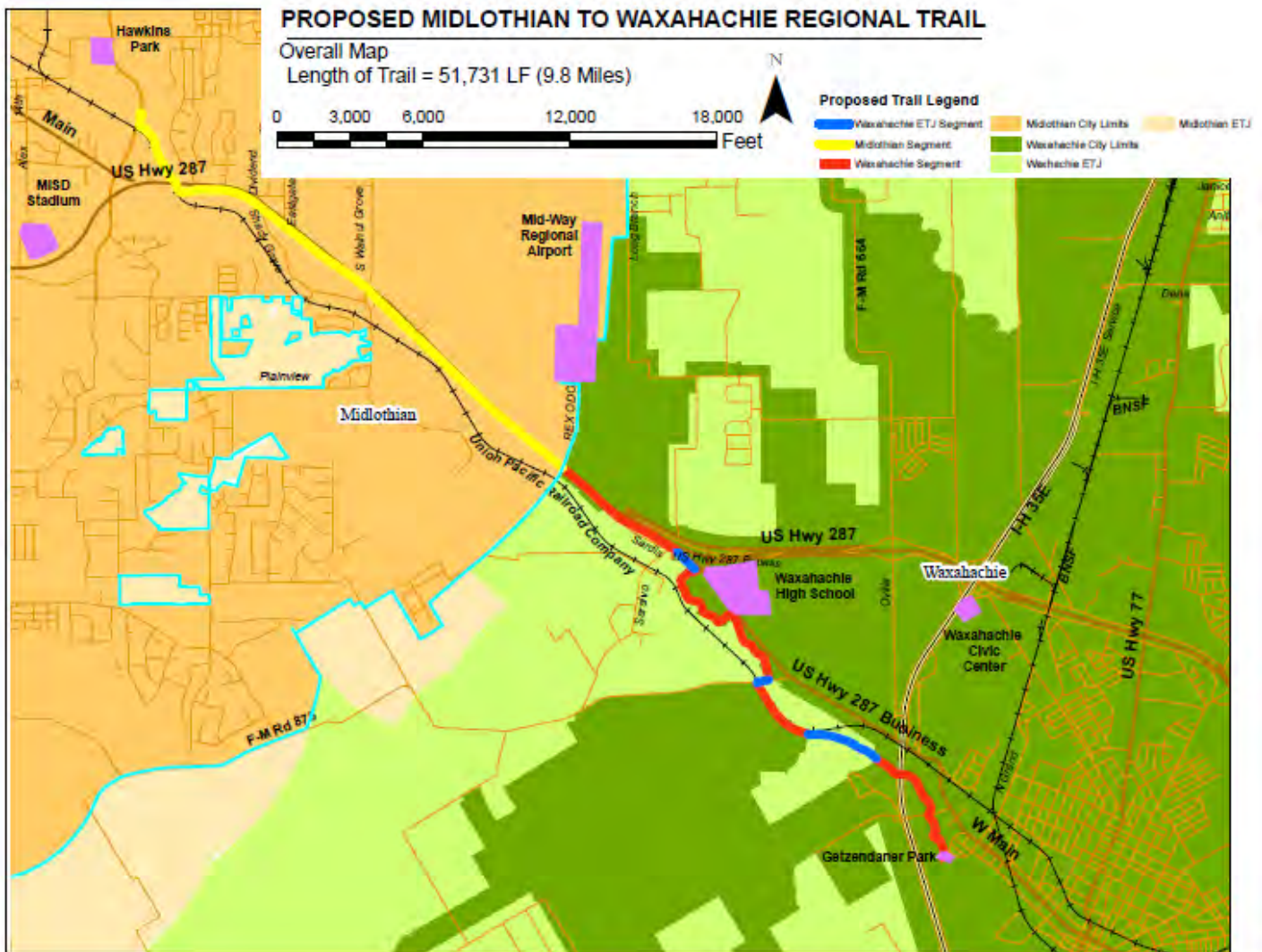


Project Description

NCTCOG procured professional services from Schrickel, Rollins | Parkhill, Smith & Cooper to evaluate alignment options, recommend a preferred route, and conduct 15 percent preliminary engineering for a Regional Veloweb shared-use path (trail). A design schematic, environmental summary, right-of-way and/or easement requirements, and opinions of probable costs by jurisdiction were developed.

The project study area is located in Ellis County, Texas generally along Waxahachie Creek and the Union Pacific Railroad (UPRR) from Midlothian Parkway near Hawkins Spring Park on the west to the existing Waxahachie city trail in Getzendaner Park east of IH 35E. The shared-use path will link the cities of Midlothian and Waxahachie and implement a portion of the Regional Veloweb adopted by the Regional Transportation Council as part of Mobility 2045: The Metropolitan Transportation Plan for North Central Texas as shown in Exhibit 1.

Exhibit 1 – Proposed Midlothian to Waxahachie Regional Trail



Project Length

The total project length is approximately 9.8 miles, with 5.2 miles on-system (within Texas Dept. of Transportation (TXDOT) right-of-way) and 4.62 miles off-system (within local jurisdictions). See Table 1.

TXDOT initiated a feasibility study for the addition of frontage roads along the US 287 facility (CSJ 0172-04-047). As the highway feasibility study is within the trail project limits, the project length was adjusted to identify the amount of anticipated trail length within TXDOT right-of-way to be constructed with a future frontage road project(s) and the remaining portions of the trail that is located within each city and/or its corresponding ETJ.

Table 1 – Midlothian to Waxahachie Regional Trail / Project Length by Jurisdiction

| Project Length by Jurisdiction | | | | | | |
|---|---------------------------|----------------|--------------------|----------------|-------------|----------------|
| Jurisdiction | Portion On-System (TXDOT) | | Portion Off-System | | Total | |
| | Length (LF) | Length (Miles) | Length (LF) | Length (Miles) | Length (LF) | Length (Miles) |
| Midlothian (within city limits or ETJ) | 18,978 | 3.59 | 4,783 | 0.91 | 23,761 | 4.5 |
| Waxahachie (within city limits or ETJ) | 8,389 | 1.59 | 19,580 | 3.71 | 27,969 | 5.3 |
| Total Length | 27,367 | 5.18 | 24,363 | 4.62 | 51,730 | 9.8 |

Project Cost

The consultant provided an opinion of probable construction cost (OPCC) in Year 2020 dollars (not adjusted for inflation) for the cities of Midlothian and Waxahachie (Table 2). Right-of-way, utilities, and trailhead costs were also provided as funding information for the local governments. A project cost was not provided for the portion of the trail that would be located within TXDOT right-of-way, since that portion of the trail corridor will be constructed as part of a future US 287 frontage road project(s). Cost summaries for alternative trail alignments are discussed in Tables 3 and 5 in the alignment sections of the document.

Table 2 – Opinion of Probable Construction Cost Summary

| Midlothian to Waxahachie Regional Trail | | | | | | | |
|--|----------------------------|-----------------------------|------------------------------|-------------------------|--------------------------------|--------------------------------------|---------------------------------|
| Cost Summary for Local Governments (Portion Located Outside of TXDOT ROW) ⁴ | | | | | | | |
| City | Length (feet) ³ | Length (miles) ³ | ROW & Utilities ¹ | Trailheads ² | Trail Design Cost ² | Trail Construction Cost ² | Total Project Cost ² |
| Midlothian | 4,783 | 0.91 | \$406,780 | \$1,703,595 | \$187,400 | \$1,561,663 | \$3,859,438 |
| Waxahachie | 19,580 | 3.7 | \$2,074,360 | \$956,710 | \$593,160 | \$4,942,999 | \$8,567,230 |
| Total | 24,363 | 4.62 | \$2481,140 | \$2,660,305 | \$780,560 | \$6,504,662 | \$12,426,668 |

Notes:

¹ Not eligible for Federal funding (construction funding by local government).

² Year 2020 dollars (not adjusted for inflation)

³ Project length for construction by City (trail sections not located within TxDOT right-of-way).

⁴ Project cost does not include future trail within the future TXDOT US 287 Frontage Road Project

Trail Alignment - Midlothian

The trail alignment included in the study area begins in Midlothian on the east approximately 700 ft. south of Hawkins Spring Park, crossing under the Midlothian Parkway bridge and continues due southeast adjacent to the Union Pacific Railroad for 0.9 miles, as referenced in Exhibit 2. The trail will cross under US 287 and continue southward, within the US 287 right-of-way. Segments of the proposed trail are within TXDOT right-of-way. Local government staff recommended keeping the trail within TXDOT right-of-way, to be constructed with a future frontage roadway project currently as part of the TXDOT / US 287 Frontage Road Feasibility Study (CSJ: 0172-04-047). A possible Trailhead C1 is proposed at Midlothian Pkwy. at Waxahachie Creek as shown in Exhibit 3; A possible Trailhead C2 is proposed at US 287 at Waxahachie Creek, shown in Exhibit 4. Trailheads would require additional right-of-way acquisition as identified in the project schematic.

Exhibit 2 – Trail Alignment in Midlothian (Midlothian Pkwy. to US 287) (Reference full project schematic: 1 C-101M Midlothian Trail Schematic.pdf).

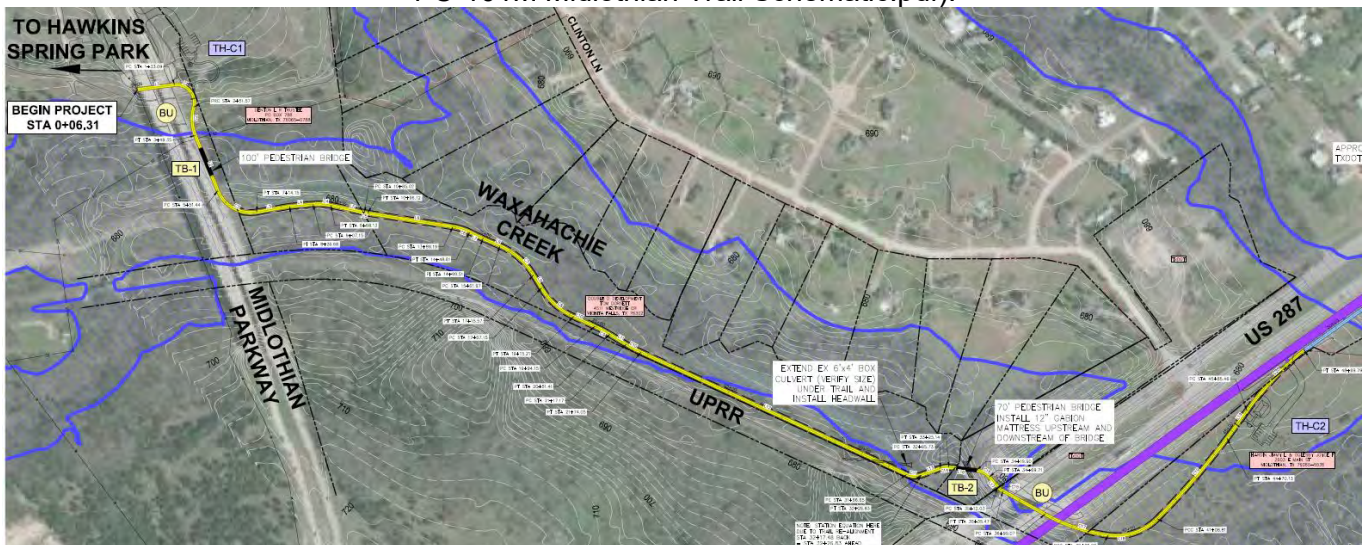


Exhibit 3 – Trailhead C1 (Midlothian Pkwy. @ Waxahachie Creek)

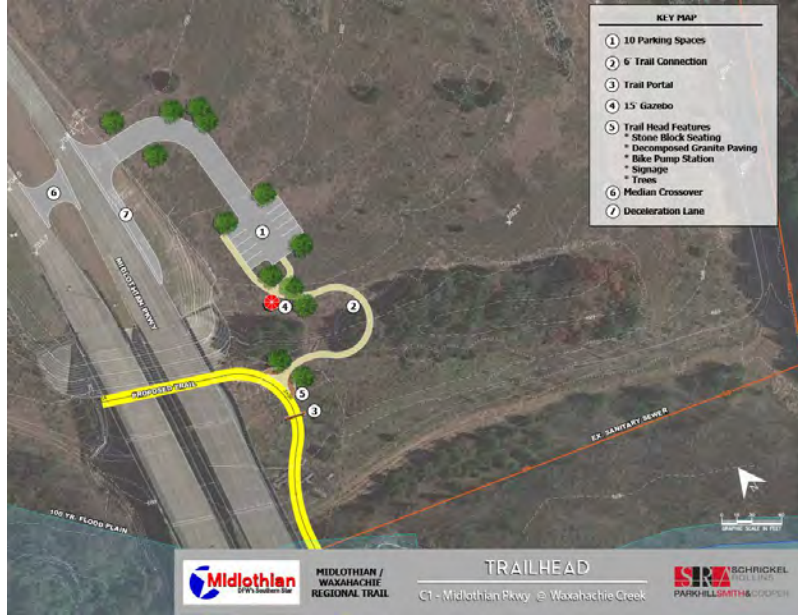
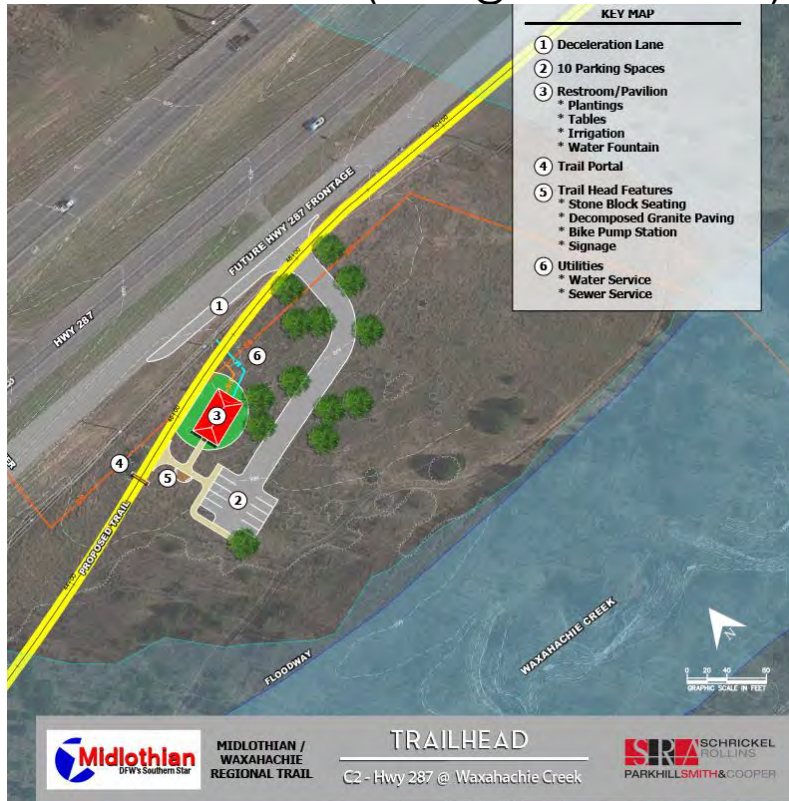


Exhibit 4 – Trailhead C2 (US 287@ Waxahachie Creek)



Trail Alignment Alternatives - Midlothian

Three alternative alignments were identified in Midlothian that could supplement a future sidepath, which is anticipated to be constructed along the US 287 highway frontage roads, within highway right-of-way. Alternatives 1 – 3 shown as a yellow dashed line below, were provided as options for construction by the City of Midlothian as a more scenic and quieter route for trail users. However, these trails would require coordination and funding by the City for implementation. The alternative alignments would require additional right-of-way acquisition as identified in the project schematic.

In Alternative 1 (Exhibit 5), the trail begins at Plainview Road and meanders southward through City-owned property with a connection to the US 287 frontage road at pedestrian trail bridge #6, near the electrical sub-station. The cost of Alternative 1 is estimated at \$3.8 million.

Exhibit 5 - Midlothian Alternative 1 (Plainview Rd. east to US287 FR/ Pedestrian Trail Bridge#6)
(Reference full project schematic: C-101M Midlothian Trail Schematic.pdf and C-102M Midlothian Trail Schematic.pdf).



In Alternative 2 (Exhibit 6), the supplemental trail alignment would deviate from the US 287 right-of-way at Bryan Place and extend southward through city-owned property with a connection to US 287 frontage road near pedestrian trail bridge #6 by an electrical sub-station. The cost of Alternative 2 is estimated at \$4.0 million (Year 2020 dollars). Possible Trailhead C3 is located at the intersection of Plainview Rd. and Bryan Place as shown in Exhibit 7. Trailhead would require additional right-of-way acquisition as identified in the project schematic.

Exhibit 6 – Midlothian Alternative 2 (Bryan Place south to US 287 FR/Pedestrian Trail #6)
 (Reference full project schematic: 1 C-101M Midlothian Trail Schematic.pdf)

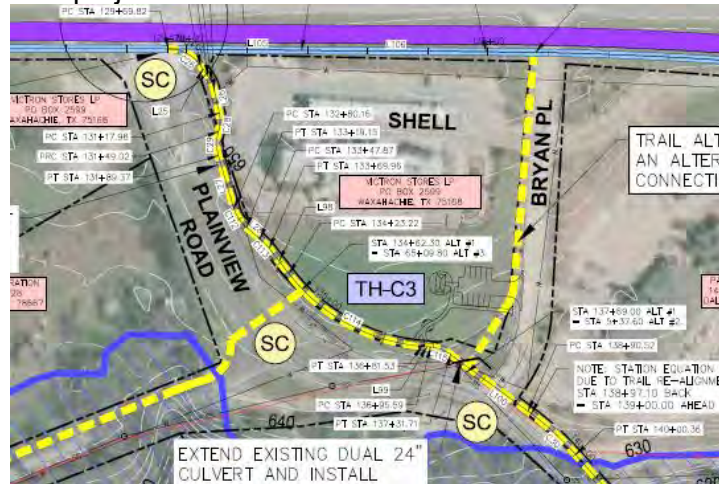
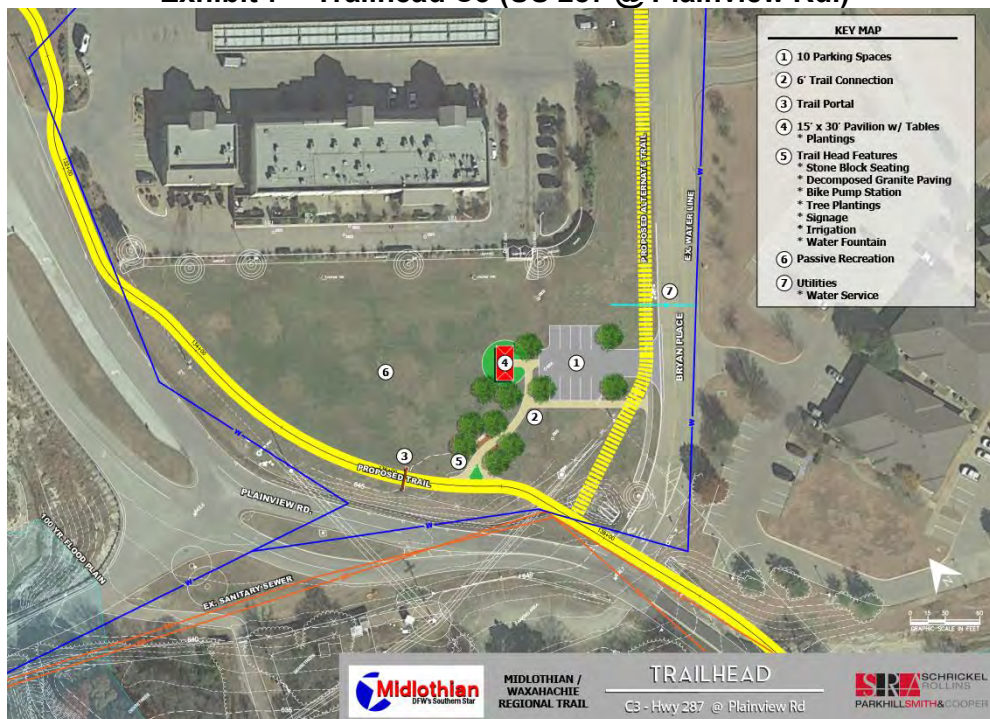


Exhibit 7 – Trailhead C3 (US 287 @ Plainview Rd.)



Alternative 3 (Exhibit 8) deviates from the future US 287 frontage road right-of-way and follows Shady Grove Rd. south to Plainview Rd. The cost of Alternative 3 is estimated at \$2.2 million.

Exhibit 8 – Midlothian Alternative 3 (Shady Grove Rd. from US 287FR to Plainview Rd.)
(Reference full project schematic: 1 C-101M Midlothian Trail Schematic.pdf)



A cost summary of each supplemental alternative trail alignment is listed in Table 3. These alternative trail routes coincide with the City of Midlothian trails master plan and would be in addition to the future sidepaths to be constructed in state right-of-way as part of the US 287 frontage road project.

Table 3 – Midlothian Supplemental Trail Alignment Alternatives Cost Summary¹

| Midlothian to Waxahachie Regional Trail (In addition to regional trail) | | | | | | | | |
|---|----------------------------------|--|---------------|----------------|-----------------|------------|------------------------------------|--------------------|
| City | Alternative | Description | Length (feet) | Length (miles) | ROW & Utilities | Trailheads | Trail Design and Construction Cost | Total Project Cost |
| Midlothian | Alternate 1 (Plainview Rd Route) | Plainview Rd. south to US287 FR at Trail Bridge #6 | 6,522 | 1.24 | \$69,960 | \$531,110 | \$3,232,298 | \$3,833,368 |
| | Alternate 2 (Bryan Place Route) | Bryan Place south to US287 FR at Trail Bridge #6 | 6,260 | 1.19 | \$44,000 | \$775,850 | \$3,190,326 | \$4,010,175 |
| | Alternate 3 (Shady Grove Route) | US 287 FR south to Plainview Rd. | 6,081 | 1.15 | \$636,900 | \$396,635 | \$1,163,296 | \$2,196,831 |

¹Year 2020 dollars (not adjusted for inflation)

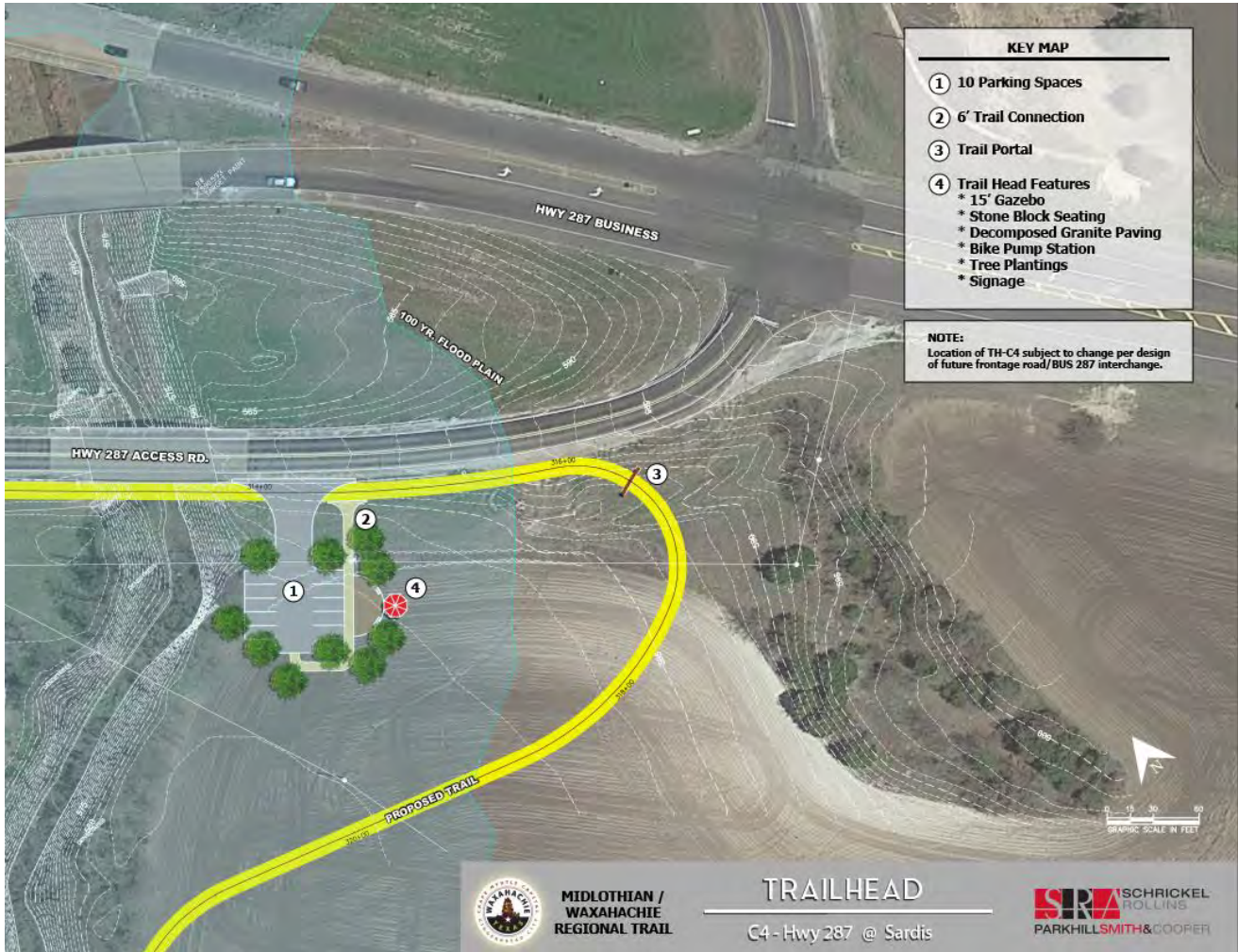
Waxahachie Trail Alignment

The trail within the Waxahachie area will extend from the west at the Waxahachie western city limit and extends southeasterly through the Sardis area within TXDOT right-of-way as part of the future US 287 frontage road project (Exhibit 9). This trail segment will be a part of the TXDOT / US 287 Frontage Road Feasibility Study. The trail deviates from US 287 right-of-way at the US 287 Business split and continues southward through the Waxahachie ISD property, generally parallel to Waxahachie Creek. Possible Trailhead C4 is proposed on the west side of US 287, east of Sardis, as shown in Exhibit 10. The location of Trailhead C4 is subject to change as per design of the future US 287 Business frontage road interchange design. An alternate location for the trailhead can be considered on the Waxahachie ISD property adjacent to the trail alignment. Waxahachie ISD property is proposed to be developed as a maintenance facility and provides adequate space for a trail alignment. Through the study process Waxahachie ISD (WISD) staff agreed an easement dedication would be granted to the City of Waxahachie for the project as the trail would be a beneficial access for the nearby Waxahachie High School. Trailhead would require additional right-of-way acquisition as identified in the project schematic.

Exhibit 9 – Waxahachie Trail Alignment (Waxahachie north city limit to Business US 287)
(Reference full project schematic: C-101W Waxahachie Trail Schematic.pdf)



Exhibit 10 – Trailhead C4 (US 287 BUS @ Sardis)



On the east side of the WISD property, the study identified two options for the trail to extend southward. The preferred trail alignment is shown as a solid yellow line in Exhibit 11, with Alternative 4 shown as dashed yellow. The preferred alignment remains at-grade through existing utility easement and crosses underneath the FM 875 bridge. It then loops around onto the south side of FM 875, over Waxahachie Creek with a 200 ft. proposed trail bridge (TB-7), with an east to west crossing of the UPRR tracks and parallel the rail right-of-way southward towards IH 35E. Possible Trailhead C5 is proposed on the southside of FM 875, east of the UPRR, shown in Exhibit 12. Trailhead would require additional right of way acquisition as identified in the project schematic.

In lieu of the preferred alignment along Waxahachie Creek, Trail Alternative 4 would follow US 287 Business with a crossing at FM 875 intersection and continue along the south side of FM 875, remaining within highway right-of-way. This option would allow for a pedestrian crossing utilizing the controlled intersection at US 287 Business at FM 875. The total cost of Alternative 4 within highway right-of-way is \$8,527,190 (Year 2020 dollars). The opinion of probable construction cost of the preferred alignment along Waxahachie Creek is essentially the same (\$8,567,230). A cost comparison is shown in Table 4. The slightly higher cost of the preferred alignment is related to drainage items.

Exhibit 11 – Waxahachie Trail Alignments at FM 875
 (Reference full project schematic: C-102W Waxahachie Trail Schematic.pdf)

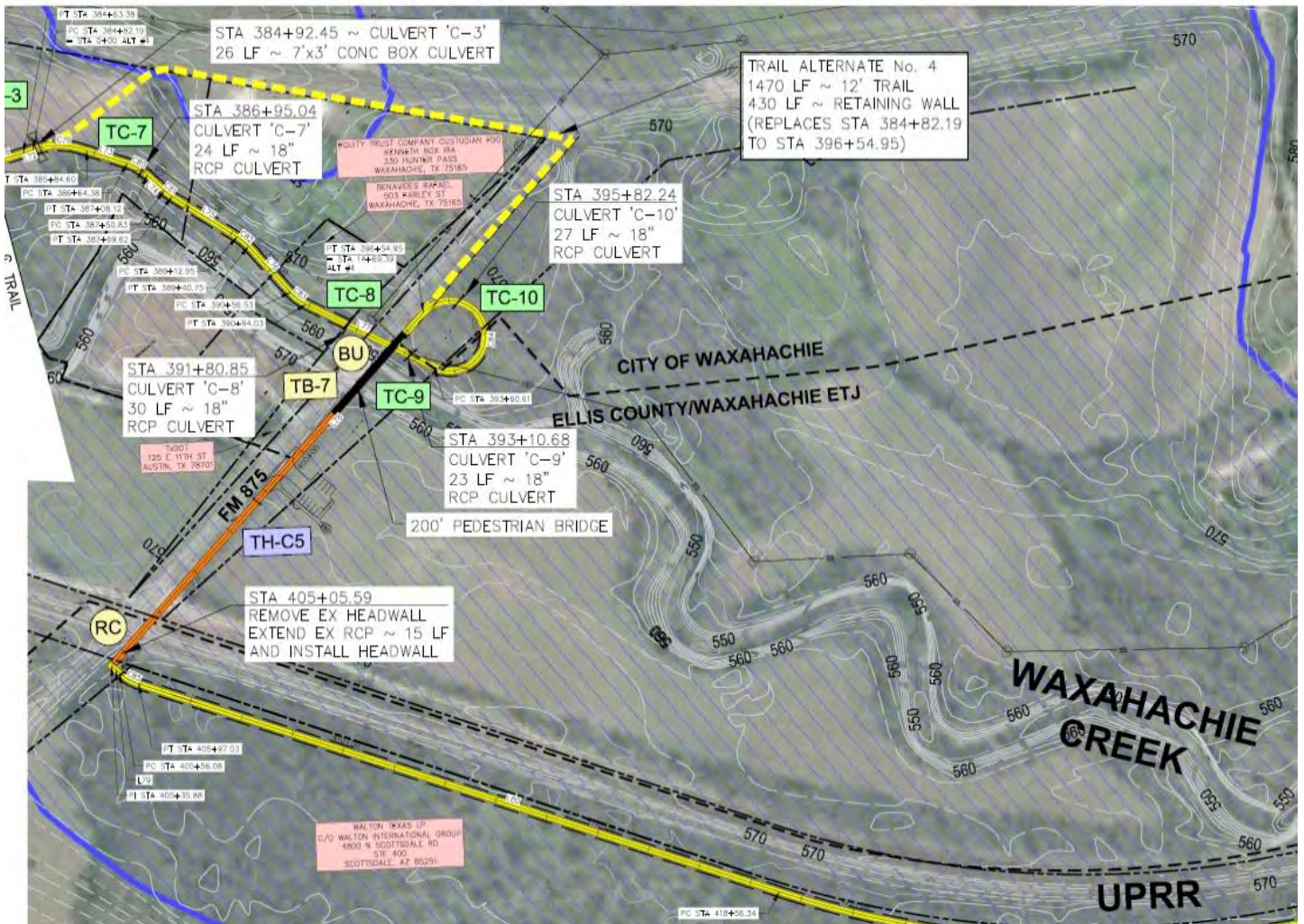


Exhibit 12 – Trailhead C5 (US 287BUS at FM 875)

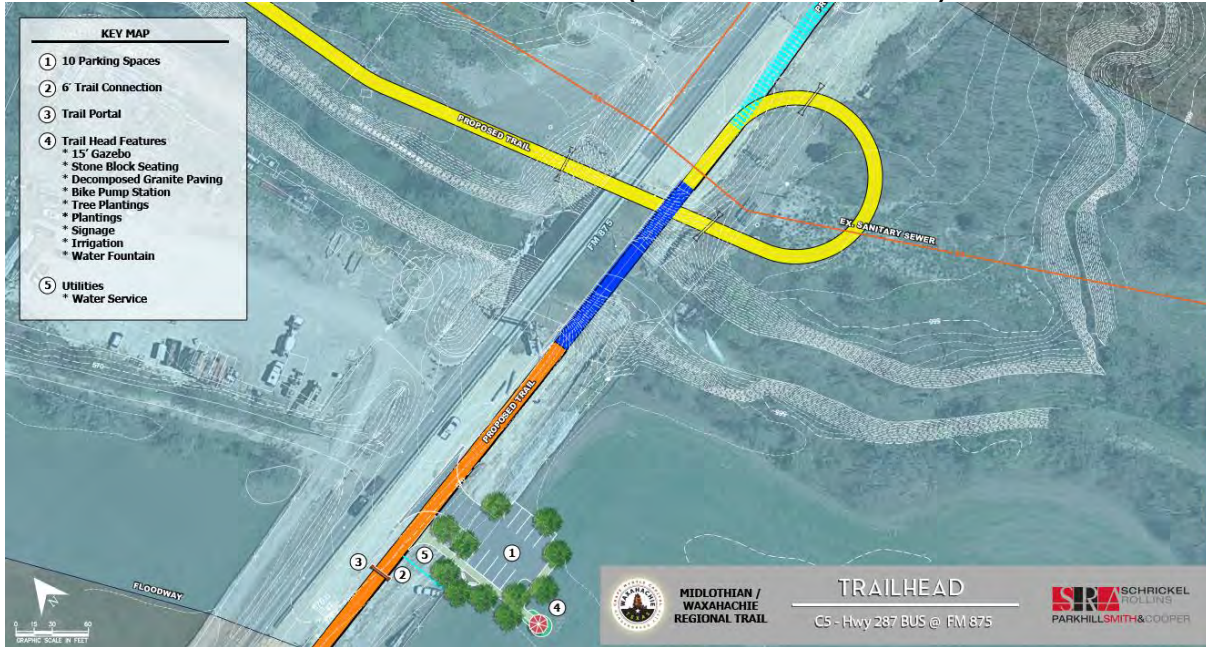


Table 4 – Waxahachie Trail Alternative Cost Comparison ¹

| Midlothian to Waxahachie Regional Trail | | | | | | | | |
|---|---|--|---------------|----------------|-----------------|-----------------------|------------------------------|--------------------|
| City | Alternative | Description | Length (feet) | Length (miles) | ROW & Utilities | Trailheads (Including | Trail Design and Const. Cost | Total Project Cost |
| Waxahachie | Preferred trail alignment (trail under FM 875 bridge) | North Waxahachie City Limits to Getzendaner Park | 19,359 | 3.67 | \$2074,360 | \$956,711 | \$5,536,159 | \$8,567,230 |
| Waxahachie | Alternate 4 (trail segment adjacent to US 287 FR at FM 875) within highway right-of-way | North Waxahachie City Limits to Getzendaner Park | 19,679 | 3.73 | \$2,032,010 | \$956,711 | \$5,538,469 | \$8,527,189 |

¹Year 2020 dollars (not adjusted for inflation)

The trail alignment continues easterly from FM 875 and across IH 35E as shown in Exhibit 13. TXDOT staff acknowledged the feasibility of the trail alignment under the IH 35E bridge over Waxahachie Creek. IH 35E is currently under construction and consists of the widening of the IH 35E main lanes from the existing four-lane facility to a six-lane facility with frontage roads (CSJ 0048-04-079). There is adequate horizontal clearance within the new IH 35E bridge columns to accommodate the trail. The alignment continues across Brookside Rd., with possible Trailhead C6 south of the trail, shown in Exhibit 14. Based on the City of Waxahachie recommendation, the preferred location is for Trailhead C6 at Brookside Rd. and not near the northbound IH 35E frontage road. The engineering assessment identified higher elevations would make the terrain inaccessible for a trailhead at that location. City staff determined a trailhead at Getzendaner Park was not necessary as part of this project and would instead be part of the planned park improvements. The project terminus is at Getzendaner Park.

Exhibit 13 - IH 35E at Waxahachie Creek
 (Reference full project schematic: C-102W Waxahachie Trail Schematic.pdf)

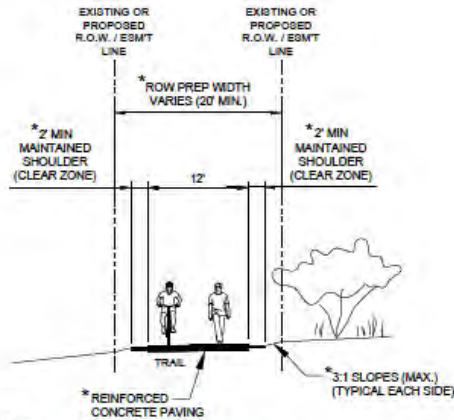


Exhibit 14 – Trailhead C6 (Brookside at Waxahachie Creek)



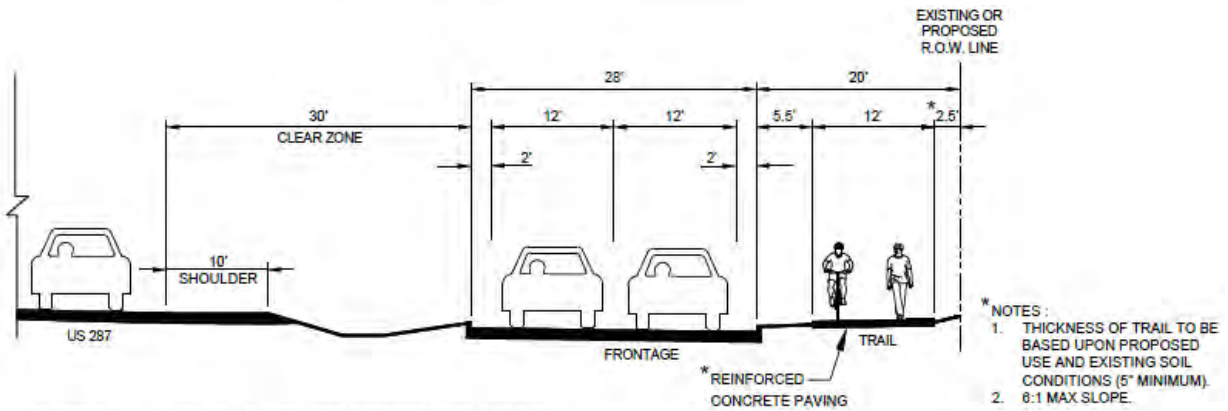
Proposed Typical Sections

Trail design standards include a 12-ft. standard width for trails with 2-ft. horizontal clearance on each side.



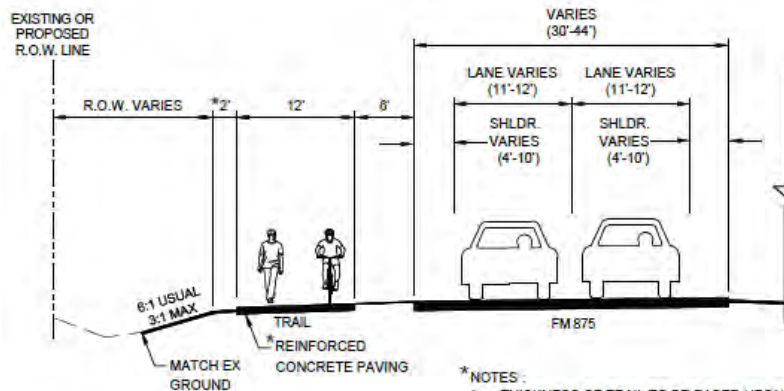
- *NOTES:
1. THICKNESS OF TRAIL TO BE BASED UPON PROPOSED USE AND EXISTING SOIL CONDITIONS (5" MINIMUM).
 2. 2' SHOULDER SHALL HAVE 6:1 MAX SLOPE.
 3. WHERE CONSTRUCTION OF SLOPES OUTSIDE OF PROPOSED 20' WIDE ROW / EASEMENT IS REQUIRED, ADDITIONAL ROW OR A TEMPORARY CONSTRUCTION EASEMENT WILL NEED TO BE ACQUIRED.

1 TYPICAL TRAIL SECTION
N.T.S. TYPICAL SECTION.DWG



- *NOTES:
1. THICKNESS OF TRAIL TO BE BASED UPON PROPOSED USE AND EXISTING SOIL CONDITIONS (5" MINIMUM).
 2. 6:1 MAX SLOPE.

2 TYPICAL SECTION - US 287 FRONTAGE ROAD
N.T.S. TYPICAL SECTION.DWG

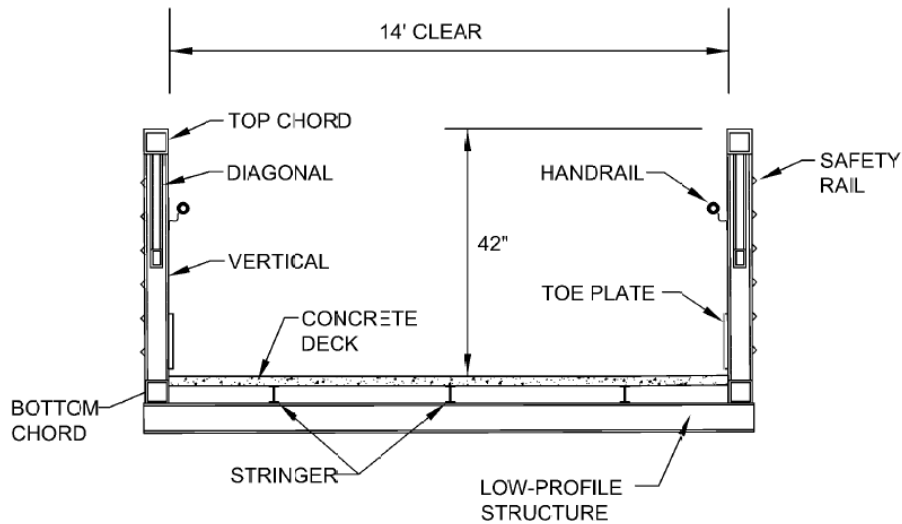
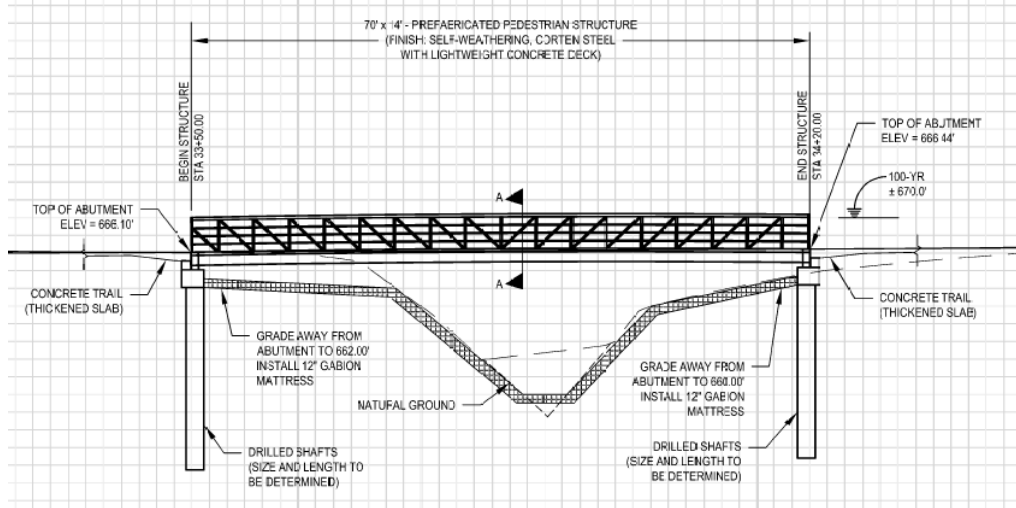


- *NOTES:
1. THICKNESS OF TRAIL TO BE BASED UPON PROPOSED USE AND EXISTING SOIL CONDITIONS (5" MINIMUM).
 2. 2' SHOULDER SHALL HAVE 6:1 MAX SLOPE.

3 TYPICAL SECTION - FM 875
N.T.S.

Proposed Bridge Typical Sections

The standard width for bridge sections are 14-ft. and a vertical clearance of 12-ft. for emergency vehicles.



SECTION A-A
NO SCALE

Environmental Impacts

An environmental memorandum was prepared, and no significant impacts were identified within the project area.

Although one historical marker was identified within the study corridor, the site is not listed in the National Register of Historic Places (NRHP). The marker is located at 635 Sardis Road in the City of Midlothian and pertains to the Sardis School, which served the local community of Sardis in the late 19th and early 20th centuries. The school was closed by the Waxahachie ISD and it is not listed in the NRHP. The building still stands at the time of this report and appears to contain enough architectural integrity to be potentially eligible for listing.

Conclusion

The next phase of design will be in accordance with city funding priorities, as well as a future TxDOT frontage road project along US 287. Coordination with TxDOT will be ongoing for the US 287 Frontage Road Feasibility Study and IH 35E at Waxahachie Creek reconstruction project. The City of Waxahachie may be able to move forward with trail construction from Getzendaner Park to IH 35E. Trail construction west of IH 35E will need to be coordinated with TxDOT's IH 35E frontage road Phase 2 project. The results of a hydrologic and hydraulic study currently underway for Waxahachie Creek will also be beneficial for development in the project area. The hydrologic and hydraulic study begins upstream of the creek's watershed, which is west of Midlothian, and continues downstream to South Prong Creek, which is downstream of the Lake Waxahachie dam.

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