



North Dakota Department of Transportation

Grant Levi, P.E.
Director

Jack Dalrymple
Governor

October 30, 2013

ADDENDUM 1 – JOB 6

TO: All prospective bidders on project SC-2335(056), Job No. 6 scheduled for the November 15, 2013 bid opening.

The following plan and proposal revisions shall be made:

Plan Revisions:

See attached letter from Matt Lange, PE – KLJ dated October 28, 2013 for an explanation.

Proposal Revision:

Remove and replace pages 7-8 of 10 of the Proposal pages located at the beginning of the Bidders Proposal, with the enclosed page revised 10/28/13.

Page 7 of 10:

Item 302 0120 AGGREGATE BASE COURSE CL 5; quantity increased from 255 to 3365 TON.

Item 408 0185 HOT BITUMINOUS PAVEMENT CL 29; 23,568 TON was deleted.

Item 408 0445 PG 58-28 ASPHALT CEMENT; quantity increased from 1530 to 1717 TON.

Item 408 0803 SUPERPAVE FAA 43; 26,410 TON was added.

Page 8 of 10:

Item 754 0110 FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING, quantity increased from 15 to 24 SF.

Item 754 0206 STEEL GALV POSTS-TELESCOPING PERFORATED TUBE; quantity increased from 48.5 to 65.7 LF.

This addendum is to be incorporated into the bidder's proposal for this project.

Expedite bid files should be updated by downloading the addendum file from the Bid Express online bidding exchange at <http://www.bidx.com/> or the Department's web page (<http://www.dot.nd.gov>) and load it into the Expedite program.

Handwritten signature of Cal J. Gendreau in black ink.

CAL J. GENDREAU – CONSTRUCTION SERVICES ENGINEER

80:plm

Enclosure

◇ October 28, 2013

ADDENDUM 1 JOB 6

TO: All prospective bidders and suppliers on Project SC-2335(056) scheduled for the November 15, 2013 bid opening.

Please incorporate the following revisions into the plans for the referenced project:

Plan Revisions:

Remove and Replace Sheet 4-1, 6-1, 6-2, 8-1, 10-1, 30-1, 110-1, and 110-2 with the enclosed sheets.

Sheet No. 4-1: Changed project calls to 4.5" Superpave FAA 43.

Sheet No. 6-1 & 2: Note 302-P02 has been modified. Notes 408-P01 to 408-P05 have been removed and replaced with Superpave FAA 43 notes 408-P01 to 408-P06.

Sheet No. 8-1: "HOT BITUMINOUS PAVEMENT CL 29" has been replaced with "SUPERPAVE FAA 43". The quantities for "SUPERPAVE FAA 43" and "PG 58-28 ASPHALT CEMENT" have been increased to reflect the additional 0.5" of pavement thickness. The quantity for "AGGREGATE BASE COURSE CL 5" has been increased to account for reshaping. The quantities for "FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING" and "STEEL GALV POSTS-TELESCOPING PERFORATED TUBE" have been updated.

Sheet No. 10-1: The Superpave FAA 43 and PG 58-28 quantities per mile have been updated to reflect the additional 0.5" of pavement thickness. All references to Hot Bituminous Pavement CL 29 have been changed to Superpave FAA 43. 500 Ton per mile has been added for Aggregate Base Course CL 5.

Sheet No. 30-1: All references to Hot Bituminous Pavement CL 29 have been changed to Superpave FAA 43. Pavement thickness for second lift between stations 30+20 and 358+60 has been increased to 2".

Sheet No. 110-1: W3-5-36 sign has been added at station 58+00 ~ LT.

Sheet No. 110-2: W3-5-36 sign at station 58+00 ~ LT has been added. Additionally, a call for installing an intermediate anchor for the guardrail at station 44+78 ~ LT has been added and the speed limit signs at stations 30+50 ~ RT and 50+60 ~ LT have been reduced to 40 MPH.

BID ITEMS

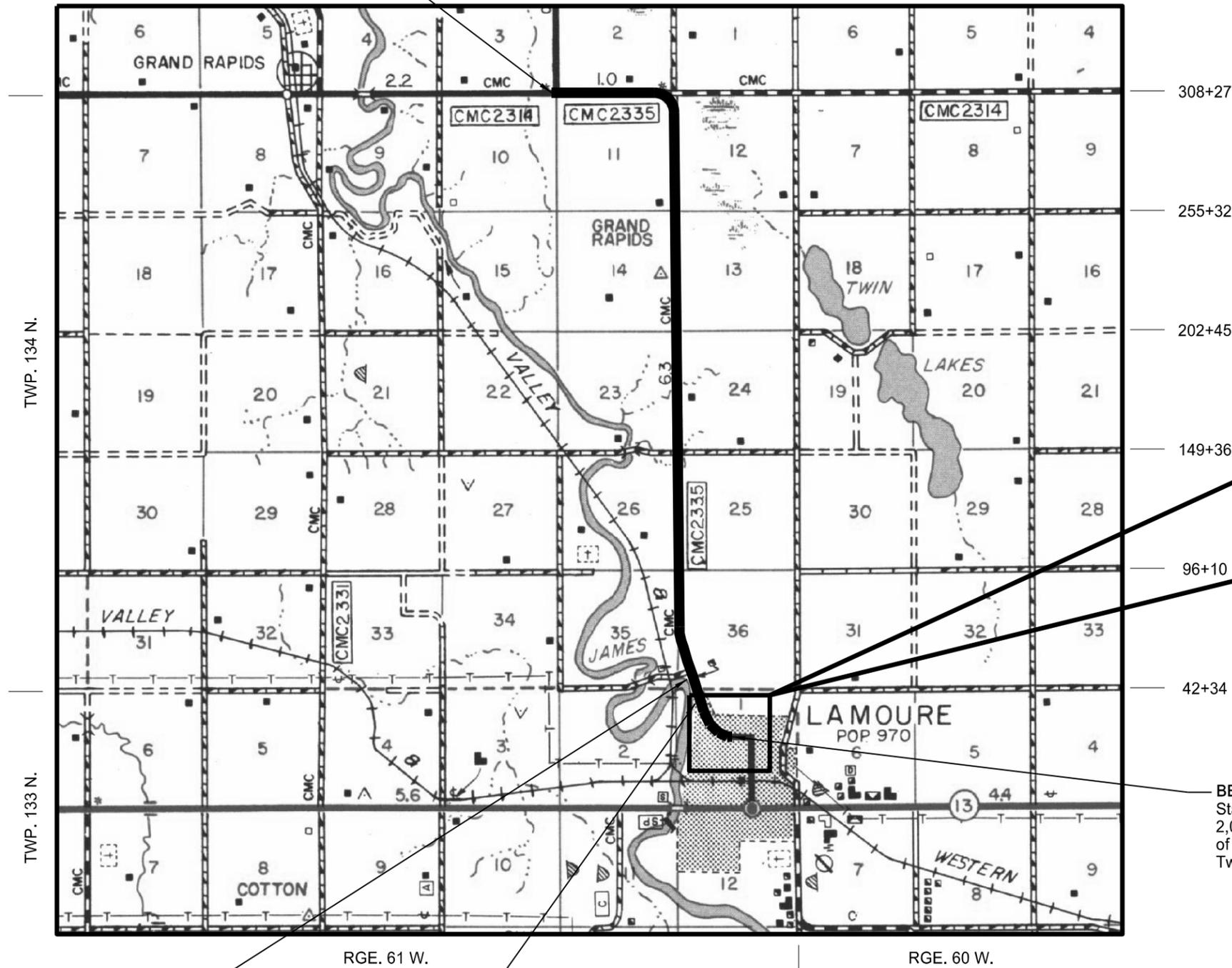
Project: SC-2335(056) (PCN-19872)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

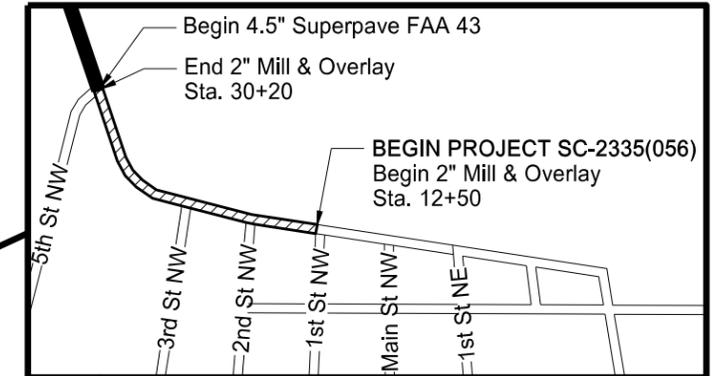
Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
001	103	0100	CONTRACT BOND	L SUM	1.				
002	203	0113	COMMON EXCAVATION-WASTE	CY	204.				
003	216	0100	WATER	M GAL	983.				
004	302	0120	AGGREGATE BASE COURSE CL 5	TON	3,365.				
005	302	0407	RESHAPE AGGREGATE BASE COURSE	STA	328.400				
006	401	0100	MC70 OR 250 LIQUID ASPHALT	GAL	27,367.				
007	401	0150	SS1H OR CSS1H OR MS1 EMULSIFIED ASPHALT	GAL	11,010.				
008	401	0160	BLOTTER MATERIAL CL 44	TON	821.				
009	408	0445	PG 58-28 ASPHALT CEMENT	TON	1,717.				
010	408	0803	SUPERPAVE FAA 43	TON	26,410.				
011	408	9605	CORED SAMPLE-BITUMINOUS PAVEMENT	EA	139.				
012	411	0105	MILLING PAVEMENT SURFACE	SY	3,414.				
013	702	0100	MOBILIZATION	L SUM	1.				
014	704	0100	FLAGGING	MHR	525.				
015	704	1000	TRAFFIC CONTROL SIGNS	UNIT	991.				
016	704	1052	TYPE III BARRICADE	EA	4.				

Revised 10/28/2013	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SC-2335(056)	4	1

END PROJECT SC-2335(056)
 End 4.5" Superpave FAA 43
 Sta. 358+60 = A Point Approximately
 90 Feet West of the Southwest
 Corner of Sec. 2, Twp. 134 N.,
 Rge. 61 W.



 4.5" Superpave FAA 43 & Incidentals
 2" Mill & Overlay & Incidentals



BEGIN PROJECT SC-2335(056)
 Sta. 12+50 = A Point Approximately
 2,050 Feet South and 2,640 Feet West
 of the Southeast Corner of Sec. 36,
 Twp. 134 N., Rge. 61 W.

This document was originally
 issued and sealed by
 Matt Lange,
 Registration Number
 PE- 6870,
 on 10/28/13 and the original
 document is stored at the
 office of Kadrmas, Lee &
 Jackson.

End Remove & Replace
 3-Cable Guardrail
 Sta. 49+28

Begin Remove & Replace
 3-Cable Guardrail
 Sta. 40+28

SC-2335(056) LAMOURE COUNTY, NORTH DAKOTA		
		
SCOPE OF WORK		
<small>DRAWN BY</small> AB	<small>CHECKED BY</small> MTL	<small>PROJECT NO.</small> 5313101

PLAN NOTES

Revised	10/28/2013	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SC-2335(056)	6	1

100-P01 CONSTRUCTION ACTIVITIES: Work activities shall be conducted during daylight hours only and construction activities shall be scheduled to accommodate traffic before dark. Both lanes shall be opened during non-work hours and 1 lane open during working hours.

100-P02 DIMENSIONS: Thicknesses shown on the typical sections for surfacing are approximate. It is intended that the plan tonnage provided by the basis of estimate will be used uniformly throughout the project unless otherwise authorized by the Engineer.

107-P01 HAUL ROADS: The Contractor shall contact the appropriate Tribal, State, County, Township or City officials to determine if there are any No Haul Routes or Restricted Routes prior to preparing a bid for this project. The gross vehicle weight on all county and township roads shall not exceed 80,000 pounds unless approved by the local agency.

203-P01 COMMON EXCAVATION-WASTE: The location and actual quantity of "COMMON EXCAVATION-WASTE" shall be determined in the field by the Engineer (see Subgrade Repair Detail on Sheet 1 Section 20). The unit price bid for "COMMON EXCAVATION-WASTE" shall govern regardless of the quantity used. An increase or decrease from plan quantity will not be accepted as a reason to negotiate any pay adjustment under this bid item. The bid item "COMMON EXCAVATION-WASTE" may be eliminated at the discretion of the Engineer.

Existing asphalt shall be cut leaving a vertical edge. The cost to cut a vertical edge and remove, load, haul, and dispose of the existing materials off the right of way in accordance with all requirements of the North Dakota Department of Health, shall be included in the price bid for "COMMON EXCAVATION-WASTE".

302-P01 AGGREGATE BASE COURSE CL 5: A quantity of "AGGREGATE BASE COURSE CL 5" has been provided for subgrade repair for the mill and overlay section (station 12+50 to 30+20). The location and actual quantity of "AGGREGATE BASE COURSE CL 5" shall be determined in the field by the engineer (see Subgrade Repair Detail on Sheet 1 Section 20). The unit price bid for "AGGREGATE BASE COURSE CL 5" shall govern regardless of the quantity used. An increase or decrease from plan quantity will not be accepted as a reason to negotiate any pay adjustment under this bid item. The bid item "AGGREGATE BASE COURSE CL 5" may be eliminated at the discretion of the Engineer.

302-P02 RESHAPE AGGREGATE BASE COURSE: The Contractor shall reshape the existing aggregate base course to the required typical section. The engineer shall provide centerline and shoulder grade stakes for the reshaping operations. Construction shall be in accordance with Section 302.04 of the Standard Specifications. 500 Ton/Mile of "AGGREGATE BASE COURSE CL 5" has been provided for reshaping.

401-P01 FOG COAT: Pavement placed after September 15 will receive a fog seal with a SS1H or CSS1H emulsified asphalt at a rate of 0.10 gal/sy. The fog seal shall be applied immediately after the final rolling while the pavement is still warm. The bitumen will be paid for at the unit price bid for "SS1H OR CSS1H OR MS1 EMULSIFIED ASPHALT". If the Contractor fails to have bitumen available to provide the fog seal, the Engineer may require the Contractor to cease paving operations and place the wearing course in the next construction season with liquidated damages applied until project completion.

401-P02 PRIME COAT: The prime coat may be eliminated at the discretion of the Engineer in the field based on site conditions and the Contractor's operation.

408-P01 MIX DESIGN: The Contractor shall develop and submit a mix design for the Superpave FAA 43. The mix design criteria shall meet NDDOT Standard Specification 410.04 A and 410.04 B (Superpave Volumetric Mix Design) with the following revisions:

- 1) The first and second paragraphs of NDDOT Standard Specification 410.04 A shall be deleted in their entirety. The aggregate source and bitumen target percentage shall be shown on the mix design.

The cost for the mix design work shall be included in the price bid for "SUPERPAVE FAA 43". Additional mix designs shall be provided if there are any changes in aggregate sources, asphalt sources, or operations.

408-P02 AGGREGATE AND MIX DESIGN PROPERTIES: The aggregate blend and properties shall meet the requirements outlined in NDDOT Standard Specification 410 Superpave Volumetric Mix Design. The following aggregate and mix design properties are required:

Test	Criteria	Reference
Course Aggregate Angularity	75% min.	NDDOT Field Sampling and Testing Manual
Fine Aggregate Angularity	43% min.	AASHTO T 304
Gyratory Effort, # Gyration	N _{ini} =7, N _{des} =75, max=115	AASHTO R 35
Voids Filled With Asphalt	65-78%	AASHTO M3223, T 166
%G _{mm} @ N _{ini}	89% max	AASHTO M323, T 166

408-P03 SUPERPAVE FAA 43 – MAINLINE: The 1st and 2nd lifts of HBP shall not be placed on the same day. If the Contractor chooses to pave both lanes in the same day, the Contractor shall exercise extreme care not to mark or tear the new driving surface and shall keep all loaded trucks off the newly placed hot bituminous pavement. Any damage to the newly paved surface shall be repaired at the Contractor's expense.

408-P04 SUPERPAVE FAA 43 – PATCHING: Within the mill and overlay segment (station 12+50 to 30+20), pavement surface areas showing signs of failure shall be repaired as per the Subgrade Repair Detail (see Sheet 1 Section 20). Existing irregularities in the roadway surface shall be cleaned, tacked, filled with hot bituminous pavement and compacted in a separate operation prior to placement of the next lift of pavement. A quantity of hot bituminous pavement has been provided for the patching and is included in the plan quantity. The patching shall be compacted with a minimum of one self-propelled pneumatic roller which shall meet NDDOT Standard Specification 151.02 B. All hot bituminous mix and asphalt cement required for the patching shall be measured and paid for by the ton of "SUPERPAVE FAA 43" and "PG 58-28 ASPHALT CEMENT". This shall be considered full payment for performing this work.

The location and actual quantity of Superpave FAA 43 used for subgrade repair and patching will be determined in the field by the Engineer. The unit price bid will govern regardless of quantity used and an increase or decrease in plan quantity will not be accepted as a reason to negotiate any pay adjustment.

408-P05 COMPACTION: The compaction requirements for the Superpave FAA 43 1st and 2nd lifts between Stations 30+20 and 358+60 shall be as per NDDOT Standard Specification 408.04 I.3 (Specified Density). Compaction requirements for the mill and overlay (station 12+50 to 30+20) shall be in accordance with Section 408.04 I.2 (Ordinary Compaction). The compaction equipment used shall include not less than two vibratory rollers.

408-P06 ACCEPTANCE: Acceptance of the Superpave FAA 43 1st and 2nd lifts shall be in accordance with Section 408.05 of the Specifications with the following revisions:

- The first paragraph of Section 408.05 shall be removed.
- The beginning of the third paragraph of Section 408.05 A.1 shall be revised to say the following: "If any test in a lot results in the variance of any one or more sieves from the JMF gradation target value by more than the tolerances listed below, a deduction on the entire lot will be applied."

Section 408.05 C does not apply.

All of the hot bituminous pavement used over the entire width of the 1st and 2nd lifts, shall be included in the tonnage quantity when determining the payment adjustment.

411-P01 MILLING PAVEMENT SURFACE: Payment for milling shall be by the square yard based on the top width of 24 feet. Sloughs if present, will not be measured for payment but shall be incidental to the bid item "MILLING PAVEMENT SURFACE". The milled material shall be stockpiled within the City of LaMoure on 7th Street SE. The Contractor shall coordinate with the LaMoure County Highway Superintendent Lauren Worrel who can be contacted at 701-408-9030.

411-P02 TEMPORARY ASPHALT WEDGES: The Contractor shall place temporary asphalt or milled material wedges at the milled taper locations to allow for the smooth passage of vehicles. All costs for labor, materials, and equipment to install and remove the wedges shall be included in the unit price bid for "MILLING PAVEMENT SURFACE".

This document was originally issued and sealed by
Matt Lange
 Registration Number
PE-6870,
 on 10/28/13 and the original document is stored at the office of Kadrmias, Lee & Jackson.

SC-2335(056)
LAMOURE COUNTY, NORTH DAKOTA

PLAN NOTES

<small>DRWN. BY</small> TO	<small>CHKD. BY</small> ML	<small>PROJECT NO.</small> 5313101
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PLAN NOTES

Revised	10/28/2013	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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- 704-P01 CONSTRUCTION SIGNING:** The Contractor shall furnish the necessary signing as shown on Standard Drawings D-704-15, 20, 22, and 26 under layouts Type A, G, K, N, O, EE and GG as required by construction operations.
- The required traffic control signs and devices are included in the "Traffic Control Devices List" and will be measured and paid at the contract unit price for each device. Additional devices required to accommodate the Contractor's operation shall be the Contractor's responsibility.
- 704-252 TRAFFIC CONTROL FOR UNEVEN PAVEMENT:** The Contractor has the option of making the paving lanes even at the end of each day's paving operation or signing for the uneven pavement and providing the following devices: Install "Uneven Lanes" signs (Sign No. W8-11-48) and a supplemental plate (Sign No. W20-52-54), identifying the distance, on the right shoulder (both directions) in advance of the beginning of the uneven pavement and at major intersections. A major intersection shall be defined as a CMC, state, U.S. highway, or Interstate ramp. Install "Do Not Pass" signs (Sign No. R4-1-48) on the right shoulder (both directions) between the uneven lanes sign and the beginning of the uneven pavement and at major intersections. Install tubular markers spaced at two times the posted speed limit on the centerline where uneven pavement exists. These traffic control devices shall be left in place until the lanes are even.
- These signs and tubular markers are included in the "Traffic Control Devices List" and will be measured and paid for at the contract unit price for each device. No extra compensation will be allowed for relocation due to work progression.
- 709-P01 GEOTEXTILE FABRIC-TYPE R1:** The location and actual quantity of "GEOTEXTILE FABRIC-TYPE R1" shall be determined in the field by the Engineer (see Subgrade Repair Detail on Section 20, Sheet 1). The unit price bid for "GEOTEXTILE FABRIC-TYPE R1" shall govern regardless of the quantity used. An increase or decrease from plan quantity will not be accepted as a reason to negotiate any pay adjustment under this bid item. The bid item "GEOTEXTILE FABRIC-TYPE R1" may be eliminated at the discretion of the Engineer.
- 762-P01 SHORT TERM PAVEMENT MARKING:** The quantity for short term striping is based on three applications (prime, 1st lift, and 2nd lift). Payment for additional applications, if required, shall be at the unit price bid for the respective bid item.
- 764-P01 REMOVE & REPLACE GUARDRAIL:** The existing Three Cable Guardrail will be removed and shall become the property of the Contractor. The new guardrail shall be installed in accordance with the Standard Specifications.
- 894-100 RETROREFLECTIVE SHEETING:** Provide Type IV retroreflective sheeting that meets ASTM D 4956, Type IV. Provide Type XI retroreflective sheeting that meets ASTM D 4956, Type XI.

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SC-2335(056) LAMOURE COUNTY, NORTH DAKOTA		
	PLAN NOTES	
	DRWN. BY TO	CHKD. BY ML

ESTIMATE OF QUANTITIES

Revised 10/28/2013	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SC-2335(056)	8	1

SPEC	CODE	ITEM DESCRIPTION	UNIT	TOTAL
103	0100	CONTRACT BOND	L SUM	1
203	0113	COMMON EXCAVATION-WASTE	CY	204
216	0100	WATER	M GAL	983
302	0120	AGGREGATE BASE COURSE CL 5	TON	3,365
302	0407	RESHAPE AGGREGATE BASE COURSE	STA	328.4
401	0100	MC70 OR 250 LIQUID ASPHALT	GAL	27,367
401	0150	SS1H OR CSS1H OR MS1 EMULSIFIED ASPHALT	GAL	11,010
401	0160	BLOTTER MATERIAL CL 44	TON	821
408	0445	PG 58-28 ASPHALT CEMENT	TON	1,717
408	0803	SUPERPAVE FAA 43	TON	26,410
408	9605	CORED SAMPLE-BITUMINOUS PAVEMENT	EA	139
411	0105	MILLING PAVEMENT SURFACE	SY	3,414
702	0100	MOBILIZATION	L SUM	1
704	0100	FLAGGING	MHR	525
704	1000	TRAFFIC CONTROL SIGNS	UNIT	991
704	1052	TYPE III BARRICADE	EA	4
704	1067	TUBULAR MARKERS	EA	333
704	1185	PILOT CAR	HR	265
706	0300	FIELD LABORATORY-TYPE C	EA	1
709	0701	GEOTEXTILE FABRIC-TYPE R1	SY	612
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	24.0
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	65.7
762	0430	SHORT TERM 4IN LINE-TYPE NR	LF	48,570
762	1104	PVMT MK PAINTED 4IN LINE	LF	16,190
764	0115	3-CABLE GUARDRAIL	LF	900
764	2020	REMOVE 3-CABLE GUARDRAIL & POSTS	LF	900
766	0100	MAILBOX-ALL TYPES	EA	3

SC-2335(056) <small>LAMOURE COUNTY, NORTH DAKOTA</small>		
	ESTIMATE OF QUANTITIES	
	DRWN. BY MAL	CHKD. BY MTL
PROJECT NO. 5313101		

BASIS OF ESTIMATE

MAINLINE		DRIVES			DESCRIPTION
QUANTITY PER MILE	WIDTH	PRIVATE & SECTION DRIVES (4/5)	FIELD DRIVES (19)	UNIT	
150	-	-	-	M GAL	Water for Dust Palliative & Reshaping Aggregate Base
500	-	-	-	TON	Aggregate Base Course CL 5 for Reshaping (1.875 Tons/CY)
4,400	30'	-	-	GAL	MC70 or 250 Liquid Asphalt (0.25 Gal/SY)
880	30'	-	-	GAL	SS1H or CSS1H or MS1 Emulsified Asphalt for 1 st Lift (0.05 Gal/SY)
821	28'	7	5	GAL	SS1H or CSS1H or MS1 Emulsified Asphalt for 2 nd Lift (0.05 Gal/SY)
132	30'	-	-	TON	Blotter Material Class 44 (15 Lbs/SY)
2,200	26'	5	3	TON	Superpave FAA 43 for 1 st Lift (2.0 Tons/CY)
1,907	26'	5	3	TON	Superpave FAA 43 for 2 nd Lift (2.0 Tons/CY)
143	26'	0.3	0.2	TON	PG 58-28 Asphalt Cement for 1 st Lift (6.5% Superpave FAA 43)
124	26'	0.3	0.2	TON	PG 58-28 Asphalt Cement for 2 nd Lift (6.5% Superpave FAA 43)
9,387	16'	-	-	SY	Milling Pavement Surface (2.0" Tapering to 0")
80	-	-	-	MHR	Flagging
40	-	-	-	HR	Pilot Car
1,320 LF plus NPZ	-	-	-	LF	Pavement Marking
2 Cores/2,000'/Lane/Lift Plus 1 Full Depth/Mile	26'			EA	Cored Sample-Bituminous Pavement

PAVEMENT MARKING

DESCRIPTION	UNIT	QUANTITY PER LOCATION	DESCRIPTION	UNIT	QUANTITY PER LOCATION
4" Yellow No Passing Zone (Solid Line)			4" Yellow Center Lines (10' Line, 30' Skip)		
Sta. 178+32 to Sta. 186+92 RT	LF	860	Sta. 20+00 to Sta. 301+00	LF	7,030
Sta. 189+65 to Sta. 195+77 LT	LF	612	Sta. 313+67 to Sta. 358+60	LF	1,130
Sta. 199+66 to Sta. 206+13 RT	LF	647	Total	LF	8,160
Sta. 206+76 to Sta. 212+04 LT	LF	528			
Sta. 273+18 to Sta. 277+70 LT	LF	452	Total Yellow Pavement Marking Paint	LF	16,190
Sta. 282+46 to Sta. 286+47 LT	LF	401			
Sta. 291+09 to Sta. 298+07 RT	LF	698			
Sta. 301+00 to Sta. 313+67 LT & RT	LF	2,534			
Sta. 319+16 to Sta. 326+04 RT	LF	688			
Sta. 326+32 to Sta. 332+42 LT	LF	610			
Total	LF	8,030			

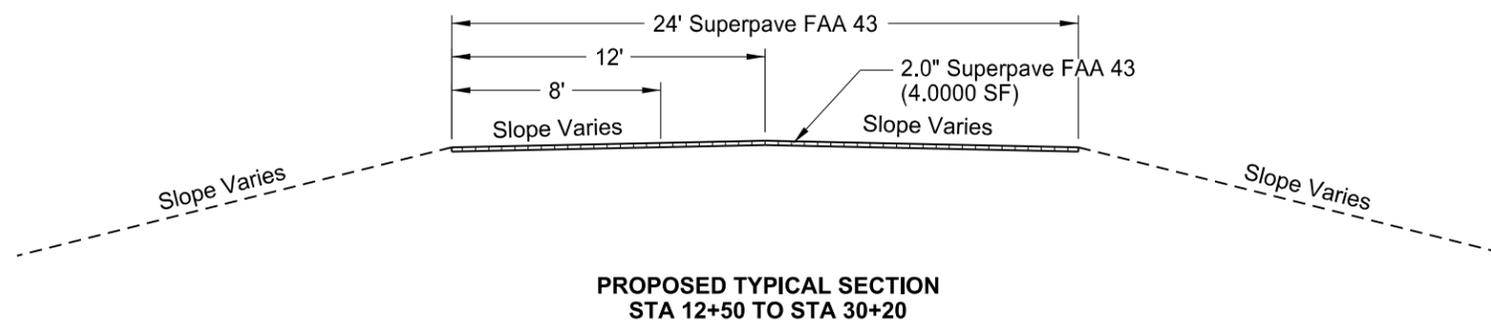
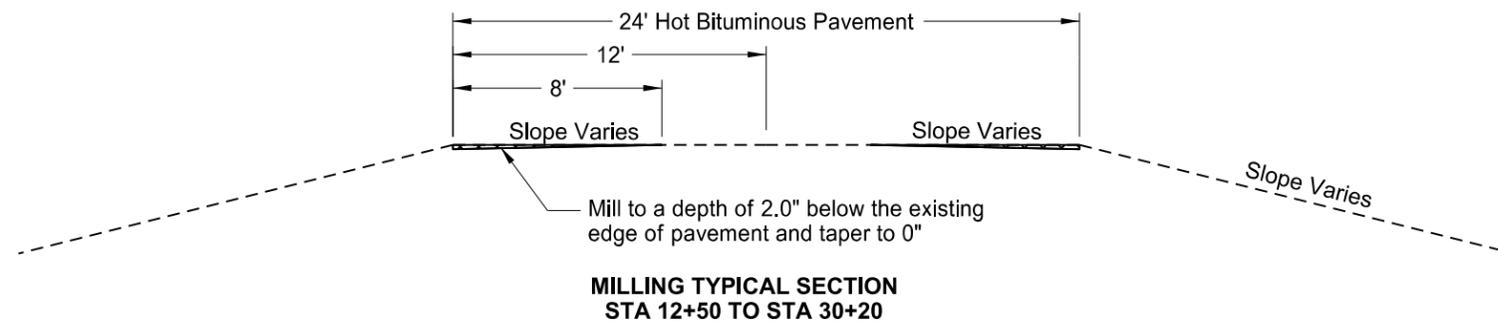
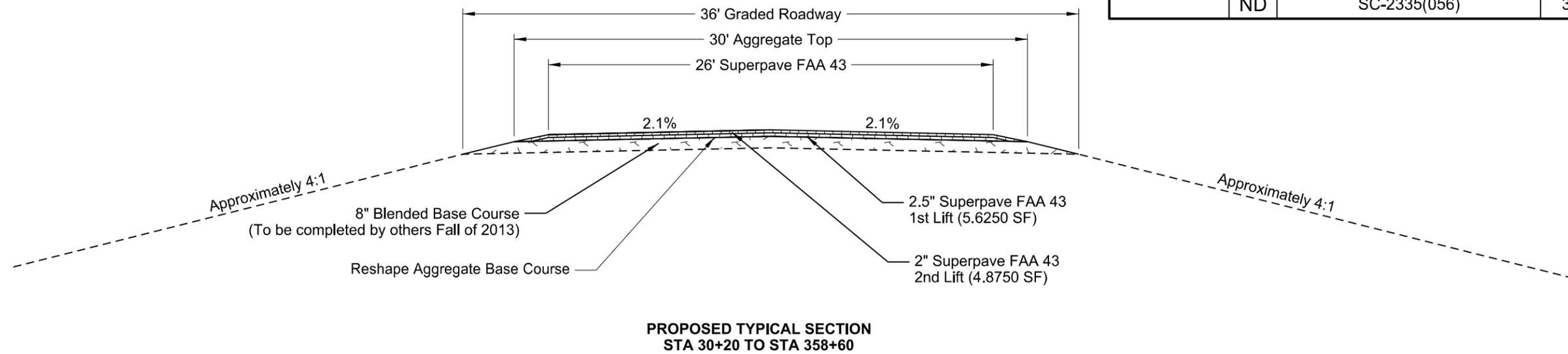
MAILBOX-ALL TYPES

STATION	DESCRIPTION
173+63	Type 2
255+00	Type 2
325+97	Type 2

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SC-2335(056) <small>LAMOURE COUNTY, NORTH DAKOTA</small>		
	BASIS OF ESTIMATE, PAVEMENT MARKING & MAILBOXES	
	<small>DRWN. BY MAL</small>	<small>CHKD. BY MTL</small>

Revised 10/28/2013	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SC-2335(056)	30	1



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SC-2335(056) LAMOURE COUNTY, NORTH DAKOTA	
	TYPICAL SECTION
DRWN. BY TO	CHKD. BY MTL
PROJECT NO. 5313101	

Revised 10/28/13

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	SC-2335(056)	110	1

Sta/RP	Sign No.	Assembly No.	Flat Sheet For Signs		Sign Support Length				Support Size	Max Post Len	Sleeve Length				Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments
			IV SF	XI SF	1st LF	2nd LF	3rd LF	4th LF		LF	1st LF	2nd LF	3rd LF	4th LF								
30+50 Rt	R2-1	9		5.0	12.2				2.25 x 2.25 12 ga	15.0						1	4	2.5 x 2.5 12 ga				
50+60 Lt	R2-1	9		5.0	12.2				2.25 x 2.25 12 ga	15.0						1	4	2.5 x 2.5 12 ga				
50+60 Rt	R2-1	9		5.0	12.2				2.25 x 2.25 12 ga	15.0						1	4	2.5 x 2.5 12 ga				
58+00 Lt	W3-5	20		9.0	13.2				2.25 x 2.25 12 ga	14.1	4.4				2 x 2 12 ga	1	4	3 x 3 7 ga			1	
Sub Total			0.0	24.0				Total	49.7						Total	16			0	0	1	
Grand Total			0.0	24.0				Total	49.7						Total	16			0	0	1	

Basis of Estimate
Sign Support Lengths

The sign support lengths have been calculated using the following vertical clearances:

Rural Roadway - 60"

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Sign Summary
Perforated Tube

Revised	10/28/13	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SC-2335(056)	110	2

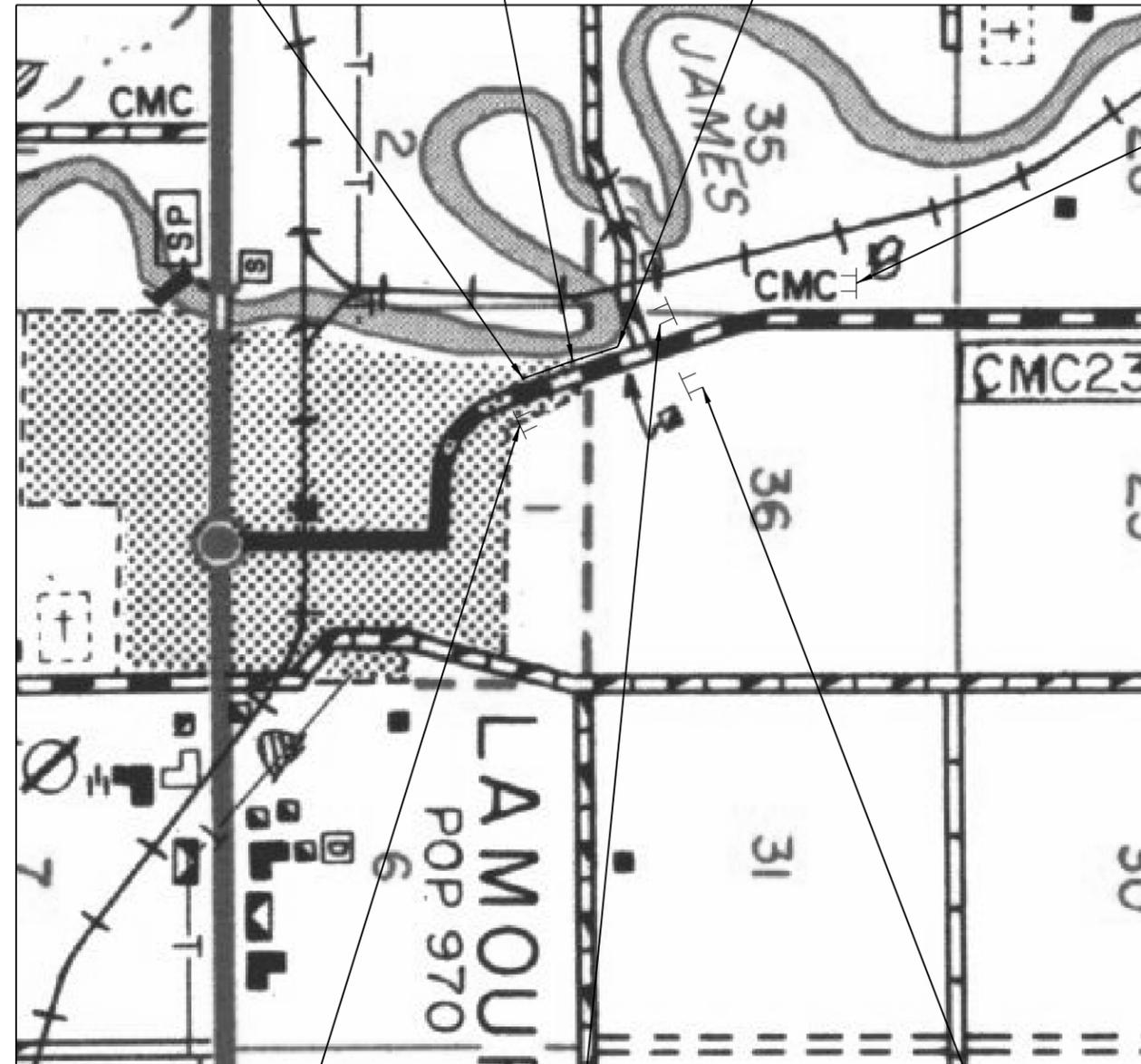
*Begin Remove & Replace
3-Cable Guardrail
Sta. 40+28

*Install Intermediate
Anchor at Sta. 44+78

*End Remove & Replace
3-Cable Guardrail
Sta. 49+28



W3-5-36
Sta. 58+00 ~ LT
Assembly No. 20



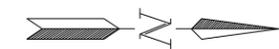
R2-1-24
Sta. 30+50 ~ RT
Assembly No. 9



R2-1-24
Sta. 50+60 ~ LT
Assembly No. 9



R2-1-24
Sta. 50+60 ~ RT
Assembly No. 9



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SC-2335(056)
LAMOURE COUNTY, NORTH DAKOTA



SIGNING & GUARDRAIL LAYOUT

DRWN. BY JL	CHKD. BY MTL	PROJECT NO. 5313101
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*Note: See Standard Drawings D-764-32 & D-764-33A for installation details.
An offset of 8 feet from the edge of the driving lane was used to determine the guardrail length.