

September 23, 2014

ADDENDUM NO. 1

Notice to All Persons and Firms Proposing
to Submit a Bid or Furnish Materials for
Reavis Barracks – Mackenzie Road Infrastructure
St. Louis County Project No. AR-1413
Federal Project No. STP-4901(632)

The construction contract for this project has been revised as follows:

No. 1

Delete Contract Book Page 32 of 267

No. 2

Insert New Contract Book Page 32A of 267

No. 3

Delete Contract Book Page 56 of 267

No. 4

Insert New Contract Book Page 56A of 267

No. 6

Delete Contract Book Page 76 of 267

No. 6

Insert New Contract Book Page 76A of 267

No. 7

Delete Contract Book Page 77 of 267

No. 8

Insert New Contract Book Page 77A of 267

No. 9

Delete Contract Book Page 78 of 267

No. 10

Insert New Contract Book Page 78A of 267

No. 11

Delete Contract Book Page 255 of 267

No. 12

Insert New Contract Book Page 255A of 267

No. 13

Delete Contract Book Page 256 of 267

No. 14

Insert New Contract Book Page 256A of 267

No. 15

Delete Plan Sheet 2 of 53

No. 16

Insert New Plan Sheet 2A of 53

No. 17

Delete Plan Sheet 3 of 53

No. 18

Insert New Plan Sheet 3A of 53

No. 19

Delete Plan Sheet 4 of 53

No. 20

Insert New Plan Sheet 4A of 53

No. 21

Delete Plan Sheet 10 of 53

No. 22

Insert New Plan Sheet 10A of 53

ATTENTION BIDDERS: CHECK THE ADDENDUM ACKNOWLEDGEMENT IN THE BID DOCUMENTS AND COMPLETE APPROPRIATELY.

A handwritten signature in blue ink, appearing to read "Daniel R. Naunheim".

Daniel R. Naunheim, P.E.
Division Manager, Design

DRN/DJF/jlh

*Attachments: Contract Book Pages 32A, 56A, 76A, 77A, 78A, 255A, 256A, Plan Sheets 2A, 3A, 4A, and 10A of 53, and Addendum Receipt Acknowledgement (**Please sign and return.**)*



September 23, 2014

ADDENDUM FAX COVER LETTER

ADDENDUM NO. 1

FROM: St. Louis County Department of Highways and Traffic

RE: Reavis Barracks – Mackenzie Road Infrastructure
St. Louis County Project No. AR-1413
Federal Project No. STP-4901(632)

DATE: _____ TIME: _____

NUMBER OF PAGES (Including Cover Letter): **Fifteen (15)**

IF YOU DO NOT RECEIVE ALL PAGES, CALL (314) 615-8543.

PLEASE DELIVER TO RECIPIENT AS SOON AS POSSIBLE.

UPON RECEIPT OF THIS FAX TRANSMISSION, **PLEASE SIGN AND DATE** (IN THE INDICATED LOCATIONS BELOW), AND **FAX THIS ACKNOWLEDGEMENT TO THIS DEPARTMENT AT 615-8194** (Attn: DESIGN DIVISION) TO VERIFY RECEIPT

COMPANY _____
RECEIVED BY _____
DATE _____

The limits and extent of tree trimming shall be discussed with and agreed to by the engineer before work proceeds.

- B. The contractor will be responsible for the timely removal of any additional branches that have been damaged as a result of the construction activities, as directed by the Engineer.
- C. When branches are removed, either after damaged or in advance of construction activities, they shall be cut off flush with the parent branch.
- D. This work will include disposition of removed branches by the Contractor.
- E. No direct payment will be made for the cost of complying with this provision.

300.10.1 AGGREGATE BASE

- A. Under all new/replaced concrete base and pavement, paved approaches and driveways, curb and gutter, concrete medians and islands, 6" sidewalk, 7" sidewalk, and curb ramps, install and compact four inch (4") thick base of Type 5 Aggregate in accordance to the applicable provisions of Section 304 of the St. Louis County Standard Specifications for Highway Construction. Prior to installation of the aggregate, contractor shall compact the subgrade as directed by the Engineer. Payment for all labor, material and equipment necessary to accomplish this item will be considered included in the contract unit price for "Type 5 Aggregate Base, 4-Inch Thick". No additional payment will be made for aggregate base in excess of four inches thick base placed under concrete channelization islands or medians.
- B. This work shall include any earthwork (excavation and/or borrow) for the aggregate base construction.

300.10.2 RECLAIMED CONCRETE MATERIAL AGGREGATE BASE

Description

This work shall consist of furnishing, crushing, stockpiling, spreading and compacting one or more courses of reclaimed concrete material aggregate on a prepared subgrade for base material in accordance with these specifications and in conformity with the lines, grades, thicknesses and typical cross sections shown on the plans or as established by the engineer.

Material

- A. Aggregate for reclaimed concrete material aggregate base may include material processed from reclaimed Portland cement concrete, lean concrete base, cement treated base or other concrete containing pozzolanic binders.
 - 1. Gradation. The aggregate for reclaimed concrete material aggregate base shall conform to Section 1007 Aggregate Base Material. Gradation and plasticity index shall be in accordance with Sec 1007.1.1 or 1007.1.2, as specified in the contract documents.

When so authorized, finish water may only be placed by use of a fine misting device, such as a Hudson sprayer.

2. The portion of the concrete pavement that is to be overlaid by the Contractor shall be surface textured with the use of a roller-bug, as directed by the Engineer.

D. Jointing of Concrete Pavement

1. Transverse contraction joints will be spaced to match existing roadway joints or on 15' to 20' intervals where the entire pavement surface is to be replaced. Contraction joints will extend full width across the pavement and through all monolithic curbs. Transverse contraction joints will be grooved with a suitable finishing tool or saw cut that will produce, at a minimum, a two inch (2") deep by three-eighths inch (3/8") wide joint. All joints are to be open, straight, continuously uniform, and neatly finished. For this contract, all grooved and saw cut joints in the pavement will be properly cleaned and sealed by St. Louis County forces. In areas where pavement removal and replacement is to extend across the entire roadway width, or where a saw cut is to extend across the entire roadway width and the nearest expansion joint is more than 400' away, the Engineer may order the construction of an expansion joint. Such joints will be placed and constructed as described under "Expansion Joint Filler Strip."

E. Curing and Weather Protection

1. Concrete pavement will be cured in accordance with Section 502.14 when polyethylene is used it should be white opaque in color. Concrete sidewalk and approaches will be cured in accordance with Section 608.3.5. Weather protection will be required per Section 502.5 "Weather Limitations".

Backfill of Completed Pavement, Approaches, and Sidewalk

Completed pavement is to be backfilled with clean dirt (Class "A" Material) that is free of debris and suitable as a sod bed. The backfill will be compacted to an elevation at which sod can be placed level with the adjacent grass and the curb line.

Method of Measurement

Quantities for the removal and replacement of concrete pavement will be measured and computed to the nearest 1/10 square yard.

Basis for Payment

- A. The cost of all labor, equipment and materials necessary to complete the construction shall be included in the contract unit price for the following items:

- | | | |
|----|--------------------|---|
| 1. | Item No. 202-22.30 | Removal of Rigid Pavement |
| 2. | Item No. 502-11.06 | Concrete Pavement (6" Non-Reinforced) |
| 3. | Item No. 509-10.30 | Concrete Base (Variable Thickness, Non-Reinforced)
Very Early Strength |
| 4. | Item No. 509-10.40 | Concrete Base (Variable Thickness, Non-Reinforced)
High Early Strength |
| 5. | Item No. 509-11.20 | Concrete Base (Variable Thickness, Non-Reinforced) |

613.3.10.2 No addition of water to the concrete shall be permitted after addition of the HRWR.

613.3.10.3 **Applicable Pavement Repair Pay Item Descriptions.** The accepted quantity for High Early Strength pavement or joint repair, not including trial slab(s), will be paid for at the contract unit price for each of the pay items included in the contract.

613.3.10.3.1 Joint Repair (High Early Strength), Item Nos. [613-10.18](#) and [613-20.21](#)

613.3.10.3.3 Concrete Pavement (High Early Strength), Item No. [509-10.40](#)

Removal of Rigid Pavement shall be considered incidental to all Joint Repairs and no direct payment will be made

613.3.11 **Very Early Strength (4 - 6 Hour Opening Time).** For the repair to be made and opened to traffic in 4 to 6 hours after placement, the Type I/II or III Portland cement, Polycarboxylate-based high-range water reducer (HRWR), water/cement ratio and slump requirements shall be option 1 (Type I/II cement) or 2 (Type III cement). Water/cementitious ratio shall be maintained at ± 0.02 from the target established on the mix design and shall be within the minimum-maximum range when the tolerance is applied.

613.3.11.1 Option 1. The allowable Type I/II cement content shall not be less than 850 pounds or exceed 950 pounds per cubic yard.

**Very Early Strength (4 – 6 Hour Opening)
9.57 sack Type I/II Cement Trial Mix Design**

Material	Amount
Type I/II Cement, lbs	900
Coarse Aggregate (Class D), lbs	1630
Fine Aggregate (Class A), lbs	1080
Maximum Batch Water, lbs (gal)	342(41)
ASTM C 260 Air Entraining Agent	Dosage to achieve 5.5%
Polycarboxylate-based HRWR (ASTM C494 Type F), ounces	59
Calcium Nitrite (30% min.) Non-Chloride Accelerator (NCA) –ASTM C 494 Type C, ounces (gal)	980 (7.65)
¹ Aggregate Weights at SSD condition Type IL cement may be substituted for Type I/II cement	

613.3.11.2 Option II. The allowable Type III cement content shall not be less than 650 pounds or exceed 800 pounds per cubic yard.

**Very Early Strength (4 – 6 Hour Opening)
7.00 sack Type III Cement Trial Mix Design**

Material	Amount
Type III Cement, lbs	658
Coarse Aggregate (Class D), lbs ¹	1795
Fine Aggregate (Class A), lbs ¹	1170
Maximum Batch Water, lbs (gal)	250 (30)
ASTM C 260 Air Entraining Agent	Dosage to achieve 5.5%
Polycarboxylate-based HRWR (ASTM C494 Type F), ounces	100
Calcium Nitrite (30% min.) NCA ASTM C 494 Type C, ounces (6.6 gal)	842(6.6)
¹ Aggregate Weights at SSD condition	

613.3.11.2 No addition of water to the concrete shall be permitted after addition of the HRWR. All 4-6 hour very early opening concrete shall have the additional properties:

**Required Very Early Strength (4 - 6 Hour Opening)
Mix Properties at the Time of Placement**

Property	Minimum	Maximum
Water / Cement Ratio	0.30	0.40
Temperature at time of placement, °F	88	-
Slump at the time of placement, inch	4	6
Entrained Air, percent	4.0	7.0

613.3.11.3 Applicable Pavement Repair Pay Item Descriptions. The accepted quantity for Very Early Strength pavement repair, not including trial slab(s), will be paid for at the contract unit price for each of the pay items included in the contract.

613.3.11.3.1 Joint Repair (Very Early Strength), [Item No. 613.10.91](#) and [Item No. 613-20.20](#)

613.3.11.3.2 Concrete Pavement, Very Early Strength, [Item No. 509-10.30](#)

Removal of Rigid Pavement shall be considered incidental to all Joint Repairs and no direct payment will be made

613.3.12 **Concrete Mixing and Placement Limitations.** ~~Weather~~ Concrete Mixing and placement limitations shall be in accordance with Section 502.4.1.

613.3.13 **Entrained Air.** The quantity of air by volume entrained in early opening strength concrete shall be 5.5 ± 1.5 percent as determined in accordance with County Test Method QA-3 Air Content of Freshly Mixed Concrete by the Pressure Method.

613.3.14 **Consolidation.** Internal concrete vibrator(s) shall be supplied in accordance with Sec 502.3.7. Concrete shall be consolidated in accordance with Sec 502.4.7.3. Vibrators and equipment to operate vibrators shall be on-site and functional prior to arrival of concrete on site. No concrete shall be placed without operational vibrators.

613.3.15 If the concrete pavement has been resurfaced and where no additional structure is to be added to the existing overlay, or where the existing bituminous overlay is to be removed by milling, the repaired area shall be filled to the surface of the existing bituminous overlay with Portland cement concrete.

613.3.16 If the concrete pavement has been resurfaced and additional lifts are to be added over the existing overlay, the repair area shall be filled with Portland cement concrete to the surface of the underlying concrete pavement, and the remaining area shall be filled with approved hot-mix asphalt to the existing bituminous overlay surface. The hot-mix asphalt shall be placed in accordance with the specifications for that mix.

613.3.17 When the concrete pavement requires all milled areas to be resurfaced in the same work day prior to opening the pavement to traffic, pavement repairs identified after milling will be marked for future repair, and the area shall be resurfaced as planned for that work day. No additional lifts of hot-mix asphalt will be allowed until the marked pavement is repaired. The pavement repair shall be performed in accordance with Sec 613.

613.3.18 **Strike-off.** Delete Section 502.3.6 and replace with the following: The use of a vibrating screed parallel to the pavement's centerline is required for full depth repairs over 10 feet in length. For repairs 10 feet or less in length use a 10-foot straight edge, pulling the tool blade parallel to the longitudinal joint.

613.3.19 **Concrete Pavement Repair Smoothness.** All repaired areas shall be finished to provide a smooth ride and to the satisfaction of the Engineer. Prior to surface texturing, repaired areas shall be checked with a straightedge in accordance with Sec 502.4.7.7 if required by the Engineer. When straightedged, the surface of the repaired area shall not vary more than 1/8" per 10' from a straight line between the surface of the existing pavement on each side of the repaired area, regardless if the repair is to be resurfaced or not. When the tolerance is not met, plastic concrete shall be added or removed from the repair until the surface tolerance is met.

613.3.20 **Surface Texturing.** No concrete shall be placed without proper texturing equipment on the job. The repair texture shall be similar to that on the surrounding pavement. For concrete not to be overlaid and placed on Arterial roads, concrete shall be finished with a wire comb in accordance with Sec 502.3.8.3. For all other conditions, concrete shall be finished with a burlap fabric drag in accordance with Sec 502.3.8.1.

ITEMIZED BID

FEDERAL PROJECT NO. STP-4901(632)

COUNTY PROJECT NO. AR-1413

PAGE 1 OF 5

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
ROADWAY ITEMS					
201-20.16	Tree Removal, Over 15"	INCH	81		
202-20.10	Removal of Improvements	L.S.	1		
202-20.10	Removal of Rigid Pavement	S.Y.	4,913.9		
203-10.00	Class "A" Excavation	C.Y.	767.4		
203-10.30	Land Disturbance Permits	L.S.	1		
304-05.04	Type 5 Aggregate Base (4" Thick)	S.Y.	6,900.5		
404-12.72	Superpave Asphaltic Concrete SP 125 (PG 70-22) DLP *	TON	8,079.9		
405-30.10	Type "C" Bituminous Concrete (Pavement)	TON	320.0		
405-30.20	Type "D" Bituminous Concrete (Pavement)	TON	109.5		
407-10.27	Tack Emulsified Asphalt (SS-1H) *	GAL.	7,350		
412-10.02	Pavement Surfacing and Texturing (0" to 2"), Concrete or Asphalt *	S.Y.	67,332		
502-11.06	Concrete Pavement (6" Non-Reinforced)	S.Y.	211.0		
509-10.30	Concrete Base (Variable Thickness, Non-Reinforced), Very Early Strength **	S.Y.	2,527.5		

*** INDICATES CHANGE IN QUANTITY UNDER ADDENDUM NO. 1**

**** INDICATES PAY ITEMS ADDED UNDER ADDENDUM NO. 1**

ITEM NOS. 509-10.30, 509-10.40, AND 509-11.20 REPLACE ITEM NOS. 502-11.08, 509-10.08, AND 509-10.18

ITEMIZED BID

FEDERAL PROJECT NO. STP-4901(632)

COUNTY PROJECT NO. AR-1413

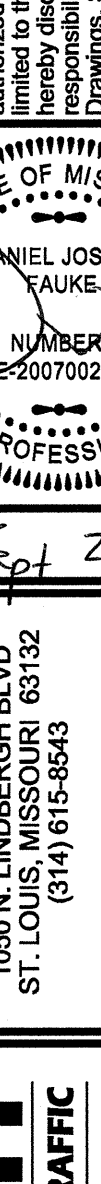
PAGE 2 OF 5

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
509-10.40	Concrete Base (Variable Thickness, Non-Reinforced), High Early Strength **	S.Y.	622.4		
509-11.20	Concrete Base (Variable Thickness, Non-Reinforced) **	S.Y.	1,580.0		
603-10.35	Adjust Water Service Valve Box to Grade	EACH	2		
604-20.00	Remove and Replace Grated Inlet Top	EACH	1		
604-20.30	Adjusting Manhole to Grade	EACH	34		
604-21.95	Replace Precast Inlet Top	EACH	1		
604-90.40	Adjust Inlet Stone to Grade	EACH	8		
608-10.90	Remove & Replace Concrete Median / Island	S.Y.	213.7		
608-50.96	Remove & Replace Paved Approach (6")	S.Y.	88.7		
608-50.97	Remove & Replace Paved Approach (7")	S.Y.	248.1		
609-10.10	Concrete Curb Type, "S"	L.F.	66		
609-10.93	Remove and Replace Curb & Gutter (Various Widths), Vertical / Mountable	L.F.	35		
609-20.11	Integral Curb (6" Height and Under)	L.F.	1,424		
609-20.90	Remove and Replace integral Curb (6" Height and Under)	L.F.	1,539		

**** INDICATES PAY ITEMS ADDED UNDER ADDENDUM NO. 1**

ITEM NOS. 509-10.30, 509-10.40, AND 509-11.20 REPLACE ITEM NOS. 502-11.08, 509-10.08, AND 509-10.18

405-30.20	TYPE "D" BITUMINOUS CONCRETE (PAVEMENT)			
	Exact locations & quantities to be determined by the Engineer. Estimated at 2.16 T/CY.			
	LOCATION	SIDE	QUANTITY	REMARKS
		(Rt / Lt)	TON (0.1)	
	9437 Mackenzie	Rt	1.5	For use on drive approach
	9501 Mackenzie	Rt	1.5	For use on drive approach
	9650 Reavis Rd (church)	Rt	1.5	For use on drive approach
	9777 Mackenzie	Rt	1.5	For use on drive approach
	9516 Reavis Barracks	Rt	1.5	For use on drive approach
	9512 Reavis Barracks	Rt	1.5	For use on drive approach
	4834 Reavis Barracks	Rt	1.5	For use on drive approach
	4828 Reavis Barracks	Rt	1.5	For use on drive approach
	4824 Reavis Barracks	Rt	1.5	For use on drive approach
	4816 Reavis Barracks	Rt	1.5	For use on drive approach
	4814 Reavis Barracks	Rt	1.5	For use on drive approach
	4808 Reavis Barracks	Rt	1.5	For use on drive approach
	4804 Reavis Barracks	Rt	1.5	For use on drive approach
	4716 Reavis Barracks	Rt	1.5	For use on drive approach
	4712 Reavis Barracks	Rt	1.5	For use on drive approach
	4710 Reavis Barracks	Rt	1.5	For use on drive approach
	4700 Reavis Barracks	Rt	1.5	For use on drive approach
	9225 Reavis Barracks	Lt	1.5	For use on drive approach
	9253 Reavis Barracks	Lt	1.5	For use on drive approach
	9427 Reavis Barracks	Lt	1.5	For use on drive approach
	9435 Reavis Barracks	Lt	1.5	For use on drive approach
	9439 Reavis Barracks	Lt	1.5	For use on drive approach
	9501 Reavis Barracks	Lt	1.5	For use on drive approach
	9505 Reavis Barracks	Lt	1.5	For use on drive approach
	9509 Reavis Barracks	Lt	1.5	For use on drive approach
	9513 Reavis Barracks	Lt	1.5	For use on drive approach
	9521 Reavis Barracks	Lt	1.5	For use on drive approach
	9940 Mackenzie	Lt	1.5	For use on drive approach
	9930 Mackenzie	Lt	1.5	For use on drive approach
	9926 Mackenzie	Lt	1.5	For use on drive approach
	9860 Mackenzie	Lt	1.5	For use on drive approach
	9814 Mackenzie	Lt	1.5	For use on drive approach
	9810 Mackenzie	Lt	1.5	For use on drive approach
	9764 Mackenzie	Lt	1.5	For use on drive approach
	9760 Mackenzie	Lt	1.5	For use on drive approach
	9654 Mackenzie	Lt	1.5	For use on drive approach
	9648 Mackenzie	Lt	1.5	For use on drive approach
	9644 Mackenzie	Lt	1.5	For use on drive approach
	9536 Upland Dr	Lt	1.5	For use on drive approach
	9506 Mackenzie	Lt	1.5	For use on drive approach
	9458 Mackenzie	Lt	1.5	For use on drive approach
	9454 Mackenzie	Lt	1.5	For use on drive approach
	9450 Mackenzie	Lt	1.5	For use on drive approach
	9446 Mackenzie	Lt	1.5	For use on drive approach
	9440 Mackenzie	Lt	1.5	For use on drive approach
	9436 Mackenzie	Lt	1.5	For use on drive approach
	9426 Mackenzie	Lt	1.5	For use on drive approach
	9422 Mackenzie	Lt	1.5	For use on drive approach
	9422 Mackenzie	Lt	1.5	For use on drive approach
	9342 Mackenzie	Lt	1.5	For use on drive approach
	9340 Mackenzie	Lt	1.5	For use on drive approach
	9338 Mackenzie	Lt	1.5	For use on drive approach
	9336 Mackenzie	Lt	1.5	For use on drive approach
	9332 Mackenzie	Lt	1.5	For use on drive approach
	9330 Mackenzie	Lt	1.5	For use on drive approach
	9328 Mackenzie	Lt	1.5	For use on drive approach
	9324 Mackenzie	Lt	1.5	For use on drive approach
	9320 Mackenzie	Lt	1.5	For use on drive approach
	9318 Mackenzie	Lt	1.5	For use on drive approach
	9316 Mackenzie	Lt	1.5	For use on drive approach
	9314 Mackenzie	Lt	1.5	For use on drive approach
	9310 Mackenzie	Lt	1.5	For use on drive approach
	9308 Mackenzie	Lt	1.5	For use on drive approach
	9306 Mackenzie	Lt	1.5	For use on drive approach
	9304 Mackenzie	Lt	1.5	For use on drive approach
	9302 Mackenzie	Lt	1.5	For use on drive approach
	9280 Mackenzie	Lt	1.5	For use on drive approach
	9278 Mackenzie	Lt	1.5	For use on drive approach
	9274 Mackenzie	Lt	1.5	For use on drive approach
	9270 Mackenzie	Lt	1.5	For use on drive approach
	9122 Mackenzie	Lt	1.5	For use on drive approach
	9118 Mackenzie	Lt	1.5	For use on drive approach
	9112 Mackenzie	Lt	1.5	For use on drive approach
	TOTAL		109.5	

COUNTY PROJECT NO. AR-1413	
FEDERAL PROJECT NO. STP-4901(632)	
E-W GATEWAY TIP NO. 5609-14	
MSD:	N/A
MSD BASE MAP: 26-J, 27-J	
REVISIONS	DESCRIPTION
REV	DATE BY APP
	9-16-14
	ADDENDUM NO. 1
<p>DISCLAIMER OF RESPONSIBILITY</p> <p>I hereby certify that the documents intended to be authorized by my seal are the work of me, and I hereby disclaim any other responsibility for all other drawings, specifications, calculations, or instruments relating to or intended to be used in connection with engineering project or survey.</p>	
	
DATE: <u>Sept 23, 2014</u>	
PREPARED BY:	DESIGN DIVISION 1050 N. LINDBERGH BLVD ST. LOUIS, MISSOURI 63132 (314) 615-8843
	DANIEL JOSEPH FAUKE PROFESSIONAL ENGINEER LICENSE NO. 2007002782
Saint Louis COUNTY HIGHWAYS & TRAFFIC PUBLIC WORKS	
Sheryl L. Hodges, D.E., P.E., LPG Director	
REAVIS BARRACKS ROAD - MACKENZIE ROAD INFRASTRUCTURE	DETAILED QUANTITIES
DESIGNED:	DJF
DRAWN:	DJF
CHECKED:	
SHEET SEQUENCE: 3A OF 53	

407-10.27	TACK-EMULSIFIED ASPHALT (SS-1H) *				
	Estimated at 0.12 Gal / S.Y.				
	LOCATION	FROM	TO	QUANTITY GAL. (10)	REMARKS
	Mackenzie Rd	EOM at Gravois Rd	Bonton Dr	4,418	Includes side street approaches
	Mackenzie Rd / Reavis Barracks Rd	Bonton Dr	Shapfield Lane	1,816	Includes side street approaches
	Reavis Barracks Rd	Shapfield Lane	EOM at I-55	1,111	Includes side street approaches
	TOTAL			7,350	Rounded to nearest 10 Gal.

412-10.02	PAVEMENT SURFACING AND TEXTURING (0" - 2"), CONCRETE OR ASPHALT *				
	Approximately 2" depth but may vary. Additional depth for use in reestablishing curb height. Includes butt joints and side streets. As directed by the Engineer.				
	LOCATION	FROM	TO	QUANTITY S.Y. (1.0)	REMARKS
	Mackenzie Rd	EOM at Gravois Rd	Bonton Dr	35,223	Mainline (full width) ending at Bonton Dr south approach
	Mackenzie Rd / Reavis Barracks Rd	Bonton Dr	Shapfield Lane	14,656	Mainline (full width) beginning at Bonton Dr south approach
	Reavis Barracks Rd	Shapfield Lane	EOM at I-55	8,698	Mainline (full width) beginning at Shapfield Lane
	TOTAL			61,211	Side Street Approaches (excludes Mullally Dr)

412-20.00	SIDEWALK GRINDING			
	Exact locations & quantities to be determined by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY (EACH)	REMARKS
	Reavis Barracks / Mackenzie	Rt / Lt	46	
	TOTAL		46	

502-11.06	CONCRETE PAVEMENT (6" NON-REINFORCED)			
	Exact locations & quantities to be determined by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY S.Y. (1.0)	REMARKS
	Mackenzie at Bonton Dr	Rt	211.0	For north approach reconstruction; includes rolled curbing and thickened sections
	TOTAL		211.0	

509-10.30	CONCRETE BASE (VARIABLE THICKNESS, NON-REINFORCED), VERY EARLY STRENGTH **			
	As directed by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	DIMENSIONS (L x W)	QUANTITY S.Y. (1.0)
	9700 Sterling Pl (Citizen's National Bank)	Rt	26' x 26'	75.1
	9700 Sterling Pl (Citizen's National Bank)	Rt	21' x 27'	63.0
	9700 Sterling Pl (Citizen's National Bank)	Rt	10' x 27'	30.0
	Mackenzie at Sterling Place	Rt	22' x 137'	334.9
	Mackenzie at Reavis Rd	Rt	45' x 12'	60.0
	Reavis Road	Rt	24' x 27'	72.0
	9765 Mackenzie (Phillips 66)	Rt	33' x 12'	44.0
	10001 Shapfield Ln	Rt	50' x 25'	138.9
	4834 Reavis Barracks	Rt	30' x 33.5'	111.7
	4824 Reavis Barracks	Rt	38' x 23'	97.1
	Reavis Barracks at Villa Ridge Ct	Lt	37' x 22'	90.4
	Reavis Barracks at Villa Ridge Ct	Lt	50' x 22'	122.2
	Reavis Barracks at Villa Ridge Ct	Lt	41' x 12'	54.7
	Reavis Barracks at Villa Ridge Ct	Lt	275' x 22'	672.2
	Huntingdon Lane	Lt	20' x 52.5'	116.7
	Huntingdon Lane	Lt	35' x 12.5'	48.6
	9207 Reavis Barracks	Lt	32' x 22'	78.2
	9209 Reavis Barracks	Lt	40' x 24'	106.7
	Reavis Barracks at Zenith Drive	Lt	100' x 12'	133.3
	Reavis Barracks at Sterling Place	Lt	25' x 28'	77.8
	TOTAL			2,527.5

* INDICATES CHANGE IN QUANTITY UNDER ADDENDUM NO. 1
** INDICATES PAY ITEMS ADDED UNDER ADDENDUM NO. 1
ITEM NOS. 509-10.30, 509-10.40 AND 509-11.20 REPLACE ITEM NOS. 502-11.08, 509-10.08, AND 509-10.18.

509-10.40	CONCRETE BASE (VARIABLE THICKNESS, NON-REINFORCED), HIGH EARLY STRENGTH **			
	As directed by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	DIMENSIONS (L x W)	QUANTITY S.Y. (1.0)
	Mackenzie at Irene Place	Rt	28' x 22'	68.4
	9347 Mackenzie	Rt	10' x 11'	12.2
	9425 Mackenzie	Rt	12' x 22'	29.3
	9441 Mackenzie	Rt	8.5' x 10'	9.4
	9801 Mackenzie	Rt	8.5' x 15'	14.2
	4812 Reavis Barracks	Rt	35' x 9'	35.0
	Reavis Barracks at Ummelmann	Rt	22' x 30'	73.3
	4700 Reavis Barracks	Rt	23' x 10'	25.6
	9926 Mackenzie	Lt	8.5' x 27'	25.5
	9918 Mackenzie	Lt	29' x 22'	70.9
	9890 Mackenzie	Lt	14' x 11'	17.1
	9764 Mackenzie	Lt	17.5' x 11'	21.4
	9548 Mackenzie	Lt	72' x 11'	88.0
	9522 Mackenzie	Lt	36' x 11'	44.0
	9406 Mackenzie	Lt	14' x 11'	17.1
	9321 Mackenzie	Lt	8' x 11'	9.8
	9122 Mackenzie	Lt	22' x 25'	61.1
	TOTAL			622.4

509-11.20	CONCRETE BASE (VARIABLE THICKNESS, NON-REINFORCED) **			
	Exact locations & quantities to be determined by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY S.Y. (1.0)	REMARKS
	E.O.M. at I-55	Lt	450' x 22'	1,100.0
	Southridge Apartment Building	Lt	130' x 12'	173.3
	Southridge Apartment Building	Lt	32' x 12'	42.7
	Southridge Apartment Building	Lt	88' x 12'	117.3
	Southridge Apartment Building	Lt	110' x 12'	146.7
	TOTAL		1,580.0	

603-10.35	ADJUST WATER SERVICE VALVE BOX TO GRADE			
	Exact locations & quantities to be determined by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY EACH	REMARKS
	Mackenzie at Bonton Dr (north approach)	Rt	1	for curb ramp reconstruction, NW corner
	9306 Mackenzie	Lt	1	
	TOTAL		2	

604-20.27	REPLACE INLET GRATES AND ADJUST TO GRADE			
	Exact locations & quantities to be determined by the Engineer. Includes replacement of concrete inlet seat.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY EACH	REMARKS
	9940 -9946 Bonton Dr	Rt	1	Replace concrete inlet seats and adjust to grade
	TOTAL		1	

604-20.30	ADJUSTING MANHOLE TO GRADE			
	Exact locations & quantities to be determined by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY EACH	REMARKS
	9700 Sterling Pl. (Citizens National Bank)	Rt	1	
	Mackenzie at Sterling Place	Rt	1	for curb ramp reconstruction, NW corner
	9617 Irene Place	Rt	2	
	9441 Mackenzie	Rt	1	
	9777 Mackenzie	Rt	1	
	9801 - 9815 Mackenzie (county park)	Rt	1	
	9137 Reavis Barracks	Lt	1	
	Mackenzie at Lydell Dr	Lt	1	for curb ramp reconstruction, SE corner
	Reavis Barracks / Mackenzie	(Rt / Lt)	25	all located in mainline pavement
	TOTAL		34	

604-21.95	REPLACE PRECAST INLET TOP			
	Exact locations & quantities to be determined by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY EACH	REMARKS
	9430 Mackenzie	Lt	1	
	TOTAL		1	

604-90.40	ADJUST INLET STONE TO GRADE			
	Exact locations & quantities to be determined by the Engineer.			
	LOCATION	SIDE (Rt / Lt)	QUANTITY EACH	REMARKS
	9355 Mackenzie	Rt	1	
	9785 Mackenzie	Rt	2	
	9504 Reavis Barracks	Rt	1	
	9256 Reavis Barracks	Rt	2	
	9330 Mackenzie	Lt	2	
	TOTAL		8	

COUNTY PROJECT NO.
AR-1413

FEDERAL PROJECT NO.
STP-4901(632)

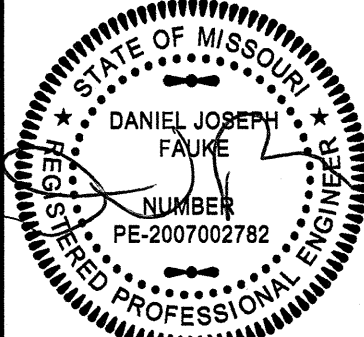
E-W GATEWAY TIP NO.
5609-14

MSD:
N/A

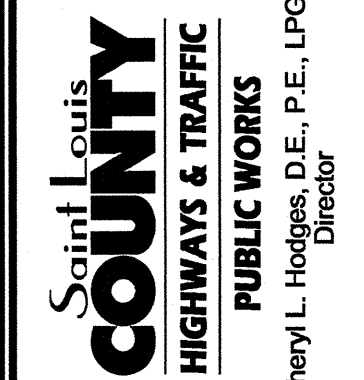
MSD BASE MAP:
26-J, 27-J

REV. DATE BY APP. DESCRIPTION
9-16-14
ADDENDUM NO. 1

DISCLAIMER OF RESPONSIBILITY: I, the undersigned, certify that the documents intended to be authorized by my seal are my own design, and I assume full responsibility for all other drawings, specifications, documents or instruments relating to or intended to be used for any part of the engineering project or survey.


DATE: Sept 23 2014

PREPARED BY:
DESIGN DIVISION
1050 N. LINDBERGH BLVD
ST. LOUIS, MISSOURI 63132
(314) 616-8543
DANIEL JOSEPH FAULKE
PROFESSIONAL ENGINEER
LICENSE NO. 2007002782

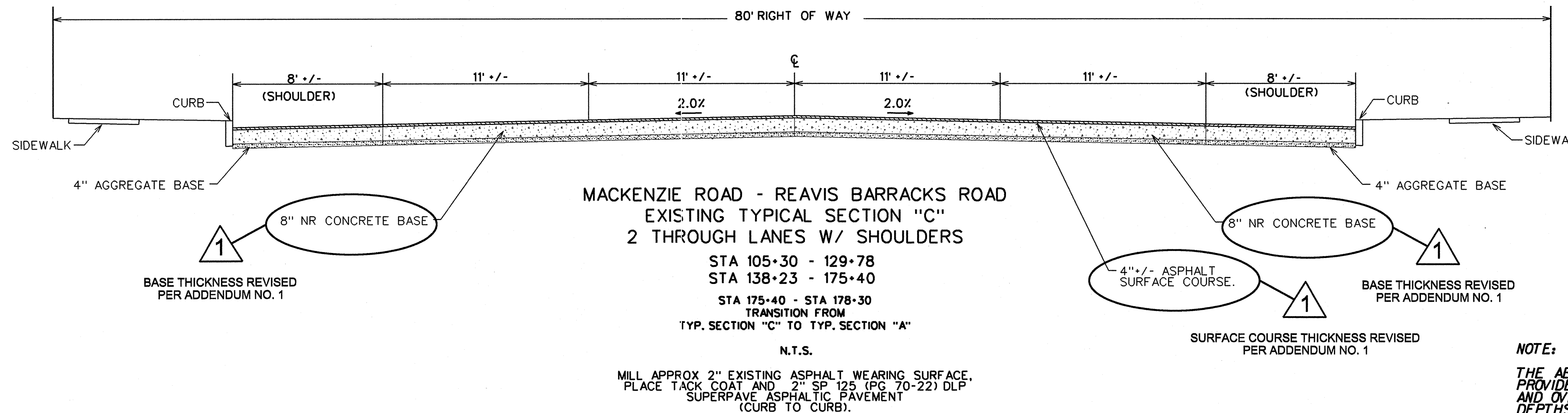
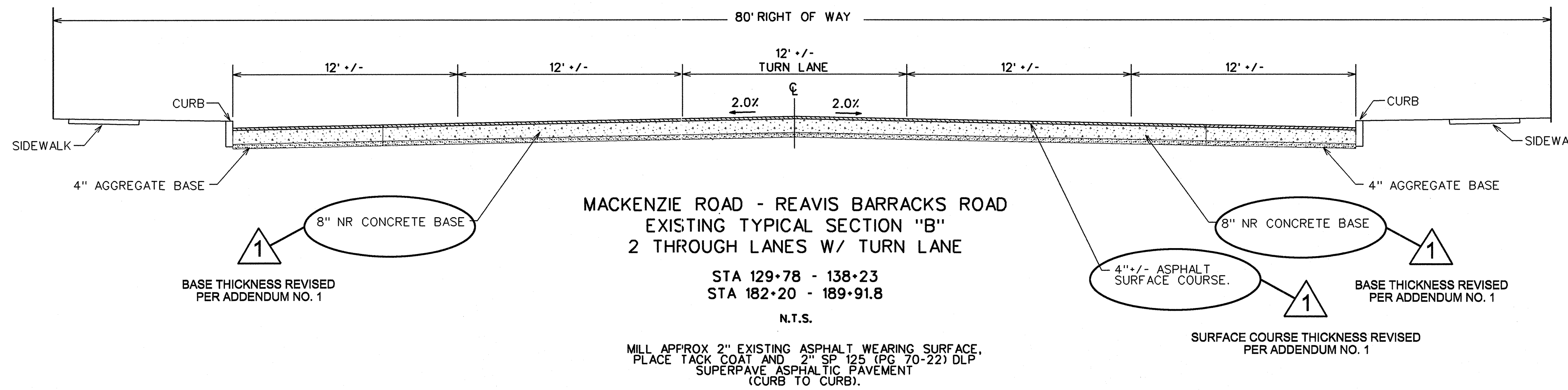
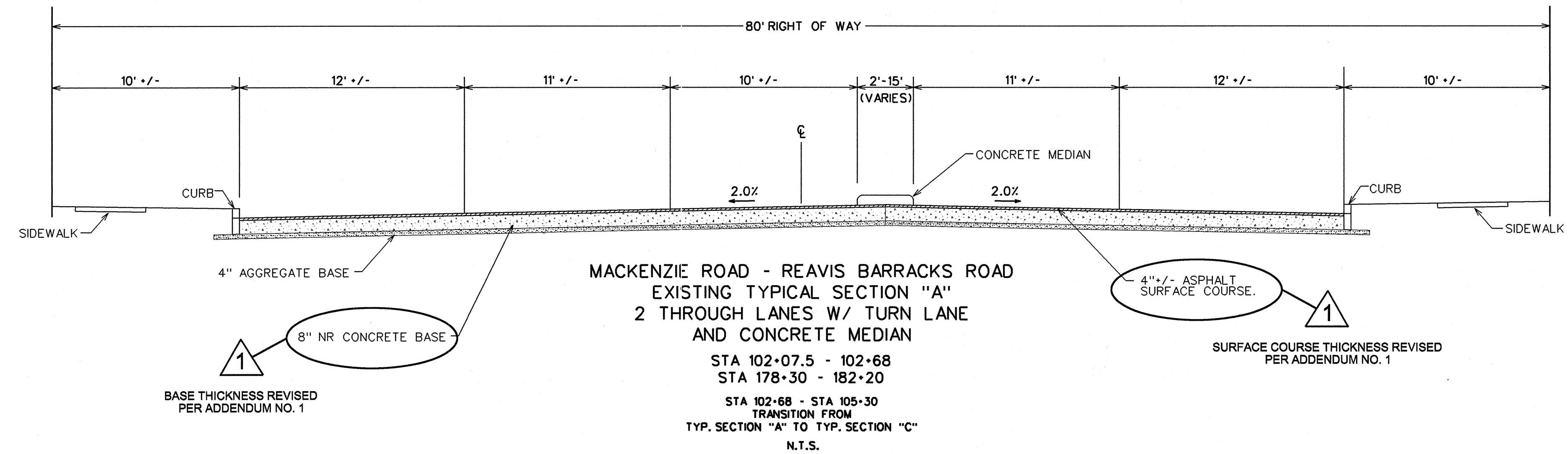

REAVIS BARRACKS ROAD - MACKENZIE ROAD INFRASTRUCTURE
DETAILED QUANTITIES

DESIGNED: DJF

DRAWN: DJF

CHECKED:

SHEET SEQUENCE:
4A OF 53



NOTE:

THE ABOVE TYPICAL SECTIONS ARE INTENDED TO PROVIDE GUIDANCE AS TO THE LIMITS OF THE MILLING AND OVERLAY OPERATIONS. THE PAVEMENT MATERIALS AND DEPTHS SHOWN WERE PLOTTED FROM EXISTING RECORDS AND MAY DIFFER SIGNIFICANTLY FROM ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES DURING MILLING OPERATIONS TO ENSURE PAVEMENT CROSS SLOPE MAINTAINS POSITIVE DRAINAGE AS DIRECTED BY THE ENGINEER. STATIONING SHOWN SHOULD BE CONSIDERED APPROXIMATE ONLY.

COUNTY PROJECT NO.
AR-1413

FEDERAL PROJECT NO.
STP-4901(632)

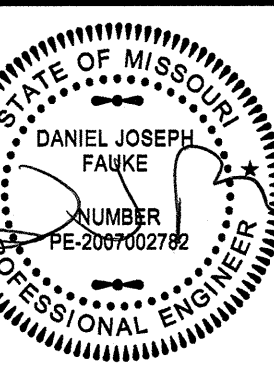
E-W GATEWAY TIP NO.
5609-14

MSD:
N/A

MSD BASE MAP:
26-J, 27-J

REVISIONS	DESCRIPTION	REV	DATE	BY	APP
1	ADENDUM NO. 1		9-15-14		

DISCLAIMER OF RESPONSIBILITY: I hereby certify that the documents herein are intended to be used for the project and are not to be used for any other purpose. I am not responsible for any errors or omissions in the documents or for any consequences arising from the use of the documents. I am not responsible for any damages, claims, or lawsuits arising from the use of the documents. I am not responsible for any damages, claims, or lawsuits arising from the use of the documents.



DATE: Sept 23, 2014

DESIGN DIVISION
10500
ST. LOUIS, MISSOURI 63132
(314) 615-9543
DANIEL JOSEPH FALKE
PROFESSIONAL ENGINEER
LICENSE NO. 2007002782

Sheryl L. Hodges, D.E., P.E., L.P.G.
DIRECTOR
St. Louis County
HIGHWAYS & TRAFFIC
PUBLIC WORKS

REAVIS BARRACKS ROAD -
MACKENZIE ROAD
INFRASTRUCTURE
EXISTING
TYPICAL SECTIONS

DESIGNED: DJF

DRAWN: DJF

CHECKED:

SHEET SEQUENCE:
10A OF 53