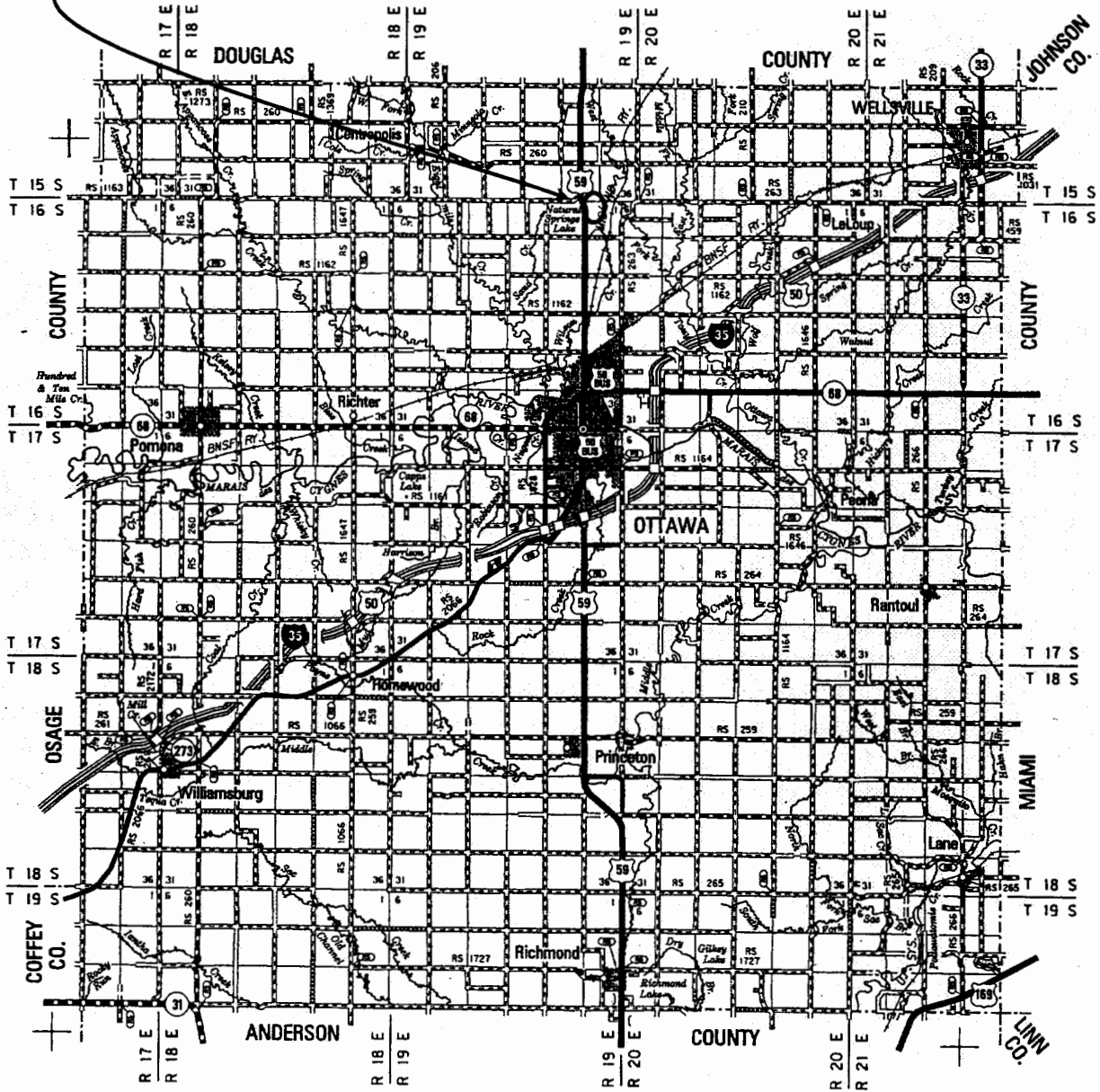


59-30 K-7889-01
Northbound Ramp over US-59

1-16-19E
w/2 NW



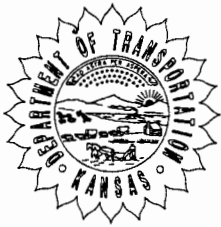
Franklin County



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	59-30	SOUNDING NO.	CD
BRIDGE STA.	269+52.79; CL	PROJ. NO.	K-7889-01
SITE NAME	Northbound Ramp over US-59		HOLE STA. 66+75.00; CL

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	ELASTIC MODULUS (tsf)	ELEVATION	
Core Barrel	Toangaxite Sandstone		6	981	Shale, sandy, gray with tan to gray/maroon to gray, laminar zones present, high swell potential. 980.00			981	
			32.3	979		14.10	481.5	979.70	
	Weston Shale Member		7	33.5	977	Shale, sandy, gray to light gray, limy, laminar, high swell potential, some thin limestone seams at 45.0' and 45.9'.	9.900	370.5	977.70
			8		975		27.25	780.0	975.20
			38.0	973				973	
			9		971		5.200	193.0	971.60
			42.5	969				969	
			10	43.5	967				967
			11		965				965
			48.0	963	7.500		296.5	963.40	
			12		961				961
			52.8	959	49.05		1400	959.90	
				957	24.10		1325	957.40	
			13		955				955
			57.7	953	23.55		1440	953.70	
14	58.5	46.30	3425	952.00					
15		951			951				
		949			949				



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	59-30	SOUNDING NO.	CD
BRIDGE STA.	269+52.79:CL	PROJ.NO.	K-7889-01
SITE NAME	Northbound Ramp over US-59		HOLE STA. 66+75.00:CL

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	ELASTIC MODULUS (tsf)	ELEVATION																																																																																																																														
Core Barrel Weston Shale Member	Weston Shale Member	15	63.0	947	Shale, gray, hard, very limy, crossbedded.	91.0	4930	948.20																																																																																																																														
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				933	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Core</th> <th>Depth</th> <th>Elev.</th> <th>Cut</th> <th>Rec.</th> <th>%</th> <th>RQD</th> </tr> </thead> <tbody> <tr><td>1</td><td>7.0</td><td>1004.20</td><td>1.5</td><td>1.5</td><td>100</td><td>0%</td></tr> <tr><td>2</td><td>8.5</td><td>1002.70</td><td>5.0</td><td>4.6</td><td>92</td><td>52%</td></tr> <tr><td>3</td><td>13.5</td><td>997.70</td><td>4.8</td><td>4.0</td><td>83</td><td>55%</td></tr> <tr><td>4</td><td>18.3</td><td>992.90</td><td>5.0</td><td>5.0</td><td>100</td><td>N/A</td></tr> <tr><td>5</td><td>23.3</td><td>987.90</td><td>4.5</td><td>5.1</td><td>113</td><td>47%</td></tr> <tr><td>6</td><td>27.8</td><td>983.40</td><td>4.5</td><td>4.9</td><td>109</td><td>75%</td></tr> <tr><td>7</td><td>32.3</td><td>978.90</td><td>1.2</td><td>0.9</td><td>75</td><td>55%</td></tr> <tr><td>8</td><td>33.5</td><td>977.70</td><td>4.5</td><td>4.5</td><td>100</td><td>95%</td></tr> <tr><td>9</td><td>38.0</td><td>973.20</td><td>4.5</td><td>4.5</td><td>100</td><td>90%</td></tr> <tr><td>10</td><td>42.5</td><td>968.70</td><td>1.0</td><td>0.8</td><td>80</td><td>80%</td></tr> <tr><td>11</td><td>43.5</td><td>967.70</td><td>4.5</td><td>4.5</td><td>100</td><td>91%</td></tr> <tr><td>12</td><td>48.0</td><td>963.20</td><td>4.8</td><td>4.8</td><td>100</td><td>100%</td></tr> <tr><td>13</td><td>52.8</td><td>958.40</td><td>4.9</td><td>4.9</td><td>100</td><td>100%</td></tr> <tr><td>14</td><td>57.7</td><td>953.50</td><td>0.8</td><td>0.8</td><td>100</td><td>100%</td></tr> <tr><td>15</td><td>58.5</td><td>952.70</td><td>4.5</td><td>4.5</td><td>100</td><td>100%</td></tr> <tr><td>16</td><td>63.0</td><td>948.20</td><td>4.8</td><td>4.8</td><td>100</td><td>100%</td></tr> <tr><td>Total</td><td>67.8</td><td>943.40</td><td>60.8</td><td>60.1</td><td>98.8</td><td>XXXX</td></tr> </tbody> </table>	Core	Depth	Elev.	Cut	Rec.	%	RQD	1	7.0	1004.20	1.5	1.5	100	0%	2	8.5	1002.70	5.0	4.6	92	52%	3	13.5	997.70	4.8	4.0	83	55%	4	18.3	992.90	5.0	5.0	100	N/A	5	23.3	987.90	4.5	5.1	113	47%	6	27.8	983.40	4.5	4.9	109	75%	7	32.3	978.90	1.2	0.9	75	55%	8	33.5	977.70	4.5	4.5	100	95%	9	38.0	973.20	4.5	4.5	100	90%	10	42.5	968.70	1.0	0.8	80	80%	11	43.5	967.70	4.5	4.5	100	91%	12	48.0	963.20	4.8	4.8	100	100%	13	52.8	958.40	4.9	4.9	100	100%	14	57.7	953.50	0.8	0.8	100	100%	15	58.5	952.70	4.5	4.5	100	100%	16	63.0	948.20	4.8	4.8	100	100%	Total	67.8	943.40	60.8	60.1	98.8	XXXX			933
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North Bound Ramp over US-59

Project No. 59-30 K-7889-01

Note: All measurements are in English

	<u>Elevation</u>	<u>Depth</u>		<u>Mantle</u>
Core Hole #1	1011.20	0.00	Silty clay, tan-brown.	
Sta. 66+75	1008.20	3.00	Pushed shelby #1. 3.0 to 5.0 ft. Sandy shale.	
centerline	1006.20	5.00	Shale, sandy, tan-gray.	
Date Drilled 6/14/04	1004.20	7.00	Begin coring.	
Geologist: R. Crow				Vinland Shale/Tonganoxie Sandstone
Driller: Jim Burns				
Water depth 6.2 ft.				
Water level 1005.0				

Core # 1	1004.20	7.00	Shaly sandstone, tan-gray.
7.0 to 8.5 ft.	1002.70	8.50	End Core 1.
Cut 1.5 ft.			
Recovered 1.5 ft.			
RQD = 0.0%			

Core # 2	1002.70	8.50	Sandstone, cross bedded, maroon-tan, core falling apart.
8.5 to 13.5 ft.	997.70	13.50	End Core 2.
Cut 5.0 ft.			
Recovered 4.6 ft.			
RQD = 52%			

Core # 3	997.70	13.50	Sandstone, cross bedded, maroon-tan, core falling apart.
13.5 to 18.3 ft.	996.80	14.40	Sandstone, iron rich, badly broken.
Cut 4.8 ft.	995.30	15.90	Sandstone, shaly.
Recovered 4.0 ? ft.	993.70	17.50	Lost 17.5 to 18.3.
RQD = 55%	992.90	18.30	End core 3.

Vinland Shale/Tonganoxie Sandstone

Core # 4	992.90	18.30	Sandstone, shaly cross-bedded.
18.3 to 23.3 ft.	991.10	20.10	Sandstone, very shaly, tan-gray.
Cut 5.0 ft.	987.90	23.30	End core 4.
Recovered 5.0 ft.			
RQD = not recorded			Sample 1 19.4 to 20.0

991.8

Core # 5	987.90	23.30	Shale, sandy, gray with tan.
23.3 to 27.8 ft.	983.40	27.80	End core 5.
Cut 4.5 ft.			
Recovered 5.1 ft.			Sample 2 27.0 to 27.5
RQD = 47%			984.2

North Bound Ramp over US-59

Project No. 59-30 K-7889-01

	<u>Elevation</u>	<u>Depth</u>	
Core # 6	983.40	27.80	Shale, sandy, gray/maroon.
27.8 to 32.3 ft.	978.90	32.30	End core 6. Vinland Shale/Tonganoxie Sandstone
Cut 4.5 ft.			
Recovered 4.9 ft.			Sample 3 30.8 to 31.5
RQD = 75%			9 8 0. 1

Core # 7	978.90	32.30	Shale, sandy, gray, laminar.
32.3 to 33.5 ft.	977.70	33.50	End core 7. Weston Shale
Cut 1.2 ft.			
Recovered 0.9 ft.			Sample 4 33.0 to 33.5
RQD = 55%			

Core # 8	977.70	33.50	Shale, sandy, gray, laminar.
33.5 to 38.0 ft.	973.20	38.00	End core 8.
Cut 4.5 ft.			
Recovered 4.5 ft.			Sample 5 35.2 to 36.0
RQD = 95%			

Core # 9	973.20	38.00	Shale, sandy, gray, laminar.
38.0 to 42.5 ft.	968.70	42.50	End core 9.
Cut 4.5 ft.			
Recovered 4.5 ft.			Sample 6 40.1 to 40.6
RQD = 90%			

Core # 10	968.70	42.50	Shale, sandy, gray, laminar, hard.
42.5 to 43.5 ft.	967.70	43.50	End core 10.
Cut 1.0 ft.			
Recovered 0.8 ft.			
RQD = 80%			

Core # 11	967.70	43.50	Shale, gray, hard.
43.5 to 48.0 ft.	966.20	45.00	Shale, limy, thin limestone stringers.
Cut 4.5 ft.	965.20	46.00	Shale, gray, laminar.
Recovered 4.5 ft.	963.20	48.00	End core 11. Weston Shale
RQD = 91%			
			Sample 7 47.3 to 47.8

North Bound Ramp over US-59

Project No. 59-30 K-7889-01

	<u>Elevation</u>	<u>Depth</u>		
Core # 12	963.20	48.00	Shale, limy, gray, hard, laminar.	
48.0 to 52.8 ft.	958.70	52.50	End core 12.	Weston Shale
Cut 4.8 ft.				
Recovered 4.8 ft.			Sample 8 51.6 to 52.3	
RQD = 100%				

Note: All shales above this elevation seem to be expansive.

Core # 13	958.40	52.80	Shale, limy, gray, hard, laminar.	
52.8 to 57.7 ft.	953.50	57.70	End core 13.	
Cut 4.9 ft.				
Recovered 4.9 ft.			Sample 9 53.2 to 53.8	
RQD = 100%				

Core # 14	953.50	57.70	Shale, limy, gray, hard, laminar.	
57.7 to 58.5 ft.	952.70	58.50	End core 14.	
Cut 0.8 ft.				
Recovered 0.8 ft.			Sample 10 57.9 to 58.5	
RQD = 100%				

Core # 15	952.70	58.50	Shale, very limy.	
58.5 to 63.0 ft.	951.20	60.00	Shale, hard, gray, cross-bedded..	
Cut 4.5 ft.	948.20	63.00	End core 15.	
Recovered 4.5 ft.			Sample 11 58.6 to 59.2	
RQD = 100%			Sample 12 62.3 to 63.0	

Core # 16	948.20	63.00	Shale, very limy, gray, cross-bedded.	
63.0 to 67.8 ft.	943.40	67.80	End core 16. Total depth.	Weston Shale
Cut 4.8 ft.				
Recovered 4.8 ft.			Sample 13 65.8 to 66.3	
RQD = 100%				

INDEX OF SHEETS

Volume 1

- 1 Title Sheet
- 2 - 5 Typical Sections
- 6 - 40 Plan & Profile Sheets
- 41 - 86 Interchange Details
- 87 Miscellaneous Details
- 88 Drainage Data Sheet
- 89 - 130 Bridge Sheets
- 131 - 140 Fencing Plans
- 141 Construction Sequencing
- 142 - 144 Drainage Area Sheets

Volume 2

XS-1 - XS-260 Cross Sections

Volume 3

XS-261 - XS-417 Cross Sections

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	59-30 K-7889-01	2006	1	

STATE OF KANSAS
DEPARTMENT OF TRANSPORTATION

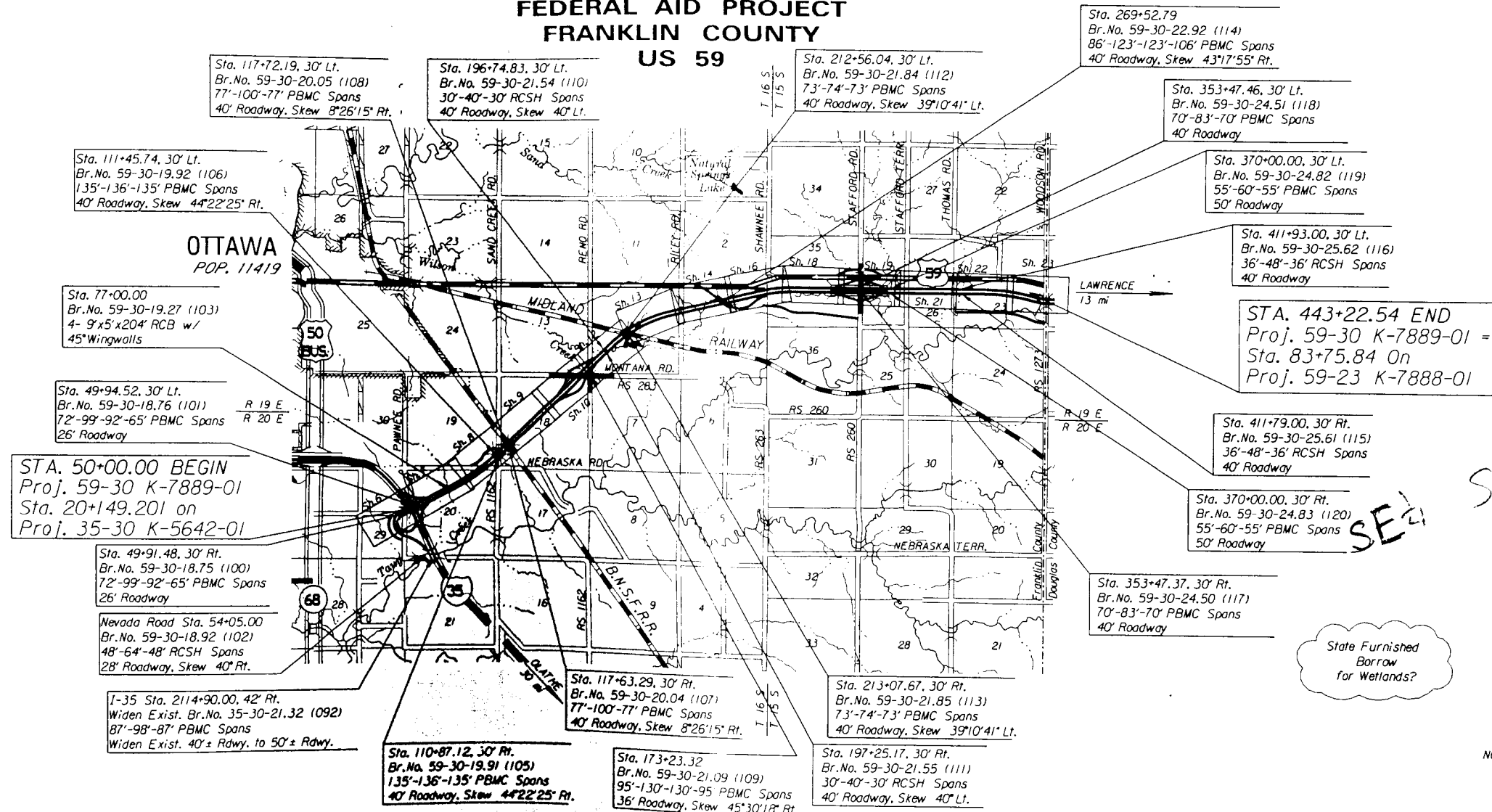


PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY

FEDERAL AID PROJECT
FRANKLIN COUNTY
US 59

PROJ. NO. 59-30 K-7889-01
K788-0(901)

GRADING
BRIDGES
FENCING
SEEDING



Scale = 1" : 4,000'

STA. 443+22.54 END
Proj. 59-30 K-7889-01 =
Sta. 83+75.84 On
Proj. 59-23 K-7888-01

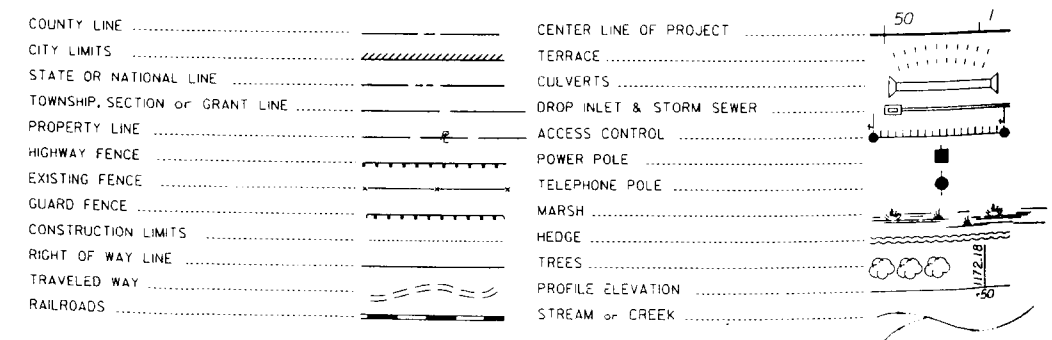
SE 23 T16S R19E

State Furnished Borrow for Wetlands?

DESIGN DESIGNATION

- AADT (2007) = 6900
- AADT (2027) = 10500
- DHV = 11%
- D = 60/40
- T = 7%
- V = 70 mph
- C of A = FULL
- Clear Zone = 34'

CONVENTIONAL SIGNS



GROSS LENGTH OF PROJECT	39,322.54
EXCEPTIONS	None
ADDITIONS	None
NET LENGTH OF PROJECT	39,322.54 FT.
NET LENGTH OF BRIDGES	1,511.00 FT.
NET LENGTH OF ROAD	37,811.54 FT.

FEB 23 2005

NOTE: TRAFFIC TO BE CARRIED THRU CONSTRUCTION. FOR CONSTRUCTION SEQUENCE SEE SH. NO. 141

PLANS PREPARED AND SUBMITTED BY:
GEORGE BUTLER ASSOCIATES, INC.
LENEXA KANSAS

RECOM. FOR APPROVAL-DATE	RECOM. FOR APPROVAL-DATE
CHIEF, BUREAU OF DESIGN KANSAS DEPARTMENT OF TRANSPORTATION	ENGINEER FEDERAL HIGHWAY ADMINISTRATION DEPARTMENT OF TRANSPORTATION
APPROVED - DATE	APPROVED - DATE
STATE TRANSPORTATION ENGINEER KANSAS DEPARTMENT OF TRANSPORTATION	DIVISION ADMINISTRATOR FEDERAL HIGHWAY ADMINISTRATION DEPARTMENT OF TRANSPORTATION