# TOLL 49 SEGMENT 4 PROGRESS REPORT

OCTOBER 2017

PROGRESS REPORT NO. 16

RS&H


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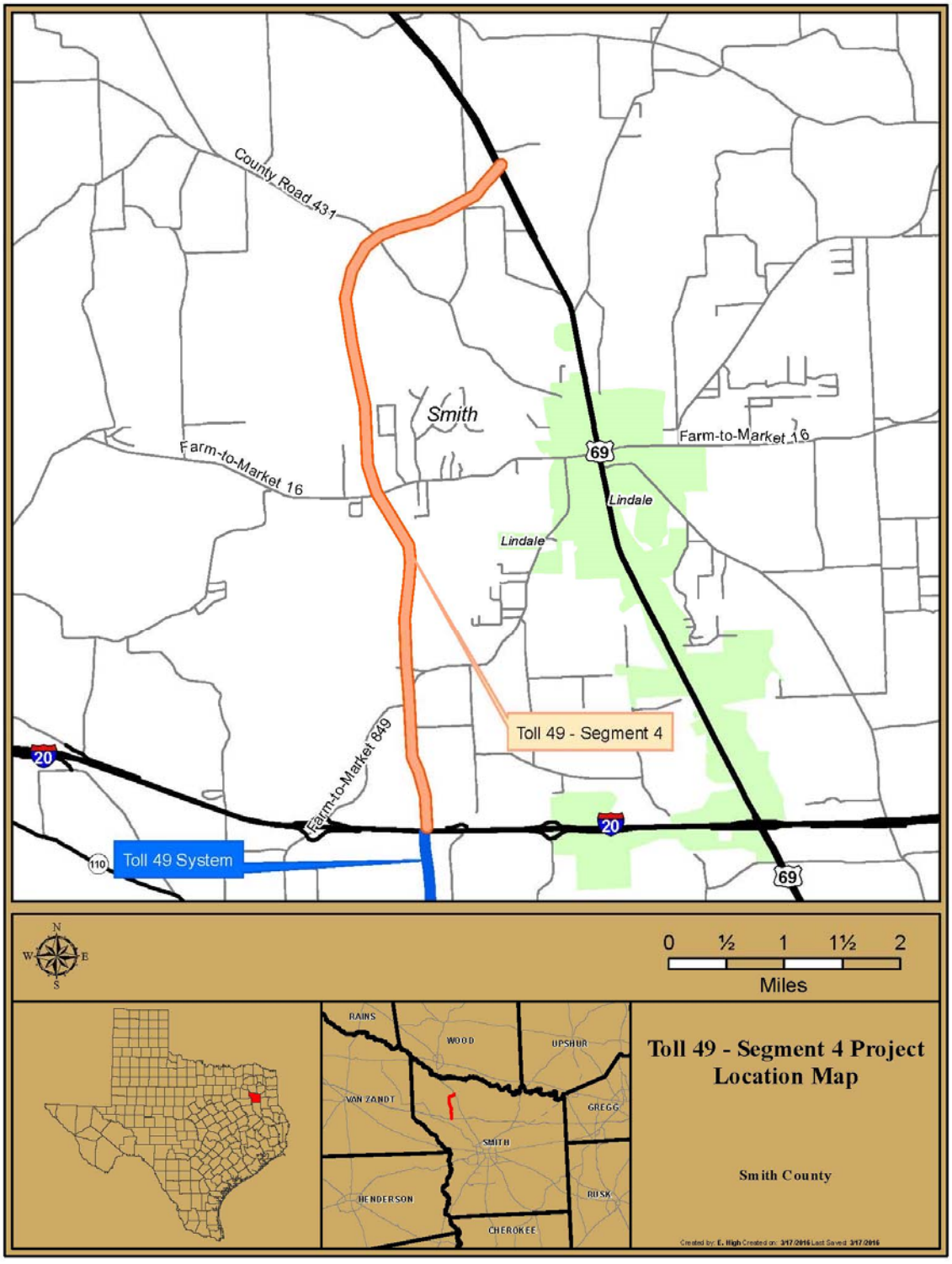
## 1.1 INTRODUCTION

This report documents and describes the development and construction of the Toll 49 Segment 4 Project during the period from September 1, 2017 through October 1, 2017. 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

To date, the Authority has either acquired, or acquired access rights to, all forty-two project parcels. Condemnation proceedings are ongoing to complete acquisition of the final seven 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 | The Authority has taken possession Parcel is accessible to Contractor Condemnation proceedings ongoing |
| 210 | 0.84 | 15-Jul-16 | Closed |
| 213 | 39.13 | NTP | The Authority has taken possession Parcel is accessible to Contractor Condemnation proceedings ongoing |
| 214 | 9.95 | NTP | Closed |
| 215 | 36.64 | NTP | Closed |
| 216 | 28.31 | NTP | The Authority has taken possession Parcel is accessible to Contractor Condemnation proceedings ongoing |
| 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 |

| Parcel | Acreage | Estimated Acquisition Date | Status |
|---|---|---|---|
| 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 | The Authority has taken possession Parcel is accessible to Contractor Condemnation proceedings ongoing |
| 239 | 1.04 | NTP + 60 Days | The Authority has taken possession Parcel is accessible to Contractor Condemnation proceedings ongoing |
| 240 | 13.39 | NTP + 60 Days | The Authority has taken possession Parcel is accessible to Contractor Condemnation proceedings ongoing |
| 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 | The Authority has taken possession Parcel is accessible to Contractor Condemnation proceedings ongoing |

### 1.3.2 Utilities

The Authority has initiated the adjustment of all of the privately-owned utilities impacted by the Segment 4 Project. Relocation design and construction is being performed by the utility owners with 100% reimbursement from the Authority. The Authority has executed relocation agreements with all eleven privately owned utilities impacted by the Segment 4 Project and has issued NTP for the relocation of these facilities.

Due to coordination and construction timeframes, the relocations for some utilities are not anticipated to be complete within the contract's estimated completion dates. It is not anticipated that these relocations will 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 | Webber to relocate as part of construction |
| Crystal Systems Water | N/A | Webber to relocate as part of construction |
| East Texas Electric Cooperative | 1-Jan-17 | Relocation is ongoing |
| Enbridge | No conflict | No conflict identified, no relocation |
| Gulf South | NTP+90 | Relocation ongoing |
| Lindale Rural WSC | N/A | Webber to relocate as part of construction |
| MHM Pipeline | Relocation will begin 2 weeks after clearing | Relocation is complete |
| Oncor Electric Delivery (Distribution) | NTP + 90 to 120 Days | Relocation is ongoing |
| 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 ongoing |
| Wood County Electric | NTP +110 Days | Relocation is complete |
| Zayo | NTP +150 Days | Relocation is ongoing |

### 1.3.3 Archeological Survey

During archeological survey undertaken in support of a utility relocation on the project, archeologists encountered a previously unrecorded archeological site within the project right of way. The archeological site is located on the northern end of the project and spans the entire width of the ROW. Following discovery of this site, the Authority enlisted the services of Hicks & Company to perform data recovery and mitigation at the site. Throughout the course of the archeological investigation, the Contractor has been allowed only limited access to the right-of-way near the archeological site. This limited access impeded earthwork activities, resulting in the demobilization of the earthwork contractor for a period of time during the months of December and January.

Access was restored to a northern portion of the site totaling approximately 39 acres in April 2017. Investigations are still underway in the southern portion of the site. With TxDOT and Texas Historical Commission approval in April, the Contractor cleared a 30' construction haul road along the eastern edge of the ROW through the six acre southern portion, further expanding access and allowing the transport of materials and construction equipment along the Project ROW.

The NET RMA has reviewed a time impact analysis submitted by the Contractor and is negotiating potential schedule extensions and cost increases associated with the delay. The NET RMA board has approved two Change Orders associated with this time impact analysis extending the project schedule by six months and increasing the construction contract amount by approximately $1.6 million for time related overhead expenses and earthwork demobilization and remobilization costs. These Change Orders are described in more detail in Section 1.7 below. The total impacts due to the archeological survey will not be fully quantified until all archeological investigations have been completed. Final clearance of the site is anticipated in the month of November.

## 1.4 PROGRESS PHOTOS

### 1.4.1 Earthwork

Clearing and grubbing activities are complete at all areas necessary within the project limits with the exception of the archeological site, to which the Contractor has limited access. Embankment activities are ongoing near FM 16 and excavation activities also continue near Stevenson Branch. The Contractor is performing the fine grading of the side slopes at various locations throughout the project to get to final grade.

Embankment near FM 16

Hauling just north of CR 431

Excavation south of CR 4118

Side slope grading near Stevenson Branch

### 1.4.2 Drainage Structures

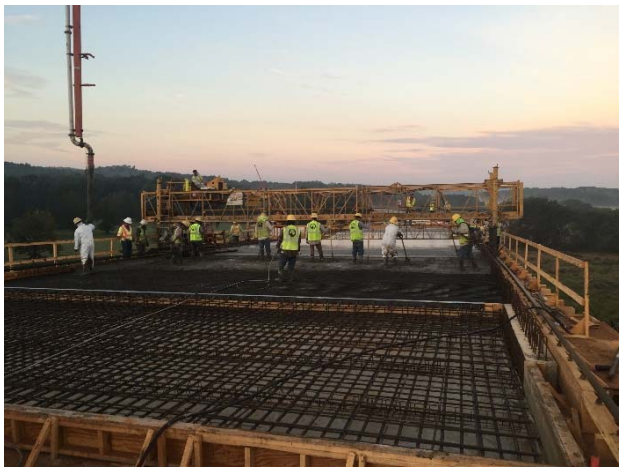
The Contractor has completed construction of major cross culverts No. 5, 7-12 and 14-17, and the construction of the final major Culverts No. 18-19 is nearly complete.

Footing construction for Culvert No. 18 north of IH 20

Construction of deck for Culvert No. 19 south of IH 20

### 1.4.3 Bridge & Wall Structures

The Contractor completed drilled shaft work in the month of September and continues bridge work including construction of columns, caps, beams, deck panels and metal decking at numerous bridge locations across the project. Construction of all Mechanically Stabilized Earth (MSE) walls and cast-in-place (CIP) retaining walls is complete.



Concrete deck pour for the CR 431 overpass

Concrete deck pour for the CR 431 overpass

IH 20 main lane overpass beams and deck panels

Beams installed over IH 20 for the main lane and northbound ramp bridges

Deck pannels at Long Brake Tributary Bidge

Concrete rip rap at FM 16 bridge abutment

### 1.4.4 Erosion Control

The Contractor continues environmental control activities such as maintaining silt fence, soil retention blankets, and rock filter dams as needed throughout the project to prevent erosion. Topsoil, compost, and seeding is also ongoing at various locations.

Floating turbidity barrier at Davis Branch

Silt fence south of US 69 at the Toll 49 entrance ramp

## 1.5 PROGRESS NARRATIVE

Clearing and grubbing activities are complete excluding the area affected by the archeological study. Excavation work continues from CR 4118 down to CR 431 around Stevenson Branch and embankment activities continue just south of FM 16 and near Davis Branch. Topsoil, compost, and seeding continues at sideslope areas south of Stevenson Branch, near Davis Branch, and south of CR 4118. The Contractor continues maintaining erosion control items including silt fence, rock filter dams, erosion control blankets, and temporary seed as needed to prevent erosion.

The final set of drilled shafts for the project was completed at FM 16 following the traffic switch from existing to temporary pavement that occurred in August. The construction of the final set of bridge columns and the final bent cap at FM 16 can now begin. All bridge substructure (drilled shaft, footing, abutment, column, and cap) construction is complete at all other nine bridge locations. The Contractor completed the nighttime work associated with the placement of bridge beams over the IH 20 main lanes in the month of September for both the IH 20 northbound ramp bridge and the IH 20 main lane overpass. The FM 16 bridge and the IH 20 main lane overpass are the only two remaining bridges on the project with outstanding beam work. The Contractor also poured the concrete bridge deck for the CR 431, completing the sixth of ten total bridge decks.

All MSE and CIP retaining wall construction is complete on the project. Installation of major cross Culverts No. 5, 7-12 and 14-17 is complete and work continues at final major cross Culverts No. 18 and 19 near IH 20. In addition, the Contractor continues pouring concrete riprap at numerous bridge abutments and drainage ditch locations throughout the project.

The Contractor continued subbase activities in the month of September, beginning with performing the cement stabilization of the subgrade for the Toll 49 main lanes south of the IH 20 main lane overpass. No further traffic signal, gantry, or lighting work was completed in the month of September.

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 | 90.00% |
| Traffic Control | 66.25% |
| Earthwork | 85.67% |
| Drainage | 49.51% |
| Sub-base and Base Course | 15.59% |
| Pavement | 8.32% |
| Structures | 78.05% |
| Pavement Markings and Signals | 20.47% |
| Environmental | 44.65% |
| Extra Work Items | 34.74% |
| Change Orders | 4.71% |

## 1.6 FINANCIAL SUMMARY

Table 4 shows the overall financial status for the Toll 49 Segment 4 project through October 1, 2017. 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***

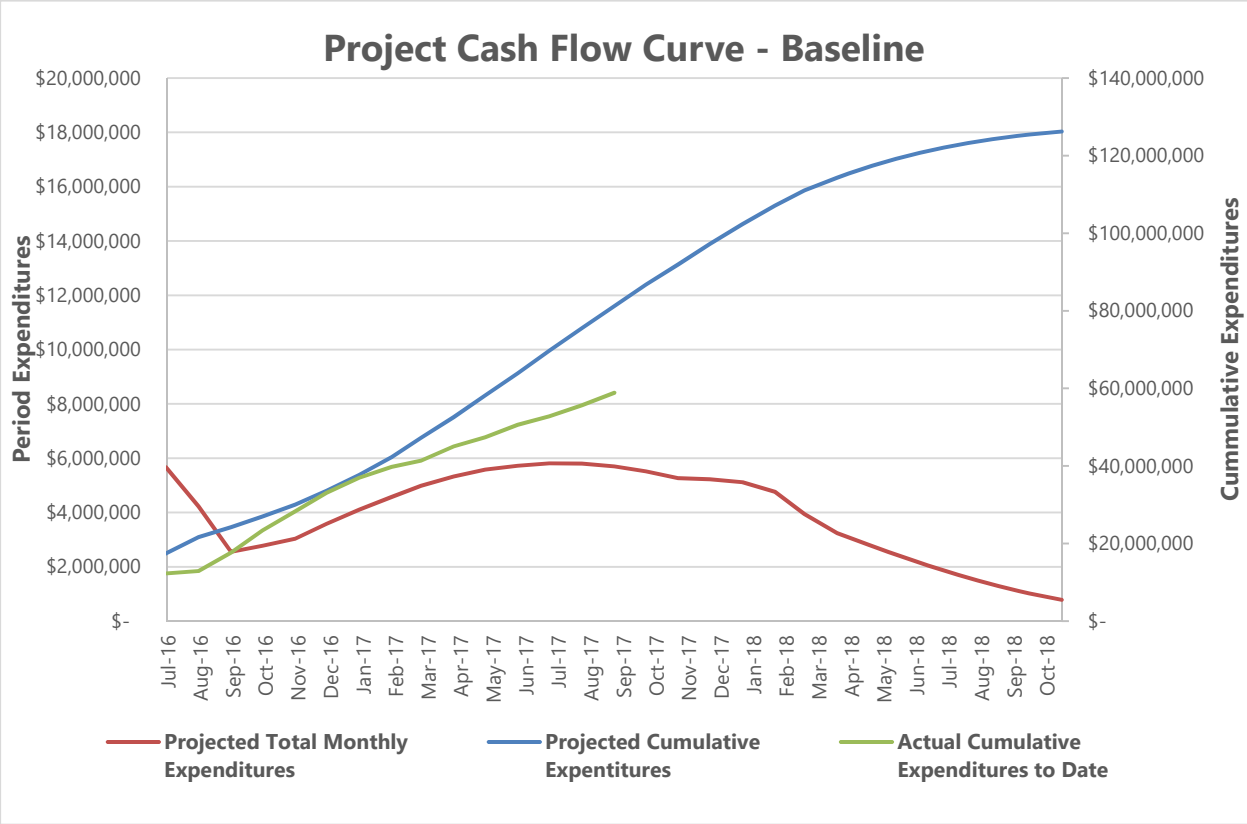
| Project Description | Original Cost Estimate ($) | Expenditures to Date ($) | Estimated Remaining Cost ($) | Estimate at Completion ($) |
|---|---|---|---|---|
| Toll 49 Segment 4 | $126,220,000 | $60,177,658.39 | $66,042,341.61 | $126,220,000 |

*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 $16.8 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" include 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 |
| *Authorized Changes (Change Order and/or Amendments):* | |
| Change Order No. 1[1] | $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 | $4,389,160.65 |
| Change Order No. 12 | $1,078,075.83 |
| Change Order No. 13 | $493,609.77 |
| **Current Authorized Contract Amount:** | **$75,568,358.84** |
| **Previous total of Contractor Payments:** | **$39,181,118.29** |
| Amount Paid this Reporting Period: | $1,054,507.95 |
| **Total Amount Paid To-Date:** | **$40,235,626.22** |
| Retainage withheld: | $0.00 |
| **Approved Amount for work completed (through Draw No. 14):** | **$40,235,626.22** |
| **Amount remaining for work to be completed:** | **$34,815,554.98** |
| **Total Percent of Budget Expended though September 30, 2017:** | **53.24%** |

Footnotes:

1. Change Order number 1 did not result in a change in price

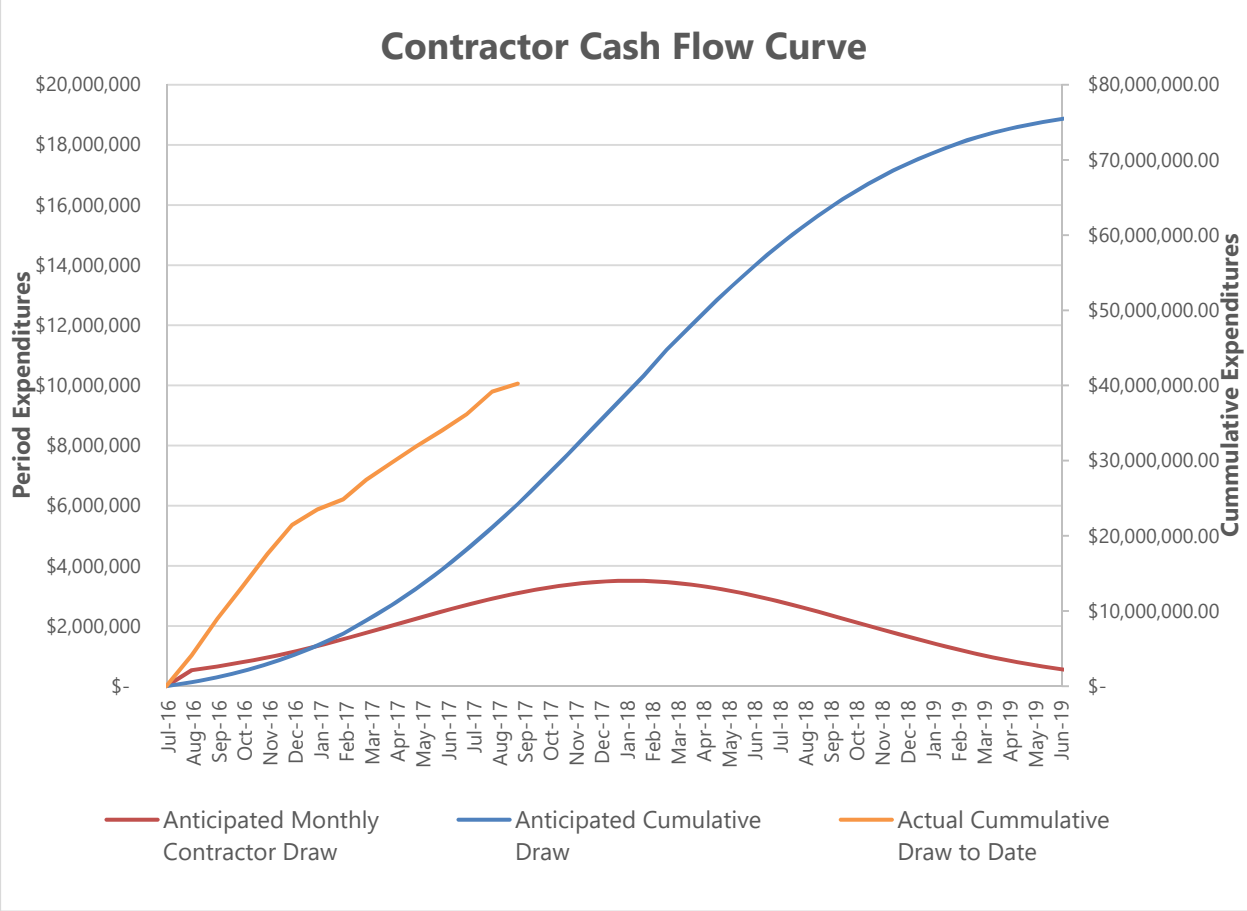
### 1.7.1 Summary of Change Orders This Reporting Period

As noted above, Change Orders No. 12 and 13 were approved by the NET RMA Board in the month of September and are both associated with the archeological delay. The terms of the Change Orders 12 extend the project schedule by 179 days and increase the construction contract amount by $1,078,075.83 for time related overhead expenses. Change Order 13 includes $493,609.77 for earthwork crew demobilization and remobilization costs. These Change Orders have been executed by the Authority and are awaiting full execution by the Contractor.

### 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***



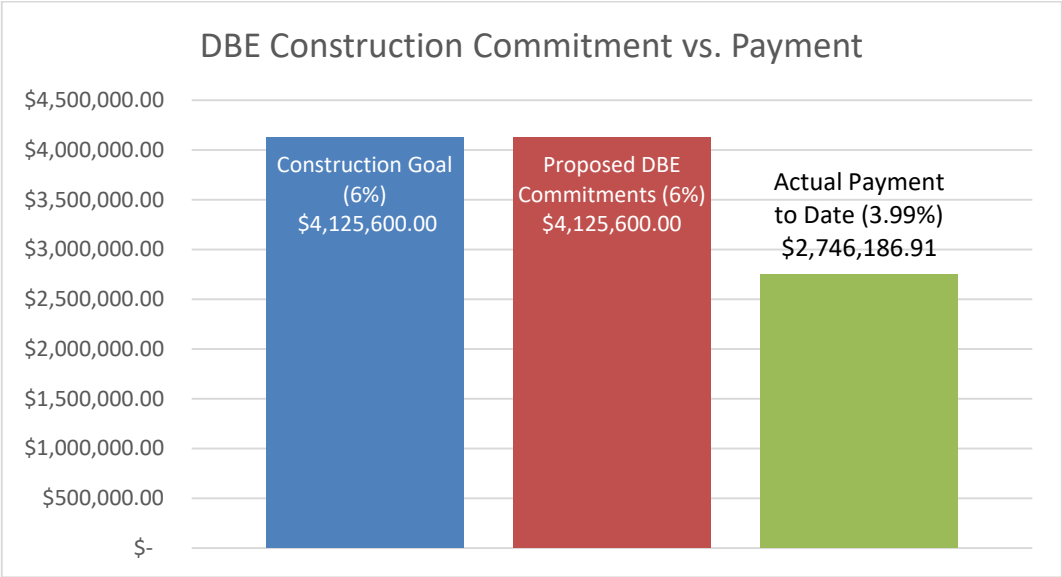

*Note: Contractor Cash Flow Curve includes both price and schedule revisions associated with approved Change Orders.*

## 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 $2,746,186.91 to DBE subcontractors, 3.99% of the original contract amount or 66.56% 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.
- Is currently working with the Authority to develop a response to a TCEQ letter transmitted to the NET RMA August 2017. The letter included provisions and timeframes for completion of the following activities: removal of accumulated sediment at areas surrounding the project Site, evaluation of the effectiveness of the existing sediment and erosion controls, and evaluation of appropriable soil stabilization measures. The response will include a construction plan to address in a timely manner all items noted the letter.
- 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 (OCTOBER 2017)*

*FIGURE 5: PROJECT AREA SOUTH OF IH 20*

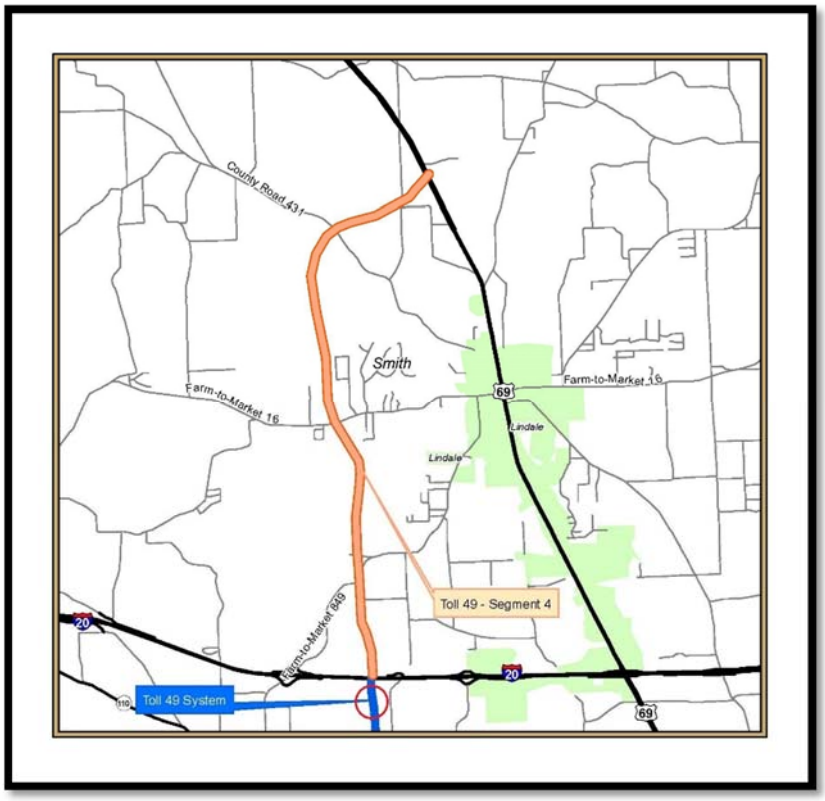


*FIGURE 6: PROJECT AREA AT IH 20*

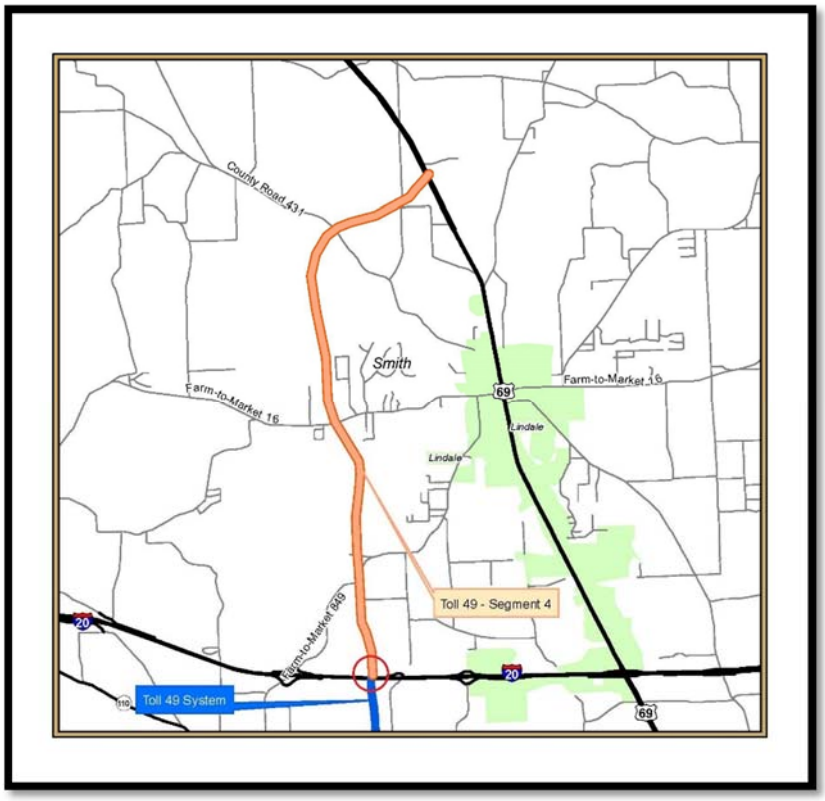


*FIGURE 7: PROJECT AREA BETWEEN IH 20 AND FM 849*

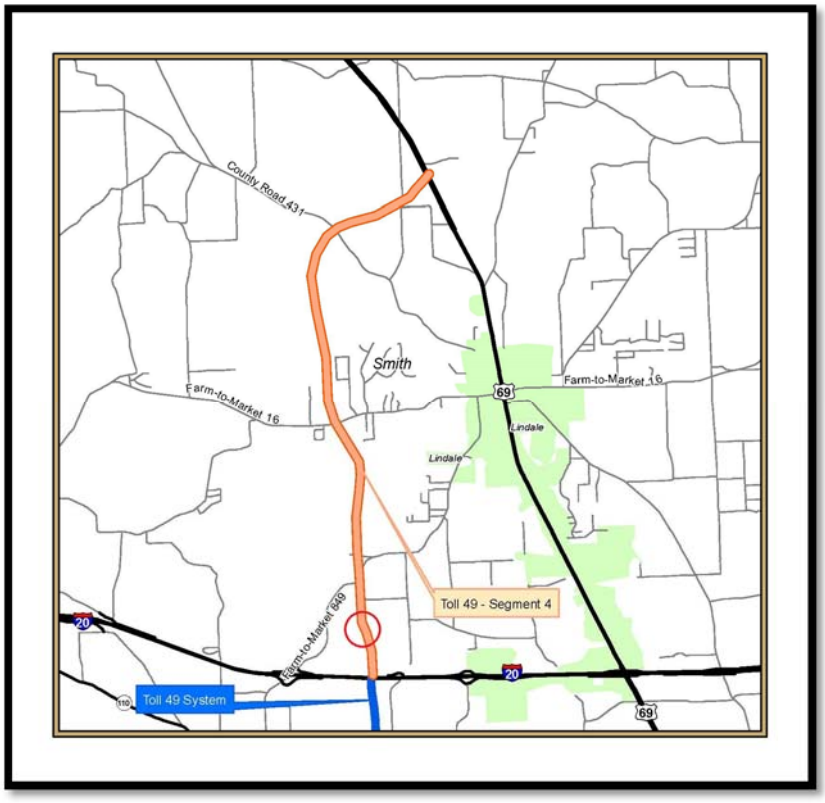


*FIGURE 8: PROJECT AREA AT EXISTING FM 849*

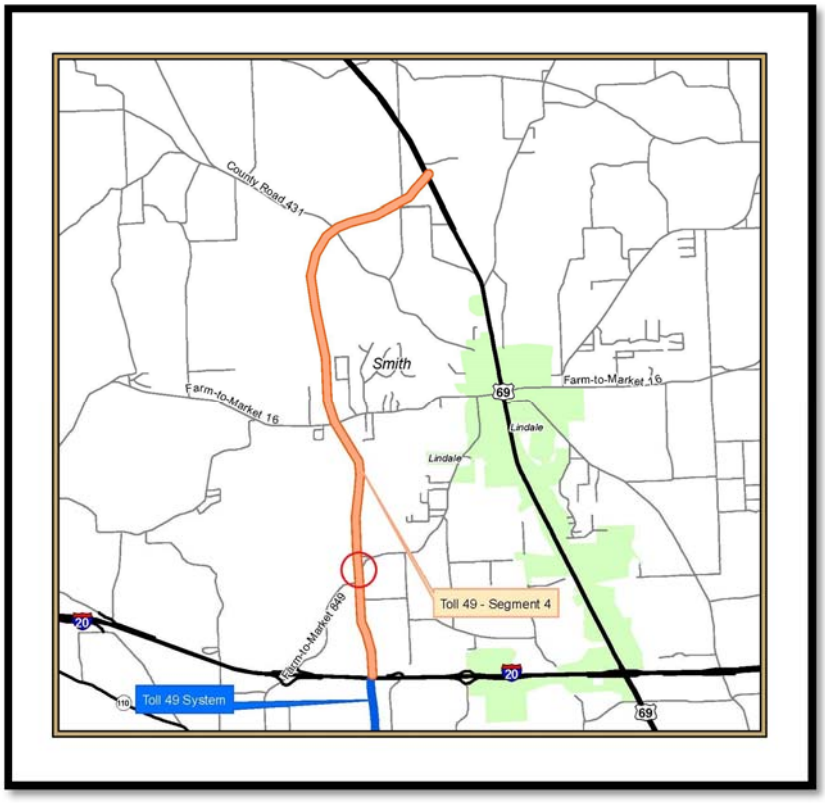


*FIGURE 9: PROJECT AREA DAVIS BRANCH TRIBUTARY*

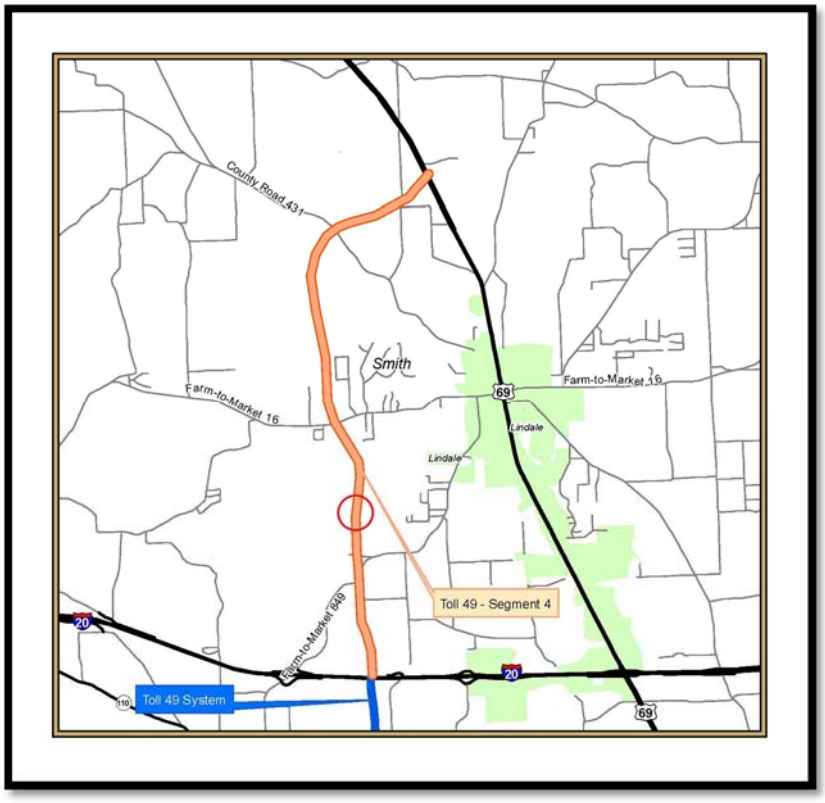


*FIGURE 10: PROJECT AREA DAVIS BRANCH*

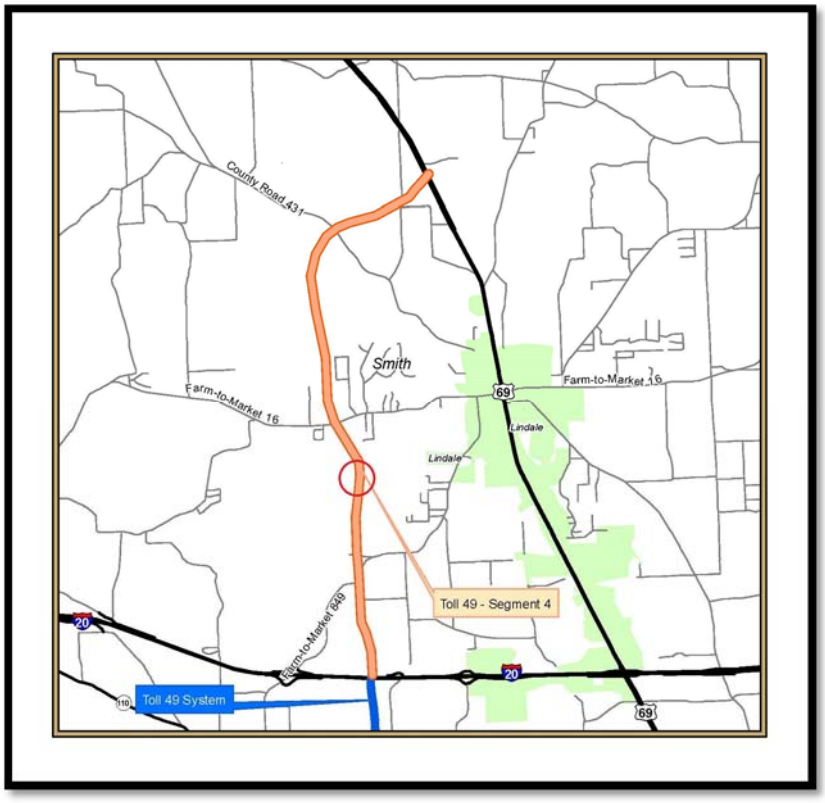


*FIGURE 11: PROJECT AREA BETWEEN DAVIS BRANCH AND FM 16*

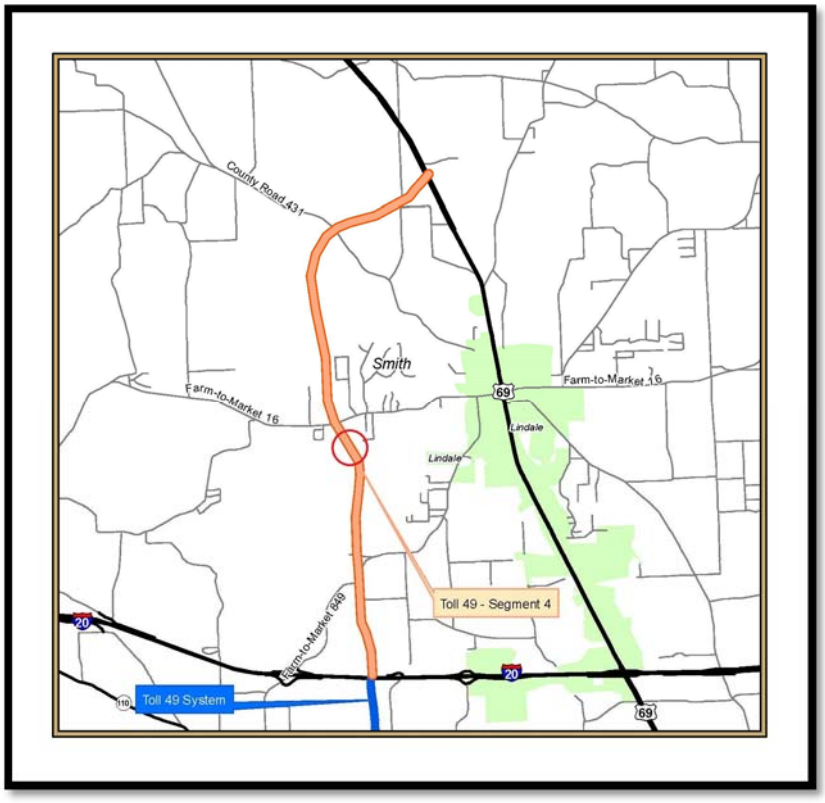


*FIGURE 12: PROJECT AREA AT FM 16*

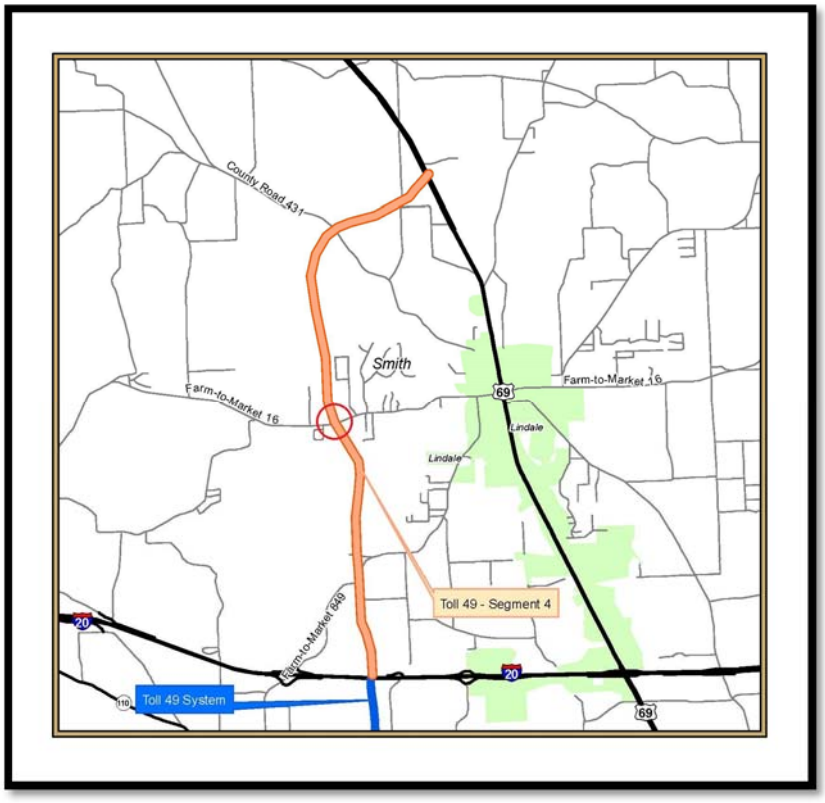


*FIGURE 13: QUARRIES NORTH OF FM 16*

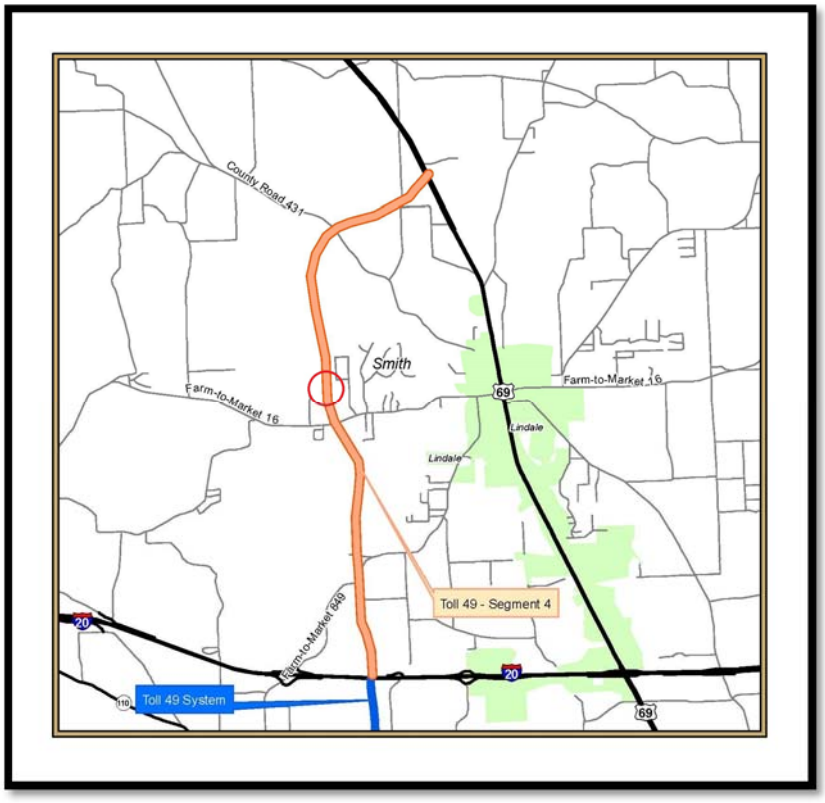


*FIGURE 14: PROJECT AREA NORTH OF THE FM 16 QUARRIES*

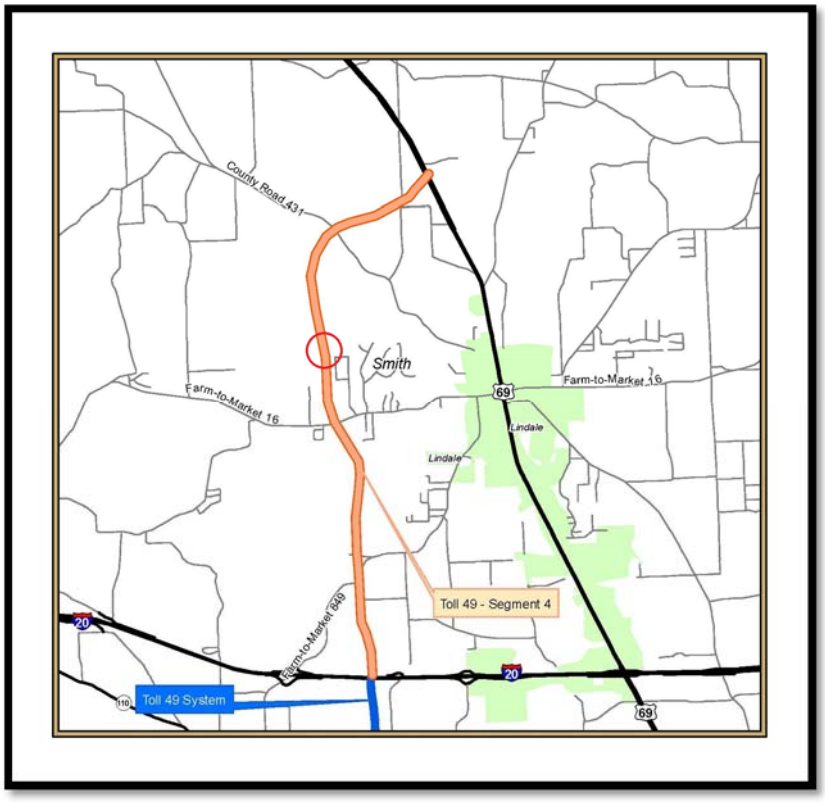


*FIGURE 15: PROJECT AREA BETWEEN FM 16 AND CR 341*

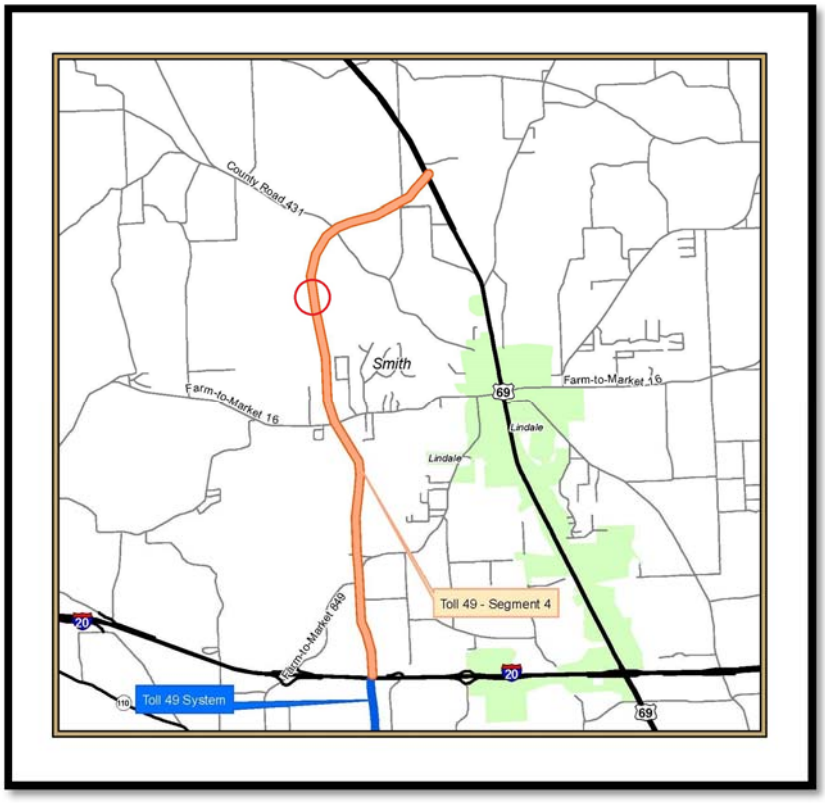


*FIGURE 16: PROJECT AREA SOUTH OF CR 431*

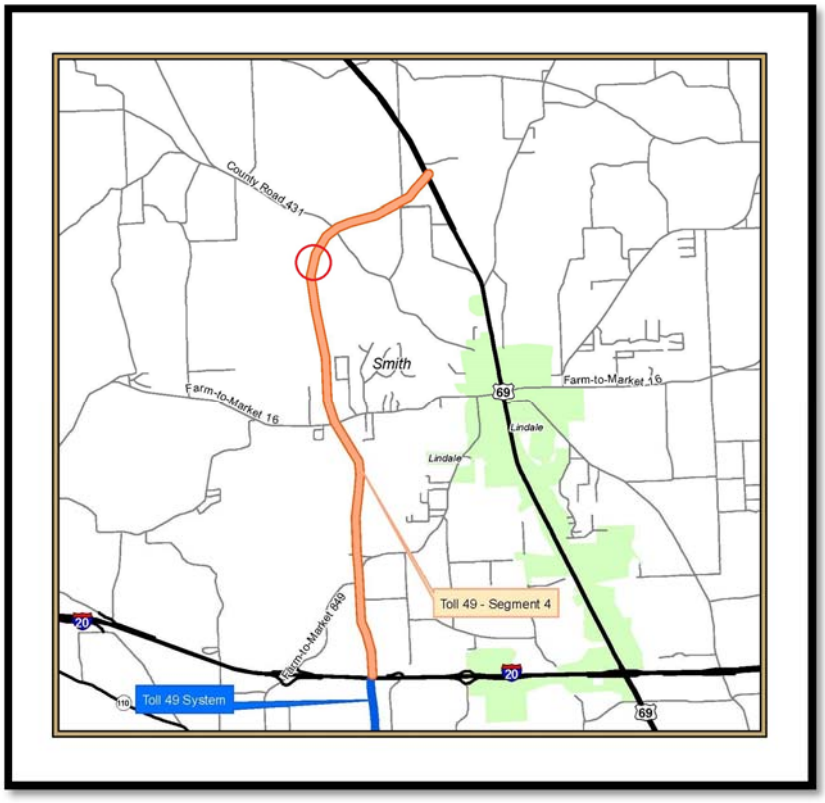


*FIGURE 17: PROJECT AREA AT CR 431*

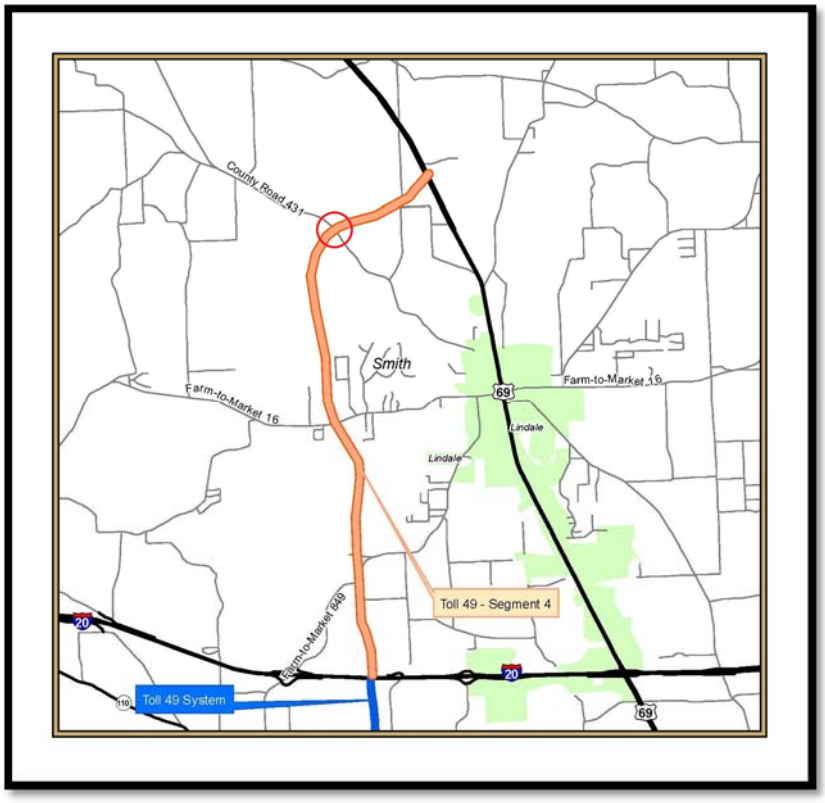


*FIGURE 18: PROJECT AREA NORTH OF CR 431*

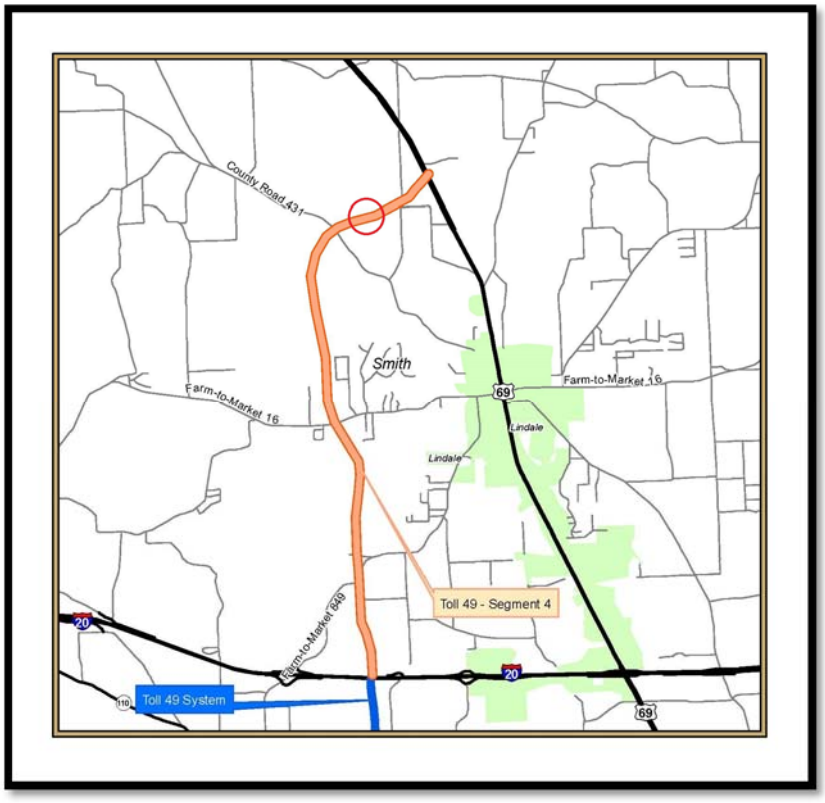


*FIGURE 19: PROJECT AREA AT CR 4118*

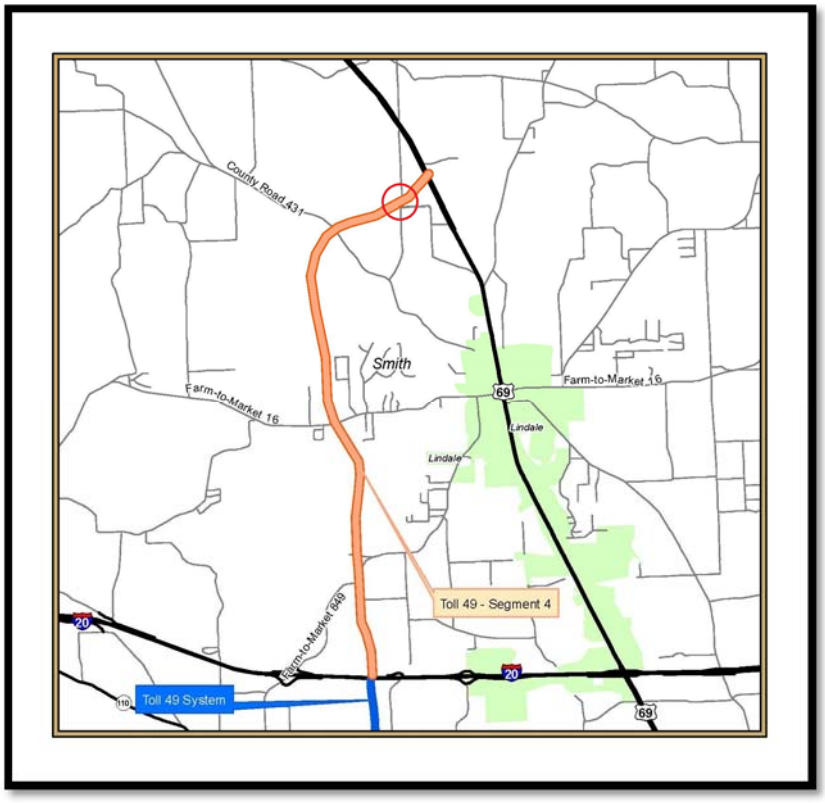


*FIGURE 20: PROJECT AREA AT US 69*