5.0 CHAPTER 5 PHASED PROJECT IMPLEMENTATION

This chapter describes the proposed phases for the preliminarily identified Preferred Alternative and documents that all applicable environmental laws and requirements will be adhered to for each of the project phases before and after construction.

Both Build Alternatives, described in detail in **Chapter 2 – Alternatives**, could be implemented using the phased Record of Decision (ROD) approach, and the ability to define phases was not a factor in the preliminary identification of the Preferred Alternative.

The preliminarily identified Preferred Alternative is estimated to cost approximately $760.5 million (based on preliminary design estimates in 2010 dollars) — including design, right-of-way (ROW) acquisition, and construction — which is more than the amount currently available in the Pueblo Area Council of Government (PACOG) Fiscally Constrained Plan in the *Pueblo Area 2035 Long Range Transportation Plan* (PACOG, 2008), referred to as the Pueblo Regional Transportation Plan. Because the Federal Highway Administration (FHWA) can approve in a ROD only those project improvements that are included in the Fiscally Constrained Plan, a phased approach is necessary. Using this approach, which allows for disclosure and discussion of project phasing during the NEPA process, additional detail is provided regarding phasing, as an enhancement to the typical NEPA process because only what is included in the Fiscally Constrained Plan can be approved in the ROD. Each additional phase of the project will need to be included in the 20-year Fiscally Constrained Plan as additional project phases are funded, with at least a portion placed in the Statewide Transportation Improvement Program (STIP). This process, including the preparation of a ROD for each project phase along with the opportunity for the public to comment, will be repeated until construction of the entire Preferred Alternative identified in the Draft Environmental Impact Statement (DEIS) is completed.

To accommodate the funding limitations described above, the preliminarily identified Preferred Alternative has been divided into three phases: Phase 1, Phase 2, and Phase 3. In selecting project phases, care was taken to ensure that each phase demonstrates independent utility; that is, it can be constructed and function independently without other phases or improvements. Phase 1, which consists of replacing the three structurally deficient bridges in the corridor (Ilex Street, Indiana Avenue, and Northern Avenue), as described in Section 5.2.1, would cost approximately $123.5 million (2010 dollars). Phase 1 is proposed as the initial phase for the first ROD. Later phases would be constructed over time and as funding becomes available; these phases are described in this chapter in concept.

After the Final Environmental Impact Statement (FEIS) has been made available to the public and the review period concludes, FHWA and the Colorado Department of Transportation (CDOT) will decide whether to select an initial phase for the first ROD. Subsequent RODs will take into consideration the FEIS, the preceding RODs, and any environmental reevaluations that may have been performed. Phases 2 and 3 do not necessarily need to be selected in their entirety or in order in subsequent RODs. This will be determined at the time of a subsequent ROD, considering available funding, priorities at that time, and the results of any reevaluation that may be needed. Future funding availability will play a major role in determining when construction begins and the priority and schedule under which the packages within each phase can be implemented.

The following general considerations will be taken into account when determining the scope of future RODs.

- CDOT will consider equity issues and the need to balance the construction of improvements throughout the corridor.
- If local agency funding or other reasonably available funding (such as private funds or other unexpected or nontraditional funding sources) becomes available, packages may be identified for inclusion in future RODs.

- Circumstances in the corridor may change such that agreements with the City of Pueblo (City) (see **Appendix F**) developed during the DEIS process would impact the decision on which packages to advance.
- If state and/or federal funds become available, CDOT will select packages to include in future RODs based on the following priorities: Safety, Mobility, and Community Values.

In reevaluating the scope of future project phases, CDOT will conduct a public information campaign and will consult with the City and PACOG. Additionally, as each package goes through the final design process, input would be sought from those local agencies affected, as is typical in CDOT project planning. Stakeholder input will also be sought in accordance with agreements that were developed during the NEPA process and documented in this DEIS. Once the packages have been determined for the next phase, the ROD will identify impacts and appropriate mitigation measures that are associated with those actions.

5.1 PROJECT FUNDING

The Pueblo Regional Transportation Plan (PACOG, 2008), which serves as the 20-year regional transportation plan for the Pueblo area, consists of two primary sections: the Preferred Plan and the Fiscally Constrained Plan (PACOG, 2008). The Preferred Plan identifies long-range improvements needed for the transportation network in the Pueblo region, without regard to available funding. The Preferred Plan programs approximately $846 million (2008 dollars) for needed improvements to the I-25 through Pueblo corridor, which would fully fund the entire New Pueblo Freeway Project (estimated at $760.5 million in 2010 dollars) based on preliminary design estimates. The Fiscally Constrained Plan for the Pueblo area must include only those projects that can be funded with available funds from state and federal sources and other reasonable available funding, such as private funds or other unexpected or nontraditional funding sources. The Fiscally Constrained Plan was updated in April 2011 and identifies projects that have been allocated funding and will be implemented by 2035.

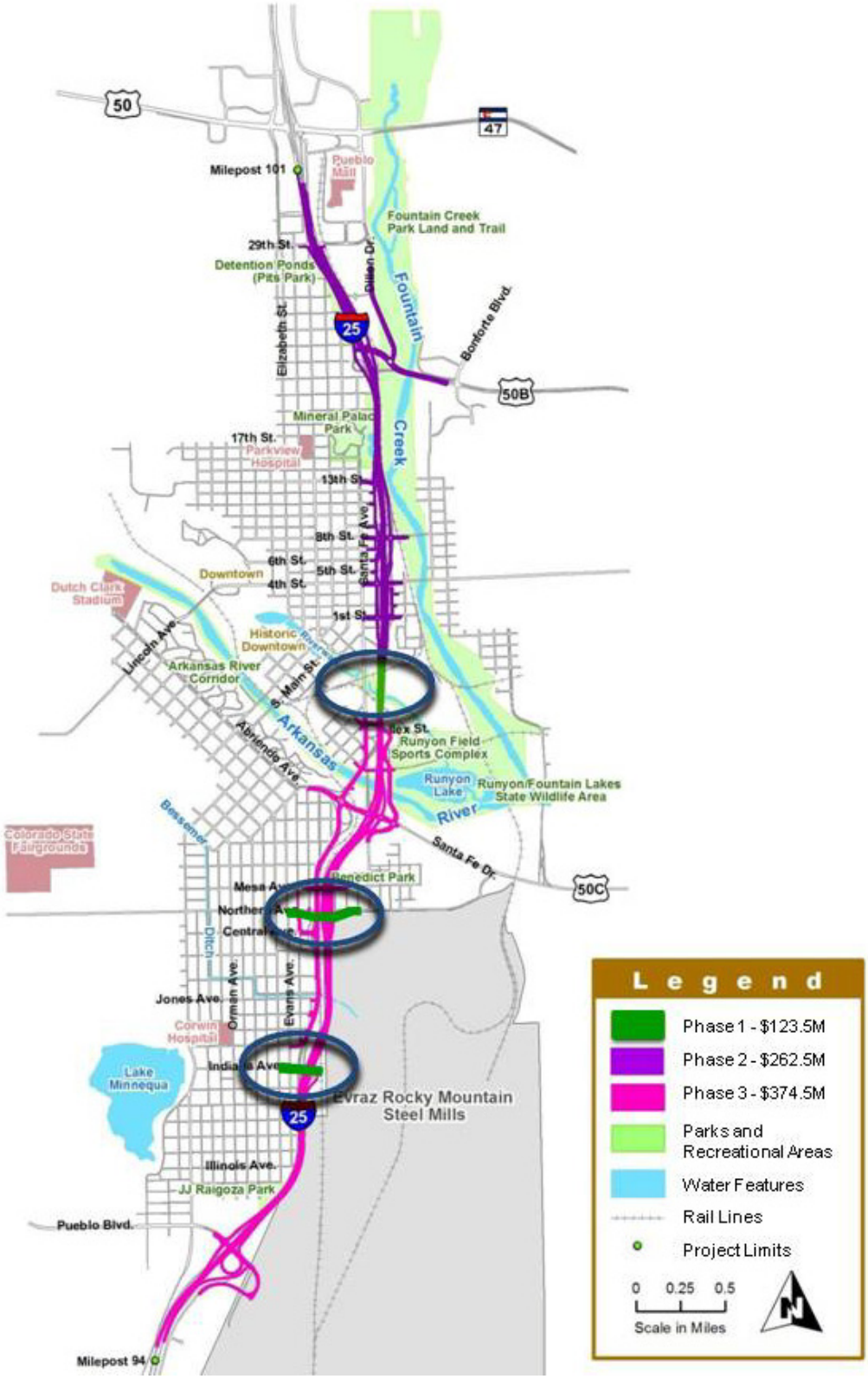
The update to the Fiscally Constrained Plan reports that $120 million in funds have been identified through the Bridge Enterprise Program (funded by State Bill [SB] 09-103 FASTER legislation) for the first phase of the preliminarily identified Preferred Alternative. The short-term Transportation Improvement Program (TIP) and the STIP identify all regional transportation projects for the period between 2012 and 2017. Of these, the TIP currently identifies $900,000 for reconstruction of the three bridges, $10 million for improvements to I-25 through Pueblo under the Safety Program, and $12 million under the Regional Priorities Program to be used within the study area for components of Phase 1. An amendment to the TIP and STIP, which will be prepared by CDOT prior to the first ROD, is expected to identify full funding for Phase 1. CDOT intends to use this funding for Phase 1 of the preliminarily identified Preferred Alternative or for the improvements identified for the No Action Alternative, described in **Chapter 2 – Alternatives, Section 2.6.1**.

5.2 PROJECT PHASING

The preliminarily identified Preferred Alternative is approximately 7 miles in length and widens I-25 to six lanes (three in each direction) from just north of 29th Street to Pueblo Boulevard. The highway would be straightened through downtown Pueblo and relocated to the east of the current highway alignment between Abriendo Avenue and Indiana Avenue. Additional details of the preliminarily identified Preferred Alternative can be found in **Chapter 2 – Alternatives**, **Section 2.6.3**. The preliminarily identified Preferred Alternative was developed based on the project's stated Purpose and Need (see **Chapter 1 – Purpose and Need**), engineering analyses, an evaluation of environmental resources, and a public involvement effort that included coordination with the public, agencies, and local officials, as described in **Chapter 2 – Alternatives**.

The scale of the preliminarily identified Preferred Alternative and the funding limitations dictate that the project be constructed in phases. The limits of the three designated phases are shown in **Exhibit 5-1**.

EXHIBIT 5-1
Preliminarily Identified Preferred Alternative Project Phasing



The elements included in each phase and the associated environmental impacts and mitigation measures are described in the remainder of this Chapter.

The decision of which elements to include in Phase 1 of the project was made based on funding constraints, the project Purpose and Need, and CDOT regional priorities. The elements of Phase 1, described in Section 5.2.1, were included in the first construction phase because these three bridges have the lowest sufficiency rating of all of the bridges in the corridor (CH2M HILL, 2011a). Deficient bridges are one of the needs identified in the project Purpose and Need. Phase 2 improvements consist of elements in the North Area of the corridor that are logical to construct together. Similarly, Phase 3 improvements consist of elements in the Central and South Areas of the corridor, where I-25 is proposed to be realigned to the east. Constructing these improvements simultaneously is necessary to accommodate the shift in highway alignment for most of the packages described in Section 5.2.3.

5.2.1 Phase 1 – Bridge Replacement

Description of Improvements

Phase 1 consists of three packages that include the replacement of the structurally deficient bridges at Ilex Street, Northern Avenue, and Indiana Avenue. As described in Section 5.1, the Fiscally Constrained Plan (PACOG, 2008) has identified $120 million for the replacement of these three bridges from CDOT's Bridge Enterprise Program (funded by SB 09-103 FASTER legislation). The engineer's estimate for the three packages that comprise Phase 1 total approximately $123.5 million. However, CDOT will prepare an amendment to the TIP and STIP prior to the first ROD; the amendment is expected to identify full funding for this phase.

Phase 1 improvements are considered a reasonable expenditure of funds and would incrementally contribute to addressing the Purpose and Need of the project, even if no additional transportation improvements are made in the area. The improvements proposed for each package in Phase 1 would have independent utility in that each element would provide transportation benefits, would be a reasonable expenditure even if no additional improvements are made in the area, and would connect logical termini.

The three packages proposed for Phase 1 and included in the Fiscally Constrained Plan (PACOG, 2008) are as follows:

- **Ilex Viaduct Replacement.** The structurally deficient Ilex Viaduct will be replaced with two separate bridges. The project will maintain full access of Exit 98A to Ilex Street until future phases of construction. Preserving this existing interchange requires removal of the existing Ilex Street. To retain access to the northbound ramps, a portion of the ultimate Stanton Avenue extension is included to connect these ramps to Santa Fe Avenue. A minimal amount of I-25 reconstruction will be required to tie the ultimate bridge location (under the shifted Modified I-25 Alternative alignment) back into the current I-25 alignment until subsequent phases of the project are constructed. The expected cost for the Ilex Viaduct replacement is $40.0 million.

Ilex Street Viaduct

- **Indiana Avenue Bridge Replacement.** The Indiana Avenue bridge will provide a new single-point diamond interchange at Indiana Avenue, east of its current location. Due to the shift of the highway in the preliminarily identified Preferred Alternative, in order to construct this bridge in its ultimate location and maintain the current access to I-25, temporary roadway tie-ins will be necessary until the surrounding highway improvements are completed in later phases. The anticipated cost for the Indiana Avenue bridge replacement is $75.0 million.
- **Northern Avenue Bridge Replacement.** The structurally deficient realigned Northern Avenue bridge can be replaced parallel to the existing bridge in the ultimate location. Replacement of the Northern Avenue bridge over existing I-25 is currently estimated to cost $8.5 million.

Environmental Impacts and Mitigation

The environmental impacts and associated mitigation measures associated with implementation of the preliminarily identified Preferred Alternative in its entirety are evaluated in **Chapter 3 – Affected Environment and Environmental Consequences**. However, for a phased implementation approach, it is necessary to evaluate the environmental impacts by phase to evaluate and disclose any incremental impacts that could result from the construction of the project in phases.

Exhibit 5-2 summarizes the environmental impacts and associated mitigation commitments associated with implementation of Phase 1. Mitigation measures identified in **Exhibit 5-2** would be completed in conjunction with construction of Phase 1 improvements. Indirect impacts for all phases would be the same as those listed for each resource in **Chapter 3 – Affected Environment and Environmental Consequences** and are not discussed further in this chapter.

Irretrievable and irreversible commitments of labor, funding, energy, and materials would occur during the full build out of the New Pueblo Freeway Project. Some elements of Phase 1 are in an interim location and would need to be reconstructed as future phases are completed, which would result in irretrievable losses of labor, funding, energy, and materials. However, the decision to proceed in phases was made due to existing funding limitations. The elements of Phase 1, including interchange reconstruction and replacement of deficient bridges, are anticipated to provide a substantial benefit to corridor users and would therefore offset the irreversible impacts.

The incremental environmental impacts that would occur as a result of project phasing are summarized below.

- The construction period of the project would occur over a longer period of time, resulting in:
  - More detours and traffic delays that would inconvenience residents, adjacent businesses, and community facilities.
  - An economic benefit to the area due to multiple construction mobilizations and the need for additional construction workers.
  - Extended visual impacts to adjacent communities, including exposed soils, staging areas, and construction lighting.
  - A greater potential for the spread of invasive species and the need to redisturb land when portions of the project are reconstructed.
- The interim configuration of the I-25 alignment for construction of the Phase 1 Indiana Avenue Bridge Replacement Package has the potential to increase noise in the Bessemer Neighborhood adjacent to the project, which would not occur if the project were not phased. Additional noise analysis will be completed prior to publication of the FEIS to evaluate the potential for noise impacts and determine required mitigation associated with Phase 1.

EXHIBIT 5-2
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
TRANSPORTATION	
❖ Phase 1 would replace 5 bridges that have low sufficiency ratings. These bridges – northbound and southbound at Ilex, northbound and southbound at Indiana, and the Northern overcrossing – will each be replaced with single bridges that span both directions of travel. ❖ Phase 1 would widen the bridges over Ilex Street and Indiana Avenue to allow for widening of I-25 in future phases. ❖ The improvements in Phase 1 are anticipated to have limited impacts to traffic patterns in the project area. ❖ Construction of Phase 1 would cause temporary impacts to the railroads during bridge construction. An internal steel mill railroad line adjacent to Northern Avenue would have to be realigned on steel mill property. ❖ Construction of Phase 1 would cause temporary impacts to traffic during construction such as changes in access, delay caused by lane closures, out-of-direction travel incurred due to detours, and other similar unavoidable impacts caused by construction-related activities. As a result of phasing, the construction period of the project would be longer, resulting in more detours and traffic delays, which would inconvenience residents and businesses during construction.	❖ CDOT will follow appropriate permitting, including coordination with the railroads for impacts to the rail lines during Phase 1 bridge construction. CDOT will coordinate with the Evraz Rocky Mountain Steel Mill for the realignment of the company's internal rail line. ❖ CDOT will conduct public information efforts, including development of a Public Information Plan (described in more detail in **Section 3.1 Transportation**) to inform the public and affected businesses in advance of lane closures, detours, and interchange reconstruction activities. ❖ CDOT will maintain safe business access during construction of Phase 1. ❖ CDOT will develop a Traffic Control Plan during final design that will detail strategies (described in more detail in **Section 3.1 Transportation**) to minimize traffic disruption from construction activities. Whenever possible, the existing number of lanes will be maintained throughout construction. Speed limits will be reduced in work zones. ❖ A mitigation monitoring and implementation plan will be developed during final design. Commitments to mitigate for both construction and operational impacts of the Preferred Alternative will be modified or adapted, if needed, based on the final project design.
HISTORIC PROPERTIES	
❖ Phase 1 would have adverse effects to 1 individual historic resource, including acquisition of 5 contributing properties for the Steelworks Suburbs Historic District. ❖ Phase 1 would have adverse effects to 1 archaeological site. Potential impacts to 5 Need Data archaeological sites.	❖ A Programmatic Agreement will be completed prior to publication of the FEIS that identifies specific mitigation measures for historic resources. These may include surveys and documentation of historic structures, salvage of historic materials from structures, or preparation of educational materials detailing the history of the area. Potential mitigation measures are described in more detail in **Section 3.2 Historic Properties**. ❖ Final mitigation measures for archaeological resources will be formalized in the Programmatic Agreement, as described in **Section 3.2 Historic Properties**.
PARKS AND RECREATION	
❖ Construction of the Ilex Viaduct Replacement Package in Phase 1 would temporarily impact the Thomas Phelps Creek Trail.	❖ CDOT will provide advance notice to the public of temporary detours and/or closures of the Thomas Phelps Creek Trail during construction. Access will be maintained as much as possible to minimize impacts to users.

EXHIBIT 5-2
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
RIGHT-OF-WAY AND RELOCATIONS	
❖ Construction of Phase 1 would require a total of 63 acquisitions (49 total and 14 partial). ❖ Residential impacts from Phase 1 include 2 total acquisitions. ❖ Commercial impacts from Phase 1 include 14 total acquisitions and 10 partial acquisitions. ❖ Vacant undeveloped impacts from Phase 1 include 27 total acquisitions and 3 partial acquisitions. ❖ A total of 12 businesses would be displaced by the construction of Phase 1. ❖ Public impacts from Phase 1 include 6 total acquisitions and 1 partial acquisition.	❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). All impacted owners will be provided notification of CDOT's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests. A ROW specialist will be assigned to each property owner to assist with this process. All displaced residents must be relocated to dwellings that are similar to the original dwellings being acquired. Based on research conducted for this DEIS, the current amount of available comparable housing is sufficiently small to raise concerns about the ability to concurrently relocate all impacted residents into comparable and adequate housing. If, during phasing, comparable housing is not available, CDOT will work with impacted residents under the Uniform Act to move them into a comparable or better home. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**. ❖ Phase 1 impacts to public properties are considered mutually beneficial, and the Memorandum of Understanding between CDOT and the City (see **Appendix F**) specifies the future land exchange, ownership, and maintenance responsibilities. A future Intergovernmental Agreement will address ownership of excess ROW. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**.
NOISE	
❖ The interim configuration of the I-25 alignment for the construction of the Indiana Avenue Bridge Replacement Package has the potential to increase noise in the Bessemer Neighborhood adjacent to the project; this increase would not occur if the project were not phased. Construction of Phase 1 would create temporary noise impacts.	❖ Additional noise analysis will be completed prior to publication of the FEIS to evaluate the potential for noise impacts and required mitigation associated with Phase 1 construction. ❖ Construction noise will be mitigated by restricting construction to daylight hours when possible and requiring contractors to use well-maintained equipment, including muffler systems.

EXHIBIT 5-2
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
SOCIAL RESOURCES, ECONOMIC CONDITIONS, AND ENVIRONMENTAL JUSTICE	
❖ There would be no change in community cohesion as a result of Phase 1. ❖ Phase 1 construction would require acquisition of 2 residences from the east side of the Bessemer Neighborhood. ❖ A total of 12 businesses would be displaced by the construction of Phase 1. Business relocations would impact employment; however the implementation of Phase 1 would generate direct and indirect employment opportunities throughout the construction period. ❖ Economic impacts are largely tied to ROW acquisitions through loss of tax revenue and displaced businesses and residences. As a result of phasing, the construction period of the project would be lengthened, resulting in more disruptions to businesses adjacent to the corridor and detours and traffic delays, which would inconvenience residents, businesses, and community facilities during construction over the course of the project. At the same time, there would be an economic benefit to the area as a result of multiple construction mobilizations and the need for additional construction workers. ❖ Impacts from Phase 1 would be predominantly borne by minority and low-income populations. When the safety benefits and proposed mitigation included in Phase 1 are considered, these impacts would not be considered disproportionately high and adverse. Although residential and commercial relocations would be from within minority and low-income neighborhoods, both renters and owners will be compensated for acquisition and provided relocation benefits in accordance with the Uniform Act. Relocations would not be substantial enough to alter the composition of the neighborhood or otherwise negatively affect community cohesion. Construction-related nuisances would be greatest for the minority and low-income residents adjacent to Phase 1 construction areas, but impacts would be temporary and will be lessened through a variety of mitigations including a Traffic Control Plan, Public Information Plan, restrictions on night-time construction, equipment requirements, signage, and well-marked detours. Minority and low-income residents serve to benefit most from the long-term safety improvements that would result from Phase 1.	❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**. ❖ Relocation areas for businesses serving the City and the region will be identified. Efforts will be made to relocate businesses that are displaced within the City limits in order to maintain property and sales tax revenues to the City. Mitigation measures are described in more detail in **Section 3.6 Social Resources, Economic Conditions, and Environmental Justice**. ❖ CDOT will make a Public Information Plan available throughout construction. This plan and any information on construction activities and detours will be provided in both English and Spanish. Mitigation measures are described in more detail in **Section 3.1 Transportation**. ❖ Signage and detours will be set in place to direct traffic to businesses, residences, and community facilities adjacent to construction. ❖ CDOT will provide advance notice to emergency service providers, Colorado State Patrol, schools, the community, and residents regarding road delays, access, and special construction activities. ❖ Aesthetic enhancements of the highway improvements will be implemented as agreed upon in the Memorandum of Understanding between the City and CDOT (see **Appendix F**).
WETLANDS	
❖ No wetland impacts are expected as a result of Phase 1.	❖ None needed.
LAND USE	
❖ Phase 1 improvements are consistent with current and future land-use plans.	❖ None needed.

EXHIBIT 5-2
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
VISUAL RESOURCES	
❖ Phase 1 improvements would alter the Steel Mill viewshed by introducing new roadway modifications. The increased mass of the highway and presence of new elements associated with the roadway (such as noise barriers and water quality ponds, if required) would increase the highway's visual presence on the existing neighborhoods along I-25. ❖ As a result of the longer construction period, visual impacts such as exposed soils, staging areas, and construction lighting would occur over a longer time period, resulting in additional impacts to adjacent communities.	❖ Mitigation for impacts to visual resources will be addressed during final design of all Phase 1 elements. Mitigation measures, such as sound walls and bridges, will be designed for compatibility with the theme in the area consistent with the *New Pueblo Freeway Aesthetic Guidelines* (see **Appendix C**).
AIR QUALITY	
❖ No National Ambient Air Quality Standards (NAAQS) violations for carbon monoxide are expected as a result of Phase 1. ❖ Exceedance of NAAQS for particulate matter less than 10 microns (PM10) is not expected for Phase 1. ❖ Mobile Source Air Toxics (MSAT) emissions would be proportionate to the slight increase in vehicle miles traveled (VMT) in Phase 1 compared to the No Action Alternative. ❖ As a result of the longer construction period, impacts from excavation, grading, and fill work that could increase local fugitive dust and exhaust emissions would occur over a longer time period. However, with the implementation of Best Management Practices (BMPs), the effects of this impact would be negligible.	❖ Because no adverse air quality impacts are anticipated to occur as a result of the proposed Phase 1 improvements, mitigation is not required from an air quality standpoint. ❖ BMPs (described in more detail in **Section 3.10 Air Quality**) will be implemented to control dust during construction of Phase 1. Construction equipment will be required to have and maintain proper controls for exhaust systems.

EXHIBIT 5-2
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
HAZARDOUS MATERIALS	
❖ Construction of Phase 1 would impact 2 sites of potential environmental concern: the Wagner Equipment Company and Meridian Rail sites. ❖ Construction of Phase 1 would impact 2 sites with recognized environmental conditions (REC): the former Missouri Pacific Yard and the Pepsi-Cola Bottling Company. ❖ The bridges at Ilex Street, Northern Avenue, and Indiana Avenue may be coated with lead-based paint. ❖ As with any construction project that involves excavation, there is the potential to unearth buried construction debris during construction of Phase 1. Such unforeseen debris could include asbestos containing material (ACM) that requires special handling and disposal. Byproducts of steel manufacturing shot and slag have been stockpiled at the Evraz Rocky Mountain Steel Mill site and will likely be encountered during construction. Special waste handling and excavation requirements would be necessary during construction.	❖ A site-specific Phase I Environmental Site Assessment (ESA) or Initial Site Assessment (ISA) will be conducted prior to construction or acquisition of any site. The nature and extent of any soil or groundwater contamination will be assessed to determine whether remediation will be required or modifications to project design can be made. ❖ A Phase II ESA may be performed on RECs or areas of potential environmental concern. Mitigation will be required if the results determine there are potential impacts to human health or the environment. A Health and Safety Plan will be developed prior to construction. ❖ A Materials Management Plan, which includes handling of ACM, and a Health and Safety Plan will be developed for areas with known soil and groundwater contamination. The level of remediation will be determined in accordance with applicable federal and state laws and based on the final project alignment, ROW requirements, and degree of subsurface disturbance during construction. ❖ Engineering controls will be considered to minimize potential disposal costs and to avoid contamination. Responsible parties will be identified, if needed, to ensure CDOT is not liable for future remediation. ❖ If dewatering is necessary, groundwater will be managed according to applicable regulations and permitted by the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division. ❖ Wells within the construction area will be abandoned and plugged in compliance with the Colorado Department of Natural Resources Division of Water Resources State Engineer Water Well Construction Rules. ❖ Prior to demolition of structures, a survey will be conducted for any ACM, lead-based paint, heavy metals, universal wastes, Toxic Substances Control Act wastes, or miscellaneous hazardous materials. Abatement of regulated materials will be conducted. Regulated materials must be removed from structures prior to demolition and appropriately recycled or disposed. ❖ For byproducts of steel manufacturing shot and slag encountered at the Evraz Rocky Mountain Steel Mills, special waste handling and excavation requirements will be developed once the chemical composition and volume of the material is known. Mitigation measures are described in more detail in **Section 3.11 Hazardous Materials**. ❖ A qualified asbestos professional will evaluate and recommend mediation for any potential ACM, including landfill material, construction debris, utilities, or other materials. Appropriate CDOT specifications will be followed regarding the potential for asbestos-containing construction debris in soil.

EXHIBIT 5-2
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
FISH AND WILDLIFE HABITAT	
❖ No impacts are expected to fish and wildlife habitat as a result of Phase 1.	❖ None needed.
SENSITIVE SPECIES	
❖ No impacts are expected to sensitive species as a result of Phase 1.	❖ None needed.
FLOODPLAINS	
❖ No impacts to floodplains are expected as a result of Phase 1.	❖ None needed.
WATER QUALITY	
❖ Phase 1 improvements and additional traffic on I-25 in the future would generate more pollutants. BMPs in compliance with the Colorado Department of Public Safety (CDPS) Municipal Separate Stormwater Sewer System (MS4) permit requirements are designed to decrease the amount of pollutants actually entering the waters and are expected to lower pollutants for Phase 1 compared to the No Action Alternative. ❖ Construction of Phase 1 would remove vegetation, potentially resulting in a short-term increase in sedimentation and potential for erosion. All highway runoff will be collected and treated to the level required by CDOT's New Development and Redevelopment Program. BMPs can be constructed, where appropriate, to intercept, divert, and collect surface runoff and convey accumulated runoff to an acceptable outlet point. This would improve water quality compared to the No Action Alternative.	❖ All stormwater runoff that falls within CDOT ROW will be captured and treated with Tier 1 BMPs (described in more detail in **Section 3.15 Water Quality**) prior to returning to a waterway. ❖ Water quality ponds in compliance with the CDPS MS4 permit requirements will be placed adjacent to I-25 to treat pollutants in runoff from increased impervious surface area. The water quality ponds that will be constructed with each phase will be evaluated prior to publication of the FEIS. The sizing and design of these ponds will be refined during the final design; other BMPs will be evaluated during final design. Mitigation measures are described in more detail in **Section 3.15 Water Quality**. ❖ A CDOT Multi-Sector General Permit for Construction Activities will be required. BMPs will be employed to mitigate both short-term and permanent impacts to water bodies as a result of construction. Mitigation measures are described in more detail in **Section 3.15 Water Quality**.
UTILITIES	
❖ Phase 1 construction would impact the above- and below-ground utility lines located adjacent to and across I-25, including those concentrated at Northern Avenue.	❖ The location of all utilities in the corridor will be confirmed by field investigations during final design for Phase 1, including locating lines below ground. Alternate delivery systems will be provided to ensure uninterrupted service, and lines or stations will be relocated as needed. When appropriate, CDOT will look for opportunities to provide space for new utilities or upgrade existing ones. If, during future design efforts, impacts to potentially historic utility lines are identified, CDOT will engage in Section 106 consultation with the State Historic Preservation Officer (SHPO) and consulting parties regarding the resource.

EXHIBIT 5-2
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
ENERGY	
❖ On a daily basis, the difference in energy use between Phase 1 of the preliminarily identified Preferred Alternative and the No Action Alternative is negligible. ❖ Construction of the 10.51 total lane miles for Phase 1 would require 256,900 million Btu(s). Additional energy would be expended as a result of a longer construction period required for project phasing and the need to reconstruct portions of the project during later phases.	❖ To the extent practical, CDOT will implement sustainability practices into the project planning, construction, and maintenance to reduce energy use. Mitigation measures are described in more detail in **Section 3.17 Energy**.
NOXIOUS WEEDS	
❖ Ground disturbance and other construction activities in the project area could expand areas already infested with noxious weeds, spread weeds to adjacent land and wetland and riparian habitats nearby, and introduce new weed species to the project area. Construction activities in the project area would cause significant vegetation removal and ground disturbance, which could potentially provide opportunities for noxious weed eradication or control if properly managed and reseeded. ❖ The potential for the spread of invasive species would increase as a result of a longer construction period required for phasing and the need to redisturb land when portions of the project are reconstructed during later phases.	❖ Prior to the start of construction activities for Phase 1, CDOT will develop and implement a Noxious Weed Management Plan that incorporates herbicides, mechanical removal, and potential biological controls (in accordance with the Colorado Noxious Weed Act) to control and prevent weed infestation and spread. During construction, standard BMPs (described in more detail in **Section 3.18 Noxious Weeds**) will be used to observe, treat, control, and/or remove noxious weeds from the disturbed area in accordance with the Noxious Weed Management Plan. After construction, disturbed areas will be reclaimed immediately and CDOT ROW will be managed through standard CDOT maintenance operations. Fertilizer will not be used in seed areas. All construction equipment will be washed thoroughly.
PALEONTOLOGICAL RESOURCES	
❖ Phase 1 would not affect any known significant paleontological resources.	❖ Construction will be monitored during all phases for potential paleontological sites.
SOILS AND GEOLOGY	
❖ Phase 1 construction activities have the potential to encounter unstable soils or geologic hazards that would require mitigation prior to construction.	❖ A detailed geotechnical and soils analysis of the subsurface will be performed during final design for each phase.
SECTION 4(f) RESOURCES	
❖ Phase 1 would impact 2 of the 39 Section 4(f) resources impacted by the Preferred Alternative: 1 historic property (5PE4179) and 1 historic district (Steelworks Suburbs). FHWA has made a preliminary determination that there is no feasible and prudent avoidance alternative to the use of Section 4(f) property for the Preferred Alternative, as demonstrated in **Chapter 4 – Section 4(f) Evaluation**. Phase 1 impacts to Section 4(f) properties are, therefore, unavoidable. The preliminarily identified Preferred Alternative incorporates all possible planning to minimize harm to Section 4(f) properties to the extent possible at the DEIS level of project design and development.	❖ CDOT will provide advance notice to the public of temporary detours and/or closures of the Thomas Phelps Creek Trail during construction. Access will be maintained as much as possible to minimize impacts to users. ❖ A Programmatic Agreement will be completed prior to publication of the FEIS that identifies specific mitigation measures for historic resources. These may include surveys and documentation of historic structures, salvage of historic materials from structures, or preparation of educational materials detailing the history of the area. Potential mitigation measures are described in more detail in **Section 3.2 Historic Properties**.

5.2.2 Phase 2 – North Area

Description of Improvements

Phase 2 consists of three packages for highway widening and interchange reconstruction from milepost (mp) 101 south to the Ilex bridges, including a complete reconstruction of I-25 in the downtown area, as described in **Chapter 2 – Alternatives, Section 2.6.3**. The expected cost for Phase 2 is $262.5 million (2010 dollars[1]).

Due to funding limitations, the entire dollar amount required for Phase 2 may not be available at one time. Phase 2 does not necessarily need to be selected in its entirety or in order in subsequent RODs. This will be determined at the time of a subsequent ROD, considering available funding, priorities at that time, and the results of any reevaluation that may be needed. Future funding availability will play a major role in determining when construction begins and the priority and schedule under which the packages within each phase can be implemented.

These improvements are considered a reasonable expenditure of funds and would incrementally contribute to addressing the Purpose and Need of the project, even if no additional transportation improvements are made in the area. The improvements proposed for each package in Phase 2 would have independent utility in that each element would provide transportation benefits, would be a reasonable expenditure even if no additional improvements are made in the area, and would connect logical termini.

The three packages proposed for Phase 2 are as follows:

- **Dillon Drive Extension.** The four-lane extension of Dillon Drive from 26th Street south to U.S. Highway (HS) 50B will provide connectivity between US 50B and 29th Street and offers an off-highway alternative for local traffic.
- **I-25 from 13th Street to US 50B Interchange.** Planned improvements consist of reconstruction and widening of the portion of I-25 from 13th Street up to and including the US 50 Bypass Interchange. This estimated $134.5-million package also includes widening I-25 from four to six lanes, constructing frontage roads, and reconstructing interchanges from mp 101 south to the US 50B interchange.
- **Downtown Improvements from 13th Street to 1st Street.** This estimated $120.1-million construction package is the most complex area of the entire I-25 corridor and will be expensive to implement. The package consists of a complete widening and reconstruction of I-25, construction of a split-diamond interchange between 13th Street and 1st Street with additional exit ramps near 6th Street, and construction of one-way frontage roads between the ramps.

Environmental Impacts and Mitigation

Exhibit 5-3 summarizes the environmental impacts and associated mitigation measures associated with the implementation of Phase 2. Mitigation measures included in **Exhibit 5-3** would be completed in conjunction with construction of Phase 2 improvements.

[1] Because the year of expenditure is unknown for future phases of construction, dollar amounts for Phase 2 are reported in 2010 dollars. These costs may be understated or overstated depending on economic factors such as material costs and inflation.

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
TRANSPORTATION	
❖ Phase 2 would upgrade interchanges to current design standards, improve interchange spacing, and provide connectivity to appropriate local streets. ❖ Phase 2 would reconstruct interchanges at US 50B and between 1st Street and 13th Street to connect I-25 to more appropriate City streets. Dillon Drive would be extended to increase off-highway local mobility for users. ❖ Phase 2 would restore off-highway connections that were removed during original I-25 construction. It would also provide alternative north-south routes for local users on Dillon Drive. ❖ Phase 2 would replace 8 bridges that have low sufficiency ratings. ❖ The improvements in Phase 2 would correct operational deficiencies and provide additional capacity on I-25 to improve congestion between 29th Street and Ilex Street to accommodate future travel demands. Construction of the project in phases would not result in any bottlenecks or unacceptable traffic conditions. ❖ Construction of Phase 2 would cause temporary impacts to the railroads during bridge construction. ❖ Phase 2 would require modifications to Transit Route 6 because it reconfigures the downtown interchange system. ❖ Pedestrian and bicycle mobility would be improved through provisions of multi-modal elements in Phase 2 such as trails and sidewalks. Construction of pedestrian trails along I-25 to the north and south and across I-25 near Mineral Palace Park would improve pedestrian and bicycle mobility. ❖ Phase 2 improvements would cause temporary impacts to traffic during construction, such as changes in access, delay caused by lane closures, out-of-direction travel incurred due to detours, and other similar unavoidable impacts caused by construction-related activities. As a result of phasing, the construction period of the project would be longer, resulting in more detours and traffic delays that would inconvenience residents and businesses during construction.	❖ To minimize the impact of construction on bus routing and service, CDOT will coordinate with the Pueblo Transit System prior to and throughout construction of Phase 2. ❖ CDOT will follow appropriate permitting, including coordination with the railroads for impacts to the rail lines during bridge construction for Phase 2. ❖ CDOT will conduct public information efforts, including development of a Public Information Plan (described in more detail in **Section 3.1 Transportation**) to inform the public and affected businesses in advance of lane closures, detours, and interchange reconstruction activities. ❖ CDOT will maintain safe business access and provide at least one access point to downtown Pueblo during construction of Phase 2. ❖ CDOT will develop a Traffic Control Plan during final design that will detail strategies (described in more detail in **Section 3.1 Transportation**) to minimize traffic disruption from construction activities. Whenever possible, the existing number of lanes will be maintained throughout construction. Speed limits will be reduced in work zones. ❖ A mitigation monitoring and implementation plan will be developed during final design. Commitments to mitigate for both construction and operational effects of a preferred alternative will be modified or adapted, if needed, based on final project design.
HISTORIC PROPERTIES	
❖ Phase 2 would have adverse effects to 24 historic resources, including the North Side and Second Ward historic districts.	❖ A Programmatic Agreement will be completed prior to publication of the FEIS that identifies specific mitigation measures for historic resources. These mitigations may include surveys and documentation of historic structures, salvage of historic materials from structures, or preparation of educational materials detailing the history of the area. Potential mitigation measures are described in more detail in **Section 3.2 Historic Properties**.

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
PARKS AND RECREATION	
❖ Under Phase 2, the detention ponds between 29th Street and 24th Street and Mineral Palace Park would potentially be impacted by noise without implementation of mitigation measures. ❖ Widening of I-25 adjacent to Mineral Palace Park in Phase 2 would result in a loss of 50 feet along the entire eastern edge of the park, equal to 1.69 acres (3.7 percent of the park). Widening would also remove the northeast park road to a parking lot, 40 parking spaces, vegetation including 20 mature trees, 15 to 20 percent of Lake Clara, 40 feet of the Works Progress Administration wall around Lake Clara, and 13 percent of the maintenance yard. An informal path within the park would also be impacted. ❖ The improvements in Phase 2, including an extension of Dillon Drive to US 50B, relocation and widening of US 50B to the north, and improved 8th Street connection to the east of I-25, would require the acquisition of 7.90 acres of property from Fountain Creek Park Land property. A retaining wall was incorporated into the design to avoid impacts to the Section 6(f) resource at US 50B. Stormwater detention features would impact 1.40 acres of the parkland. ❖ Temporary detours of the Fountain Creek Trail would be required to protect the public when construction is occurring above the trail.	❖ To alleviate forecasted noise from I-25, noise walls and berms (where appropriate) will be constructed. Mitigation measures are described in more detail in **Section 3.5 Noise**. ❖ City staff and citizens participated in an extensive public involvement process to determine adequate mitigation for project impacts to Mineral Palace Park. This process resulted in the development of a restoration plan for the park (described in more detail in **Section 3.3 Parks and Recreation**). The restoration will adhere to a theme of celebrating the past and connecting to neighborhoods. ❖ Water treatment ponds will be constructed to treat stormwater runoff from I-25, resulting in improved water quality in Fountain Creek and in the riparian and wetland habitat areas adjacent to the creek. Trails and picnic areas will also be incorporated into the design. ❖ CDOT will construct a pedestrian bridge to provide access to the Fountain Creek Park Land from Mineral Palace Park and its surrounding neighborhood. ❖ CDOT will provide advance notice to the public of temporary trail detours and/or closures of the Fountain Creek Trail during construction. Access will be maintained throughout construction to minimize impacts to users.
RIGHT-OF-WAY AND RELOCATIONS	
❖ Construction of Phase 2 would require a total of 102 acquisitions (74 total and 28 partial). ❖ Residential impacts from Phase 2 include 16 total acquisitions and no partial acquisitions. ❖ Commercial impacts from Phase 2 include 28 total acquisitions and 12 partial acquisitions. ❖ Vacant undeveloped impacts from Phase 2 include 21 total acquisitions and 5 partial acquisitions. ❖ A total of 24 businesses would be displaced by the construction of Phase 2. ❖ Public impacts from Phase 2 include 9 total acquisitions and 11 partial acquisitions.	❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. All impacted owners will be provided notification of CDOT's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests. A ROW specialist will be assigned to each property owner to assist with this process. All displaced residents must be relocated to dwellings that are similar to the original dwellings being acquired. Based on research conducted for this DEIS, the current amount of available comparable housing is sufficiently small to raise concerns about the ability to concurrently relocate all impacted residents into comparable and adequate housing. If, during phasing, comparable housing is not available, CDOT will work with impacted residents under the Uniform Act to move them into a comparable or better home. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**. ❖ Phase 2 impacts to public properties are considered mutually beneficial, and the Memorandum of Understanding between CDOT and the City (see **Appendix F**) specifies future land exchange, ownership, and maintenance responsibilities. A future Intergovernmental Agreement will address ownership of excess ROW. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**.

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
NOISE	
❖ Seven receptors would meet or exceed CDOT's noise abatement criteria with the implementation of Phase 2 improvements: Goat Hill; Mineral Palace Park; Fountain Creek Park Land; residences at 20th Street and Santa Fe Avenue, 25th Street and Main Street, and 27th Street and Court Street; and Tony's Mobile Home Park. ❖ Construction of Phase 2 would create temporary noise impacts.	❖ For Phase 2, a total of 10,525 feet of noise walls would be constructed to mitigate noise impacts. Noise walls were determined to be the most appropriate mitigation strategy for this project, except for Mineral Palace Park where berms would better fit the context of the park. Mitigation measures are described in more detail in **Section 3.5 Noise**. Additional noise analysis will be performed during final project design to refine the final mitigation measures and dimensions. ❖ Construction noise will be mitigated by restricting construction to daylight hours when possible and requiring contractors to use well-maintained equipment, including muffler systems.
SOCIAL RESOURCES, ECONOMIC CONDITIONS, AND ENVIRONMENTAL JUSTICE	
❖ Community cohesion in the Northside, Eastside, and Downtown neighborhoods would be positively impacted by Phase 2 improvements to local roadway and trail systems. ❖ A total of 24 businesses would be displaced by the construction of Phase 2, and business relocations would impact employment. However, the implementation of Phase 2 would generate direct and indirect employment opportunities throughout construction. ❖ Economic impacts are largely tied to ROW acquisitions through loss of tax revenue and displaced businesses and residences. As a result of phasing, the construction period of the project would be lengthened, resulting in more disruptions to businesses adjacent to the corridor and detours and traffic delays that would inconvenience residents, businesses, and community facilities during construction over the course of the project. At the same time, there would be an economic benefit to the area as a result of multiple construction mobilizations and the need for additional construction workers. ❖ Impacts from Phase 2 would be predominantly borne by minority and low-income populations. When offsetting benefits from the project and proposed mitigation are also considered, these impacts would not be considered disproportionately high and adverse. Although residential and commercial relocations would be from within minority and low-income neighborhoods, both renters and owners will be compensated for acquisition and provided relocation benefits in accordance with the Uniform Act. Relocations would not be substantial enough to alter the composition of the neighborhood or otherwise negatively affect community cohesion. Although some jobs would be lost, many would be relocated and the project itself would generate new employment opportunities. Noise walls would be constructed to mitigate noise impacts. Visual impacts would be lessened through design consistent with New Pueblo Freeway Aesthetic Guidelines (see **Appendix C**). Construction-related nuisances would be greatest for the	❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**. ❖ Relocation areas for businesses serving the City and the region will be identified. Efforts will be made to relocate businesses that are displaced within the City limits in order to maintain property and sales tax revenues to the City. Mitigation measures are described in more detail in **Section 3.6 Social Resources, Economic Conditions, and Environmental Justice**. ❖ CDOT will make a Public Information Plan available throughout construction. This plan and any information on construction activities and detours will be provided in both English and Spanish. ❖ Signage and detours will be set in place to direct traffic to businesses, residences, and community facilities adjacent to construction. ❖ CDOT will provide advance notice to emergency service providers, Colorado State Patrol, schools, the community, and residents regarding road delays, access, and special construction activities. ❖ Aesthetic enhancements of the highway improvements will be implemented as agreed upon in the Memorandum of Understanding between the City and CDOT (see **Appendix F**).

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
minority and low-income residents adjacent to Phase 2 construction areas, but impacts would be temporary and would be lessened through a variety of mitigations, including a Traffic Control Plan, Public Information Plan, restrictions on night-time construction, equipment requirements, signage, and well-marked detours. Minority and low-income residents serve to benefit most from the improvements that would result from Phase 2, including enhanced safety and local mobility, new pedestrian facilities and connections, the restoration of Mineral Palace Park, restored neighborhood connections, and improved community cohesion.	
WETLANDS	
❖ Phase 2 construction would result n the direct loss of 0.13 acre of wetlands.	❖ Wetland boundaries will be reevaluated to determine the need for additional delineations once construction funding has been identified. ❖ CDOT will obtain an Individual Section 404 permit from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act prior to construction of Phase 2. CDOT and FHWA will work with the USACE to identify a suitable site for wetland mitigation that would replace the functional values impacted by the project. CDOT will replace removed wetlands on a 1:1 basis regardless of jurisdictional determination. Additional mitigation measures identified by the USACE include placing tree cuttings at various locations near the project area. Mitigation measures are described in more detail in **Section 3.7 Wetlands**. ❖ Following final project design, CDOT will apply for a SB 40 Wildlife Certification if the project does not fall within CDOT's Programmatic Agreement with the Colorado Department of Wildlife, including detailed plans and specifications.
LAND USE	
❖ Phase 2 improvements are consistent with current and future land-use plans.	❖ None needed.
VISUAL RESOURCES	
❖ Phase 2 improvements would alter the Fountain Creek and Downtown Neighborhood viewsheds by introducing new roadway modifications. The increased mass of the highway and presence of new elements associated with the roadway (such as noise barriers and water quality ponds) would increase the highway's visual presence on the existing neighborhoods along I-25. ❖ As a result of the longer construction period, visual impacts such as exposed soils, staging areas, and construction lighting would occur over a longer time period, resulting in additional impacts to adjacent communities.	❖ Mitigation for impacts to visual resources will be addressed during final design of all Phase 2 elements. Mitigation measures, such as sound walls and bridges, will be designed for compatibility with the theme in the area consistent with the *New Pueblo Freeway Aesthetic Guidelines* (see **Appendix C**).

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
AIR QUALITY	
❖ No NAAQS violations for carbon monoxide are expected as a result of Phase 2. ❖ Exceedance of NAAQS for PM10 is not expected for Phase 2. ❖ MSAT emissions are proportionate to the increase in VMT in Phase 2 compared to the No Action Alternative. ❖ As a result of the longer construction period, impacts from excavation, grading, and fill work that could increase local fugitive dust and exhaust emissions, would occur over a longer time period. However, with the implementation of BMPs the effect of this impact will be negligible.	❖ Because no adverse air quality impacts are anticipated to occur as a result of the proposed Phase 2 improvements, mitigation is not required from an air quality standpoint. ❖ BMPs (described in more detail in **Section 3.10 Air Quality**) will be implemented to control dust during construction of Phase 2. Construction equipment will be required to have and maintain proper controls for exhaust systems.
HAZARDOUS MATERIALS	
❖ Construction of Phase 2 would impact two sites of potential environmental concern: the industrial facility south of Dillon Drive and the federal Emergency Response Notification System (ERNS) Site #1. ❖ Construction of Phase 2 would impact the River Street property, a site with RECs. ❖ All bridges replaced as part of Phase 2 may be coated with lead-based paint. ❖ As with any construction project that involves excavation, there is the potential to unearth buried construction debris during construction of Phase 2. Such unforeseen debris sometimes could include ACM that requires special handling and disposal. Special waste handling and excavation requirements would be necessary during construction.	❖ A site-specific Phase I ESA or ISA will be conducted prior to construction or acquisition of any site. The nature and extent of any soil or groundwater contamination will be assessed to determine whether remediation will be required or modifications to project design can be made. ❖ A Phase II ESA may be performed on RECs or areas of potential environmental concern. Mitigation will be required if the results determine there are potential impacts to human health or the environment. A Health and Safety Plan will be developed prior to construction. ❖ A Materials Management Plan, which includes handling of ACM, and a Health and Safety Plan will be developed for areas with known soil and groundwater contamination. The level of remediation will be determined in accordance with applicable federal and state laws and based on the final project alignment, ROW requirements, and degree of subsurface disturbance during construction. ❖ Engineering controls will be considered to minimize potential disposal costs and to avoid contamination. Responsible parties will be identified, if needed, to ensure CDOT is not liable for future remediation. ❖ If dewatering is necessary, groundwater will be managed according to applicable regulations and permitted by the CDPHE Water Quality Control Division. ❖ Wells within the construction area will be abandoned and plugged in compliance with the Colorado Department of Natural Resources Division of Water Resources State Engineer Water Well Construction Rules. ❖ Prior to demolition of structures, sites will be surveyed for any ACM, lead-based paint, heavy metals, universal wastes, Toxic Substances Control Act wastes, or miscellaneous hazardous materials. Abatement of regulated material will be conducted. Regulated materials must be removed from structures prior to demolition and appropriately recycled or disposed.

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
	❖ A qualified asbestos professional will evaluate and recommend mediation for any potential ACM, including landfill material, construction debris, utilities, or other materials. Appropriate CDOT specifications will be followed regarding the potential for asbestos-containing construction debris in soil.
FISH AND WILDLIFE HABITAT	
❖ Construction of Phase 2 would result in the direct loss of 5.04 acres of wildlife habitat. ❖ Construction of Phase 2 could result in a loss of low-quality nesting habitat for migratory birds. ❖ Construction of Phase 2 would result in noise from construction activities that could affect wildlife species, and could temporarily displace priority bird species. Construction activities could also affect wildlife by removing vegetation and wildlife habitats.	❖ Habitat replacement, restoration, or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas along Fountain Creek (described in more detail in **Section 3.12 Fish and Wildlife Habitat**). Wildlife surveys will be done prior to final design and construction to identify additional opportunities to avoid and minimize impacts to fish and wildlife habitats. ❖ Field surveys will be conducted prior to construction activities to determine the presence or absence of birds protected under the Migratory Bird Treaty Act. Construction activities that would otherwise result in the take of migratory birds, eggs, young, and/or active nests will be avoided during the nesting season. Active bird nests, trees, grasses, and shrubs will not be removed during nesting season. Trees that are removed will be mitigated at a 1:1 ratio or as specified by state and federal wildlife agencies to ensure raptor perch trees are replaced for future use. Mitigation measures are described in more detail in **Section 3.12 Fish and Wildlife Habitat**. ❖ BMPs (described in more detail in Section 3.12 Fish and Wildlife Habitat) such as limiting sedimentation, revegetation, and clearly marking construction boundaries to prevent equipment or other intrusion into habitat located outside the construction zone will be adopted to minimize construction impacts on wildlife and habitat resources within the study area. A concrete washout area will be provided at suitable locations within the CDOT ROW during construction, as described in more detail in **Section 3.12 Fish and Wildlife Habitat**.

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
SENSITIVE SPECIES	
❖ Construction of Phase 2 would impact 5.04 acres of plains leopard frog habitat. ❖ Construction of Phase 2 would impact 0.13 acre of Arkansas darter habitat.	❖ The mitigation measures to compensate for impacts on wetlands, flowing water, and riparian habitats used by the Arkansas darter and plains leopard frog are described in **Sections 3.7 Wetlands, 3.12 Fish and Wildlife, 3.15 Water Quality,** and **3.18 Noxious Weeds**. These mitigations might benefit terrestrial and aquatic plant and wildlife species by improving and protecting potential habitat along Fountain Creek and the Fountain Creek floodplain. Implementing these mitigation measures might enlarge the size of contiguous blocks of wetland and riparian habitats, improve habitat connectivity, and enhance functions of the existing habitat. Such results would provide functional benefits for sensitive species. ❖ Habitat restoration or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas along Fountain Creek (described in more detail in **Section 3.13 Sensitive Species**). ❖ A SB 40 permit will be obtained by CDOT prior to construction.
FLOODPLAINS	
❖ The Phase 2 improvements would result in 3.35 acres near the US 50B bridge being inundated during a 100-year flood event, in an area not currently within the 100-year floodplain boundaries. The Dillon Drive extension would result in two longitudinal encroachments of the floodplain, increases in the base flood elevation (BFE) and floodplain width upstream of the new Dillon Drive embankment, and increased channel velocity below the embankment. The reconstructed US 50B bridge would have a greater conveyance capacity, resulting in a decrease in BFE near the bridge. Scouring and erosion may result at the US 50B bridge.	❖ Mitigation measures to demonstrate no rise in the BFE may involve channel grading to increase water conveyance, construction of an overflow channel, or reduction in the channel roughness. ❖ The small inundated area within the Fountain Creek Floodplain will be managed to reduce impacts. Approximately 0.2 acre of private property may be acquired by CDOT, and the estimated 3.2 acres of City property will be managed in perpetuity as part of the Fountain Creek Park Land. In its Memorandum of Understanding with CDOT, the City has agreed that no structures will be permitted in this area (see **Appendix F**). Based on the results of the floodplain analyses using revised modeling and the final I-25 design configuration, CDOT will likely need to apply for Flood Insurance Rate Map revisions through the Federal Emergency Management Agency, as described in more detail in **Section 3.14 Floodplains**. A Letter of Map Revision (LOMR) application is required for any substantial encroachment upon the floodplain. ❖ Streambed and bank stabilization measures (described in more detail in **Section 3.14 Floodplains**) will be included in the final project for the area surrounding the US 50B bridge. ❖ Floodplain mitigation will comply with Executive Order (EO) 11988, “Floodplain Management,” during design of any selected alternative. State of Colorado drainage design standards will be applied to achieve results that will not increase or significantly change the flood elevations and/or limits.

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
WATER QUALITY	
❖ Phase 2 improvements and additional traffic on I-25 in the future will generate more pollutants. BMPs in compliance with the CDPS MS4 permit requirements are designed to decrease the amount of pollutants actually entering the waters and are expected to lower the amounts of pollutants for Phase 2 compared to the No Action Alternative. ❖ Phase 2 construction would remove vegetation and create bare surfaces that may cause erosion and sedimentation issues. All highway runoff would be collected and treated to the level required by CDOT's New Development and Redevelopment Program. BMPs can be constructed, where appropriate, to intercept, divert, and collect surface runoff and convey accumulated runoff to an acceptable outlet point, thereby improving water quality compared to the No Action Alternative.	❖ All stormwater runoff that falls within CDOT ROW will be captured and treated with Tier 1 BMPs (described in more detail in **Section 3.15 Water Quality**) prior to returning to a waterway. ❖ Water quality ponds in compliance with the CDPS MS4 permit requirements will be placed adjacent to I-25 to treat runoff pollutants from increased impervious surface area. The water quality ponds that will be constructed with each phase will be evaluated prior to publication of the FEIS. The sizing and design of these ponds will be refined during the final project design. Other BMPs will be evaluated during final design. Mitigation measures are described in more detail in **Section 3.15 Water Quality**. ❖ A CDOT Multi-Sector General Permit for Construction Activities will be required. BMPs (described in more detail in **Section 3.15 Water Quality**) will be employed to mitigate both short-term and permanent impacts to water bodies as a result of Phase 2 construction.
UTILITIES	
❖ Phase 2 construction would impact the above- and below-ground utility lines located adjacent to and across I-25, including those concentrated at 4th Street, 8th Street, and 29th Street.	❖ During final design for Phase 2, the location of all utilities in the corridor will be confirmed by field investigations, including locating lines below ground. Alternate delivery systems will be provided to ensure uninterrupted service, and lines or stations will be relocated as needed. When appropriate, CDOT will look for opportunities to provide space for new utilities or upgrade existing ones. If, during future design efforts, impacts to potentially historic utility lines are identified, CDOT will engage in Section 106 consultation with the SHPO and consulting parties regarding the resource.
ENERGY	
❖ On a daily basis, the difference in energy use between Phase 2 of the preliminarily identified Preferred Alternative and the No Action Alternative is negligible. ❖ Construction of the 33.51 total lane miles for Phase 2 would require 760,400 million Btu(s).	❖ To the extent practical, CDOT will implement sustainability practices into the project planning, construction, and maintenance to reduce energy use. Mitigation measures are described in more detail in **Section 3.17 Energy**.

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
NOXIOUS WEEDS	
❖ Ground disturbance and other construction activities in the project area could expand areas already infested with noxious weeds, spread weeds to adjacent land and wetland and riparian habitats nearby, and introduce new weed species to the project area. Construction activities in the project area would cause significant vegetation removal and ground disturbance, which could potentially provide opportunities for noxious weed eradication or control if properly managed and reseeded. ❖ The potential for the spread of invasive species would increase as a result of a longer construction period resulting from phasing and the need to redisturb land when portions of the project are reconstructed during later phases.	❖ Prior to the start of construction activities for Phase 2, CDOT will develop and implement a Noxious Weed Management Plan that incorporates herbicides, mechanical removal, and potential biological controls (in accordance with the Colorado Noxious Weed Act) to control and prevent weed infestation and spread. During construction, standard BMPs (described in more detail in **Section 3.18 Noxious Weeds**) will be used to observe, treat, control, and/or remove noxious weeds from the disturbed area in accordance with the Noxious Weed Management Plan. After construction, disturbed areas will be reclaimed immediately and CDOT ROW will be managed through standard CDOT maintenance operations. Fertilizer will not be used in seed areas. All construction equipment will be washed thoroughly.
PALEONTOLOGICAL RESOURCES	
❖ Phase 2 would not affect any known significant paleontological resources.	❖ Construction will be monitored during all phases for potential paleontological sites.
SOILS AND GEOLOGY	
❖ Phase 2 construction activities have the potential to encounter unstable soils or geologic hazards that would require mitigation prior to construction.	❖ A detailed geotechnical and soils analysis of the subsurface will be performed during final design for each phase.
SECTION 4(f) RESOURCES	
❖ Phase 2 would impact 20 of the 39 Section 4(f) resources impacted by the Preferred Alternative: 16 historic properties, 2 historic districts (North Side/Second Ward), 1 historic park (Mineral Palace Park), and 1 parkland (Fountain Creek Park Land). FHWA has made a preliminary determination that there is no feasible and prudent avoidance alternative to the use of Section 4(f) property for the Preferred Alternative, as demonstrated in **Chapter 4 – Section 4(f) Evaluation**. Phase 2 impacts to Section 4(f) properties are, therefore, unavoidable. The preliminarily identified Preferred Alternative incorporates all possible planning to minimize harm to Section 4(f) properties to the extent possible at the DEIS level of project design and development.	❖ To alleviate forecasted noise from I-25, noise walls and berms (where appropriate) will be constructed. Mitigation measures are described in more detail in **Section 3.5 Noise**. ❖ City staff and citizens participated in an extensive public involvement process to determine adequate mitigation for impacts to Mineral Palace Park. This process resulted in the development of a restoration plan for the park (described in more detail in **Section 3.3 Parks and Recreation**). The restoration will adhere to a theme of celebrating the past and connecting to neighborhoods. ❖ Water treatment ponds will be constructed to treat highway runoff from I-25, resulting in improved water quality in Fountain Creek and in the riparian and wetland habitat areas adjacent to the creek. Trails and picnic areas will also be incorporated. ❖ CDOT will construct a pedestrian bridge to provide access to the Fountain Creek Park Land from Mineral Palace Park and its surrounding neighborhood. ❖ CDOT will provide advance notice to the public of temporary trail detours and/or closures of the Fountain Creek Trail during construction. Access will be maintained throughout construction to minimize impacts to users. ❖ A Programmatic Agreement will be completed prior to publication of the FEIS that identifies specific mitigation

EXHIBIT 5-3
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
	measures for historic resources. These measures may include surveys and documentation of historic structures, salvage of historic materials from structures, or preparation of educational materials detailing the history of the area. Potential mitigation measures are described in more detail in **Section 3.2 Historic Properties**.

5.2.3 Phase 3 – South Area

Description of Improvements

Phase 3 consists of two package that include highway widening and interchange reconstruction from the Ilex Street bridges (minus the bridges replaced during Phase 1) south to mp 94, as described in **Chapter 2 – Alternatives, Section 2.6.3**. The alignment of I-25 would be shifted east in this phase from Ilex Street to south of Indiana Avenue. Local road improvements such as Stanton Avenue, Locust Street, and the Santa Fe Avenue extension would also be included in Phase 3. The expected cost for this phase is $360.8 million (2010 dollars[2]).

Mitigation elements such as trail connections, noise walls, and water quality ponds in Phase 3 will be built along with the adjacent construction projects as each package is constructed. **Section 3.5 Noise** and **Section 3.15 Water Quality** provide more details on these proposed mitigations.

Due to funding limitations, the entire dollar amount required for Phase 3 may not be available at one time. Phase 3 does not necessarily need to be selected in its entirety or in order in subsequent RODs. This will be determined at the time of a subsequent ROD, considering available funding, priorities at that time, and the results of any reevaluation that may be needed. Future funding availability will play a major role in determining when construction begins and the priority and schedule under which the packages within each phase can be implemented. These improvements are considered a reasonable expenditure of funds and would incrementally contribute to addressing the Purpose and Need of the project, even if no additional transportation improvements are made in the area. The improvements proposed for each package in Phase 3 would have independent utility in that each element would provide transportation benefits, would be a reasonable expenditure even if no additional improvements are made in the area, and would connect logical termini.

The two packages proposed for Phase 3 are as follows:

- **Ilex Street to Pueblo Boulevard.** This package includes the widening and reconstruction of I-25 from Ilex Street to the Pueblo Boulevard interchange and interchange reconstruction at Abriendo Avenue, Northern Avenue, and Indiana Avenue. The estimated cost of this package is $327.2 million. The highway alignment would be shifted to the east, and the existing I-25 would be converted to a local arterial road to become an extension of Santa Fe Avenue, providing off-highway access to and from downtown Pueblo from the south. The Stanton Avenue extension also would be completed as a part of this package.
- **Pueblo Boulevard Interchange.** This estimated $47.3-million package includes widening and reconstructing I-25 south of Pueblo Boulevard to mp 94, north of the Pueblo Boulevard Interchange, and realignment of Greenhorn Drive.

Environmental Impacts and Mitigation

Exhibit 5-4 summarizes the environmental impacts and associated mitigation measures associated with the implementation of Phase 3. Mitigation measures included in **Exhibit 5-4** would be completed in conjunction with construction of Phase 3 improvements.

[2] Because the year of expenditure is unknown for future phases of construction, dollar amounts for Phase 3 are reported in 2010 dollars. These costs may be understated or overstated depending on economic factors such as material costs and inflation.

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
TRANSPORTATION	
❖ Phase 3 would upgrade interchanges to current design standards, improve interchange spacing, and provide connectivity to appropriate local streets. ❖ Phase 3 would restore off-highway connections that were removed during original I-25 construction. It would provide alternative north-south routes for local users on Santa Fe Avenue, reduce demand on I-25, and increase local mobility and east-west access by reconstructing the Northern Avenue interchange and constructing a frontage road system. The extension of Santa Fe Avenue and Stanton Avenue would reestablish 23 miles of local grid system and improve safety and local mobility. ❖ Phase 3 would replace 1 bridge that has a low sufficiency rating. ❖ Phase 3 improvements would correct operational deficiencies and provide additional capacity on I-25 to reduce congestion between Ilex Street and Pueblo Boulevard and accommodate future travel demands. Construction of the project in phases would not result in any bottlenecks or unacceptable traffic conditions. ❖ Construction of Phase 3 would cause temporary impacts to the railroads during bridge construction. ❖ Phase 3 would require modifications to Transit Route 11 because of the reconfiguration of Santa Fe Avenue and Stanton Avenue. ❖ Pedestrian and bicycle mobility would be improved through provisions of multi-modal elements in Phase 3 such as trails and sidewalks. Construction of pedestrian trails and sidewalks connecting the Runyon Field Sports Complex and JJ Raigoza Park would improve pedestrian and bicycle mobility. ❖ Construction of Phase 3 would cause temporary impacts to traffic such as changes in access, delay caused by lane closures, out-of-direction travel incurred due to detours, and other similar unavoidable impacts caused by construction-related activities. As a result of phasing, the construction period of the project would be longer, resulting in more detours and traffic delays that would inconvenience residents and businesses during construction.	❖ To minimize the impact of construction on bus routing and service, CDOT will coordinate with the Pueblo Transit System prior to and throughout construction of Phase 3. ❖ CDOT will follow appropriate permitting, including coordination with the railroads for impacts to the rail lines during bridge construction for Phase 3. ❖ CDOT will conduct public information efforts, including development of a Public Information Plan (described in more detail in **Section 3.1 Transportation**) to inform the public and affected businesses in advance of lane closures, detours, and interchange reconstruction activities. ❖ CDOT will maintain safe business access during construction of Phase 3. ❖ CDOT will develop a Traffic Control Plan during final design that will detail strategies (described in more detail in **Section 3.1 Transportation**) to minimize traffic disruption from construction activities. Whenever possible, the existing number of lanes will be maintained throughout construction. Speed limits will be reduced in work zones. ❖ A mitigation monitoring and implementation plan will be developed during final project design. Commitments to mitigate for both construction and operational effects of the Preferred Alternative will be modified or adapted, if needed, based on the final design.
HISTORIC PROPERTIES	
❖ Phase 3 will result in adverse effects to 14 historic resources, including the Steelworks Suburbs and Grove historic districts. ❖ Phase 3 will result in adverse effects to 1 archaeological site and potential impact to 17 Need Data archaeological sites.	❖ A Programmatic Agreement will be completed prior to publication of the FEIS that identifies specific mitigation measures for historic resources. These may include surveys and documentation of historic structures, salvage of historic materials from structures, or preparation of educational materials detailing the history of the area. Potential mitigation measures are described in more detail in **Section 3.2 Historic Properties**. ❖ Final mitigation measures for archaeological resources will be formalized in the Programmatic Agreement, as described in **Section 3.2 Historic Properties**.

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
PARKS AND RECREATION	
❖ Under Phase 3, JJ Raigoza Park would potentially be impacted by noise without implementation of mitigation measures. ❖ Temporary detours and/or closures of the Arkansas River Trail would be required to protect the public when construction of Phase 3 is occurring above the trail. ❖ Realignment of I-25 to the east in Phase 3 would completely remove Benedict Park (1.92 acres) and its facilities. ❖ Extension of Stanton Avenue in Phase 3 would positively impact the Runyon Field Sports Complex by providing access to the park from the local road network instead of I-25 and minimizing traffic queues on I-25. ❖ Realignment of I-25 to the east would require the construction of four new bridges over the Arkansas River (with 18 bridge piers) and the relocation of trails and an existing pedestrian bridge.	❖ To alleviate forecasted noise from I-25, noise walls will be constructed. Mitigation measures are described in more detail in **Section 3.5 Noise**. ❖ CDOT will provide advance notice to the public of temporary detours and/or closures of the Arkansas River Trail during construction. Access will be maintained as much as possible to minimize impacts to users. ❖ Mitigation for impacts to Benedict Park includes a new 4.30-acre Benedict Park to be built south of the existing park location between Mesa Avenue and Northern Avenue using remnant parcels of land resulting from changes in the roadway network. Mitigation measures are described in more detail in **Section 3.3 Parks and Recreation**. ❖ The pedestrian bridge over the Arkansas River would be relocated just east of the proposed Stanton Avenue bridge to allow room for the new bridges that will span the river east of the current I-25 alignment. The trail would be relocated over the new pedestrian bridge. Mitigation measures are described in more detail in **Section 3.3 Parks and Recreation**.
RIGHT-OF-WAY AND RELOCATIONS	
❖ Construction of Phase 3 would require a total of 144 acquisitions (123 total and 21 partial). ❖ Residential impacts from Phase 3 include 99 total acquisitions and 0 partial acquisitions. ❖ Commercial impacts from Phase 3 include 14 total acquisitions and 4 partial acquisitions. ❖ Vacant undeveloped impacts from Phase 3 include 10 total acquisitions and 14 partial acquisitions. ❖ A total of 28 businesses would be displaced by the construction of Phase 3. ❖ Public impacts from Phase 3 include 0 total acquisitions and 3 partial acquisitions.	❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. All impacted owners will be provided notification of CDOT's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests. A ROW specialist will be assigned to each property owner to assist with this process. All displaced residents must be relocated to dwellings that are similar to the original dwellings being acquired. Based on research conducted for this DEIS, the current amount of available comparable housing is sufficiently small to raise concerns about the ability to concurrently relocate all impacted residents into comparable and adequate housing. If, during phasing, comparable housing is not available, CDOT will work with those impacted residents under the Uniform Act to move them into a comparable or better home. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**. ❖ Phase 3 impacts to public properties are considered mutually beneficial, and the Memorandum of Understanding between CDOT and the City (see **Appendix F**) specifies the future land exchange, ownership, and maintenance responsibilities. A future Intergovernmental Agreement will address ownership of excess ROW. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**.

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
NOISE	
❖ Six receptors would meet or exceed CDOT's noise abatement criteria with the implementation of Phase 3 improvements: Aqua and Evans, Emerson and Abriendo, Benedict Park, Locust and Moffat, JJ Raigoza Park, and residences at Iowa Avenue and Evans Avenue. ❖ Construction of Phase 3 would create temporary noise impacts.	❖ For Phase 3, a total of 9,850 feet of noise walls would be constructed to mitigate noise impacts. Noise walls were determined to be the most appropriate mitigation strategy. Mitigation measures are described in more detail in **Section 3.5 Noise**. Additional noise analysis will be performed during final project design to refine the final mitigation measures and dimensions. ❖ Construction noise will be mitigated by restricting construction to daylight hours when possible and requiring contractors to use well-maintained equipment, including muffler systems.
SOCIAL RESOURCES, ECONOMIC CONDITIONS, AND ENVIRONMENTAL JUSTICE	
❖ Community cohesion in the Bessemer Neighborhood would be positively impacted by improved local roadway and trail systems as a result of Phase 3. ❖ Phase 3 construction would require acquisition of 63 residences from the Bessemer Neighborhood. ❖ A total of 28 businesses would be displaced by the construction of Phase 3, and these business relocations would impact employment. However the implementation of Phase 3 would generate direct and indirect employment opportunities throughout construction. ❖ Economic impacts are largely tied to ROW acquisitions through loss of tax revenue and displaced businesses and residences. As a result of phasing, the construction period of the project would be lengthened, resulting in more disruptions to businesses adjacent to the corridor and detours and traffic delays that would inconvenience residents, businesses, and community facilities during construction over the course of the project. At the same time, there would be an economic benefit to the area from the multiple construction mobilizations and the need for additional construction workers. ❖ Impacts from Phase 3 would be predominantly borne by minority and low-income populations. When offsetting benefits from the project and proposed mitigation are also considered, these impacts would not be considered disproportionately high and adverse. Although residential and commercial relocations would be from within minority and low-income neighborhoods, both renters and owners will be compensated for acquisition and provided relocation benefits in accordance with the Uniform Act. Residential acquisitions from the Bessemer Neighborhood would be offset by the additional connectivity provided by the extension of Stanton Avenue and Santa Fe Drive. Although some jobs would be lost, many would be relocated and the project itself would generate new employment opportunities. Noise walls would be constructed to mitigate noise impacts. Visual impacts would be lessened through design consistent with *New Pueblo Freeway Aesthetic Guidelines* (see **Appendix C**). Construction-related	❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. Mitigation measures are described in more detail in **Section 3.4 Right-of-Way and Relocations**. ❖ Relocation areas for businesses serving the City and the region will be identified. Efforts will be made to relocate businesses that are displaced within the City limits in order to maintain property and sales tax revenues to the City. Mitigation measures are described in more detail in **Section 3.6 Social Resources, Economic Conditions, and Environmental Justice**. ❖ CDOT will make a Public Information Plan available throughout construction. This plan and any information on construction activities and detours will be provided in both English and Spanish. ❖ Signage and detours will be set in place to direct traffic to businesses, residences, and community facilities adjacent to construction. ❖ CDOT will provide advance notice to emergency service providers, Colorado State Patrol, schools, the community, and residents regarding road delays, access, and special construction activities. ❖ Aesthetic enhancements of the highway improvements will be implemented as agreed upon in the Memorandum of Understanding between the City and CDOT (see **Appendix F**).

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
nuisances would be greatest for the minority and low-income residents adjacent to Phase 3 construction activities, but impacts would be temporary and would be lessened through a variety of mitigations including a Traffic Control Plan, Public Information Plan, restrictions on night-time construction, equipment requirements, signage, and well marked detours. Minority and low-income residents serve to benefit most from the improvements that would result from Phase 3. These include enhanced safety and local mobility, new pedestrian facilities and connections, the reconstruction and expansion of Benedict Park, restored neighborhood connections, and improvements in community cohesion.	
WETLANDS	
❖ Phase 3 would result in a direct loss of 0.95 acre of wetlands.	❖ Wetland boundaries will be reevaluated to determine the need for additional delineations once construction funding has been identified. ❖ CDOT will obtain an Individual Section 404 permit from the USACE under Section 404 of the Clean Water Act prior to construction of Phase 3. CDOT FHWA will work with the USACE to identify a suitable site for wetland mitigation that would replace the functional values impacted by the project. CDOT will replace removed wetlands on a 1:1 basis regardless of jurisdictional determination. Additional mitigation measures identified by the USACE include placing tree cuttings at various locations near the project area. Mitigation measures are described in more detail in **Section 3.7 Wetlands**. ❖ Following final design, CDOT will apply for a SB 40 Wildlife Certification, if the project does not fall within CDOT's Programmatic Agreement with CDOW, including detailed plans and specifications.
LAND USE	
❖ Phase 3 improvements are not consistent with current land uses where the alignment of I-25 shifts to the east. However, they are consistent with future land use plans.	❖ None needed.
VISUAL RESOURCES	
❖ Phase 3 improvements would alter the Evraz Rocky Mountain Steel Mill viewshed by introducing new roadway modifications. The increased mass of the highway and presence of new elements associated with the roadway (such as noise barriers and water quality ponds) would increase the highway's visual presence on the existing neighborhoods along I-25. ❖ As a result of the longer construction period, visual impacts such as exposed soils, staging areas, and construction lighting would occur over a longer time period, resulting in additional impacts to adjacent communities.	❖ Mitigation for impacts to visual resources will be addressed during final design of all Phase 3 elements. Mitigations such as sound walls and bridges will be designed for compatibility with the theme in the area consistent with the *New Pueblo Freeway Aesthetic Guidelines* (see **Appendix C**).

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
AIR QUALITY	
❖ No NAAQS violations for carbon monoxide are expected for Phase 3. ❖ Exceedance of NAAQS for PM10 is not expected for Phase 3. ❖ MSAT emissions are proportionate to the increase in VMT in Phase 3 compared to the No Action Alternative. ❖ As a result of the longer construction period, impacts from excavation, grading, and fill work that could increase local fugitive dust and exhaust emissions would occur over a longer time period. However, with the implementation of BMPs, the effect of this impact would be negligible.	❖ Because no adverse air quality impacts are anticipated to occur as the result of the proposed improvement, mitigation is not required from an air quality standpoint. ❖ BMPs (described in more detail in **Section 3.10 Air Quality**) would be implemented to control dust during construction of Phase 3. Construction equipment will be required to have and maintain proper controls for exhaust systems.
HAZARDOUS MATERIALS	
❖ Construction of Phase 3 would impact the Greenhorn Drive area, a site of potential environmental concern. ❖ Construction of Phase 3 would impact two REC sites: the Evraz Rocky Mountain Steel Mills property and the slag piles. ❖ All bridges replaced as part of Phase 3 may be coated with lead-based paint. ❖ As with any construction project that involves excavation, there is the potential to unearth buried construction debris during construction of Phase 3. Such unforeseen debris sometimes can include ACM that requires special handling and disposal. Byproducts of steel manufacturing shot and slag have been stockpiled at the Evraz Rocky Mountain Steel Mill site and will likely be encountered during construction. Special waste handling and excavation requirements would be necessary during construction.	❖ A site-specific Phase I ESA or ISA will be conducted prior to construction or acquisition of any site. The nature and extent of any soil or groundwater contamination will be assessed to determine whether remediation will be required or modifications to project design can be made. ❖ A Phase II ESA may be performed on RECs or areas of potential environmental concern. Mitigation will be required if the results determine there are potential impacts to human health or the environment. Prior to construction, a Health and Safety Plan will be developed. ❖ A Materials Management Plan, which includes handling of ACM, and a Health and Safety Plan will be developed for areas with known soil and groundwater contamination. The level of remediation will be determined in accordance with applicable federal and state laws, based on the final project alignment, ROW requirements, and degree of subsurface disturbance during construction. ❖ Engineering controls will be considered to minimize potential disposal costs and to avoid contamination. Responsible parties will be identified, if needed, to ensure CDOT is not liable for future remediation. ❖ If dewatering is necessary, groundwater will be managed according to applicable regulations and permitted by the CDPHE Water Quality Control Division. ❖ Wells within the construction area will be abandoned and plugged in compliance with the Colorado Department of Natural Resources Division of Water Resources State Engineer Water Well Construction Rules. ❖ Prior to demolition of structures, sites will be surveyed for any asbestos, lead-based paint, heavy metals, universal wastes, Toxic Substances Control Act wastes, or miscellaneous hazardous materials. Abatement of regulated material will be conducted. Regulated materials must be removed from structures prior to demolition and appropriately recycled or disposed. ❖ Byproducts of steel manufacturing shot and slag will likely be encountered during construction at the Evraz Rocky

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
	Mountain Steel Mills. Special waste handling and excavation requirements will be developed once the chemical composition and volume of the material is known. Mitigation measures are described in more detail in **Section 3.11 Hazardous Materials**.
FISH AND WILDLIFE HABITAT	
❖ Phase would result in the direct loss of 13.06 acres of wildlife habitat for. ❖ Construction of Phase 3 could result in a loss of low-quality nesting habitat for migratory birds. ❖ Construction of new bridge piers over the Arkansas River in Phase 3 would impact 0.08 acre of open water. ❖ Construction of Phase 3 would result in noise from construction activities that could affect wildlife species and temporarily displace priority bird species. Construction activities could also affect wildlife by removing vegetation and wildlife habitats.	❖ Habitat replacement, restoration, or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas along Fountain Creek (described in more detail in **Section 3.12 Fish and Wildlife Habitat**). Wildlife surveys will be done prior to final design and construction to identify additional opportunities to avoid and minimize impacts to fish and wildlife habitats. ❖ Field surveys will be conducted prior to construction to determine the presence or absence of birds protected under the Migratory Bird Treaty Act. Construction activities that would otherwise result in the take of migratory birds, eggs, young, and/or active nests will be avoided during the nesting season. Active bird nests, trees, grasses, and shrubs will not be removed during nesting season. Trees that are removed will be mitigated at a 1:1 ratio or as specified by state and federal wildlife agencies to ensure raptor perch trees are replaced for future use. Mitigation measures are described in more detail in **Section 3.12 Fish and Wildlife Habitat**. ❖ CDOT will adhere to the requirements of SB 40 Wildlife Certification for impacts to open water and riparian habitats. Mitigation measures are described in more detail in **Section 3.12 Fish and Wildlife Habitat**. ❖ BMPs (described in more detail in **Section 3.12 Fish and Wildlife Habitat**) such as limiting sedimentation, revegetation, and clearly marking construction boundaries to prevent equipment or other intrusion into habitat located outside the construction zone will be adopted to minimize construction impacts on wildlife and habitat resources within the study area. A concrete washout area will be provided at suitable locations within the CDOT ROW during construction. Mitigation measures are described in more detail in **Section 3.12 Fish and Wildlife Habitat**.

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
SENSITIVE SPECIES	
❖ Phase 3 would impact 3.64 acres of plains leopard frog habitat. ❖ Phase 3 would impact 0.08 acre of Arkansas darter habitat.	❖ The mitigation measures to compensate for impacts on wetlands, flowing water, and riparian habitats used by the Arkansas darter and plains leopard frog are described in **Sections 3.7 Wetlands, 3.12 Fish and Wildlife, 3.15 Water Quality,** and **3.18 Noxious Weeds**. These mitigations might benefit terrestrial and aquatic plant and wildlife species by improving and protecting potential habitat along the Arkansas River and the Arkansas River floodplain. Implementing these mitigation measures might enlarge the size of contiguous blocks of wetland and riparian habitats, improve habitat connectivity, and enhance functions of the existing habitat. Such results would provide functional benefits for sensitive species. ❖ Habitat restoration or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas adjacent to the Arkansas River. Mitigation measures are described in more detail in Section 3.13 Sensitive Species. ❖ A SB 40 permit will be obtained by CDOT prior to Phase 3 construction.
FLOODPLAINS	
❖ Impacts to the Arkansas River floodplain under Phase 3 would be located east of the existing bridge and include a new transverse encroachment on the floodplain and floodway. River velocity in this location is low (less than 2 feet per second), and the impacts of encroachment for a new bridge are minimal. Implementation of Phase 3 would not result in flooding of any new areas that are not within the existing 100-year floodplain.	❖ Based on analyses conducted for this DEIS, impacts to the Arkansas River floodplain and floodway are expected to be minimal, and required mitigation measures will be limited to erosion protection for bridge structures. Foundations of new bridge structures will be designed to limit scour, and proposed abutments within the floodplain will be protected from erosion. Measures that may be used to protect the bridges include rip rap armoring of banks and slope paving. ❖ Floodplain mitigation will comply with EO 11988, "Floodplain Management," during design of any selected alternative. State of Colorado drainage design standards will be applied to achieve results that will not increase or significantly change flood elevations and/or limits.

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
WATER QUALITY	
❖ Phase 3 improvements and additional traffic on I-25 in the future will generate more pollutants. BMPs in compliance with the CDPS MS4 permit requirements are designed to decrease the amount of pollutants actually entering the waters and are expected to lower the amount of pollutants for Phase 3 compared to the No Action Alternative. ❖ Phase 3 construction would remove vegetation and create bare surfaces that may create erosion and sedimentation issues. All highway runoff will be collected and treated to the level required by CDOT's New Development and Redevelopment Program. BMPs can be constructed, where appropriate, to intercept, divert, and collect surface runoff and convey accumulated runoff to an acceptable outlet point, thereby improving water quality compared with the No Action Alternative.	❖ All stormwater runoff that falls within CDOT ROW will be captured and treated with Tier 1 BMPs (described in more detail in **Section 3.15 Water Quality**) prior to returning to a waterway. ❖ Water quality ponds in compliance with the CDPS MS4 permit requirements will be placed adjacent to I-25 to treat runoff pollutants from increased impervious surface area. The water quality ponds that will be constructed with each phase will be evaluated prior to publication of the FEIS. The sizing and design of these ponds will be refined during the final project design. Other BMPs will be evaluated during final design. Mitigation measures are described in more detail in **Section 3.15 Water Quality**. ❖ A CDOT Multi-Sector General Permit for Construction Activities will be required. BMPs (described in more detail in **Section 3.15 Water Quality**) will be employed to mitigate both short-term and permanent impacts to water bodies as a result of Phase 3 construction.
UTILITIES	
❖ Phase 3 would impact the above- and below-ground utility lines located adjacent to and across I-25, including those concentrated at Pueblo Boulevard, Mesa Avenue, and the north and south banks of the Arkansas River. ❖ Construction of Phase 3 would require a new crossing for I-25 over the Bessemer Ditch. ❖ Phase 3 improvements would encroach on the alternate coolant water line at the Evraz Rocky Mountain Steel Mills. ❖ Xcel Energy's south town natural gas transfer station would need to be relocated in Phase 3.	❖ During the final design effort for Phase 3, the location of all utilities in the corridor will be confirmed by field investigations, including locating lines below ground. Alternate delivery systems will be provided to ensure uninterrupted service, and lines or stations will be relocated as needed. When appropriate, CDOT will look for opportunities to provide space for new utilities or upgrade existing ones. If, during future design efforts, impacts to potentially historic utility lines are identified, CDOT will engage in Section 106 consultation with the SHPO and consulting parties regarding the resource. ❖ CDOT will negotiate an agreement—through purchase of either a temporary or a permanent easement—from the Bessemer Ditch Company for construction of the new roadway structure over the irrigation ditch in Phase 3.
ENERGY	
❖ On a daily basis, the difference in energy use between Phase 3 of the preliminarily identified Preferred Alternative and the No Action Alternative is negligible. ❖ Construction of the 46.15 total lane miles for Phase 3 requires 1,176,600 million Btu(s). Additional energy (approximately 71,600 million Btu(s)) would be expended as a result of project phasing and the need to reconstruct portions of the project during later phases.	❖ To the extent practical, CDOT will implement sustainability practices into the project planning, construction, and maintenance to reduce energy use. Mitigation measures are described in more detail in **Section 3.17 Energy**.

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
NOXIOUS WEEDS	
❖ Ground disturbance and other construction activities in the project area could expand areas already infested with noxious weeds, spread weeds to adjacent land and wetland and riparian habitats nearby, and introduce new weed species to the project area. Construction activities in the project area would cause significant vegetation removal and ground disturbance, which could potentially provide opportunities for noxious weed eradication or control if properly managed and reseeded. ❖ The potential for the spread of invasive species would increase as a result of a longer construction period required phasing and the need to redisturb land when portions of the project are reconstructed in later phases.	❖ Prior to the start of construction activities for Phase 3, CDOT will develop and implement a Noxious Weed Management Plan that incorporates herbicides, mechanical removal, and potential biological controls (in accordance with the Colorado Noxious Weed Act) to control and prevent weed infestation and spread. During construction, standard BMPs (described in more detail in **Section 3.18 Noxious Weeds**) will be used to observe, treat, control, and/or remove noxious weeds from the disturbed area in accordance with the Noxious Weed Management Plan. After construction, disturbed areas will be reclaimed immediately and CDOT ROW will be managed through standard CDOT maintenance operations. Fertilizer will not be used in seed areas. All construction equipment will be washed thoroughly.
PALEONTOLOGICAL RESOURCES	
❖ Phase 3 would not affect any known significant paleontological resources.	❖ Construction will be monitored during all phases for potential paleontological sites.
SOILS AND GEOLOGY	
❖ Phase 3 construction activities have the potential to encounter unstable soils or geologic hazards that would require mitigation prior to construction.	❖ A detailed geotechnical and soils analysis of the subsurface will be performed during final design for each phase.
SECTION 4(f) RESOURCES	
❖ Phase 3 would impact 15 of the 39 Section 4(f) resources impacted by the Preferred Alternative: 10 historic properties, 2 historic districts (Steelworks Suburbs and Grove), 1 park (Benedict Park), and 2 recreational areas (the Arkansas River Corridor and the Runyon/Fountain Lakes State Wildlife Area). FHWA has made a preliminary determination that there is no feasible and prudent avoidance alternative to the use of Section 4(f) property for the Preferred Alternative, as demonstrated in **Chapter 4 – Section 4(f) Evaluation**. Phase 3 impacts to Section 4(f) properties are, therefore, unavoidable. The preliminarily identified Preferred Alternative incorporates all possible planning to minimize harm to Section 4(f) properties to the extent possible at the DEIS level of project design and development.	❖ To alleviate forecasted noise from I-25, noise walls will be constructed. Mitigation measures are described in more detail in **Section 3.5 Noise**. ❖ CDOT will provide advance notice to the public of temporary detours and/or closures of the Arkansas River Trail during construction. Access will be maintained as much as possible to minimize impacts to users. ❖ Mitigation for impacts to Benedict Park includes a new 4.30-acre Benedict Park to be built south of the existing park location between Mesa Avenue and Northern Avenue using remnant parcels of land resulting from changes in the roadway network. Mitigation measures are described in more detail in **Section 3.3 Parks and Recreation**. ❖ The pedestrian bridge over the Arkansas River would be relocated just east of the proposed Stanton Avenue bridge to allow room for the new bridges that will span the river east of the current I-25 alignment in Phase 3. The Arkansas River Trail would be relocated over the new pedestrian bridge. Mitigation measures are described in more detail in **Section 3.3 Parks and Recreation**. ❖ A Programmatic Agreement will be completed prior to publication of the FEIS that identifies specific mitigation measures for historic resources. These may include surveys and documentation of historic structures, salvage of historic materials from structures, or preparation of

EXHIBIT 5-4
Environmental Impacts and Mitigation Measures by Resource Associated with Phase 3

Impacts	Mitigation
	educational materials detailing the history of the area. Potential mitigation measures are described in more detail in **Section 3.2 Historic Properties**. ❖ Final mitigation measures for archaeological resources will be formalized in the Programmatic Agreement, as described in **Section 3.2 Historic Properties**.

5.3 PROJECT PROCESS AND DELIVERY

The preliminarily identified Preferred Alternative has been designed to a planning level of detail, allowing engineers and planners to investigate the environmental impacts and the costs as disclosed in this DEIS. Upon completion of the FEIS, a ROD will be issued. If a Build Alternative is approved, CDOT will begin the design and construction process of the approved phase.