ADDENDUM NO. 2

Sedgwick County Project: 803-S¾ V thru X; 135th St. West between K-42 & 71st St. South (R259)

The items contained herein now become a part of the referenced plans and specifications. Please read the following items and acknowledge receipt of this addendum on the Proposal Page Number P-1. NOTE: THIS ADDENDUM MUST BE ACKNOWLEDGED TO CONSTITUTE A VALID BID.

SPECS:

Replace Sheet SOP-1R to 2R with SOP-1R-1 to 3R-1
Replace Sheet GN-2 with GN-2R
Add Sheets GN-3, GN-4, and GN-5.

PLANS:

Replace Sheet 4 with Sheet 4R dated 10/25/2013.
Replace Sheet 8 with Sheet 8R dated 10/25/2013.
Replace Sheet 12 with Sheet 12R dated 10/25/2013.
Replace Sheet 17 with Sheet 17R dated 10/25/2013.
Replace Sheet 31 with Sheet 31R dated 10/25/2013.
Replace Sheet 49 with Sheet 49R dated 10/25/2013.
Replace Sheet 66R with Sheet 66R dated 10/25/2013.
Replace Sheet 67R with Sheet 67R dated 10/25/2013.
Replace Sheet 78R with Sheet 78R dated 10/25/2013.

By _____
David C. Spears, P.E., Director,
Public Works/County Engineer

Date: November 26, 2013

PROJECT: 803-S¾ V thru X; 135th St W between 71st St S & K-42 (R259)

TYPE OF WORK: Grading, Surfacing, RCB Bridge, RCB Culverts, Guardrail, Seeding, Pavement Marking

Bidding Item	Approx. Quantity	Unit	Unit Price	Amount
Mobilization	1	Lump Sum		
Contractor Construction Staking	1	Lump Sum		
Field Office	1	Each		
Clearing and Grubbing	1	Lump Sum		
Removal of Existing Structures	1	Lump Sum		
Maintenance and Restoration of Haul Roads (Set Price)	1	Lump Sum	4,000.00	
Common Excavation	31,489	Cu. Yds.		
Milling	41,366	Sq. Yds.		
Compaction of Earthwork (Type B) (MR-90)	11,896	Cu. Yds.		
Compaction of Earthwork (Type AA) (MR-3-3)	8,336	Cu. Yds.		
Aggregate Shoulder (AS-1) (7")	23,995	Sq. Yds.		
Water (Aggregate Shoulder) (Set Price)	1	M.Gal	35.00	
Surfacing Material (AB-3)	970	Tons		
Water (Earthwork Compaction) (Set Price)	1	M.Gal	35.00	
Water (Grading) (Set Price)	1	M.Gal	35.00	
Plant Mix Asphalt Mixture-Commercial Grade (Base) (5")	13,833	Tons		
Plant Mix Asphalt Mixture-Commercial Grade (Base) (6")	1,037	Tons		
Plant Mix Asphalt Mixture-Commercial Grade (Surface) (2")	5,392	Tons		
Plant Mix Asphalt Mixture-Commercial Grade (Shoulder) (Variable)	110	Tons		
Aggregate Base (Special) (6")	50,229	Sq. Yds.		
RCB/RFB Quantities - All Structures South of 55th St S				
Concrete (Grade 4.0)	347.7	Cu. Yds.		
Concrete (Grade 4.0) (AE)	213.1	Cu. Yds.		
Reinforcing Steel (Grade 60)	8,160	Lbs.		
Reinforcing Steel (Grade 60) (Epoxy Coated)	91,420	Lbs.		
Class III Excavation	1,538	Cu. Yds.		
Foundation Stabilization	171	Cu. Yds.		
Concrete for Seal Course (Set Price)	1	Cu. Yds.	175.00	
Granular Backfill (Wingwalls) (Set Price)	1	Cu. Yds.	50.00	
Slope Protection (Riprap Stone) (18") (Grouted)	336	Cu. Yds.		
Bedding for Slope Protection	108	Cu. Yds.		
Crossroad Pipe (18") (RCP)	236	L.F.		
Crossroad Pipe (3.0 Sq. Ft) (RCPHE)	114	L.F.		
Crossroad Pipe (6.0 Sq. Ft) (RCPHE)	125	L.F.		
Crossroad Pipe (7.0 Sq. Ft) (RCPHE)	68	L.F.		
Entrance Pipe (18") (RCP)	280	L.F.		
Entrance Pipe (42") (RCP)	108	L.F.		
Entrance Pipe (1.5 Sq. Ft) (RCPHE)	289	L.F.		
Entrance Pipe (3.0 Sq. Ft) (RCPHE)	374	L.F.		
Entrance Pipe (4.0 Sq. Ft) (RCPHE)	62	L.F.		

PROJECT: 803-S¾ V thru X; 135th St W between 71st St S & K-42 (R259)

TYPE OF WORK: Grading, Surfacing, RCB Bridge, RCB Culverts, Guardrail, Seeding, Pavement Marking

Bidding Item	Approx. Quantity	Unit	Unit Price	Amount
Storm Sewer (18") (RCP)	426	L.F.		
Storm Sewer (24") (RCP)	34	L.F.		
End Section (18") (RC)	28	Each		
End Section (24") (RC)	1	Each		
End Section (42") (RC)	4	Each		
End Section (1.5 Sq. Ft.) (RCHE)	14	Each		
End Section (3.0 Sq. Ft.) (RCHE)	24	Each		
End Section (4.0 Sq. Ft.) (RCHE)	4	Each		
End Section (6.0 Sq. Ft.) (RCHE)	4	Each		
End Section (7.0 Sq. Ft.) (RCHE)	2	Each		
Manhole (Reinforced Concrete)	1	Each		
Guardrail, Removal of Steel Plate	208.00	L.F.		
Guardrail, Steel Plate	312.50	L.F.		
Guardrail End Terminal (SKT) (TL-3)	4	Each		
Guardrail End Terminal (SKT) (TL-2)	2	Each		
Temorary Seeding	1	Lump Sum		
Soil Erosion Mix	13.9	Lbs.		
Temporary Ditch Check	3,080	L.F.		
Temporary Slope Barrier (Set Price)	1	L.F.	5.00	
Temporary Ditch Check (Rock) (Set Price)	1	Cu. Yds.	85.00	
Sediment Removal (Set Price)	1	Cu. Yds.	35.00	
Mobilization (Emergency Erosion Control) (Set Price)	1	Each	1,000.00	
Erosion Control (Class 2)(Type H)	1,140	Sq. Yds.		
Seeding	1	Lump Sum		
Pavement Marking (Paint) (White) (4") (0.024")	31,405	Lin. Ft.		
Pavement Marking (Paint) (Yellow) (4") (0.024")	3,783	Lin. Ft.		
Temporary Surfacing Material (Aggregate) (Set Price)	1	Cu. Yds.	35.00	
Keel (Provide Only)	1,000	Tons		
Surfacing Material (AB-3) (Provide Only)	1,000	Tons		
Mailbox Installation (Set Price)	1	Each	140.00	
Mowing	5.8	Mile/Side		
Traffic Control	1	Lump Sum		
G-20 (Special) Signing	4	Each		
SUBTOTAL - Base Bid				

PROJECT: 803-S¾ V thru X; 135th St W between 71st St S & K-42 (R259)

TYPE OF WORK: Grading, Surfacing, RCB Bridge, RCB Culverts, Guardrail, Seeding, Pavement Marking

Bidding Item	Approx. Quantity	Unit	Unit Price	Amount
Alternate 1 - Cast in Place (REQUIRED BID)				
RFB Bridge Quantities - Sta. 27+60 (6-18'x10')				
Concrete (Grade 4.0)	331.8	Cu. Yds.		
Concrete (Grade 4.0) (AE)	202.3	Cu. Yds.		
Reinforcing Steel (Grade 60)	6,630	Lbs.		
Reinforcing Steel (Grade 60) (Epoxy Coated)	105,890	Lbs.		
Class III Excavation	1,800	Cu. Yds.		
Foundation Stabilization	135	Cu. Yds.		
SUBTOTAL - Cast in Place				
SUBTOTAL - Base Bid				
Grand Total Alternate 1				

In Words:

DOLLARS

Alternate 2 - Precast (OPTIONAL BID)				
Precast Reinforced Concrete Bridge (3@36' Span Arch)	1	Lump Sum		
SUBTOTAL - Base Bid				
Grand Total Alternate 2				

In Words:

DOLLARS

Company or Firm Name

BY

TITLE

Gas Line Utility - ONEOK

ONEOK has a gas line that crosses 135th St. W. near Sta. 281+00 as shown on the construction plans. According to ONEOK representatives the gas line is approximately 36 inches below the existing ditch flow lines. Final grading plans in this area should keep the ditch flow lines at approximately the same elevation as existing, therefore coordinating with ONEOK so that they can construct a concrete apron over this gas line is no longer necessary. However, ONEOK has requested to be notified at least two (2) working days in advance of grading operations in this area so that a representative may be onsite. Contact Stan Bowen at (316) 772-2628 or Dennis Hertle at (316) 772-2628.

Asphalt Construction Requirements

In an attempt to achieve the smoothest pavement profile possible, the Contractor will be required to construct the base lift of asphalt with a minimum of two (2) lifts. The first base lift will not exceed 3 inch thickness. Additionally, a Shuttle Buggy Material Transfer Vehicle will be required to be used for all lifts other than the first base lift to facilitate non-stop paving.

Milling

Sedgwick County desires to keep ownership of the top 6" of existing asphalt material. This material will be milled and transported to the Sedgwick County Clonmel Yard located at 17500 W. 71st St S. The remaining existing asphalt material shall become the property of the Contractor and shall be considered Common Excavation. Quantities for Common Excavation included in the plans assume the following asphalt thicknesses:

Station Range	Total Assumed Asphalt Thickness	Asphalt Calculated as Common Excavation
Sta. 236+50 to Sta. 291+58	8"	2"
Sta. 291+58 to Sta. 344+86	10"	4"
Sta. 344+86 to Sta. 389+74.94	9.5"	3.5"

The bid item, "Milling" shall be in accordance with Section 612 of the KDOT Standard Specifications, except that transportation of the millings will be SUBSIDIARY to this bid item. Transportation of the millings shall be in accordance with the KDOT standard specifications for "Transporting Salvageable Material." All labor, equipment, materials, and incidentals necessary to complete this work shall be SUBSIDIARY to the bid item "Milling." Coordinate delivery with the Engineer at least 2 working days before beginning milling operations.

Conduit Installation - Stop Sign Beacon

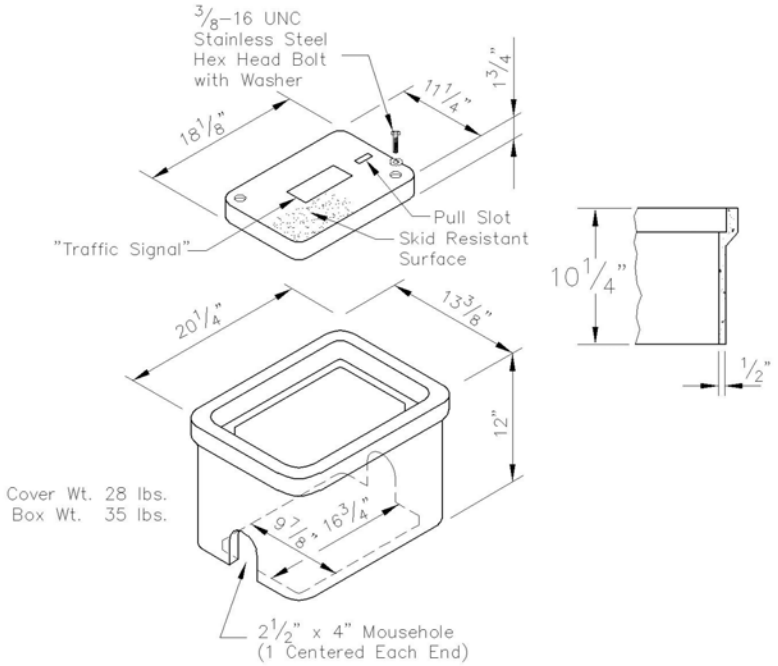
The Contractor shall install up to 150 lineal feet of 1” rigid galvanized conduit with appropriate 90° sweeps in preparation of stop sign beacons being installed by Sedgwick County at the intersection of 135th St W and 71st St S. This installation shall consist of approximately 100 lineal feet being trenched diagonally across the intersection from the southwest quadrant to the northeast quadrant. This run of conduit shall extend from a traffic worthy junction box (specified below) located in the outside edge of the southwest shoulder to a point of daylight in the northeast quadrant. Both ends of the conduit shall be capped to protect the threads and keep dirt and moisture out.

A second run of conduit shall be installed from the junction box in the southwest quadrant shoulder to the utility pole in the southwest quadrant holding the electrical meter and disconnect box. Conduit runs in the junction box shall be brought into the bottom of the box via 90° sweeps and capped a minimum of 2”-3” above grade. The conduit at the utility pole shall be brought up above grade via a 90° sweep a minimum of one foot and capped. Pull strings shall be installed in each conduit run.

Installation shall be coordinated with Mark Espinoza, Traffic Operations & Maintenance foreman, by contacting him at 316-304-1185 or msespino@sedgwick.gov .

RIGID GALVANIZED STEEL CONDUIT: All conduit and fittings shall be hot dipped galvanized rigid steel conduit, UL approved, and meet federal specifications WWC-581-D or American Standard #C80-1. All couplings shall be threaded. Compression couplings shall not be used.

JUNCTION BOXES: The enclosures and covers shall be concrete gray color, and shall have dimensions similar to those shown below. Materials shall be polymer concrete reinforced by a heavy weave fiberglass. Enclosures shall be rated for no less than 8,000 pounds over a 10" x 10" area, and covers shall be rated for no less than 15,000 pounds over a 10" x 10" area. Material compressive strength shall be no less than 11,000 p.s.i. The covers shall bear the logo "TRAFFIC SIGNAL" or similar approved wording, and they shall have a minimum coefficient of friction of 0.5.



JUNCTION BOX DETAIL

All labor, equipment, materials, and incidentals necessary to complete this work shall be SUBSIDIARY to other contract items.

Alternate Bid Item: Precast Reinforced Concrete Bridge (3@36' Span Arch)

The Contractor is required to bid on the cast-in-place structure as shown on Sh. No. 52-59 (Alternate #1) to constitute a valid bid response. An alternate structure type will be considered for Br. No. 803-V-2000 at Centerline Sta. 27+60. This lump sum bid item shall include all labor, equipment, materials, and incidentals necessary to deliver and install a precast reinforced concrete bridge structure composed of 3@36' arch spans. Bidding on the Precast Reinforced Concrete Bridge (3@36' Span Arch) (Alternate #2) is optional. Acceptance of Alternate #2 will be determined by Sedgwick County based on adherence to the design criteria listed below and determination of the lowest responsible and responsive Contractor. Sedgwick County reserves the right to reject Alternate #2 at its sole discretion.

The bidder shall submit with the proposal sufficient documentation to allow Sedgwick County to review and determine if the structure will conform to the design criteria listed below. The submittal information shall include:

- structure description with a general layout that shows dimensions and structure configuration;
- substantiating documentation for foundation and structure design;
- all material and installation specifications;
- acknowledgement that the currently designed special ditch features, including storm water sewer pipes and special wing walls, will be accommodated without adjustment to the base bid quantities;
- Alternate #2 bridge plans and shop drawings shall be submitted with the proposal;
- bridge plans and final shop drawings shall be designed and appropriately sealed by a professional engineer licensed in the State of Kansas.

<u>DESIGN CRITERA FOR PRECAST REINFORCED CONCRETE BRIDGE</u>

1. Design Specifications: AASHTO LRFD Bridge Design Specifications, Fifth Edition, 2010 and latest interim specifications.
2. Design Loading:

   Live Load: HL-93 for the arch structure .
   A traffic surcharge load of 250 psf shall be added to the vertical stress where geometrically applicable for the headwalls and wingwalls.

   Dead Load: The design dead load for the arch structure shall include an allowance for the road materials.

   The design dead load for the headwall and wingwalls shall include an allowance for the corral rail.
3. Wingwalls: The minimum factor of safety shall be 1.5 for sliding and 2.0 for overturning
4. All concrete used in the pre-cast elements shall be air-entrained concrete composed of Portland cement, fine and coarse aggregate. All concrete and steel reinforcing shall conform to KDOT specifications.
5. Include documentation of any additional geotechnical investigation that was conducted to design the structure and footings.
6. Structure footing analysis shall meet KDOT specifications for foundation design.
7. The minimum section for end bearing pile applications shall be HP12 x 53. The use of HP10 x 42 sections is discouraged.

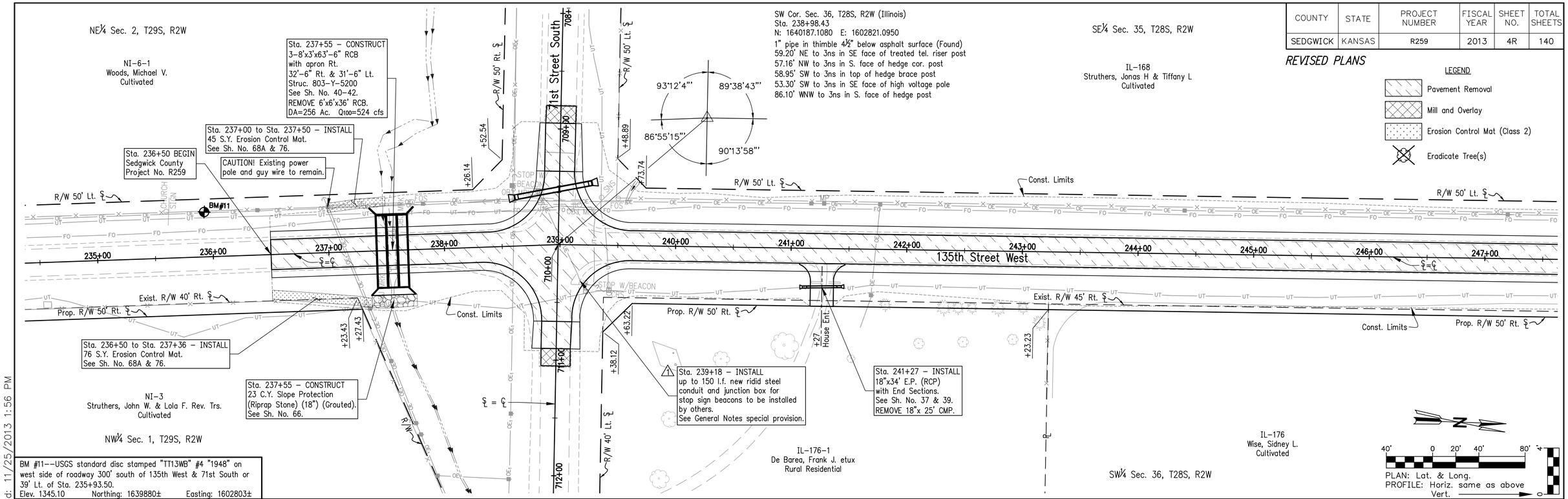
8. Bridge scour protection is required on both the upstream and downstream sections, and shall be SUBSIDIARY to the bid item, “Precast Reinforced Concrete Bridge (3@36’ Span Arch).” Specify the scour countermeasures to be constructed.
9. A bridge backwall protection system will not be required for Alternate #2 bridge.
10. The bridge roadway width shall equal 40’-0” and shall include 3@36’ spans.
11. All hydraulic characteristics must be equal to or better than that shown on Sh. No. 52 for the existing design.
12. The corral rail shall be essentially the same as designed and shall be SUBSIDIARY to the bid item, “Precast Reinforced Concrete Bridge (3@36’ Span Arch).”
13. All road and fill material in addition to that shown in the Typical Section on Sh. No. 3 shall be SUBSIDIARY to the bid item, “Precast Reinforced Concrete Bridge (3@36’ Arch Span).”
14. Any special backfill and compaction requirements recommended by the Supplier, or as specified in installation specifications, shall be SUBSIDIARY to the bid item, “Precast Reinforced Concrete Bridge (3@36’ Span Arch).”

COUNTY	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
SEDGWICK	KANSAS	R259	2013	4R	140

REVISED PLANS

LEGEND

- Pavement Removal
- Mill and Overlay
- Erosion Control Mat (Class 2)
- Eradicate Tree(s)



BM #11--USGS standard disc stamped "TT13WB" #4 "1948" on west side of roadway 300' south of 135th West & 71st South or 39' Lt. of Sta. 235+93.50.
Elev. 1345.10 Northing: 1639880± Easting: 1602803±

PROJECT SURVEY CONTROL

HORIZONTAL PROJECT DATUM:
State Plane Coordinates
Kansas South NAD83

VERTICAL PROJECT DATUM:
USGS Standard Tablet TT15WB, 51' W. & 37' S. of SW Cor. Sec. 24, T29S, R2W. (135th St. West & 103rd St. S.)

UTILITIES

Black Hills Energy — G1
1611 S Hoover
Wichita, KS 67209
Contact: Daryl Keller (316) 941-1654

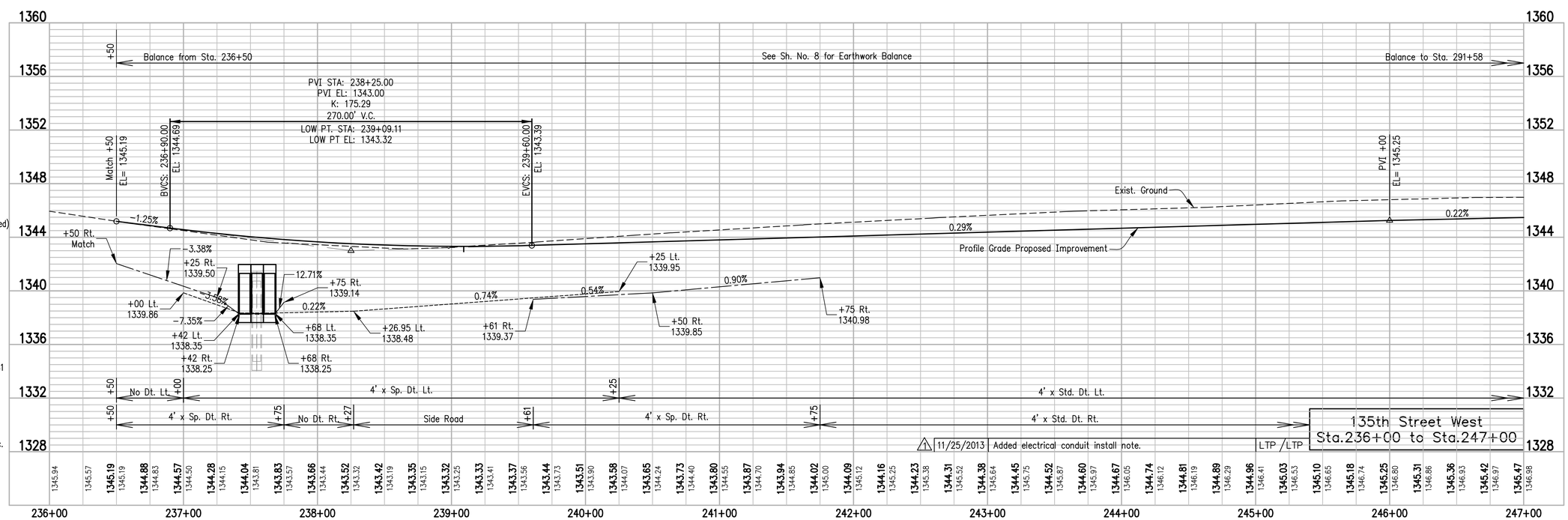
Kansas Gas Service — G
1021 E. 26th St. N. — G3 (Abandoned)
Wichita, KS 67219
Contact: Jim Coe (316) 832-3126
Emergency: 1-888-482-4950

Oneok Field Services — G2
30317 N. U.S. Hwy. 281
Pratt, KS 67124
Contact: Kevin Brown (620) 672-9425

Southern Kansas Telephone — UT
112 S. Lee — FO
Clearwater, KS 67026
Contact: Darren Wesbrooks (620) 584-8381

Westar Energies — UE
P.O. Box 208 — OE
Wichita, KS 67201-0208
Contact: Miles Capps (316) 261-6824

Sedgwick County Electric Cooperative Assoc.
1355 S. 383rd St W. — OE1
Cheney, KS 67025
Contact: Wayne Voss (316) 542-3131



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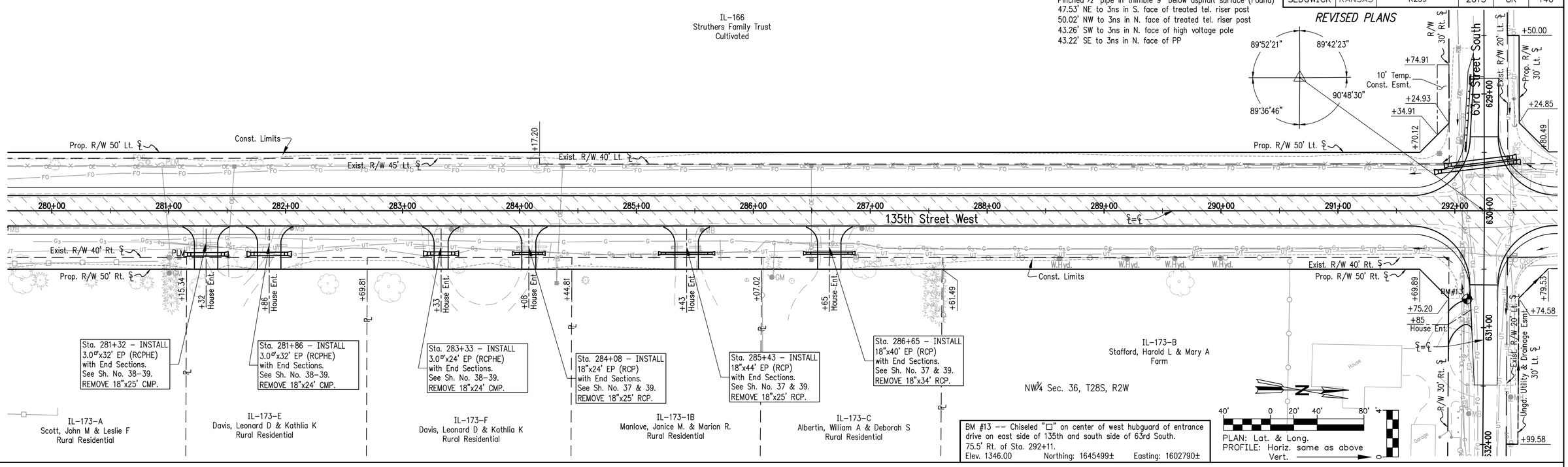
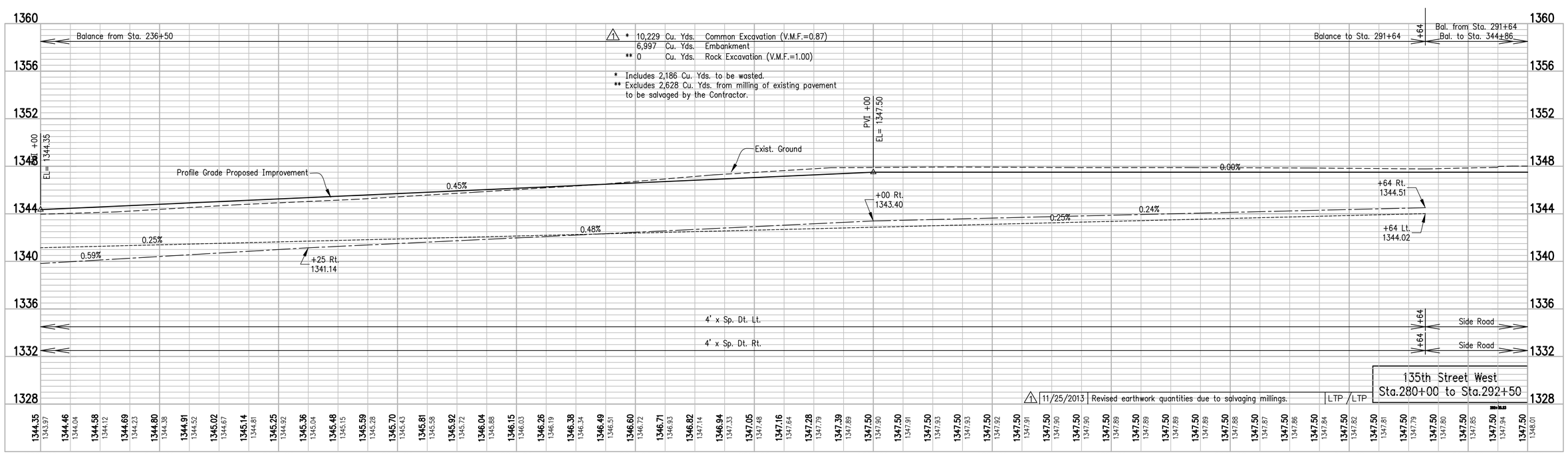
COUNTY	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
SEDGWICK	KANSAS	R259	2013	8R	140

SW Cor. Sec. 25, T28S, R2W (Illinois)
Sta. 292+25.23
N: 1645512.8410 E: 1602714.4240
Pinched ½" pipe in thimble 9" below asphalt surface (Found)
47.53' NE to 3ns in S. face of treated tel. riser post
50.02' NW to 3ns in N. face of treated tel. riser post
43.26' SW to 3ns in N. face of high voltage pole
43.22' SE to 3ns in N. face of PP



BM #13 -- Chiseled "□" on center of west hubguard of entrance drive on east side of 135th and south side of 63rd South.
75.5' Rt. of Sta. 292+11.
Elev. 1346.00 Northing: 1645499± Easting: 1602790±



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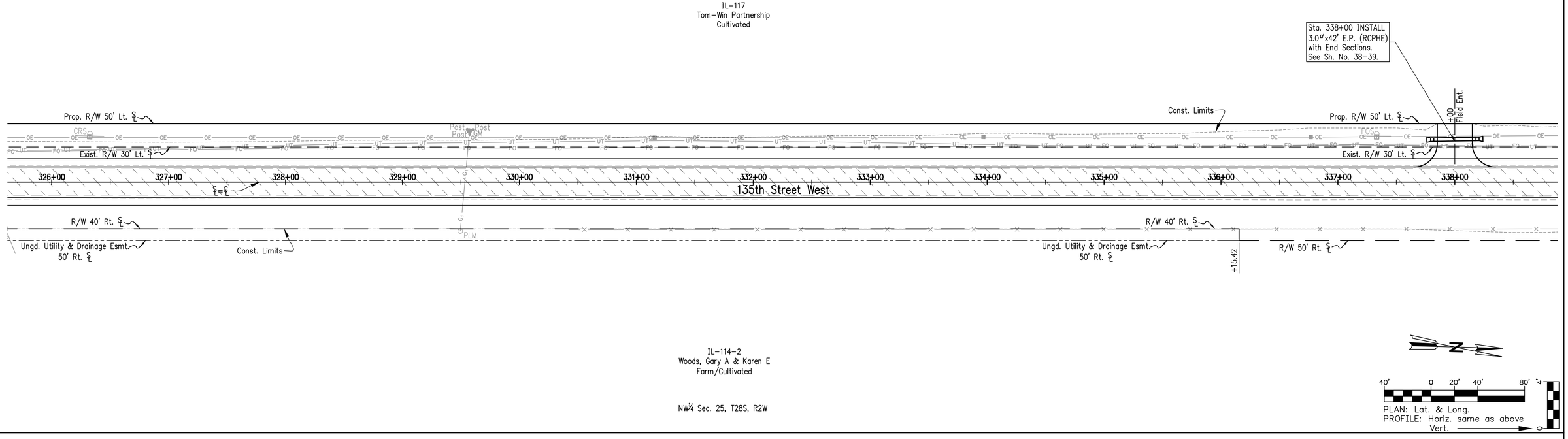
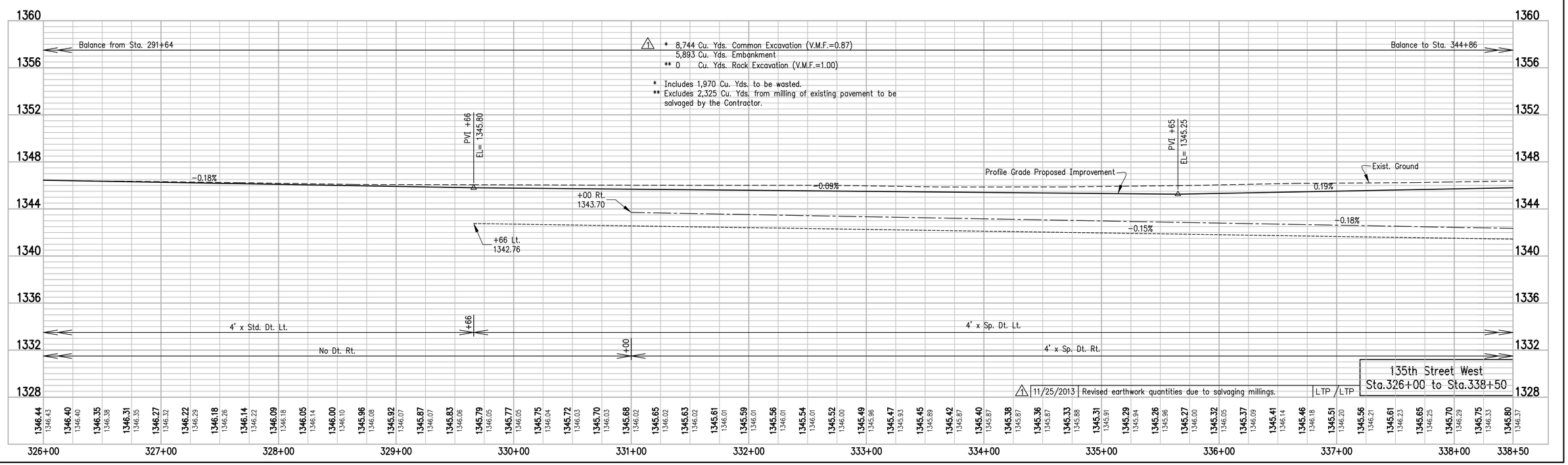
COUNTY	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
SEDGWICK	KANSAS	R259	2013	12R	140

REVISED PLANS





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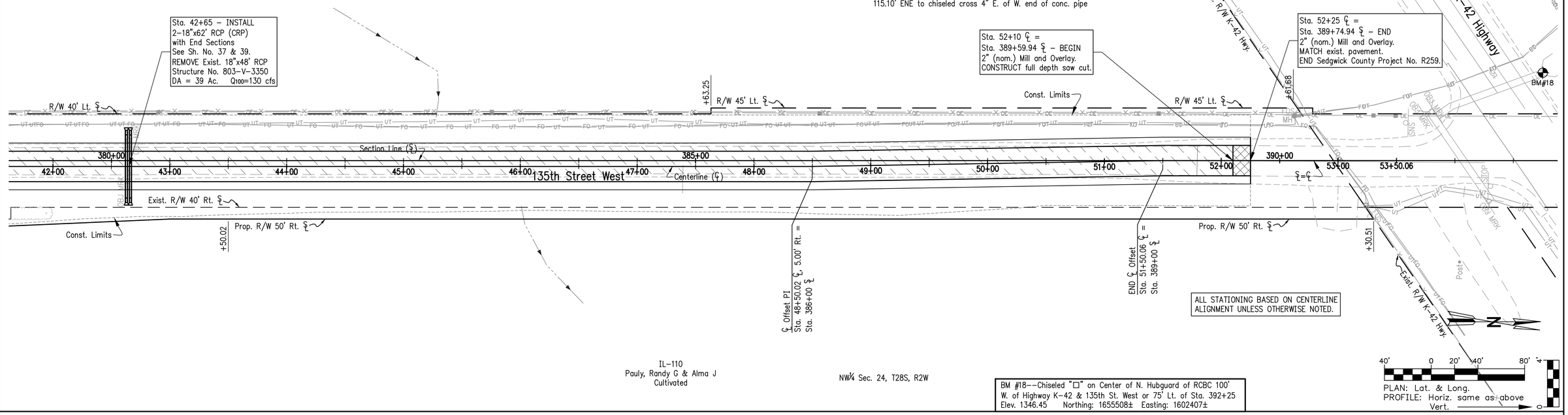
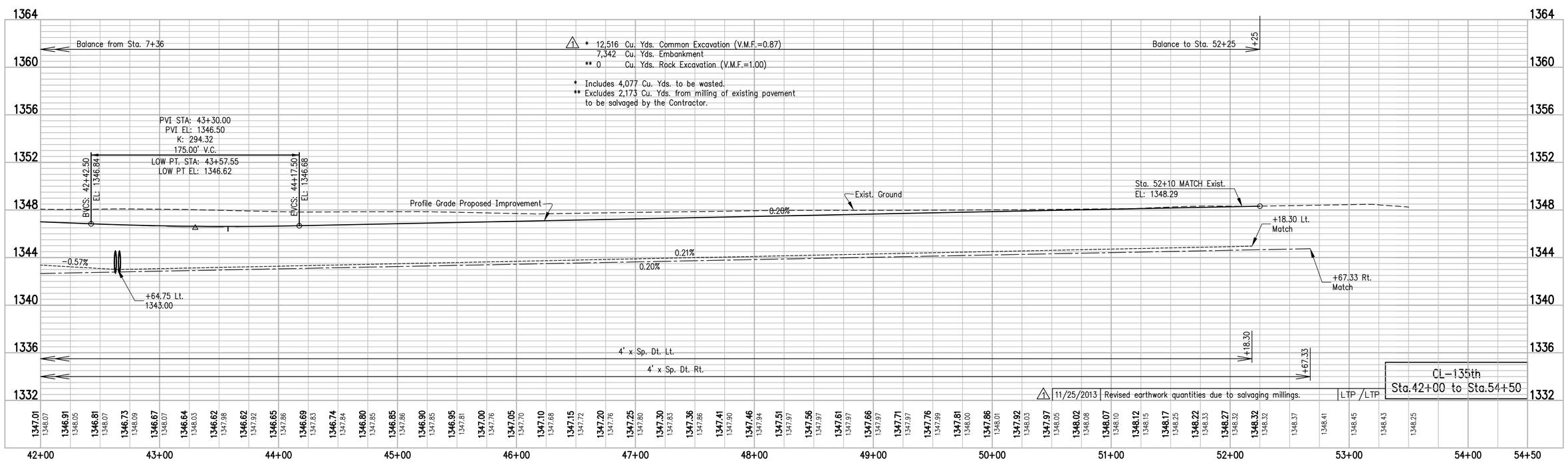
COUNTY	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
SEDGWICK	KANSAS	R259	2013	17R	140

REVISED PLANS





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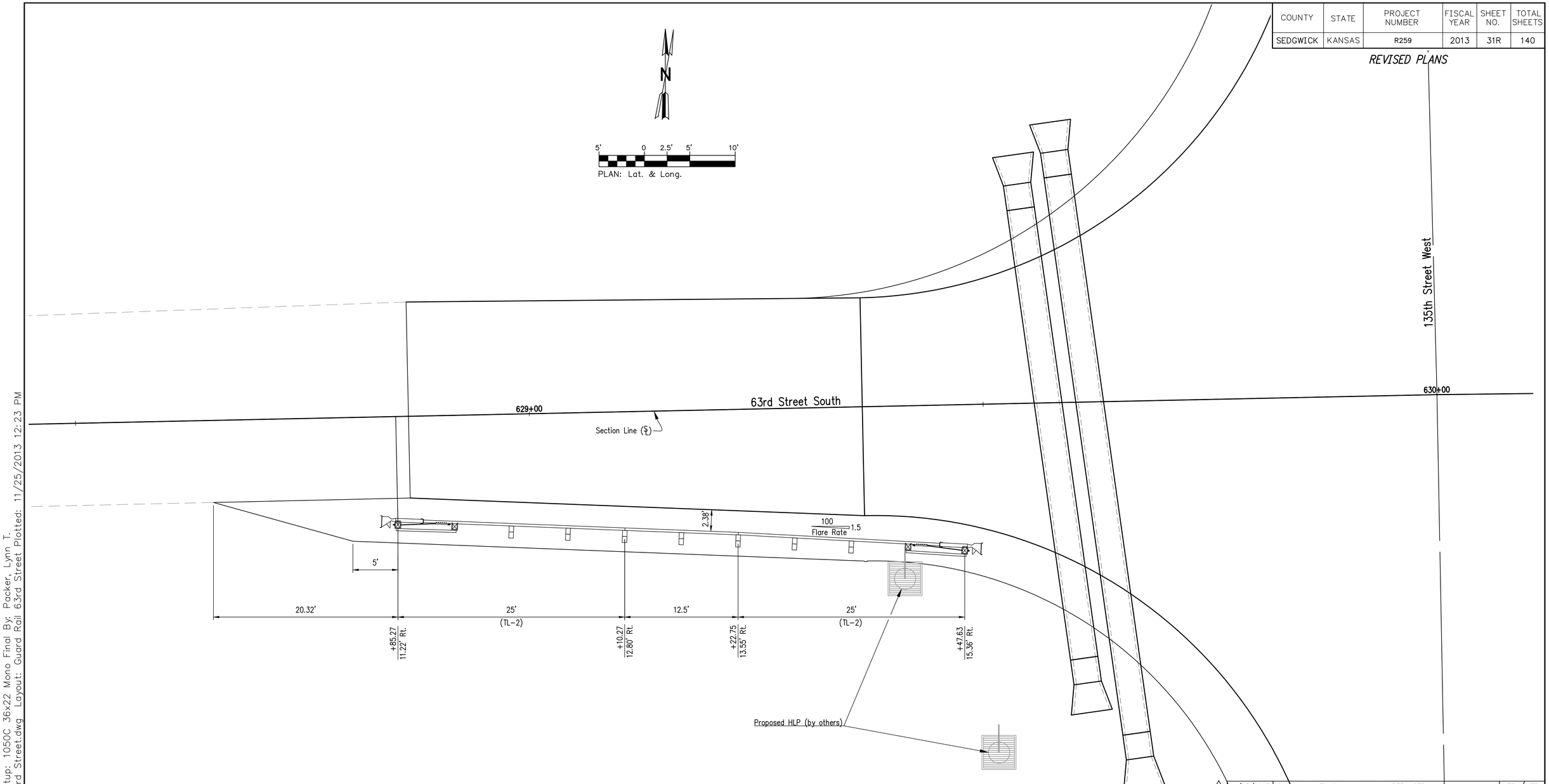
SEDGWICK	KANSAS	R259	2013	31R	140

REVISED PLANS



NOTES:

1. Offset distances are from Section Line to face of guardrail.
2. See Sh. No. 32–35 for additional details.
3. Test Level 2 end terminals are to be used at this location. 25 l.f. of W-Beam guardrail shall be included in the SKT (TL-2) End Terminal bid items. See Sh. No. 66 for Summary of Quantities.

1	11/25/2013	Changed to TL-2 end terminals. REPLACED sheet.	LTP /LTP

GUARDRAIL LAYOUT
63RD STREET SOUTH

PREPARED BY
SEDGWICK COUNTY PUBLIC WORKS
HIGHWAY DEPARTMENT

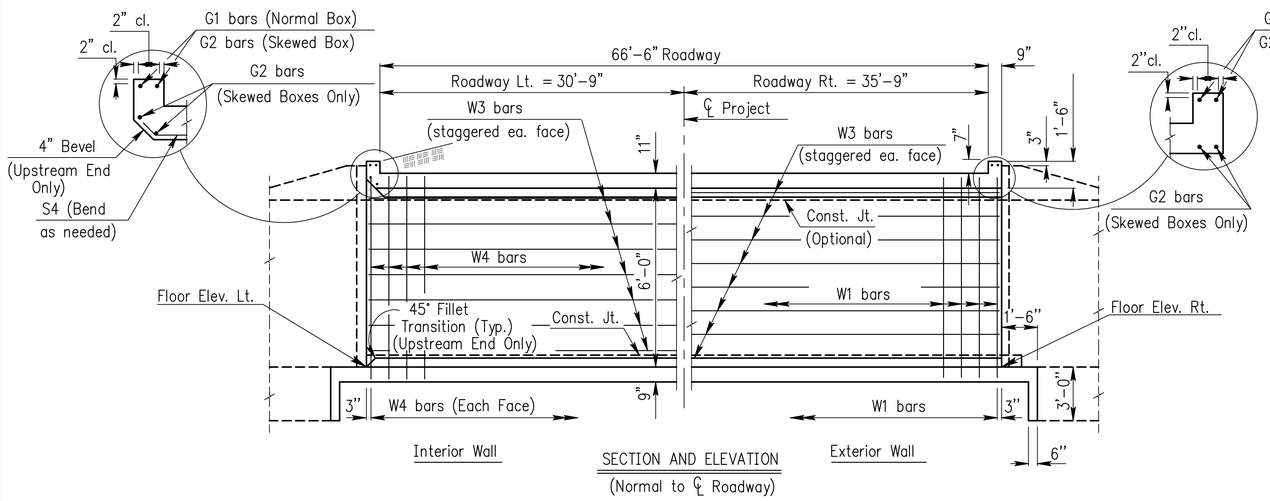
DAVID C. SPEARS, P.E. — DIRECTOR/COUNTY ENGINEER

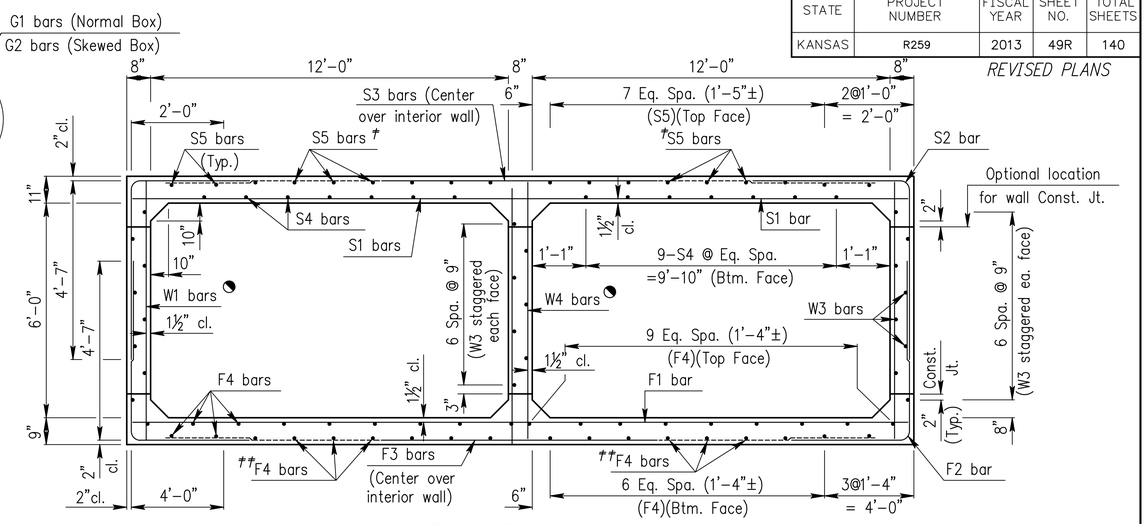
REVISED	SCALE	DESIGNED	DRAWN	CHECKED	SHEET NO.
	1" = 5'	L.T.P.	D.R.S.	L.T.P.	31R
	DATE	10/2013	10/2013	10/2013	

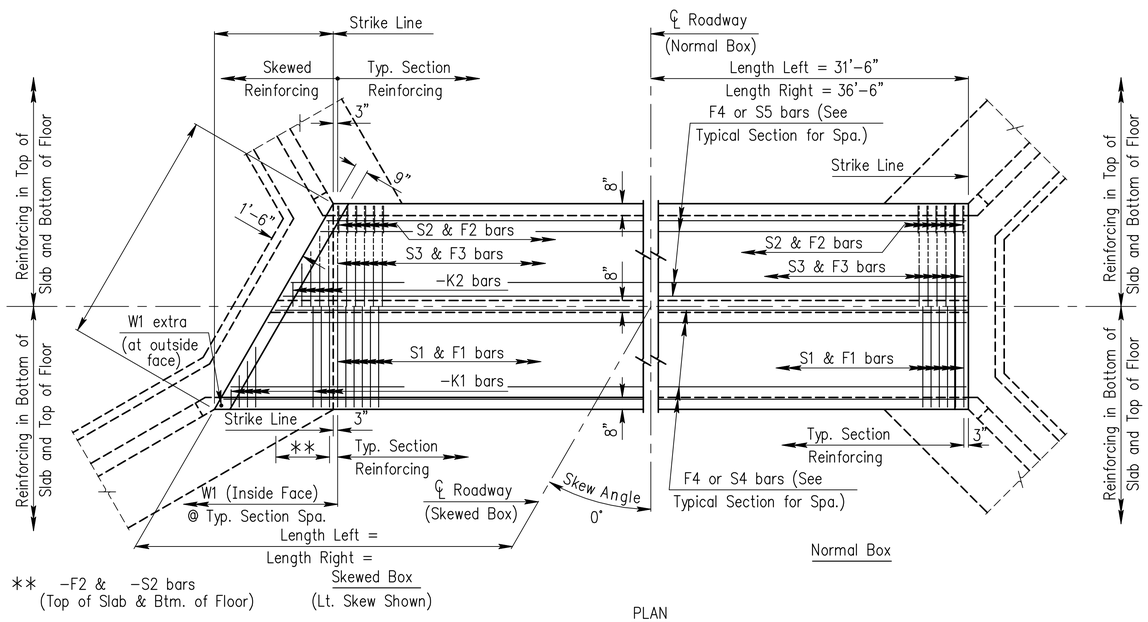
DWG: GR-Details-63rd Street.dwg

STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	R259	2013	49R	140

REVISED PLANS



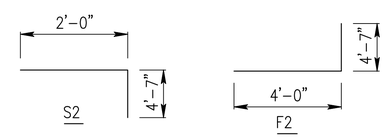




See RCB Auxiliary Details for Optional Splice.

† Place when S3 bar extends to exterior walls.

†† Place when F3 bar extends to exterior walls.



BENDING DIAGRAM

All Dimensions are out to out of bars.

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
Reinforcing Steel; fy = 60,000 p.s.i.

FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.

CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾ inch triangular molding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.

REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.

EXCAVATION: Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Grade 4.0 Concrete. Excavation for RCB Bridges shall be paid for as Class III Excavation.

SEAL COURSE: A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.

FOUNDATION STABILIZATION: The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

QUANTITIES: The quantities shown in the Culvert Summary include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.

GRANULAR BACKFILL (WINGWALLS): See the "Auxiliary Details" sheet.

STRIKE LINE: Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall detail sheet.

BRIDGE BACKWALL PROTECTION SYSTEM: For structures with two foot of fill or less that have this bid item in the Summary of Quantities. See the "Auxiliary Details" sheet.

CULVERT SUMMARY

For design purposes ONLY. Do NOT use for Construction — includes any welded wire fabric

Floor Elev. Lt.	Floor Elev. Rt.	Crown Gr. Elev.	Design Fill Ht.	Skew	Left Wings	Right Wings	Scour Apron	Soil Saver	Concrete Barrel (Cu.Yds.)	Concrete Wings (Cu.Yds.)	Concrete Total (Cu.Yds.)	Reinf. Steel (Gr. 60) Barrel (Lbs.)	Reinf. Steel (Gr. 60) Wings (Lbs.)	Reinf. Steel (Gr. 60) Total (Lbs.)	LRFR RATING FACTORS HL-93 Loading Inventory	LRFR RATING FACTORS HL-93 Loading Operating
1337.15	1336.90	1346.75	2	0	Flared	Flared	No	No	147.10	20.54	167.64	27762	2239	30001	1.54	1.97

Minimum Splice Lengths	
#4	1'-5"
#5	1'-9"

△ Epoxy Coated Bars
∗ See Bending Diagram

BAR SCHEDULE

△F1 Size	Spa.	No.	Length	△F2 ∗ Size	Spa.	No.	Length	△F3 Size	Spa.	No.	Length	△F4 Size	No.	Length	△S1 Size	Spa.	No.	Length	△S2 ∗ Size	Spa.	No.	Length	△S3 Size	Spa.	No.	Length	△S4 Size	No.	Length	△S5 Size	No.	Length
4	5"	163	25'-8"	6	6½"	252	8'-7"	7	6½"	126	10'-0"	4	68	34'-7"	5	5"	163	25'-8"	5	6½"	252	6'-7"	7	6½"	126	25'-8"	5	36	34'-9"	4	36	34'-7"

△K1 Size	Spa.	No.	Length	△K2 Size	Spa.	No.	Length	△W1 Size	Spa.	No.	Length	△W2 Size	Spa.	No.	Length	△W3 Size	No.	Length	△W4 Size	Spa.	No.	Length	△G1 Size	No.	Length	△G2 Size	No.	Length	Size	Spa.	No.	Length
N/A	N/A	N/A		N/A	N/A	N/A		4	10"	164	7'-4"	N/A	N/A	N/A	N/A	4	42	34'-7"	4	10"	6	7'-4"	6	4	25'-8"	N/A	N/A	N/A				

SUMMARY OF QUANTITIES

Concrete (Grade 4.0)	98.3	C.Y.
Concrete (Grade 4.0) (AE)	69.3	C.Y.
Bridge Backwall Protection System (Subsidiary)	207	S.Y.
Reinforcing Steel (Gr. 60)	2240	Lbs.
Reinforcing Steel (Gr. 60) (Epoxy Coated)	27760	Lbs.
Class III Excavation	621	C.Y.
Foundation Stabilization	45	C.Y.
Concrete for Seal Course (Set)	1	C.Y.
Granular Backfill (Wingwalls)	44	C.Y.

NO.	DATE	REVISIONS	BY	APP'D
1	11/22/2013	Replaced sheet.	LTP	LTP

KANSAS DEPARTMENT OF TRANSPORTATION
Br. No. 803-W-5070 Sta. 343+46
DOUBLE 12 ft x 6 ft RFB

BR 2.12.6 F Sedgwick Co.

FHWA APPROVAL	10-20-10	APP'D	Terry L. Fleck
DESIGNED	DETAILED	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	QUAN. CK.	CADD CK.

COUNTY	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
SEDGWICK	KANSAS	R259	2013	66R	140

REVISED PLANS

EARTHWORK NOTES

Quantities shown for "Common Excavation" are for excavation within the project limits. Rock Excavation quantities is for the removal of existing asphalt pavement. Quantities were calculated using an average pavement thickness of 10" between Sta. 236+50 and Sta. 291+58, 9.5" between Sta. 291+58 and Sta. 344+86, and 8" between Sta. 344+86 and Sta. 389+74.94. This represents the best information available and may or may not be representative of the entire project. In the event that the actual quantities encountered in the field exceed those shown here, the Contractor shall remove and dispose of said existing pavement at no additional expense.

No separate measurement or payment will be made for initial consolidation and settlement. Additionally, no separate measurement was made for compaction of earthwork in cut areas outside the roadway. These items shall be SUBSIDIARY to other earthwork bid items.

The Contractor shall place 6" of top soil in all areas to be seeded. This material shall be obtained by striping soil from within the construction limit and shall be free of rocks, rubble, trash and other foreign or toxic material and shall be capable of supporting vegetation. No separate measurement or payment will be made for placing topsoil on this project.

Double handling of material stockpiled, over excavation and placement of material through cuts and over excavation and replacement of material to the original ground line through fills is not quantified and shall be SUBSIDIARY to other earthwork bid items.

This project will not include payment for overhaul. Stockpiling of excavated material due to staged construction and/or double handling of excavated material required to complete the embankment will not be paid for separately, but shall be SUBSIDIARY to other earthwork bid items.

For Temporary Erosion and Pollution Control Quantities, see Sh. No. 68.
For Seeding Quantities, see Sh. No. 76.
For Surfacing Quantities, see Sh. No. 78.
For Pavement Marking Quantities, see Sh. No. 77.
For Traffic Control Quantities, See Sh. No. 80–83. (FOR INFORMATION ONLY)
* Bid items and quantities for RFB at Sta. 27+60 only.

SUMMARY OF EARTHWORK QUANTITIES

STATION TO STATION		EXCAVATION						COMPACTION (IN FILL)		WASTE ψ	
		COMMON 2		CONTRACTOR FURNISHED		ROCK 2		TYPE B (MR–90)	TYPE AA (MR–3–3)	COMMON 2	ROCK 2
		C.Y.	V.M.F.	C.Y.	V.M.F.	C.Y.	V.M.F.	C.Y.	C.Y.	C.Y.	C.Y.
236+50	291+58	10,229	0.87	0	0.87	0	1.00	4,016	2,981	2,186	0
291+58	344+86	8,744	0.87	0	0.87	0	1.00	2,984	2,909	1,970	0
344+86	389+74.94	12,516	0.87	0	0.87	0	1.00	4,896	2,446	4,077	0
TOTALS		31,489		0		0		11,896	8,336	8,233	0

ψ For information only.

RECAPITULATION OF ROAD QUANTITIES

	ITEM	QUANTITY	UNIT
	Clearing and Grubbing	1	L.S.
	Removal of Existing Structures	1	L.S.
	Rock Excavation 2	0	Cu. Yd.
	Common Excavation 2	31,489	Cu. Yd.
	Compaction of Earthwork (Type B) (MR–90)	11,896	Cu. Yd.
	Compaction of Earthwork (Type AA) (MR–3–3)	8,336	Cu. Yd.
	Water (Earthwork Compaction) (Set Price)	1	M–Gal.
	Aggregate Base Special (6") 1	50,229	Sq. Yd.
	Water (Grading) (Set Price)	1	M–Gal.
*	Concrete (Grade 4.0) (Alt. #1) 2 1	331.8	Cu. Yd.
*	Concrete (Grade 4.0) (AE) (Alt. #1) 2 1	202.3	Cu. Yd.
*	Reinforcing Steel (Grade 60) (Alt. #1) 2 1	6,630	Lbs.
*	Reinforcing Steel (Grade 60) (Epoxy Coated) (Alt. #1) 2 1	105,890	Lbs.
*	Class III Excavation (Alt. #1) 2 1	1,800	Cu. Yd.
*	Foundation Stabilization (Alt. #1) 2 1	135	Cu. Yd.
2 *	Precast Reinforced Concrete Bridge (3@36' Span Arch) (Alt. #2)	1	L.S.
	Concrete (Grade 4.0) 1	347.7	Cu. Yd.
	Concrete (Grade 4.0) (AE) 1	213.1	Cu. Yd.
	Reinforcing Steel (Grade 60) 1	8,160	Lbs.
	Reinforcing Steel (Grade 60) (Epoxy Coated) 1	91,420	Lbs.
	Class III Excavation 1	1,538	Cu. Yd.
	Foundation Stabilization 2 1	166	Cu. Yd.
	Concrete for Seal Course (Set Price)	1	Cu. Yd.
	Granular Backfill (Wingwalls) (Set Price)	1	Cu. Yd.
	Slope Protection (Riprap Stone) (18") (Grouted) 1	336	Cu. Yd.
	Bedding for Slope Protection 1	108	Cu. Yd.
	Crossroad Pipe (18") (RCP)	236	Lin Ft.
	Crossroad Pipe (3.0 Sq. Ft.) (RCPHE)	114	Lin Ft.
	Crossroad Pipe (6.0 Sq. Ft.) (RCPHE)	125	Lin Ft.
	Crossroad Pipe (7.0 Sq. Ft.) (RCPHE)	68	Lin Ft.
	Entrance Pipe (18") (RCP) 1	280	Lin Ft.
	Entrance Pipe (42") (RCP)	108	Lin Ft.
	Entrance Pipe (1.5 Sq. Ft.) (RCPHE) 1	289	Lin Ft.
	Entrance Pipe (3.0 Sq. Ft.) (RCPHE)	374	Lin Ft.
	Entrance Pipe (4.0 Sq. Ft.) (RCPHE)	62	Lin Ft.
	Storm Sewer (18") (RCP)	426	Lin Ft.
	Storm Sewer (24") (RCP)	34	Lin Ft.
	End Section (18") (RC) 1	28	Each
	End Section (24") (RC)	1	Each
	End Section (42") (RC)	4	Each
	End Section (1.5 Sq. Ft.) (RCHE) 1	14	Each
	End Section (3.0 Sq. Ft.) (RCHE) 1	24	Each
1	End Section (4.0 Sq. Ft.) (RCHE)	4	Each
	End Section (6.0 Sq. Ft.) (RCHE)	4	Each
	End Section (7.0 Sq. Ft.) (RCHE)	2	Each
	Manhole (Reinforced Concrete)	1	Each
	Guardrail, Removal of Steel Plate	208	Lin Ft.
	Guardrail, Steel Plate 2	312.50	Lin Ft.
	Guardrail End Terminal (SKT) (TL–3) 2	4	Each
2	Guardrail End Terminal (SKT) (TL–2)	2	Each
	Mobilization	1	Lump Sum
	Contractor Construction Staking	1	Lump Sum
	Field Office	1	Each
	Maintenance and Restoration of Haul Road (Set Price)	1	Lump Sum
	Temporary Surfacing Material (Aggregate) (Set Price)	1	Cu. Yd.
	Mailbox Installation (Set Price)	1	Each
	Mowing	5.8	Mi/Side
	Traffic Control	1	Lump Sum
	G20–Special Signing	4	Each

ΔREMOVAL OF EXISTING STRUCTURES

STATION	SIDE	SIZE	ITEM
237+55	℄	6'x6'x36'	RCB
241+27	Rt.	18"x25'	CMP
258+62	Rt.	18"x24'	CMP
265+11	℄	2–6'x4'x32'	RCB
266+25	Rt.	18"x24"	CMP
269+75	℄	2–7'x7'x32'	RCB
271+76	Rt.	18"x24'	RCP
274+25	Rt.	18"x27'	CMP
278+96	Rt.	18"x33'	CMP
279+00	Lt.	29"x19"x30'	CMMAC
279+47	Rt.	18"x26'	RCP
281+32	Rt.	18"x25'	CMP
281+85	Rt.	18"x24'	CMP
283+33	Rt.	18"x24'	CMP
284+08	Rt.	18"x25'	RCP
285+43	Rt.	18"x25'	RCP
286+65	Rt.	18"x34'	RCP
292+65	Lt.	24"x24'	CMP
293+26	℄	2–24"x36'	RCP
303+52	Rt.	18"x41'	CMP
306+14	℄	2–30"x40'	RCP
318+68	Lt.	18"x32'	CMP
318+68	Rt.	18"x20'	CMP
324+00	Lt.	18"x20'	CMP
343+46	℄	2–9'x4'x32'	RCB
330+42 – 342+32	Rt.	1,190 l.f.	Woven Wire Fence
8+94 ℄	Rt.	18"X21'	CMP
23+49 ℄	Lt.	18"x33'	RCP
24+55 ℄	Rt.	29"x19"	CMMAC
28+05 ℄	Lt.	24 Sq. Ft.	Conc. Ditch Lining
28+08 ℄	Rt.	23 Sq. Ft.	Conc. Ditch Lining
26+67 – 27+19	Lt. & Rt.	--	Steel Plate Guardrail
27+60 ℄	℄	5–9'x10'	RCB
27+77 – 28+29	Lt. & Rt.	--	Steel Plate Guardrail
32+20 ℄	Rt.	24"x33'	CMP
33+56 ℄	Lt.	18"x33	CMP
34+20 ℄	Lt.	18"x21'	CMP
42+65 ℄	℄	18"x48'	RCP

ΔFOR INFORMATION ONLY

AGGREGATE BASE (SPECIAL)

STATION TO STATION		ROADWAY	SIDE	AGGREGATE BASE (6") (S.Y.)	GEOGRID REINFORCEMENT (FOR BASE)* (S.Y.)	REMARKS
236+50	291+58	135th St W	℄	17,884.33	17,884.33	Includes 71st St. S.
291+58	344+86	135th St W	℄	17,454.97	17,454.97	Includes 63rd St. S.
344+86	389+59.94	135th St W	℄	14,889.90 1	14,889.90 1	Includes 55th St. S.
			TOTALS	50,229.20 1	50,229.20 1	

* For information only. Geogrid is included in the bid item "Aggregate Base (Special) (6")."

MOWING

STATION TO STATION		ROADWAY	MOWING (MILE PER SIDE)	REMARKS
236+50	389+67.33	135th St W	5.8	
		TOTAL	5.8	

GUARDRAIL, STEEL PLATE (GALV.)

STATION TO STATION		ROADWAY	SIDE	LENGTH (FT.)ψ	END TERM. (SKT) (TL–2) (EACH)	END TERM. (SKT) (TL–3) (EACH)
26+03.20	27+02.85	135th St W	Rt.	100.00		1
26+53.19	27+02.85	135th St W	Lt.	50.00		1
28+14.98	28+64.64	135th St W	Rt.	50.00		1
28+14.98	29+14.63	135th St W	Lt.	100.00		1
628+85.27	629+47.63	63rd St S	Rt.	12.50	2	
			TOTALS	312.50	2 2	4 2

2 ψQuantity does not include length of end terminals. TL–2 end term. include 25' and TL–3 end term. include 50' W–Beam guardrail as shown on Sh. No. 30 and 31.

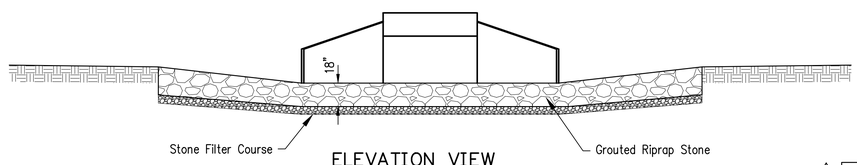
MAILBOX INSTALLATIONβ

STATION	SIDE	REMARKS
258+76	Rt.	
266+07	Rt.	
275+62	Rt.	Relocate to drive at Sta. 274+25.
279+61	Rt.	
282+05	Rt.	
283+42	Rt.	
285+56	Rt.	
286+93	Rt.	
346+47	Rt.	℄ Sta. 8+87

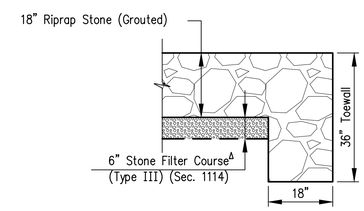
βFor information only.

SLOPE PROTECTION (RIPRAP STONE) (18") (GROUTED)

STATION	STRUCTURE SIZE	SIDE	APPROX. LENGTH (FT.)	AVG. WIDTH (FT.)	THICKNESS (FT.)	RIPRAP (C.Y.)	BEDDING (C.Y.)	REMARKS
237+55	3–8'x3' RCB	Rt.	39	10	1.5	23	8	
265+15	2–6'x5' RCB	Rt.	15	Varies	1.5	29	10	
269+70	2–12'x6' RFB	Lt.	52	Varies	1.5	40	11	Includes toewall along upstream face.
269+70	2–12'x6' RFB	Rt.	51	Varies	1.5	33	13	
343+46	2–12'x6' RFB	Lt.	60	Varies	1.5	62	17	Includes toewall along upstream face.
343+46	2–12'x6' RFB	Rt.	65	Varies	1.5	51	17	
27+60	6–18'x10' RFB	Lt.	18	Varies	1.5	15	5	SW Quadrant
27+60	6–18'x10' RFB	Rt.	35	Varies	1.5	43	14	SE Quadrant
27+60	6–18'x10' RFB	Lt.	13	Varies	1.5	7	2	NW Quadrant
27+60	6–18'x10' RFB	Rt.	24	Varies	1.5	33	11	NE Quadrant
TOTALS						336 2	108 2	



ELEVATION VIEW
Slope Protection (Riprap Stone)
Typical Application



ΔStone Filter Course to be paid for as "Bedding for Slope Protection."

TYICAL SECTION WITH TOEWALL
Toewall to be constructed when Slope Protection used on the upstream end of an RCB.

2	11/25/2013	Revised earthwork quantities based on salvaging 6" exist. HMA.	LTP	/LTP
2	11/25/2013	Added alt. bid item. Rev. SKT end term. Rev. Found. Stbl. qty.	LTP	/LTP
1	11/18/2013	Separated RFB quantities for structure at Sta. 27+60 from others.	LTP	/LTP
1	11/18/2013	Corrected quantities. Corrected end section size.	LTP	/LTP

Reconstruction of 135th St. West

SUMMARY OF QUANTITIES
SHEET 1 OF 2

PREPARED BY
SEDGWICK COUNTY PUBLIC WORKS
HIGHWAY DEPARTMENT

DAVID C. SPEARS, P.E. — DIRECTOR/COUNTY ENGINEER

REVISED	SCALE	DESIGNED	DRAWN	CHECKED	SHEET NO.
	NONE	L.T.P.	L.T.P.	L.T.P.	66R
	DATE	10/2013	10/2013	10/2013	

REVISED PLANS

COUNTY	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
SEDGWICK	KANSAS	R259	2013	67R	140

DRAINAGE STRUCTURES

STATION	LOCATION	TYPE	Size	CONCRETE GRADE 4.0 (CU. YD.)	CONCRETE GRADE 4.0 (AE) (CU. YD.)	REINFORCING STEEL (GR. 60) (LBS.)	REINFORCING STEEL (GR. 60) (EPOXY COATED) (LBS.)	CROSSROAD PIPES (L.F.)						ENTRANCE PIPES (L.F.)							END SECTIONS (EACH)[a]								
								18" (RCP)		3.0 Sq. Ft. (RCPHE)	6.0 Sq. Ft. (RCPHE)	7.0 Sq. Ft. (RCPHE)		18" (RCP)	42" (RCP)		1.5 Sq. Ft. (RCPHE)	3.0 Sq .Ft. (RCPHE)	4.0 Sq. Ft. (RCPHE)		18" (RC)	42" (RC)		1.5 Sq. Ft. (RCHE)	3.0 Sq. Ft. (RCHE)	4.0 Sq. Ft. (RCHE)	6.0 Sq. Ft. (RCHE)	7.0 Sq. Ft. (RCHE)	
237+55	135th St W	RCB	3-8'x3'	75.5	45.0	1,300	21,870																					
241+27	135th St W	EP	18"											34							2							
258+62	135th St W	EP	18"											32							2							
265+15	135th St W	RCB	3-6'x5'	62.1	23.4	2,020	11,720																					
266+25	135th St W	EP	4.0 Sq. Ft.																30						2			
269+70	135th St W	RFB	2-12'x6'	102.6	67.3	2,600	26,920																					
271+30	135th St W	EP	2-3.0 Sq. Ft.															88							4			
△1 271+76	135th St W	EP	1.5 Sq. Ft.														44							2				
274+25	135th St W	EP	18" △1											42 △1							2 △1							
278+96	135th St W	EP	4.0 Sq. Ft.																32							2 △1		
279+00	135th St W	EP	2-3.0 Sq. Ft.															88							4			
279+47	135th St W	EP	3.0 Sq. Ft.															24							2			
281+32	135th St W	EP	3.0 Sq. Ft.															32							2			
281+86	135th St W	EP	3.0 Sq. Ft.															32							2			
283+33	135th St W	EP	3.0 Sq. Ft.															24							2			
284+08	135th St W	EP	18"											24							2							
285+43	135th St W	EP	18"											44							2							
286+65	135th St W	EP	18"											40							2							
293+26	135th St W	CRP	2-18"					112													4							
303+52	135th St W	EP	1.5 Sq. Ft.														44							2				
306+14	135th St W	CRP	2-6.0 Sq. Ft.								125															4		
318+68	135th St W	EP	1.5 Sq. Ft.														37							2				
318+68	135th St W	EP	1.5 Sq. Ft.														42							2				
320+75	135th St W	EP	1.5 Sq. Ft.														46							2				
324+00	135th St W	EP	1.5 Sq. Ft.														36							2				
338+00	135th St W	EP	3.0 Sq. Ft.															42							2 △1			
343+46	135th St W	RFB	2-12'x6'	98.3 △1	69.3 △1	2,240 △1	27,760 △1																					
24+55	135th St W	EP	1.5 Sq. Ft.														40							2				
24+55	135th St W	EP	3.0 Sq. Ft.															44							2			
27+60	135th St W	RFB	6-18'x10'	331.8	202.3	6,630	105,890																					
32+20	135th St W	EP	42"												56							2						
33+56	135th St W	EP	18"											34							2							
34+20	135th St W	EP	18"											30							2							
36+67	135th St W	EP	42"												52							2						
42+65	135th St W	CRP	2-18"					124													4							
71st St S																												
709+51	71st St S	CRP	7.0 Sq. Ft.									68															2	
63rd St S																												
629+57	63rd St S	CRP	3.0 Sq. Ft.							53															2			
629+62	63rd St S	CRP	3.0 Sq. Ft.							61															2			
			TOTALS	670.3 △1	407.3 △1	14,790 △1	194,160 △1	236		114	125	68		280 △1	108		289 △1	374	62		24 △1	4		14 △1	24 △1	4 △1	4	2	

[a] See Sh. No. 28 for end section quantities associated with storm sewer construction.

△2	11/25/2013	Corrected concrete and steel quantities for RFB at Sta. 343+46.	LTP /LTP
△1	11/18/2013	Added qty's for EP at Sta. 271+76. Corrected various E/S qty's.	LTP /LTP
△1	11/18/2013	Corrected EP size at Sta. 274+25; updated quantities.	LTP /LTP

Reconstruction of 135th St. West

SUMMARY OF QUANTITIES
SHEET 2 OF 2

PREPARED BY
SEDGWICK COUNTY PUBLIC WORKS
HIGHWAY DEPARTMENT

DAVID C. SPEARS, P.E. — DIRECTOR/COUNTY ENGINEER

REVISED	SCALE	DESIGNED	DRAWN	CHECKED	SHEET NO.
	NONE	L.T.P.	L.T.P.	L.T.P.	67R
	DATE	10/2013	10/2013	10/2013	

GENERAL NOTE:

On surfacing projects, the 6" of Compaction Type AA, shown for the center portion of the roadbed, is for the purpose of restoring the original Compaction Type AA which may have been lost since grading operations. The exact locations of this Compaction Type AA, which will be required, is to be determined by the Engineer at the time of construction. This work shall be paid under the bid item "Compaction of Earthwork (Type AA) (MR-)".

Over all structures, unless otherwise directed by the Engineer, where the top of the hubguard is level with or above the finished shoulder grade, the earth cover over the structure slab shall be removed and backfilled with _____ material as directed by the Engineer. The removal of this material will be subsidiary.

The _____ material used to backfill over the structure shall be paid for at the prices shown in the contract.

The earth shoulders shall be compacted full depth (Type -MR) except, when ordered by the Engineer, the top 3" shall be left uncompacted for seeding.

All side roads and house entrances shall be surfaced with _____ to the R/W line as indicated on the detail. All side roads and house entrances with existing asphalt surface shall be surfaced with _____ at least to the R/W line or to the end of construction, as directed by the Engineer. Each mailbox turnout (ON PROJECTS WHERE STABILIZED SHOULDERS ARE NOT SPECIFIED) shall be surfaced with _____ to the limits shown on the detail.

Surfacing material (SA-_____) shall be used for surfacing house entrances and side roads (_____ C.Y./SQ. YD.) beyond the limits of the asphalt surface to the limits of construction as determined by the Engineer.

The thickness of side road and entrance surfacing may be increased to the same thickness as the stabilized shoulder within the approximate limits of the shoulder.

On projects which specify both asphalt base and surface course materials, side roads, house entrances and mailbox turnouts may be surfaced with both materials at the contractors option, with the approval of the Engineer.

Quantities for aggregate for shoulders, AS-1, are calculated on the basis of 150 lbs. per cu. ft. Quantities for stabilized base course, AB-3, are calculated on the basis of 156 lbs. per cu. ft. Weight/cu. ft. includes moisture allowed by specification.

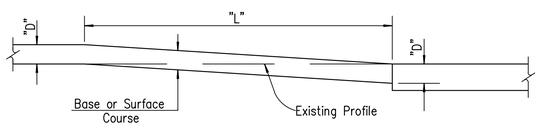
The base course shall be constructed to the plan thickness as shown.

Thicknesses indicated for all construction which is paid for on a weight or volume basis are approximate and may vary to correct for unevenness in the foundations or for other normal unevenness encountered in placement operations.

A tack coat of SS-1HP shall be provided between each lift of all base courses and under the first lift of base when they are placed on an existing asphalt, brick, or concrete surface, when so ordered by the Engineer and at the rate designated by him. A tack coat of EBL shall be provided for the surface lift at the rate of 0.15-0.20 gal./sq. yd.

Asphalt Material quantities are calculated on the basis of 8.328 lbs. per gal.

Shoulder rumble strips will not be constructed as part of this project.



TYPICAL PROFILE AT GRADE CONTROL POINTS

The Contractor shall cut the subgrade in accordance with this profile at all grade control points, i.e.; existing pavements, grade bridges and R.R. crossings, also at changes in thickness of base or surface courses. Corresponding dimensions of "D" and "L" shall be as given in the table below.

The work of cutting the subgrade and disposing of excess excavated material shall be subsidiary to other items in the contract.

TABLE OF DIMENSIONS

D	L	D	L	D	L	D	L	D	L	D	L
1"	25'	3"	75'	5"	125'	7"	175'	9"	225'	11"	275'
2"	50'	4"	100'	6"	150'	8"	200'	10"	250'	12"	300'

SUMMARY OF QUANTITIES

STATION TO STATION*		ROADWAY	SIDE	5" PLANT MIX ASPHALT (BASE) (TONS)*	2" PLANT MIX ASPHALT (SURFACE) (TONS)§	6" PLANT MIX ASPHALT (ENTRANCES) (BASE) (TONS)§	SURFACING MAT'L (AB-3) (TONS)Δ	MILLING (S.Y.) 2	SURFACING MAT'L (AB-3) (PROVIDE ONLY) (TONS)	KEEL (PROVIDE ONLY) (TONS)
236+50	291+58	135th St W	℄	4,976.40	1,909.41	606.00	313.85	15,085.3* 1		
291+58	344+86	135th St W	℄	4,770.73	1,912.63	335.78 1	370.67	13,947.1		
344+86	389+74.94	135th St W	℄	4,085.69	1,570.06	94.93	285.45	12,333.4**		
Road Maintenance⁷									1,000.00	1,000.00
TOTALS				13,832.82	5,392.10	1,036.71 1	969.97	41,365.8	1,000.00	1,000.00

* Includes sideroads. Computed at the rate of 145 lbs/ft³ and increased 10% for contingencies.
§ Includes sideroads. Computed at the rate of 145 lbs/ft³ and increased 5% for contingencies.
Δ Surfacing material for field entrances. See Sh. No. 24 for details. Computed at the rate of 156 lbs/ft³.
⁷ Quantities included for Road Maintenace are for upkeep of local Township roads. Contractor to provide material only as needed. See Special Provision General Note.
* Includes 85.1 S.Y. of 2" (nom.) milling. See Pavement Overlay Deatail on Sh. No. 3.
** Includes 88.2 S.Y. of 2" (nom.) milling. See Pavement Overlay Deatail on Sh. No. 3.

SUMMARY OF QUANTITIES (SHOULDERS)

STATION TO STATION		SIDE	WIDTH	AGGREGATE SHOULDER (AS-1) (7") (S.Y.)	WATER (AGG. SHLDR) (M. GAL.)	PLANT MIX ASPHALT (TONS)λ	REMARKS
236+50	291+58	Rt.	7'-0"	4,341.44	(Set Price)		
236+50	291+58	Lt.	7'-0"	4,358.65	(Set Price)		
291+58	344+86	Rt.	7'-0"	4,123.94	(Set Price)		
291+58	344+86	Lt.	7'-0"	4,169.29	(Set Price)		
344+86	364+22.46	Rt.	7'-0"	1,755.28	(Set Price)		Includes widening for guardrail.
344+86	364+22.46	Lt.	7'-0"	1,568.19	(Set Price)		Includes widening for guardrail.
364+22.46	365+95.29	Rt.	7'-0"			55.15	Includes widening for guardrail.
364+22.46	365+95.29	Lt.	7'-0"			55.31	Includes widening for guardrail.
365+95.29	389+59.94	Rt.	7'-0"	1,839.21	(Set Price)		Includes widening for guardrail.
365+95.29	389+59.94	Lt.	7'-0"	1,839.86	(Set Price)		Includes widening for guardrail.
TOTALS				23,995.86		110.46	

Φ Computed at the rate of 150 lbs/ft³.
λ Asphalt shoulder varies from 7" to 5" thickness over RFB bridge. See Typical Section on Sh. No. 3.

2 TRANSPORTING SALVAGEABLE MATERIAL Δ

ITEM	STATION TO STATION		SIDE	S.Y.	TONS Ω	DELIVERY LOCATION
Millings	236+50	291+58	℄	15,085.3	4,666.36	17500 W. 71st St.
Millings	291+58	344+86	℄	13,947.1	4,330.56	17500 W. 71st St.
Millings	344+86	389+74.94	℄	12,333.4	3,811.26	17500 W. 71st St.
			TOTAL	41,365.8	12,808	

Δ For information only. Transporting Salvable Material is SUBSIDIARY to Milling. See Special Provision.
Ω Based on an assumed unit weight of 138 lbs/ft³.

RATES OF APPLICATION

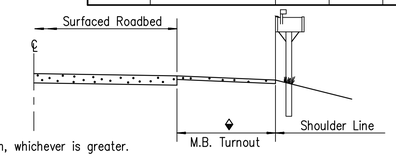
RATE	UNIT	ITEM		
39.3	Ton	Plant Mix Asphalt Mixture-Commercial Grade (Base) (5")	per Ln./Sta.	13 ft. Ln.
15.7	Ton	Plant Mix Asphalt Mixture-Commercial Grade (Surface) (2")	per Ln./Sta.	13 ft. Ln.
0.05	Gal.	Emulsified Asphalt (SS-1HP) for Tack	per sq. yd.	
0.15-0.20	Gal.	Emulsified Asphalt (EBL) for Tack	per sq. yd.	

RECAPITULATION OF QUANTITIES

ITEM		TOTAL	UNIT
Plant Mix Asphalt Mixture-Commercial Grade (Base) (5")		13,833	TONS
Plant Mix Asphalt Mixture-Commercial Grade (Surface) (2")		5,392	TONS
Plant Mix Asphalt Mixture-Commercial Grade (Base) (6")	1	1,037	TONS
Plant Mix Asphalt Mixture-Commercial Grade (Shoulder) (Variable)		110	TONS
Surfacing Material (AB-3)		970	Tons
Surfacing Material (AB-3) (Provide Only)		1,000	Tons
Keel (Provide Only)		1,000	Tons
1 Aggregate Shoulder (AS-1) (7")		23,996	Sq. Yds.
Water (Aggregate Shoulder) (Set Price)		1	M. Gal.
Milling	1 2	41,366	Sq. Yds.

REVISED PLANS

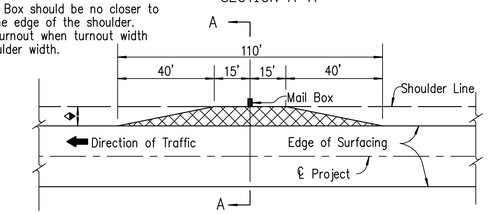
STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	R259	2013	78R	140



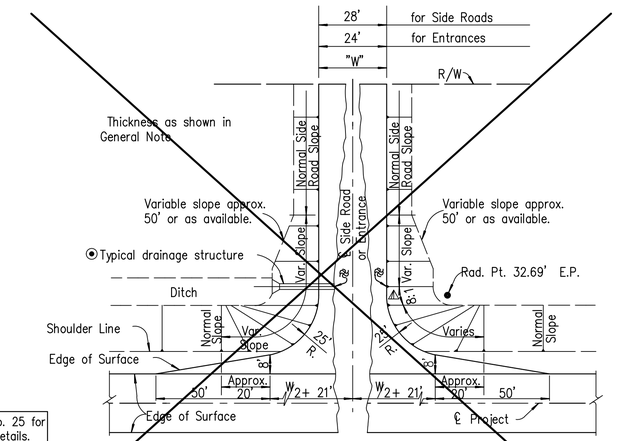
Φ Width shall be 8' or shoulder width, whichever is greater.

SECTION A-A

Note: The face of Mail Box should be no closer to the roadway than the edge of the shoulder. Align with edge of turnout when turnout width is greater than shoulder width.



DETAIL FOR SURFACING OF MAIL BOX TURNOUTS



WITH DRAINAGE STRUCTURE MOUND ENTRANCE OR SIDE ROAD

DETAIL FOR SURFACING OF SIDE ROADS & HOUSE ENTRANCES

1 8:1 Slope at the appropriate clear zone shall apply to all mound entrances and mound side roads to 10' fill height. Normal Slope (but not steeper than 6:1) for over 10' fill height.

Φ Normal Slope (but not steeper than 6:1) at approximate ℄ Structure or appropriate clear zone width.

≈ On side roads and entrances which slope toward the highway, a low point approx. 6" deep shall be constructed to divert surface drainage into the highway ditch, unless otherwise shown on the plans.

2 11/25/2013	Added milling with salvagable mat'l. See Sp. Prov.		LTP/LTP
1 11/18/2013	Corrected quantities. Corrected Agg. Shldr. bid item.		LTP/LTP
12	1-10-07	Changed bituminous to asphalt	S.W.K.	J.O.B.
11	8-30-06	Changed tack type/rate	S.W.K.	J.O.B.
10	3-24-05	Revised compaction, tack type/rate	S.W.K.	J.O.B.
9	6-12-02	Added low point off shoulder.	S.W.K.	J.O.B.
NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES (Surfacing)

RD051 78/140

FHWA APPROVAL	9-06-06	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Hecht