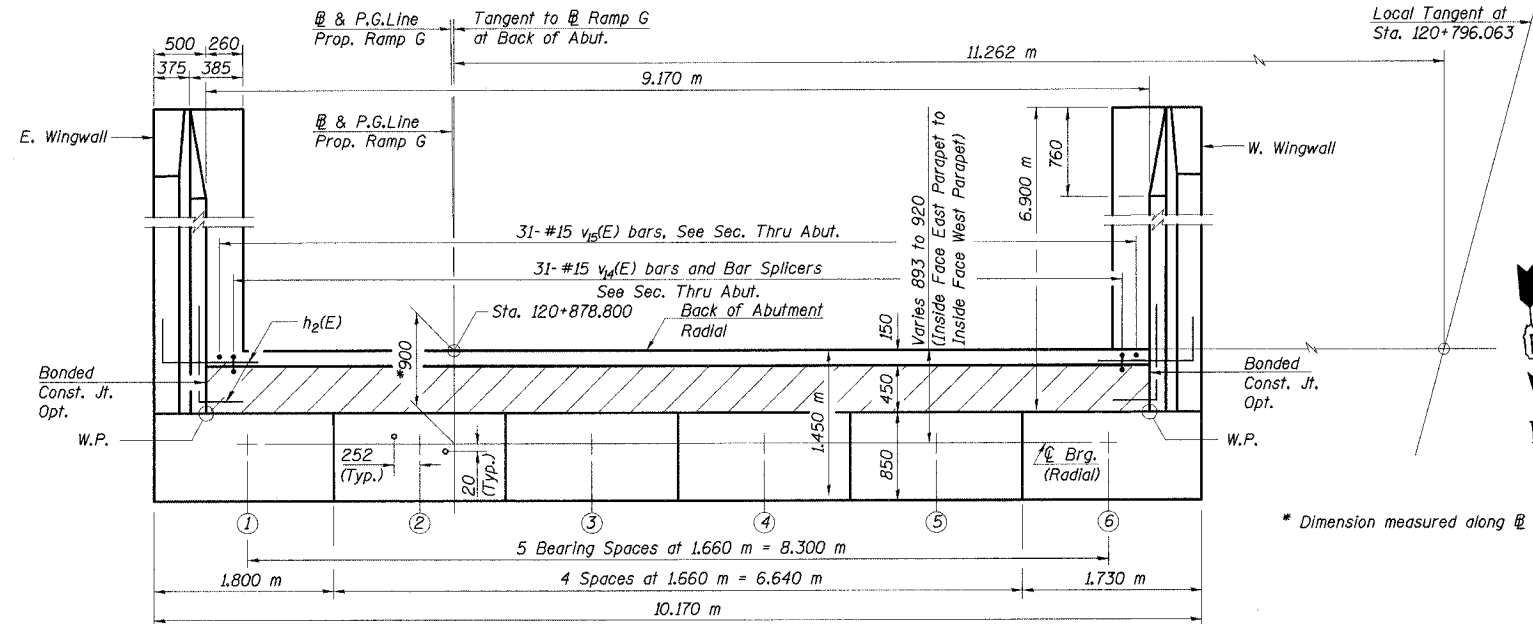
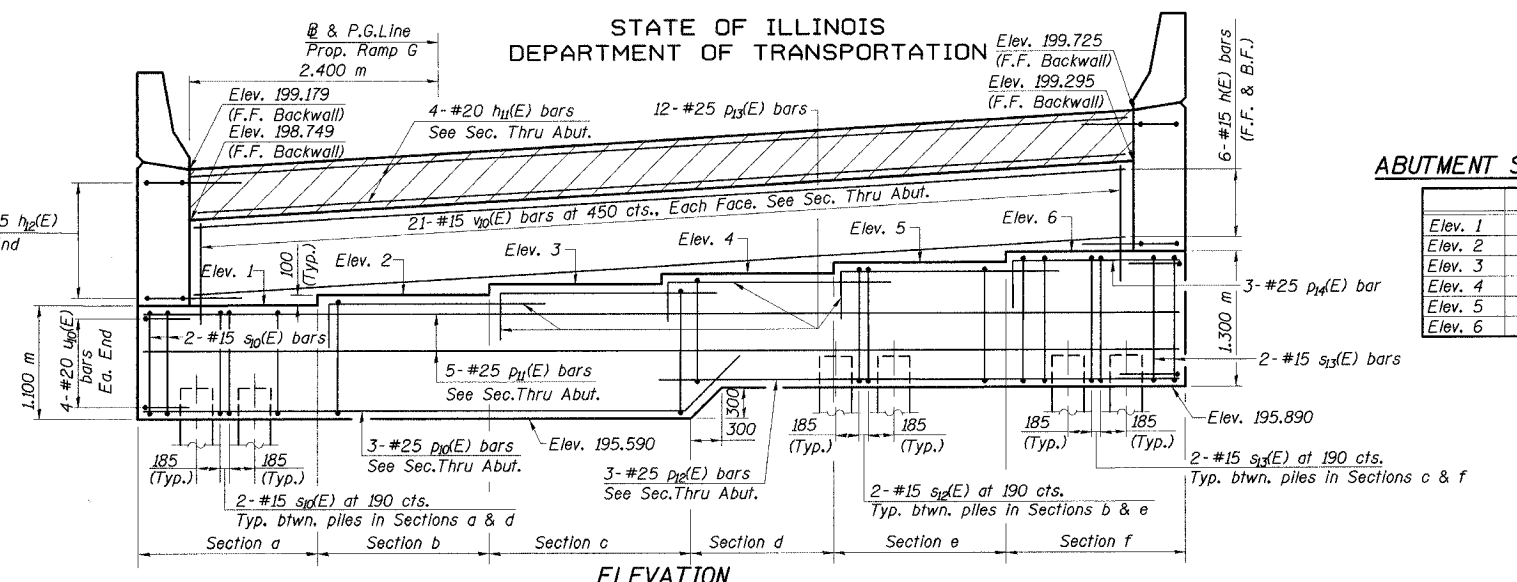


TABLE OF DIMENSIONS

Rebar	A	B
s ₁₀ (E)	1.000 m	1.350 m
s ₁₁ (E)	660	660
s ₁₂ (E)	1.100 m	1.350 m
s ₁₃ (E)	1.200 m	1.350 m



DESIGNED	MEA
CHECKED	JJK
DRAWN	LK
CHECKED	JJK



PILE DATA

Type: HP 310 x 79
Capacity: 500 kN (Driven to 750 kN bearing)
Est. Length: 27.5 m
No. Required: 21 (Includes 1 Test Pile)
Test Pile Driven to 1125 kN

Schedule Note:
West Abutment piles not to be installed before June 6, 2006 to allow for embankment settlement.

- Notes:
- Work this sheet with Sheet 73 of 91.
 - Reinforcement bars designated (E) shall be epoxy coated.
 - All dimensions are in millimeters (mm) except as noted.
 - Min. bar laps (Unless otherwise shown):
#15 bars - 640 mm
#20 bars - 790 mm
#25 bars - 1320 mm
 - All piles shall be encased in concrete, see detail on Sheet 73 of 91.

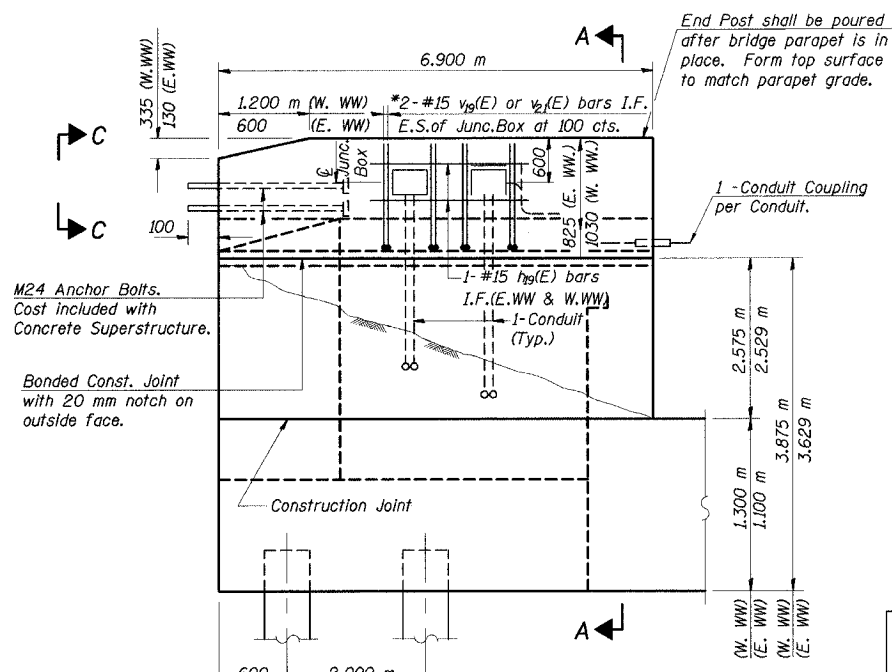
ILLINOIS DEPARTMENT OF TRANSPORTATION
1-94/IL 394 SOUTH BOUND
WEST ABUTMENT PLAN & ELEVATION
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 73 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	135	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
CONTRACT NO. 62854					

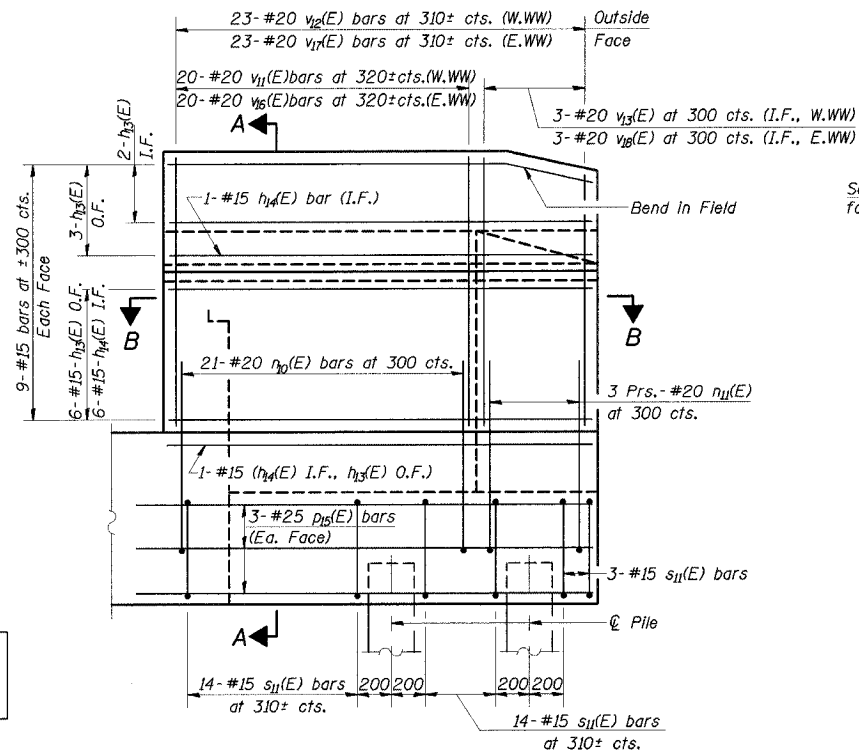


WING WALL ELEVATION

Showing Dimensions
* $v_9(E)$ for West Wingwall
 $v_6(E)$ for East Wingwall

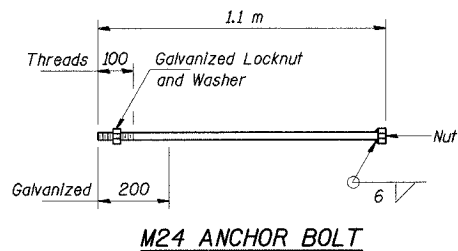
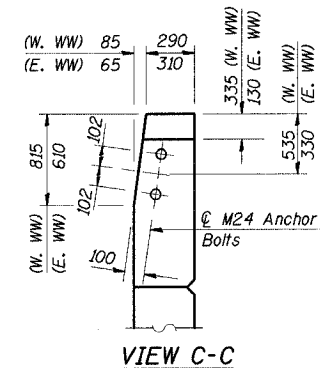
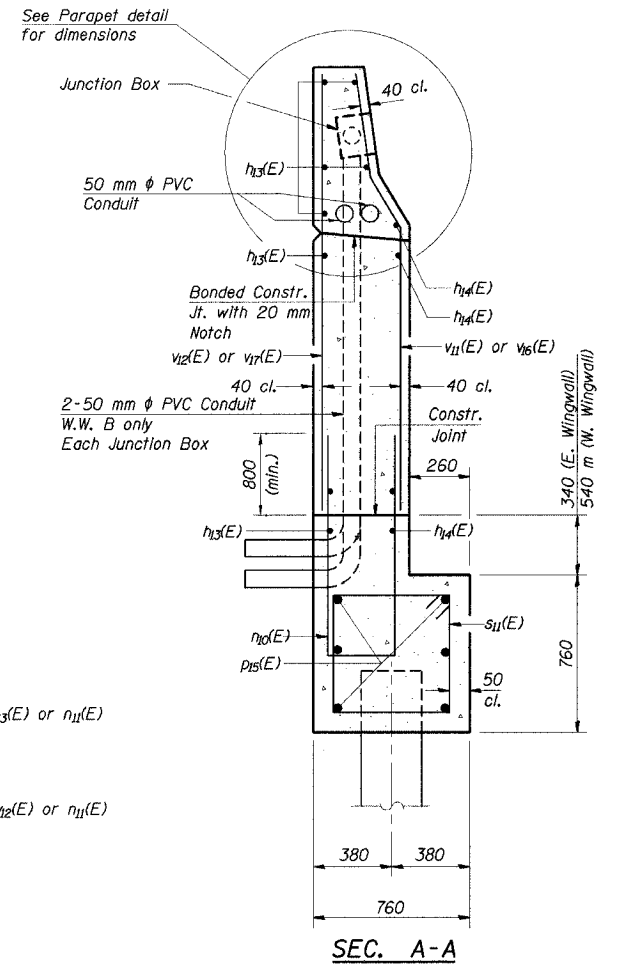
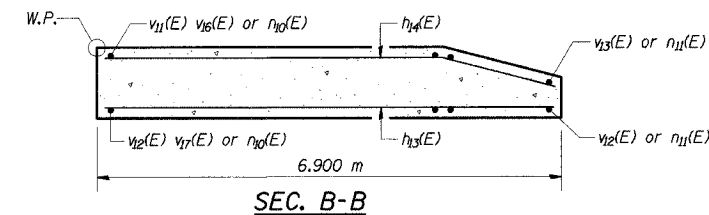
Abbreviations:
W.WW: West Wingwall
E.WW: East Wingwall
O.F.: Outside Face
I.F.: Inside Face
E.S.: Each Side

General Contractor to coordinate with the Electrical Contractor before embedding the conduits and junction boxes.

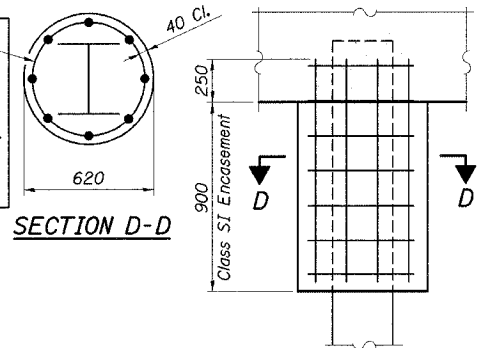


WING WALL ELEVATION

Showing Reinforcement

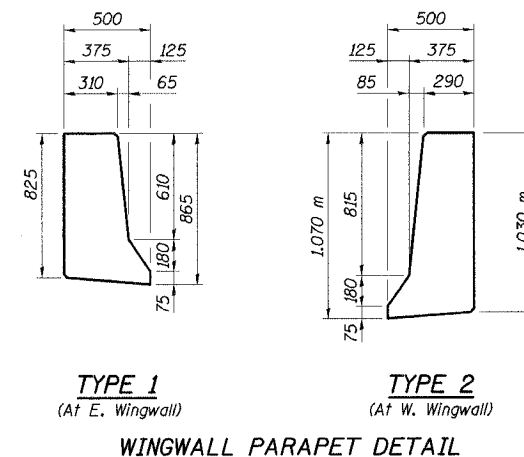
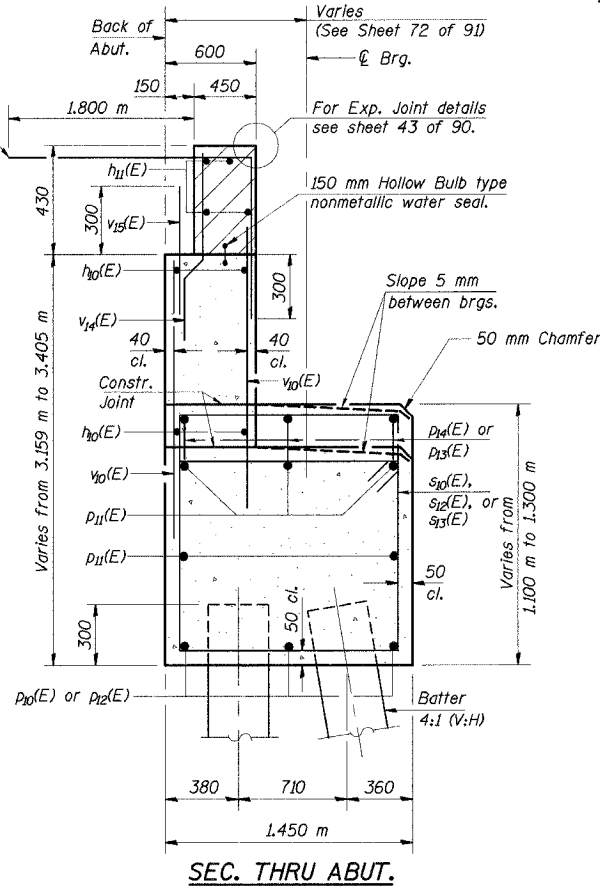


Welded wire fabric 152x152-MW25.8xMW25.8 with a mass of 2.91 kg/m². The cost of Excavation, Class SI Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for encasement may be omitted when soil conditions permit.



PILE ENCASMENT DETAIL

DESIGNED	MEA
CHECKED	JJK
DRAWN	LK
CHECKED	JJK



- Notes:
1. Work this sheet with Sheet 72 of 91.
 2. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
 3. For details of Junction Box and method of payment, see Electrical Drawings.
 4. For method of payment of conduit, see Electrical Drawings.
 5. Space reinforcement in cap to clear anchor bolts.
 6. Pour steps monolithically with cap.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

WEST ABUTMENT DETAILS

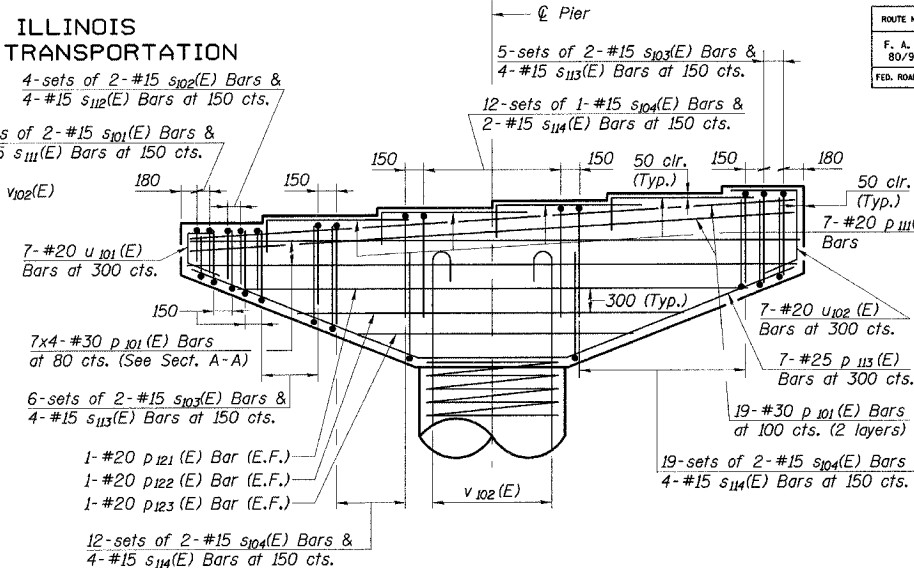
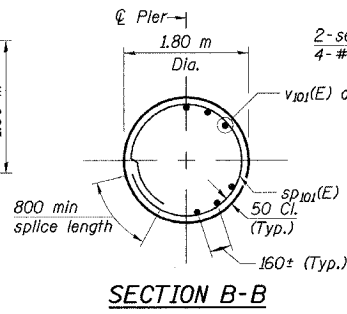
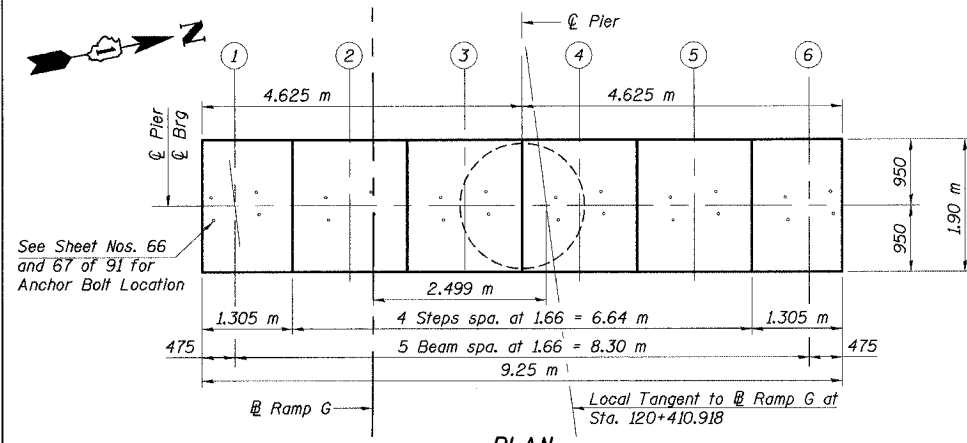
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 74 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	136	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62B54		

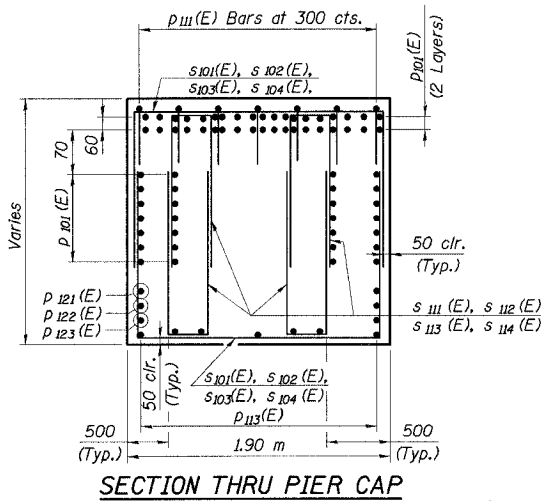


BILL OF MATERIAL

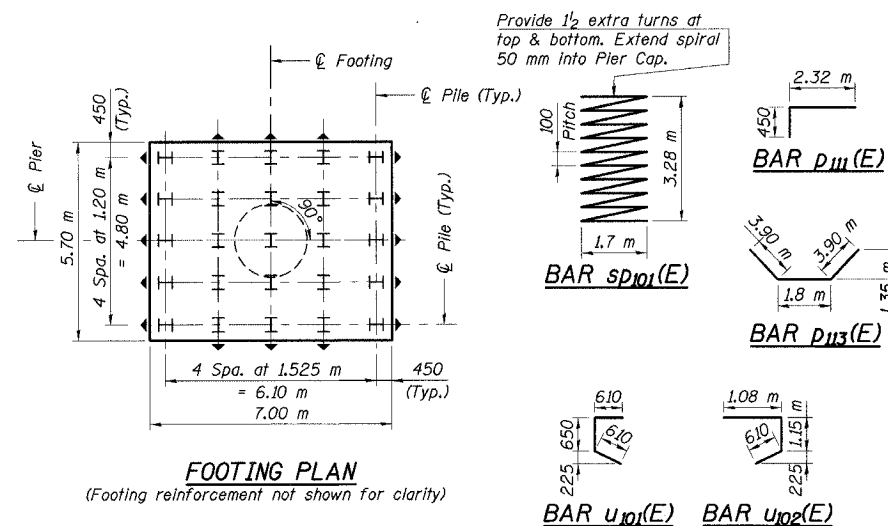
Bar	No.	Size	Length (m)	Shape
P101 (E)	66	#30	9.15	
P111 (E)	28	#20	2.77	
P113 (E)	7	#25	9.60	
P121 (E)	2	#20	7.00	
P122 (E)	2	#20	5.45	
P123 (E)	2	#20	3.95	
S101 (E)	4	#15	3.24	
S102 (E)	8	#15	3.46	
S103 (E)	22	#15	3.92	
S104 (E)	74	#15	4.72	
S111 (E)	8	#15	1.74	
S112 (E)	16	#15	1.96	
S113 (E)	44	#15	2.42	
S114 (E)	148	#15	3.22	
U101 (E)	7	#20	1.87	
U102 (E)	7	#20	2.84	
W101 (E)	57	#25	7.95	
W121 (E)	4	#20	7.40	
T101 (E)	63	#25	9.25	
T121 (E)	4	#20	5.25	
V101 (E)	33	#35	5.50	
V102 (E)	33	#35	4.96	
SP101 (E)	1	#15	* 3.28	NNN
ITEM	UNIT	QUANTITY		
Driving Steel Piles	m	446.4		
Furnishing Steel Piles	m	446.4		
HP360x108	m	446.4		
Test Pile Steel HP360x108	Each	1		
Structure Excavation	m ³	86.2		
Concrete Structures	m ³	99.9		
Reinforcement Bars, Epoxy Coated	kg	12,830		

TYPICAL LAPS

Bar Size	Min. Lap
#15	640
#20	790
#25	1320
#30	1850
#35	2640

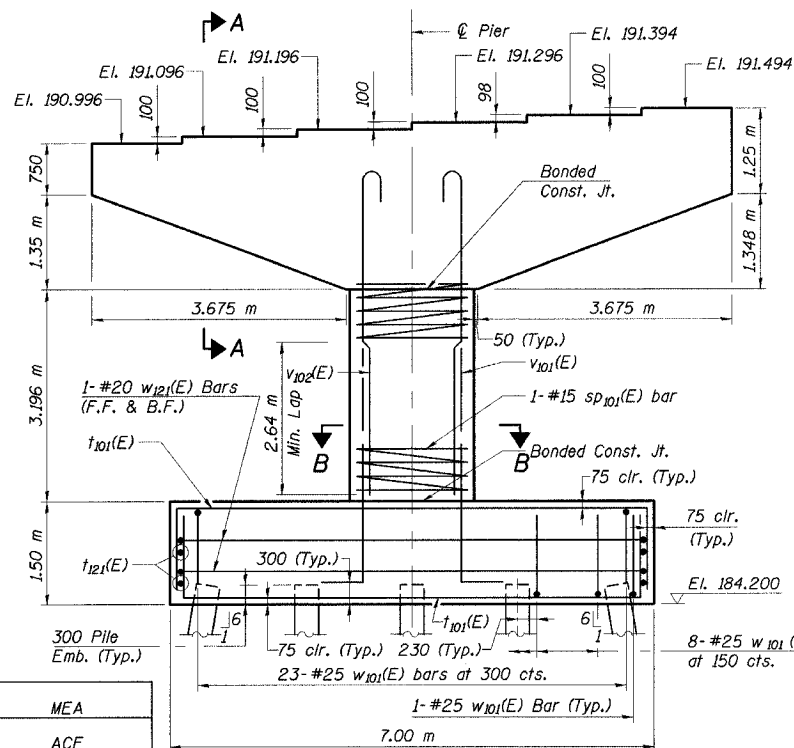


PIER CAP REINFORCEMENT



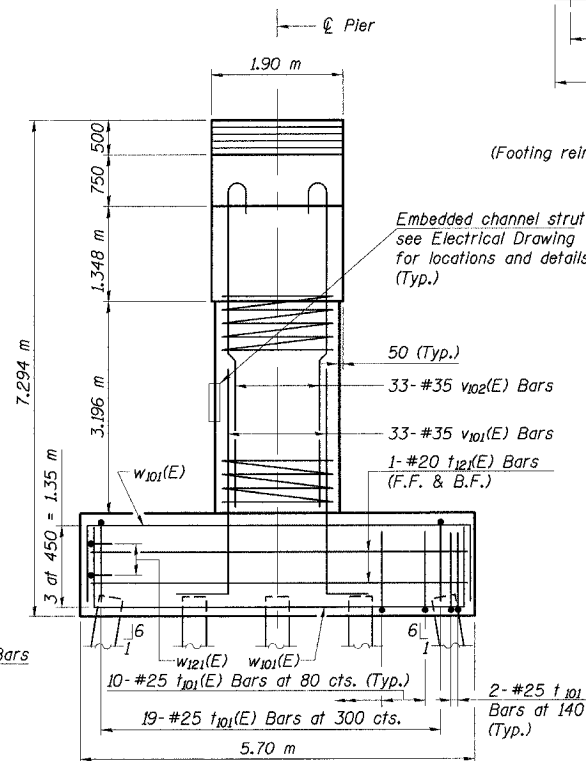
FOOTING PLAN

(Footing reinforcement not shown for clarity)



ELEVATION

(Looking Upstation)



END VIEW

PILE DATA

Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 18.6 m
No. Req'd.: 25 (Includes 1 Test Pile)
Test Pile Driven to 1463 kN

TABLE OF DIMENSIONS

Rebar	A	B
S101 (E)	1.8 m	720
S102 (E)	1.8 m	830
S103 (E)	1.8 m	1,060 m
S104 (E)	1.8 m	1,460 m
S111 (E)	300	720
S112 (E)	300	830
S113 (E)	300	1,060 m
S114 (E)	300	1,460 m

Notes:

- Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
- Pour steps monolithically with cap beam.
- All exposed edges shall have standard 20 mm chamfers.
- All dimensions are in millimeters (mm) except as noted.
- For backfill material see Footing Layout drawing.

Indicates battered pile

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

PIER 1

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804

DATE 3/23/05
SCALE ---

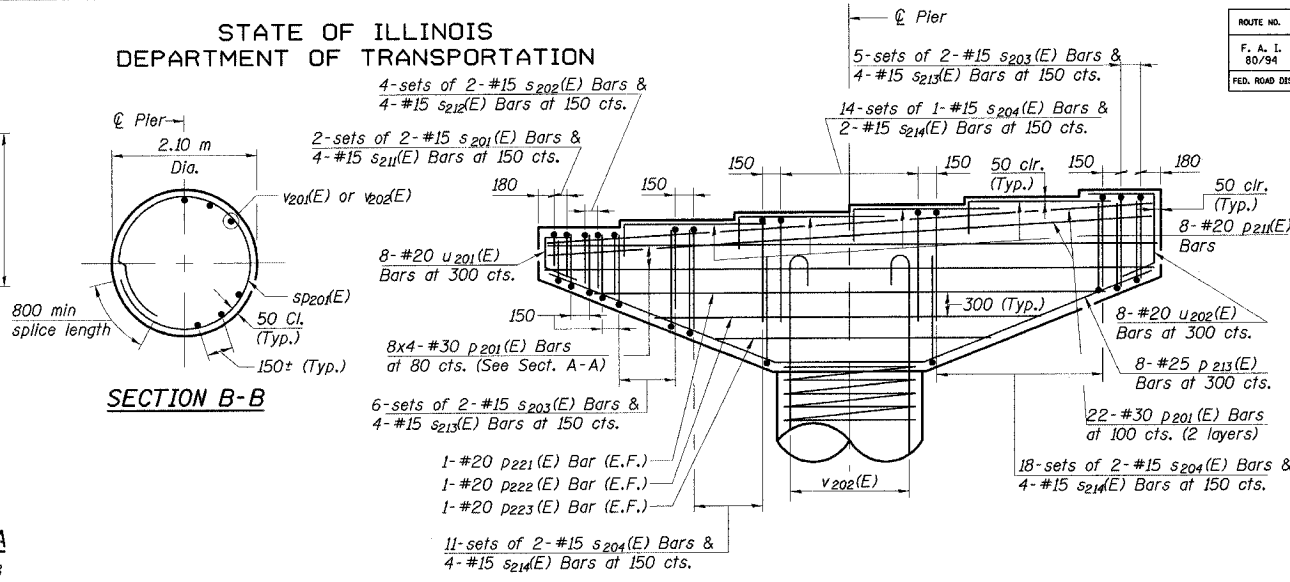
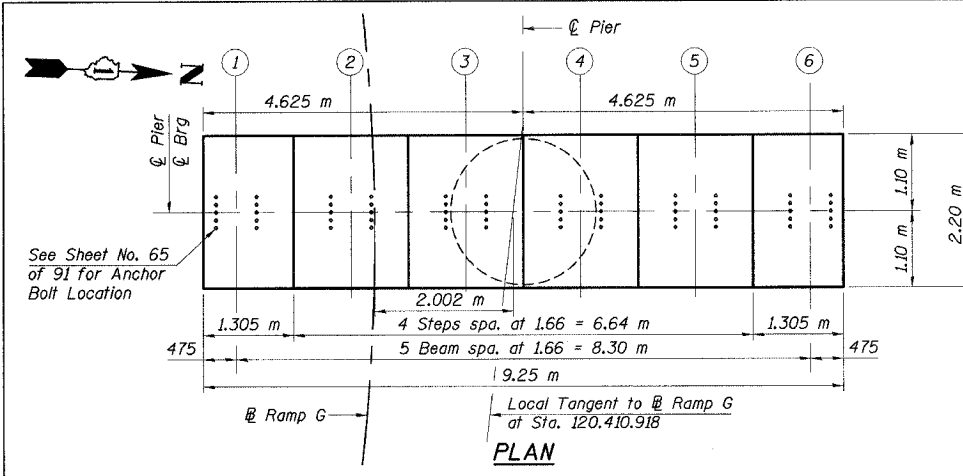
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DESIGNED	MEA
CHECKED	ACF
DRAWN	JM
CHECKED	GPM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 75 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	137	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-					
CONTRACT NO. 62854					



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
P201(E)	76	#30	9.15	
P211(E)	32	#20	2.77	
P213(E)	8	#25	9.60	
P221(E)	2	#20	7.00	
P222(E)	2	#20	5.45	
P223(E)	2	#20	3.95	
S201(E)	4	#15	3.54	
S202(E)	8	#15	3.76	
S203(E)	22	#15	4.22	
S204(E)	72	#15	5.02	
S211(E)	8	#15	1.74	
S212(E)	16	#15	1.96	
S213(E)	44	#15	2.42	
S214(E)	144	#15	3.20	
U201(E)	8	#20	1.87	
U202(E)	8	#20	2.84	
W201(E)	69	#25	9.25	
W221(E)	4	#20	7.40	
T201(E)	73	#25	9.25	
T221(E)	4	#20	6.85	
V201(E)	40	#35	4.50	
V202(E)	40	#35	9.31	
SP20(E)	1	#15	* 7.12	NNN

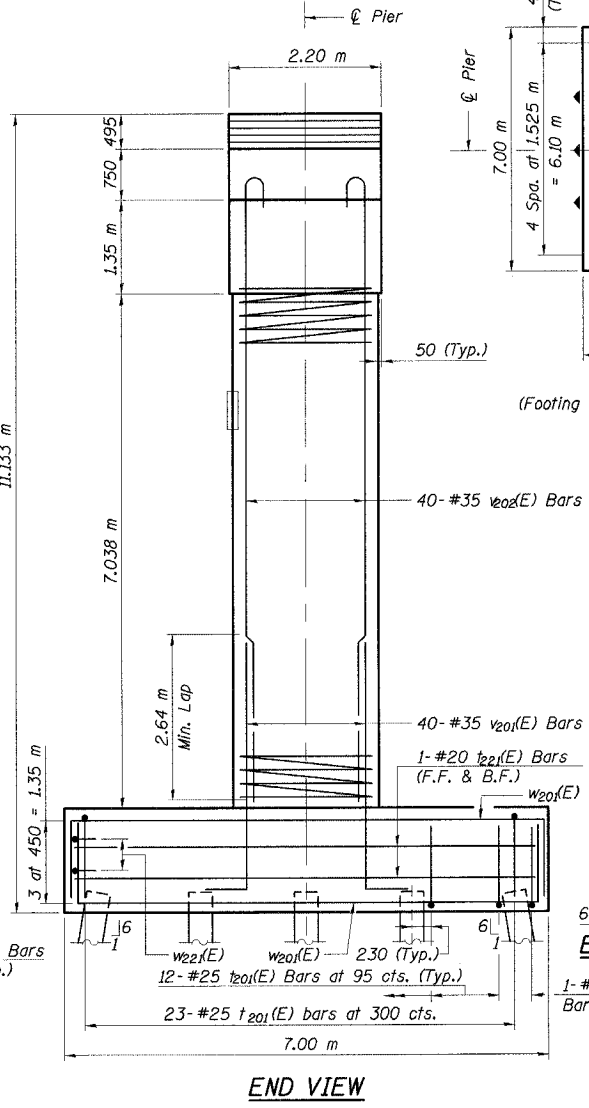
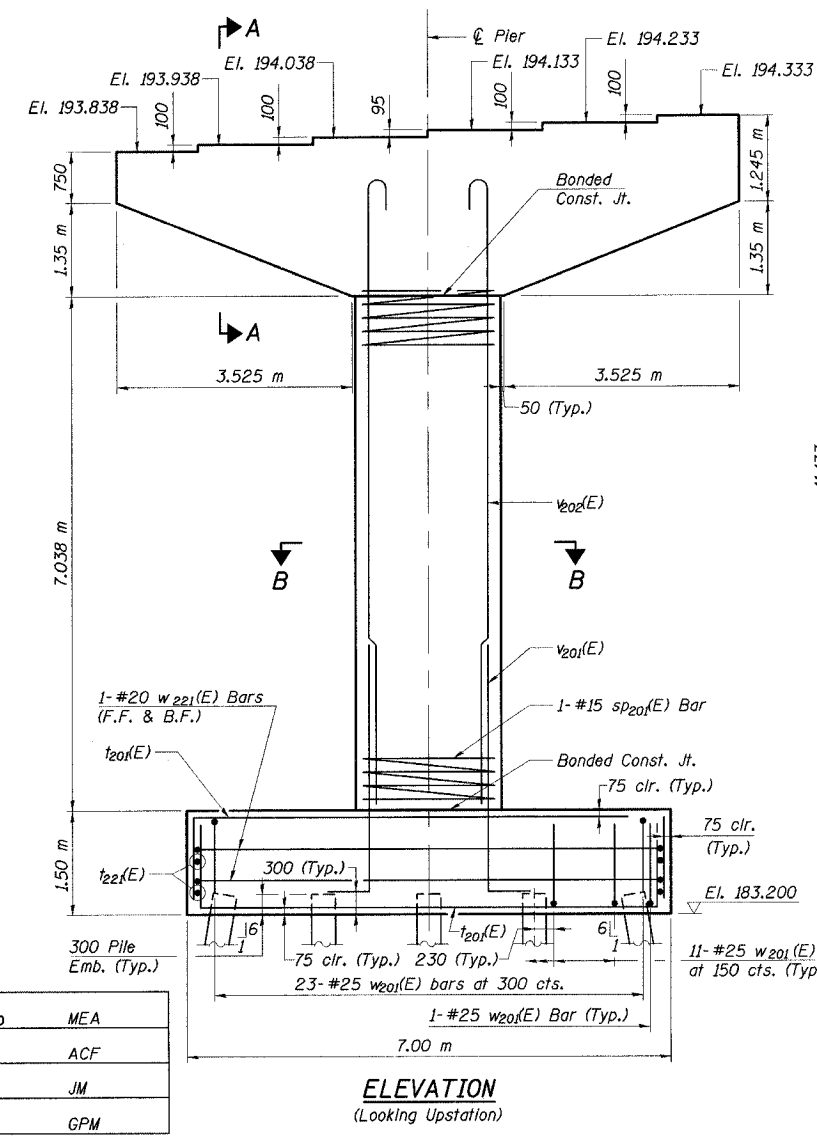
ITEM	UNIT	QUANTITY
Driving Steel Piles	m	388.8
Furnishing Steel Piles		
HP360x108	m	388.8
Test Pile Steel HP360x108	Each	1
Structure Excavation	m ³	104.0
Concrete Structures	m ³	134.5
Reinforcement Bars, Epoxy Coated	kg	16,580

TYPICAL LAPS

Bar Size	Min. Lap
#15	640
#20	790
#25	1320
#30	1850
#35	2640

PILE DATA

Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 16.2 m
No. Req'd: 25 (Includes 1 Test Pile)
Test Pile Driven to 1463 kN



PIER CAP REINFORCEMENT

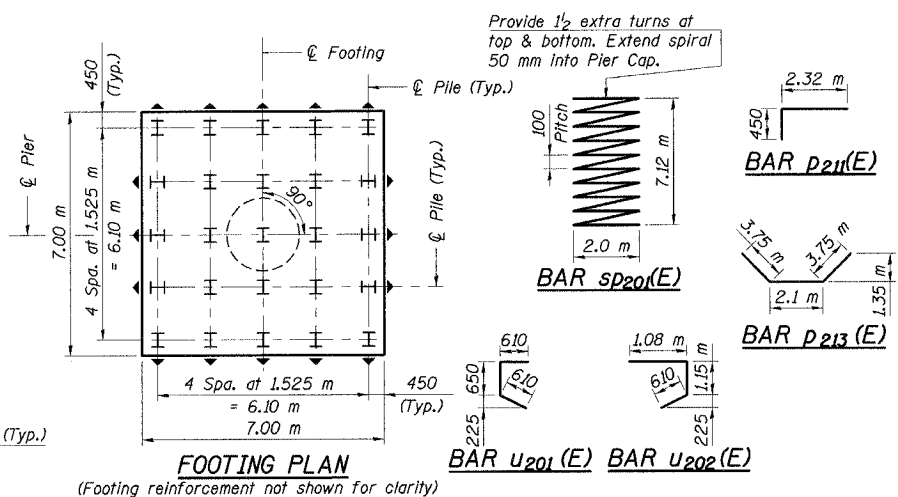
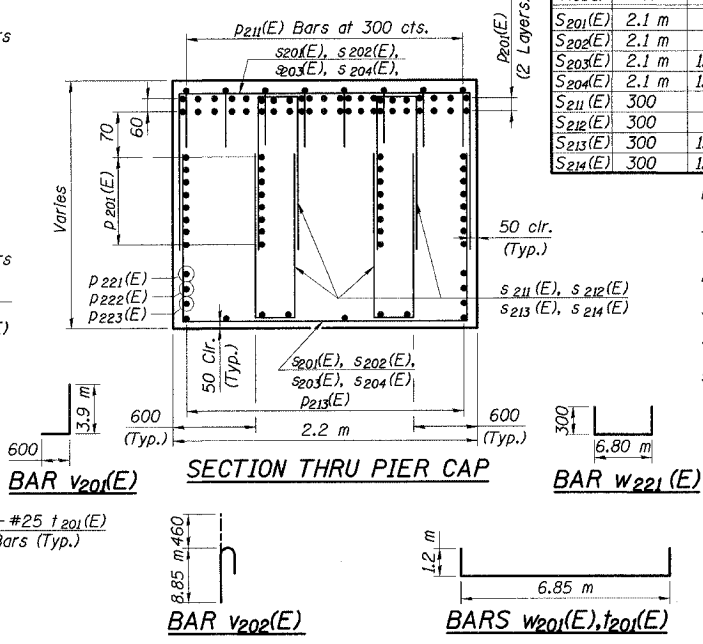


TABLE OF DIMENSIONS

Rebar	A	B
S201(E)	2.1 m	720
S202(E)	2.1 m	830
S203(E)	2.1 m	1,060 m
S204(E)	2.1 m	1,450 m
S211(E)	300	720
S212(E)	300	830
S213(E)	300	1,060 m
S214(E)	300	1,450 m

Notes:

- Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
- Pour steps monolithically with cap beam.
- All exposed edges shall have standard 20 mm chamfers.
- All dimensions are in millimeters (mm) except as noted.
- For backfill material see Footing Layout drawing.



DESIGNED	MEA
CHECKED	ACF
DRAWN	JM
CHECKED	GPM

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

PIER 2

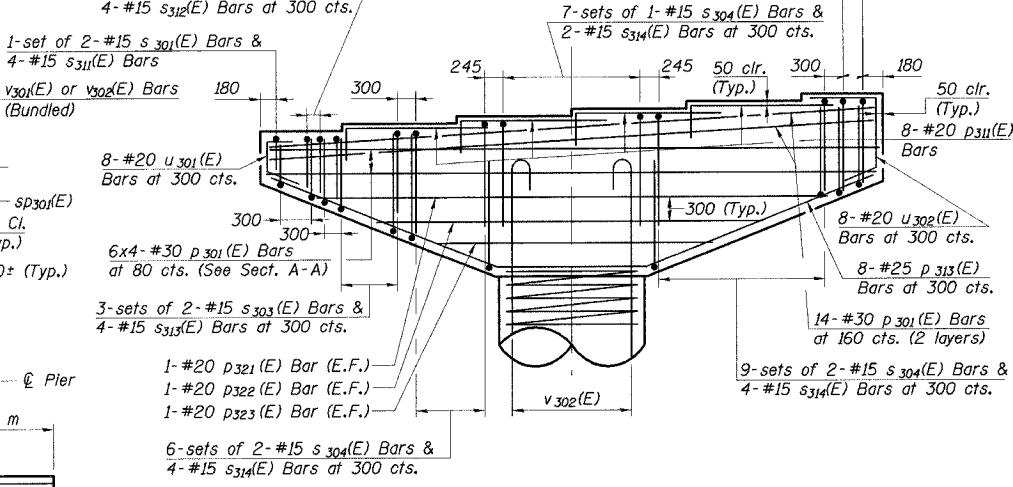
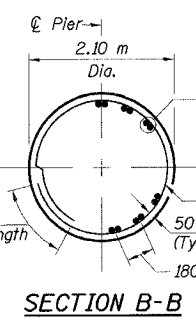
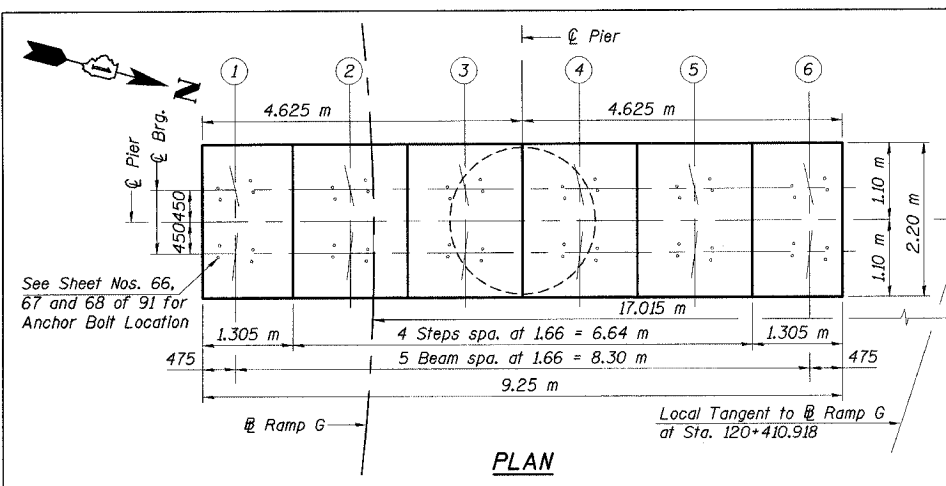
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COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

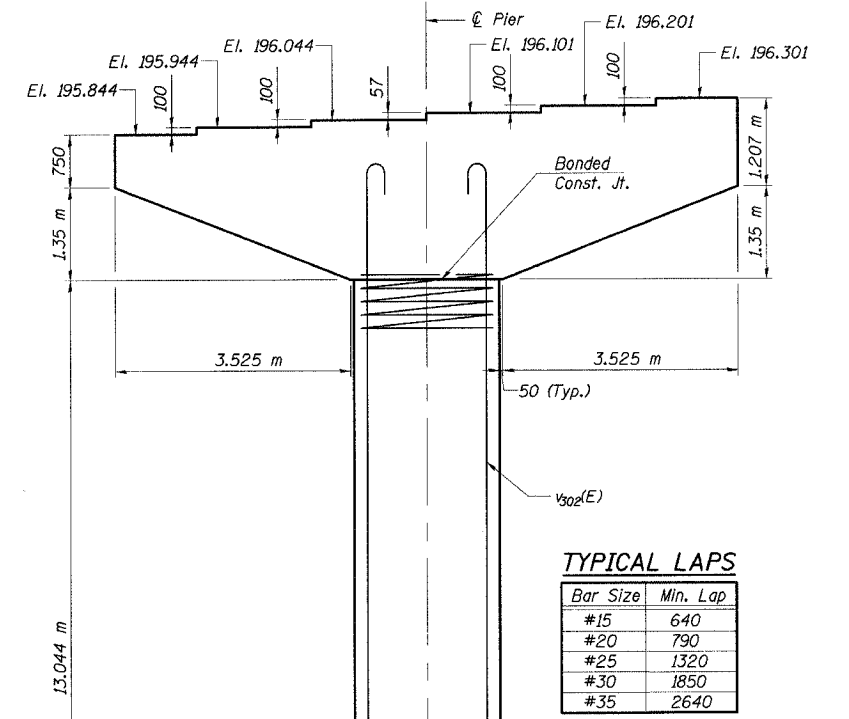
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 76 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	138	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT - CONTRACT NO. 62854					



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
P301(E)	52	#30	9.15	
P311(E)	32	#20	2.77	
P313(E)	8	#25	9.60	
P321(E)	2	#20	7.00	
P322(E)	2	#20	5.45	
P323(E)	2	#20	3.95	
S301(E)	2	#15	3.54	
S302(E)	4	#15	3.76	
S303(E)	12	#15	4.22	
S304(E)	37	#15	5.02	
S311(E)	4	#15	1.74	
S312(E)	8	#15	1.96	
S313(E)	24	#15	2.42	
S314(E)	74	#15	3.20	
U301(E)	8	#20	1.87	
U302(E)	8	#20	2.84	
W301(E)	53	#25	7.95	
W311(E)	4	#20	7.40	
T301(E)	61	#25	9.25	
T311(E)	4	#20	5.55	
V301(E)	70	#35	8.80	
V302(E)	70	#35	11.00	
SP301(E)	1	#15	* 13.11	NNN

ITEM	UNIT	QUANTITY
Driving Steel Piles	m	338.4
Furnishing Steel Piles		
HP360x108	m	338.4
Test Pile Steel HP360x108	Each	1
Structure Excavation	m ³	134.1
Concrete Structures	m ³	141.6
Reinforcement Bars, Epoxy Coated	kg	20,360



TYPICAL LAPS

Bar Size	Min. Lap
#15	640
#20	790
#25	1320
#30	1850
#35	2640

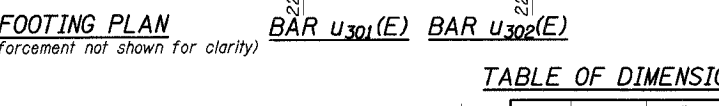
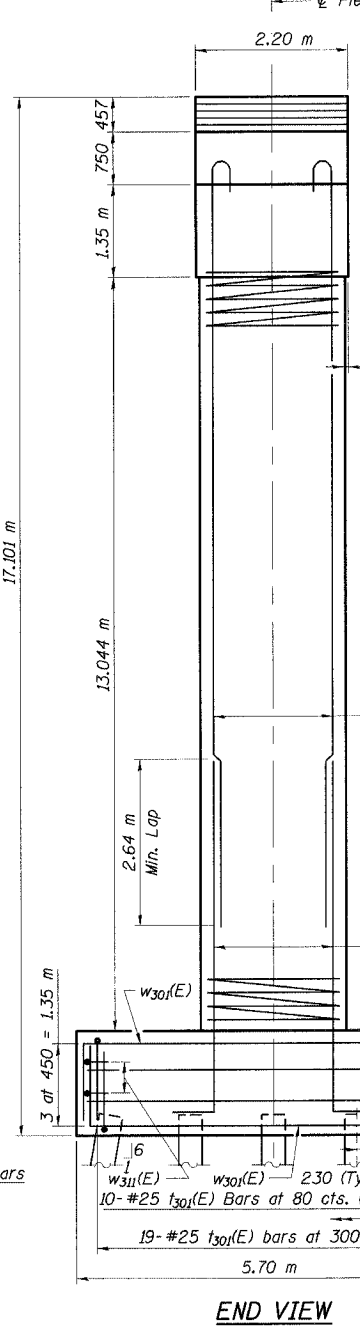
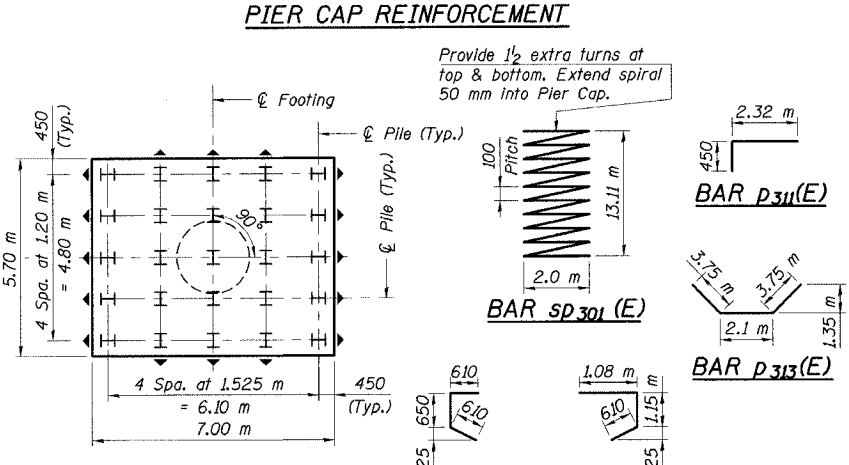


TABLE OF DIMENSIONS

Rebar	A	B
S301(E)	2.1 m	720
S302(E)	2.1 m	830
S303(E)	2.1 m	1.06 m
S304(E)	2.1 m	1.460 m
S311(E)	300	720
S312(E)	300	830
S313(E)	300	1.060 m
S314(E)	300	1.460 m

BARS S301(E), S302(E), S303(E), S304(E), S311(E), S312(E), S313(E), S314(E)

PILE DATA
Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 14.1 m
No. Req'd.: 25 (Includes 1 Test Pile)
Test Pile Driven to 1463 kN

Notes:
1. Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
2. Pour steps monolithically with cap beam.
3. All exposed edges shall have standard 20 mm chamfers.
4. All dimensions are in millimeters (mm) except as noted.
5. For backfill material see Footing Layout drawing.

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DESIGNED	MEA
CHECKED	ACF
DRAWN	JM
CHECKED	GPM

ELEVATION
(Looking Upstation)

END VIEW

SECTION THRU PIER CAP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

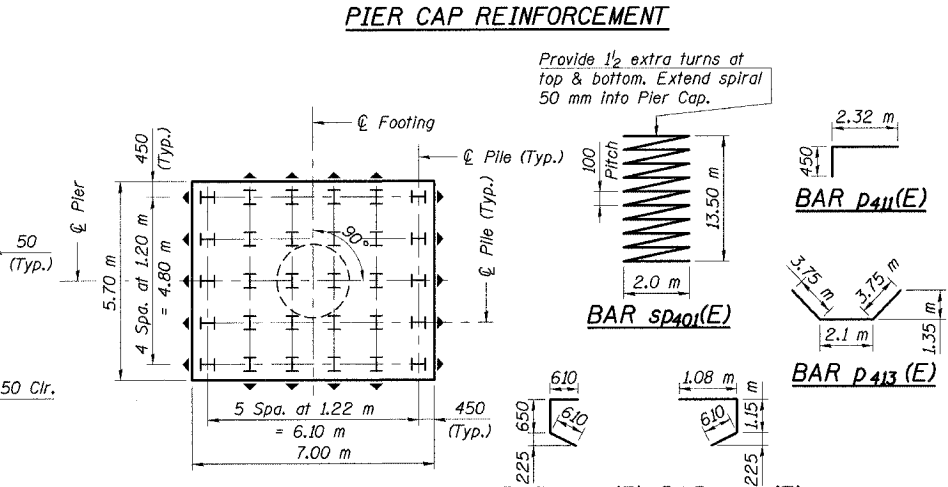
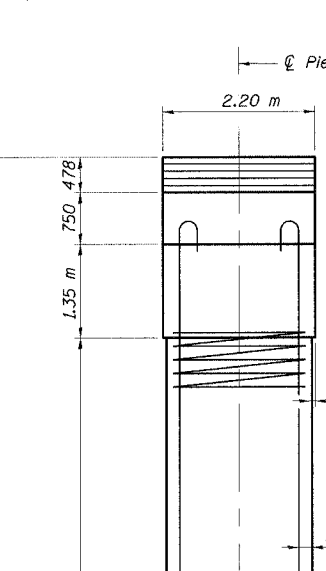
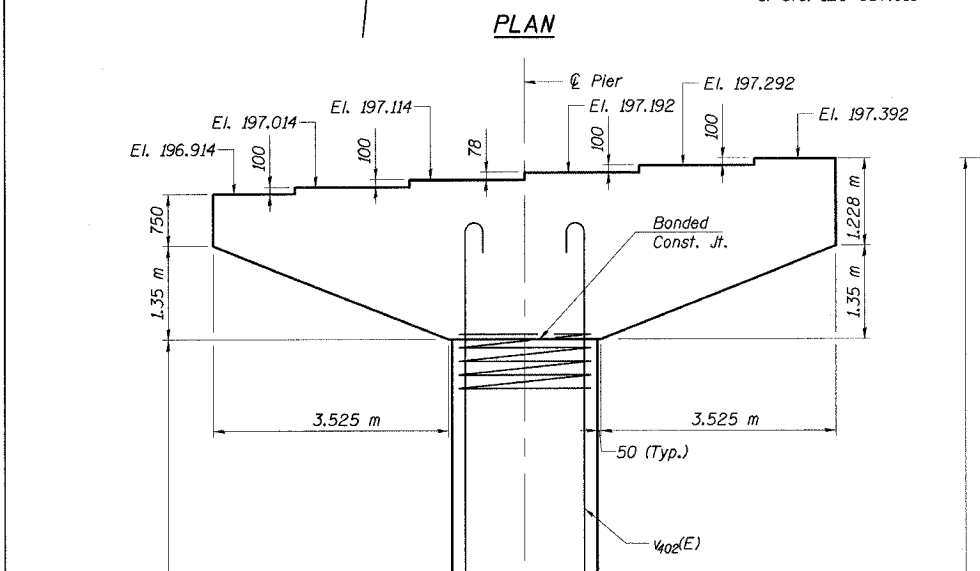
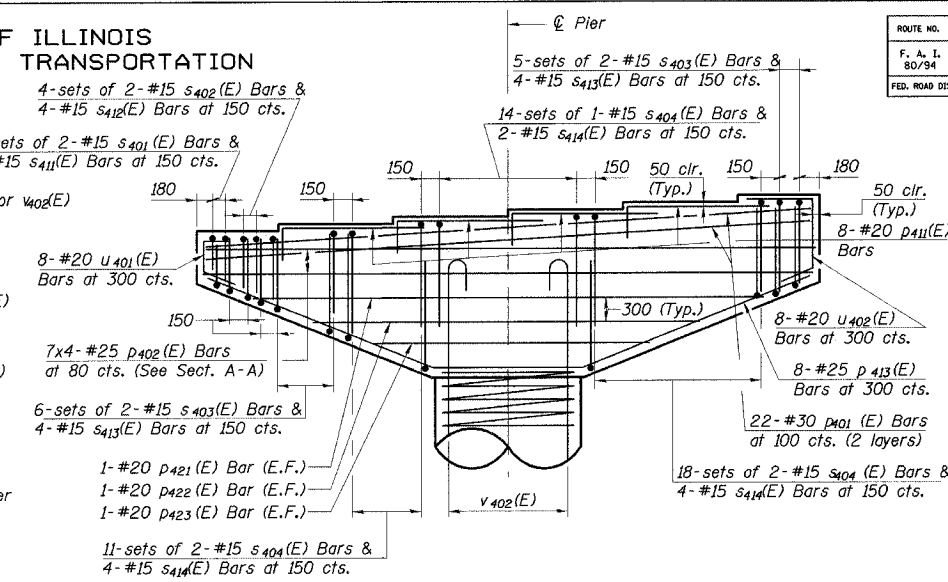
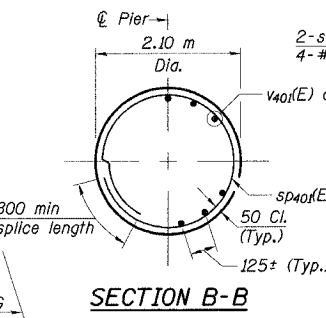
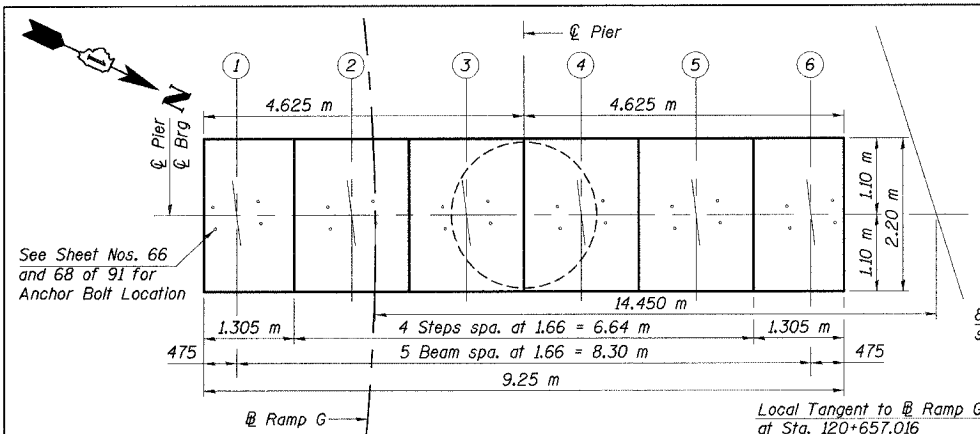
PIER 3

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

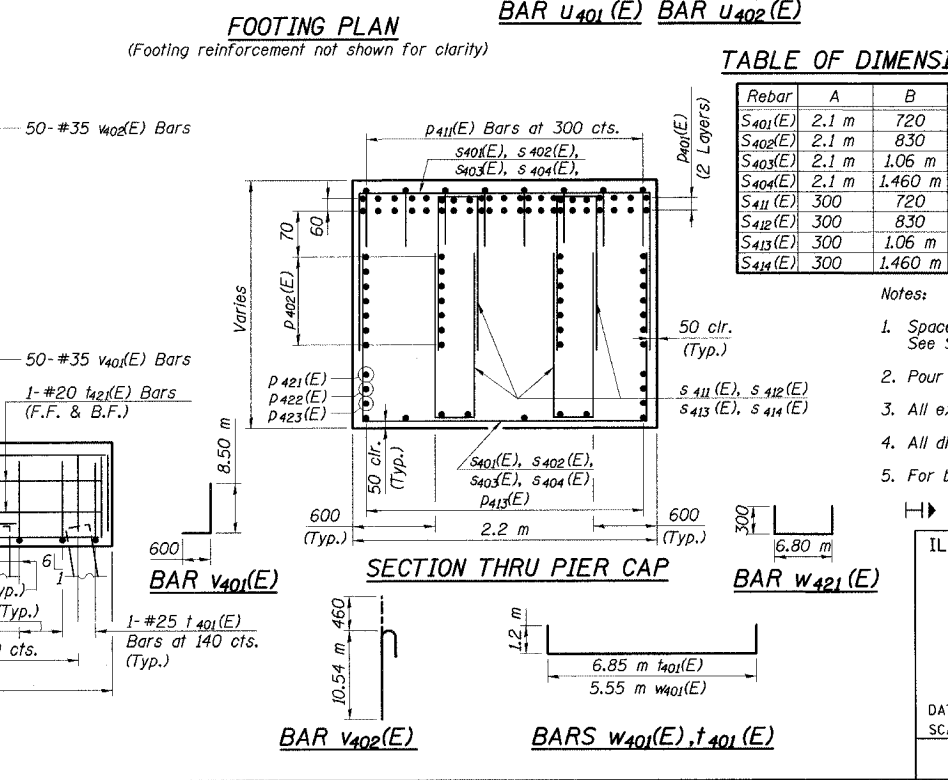
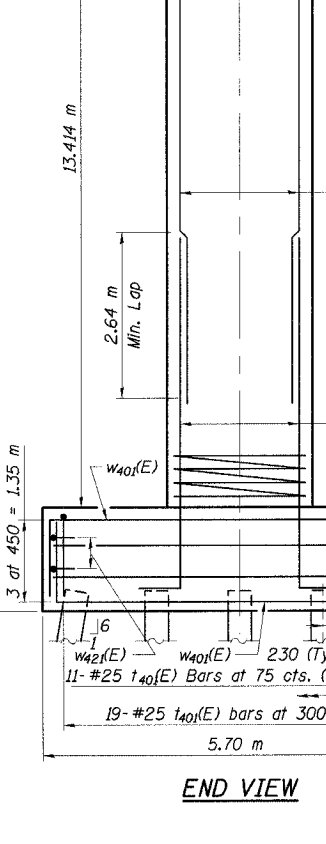
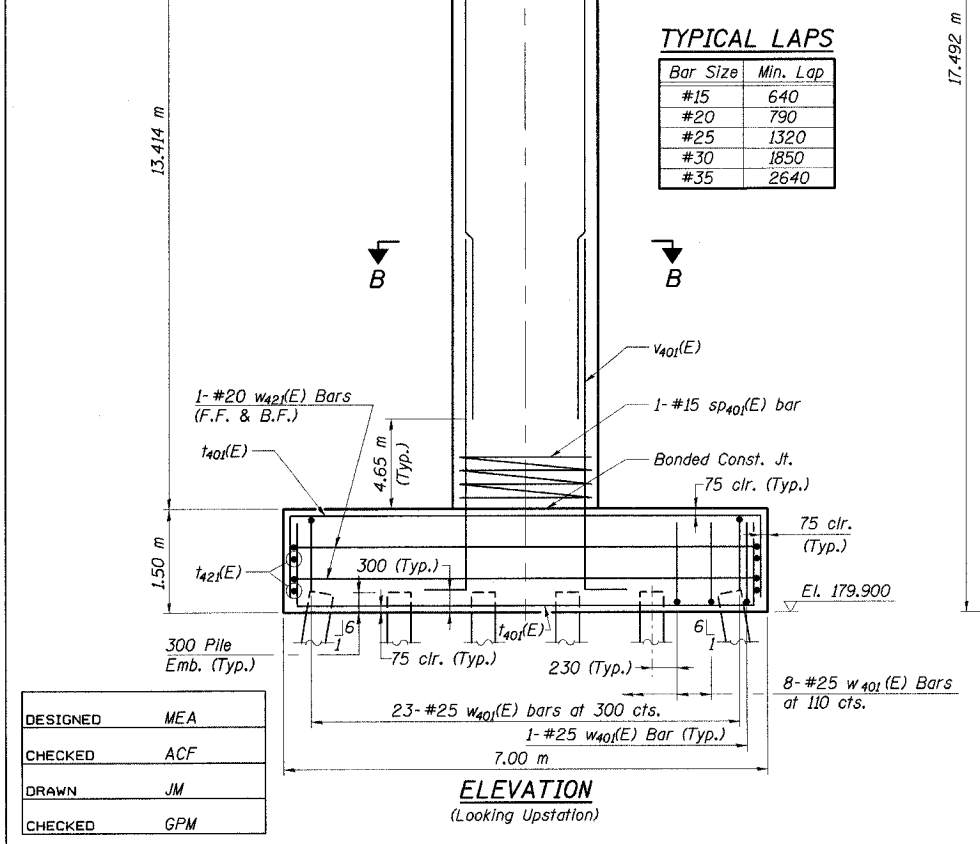
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 77 91 SHEETS
F. A. I. 80/94	0203JB	COOK	200	139	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62854	



TYPICAL LAPS

Bar Size	Min. Lap
#15	640
#20	790
#25	1320
#30	1850
#35	2640



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
P401(E)	44	#30	9.15	—
P402(E)	28	#25	9.15	—
P411(E)	32	#20	2.77	—
P413(E)	8	#25	9.60	—
P421(E)	2	#20	7.00	—
P422(E)	2	#20	5.45	—
P423(E)	2	#20	3.95	—
S401(E)	4	#15	3.54	—
S402(E)	8	#15	3.76	—
S403(E)	22	#15	4.22	—
S404(E)	72	#15	5.02	—
S411(E)	8	#15	1.74	—
S412(E)	16	#15	1.96	—
S413(E)	44	#15	2.42	—
S414(E)	144	#15	3.20	—
U401(E)	8	#20	1.87	—
U402(E)	8	#20	2.84	—
W401(E)	65	#25	7.95	—
W421(E)	4	#20	7.40	—
T401(E)	65	#25	9.25	—
T421(E)	4	#20	5.55	—
V401(E)	50	#35	9.10	—
V402(E)	50	#35	11.00	—
SP401(E)	1	#15	*13.50	NNN

ITEM QUANTITY

ITEM	UNIT	QUANTITY
Driving Steel Piles	m	536.5
Furnishing Steel Piles		
HP360x108	m	536.5
Test Pile Steel HP360x108	Each	1
Structure Excavation	m ³	172.4
Concrete Structures	m ³	142.9
Reinforcement Bars, Epoxy Coated	kg	19,370

Reinforcement bars designated (E) shall be epoxy coated.
*Length is height of spiral

TABLE OF DIMENSIONS

Rebar	A	B
S401(E)	2.1 m	720
S402(E)	2.1 m	830
S403(E)	2.1 m	1.06 m
S404(E)	2.1 m	1.460 m
S411(E)	300	720
S412(E)	300	830
S413(E)	300	1.06 m
S414(E)	300	1.460 m

BARS S401(E), S402(E), S403(E), S404(E), S411(E), S412(E), S413(E), S414(E)

PILE DATA
Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 18.5 m
No. Req'd.: 30 (Includes 1 Test Pile)
Test Pile Driven to 1463 kN

- Notes:
- Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
 - Pour steps monolithically with cap beam.
 - All exposed edges shall have standard 20 mm chamfers.
 - All dimensions are in millimeters (mm) except as noted.
 - For backfill material see Footing Layout drawing.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

PIER 4

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203JB
COOK COUNTY

STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

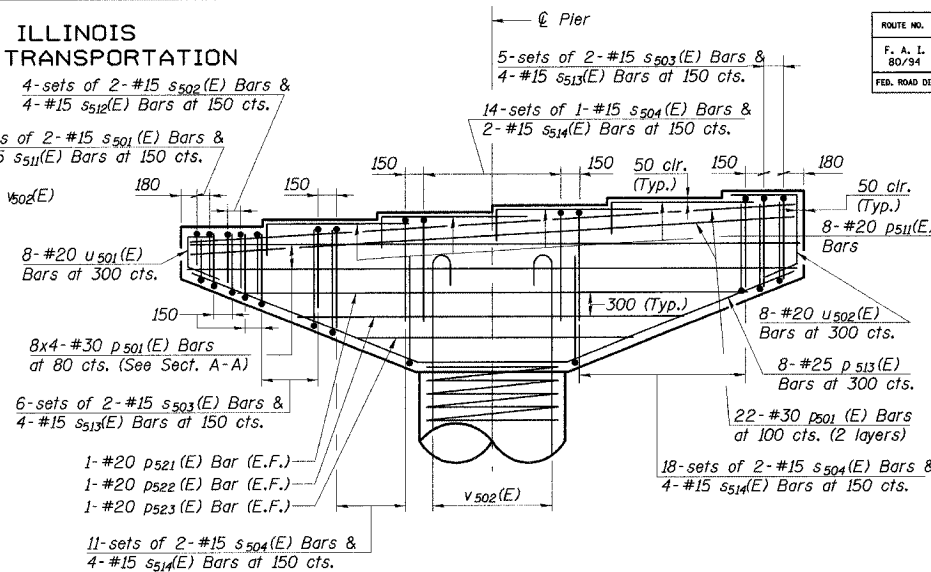
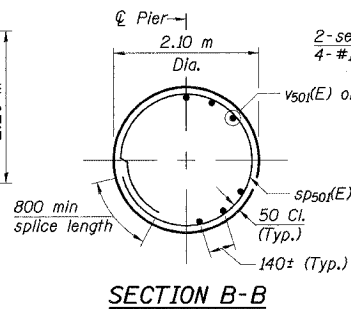
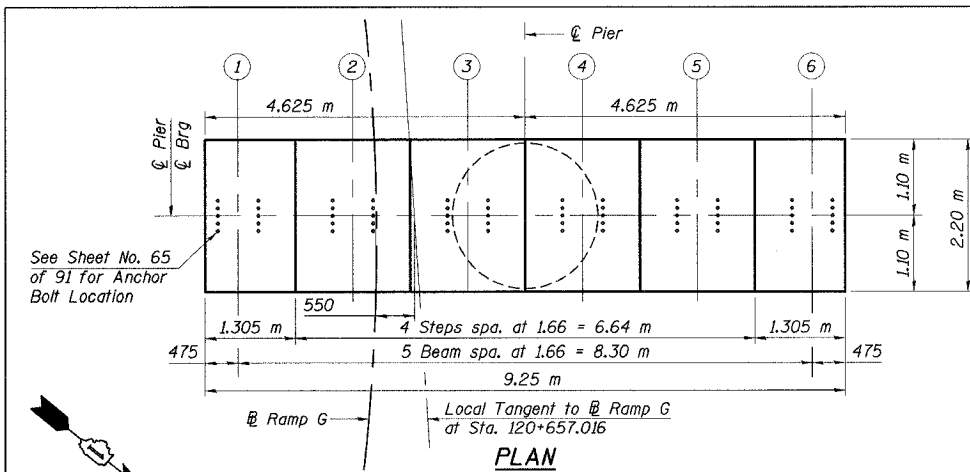
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DESIGNED	MEA
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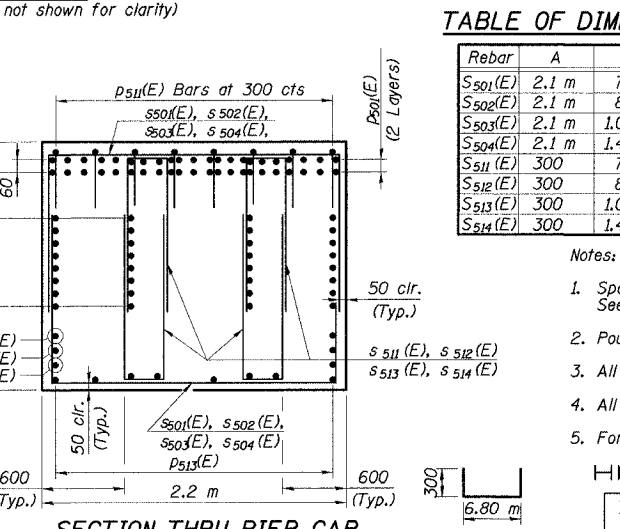
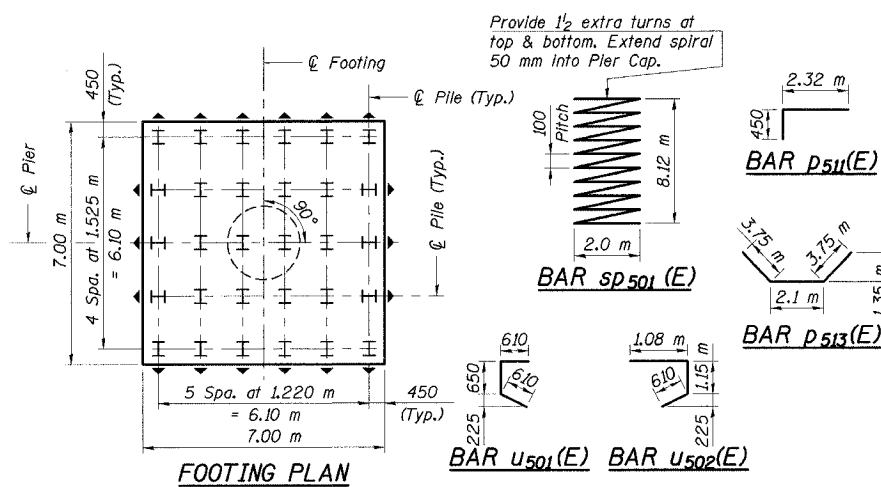
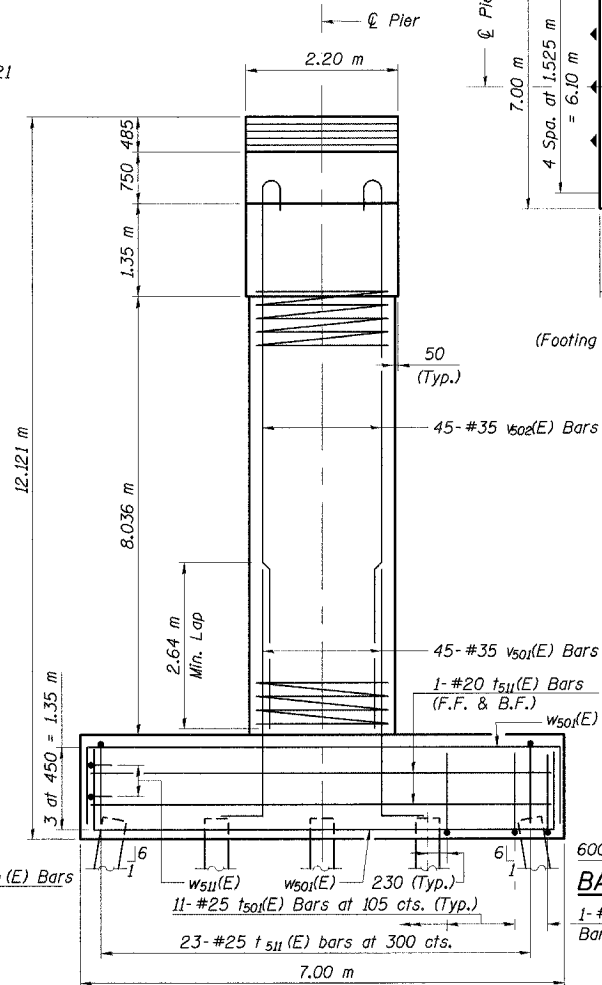
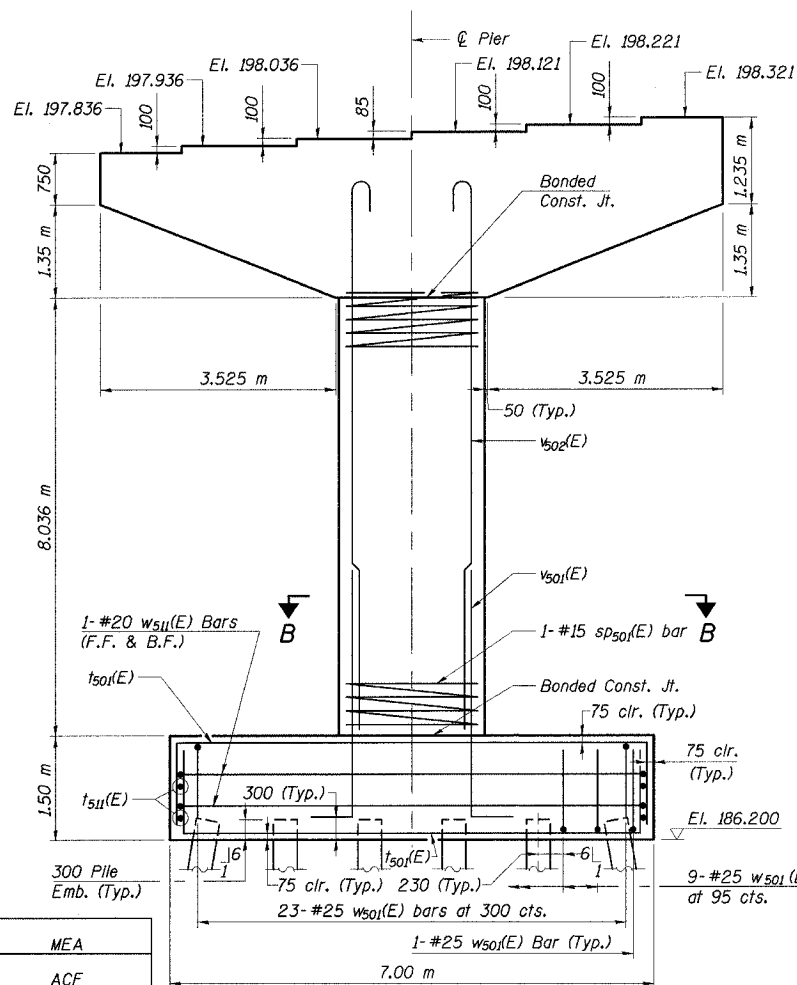
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 78 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	140	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62854	



TYPICAL LAPS

Bar Size	Min. Lap
#15	640
#20	790
#25	1320
#30	1850
#35	2640



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
P501(E)	76	#30	9.15	
P511(E)	32	#20	2.77	
P513(E)	8	#25	9.60	
P521(E)	2	#20	7.00	
P522(E)	2	#20	5.45	
P523(E)	2	#20	3.95	
S501(E)	4	#15	3.54	
S502(E)	8	#15	3.76	
S503(E)	22	#15	4.22	
S504(E)	72	#15	5.02	
S511(E)	8	#15	1.74	
S512(E)	16	#15	1.96	
S513(E)	44	#15	2.42	
S514(E)	144	#15	3.20	
U501(E)	8	#20	1.87	
U502(E)	8	#20	2.84	
W501(E)	70	#25	9.25	
W511(E)	4	#20	7.40	
T501(E)	69	#25	9.25	
T511(E)	4	#20	6.85	
V501(E)	45	#35	5.00	
V502(E)	45	#35	9.78	
SP501(E)	1	#15	* 8.12	NNN

ITEM	UNIT	QUANTITY
Driving Steel Piles	m	585.8
Furnishing Steel Piles		
HP360x108	m	585.8
Test Pile Steel HP360x108	Each	1
Structure Excavation	m ³	190.6
Concrete Structures	m ³	137.9
Reinforcement Bars, Epoxy Coated	kg	17,450

Reinforcement bars designated (E) shall be epoxy coated.
* Length is height of spiral

TABLE OF DIMENSIONS

Rebar	A	B
S501(E)	2.1 m	720
S502(E)	2.1 m	830
S503(E)	2.1 m	1.06 m
S504(E)	2.1 m	1.46 m
S511(E)	300	720
S512(E)	300	850
S513(E)	300	1.06 m
S514(E)	300	1.46 m

BARS S501(E), S502(E), S503(E), S504(E), S511(E), S512(E), S513(E), S514(E)

PILE DATA

Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 20.2 m
No. Req'd.: 30 (Includes 1 Test Pile)
Test Pile Driven to 146.3 kN

- Notes:
- Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
 - Pour steps monolithically with cap beam.
 - All exposed edges shall have standard 20 mm chamfers.
 - All dimensions are in millimeters (mm) except as noted.
 - For backfill material see Footing Layout drawing.

Indicates battered pile

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

PIER 5

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804

DATE 3/23/05
SCALE ---

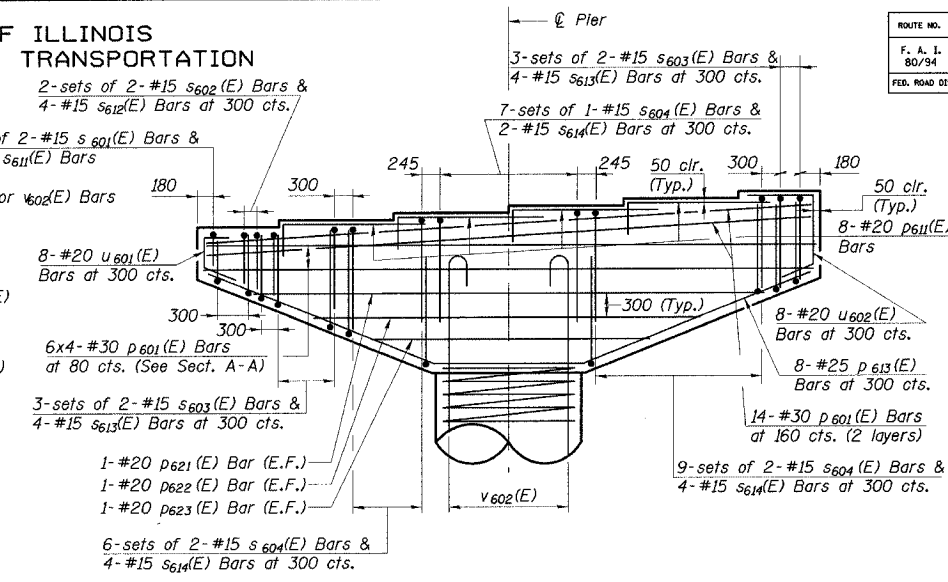
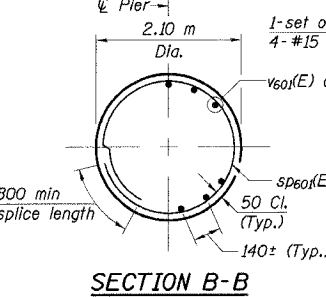
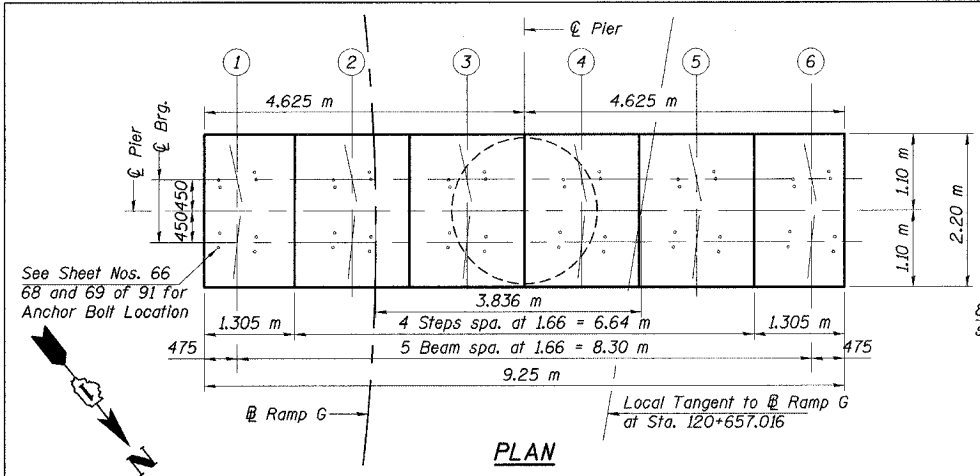
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DESIGNED	MEA
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DRAWN	JM
CHECKED	GPM

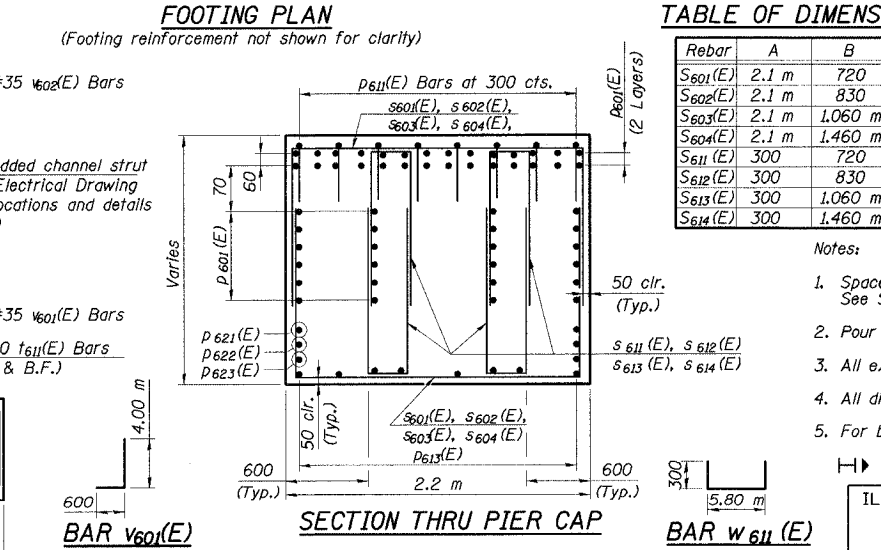
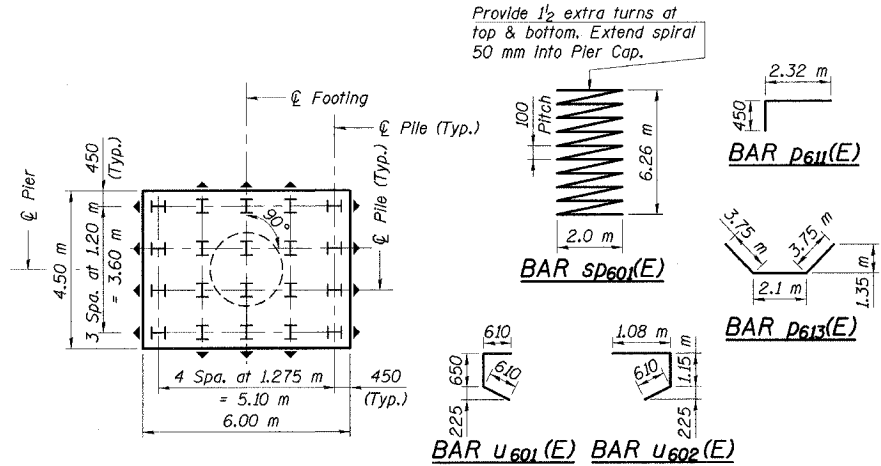
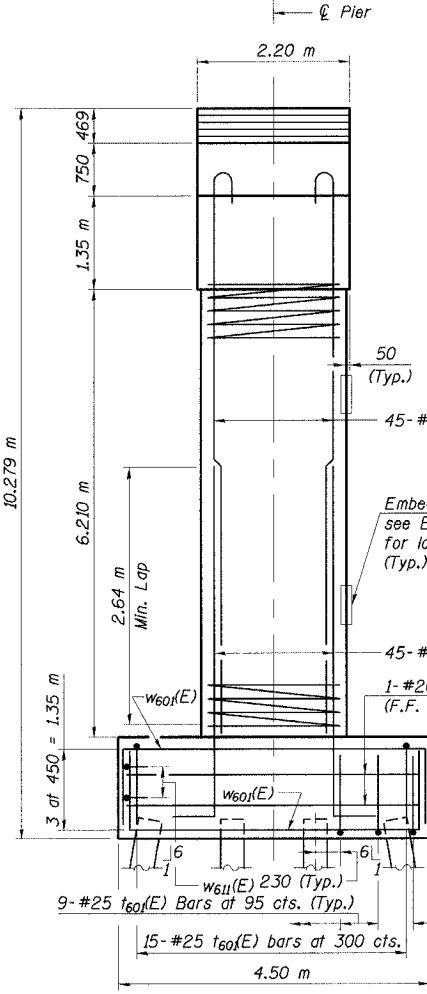
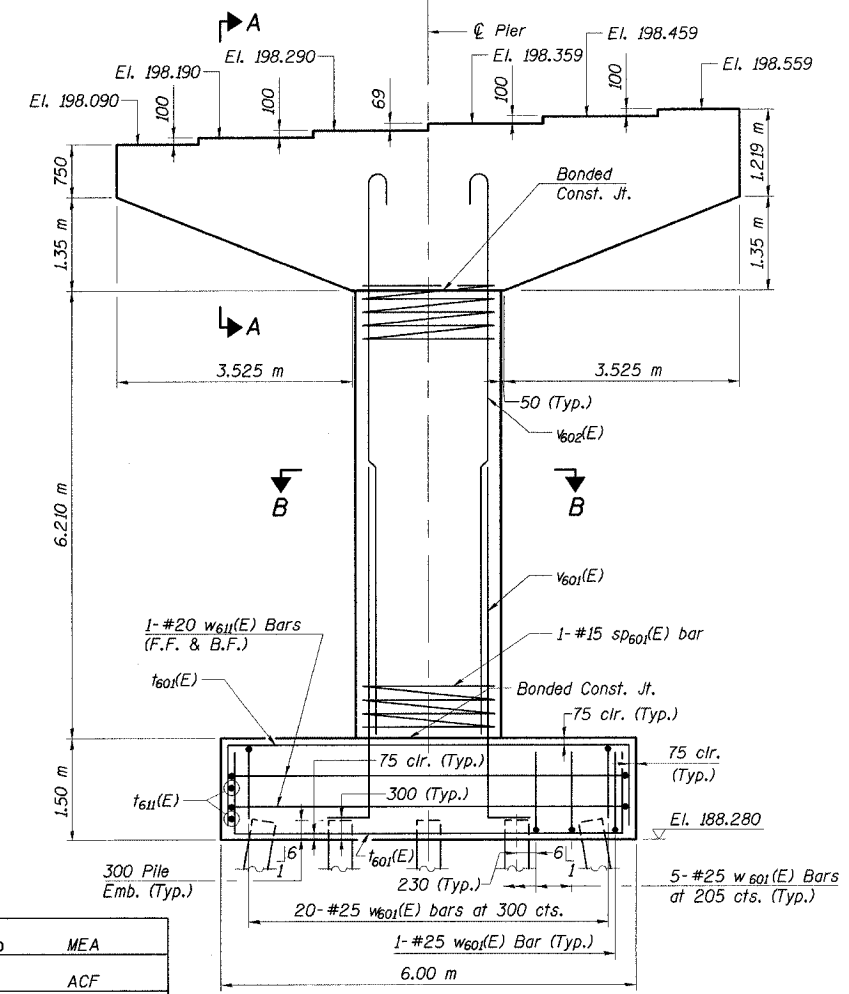
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 79
F. A. I. 80/94	0203.1B	COOK	200	141	91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-			CONTRACT NO. 62854		



TYPICAL LAPS

Bar Size	Min. Lap
#15	640
#20	790
#25	1320
#30	1850
#35	2640



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
p601 (E)	52	#30	9.15	
p611 (E)	32	#20	2.77	
p613 (E)	8	#25	9.60	
p621 (E)	2	#20	7.00	
p622 (E)	2	#20	5.45	
p623 (E)	2	#20	3.95	
	0	#	0.00	
s601 (E)	2	#15	3.54	
s602 (E)	4	#15	3.76	
s603 (E)	12	#15	4.22	
s604 (E)	37	#15	5.02	
s611 (E)	4	#15	1.74	
s612 (E)	8	#15	1.96	
s613 (E)	24	#15	2.42	
s614 (E)	74	#15	3.20	
u601 (E)	8	#20	1.87	
u602 (E)	8	#20	2.84	
w601 (E)	42	#25	6.75	
w611 (E)	4	#20	6.40	
t601 (E)	44	#25	8.25	
t611 (E)	4	#20	4.35	
v601 (E)	45	#35	4.60	
v602 (E)	45	#35	8.46	
sp601 (E)	1	#15	* 6.26	NNN

ITEM	UNIT	QUANTITY
Driving Steel Piles	m	399.0
Furnishing Steel Piles HP360x108	m	399.0
Test Pile Steel HP360x108	Each	1
Structure Excavation	m ³	108.4
Concrete Structures	m ³	98.6
Reinforcement Bars, Epoxy Coated	kg	12,070

TABLE OF DIMENSIONS

Rebar	A	B
S601(E)	2.1 m	720
S602(E)	2.1 m	830
S603(E)	2.1 m	1,060 m
S604(E)	2.1 m	1,460 m
S611 (E)	300	720
S612 (E)	300	830
S613 (E)	300	1,060 m
S614 (E)	300	1,460 m

BARS s601(E), s602(E), s603(E), s604(E), s611 (E), s612(E), s613(E), s614(E)

PILE DATA
Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 21.0 m
No. Req'd.: 20 (Includes 1 Test Pile)
Test Pile Driven to 1463 kN

- Notes:
- Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
 - Pour steps monolithically with cap beam.
 - All exposed edges shall have standard 20 mm chamfers.
 - All dimensions are in millimeters (mm) except as noted.
 - For backfill material see Footing Layout drawing.

Indicates battered pile

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

PIER 6

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804

DATE 3/23/05
SCALE ---



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DESIGNED	MEA
CHECKED	ACF
DRAWN	JM
CHECKED	GPM

ELEVATION
(Looking Upstation)

END VIEW

SECTION THRU PIER CAP

BARS w601(E), t601(E)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 80 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	142	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62854	

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
P701(E)	44	#30	9.15	—
P702(E)	32	#25	9.15	—
P711(E)	32	#20	2.77	—
P713(E)	8	#25	9.60	—
P721(E)	2	#20	7.00	—
P722(E)	2	#20	5.45	—
P723(E)	2	#20	3.95	—
S701(E)	4	#15	3.54	—
S702(E)	8	#15	3.76	—
S703(E)	22	#15	4.22	—
S704(E)	72	#15	5.02	—
S711(E)	8	#15	1.74	—
S712(E)	16	#15	1.96	—
S713(E)	44	#15	2.42	—
S714(E)	144	#15	3.20	—
U701(E)	8	#20	1.87	—
U702(E)	8	#20	2.84	—
W701(E)	63	#25	7.95	—
W711(E)	4	#20	7.90	—
T701(E)	67	#25	9.75	—
T711(E)	4	#20	5.55	—
V701(E)	50	#35	6.50	—
V702(E)	50	#35	11.00	—
SP701(E)	1	#15	* 10.94	NNN

ITEM	UNIT	QUANTITY
Driving Steel Piles	m	505.3
Furnishing Steel Piles	m	505.3
HP360x108	m	505.3
Test Pile Steel HP360x108	Each	1
Structure Excavation	m ³	193.9
Concrete Structures	m ³	138.3
Reinforcement Bars, Epoxy Coated	kg	18,390

Reinforcement bars designated (E) shall be epoxy coated.
*Length is height of spiral

BARS S701(E), S702(E), S703(E), S704(E), S711(E), S712(E), S713(E), S714(E)

PILE DATA

Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 16.3 m
No. Req'd.: 32 (Includes 1 Test Pile)
Test Pile Driven to 1463 kN

- Notes:
- Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
 - Pour steps monolithically with cap beam.
 - All exposed edges shall have standard 20 mm chamfers.
 - All dimensions are in millimeters (mm) except as noted.
 - For backfill material see Footing Layout drawing.

Indicates battered pile

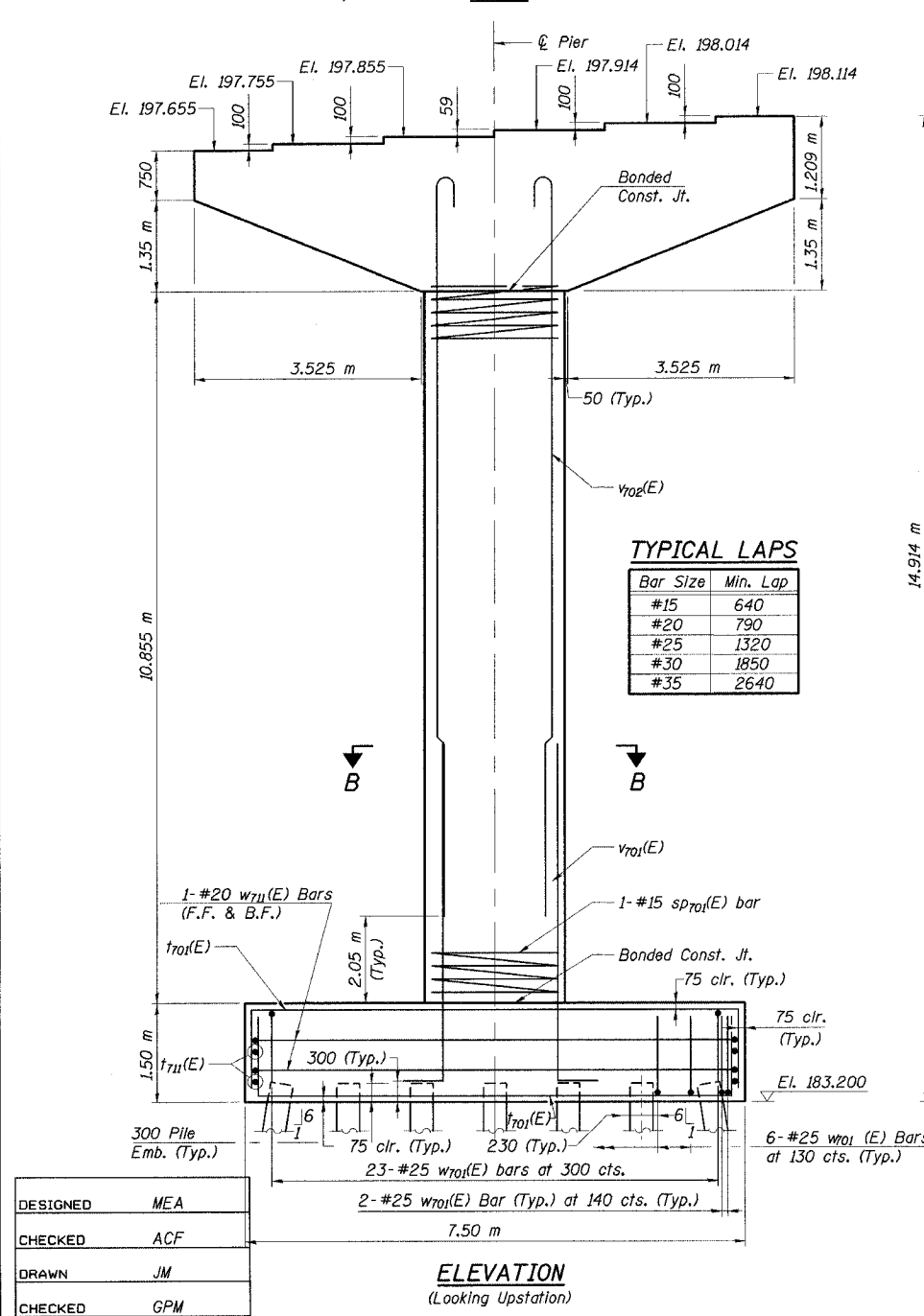
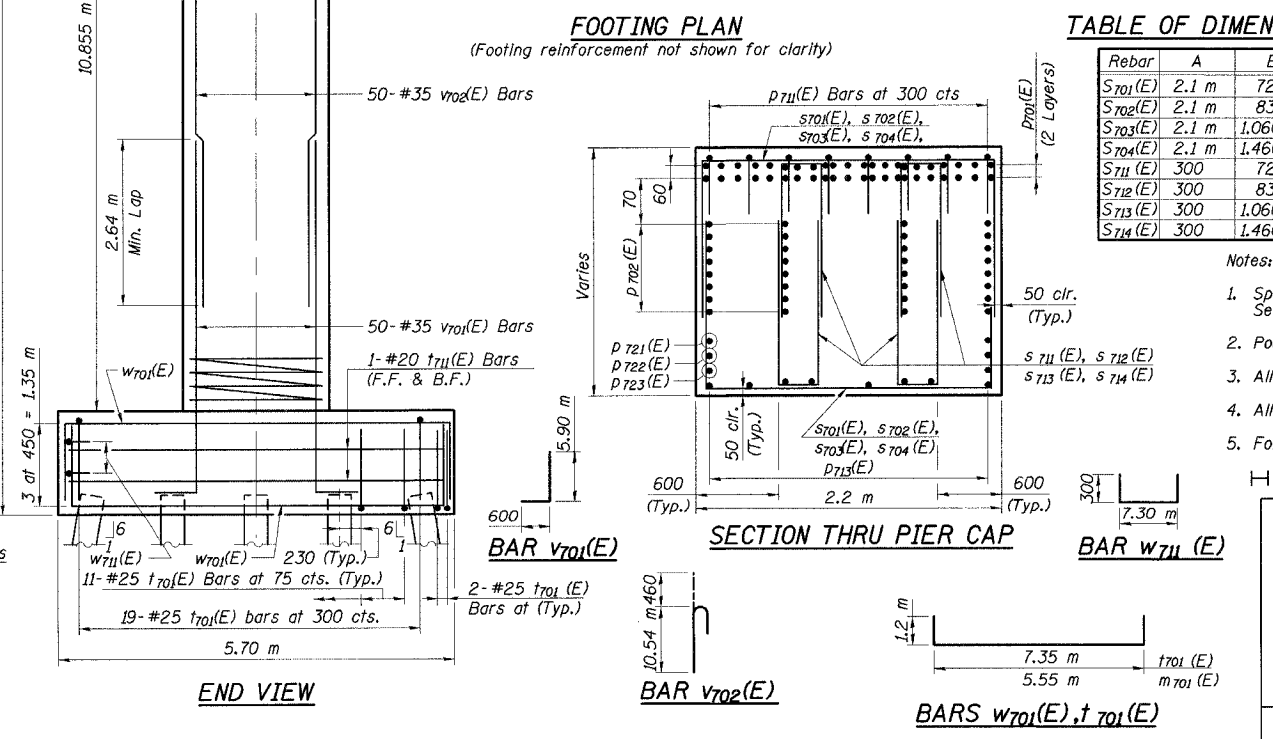
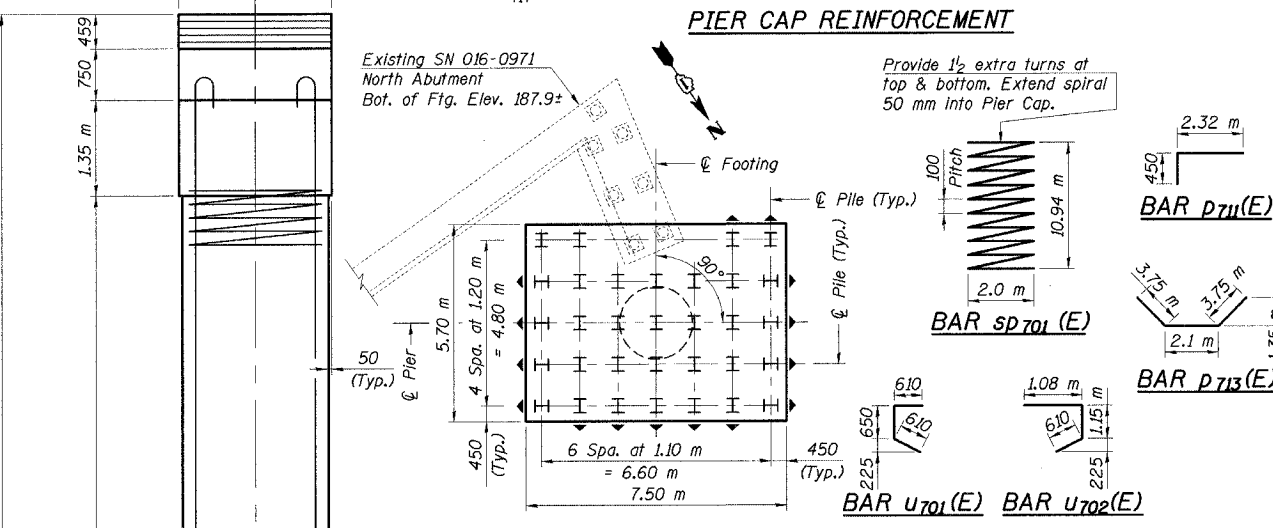
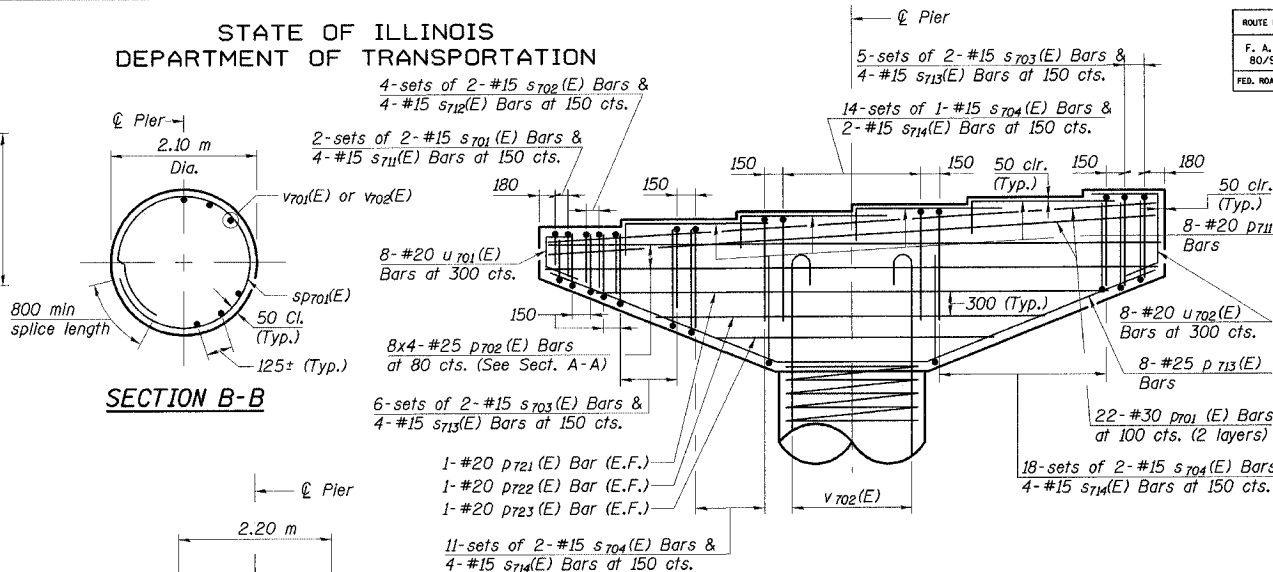
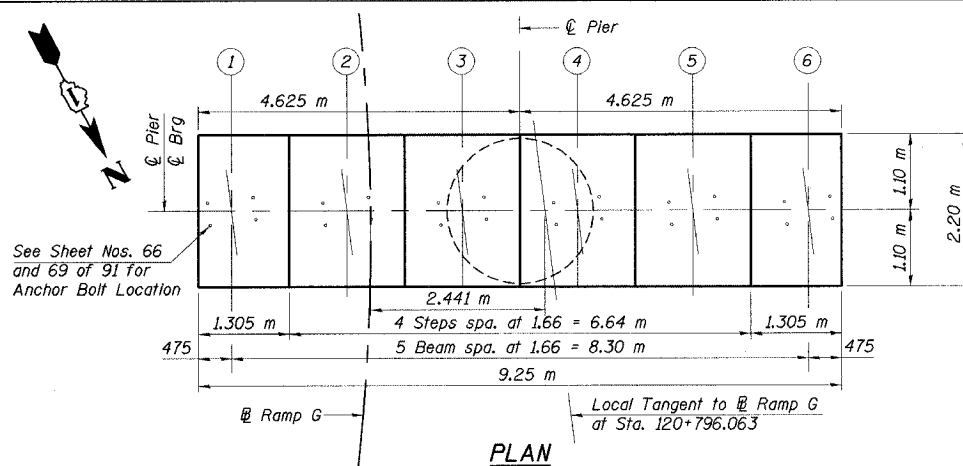
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

PIER 7

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804

DATE 3/23/05
SCALE ---

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TYPICAL LAPS

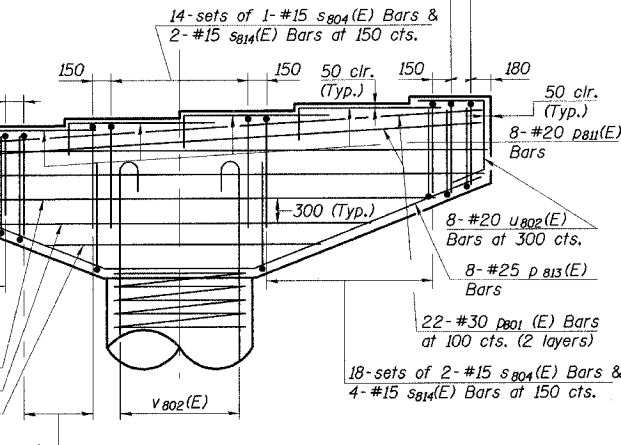
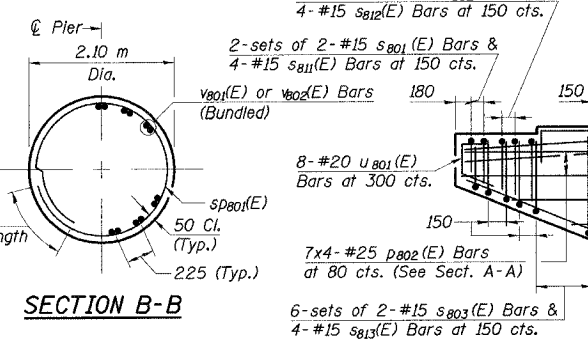
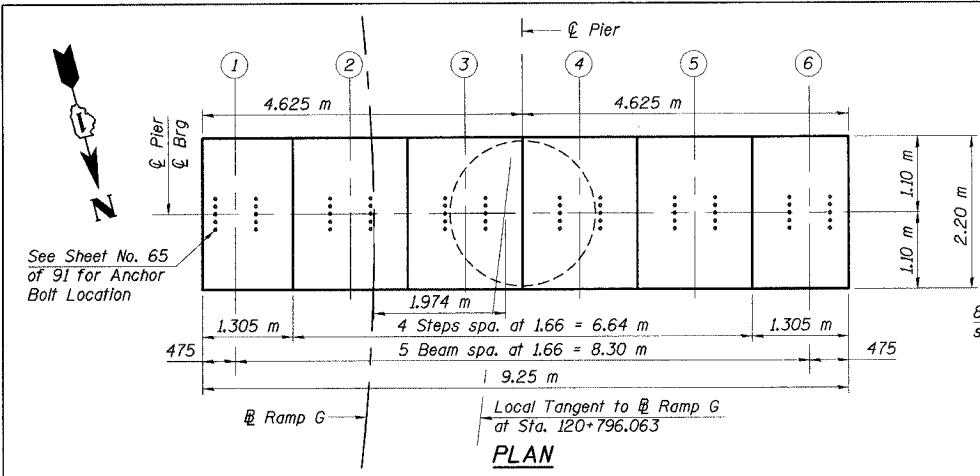
Bar Size	Min. Lap
#15	640
#20	790
#25	1320
#30	1850
#35	2640

DESIGNED	MEA
CHECKED	ACF
DRAWN	JM
CHECKED	GPM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

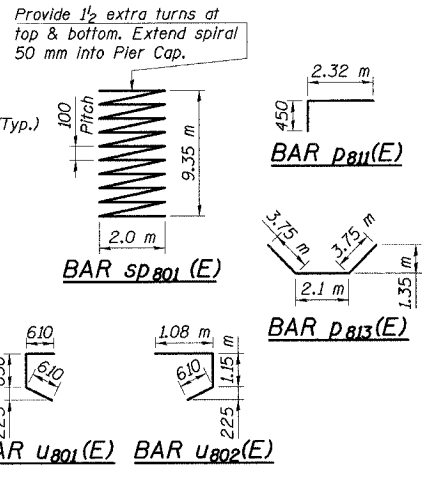
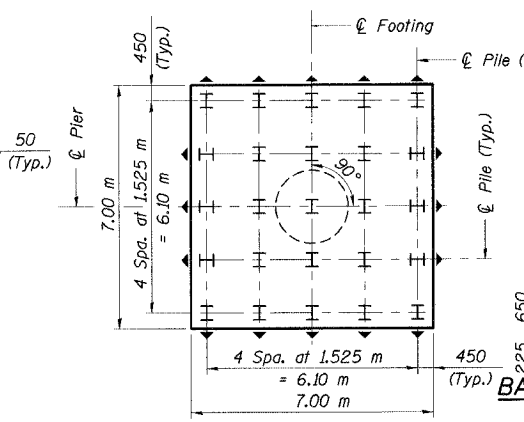
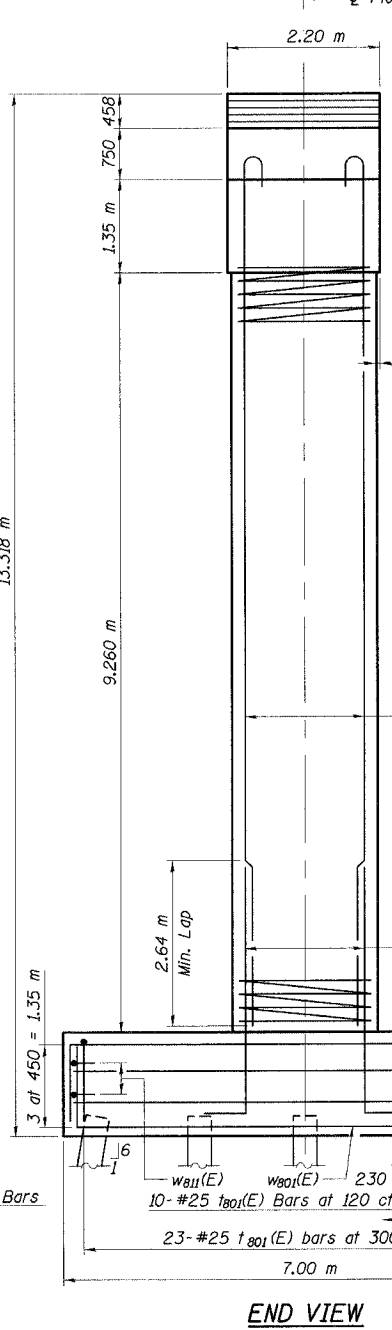
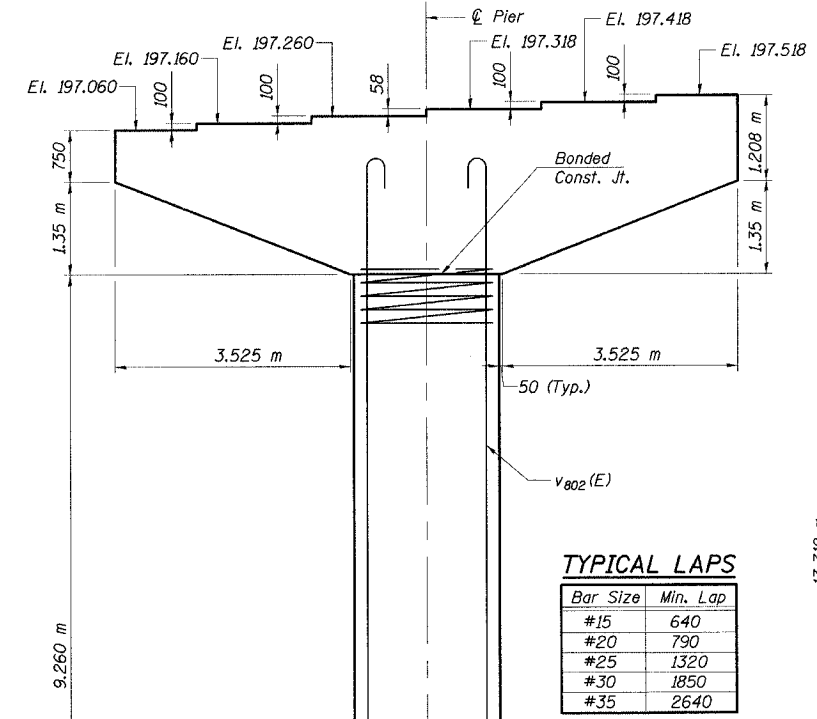
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 81 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	143	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



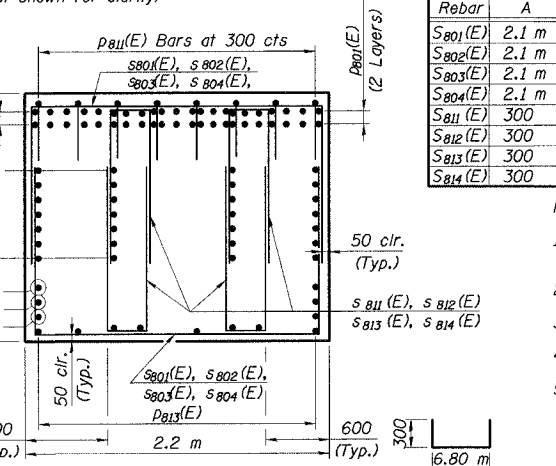
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
P801(E)	44	#30	9.15	—
P802(E)	28	#25	9.15	—
P811(E)	32	#20	2.77	—
P813(E)	8	#25	9.60	—
P821(E)	2	#20	7.00	—
P822(E)	2	#20	5.45	—
P823(E)	2	#20	3.95	—
S801(E)	4	#15	3.54	—
S802(E)	8	#15	3.76	—
S803(E)	22	#15	4.22	—
S804(E)	72	#15	5.02	—
S811(E)	8	#15	1.74	—
S812(E)	16	#15	1.96	—
S813(E)	44	#15	2.42	—
S814(E)	144	#15	3.20	—
U801(E)	8	#20	1.87	—
U802(E)	8	#20	2.84	—
W801(E)	65	#25	9.25	—
W811(E)	4	#20	7.40	—
T801(E)	65	#25	9.25	—
T811(E)	4	#20	6.85	—
Y801(E)	56	#35	5.00	—
Y802(E)	56	#35	11.00	—
SP801(E)	1	#15	* 9.35	NNN

ITEM	UNIT	QUANTITY
Driving Steel Piles	m	396.0
Furnishing Steel Piles		
HP360x108	m	396.0
Test Pile Steel HP360x108	Each	1
Structure Excavation	m ³	132.8
Concrete Structures	m ³	142.2
Reinforcement Bars, Epoxy Coated	kg	18,450



SECTION THRU PIER CAP



BARS S801(E), S802(E), S803(E), S804(E), S811(E), S812(E), S813(E), S814(E)

PILE DATA

Type: HP360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 16.5 m
No. Req'd.: 25 (Includes 1 Test Pile)
Test Pile Driven to 1463 kN

- Notes:
- Space reinforcement in cap to miss anchor bolts. See Sheet 65 for anchor bolt spacing.
 - Pour steps monolithically with cap beam.
 - All exposed edges shall have standard 20 mm chamfers.
 - All dimensions are in millimeters (mm) except as noted.
 - For backfill material see Footing Layout drawing.

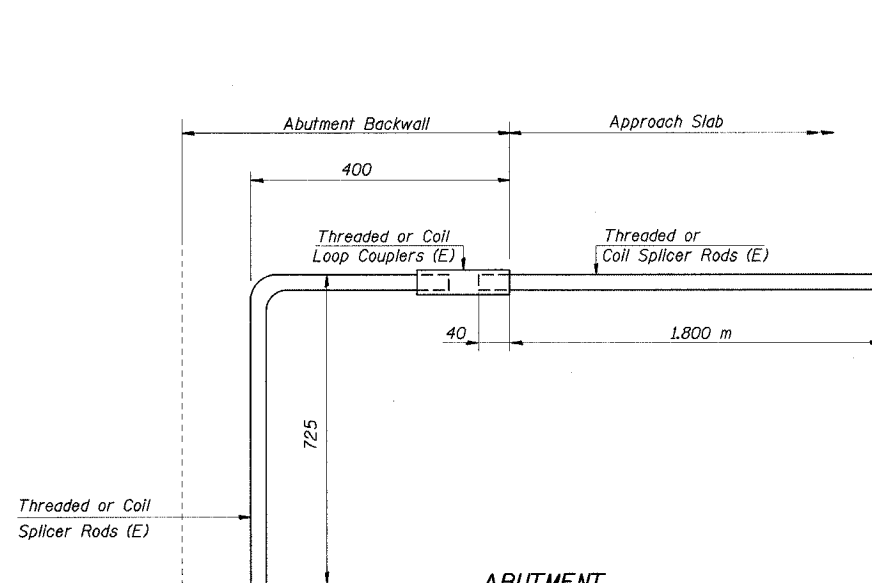
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
PIER 8
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 82 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	144	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					



**ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #15 BAR**

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 31 (E. Abut.) 31 (W. Abut.)
62 Total

The diameter of this part is the same as the diameter of the bar spliced. The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

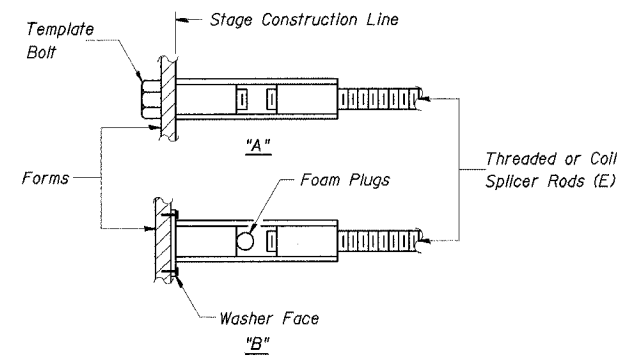
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times 10^{-3} \times f_y \times A_s$
(Tension in kN)
- ② Minimum *Pull-out Strength = $1.25 \times 10^{-3} \times f_{s\text{allow}} \times A_s$
(Tension in kN)

Where f_y = Yield strength of lapped reinforcement bars in MPa.
 $f_{s\text{allow}}$ = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
 A_s = Tensile stress area of lapped reinforcement bars (mm^2).
* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.32 m	250	100
#30	1.85 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."
All dimensions are in millimeters (mm) except as noted.

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DESIGNED	---
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DRAWN	GPM
CHECKED	JJK

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

BAR SPLICER ASSEMBLY DETAILS
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F. A. I. 80/94	SECTION 0203.1B	COUNTY COOK	TOTAL SHEETS 200	SHEET NO. 145	SHEET NO. 83 91 SHEETS
FED. ROAD DIST. NO. 1			ILLINOIS FED. AID PROJECT- CONTRACT NO. 62854		

BORING LOG HB-18 Page 1 of 2

Wang Engineering, Inc.
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 190.26 m
North: 54559.59 m
East: 36265.18 m
Station: 440+230.24
Offset: 5.59 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)
190.26	127-mm thick ASPHALTIC CONCRETE over 264-mm thick CONCRETE	0-8	1	4	335	13	190.26		0	11	3	293	18
188.0	CRUSHED STONE	8-11	2	7	NP	17	188.0		11	5	5	503	15
186.0	Very stiff, gray SILTY CLAY	11-12	3	8	NP	13	186.0		12	4	4	477	18
184.0	Medium dense, brown to gray medium SAND to SANDY LOAM	12-13	4	7	NP	15	184.0	Very stiff to stiff, gray CLAY	13	14	5	314	17
182.0	Dense, brown and gray medium SAND	13-15	5	4	NP	15	182.0		14	6	6	290	14
180.0	Very stiff, black CLAY	15-16	6	10	NP	11	180.0	Very dense, gray SILT to SILTY LOAM	15	16	4	189	18
178.0	Very stiff to hard, brown and gray CLAY with root traces immediately below the buried topsoil	16-17	7	13	NP	17	178.0		16	5	5	212	19
176.0		17-18	8	10	NP	11	176.0		17	4	4	189	18
174.0		18-19	9	4	NP	15	174.0		18	3	3	118	21
172.0		19-20	10	3	NP	17	172.0		19	3	3	118	21

GENERAL NOTES

Begin Drilling: 03-14-2002 Complete Drilling: 03-14-2002
Drilling Contractor: TSC Drill Rig: CME 75
Driller: C&J Logger: H. Suhail Checked by: L. Iordache
Drilling Method: 3.25-inch ID HSA; Boring grouted after completion

WATER LEVEL DATA

While Drilling: 5.49 m
At Completion of Drilling: 18.59 m
Time After Drilling: NA
Depth to Water: NA

BORING LOG HB-18 Page 2 of 2

Wang Engineering, Inc.
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 190.26 m
North: 54559.59 m
East: 36265.18 m
Station: 440+230.24
Offset: 5.59 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)
170.0		20-21	11	5	NP	17	170.0		20	6	6	385	14
168.0		21-22	12	6	NP	17	168.0		21	4	4	189	18
166.0		22-23	13	4	NP	15	166.0		22	25	50	5027	NA
164.0		23-24	14	3	NP	17	164.0		23	4	4	189	18
162.0		24-25	15	3	NP	17	162.0		24	6	6	385	14
160.0		25-26	16	3	NP	17	160.0		25	5	5	503	15
158.0		26-27	17	3	NP	17	158.0		26	4	4	189	18
156.0		27-28	18	3	NP	17	156.0		27	3	3	118	21
154.0		28-29	19	3	NP	17	154.0		28	3	3	118	21
152.0		29-30	20	3	NP	17	152.0		29	3	3	118	21
150.0		30-31	21	3	NP	17	150.0		30	3	3	118	21

GENERAL NOTES

Begin Drilling: 03-14-2002 Complete Drilling: 03-14-2002
Drilling Contractor: TSC Drill Rig: CME 75
Driller: C&J Logger: H. Suhail Checked by: L. Iordache
Drilling Method: 3.25-inch ID HSA; Boring grouted after completion

WATER LEVEL DATA

While Drilling: 5.49 m
At Completion of Drilling: 18.59 m
Time After Drilling: NA
Depth to Water: NA

BORING LOG HB-20 Page 1 of 2

Wang Engineering, Inc.
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 194.48 m
North: 54543.35 m
East: 36207.01 m
Station: 120+841.07
Offset: 4.90 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)
194.48	127-mm thick, black SANDY CLAY LOAM	0-1	1	7	287	29	194.48		0	11	6	189	21
192.0	203-mm thick, brown, medium SAND	1-2	2	7	287	29	192.0		11	8	8	287	21
190.0	102-mm thick, hard, black CLAY	2-3	3	3	212	28	190.0		12	4	4	283	21
188.0	Very stiff, gray CLAY	3-4	4	4	212	28	188.0		13	7	7	275	19
186.0		4-5	5	4	322	23	186.0		14	8	8	287	21
184.0	Stiff to very stiff, gray CLAY	5-6	6	10	204	21	184.0		15	15	26	856	14
182.0		6-7	7	6	160	22	182.0	Very stiff to hard, gray SILTY CLAY	16	16	16	160	22
180.0		7-8	8	3	110	26	180.0		17	15	26	856	14
178.0		8-9	9	4	98	23	178.0	Very dense, gray SILTY LOAM	18	18	18	98	23
176.0		9-10	10	6	169	21	176.0		19	18	18	98	23

GENERAL NOTES

Begin Drilling: 02-25-2002 Complete Drilling: 02-25-2002
Drilling Contractor: TSC Drill Rig: Diedrich D-120
Driller: L&B Logger: T. Chan Checked by: E. Datz
Drilling Method: 2.24-inch ID HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling: DRY
At Completion of Drilling: DRY
Time After Drilling: NA
Depth to Water: NA

Notes:
1. For Page 2 of 2 of Boring Log HB-20, see Sheet No. 84 of 91 sheets.

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DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS HB-18 AND HB-20
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 84 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	146	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					

BORING LOG HB-20 Page 1 of 2

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Date: NGVD
Elevation: 194.48 m
North: 545433.35 m
East: 362626.36 m
Station: 120+794.88
Offset: 4.50 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Mohr's Constant (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Mohr's Constant (%)
18.7	Hard, gray SILTY CLAY LOAM	16	17	56302	>421	8							
17.2	Very dense, gray gravelly SANDY LOAM	18	18	56302	NP	10							
15.1	Boring terminated at 19.41 m	19	19	5061	NP	11							

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-25-2002	Complete Drilling	02-25-2002
Drilling Contractor	TSC	Drill Rig	Dioldrich D-120
Driller	L&B	Logger	T. Chan
Checked by	E. Datz	Drilling Method	2.24-inch ID. HSA; Boring backfilled upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

BORING LOG HB-21 Page 1 of 2

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Date: NGVD
Elevation: 194.81 m
North: 545476.15 m
East: 362626.36 m
Station: 120+794.88
Offset: 3.57 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Mohr's Constant (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Mohr's Constant (%)
18.4	254-mm thick ASPHALT -PAVEMENT-												
18.4	Very dense CRUSHED STONE -BASE COURSE-	1	1	25	NP	5							
18.4	Medium dense, gray SAND -FILL-	2	2	6	NP	15							
18.4	Very stiff, brown and gray CLAY	3	3	8	NP	21							
18.4	Medium dense, brown SILT	4	4	5	NP	20							
18.4	Very stiff, brown and gray CLAY	5	5	6	NP	20							
18.4	Medium dense, brown and gray SILT	6	6	8	NP	18							
18.4	Stiff to very stiff, gray CLAY, trace to little gravel	7	7	3	NP	21							
18.4	Hard gray CLAY, little gravel	8	8	3	NP	21							
18.4	Very dense, gray, gravelly SILTY LOAM	9	9	3	NP	23							
18.4		10	10	3	NP	22							

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-13-2002	Complete Drilling	03-13-2002
Drilling Contractor	TSC	Drill Rig	CME 75
Driller	C&J	Logger	H. Suhail
Checked by	E. Datz	Drilling Method	3.25-inch ID. HSA; Boring grouted after completion
While Drilling	2.59 m	At Completion of Drilling	14.48 m
Time After Drilling	NA	Depth to Water	NA

BORING LOG HB-21 Page 2 of 2

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Date: NGVD
Elevation: 194.81 m
North: 545476.15 m
East: 362626.36 m
Station: 120+794.88
Offset: 3.57 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Mohr's Constant (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Mohr's Constant (%)
18.1	Boring terminated at 16.54 m	17	17	75	NP	12							

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-13-2002	Complete Drilling	03-13-2002
Drilling Contractor	TSC	Drill Rig	CME 75
Driller	C&J	Logger	H. Suhail
Checked by	E. Datz	Drilling Method	3.25-inch ID. HSA; Boring grouted after completion
While Drilling	2.59 m	At Completion of Drilling	14.48 m
Time After Drilling	NA	Depth to Water	NA

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DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

Notes:
1. For Page 1 of 2 of Boring Log HB-20, see Sheet No. 83 of 91 sheets.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS HB-20 AND HB-21
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	0203.1B	COOK	200	147
91 SHEETS				
CONTRACT NO. 62854				

BORING LOG HB-22 Page 1 of 2

Weng Engineering, Inc.
1945 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: **HNTB Corporation**
Project: **IL 394 (FAP 94) IDOT D-91-012-01**
Location: **Sections 25&26, T36N, R14E, Cook Co.**

Date: NGVD
Elevation: 186.02 m
North: 545546.31 m
East: 362878.46 m
Station: 120+707.88
Offset: 2.40 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)
187.2	152-mm thick ASPHALT -PAVEMENT-	0							0				
186.4	CRUSHED STONE -BASE COURSE-	0							0				
186.4	Hard, gray SILTY CLAY -FILL-	1	4	432	14		186.4		11	5	140	23	
186.3	Medium dense, medium grained, brown and gray SAND -FILL-	2	7	NP	12		186.3		12	3	238	27	
186.3	Medium dense, gray SILT -FILL-	3	8	NP	12		186.3	Stiff to very stiff, gray CLAY, trace gravel	13	3	118	21	
186.3	Hard, gray SILTY CLAY -FILL-	4	5	665	16				14	3	172	20	
186.7	Medium dense, brown and gray SANDY LOAM to medium SAND -FILL-	5	5	385	18				15	7	275	23	
186.7	Very stiff, gray SILTY CLAY with root traces	6	6	NP	24				16	10	NP	16	
186.8	Very stiff, gray SILTY CLAY with root traces	7	10	NP	16				17	10	NP	16	
186.8	Stiff to hard, brown and gray CLAY, trace gravel	8	10	NP	19				18	10	NP	19	
186.8		9	5	275	25				19	3	238	20	
186.8		10	6	502	19				20	25	NP	10	
186.8		11	5	67	2				21	190	NP	9	
186.8		12	6	502	19				22	3	157	22	

GENERAL NOTES

Begin Drilling: 03-13-2002 Complete Drilling: 03-13-2002
Drilling Contractor: TSC Drill Rig: CME 75
Driller: CBJ Logger: H. Suhail Checked by: L. Iordache
Drilling Method: 3.25-inch ID HSA; Boring grouted after completion.

WATER LEVEL DATA

While Drilling: 5.49 m
At Completion of Drilling: 18.90 m
Time After Drilling: NA
Depth to Water: NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG HB-22 Page 2 of 2

Weng Engineering, Inc.
1945 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: **HNTB Corporation**
Project: **IL 394 (FAP 94) IDOT D-91-012-01**
Location: **Sections 25&26, T36N, R14E, Cook Co.**

Date: NGVD
Elevation: 186.02 m
North: 545546.31 m
East: 362878.46 m
Station: 120+707.88
Offset: 2.40 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)
186.8	Very stiff, gray SILTY CLAY LOAM, trace gravel	13	3	118	21		186.8		13	3	118	21	
186.8		14	3	172	20		186.8		14	3	172	20	
186.8		15	7	275	23		186.8		15	7	275	23	
186.8		16	10	NP	16		186.8		16	10	NP	16	
186.8		17	10	NP	19		186.8		17	10	NP	19	
186.8		18	5	275	25		186.8		18	5	275	25	
186.8		19	6	7	8		186.8		19	6	7	8	
186.8		20	25	NP	10		186.8		20	25	NP	10	
186.8		21	190	NP	9		186.8		21	190	NP	9	
186.8		22	3	157	22		186.8		22	3	157	22	

GENERAL NOTES

Begin Drilling: 03-13-2002 Complete Drilling: 03-13-2002
Drilling Contractor: TSC Drill Rig: CME 75
Driller: CBJ Logger: H. Suhail Checked by: L. Iordache
Drilling Method: 3.25-inch ID HSA; Boring grouted after completion.

WATER LEVEL DATA

While Drilling: 5.49 m
At Completion of Drilling: 18.90 m
Time After Drilling: NA
Depth to Water: NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG HB-23 Page 1 of 2

Weng Engineering, Inc.
1945 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: **HNTB Corporation**
Project: **IL 394 (FAP 94) IDOT D-91-012-01**
Location: **Sections 25&26, T36N, R14E, Cook Co.**

Date: NGVD
Elevation: 184.92 m
North: 546572.23 m
East: 362715.56 m
Station: 120+682.83
Offset: 2.90 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	Cu (kPa)	Moisture Content (%)
184.9	127-mm thick, black SILTY CLAY LOAM -TOPSOIL-	0					184.9		0				
184.9	Hard, gray and brown, mottled CLAY -FILL-	1	2	407	18		184.9		11	3	172	23	
184.9	Very stiff to hard, brown CLAY	2	3	230	27		184.9		12	3	208	21	
184.9		3	3	589	20		184.9		13	3	196	20	
184.9		4	4	385	20		184.9		14	3	314	22	
184.9	Medium dense, gray SILT	5	6	NP	18		184.9		15	4	267	15	
184.9	Stiff to very stiff, gray CLAY, trace gravel	6	7	204	20		184.9		16	3	267	15	
184.9		7	3	165	21		184.9		17	3	172	20	
184.9		8	2	172	20		184.9		18	3	204	21	
184.9		9	3	172	20		184.9		19	3	172	20	
184.9		10	3	204	21		184.9		20	3	204	21	

GENERAL NOTES

Begin Drilling: 02-27-2002 Complete Drilling: 02-27-2002
Drilling Contractor: Windy City Drilling Drill Rig: CME 45
Driller: G&E Logger: K. Jacob Checked by: E. Datz
Drilling Method: 3.25-inch ID HSA; Boring grouted after completion.

WATER LEVEL DATA

While Drilling: DRY
At Completion of Drilling: DRY
Time After Drilling: NA
Depth to Water: NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Notes:
1. For Page 2 of 2 of Boring Log HB-23, see Sheet No. 86 of 91 sheets.

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28-MAR-2005 12:25

DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

BORING LOGS HB-22 AND HB-23

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 86 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	148	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			

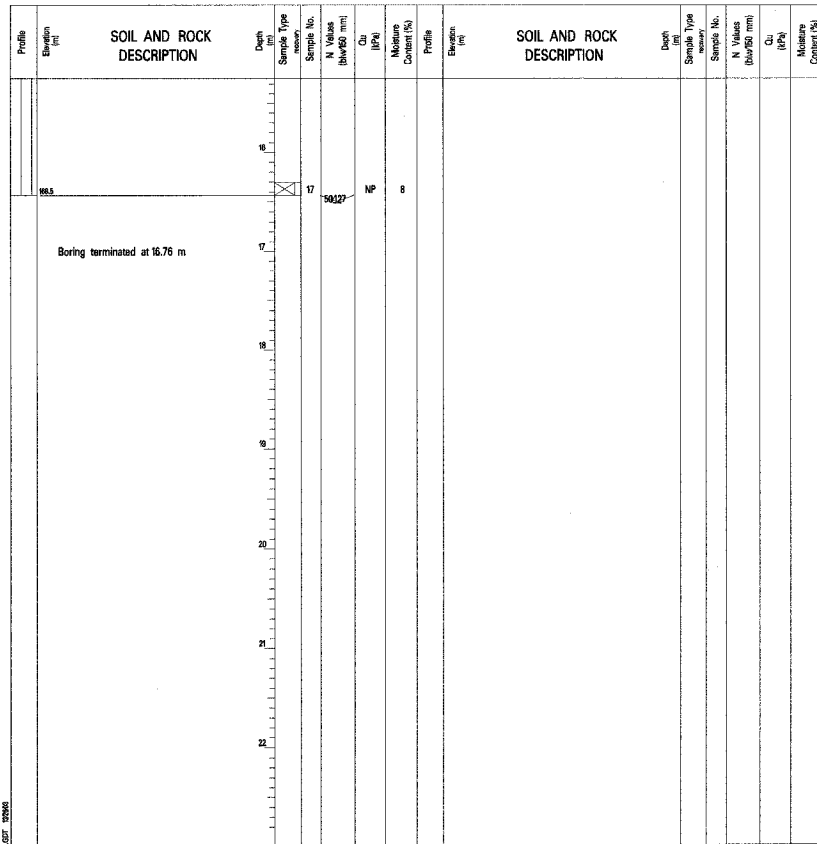
CONTRACT NO. 62854

BORING LOG HB-23 Page 1 of 2

Wang Engineering, Inc.
wangeng@wangeng.com
1945 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9939

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T38N, R14E, Cook Co.

Date: NGVD
Elevation: 164.92 m
North: 545572.23 m
East: 362785.56 m
Station: 120+682.83
Offset: 2.80 LT



GENERAL NOTES

Begin Drilling: 02-27-2002 Complete Drilling: 02-27-2002
 Drilling Contractor: Windy City Drilling Drill Rig: CME 45
 Driller: G&E Logger: K. Jacob Checked by: E. Datz
 Drilling Method: 3.25-inch ID HSA, Boring grouted after completion

WATER LEVEL DATA

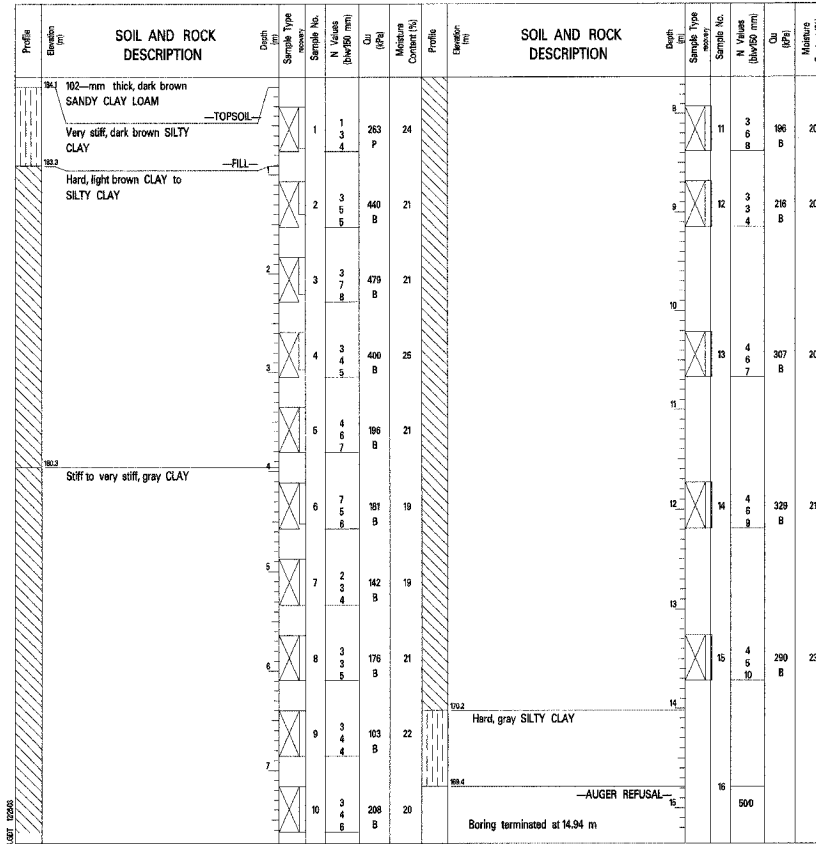
While Drilling: DRY
 At Completion of Drilling: DRY
 Time After Drilling: NA
 Depth to Water: NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG HB-24 Page 1 of 1

Wang Engineering, Inc.
wangeng@wangeng.com
1945 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9939

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T38N, R14E, Cook Co.

Date: NGVD
Elevation: 164.23 m
North: 545591.21 m
East: 362740.15 m
Station: 120+631.65
Offset: 1.05 LT



GENERAL NOTES

Begin Drilling: 02-26-2002 Complete Drilling: 02-26-2002
 Drilling Contractor: Windy City Drilling Drill Rig: CME 45
 Driller: G&E Logger: T. Chan Checked by: E. Datz
 Drilling Method: 3.25-inch ID HSA, Boring grouted after completion

WATER LEVEL DATA

While Drilling: DRY
 At Completion of Drilling: DRY
 Time After Drilling: NA
 Depth to Water: NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

Notes:
1. For Page 1 of 2 of Boring Log HB-23, see Sheet No. 85 of 91 sheets.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

BORING LOGS HB-23 AND HB-24

WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

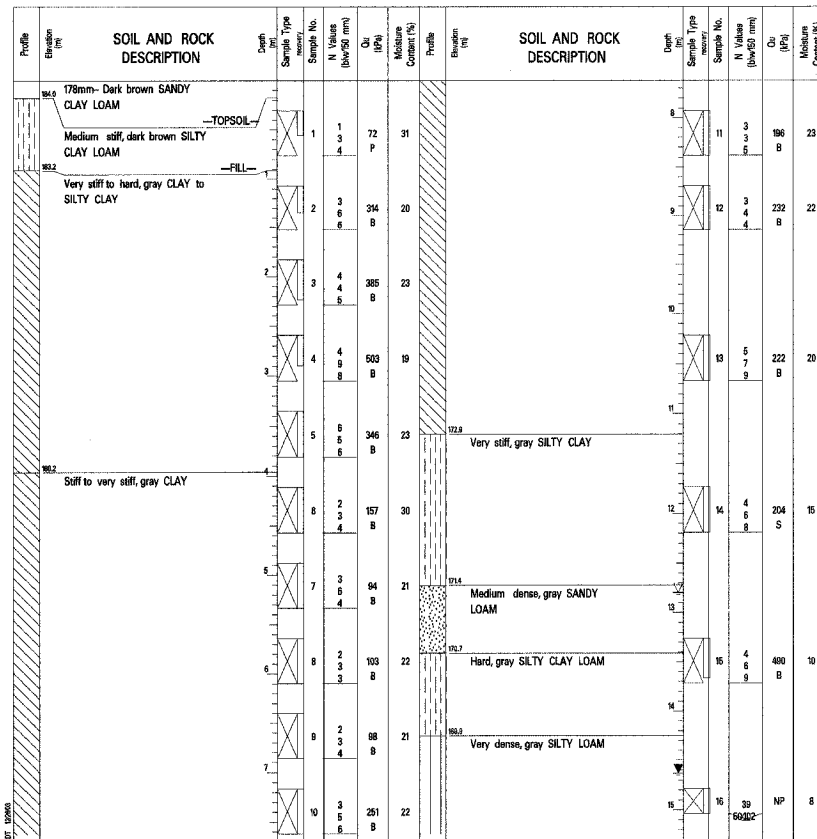
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 87 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	149	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
CONTRACT NO. 62854					

BORING LOG HB-25 Page 1 of 2

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 184.15 m
North: 545610.94 m
East: 382780.64 m
Station: 129 + 538.90
Offset: 2.07 LT



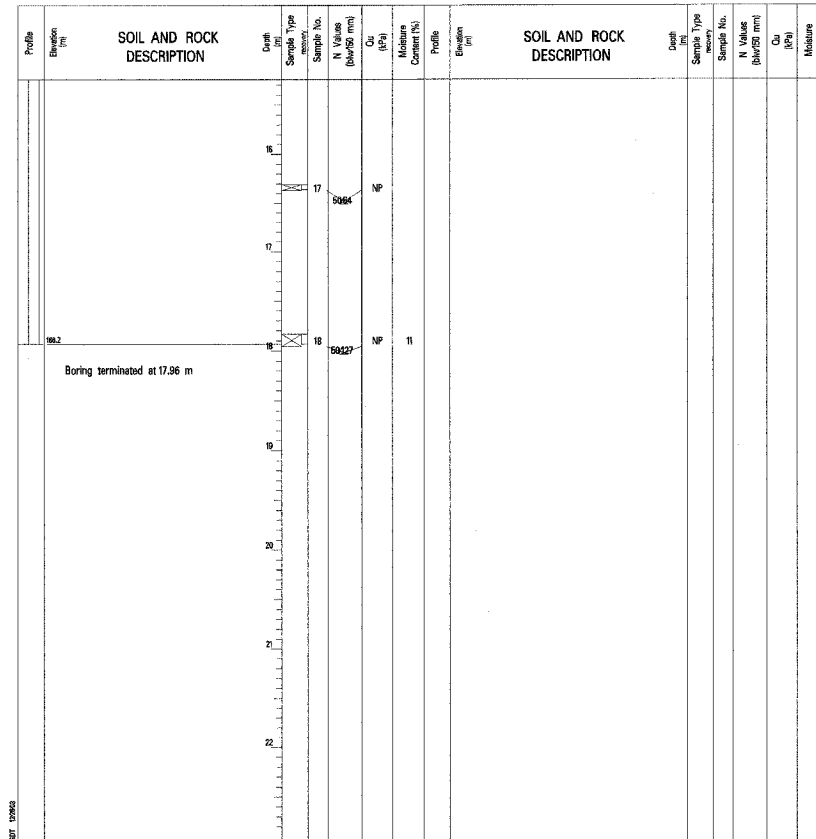
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-26-2002	Complete Drilling	02-26-2002
Drilling Contractor	Windy City Drilling	Drill Rig	CME 45
Driller	G&E	Logger	T. Chan
Checked by	L. Iordache	Drilling Method	3.25-inch ID HSA Boring grouted after completion
Drilling Method	3.25-inch ID HSA Boring grouted after completion	While Drilling	12.80 m
		At Completion of Drilling	14.63 m
		Time After Drilling	NA
		Depth to Water	NA

BORING LOG HB-25 Page 1 of 2

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 184.15 m
North: 545610.94 m
East: 382780.64 m
Station: 129 + 538.90
Offset: 2.07 LT



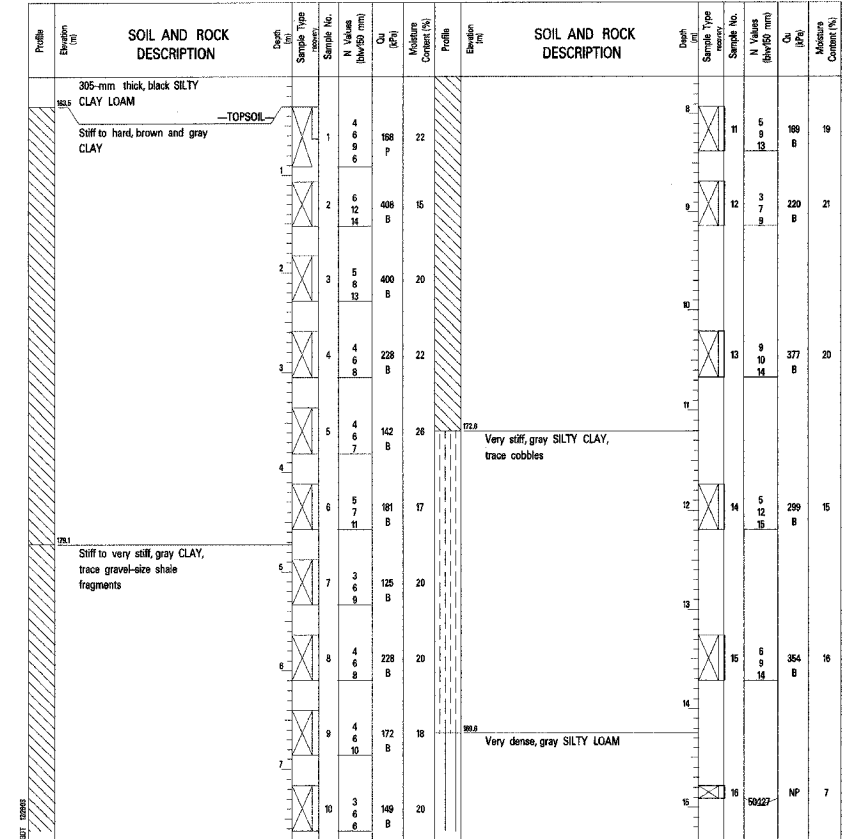
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-26-2002	Complete Drilling	02-26-2002
Drilling Contractor	Windy City Drilling	Drill Rig	CME 45
Driller	G&E	Logger	T. Chan
Checked by	L. Iordache	Drilling Method	3.25-inch ID HSA Boring grouted after completion
Drilling Method	3.25-inch ID HSA Boring grouted after completion	While Drilling	12.80 m
		At Completion of Drilling	14.63 m
		Time After Drilling	NA
		Depth to Water	NA

BORING LOG HB-26 Page 1 of 2

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 183.81 m
North: 545610.03 m
East: 382626.85 m
Station: 129 + 538.90
Offset: 12.43 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-11-2002	Complete Drilling	03-11-2002
Drilling Contractor	Mid-America Drilling	Drill Rig	D-50 ATV
Driller	J&C	Logger	E. Datz
Checked by	L. Iordache	Drilling Method	2.25-inch IDA HSA Boring backfilled upon completion
Drilling Method	2.25-inch IDA HSA Boring backfilled upon completion	While Drilling	DRY
		At Completion of Drilling	DRY
		Time After Drilling	NA
		Depth to Water	NA

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DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

Notes:
1. For Page 2 of 2 of Boring Log HB-26, see Sheet No. 88 of 91 sheets.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS HB-25 AND HB-26
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 88 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	150	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
CONTRACT NO. 62854					

BORING LOG HB-26 Page 1 of 2

Wang Engineering, Inc.
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01

Client: HNTB Corporation

Project: IL 394 (FAP 94) IDOT D-91-012-01

Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 932.91 m
North: 545641.03 m
East: 362826.95 m
Station: 120+530.99
Offset: 12.43 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 cm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 cm)	Cu (kPa)	Moisture Content (%)
932.2	356-mm thick, black SILTY CLAY LOAM	0					932.2	356-mm thick, black SILTY CLAY LOAM	0				
	Very stiff to hard, brown and gray CLAY to SILTY CLAY	1	1	4	354	10		Very stiff to hard, brown and gray CLAY to SILTY CLAY	1	1	4	354	10
		2	2	7	432	20		Dense, brown SILT	2	2	7	432	20
		3	3	28	NP	21		Very stiff, brown to grayish brown CLAY	3	3	28	NP	21
		4	4	5	276	25			4	4	5	276	25
		5	5	3	196	19			5	5	3	196	19
		6	6	5	154	20		Medium dense, gray SILT	6	6	5	154	20
		7	7	4	212	21		Stiff to very stiff, gray CLAY	7	7	4	212	21
		8	8	4	196	21			8	8	4	196	21
		9	9	4	7	10			9	9	4	7	10
		10	10	3	196	21			10	10	3	196	21

GENERAL NOTES

Begin Drilling: 03-11-2002 Complete Drilling: 03-11-2002

Drilling Contractor: Mid-America Drilling Drill Rig: D-50 ATV

Driller: J&C Logger: E. Datz Checked by: L. Iordache

Drilling Method: 2.25-inch IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling: DRY

At Completion of Drilling: DRY

Time After Drilling: NA

Depth to Water: NA

BORING LOG HB-27 Page 1 of 2

Wang Engineering, Inc.
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01

Client: HNTB Corporation

Project: IL 394 (FAP 94) IDOT D-91-012-01

Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 932.59 m
North: 545624.74 m
East: 362859.59 m
Station: 120+504.77
Offset: 8.39 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 cm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 cm)	Cu (kPa)	Moisture Content (%)
932.2	356-mm thick, black SILTY CLAY LOAM	0					932.2	356-mm thick, black SILTY CLAY LOAM	0				
	Very stiff to hard, brown and gray CLAY to SILTY CLAY	1	1	4	354	10		Very stiff to hard, brown and gray CLAY to SILTY CLAY	1	1	4	354	10
		2	2	7	432	20		Dense, brown SILT	2	2	7	432	20
		3	3	28	NP	21		Very stiff, brown to grayish brown CLAY	3	3	28	NP	21
		4	4	5	276	25			4	4	5	276	25
		5	5	3	196	19			5	5	3	196	19
		6	6	5	154	20		Medium dense, gray SILT	6	6	5	154	20
		7	7	4	212	21		Stiff to very stiff, gray CLAY	7	7	4	212	21
		8	8	4	196	21			8	8	4	196	21
		9	9	4	7	10			9	9	4	7	10
		10	10	3	196	21			10	10	3	196	21

GENERAL NOTES

Begin Drilling: 02-26-2002 Complete Drilling: 02-26-2002

Drilling Contractor: Mid-America Drilling Drill Rig: D-50 ATV

Driller: B&D Logger: E. Datz Checked by: L. Iordache

Drilling Method: 2.25-inch IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling: DRY

At Completion of Drilling: DRY

Time After Drilling: NA

Depth to Water: NA

BORING LOG HB-28 Page 1 of 2

Wang Engineering, Inc.
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01

Client: HNTB Corporation

Project: IL 394 (FAP 94) IDOT D-91-012-01

Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 933.60 m
North: 545832.41 m
East: 362897.26 m
Station: 120+465.69
Offset: 4.16 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 cm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 cm)	Cu (kPa)	Moisture Content (%)
932.2	305-mm thick, black SILTY CLAY LOAM	0					932.2	305-mm thick, black SILTY CLAY LOAM	0				
	Hard, brown and gray CLAY	1	1	4	361	19		Hard, brown and gray CLAY	1	1	4	361	19
		2	2	8	786	17		Very dense, light brown SILT	2	2	8	786	17
		3	3	15	NP	19			3	3	15	NP	19
		4	4	4	275	28		Very stiff, light brown CLAY	4	4	4	275	28
		5	5	3	220	20			5	5	3	220	20
		6	6	3	204	17			6	6	3	204	17
		7	7	3	172	20			7	7	3	172	20
		8	8	3	220	20			8	8	3	220	20
		9	9	3	226	21			9	9	3	226	21

GENERAL NOTES

Begin Drilling: 02-26-2002 Complete Drilling: 02-26-2002

Drilling Contractor: Mid-America Drilling Drill Rig: D-50 ATV

Driller: B&D Logger: E. Datz Checked by: L. Iordache

Drilling Method: 2.25-inch IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling: DRY

At Completion of Drilling: DRY

Time After Drilling: NA

Depth to Water: NA

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DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

Notes:
1. For Page 2 of 2 of Boring Log HB-28, see Sheet No. 89 of 91 sheets.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

BORING LOG HB-26, HB-27 & HB-28
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 89 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	151	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-					
CONTRACT NO. 62854					

BORING LOG HB-28
WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.Datum: NGVD
Elevation: 163.69 m
North: 545632.48 m
East: 362871.26 m
Station: 120+465.69
Offset: 4.15 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	u (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	u (kPa)	Moisture Content (%)
15.04	Hard, gray gravelly SILTY CLAY	0					15.04		0				
		15	16	45	>431	10			15				
	Boring terminated at 15.04 m												

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-26-2002	Complete Drilling	02-26-2002
Drilling Contractor	Mid-America Drilling	Drill Rig	D-50 ATV
Driller	B&D	Logger	E. Datz
Checked by	L. Jordsache	Time After Drilling	NA
Drilling Method	2.25-inch IDA HSA; Boring backfilled upon completion	Depth to Water	7

BORING LOG HB-29
WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.
Datum: NGVD
Elevation: 163.70 m
North: 545636.90 m
East: 362941.28 m
Station: 120+420.55
Offset: 6.35 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	u (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	u (kPa)	Moisture Content (%)
14.86	305mm thick, black SILTY CLAY LOAM	0					14.86		0				
	Very stiff, brown CLAY	1	6	21	27				1	11	3	236	21
	Dense, brown SILT	2	12	15	NP	21			2	3	7	221	20
	Very stiff, brown and gray CLAY	3	5	354	24				3	8	15	354	16
	Very stiff, gray SILTY CLAY	4	3	268	25				4	4	6	268	16
	Stiff to very stiff, gray CLAY	5	3	163	20				5	3	8	163	20
	Dense, gray SILT	6	3	120	21				6	2	5	120	21
	Hard, gray SILTY CLAY	7	3	220	20				7	3	7	220	20
	Very dense, gray SILT	8	2	228	21				8	2	23	597	13
	Boring terminated at 14.86 m								10	3	6	267	20

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-27-2002	Complete Drilling	02-27-2002
Drilling Contractor	Mid-America Drilling	Drill Rig	D-50 ATV
Driller	B&D	Logger	K. Jacob
Checked by	L. Jordsache	Time After Drilling	NA
Drilling Method	3.25-inch ID HSA; Boring grouted after completion	Depth to Water	7

BORING LOG HB-30
WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.
Datum: NGVD
Elevation: 163.80 m
North: 545680.02 m
East: 362968.34 m
Station: 120+374.34
Offset: 3.89 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	u (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Value (blows/30 mm)	u (kPa)	Moisture Content (%)
14.91	254mm thick, black SILTY CLAY LOAM	0					14.91		0				
	Stiff to very stiff, brown CLAY to SILTY CLAY	1	6	234	20				1	4	5	181	21
	Medium dense, brown SILT	2	3	178	30				2	3	4	181	22
	Very stiff, brown CLAY to SILTY CLAY	3	3	369	30				3	3	7	369	19
	Stiff to very stiff, gray CLAY, trace gravel-silt shale fragments	4	4	180	25				4	12	15	180	19
	Hard, gray SILTY CLAY, trace gravel	5	3	368	21				5	12	14	368	15
	Boring terminated at 14.91 m								6	2	5	204	21
									7	3	7	172	21
									8	2	5	228	20
									9	4	7	172	21
									10	5	8	243	22

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-26-2002	Complete Drilling	02-26-2002
Drilling Contractor	Mid-America Drilling	Drill Rig	D-50 Truck
Driller	B&D	Logger	E. Datz
Checked by	L. Jordsache	Time After Drilling	NA
Drilling Method	2.25-inch IDA HSA; Boring backfilled upon completion	Depth to Water	7

Notes:
1. For Page 1 of 2 of Boring Log HB-28, see Sheet No. 88 of 91 sheets.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOG HB-28, HB-29 AND HB-30
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---
HNTB

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DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

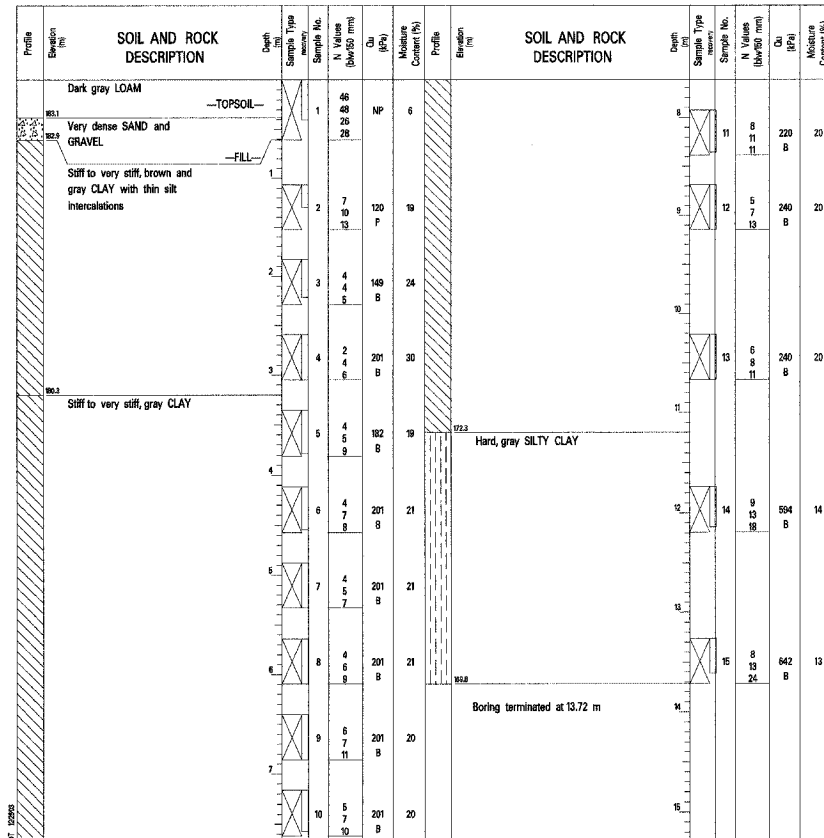
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 90 91 SHEETS
F. A. I. 80/94	0203.1B	COOK	200	152	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			

CONTRACT NO. 62854

BORING LOG MR-37
Wang Engineering, Inc.
Wangeng3@wanger.com
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 93.47 m
North: 545823.65 m
East: 302979.20 m
Station: 120+384.68
Offset: 7.17 RT

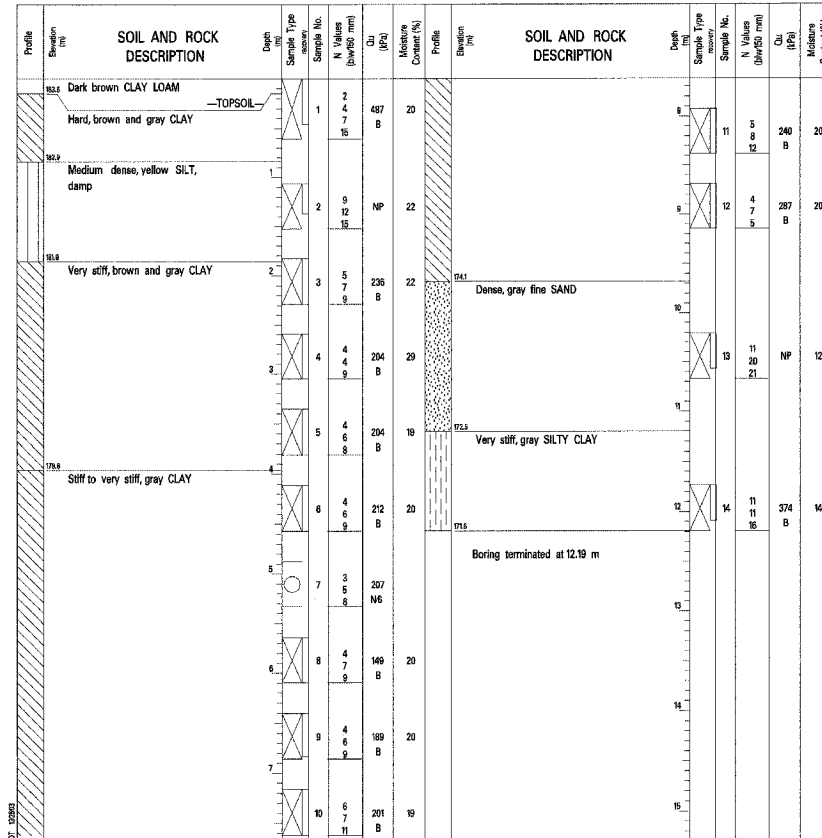


GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-02-2002	Complete Drilling	01-02-2002
Drilling Contractor	Mid-America Drilling	Drill Rig	D-120 ATV
Driller	J&C	Logger	K. Jacob
Checked by	N. Davis	Time After Drilling	NA
Drilling Method	3.25-inch ID HSA; Boring grouted after completion.	Depth to Water	NA

BORING LOG MR-38
Wang Engineering, Inc.
Wangeng3@wanger.com
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 93.75 m
North: 545823.97 m
East: 302989.84 m
Station: 120+382.82
Offset: 5.08 RT

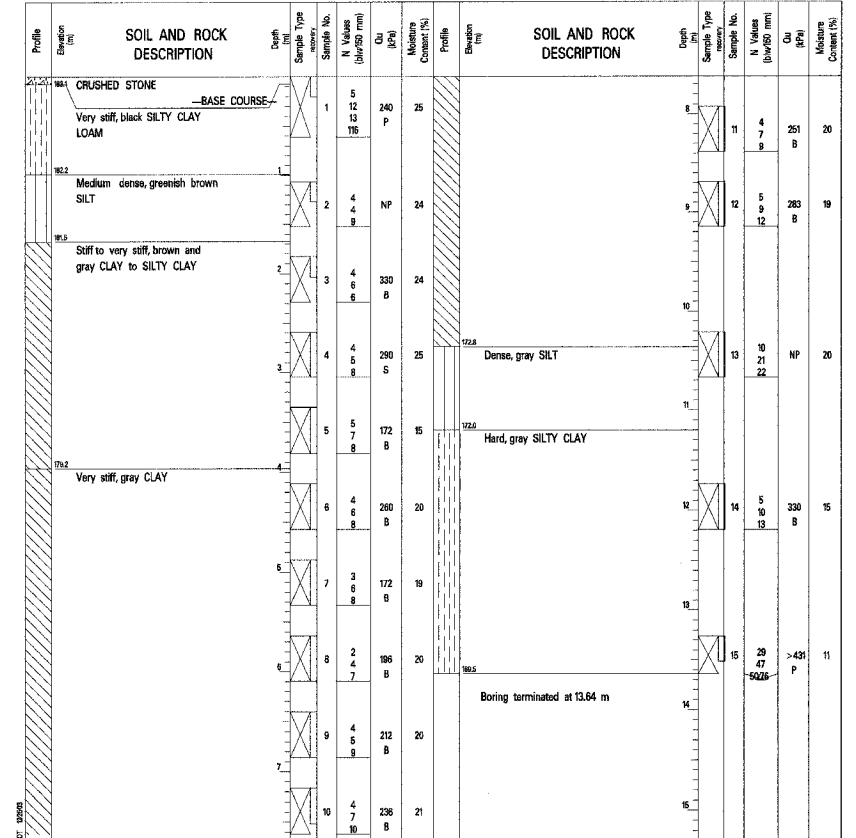


GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-02-2002	Complete Drilling	01-02-2002
Drilling Contractor	Mid-America Drilling	Drill Rig	D-120 ATV
Driller	J&C	Logger	K. Jacob
Checked by	N. Davis	Time After Drilling	NA
Drilling Method	2.25-inch ID HSA; Boring grouted upon completion.	Depth to Water	NA

BORING LOG MR-39
Wang Engineering, Inc.
Wangeng3@wanger.com
145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 93.17 m
North: 545821.36 m
East: 303025.68 m
Station: 120+338.45
Offset: 12.15 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-11-2002	Complete Drilling	03-11-2002
Drilling Contractor	Mid-America Drilling	Drill Rig	D-50
Driller	J&C	Logger	E. Datz
Checked by	L. Lardache	Time After Drilling	NA
Drilling Method	2.25-inch ID HSA; Boring grouted upon completion.	Depth to Water	NA

DESIGNED	---
CHECKED	---
DRAWN	JRB
CHECKED	GPM

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOG MR-37, MR-38 AND MR-39
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---



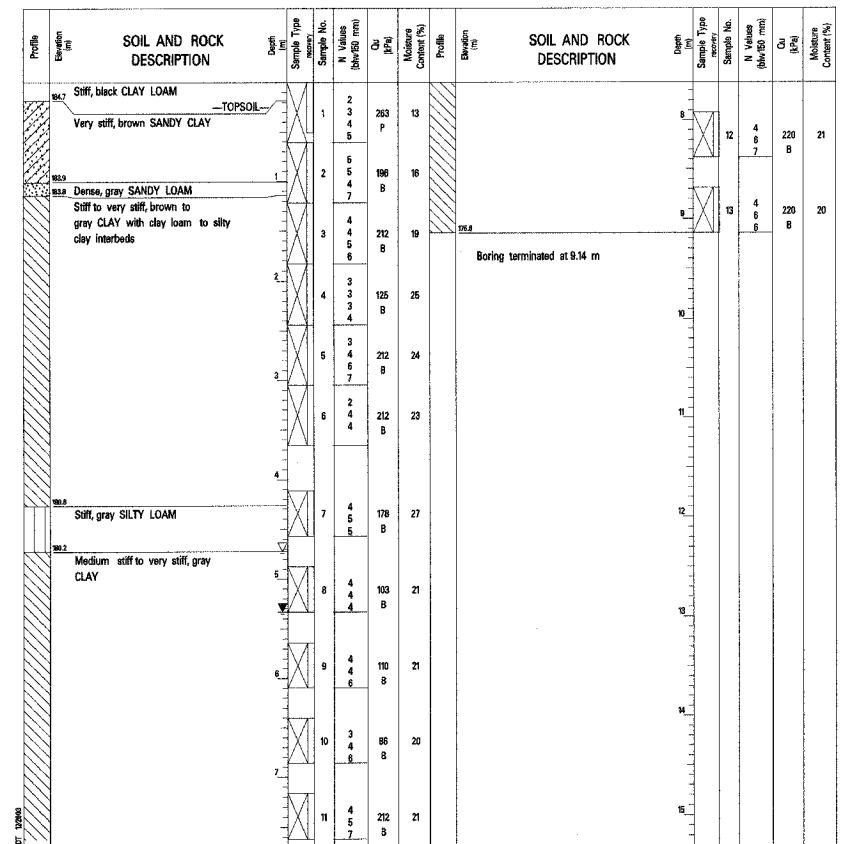
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	0203.1B	COOK	200	153
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-			91 SHEETS	
CONTRACT NO. 62854				

Wang Engineering, Inc.
Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG RD-083
WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Date: NGVD
Elevation: 194.00 m
North: 545392.17 m
East: 362596.17 m
Station: 120+885.01
Offset: 4.07 RT

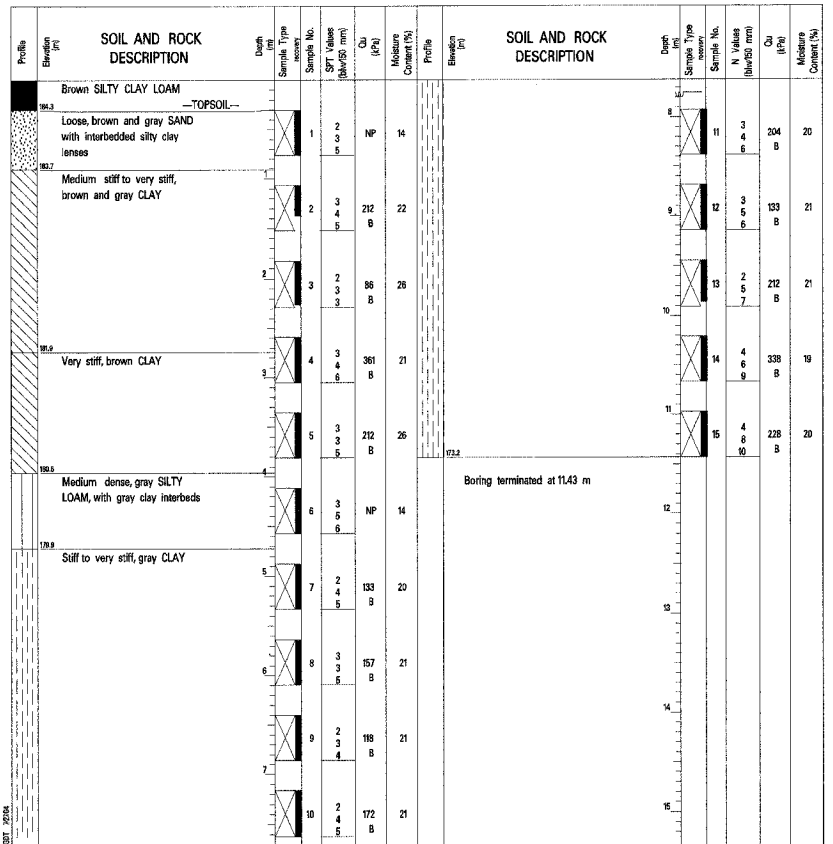


GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	06-01-2002	Complete Drilling	06-01-2002
Drilling Contractor	TSC	Drill Rig	CME 750 ATV
Driller	D&J	Logger	N. Davis
Checked by	JC	Drilling Method	2.25" ID SSA, Boring backfilled upon completion
Drilling Method	2.25" ID SSA, Boring backfilled upon completion	While Drilling	4.72 m
		At Completion of Drilling	6.33 m
		Time After Drilling	NA
		Depth to Water	NA

Wang Engineering, Inc.
Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG RD-401
WEI Job No.: 255-08-04
Client: American Consulting Engineers, LLC
Project: FAI 8094, I-294 to US 41
Location: s13 T36N R10W & s29 T36N R15E

Date: NGVD
Elevation: 194.61 m
North: 545400.25 m
East: 362588.66 m
Station: 120+877.09
Offset: 13.09 RT

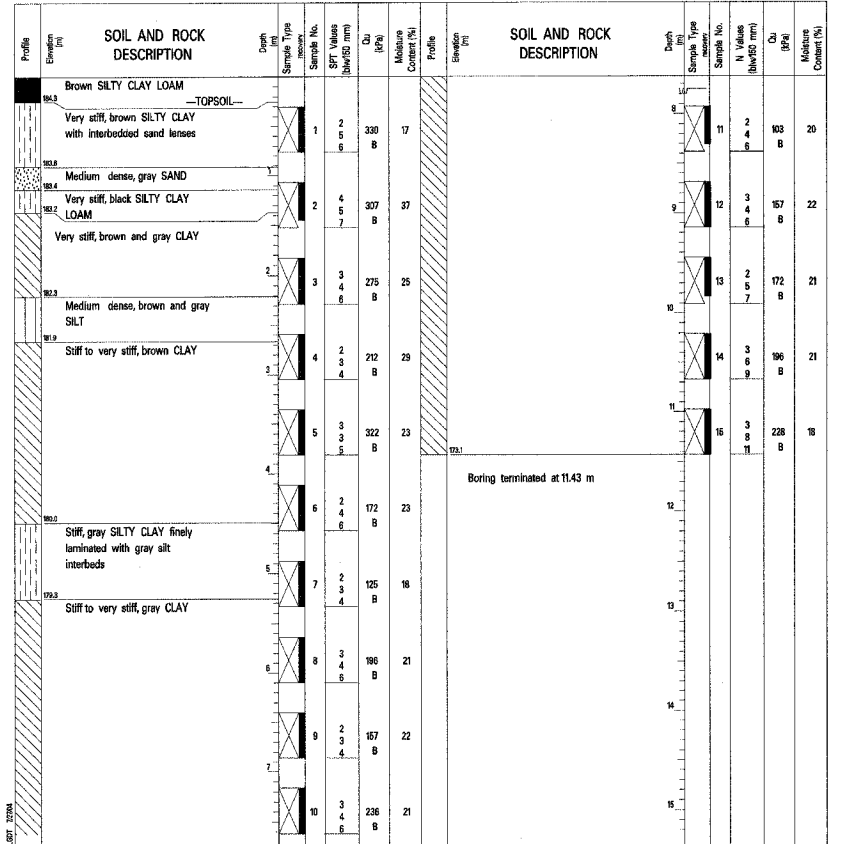


GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	06-14-2004	Complete Drilling	06-14-2004
Drilling Contractor	Groundbreaking Exploration	Drill Rig	D-50 Turbo ATV
Driller	G&E	Logger	J. Kasnick
Checked by		Drilling Method	3.25-in ID HSA
Drilling Method	3.25-in ID HSA	While Drilling	7.77 m
		At Completion of Drilling	8.99 m
		Time After Drilling	48 hours
		Depth to Water	5.79 m

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BORING LOG RD-402
WEI Job No.: 255-08-04
Client: American Consulting Engineers, LLC
Project: FAI 8094, I-294 to US 41
Location: s13 T36N R10W & s29 T36N R15E

Date: NGVD
Elevation: 194.53 m
North: 545393.60 m
East: 362590.27 m
Station: 120+881.13
Offset: 1.70 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	06-14-2004	Complete Drilling	06-14-2004
Drilling Contractor	Groundbreaking Exploration	Drill Rig	D-50 Turbo ATV
Driller	G&E	Logger	J. Kasnick
Checked by		Drilling Method	3.25-in ID HSA, Boring backfilled upon completion
Drilling Method	3.25-in ID HSA, Boring backfilled upon completion	While Drilling	7.77 m
		At Completion of Drilling	10.21 m
		Time After Drilling	NA
		Depth to Water	NA

J:\Beauchamp
JA\34562\CADD\B\CTR_2B_2804\cda\up150014a_2804.dgn
28-MAR-2005 12:24

DESIGNED	---
CHECKED	---
DRAWN	AES
CHECKED	PCA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOG RD-083, RD-401
& RD-402
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	0203.1B	COOK	200	154
SHEET NO. 91A				
91 SHEETS				
CONTRACT NO. 62854				

BORING LOG RD-403 Page 1 of 1

Wang Engineering, Inc.
1465 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9928

Client: American Consulting Engineers, LLC
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 T36N R15E

WEI Job No.: 255-08-04

Date: NGVD
Elevation: 195.67 m
North: 545376.06 m
East: 392506.73 m
Station: 120 + 908.24
Offset: 11.47 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/30 mm)	Q _v (kPa)	Moisture Content (%)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	R _v Values (blows/30 mm)	Q _v (kPa)	Moisture Content (%)
195.4	Black SILTY CLAY LOAM	0						0				
	Loose, brown SANDY LOAM with interbedded silty clay lenses	1	1	3	NP	13		1	11	2	157	20
	Stiff, black SILTY CLAY	2	2	4	NP	15		2	12	4	260	21
	Very stiff, brown and gray CLAY	3	3	5				3	13	5	243	20
	Medium stiff, brown and gray SILTY CLAY	4	4	5				4	14	6		
	Very loose, brown SILT MC=28%	5	5	1				5	15	2		
	Very stiff, brown CLAY	6	6	4				6	16	3		
	Stiff to very stiff, gray CLAY	7	7	2				7	17	3		
		8	8	4				8	18	4		
		9	9	3				9	19	2		
		10	10	3				10	20	4		

GENERAL NOTES

Begin Drilling: 06-17-2004
Drilling Contractor: Groundbreaking Exploration
Driller: G&E
Drilling Method: 3.25-in. ID HSA; Boring backfilled upon completion.

WATER LEVEL DATA

White Drilling: DRY
At Completion of Drilling: 6.71 m
Time After Drilling: NA
Depth to Water: NA

BORING LOG RD-404 Page 1 of 1

Wang Engineering, Inc.
1465 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9928

Client: American Consulting Engineers, LLC
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 T36N R15E

WEI Job No.: 255-08-04

Date: NGVD
Elevation: 196.04 m
North: 545266.13 m
East: 392592.63 m
Station: 120 + 909.34
Offset: 4.56 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/30 mm)	Q _v (kPa)	Moisture Content (%)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	R _v Values (blows/30 mm)	Q _v (kPa)	Moisture Content (%)
196.7	Dark brown SILTY CLAY LOAM	0						0				
	Medium stiff, brown SANDY CLAY LOAM	1	1	3	72	17		1	11	3	189	20
	Hard, brown and gray CLAY	2	2	5	811	16		2	12	3	157	21
	Stiff, black SILTY CLAY	3	3	4	166	35		3	13	4		
	Stiff to very stiff, brown and gray CLAY	4	4	4	228	21		4	14	3		
	Very stiff, brown CLAY	5	5	2	99	22		5	15	2		
	Stiff, gray CLAY	6	6	3	200	23		6	16	3		
	Medium dense, gray SILT	7	7	4	103	20		7	17	4		
	Stiff, gray CLAY	8	8	3	157	21		8	18	3		
		9	9	2	118	21		9	19	2		
		10	10	3	125	20		10	20	4		

GENERAL NOTES

Begin Drilling: 06-17-2004
Drilling Contractor: Groundbreaking Exploration
Driller: G&E
Drilling Method: 3.25-in. ID HSA; Boring backfilled upon completion.

WATER LEVEL DATA

White Drilling: DRY
At Completion of Drilling: DRY
Time After Drilling: NA
Depth to Water: NA

BORING LOG RD-405 Page 1 of 1

Wang Engineering, Inc.
1465 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9928

Client: American Consulting Engineers, LLC
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 T36N R15E

WEI Job No.: 255-08-04

Date: NGVD
Elevation: 197.85 m
North: 545350.56 m
East: 392595.57 m
Station: 120 + 924.17
Offset: 0.27 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/30 mm)	Q _v (kPa)	Moisture Content (%)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	R _v Values (blows/30 mm)	Q _v (kPa)	Moisture Content (%)
197.8	Black SILTY CLAY LOAM	0						0				
	Stiff, brown CLAY with sand interbeds	1	1	2	168	18		1	11	3	133	23
	Medium dense to very dense, gray SANDY LOAM	2	2	3	207	16		2	12	3	133	22
	Stiff, black SILTY CLAY MC=28%	3	3	4	NP	12		3	13	5		
	Hard, brown and gray CLAY	4	4	5	405	18		4	14	6		
	Medium dense, brown SANDY LOAM	5	5	7	NP	20		5	15	7		
	Very stiff, brown CLAY	6	6	4	205	24		6	16	4		
	Stiff, gray CLAY	7	7	3	102	30		7	17	3		
	Medium dense, gray SILT	8	8	4	157	20		8	18	4		
	Stiff, gray CLAY	9	9	7	157	20		9	19	6		

GENERAL NOTES

Begin Drilling: 06-17-2004
Drilling Contractor: Groundbreaking Exploration
Driller: G&E
Drilling Method: 3.25-in. ID HSA.

WATER LEVEL DATA

White Drilling: 3.51 m
At Completion of Drilling: 7.62 m
Time After Drilling: 8 hours
Depth to Water: 3.66 m

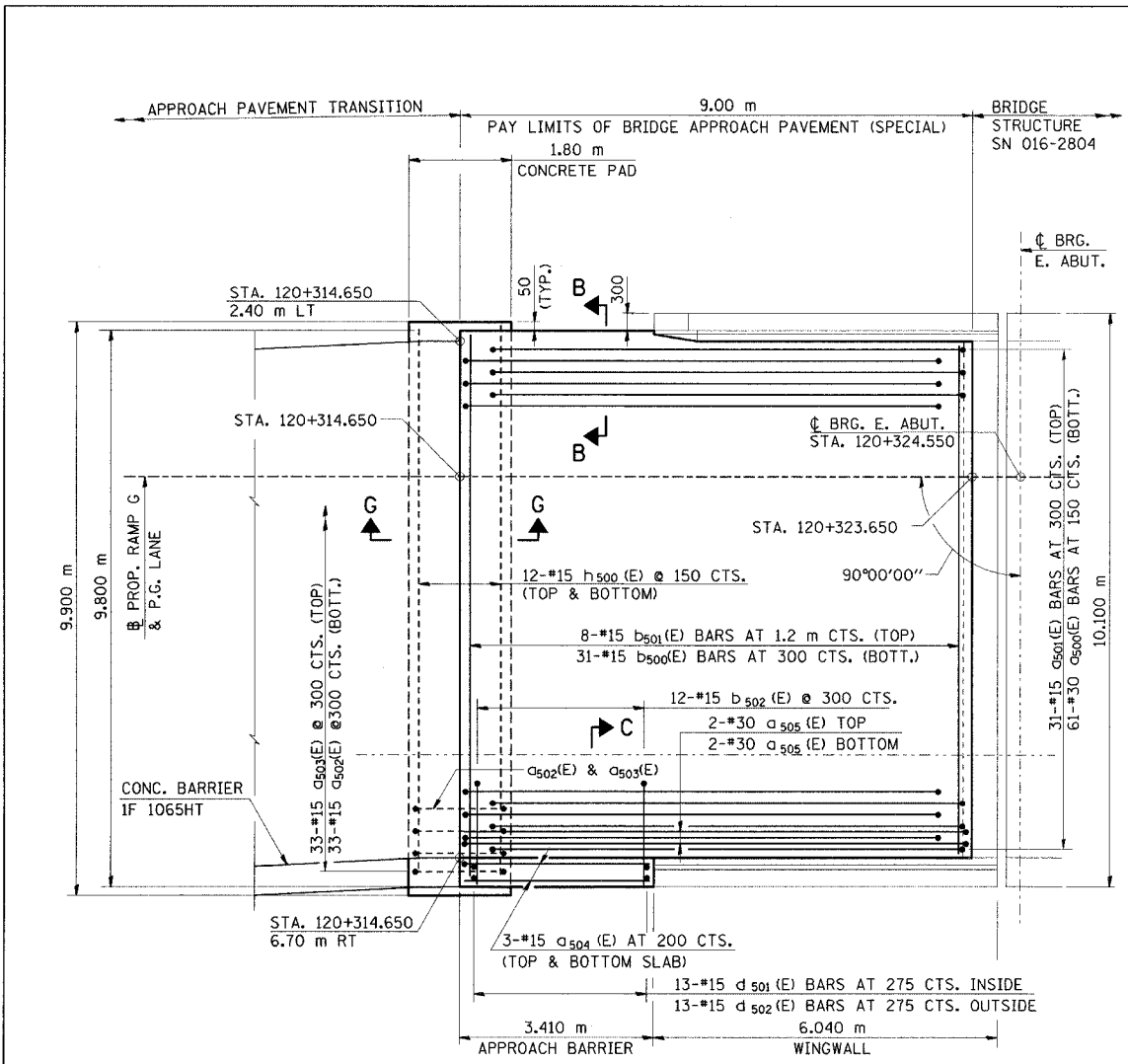
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DESIGNED	---
CHECKED	---
DRAWN	AES
CHECKED	PCA

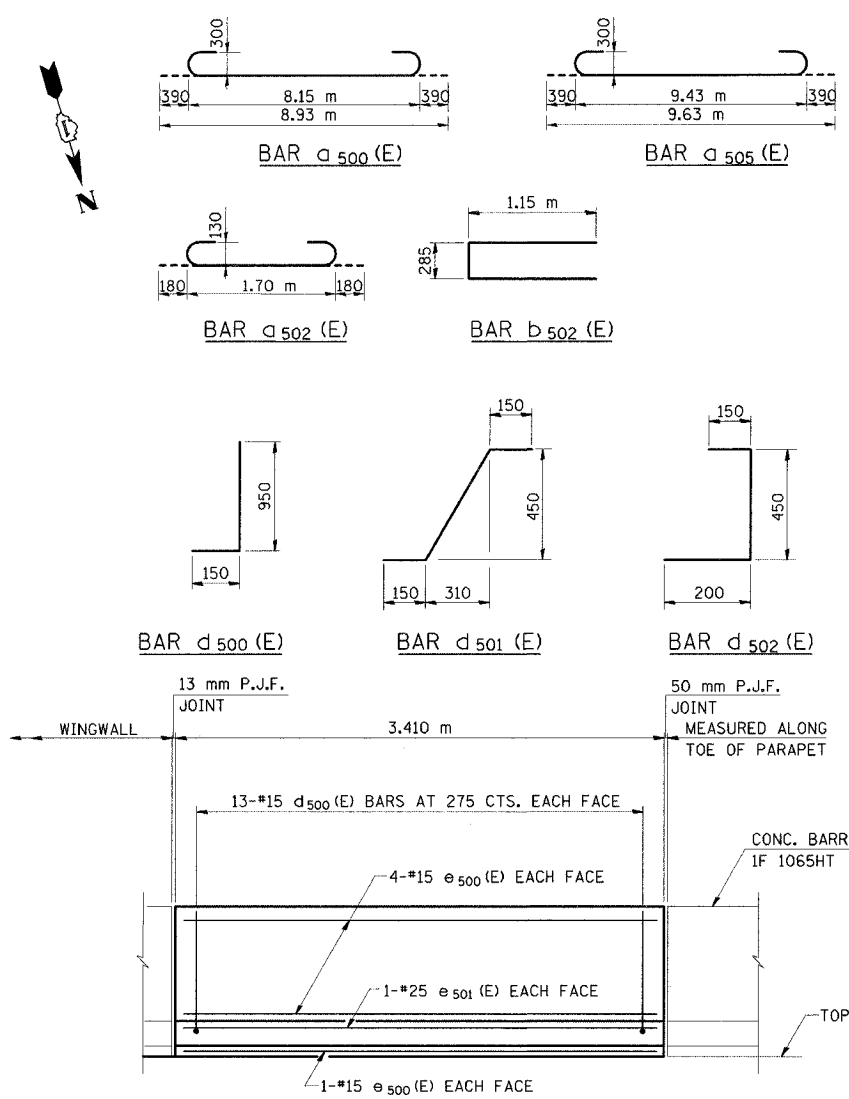
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOG RD-403, RD-404
& RD-405
WB I-80/94 TO SB IL 394 - RAMP G
FAI 80/94 - FAP 332 SECTION 0203.1B
COOK COUNTY
STA. 120+796.063 STRUCTURE NO. 016-2804
DATE 3/23/05
SCALE ---

HNTB

FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	155
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62854				



PLAN

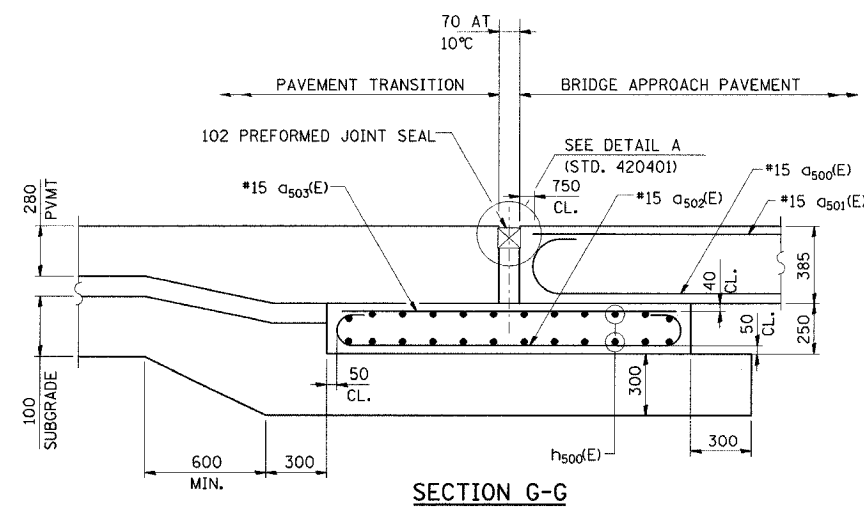


INSIDE PARAPET ELEVATION

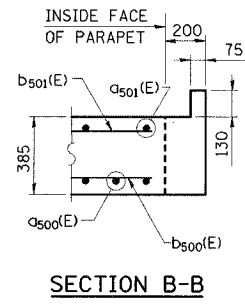
BILL OF MATERIAL BRIDGE APPROACH PAVEMENT (SPECIAL)

BAR	NO.	SIZE	LENGTH (M)	SHAPE
a500(E)	61	#30	8.93	U
a501(E)	31	#15	8.90	—
a502(E)	33	#15	2.06	U
a503(E)	33	#15	1.70	—
a504(E)	6	#15	3.31	—
a505(E)	4	#30	9.63	U
b500(E)	31	#15	9.00	—
b501(E)	8	#15	9.00	—
b502(E)	12	#15	2.58	—
d500(E)	26	#15	1.10	—
d501(E)	13	#15	1.10	—
d502(E)	13	#15	0.80	—
e500(E)	10	#15	3.31	—
e501(E)	2	#25	3.31	—
h500(E)	24	#15	9.80	—
ITEM	UNIT	QUANTITY		
REINFORCEMENT BARS, EPOXY COATED (1)	KG	4979		
BRIDGE APPROACH PAVEMENT (SPECIAL)	M ²	85		

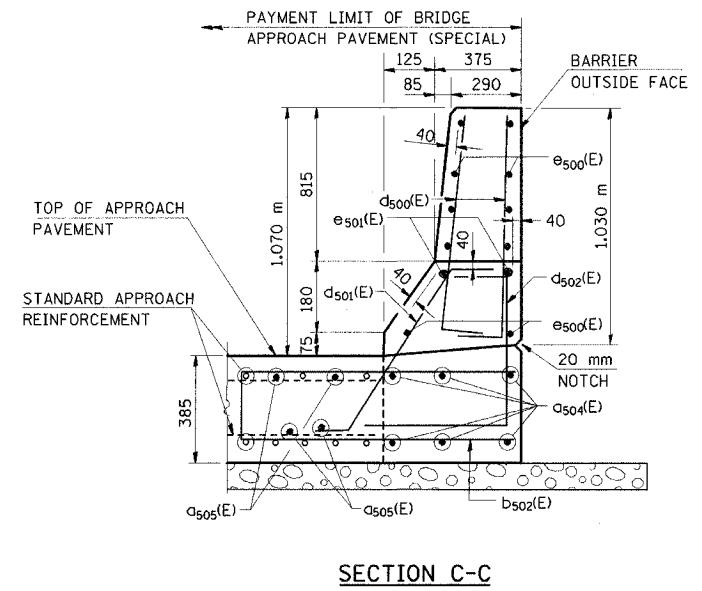
(1) INCLUDED FOR PAYMENT UNDER "BRIDGE APPROACH PAVEMENT (SPECIAL)"



SECTION G-G



SECTION B-B



SECTION C-C

- NOTES:**
1. WORK THIS SHEET WITH BRIDGE APPROACH PAVEMENT STANDARD 420401 AND PAVEMENT JOINTS STD. 420001.
 2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
 3. FOR THE 9 m APPROACH PAVEMENT AND SUPPORTING PAD, ALL WORK AND MATERIALS ARE INCLUDED FOR PAYMENT UNDER "BRIDGE APPROACH PAVEMENT (SPECIAL)".
 4. ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT AS NOTED.
 5. FOR CROSS SECTIONS ON BRIDGE APPROACH PAVEMENT (SPECIAL) AND BRIDGE APPROACH PAVEMENT TRANSITION, SEE ROADWAY PLANS.
 6. PAYMENT FOR 13 mm P.J.F. and 50 mm P.J.F. AT PARAPET ENDS ARE INCLUDED WITH "BRIDGE APPROACH PAVEMENT (SPECIAL)".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

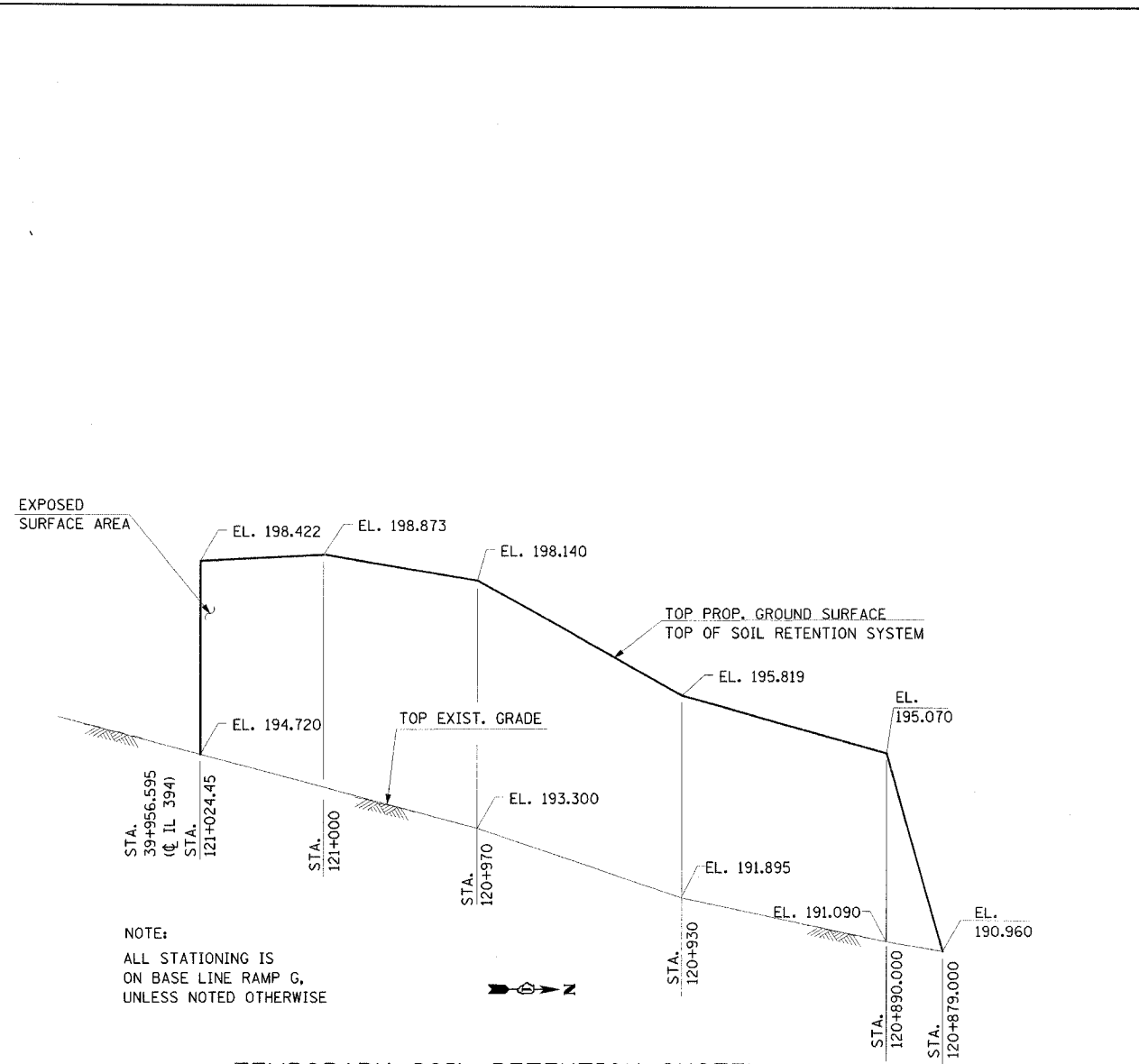
**BRIDGE APPROACH PAVEMENT
WB I-80/94 TO SB IL 394 RAMP G
STRUCTURE NO. 016-2804
EAST APPROACH**

HORIZ SCALE:
VERT SCALE:
DATE: MARCH 23, 2005

DRAWN BY: LK
CHECKED BY: JJK

HNTB

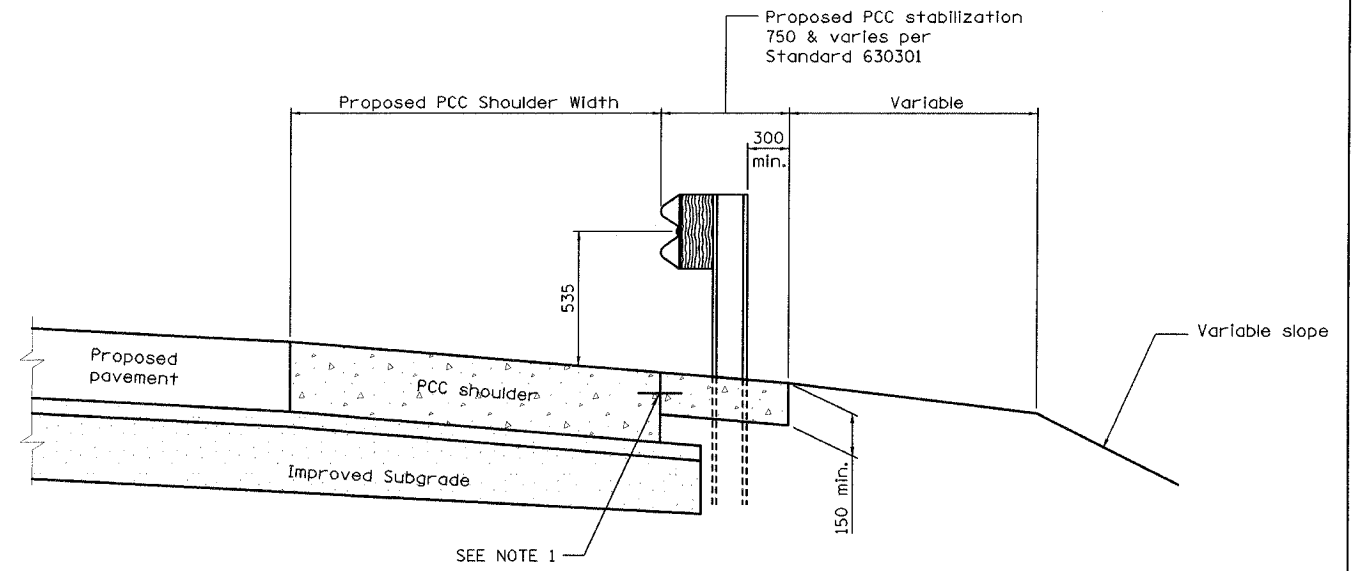
FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	156
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTE:
ALL STATIONING IS
ON BASE LINE RAMP G,
UNLESS NOTED OTHERWISE

**TEMPORARY SOIL RETENTION SYSTEM
RAMP G-SE OF WEST ABUTMENT**

(N.T.S.)
AREA= 607 SQ.M. (REMAIN IN PLACE)



**DETAILS FOR STEEL PLATE BEAM
GUARD RAIL ADJACENT TO SHOULDER**

NOTES:

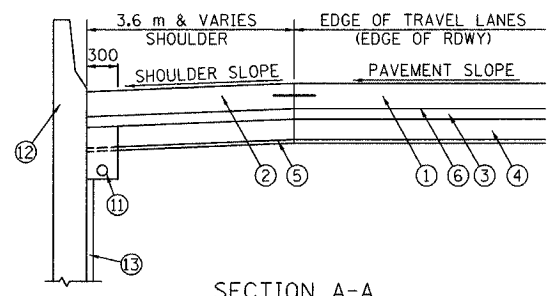
- LONGITUDINAL CONSTRUCTION JOINT WITH NO. 15 EPOXY COATED TIE BARS AT 600 CTS.
- "TIE BARS SHALL BE PAID FOR AS PART OF PORTLAND CEMENT CONCRETE SHOULDERS - 150 MM"
- SEE STANDARD 420001 AND THE DETAIL FOR PCC SHOULDER FOR DETAILS NOT SHOWN.

REVISIONS	
NAME	DATE

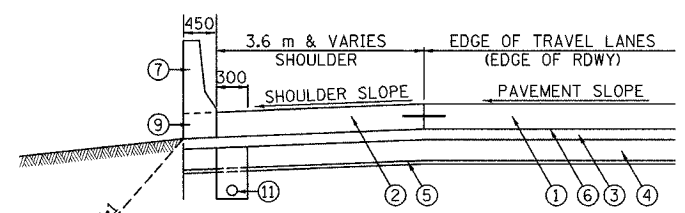
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94 WB FLYOVER RAMP
TO SB IL 394 (RAMP G)
**TEMP. SOIL RETENTION SYSTEM/
GUARDRAIL STABILIZATION
DETAILS**
HORIZ SCALE: NONE
VERT SCALE: NONE
DATE: MARCH 23, 2005
DRAWN BY: DD/MAM
CHECKED BY: BJM

HNTB

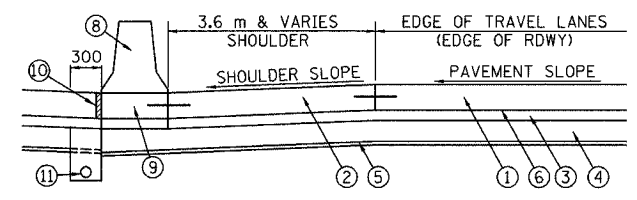
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	157
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



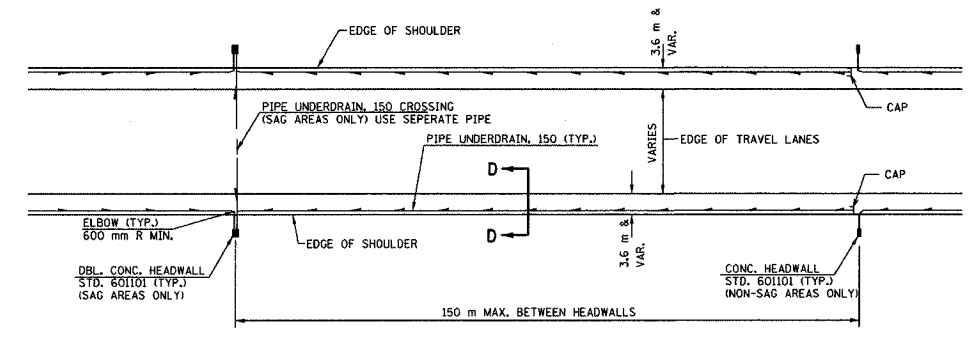
SECTION A-A
SHOWING RETAINING WALL



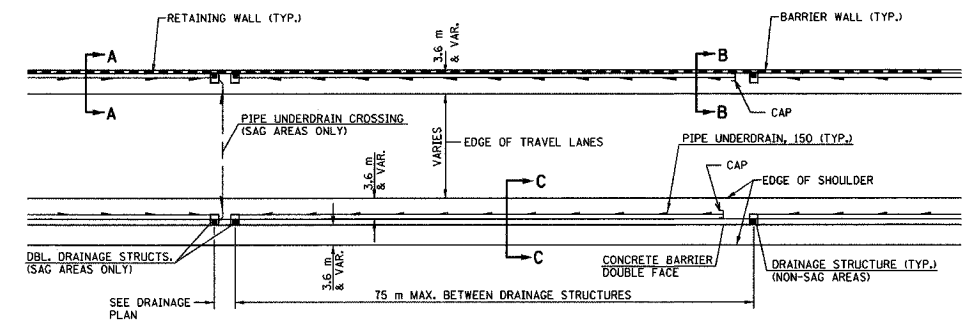
SECTION B-B
SHOWING CONCRETE BARRIER, SINGLE FACE



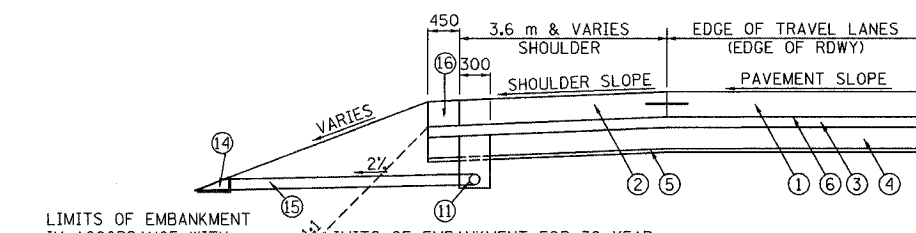
SECTION C-C
SHOWING CONCRETE BARRIER, DOUBLE FACE



PROPOSED PLAN VIEW WITH OPEN DRAINAGE SYSTEM



PROPOSED PLAN VIEW WITH CLOSED DRAINAGE SYSTEM



SECTION D-D
SHOWING OPEN DRAINAGE

LIMITS OF EMBANKMENT IN ACCORDANCE WITH SPECIAL PROVISION FOR EMBANKMENT FOR NON 30 YEAR PAVEMENT

LIMITS OF EMBANKMENT FOR 30 YEAR EXTENDED LIFE PAVEMENT

LIMITS OF EMBANKMENT IN ACCORDANCE WITH SPECIAL PROVISION FOR EMBANKMENT FOR NON 30 YEAR PAVEMENT

LIMITS OF EMBANKMENT FOR 30 YEAR EXTENDED LIFE PAVEMENT

LEGEND

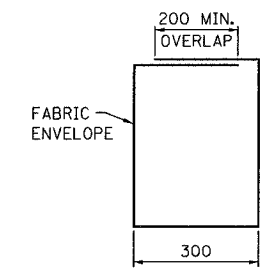
- ① PROPOSED PAVEMENT
- ② PORTLAND CEMENT CONCRETE SHOULDERS
- ③ STABILIZED SUBBASE - 150 mm
- ④ SUB-BASE GRANULAR MATERIAL, TYPE B - 300 mm
- ⑤ GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
- ⑥ WHITE WASHING FOR CONCRETE PAVEMENT
- ⑦ CONCRETE BARRIER, SINGLE FACE
- ⑧ CONCRETE BARRIER, DOUBLE FACE
- ⑨ CONCRETE BARRIER BASE
- ⑩ BARRIER BASE OPEN JOINT (P/J)
- ⑪ PIPE UNDERDRAINS - 150 mm
- ⑫ RETAINING WALL
- ⑬ GEOCOMPOSITE WALL DRAIN
- ⑭ CONCRETE HEADWALLS FOR PIPE DRAINS (STD. 601101)
- ⑮ PIPE UNDERDRAINS (SPECIAL)
- ⑯ AGGREGATE SHOULDERS, TYPE B

LEGEND

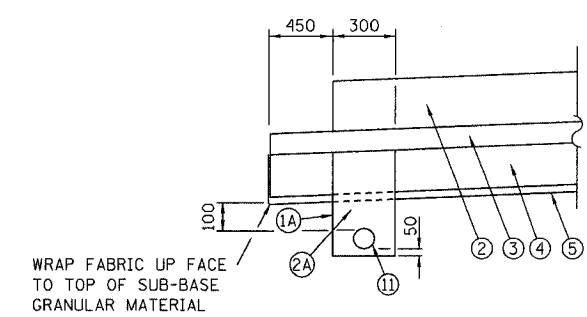
(COST INCLUDED IN PIPE UNDERDRAINS)

- 1A FABRIC ENVELOPE FOR PIPE UNDERDRAINS
- 2A POROUS GRANULAR BACKFILL (CA-16)

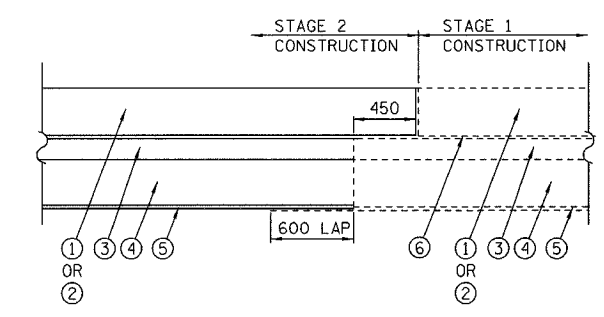
- NOTE 1: NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR TRENCHING THROUGH AGGREGATE SUBGRADE, POROUS GRANULAR EMBANKMENT, SUBGRADE OR GEOTECHNICAL FABRIC FOR GROUND STABILIZATION.
- NOTE 2: DRAINAGE MATS WILL NOT BE ALLOWED.
- NOTE 3: SEE TYPICAL SECTIONS AND ROADWAY PLANS FOR PAVEMENT AND SHOULDER TYPES, WIDTHS AND CROSS-SLOPES.
- NOTE 4: SEE CONCRETE BARRIER DETAILS FOR REQUIRED TIE BARS OR REINFORCING BARS AND OTHER DETAILS.
- NOTE 5: ADDITIONAL SUB-BASE GRANULAR MATERIAL UNDER THE CONCRETE BARRIER WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE SQUARE METER COST OF SUB-BASE GRANULAR MATERIAL, TYPE B.
- NOTE 6: ALL PIPE FITTINGS NECESSARY FOR THE INSTALLATION OF THE UNDERDRAIN SYSTEM WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE METER COST OF PIPE UNDERDRAINS, 150.



FABRIC ENVELOPE
DETAIL



UNDERDRAIN TRENCH
DETAIL



DETAIL FOR STAGE CONSTRUCTION OF THE SUBGRADE
(FOR 30 YEAR EXTENDED LIFE PAVEMENT)

LEGEND

- STAGE 1
- STAGE 2

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
ACE	06/04
ACE	6/9/04

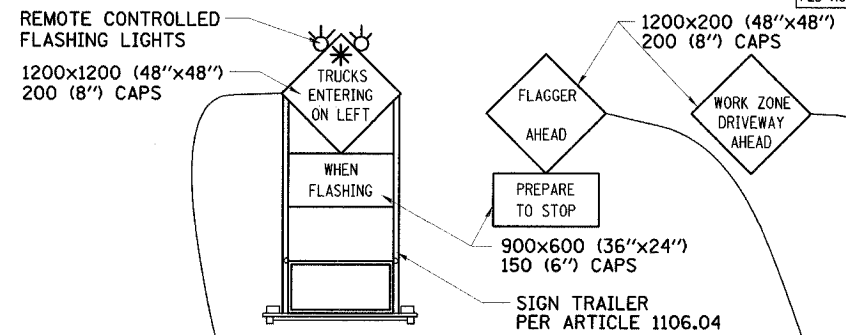
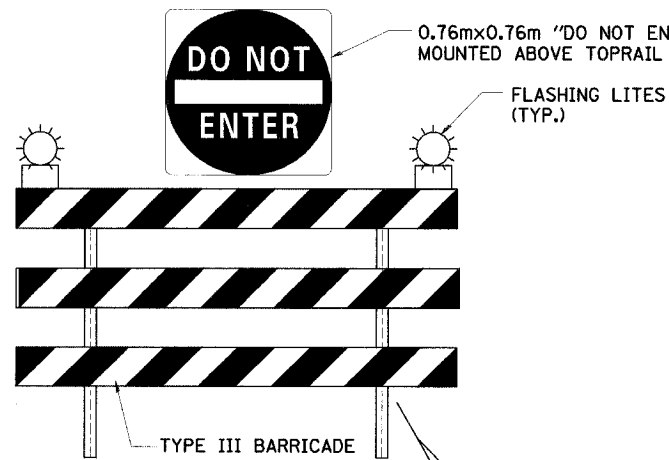
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)
**PIPE UNDERDRAIN AND SUBGRADE DETAILS
FOR OPEN AND CLOSED DRAINAGE SYSTEMS**

SCALE NONE
DATE 02/04
DRAWN BY ACE/CAD
CHECKED BY

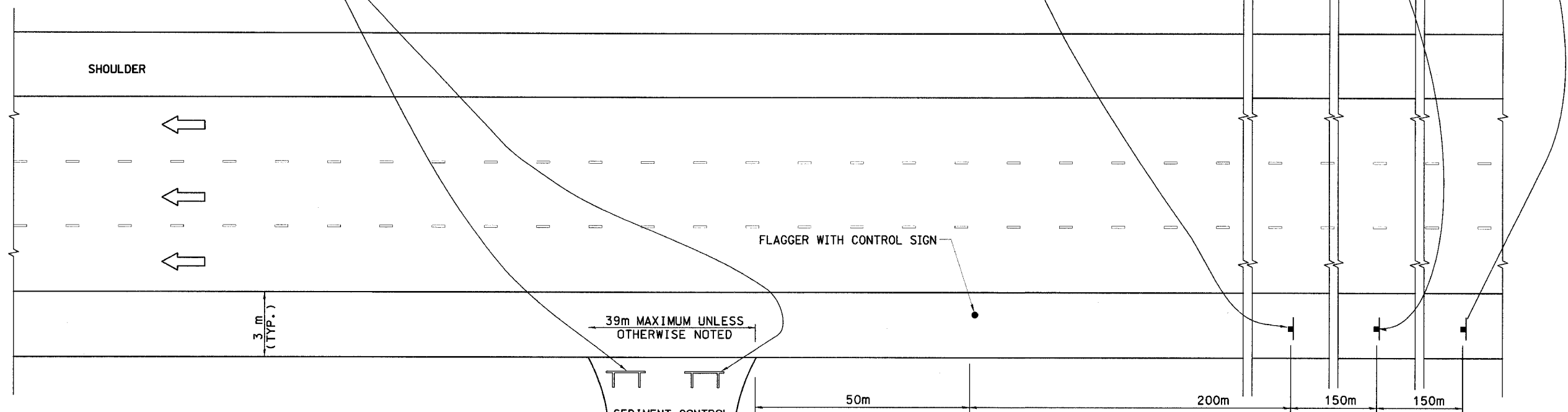


FAI R/TE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	159
STA.	TO STA.			
FED ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

* SIGNS ARE TO READ "TRUCK ENTERING ON LEFT/RIGHT"
"TRUCK LEAVING LEFT/RIGHT" AS APPLICABLE.



WARNING SIGNS SHALL HAVE
BLACK LEGEND ON ORANGE BACKGROUND



NOTES

1. THE "FLAGGER AHEAD" AND "TRUCKS ENTERING ON LEFT/RIGHT" SIGNS SHALL BE MOVED OR TURNED AWAY FROM TRAFFIC WHEN THE FLAGGING OPERATION CEASES.
2. CONSTRUCTION ENTRANCES SHALL BE LOCATED AS PER TABLE A OR AT LOCATIONS AS REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
3. THE FLASHING LIGHT ON THE "TRUCKS ENTERING ON LEFT" SIGN SHALL MEET THE REQUIREMENTS OF ARTICLE 702.05(c) AND BE OPERATED BY THE FLAGGER REMOTELY. THE LIGHTS SHALL BE FLASHING ONLY WHEN A VEHICLE IS ENTERING THE EXPRESSWAY.
4. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A CONSTRUCTION ENTRANCE WILL BE PROHIBITED.
5. ALL VEHICLES SHALL ENTER THE WORK ZONE AT THESE OPENINGS. USING THEIR TURN SIGNALS TO WARN MOTORISTS.
6. INSTALL A MINIMUM OF 2 TYPE III BARRICADES WITH FLASHING LIGHTS AND 1 DO NOT ENTER SIGN AT ALL TIMES WHEN NO WORK IS PERFORMED AT THE SITE. THE COSTS OF INSTALLING, MAINTAINING AND REMOVING ALL BARRICADES AND SIGNS SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)"

**MAINTENANCE OF TRAFFIC
LEGEND AND SYMBOLS**

- FLAGGER WITH CONTROL SIGN
- ← DIRECTION OF TRAFFIC
- ⊥ SIGN ON SUPPORT

**TABLE A
WORK ZONE DRIVEWAY LOCATIONS**

STATION	LOCATION
A TOTAL OF THREE LOCATIONS ARE TO BE PROVIDED PER DIRECTION OF MIKE WAITER	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94 WB FLYOVER RAMP
TO SB IL 394 (RAMP G)

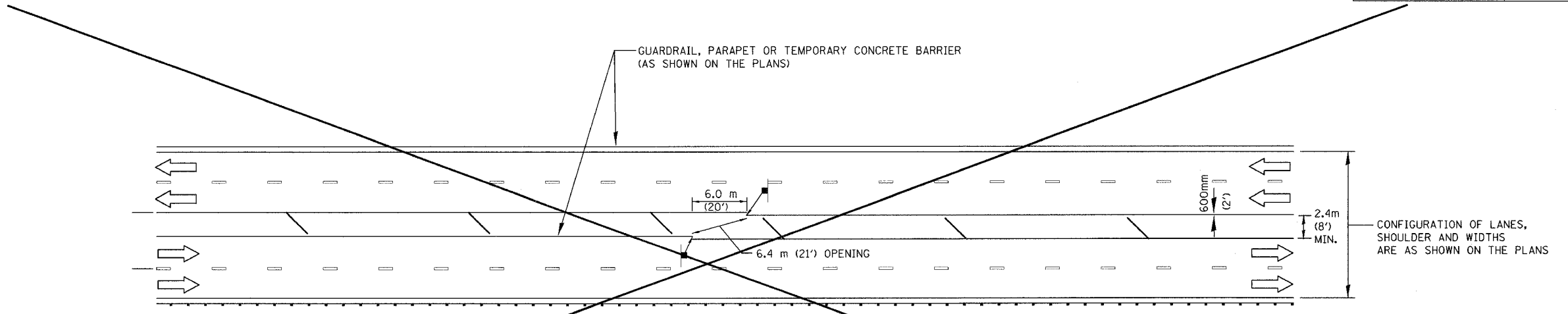
**TRAFFIC CONTROL FOR
STABILIZED CONSTRUCTION
ENTRANCE/EXIT**

HORIZ SCALE:
VERT SCALE:
DATE: MARCH 23, 2005

DRAWN BY: MAM
CHECKED BY: JES

HNTB

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	160
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

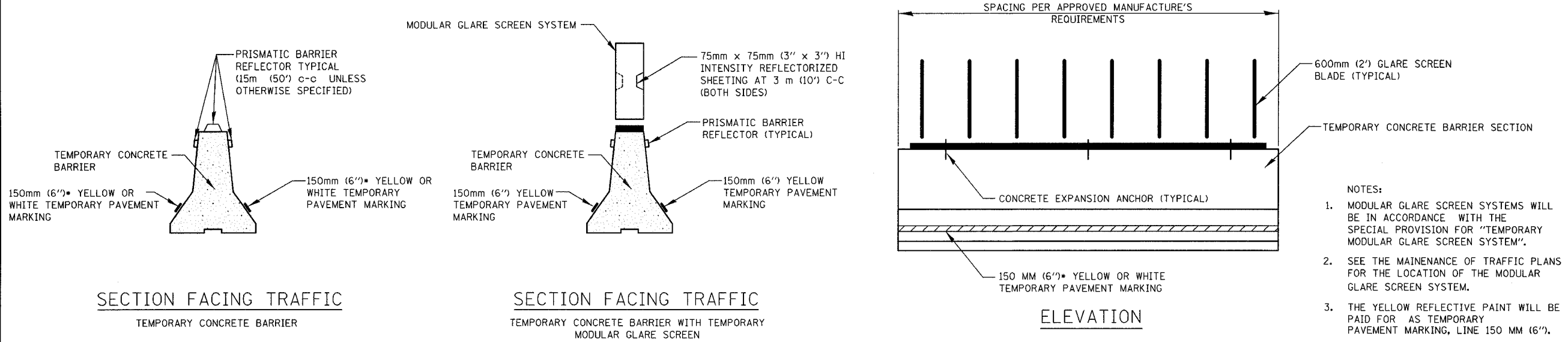


TYPICAL EMERGENCY TURNAROUND

SEE MAINTENANCE OF TRAFFIC PLANS FOR LOCATION(S)

- LEGEND**
- TEMPORARY CONCRETE BARRIER WALL
 - ➔ DIRECTION OF TRAFFIC
 - NO U TURN SIGN - 1.2m X 1.2m (48" X 48")

NOTE: GUARDRAIL, PARAPET OR TEMPORARY BARRIER WALL TO BE USED ON OUTSIDE EDGE OF TRAFFIC AS REQUIRED.



SECTION FACING TRAFFIC

TEMPORARY CONCRETE BARRIER

SECTION FACING TRAFFIC

TEMPORARY CONCRETE BARRIER WITH TEMPORARY MODULAR GLARE SCREEN

ELEVATION

• YELLOW IS FOR LEFT EDGE OF TRAVEL LANE. WHITE IS FOR RIGHT EDGE OF TRAVEL LANE.
(REFLECTORS AND MARKINGS ARE REQUIRED ONLY ON TRAFFIC SIDE)

TEMPORARY CONCRETE BARRIER DETAILS

REVISIONS	
NAME	DATE
ACE	01/04
ACE	02/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)




EMERGENCY TURNAROUND AND TEMPORARY CONCRETE BARRIER DETAILS

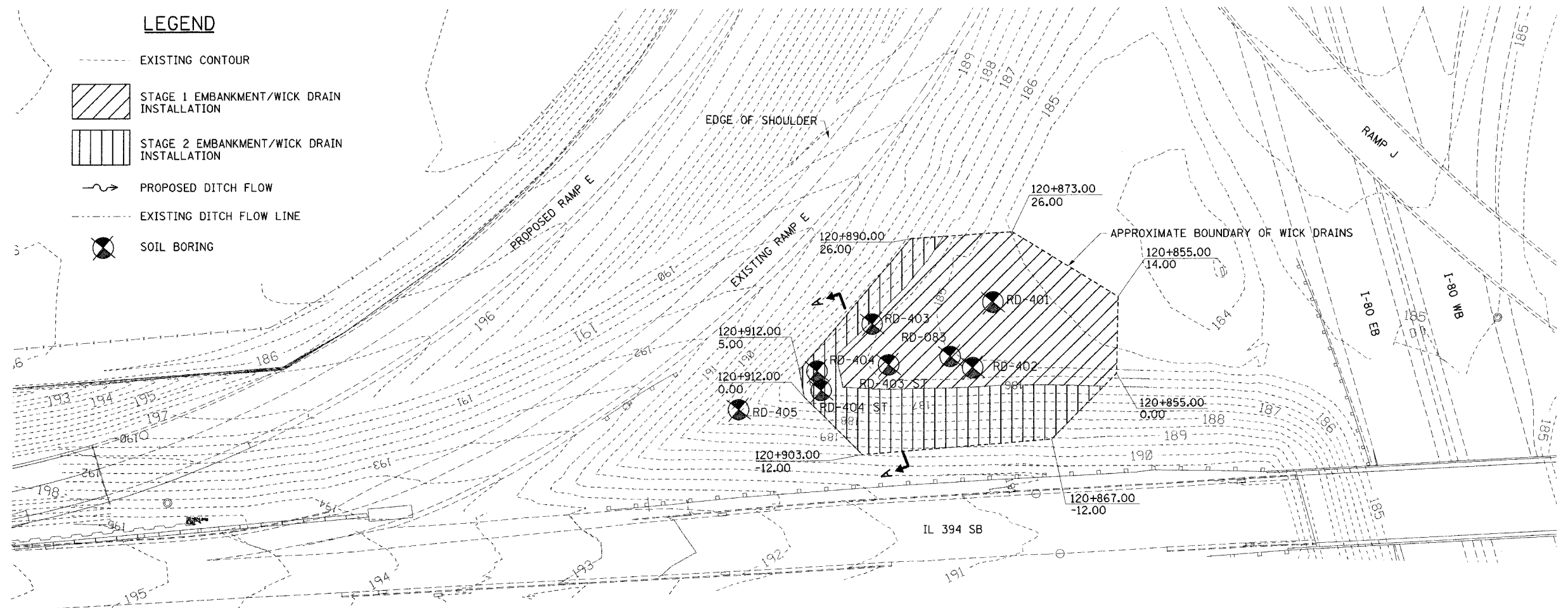
SCALE NONE DRAWN BY ACE/CAD
DATE 01/04 CHECKED BY



FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	161
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LEGEND

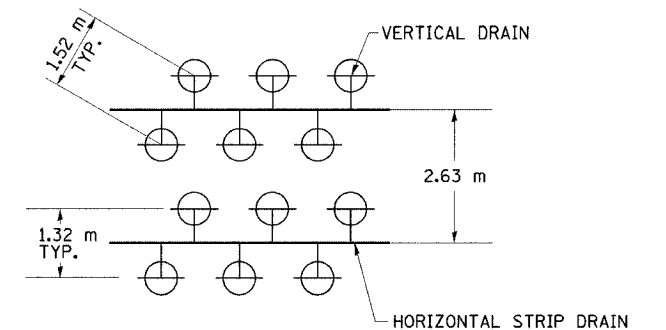
- - - - - EXISTING CONTOUR
-  STAGE 1 EMBANKMENT/WICK DRAIN INSTALLATION
-  STAGE 2 EMBANKMENT/WICK DRAIN INSTALLATION
- - - - - PROPOSED DITCH FLOW
- - - - - EXISTING DITCH FLOW LINE
-  SOIL BORING



PLAN VIEW

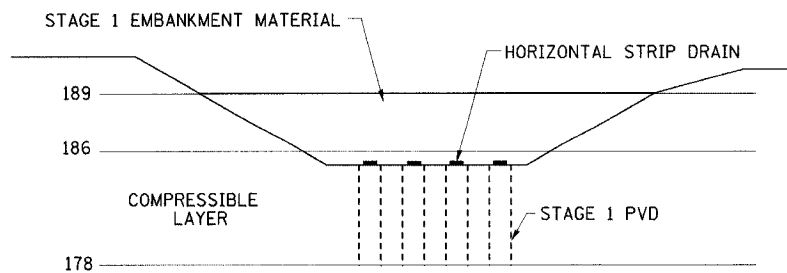
NOTES:

1. STAGE 1 CONSISTS OF INSTALLING THE PREFABRICATED VERTICAL DRAIN (PVD) IN THE FLAT, INNER AREA OF PROPOSED ABUTMENT FOOTPRINT--APPROXIMATELY OUTLINED BY THE 186 METERS ELEVATION CONTOUR. EMBANKMENT MATERIAL IS TO BE PLACED TO FILL THE DEPRESSION UP TO AN ELEVATION OF 189 METERS, CREATING A RELATIVELY LEVEL GROUND OVER THE EXISTING SLOPES.
2. IN THE SECOND STAGE, PVD WOULD BE INSTALLED IN THE OUTER AREA OF THE PROPOSED EMBANKMENT FOOTPRINT, AND THE REST OF THE EMBANKMENT WOULD BE BUILT. PREDRILLING TO A DEPTH OF 4 METERS IS REQUIRED TO INSTALL THE PVD IN THE SECOND STAGE.
3. HORIZONTAL STRIP DRAINS WILL DIRECT THE LATERAL FLOW FROM THE PVD TO DISCHARGE POINTS LOCATED NORTH OF THE EMBANKMENT FOOTPRINT.
4. FOR TREE REMOVAL SEE PF-1
5. FOR BORING LOGS RD-401 THRU RD-405 AND RD-083, SEE RAMP G BRIDGE DRAWINGS.
6. FOR BORING LOGS RD-403 ST AND RD-404 ST, SEE SHEET NO 162.

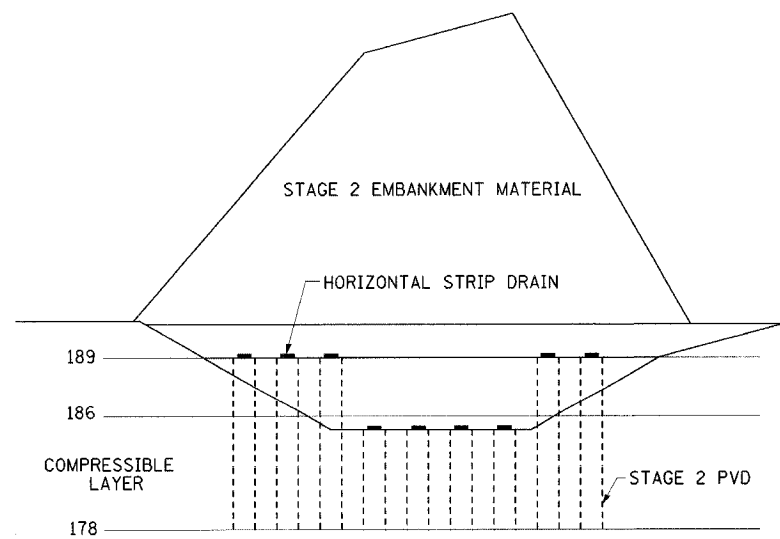


WICK DRAIN LAYOUT

TO BE INSTALLED IN AN EQUILATERAL TRIANGLE PATTERN



**SECTION A-A
STAGE 1 EMBANKMENT CONSTRUCTION**



**SECTION A-A
STAGE 2 EMBANKMENT CONSTRUCTION**

REVISIONS	
NAME	DATE

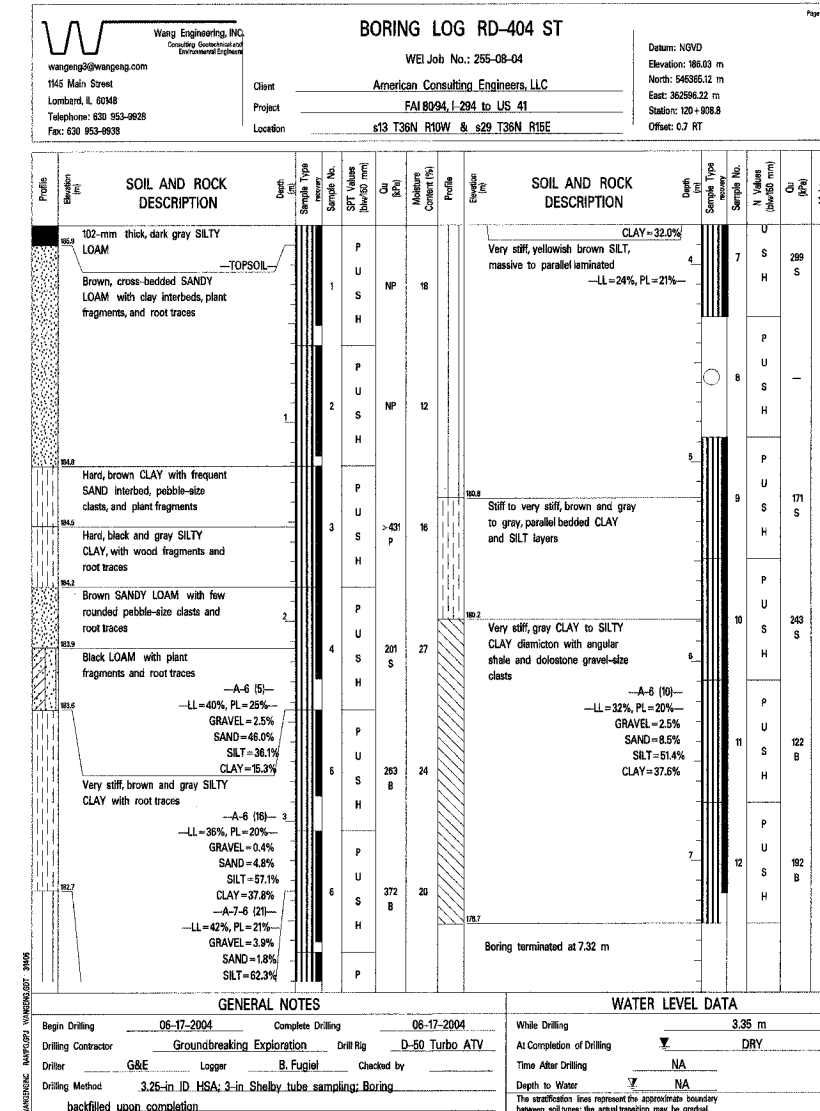
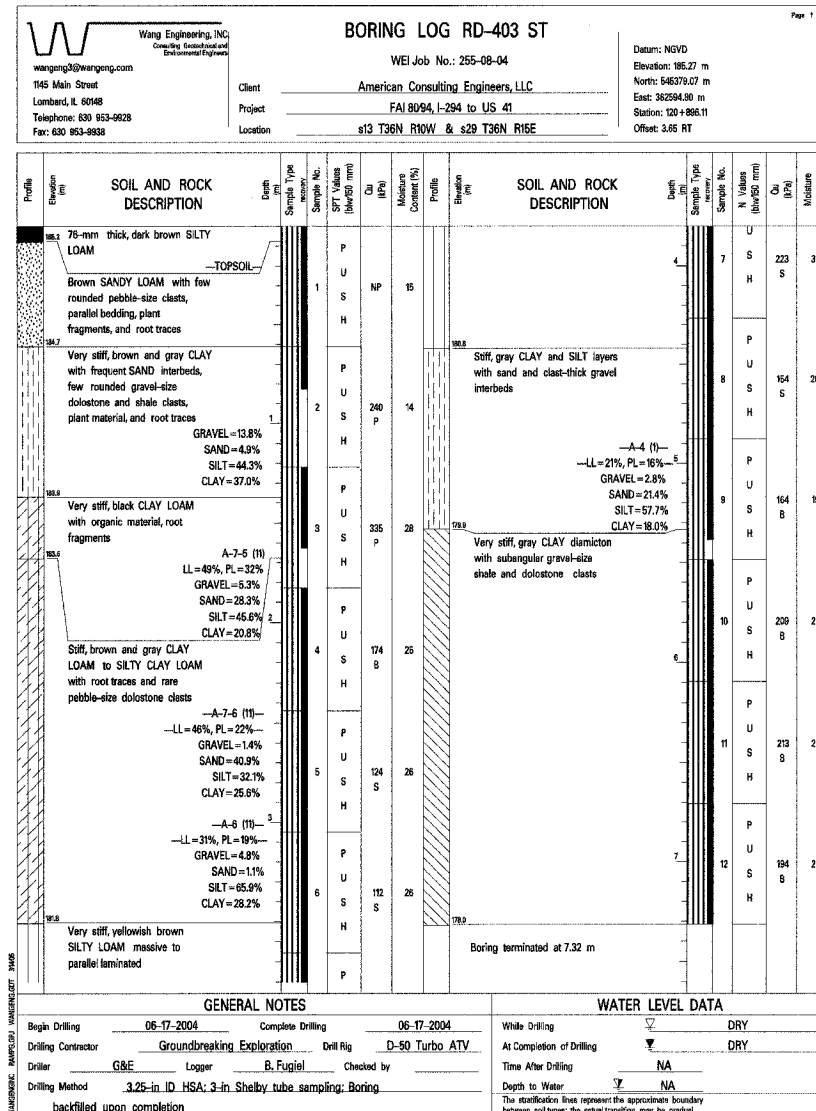
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94 WB FLYOVER RAMP
TO SB IL 394 (RAMP G)

WICK DRAINS

HORIZ SCALE: NONE
VERT SCALE: NONE
DATE: MARCH 23, 2005
DRAWN BY: MAM
CHECKED BY: BJM

HNTB

FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	162
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTE:
 WORK THIS SHEET WITH SHEET 152.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94 WB FLYOVER RAMP
 TO SB IL 394 (RAMP G)

**WICK DRAIN SOIL BORING LOGS
 RD-403 ST & RD-404 ST**

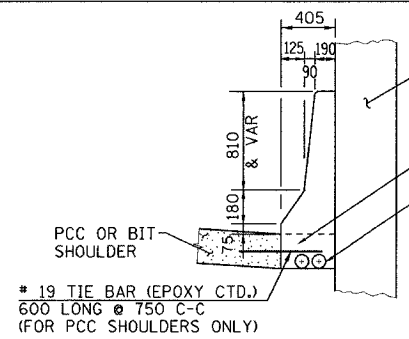
HORIZ SCALE: NONE
 VERT SCALE: NONE
 DATE: MARCH 23, 2005

DRAWN BY: LK
 CHECKED BY: PCA

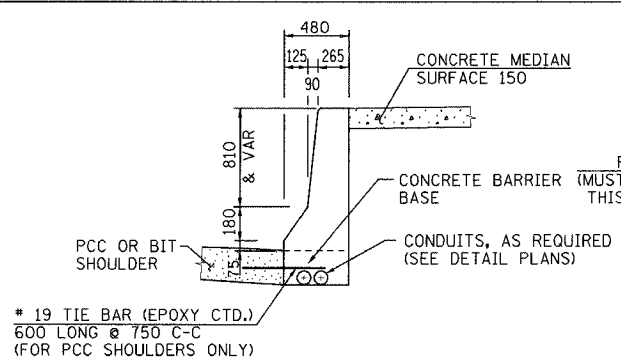
HNTB

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	163
STA. TO STA.				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62854				

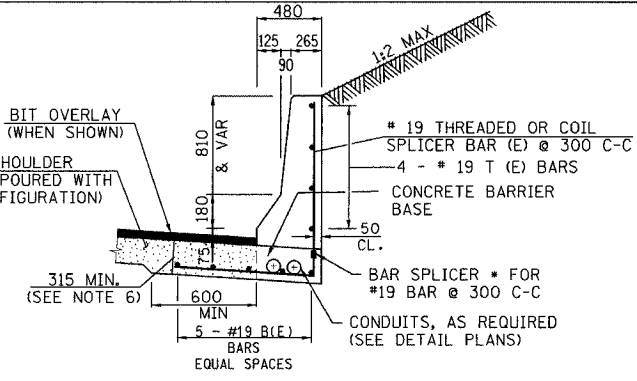
* THE BAR SPLICER SHALL BE CAPABLE OF DEVELOPING A MINIMUM OF 125% OF THE YIELD STRENGTH OF A #19 BAR



SECTION F
CONC BAR 1F 1065 HT
CONCRETE BARRIER, SINGLE FACE,
1065 HEIGHT



SECTION G
CONC BAR 1F 1065 HT
CONCRETE BARRIER, SINGLE FACE,
1065 HEIGHT

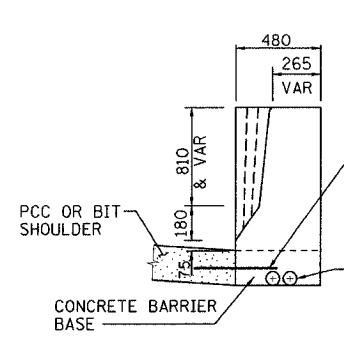


SECTION H
CONC BAR 1F 1065 HT SPL
CONCRETE BARRIER, SINGLE FACE,
1065 HEIGHT, SPECIAL
CUT SECTION

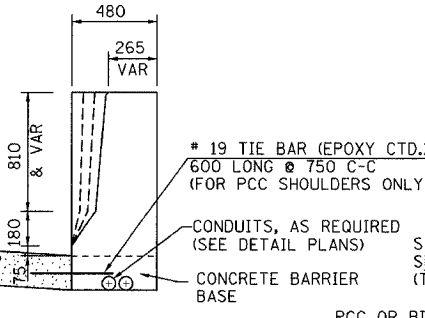
CUT SECTION

REINFORCING BARS 6.1 m SECTION				
BAR	NO.	SIZE	LENGTH	SHAPE
B(E)	5	#19	6.00 m	—
T(E)	4	#19	6.00 m	—
REINFORCING BARS (EPOXY COATED)			Kg	121
BAR SPLICER			EACH	21

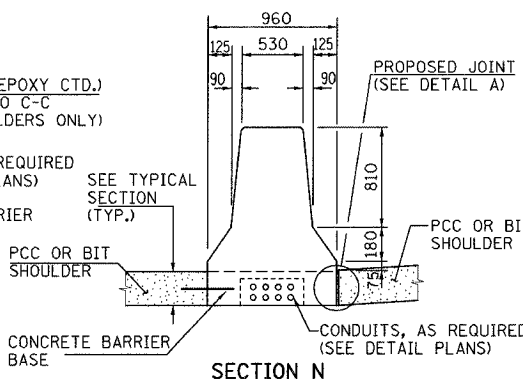
** LONGITUDINAL BARS SHOULD NOT EXTEND THROUGH JOINTS.



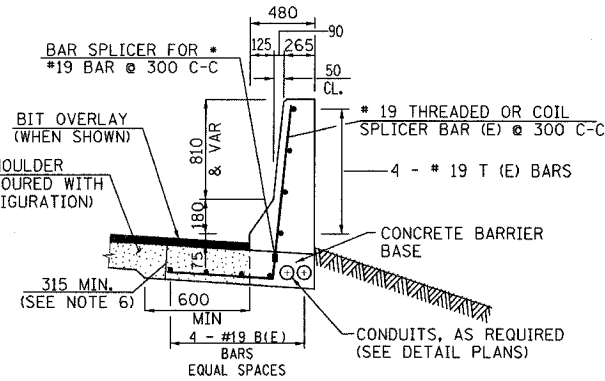
SECTION I
CONC BAR 1F 1065 HT
CONCRETE BARRIER, SINGLE FACE,
1065 HEIGHT



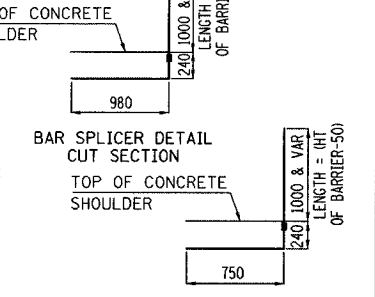
DEPARTURE SIDE



SECTION N
CONC BAR 2F 1065 HT
CONCRETE BARRIER, DOUBLE FACE,
1065 HEIGHT



SECTION J
CONC BAR 1F 1065 HT SPL
CONCRETE BARRIER, SINGLE FACE,
1065 HEIGHT, SPECIAL
FILL SECTION

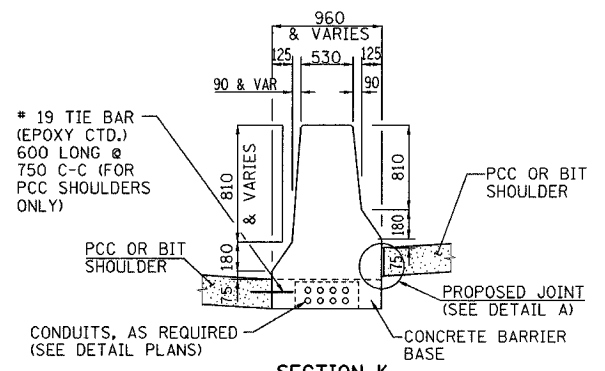


BAR SPLICER DETAIL FILL SECTION

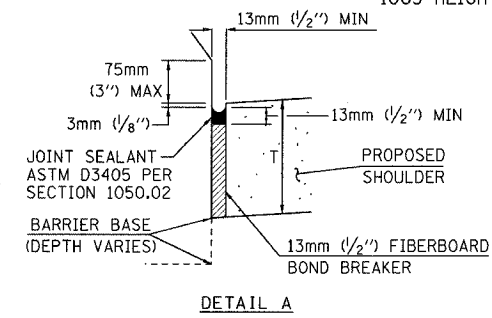
FILL SECTION

REINFORCING BARS 6.1 m SECTION				
BAR	NO.	SIZE	LENGTH	SHAPE
B(E)	4	#19	6.00 m	—
T(E)	4	#19	6.00 m	—
REINFORCING BARS (EPOXY COATED)			Kg	108
BAR SPLICER			EACH	21

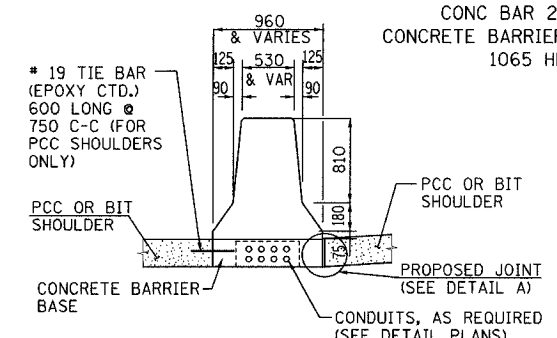
** LONGITUDINAL BARS SHOULD NOT EXTEND THROUGH JOINTS.



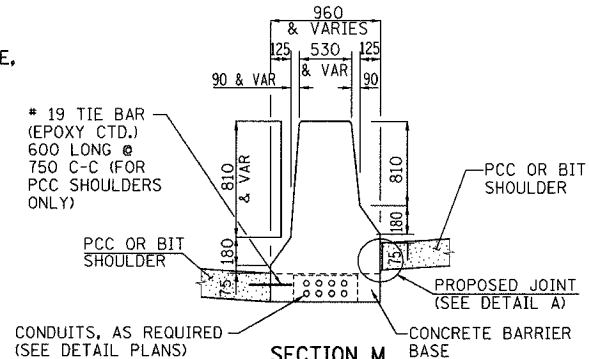
SECTION K
CONC BAR 2F 1065 HT
CONCRETE BARRIER, DOUBLE FACE,
1065 HEIGHT



DETAIL A



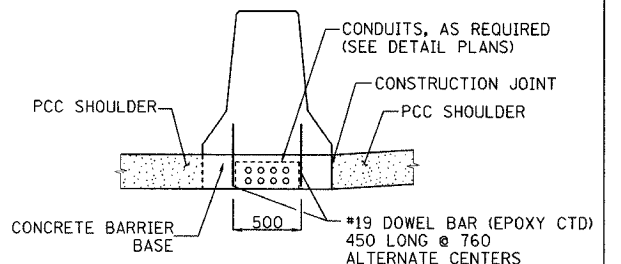
SECTION L
CONC BAR 2F 1065 HT
CONCRETE BARRIER, DOUBLE FACE,
1065 HEIGHT



SECTION M
CONC BAR 2F 1065 HT
CONCRETE BARRIER, DOUBLE FACE,
1065 HEIGHT

LEGEND:
PAY LIMITS OF BITUMINOUS OR PCC SHOULDERS.

- NOTES:
- FOR ADDITIONAL CONCRETE BARRIER DETAILS SEE STANDARDS 637001 & 637006.
 - FOR ADDITIONAL SHOULDER DETAILS SEE TYPICAL SECTIONS, PIPE UNDERDRAIN & SUBGRADE DETAILS FOR OPEN AND CLOSED DRAINAGE SYSTEMS, P.C.C SHOULDER DETAILS AND/OR STANDARDS 601001, 482006, 483001 & 482001 AS APPLICABLE.
 - A 25 RADIUS CAN BE SUBSTITUTED FOR THE 13 CHAMFER AT THE TOP OF THE BARRIER WALL.
 - FOR BITUMINOUS SHOULDERS -- DEPTH "T" EQUALS 450 MINIMUM.
 - FOR PCC SHOULDERS -- DEPTH "T" SHALL BE 255 MINIMUM OR THE SHOULDER DEPTH IF GREATER.
 - THE THICKENED PCC SHOULDER FOR THE REINFORCED CONCRETE BARRIER SECTION SHALL BE INCLUDED IN THE COST OF THE CONCRETE BARRIER OF THE TYPE INVOLVED.
 - 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.
 - THE FURNISHING AND PLACING OF TIE BARS AND DOWEL BARS SHALL BE INCLUDED IN THE COST OF PCC SHOULDER OF THE THICKNESS SPECIFIED.
 - THE FURNISHING AND PLACING OF BAR SPLICERS, TIE BARS AND DOWEL BARS SHALL BE INCLUDED IN THE COST OF THE PCC SHOULDER OF THE THICKNESS SPECIFIED.
 - THE CONDUIT LOCATIONS SHOWN ARE TYPICAL. ADDITIONAL CONDUITS MAY BE REQUIRED. FOR THE SIZE, LOCATION, AND DETAILS, SEE THE ELECTRICAL AND/OR SURVEILLANCE PLANS. THE FURNISHING AND PLACING OF CONDUITS OF THE SIZE SPECIFIED SHALL BE PAID FOR SEPARATELY.



REVISIONS	
NAME	DATE
MDV	01/30/04
MRN	3/29/04
MDV	8/25/04

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)

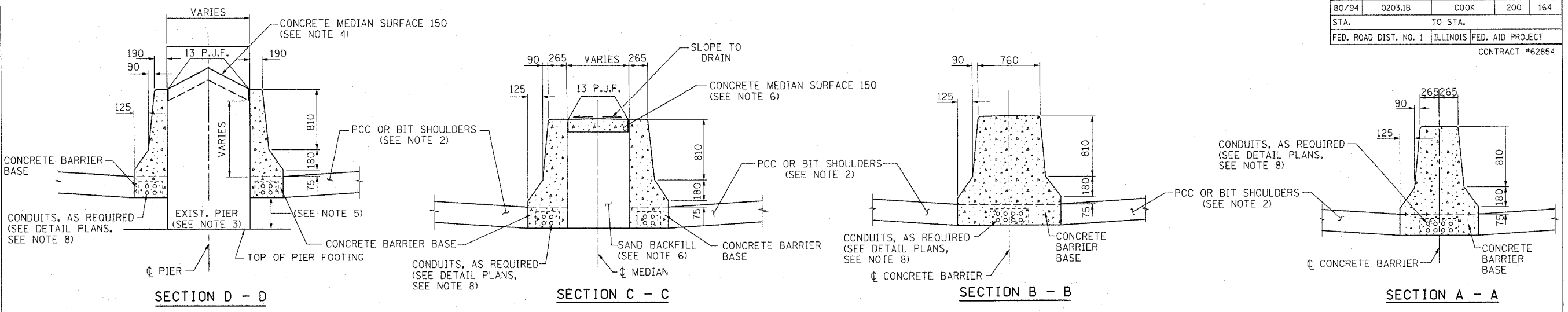
**CONCRETE BARRIER DETAILS
1065 MM WALL**

SCALE NONE
DATE 10/03
DRAWN BY ACE/CAD
CHECKED BY

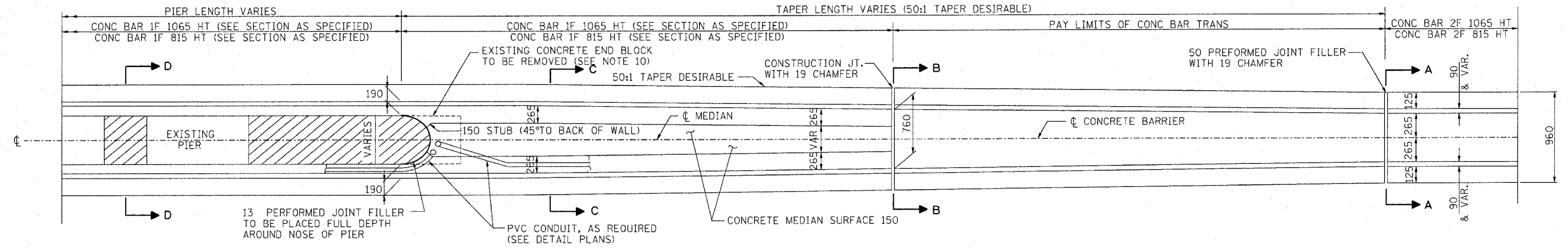


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	164
STA.	TO STA.			
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		CONTRACT #62854

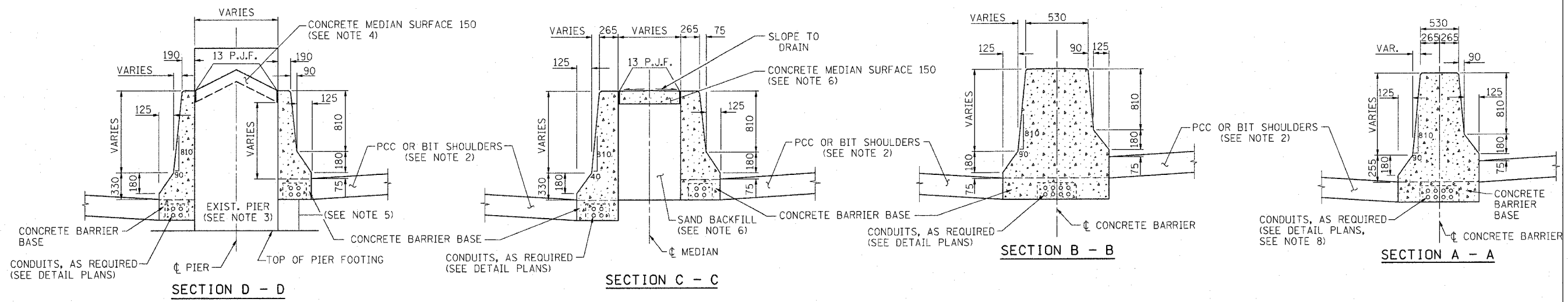
TANGENT CONDITION



PLAN VIEW OF CONCRETE BARRIER TRANSITION



(SUPER ELEVATION CONDITION)



NOTES:

- FOR ADDITIONAL CONCRETE BARRIER DETAILS SEE CONCRETE BARRIER TYPICAL SECTIONS AND STANDARDS 637001 AND 637006.
- FOR ADDITIONAL SHOULDER DETAILS SEE TYPICAL SECTIONS, PIPE UNDERDRAIN & SHOULDER DETAILS AND STANDARDS 601001, 482006, 483001 & 482001.
- IF THE PIER IS NEW CONSTRUCTION, THE CONCRETE BARRIER MAY BE POURED MONOLITHICALLY.
- PIER FILLER MATERIAL SHALL BE CONCRETE IF A MINIMUM 150 THICKNESS CAN BE MAINTAINED. IF THE 150 THICKNESS CANNOT BE MAINTAINED, USE ASPHALT FILLER MATERIAL AS DIRECTED BY THE ENGINEER.

- EXTEND THE BOTTOM OF THE CONCRETE BARRIER TO THE PIER FOOTING WHEN THE DEPTH IS LESS THAN 150.
- SAND BACKFILL AND CONCRETE MEDIAN SURFACE 150 WILL BE REQUIRED. FILLING WITH CONCRETE WILL NOT BE ALLOWED. THIS WORK SHALL BE PAID FOR SEPARATELY.
- TAPERS INTO AND AWAY FROM SIGN FOUNDATIONS SHALL BE THE SAME AS SHOWN ABOVE.
- INSTALL DUCT BETWEEN THE SIGN FOUNDATION AND THE NEAREST LIGHT POLE FOUNDATION WHERE SHOWN ON THE PLANS. THIS WORK SHALL BE PAID FOR SEPARATELY.
- PREFORMED JOINT FILLER OF THE SIZE SPECIFIED SHALL BE INCIDENTAL TO THE CONCRETE BARRIER OF THE TYPE INVOLVED.

- THE REMOVAL OF THE EXISTING CONCRETE END BLOCKS IF APPLICABLE SHALL BE INCLUDED IN THE COST OF THE CONCRETE BARRIER OF THE TYPE INVOLVED.
- THE CONDUIT LOCATIONS SHOWN ARE TYPICAL. ADDITIONAL CONDUITS MAY BE REQUIRED. FOR THE SIZE, LOCATION AND DETAILS, SEE THE ELECTRICAL AND/OR SURVEILLANCE PLANS. THE FURNISHING AND PLACING OF CONDUITS OF THE SIZE SPECIFIED SHALL BE PAID FOR SEPARATELY.

REVISIONS	
NAME	DATE
MDV	01/30/04
MRN	3/29/04

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)

**CONCRETE BARRIER
DETAILS
SHEET 1 OF 2**

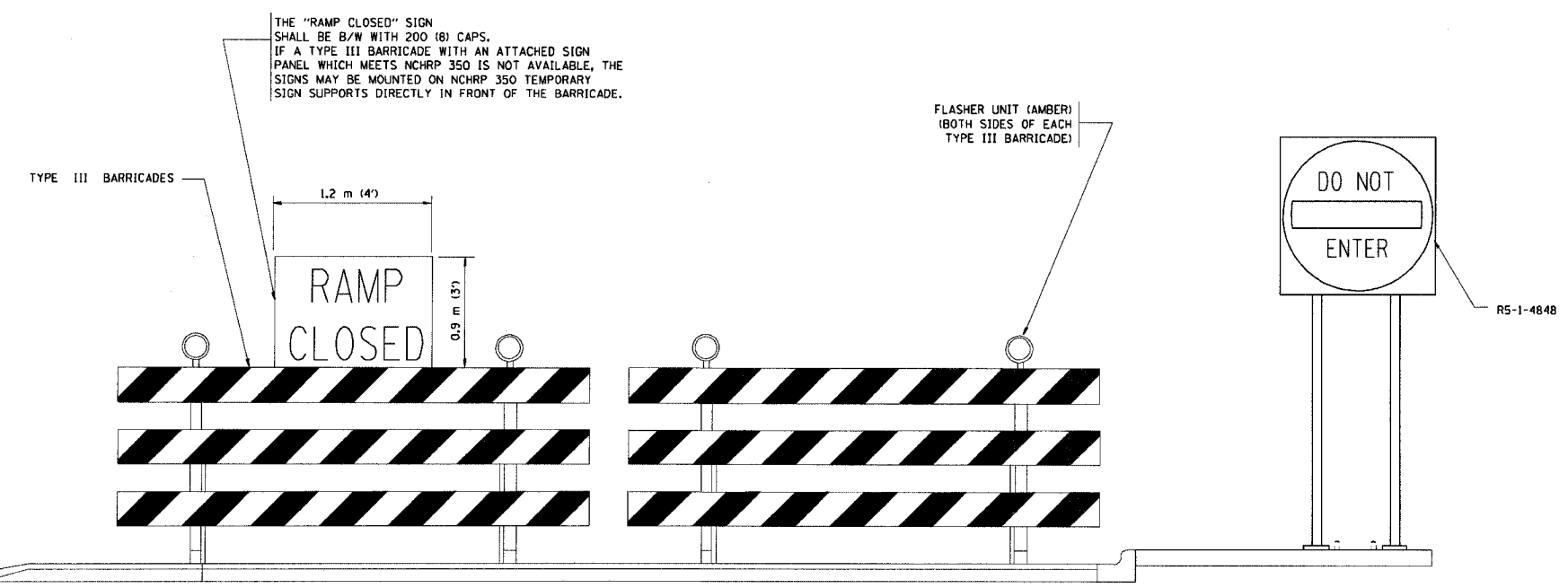
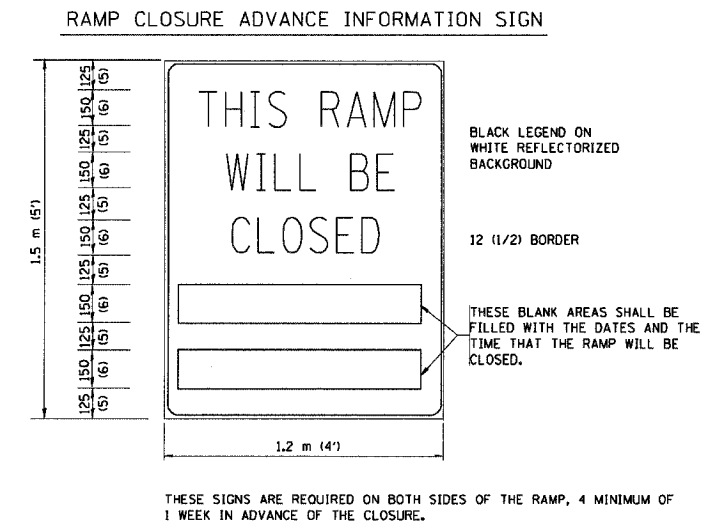
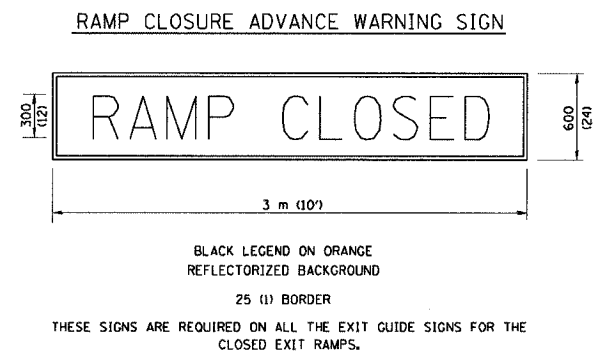
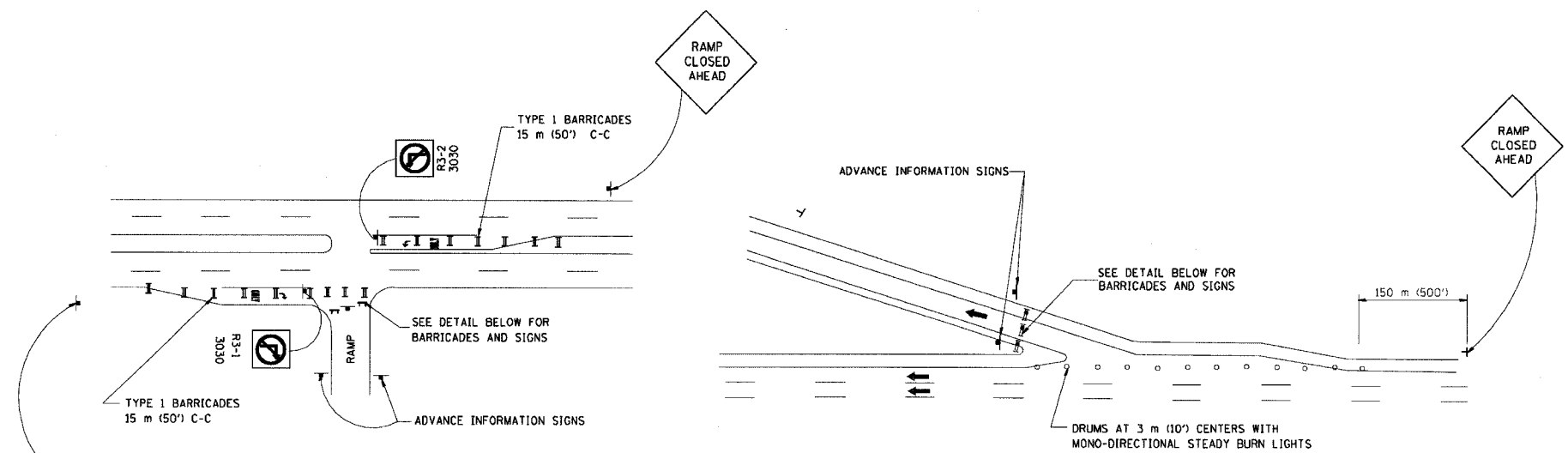
SCALE NONE
DATE 10/03

DRAWN BY ACE/CAD
CHECKED BY

AMERICAN
CONSULTING ENGINEERS

F.A. I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80194	0203.1B	COOK	200	166
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62854



- GENERAL NOTES:
- CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 700 (28) HIGH.
 - STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
 - A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
 - FOR DAYTIME RAMP CLOSURES, LASTING 6 HOURS OR LESS, THE CONTRACTOR MAY ELIMINATE THE ADVANCE WARNING SIGNS ON THE EXIT GUIDE SIGNS.
 - ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
 - THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE CONSIDERED INCIDENTAL TO TRAFFIC CONTROL AND PROTECTION.
 - AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.

- NOTES:
- CONES MAY BE SUBSTITUTED FOR TYPE I AND TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28" IN HEIGHT.
 - STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
 - THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS.
 - ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY FOUR (24) HOURS IN LENGTH.

REVISIONS	
NAME	DATE
DWS	2-83
DWS	1/90
DWS	3/94
DWS	12/94
DWS/JAF	12/02
Revise devices to meet NCHRP 350	4/03

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION

FREWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS

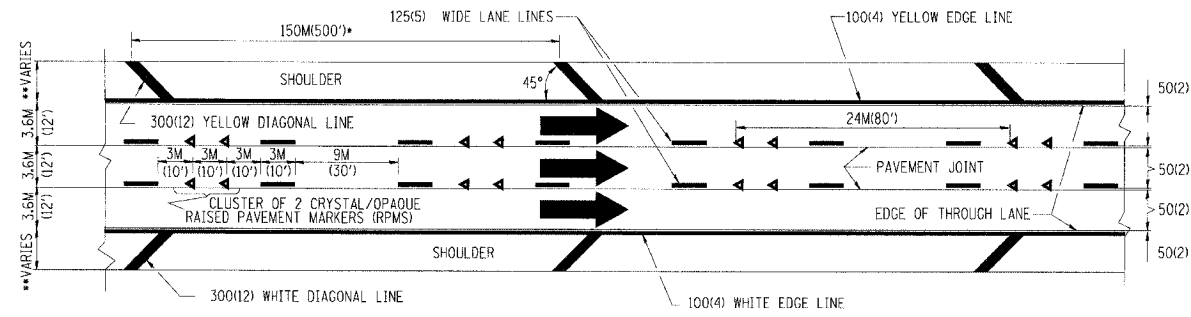
SCALE: NONE
DATE: 05/06/2003

DRAWN BY:
CHECKED BY:
TC-8

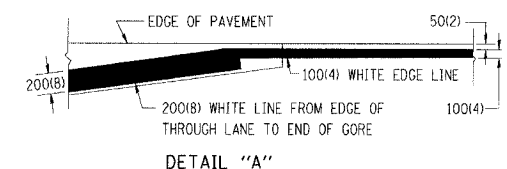
F.A.I. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	167
STA. TO STA.		FED. ROAD DIST. NO. 1		
		ILLINOIS		
		FED. AID PROJECT		

CONTRACT NO. 62854

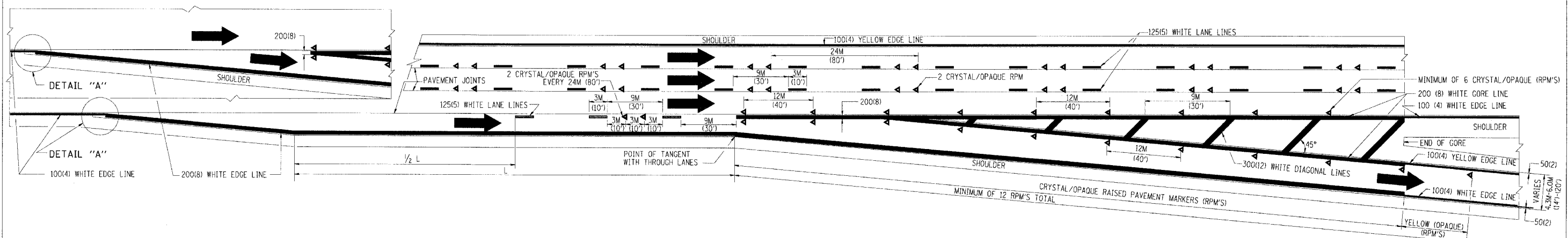
- THE DIAGONAL LINES SHALL BE SPACED AT 12M (40') C-C ACROSS ALL STRUCTURES WHICH ARE 150M (500') OR LESS IN LENGTH
- THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 1.8M (6') OR LESS IN WIDTH



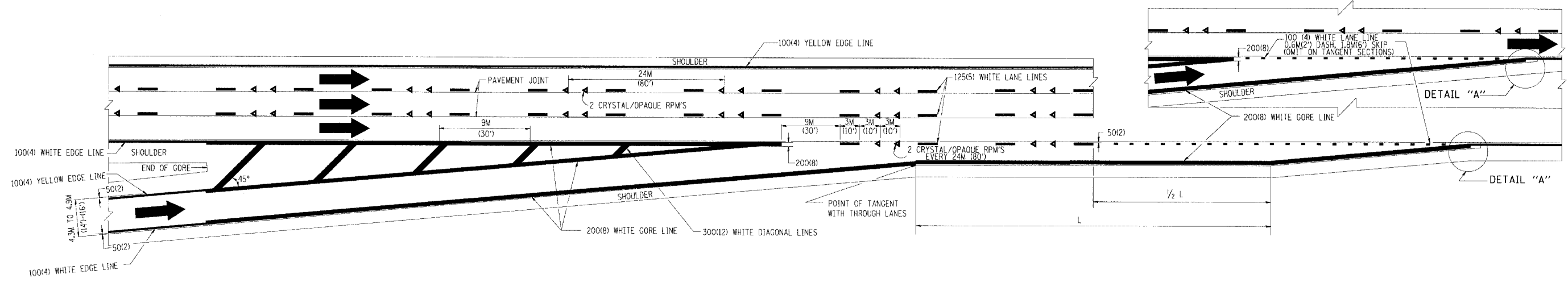
- NOTES:
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
 2. PREFORMED PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES
 3. PREFORMED PLASTIC PAVEMENT MARKING LINE SHALL BE USED ON PCC PAVEMENT.



TYPICAL EDGE LINES & LANE LINES



TYPICAL EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

REVISIONS	
NAME	DATE
DWS	1/90
DWS	5/91
AH	3/96
DWS	7/96

ILLINOIS DEPARTMENT OF TRANSPORTATION

MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS

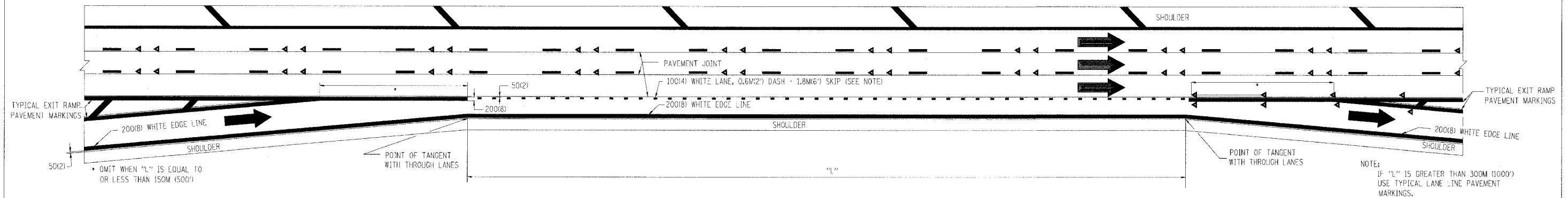
SCALE: NONE
DATE: **DATE**

DRAWN BY C.A.D.D.
CHECKED BY

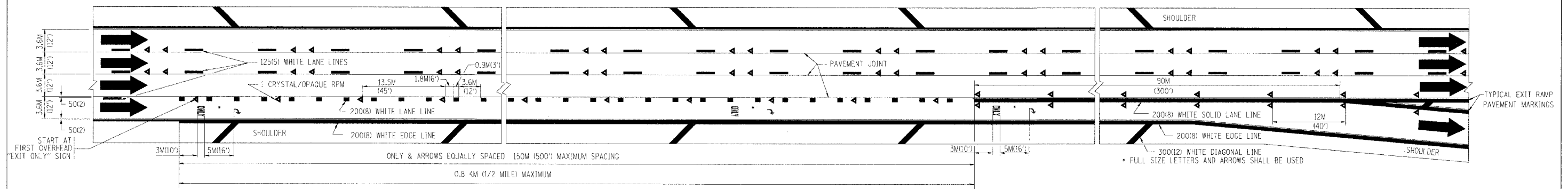
•DATE-TIME•
•DGN-SPEC•
VI=TC12

F. & L. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/84	0203-1B	COOK	200	168
STA.	TO STA.			
FED. ROAD DIST. NO. 7	BLINDS	FEB. AID PROJECT		

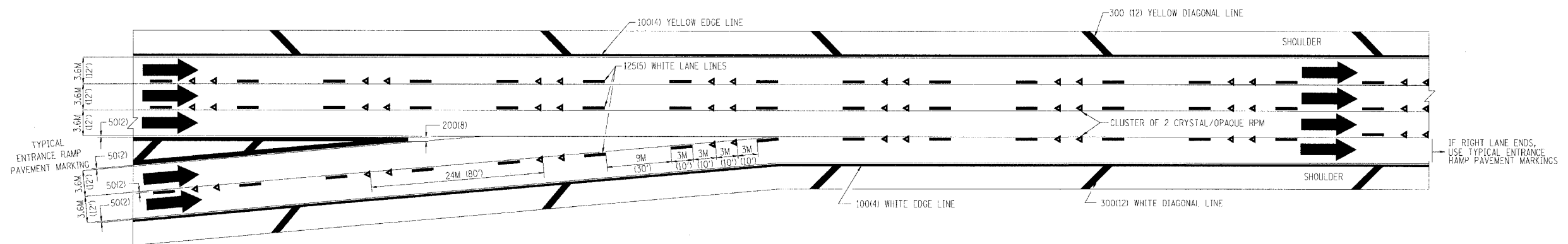
CONTRACT NO. 62854



TYPICAL ENTRANCE/EXIT RAMP COMBINATION PAVEMENT MARKINGS



TYPICAL EXIT ONLY LANE PAVEMENT MARKINGS



TYPICAL TWO LANE ENTRANCE RAMP PAVEMENT MARKINGS

•DATE-TIME•
•DGN-SPEC•
VI-TC12

REVISIONS	
NAME	DATE
DWS	1/90
DWS	5/91

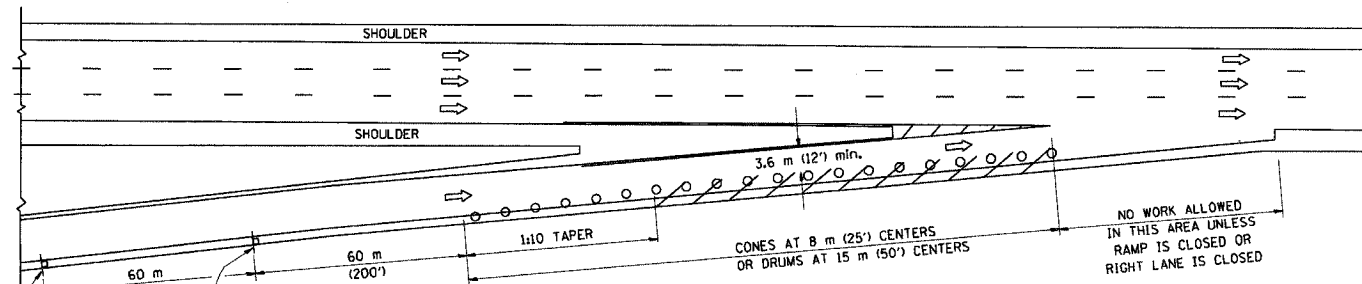
ILLINOIS DEPARTMENT OF TRANSPORTATION

**MULTI-LANE FREEWAY
PAVEMENT MARKING
DETAILS**

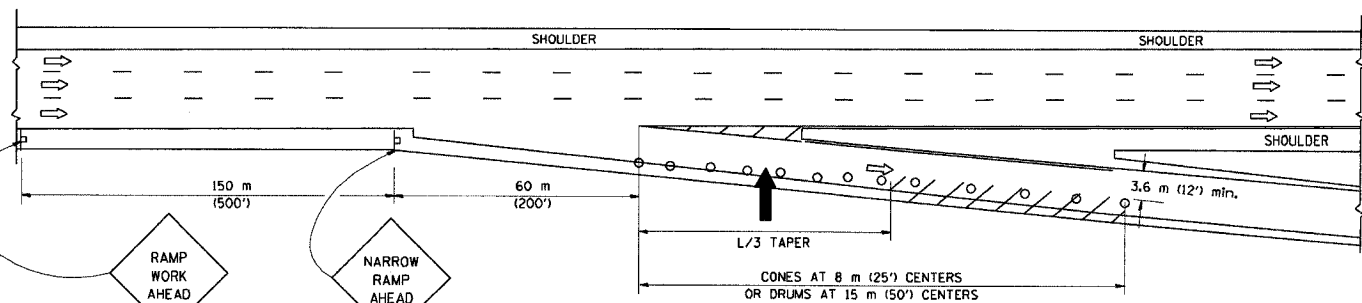
SCALE: NONE
DATE: **DATE**

DRAWN BY C.A.D.D.
CHECKED BY

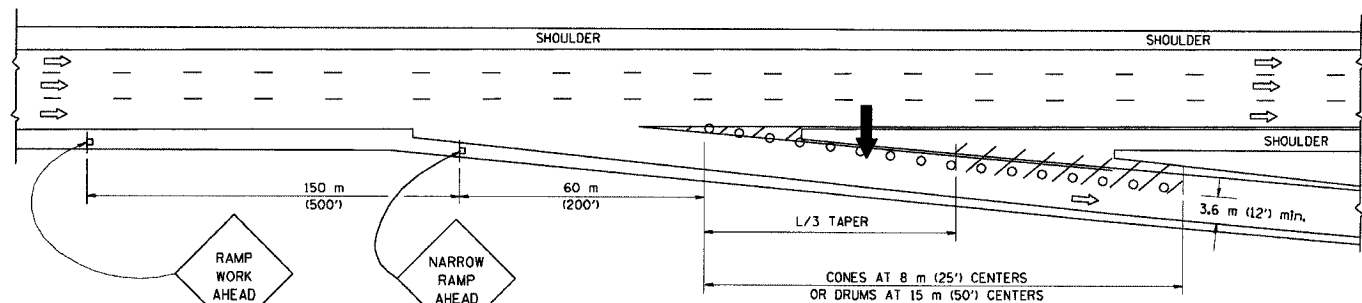
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

- ARROWBOARD
- 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 NOTES

1. THE "L" DISTANCE EQUALS:

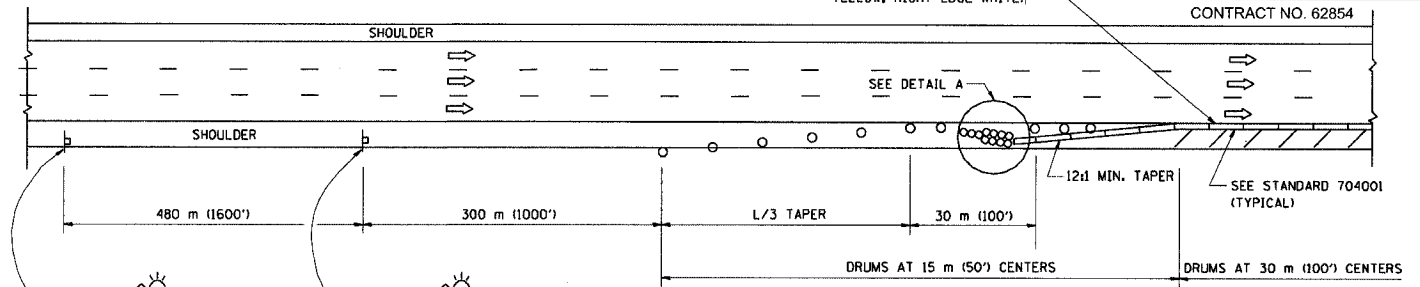
SPEED LIMIT	FORMULAS
80 km/h (45 mph) OR GREATER:	METRIC: $L=0.65(W/S)$ ENGLISH: $L=(W/15)$

W = WIDTH OF OFFSET IN METERS (FEET)
S = NORMAL POSTED SPEED KM/H (MPH)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

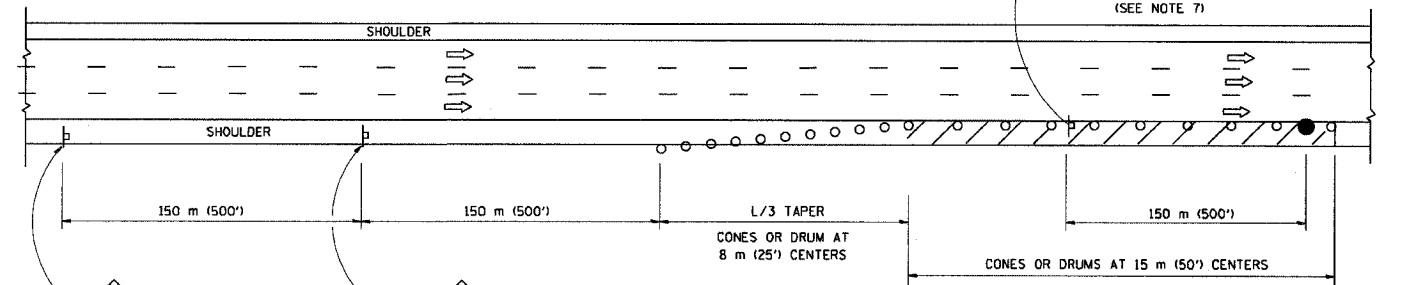
SHOULDER CLOSURE DETAILS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	169
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

CONTRACT NO. 62854

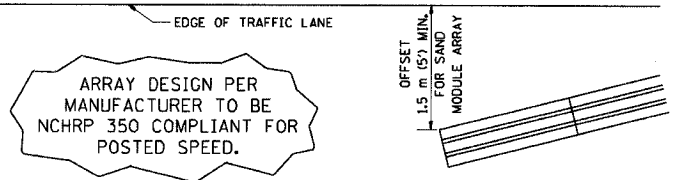


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 4.5 m (15') TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"
IMPACT ATTENUATOR, TEMPORARY
(SEE NOTE 5)

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03

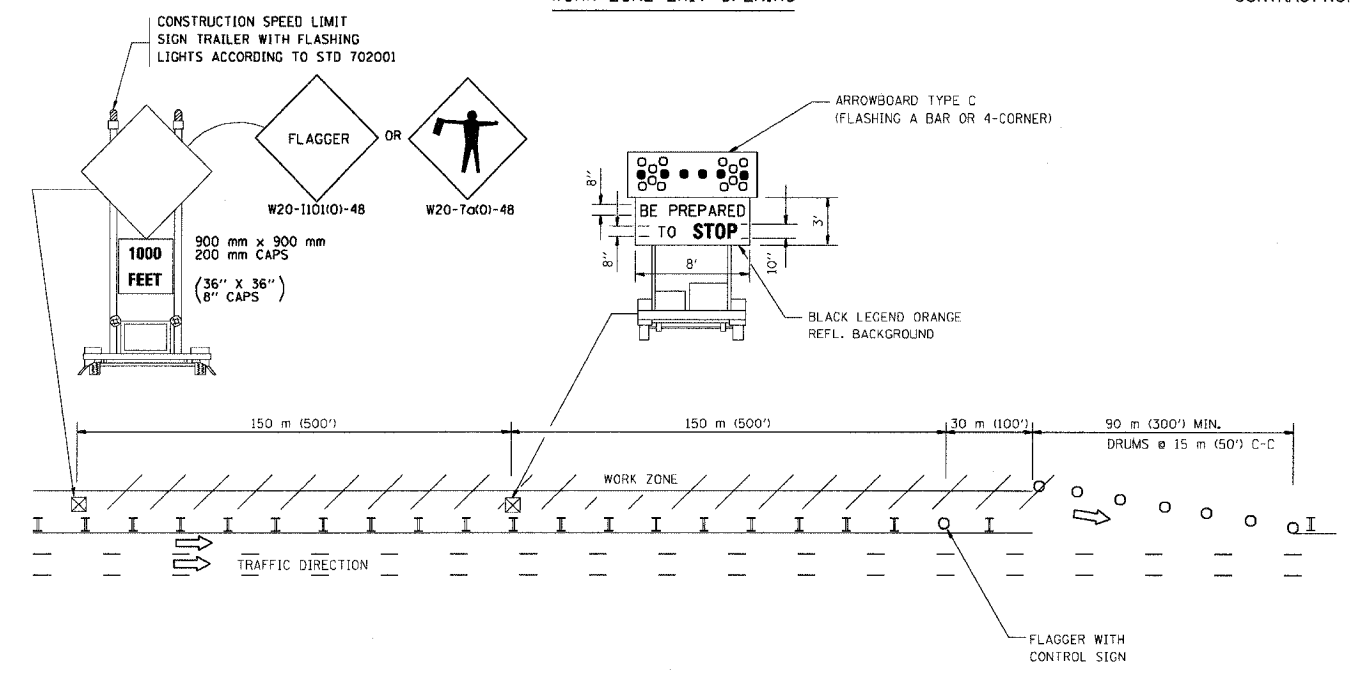
SCALE: NONE
DATE: 05/06/2003
DRAWN BY: DWS
DESIGNED BY: DWS
CHECKED BY:

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

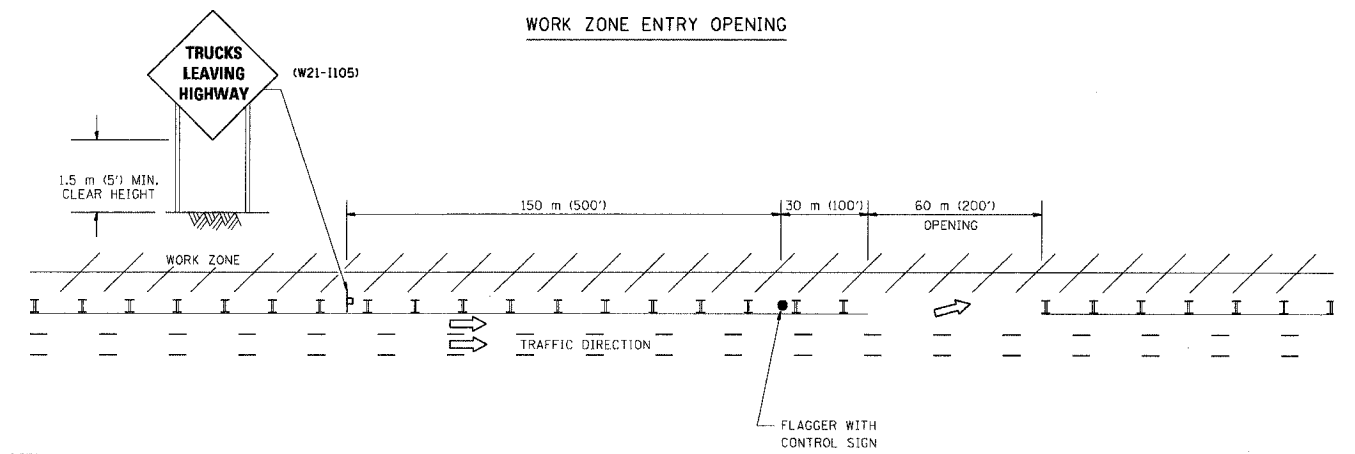
CONTRACT NO. 62854

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. The Arrowboard, the Flagger Ahead trailer mounted sign, and the Trucks Leaving Highway sign shall be removed or turned away from traffic and the exit and entry openings shall be closed when the flagging operation ceases.
2. Work Zone Exit Openings should be a minimum of one half mile apart.
3. Exiting the work zone at any place other than at a Work Zone Exit Opening will be prohibited.
4. All vehicles shall enter the work zone at entry openings, using their turn signals to warn motorists

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION

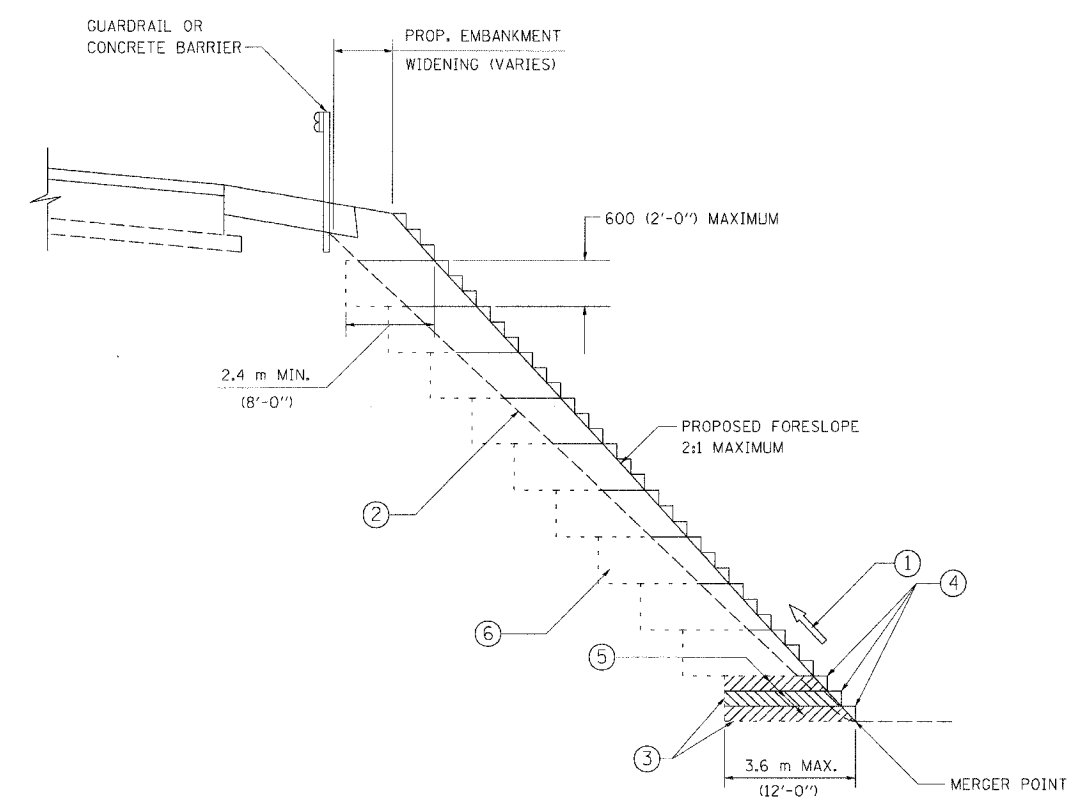
REVISIONS	
NAME	DATE
DWS	8/98
JAF	4/03

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

SCALE: NONE
DATE 05/06/2003
DRAWN BY CADD
CHECKED BY TC-18

F. A. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	171
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62854



TYPICAL BENCHING DETAIL
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.04 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 200 (8-INCH) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.06 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION (SPECIAL)". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT
WIDENING

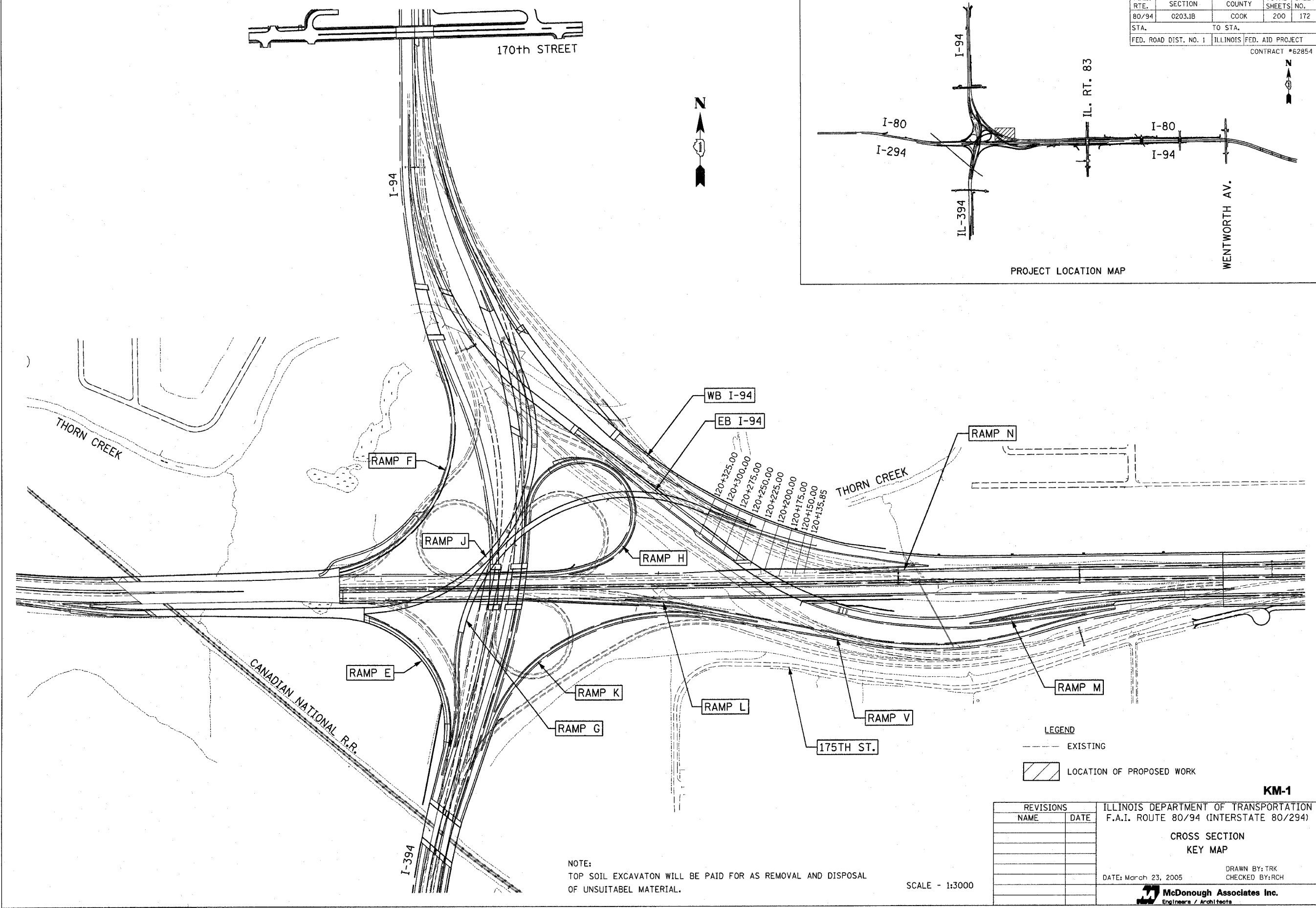
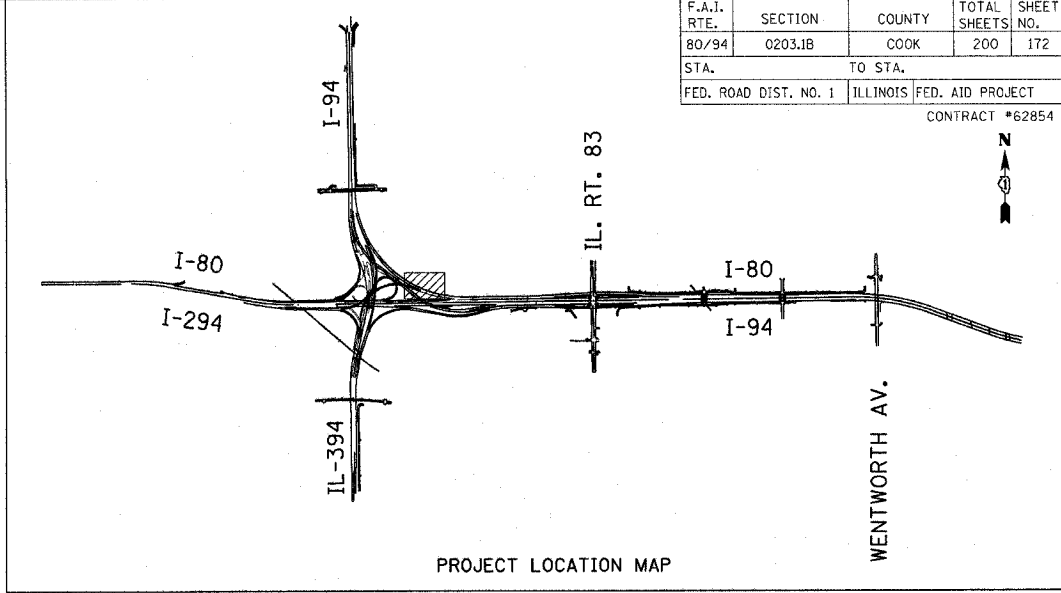
REVISIONS	
NAME	DATE

SCALE: NONE
DATE 10/18/2002

DRAWN BY: CADD
CHECKED BY: S.E.B.
BD-51

REVISION DATE:

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203JB	COOK	200	172
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT #62854				



NOTE:
TOP SOIL EXCAVATION WILL BE PAID FOR AS REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL.

SCALE - 1:3000

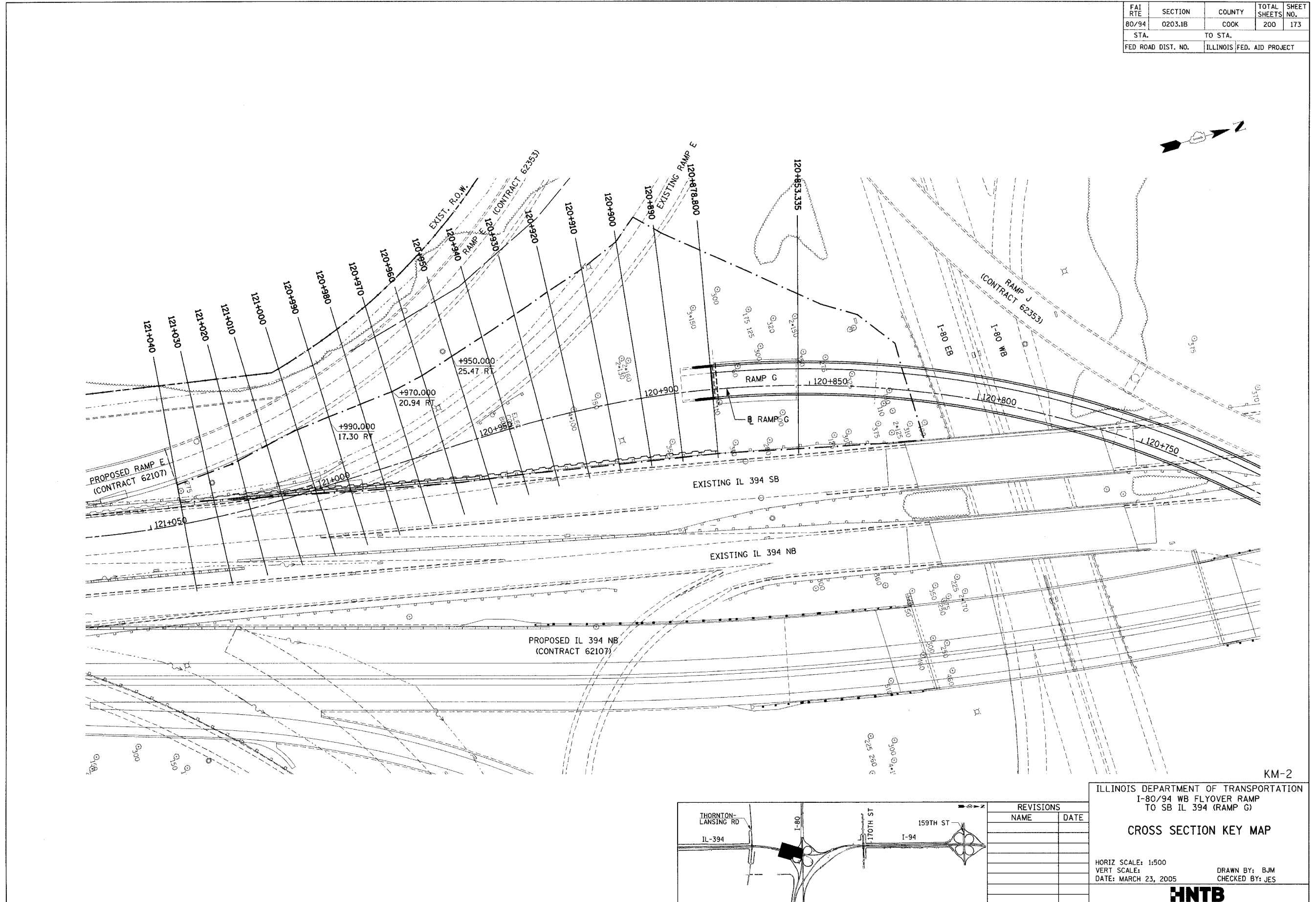
LEGEND
 --- EXISTING
 [Hatched Box] LOCATION OF PROPOSED WORK

REVISIONS	
NAME	DATE

KM-1
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 80/94 (INTERSTATE 80/294)
 CROSS SECTION
 KEY MAP
 DATE: March 23, 2005
 DRAWN BY: TRK
 CHECKED BY: RCH
McDonough Associates Inc.
 Engineers / Architects

Contract: 2014060226.dgn 3/23/2005 3:07:29 PM

FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	173
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

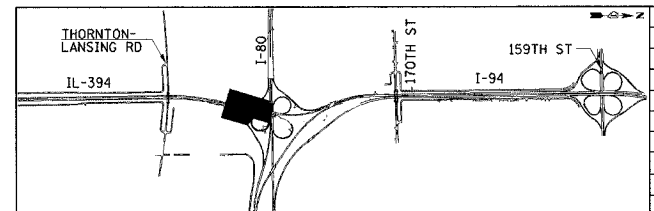


KM-2

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94 WB FLYOVER RAMP
TO SB IL 394 (RAMP G)

CROSS SECTION KEY MAP

HORIZ SCALE: 1:500
VERT SCALE:
DATE: MARCH 23, 2005
DRAWN BY: BJM
CHECKED BY: JES

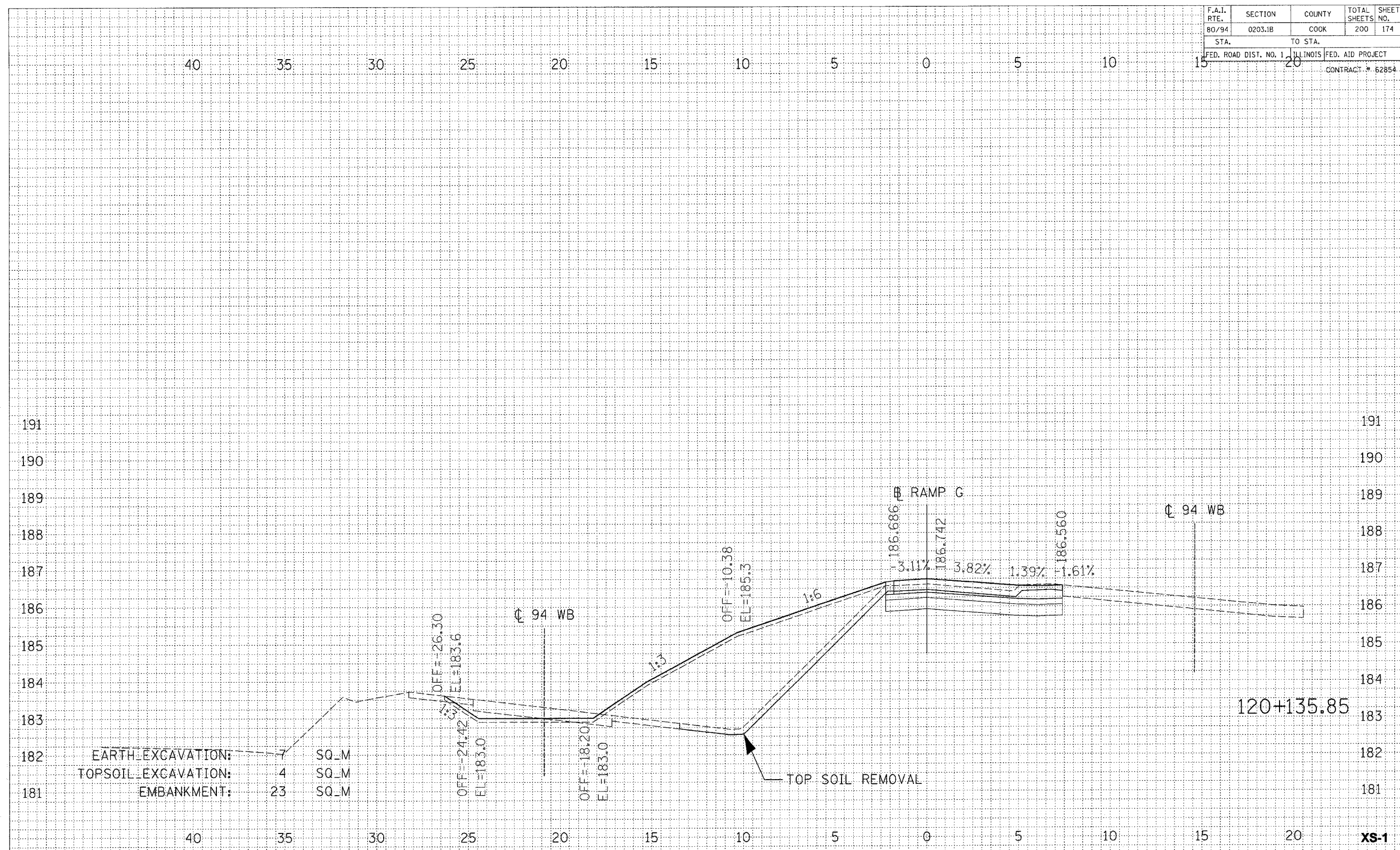


REVISIONS	
NAME	DATE

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	174
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT # 62854				

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

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



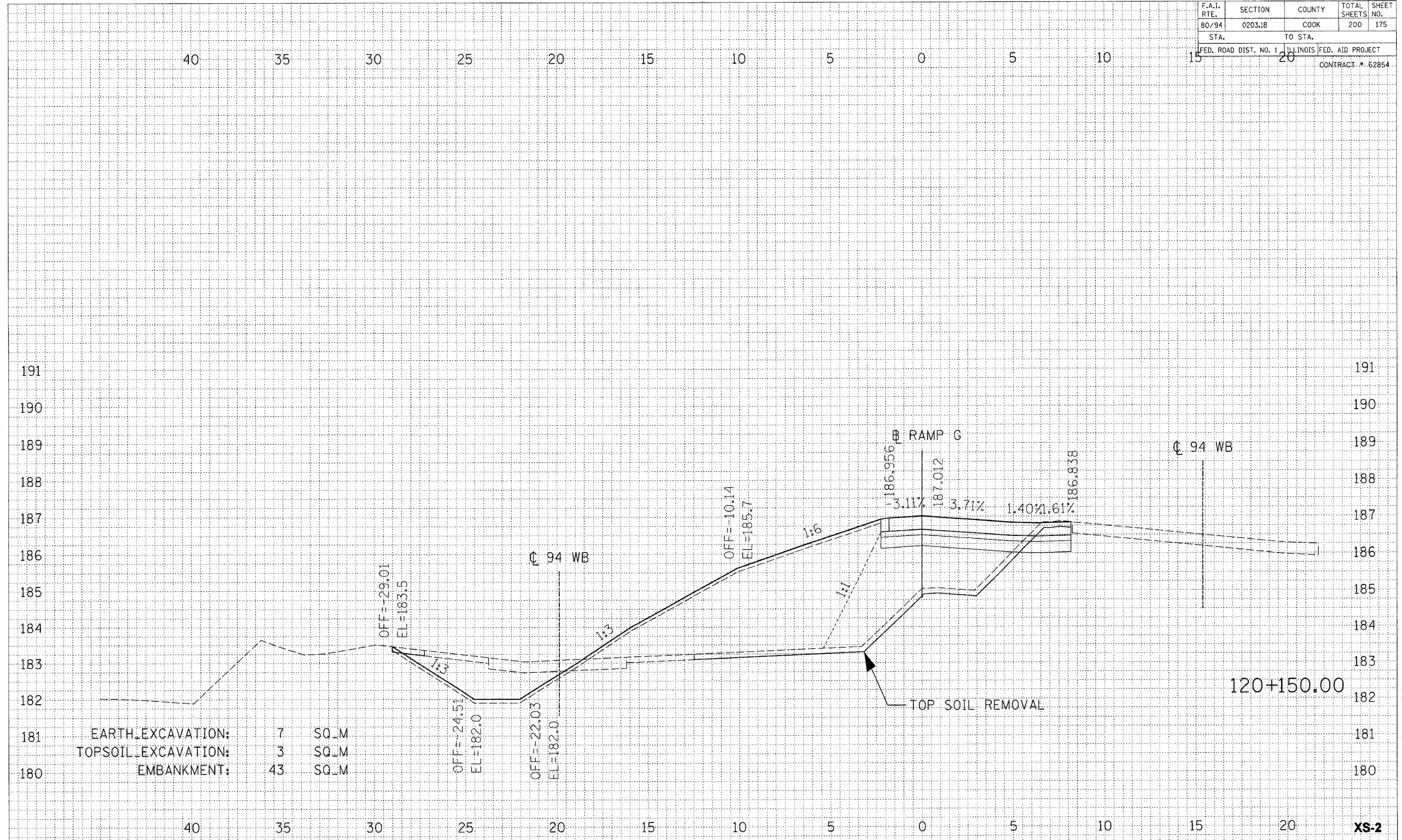
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. ROUTE 80/94 (INTERSTATE 80/294)
NAME	DATE	
		CROSS SECTIONS RAMP G HORIZ. SCALE: 1:100 VERT. SCALE: 1:50 DATE: March 23, 2005 DRAWN BY: TRK CHECKED BY: RCH McDonough Associates Inc. Engineers / Architects

XS-1

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	175
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
		CONTRACT # 62854		

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

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



EARTH EXCAVATION: 7 SQ_M
 TOPSOIL EXCAVATION: 3 SQ_M
 EMBANKMENT: 43 SQ_M

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 80/94 (INTERSTATE 80/294)
CROSS SECTIONS
RAMP G
 HORIZ. SCALE: 1:100
 VERT. SCALE: 1:50
 DATE: March 23, 2005
 DRAWN BY: TRK
 CHECKED BY: RCH

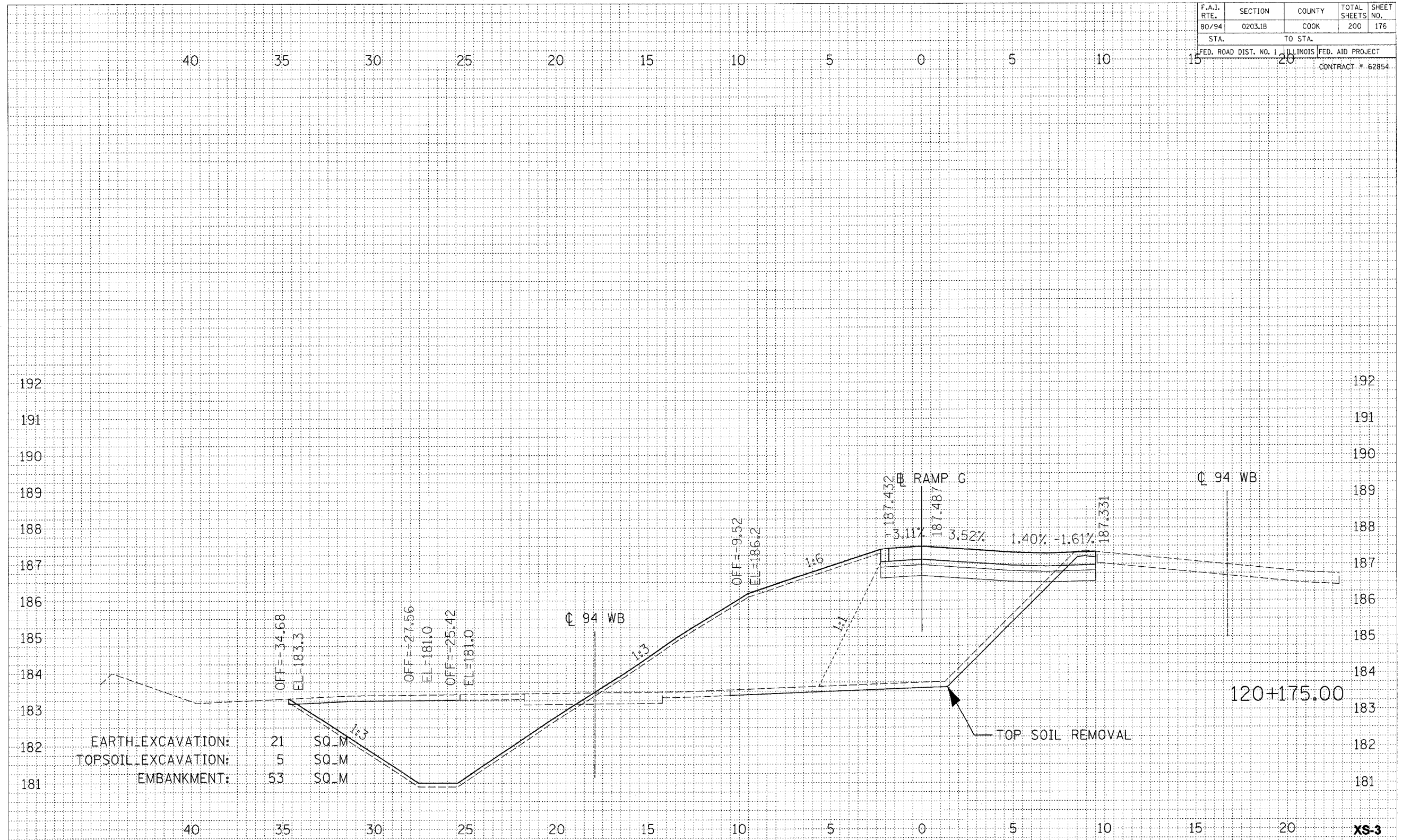
McDonough Associates Inc.
 Engineers / Architects

XS-2

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	176
STA.		TO STA.		
15		20		
ILLINOIS FED. AID PROJECT				
CONTRACT # 62854				

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

ORIGINAL SURVEY	DATE
BY	
SURVEYED	
PLANNED	
NOTE BOOK	
AREAS CHECKED	
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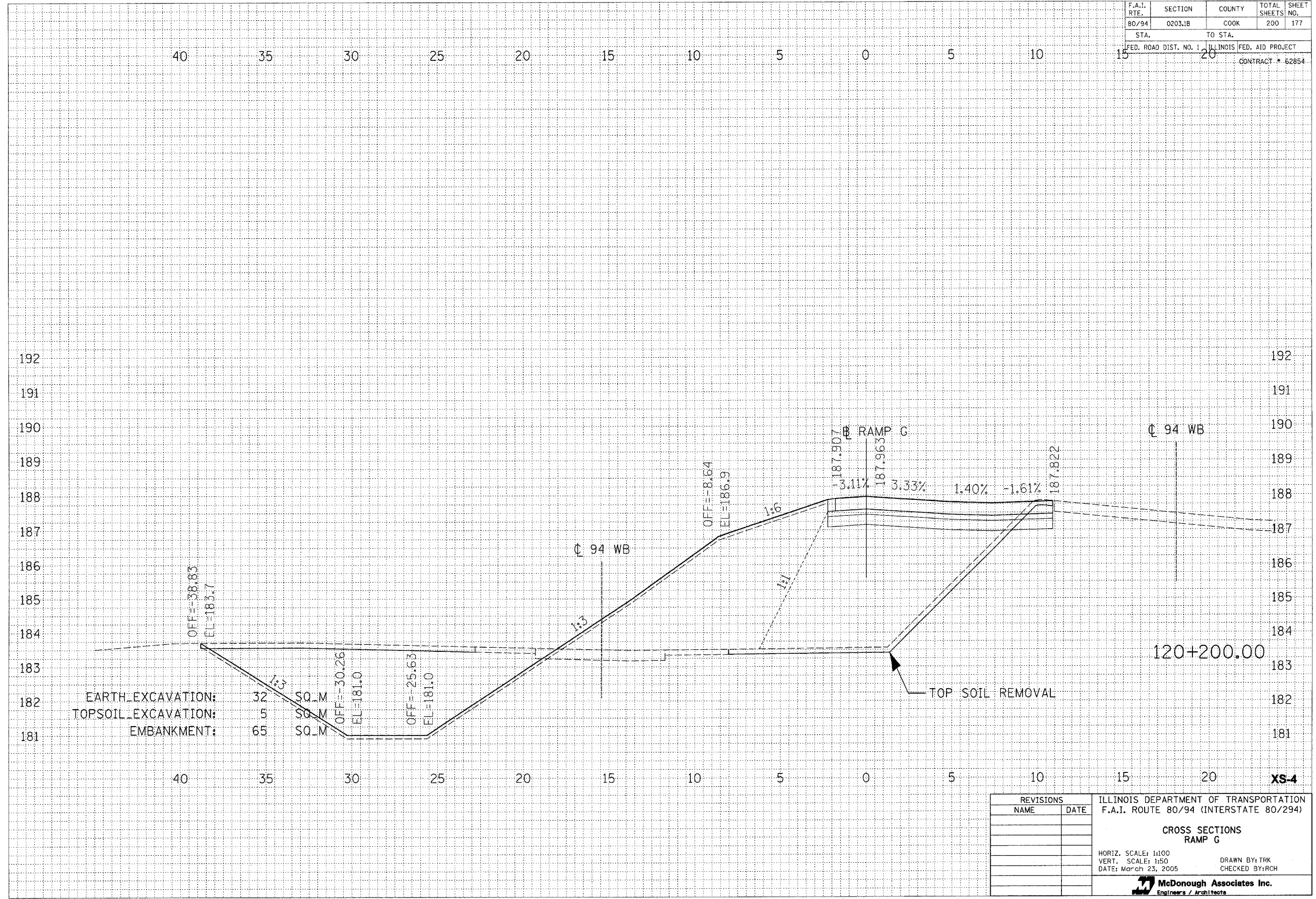
EARTH EXCAVATION: 21 SQ. M
TOPSOIL EXCAVATION: 5 SQ. M
EMBANKMENT: 53 SQ. M

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. ROUTE 80/94 (INTERSTATE 80/294)
NAME	DATE	
		CROSS SECTIONS RAMP G HORIZ. SCALE: 1:100 VERT. SCALE: 1:50 DATE: March 23, 2005 DRAWN BY: TRK CHECKED BY: RCH McDonough Associates Inc. Engineers / Architects

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	177
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT # 62854				

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

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

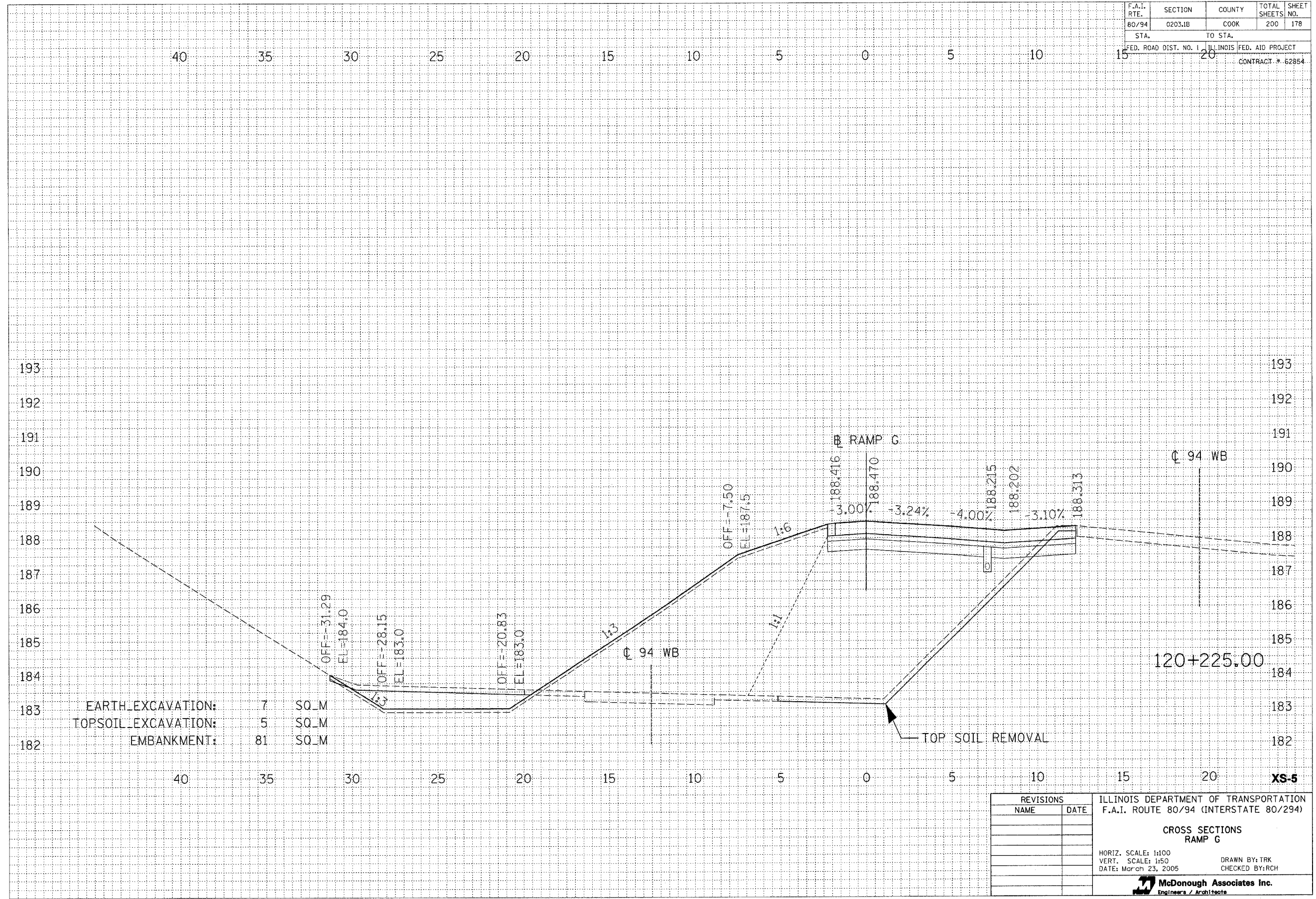


REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. ROUTE 80/94 (INTERSTATE 80/294)
NAME	DATE	
		CROSS SECTIONS RAMP G HORIZ. SCALE: 1:100 VERT. SCALE: 1:50 DATE: March 23, 2005 DRAWN BY: TRK CHECKED BY: RCH McDonough Associates Inc. Engineers / Architects

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	178
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
		CONTRACT # 62B54		

FINAL SURVEY	DATE
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PLOTTED	
NOTE BOOK	
AREAS CHECKED	

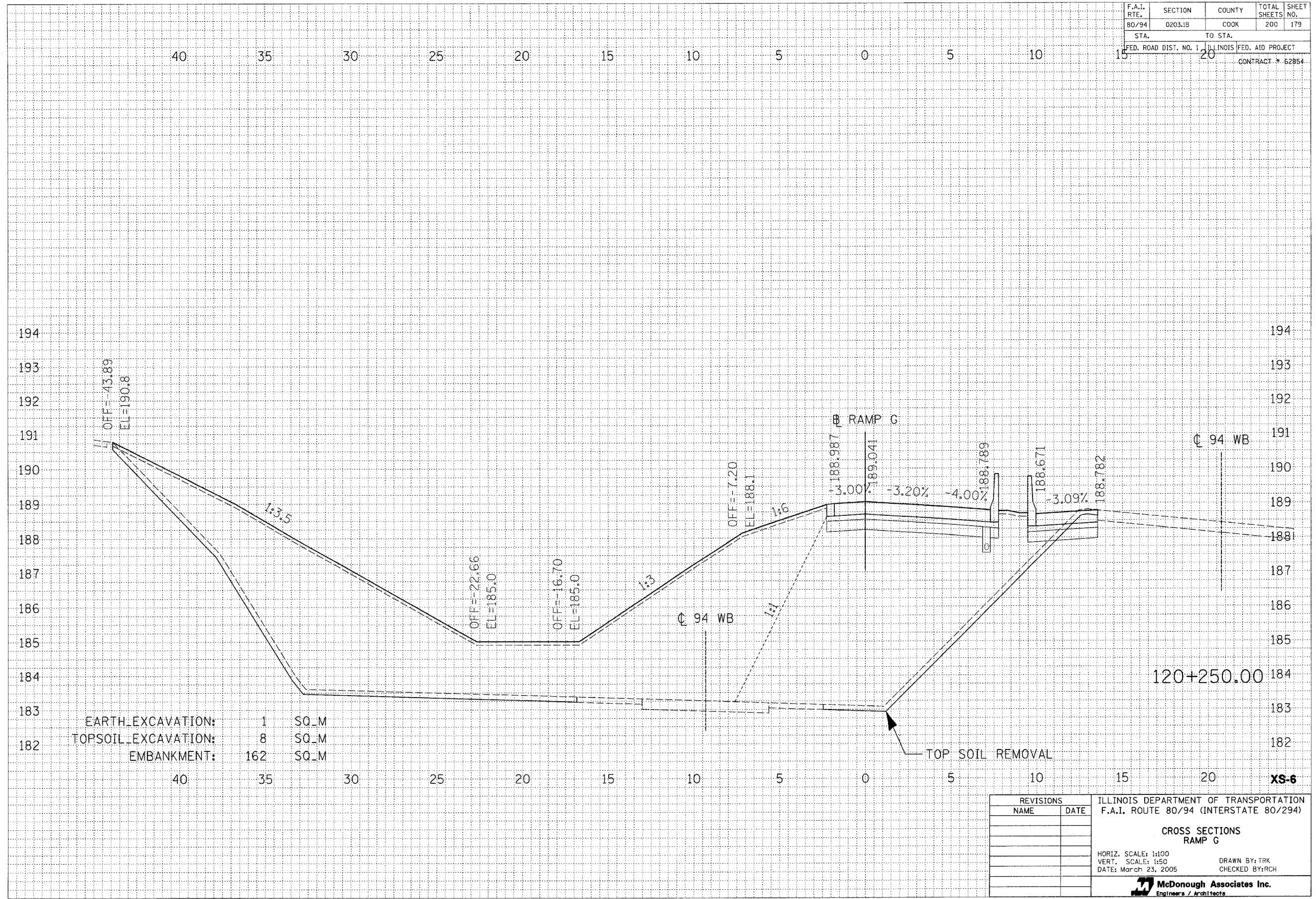
ORIGINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	179
STA.		TO STA.		
15		20		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT # 62854				

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

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



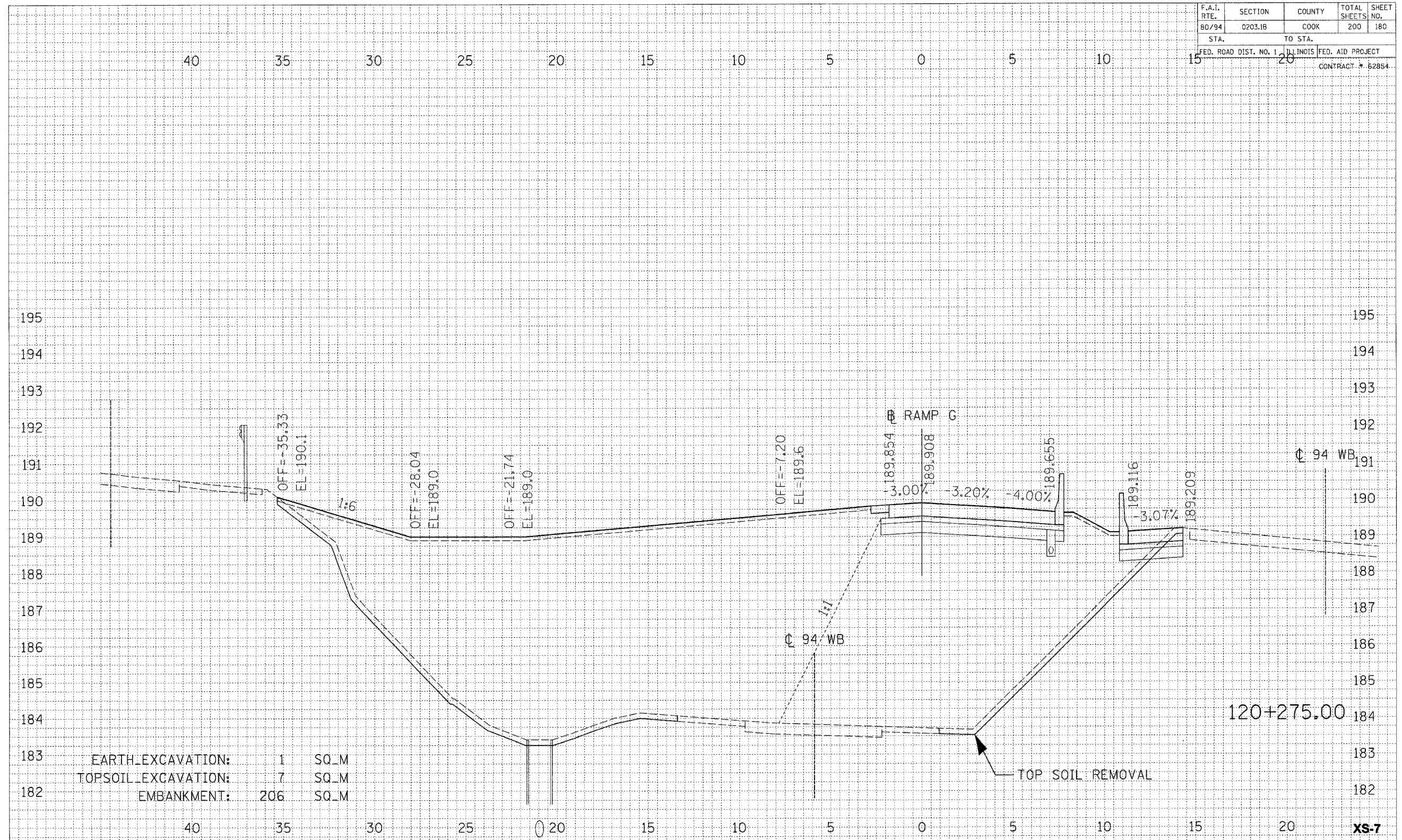
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. ROUTE 80/94 (INTERSTATE 80/294)
NAME	DATE	
		CROSS SECTIONS RAMP G HORIZ. SCALE: 1:100 VERT. SCALE: 1:50 DATE: March 23, 2005 DRAWN BY: TRK CHECKED BY: RCH

McDonough Associates Inc.
Engineers / Architects

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	180
STA.		TO STA.		
15		20		
ILLINOIS FED. AID PROJECT				
CONTRACT # 62854				

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

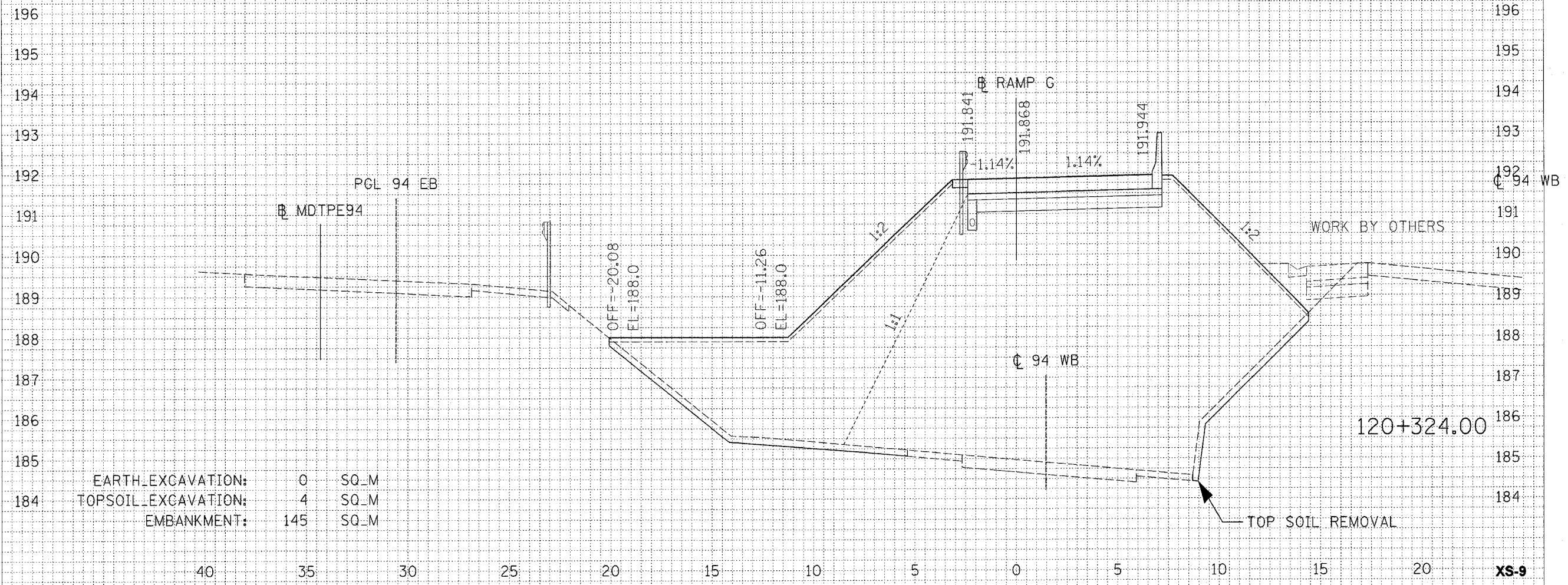


EARTH EXCAVATION:	1	SQ_M
TOPSOIL EXCAVATION:	7	SQ_M
EMBANKMENT:	206	SQ_M

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. ROUTE 80/94 (INTERSTATE 80/294)
NAME	DATE	
		CROSS SECTIONS RAMP G HORIZ. SCALE: 1:100 VERT. SCALE: 1:50 DATE: March 23, 2005 DRAWN BY: TRK CHECKED BY: RCH McDonough Associates Inc. Engineers / Architects

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	182
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
		CONTRACT # 62854		

40 35 30 25 20 15 10 5 0 5 10 15 20



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

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (INTERSTATE 80/294)

**CROSS SECTIONS
RAMP G**

HORIZ. SCALE: 1:100
VERT. SCALE: 1:50
DATE: March 23, 2005

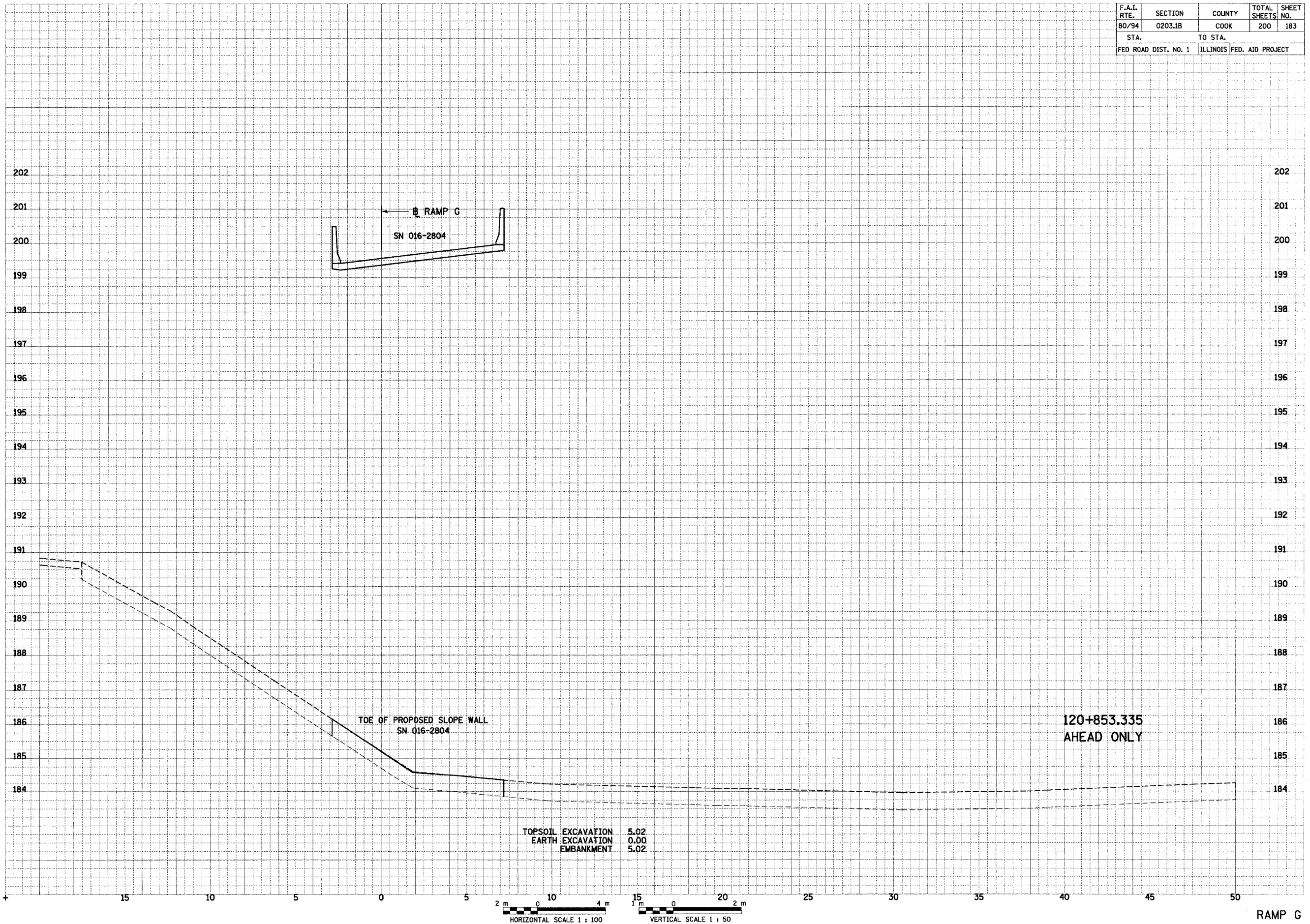
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McDonough Associates Inc.
Engineers / Architects

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	183
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

DATE	BY	SURVEYED	PLOTTED	DATE
		NOTE BOOK	AREAS	CHECKED
		NO.		

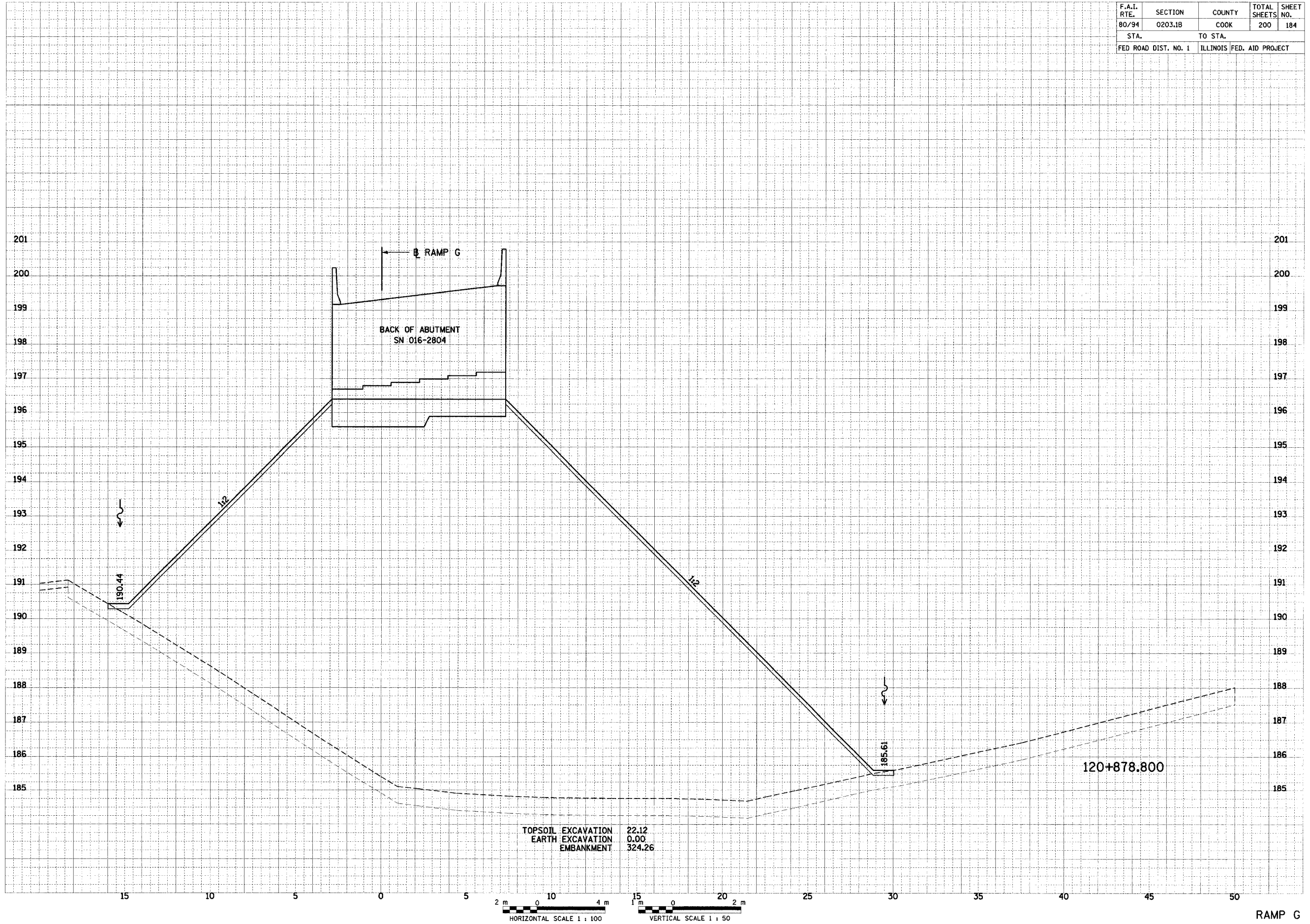
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		NOTE BOOK	AREAS	CHECKED
		NO.		



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	184
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

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

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

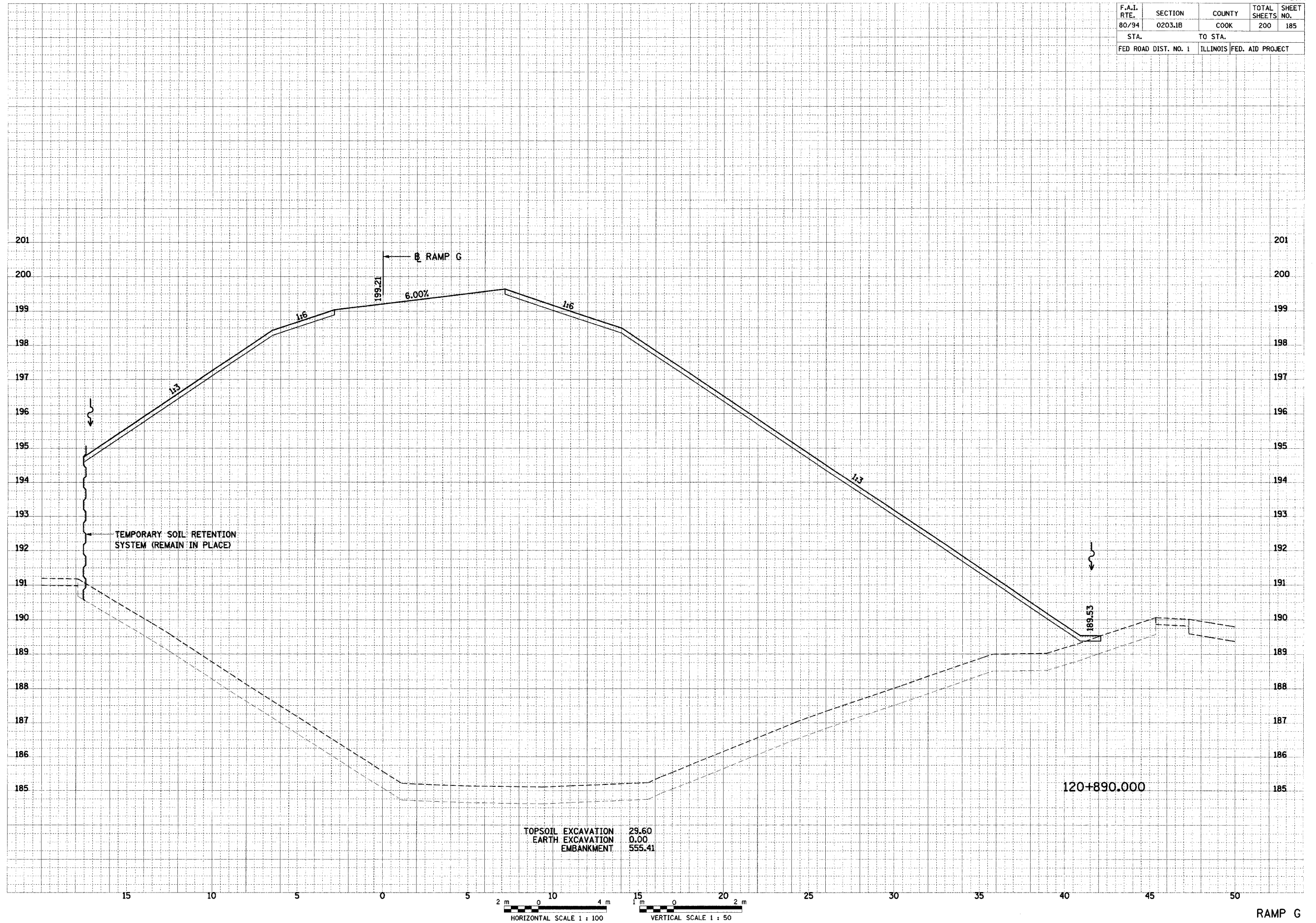


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	185
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

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

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

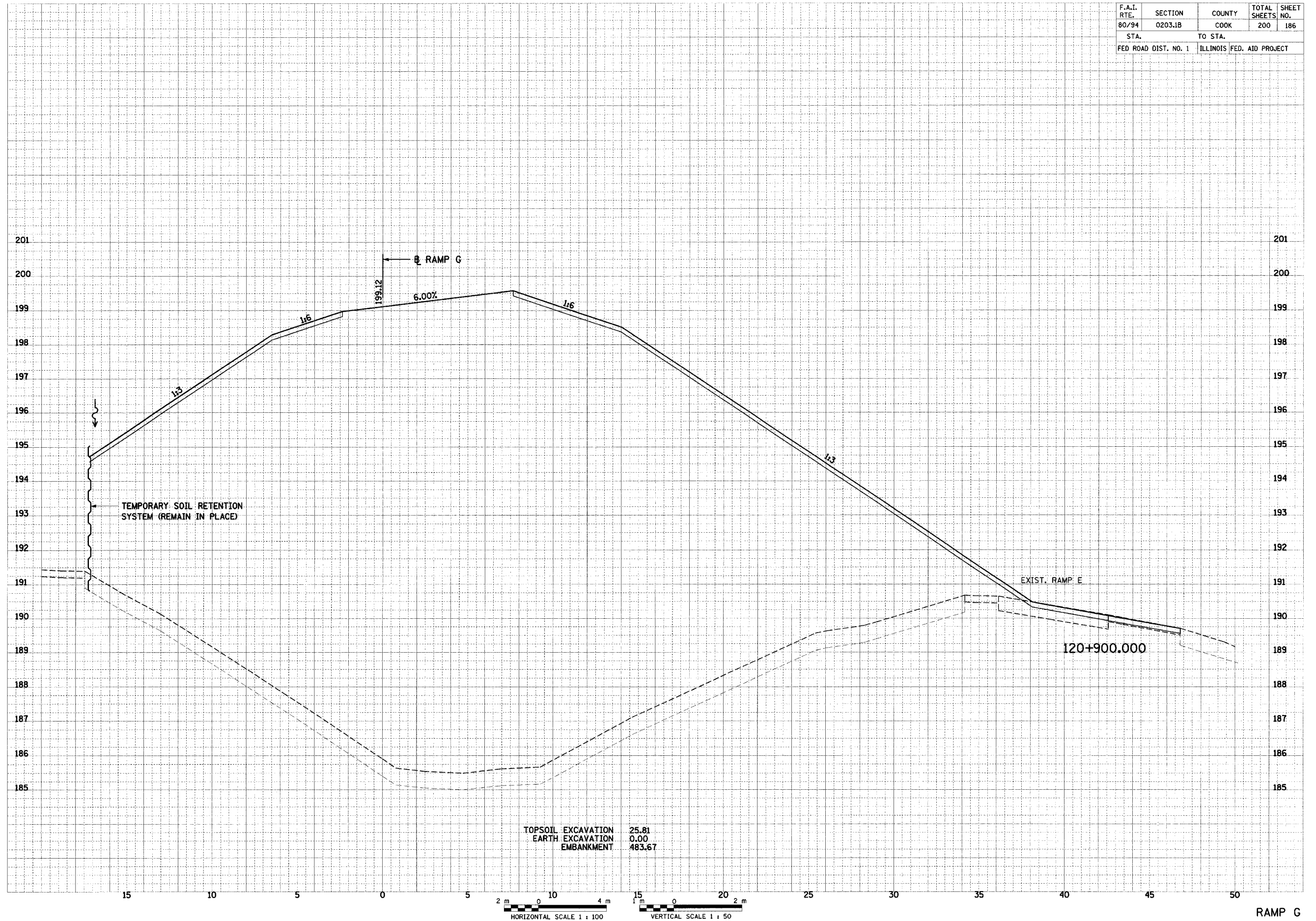


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	186
STA.		TO STA.		
FED ROAD DIST. NO. 1		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		
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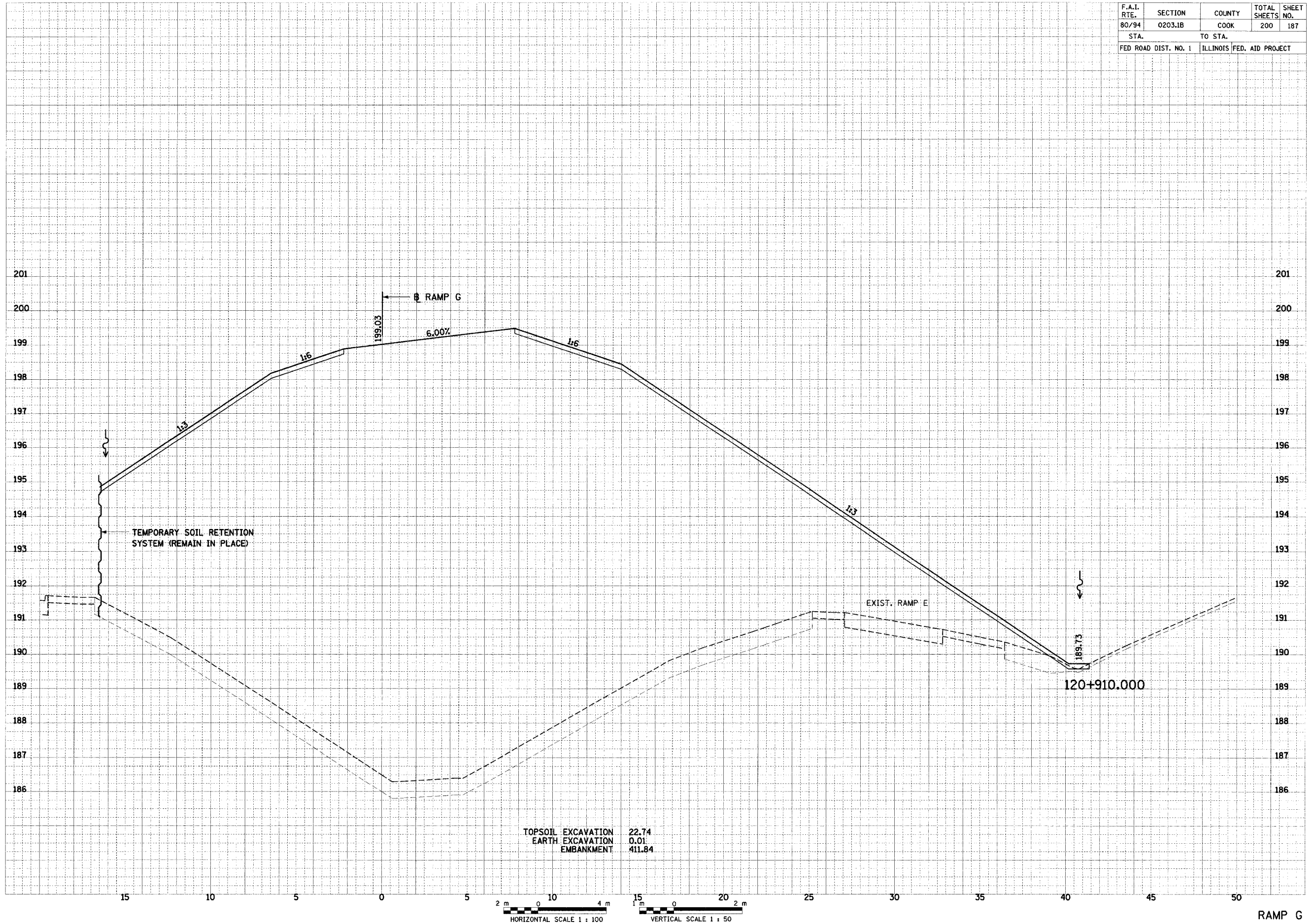


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	187
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
	AREAS	
	CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
	AREAS	
	CHECKED	



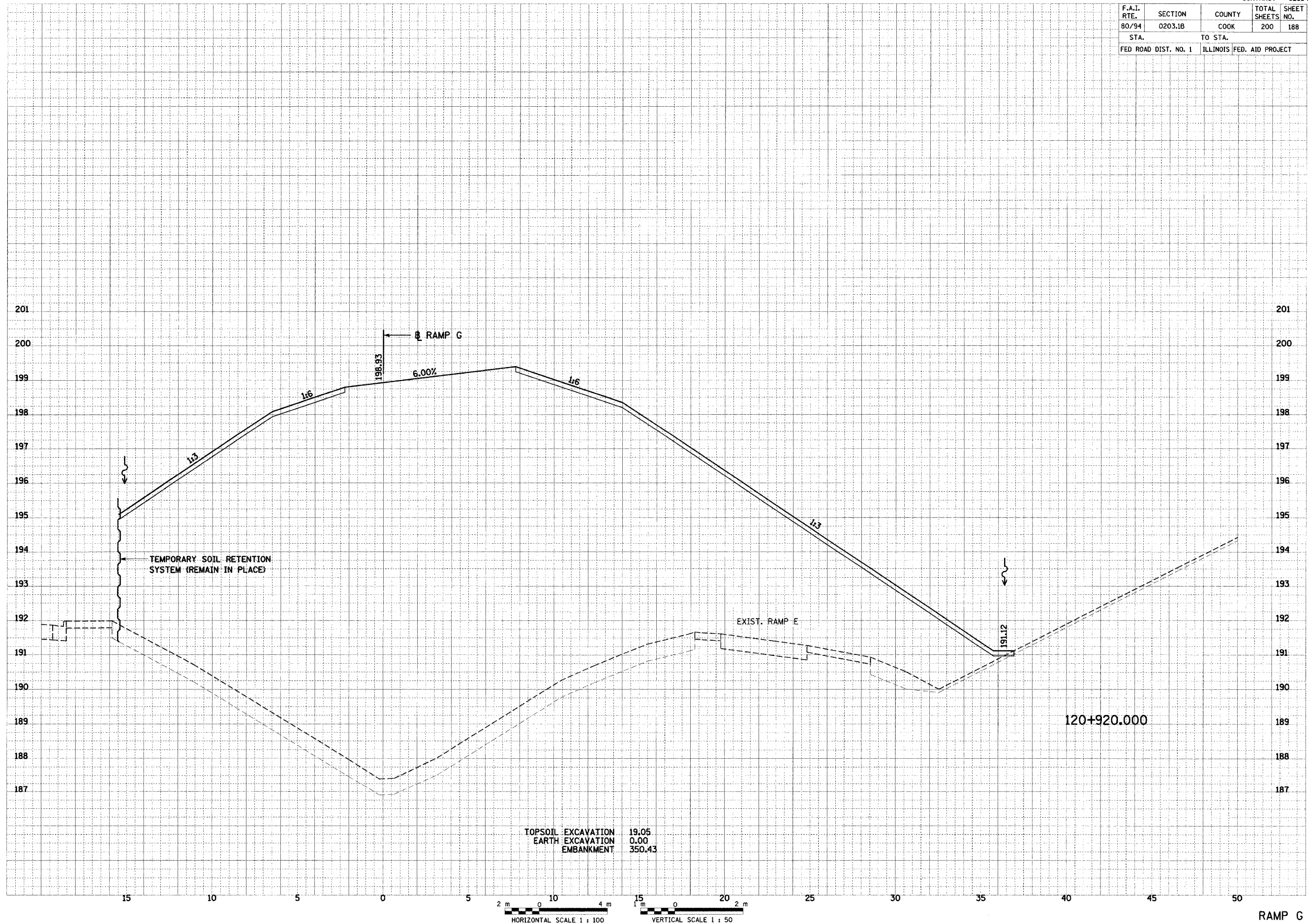
RAMP G

CONTRACT # 62854

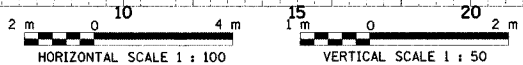
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	188
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
ROUTE BOOK	PLOTTED	
NO.	AREAS	
	CHECKED	

ORIG. SURVEY	SURVEYED	DATE
ROUTE BOOK	PLOTTED	
NO.	AREAS	
	CHECKED	



TOPSOIL EXCAVATION 19.05
 EARTH EXCAVATION 0.00
 EMBANKMENT 350.43

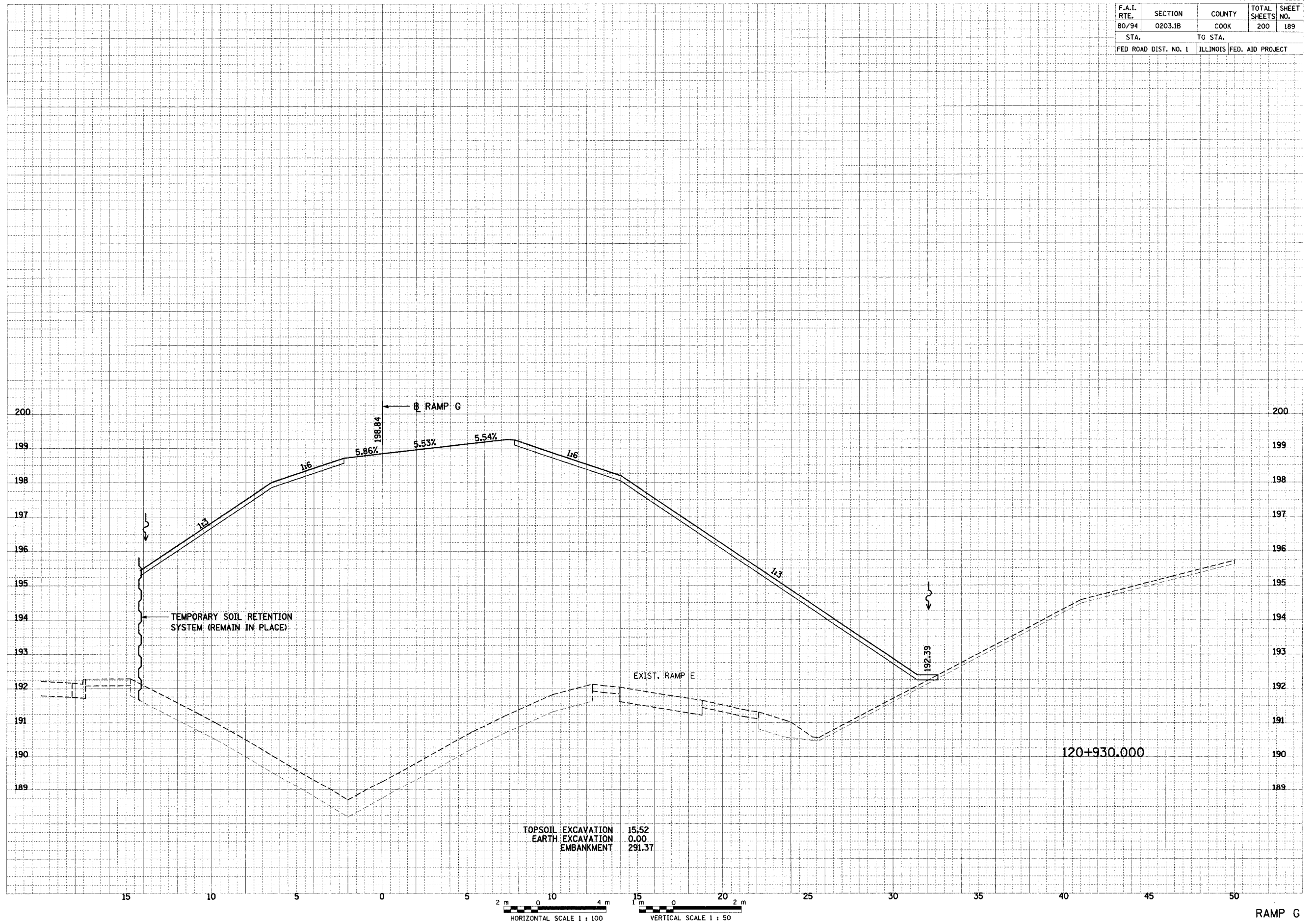


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	189
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

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

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

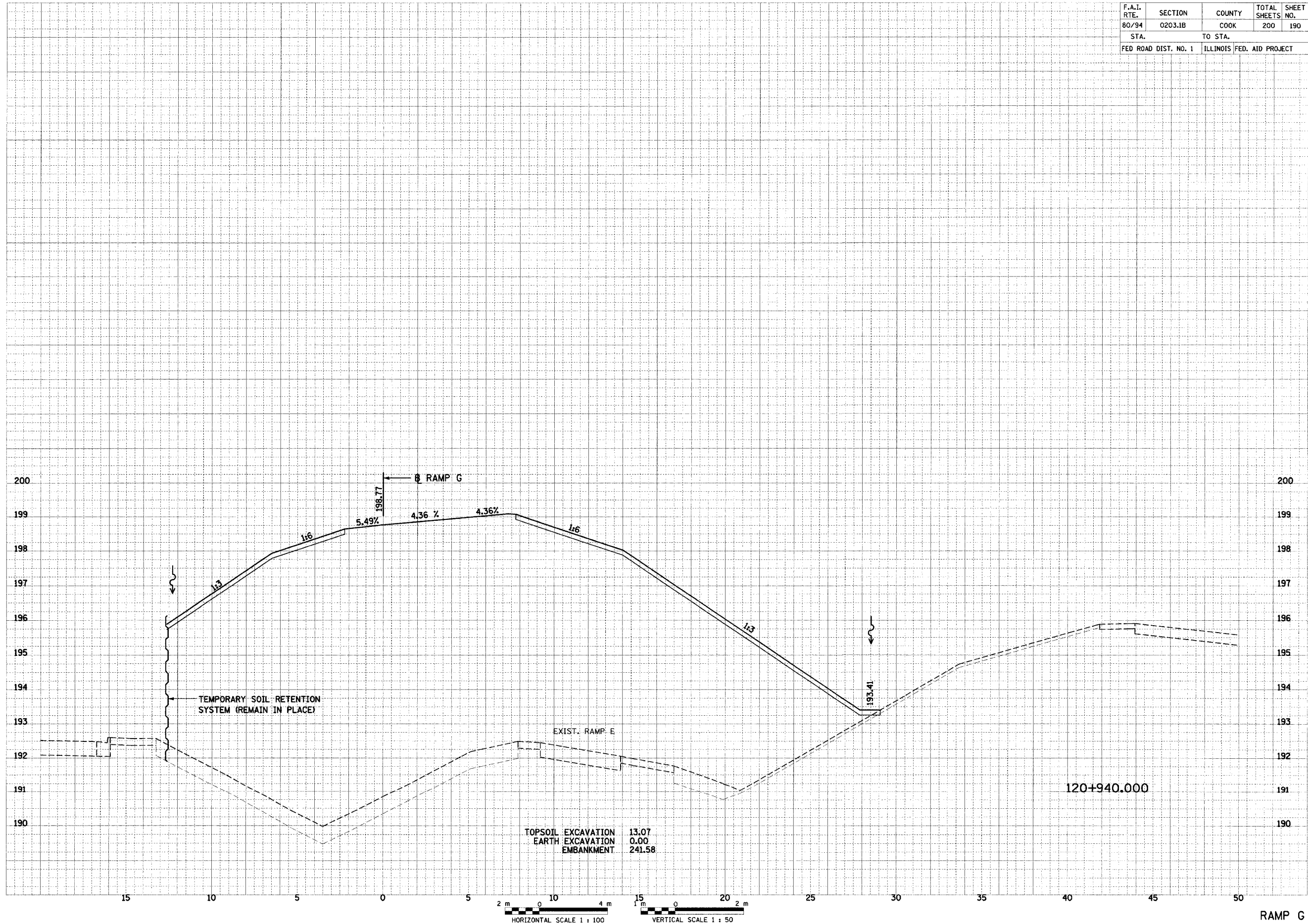


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	190
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY NOTE BOOK NO.	BY	DATE
SUBMITTED		
REPLATE		
AREAS CHECKED		

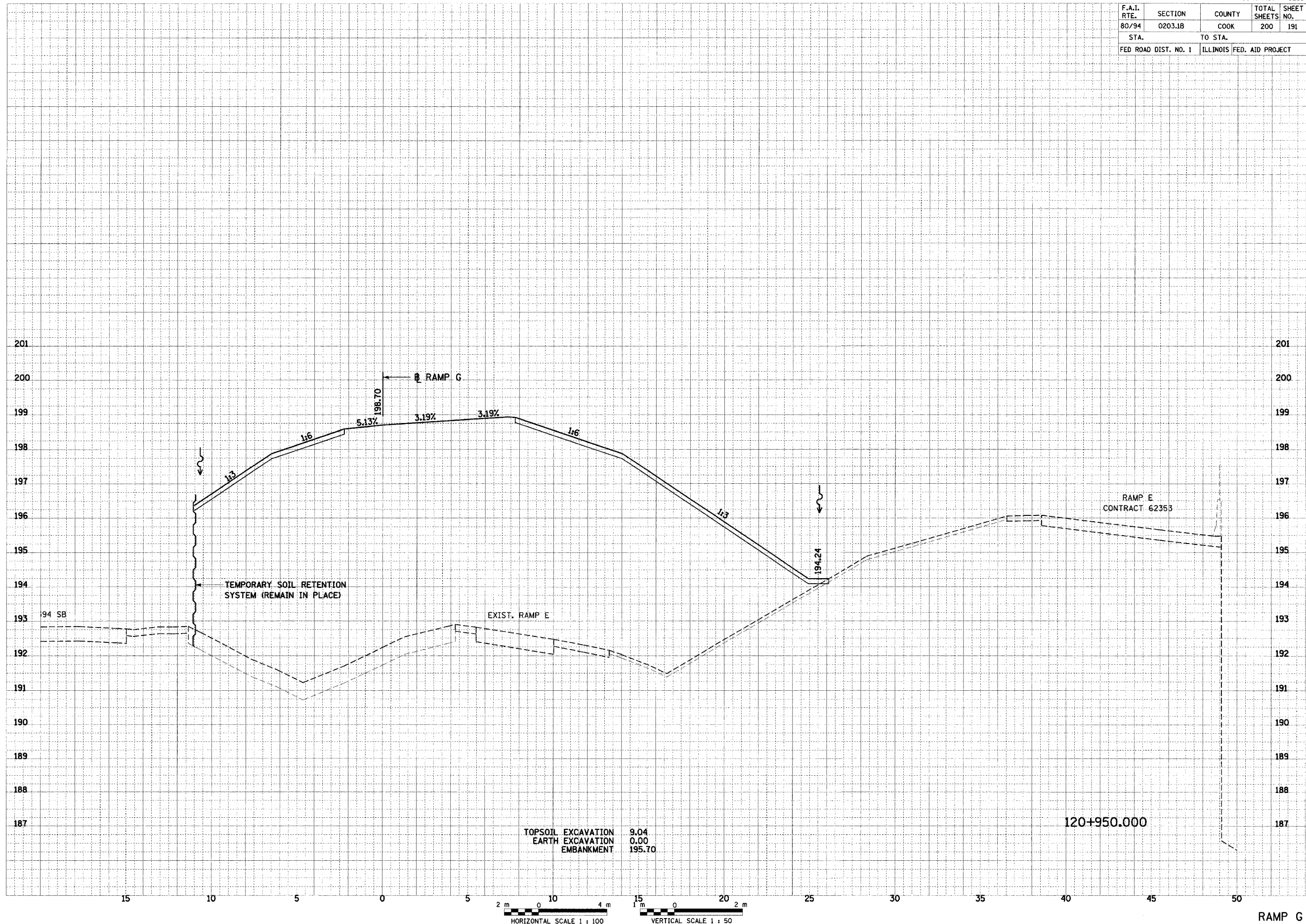
ORIGINAL SURVEY NOTE BOOK NO.	BY	DATE
SUBMITTED		
REPLATE		
AREAS CHECKED		



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	191
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEY NO.	BY
NOTE BOOK NO.	
REPLATE NO.	
AREAS CHECKED	

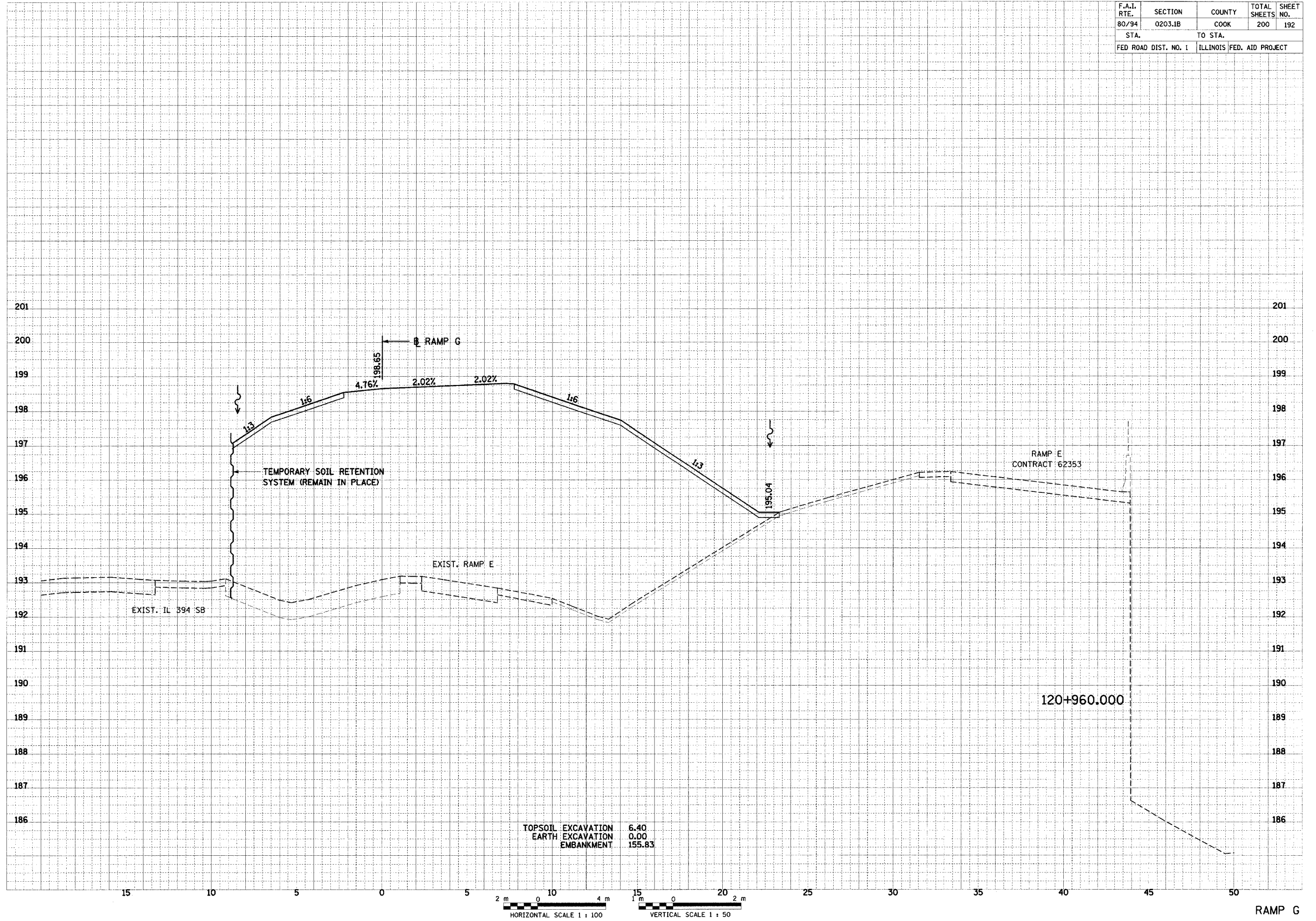
ORIGINAL SURVEY	DATE
SURVEY NO.	BY
NOTE BOOK NO.	
REPLATE NO.	
AREAS CHECKED	



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	192
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	SURVEYED	PLOTTED	DATE
NO.	NO.	NO.	

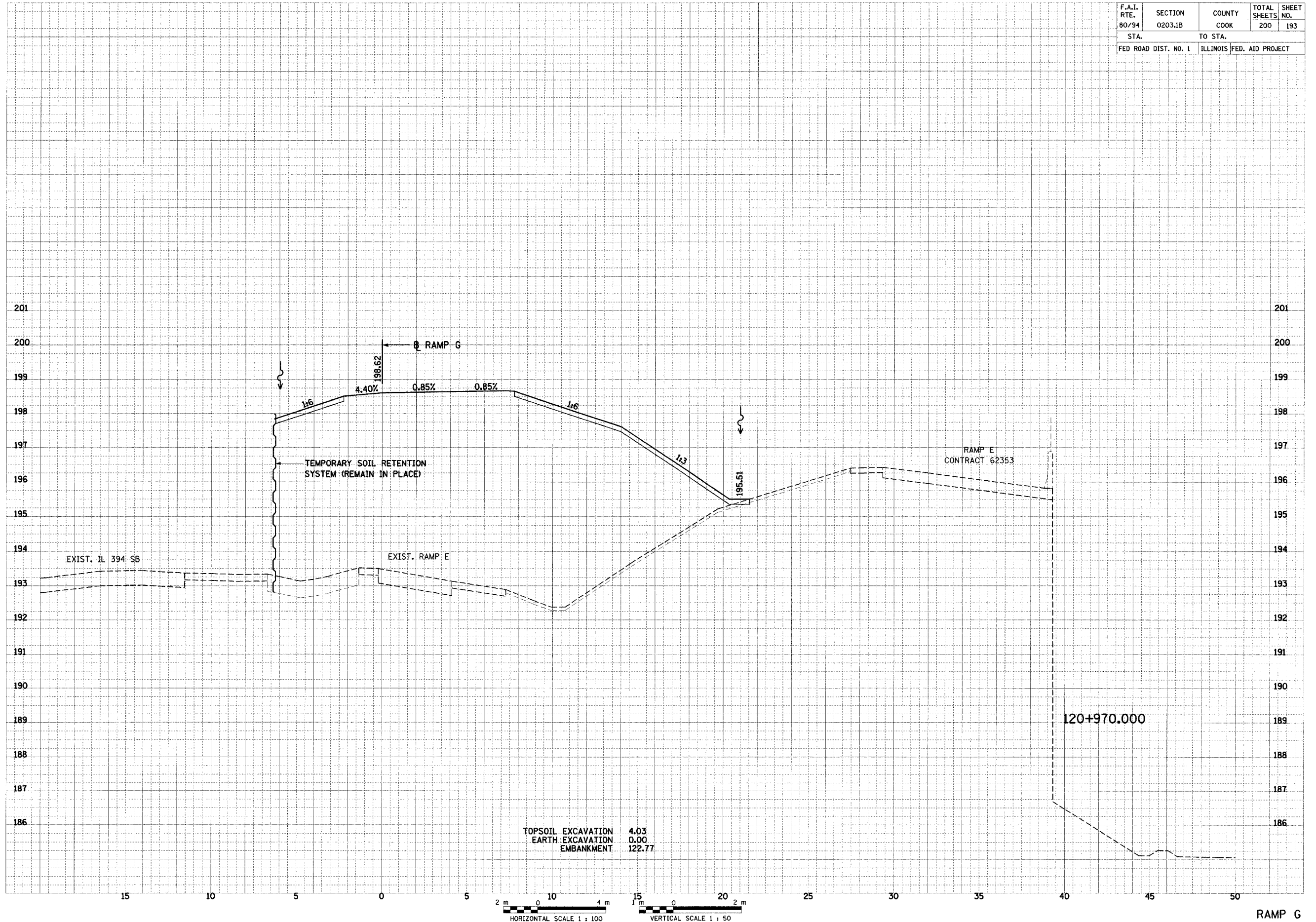
ORIGINAL SURVEY	SURVEYED	PLOTTED	DATE
NO.	NO.	NO.	



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	193
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY NO.	DATE
SUBMITTED	BY
ROUTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY NO.	DATE
SUBMITTED	BY
ROUTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

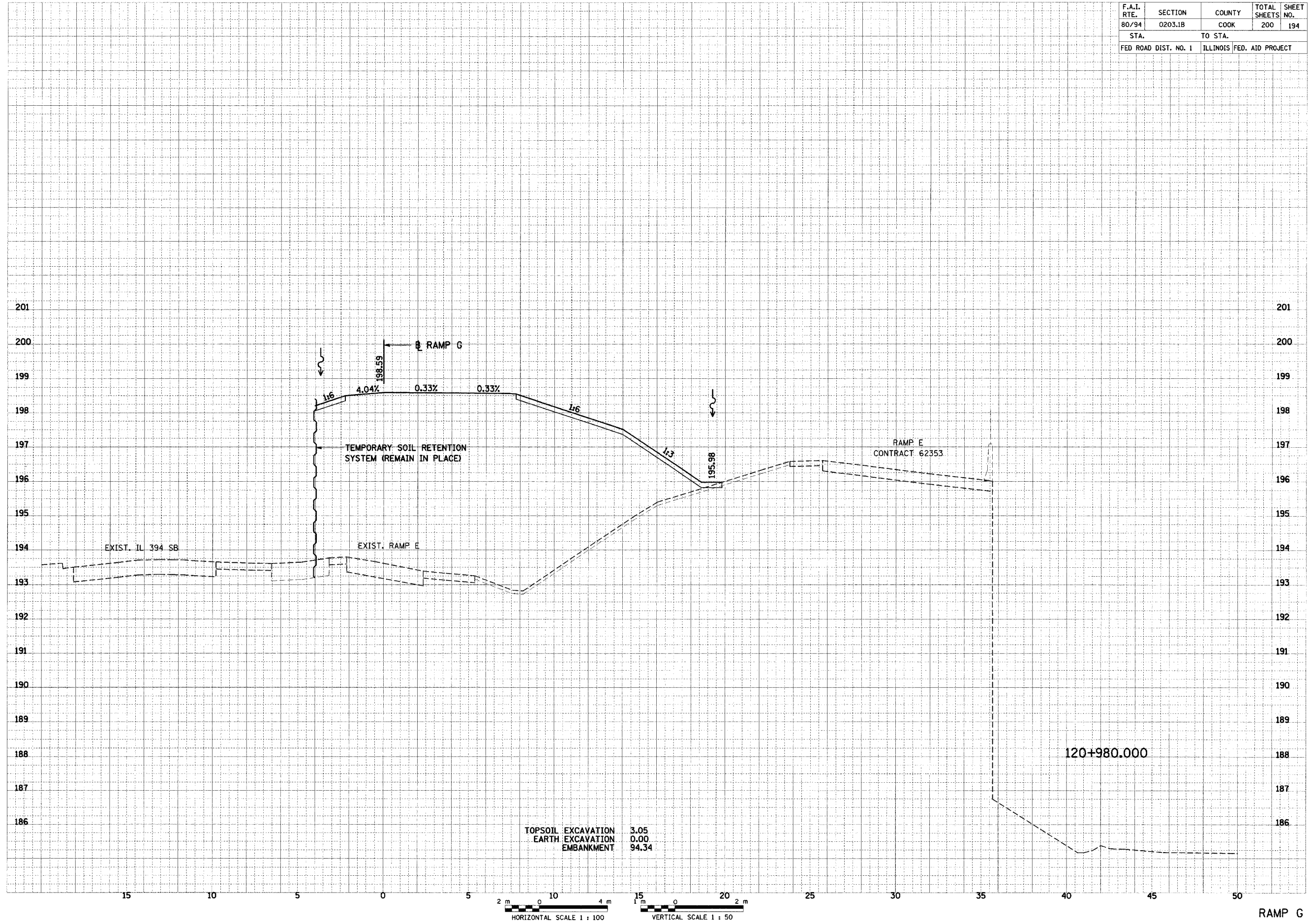


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	194
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL	SURVEYED	DATE
SHEET	PLOTTED	
NOTE BOOK	AREA	
NO.	CHECKED	

ORIGINAL	SURVEYED	DATE
SHEET	PLOTTED	
NOTE BOOK	AREA	
NO.	CHECKED	

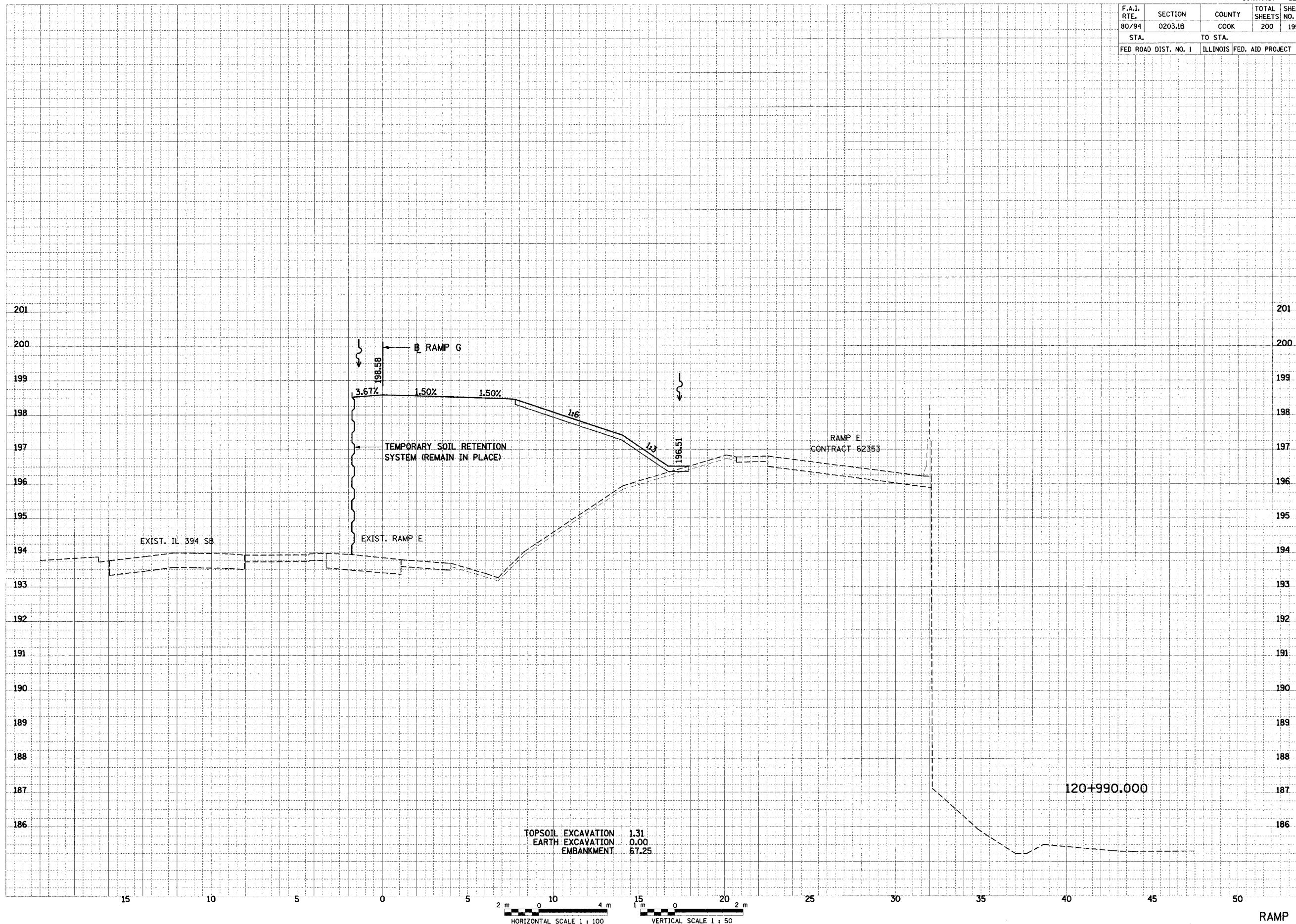


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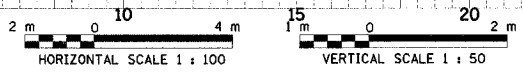
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	195
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY NO.	BY	DATE
NO.		
REVISIONS CHECKED		

ORIGINAL SURVEY NO.	BY	DATE
NO.		
REVISIONS CHECKED		



TOPSOIL EXCAVATION 1.31
 EARTH EXCAVATION 0.00
 EMBANKMENT 67.25

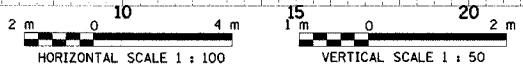
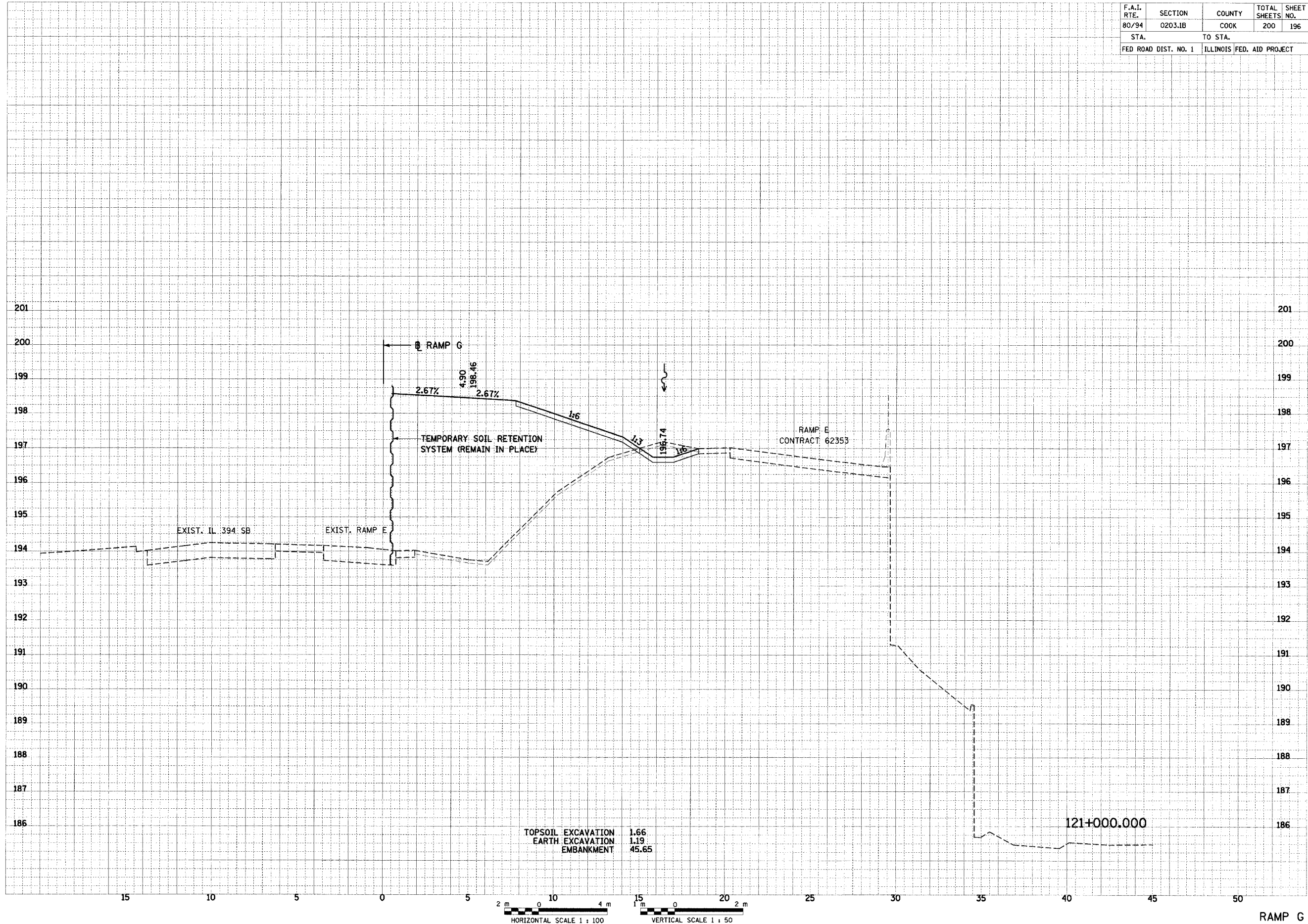


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	196
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY NOTE BOOK NO.	DATE
REVISIONS PLOTTED	BY
TEMPLATE AREAS CHECKED	

ORIGINAL SURVEY NOTE BOOK NO.	DATE
REVISIONS PLOTTED	BY
TEMPLATE AREAS CHECKED	

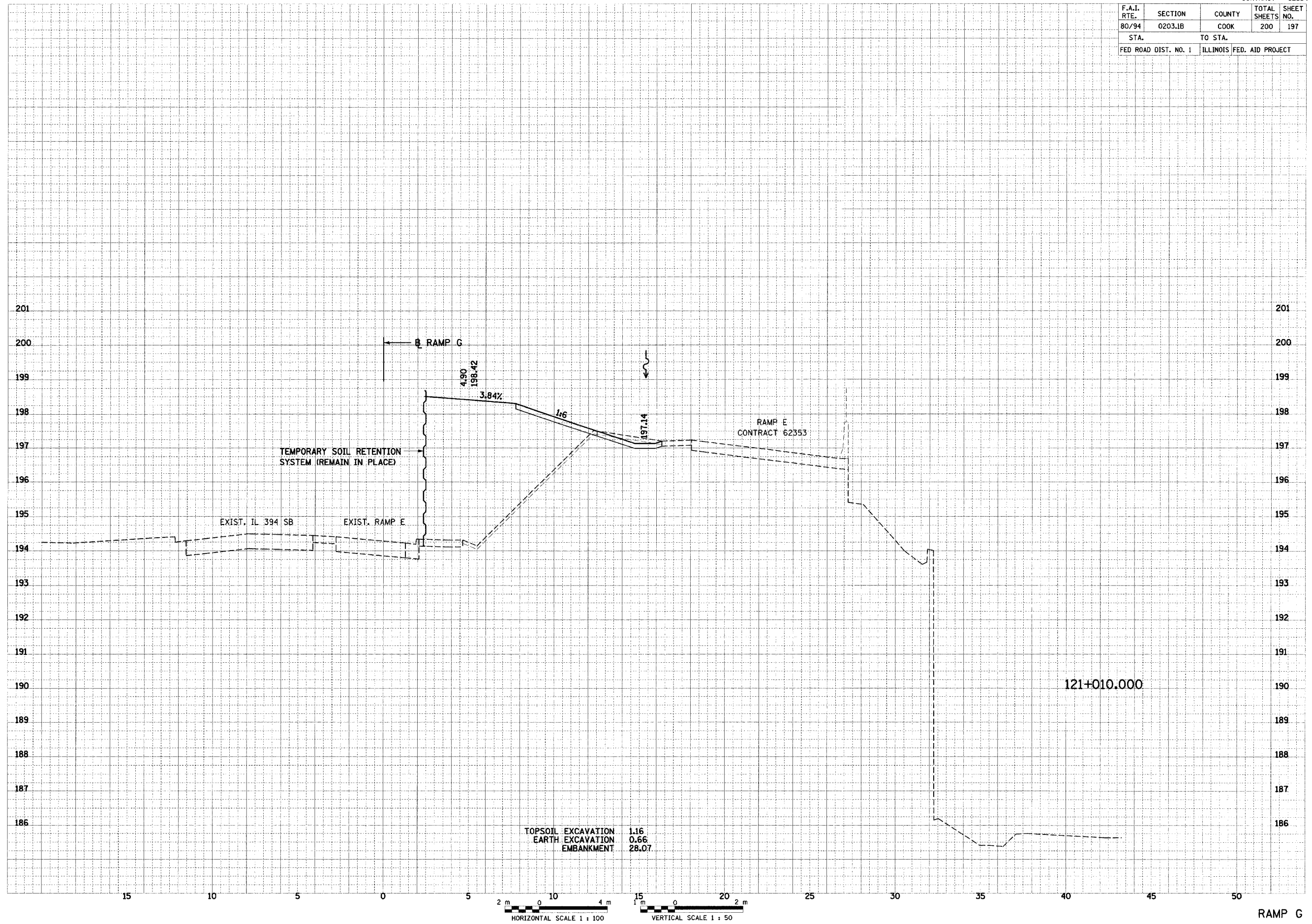


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	197
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY	SURVEYED	DATE
NO.	BY	

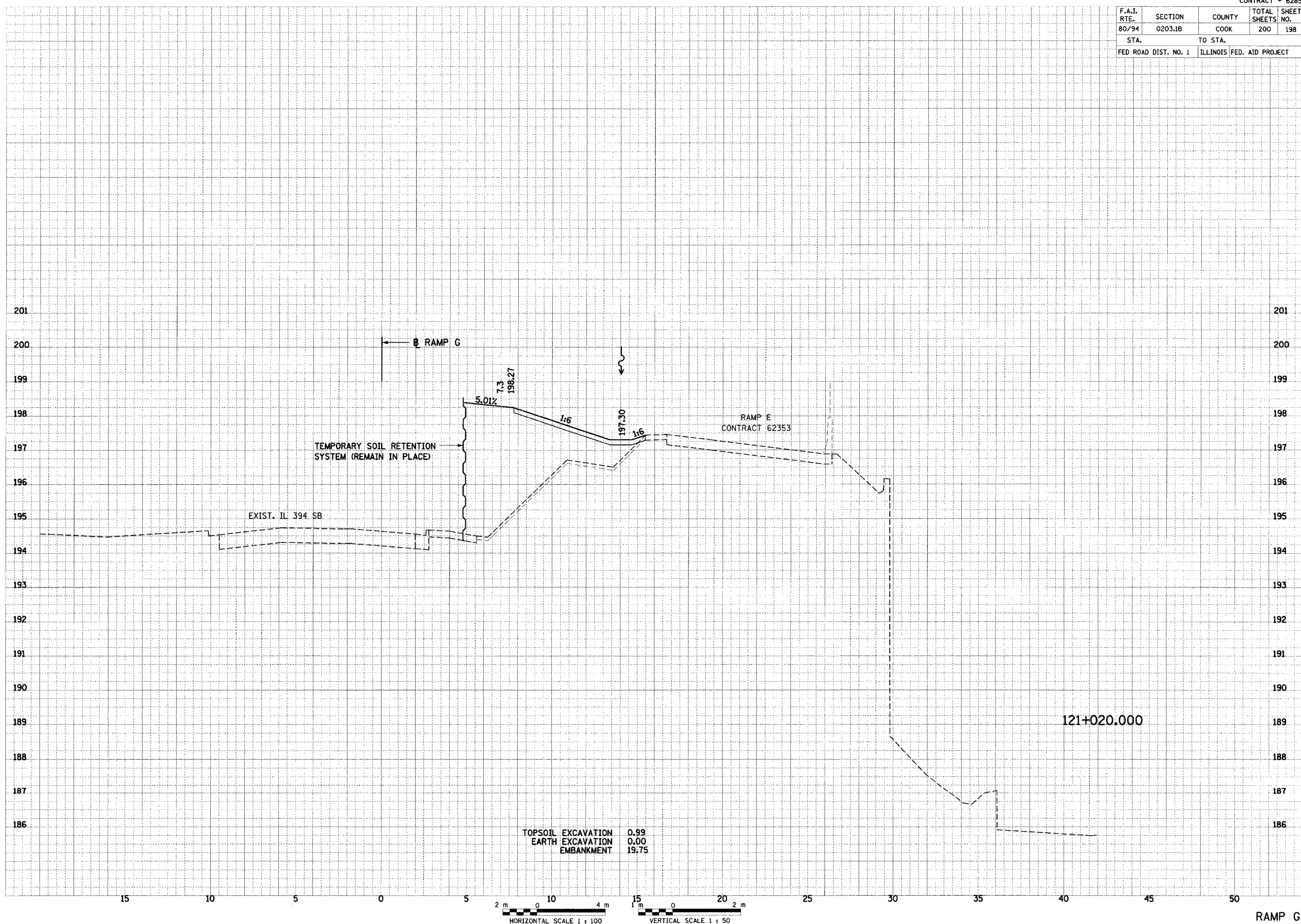
ORIGINAL SURVEY	SURVEYED	DATE
NO.	BY	



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	198
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	DATE
NOTE BOOK NO.	BY
NO.	
REVISIONS	
PLOTTED	
TEMPLATE	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
NOTE BOOK NO.	BY
NO.	
REVISIONS	
PLOTTED	
TEMPLATE	
AREAS CHECKED	

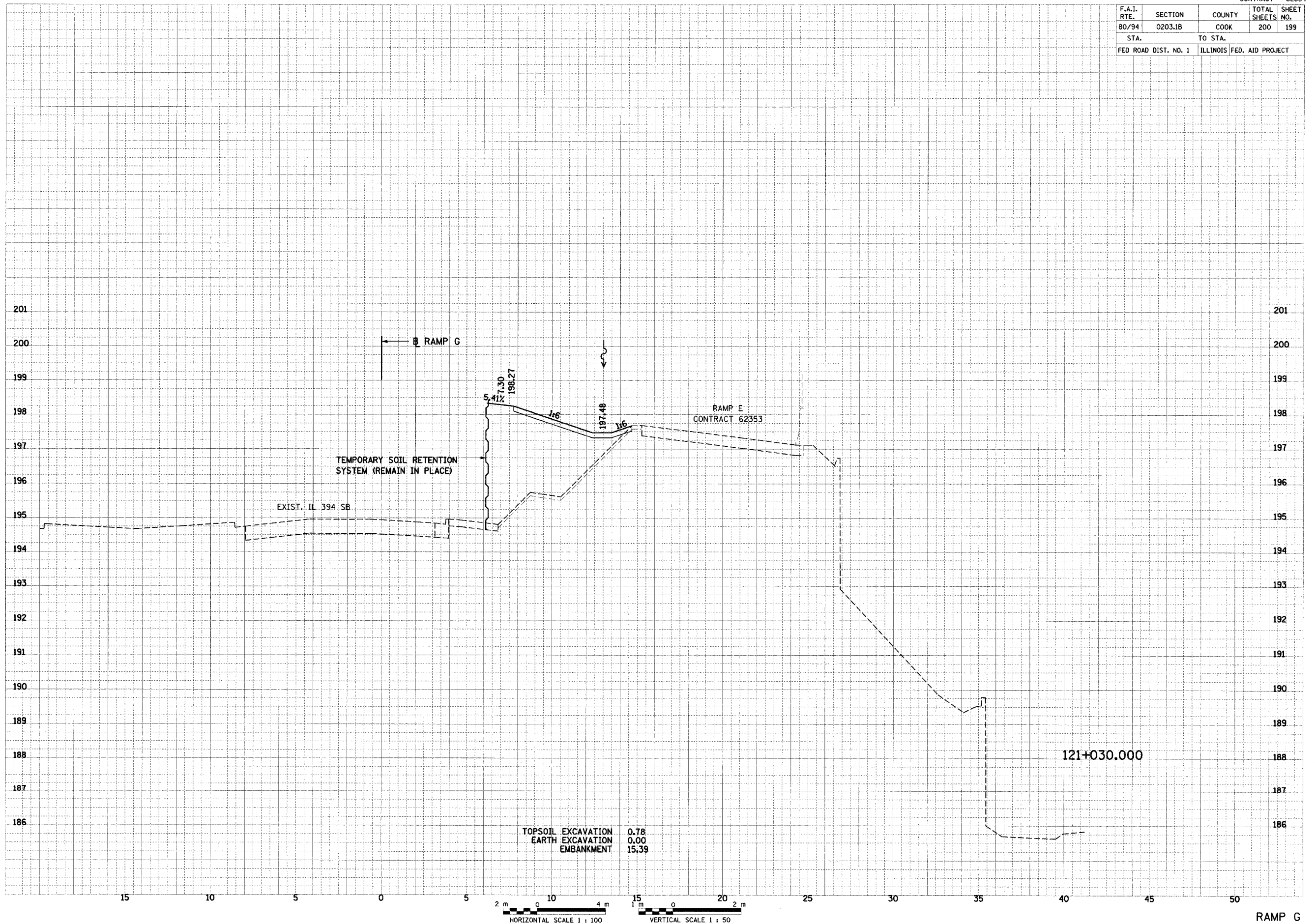


RAMP G

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	199
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
NO.	BY	

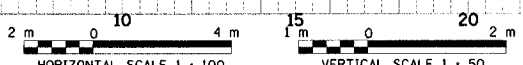
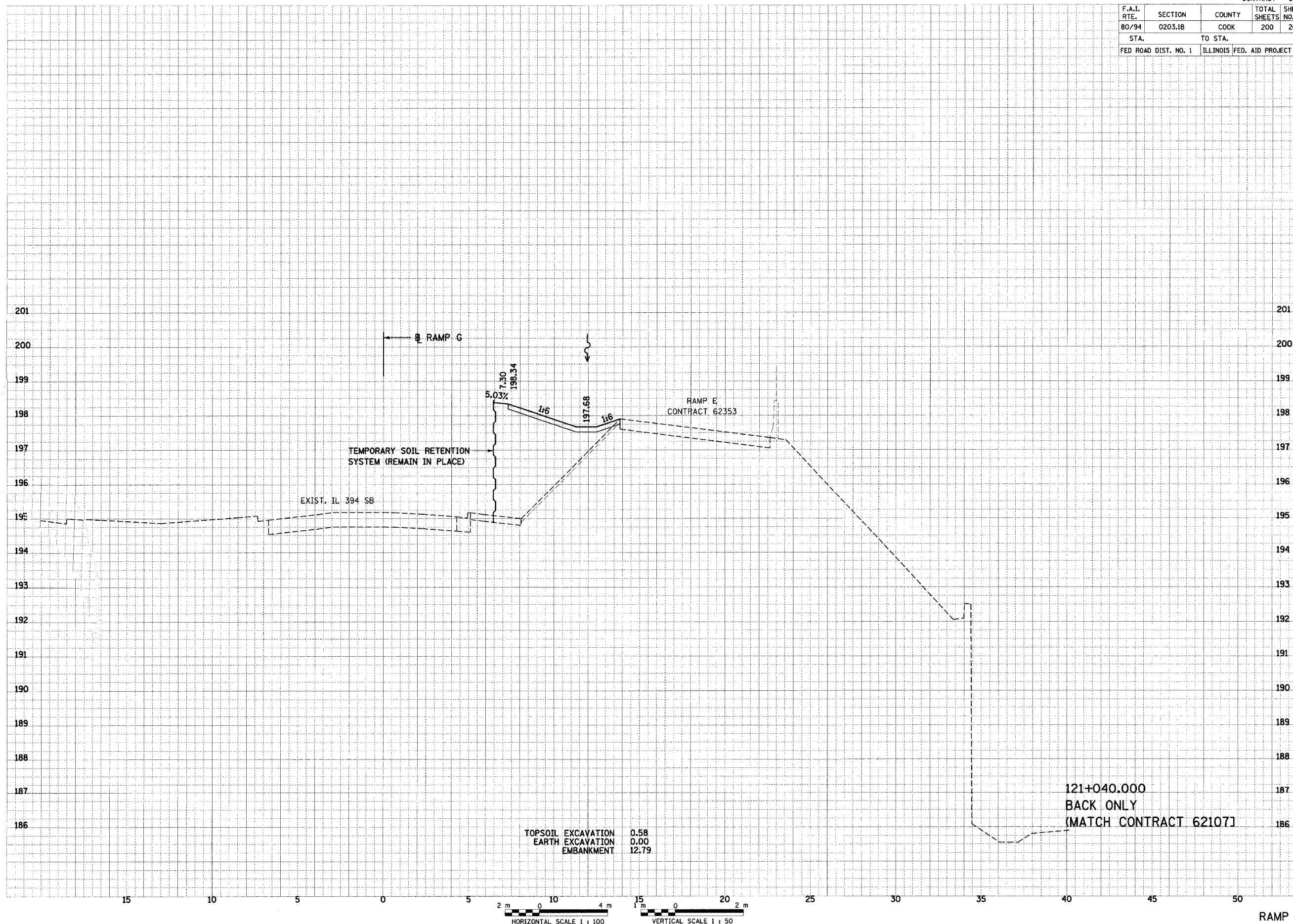
ORIGINAL SURVEY	SURVEYED	DATE
NO.	BY	



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	0203.1B	COOK	200	200
STA.		TO STA.		
FED ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

FINISHED SURVEY	DATE
NO. _____	_____
BY _____	_____
REVISIONS	DATE
PLOTTED	_____
TEMPLATE	_____
AREAS CHECKED	_____

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



RAMP G