

VISUAL RESOURCES TECHNICAL REPORT
FOR THE
I-25 (US 36 to 104th Avenue)
Environmental Assessment

Prepared for:



Colorado Department of Transportation
Region 1
2829 W. Howard Place
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List of Acronyms and Abbreviations

AVE	Area of Visual Effect
CatEx	Categorical Exclusion
CDOT	Colorado Department of Transportation
CFR	Code of Federal Regulations
EA	Environmental Assessment
EB	eastbound
EIS	Environmental Impact Statement
Fg	foreground
FHU	Felsburg Holt & Ullevig
FHWA	Federal Highway Administration
I-25	Interstate 25
NB	northbound
NEPA	National Environmental Policy Act
PEL	Planning and Environmental Linkages
ROD	Record of Decision
RTD	Regional Transportation District
SB	southbound
US 36	United States Highway 36
VIA	visual impact assessment
WB	westbound

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1.0 Project Description

A visual resources evaluation was completed for the Interstate 25 (I-25) North, United States Highway 36 (US 36) to 104th Avenue project. Colorado Department of Transportation (CDOT), in cooperation with the Federal Highway Administration (FHWA), is preparing a template Environmental Assessment for the I-25 North, US 36 to 104th Avenue project. The Regional Transportation District (RTD) is a cooperating agency.

The I-25 North, US 36 to 104th Avenue project includes improvements to relieve congestion and improve safety on I-25 from US 36 to 104th Avenue in Adams County and the City of Thornton, Colorado (Figure 1 and Figure 2). The project will provide improvements to an approximately 4-mile segment of I-25 between US 36 and 104th Avenue. The current cross-section of I-25 between US 36 and 104th Avenue generally includes three general purpose lanes and one Express Lane along the inside shoulder with an auxiliary lane between US 36 and 84th Avenue. The inside shoulder varies in width between 2 and 12 feet, and the outside shoulder varies between 10 and 12 feet. There is a 2-foot inside shoulder and a 2-foot buffer between the Express Lane and the nearest general-purpose lane.

The proposed improvements associated with this project are as follows:

- ▶ Adding a fourth general purpose lane in each direction from 84th Avenue to Thornton Parkway with the northbound general-purpose lane extending to 104th Avenue;
- ▶ Constructing continuous acceleration and deceleration lanes between the I-25/84th Avenue interchange and the I-25/Thornton Parkway interchange;
- ▶ Widening the inside and outside shoulder to a consistent 12-foot width;
- ▶ Accommodating a proposed median transit station and pedestrian bridge for the Thornton Park-n-Ride just south of 88th Avenue; and
- ▶ Replacing the 88th Avenue bridge over I-25.

The proposed typical section on I-25 will consist of four 12-foot general purpose lanes, a 12-foot Express Lane along the inside travelled way, and a 12-foot outside auxiliary lane between each interchange. Additionally, the inside and outside shoulders will be widened to 12 feet and the Express Lane buffer will be extended to 4 feet. A 2-foot concrete barrier will surround the median station to separate the through-lanes from the bus station and bus lanes.

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I-25 (US 36 to 104th Avenue) Environmental Assessment

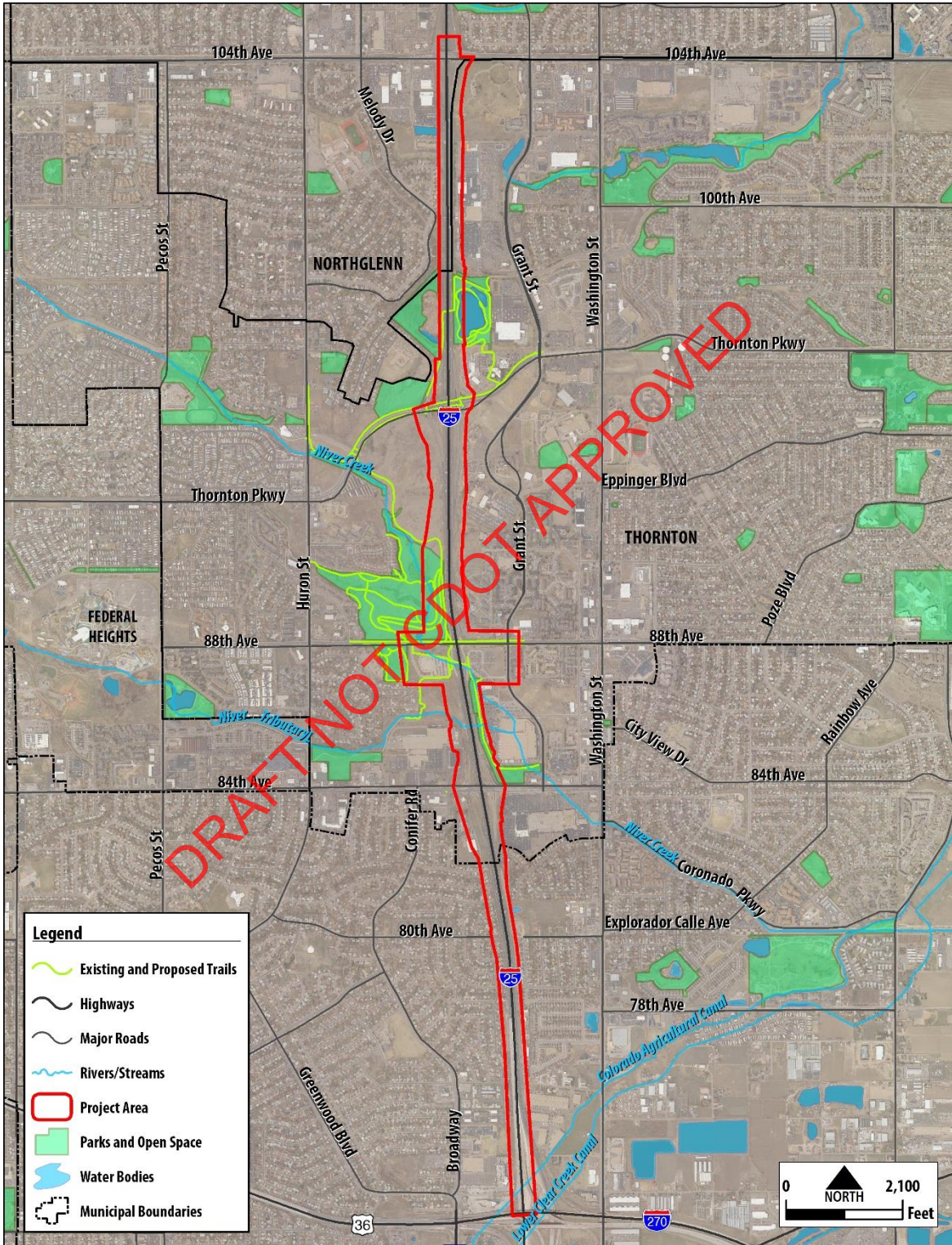
Figure 1. Project Vicinity



Source: FHU, 2019



Figure 2. Project Area



Source: FHU, 2019



2.0 Visual Impact Scoping

This visual analysis follows guidance from FHWA’s recent *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA, 2015) for assessing impacts on visual resources, in context to the National Environmental Policy Act (NEPA). These visual impact assessment (VIA) guidelines start with a scoping process to highlight key issues and to determine the appropriate level of study and documentation for individual projects, in compliance with NEPA.

The VIA scoping for the project began early in the NEPA process and tracked with project refinements, including changes to the project termini and RTD station planning. Responses to VIA scoping questions relate to environmental compatibility and viewer sensitivity are summarized below (**Appendix A, VIA Scoping Questionnaire**):

- ▶ **Environmental Compatibility** - The scale of the transportation improvements proposed for I-25 from US 36 to 104th Avenue is considered moderately compatible with the visual character of the urban corridor. With the replacement of the 88th Avenue bridge, there is the opportunity to complement the visual character of the corridor.

Visual issues identified during scoping included the loss of roadside landscaping within the 84th Avenue interchange area due to the I-25 widening and realignment of Niver Trail and the potential footprint of the NB general-purpose lane within the western edge of Civic Center Park.

- ▶ **Viewer Sensitivity**—The project has not proven to be controversial within the community, based on the North I-25 Environmental Impact Statement (EIS) and North I-25 Planning and Environmental Linkages (PEL) study.
- ▶ **Abbreviated VIA**—The scoping process suggests that an *Abbreviated VIA* is appropriate for the I-25 North, US 36 to 104th Avenue EA. The scope generally includes:
 - Describing the visual quality and viewers within the project’s Area of Visual Effect (AVE),
 - Identifying visual impacts on the natural, cultural, and project environments, and
 - Developing mitigation strategies to avoid, minimize, or compensate for adverse visual impacts.

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3.0 VIA Methodology

The VIA process includes four connected phases, consistent with FHWA’s *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA, 2015):

- ▶ **Establishment Phase**—The role of this phase is to create the framework and context for the VIA. It includes outlining applicable regulations and aesthetic guidelines; and defining the AVE and landscape units with visually homogeneous characteristics.
- ▶ **Inventory Phase**—The visual inventory includes descriptions of the visual character of the natural, cultural, and project environments; viewers, including *neighbors* (of the road) and *travelers* (from the road); and the visual quality of landscape units.

A “Professional Observational Approach” was applied to the visual quality inventory, to determine if:

- The natural harmony of the existing scene is *harmonious* or *inharmonious*
- The composition of the scene’s cultural order is *orderly* or *disorderly*
- The coherence of the project environment components is *coherent* or *incoherent*

- ▶ **Analysis Phase**—This phase evaluates project visual impacts on landscape units, including:
 - Visual compatibility of the Proposed Action with the visual character
 - Sensitivity of viewers to changes in the visual character of visual resources
 - Degree of visual impacts on visual quality
The transportation elements of the Proposed Action may be visually *compatible* or *incompatible*; viewers may be *sensitive* or *insensitive*; and visual impacts may be *adverse*, *neutral* or *beneficial*.
- ▶ **Mitigation Phase**—Methods for mitigating adverse visual impacts include avoidance, minimization, and compensation. In addition, the project includes opportunities to enhance existing visual quality.

Appendix B provides additional details on the VIA methodology and criteria applied to assess the visual impacts of the proposed transportation improvements.

3.1 National Environmental Policy Act

Consideration of aesthetics is included in both NEPA and FHWA regulations. NEPA of 1969, 42 U.S. Code 4321 et. seq., Section 101(b) declares that agencies will assure all Americans “aesthetically and culturally pleasing surroundings” for major federal actions; and 49 U.S. Code 4331, Section 102 requires agencies to use environmental design arts in planning and decision-making. FHWA Advisory T6640.8A requires an analysis of aesthetic effects, particularly for facilities located in visually sensitive urban or rural settings.

3.2 Sections 4(f) and 6(f)

The study area is predominantly urban with isolated park, recreation, and open space properties. FHWA’s regulations for complying with Section 4(f) in 23 Code of Federal Regulations (CFR) Part 774 apply to the Niver Open Space and Trail, which includes contiguous City-owned landholdings that are managed for open space and trail purposes; and the City of Thornton’s Civic Center Park. The VIA process includes an assessment of visual impacts on Section 4(f) properties, in coordination with the analysis of Section 4(f) properties included in the *Parks, Recreation, Open Space and Section 4(f) and 6(f) Analysis Technical Report*.

3.3 Section 106

Section 106 of the National Historic Preservation Act of 1966 requires that federal agencies account for the visual resource effects of projects on historic properties. This includes the introduction of visual elements that may diminish the integrity of the property’s significant features. Findings from the Historic Resource technical studies indicate the Northglenn community is potentially eligible for the National Register of Historic Places. This information is documented in the *Historic Resources Technical Report*.



3.4 Area of Visual Effect and Landscape Units

The project AVE defines the foreground (Fg) area (within 0.5 mile), within which the I-25 corridor is most visible to viewers. The outside limits or boundary of the AVE varies in width, in response to the influence of noise walls, buildings, and topography that limit the visibility of I-25.

The process for establishing the AVE involved field reconnaissance to establish the potential visibility of the I-25 corridor to adjacent residential, commercial, schools, and park and open space areas. The visual resources AVE incorporates the potentially visible edges of the neighborhoods, schools, and commercial development included in the Area of Potential Effects (APE) boundary, for compliance with Section 106 of the National Historic Preservation Act (NHPA).

The study team identified a sequence of landscape units (LAU) within the AVE that represent visually connected areas within the 4-mile project corridor. The visual character of each LAU is individually distinctive, capturing common patterns of the I-25 transportation elements,

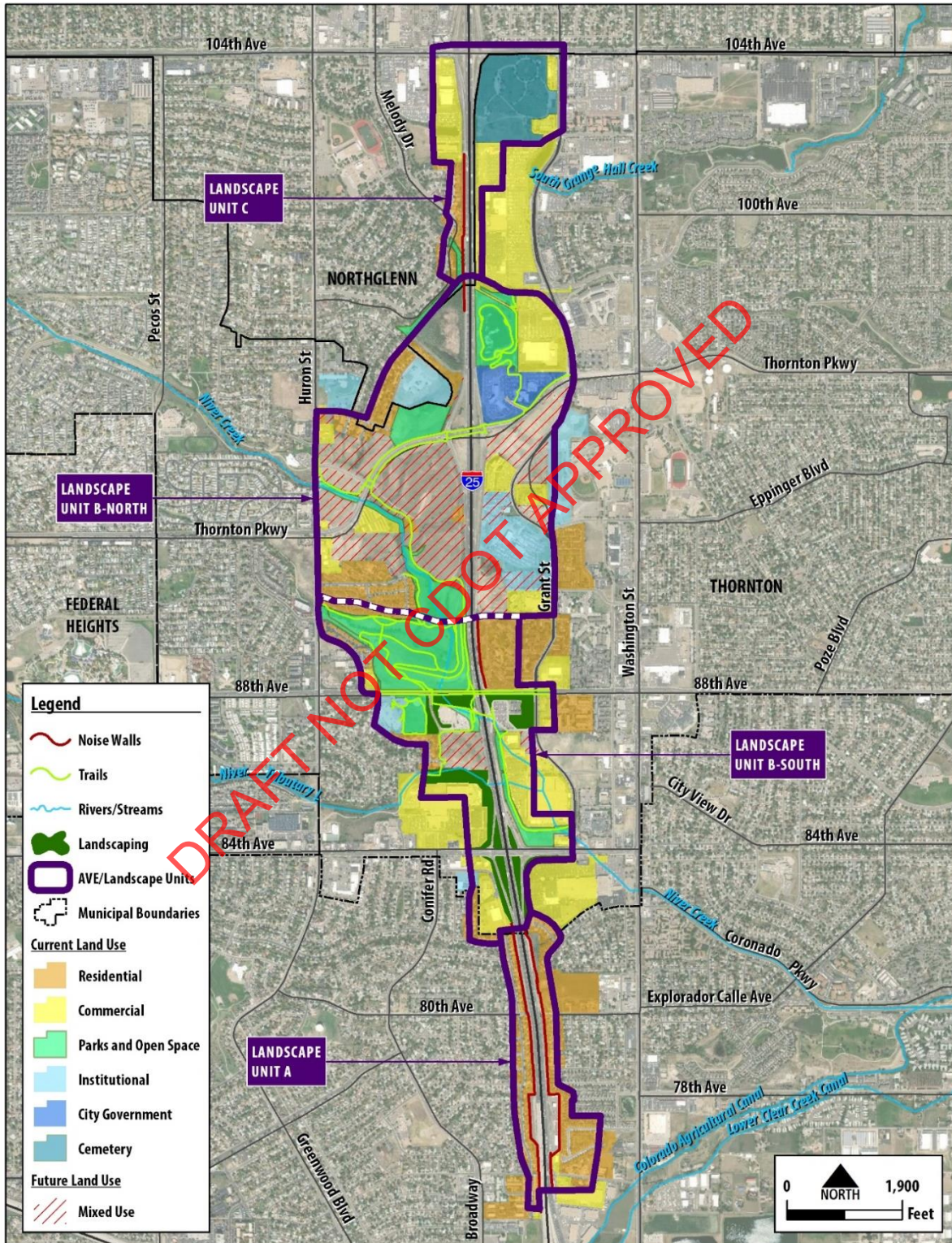
adjacent patterns of development, landscape features, and viewsheds, as shown on **Figure 3**.

- ▶ **LAU A** encompasses the southern segment of the project corridor defined by noise walls, extending from 78th Avenue to the 84th Avenue interchange.
- ▶ **LAU B** encompasses the central portion of the project corridor, which is defined by the visually connected areas associated with the 84th Avenue interchange, 88th Avenue bridge, and Thornton Parkway. LAU B was divided into two sub-areas to focus on local landscape features and viewers:
 - **LAU B South** includes the 84th Avenue interchange and 88th Avenue bridge area, and associated viewers
 - **LAU B North** includes the north of the 88th Avenue and 88th Avenue bridge to Thornton Parkway area, and associated viewers
 - **LAU C** encompasses the northern segment of the project corridor extending to the 104th Avenue interchange

Section 4.0 describes the visual character, views, and visual quality of LAUs A, B and C.

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Figure 3. Area of Visual Effect and Landscape Units



Source: FHU, 2019



4.0 Affected Environment

4.1 Regional Context

The project's AVE is within urbanized areas of Adams County and the City of Thornton. LAU A is within the North Perl Mack and Welby neighborhoods of southwest Adams County; and LAUs B and C are within the South Thornton Revitalization planning area. The Niver Creek Open Space and Trail Corridor provides a unifying natural and recreation resource within the urban context of the AVE.

The following subsections describe the project features that would have the greatest visual effects, anticipated future conditions, and visual resources considered to be at risk.

4.1.1 Project Features with the Greatest Visual Effects

The features of the Proposed Action that would have the greatest potential to affect the character and quality of the visual resources within the AVE include the construction of the following project elements:

- ▶ Additional I-25 travel lanes and alignment adjustment
- ▶ Changes to landscaping within the 84th Avenue to 88th Avenue area
- ▶ Replacement of the 88th Avenue bridge

4.1.2 Anticipated Future Conditions of the Visual Resources in the AVE

The AVE is generally dominated by the I-25 corridor and adjacent patterns of mixed urban development. An exception is the open prairie landscape area to the west of I-25 between 88th Avenue and Thornton Parkway, where the Niver Creek Open Space and adjoining parcels of undeveloped prairie provide expansive views.

The private undeveloped parcels south of Thornton Parkway and west of I-25 are planned for future mixed use and employment center development in the *South Thornton Revitalization Subarea Future Land Use Map* (2012a). This area is also identified as Open Space and as special Ecological

Opportunity Area 16 in the *Thornton Parks and Open Space Plan* (2012b). Development of this private prairie landscape would result in a noticeable change to the visual character of the AVE.

4.2 Landscape Unit A

LAU A centers on I-25 and extends from 76th Avenue to 84th Avenue interchange area. The following sections describe the visual character, viewers, and visual quality of LAU A (see **Figure 4** and site photos in **Appendix C**).

4.2.1 Project Environment

Between 76th Avenue and the 84th Avenue interchange area, I-25 contains 10 lanes (5 eastbound [EB] and 5 westbound [WB] lanes), with a concrete median barrier and noise walls. The overall width of the combined I-25 travel lanes and shoulders is approximately 148 feet, and the typical width of the I-25 cross section between walls is approximately 235 feet.

4.2.2 Visual Character

The transportation elements of the I-25 project environment dominate the visual character of LAU A, as shown in the site photos (see **Appendix C**). The visual enclosure created by continuous noise walls focuses attention on the interstate corridor, including I-25 traffic, the expanse of pavement with multiple travel lanes, and large scale express lane message signs.

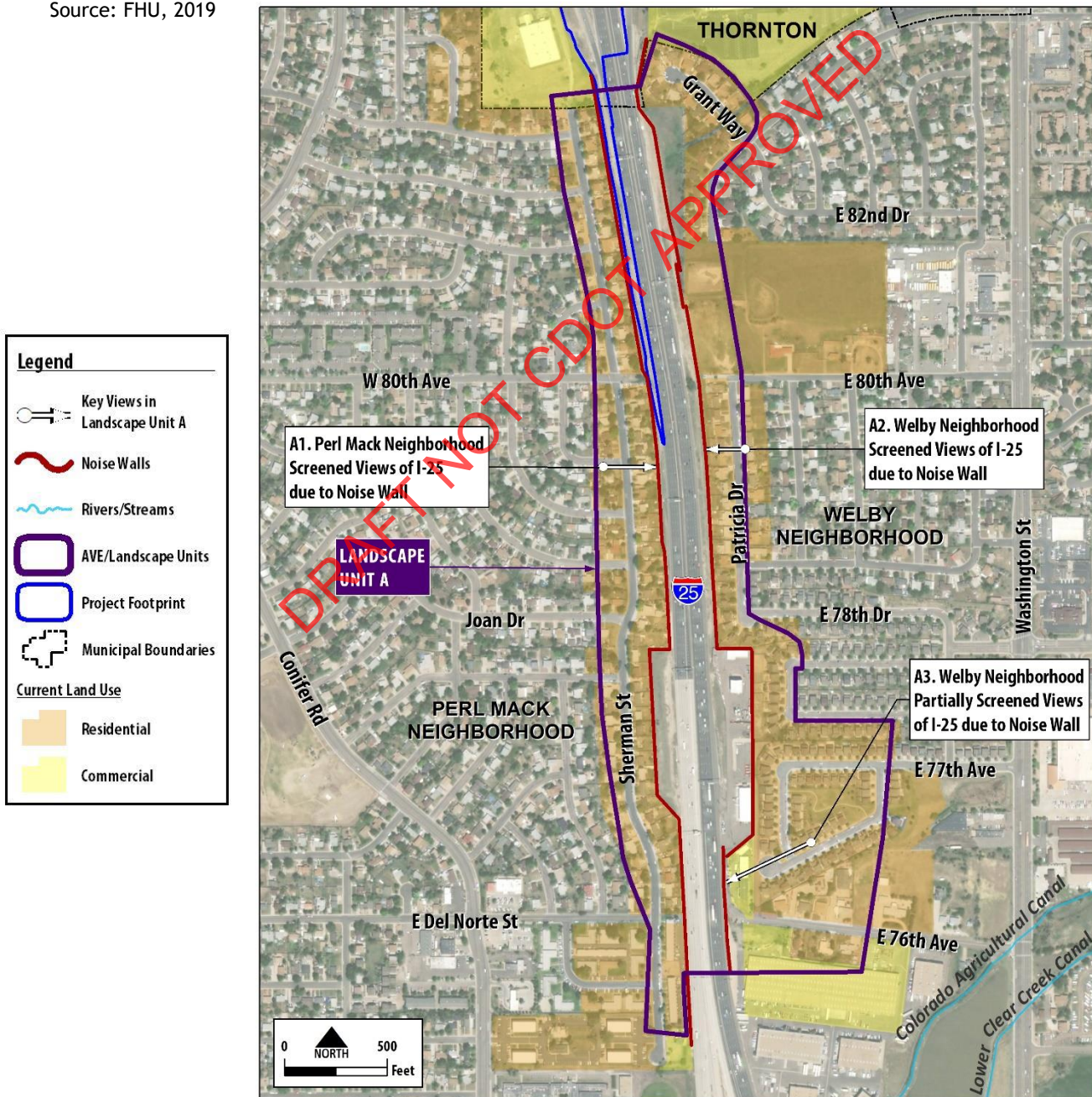
The earth tone wall colors establish a generally uniform image to the corridor; however, the variations in the appearance of aesthetic wall designs is noticeable.

- ▶ The painted concrete block walls along the west side of I-25 are a uniform light tan color, with a continuous dark brown stripe below the cap.
- ▶ The post and panel walls along the east side of I-25 alternate between sections of flagstone colored panels and intermittent sections with a contrasting two-tone mountain horizon motif panels.

Figure 4. Landscape Unit A Visual Quality Inventory

Landscape Unit A: 78 th Avenue to 84 th Avenue Interchange						
Viewers / Distance Zone		Natural Environment		Cultural Environment		Project Environment
A1. Residential	Fg	Residential subdivision	Mature landscaping	Noise walls		
A2. Residential	Fg	Mixed use patterns	Inconsistent patterns	Variable walls		
A3. I-25 travelers	Fg	Urbanized setting	Views limited to Fg	Variable wall design		
Legend						
I-25 Viewer Visibility		Harmonious	Orderly	Coherent		
Screened views		Inharmonious	Disorderly	Incoherent		
Partially screened views		Urban	Fg	Foreground views	Bg	Background views

Source: FHU, 2019





4.2.3 Viewers

Views of I-25 from adjacent residents within the North Perl Mack neighborhood to the west and the Welby neighborhood to the east are generally screened by I-25 noise walls, as shown on **Figure 4**. These neighborhoods are within southwest Adams County.

A1. Perl Mack Neighborhood

The Perl Mack neighborhood is a planned community established in the 1960s. Residents along Sherman Street, East Del Norte Street, and Marigold Drive are adjacent to I-25, where the block noise wall screens views of I-25. The wall is not visually prominent within the neighborhood setting of mature landscaping and single story homes.

A2. Welby Neighborhood

The urban context for the southwest corner of the Welby neighborhood in LAU A is provided in the *Adams County Comprehensive Plan* (2012a). The plan characterizes the Welby neighborhood as one of the most diverse communities in the county. The *Welby Subarea Plan* (2012b) identifies 80th Avenue and Washington Street as future transit oriented development, and 78th Avenue and Washington Street as a neighborhood node.

Adjacent I-25 noise walls screen residential views along the edge of the Welby neighborhood between East 77th Avenue and East 83rd Avenue. Residential views south of 77th Avenue are mixed, with partial views of I-25.

I-25 Travelers

Foreground views from I-25 focus on the transportation corridor and adjacent noise walls. The downtown Denver skyline is seen in the distance from southbound lanes.

4.2.4 Visual Quality

Figure 4 summarizes the visual quality of the natural, cultural, and project environments within LAU A. The I-25 corridor generally lacks visually harmonious, orderly, and coherent design elements. The visual quality of the foreground views within the Perl Mack neighborhood setting are orderly, with mature landscaping, and the partial views of the noise walls are considered

visually coherent due to the consistent aesthetic design of the painted block walls.

4.3 Landscape Unit B South

The southern portion of LAU B centers on I-25, within the 84th Avenue interchange and 88th Avenue bridge area.

The following sections describe the visual character, viewers, and visual quality of Landscape Unit B South (see **Figure 5** and site photos in **Appendix C**).

4.3.1 Project Environment

LAU B South includes the 84th Avenue interchange and 88th Avenue bridge and RTD Thornton Park-n-Ride parking lots. The overall width of the combined I-25 travel lanes and shoulders is approximately 148 feet, and the typical width of the I-25 cross section between walls is approximately 235 feet.

4.3.2 Visual Character

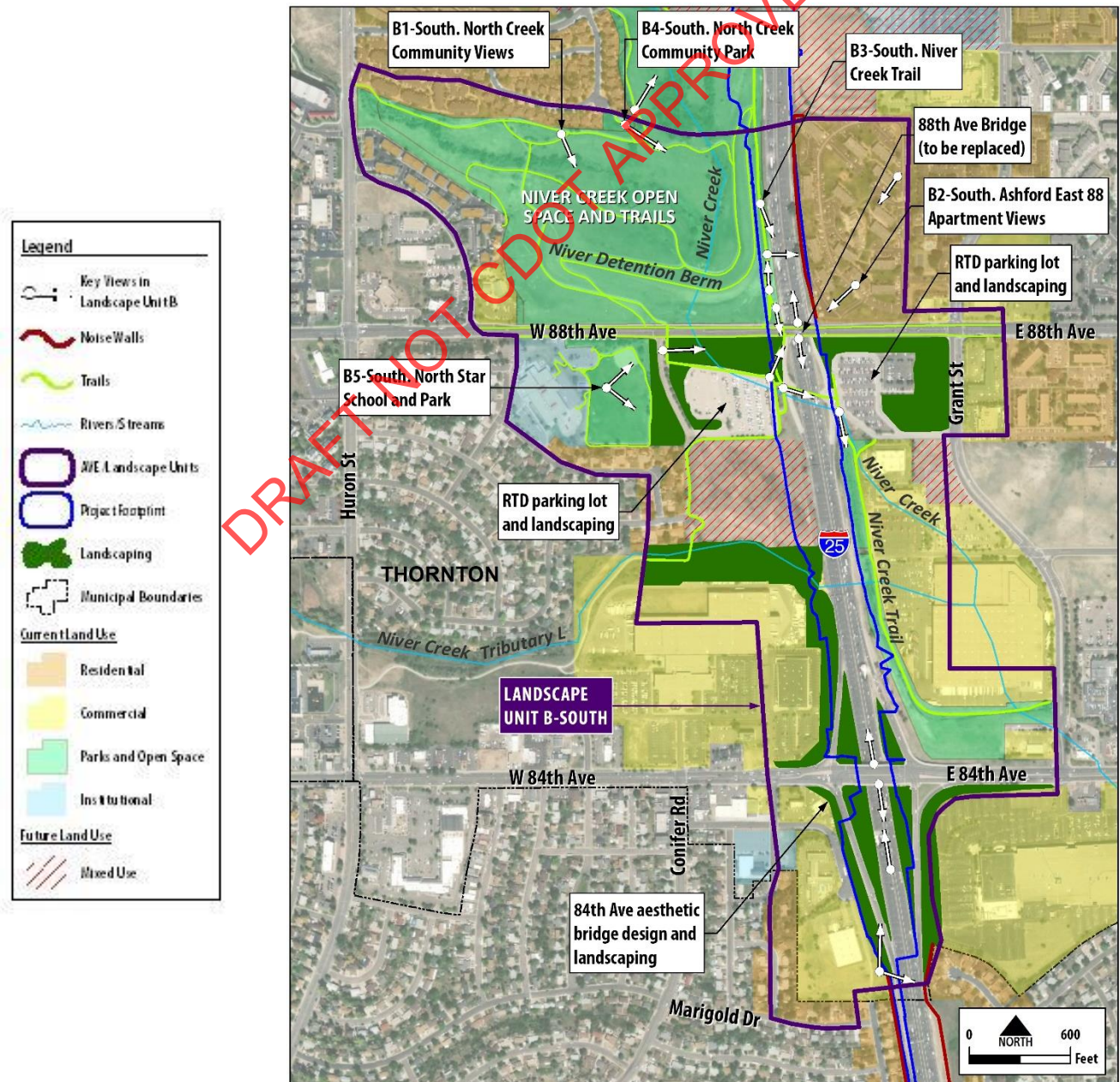
The 84th Avenue interchange establishes a gateway image for Thornton, with aesthetic bridge design and expansive landscaping, as characterized on **Figure 5** and shown on LAU B South site photos (see **Appendix C**). The visual character of the adjacent urban setting between 84th Avenue and 88th Avenue is dominated by commercial development, where contrasting scales, forms, and color of the warehouse scale buildings dominate the viewshed and horizon line.

LAU B South also encompasses portions of the Niver Open Space and trail and residential development north of 88th Avenue. I-25 is adjacent to the Niver detention area berm to the west and a residential noise wall to the east.

Figure 5. Landscape Unit B South Visual Quality Inventory

Landscape Unit B South: 84 th Avenue to 88 th Avenue Interchange Area						
Viewers / Distance Zone		Natural Environment		Cultural Environment		Project Environment
B1.S Residential (NW of I-88 th)	Fg		Fg Prairie views		Cluster development	
B2.S Residential (NE of I-88 th)	Fg		Fg Prairie & Bg mountains			I-25/Gateway landscaping
B3.S Niver Creek Trail	Fg		Fg Open space / urban		Open space / mixed use	I-25 bridge and tunnel
B4.S North Creek Park	Fg		Fg prairie views unique within corridor		Orderly patterns of earth tone cluster development	I-25 Gateway landscaping
B5.S North Star Park	Fg					
I-25 Travelers	Fg		Partially enclosed Fg		Contrasting scale & color	I-25 landscaping/84 th Ave
Legend						
I-25 Viewer Visibility			Harmonious		Orderly	Coherent
Screened views			Inharmonious		Disorderly	Incoherent
Partially screened			Urban	Fg	Foreground views	Bg
					Bg	Background mountain views

Source: FHU, 2019





4.3.3 Viewers

LAU B South is variable in width due to the influence of adjacent commercial development and topography that limit the visibility of I-25. Viewsheds are more open within the Niver Creek Open Space area north of 88th Avenue, extending west to Huron Street. The following subsections address key viewers.

B1.S North Creek Residents Northwest of I-25/88th Avenue

Residents along the southern edge of the North Creek development have open foreground views of the Niver Creek Open Space area. The Niver detention berm partially screens views of I-25 and the 88th Avenue bridge.

B2.S Ashford East 88 Apartments Northeast of I-25/88th Avenue

Residential views of I-25 from hillside units have open foreground views of the 88th Avenue bridge area.

B3.S Niver Creek Trail

The Niver Creek Trail viewshed is varied, with prairie views within the open space area and urban views adjacent to the I-25 corridor, as shown on **Figure 6**.

B4.S North Creek Community Park

The Niver detention berm partially screens foreground views of I-25 from the North Creek Community Park.

B5.S North Star Park

The North Star Park viewshed is oriented toward the North Star School. Landscaping at the 88th Street bridge and RTD Thornton Park-n-Ride parking lots partially screens foreground views of I-25.

I-25 Travelers

The immediate foreground views from I-25 focus on the 84th Avenue bridge and interchange landscaping. Large scale commercial warehouses dominate the viewshed area adjacent to the interchange area between 84th Avenue and 88th Avenue.

4.3.4 Visual Quality

Figure 5 shows the characterization of the visual quality of the natural, cultural, and project environments within LAU B. The Niver Open Space area is a harmonious landscape within the urban context of the project area, and the 84th Avenue bridge and interchange landscaping are orderly and create an aesthetic gateway to Thornton. The contrasting scale, forms, and colors associated with the commercial warehouses create a disorderly urban context within the setting and dominate the horizon line.

4.4 Landscape Unit B North

The northern portion of LAU B centers on I-25 and includes the Thornton Parkway interchange. The following sections describe the visual character, viewers and visual quality of LAU B North (see **Figure 6** and site photos in **Appendix C**).

4.4.1 Project Environment

The current cross section of I-25 contains 8 lanes (4 EB and 4 WB lanes) and includes the Thornton Parkway interchange. The overall width of the I-25 cross section is 235 feet.

4.4.2 Visual Character

The overall visual character of LAU B North is open and natural, in contrast to the urban character of LAUs A, B South, and C. The Niver Open Space area, Niver Creek, and undeveloped parcels include natural vegetation. Subtle topographic interests form a visually important buffer west of I-25. Civic Center Park serves as a focal point at the Thornton Parkway entrance to Thornton.

4.4.3 Viewers

The following subsections identify key viewers within LAU B North as shown on **Figure 6**.

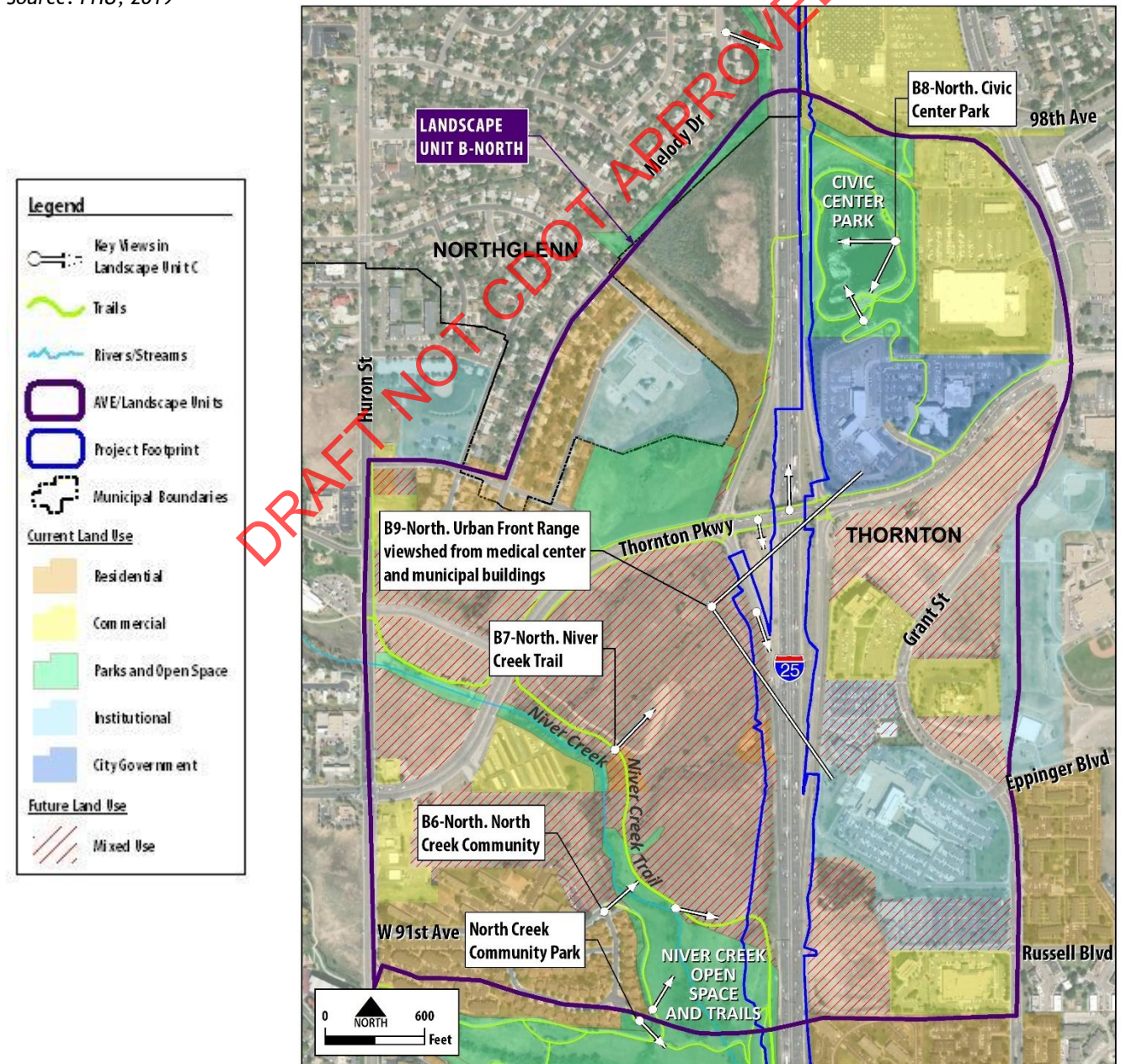
B1.N North Creek Residents

Residents along the eastern and northern edges of the North Creek development have open views of I-25, in context to the Niver Creek Open Space and surrounding prairie landscape foreground setting.

Figure 6. Landscape Unit B North Visual Quality Inventory

Landscape Unit B North: 84 th Avenue Interchange to Thornton Parkway						
Viewers / Viewsheds		Natural Environment		Cultural Environment		Project Environment
B1.N Residential	Fg/Bg		Fg Niver Open Space and open prairie landscapes		Open prairie areas west of I-25 and south of Thornton Parkway are planned as a mixed use / employment center area in the Thornton Comprehensive Plan	Thornton Parkway bridge and ROW landscape provide a visually coherent highway environment within an open landscape setting
B2.N Niver Creek Trail	Fg					
B3.N Civic Center Park	Fg					
B4.N Office Views	Fg/Bg		Fg prairie landscape and Bg mountain panoramas			
NB and SB I-25 views	Fg					
Legend						
I-25 Viewer Visibility			Harmonious		Orderly	Coherent
Screened views			Inharmonious		Disorderly	Incoherent
Partially screened views			Urban	Fg	Foreground views	Bg

Source: FHU, 2019





B2.N Niver Creek Trail

Views of I-25 from Niver Creek Trail are variable due to the subtle rolling topography.

B3.N Civic Center Park

While located adjacent to I-25 north of 88th Avenue, I-25 is not a dominating element from the park due to local landform grading within the park.

B4.N Municipal and Medical Center

I-25 is within the foreground of panoramic urban and front range views from the medical center and municipal office buildings.

I-25 Travelers

The viewshed for travelers to the west of I-25 is panoramic with foreground views of Niver Creek and adjacent prairie grasslands and background views of the front range mountains. East of I-25, the viewshed includes municipal and medical center office buildings and Civic Center Park foreground. The Denver skyline is visible to southbound travelers.

4.4.4 Visual Quality

Figure 6 summarizes the visual quality of the natural, cultural, and project environments within LAU B North. The combination of the prairie landscapes, clustered office complexes, Civic Center Park, and Thornton Parkway creates a visually harmonious, orderly, and coherent setting within the I-25 corridor.

4.5 Landscape Unit C

LAU C centers on I-25, extending north of the Thornton Parkway interchange to 104th Avenue. The following subsections describe the visual character, viewers, and visual quality of LAU C (see **Figure 7** and site photos in **Appendix C**).

4.5.1 Project Environment

The current cross section of I-25 contains 8 lanes (4 EB and 4 WB lanes) and includes the Thornton Parkway interchange. The overall width of the I-25 cross section is 235 feet.

4.5.2 Visual Character

Large scale commercial development and noise walls dominate the overall visual character of LAU C.

The Highland Memorial Cemetery at the 104th Avenue interchange creates a visually unique garden-like image within the otherwise hardscape visual character of LAU C, which is lacking in visual unity as shown on **Figure 7** and site photos in **Appendix C**.

4.5.3 Viewers

The following subsections identify key viewers within LAU C, as shown on **Figure 7**.

D1. Northglenn Residents

The I-25 noise wall screens views from Northglenn residents along the west edge of I-25.

D2. Highland Memorial Gardens Cemetery

The Highland Memorial Gardens Cemetery viewshed to the west includes foreground views of the Northglenn community. The visibility of I-25 travel lanes is variable from within the cemetery and is not visually dominated from the central areas and the cemetery roadway network.

I-25 Travelers

Foreground views from I-25 are limited to the immediate corridor by noise walls, commercial development, and the Highland Memorial Gardens Cemetery.

4.5.4 Visual Quality

The visual quality of the natural, cultural and project environments within LAU B North is characterized on **Figure 7**.

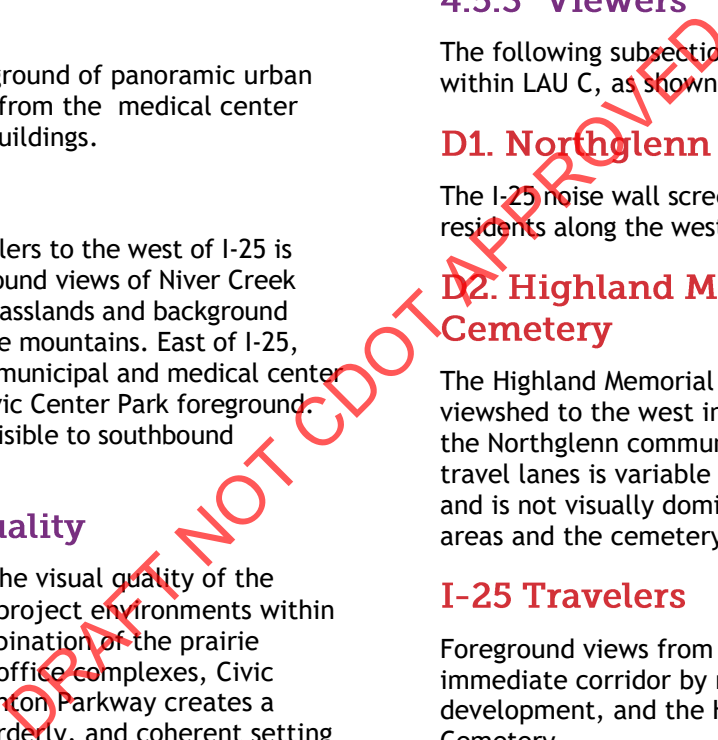
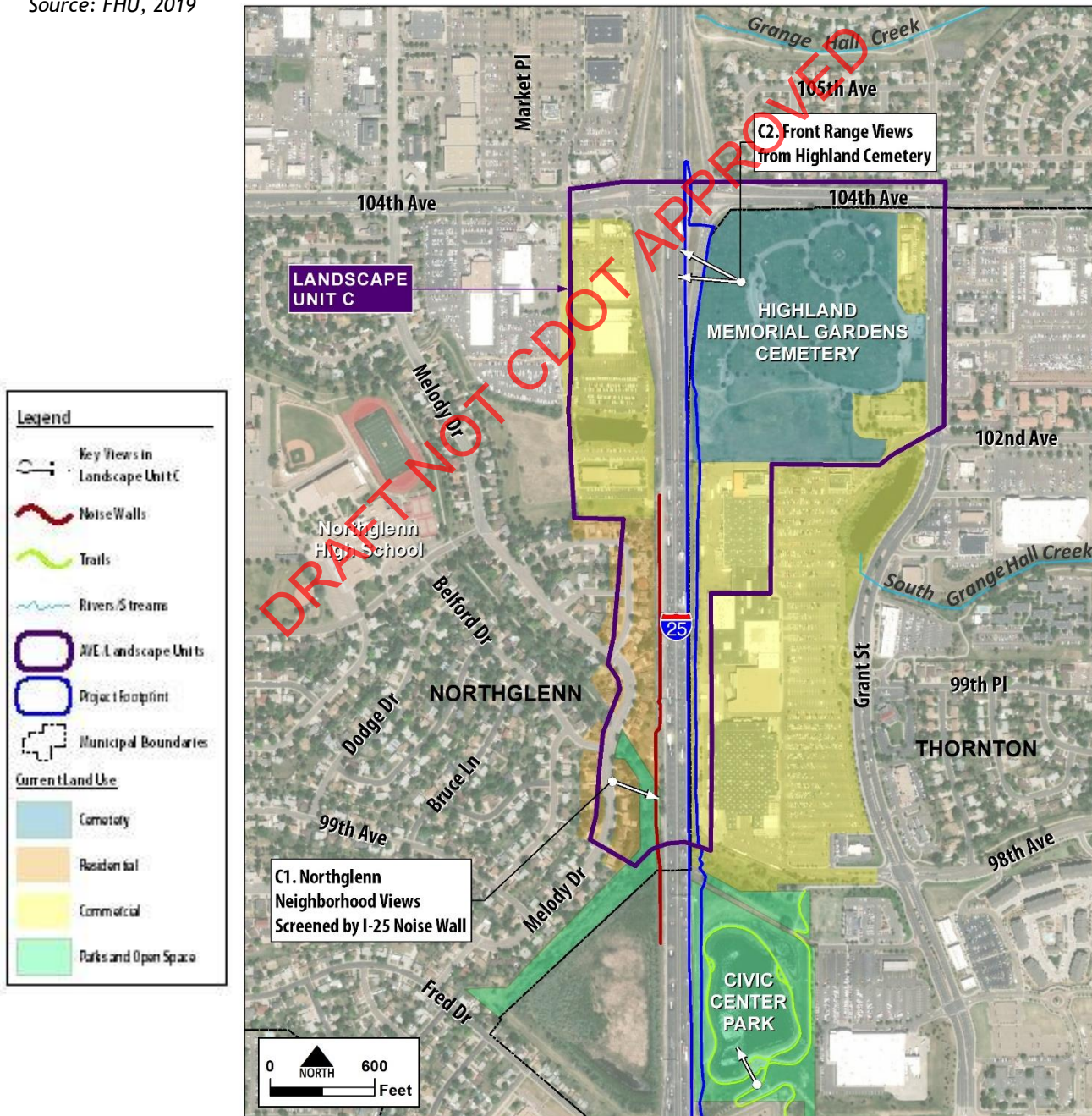


Figure 7. Landscape Unit C Visual Quality Inventory

Landscape Unit C: Thornton Parkway to 104 th Avenue							
Viewers / Distance Zones		Natural Environment		Cultural Environment		Project Environment	
C1. Northglenn Residential	Fg	Harmonious	Residential subdivision	Orderly	Residential landscaping	I-25 noise walls	
C2. Highland Cemetery	Fg & Bg	Inharmonious	Naturalized	Disorderly	Garden setting	104 th Ave	
I-25 NB & SB	Fg	Urban	Mixed use	Fg	Lacks unity	Lacks unity	
Legend							
I-25 Viewer Visibility		Harmonious		Orderly		Coherent	
Screened views		Inharmonious		Disorderly		Incoherent	
Partially screened views		Urban		Fg	Foreground	Bg	Background

Source: FHU, 2019





5.0 Impact Evaluation

5.1 Methodology

The FHWA VIA focuses on determining the degree of impacts on the visual quality of each LAU (beneficial, adverse, or neutral). The process for assessing visual impacts incorporates the visual compatibility and viewer sensitivity assessments to determine the degree of visual impact on visual quality. **Appendix B** provides details of the visual impact methodology, visual compatibility, and visual sensitivity analyses.

The following sections describe the impacts on visual quality within LAUs A, B South, B North, and C.

5.2 Visual Impacts Landscape Unit A

This section describes the impacts of the two additional northbound (NB) and southbound (SB) general purpose travel lanes to the visual quality within the AVE for LAU A between 78th Avenue and 84th Avenue, as follows (see **Table 1** and **Appendix B, Table B1**):

- ▶ The scale, form, and materials of the added NB and SB general purpose lanes would be compatible with the visual character of the I-25 corridor between 78th Avenue to the southern limits of the 84th Avenue interchange (see **Appendix B** for details of the visual compatibility analysis).
- ▶ I-25 noise walls would screen views of I-25 from adjacent Perl Mack and Welby residential neighborhoods.
- ▶ Visual impacts on I-25 travelers would be neutral due to the weak levels of visual contrast associated with the added NB and SB general purpose lanes.

5.3 Visual Impacts Landscape Unit B South

This section describes the impacts of the proposed improvements on the visual quality within the AVE for LAU B South between 84th Avenue and 88th Avenue (see **Table 2** and **Appendix B, Table B2**).

- ▶ Visual impacts from the proposed I-25 lane widening and realignment would be seen in context to RTD station expansion at I-25 and 88th Avenue. The widening of I-25 and alignment shift to the west would diminish the aesthetic gateway image of the setting between 84th Avenue and 88th Avenue, resulting in an adverse visual impact due to the following:
 - The scale of the project footprint shown on **Figure 8** would be visually incompatible with the gateway image due to the loss of up to approximately 7 acres of adjacent hillside landscaping within LAU B South.
 - The alignment shift of added lanes, ramps, grading, and retaining walls into the hillside landscaping west of I-25 would result in a strong level of landform and vegetation contrast within the foreground views of I-25.
 - I-25 widening would contrast with 84th Avenue bridge aesthetic design features.
- ▶ The replacement of the 88th Avenue bridge would provide opportunities for creating beneficial impacts by establishing I-25 corridor visual unity, in context to the 84th Avenue and Thornton Parkway bridges.
- ▶ The Niver Trail would be shifted to the west of I-25, where the trail alignment would be located along the top of the Niver berm, and cross under the 88th Avenue bridge embankment within a concrete box culvert. The proposed alignment of the Niver Trail would result in a neutral effect to the visual experience of trail users.
- ▶ The increased height of the noise walls adjacent to the Ashford Apartments would result in a moderate to weak levels of visual contrast to residential and I-25 views.



5.4 Visual Impacts Landscape Unit B North

This section describes the impacts of the proposed improvements on the visual quality of the natural, cultural, and project environments within the AVE for LAU B North, between 88th Avenue and Thornton Parkway interchange (see **Table 3** and **Appendix B, Table B3**).

- ▶ The visual contrast of the added NB and SB lanes and the transition of the I-25 alignment within LAU B North would not be visually apparent within viewsheds of the North Creek Community residents, City of Thornton Government Center, or medical complexes.
- ▶ The I-25 widening and alignment shift would have a neutral impact on the viewer experience of Niver Trail, with the alignment location along the top of the Niver berm, where there would be a vertical separation from I-25 travel lanes.
- ▶ The footprint of the added NB general-purpose lane would avoid direct impacts on Civic Center

Park. An anticipated 10-foot construction zone within the western edge of the Park would result in a short-term adverse visual impact, due to disturbance to native grasses and shrubs within the foreground views of Park visitors. The added NB lane would also bring I-25 traffic closer to the western edge of the Park.

5.5 Visual Impacts Landscape Unit C

This section describes the impacts of the proposed improvements on the visual quality of the natural, cultural, and project environments within the AVE for LAU C between the Thornton Parkway interchange and the 104th Avenue interchange (see **Table 4** and **Appendix B, Table B4**).

- ▶ The I-25 noise wall would screen views of the NB lane widening from the Northglenn community residents.
- ▶ Impacts of the NB lane widening on the Highland Memorial Cemetery would not attract attention and are considered neutral.

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Table 1. Impacts on Visual Quality Landscape Unit A

				Impacts on Visual Quality Landscape Unit A			Visual Impact Summary		
				Viewer Sensitivity					
				Sensitive	Insensitive				
				Neighbors	Travelers				
Visual Compatibility	Incompatible	Criteria	Proposed Project Elements	Visual Contrast / Compatibility	A.1 PerL Mack	A.2 Welby	A.3 I-25 Views	Visual Impact Summary	
	Compatible	Natural Harmony / Cultural	Roadway Widening	Weak Contrast					Limited visual exposure or awareness of I-25 widening from residential neighbors: The I-25 noise walls adjacent to Perl Mack and Welby neighborhoods would screen residential views of I-25 lane widening.
		Project Coherence		Weak Contrast					Neutral visual changes to I-25 corridor
		Visual Quality Impacts	Roadway Widening	Weak Contrast					Neutral visual quality impacts: The scale, form, and materials of the proposed I-25 widening would be visually compatible with the LAU A setting and would not be visually apparent to adjacent residential viewers.
Impacts on Visual Quality Legend									
	Adverse Impact		Neutral Impact		Beneficial Impact		No Visual Impact / or Not Visible	Screened Views	

Source: FHU, 2019

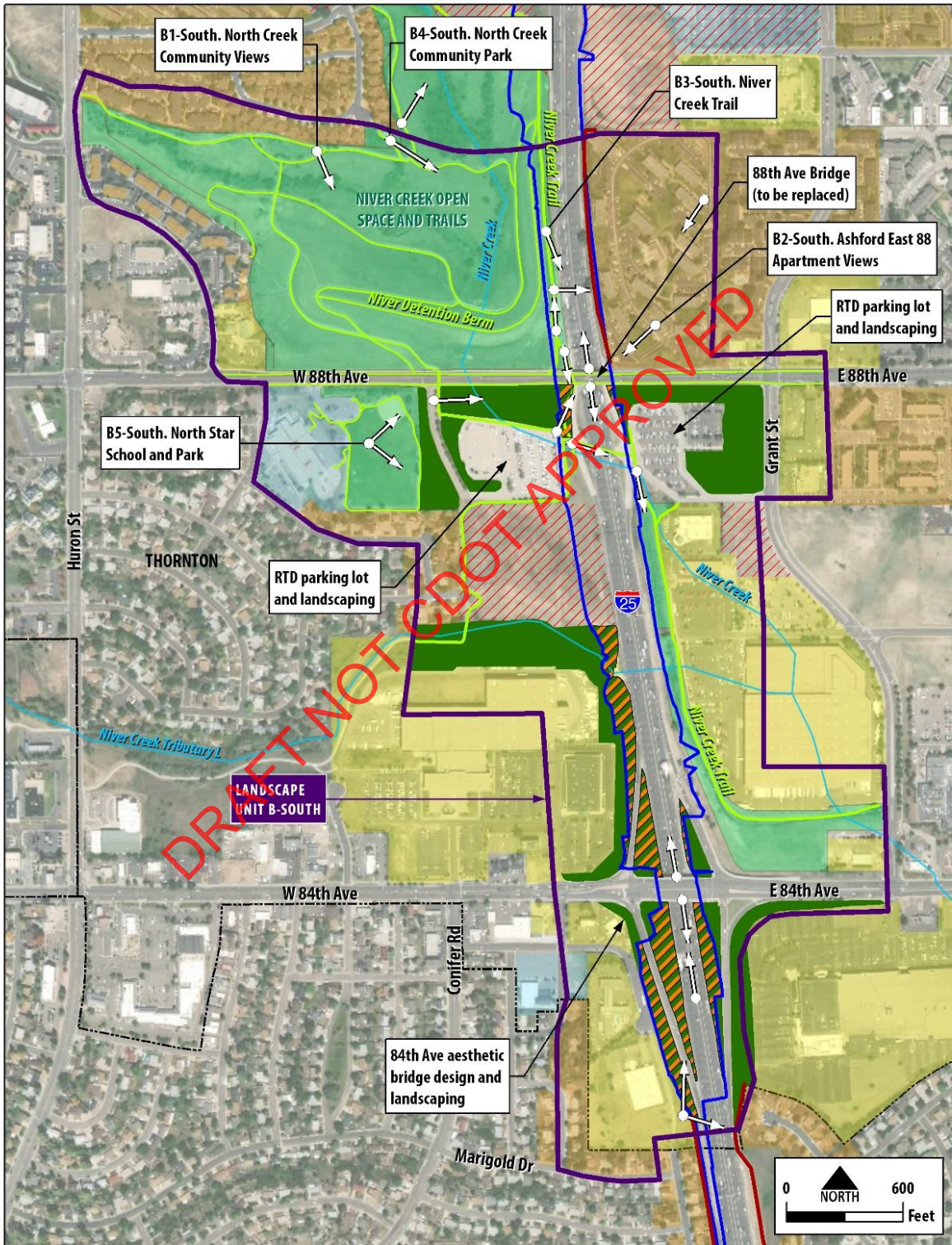


Table 2. Impacts on Visual Quality Landscape Unit B South

				Impacts on Visual Quality Landscape Unit B South									
				Viewer Sensitivity									
				Sensitive					Insensitive				
				Neighbors					Travelers				
Visual Compatibility	Incompatible		Criteria	Proposed Project Elements	Visual Contrast / Compatibility	B1S. North Ck Neighborhood	B2S. Ashford Residents	B3S. Niver Trail	B4S. North Ck Park	B5S. North Star School	I-25 Views within Landscape Setting		
	Compatible		Natural Harmony / Cultural Order		I-25 Lanes / Realignment	Strong							<p>The proposed I-25 lane widening and realignment to the west within LAU B South would be seen in context to RTD station expansion at I-25 and 88th Avenue.</p> <p>The strong visual contrast resulting from the loss of landscaping adjacent to the west side of the 84th Avenue interchange ramps has the potential to diminish the gateway image.</p> <p>The replacement of the 88th Avenue bridge provides opportunities to create visual unity within the project corridor; and the Niver Trail underpass culvert creates an improved pedestrian experience.</p> <p>The visual contrast of relocating the existing noise walls adjacent to the Ashford East Apartments would be weak. The wall heights would not be increased or modify apartment views.</p>
			Project Coherence		M-S								
			Visual Quality Impacts		I-25 Lanes / Realignment	Strong							
			Visual Quality Impacts		88 th Bridge Replacement	Moderate							
	Visual Quality Impacts		Niver Trail Alignment / Retaining Wall	Moderate									
	Visual Quality Impacts		Noise Wall	Weak									
	Impacts on Visual Quality												
		Adverse Impacts			Neutral Impacts		Beneficial Impacts		No Visual Impact / Not Visible		Screened		

Source: FHU, 2019

Figure 8. Visual Impacts on Gateway Image



Source: FHU, 2019



Table 3. Impacts on Visual Quality Landscape Unit B North

					Impacts on Visual Quality Landscape Unit B North					
					Viewer Sensitivity					
					Sensitive		Insensitive			
					Neighbors	Travelers	Visual Impact Summary			
Visual Compatibility	Incompatible	Criteria	Proposed Project Elements	Visual Contrast / Compatibility	B1N. North Ck Community	B2N. Niver Ck Trail	B3N. Civic Center Park	B4N. Thornton Center	I-25 Views within Park/Open Setting	<p>The visual contrast of the added NB and SB lanes and the transition of the I-25 alignment within LAU B North would not be visually apparent within the open space viewsheds of the residential communities or the Front Range viewsheds of the City of Thornton Government Center or medical complexes.</p> <p>The realignment of the Niver Creek Trail would result in a neutral visual impact on trail users adjacent to I-25 and within the 88th Avenue bridge concrete culvert underpass.</p> <p>The construction footprint of the added NB lane would result in an adverse construction-related visual impact on the western edge of Civic Center Park due to the removal of native grasses and shrubs and closer proximity of I-25 traffic to visitors.</p>
	Compatible	Natural Harmony / Cultural Order	I-25 Lane widening / Realignment	M - S						
			Niver Trail Realignment	M						
	Compatible	Project Coherence		Weak						
		Visual Quality Impacts	I-25 Lane widening / Realignment	M - S						
Trail Realignment	M - S									
Impacts on Visual Quality										
	Adverse Impacts		Neutral Impacts		Beneficial Impacts		No Visual Impact / Not Visible		Screened	

Source: FHU, 2019



Table 4. Impacts on Visual Quality Landscape Unit C

				Impacts on Visual Quality Landscape Unit C					
				Viewer Sensitivity					
				Sensitive		Insensitive			
				Neighbors	Travelers	Visual Impact Summary The visual contrast of the added NB lanes and retaining wall within LAU C would not be visually apparent within the viewshed of the Highland Memorial Gardens Cemetery. I-25 noise walls would screen Northglenn residential views.			
Visual Compatibility	Incompatible	Criteria	Proposed Project Elements	Visual Contrast / Compatibility	C1. Northglenn Neighborhood			C2. Highland Memorial Cemetery	I-25 Corridor Views
		Natural Harmony / Cultural Order	Roadway Widening	Weak					
			Retaining Wall	Weak					
	Compatible	Project Coherence		Weak					
		Visual Quality	Roadway Widening	Weak					
			Retaining Wall	Weak					
	Impacts on Visual Quality								
		Adverse Impact		Neutral Impact		Beneficial Impact		No Visual Impact / Not Visible	

Source: FHU, 2019



Table 5. Impacts on Visual Resources

Context	No Action Alternative	Proposed Action
<p>The visual impact assessment follows FHWA 2015 <i>Guidelines for the Visual Impact Assessment of Highway Projects</i>. The project's Area of Visual Effect (AVE) is within urbanized areas of Adams County and the City of Thornton.</p> <p>The Niver Creek Open Space and Trail Corridor provides a unifying natural and recreation resource within the urban context of the AVE. The 84th Avenue interchange design features and landscaping, combined with stone terraced landscape walls and the City of Thornton sign, create a gateway image.</p> <p>The AVE includes a sequence of four visually connected areas, or landscape units (LAU), including:</p> <ul style="list-style-type: none"> • LAU A: 78th Ave to 84th Ave • LAU B South: 84th Ave to 88th Ave • LAU B North: North of 88th Ave to Thornton Parkway • LAU C: Thornton Parkway to 104th Avenue interchange 	<p>Permanent Impacts</p> <p>Would not impact visual quality of the project area.</p>	<p>Permanent Impacts</p> <p>The overall corridor project elements including bridges, noise walls, and retaining walls will result in an Adverse Impact due to the strong visual contrast among them.</p> <p>LAU A impacts: The proposed roadway widening would be visually compatible with the project setting, and the existing I-25 noise walls would screen residential views within the adjacent Perl Mack and Welby neighborhoods.</p> <p>LAU B South impacts: The loss of landscaping at the 84th Ave interchange would diminish the visual quality of the City of Thornton gateway image and result in adverse impacts on I-25 traveler views due to the strong visual contrast of I-25 widening. This action results in an Adverse Impact.</p> <p>The replacement of the 88th Avenue bridge would result in a moderate visual contrast and create opportunities for beneficial impacts by establishing I-25 corridor visual unity with the 84th Avenue and Thornton Parkway bridges.</p> <p>The visual contrast of shifting the Niver Trail alignment along the top of the berm would provide a vertical separation between the trail and I-25 travel lanes; and the pedestrian underpass at the 88th Avenue bridge within a box culvert would provide a horizontal separation from the I-25 travel lanes. The visual contrast of the Niver Creek Trail realignment would be moderate and result in neutral impacts to the visual experience of trail users.</p> <p>LAU B North impacts: The moderate visual contrast of the continued Niver Creek Trail alignment along the top of the berm would result in neutral impacts to the visual experience of trail users.</p> <p>The construction footprint of the added northbound lane would result in an adverse construction related visual impact on the western edge of Civic Center Park due to the moderate-to-strong visual contrast of removing native grasses and shrubs and the closer proximity of I-25 traffic to visitors within the Park.</p>

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Context	No Action Alternative	Proposed Action
		<p>LAU C: The added I-25 northbound lanes would not be visually apparent to the Highland Memorial Gardens Cemetery.</p> <p>Temporary Impacts</p> <p>LAU B North impacts: The construction footprint of the added northbound lane would result in an adverse construction-related visual impact on the western edge of Civic Center Park due to the removal of native grasses and shrubs and closer proximity of I-25 traffic to visitors.</p>

6.0 Mitigation Measures

Table 6 includes strategies to avoid, minimize, or compensate for visual impacts.

Table 6. Mitigation Commitments for Visual Resources

Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase That Mitigation Will Be Implemented
Loss of landscaping due to I-25 widening and realignment creates strong visual contrast, particularly regarding the 84 th Avenue gateway image = Adverse Impact.	Minimize the loss of landscape within the I-25 right-of-way and adjacent properties to the extent possible. During the design phase, develop a planting plan for replacement of shrubs and trees in coordination with the CDOT Region 1 Landscape Architect and the City of Thornton. This plan will include the development of plans to retain the 84 th Avenue Interchange aesthetic gateway image for the City of Thornton.	CDOT R1 Landscape Architect and CDOT Design Engineer	Design and Construction
Strong visual contrast among I-25 project elements, including bridges, noise walls, and retaining walls = Adverse Impact	Develop visually coordinated design elements for the 88 th Avenue Bridge replacement and proposed retaining walls adjacent to southbound lanes (STA 158+00 to STA 167+75.00) and northbound lanes (STA 158+00.00 to STA 176+00) to establish a unified image and compatible setting for views from I-25 travelers, Ashford residents, and the Niver Creek Trail.	CDOT R1 Landscape Architect	Design
Replacement of 88 th Avenue bridge creates opportunity to improve visual quality by creating visual unity within the project corridor = Beneficial Impact	The design team will work closely with the City of Thornton, RTD, and CDOT Region 1 Landscape Architect to develop a similar architectural design theme for the 88 th Avenue Bridge and the RTD multimodal bus transit station. The design theme will include coordinated colors and landscaping within available spaces to create aesthetic continuity.	CDOT R1 Landscape Architect and CDOT Design Engineer	Design Construction



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Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase That Mitigation Will Be Implemented
I-25 northbound lane within Civic Center Park construction-related impacts on park vegetation along the western fence line edge adjacent to path = Adverse Impact during construction	Minimize the footprint of the proposed northbound I-25 lane within Civic Center Park and restore the park edge with compatible landscape treatment. Include native grasses and informal groupings of mixed shrubs and trees within the construction footprint zone that blend in with existing vegetation to compensate for vegetation loss and provide a visual buffer to I-25 travel lanes. Coordinate revegetation planting with the City of Thornton and the CDOT Region 1 Landscape Architect.	CDOT R1 Landscape Architect and CDOT Design Engineer	Design Construction

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7.0 References

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City of Thornton. 2012b. *Thornton Parks and Open Space Plan*.

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Appendix A – Federal Highway Administration Visual Impact Assessment Scoping Questionnaire October 2018

The following 10 questions can be used to determine the appropriate level of effort for assessing the impacts on visual quality that may result from a proposed highway project. The first set of five questions is concerned with environmental compatibility impacts on the visual resources of the affected environment. The second set of five questions deals with the sensitivity of the affected population of viewers to those impacts.

Consider each of the 10 questions on the questionnaire and select the response that most closely applies to the project in question. Each response has a corresponding point value. After the questionnaire is completed the total score will represent the type of VIA document suitable for the project.

It is important that this scoring system be used as a preliminary guide only. Although these questions provide some guidelines for determining if a VIA is necessary, it should not, by itself, be considered definitive. If there is any hint that visual issues may be a factor in assessing impacts, it is recommended that a VIA be conducted. Although the total score will direct the user toward a particular level of VIA documentation, circumstances may necessitate selecting a different level of analysis and documentation based on previous experience, local concerns, or professional judgment. This checklist is meant to assist the writer of the VIA to understand the degree and breadth of the possible visual issues. The goal is to develop an analysis and document strategy that is appropriately thorough, efficient, and defensible.

The FHWA VIA scoping questionnaire consists of 10 questions to help determine the type of VIA. The questions cover two topics: *environmental compatibility* and *viewer sensitivity*.

Scoping Overview

The visual impact assessment scoping for the project evolved with changes in the project termini and preliminary design as follows:

- ▶ The visual resource team conducted initial scoping in April 2017 based on the following proposed improvements:
 - Project termini between US 36 to Thornton Parkway. Proposed I-25 widening included the addition of a 4th northbound (NB) and southbound (SB) general-purpose lane within the existing I-25 alignment, and
 - Replacement of the 88th Avenue bridge and realignment of Niver Trail.
- ▶ Updated scoping occurred in July 2018 in response to the following changes in proposed project improvements:
 - Extension of the project termini to 104th Avenue, with a NB general-purpose lane extending from Thornton Parkway to 104th Avenue,
 - Accommodating a proposed median RTD station at the 88th Avenue interchange, and
 - An I-25 alignment shift to the west from 84th Avenue to north of 88th Avenue.

The following VIA scoping responses reflect the environmental compatibility and viewer sensitivity associated with proposed project improvements. The scoping process included a review of the related NEPA and planning documents, project design plans, and a site visit.



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The five questions about *environmental compatibility* in the VIA Scoping Questionnaire are:

1. Will the project result in a noticeable change in the physical characteristics of the existing environment?

Consider all project components and construction impacts—both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.

- ▶ High level of permanent change (3)
- ▶ **Moderate level of permanent change (2)**
- ▶ Low level of permanent or temporary change (1)
- ▶ No Noticeable Change (0)

Assumptions: The limits of the VIA study termini focus on the limits of transportation improvements and do not include the I-25 / US 36 interchange area. The overall width of I-25 will expand from 136 ft. to 202 ft., and the 88th Avenue bridge will be replaced. Widening includes adding a 4th NB & SB general-purpose lane, outside managed auxiliary lanes, and inside and outside shoulders. There will be an I-25 alignment shift to the west between the 84th Avenue interchange and Thornton Parkway. Existing noise walls are not expected to change. The visibility of these changes from adjacent viewers will be variable.

2. Will the project complement or contrast with the visual character desired by the community?

Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.

- ▶ Low Compatibility (3)
- ▶ **Moderate Compatibility (2)**
- ▶ High compatibility (1)

Assumptions: The project is included as an element of the Preferred Alternative in the I-25 North EIS (2011), I-25/84th Avenue Bridge Reconstruction CatEx (2010), I-25 Managed Lanes Project - US36 to 120th Avenue (Reevaluation of I-25 EIS, 2014), and the North I-25, US36 to SH 7 PEL (2014). The replacement of the 84th Avenue bridge will be complementary to the urban setting of the project area and is consistent with local plans.

3. What types of project features and construction impacts are proposed? Are there particular concerns related to bridge structures, large excavations, sound barriers, vegetation removal, or other features of the proposed project that will raise concerns?

Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.

- ▶ High concern (3)
- ▶ **Moderate concern (2)**
- ▶ Low concern (1)
- ▶ Negligible Project Features (0)

Assumptions: The 84th Avenue bridge replacement has the potential to improve the visual compatibility with the urban corridor setting. ROW widening may result in impacts on roadside landscaping and open space vegetation.

4. Will the project changes likely be mitigated by normal means such as landscaping and architectural enhancements, or will avoidance or more extensive compensation measures be necessary to minimize adverse change?

- ▶ Extensive Non-Conventional Mitigation Likely
- ▶ **Some non-conventional Mitigation Likely (2)**
- ▶ Only Conventional Mitigation Likely (1)
- ▶ No Mitigation Likely (0)

Assumptions: Impacts on roadside landscape materials and open space areas within the project footprint would require landscape architectural and urban design treatment to establish visual compatibility.



5. **Will this project, when seen collectively with other projects, result in cumulative adverse impacts to visual resources or their visual character?**

Identify any projects [both state and local] in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.

- ▶ Cumulative Impacts likely: 0-5 years (3)
- ▶ Cumulative Impacts likely: 6-10 years (2)
- ▶ **Cumulative Impacts unlikely (1)**

Assumptions: DRCOG Metro Vision Plan recognizes a future 202-foot cross section for I-25 north of US-36, which is greater than the highway's current cross section, to address the transportation needs of the rapidly growing corridor communities. Cumulative impact analyses conducted for the North I-25 EIS concluded that the patterns of growth north of US 36 will likely continue, regardless of whether improvements to I-25 are implemented. The visual character of the community is not expected to change due to the proposed improvements to I-25 from US 36 to Thornton Parkway, because the project area is fully developed.

The five questions about viewer sensitivity are:

1. **What is the potential that the project proposal may be controversial within the community, or opposed by any organized group?**

This can be researched initially by talking with the state DOT and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information

- ▶ High Potential (3)
- ▶ Moderate Potential (2)
- ▶ **Low Potential (1)**
- ▶ No Potential (0)

Assumptions: Previous NEPA studies for the project area have not identified community concerns for the project. The public comments from North I-25 PEL open house meetings showed support for the additional capacity and operational improvements.

2. **How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project?**

Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment and by soliciting information from other DOT staff, local agencies, and community representatives familiar with the affected community's sentiments and demonstrated concerns.

- ▶ High Sensitivity (3)
- ▶ **Moderate Sensitivity (2)**
- ▶ Low Sensitivity (1)

Assumptions: Viewer groups include I-25 travelers, residents, park and open space visitors and trail users, commercial shoppers, as well as views from the medical complex at the I-25 and Thornton Parkway interchange area. I-25 travelers will experience interstate lane improvements consistent with the North I-25 corridor. Residential views south of the 84th Avenue bridge and at the northeast corner of the 88th Avenue bridge intersection are screened by noise walls. Views of I-25 from other residents in the project area are screened or minimized by open space buffers. Recreation viewers will have the most direct views of the project from adjacent park and open space areas and trails. Views from the medical complexes near Thornton Parkway are generally set back from the interstate, and commercial areas are generally within large building complexes.



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3. *To what degree does the project appear to be consistent with applicable laws, ordinances, regulations, policies, or standards regarding visual preferences?*

- ▶ Low Compatibility (3)
- ▶ Moderate Compatibility (2)
- ▶ **High compatibility (1)**

Assumptions: Project improvements are included in the DRCOG *Metro Vision Plan*, and previous NEPA studies have not identified community concerns for the project.

4. *Are any permits going to be required by outside regulatory agencies (i.e., Federal, State, or local) that will necessitate a particular level of Visual Impact Assessment?*

Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements that are defined by the permitter, may be determined by talking with the project environmental planner and project engineer. Note: coordinate with the state DOT representative responsible for obtaining the permit prior to communicating directly with any permitting agency. Permits that may benefit from additional analysis include permits that may result in visible built features, such as infiltration basins or devices under a stormwater permit or a retaining wall for wetland avoidance or permits for work in sensitive areas such as coastal development permits or on federal lands, such as impacts to Wild and Scenic Rivers.

- ▶ Yes (3)
- ▶ **Maybe (2)**
- ▶ No (1)

Assumptions: There are trail and open space areas within the project footprint.

5. *Will decision-makers (including the project designers) or the public benefit from a more detailed visual analysis in order to help reach consensus on a course of action?*

Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.

- ▶ Yes (3)
- ▶ Maybe (2)
- ▶ **No (1)**

Assumptions: The I-25 North EIS and Record of Decision provide a comprehensive plan for I-25 improvements in the Preferred Alternative, and the North I-25 PEL focuses on improvements north of US 36. The consensus reached on the Preferred Alternative is supported by local communities.

Summary: This represents an initial VIA scoping effort to get the process started, based on a preliminary review of the I-25 North US 36 to 104th Avenue Project. **With the total score of 16 points, an Abbreviated VIA is appropriate (see below).**

Determining the Level of Visual Impact Assessment

Total the scores of the answers to all 10 questions on the VIA Scoping Questionnaire. Use the total score from the questionnaire as an indicator of the appropriate level of VIA to perform for the project. Confirm that the level suggested by the checklist is consistent with the project teams' professional judgments. If there remains doubt about whether a VIA needs to be completed, it may be prudent to conduct an Abbreviated VIA. If there remains doubt about the level of the VIA, begin with the simpler VIA process. If visual impacts emerge as a more substantial concern than anticipated, the level of VIA documentation can always be increased.



The level of the VIA can initially be based on the following ranges of total scores:

Score 25-30

An *Expanded VIA* is probably necessary. It is recommended that it should be proceeded by a formal visual scoping study prior to beginning the VIA to alert the project team to potential highly adverse impacts and to develop new project alternatives to avoid those impacts. These technical studies will likely receive state-wide, even national, public review. Extensive use of visual simulations and a comprehensive public involvement program would be typical.

Score 20-24

A *Standard VIA* is recommended. This technical study will likely receive extensive local, perhaps state-wide, public review. It would typically include several visual simulations. It would also include a thorough examination of public planning and policy documents supplemented with a direct public engagement processes to determine visual preferences.

Score 15-19

An *Abbreviated VIA* would briefly describe project features, impacts, and mitigation requirements. Visual simulations would be optional. An Abbreviated VIA would receive little direct public interest beyond a summary of its findings in the project's environmental documents. Visual preferences would be based on observation and review of planning and policy documents by local jurisdictions.

Score 10-14

A *VIA Memorandum* addressing minor visual issues that indicates the nature of the limited impacts and any necessary mitigation strategies that should be implemented would likely be sufficient along with an explanation of why no formal analysis is required.

Score 6-9

No noticeable physical changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file to document that there is no effect. A *VIA Memorandum* may be used to document that there is no effect and to explain the approach used for the determination.

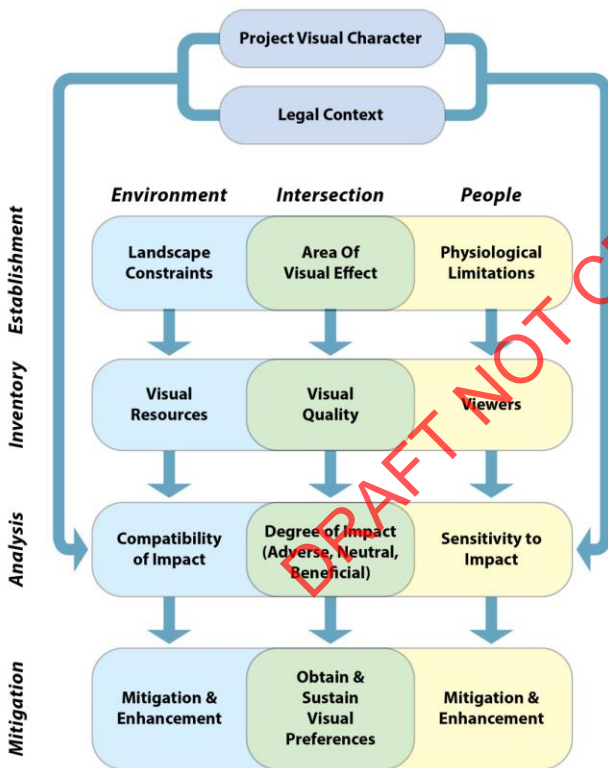
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Appendix B – Visual Impact Assessment Methodology and Visual Compatibility Evaluations

This visual analysis follows guidance from FHWA’s *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA, 2015) for assessing impacts on visual resources, in context to the National Environmental Policy Act (NEPA). The Visual Impact Assessment (VIA) process includes four phases (Establishment, Inventory, Analysis, and Mitigation), as illustrated on **Figure B-1, Visual Impact Assessment Process**.

- ▶ Visual compatibility of the Proposed Action with the visual character (compatible or incompatible)
- ▶ Viewer sensitivity to changes (sensitive or insensitive)
- ▶ Degree of visual impacts on visual quality (adverse, neutral, or beneficial)

Figure B-1. Visual Impact Assessment Process



This section of the visual resources technical report describes the criteria and evaluation of the visual impacts of the Proposed Action on the visual character, viewers, and visual quality of the landscape units. For the analysis phase of the FHWA VIA process, the study team evaluated the changes to the visual resources within each landscape unit in three steps, to identify:

Evaluation Criteria

Compatibility with Visual Character

The visual compatibility, or contrast, of the Proposed Action with the visual character of the landscape is based on the ability of the environment to absorb the visual changes of the proposed project. The study team analyzed the visual contrast of the proposed roadway, bridge, and intersections described in **Section 2.3** with natural and cultural environment features within each landscape unit. The analysis considers the contrast of the form, line, color, texture, scale, and materials of each project element with landforms, vegetation, water, and development (existing and future). The degree of visual contrast is characterized in the following three levels:

- ▶ **Strong** visual contrast - Proposed Action would attract attention and dominate landscape features
- ▶ **Moderate** visual contrast - Proposed Action begins to attract attention but remains subordinate to landscape features
- ▶ **Weak** visual contrast - Proposed Action would not attract attention or reduce the diversity and continuity of landscape features

Determining the visual compatibility of the project (compatible or incompatible) with the visual character of the natural, cultural, and project environments is tied to the levels of visual contrast:

- ▶ **Compatible** - Moderate or weak levels of visual contrast to natural environment and cultural environment features are considered compatible with the visual character of the landscape units



- ▶ *Incompatible* - A strong or moderate-strong levels of contrast to the natural environment and cultural environment features are considered incompatible with the visual character of the landscape units

- ▶ *Focus* refers to differentiating details in the landscape
- ▶ *Protection* is provided by restrictions placed on visual resources by agency regulations, guidelines, and plans

Viewer Sensitivity

The sensitivity of viewers would be *sensitive* or *insensitive* to changes in the visual character of the natural, cultural, and project environments within each landscape unit, based on the evaluation of viewer *exposure* and *awareness* of the project. Viewer exposure criteria include proximity, extent, and duration:

- ▶ Viewer *proximity* is measured by three distance zones:
 - Foreground - 0.25 to 0.5 mile
 - Middleground - 3 to 5 miles
 - Background - Extends from the middleground zone to the limit of project visibility within the AVE
- ▶ *Extent* refers to the number of people who will be viewing the scene or object
- ▶ *View duration* measures how long viewers may view the scene or object

Viewer *awareness* criteria include attention, focus, and protection:

- ▶ *Attention* correlates with how routine or unique the scene is to a viewer

Impacts on Visual Quality

The FHWA VIA focuses on determining the degree of impacts on the visual quality of each landscape unit (beneficial, adverse, or neutral). The process for assessing visual impacts incorporates the visual compatibility and viewer sensitivity assessments to determine the degree of visual impact on visual quality.

Section 5.0 describes visual impacts.

A template was developed in a matrix format to display each element of the visual impact assessment described previously as shown on Tables B.1 through B.4.

Visual Compatibility Evaluations

Tables B.1 through B.4 characterize the visual compatibility of the proposed project improvements.

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Table B.1. Visual Character Compatibility Matrix Landscape Unit A

			Visual Character Compatibility Matrix Landscape Unit A		
	Visually Compatible		Visual Compatibility		
	Visually Incompatible				
W	Weak Visual Contrast				
M	Moderate Visual Contrast				
S	Strong Visual Contrast				
Evaluation Criteria			Natural Environment	Cultural Environment	Project Environment
Proposed Project Elements			LAU A is urbanized, without natural environmental-related visual resources	I-25 retaining walls screen adjacent Perl Mack & Welby Neighborhoods	8 existing I-25 lanes, including 2-managed lanes and 6-general purpose lanes, with adjacent noise walls
Visual Contrast	Project Scale, Form, and Materials	Roadway Widening: 2 additional lanes (1 NB & 1 SB)		None No change to I-25 noise wall scale, form, or materials	W Minor change in scale of I-25 travel corridor (8-lanes to 10-lanes)
Visual Compatibility Summary				Compatible	Compatible

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Table B.2. Visual Character Compatibility Matrix Landscape Unit B South

		Compatible	Visual Character Compatibility Matrix Landscape Unit B South		
		Incompatible			
W	Weak Visual Contrast				
M	Moderate Visual Contrast				
S	Strong Visual Contrast				
Evaluation Criteria		Visual Compatibility			
		Natural Environment	Cultural Environment	Project Environment	
Proposed Project Elements		Niver Open Space & Trail	Residential & Commercial Development	8 existing I-25 lanes, including 2-managed lanes and 6-general purpose lanes; 84 th Avenue interchange; 88 th Avenue bridge; and connected landscaping	
Visual Contrast	Project Scale, Form, and Materials	I-25 Widening / Realignment: 2 additional lanes (1 NB and 1 SB) with alignment shift to west w/retaining wall	M Retains visual character of core Niver Creek landscape	M-S Reduced landscape buffer diminishes corridor visual character	S Reduces 84 th Avenue interchange landscaping and aesthetic gateway character
		88 th Avenue Bridge Replacement	M Enhances trail setting	M Enhances corridor viewshed	M Enhances corridor visual image
		Niver Trail Realignment and Berm Retaining Wall	M Enhances trail experience at 88 th Ave underpass and retains visual character of core Niver Creek landscape	M Retains core Niver Creek landscape	M Contrast with Niver berm scale, form, and materials
		Noise Wall	None No contrast with core Niver Creek landscape	M Increased wall scale adjacent to Ashford Apartments	W Minor increase in wall scale
Visual Compatibility Summary				Contrast with Corridor Gateway image	

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Table B.3. Visual Character Compatibility Matrix Landscape Unit B North

		Compatible	Visual Character Compatibility Matrix Landscape Unit B North			
		Incompatible				
W	Weak Visual Contrast					
M	Moderate Visual Contrast					
S	Strong Visual Contrast					
Evaluation Criteria		Visual Compatibility				
		Natural Environment	Cultural Environment	Project Environment		
Proposed Project Elements		Niver Open Space and Trail	Civic Center Park	Adjacent Residential Development	8 existing I-25 lanes, including 2-managed lanes and 6-general purpose lanes	
Visual Contrast	Project Scale, Form, and Materials	I-25 Lanes / Realignment	MS Scale, form, and materials contrast with Open Space edge	MS Form and materials contrast to Park edge	W	W Minor increase in scale of I-25
		Niver Trail Realignment	M Retains visual character of core Niver Creek landscape, and the alignment along the berm creates vertical separation from I-25 travel lanes			
Visual Compatibility Summary						

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Table B.4. Visual Character Compatibility Matrix Landscape Unit C

		Visual Character Compatibility Matrix Landscape Unit C		
Evaluation Criteria		Visual Compatibility		
		Natural Environment	Cultural Environment	Project Environment
Compatible				
Incompatible				
W	Weak Visual Contrast			
M	Moderate Visual Contrast			
S	Strong Visual Contrast			
Proposed Project Elements		Urban Corridor	Highland Memorial Gardens Cemetery	Northglenn Residents
Visual Contrast	Project Scale, Form, and Materials	Roadway Widening 1 additional NB lane	W Changes in scale, form, and materials would not be visually apparent	None No change to I-25 noise wall scale, form, or materials
Visual Compatibility Summary				8 existing I-25 lanes, including 2-managed lanes and 6-general purpose lanes W Minor change in scale of I-25 travel corridor (8-lanes to 10 lanes)

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Appendix C – Site Photos

Landscape Unit A Photos



I-25 Northbound Views

- I-25 traveler foreground viewshed is dominated by noise walls and Managed Lane message signs



I-25 Southbound Views

- I-25 traveler foreground viewshed is dominated by noise walls and Managed Lane message signs
- Background views of the Denver skyline



I-25 (US 36 to 104th Avenue) Environmental Assessment



I-25 Southeast View

- View across the I-25 Managed Lanes from the end of Sherman Street

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Landscape Unit B South Photos



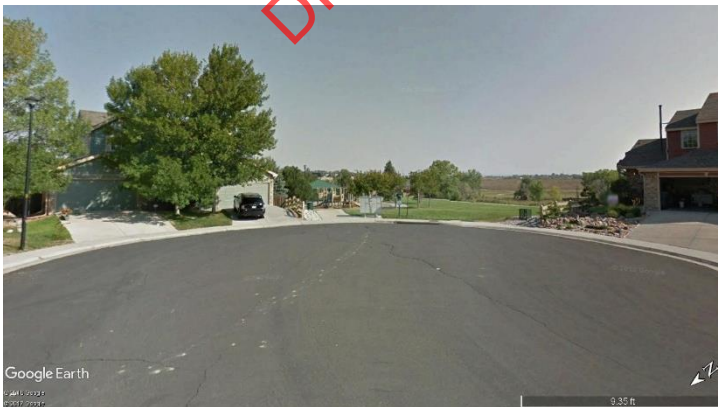
Ashford Apartments at 88th Avenue

- Aerial view south of I-25 and 88th Avenue bridge



Niver Creek Trail at 88th Avenue

- View of SB I-25 and Niver Creek Trail underpass at 88th Avenue bridge



North Creek Park

- View southeast from North Creek community park toward Niver Open Space
- I-25 is screened by the Niver berm

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I-25 (US 36 to 104th Avenue) Environmental Assessment



88th Street Bridge Landscaping

- View east of I-25 and 88th Avenue bridge landscaping adjacent to RTD bus facility



84th Street Bridge

- View south of 84th Avenue bridge



View south of I-25 from 84th Street bridge

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I-25 (US 36 to 104th Avenue) Environmental Assessment



View north of I-25 from 84th Street bridge



View north of Niver Creek Trail near 88th Avenue bridge underpass

- Niver detention berm to the west and SB lanes to the east



Niver Creek Trail underpass at 88th Avenue bridge

- View south of trail underpass

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I-25 (US 36 to 104th Avenue) Environmental Assessment



View east toward Ashford Apartments and Retaining Wall

- View east from Niver Creek Trail just north of 88th Avenue bridge



North Creek Community Park and Niver Open Space

- View southeast of Niver Creek Open Space
- Views of I-25 screened by the Niver detention berm
- Ashford Apartments on the skyline



84th Street bridge and I-25 interchange

- View northeast of I-25 southbound on-ramp and adjacent landscaping from the north end of Sherman Street

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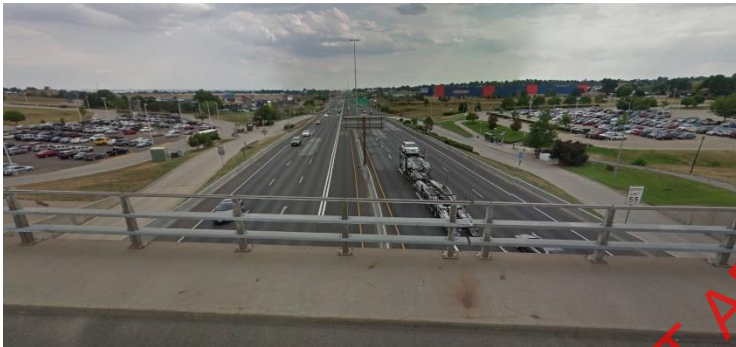


I-25 (US 36 to 104th Avenue) Environmental Assessment



View north of I-25 from 88th Avenue bridge

- View North of Ashford Apartments to the east and Niver Creek Trail to the west



View south of I-25 from 88th Avenue bridge

- View south of RTD parking lots and I-25 bus underpass

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Landscape Unit B North Photos



North Creek Community

- View northeast at Niver Creek trailhead



I-25 southbound lanes and Thornton Parkway on-ramp



Niver Creek Trail and Open Space

- View northeast toward I-25 and Thornton Parkway bridge
- Skyline view of City of Thornton government center



I-25 (US 36 to 104th Avenue) Environmental Assessment

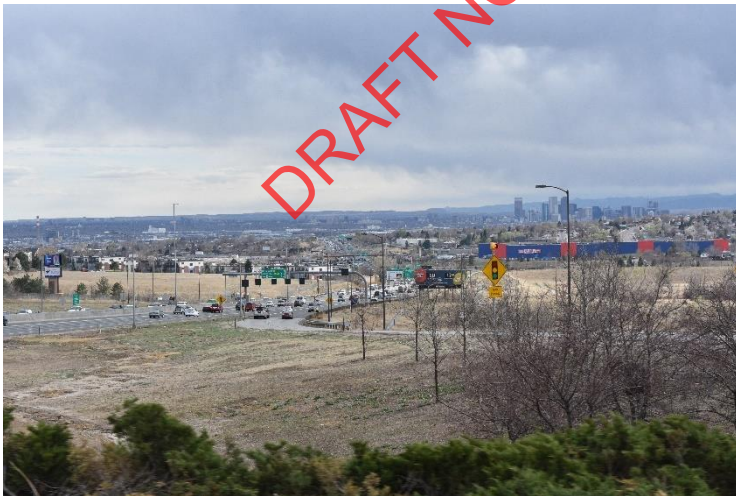


Niver Creek Trail and Open Space

- View east from Niver Creek Trail toward I-25 and Ashford Apartments



View north from Thornton Parkway bridge



View southeast from Thornton Parkway

- View south with Thornton Parkway interchange landscaping in foreground

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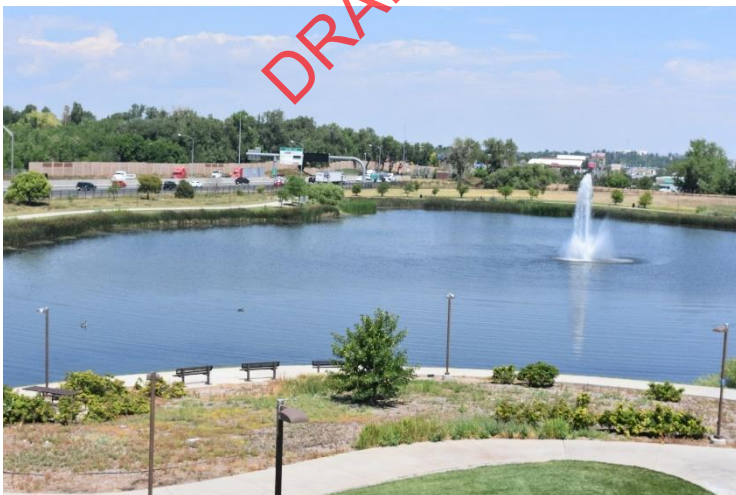
Civic Center Park

- View northwest across Civic Center Park toward I-25



Civic Center Park Trail

- View north from Civic Center Park path adjacent to I-25



Civic Center Park

- View northwest toward I-25 and Northglenn community noise wall

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Landscape Unit C Photos



Highland Memorial Gardens Cemetery

- View southwest across cemetery toward I-25 from center area



Highland Memorial Gardens Cemetery

- View southwest across cemetery toward I-25 from western section



View south from 104th Avenue bridge



I-25 Northbound View

- Commercial development to east
- Northglenn community and noise wall to west

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