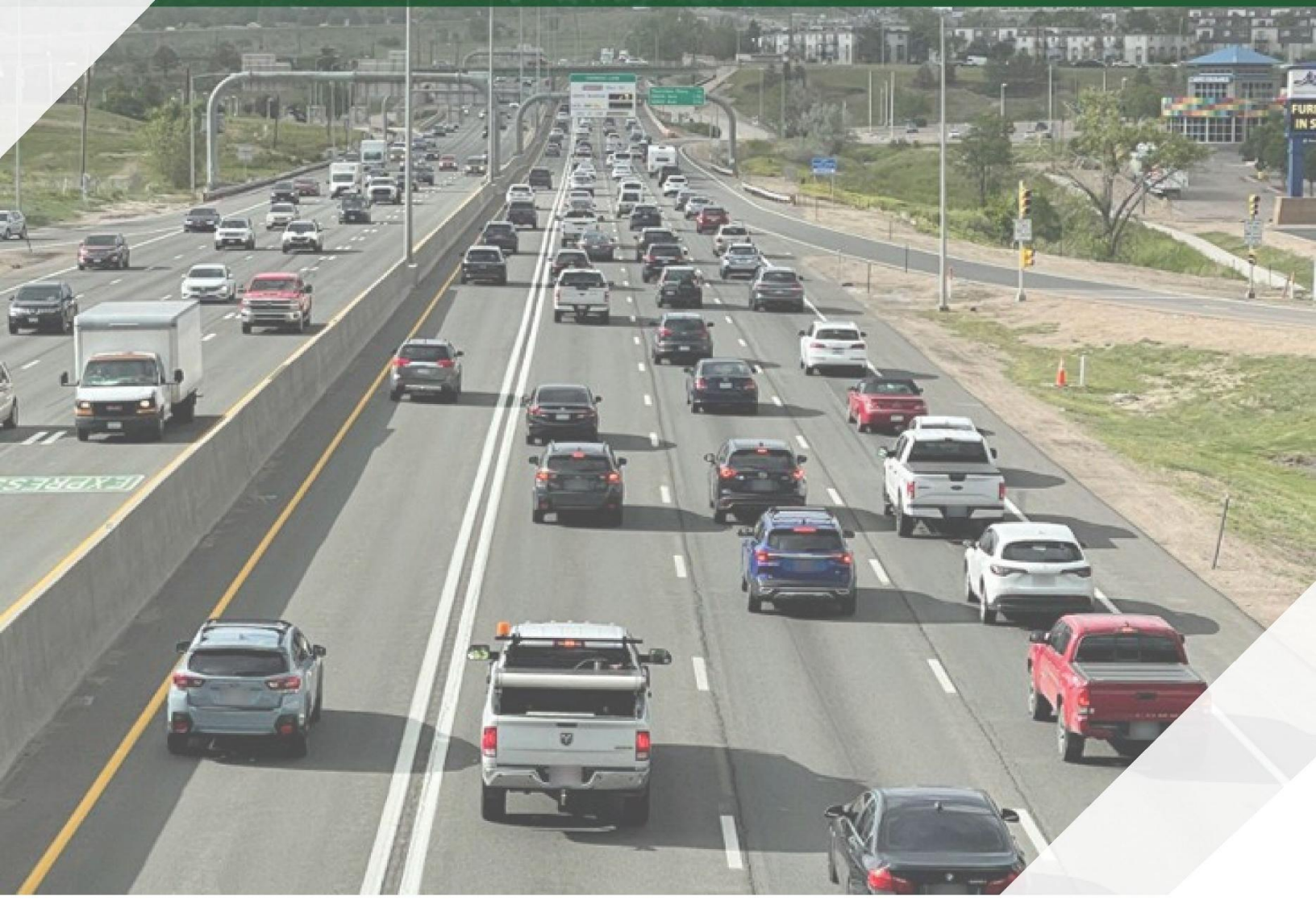
I-25 (US 36 to 104th Avenue)

Safety and Operations Improvements Project



Appendix D5: Floodplain Technical Report

October 2026

[Page intentionally left blank]

Appendix D5. Floodplain Technical Report

October 21, 2026 – Version 8
Project Number: PM 0253-299
Subaccount Number: 25563

Contents

Acronyms and Abbreviations ..... **ii**

1.0 Introduction and Background **1**

2.0 Regulatory Setting **3**

3.0 Methodology **5**

4.0 Existing Conditions **6**
4.1 Niver Creek 6
4.2 Grange Hall 8

5.0 Environmental Consequences **11**
5.1 No Action 11
5.2 Proposed Action 11
5.2.1 Niver Creek 11
5.2.2 Grange Hall 13

6.0 Mitigation **14**
6.1 No Action 14
6.2 Proposed Action 14
6.2.1 Niver Creek 14
6.2.2 Grange Hall 14
6.3 Mitigation Commitments 16

7.0 Required Permits and Clearance Needs **17**

8.0 References **18**

Attachments

Attachment A. Project Information
Attachment B. Niver Creek Floodplain Reference Documents
Attachment C. South Grange Hall Creek Floodplain Reference Documents

Figures

Figure 1. Project Study Area 2
Figure 2. Floodplains Overview Map 4
Figure 3. Niver Creek Floodplains Map 7
Figure 4. Grange Hall Floodplain Map 9

Tables

Table 1. Proposed Action Impacts on Floodplain Resources 11
Table 2. Mitigation Commitments on Floodplain Resources 16

Acronyms and Abbreviations

Acronym or Abbreviation	Full Name
CDOT	Colorado Department of Transportation
CLOMR	Conditional Letter of Map Revision
EA	Environmental Assessment
EIS	Environmental Impact Statement
FHAD	Flood Hazard Area Delineation
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
ft	feet
I-25	Interstate 25
I-76	Interstate 76
I-270	Interstate 270
LOMA	Letter of Map Amendment
LOMC	Letter of Map Changes
LOMR	Letter of Map Revisions
MDP	Major Drainageway Planning
MHFD	Mile High Flood District
PEL	Planning and Environmental Linkages
ROD	Record of Decision
ROW	right-of-way
RTD	Regional Transportation District
SHFA	Special Flood Hazard Area
US 36	United States Highway 36
USDOT	United States Department of Transportation

1.0 Introduction and Background

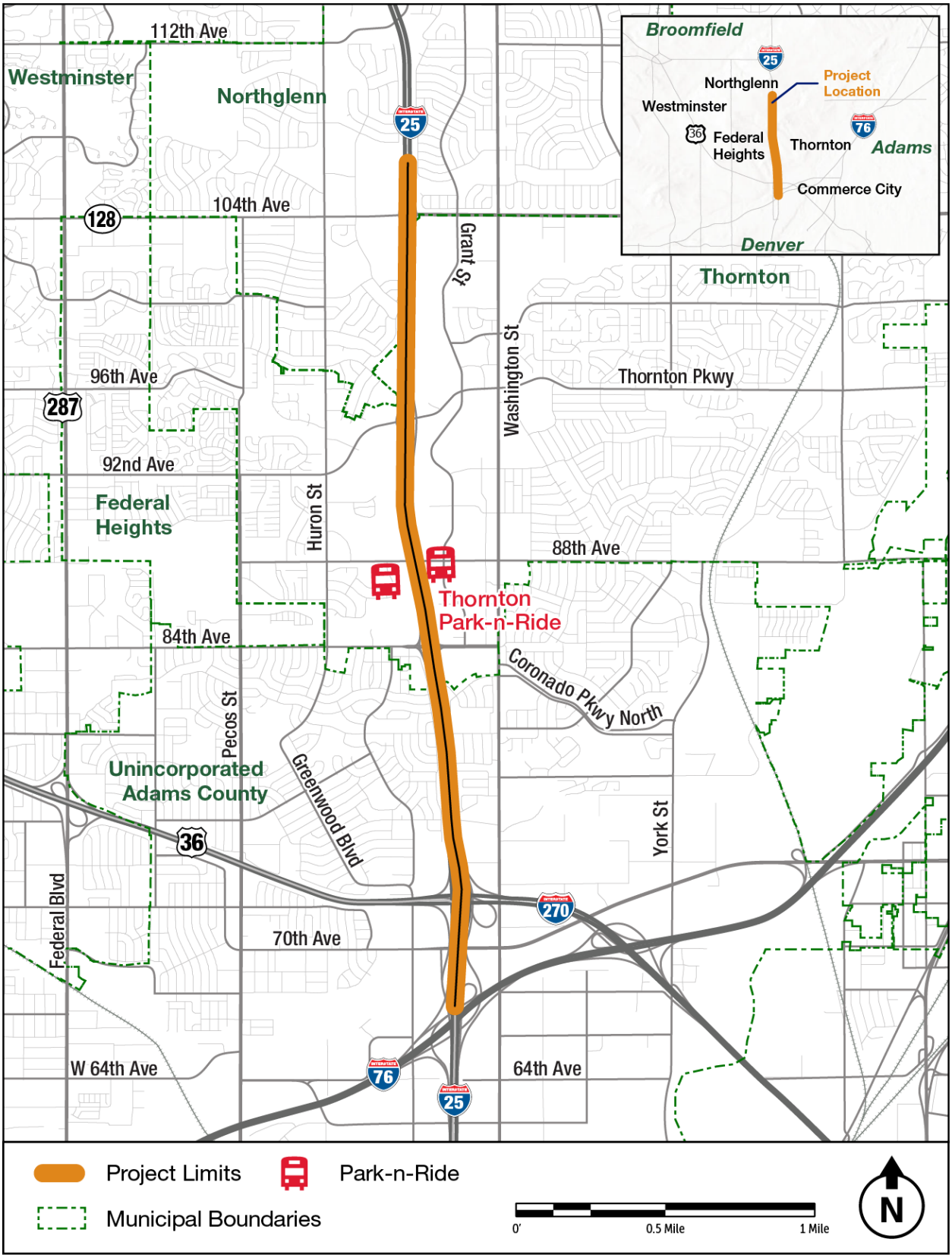
The Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA) are proposing transportation improvements to Interstate 25 (I-25) between United States Highway 36 (US 36) and 104th Avenue (**Figure 1**). This Floodplain Technical Report was prepared to support evaluation of the I-25 from US 36 to 104th Avenue project (the project). The Regional Transportation District (RTD) is a cooperating agency.

CDOT has previously completed an Environmental Impact Statement (EIS) and other planning efforts that recommended improvements to this segment of I-25. The current project evaluates proposed transportation improvements that reflect and build upon previous recommendations. Because the current project includes elements that were not evaluated and approved in the **North I-25 Record of Decision 1** (ROD1) (FHWA and CDOT, 2011b), this project is undergoing new evaluation under the National Environmental Policy Act (NEPA).

The following project information can be found in **Attachment A** Project Information:

- Project History
- Project Study Area
- Purpose and Need
- Proposed Action Description

Figure 1. Project Study Area



2.0 Regulatory Setting

The Federal Emergency Management Agency (FEMA) regulates floodways and floodplains through the consideration of changes in the floodway and floodplain limits. The primary concern regarding floodways and floodplains is their ability to convey stormwater flows and their potential to impact properties or structures.

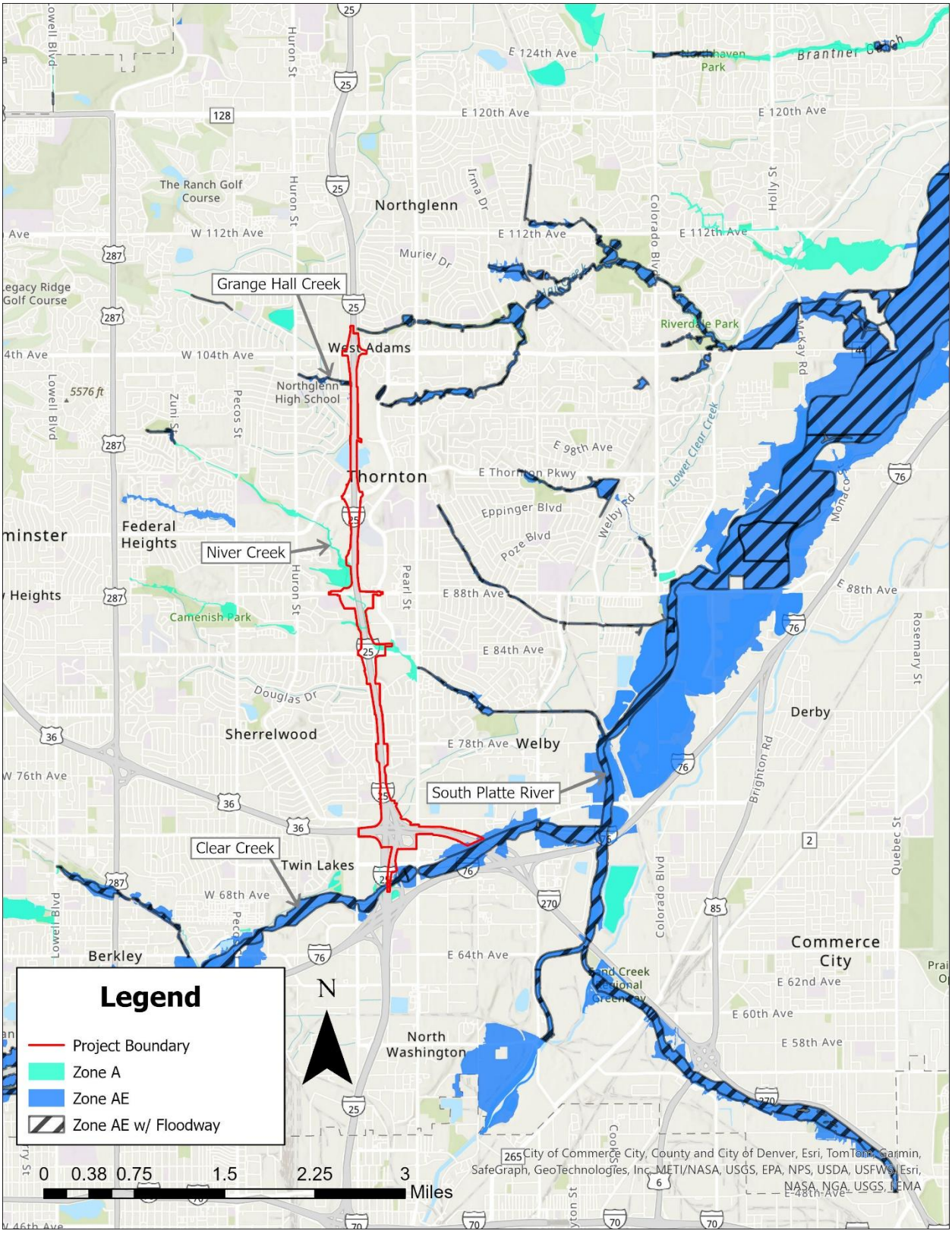
FEMA publishes flood map related resources online, which have been obtained and reviewed. Flood Insurance Rate Maps (FIRM), current and pending Flood Insurance Studies (FIS), and any relevant Letters of Map Changes (LOMC) near the project were obtained and reviewed (FEMA, 2024a and FEMA, 2024b). In addition to FEMA resources, relevant available reports and resources were obtained from the Mile High Flood District (MHFD), including Flood Hazard Area Delineation (FHAD) reports and Major Drainageway Planning (MDP) studies (MHFD, 2018). Additionally, approximate watershed boundaries were obtained and reviewed from MHFD.

Based on the review of FEMA and MHFD resources, four major waterways and associated tributaries were identified near the project area. Two of the four relevant major waterways identified, Niver Creek and South Grange Hall Creek, cross I-25 within the project area limits. The other two relevant major waterways identified, Clear Creek and Grange Hall Creek, cross I-25 outside the project area limits. All four of the identified waterways are located within individual watersheds per MHFD mapping data as shown on **Figure 2**. Note that although the project boundary intersects with the Clear Creek floodplain, the work area itself does not interface with the floodplain; thus, Clear Creek is not discussed within this analysis.

All the relevant waterways and watersheds identified are generally flowing from west to east, toward the South Platte River.

Potential impacts on floodplains and floodways are discussed for the two applicable waterways in the following sections. The two major waterways located outside the proposed limits of disturbance near the project were not evaluated because there will be no impacts to any floodplains or floodways outside the proposed limits of disturbance.

Figure 2. Floodplains Overview Map



3.0 Methodology

The FEMA FIRM maps were investigated for the presence of Special Flood Hazard Areas (SFHAs) within and near the project area along I-25. SFHAs are defined as the area that will be inundated by the flood event having a 1 percent chance of being equaled or exceeded in any given year (often referred to as the base flood or 100-year flood) (FEMA, 2017). Development within the SHFA is prohibited by FEMA unless it can be shown that the development does not increase the height of flooding during a 100-year equivalent event but can be permitted provided the development meets NFIP and local floodplain regulations.

The study area for floodplains consists of the disturbance areas resulting from construction of the Proposed Action. Based on current preliminary designs, the proposed roadway improvements may extend into the SFHA and change the floodplain along the I-25 Corridor for multiple floodplain crossings of I-25. In addition, existing floodplain limits envelope parts of the interstate which presents a risk for CDOT and the travelling public. Therefore, the analysis of the Proposed Action floodplain impacts as well as proposed floodplain alternatives to resolve the floodplain encroachment focuses on how the floodplain alternatives:

- Impacts to the base flood elevation. This analysis requires hydraulic modeling and coordination with hydraulic design staff.
- Ensure consistency with local and state floodplain ordinances, which may be more restrictive than FEMA floodplain regulations.
- Require additional coordination with FEMA to revise the floodplain if the project is not able to meet NFIP and local floodplain requirements.

Based on current designs, it is anticipated that an increase in floodplain base flood elevation will occur at multiple locations within the project area. If during final design the project still creates a rise in floodplain elevations, a Conditional Letter of Map Revision (CLOMR) shall be submitted to FEMA to notify them of the rise in the floodplain. Any revisions to floodplain maps would go through the FEMA Letter of Map Change (LOMC) process. Should there be impacts to structures, FEMA requires proof of mitigation for structures that would have been adversely impacted prior to the approval of any map revisions. Once approval of map revisions is granted, the revised map is updated through a Letter of Map Revision (LOMR) submittal to FEMA.

4.0 Existing Conditions

Prior NEPA-Level Planning describes the existing conditions as follows:

4.1 Niver Creek

The main stem of Niver Creek is approximately 5.3 miles long and primarily flows southeast towards a confluence with the South Platte River, with headwaters located near Ruston Park northwest of the project area, per MHFD data (MHFD, 2018). Two major tributaries to Niver Creek, Tributary M and Tributary L, converge with Niver Creek near the 88th Avenue bridge over I-25. **Figure 2** shows an overview of Niver Creek and associated tributaries in relation to the project area. Niver Creek and Niver Creek Tributary L cross beneath the I-25 Corridor within the proposed limits of disturbance, just south of 88th Avenue, as shown on **Figure 3**.

Niver Creek crosses beneath I-25, via a culvert, approximately 400 feet south of the 88th Avenue bridge over I-25. At this crossing location, a SFHA designated Zone A has been designated on FEMA resources.

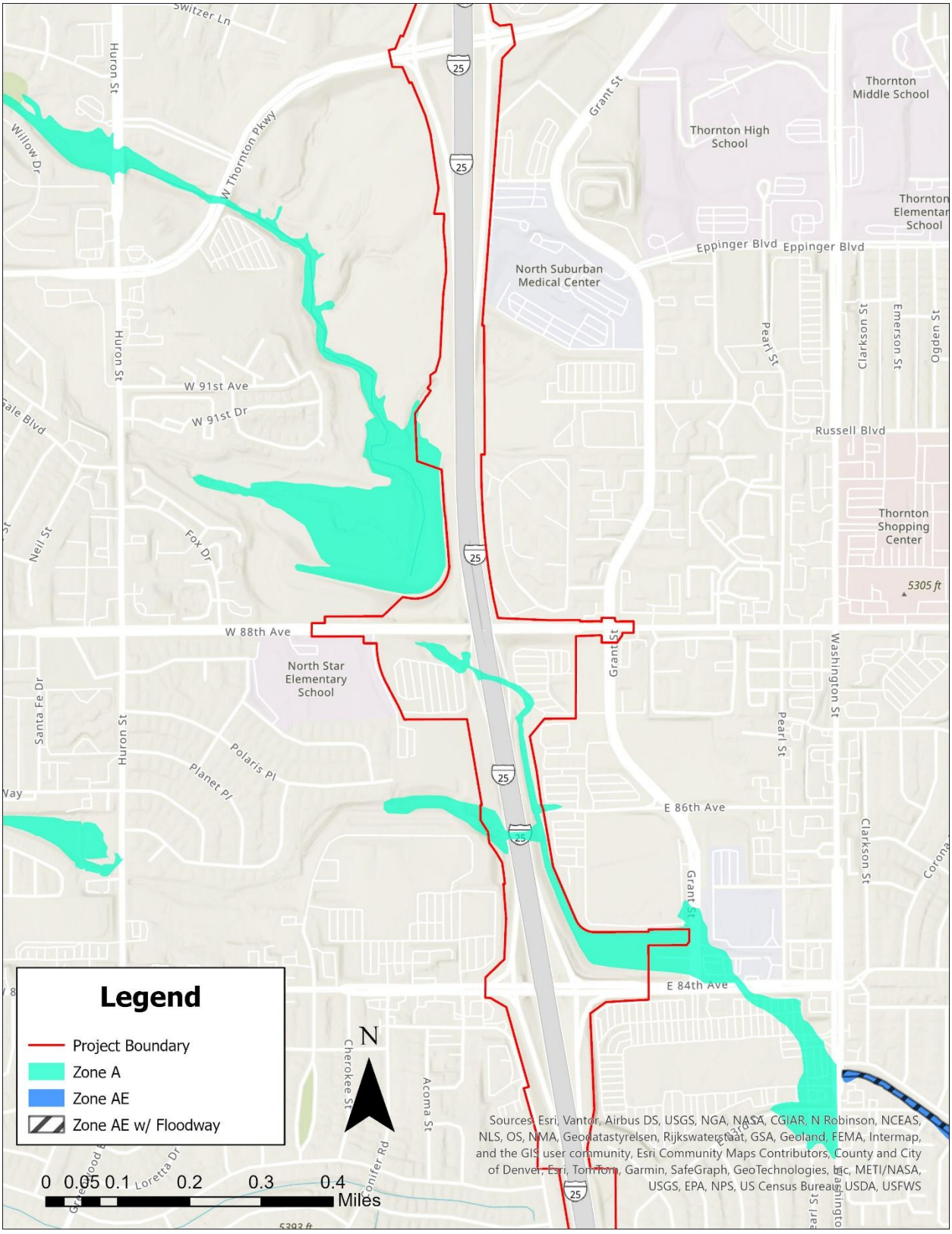
The Zone A designation indicates a high-risk flood area based on the described probability of a flood event resulting in inundation. The Zone A designation also indicates that no detailed analyses on this flood area have been performed to obtain the base flood elevation for the area. The SFHA crosses the I-25 project area at the current location of a pedestrian underpass beneath the roadway. The Zone A SFHA continues along the east side of I-25, approximately 60 feet from the edge of existing pavement, until Niver Creek turns toward the east at the northeast quadrant of the I-25 and 84th Avenue interchange.

Niver Creek Tributary L crosses beneath I-25, via a culvert, approximately 1,500 feet south of the 88th Avenue bridge over I-25. Niver Creek Tributary L converges with Niver Creek just east of I-25 at this location. The Zone A SFHA previously noted also crosses I-25 at this location and continues upstream along Niver Creek Tributary L approximately 1,000 feet.

Additionally, in the northwest quadrant of the 88th Avenue bridge over I-25, Niver Creek and Niver Creek Tributary M converge in an area denoted as a “Regional Detention Facility” in the Niver Creek Major Drainageway Planning Study (Kiowa, 1996). FEMA resources designate this area as a Zone A SFHA. Based on current preliminary designs, the Proposed Action may extend into the eastern edge of this Zone A SFHA.

Figure 3 provides an overview of the FEMA designated SFHAs and the discussed surface waterbodies.

Figure 3. Niver Creek Floodplains Map



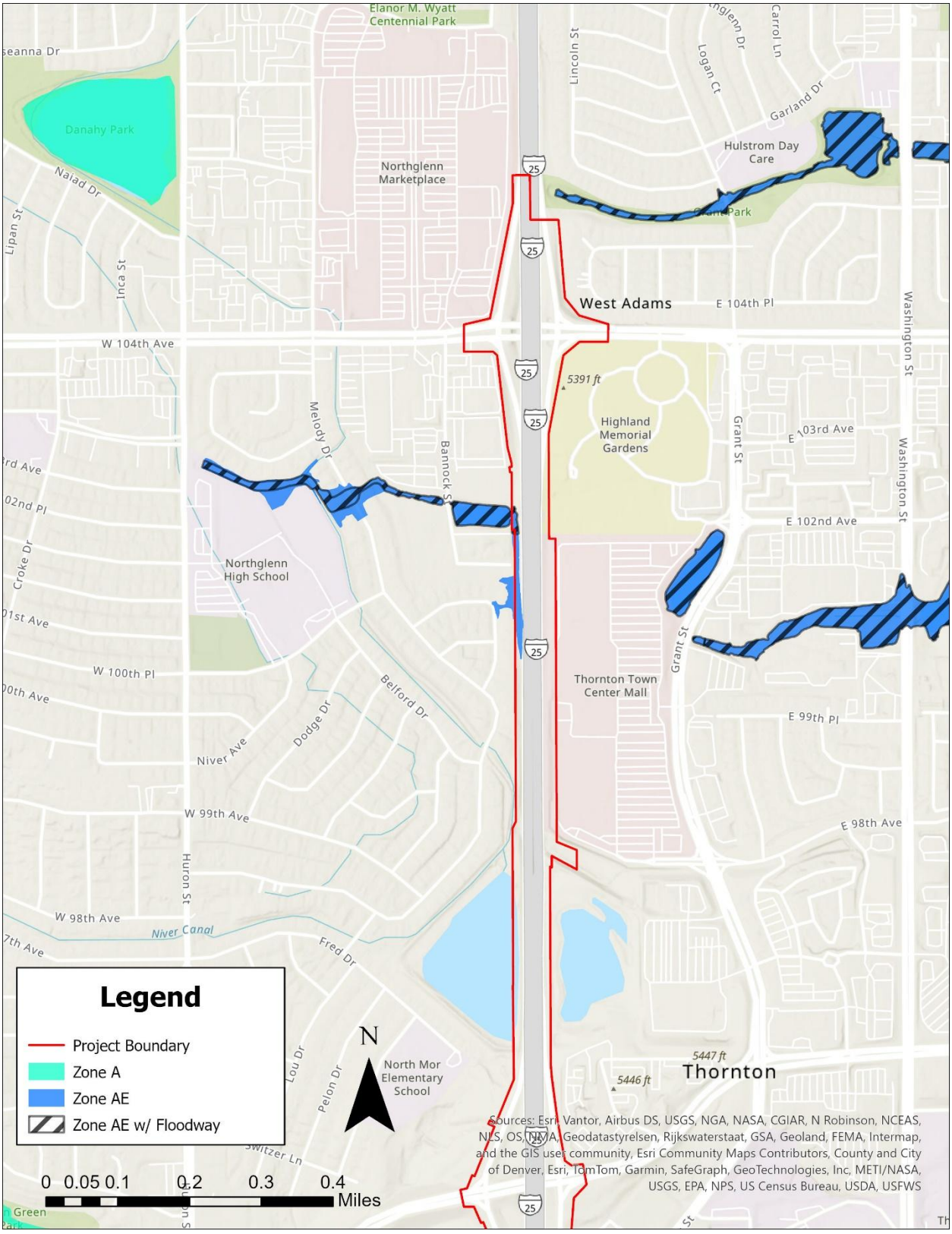
4.2 Grange Hall

South Grange Hall Creek is approximately 2.7 miles long and primarily flows from west to east-northeast toward a confluence with the main stem of Grange Hall Creek, located northeast of the project area in Jaycee Park (MHFD, 2018). The observable upstream limit of the tributary is located on the east side of Huron Street, approximately 2,500 feet west of I-25. However, MHFD delineated watershed associated with this tributary extends approximately 1.5 miles further to the west than the upstream limit, indicating surface flow from beyond the tributary's upstream limit is projected to flow into this tributary. The tributary flows through a variety of channels, ditches, drainage structures, and ponds/lakes near the project. **Figure 4** provides an overview of the South Grange Hall Creek in relation to the project area.

South Grange Hall Creek crosses beneath the I-25 Corridor at two locations via culverts. The main culvert exits from the existing detention area west of I-25 is a 7-foot circular (84-inch) diameter pipe. The secondary culvert is a 48-inch circular diameter pipe which drains flows above the detention area along the west side of I-25 in the roadside ditch. These culvert crossings are approximately 1,500 feet and 2,000 feet south of 104th Avenue along the western edge of I-25. These culverts outlet flow into the detention basin located approximately 1,000 feet east of I-25, located between the Home Depot shopping plaza and Grant Street. South Grange Hall Creek flow continues south along this detention basin toward the east-northeast.

The FEMA FIRM maps were investigated for the presence of SFHAs within and near the Proposed Action along I-25. South Grange Hall Creek is designated with a floodway Zone AE along the channel, originating at the upstream end (near Huron Street) and continuing up to and between the two culverts crossing beneath I-25 on the western side of the roadway. The floodway is surrounded by a FEMA designated Zone X noted as a "0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile" (FEMA, 2018) and the Zone X area is not part of the regulatory floodplain. The Floodway Zone AE and the Flood Hazard Zone X both extend onto the I-25 roadway, primarily on the southbound side of the roadway (the 3.5-foot concrete median divider is modeled as containing flood waters). The Floodway Zone AE and the Flood Hazard Zone X associated with South Grange Hall Creek continue in the previously discussed detention basin east of the project area. **Figure 4** shows the location of these FEMA designated flood zones and their relation to the project area.

Figure 4. Grange Hall Floodplain Map



Per the FHAD prepared for Grange Hall Creek and Tributaries, the designated floodways and flood zones in this area are due to an undersized storm sewer system along Melody Drive and undersized culverts crossing I-25. Additionally, the 3.5-foot concrete divider in the median blocks flows, forcing water surface elevations to increase on the upstream side of the road (western side) (MHFD, 2018).

5.0 Environmental Consequences

5.1 No Action

The No Action Alternative would not affect floodplains and drainage. Additionally, if any or all of the projects included in the No Action Alternative were found to encroach on the floodway or floodplain, they would be subject to the same NFIP requirements that apply to the Proposed Action, which limit those floodplain impacts to minimal encroachments. Discrepancies in outdated FIRM mapping would need to be updated through the CLOMR/LOMR processes. Without updating the effective FIRM panels and FIS, the effective FIRM data will continue to reflect inaccurate floodway and floodplain boundaries.

5.2 Proposed Action

The Proposed Action Descriptions can be found in **Attachment A** Project Information. **Table 1** documents the expected impacts on floodplain resources associated with the Proposed Action.

Table 1. Proposed Action Impacts on Floodplain Resources

Flood Source	Flood Zone	Floodway (Y/N)	Area (acre)	Impact Location
Grange Hall Creek Tributary South	AE	Y	1.388	Western edge of I-25 SB roadway approximately 1,500 feet to 2,000 feet south of 104th Avenue
Niver Creek Lower Niver	A	N	1.554	East and west of the existing pedestrian underpass under the I-25 roadway approximately 400 feet south of 88th Avenue
Niver Creek Tributary L	A	N	1.038	Western edge of I-25 SB roadway approximately 1,500 feet south of 88th Avenue

5.2.1 Niver Creek

The Proposed Action would include multiple actions within and near the identified Niver Creek SFHAs. Although preliminary designs have been prepared, the designs are not finalized and actions that may have an impact on the SFHA may change as designs progress.

Preliminary designs near the Niver Creek SFHAs currently propose an additional lane in both directions of I-25, improved and expanded shoulders on both sides of I-25, and replacement of an existing pedestrian underpass under I-25. In addition, the concrete box culvert that conveys Niver Creek under I-25 is proposed to be replaced by an open channel along the west side of I-25. The overall result of the Proposed Action is a substantially wider I-25 roadway through the project area.

If a rise in the base flood elevation occurs as a result of the Proposed Action, an approved LOMC from FEMA will be required in conjunction with the floodplain development permits from the City of Thornton and Adams County as previously discussed. If there is a rise in base

flood elevation, affected property owners will need to be notified and any adverse impacts on structures affected by the rise will need to be mitigated. Based on the evaluation of the FEMA designated SFHAs associated with Niver Creek and its tributaries, there is a very low potential for any structures to be impacted by a rise in base flood elevation. The SFHA associated with the Niver Creek main (south of 88th Avenue) is primarily located in drainage channels or ditches with no structures within or near the project area; therefore, no impacts on structures would be anticipated if a rise in base flood elevation occurs at this location. The SFHA associated with Niver Creek Tributary L is just north of a large warehouse and retail shopping plaza, located on the western side of I-25. However, there is substantial elevation increase from the limits of the SFHA to the developed property (approximately 10 to 15 feet); therefore, a minor rise in the base flood elevation would not have the potential to impact these nearby structures. **Figure 3** shows the relative location of nearby structures to the FEMA designated SFHAs associated with Niver Creek.

The environmental consequences at each potentially impacted SFHA associated with Niver Creek are discussed below, from north to south.

Niver Creek Lower Niver

Due to the Proposed Action, primarily expanding the roadway footprint to include new lanes and shoulders, there will be substantial project construction activities within the current Zone A SFHA associated with the main stem of Niver Creek on the south side of 88th Avenue. Additionally, based on FEMA mapping, the Zone A SFHA appears to cross through the existing pedestrian underpass to be closed during project activities, eliminating an existing flood path for the area. The culvert currently routing Niver Creek flow beneath the I-25 roadway would be impacted by the expanded roadway footprint and would need to be modified to meet new capacity requirements; the proposed design is to remove this culvert and replace it with an open channel that will convey flow south along the west side of I-25. Based on the preliminary designs, it is anticipated that a change in the Zone A SFHA boundaries at this location will be unavoidable and will require a LOMC. A more detailed analysis of the potential impacts on the Zone A SFHA at this crossing will need to be conducted once final designs are completed.

Niver Creek Tributary L

Based on preliminary designs, the Proposed Action would have an impact on the Zone A SFHA crossing I-25 associated with Niver Creek Tributary L due to a substantially wider I-25 roadway. An extended roadway footprint and associated grading activities are proposed within the Zone A SFHA at this location. Additionally, the culvert currently routing Niver Creek Tributary L flow beneath the I-25 roadway would be impacted by the expanded roadway footprint and would need to be modified to meet new capacity requirements. Based on the preliminary designs, it is anticipated that a change in the Zone A SFHA boundaries at this location will be unavoidable and will require a LOMC. A more detailed analysis regarding the potential impacts to the Zone A SFHA at this crossing will need to be conducted once final designs are completed.

5.2.2 Grange Hall

Near South Grange Hall Creek, the Proposed Action would widen the roadway for an additional lane and improve the shoulder on the southbound and northbound side of I-25. Although preliminary designs have been prepared for the Proposed Action, the designs are not finalized and actions that may have an impact on the identified FEMA flood zones are subject to change. Current designs for the described improvements to southbound I-25 are located within the FEMA flood zones associated with the South Grange Hall Creek. Project activities involve grading along the western edge of I-25 and may alter the landscape, which could result in an alteration in the FEMA flood zone boundaries in this area. Based on preliminary designs, the southbound roadway would be widened approximately 25 feet east of the current edge of pavement and grading activities would extend 60 feet east of the current edge of pavement. As final designs are completed, the impacts on the flood zones as a result of the Proposed Action must be mitigated by the drainage improvements to eliminate the need for a LOMC and instead only require a No-Rise Certification.

Per the FHAD for Grange Hall Creek and Tributaries, 30 residential structures and a commercial building are already located upstream of I-25 within the 100-year floodplain and the 100-year shallow flooding zone (MHFD, 2018). As noted, this large flood zone on the upstream side of I-25 is due to undersized storm sewer systems along Melody Drive and an undersized culvert crossing beneath I-25. Project activities would be anticipated to increase the size of the undersized storm sewer crossing under I-25 to reduce or eliminate any significant change to the flood zone to prevent a rise beyond the ditch and prevent impacts to any nearby structures east of I-25. If final design confirms adverse structural impacts due to a rise in the base flood elevation, mitigation measures at the affected structures will be required. Without proposed drainage improvements, it is anticipated that the flood zone within a roadside ditch adjacent to the project area would increase, and rise beyond the ditch, due to proposed highway widening and associated grading, affecting nearby structures; mitigation measures required to reduce floodplain encroachment will be included in the final design as part of the drainage improvements.

6.0 Mitigation

The following are preliminary strategies for mitigation of impacts and are subject to change. Final mitigation measures will be defined in the NEPA Decision Document.

6.1 No Action

The No Action Alternative would not affect floodplains and drainage. Additionally, if any or all of the projects included in the No Action Alternative were found to encroach on the floodway or floodplain, they would be subject to the same NFIP requirements that apply to the Proposed Action, which limit those floodplain impacts to minimal encroachments. Discrepancies in outdated FIRM mapping would need to be updated through the CLOMR/LOMR processes. Without updating the effective FIRM panels and FIS, the effective FIRM data will continue to reflect inaccurate floodway and floodplain boundaries.

6.2 Proposed Action

As final designs are completed, an analysis of the impacts on the flood zones as a result of the Proposed Action must be conducted to determine if a LOMC will be required.

6.2.1 Niver Creek

Preliminary design has the replacement of the Lower Niver culvert and the Tributary L culvert under I-25 as part of the Project due to concerns over the long-term structural integrity of the culverts. The culvert replacements and the Project's improvements with the floodplain will require floodplain mitigation in the form of grading and open channel improvements to reroute a reach of Niver Creek to the west side of I-25. **Attachment B** contains the following Niver Creek reference documents:

- Niver Creek floodplain as shown on FEMA FIRM maps.
- Excerpts of Flood Hazard Area Delineation Maps (Jacobs, August 2021)

Additional criteria and coordination require with CDOT and FEMA to revise the floodplain if the project is not able to meet NFIP and local floodplain requirements.

6.2.2 Grange Hall

Preliminary design shows the Project improvements encroaching on the Grange Hall floodplain that require floodplain mitigation in the form of grading and culvert improvements. **Attachment C** contains the following South Grange Hall Creek reference documents:

- Grange Hall Creek floodplain as shown on FEMA FIRM maps.
- Grange Hall Creek South Tributary LOMR Topographic Floodplain Workmap (RESPEC, 2023)
- Excerpts of Flood Hazard Area Delineation Maps (MHFD, 2018)

Additional criteria and coordination are required with CDOT and FEMA to revise the floodplain if the project is not able to meet NFIP and local floodplain requirements.

6.3 Mitigation Commitments

The following **Table 2** lists are preliminary strategies for mitigation of impacts, which and are subject to change. Final mitigation measures will be defined in the NEPA Decision Document.

Table 2. Mitigation Commitments on Floodplain Resources

Activity Causing Impact	Location of Activity	Impact	Mitigation Commitment	Responsible Branch	Timing/ Phase of Mitigation Implementation
Culvert replacement and I-25 widening over Niver Creek	Niver Creek and Tributary L	Changes to floodplain boundaries and base flood elevations; reduced severity and frequency of floodplain overtopping on I-25	A CLOMR and, following construction, LOMR shall be submitted to FEMA for review and approval to reflect the proposed changes to the floodplain, in accordance with 44 CFR § 65.12. Should there be impacts on structures, FEMA requires proof of mitigation for structures that would have been adversely impacted prior to the approval of any map revisions.	CDOT Engineering	Final Design; Post-construction
Drainage modifications and I-25 widening over South Grange Hall Creek	South Grange Hall Creek	Potential rise in base flood elevations from widening and grading absent drainage improvements; reduced floodplain encroachment on I-25 with improvements	Hydraulic modeling of existing and proposed conditions showing no rise in base flood elevations above regulatory standards shall be completed, and a No-Rise Certification shall be submitted to the City of Northglenn for review and approval.	CDOT Engineering	Final Design
Construction within the effective FEMA floodplain	Niver Creek, Tributary L, and South Grange Hall Creek	Temporary floodplain alterations that could increase safety and flood risks	A floodplain development permit must be obtained from the City of Thornton (Niver Creek and Tributary L) and the City of Northglenn (South Grange Hall Creek) before construction activities begin within the effective FEMA floodplain.	CDOT Engineering and Contractor	Pre-construction

7.0 Required Permits and Clearance Needs

The following permits and/or actions could be required as part of the Proposed Action for the Niver Creek floodplain:

- Municipal floodplain development permit for the City of Thornton
- Approved LOMC from FEMA

The following permits and/or actions could be required as part of the Proposed Action for the Grange Hall floodplain:

- Municipal floodplain development permit for the City of Northglenn
- Approved LOMC from FEMA (as necessary if No-Rise Certification is not achievable)

CDOT/Design Team will submit the No-Rise Certificate to the City of Northglenn and the CLOMR/LOMR to the City of Thornton to acquire any needed floodplain development permits.

8.0 References

Colorado Department of Transportation (CDOT). 2025. I-25 from US 36 to 104th Avenue Alternatives Evaluation Report. January.

EES prepared for Colorado Department of transportation (CDOT). 2018. I-25 N 84th Avenue to 104th Avenue Transportation Improvements Preliminary Drainage Report. October.

Federal Emergency Management Agency (FEMA). 2017. Flood Insurance Study: Adams County, Colorado and Incorporated Areas. February.

Federal Emergency Management Agency (FEMA). 2018. Flood Insurance Study – Adams County, Colorado and Incorporated Areas. September.

Federal Emergency Management Agency. 2024a. FEMA Flood Map Service Center. https://msc.fema.gov/portal/home.

Federal Emergency Management Agency (FEMA). 2024b. National Flood Hazard Layer (NFHL). https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html

Federal Highway Administration (FHWA) and Colorado Department of Transportation (CDOT). 2011a. North I-25 Final EIS. August.

Federal Highway Administration (FHWA) and Colorado Department of Transportation (CDOT). 2011b. North I-25 Record of Decision 1. December. https://www.codot.gov/projects/archived-project-sites/north-i-25-eis/Northi25rod.

Icon Engineering, Inc. (Icon). 2007. Major Drainageway Planning, Phase A: Development of Alternative Plans for Clear Creek. February.

Icon Engineering, Inc. (Icon). 2008. Major Drainageway Planning, Phase B: Conceptual Preliminary Design for Clear Creek. February.

Jacobs prepared for Mile High Flood District (MHFD). 2021. Flood Hazard Area Delineation Niver Creek, Tributary L, and Tributary M. August.

Mile High Flood District (MHFD). 2024. Flood Hazard Area Delineation (FHAD) Viewer. https://mhfd.maps.arcgis.com/apps/webappviewer/index.html.

Respec Consulting & Services prepared for Mile High Flood District (MHFD). 2018. Flood Hazard Area Delineation: Grange Hall Creek and Tributaries. June.

Respec Consulting & Services. 2023. Grange Hall Creek South Tributary LOMR. January.

Attachment A.

Project Information

[Page intentionally left blank]

Attachment A: Project Information

October 23, 2026 - Version 15

Subaccount number: 25563

BACKGROUND

The Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA) are proposing transportation improvements to Interstate 25 (I-25) between United States Highway 36 (US 36)/I-270/I-76 interchange and 104th Avenue.

Project History

CDOT has previously completed an Environmental Impact Statement (EIS), a Planning and Environmental Linkages (PEL) study, a safety audit, previous National Environmental Policy Act (NEPA)-level planning, and supplemental operational and transit and safety analyses that recommended improvements to this segment of I-25.

Some of the previously recommended improvements have been constructed, like the Express Lanes approved in the **North I-25 Record of Decision 1** (ROD1) (FHWA and CDOT, 2011), while others have not yet been implemented. The current Project evaluates proposed transportation improvements that reflect and build upon previous recommendations.

Because the current Project includes elements that were not evaluated and approved in the **North I-25 ROD1**, this Project is undergoing new evaluation under the National Environmental Policy Act.

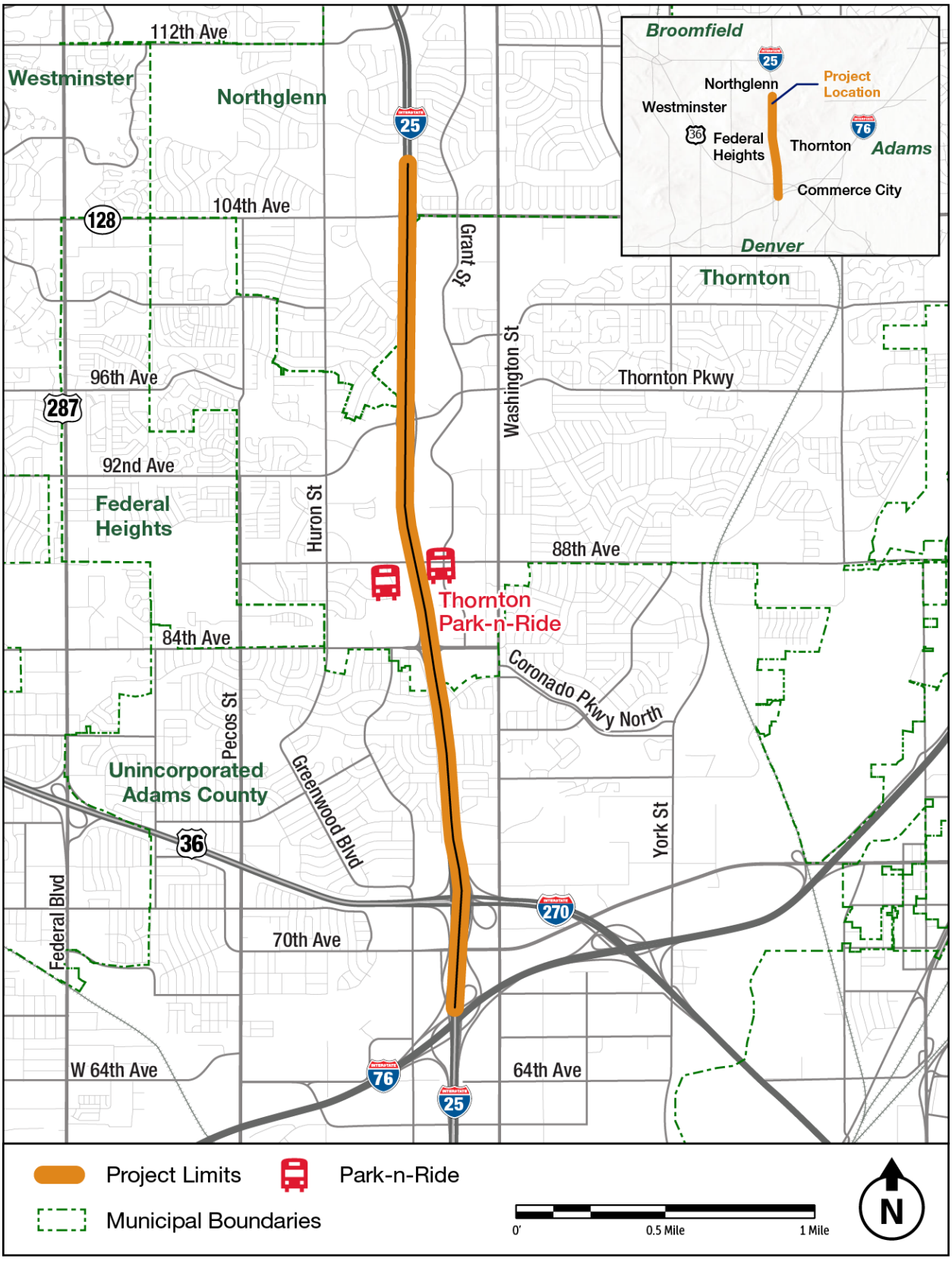
Study Area

The Project limits, illustrated in **Figure 1**, extend along I-25 from the US 36/I-76/I-270 interchange to 104th Avenue. It includes portions of US 36 and I-270, major arterials crossing I-25, and areas of potential drainage improvements. The study area for the Project varies by resource. Each resource's study area is defined within its corresponding technical report or memorandum.

The interchanges included in the Project limits are:

- I-25/US 36/270/I-76
- I-25/84th Avenue
- I-25/88th Transit Slip Ramps
- I-25/Thornton Parkway
- I-25/104th Avenue

Figure 1. Project Limits



PURPOSE AND NEED

The purpose of the Project is to improve I-25 between US 36 and 104th Avenue to address safety concerns and traffic operations.

The Project is needed to:

- Improve safety
- Improve traffic operations

In addition to addressing Project needs, the Project also has the following goal:

- Minimize environmental and community impacts caused by the Project

PROPOSED ACTION

The Project would improve approximately five miles of I-25 between US 36 and 104th Avenue. All lanes are 12 feet in width unless otherwise noted. The current cross-section of this segment of I-25 includes:

- Three general-purpose travel lanes in each direction
- One Express Lane in each direction, along the inside shoulder, separated from the adjacent general-purpose lane by a 2-foot buffer
- A southbound auxiliary lane between the 84th Avenue and US 36 interchanges
- A southbound auxiliary lane between the 88th Avenue transit slip ramp and the 84th Avenue interchange
- A northbound auxiliary lane between the 88th Avenue transit slip ramp and Thornton Parkway interchange
- Inside shoulders varying in width between 2 and 12 feet and outside shoulders varying in width between 6 and 12 feet

The Proposed Action on I-25 between US 36 and 104th Avenue, illustrated in **Figure 2**, includes the general-purpose and Express Lanes listed above and adds the following elements to the existing cross-section:

- A new 12-foot wide southbound general-purpose lane from 104th Avenue to south of 84th Avenue (all new lanes will be 12 feet in width)
- A new northbound climbing lane from the I-76 entrance ramp to 104th Avenue
- An expanded buffer of 4 feet between the Express Lane and the adjacent general-purpose lane
- A new continuous auxiliary lane southbound between the 84th Avenue and Thornton Parkway interchanges
- New continuous northbound auxiliary lanes between the interchanges at I-270 and 84th Avenue, 84th Avenue and Thornton Parkway, and Thornton Parkway and 104th Avenue
- Expanded inside and outside shoulders with typical 10-foot widths, and minimum 6.5-foot inside and 7-foot width in restricted locations

In addition to those changes to the cross-section, the Proposed Action would include the following elements:

- Realignment of the combined I-76 and US 36 on-ramp connection
- Expansion of the I-270 exit to northbound I-25 from one to two lanes; I-270 merge with I-25 shifted farther north (See **Figure 3**)
- Removal of bus-only slip ramps along I-25 at the Thornton Park-n-Ride facilities
- Changes to the Park-n-Ride west parking lot including reduction in size and reconstruction of circulation widths, sidewalks, and median areas to accommodate the proposed open channel of Niver Creek
- Changes to the Park-n-Ride east parking lot including reconstruction of bus bays and relocated shelters and amenities
- Replacement of the 88th Avenue bridge over I-25; wider to accommodate improved bicycle and pedestrian facilities and longer to accommodate I-25 widening

- Realignment of the I-25 adjacent existing trail and pedestrian network within the Niver Creek Open Space and its connections to the Thornton Park-n-Ride facilities (see **Figure 4**)
- Replacement of the aging pedestrian and bikeway underpass at the Thornton Park-n-Ride facility
- Removal of Niver Creek from the existing box culvert at the Thornton Park-n-Ride and conversion of the creek into an open channel
- Relocation of the segment of Niver Creek east of I-25, which currently flows south from the Park-n-Ride east parking lot to the creek's intersection with Tributary L, to the west side of I-25
- New water quality treatment features throughout the project area

Figure 2. Proposed Action

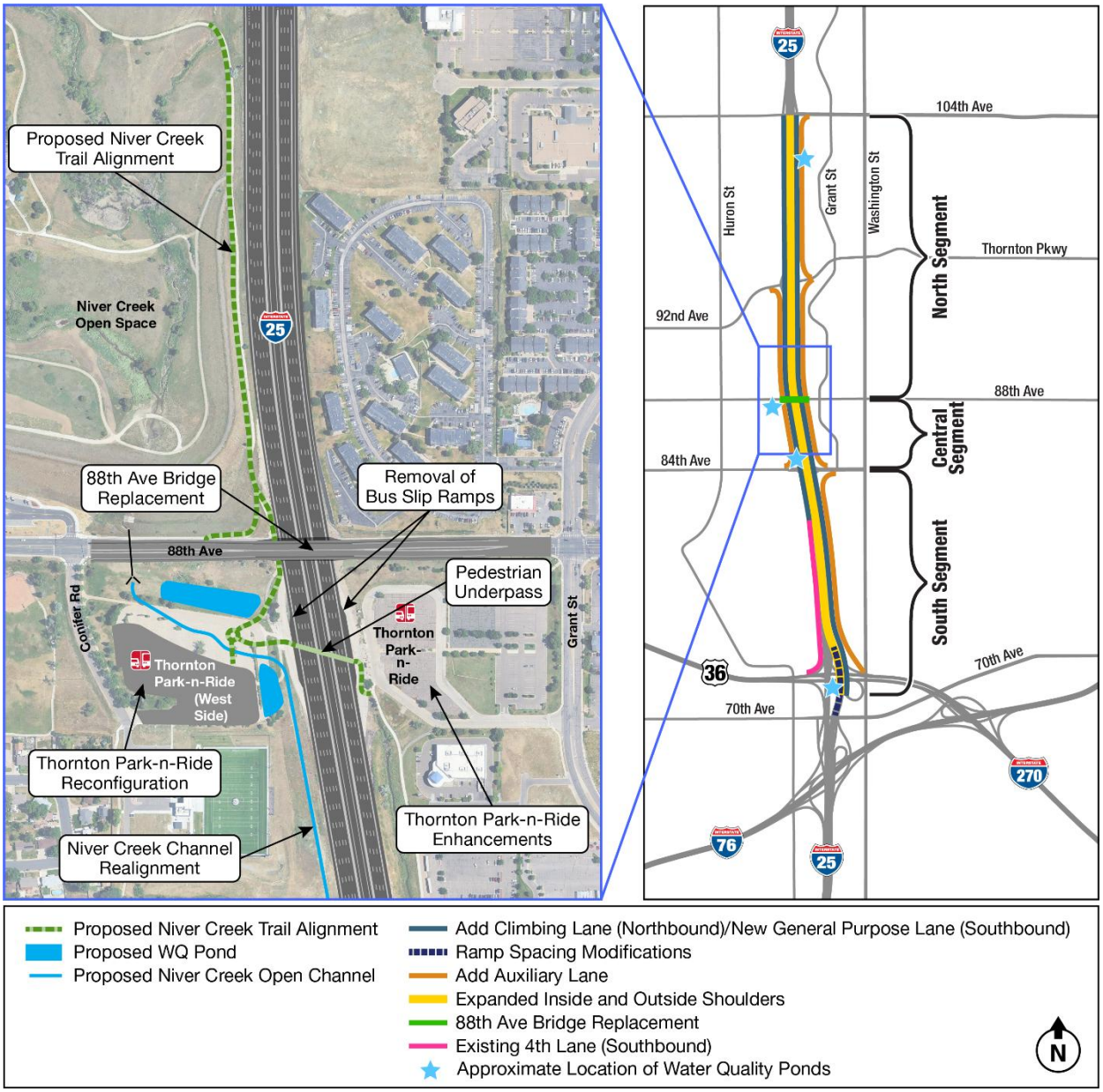


Figure 3. Proposed Improvements to I-270 Exit to NB I-25

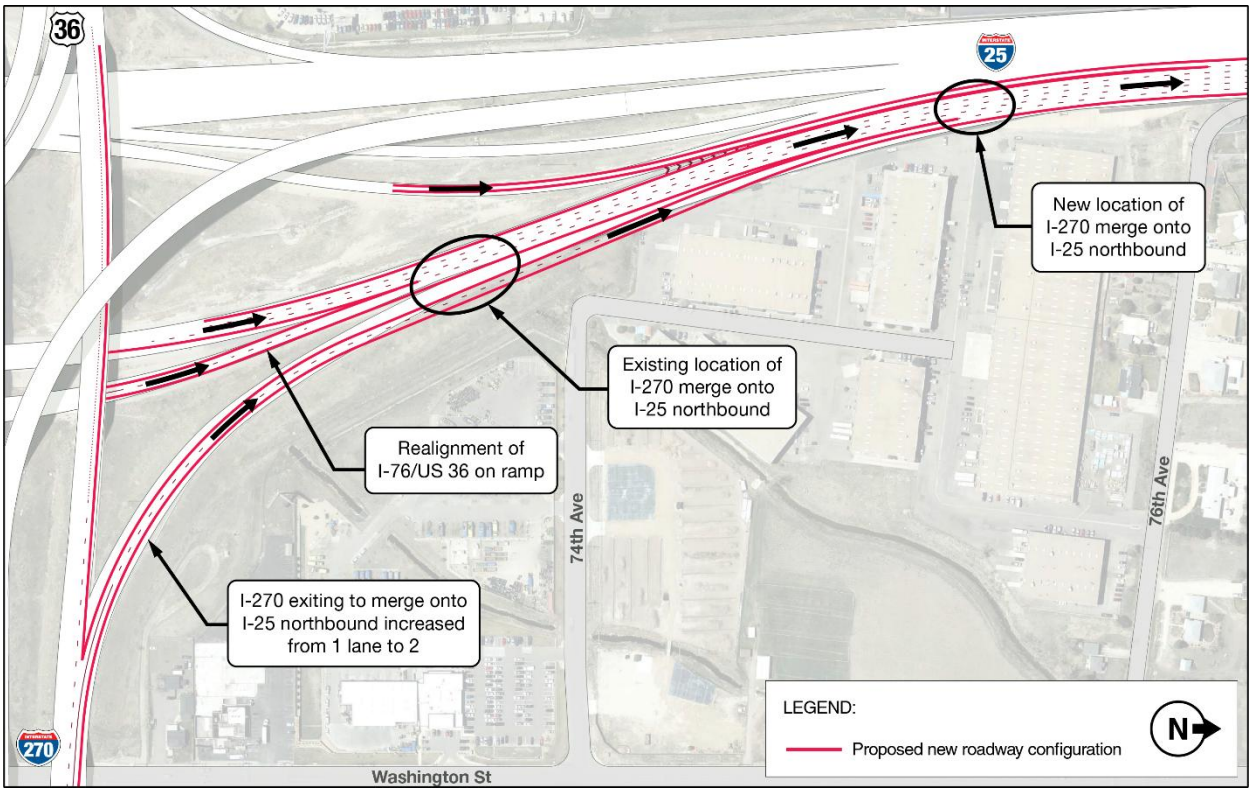
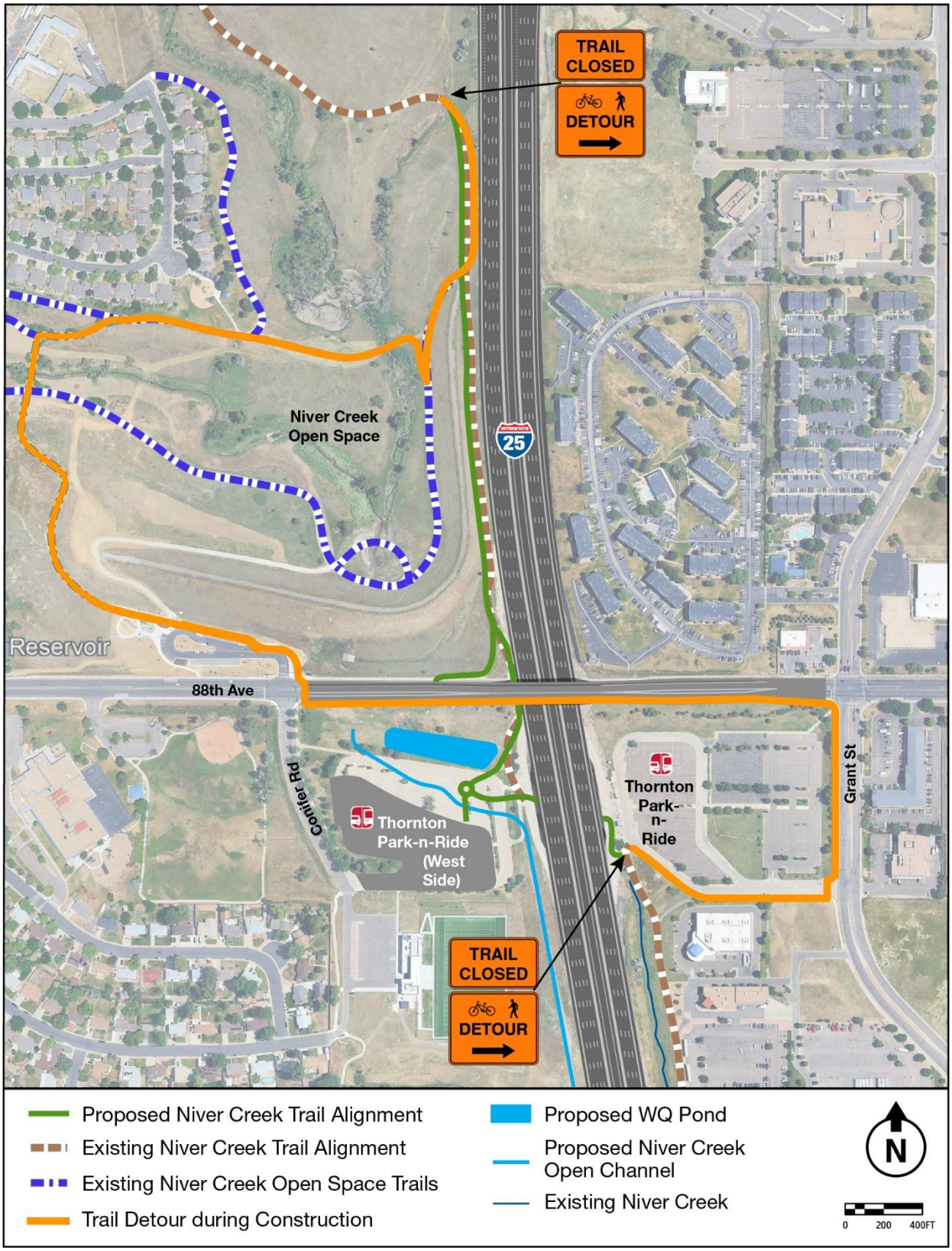


Figure 4. Proposed Realignment of Niver Creek Trail



Attachment B.

Niver Creek Floodplain Reference Documents

Attachment B. Niver Creek Floodplain Reference Documents

CDOT is dedicated to providing an accessible experience for everyone. While we are continuously improving our standards, some complex items in this document, such as certain figures and images, are difficult to create with fully accessible parameters to all users. If you need help understanding any part of this document, we are here to assist and have resources to provide additional accessibility assistance to any requests. Please email us at CDOT_Accessibility@state.co.us to request an accommodation, and a member of our I-25 Engineering Program will schedule a time to review the content with you. To learn more about accessibility at CDOT, please visit the Accessibility at CDOT webpage on the CDOT Website.

NOTE: This attachment is not able to be included in the Environmental Assessment at this time due to accessibility. If you would like a copy of this attachment or to sit down with a project team member to review this attachment, please contact the project team at I25.US36to104thAvenue@gmail.com or 720-378-8859.

Attachment C.

South Grange Hall Creek Floodplain Reference Documents

Attachment C. South Grange Hall Creek Floodplain Reference Documents

CDOT is dedicated to providing an accessible experience for everyone. While we are continuously improving our standards, some complex items in this document, such as certain figures and images, are difficult to create with fully accessible parameters to all users. If you need help understanding any part of this document, we are here to assist and have resources to provide additional accessibility assistance to any requests. Please email us at CDOT_Accessibility@state.co.us to request an accommodation, and a member of our I-25 Engineering Program will schedule a time to review the content with you. To learn more about accessibility at CDOT, please visit the Accessibility at CDOT webpage on the CDOT Website.

NOTE: This attachment is not able to be included in the Environmental Assessment at this time due to accessibility. If you would like a copy of this attachment or to sit down with a project team member to review this attachment, please contact the project team at I25.US36to104thAvenue@gmail.com or 720-378-8859.