

# *TOLL 49 SEGMENT 4 PROGRESS REPORT*



*AUGUST 2018  
PROGRESS REPORT NO. 26*

**RS&H**





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## 1.1 INTRODUCTION

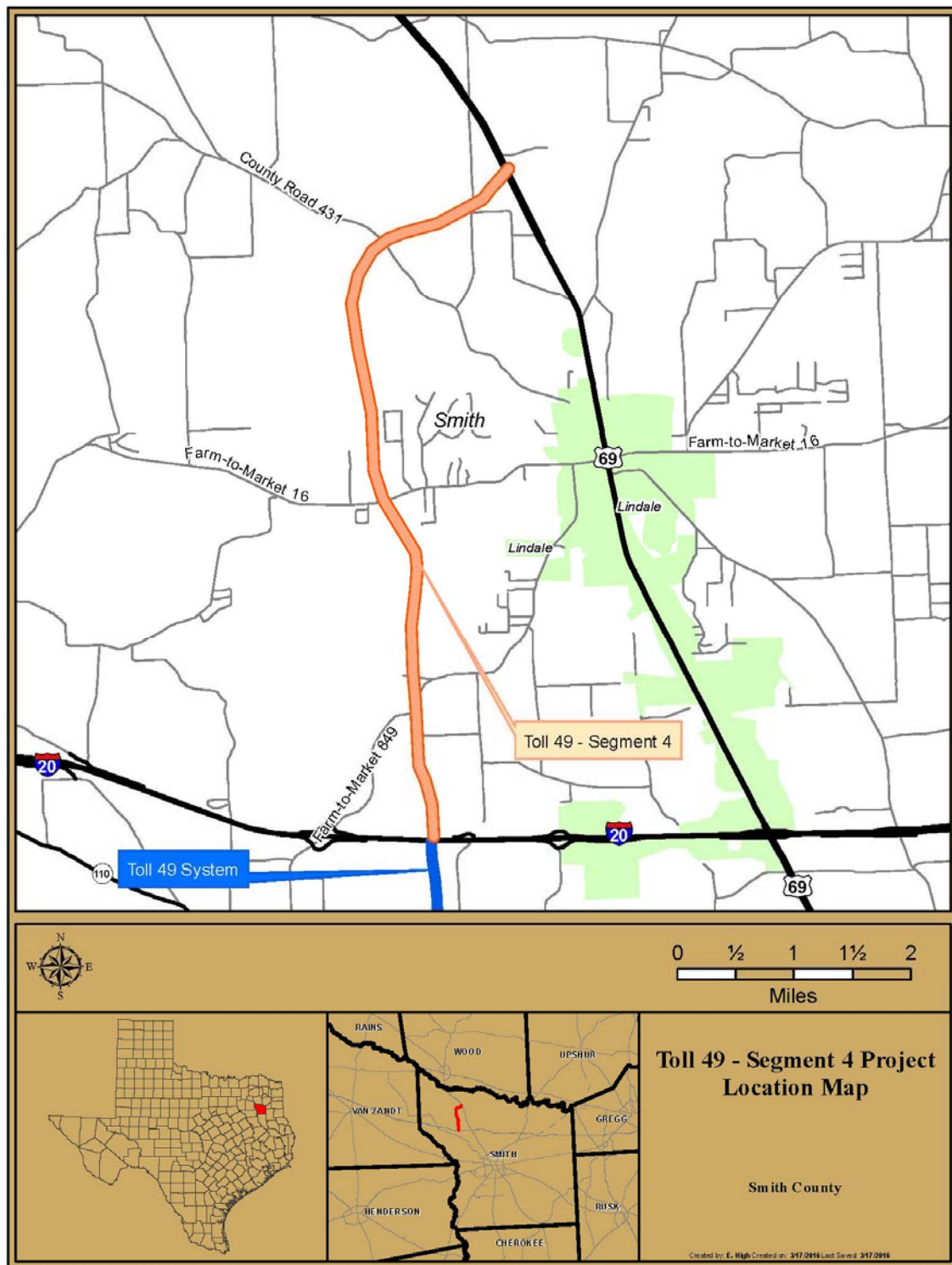
This report documents and describes the development and construction of the Toll 49 Segment 4 Project during the period from July 1, 2018 through August 1, 2018. This Project is being developed and constructed by the North East Texas Regional Mobility Authority ("the Authority"). The Segment 4 Project is funded by Series 2016A Senior Lien bonds, and funds committed by the Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT).

## 1.2 PROJECT DESCRIPTION

The Segment 4 Project extends along new alignment from US 69 in the City of Lindale south to IH 20, north of the City of Tyler in Smith County, Texas. The Segment 4 Project connects with Toll 49 Segment 3B, extending Toll 49 by a length of approximately 6.6 miles. The Segment 4 Project consists of an interim two-lane access controlled tollway with grade separations at major cross streets, and toll collection facilities. The interim two-lane facility may be expanded to its ultimate four-lane configuration as traffic demand warrants and funding sources are identified in the future. The Segment 4 Project includes the construction of an at grade intersection at US 69, a diamond interchange including access ramps at FM 16, access ramps south of SH 110, and a three level interchange at IH 20. Continuous access/frontage roads will not be constructed as part of the Segment 4 Project.



**FIGURE 1: Project Location Map**



## 1.3 DEVELOPMENT ACTIVITIES

### 1.3.1 Right-of-Way

The Authority has acquired all forty-two project parcels.

**TABLE 1: RIGHT-OF-WAY PARCEL STATUS**

Parcel	Acreage	Estimated Acquisition	
		Date	Status
202	3.93	NTP	Closed
203	1.44	Acquired	Closed
204	0.73	NTP + 75 Days	Closed
205	0.52	NTP	Closed
206	2.42	NTP	Closed
207	0.40	NTP	Closed
208	7.03	NTP + 75 Days	Closed
209	12.47	15-Jul-16	Closed
210	0.84	15-Jul-16	Closed
213	39.13	NTP	Closed
214	9.95	NTP	Closed
215	36.64	NTP	Closed
216	28.31	NTP	Closed
217	8.39	NTP	Closed
218	5.61	NTP	Closed
219	21.01	NTP	Closed
220	1.35	NTP	Closed
221	5.69	NTP + 30 Days	Closed
222	2.46	NTP + 30 Days	Closed
223	0.13	NTP + 30 Days	Closed
224	0.17	NTP + 30 Days	Closed
225	0.04	NTP + 30 Days	Closed
226	11.63	NTP + 30 Days	Closed
227	3.18	NTP + 60 Days	Closed
229	22.23	NTP + 60 Days	Closed
230	3.22	NTP + 60 Days	Closed
231	4.25	NTP + 60 Days	Closed
232	14.47	NTP + 60 Days	Closed
233	1.52	NTP + 60 Days	Closed
235	0.85	NTP + 60 Days	Closed
236	9.71	NTP + 60 Days	Closed
237	0.41	NTP + 60 Days	Closed
238	22.66	NTP + 60 Days	Closed



Parcel	Acreage	Estimated Acquisition	
		Date	Status
239	1.04	NTP + 60 Days	Closed
240	13.39	NTP + 60 Days	Closed
241	0.36	NTP + 60 Days	Closed
242	11.04	NTP + 60 Days	Closed
243	9.16	NTP + 60 Days	Closed
244	19.14	NTP	Closed
245	5.81	NTP	Closed
246	0.10	NTP + 30 Days	Closed
247	0.07	NTP + 60 Days	Closed

### 1.3.2 Utilities

Utility relocations are complete. There were eleven privately-owned utilities impacted by the Segment 4 Project. Relocation design and construction was performed by the utility owners with 100% reimbursement from the Authority. Due to coordination and construction timeframes, some relocations were not complete within the contract's estimated completion dates. These relocations did not impact the Project critical path.

**TABLE 2: UTILITY RELOCATION STATUS**

Utility Company	Estimated Relocation	
	Completion Date	Status
AT&T (SBC)	NTP+120	Relocation is complete
CenterPoint Energy	NTP+120	Relocation is complete
City of Lindale	N/A	Relocation is complete
Crystal Systems Water	N/A	Relocation is complete
East Texas Electric Cooperative	1-Jan-17	Relocation is complete
Enbridge	No conflict	No conflict identified, no relocation
Gulf South	NTP+90	Relocation is complete
Lindale Rural WSC	N/A	Relocation is complete
MHM Pipeline	Relocation will begin 2 weeks after clearing	Relocation is complete
Oncor Electric Delivery (Distribution)	NTP + 90 to 120 Days	Relocation is complete
Oncor Electric Delivery (Transmission)	1-Nov-16	Relocation is complete
Peoples Telephone Cooperative	NTP + 0 to 60 Days	Relocation is complete
SuddenLink	NTP + 150 Days	Relocation is complete
Wood County Electric	NTP +110 Days	Relocation is complete
Zayo	NTP +150 Days	Relocation is complete

### 1.3.3 Archeological Survey

During archeological survey undertaken in support of a utility relocation on the project in July of 2016, archeologists encountered a previously unrecorded archeological site, resulting in limited Contractor access to the right-of-way during an archeological investigation. Final clearance of the site was received on December 1, 2017, at which time the Contractor was granted full access to resume construction activities at this location.

Four Change Orders have been executed to address delays associated with the archeological investigation. Change Orders No. 12 and 13 extended the project schedule by six months and increased the construction contract amount by approximately \$1.6 million for time related overhead expenses and earthwork demobilization and remobilization costs. Change Order No. 14 increased the not-to-exceed amount of the construction contract by \$2.7 million, with \$1.4 million representing a lump sum settlement payment to be paid to the Contractor if the February 6, 2019 Substantial Completion date is met. Should Substantial Completion occur after February 6, 2019, this \$1.4 million lump sum will decrease by \$15,000 per calendar day. The remaining \$1.3 million represents a not-to-exceed amount intended to cover costs associated with the increased erosion control activities required to maintain the project during the extended construction schedule. The erosion control costs in Change Order No. 14 do not account for costs associated with removal of sediment from outside the project ROW or additional seeding needed to establish ground cover. Change Order No. 28 included \$0.4 million to cover the material escalation cost resulting from the schedule extension.

## 1.4 PROGRESS PHOTOS

### 1.4.1 Earthwork

During this reporting period, the Contractor completed the embankment for the northbound exit ramp south of IH 20. All major earthwork is complete for the project. Remaining minor earthwork tasks include level up at pavement edges following the placement of asphalt pavement.



Embankment completed south of IH 20  
on northbound ramp

### 1.4.2 Guardrail

During the reporting period, the Contractor resumed installation of guardrail, starting from the north end of the project limits and working south. Guardrail was installed for the CR 431 bridge, the Stevenson branch bridge, the FM 16 bridge, the FM 16 ramp gantries, and the Davis Branch bridge. Guardrail at the mainline gantry north of FM 16 was skipped to allow accessibility for continued work at the gantry structure.



Guardrail installed on CR 431 bridge



Guardrail completed north of FM 16 bridge

### 1.4.3 Erosion Control

The Contractor continued environmental control activities such as maintaining silt fence, soil retention blankets, and rock filter dams. The contractor continued installing permanent seeding on back slopes and supplementing with sod in certain areas to more efficiently establish ground cover.



Installation of stone rip rap and silt fence at  
Culvert No. 7



Installation of sod on the backslope north of CR 431



#### 1.4.4 Subbase and Pavement

During the reporting period, the Contractor completed the placement of the drainable pavement layer and flexible base for the main lanes at FM849. South of IH 20, the Contractor completed cement treating the subgrade for the northbound exit ramp to IH 20.



Cement treatment for northbound ramp



Placement of drainable pavement layer at FM 849

#### 1.4.5 Gantry Structures and Signs

During the reporting period, the Contractor installed the mainlane gantry structure north of FM 16 and is progressing the electrical work for the tolling equipment. The Contractor also began installation of roadside signs during this report period, drilling the foundations for signs from US 69 to IH 20.



Main lane gantry structure north of FM 16



Small sign foundation

## 1.5 PROGRESS NARRATIVE

The Contractor continued maintaining erosion control items including silt fence, rock filter dams, erosion control blankets, and placing temporary seed. Clearing and grubbing activities are complete. With the embankment work south of IH 20 for the northbound exit ramp completed, no major earthwork tasks remain on the project. Minor earthwork tasks include level up at pavement edges following the placement of asphalt pavement.

The substructure and superstructure construction of all bridges on the project is complete. The only remaining bridge items are grinding and grooving the deck surfaces. Rip rap construction for bridge abutments is complete at all bridge abutment locations. The aesthetic painting and recoating of bridge structures is in progress at the IH 20 bridges. All retaining wall construction is complete on the project as is the construction of project culverts and storm sewer. Grading is still ongoing for drainage ditches throughout the Project along with rip rap construction for drainage ditches north of IH 20.

Subgrade cement treatment, drainable pavement layers as appropriate, and flexible base have been placed project-wide with the exception of the northbound exit ramp to IH 20 for which the earthwork was just completed. Prime coat, the first four inches of mainlane asphalt pavement, and the first two inches of ramp asphalt pavement have been placed project-wide with the exception of the main lanes at FM 849 and the northbound exit ramp to IH 20. The one course surface treatment and the surface layer of asphalt have been placed from US 69 to the Stevenson Branch Bridge and from FM 16 to just north of FM 849.

All three gantry structures have been installed and electrical work at the toll plazas is ongoing. Sign foundations have been drilled project-wide with the exception of signs at SH 110. Installation of guardrail is in progress with completed installation at the following locations: CR 4118, CR 431, Stevenson Branch FM 16, FM 16 ramp gantries, Davis Branch and FM 849.

Table 3 below reflects construction progress based on the Contractor's schedule of values and approved construction draws.

**TABLE 3: CONSTRUCTION PROGRESS**

Construction Activity	Percent Complete
Mobilization	100.00%
Traffic Control	100.00%
Earthwork	99.94%
Drainage	94.11%
Sub-base and Base Course	95.63%
Pavement	66.26%
Structures	100.00%
Pavement Markings and Signals	44.28%
Environmental	95.11%
Extra Work Items	63.80%
Change Orders	64.96%

## 1.6 FINANCIAL SUMMARY

Table 4 shows the overall financial status for the Toll 49 Segment 4 project through August 1, 2018. The original budget established for the Project and the expenditures to date are provided. An estimated cost remaining and an estimate at completion are also provided.

**TABLE 4: FINANCIAL STATUS SUMMARY**

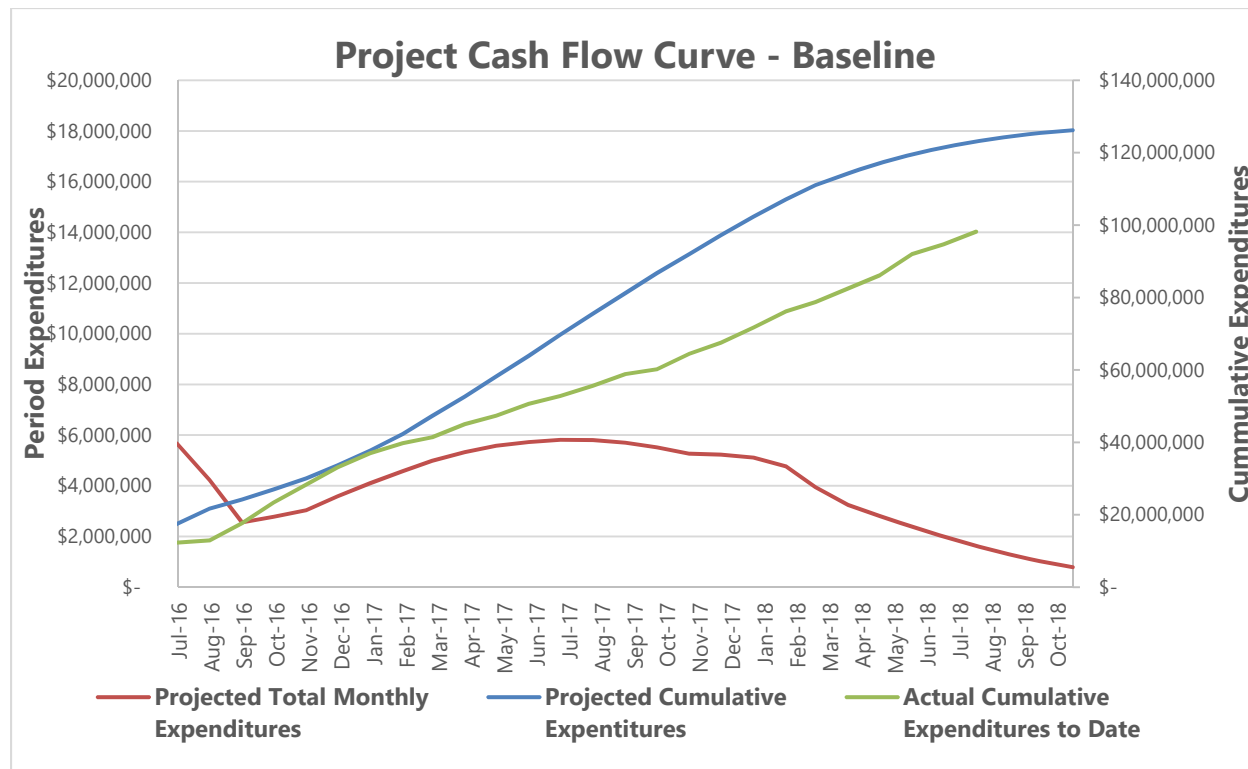
Project Description	Original Cost Estimate (\$)	Expenditures to Date (\$)	Estimated Remaining Cost (\$)	Estimate at Completion (\$)
Toll 49 Segment 4	\$126,220,000	\$98,181,387.44	\$28,038,612.56	\$126,220,000

*Note: These costs include Traffic & Revenue studies costs, ROW survey and mapping costs, Final Engineering costs, Utility Relocation costs, Oversight costs, Construction (including GEC costs), and approximately \$11.7 million in remaining contingencies.*

### 1.6.1 Project Cash Flow Curve – Baseline

Figure 2 summarizes the actual project costs to date through this reporting period in comparison to the projected project costs.

**FIGURE 2: PROJECT CASH FLOW CURVE – BASELINE**



*Note: "Projected Cumulative Expenditures" includes both projected project expenditures and project contingencies.*

## 1.7 CONSTRUCTION FINANCIAL STATUS

The following summary provides the financial status of the Project.

Original Contractor Amount:	\$68,760,000.00
<i>Authorized Changes (Change Order and/or Amendments):</i>	
Change Order No. 1 <sup>1</sup>	\$0.00
Change Order No. 2	\$26,247.38
Change Order No. 3	\$17,257.93
Change Order No. 4	\$156,926.00
Change Order No. 5	\$100,000.00
Change Order No. 6	\$34,276.66
Change Order No. 7	\$3,721.82
Change Order No. 8	\$4,231.40
Change Order No. 9	\$304,851.40
Change Order No. 10	\$200,000.00
Change Order No. 11 <sup>2</sup>	\$4,389,160.65
Change Order No. 12 <sup>3</sup>	\$1,078,075.83
Change Order No. 13	\$493,609.77
Change Order No. 14	\$2,660,075.00
Change Order No. 15	\$24,838.18
Change Order No. 16	\$28,495.58
Change Order No. 17	\$50,000.00
Change Order No. 18	\$11,860.97
Change Order No. 19	\$100,000.00
Change Order No. 20	\$67,382.19
Change Order No. 21	\$31,352.18
Change Order No. 23 <sup>4</sup>	\$71,420.24
Change Order No. 24	\$36,708.84
Change Order No. 25	\$496,675.32
Change Order No. 26	\$34,821.29
Change Order No. 27	\$603,398.31
Change Order No. 28	\$342,936.16
<b>Current Authorized Contract Amount:</b>	<b>\$80,128,323.10</b>
<b>Previous total of Contractor Payments:</b>	<b>\$68,231,576.47</b>
Amount Paid this Reporting Period:	\$3,274,223.57
<b>Total Amount Paid To-Date:</b>	<b>\$71,505,800.08</b>
Retainage withheld:	\$0.00
<b>Approved Amount for work completed (through Draw No. 24):</b>	<b>\$71,505,800.08</b>
<b>Amount remaining for work to be completed:</b>	<b>\$8,622,523.02</b>
<b>Total Percent of Budget Expended through July 31, 2018:</b>	<b>89.24%</b>

Footnotes:

1. Change Order No. 1 did not result in a change in price
2. Change Order No. 11 included a 56 day time extension



3. Change Order No. 12 included a 179 day time extension
4. No. 22 was skipped because the NET RMA Board voted not to execute Change Order No. 22.

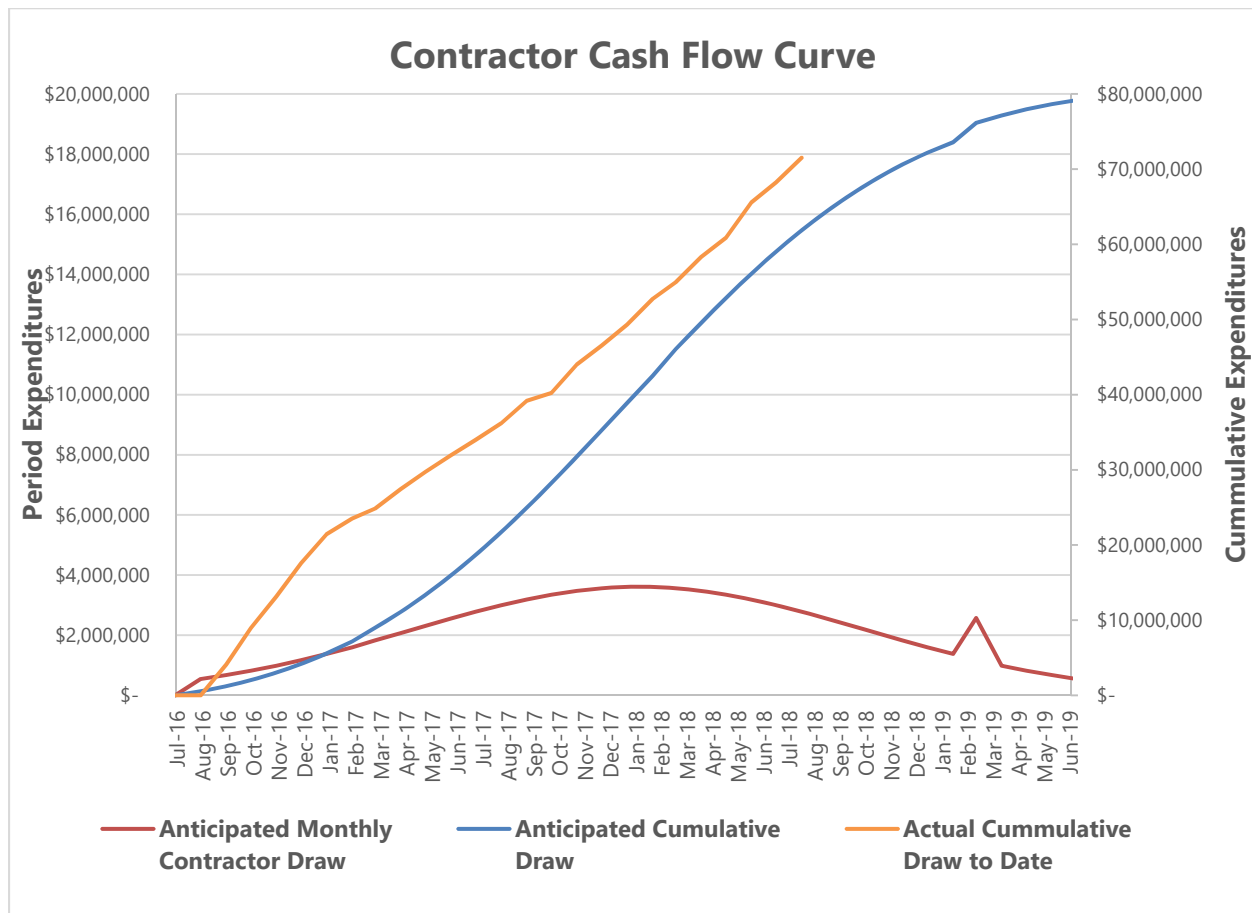
### 1.7.1 Summary of Change Orders This Reporting Period

During the reporting period, the NET RMA executed Change Orders No. 27 and 28. Change Order No. 27 included \$603,398.31 to increase drainable pavement thickness for the Toll 49 mainlanes at FM 849. Change Order No. 28 included \$342,936.16 to cover purchase of materials at escalated rates. The material escalation cost is a result of the schedule delay caused by the archeological investigations noted above.

### 1.7.2 Contractor Cash Flow Curve

Figure 3 summarizes the actual Contractor draws to date through this reporting period in comparison to the projected Contractor draws.

**FIGURE 3: CONTRACTOR CASH FLOW CURVE**



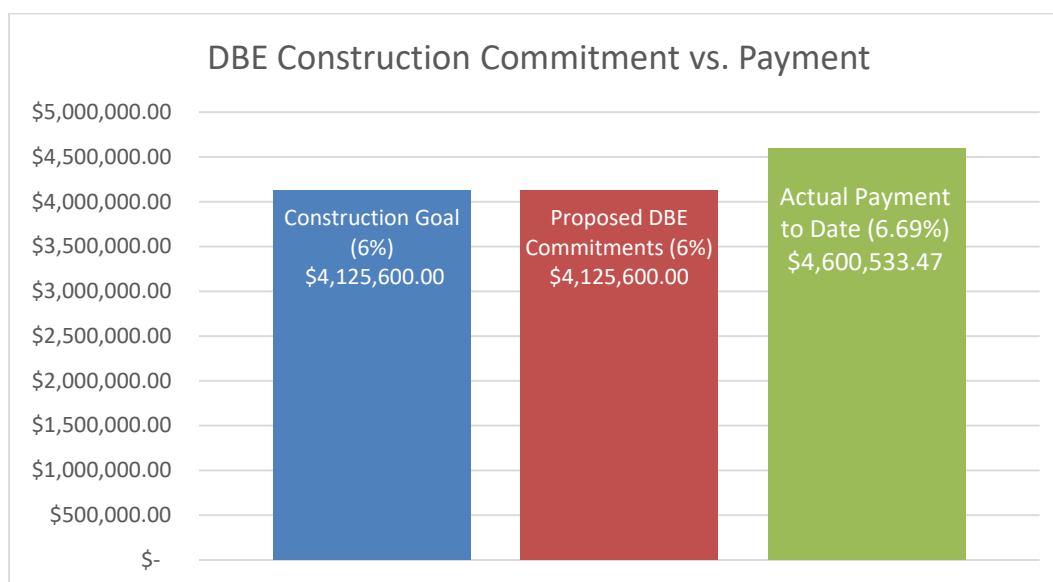
*Note: Contractor Cash Flow Curve includes both price and schedule revisions associated with approved Change Orders.*

## 1.8 DBE STATUS

The Contractor is required to meet the Disadvantage Business Enterprise (DBE) goal of 6% for the Segment 4 Project. The Contractor has proposed costs associated with DBE development work in the amount of \$4,125,600.00 which equals 6.00% of the original contract value. This represents approved subcontracts with the following firms: Rambo Contracting INC (culverts, inlets, headwalls, and wing walls), Texas Environmental Management (stormwater pollution prevent plans and erosion control), MCL Contracting (rebar tying), Buyers Barricade (advanced warning signs), South Texas Painting (painting), Odum Services LP (metal beam guard fence and guard rail), and A Brothers Milling (milling).

To date, the Contractor has made payments in the amount of \$4,600,533.47 to DBE subcontractors, 6.69% of the original contract amount or 111.51% of their commitment amount.

FIGURE 4: DBE STATUS



## 1.9 COMPREHENSIVE ENVIRONMENTAL PROTECTION PROGRAM

In accordance with the terms of the Environmental Record of Decision (ROD) and contract requirements, the Contractor was required to develop and implement a Comprehensive Environmental Protection Program (CEPP) applicable throughout the duration of construction to establish the approach, requirements and procedures to be employed to protect the environment. The Contractor's CEPP includes the following component parts:

- » Areas of Special Environmental Interest - Describes steps taken to prevent impacts to at risk, rare species and their habitat as well as historical resources including:
  - Educating employees to recognize these impacts
  - Identifying the areas where construction related activities are not to take place based on the relevant migratory bird timing windows

- Keeping water work to a minimum and cleaning any equipment which must enter the water both prior and after to mitigate the spread of Zebra Mussels
- If endangered/rare species or historical/archaeological/paleontological resources are encountered, ceasing working in the area and notifying the engineer or applicable agency for direction on any mitigation action required
- » Environmental Protection Measures include the following:
  - Erosion and sediment control measures
  - Preparation for seasonal shutdown
  - Protection of wildlife and wildlife habitat
  - Proper practices for clearing vegetation
  - Appropriate handling and storage of soil
  - Protection of wetlands, watercourses (streams), and riparian areas
  - Air quality management
  - Proper handling and storage of petroleum, oil, lubricant, and other chemicals
  - Management of waste
  - Constructing, operating, and reclaiming borrow excavations
  - Operating concrete batch plants
  - Well impacts and requirements
  - Recycling program
- » Monitoring and Inspection efforts consist of:
  - Self-Regulatory inspection program
  - Construction Monitoring
  - Post construction monitoring
- » Energy Conservation measures including the following:
  - Reusing and recycling of construction materials
  - Maximizing the use of local materials to reduce hauling
  - Carpooling of workers to and from the jobsite
  - Regular maintenance of equipment to ensure proper working order
  - Reducing energy consumption by turning off equipment and vehicles when not in use
  - Minimizing stops and delays by efficient routing of trucks to and from the jobsite and utilizing off-peak travel times to maximize fuel efficiency
  - Minimizing the need for artificial light by scheduling construction during daytime hours to the extent practicable
  - Maintenance of traffic control plan that minimizes lengthy detours or delays for motorists.
- » The Environmental Protection Training Plan educates non-administrative employees to:
  - Recognize the overall importance of environmental issues
  - Recognize environmental impacts as they relate to construction
  - Know what actions to take to minimize impacts
- » The Communication Plan provides contact information for the Environmental Manager, Superintendent, Project Engineer and Project Manager

Per the CEPP, the contractor has conducted the following activities:

- » Submitted for and posted TCEQ Notice of Intent (NOI) for stormwater discharges. The NOI and large construction site notices are posted on the Contractor's Equal Employment Opportunity board in front of the field office to address accessibility concerns.
- » Implemented proper vegetation clearing practices including installing sediment and erosion control measures prior to beginning the clearing and grubbing work.
- » Minimized disturbance to aquatic resources during clearing and grubbing by installing silt fence between the construction site and watercourse to prevent sedimentation and equipment from encroaching on protected areas and installing temporary crossings to allow construction equipment to cross various tributary streams.
- » Focused on addressing several erosion control items identified in a March 2017 letter from TCEQ by installing additional rock filter dams, erosion control blankets, mulch, topsoil, and temporary seeding on back and side slopes as construction progressed and performing silt excavation downstream of areas where erosion control measures were previously inadequate.
- » Continues the maintenance and repair of erosion control measures throughout the jobsite to ensure continued TCEQ compliance and is focused on repairing and replacing measures due to the rains experienced in mid-December of 2017.
- » Reduced the amount of runoff at soil stockpile locations by reducing the grade of the stockpile side slopes.
- » Performed weekly inspections to ensure the measures are operating correctly.
- » Implemented the Environmental Protection Training Plan by providing staff access to the TxDOT Environmental Management System training website.
- » Avoided impacts to streams during construction until mitigation was secured.

## *APPENDIX A: AERIAL PHOTOGRAPHS (AUGUST 2018)*



FIGURE 5: PROJECT AREA SOUTH OF IH 20

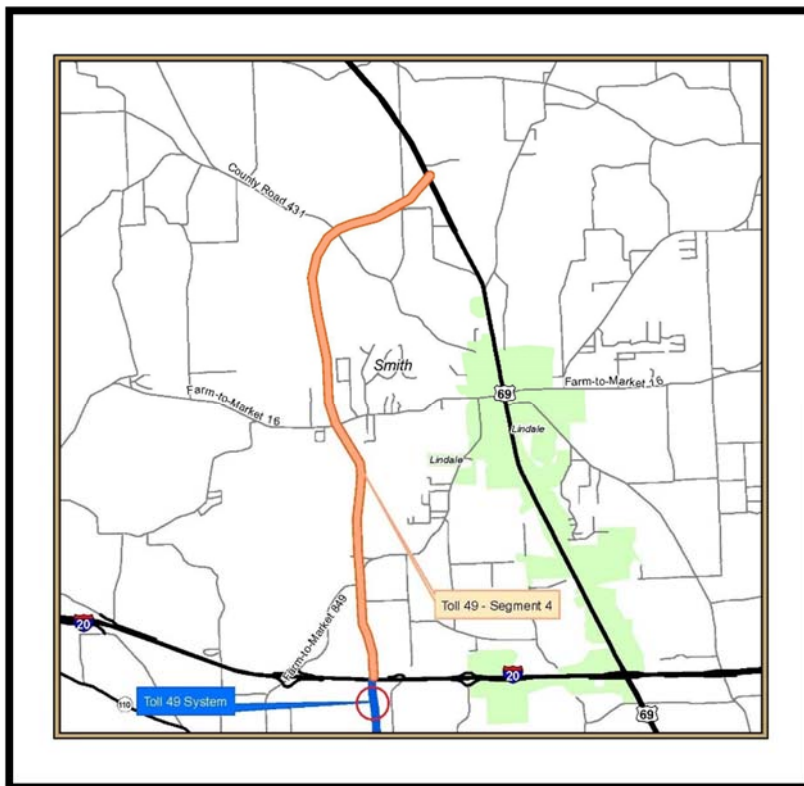
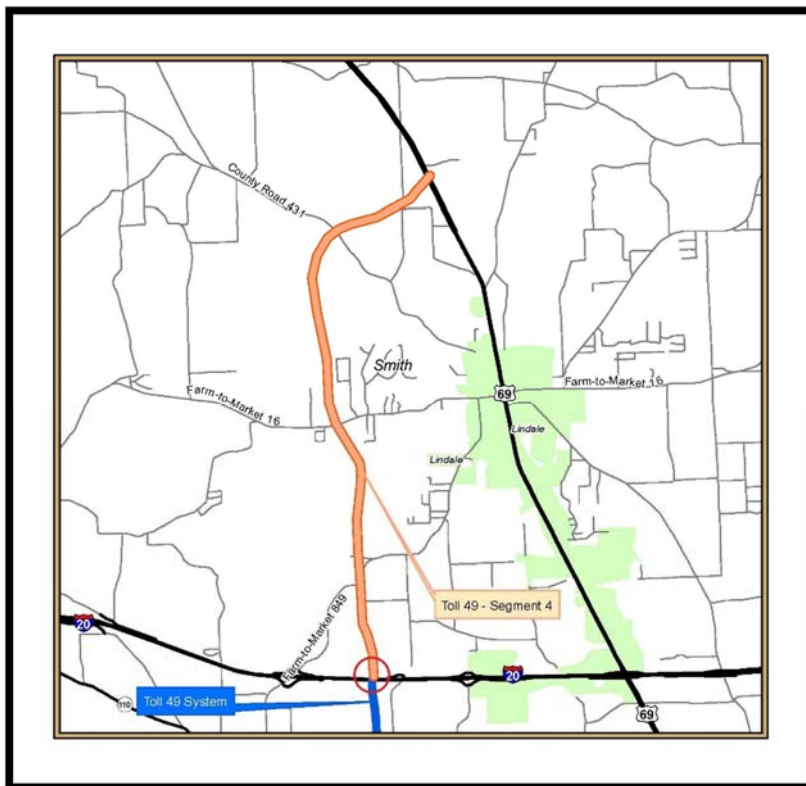






FIGURE 6: PROJECT AREA AT IH 20







**FIGURE 7: PROJECT AREA BETWEEN IH 20 AND FM 849**

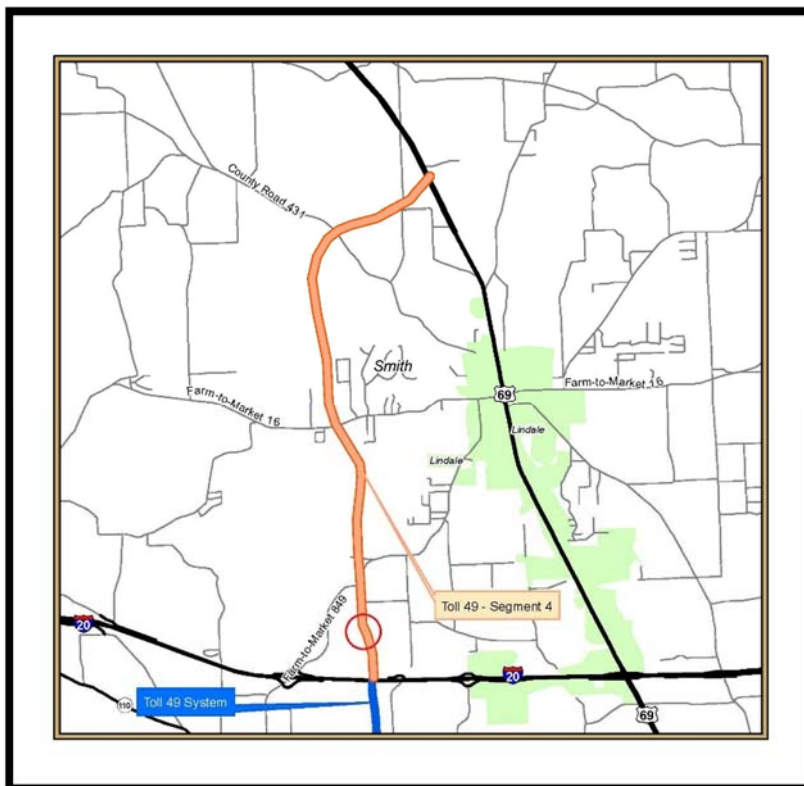
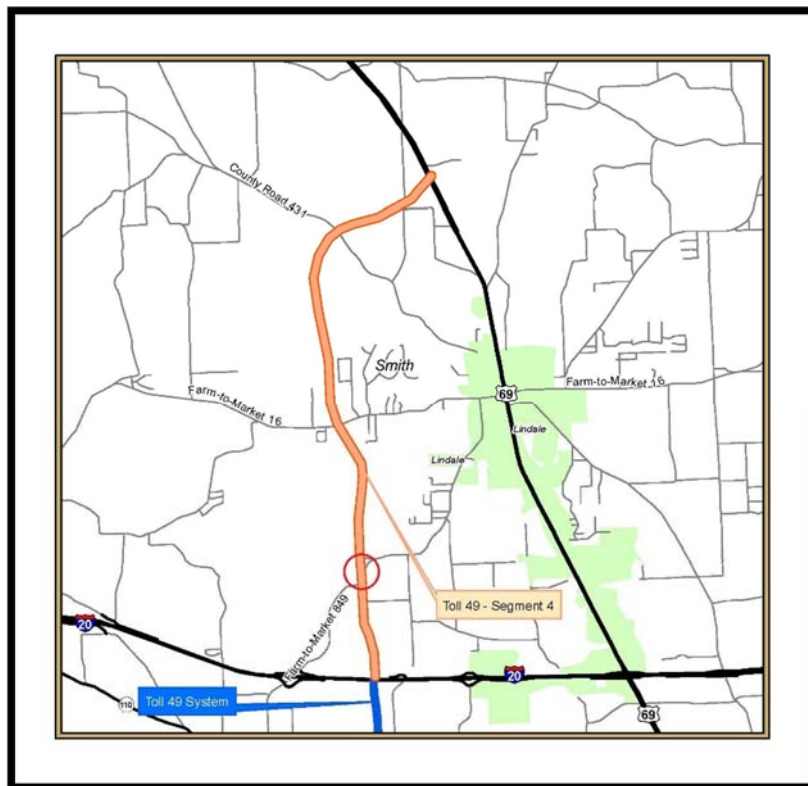




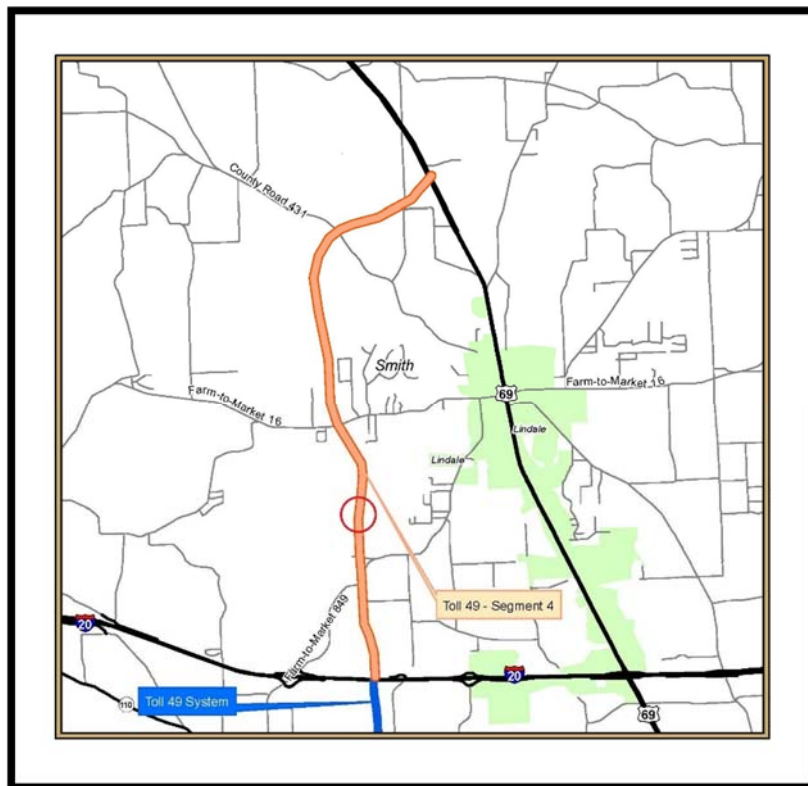
FIGURE 8: PROJECT AREA AT FM 849

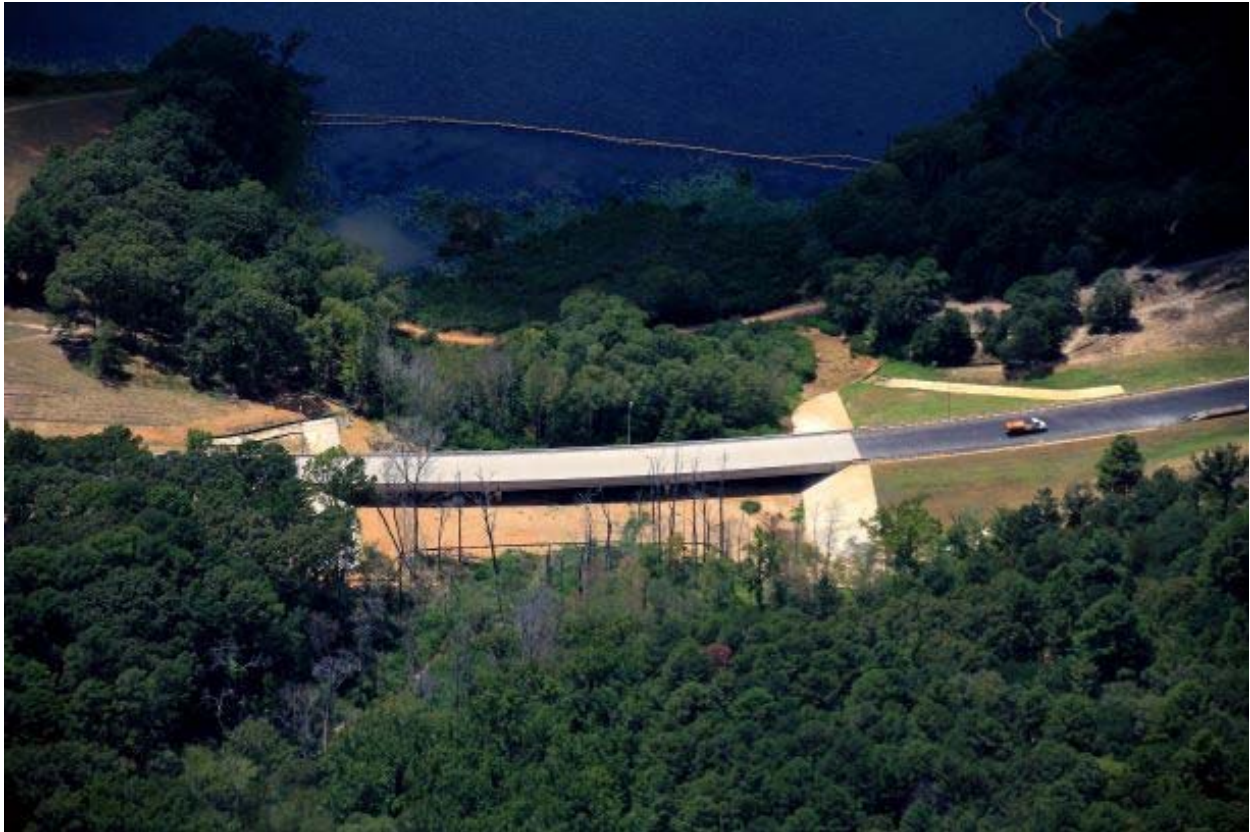




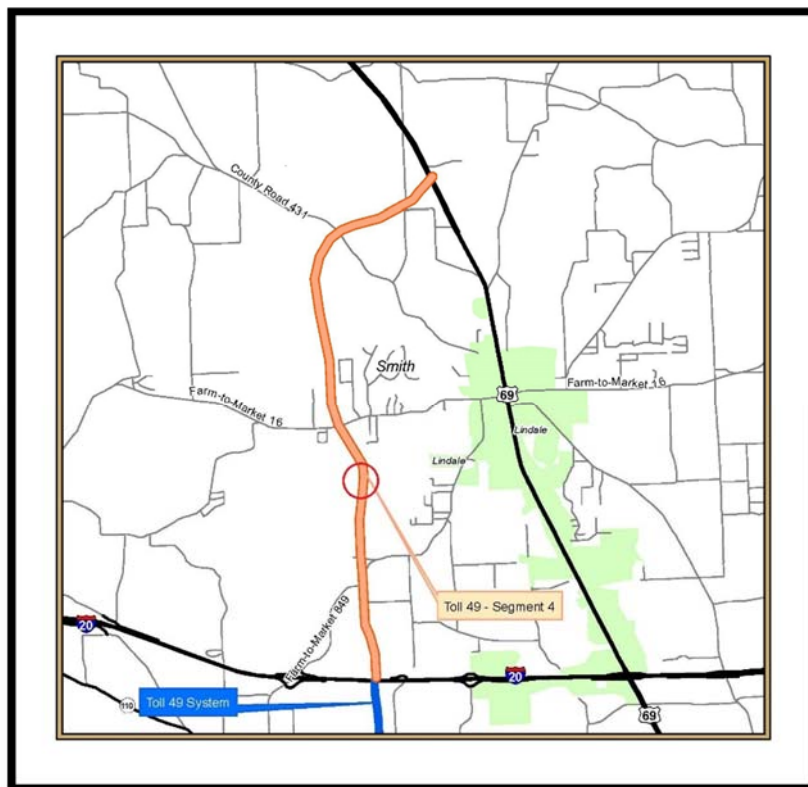


**FIGURE 9: PROJECT AREA DAVIS BRANCH TRIBUTARY**





**FIGURE 10: PROJECT AREA DAVIS BRANCH**







**FIGURE 11: PROJECT AREA BETWEEN DAVIS BRANCH AND FM 16**

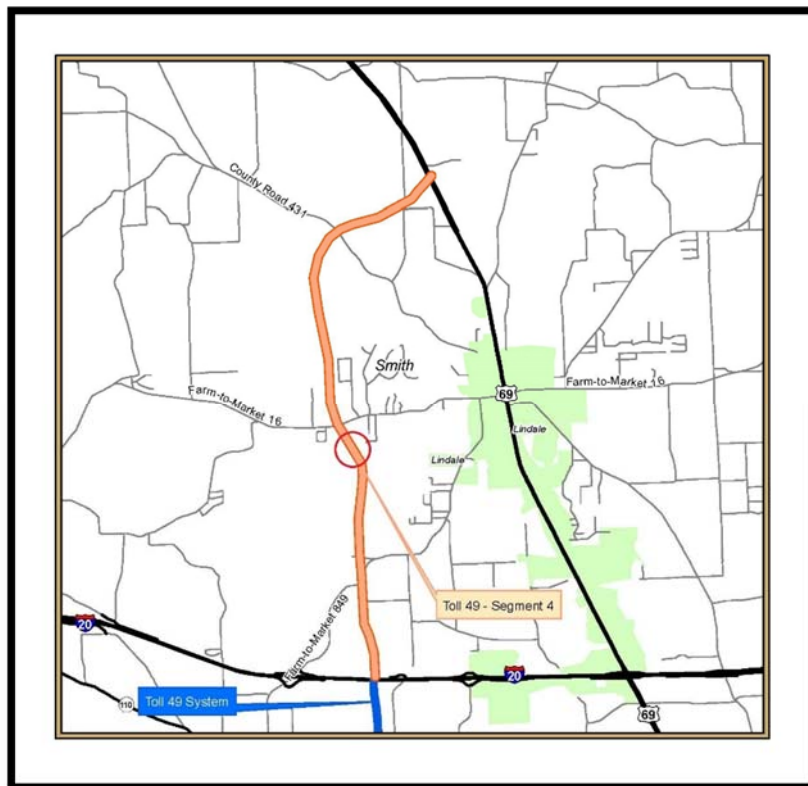




FIGURE 12: PROJECT AREA AT FM 16

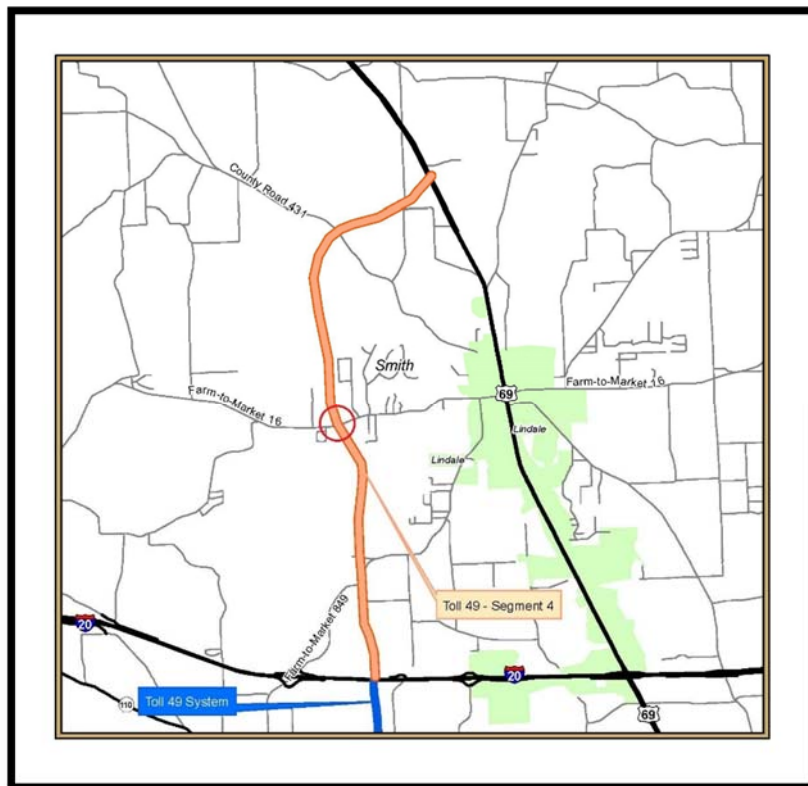
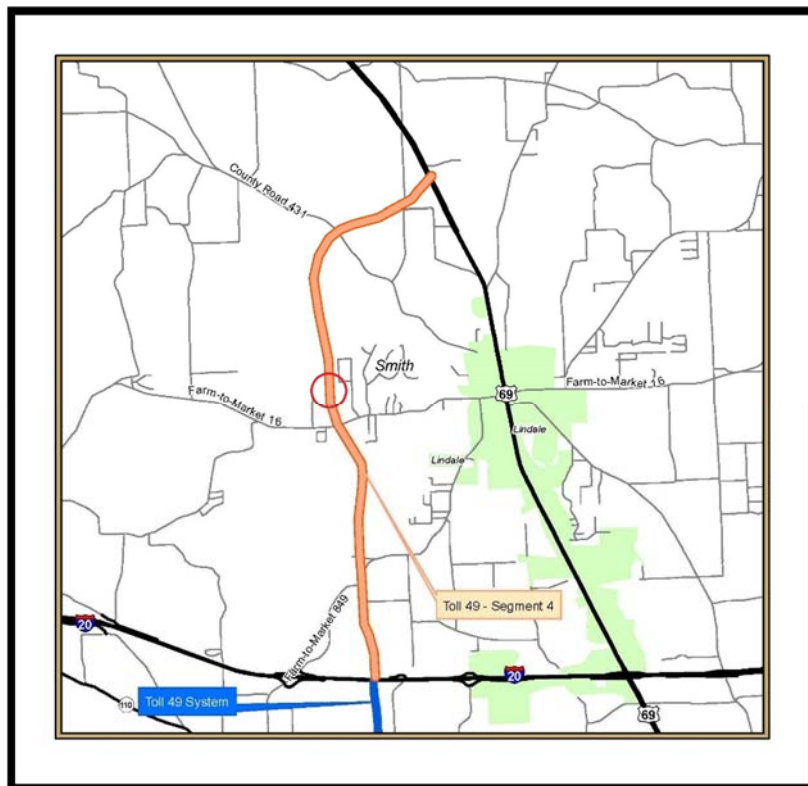






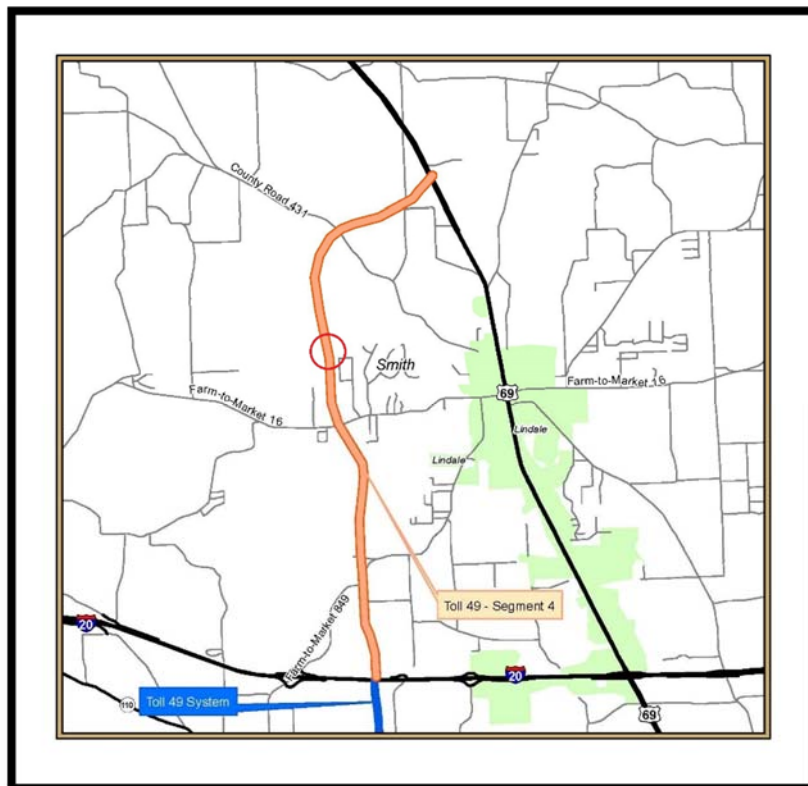
FIGURE 13: QUARRIES NORTH OF FM 16







**FIGURE 14: PROJECT AREA NORTH OF THE FM 16 QUARRIES**





**FIGURE 15: PROJECT AREA BETWEEN FM 16 AND CR 341**

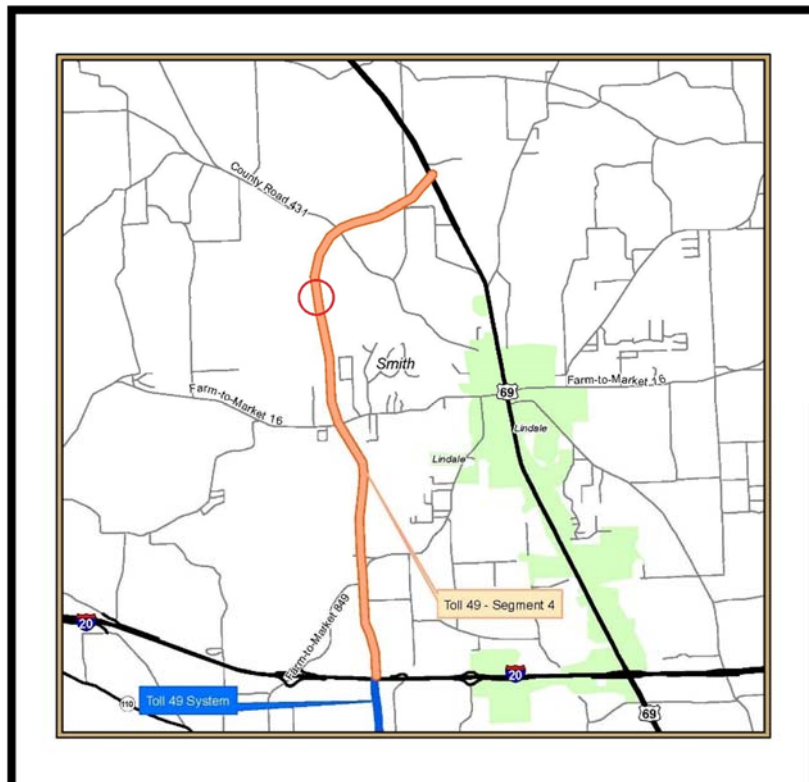
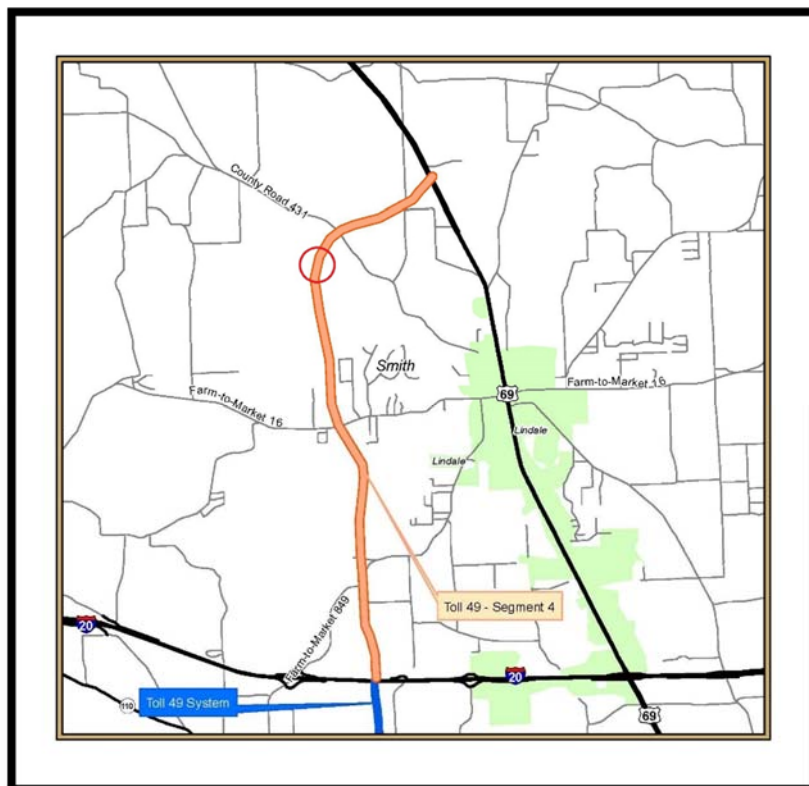




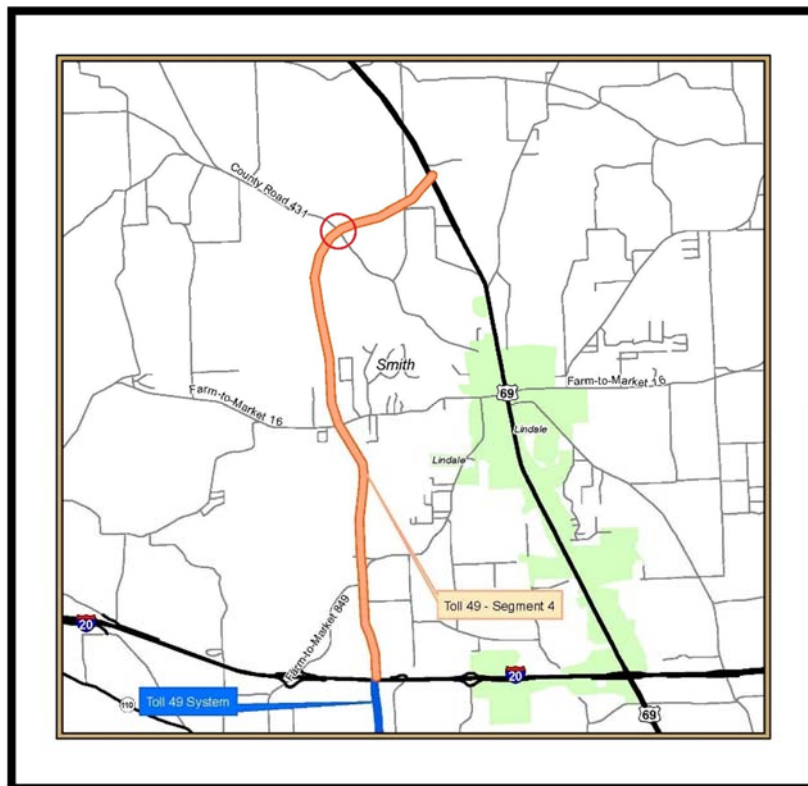


FIGURE 16: PROJECT AREA SOUTH OF CR 431





**FIGURE 17: PROJECT AREA AT CR 431**







**FIGURE 18: PROJECT AREA NORTH OF CR 431**

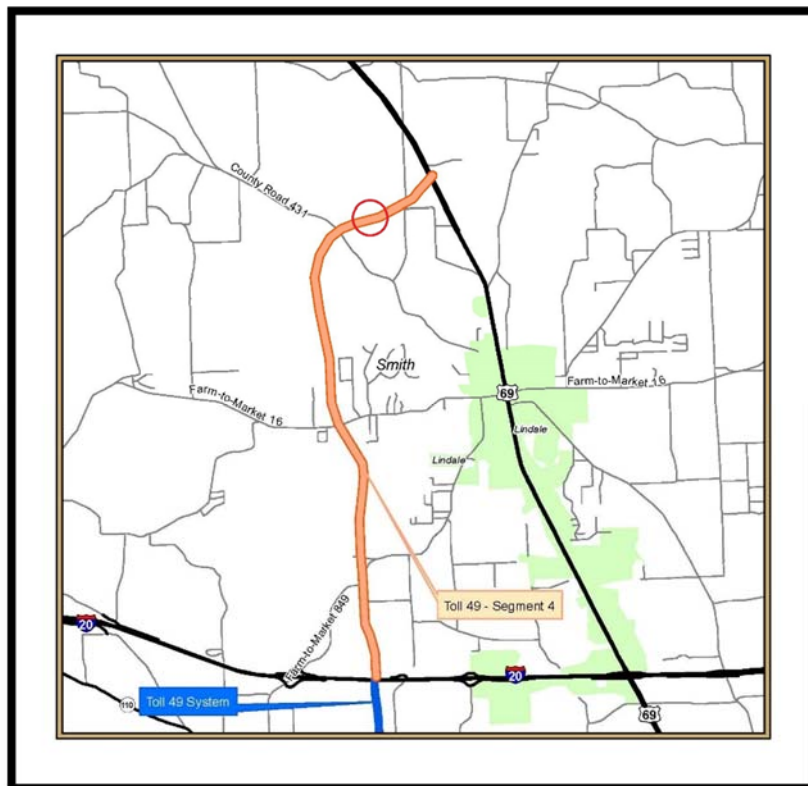
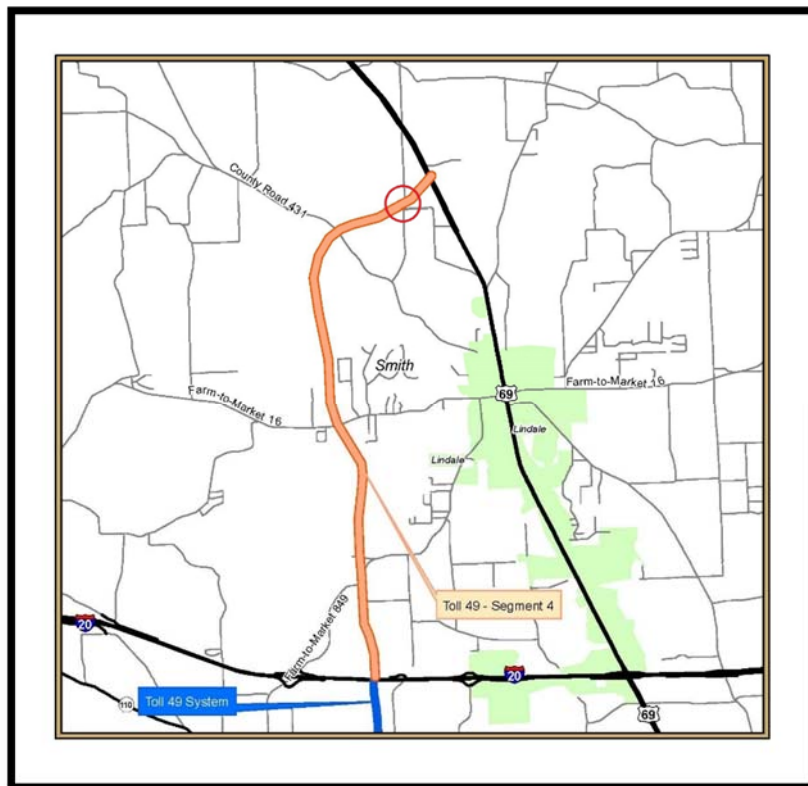






FIGURE 19: PROJECT AREA AT CR 4118





**FIGURE 20: PROJECT AREA AT US 69**

