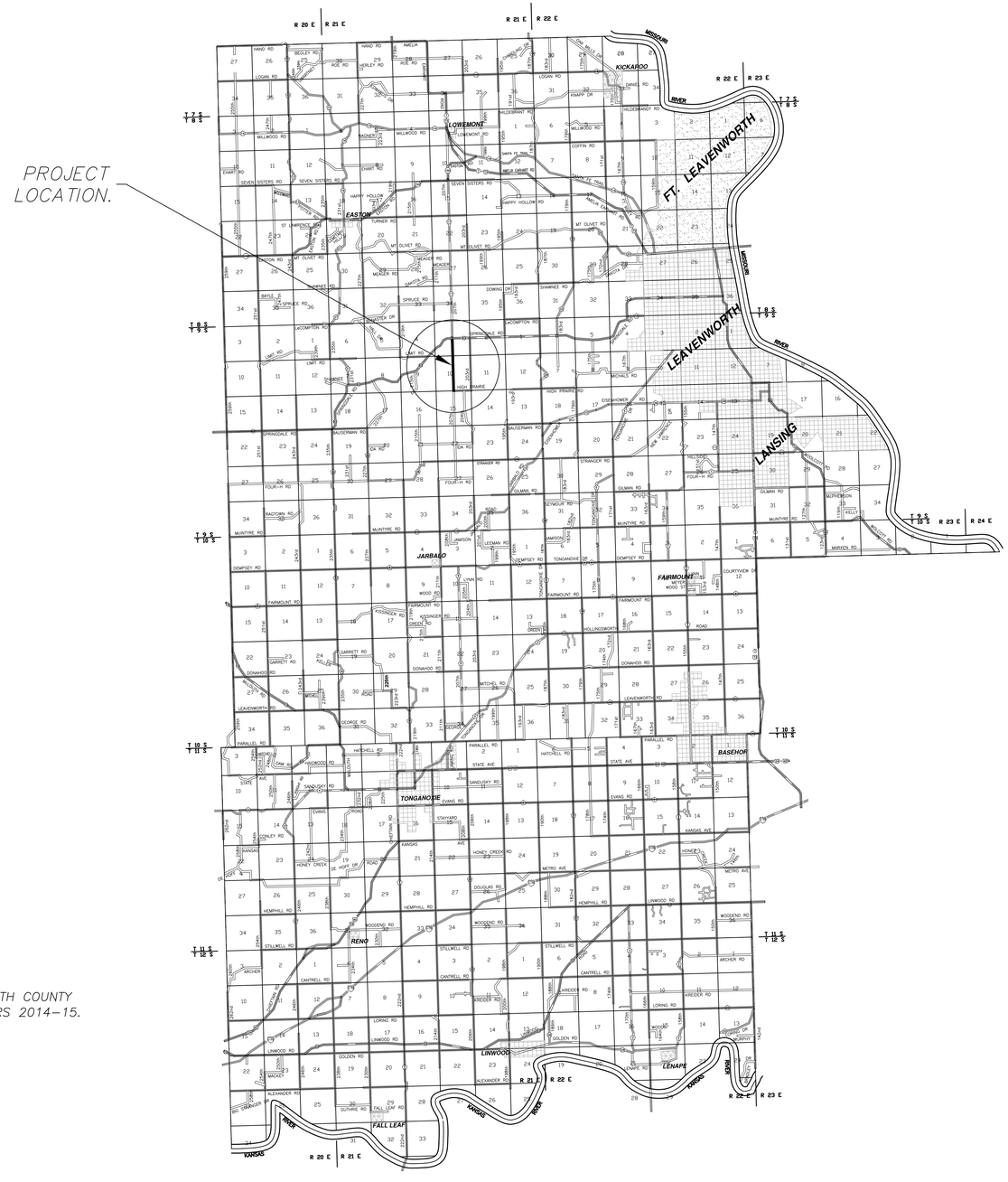
207th Street

Highway K-92 to High Prairie Road

Geometric Improvements and Surface Upgrade

LEAVENWORTH COUNTY, KANSAS

Material Cost Data	Units	Appl. Rates	Quantity
AB-3	Ton	170	10816.08 Ton
MC-250	gal	0.35	7422.80 gal
MC-800	gal	0.3	6362.40 gal
MC-3000	gal	0.3	6362.40 gal
CM-K	ton (3 Coats)	30	318.12 ton (3 Coats)
4-strand barbed-wire fence	l.f.		0.00 l.f.
seed	acres		15.34 acres
mulch (bales)	ea	5	76.68 ea
mailboxes	ea		20.00 ea
15" dia. CSP	l.f.		156.00 l.f.
15" dia. end-sections	ea		0.00 ea
18" dia. CSP	l.f.		398.00 l.f.
18" dia. end-sections	ea		0.00 ea
24" dia. CSP	l.f.		30.00 l.f.
24" dia. end-sections	ea		0.00 ea
30" dia. CSP	l.f.		169.00 l.f.
30" dia. end-sections	ea		4.00 ea
42" dia. CSP	l.f.		49.00 l.f.
42" dia. end-sections	ea		2.00 ea
48" dia. CSP	l.f.		87.00 l.f.
48" dia. end-sections	ea		2.00 ea
60" dia. CSP	l.f.		180.00 l.f.
60" dia. end-sections	ea		2.00 ea
72" dia. CSP	l.f.		146.00 l.f.
72" dia. end-sections	ea		2.00 ea
guardrail	l.f.		900.00 l.f.
SRT end terminal	ea		4.00 ea
straw bale ditch checks	ea		1000.00 ea
biologs (20")	l.f.		2550.00 l.f.
riprap	sq.yd.		66.67 sq.yd.



LEGEND

- DAYLIGHT
- SECTION LINE
- CENTERLINE
- OP — OP — OVERHEAD POWERLINE
- ATT — ATT — UNDERGROUND TELEPHONE
- W — W — WATER LINE
- X — X — FENCE LINE
- SS — SS — SANITARY SEWER MAIN
- GAS — GAS — UNDERGROUND GAS
- FO — FO — FIBER OPTIC
- SIGN
- T — TELEPHONE PEDESTAL
- WV — WATER VALVE
- GV — GAS VALVE
- POWER POLE AND GUY WIRE
- PROPOSED CHIP-SEAL ROAD SURFACE

UTILITIES

POWER
Leavenworth-Jefferson Electric Cooperative
Attn: Mr. Gary Willits
507 N. Union
PO Box 70
McLouth, KS 66054
ph: 913-486-5018

TELEPHONE
AT&T
Attn: Mr. Rick Bryan
500 E. 8th Street, RM 1152
Kansas City, MO 64106
ph: 800-778-9140

FIBER
Level 3 Communications
Attn: Mr. Jerry Woodall
1212 E. 19th Street
Kansas City, MO 64108
ph: 877-366-8344

GAS
Enterprise / Mid-America Pipeline
9420 W. Sam Houston Parkway North
HOUSTON, TX 77064
ph: 877-243-2255

WATER
Leavenworth County Rural Water District No. 5
Attn: Steve Simms
PO Box 287
Leavenworth, KS 66048
ph: 913-758-0488

KANSAS ONE-CALL (DIG SAFE)
800-344-7233

PLAN INDEX

1. COVER SHEET
2-3. EXISTING UTILITIES
4-5. EROSION CONTROL PLAN
6-7. GUARDRAIL DETAILS
8-13. PLAN AND PROFILE SHEET
14-22. CROSS-SECTIONS
22. CUT-FILL TABLES

REFERENCES

SURVEY PERFORMED BY LEAVENWORTH COUNTY PERSONNEL DURING CALENDAR YEARS 2014-15.

NOTES:

1. THE PROJECT BASELINE IS THE EXISTING CENTERLINE OF PROPOSED 207th STREET.
2. IT IS THE RESPONSIBILITY OF THE LANDOWNERS TO REMOVE AND/OR RELOCATE ALL PRIVATE IMPROVEMENTS AFFECTED BY THE PROJECT (FENCES, LANDSCAPING, GATES, ETC.)
3. CONSTRUCT CONCRETE TOE-WALLS AT THE INFLOW AND OUTFLOW OF ALL NEW CROSS-ROAD CULVERT END-SECTIONS - 12" THICK X 36" DEEP X WIDTH OF END-SECTION. USE EPOXY COATED No. 4 BARS @ 12" EACH WAY WITH 3" CLEARANCE FOR REINFORCEMENT.
4. INSTALL ADEQUATE RIPRAP AREA (15" NOMINAL DIAMETER) AT OUTFLOW END OF ALL CROSS-ROAD CULVERTS.
5. ADD RIPRAP (8" NOMINAL DIAMETER) TO DITCH FLOWLINES THAT EXCEED 7% (LONGITUDINAL SLOPE).
6. INSTALL ALL EROSION CONTROL MEASURES (SILT FENCE, BIO-LOGS, STRAW BALES, ETC.) AS SOON AS CONSTRUCTION PHASING ALLOWS.
7. SEED AND MULCH ALL DISTURBED AREAS. RESEED AND MULCH DISTURBED AREAS THE FOLLOWING YEAR, AS NEEDED, AT LOCATIONS WHERE ESTABLISHMENT OF VEGETATION APPEARS INADEQUATE.

APPROVED BY: _____ MICHAEL SPICKELMIER, COUNTY ENGINEER _____ DATE

LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

No.	Date	Revisions	By	App.
1	xx/yy/20zz	N/A.	MGS	MWS
2				
3				
4				
5				
6				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cover Sheet

Date:	03/27/15
Designed:	MGS
Drawn:	MGS
Checked:	MWS
Approved:	MWS
Project No.:	N/A
Sheet No.:	1

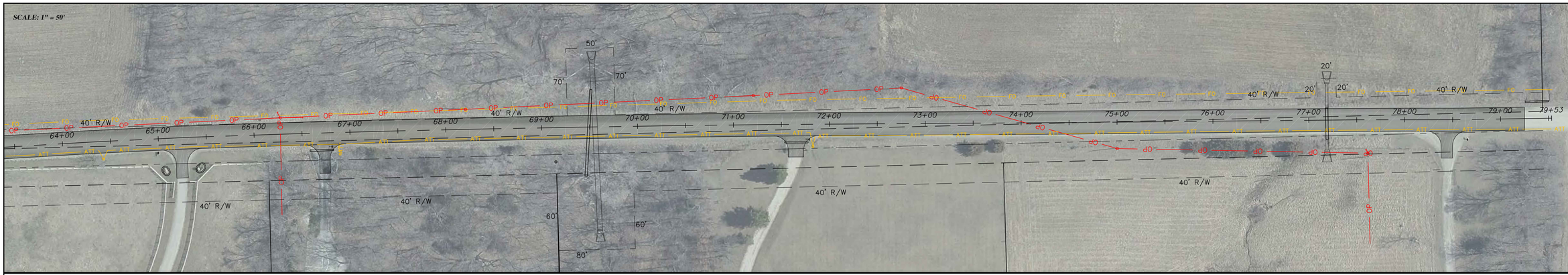
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

No.	Date	Revisions	By	App.
1				
2	09/19/2014	N/A.	MGS	MWS
3.				
4				
5.				
6				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Existing Utilities

Date:	03/28/15
Designed:	MGS
Drawn:	MGS
Checked:	MWS
Approved:	MWS
Project No.:	N/A
Sheet No.:	2



LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

No.	Date	Revisions	By	App.
1				
2	09/19/2014	N/A.	MGS	MWS
3.				
4				
5.				
6				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Existing Utilities

Date:	*03/28/15*
Designed:	*MGS*
Drawn:	*MGS*
Checked:	*MWS*
Approved:	*MWS*
Project No.:	*N/A*
Sheet No.:	**3**

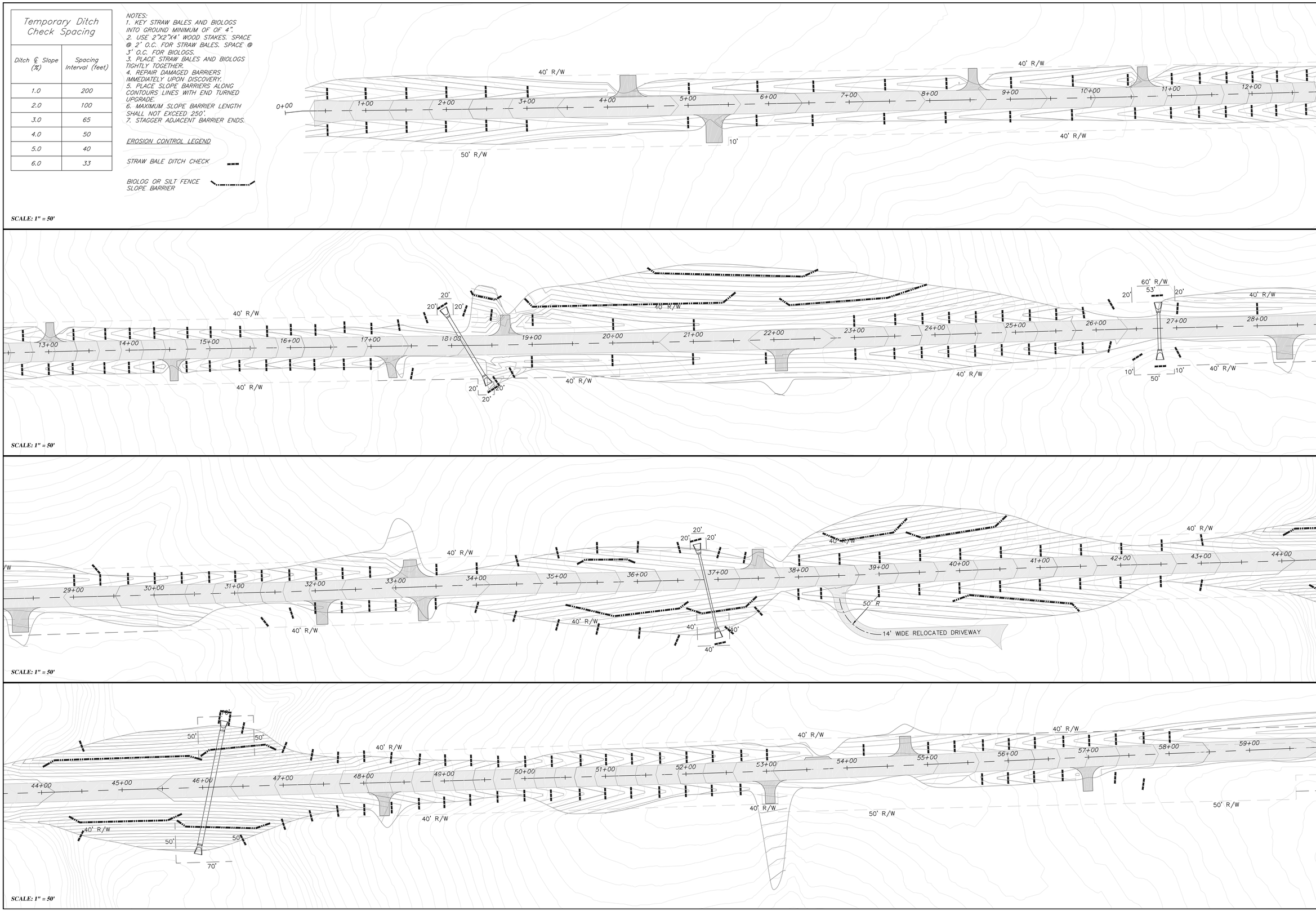
Temporary Ditch Check Spacing	
Ditch ℄ Slope (%)	Spacing Interval (feet)
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	33

NOTES:
1. KEY STRAW BALES AND BIOLOGS INTO GROUND MINIMUM OF OF 4".
2. USE 2"X2"X4' WOOD STAKES. SPACE @ 2' O.C. FOR STRAW BALES. SPACE @ 3' O.C. FOR BIOLOGS.
3. PLACE STRAW BALES AND BIOLOGS TIGHTLY TOGETHER.
4. REPAIR DAMAGED BARRIERS IMMEDIATELY UPON DISCOVERY.
5. PLACE SLOPE BARRIERS ALONG CONTOURS LINES WITH END TURNED UPGRADE.
6. MAXIMUM SLOPE BARRIER LENGTH SHALL NOT EXCEED 250'.
7. STAGGER ADJACENT BARRIER ENDS.

EROSION CONTROL LEGEND

STRAW BALE DITCH CHECK

BIOLOG OR SILT FENCE SLOPE BARRIER

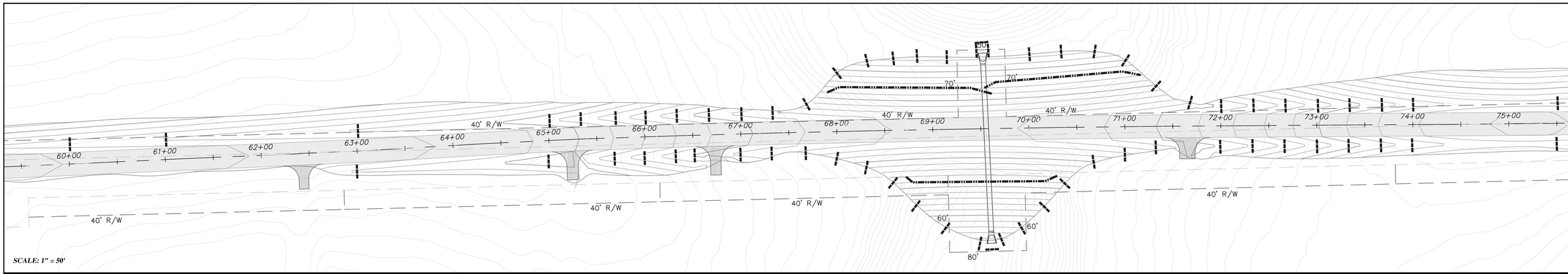


LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

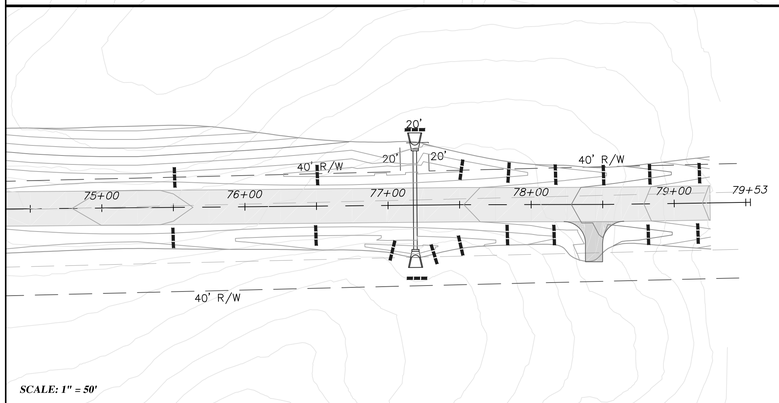
No.	Date	Revisions	By	App.
1				
2	09/19/2014	N/A.		
3.			MGS	MWS
4				
5.				
6				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Erosion Control

Date:	03/28/15
Designed:	MGS
Drawn:	MGS
Checked:	MWS
Approved:	MWS
Project No.:	N/A
Sheet No.:	4



SCALE: 1" = 50'



SCALE: 1" = 50'

Temporary Ditch Check Spacing	
Ditch ℄ Slope (%)	Spacing Interval (feet)
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	33

NOTES:
1. KEY STRAW BALES AND BIOLOGS INTO GROUND MINIMUM OF OF 4".
2. USE 2"X2"X4' WOOD STAKES. SPACE @ 2' O.C. FOR STRAW BALES. SPACE @ 3' O.C. FOR BIOLOGS.
3. PLACE STRAW BALES AND BIOLOGS TIGHTLY TOGETHER.
4. REPAIR DAMAGED BARRIERS IMMEDIATELY UPON DISCOVERY.
5. PLACE SLOPE BARRIERS ALONG CONTOURS LINES WITH END TURNED UPGRADE.
6. MAXIMUM SLOPE BARRIER LENGTH SHALL NOT EXCEED 250'.
7. STAGGER ADJACENT BARRIER ENDS.

EROSION CONTROL LEGEND

STRAW BALE DITCH CHECK

BIOLOG OR SILT FENCE SLOPE BARRIER

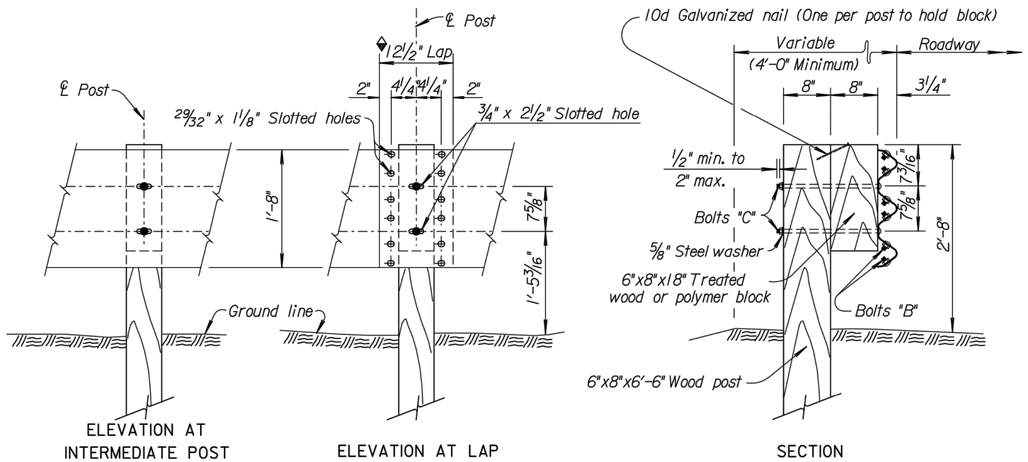
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

No.	Date	Revisions	By	App.
1				
2	09/19/2014	N/A.	MGS	MWS
3.				
4				
5.				
6				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Erosion Control

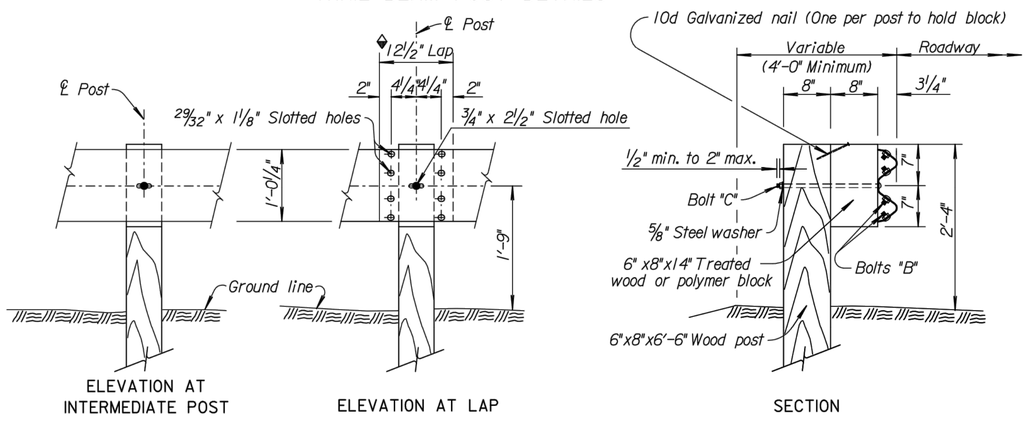
Date:	03/28/15
Designed:	MGS
Drawn:	MGS
Checked:	MWS
Approved:	MWS
Project No.:	N/A
Sheet No.:	5

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS			6	



ELEVATION AT INTERMEDIATE POST — ELEVATION AT LAP — SECTION

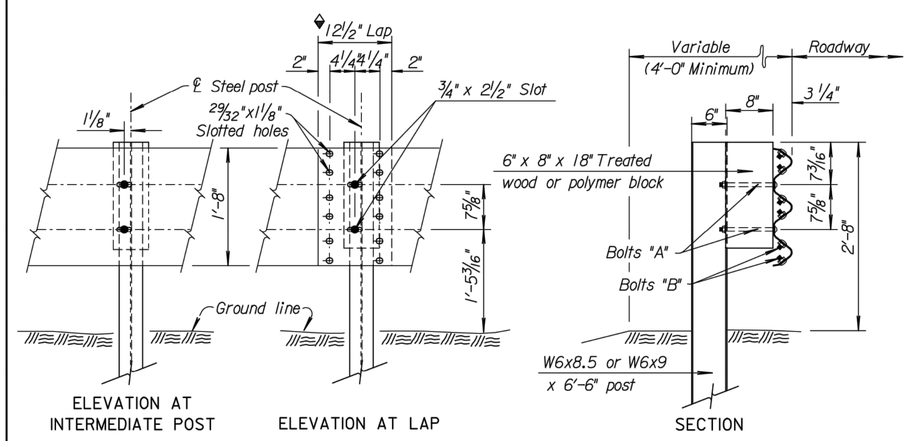
THRIE BEAM POST DETAILS



ELEVATION AT INTERMEDIATE POST — ELEVATION AT LAP — SECTION

W-BEAM POST DETAILS

◆ Rail shall be lapped in the direction of traffic. Where traffic is temporarily carried in the direction opposite of the final configuration, the rail splices shall be lapped in the direction of the permanent traffic.

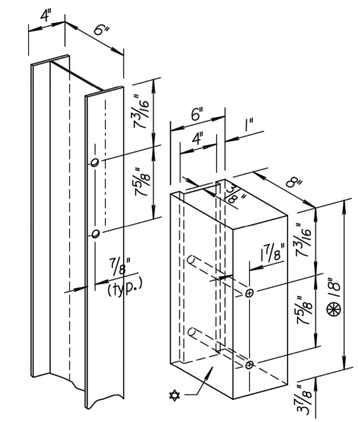


ELEVATION AT INTERMEDIATE POST — ELEVATION AT LAP — SECTION

THRIE BEAM POST DETAILS

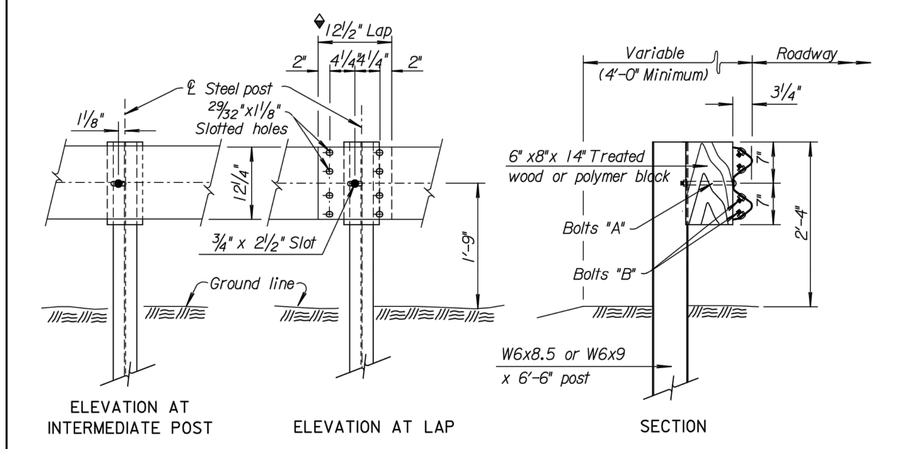
◆ Rail shall be lapped in the direction of traffic. Where traffic is temporarily carried in the direction opposite of the final configuration, the rail splices shall be lapped in the direction of the permanent traffic.

⊛ The Thrie Beam Transition blockout shall be 6"x8"x18" with a hole pattern as shown on Standard Drawing RD613.



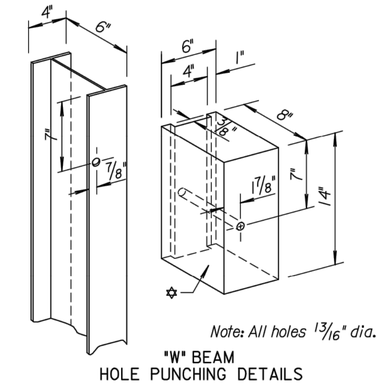
Note: All holes 13/16" dia.

THRIE BEAM HOLE PUNCHING DETAILS



ELEVATION AT INTERMEDIATE POST — ELEVATION AT LAP — SECTION

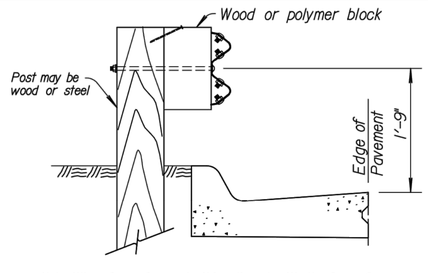
W-BEAM POST DETAILS



Note: All holes 13/16" dia.

"W" BEAM HOLE PUNCHING DETAILS

✡ NON-METALLIC (POLYMER) or TREATED WOOD BLOCK



Note: When face of guardrail is aligned with the face of a curb, the height of rail shall be measured from the pavement surface at the curb/pavement joint as shown.

A laydown type curb shall be used where the face of the guardrail is not located at the face of the curb.

DETAIL OF PLACEMENT AT CURB

WOOD POSTS

General Notes for Wood Posts

All wood posts and wood blocks shall be given a preservative treatment as provided for in the K.D.O.T. Standard Specifications. All cuts, injuries, and bolt holes in treated wood posts and blocks shall be thoroughly saturated with preservative.

Only one type of preservative treatment may be used on a project. Rectangular posts and wood blocks shall be S4S and shall meet the requirements of the KDOT Standard Specifications.

Excavation of all classes, including rock, shale, and other materials, regardless of the elevations encountered, required for the erection of Guardrail shall be considered subsidiary to the various bid items for which payment is made.

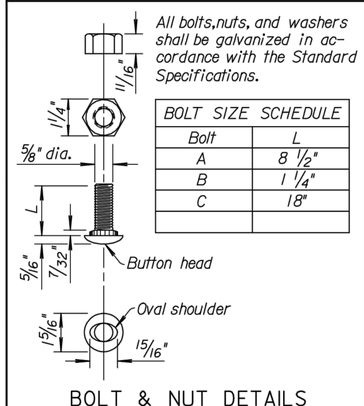
Guardrail posts may be set by digging or by driving. Post caps which are designed to protect the post from crushing shall be used during driving operations.

Guardrail posts may be wood or steel as shown on this sheet, with no change in type of post permitted within a single project except as noted on end section layout detail sheet.

Approved polymer block-outs may be subsituted for wood blockouts. Only one type of block-out shall be permitted at each guardrail installation. This excludes the guardrail end terminals unless certified by the manufacturer.

The Contractor shall notify the Engineer at the earliest practical time if a non-removable man-made object (footing, pipe, etc.) is encountered which prevents installation of a full length post. Approval of the Engineer shall be obtained before cutting posts shorter than 6'-6" except as allowed on Standard Drawing RD617.

All dimensions are nominal and are subject to manufacturing tolerances.



All bolts, nuts, and washers shall be galvanized in accordance with the Standard Specifications.

BOLT SIZE SCHEDULE	
Bolt	L
A	8 ½"
B	1 ¼"
C	18"

BOLT & NUT DETAILS

STEEL POSTS

General Notes for Steel Posts

The grade of steel for steel posts shall meet the requirements of the Standard Specifications.

Steel posts shall be hot dipped galvanized in accordance with KDOT Standard Specifications. Galvanizing shall be done after the posts and blocks are fabricated.

Wood blocks shall meet the requirements in the general notes for wood posts on this sheet.

Approved polymer block-outs may be subsituted for wood blockouts. Only one type of block-out shall be permitted at each guardrail installation. This excludes the guardrail end terminals unless certified by the manufacturer.

Excavation of all classes, including rock, shale, and other materials regardless of the elevations encountered, required for the erection of Guardrail shall be considered as subsidiary to the various bid items for which payment is made.

Guardrail Posts may be set by digging or by driving. Post caps which are designed to protect the post from crushing shall be used during driving operations.

Guardrail posts may be wood or steel as shown on this sheet with no change in type of post permitted within a single project except as noted on end section layout detail sheet.

The Contractor shall notify the Engineer at the earliest practical time if a non-removable man-made object (footing, pipe, etc.) is encountered which prevents installation of a full length post. Approval of the Engineer shall be obtained before cutting posts shorter than 6'-6" except as allowed on Standard Drawing RD617.

All dimensions are nominal and are subject to manufacturing tolerances.

NO.	DATE	REVISIONS	BY	APP'D
11	6-30-04	Removed steel blockout and notes.	S.W.K.	J.O.B.
10	7-15-02	Added polymer block-out alternate.	S.W.K.	J.O.B.
9	5-19-00	Add. alt. hole punch. det. &temp. traf.	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL POST DETAILS

RD611

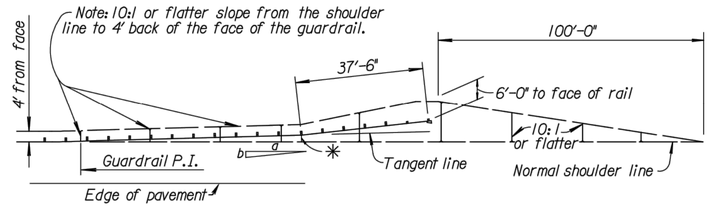
FHWA APPROVAL	11-02-04	APP'D. James O. Brewer		
DESIGNED	DETAILED	QUANTITIES	TRACED	B.N.B.
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.	S.W.K.

Plotted : 02-JUN-2006 12:52

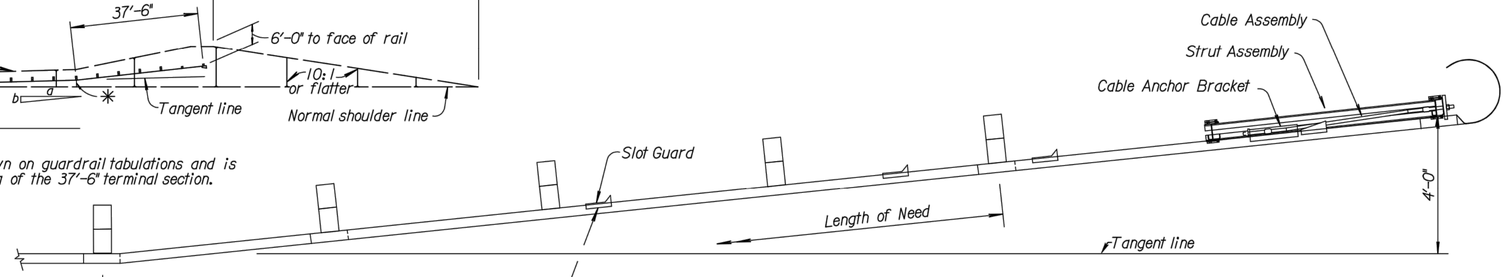
Drawn By : bert

File : rd611.dgn (rd611)

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS			7	

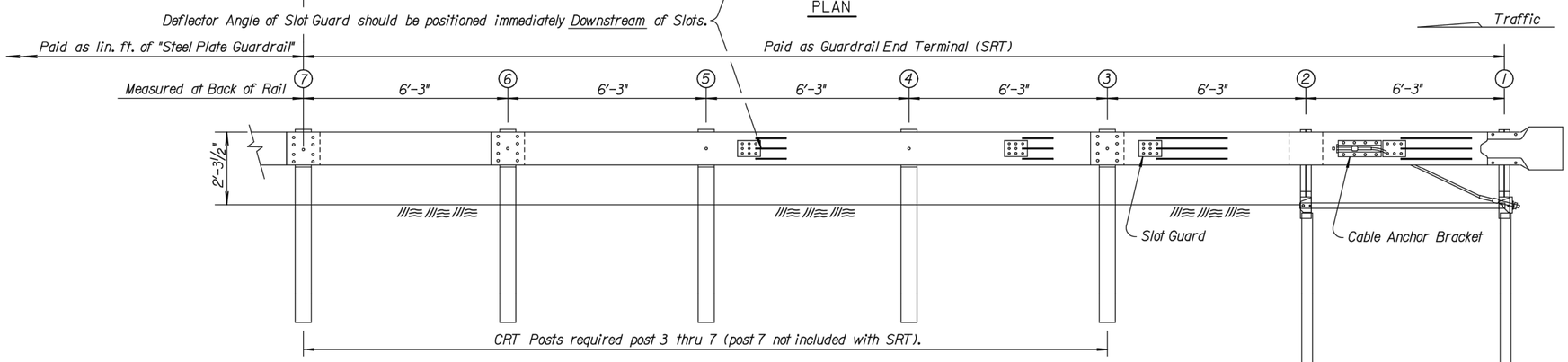


✳ "K" is the distance shown on guardrail tabulations and is measured at the beginning of the 37'-6" terminal section.



PLAN

Deflector Angle of Slot Guard should be positioned immediately Downstream of Slots.



ELEVATION

GENERAL NOTE

See RD611 & RD613 for details of guardrail not shown.

Slotted Rail Terminal posts shall be wood, or as shown regardless of post material used on remainder of the installation.

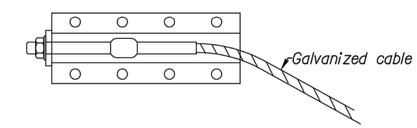
All guardrail splices shall be lapped in the direction of Traffic. Where traffic is temporarily carried in the direction opposite of the final configuration, the rail splices shall be lapped in the direction of the permanent traffic.

All work and materials required for installation of this terminal shall be paid under to the bid item "Guardrail End Terminal (SRT)".

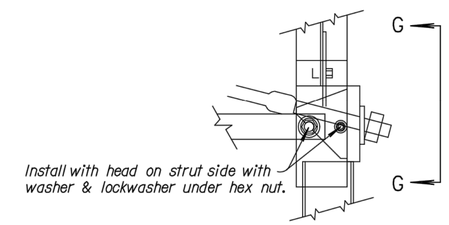
All steel parts shall be galvanized after fabrication.

Standard splices, standard hardware connections (bolts, nuts, & washers) are used except where noted. See RD611 for additional details.

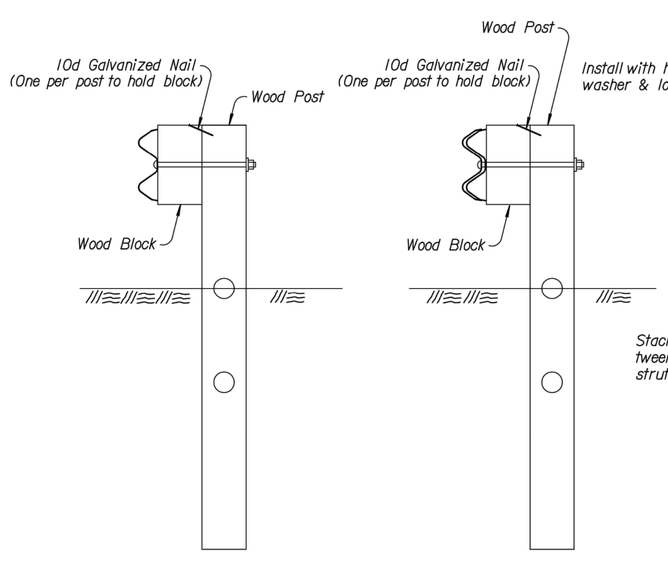
The cable anchor assembly must be taut. Restrain the cable with vise grip pliers at the end being tightened to avoid twisting the cable. Make sure the nuts are tight and the cable is taut.



CABLE ANCHOR BRACKET

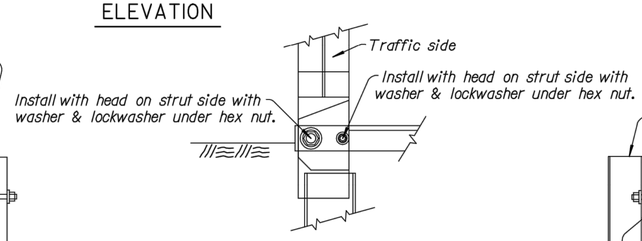


DETAIL "G" (Post #1)

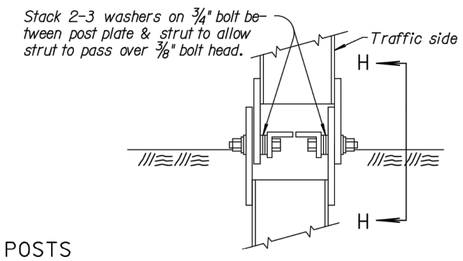


DETAIL OF CRT POSTS (Post #4 & 6)

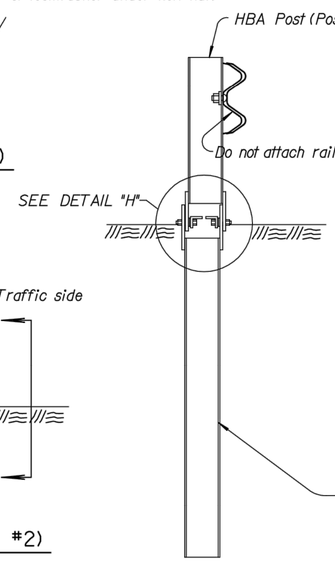
DETAIL OF CRT POSTS (Post #3,5 & 7)



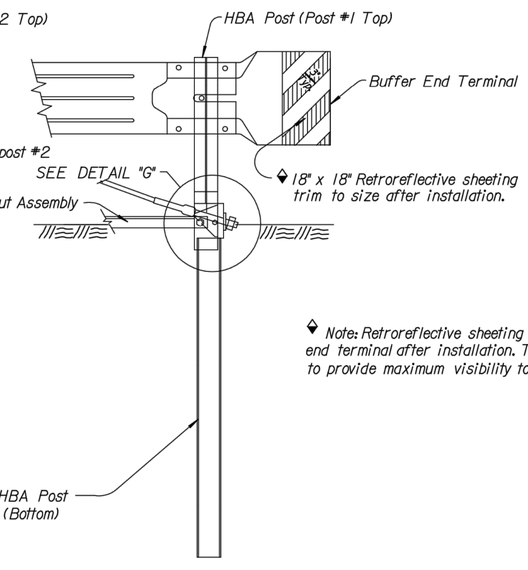
VIEW H-H (Post #2)



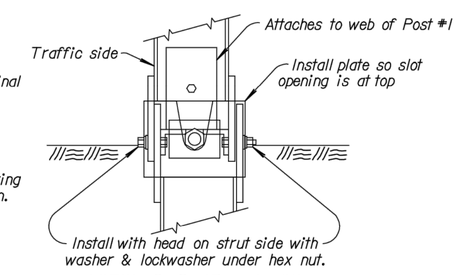
DETAIL "H" (Post #2)



DETAIL OF POST #2



ENLARGED VIEW @ POST #1



VIEW G-G (Post #1)

◆ Note: Retroreflective sheeting shall be applied to the buffer end terminal after installation. The sheeting shall be located to provide maximum visibility to approach traffic.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL END TERMINAL (SRT) (FLARED)

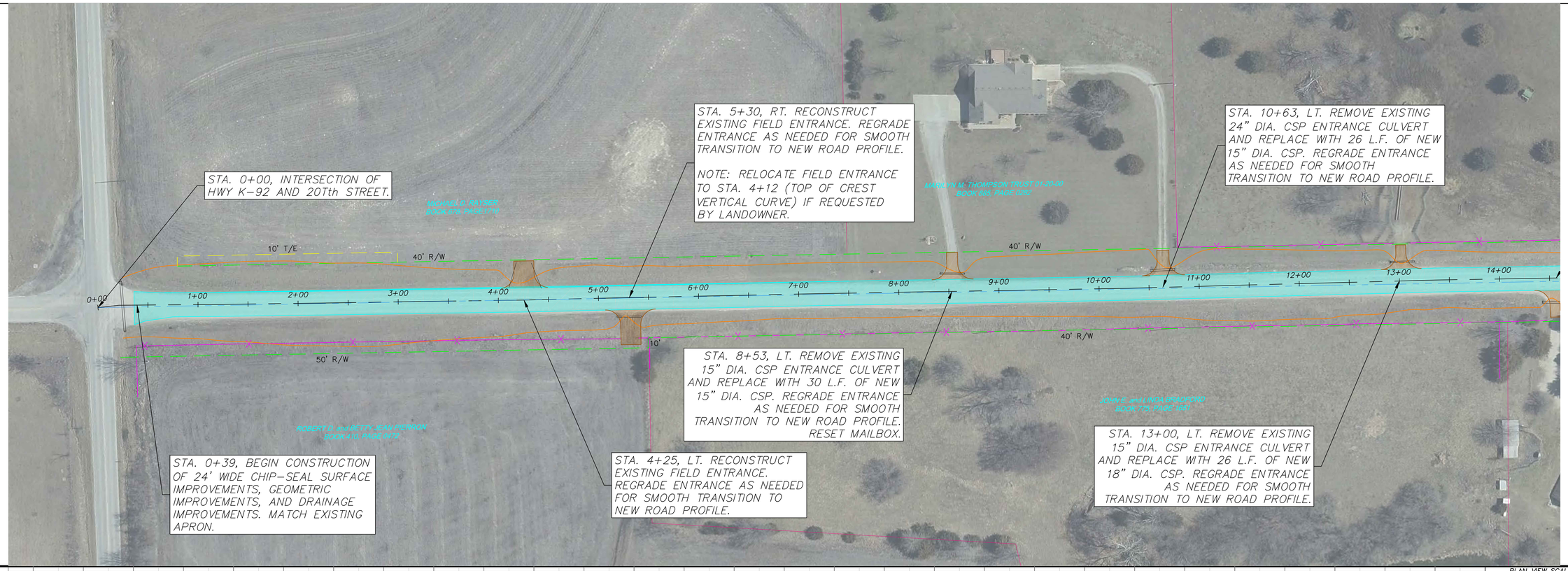
RD621A

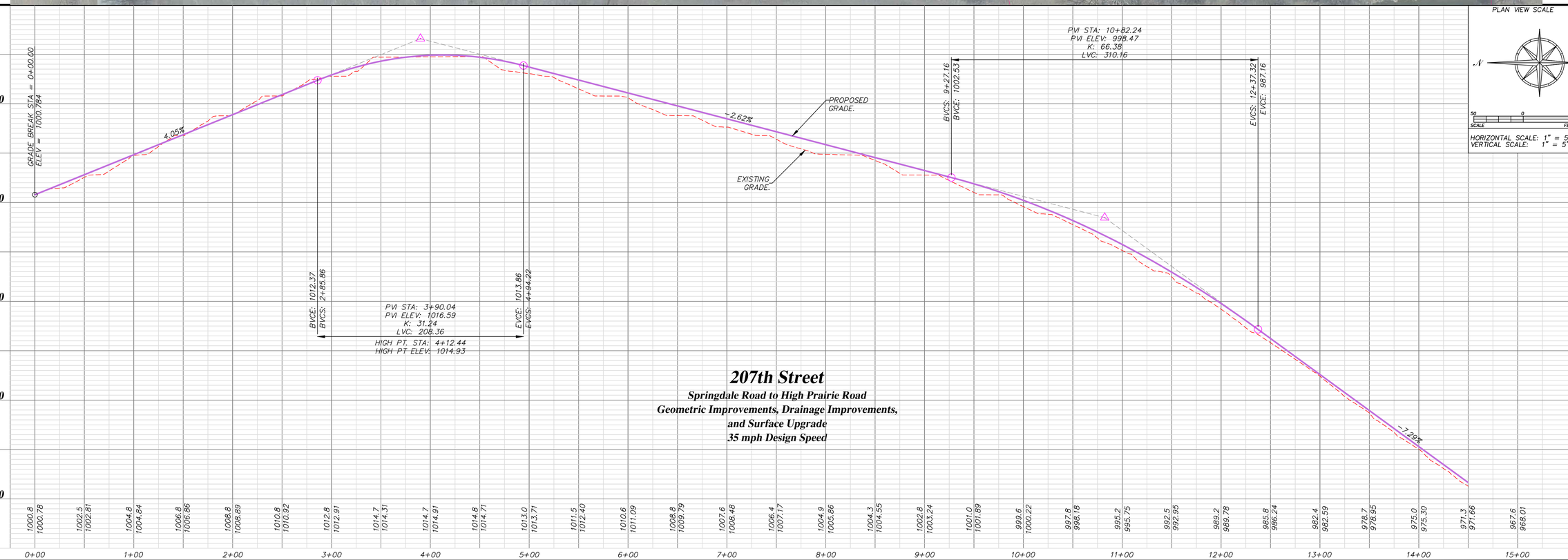
FHWA APPROVAL	11-02-04	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

Plotted : 02-JUN-2006 12:59

Drawn By : bert

File : rd621a.dgn (rd621a)





PLAN VIEW SCALE

N

50 0 50
SCALE FEET

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

207th Street

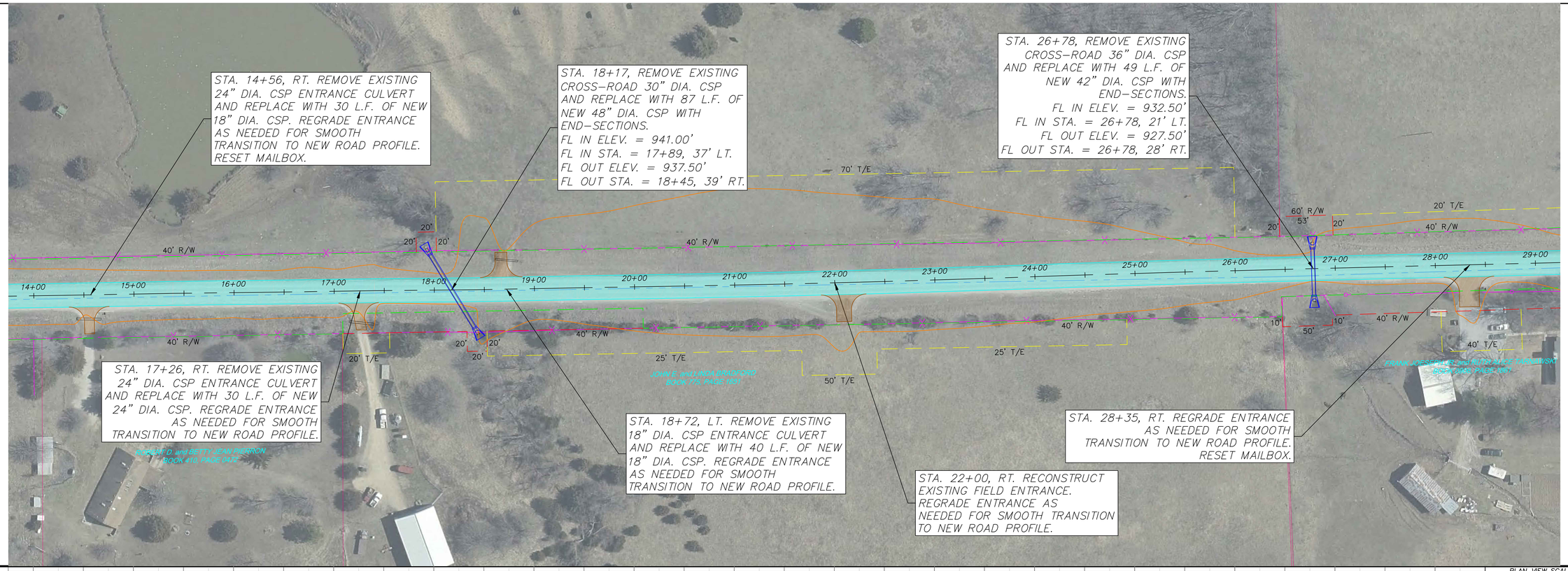
Springdale Road to High Prairie Road
Geometric Improvements, Drainage Improvements, and Surface Upgrade
35 mph Design Speed

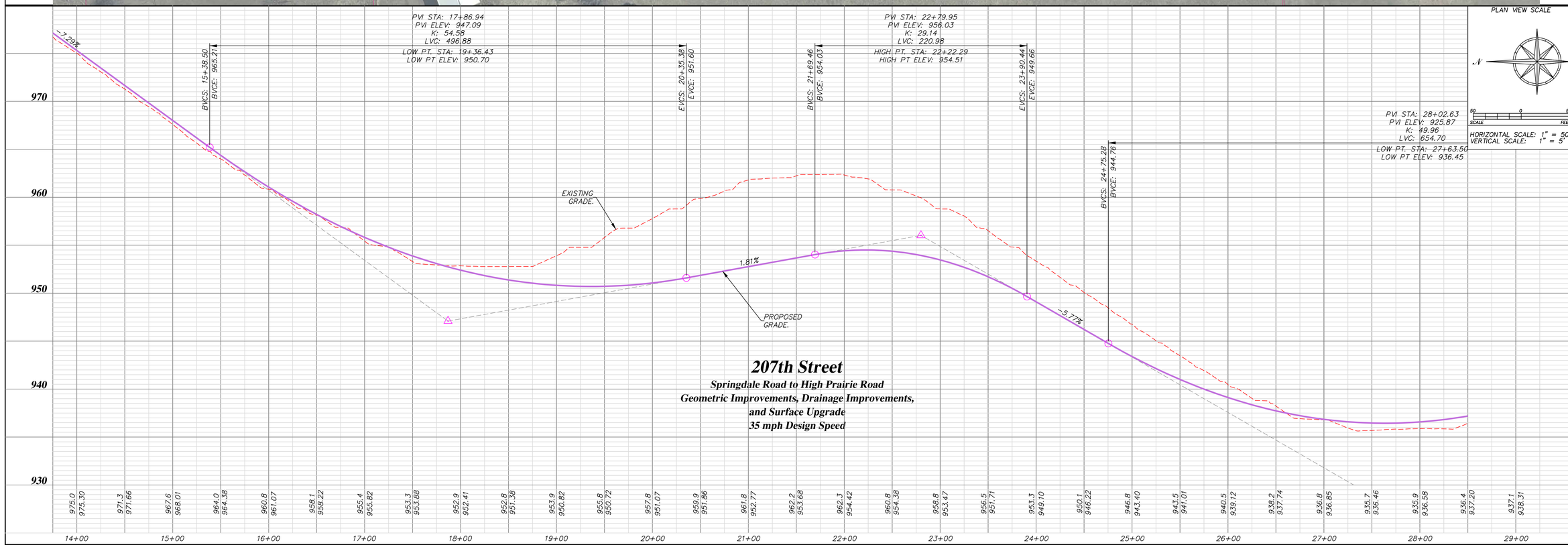
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Plan and Profile

Date:	09/08/14
Designed:	N/A
Drawn:	MGS
Checked:	N/A
Approved:	N/A
Project No.:	N/A
Sheet No.:	8





207th Street

Springdale Road to High Prairie Road
Geometric Improvements, Drainage Improvements, and Surface Upgrade
35 mph Design Speed

PLAN VIEW SCALE

N

SCALE 50 0 50 FEET

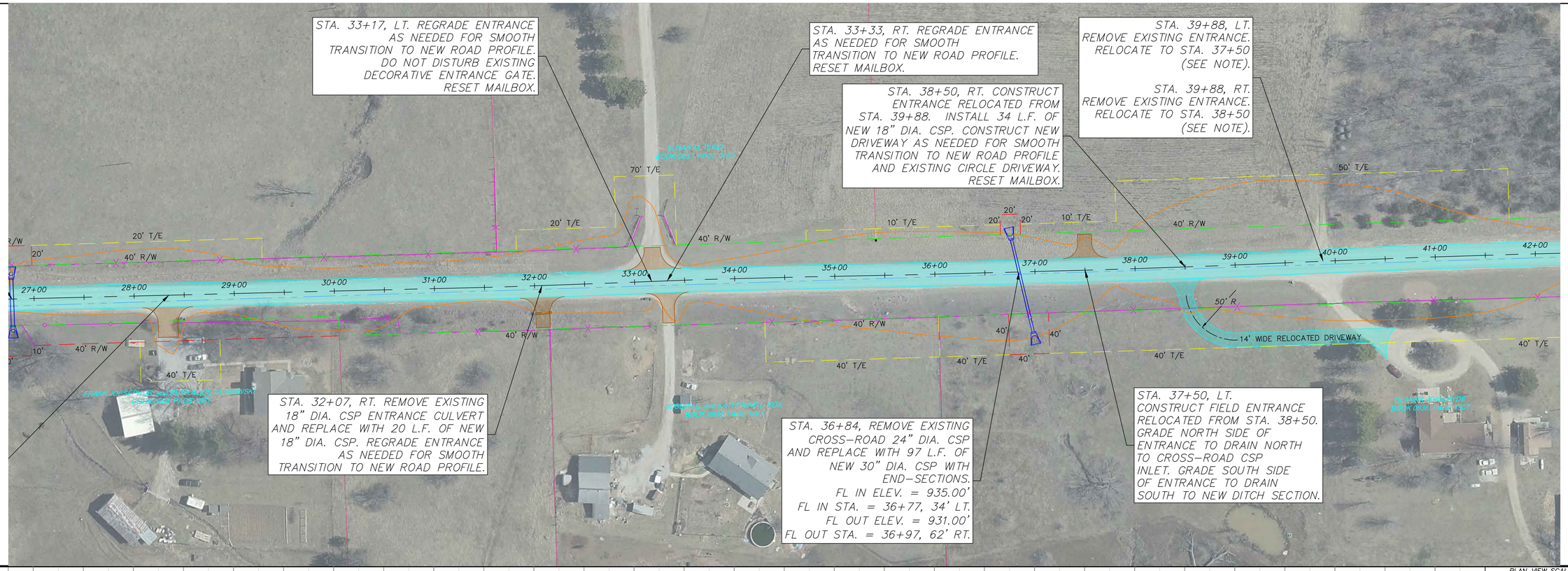
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

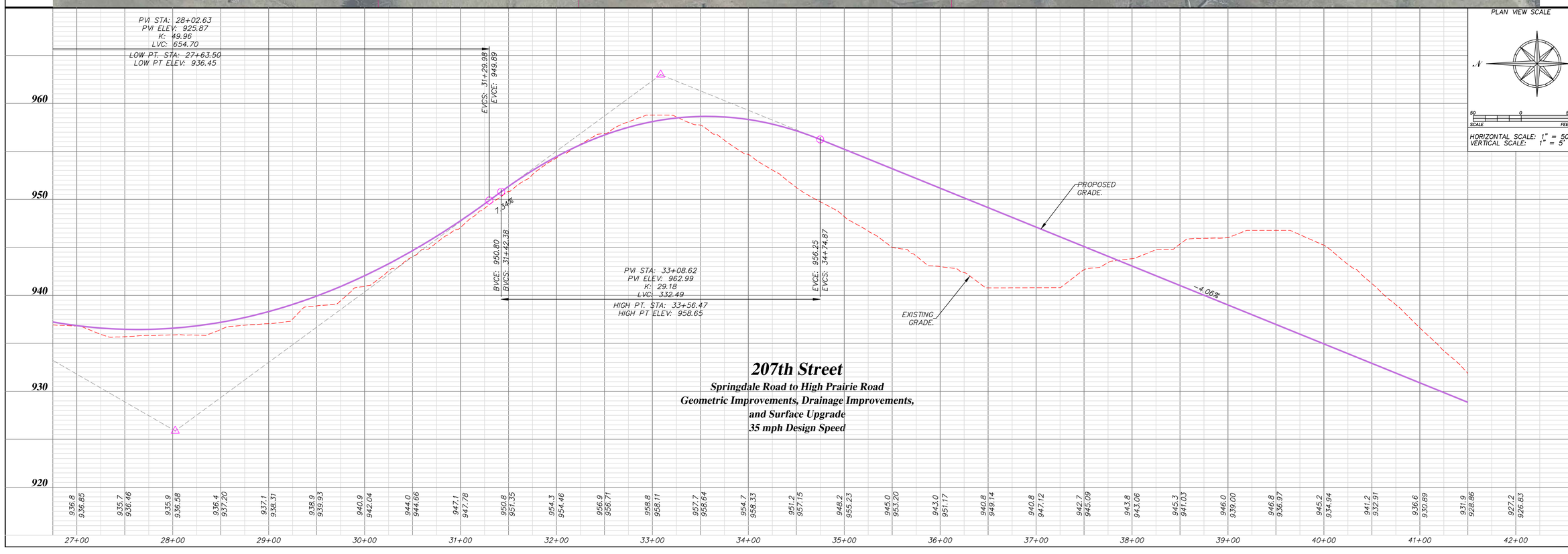
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Plan and Profile

Date:	09/08/14
Designed:	N/A
Drawn:	MGS
Checked:	N/A
Approved:	N/A
Project No.:	N/A
Sheet No.:	9





207th Street

Springdale Road to High Prairie Road

Geometric Improvements, Drainage Improvements, and Surface Upgrade

35 mph Design Speed

PLAN VIEW SCALE

N

50 0 50
SCALE FEET

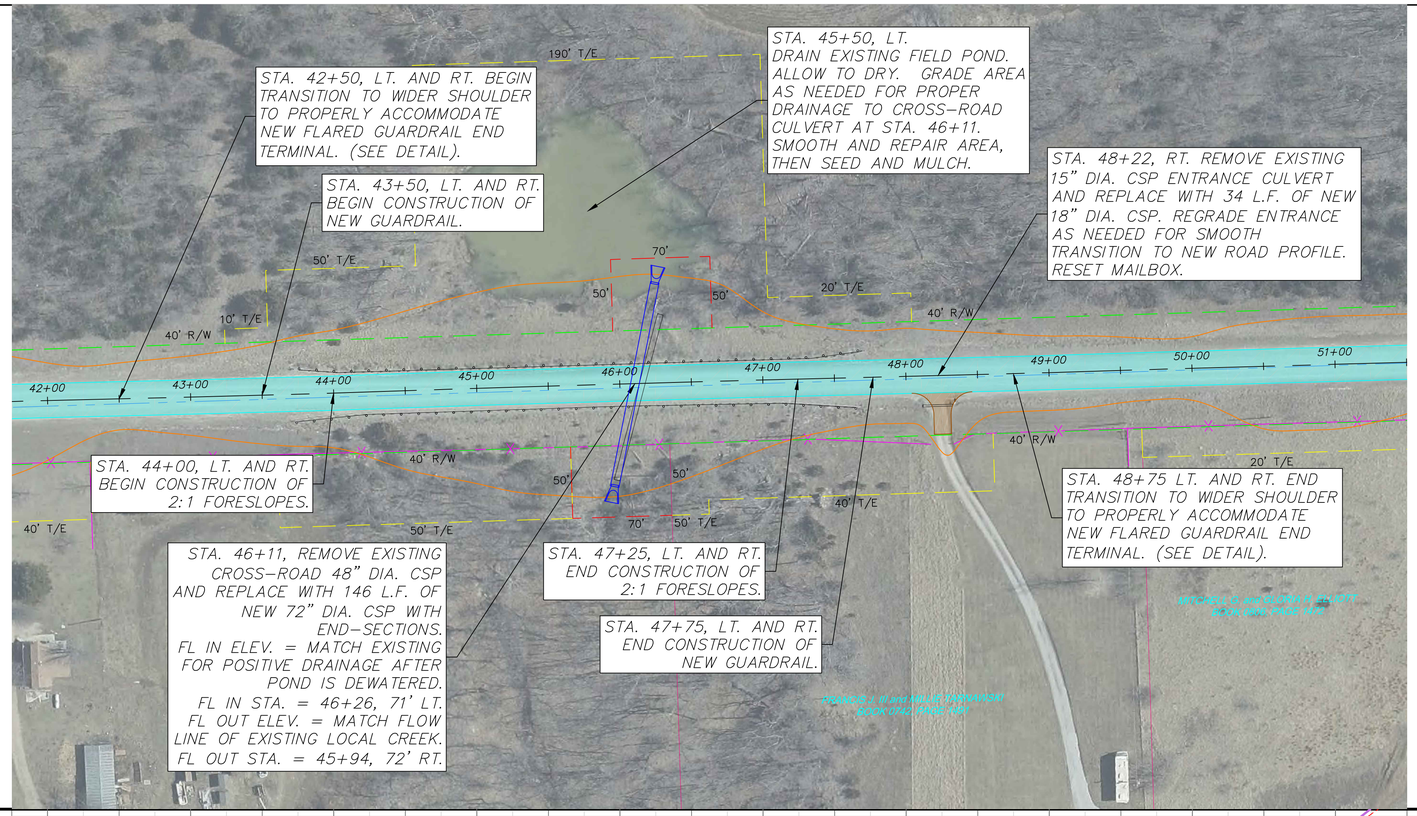
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

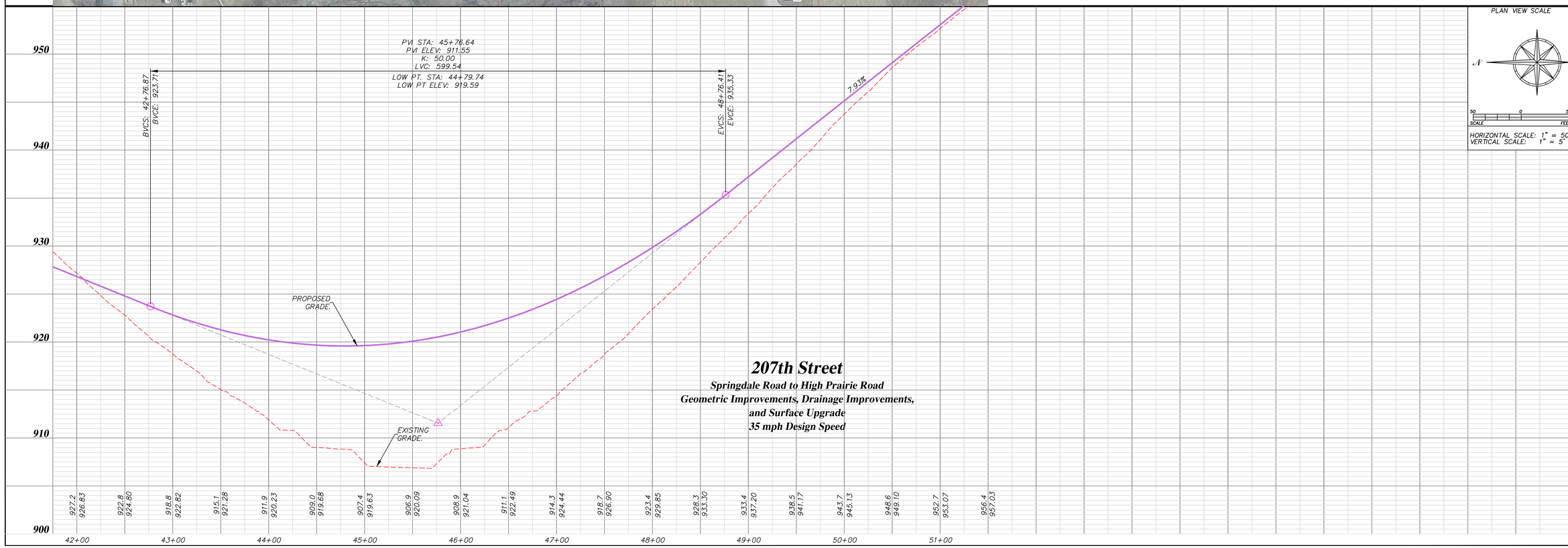
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Plan and Profile

Date:	09/08/14
Designed:	N/A
Drawn:	MGS
Checked:	N/A
Approved:	N/A
Project No.:	N/A
Sheet No.:	10





207th Street

Springdale Road to High Prairie Road
Geometric Improvements, Drainage Improvements, and Surface Upgrade
35 mph Design Speed

PLAN VIEW SCALE

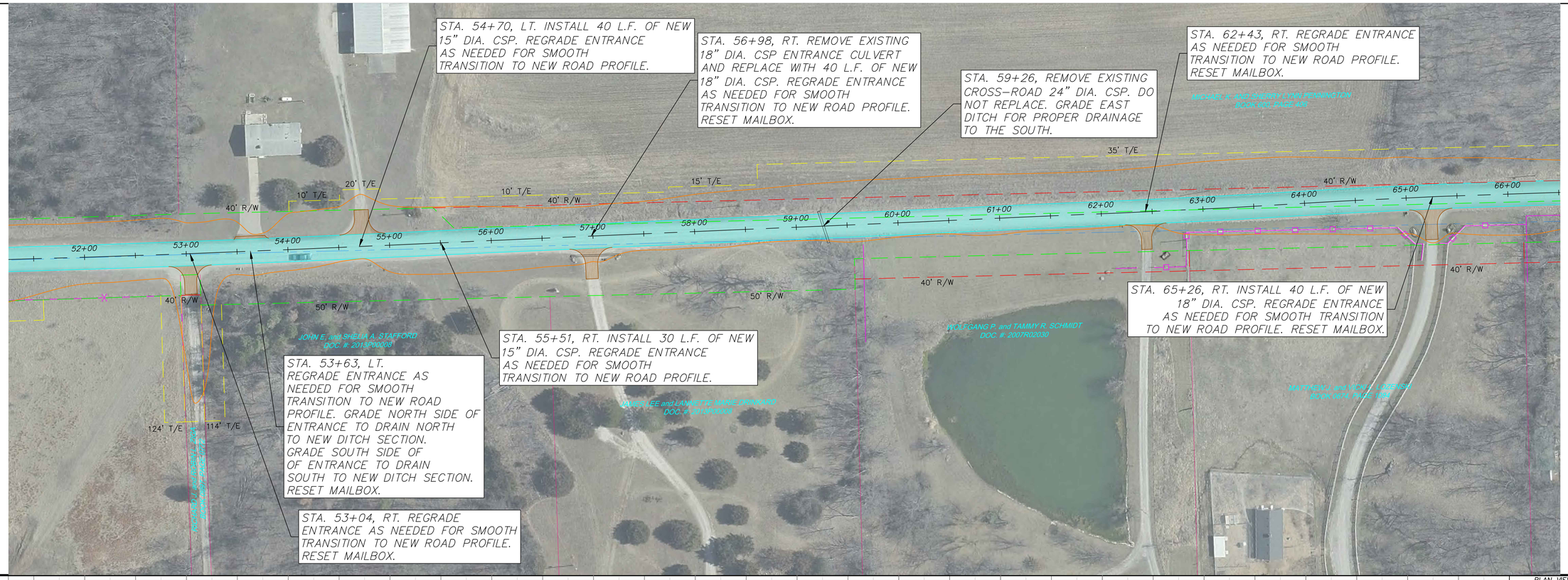
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

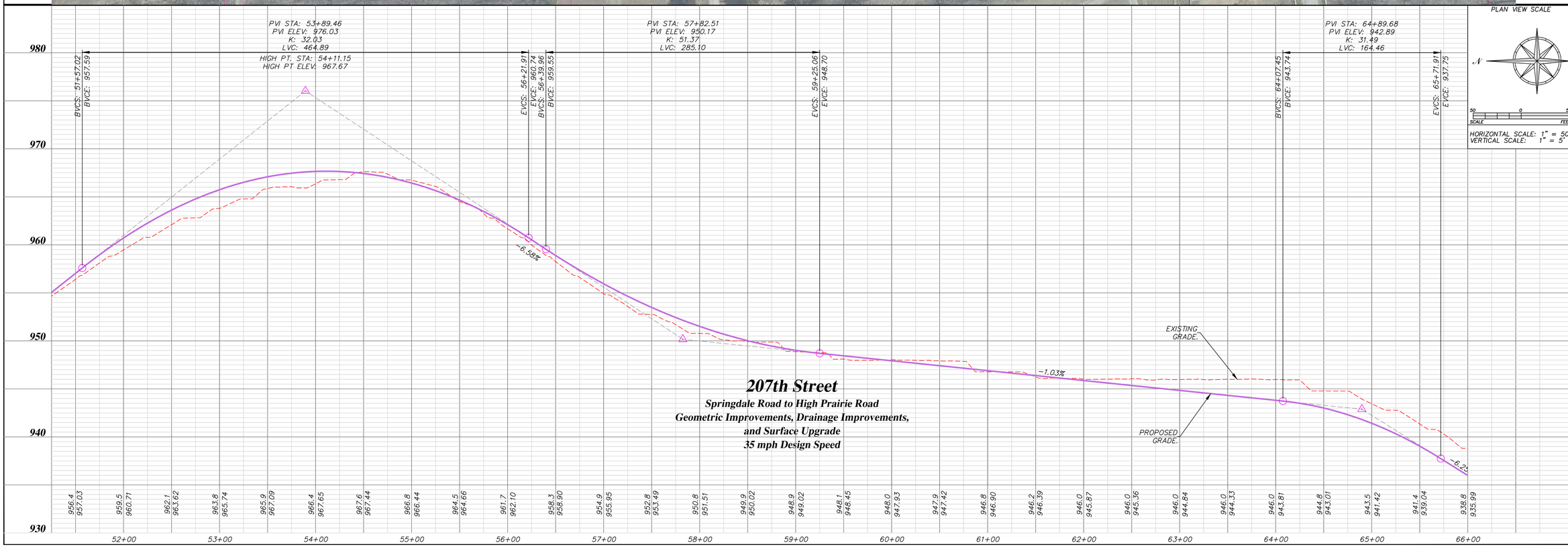
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

No.	Date	Revisions	By	App.
1				
2				
3				
4				
5				
6				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Plan and Profile

Date:	09/08/14
Designed:	N/A
Drawn:	MGS
Checked:	N/A
Approved:	N/A
Project No.:	N/A
Sheet No.:	11





PLAN VIEW SCALE

N

50 0 50
SCALE FEET

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

207th Street

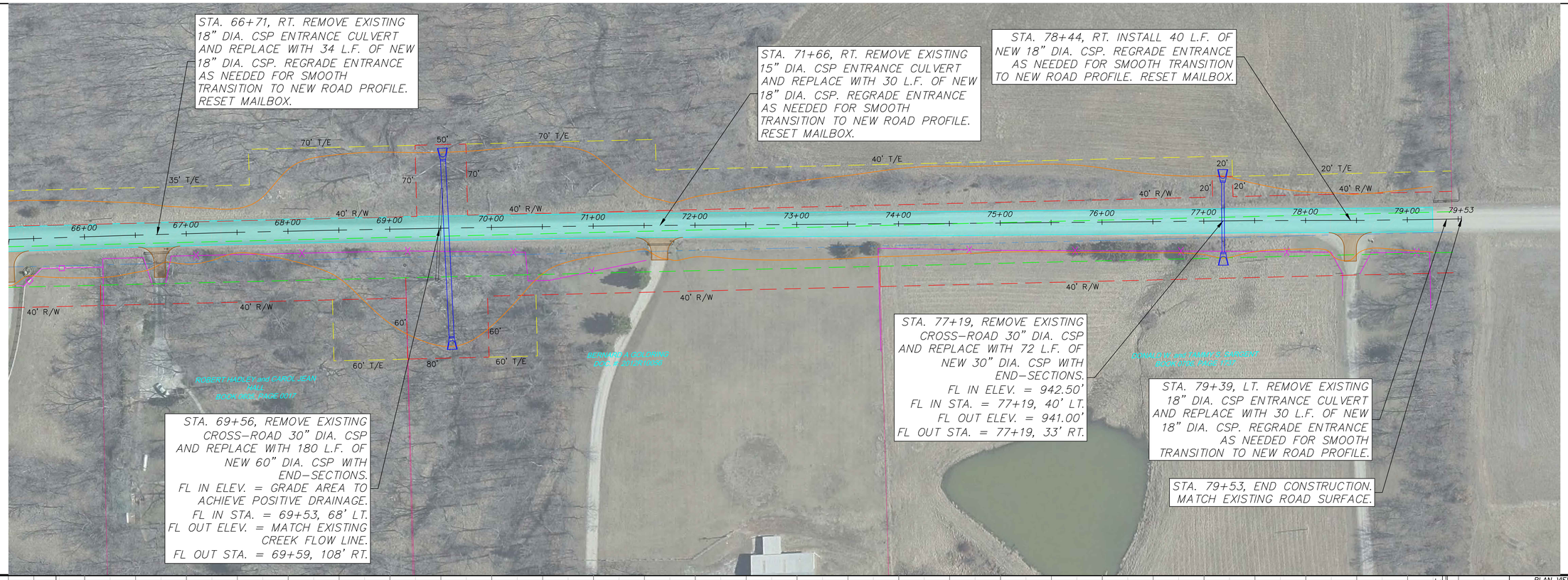
Springdale Road to High Prairie Road
Geometric Improvements, Drainage Improvements, and Surface Upgrade
35 mph Design Speed

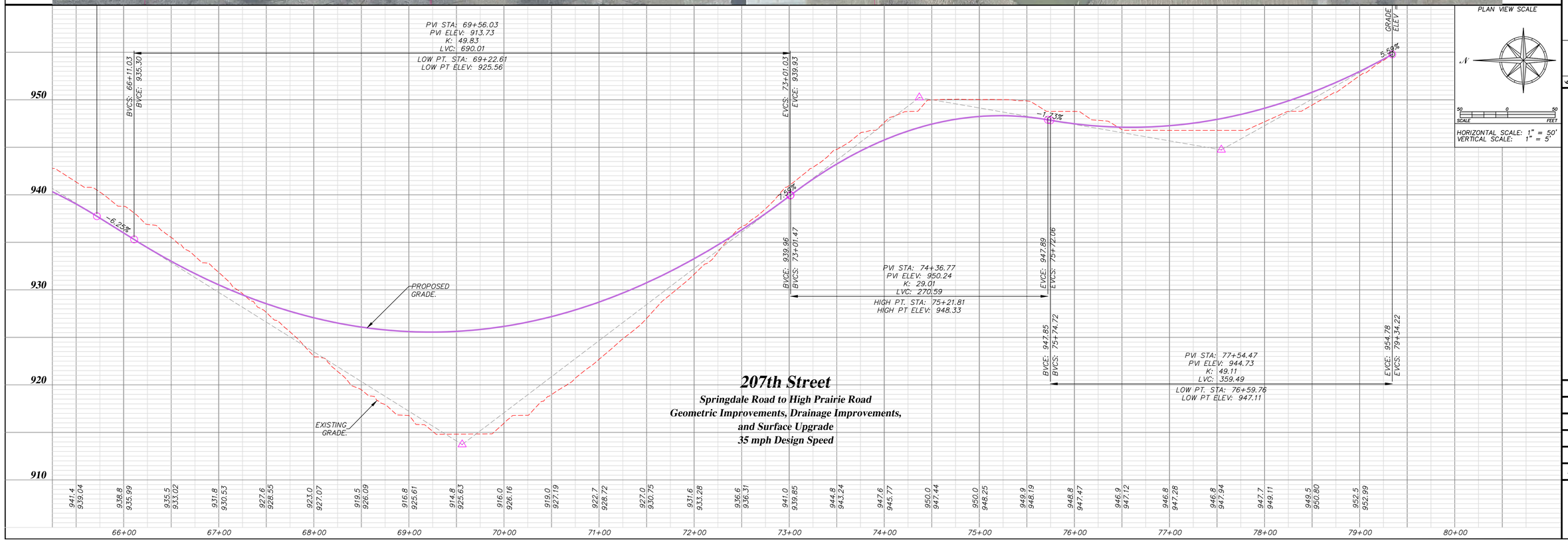
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

No.	Date	Revisions	By	App.
1				
2				
3				
4				
5				
6				

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Plan and Profile

Date:	09/08/14
Designed:	N/A
Drawn:	MGS
Checked:	N/A
Approved:	N/A
Project No.:	N/A
Sheet No.:	12





207th Street

Springdale Road to High Prairie Road
Geometric Improvements, Drainage Improvements, and Surface Upgrade
35 mph Design Speed

PLAN VIEW SCALE

N

50 0 50
SCALE FEET

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

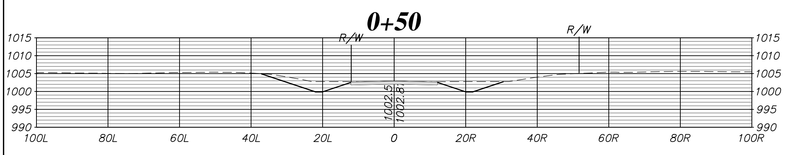
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

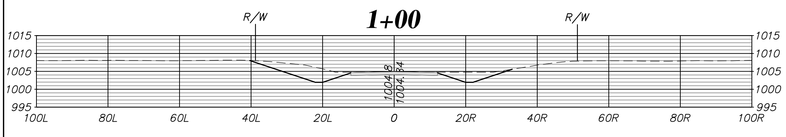
No.	Date	Revisions	By	App.
1				
2				
3				
4				
5				
6				

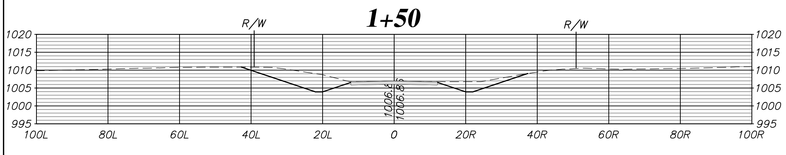
207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Plan and Profile

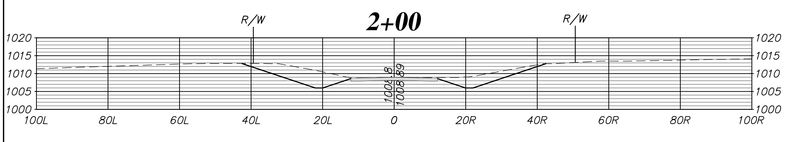
Date:	09/08/14
Designed:	N/A
Drawn:	MGS
Checked:	N/A
Approved:	N/A
Project No.:	N/A
Sheet No.:	13

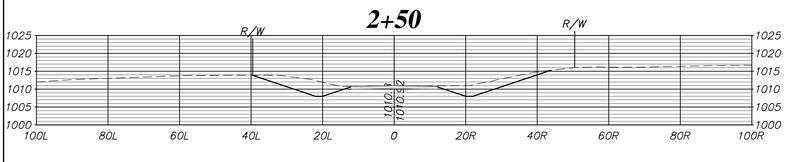
SCALE: 1 = 20'

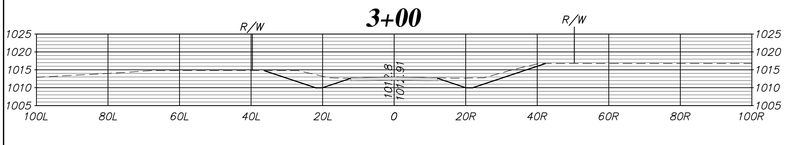


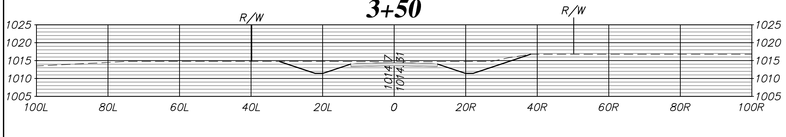


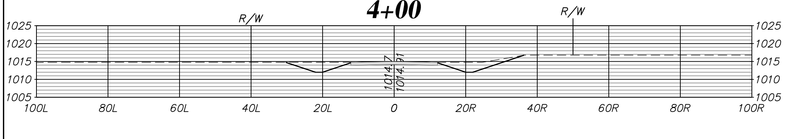


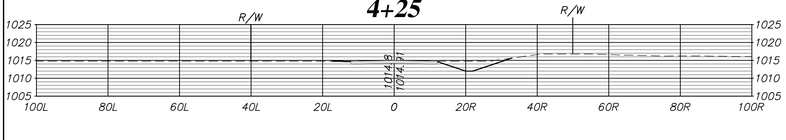


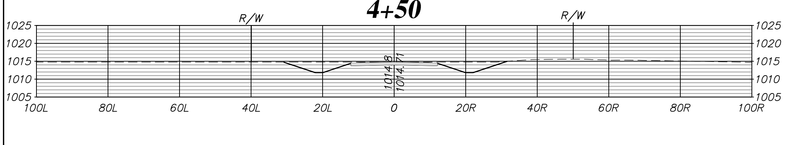


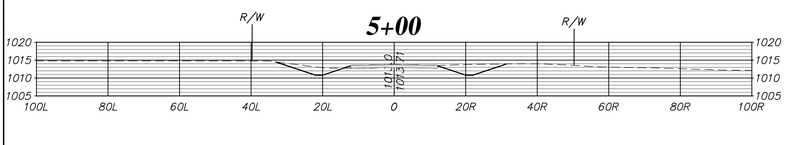




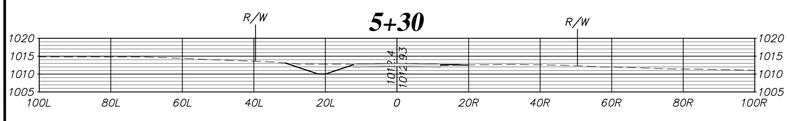


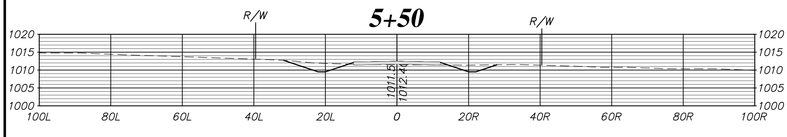


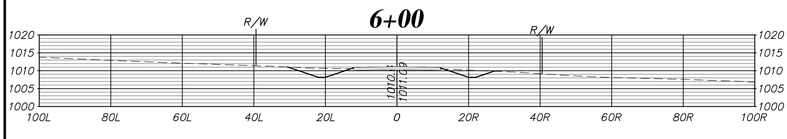


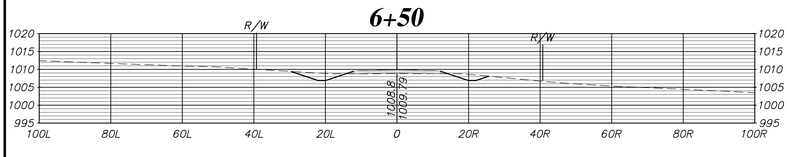


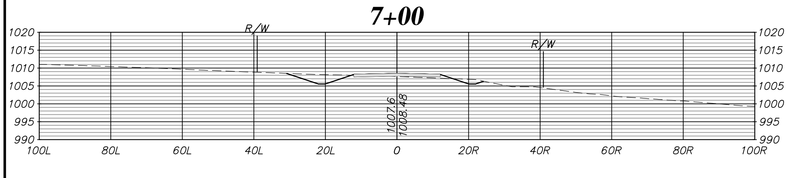
SCALE: 1 = 20'

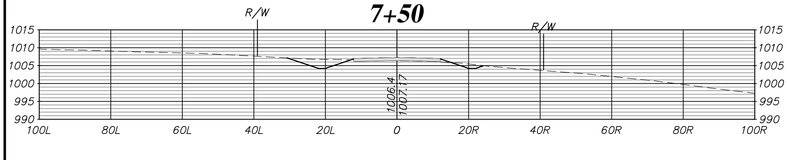


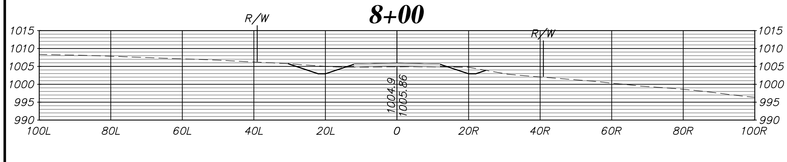


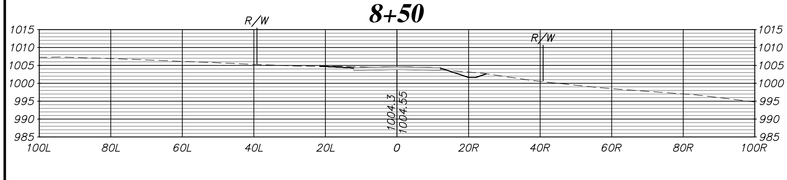


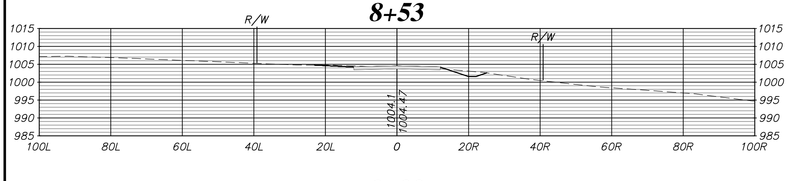


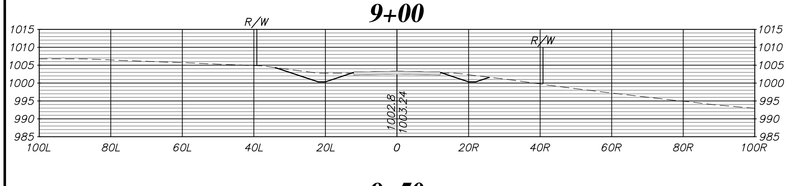


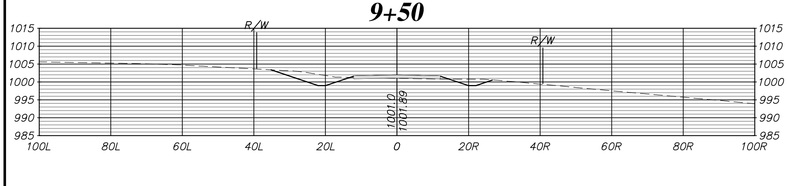












Sheet No.: 14

Project No.: N/A

Approved: MWS

Checked: MWS

Drawn: MGS

Designed: MGS

Date: 03/26/15

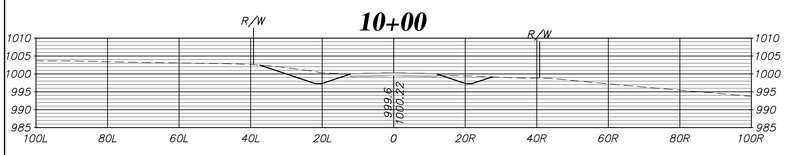
207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

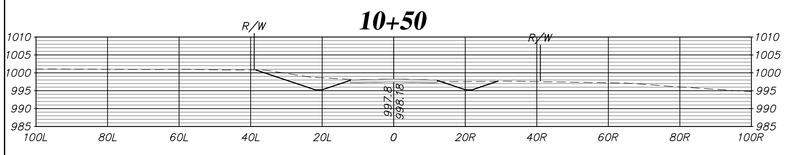
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

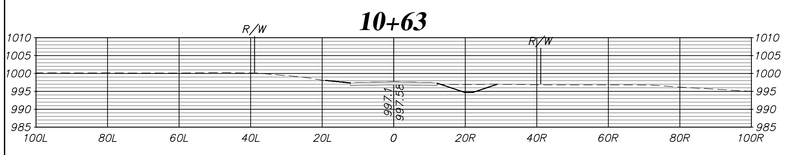
LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

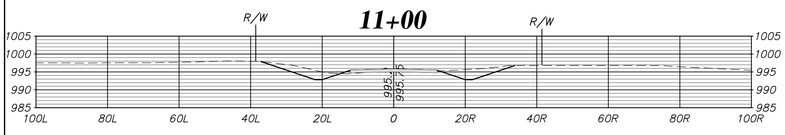
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

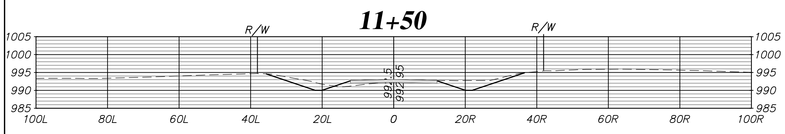
SCALE: 1 = 20'

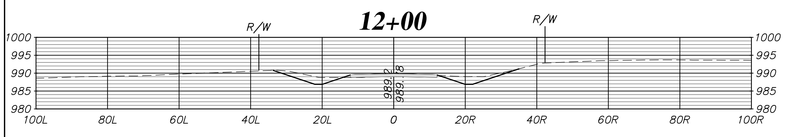


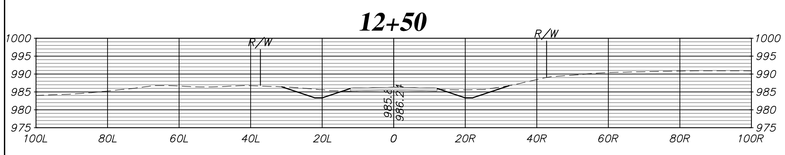


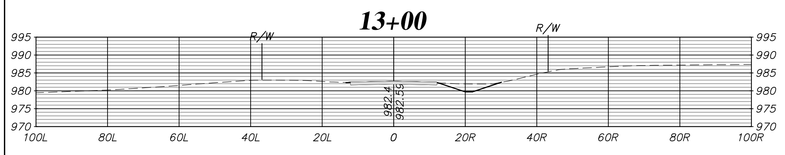


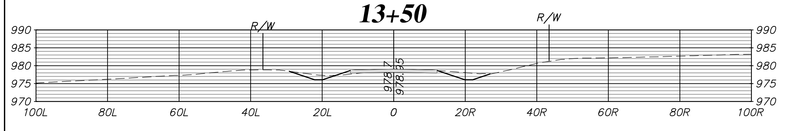


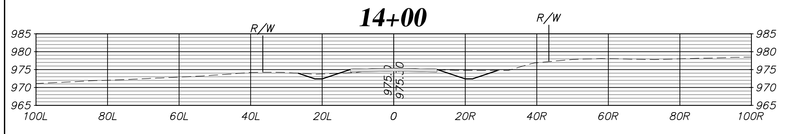


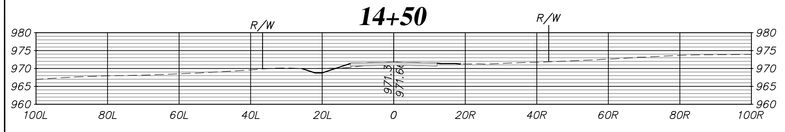




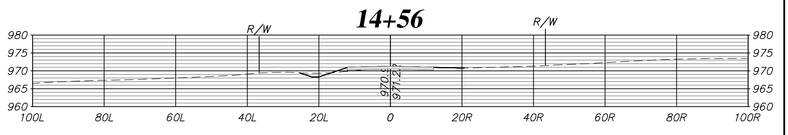


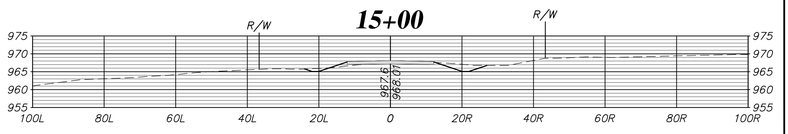


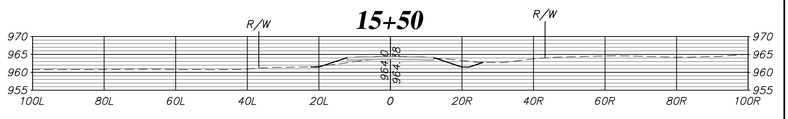


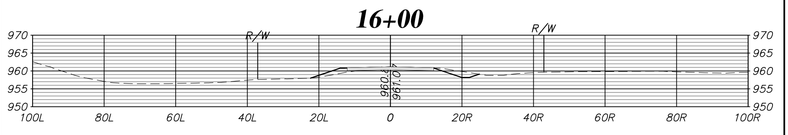


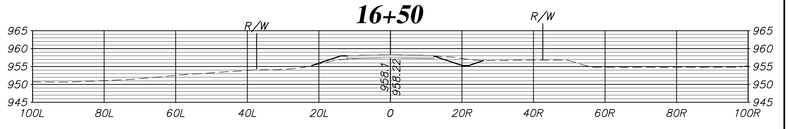
SCALE: 1 = 20'

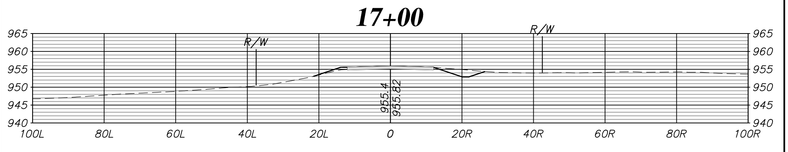


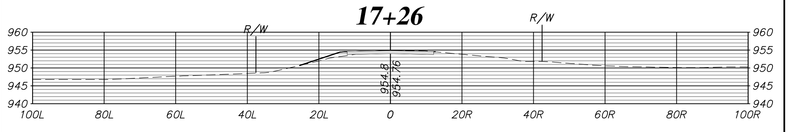


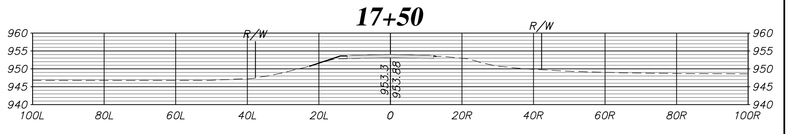


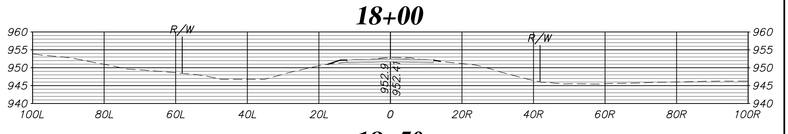


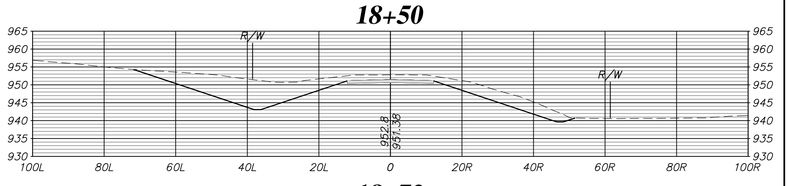


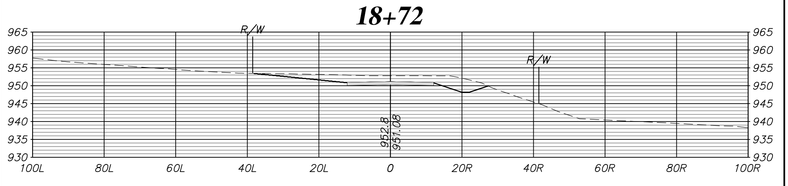












Sheet No.:	Project No.:	Approved:	Checked:	Drawn:	Designed:	Date:
15	N/A	MWS	MWS	MGS	MGS	03/26/15

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

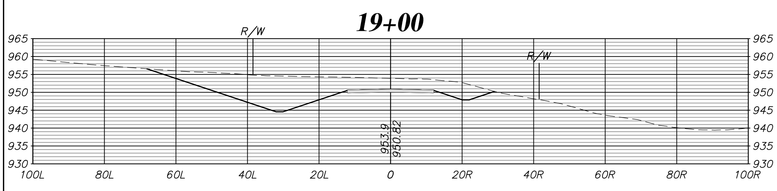
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

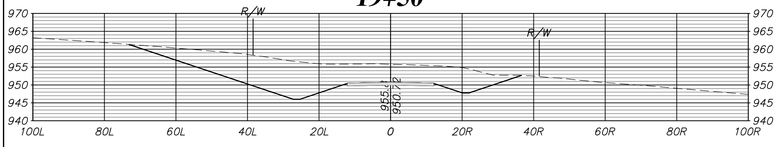
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

SCALE: 1 = 20'

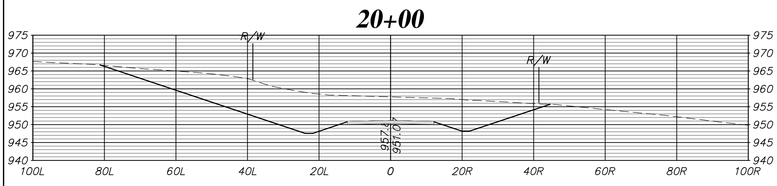
19+00



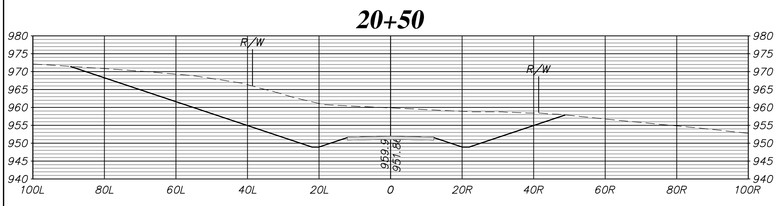
19+50



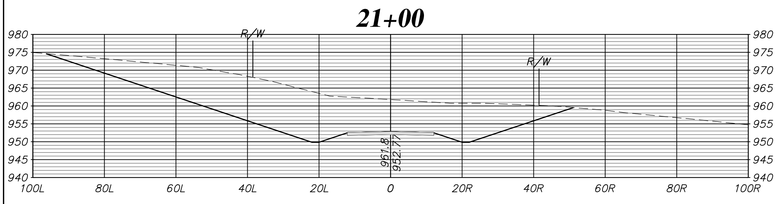
20+00



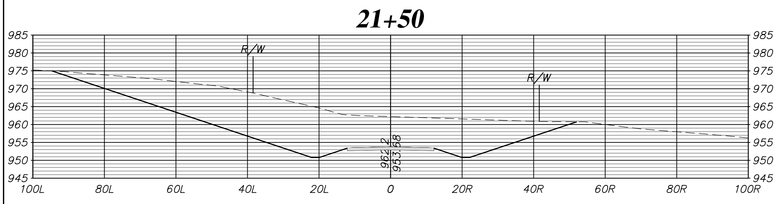
20+50



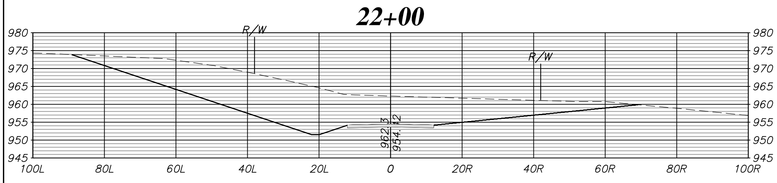
21+00



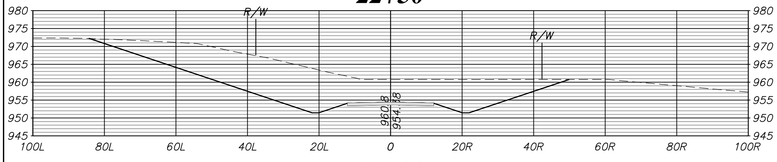
21+50



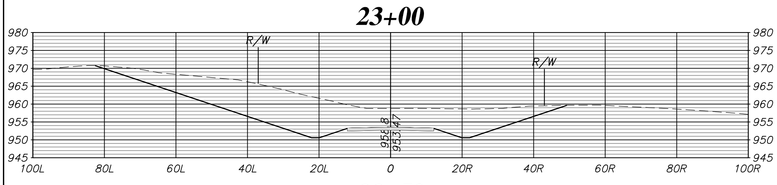
22+00



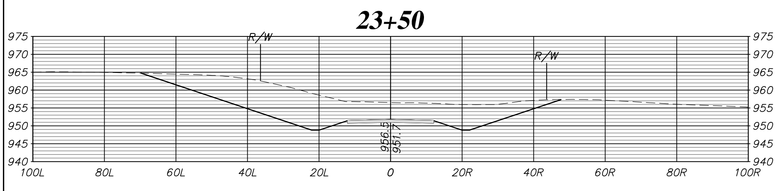
22+50



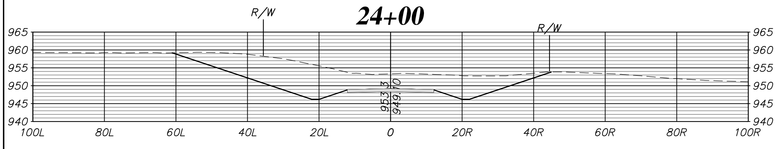
23+00



23+50

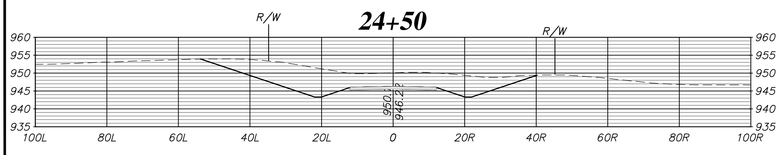


24+00

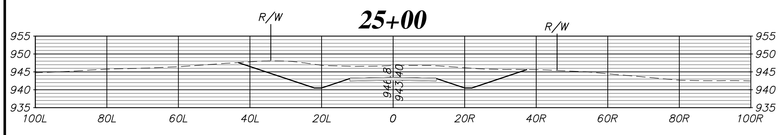


SCALE: 1 = 20'

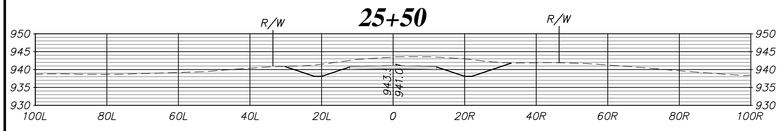
24+50



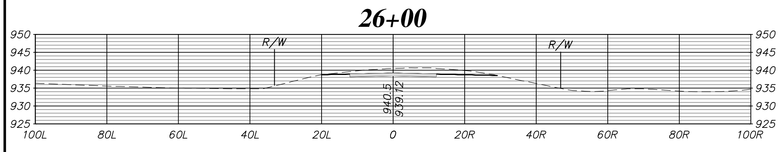
25+00



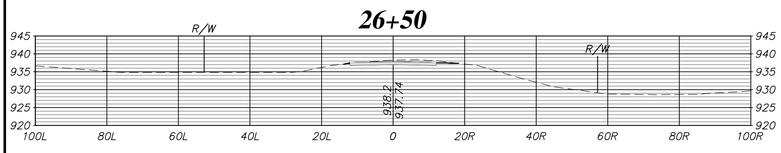
25+50



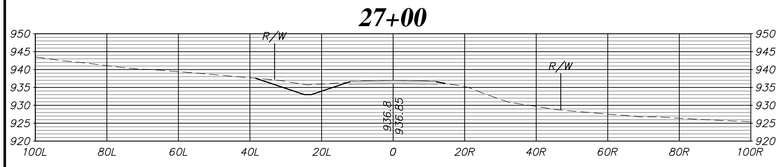
26+00



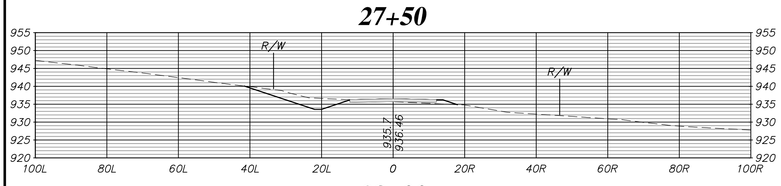
26+50



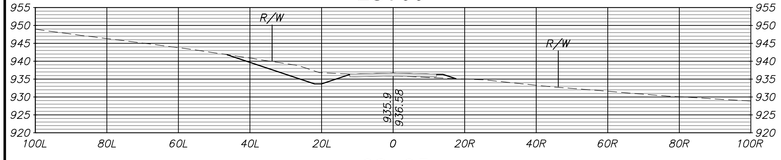
27+00



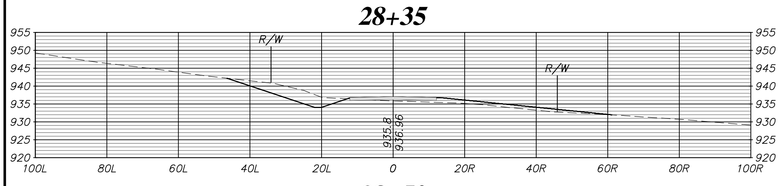
27+50



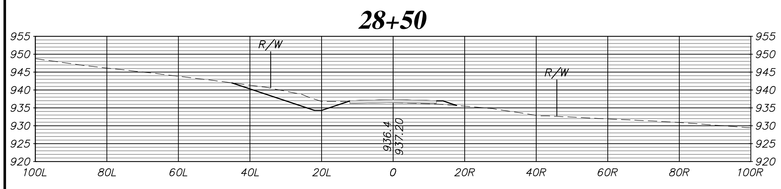
28+00



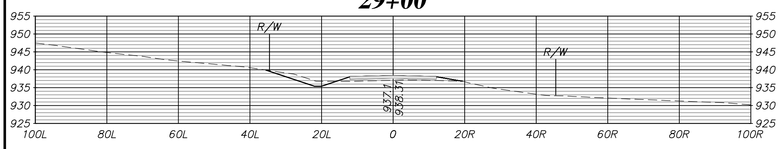
28+35



28+50



29+00



Sheet No.:	16
Project No.:	N/A
Approved:	MWS
Checked:	MWS
Drawn:	MGS
Designed:	MGS
Date:	03/26/15

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

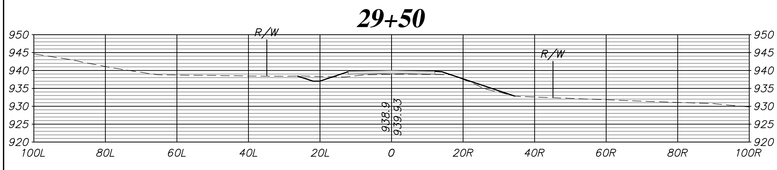
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

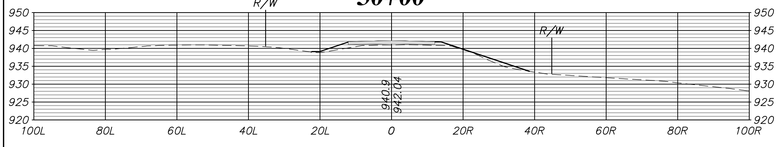
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

SCALE: 1 = 20'

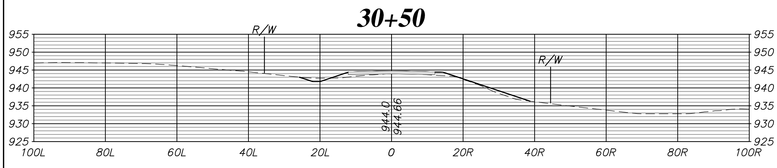
29+50



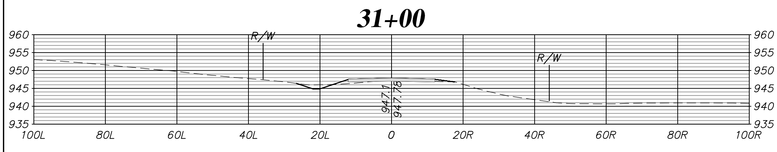
30+00



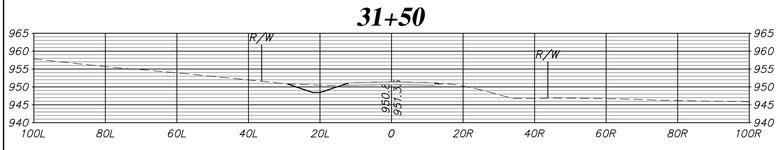
30+50



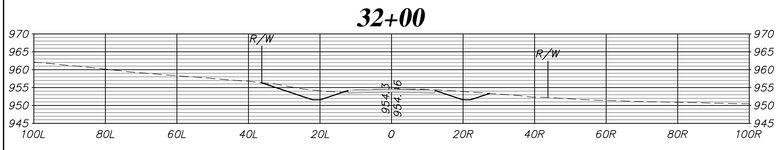
31+00



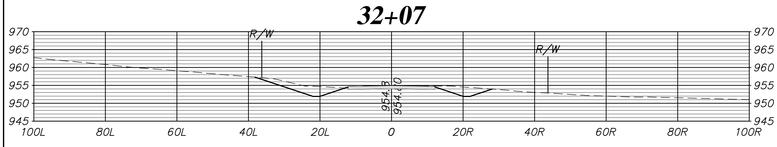
31+50



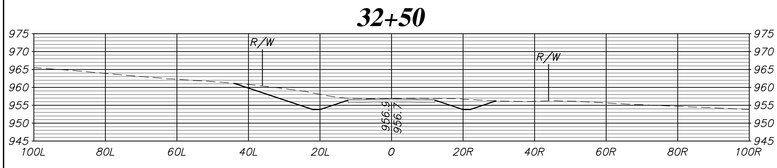
32+00



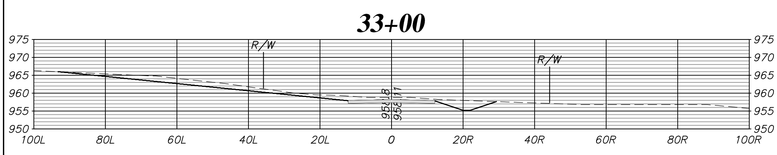
32+07



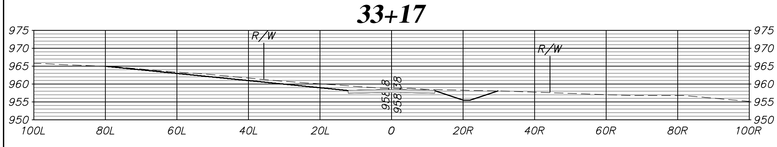
32+50



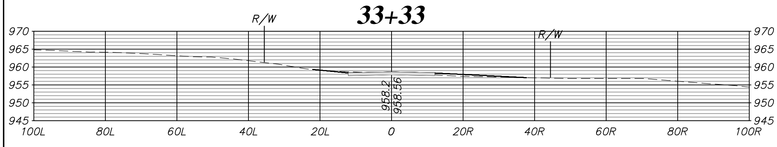
33+00



33+17

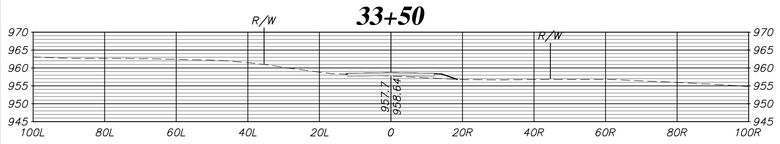


33+33

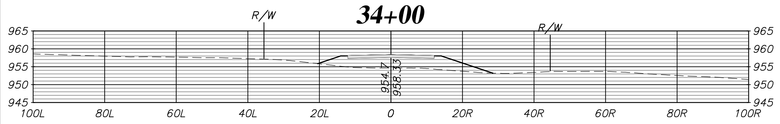


SCALE: 1 = 20'

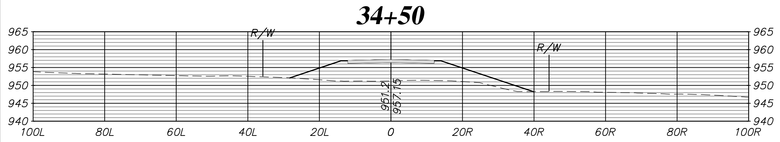
33+50



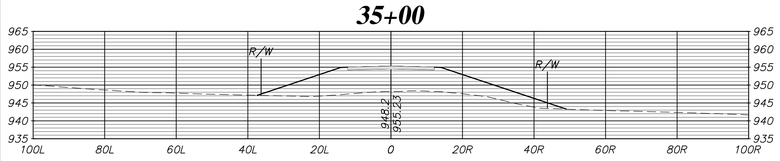
34+00



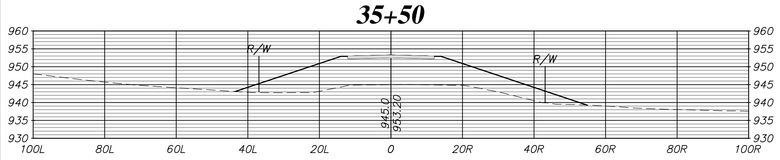
34+50



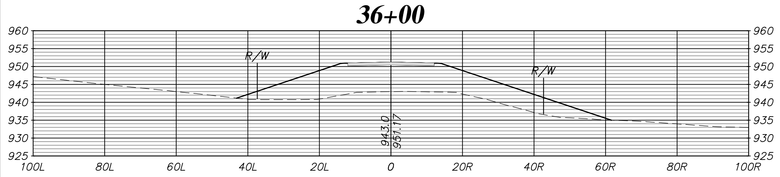
35+00



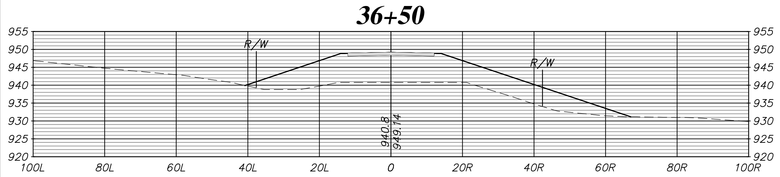
35+50



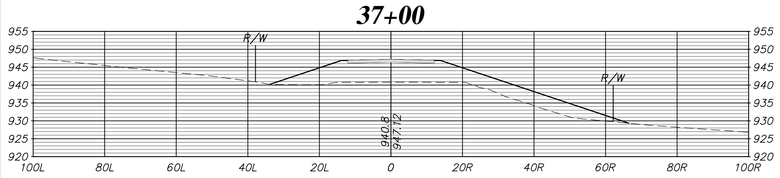
36+00



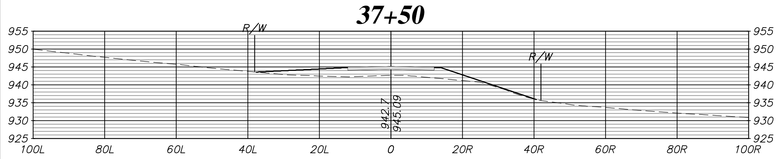
36+50



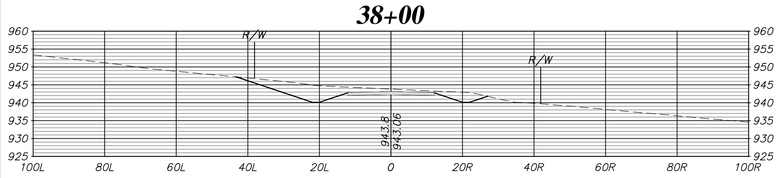
37+00



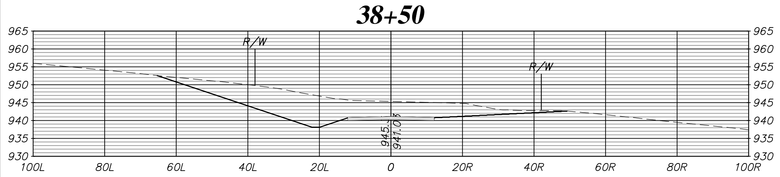
37+50



38+00



38+50



Sheet No.:	17
Project No.:	N/A
Approved:	MWS
Checked:	MWS
Drawn:	MGS
Designed:	MGS
Date:	03/26/15

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

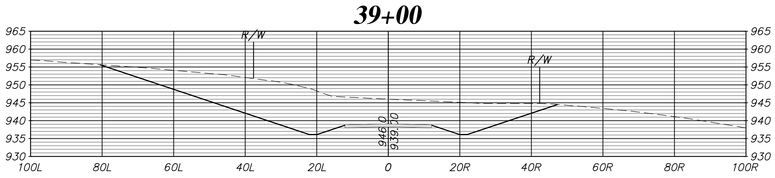
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

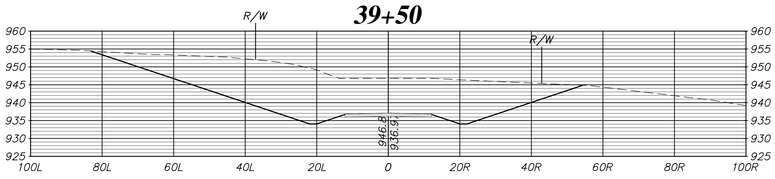
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

SCALE: 1 = 20'

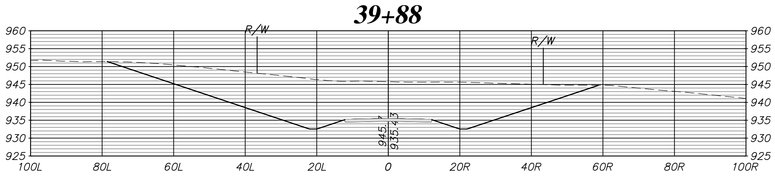
39+00



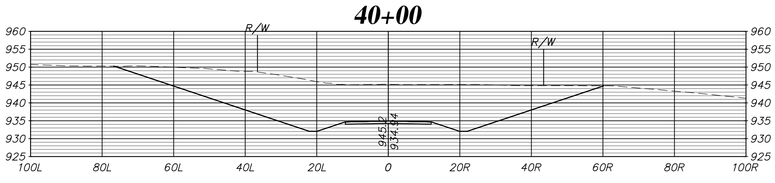
39+50



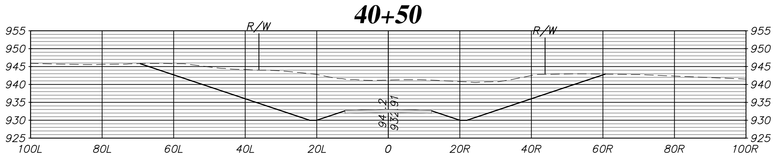
39+88



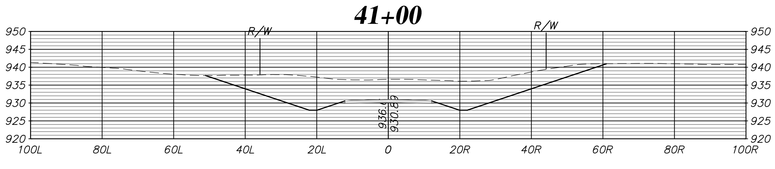
40+00



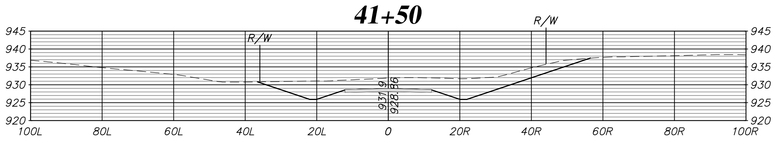
40+50



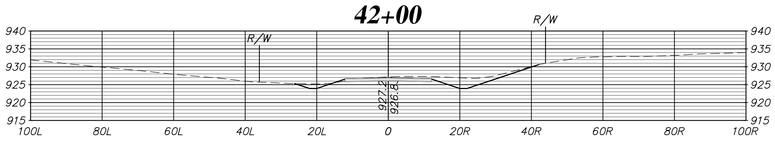
41+00



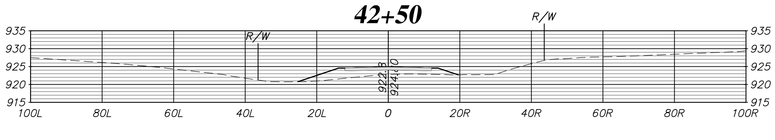
41+50



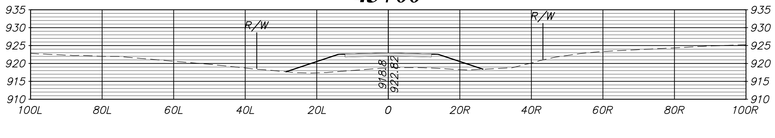
42+00



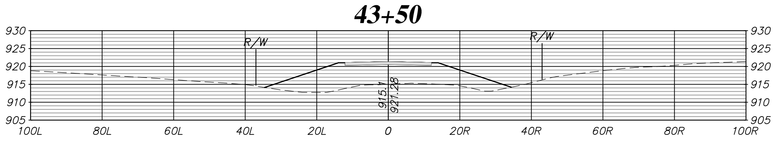
42+50



43+00

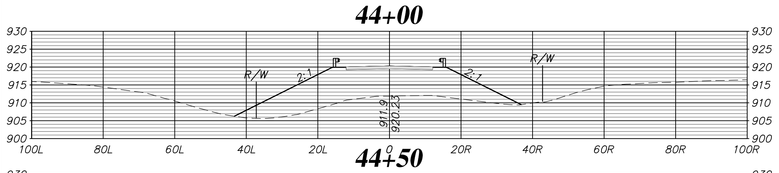


43+50

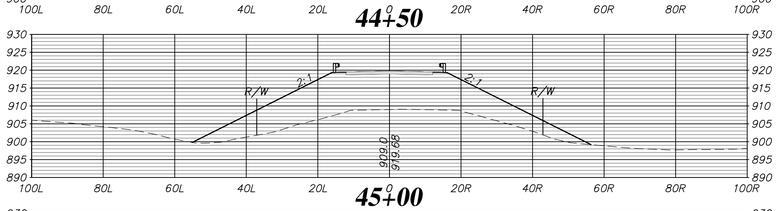


SCALE: 1 = 20'

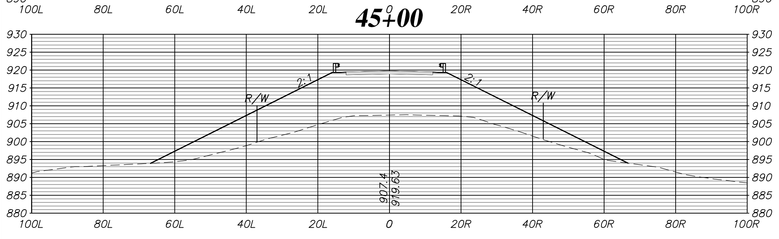
44+00



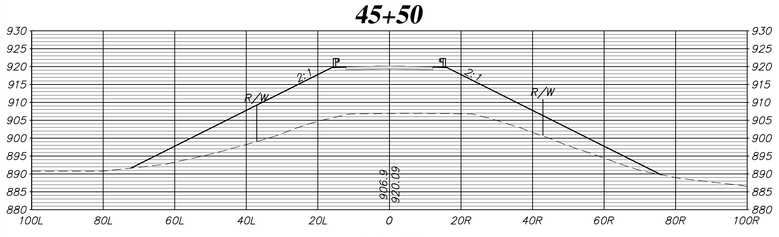
44+50



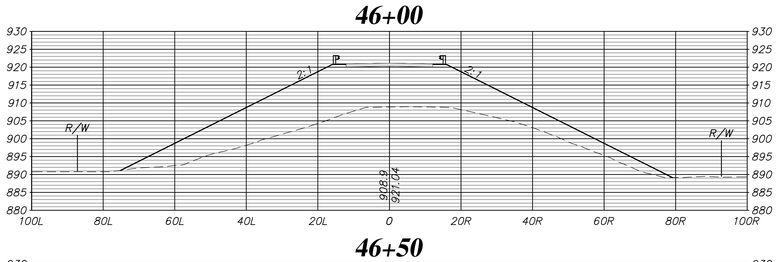
45+00



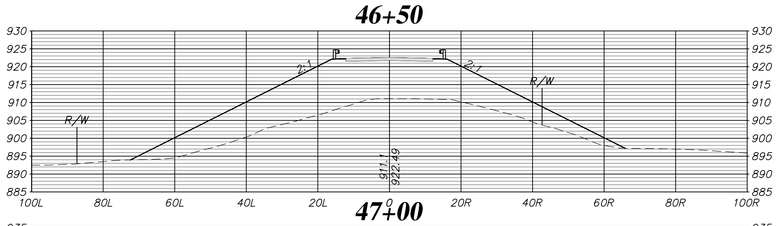
45+50



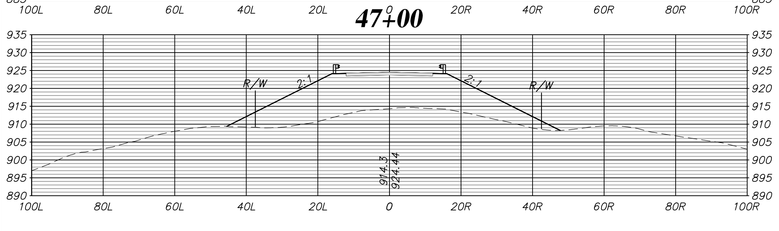
46+00



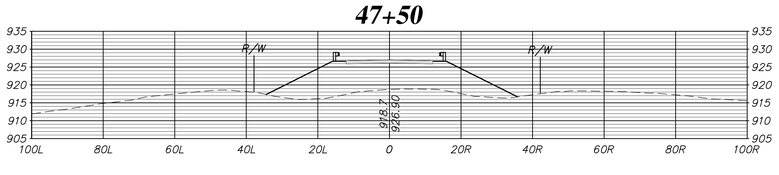
46+50



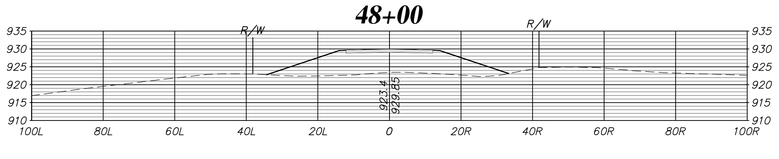
47+00



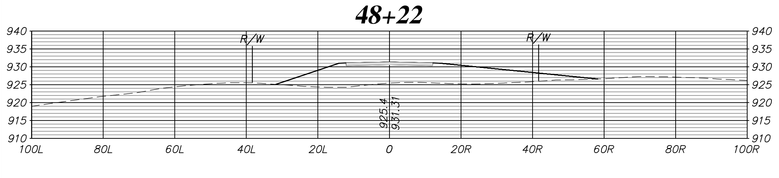
47+50



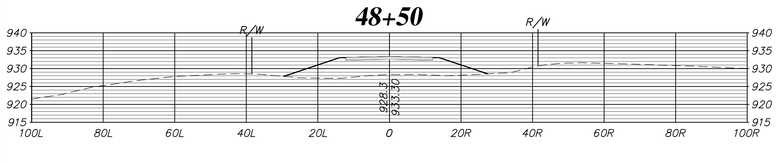
48+00



48+22



48+50



Sheet No.:	18
Project No.:	N/A
Approved:	MWS
Checked:	MWS
Drawn:	MGS
Designed:	MGS
Date:	03/26/15

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

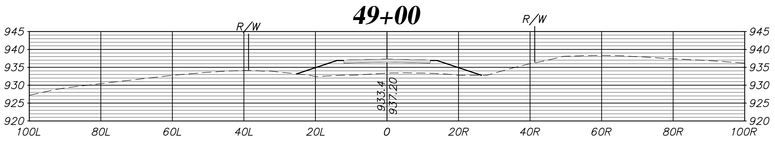
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

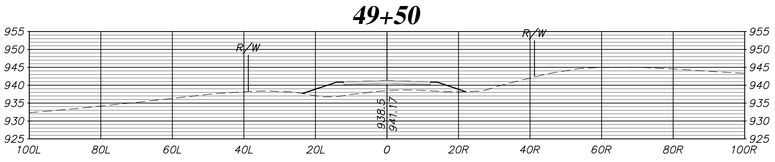
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

SCALE: 1 = 20'

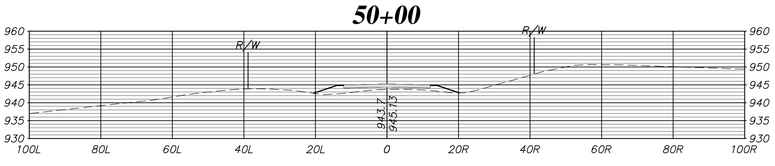
49+00



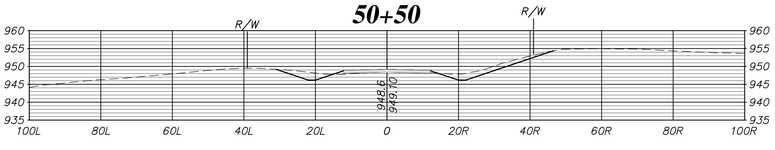
49+50



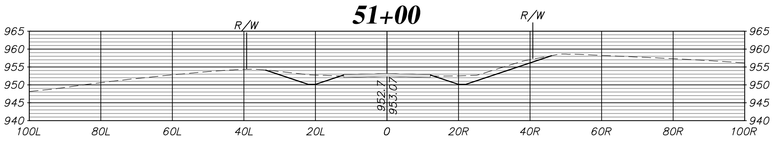
50+00



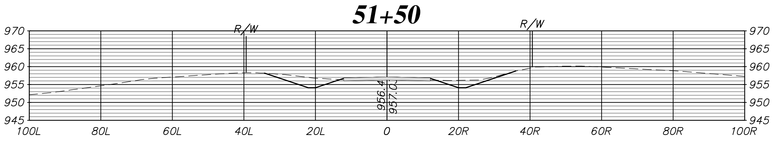
50+50



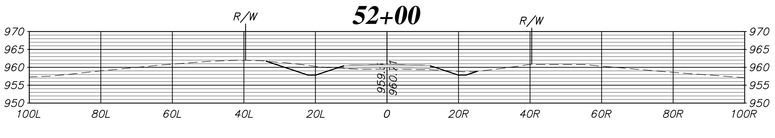
51+00



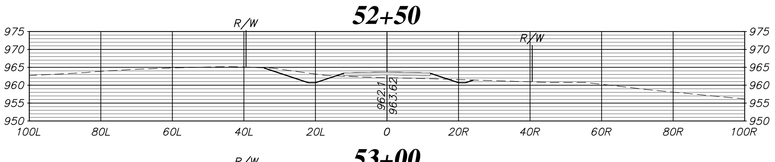
51+50



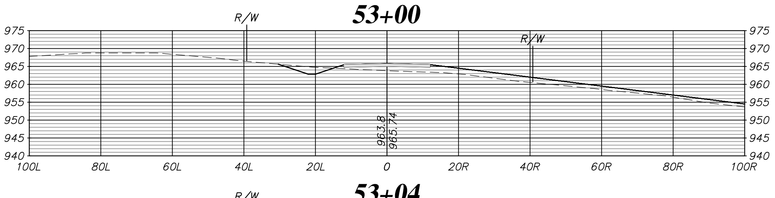
52+00



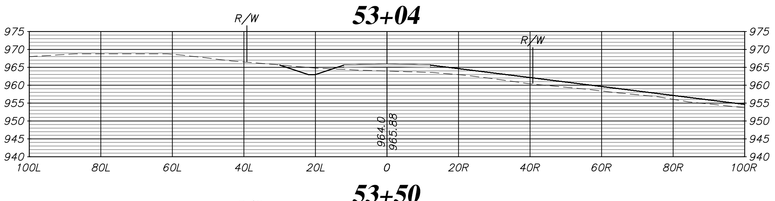
52+50



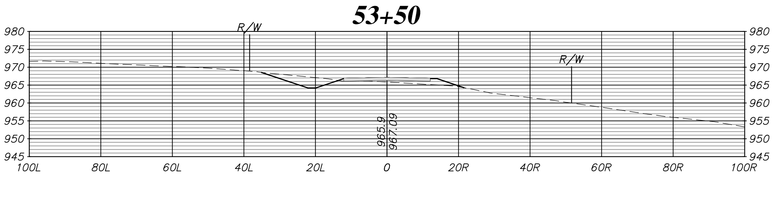
53+00



53+04

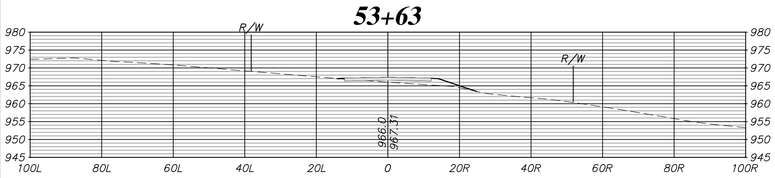


53+50

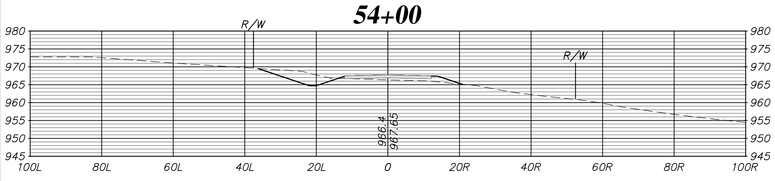


SCALE: 1 = 20'

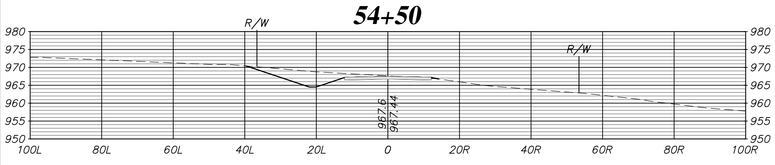
53+63



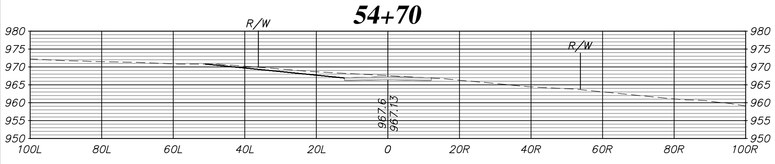
54+00



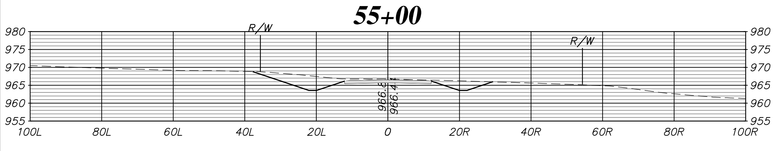
54+50



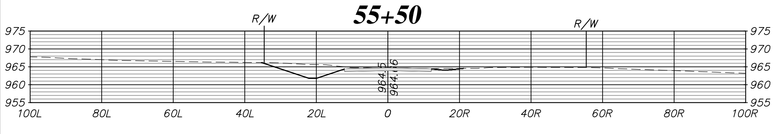
54+70



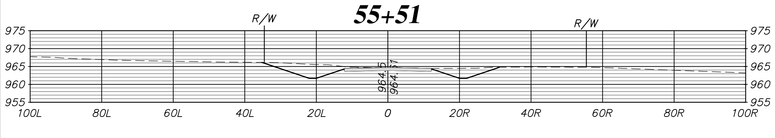
55+00



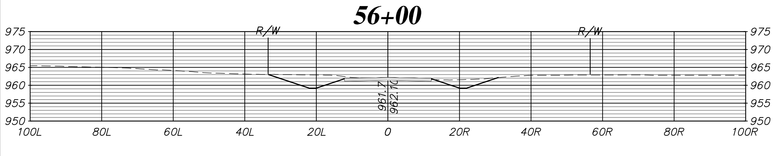
55+50



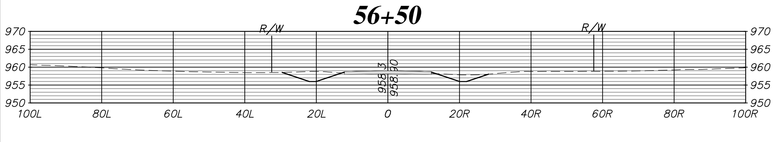
55+51



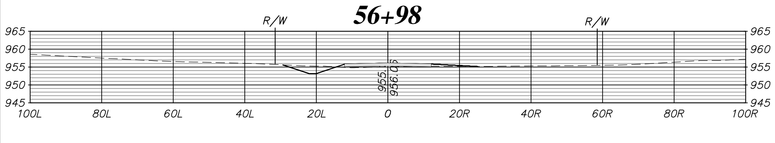
56+00



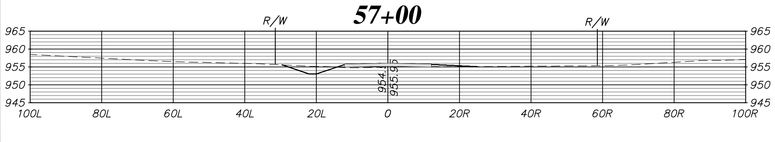
56+50



56+98



57+00



Sheet No.:	19
Project No.:	N/A
Approved:	MWS
Checked:	MWS
Drawn:	MGS
Designed:	MGS
Date:	03/26/15

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

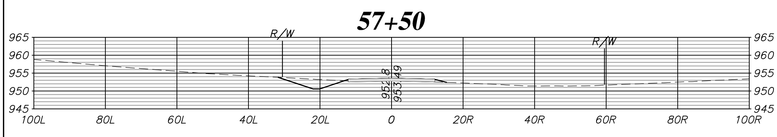
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

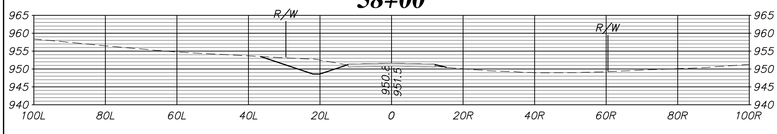
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

SCALE: 1 = 20'

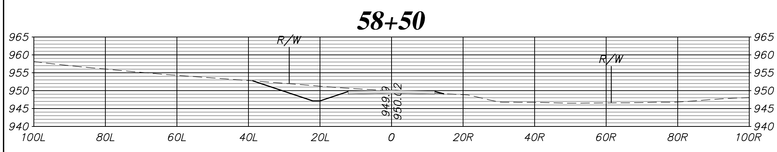
57+50



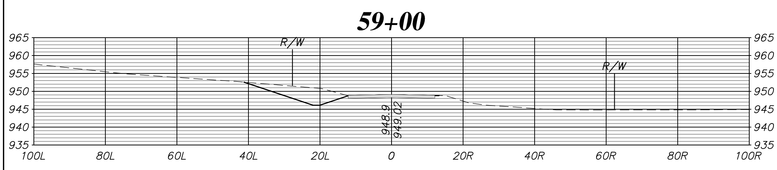
58+00



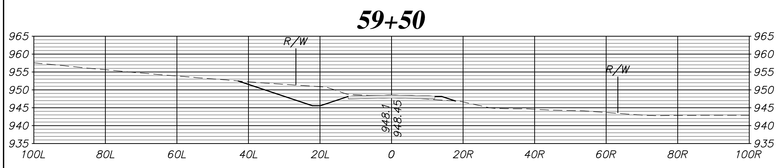
58+50



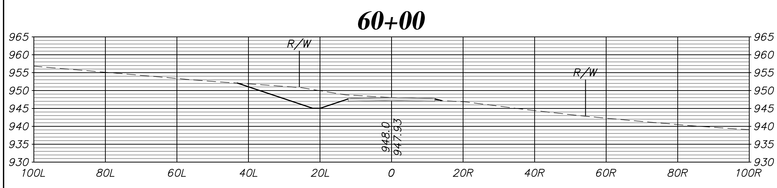
59+00



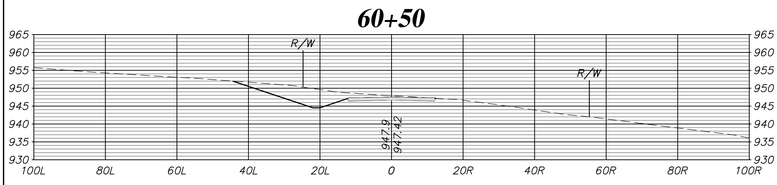
59+50



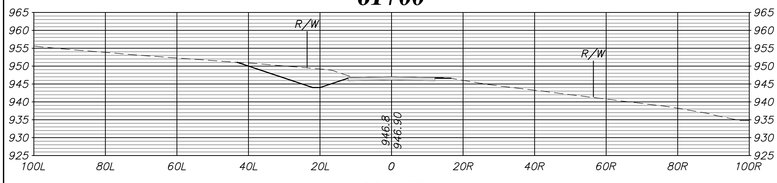
60+00



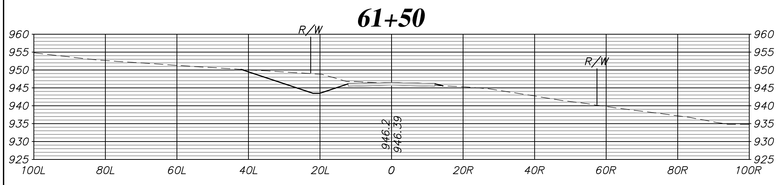
60+50



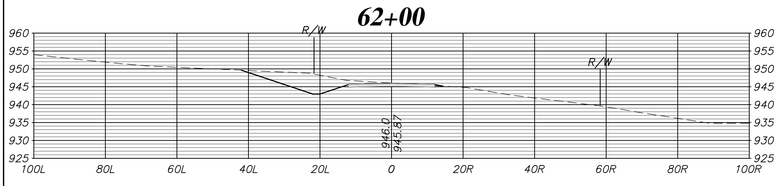
61+00



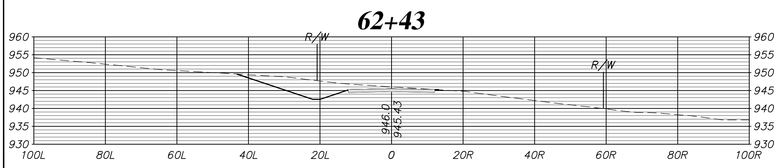
61+50



62+00

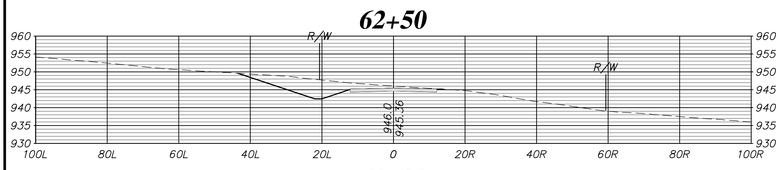


62+43

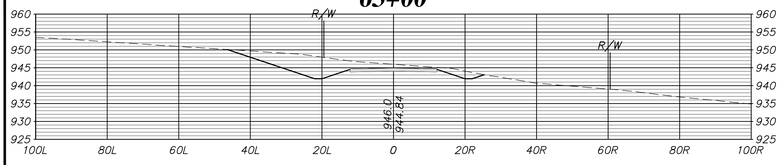


SCALE: 1 = 20'

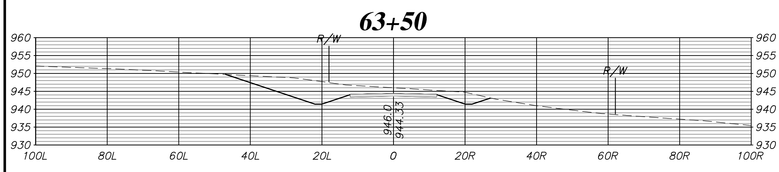
62+50



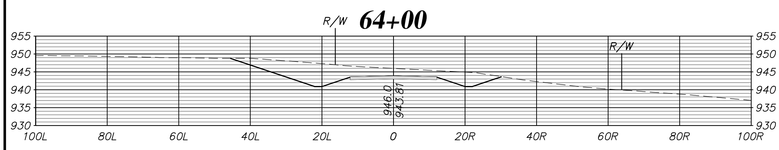
63+00



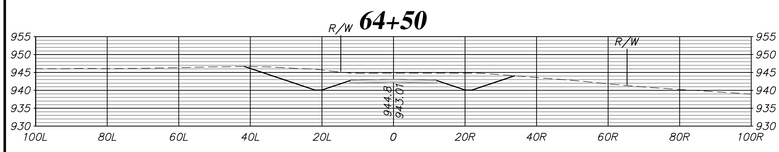
63+50



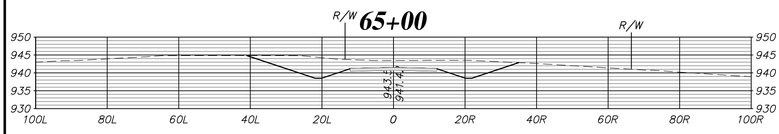
64+00



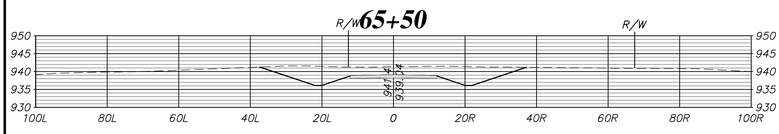
64+50



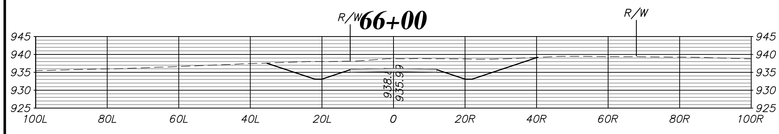
65+00



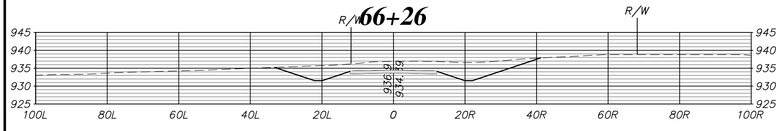
65+50



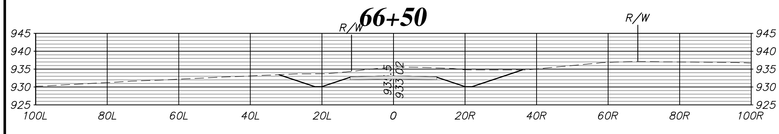
66+00



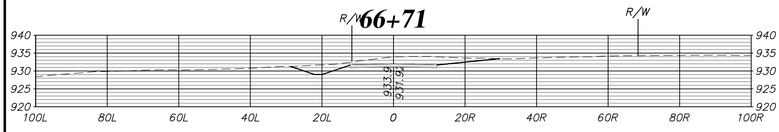
66+26



66+50



66+71



Sheet No.:	20
Project No.:	N/A
Approved:	MWS
Checked:	MWS
Drawn:	MGS
Designed:	MGS
Date:	03/26/15

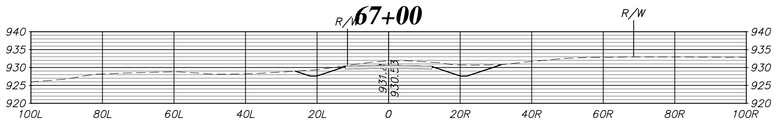
207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

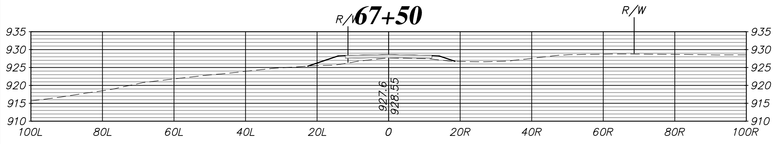
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

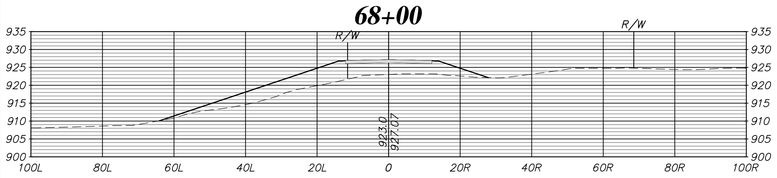
LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

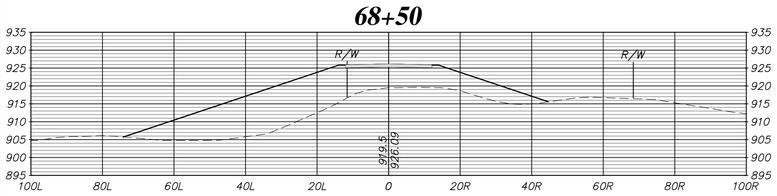
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

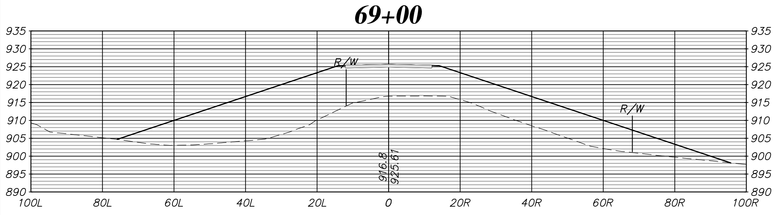
SCALE: 1 = 20'

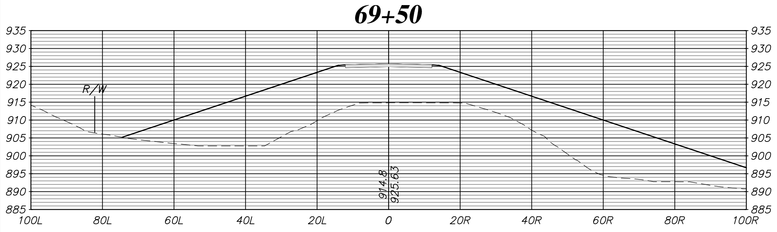


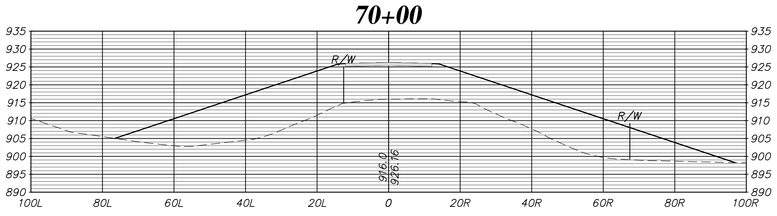


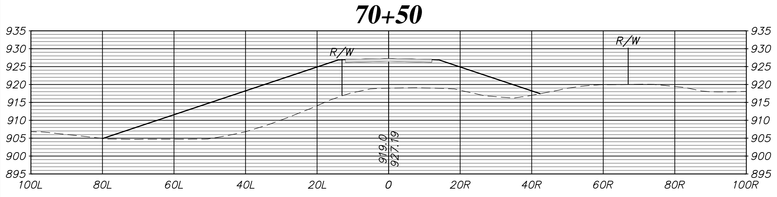


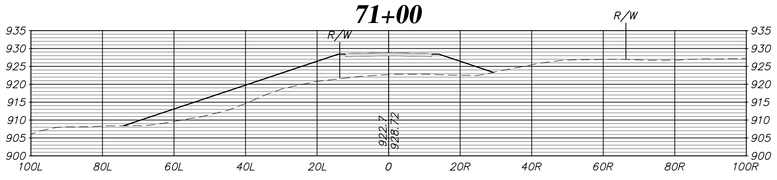


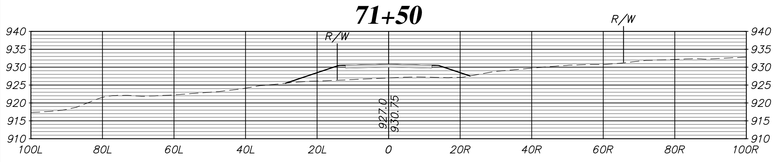


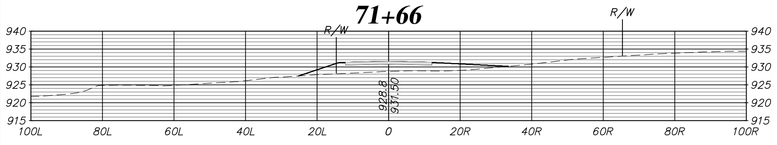




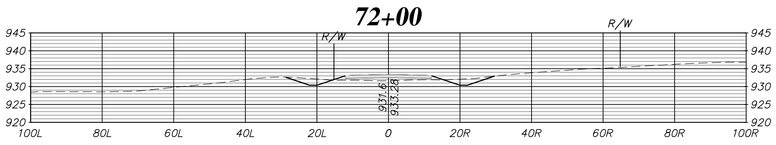


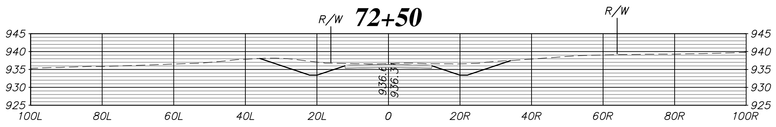


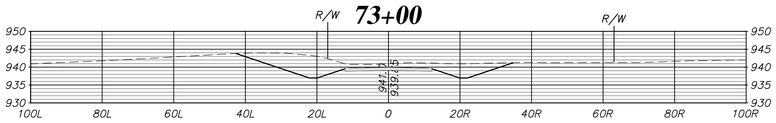


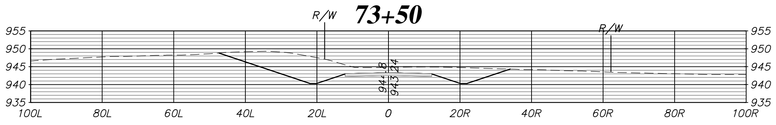


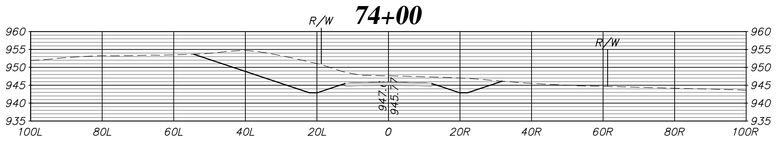
SCALE: 1 = 20'

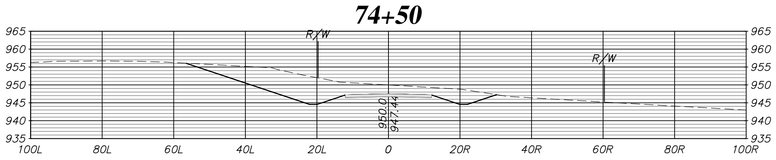


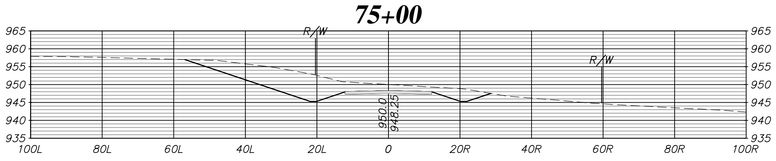


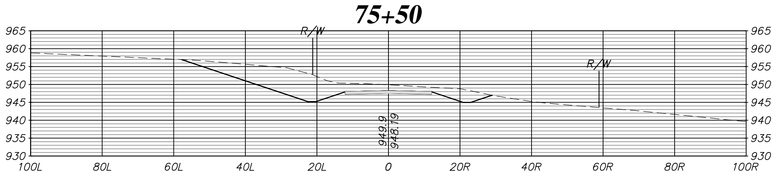


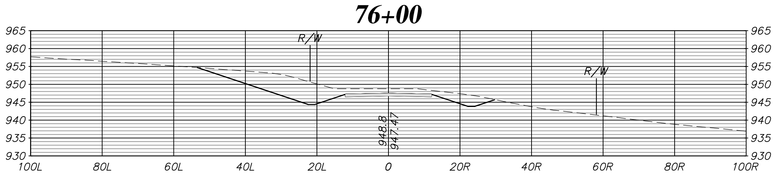


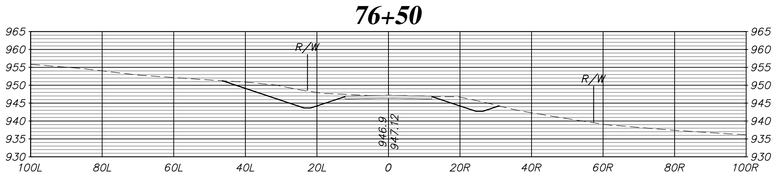


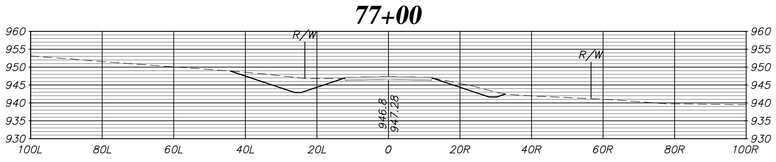












Sheet No.:	21
Project No.:	N/A
Approved:	MWS
Checked:	MWS
Drawn:	MGS
Designed:	MGS
Date:	03/26/15

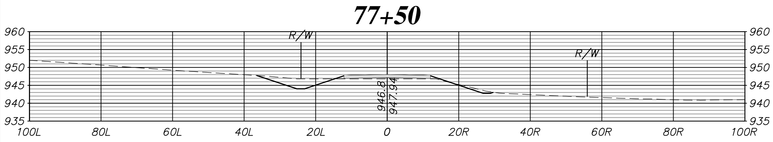
207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

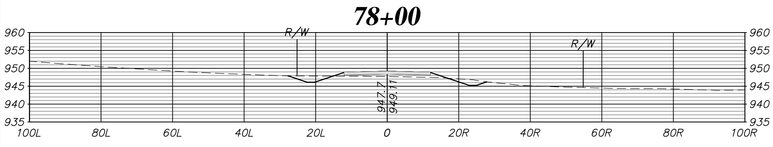
No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

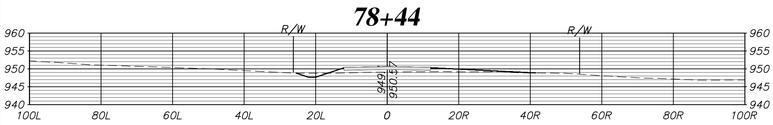
LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

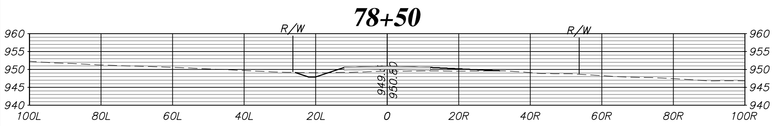
LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048

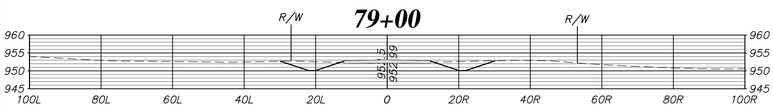
SCALE: 1 = 20'

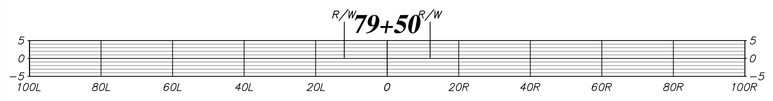












SCALE: 1 = 20'

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
0+50.00	2.20	72.40	0.00	0.00	0.00	0.00
1+00.00	0.18	97.21	2.20	157.04	2.20	157.04
1+50.00	0.29	127.66	0.43	208.21	2.63	365.25
2+00.00	0.09	143.82	0.35	251.37	2.98	616.62
2+50.00	0.73	126.38	0.76	250.18	3.74	866.80
3+00.00	1.54	93.58	2.10	203.66	5.85	1070.46
3+50.00	0.00	98.52	1.42	177.87	7.27	1248.32
4+00.00	1.27	63.16	1.18	149.70	8.45	1398.02
4+25.00	1.06	31.00	1.08	43.59	9.53	1441.61
4+50.00	0.00	69.41	0.49	46.49	10.02	1488.10
5+00.00	13.44	55.53	12.44	115.69	22.46	1603.79
5+30.00	9.68	28.61	12.84	46.75	35.30	1650.53
5+50.00	19.62	39.55	10.85	25.24	46.15	1675.78
6+00.00	9.76	40.11	27.20	73.76	73.35	1749.54
6+50.00	22.57	29.36	29.94	64.33	103.29	1813.87
7+00.00	19.84	33.23	39.27	57.96	142.56	1871.82
7+50.00	16.89	30.84	34.01	59.33	176.58	1931.15
8+00.00	22.98	29.71	36.91	56.07	213.49	1987.22
8+50.00	5.78	12.37	26.63	38.97	240.12	2026.18
8+53.00	6.40	13.11	0.68	1.42	240.79	2027.60
9+00.00	8.27	43.63	12.76	49.38	253.56	2076.98
9+50.00	19.40	50.92	25.61	87.54	279.17	2164.52
10+00.00	12.11	62.65	29.17	105.16	308.34	2269.68
10+50.00	6.67	71.85	17.39	124.54	325.72	2394.22
10+63.00	7.52	20.73	3.42	22.29	329.14	2416.51
11+00.00	14.79	65.70	15.29	59.22	344.43	2475.72
11+50.00	17.81	54.82	30.18	111.59	374.61	2587.31
12+00.00	13.46	47.04	28.95	94.32	403.56	2681.63
12+50.00	10.61	44.87	22.29	85.10	425.85	2766.73
13+00.00	3.21	20.46	12.80	60.50	438.65	2827.23
13+50.00	10.30	26.53	12.52	43.52	451.16	2870.75
14+00.00	10.09	30.85	18.88	53.13	470.04	2923.87
14+50.00	11.77	7.46	20.24	35.47	490.28	2959.34
14+56.00	12.55	6.87	2.70	1.59	492.99	2960.93
15+00.00	14.17	19.26	21.77	21.30	514.76	2982.23
15+50.00	18.53	13.66	30.28	30.49	545.03	3012.72
16+00.00	16.95	12.56	32.85	24.28	577.89	3036.99
16+50.00	11.72	15.63	26.55	26.10	604.43	3063.10
17+00.00	12.42	15.89	22.36	29.19	626.79	3092.29
17+26.00	13.10	2.12	12.29	8.67	639.08	3100.96
17+50.00	16.18	0.00	13.02	0.94	652.10	3101.90
18+00.00	5.01	5.35	19.62	4.95	671.72	3106.85
18+50.00	0.00	322.59	4.64	303.65	676.35	3410.50
18+72.00	0.00	196.32	0.00	211.41	676.35	3621.91
19+00.00	2.07	331.19	1.08	273.52	677.43	3895.43
19+50.00	0.00	611.78	1.92	873.12	679.35	4768.55
20+00.00	0.00	835.48	0.00	1340.05	679.35	6108.60
20+50.00	0.00	1056.74	0.00	1752.06	679.35	7860.66
21+00.00	0.00	1223.73	0.00	2111.54	679.35	9972.20
21+50.00	0.00	1192.77	0.00	2237.51	679.35	12209.71
22+00.00	0.06	1088.50	0.06	2112.29	679.41	14322.00
22+50.00	0.00	944.50	0.06	1882.40	679.47	16204.40
23+00.00	0.00	810.92	0.00	1625.38	679.47	17829.78
23+50.00	0.00	657.00	0.00	1359.18	679.47	19188.97
24+00.00	0.00	533.71	0.00	1102.51	679.47	20291.48
24+50.00	0.00	409.18	0.00	873.04	679.47	21164.52
25+00.00	0.00	303.50	0.00	659.89	679.47	21824.41
25+50.00	0.00	163.06	0.00	432.00	679.47	22256.41
26+00.00	0.00	76.57	0.00	221.88	679.47	22478.29
26+50.00	0.50	12.50	0.46	82.47	679.93	22560.76
27+00.00	0.83	41.13	1.23	49.66	681.16	22610.42
27+50.00	20.19	52.72	19.46	86.90	700.62	22697.32
28+00.00	17.73	71.69	35.11	115.19	735.73	22812.51
28+35.00	35.37	73.95	34.42	94.39	770.15	22906.90
28+50.00	19.09	61.80	15.13	37.71	785.28	22944.61
29+00.00	35.33	19.84	50.39	75.60	835.67	23020.21
29+50.00	32.90	9.02	63.18	26.72	898.85	23046.93
30+00.00	48.81	0.00	75.66	8.35	974.51	23055.28
30+50.00	36.43	5.08	78.92	4.71	1053.43	23059.98
31+00.00	22.80	6.40	54.84	10.63	1108.27	23070.61
31+50.00	12.52	17.57	32.70	22.20	1140.97	23092.81
32+00.00	4.03	56.26	15.32	68.36	1156.29	23161.17
32+07.00	1.99	65.66	0.78	15.80	1157.07	23176.98
32+50.00	0.00	118.45	1.58	146.60	1158.65	23323.58
33+00.00	4.10	91.10	3.79	194.02	1162.45	23517.61
33+17.00	0.80	50.80	1.54	44.67	1163.99	23562.28
33+33.00	9.12	2.50	2.94	15.79	1166.93	23578.07
33+50.00	24.66	0.00	10.64	0.79	1177.56	23578.85
34+00.00	136.65	0.00	149.36	0.00	1326.92	23578.85
34+50.00	267.85	0.00	374.54	0.00	1701.46	23578.85
35+00.00	413.26	0.00	630.66	0.00	2332.13	23578.85
35+50.00	543.94	0.00	886.30	0.00	3218.42	23578.85
36+00.00	596.69	0.00	1056.13	0.00	4274.56	23578.85
36+50.00	611.19	0.00	1118.41	0.00	5392.96	23578.85
37+00.00	417.06	0.00	952.08	0.00	6345.05	23578.85
37+50.00	127.01	0.00	503.76	0.00	6848.81	23578.85
38+00.00	0.00	133.90	117.60	123.98	6966.41	23702.84
38+50.00	1.33	487.85	1.23	575.70	6967.64	24278.53
39+00.00	0.00	889.21	1.23	1275.06	6968.87	25553.59
39+50.00	0.00	1199.33	0.00	1933.63	6968.87	27487.42
39+88.00	0.02	1154.66	0.01	1656.51	6968.88	29143.93

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
40+00.00	0.00	1176.84	0.00	518.11	6968.88	29662.04
40+50.00	0.00	951.83	0.00	1970.99	6968.88	31633.02
41+00.00	0.00	599.48	0.00	1436.40	6968.88	33069.42
41+50.00	0.00	295.27	0.00	828.48	6968.88	33897.90
42+00.00	2.71	56.57	2.51	325.78	6971.39	34223.68
42+50.00	81.95	0.00	78.39	52.38	7049.78	34276.05
43+00.00	181.34	0.00	243.79	0.00	7293.57	34276.05
43+50.00	339.66	0.00	482.41	0.00	7775.98	34276.05
44+00.00	537.74	0.00	812.41	0.00	8588.39	34276.05
44+50.00	831.71	0.00	1268.00	0.00	9856.40	34276.05
45+00.00	1065.76	0.00	1756.91	0.00	11613.31	34276.05
45+50.00	1208.79	0.00	2106.07	0.00	13719.38	34276.05
46+00.00	1260.02	0.00	2285.94	0.00	16005.32	34276.05
46+50.00	1132.98	0.00	2215.75	0.00	18221.07	34276.05
47+00.00	707.98	0.00	1704.60	0.00	19925.66	34276.05
47+50.00	464.29	0.00	1085.44	0.00	21011.10	34276.05
48+00.00	329.42	0.00	734.92	0.00	21746.02	34276.05
48+22.00	278.27	3.49	247.58	1.42	21993.59	34277.48
48+50.00	223.50	0.00	260.18	1.81	22253.77	34279.29
49+00.00	158.34	0.00	353.56	0.00	22607.33	34279.29
49+50.00	112.65	0.00	250.92	0.00	22858.24	34279.29
50+00.00	54.88	0.63	155.12	0.58	23013.36	34279.87
50+50.00	16.87	51.56	66.43	48.33	23079.79	34328.19
51+00.00	8.32	71.49	23.32	113.94	23103.11	34442.13
51+50.00	14.91	52.45	21.51	114.76	23124.62	34556.89
52+00.00	30.51	34.51	42.06	80.52	23166.68	34637.40
52+50.00	37.78	33.54	63.24	63.01	23229.92	34700.41
53+00.00	72.76	21.81	102.35	51.25	23332.27	34751.67
53+04.00	75.97	18.72	11.02	3.00	23343.29	34754.67
53+50.00	38.93	31.64	97.88	42.90	23441.17	34797.57
53+63.00	40.33	0.00	19.08	7.62	23460.25	34805.19
54+00.00	36.91	41.99	52.93	28.77	23513.17	34833.95
54+50.00	1.42	76.50	35.49	109.71	23548.67	34943.66
54+70.00	0.00	85.27	0.53	59.91	23549.19	35003.58
55+00.00	0.00	95.25	0.00	100.29	23549.19	35103.86
55+50.00	0.90	57.67	0.83	141.59	23550.03	35245.46
55+51.00	1.00	58.31	0.04	2.15	23550.06	35247.61
56+00.00	5.61	70.72	5.99	117.09	23556.06	35364.69
56+50.00	11.40	41.31	15.75	103.73	23571.81	35468.42
56+98.00	26.53	18.20	33.72	52.90	23605.53	35521.32
57+00.00	26.97	18.60	1.98	1.36	23607.51	35522.69
57+50.00	17.19	27.24	40.88	42.45	23648.40	35565.13
58+00.00	15.41	52.91	30.19	74.22	23678.58	35639.36
58+50.00	4.48	69.17	18.42	113.04	23697.00	35752.40
59+00.00	1.45	75.73	5.50	134.16	23702.50	35886.56
59+50.00	12.15	94.13	12.60	157.28	23715.09	36043.84
60+00.00	2.14	98.84	13.23	178.68	23728.32	36222.51
60+50.00	0.00	114.94	1.98	197.95	23730.30	36420.46
61+00.00	0.70	94.74	0.65	194.15	23730.95	36614.61
61+50.00	4.39	92.86	4.72	173.70	23735.67	36788.31
62+00.00	1.77	101.59	5.71	180.04	23741.37	36968.35
62+43.00	0.00	114.85	1.41	172.35	23742.79	37140.70
62+50.00	0.00	120.16	0.00	30.46	23742.79	37171.16
63+00.00	0.00	174.61	0.00	272.94	23742.79	37444.10
63+50.00	0.00	209.09	0.00	355.29	23742.79	37799.38
64+00.00	0.00	234.88	0.00	411.09	23742.79	38210.47
64+50.00	0.00	210.34	0.00	412.25	23742.79	38622.72
65+00.00	0.00	227.05	0.00	404.99	23742.79	39027.71
65+50.00	0.00	224.62	0.00	418.21	23742.79	39445.92
66+00.00	0.00	234.45	0.00	425.07	23742.79	39870.98
66+26.00	0.00	206.80	0.00	212.45	23742.79	40083.44
66+50.00	0.00	173.28	0.00	168.92	23742.79	40252.36
66+71.00	0.01	120.55	0.00	114.27	23742.79	40366.63
67+00.00	0.00	78.59	0.01	106.94	23742.79	40473.57
67+50.00	47.50	0.00	43.98	72.77	23786.78	40546.34
68+00.00	294.66	0.00	316.81	0.00	24103.59	40546.34
68+50.00	847.87	0.00	1057.89	0.00	25161.48	40546.34
69+00.00	1381.38	0.00	2064.12	0.00	27225.60	40546.34
69+50.00	1837.38	0.00	2980.33	0.00	30205.93	40546.34
70+00.00	1544.83	0.00	3131.68	0.00	33337.61	40546.34
70+50.00	927.46	0.00	2289.16	0.00	35626.77	40546.34
71+00.00	478.03	0.00	1301.38	0.00	36928.14	40546.34
71+50.00	147.79	0.00	579.46	0.00	37507.61	40546.34
71+66.00	117.76	0.00	78.68	0.00	37586.29	40546.34
72+00.00	38.12	27.47	98.14	17.29	37684.43	40563.63
72+50.00	0.00	106.15	35.30	123.72	37719.73	40687.36
73+00.00	0.00	199.17	0.00	282.70	37719.73	40970.06
73+50.00	0.00	267.85	0.00	432.42	37719.73	41402.48
74+00.00	0.00	340.29	0.00	563.10	37719.73	41965.58
74+50.00	0.00	329.69	0.00	620.36	37719.73	42585.94
75+00.00	0.00	289.43	0.00	573.26	37719.73	43159.20
75+50.00	0.00	293.51	0.00	539.75	37719.73	43698.95
76+00.00	0.00	228.60	0.00	483.43	37719.73	44182.38
76+50.00	2.92	131.74	2.71	333.65	37722.43	44516.03
77+00.00	9.15	59.43	11.18	177.01	37733.61	44693.05
77+50.00	28.18	38.51	34.56	90.69	37768.17	44783.73
78+00.00	36.82	22.61	60.19	56.59	37828.35	44840.32
78+44.00	43.19	7.39	65.19	24.44	37893.55	44864.76
78+50.00	43.55	6.63	9.64	1.56	37903.18	44866.32
79+00.00	9.76	48.44	49.36	50.99	37952.54	44917.31
79+50.00	0.00	0.00	9.03	44.85	37961.58	44962.16

Sheet No.: 22

Project No.: N/A

Approved: MWS

Checked: MWS

Drawn: MGS

Designed: MGS

Date: 03/26/15

207th Street
(Highway K-92 to High Prairie Road)
Geometric Improvements and Surface Upgrade
Cross Sections

No.	Date	Revisions	By	App.
6				
5				
4				
3				
2				
1				

LEAVENWORTH DEPARTMENT OF PUBLIC WORKS COUNTY

LEAVENWORTH COUNTY
Public Works Department
Leavenworth County Courthouse
300 Walnut, Suite No. 7
Leavenworth, KS 66048