

# Chapter 4

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## Section 4(f) Evaluation





# Chapter 4. Section 4(f) Evaluation

## 4.1 Section 4(f) Legislation

Section 4(f) of the 1966 US Department of Transportation Act (49 USC 303 and 23 USC 138) states that the Federal Highway Administration (FHWA) may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

- (i) There is no feasible and prudent alternative to the use of land from the property; and
- (ii) The action includes all possible planning to minimize harm to the property resulting from such use.

Details of Section 106 of the National Historic Preservation Act (NHPA) and its relevancy to the SH 402 project are included in *Chapter 3, Section 3.11, Historic Preservation*.

On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Major provisions of Section 6009 include the first substantive revision of Section 4(f) legislation since passage of the US Department of Transportation Act of 1966.

The requirements of Section 4(f) of the Department of Transportation Act will be considered satisfied with respect to a Section 4(f) resource if it is determined that a transportation project will have only a "*de minimis* impact" on the 4(f) resource. The Agencies with jurisdiction must concur in writing with the determination. For historic properties the *de minimis* criteria are defined as "no adverse effect" or "no historic properties affected" under Section 106 of the National Historic Preservation Act.

The *Guidelines for Determining De Minimis Impacts to Section 4(f) Resources* (December 13, 2005) state:

Section 4(f) requires that the State Historic Preservation Officer (SHPO) and/or THPO (Tribal Historic Preservation Officer), and Advisory Council on Historic Preservation (ACHP) if participating, must concur in writing in the Section 106 determination of "no adverse effect" or "no historic properties affected." The request for concurrence in the Section 106 determination should include a statement informing the SHPO or THPO and ACHP, if participating, that the FHWA or Federal Transit Administration intends to make a *de minimis* finding based upon their concurrence in the Section 106 determination.

The FHWA Division Administrator for Colorado is responsible for determining that this project meets the criteria and procedures set forth in the federal regulations. Application of 4(f) requires a determination of whether there are prudent and feasible alternatives that avoid the use of the 4(f) resource. An alternative may be rejected as not being prudent and feasible for any of the following reasons:

1. It does not meet the project purpose and need;
2. It involves extraordinary operational or safety problems;
3. There are unique problems or truly unusual factors present with it;
4. It results in unacceptable and severe adverse social, economic, or other environmental impacts;
5. It would cause extraordinary community disruption;
6. It has additional construction costs of an extraordinary magnitude, or
7. There is an accumulation of factors that collectively, rather than individually, have adverse impacts that present unique problems or reach extraordinary magnitudes.

The determination must be made whether one or more of the alternatives to avoid the use of land from Section 4(f) property is prudent and feasible. If such avoidance alternatives exist, one of them must be selected. If all the remaining and prudent and feasible alternatives use land from the Section 4(f) properties, then a least harm analysis must be performed to determine which alternative does the least overall harm to the Section 4(f) properties. In performing this analysis, the net harm (after mitigation) to the properties is the governing factor.

## 4.2 Project Purpose and Need

SH 402 is a heavily used two-lane, east-west arterial connecting US 287 (also known as Lincoln Avenue) and I-25.<sup>1</sup> This 4-mile highway is located south of the city of Loveland in Larimer County, Colorado. SH 402 serves local residents and businesses and is used as a commuter route to I-25. The proposed action encompasses the entire 4-mile length of SH 402. Access to a carpool lot (88 spaces) located at the southwest quadrant of the SH 402 and I-25 interchange was included as a part of this study. Potential improvements at the I-25 interchange are being addressed under the current *North I-25 Environmental Impact Statement*. Figure 4-1 illustrates the project study area and National Register of Historic Places (NRHP) eligible properties.

The **purpose** of this project is to improve mobility and safety along the existing SH 402 from the US 287 intersection east to the I-25 interchange.

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<sup>1</sup> An urban cross section has been developed and partially built from US 287 east to CR 13C; the interim condition will remain until the development on the south side of SH 402 is constructed. This section was constructed by developers in coordination with the city of Loveland and CDOT under a Categorical Exclusion, dated September 18, 2003. Impacts related to widening between US 287 and CR 13C are not included in this analysis, and the existence of this developed portion of SH 402 did not restrict consideration of alternatives.

The **need** for this project was established by identifying and analyzing the 2030 travel demand and expected growth and development. The existing two-lane highway's substandard design includes no turn lanes, narrow shoulders, and poor sight distances (how far ahead a driver can see from the road), resulting in mobility and safety concerns. Key elements for identifying mobility impacts are the cross section of the highway and the level of service. *Chapter 1, Purpose and Need*, includes additional discussion.

## 4.3 Alternatives Evaluated

A detailed agency and public involvement process was initiated during project scoping. A range of alternatives was developed and evaluated, including alternate transportation modes, a no action alternative, and four action alternatives.

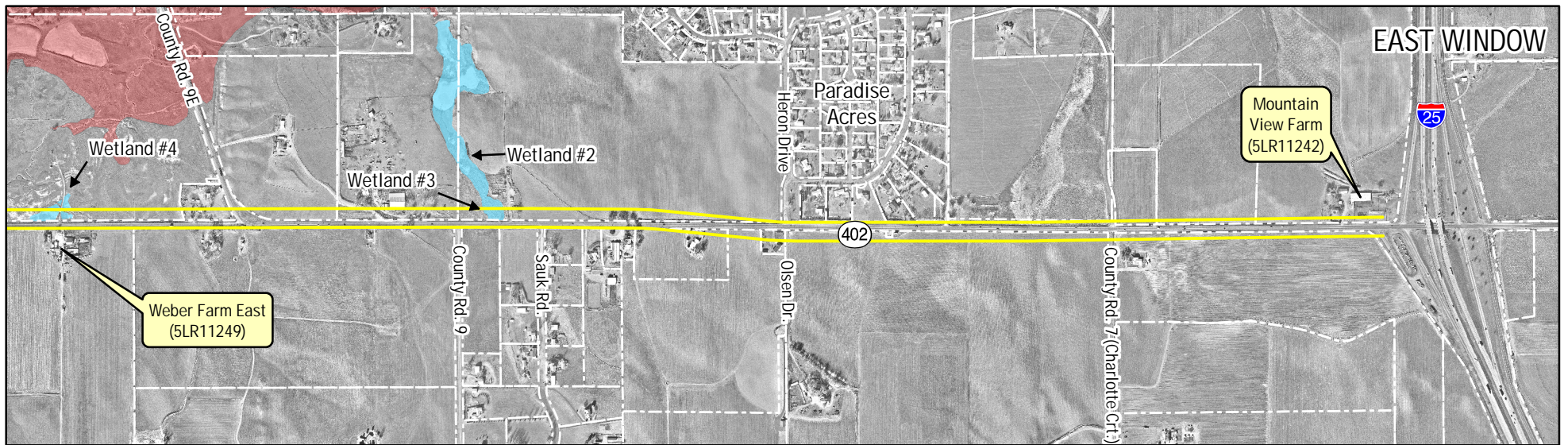
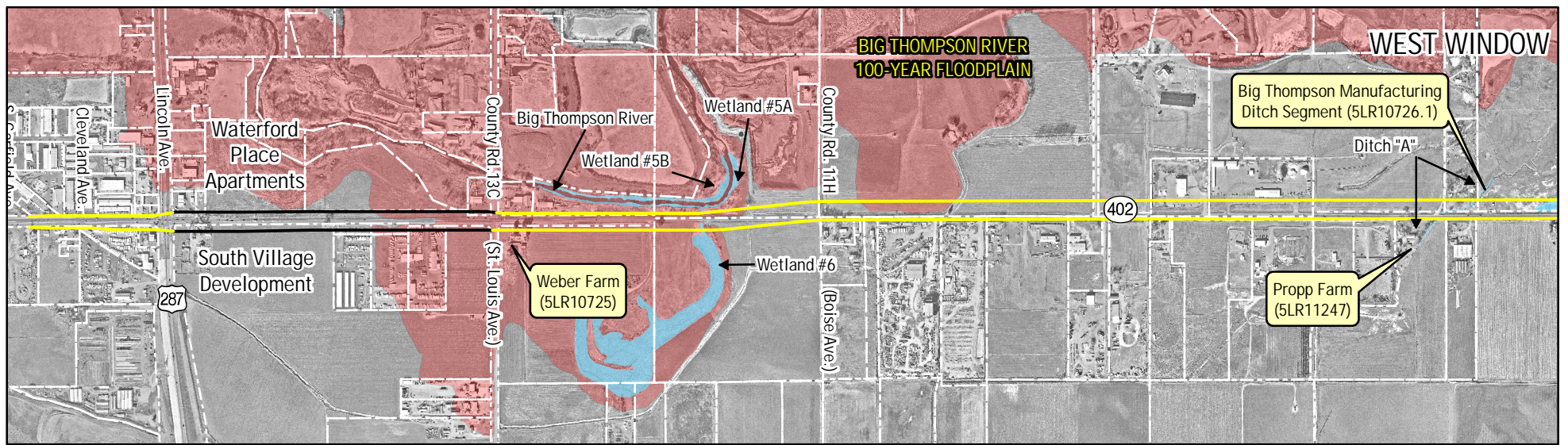
The alternatives evaluated in detail in this EA are the No Action Alternative and one action alternative (Alternative # 4 – Meander Alternative). Figure 4-1 shows the right-of-way proposed for the Meander Alternative. The Meander Alternative is the Preferred Alternative.

### 4.3.1 No Action Alternative






The No Action Alternative would result in no physical changes to the existing highway; however, standard operation and maintenance practices would continue. The existing human and natural environments bordering the highway would remain as they are, except for any development that might occur independently of improvements to the highway.

### 4.3.2 Preferred Alternative - #4 Meander Alternative

The Meander Alternative shifts between the north and south sides of the current highway alignment, minimizing impacts on the human and natural environments while meeting design criteria for a four-lane highway in this corridor.

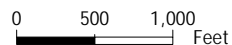


LEGEND

-  Wetlands
-  Floodplain
-  Property Parcel Boundaries
-  Proposed Meander Right-of-Way
-  Existing Right-of-Way



SCALE - 1:14,700 or 1" = 1225'



SOURCE: 2001 1/2-foot resolution aerial photography. Land use and parcel information provided by the City of Loveland. Wetland information obtained through field observation and aerial photo interpretation by JFSA. Floodplain information provided by FEMA. Map produced November 29, 2006 by JFSA.



Project Study Area  
Featuring Historic Properties

Figure 4-1

Individual constraints in the study area that guided the development of the Meander Alternative were identified during project scoping, then mapped, and used to develop the meander alignment. Versions of the Meander Alternative were analyzed to identify the best-fit alignment that minimized impacts while meeting design criteria.

The Meander Alternative's limited alignment shifts were developed to meet speed and safety criteria for posted speed limits (40 to 50 mph) while taking into account driver expectations. By limiting the number of alignment shifts and maintaining the right-of-way width of 160 to 175 feet, the Meander Alternative has the least number of relocations while meeting the purpose and need. While the Meander Alternative does not have the least impacts on all resources, it adversely affects only one historic property, and the lower number of relocations was also a key screening factor.

## 4.4 Section 4(f) Resources

Within the SH 402 project study area, the proposed action will have no impact on any existing public parks, recreation areas, wildlife refuges, or waterfowl refuges.

Five historic properties are eligible for the NRHP in the project area of potential effect (APE) as shown in Figure 4-1.

All five of these properties will have uses under Section 4(f) for the Preferred Alternative as defined by *49 USC 303* and *23 USC 138*.

For the Weber Farm (5LR10725), located in the southeast quadrant of SH 402 and CR 13C (St. Louis Avenue), a finding of adverse effect under Section 106 has been made. Due to the finding of adverse effect, the use of this property requires a full Section 4(f) evaluation.

For four properties, the Big Thompson Manufacturing Ditch Segment (5LR10726.1), the Weber Farm East (5LR11249), the Propp Farm (5LR11247), and the Mountain View Farm (5LR11242), the project will result in *de minimis* impacts.

### 4.4.1 Weber Farm (5LR10725)

#### Property Description





The Weber Farm abuts the south side of existing SH 402 from CR 13C east to the location where CR 11H (Boise Avenue) ties into SH 402 from the north. The buildings on this 80-acre farm complex are located in the area immediately south and east of the intersection at CR 13C. Access to the property comes from both SH 402 and CR 13C.

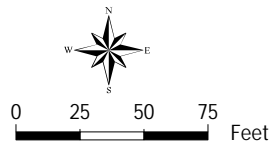
The farm complex, built during the period from 1911 to the 1930s, is an example of the early 20th century irrigated farming patterns of small land holdings and the family farm. This farm complex includes eight buildings, a feedlot, and tilled fields (see Figure 4-2). The Weber family acquired the farm property in 1926 and still owns the property. Family members operate it as a small farm. Its associations with early 20th century farming and the high level of physical integrity make the Weber Farm eligible to the NRHP under Criterion A. The house and outbuildings are aging but all retain a high degree of integrity and completeness as representative buildings of an early 20th century Larimer County farm, also resulting in NRHP eligibility under Criterion C.

The farm complex is in close proximity to the Big Thompson River that meanders along the north side of SH 402 in this area (see Figure 4-3). Additional information on the river, associated wetlands and wildlife habitat can be found in *Chapter 3, Impacts and Mitigation Measures*.



**LEGEND**

-  Property Parcel Boundaries
-  Meander Alternative Right-of-Way
-  Meander Alternative Utility Corridor Right-of-Way
-  Site Boundary



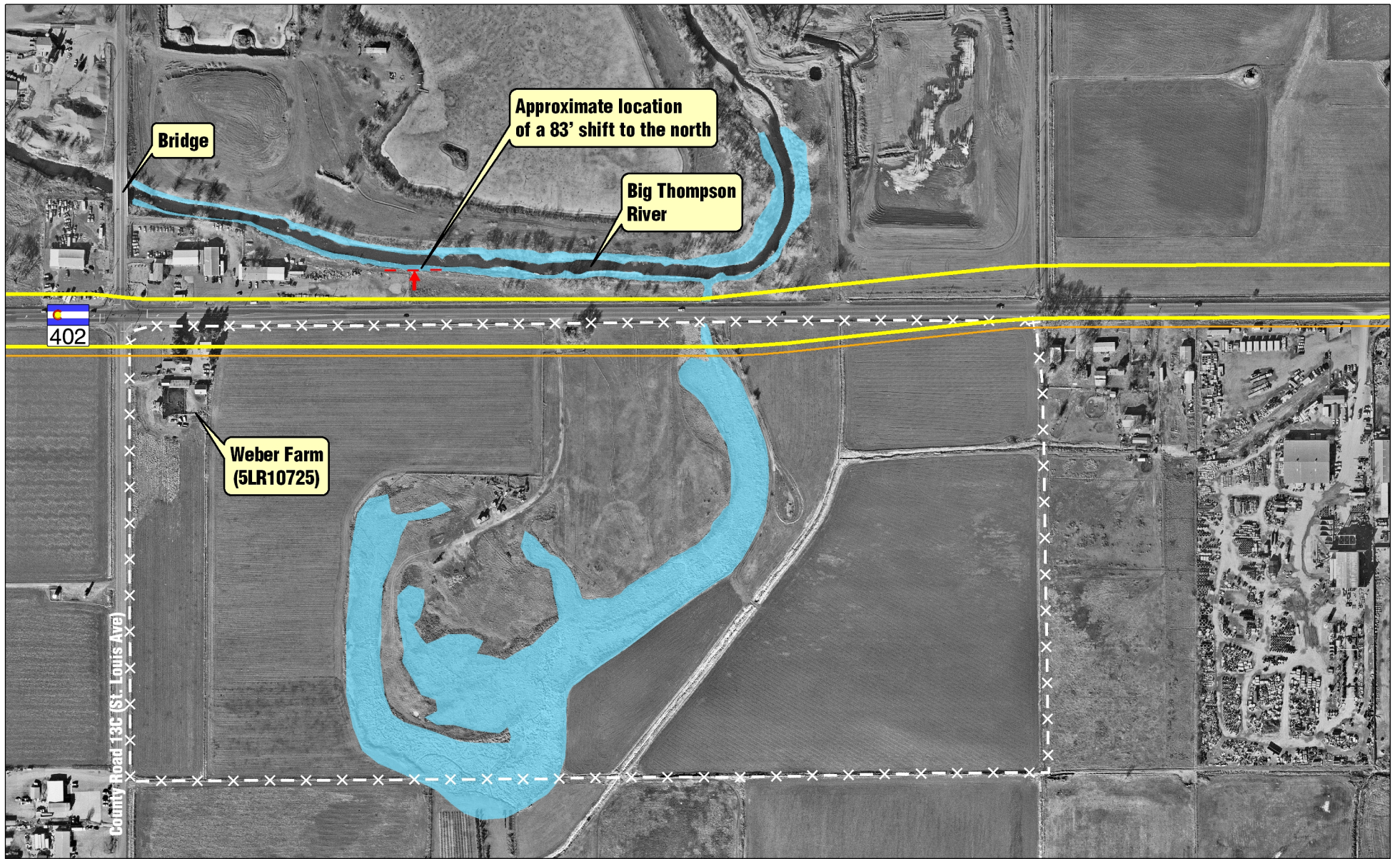
SCALE - 1:900 or 1" = 75'

SOURCE: 2001 1/2-foot pixel resolution aerial photography, provided by Wilson & Co. Land use and parcel information provided by the City of Loveland. Historic information provided by WCRM. Map produced November 2006 by JFSA.



Weber Farm - Detail of Buildings  
5LR10725

FIGURE 4-2



**LEGEND**

-  Meander Alternative Right-of-Way
-  Meander Alternative Utility Corridor Right-of-Way
-  Site Boundary
-  Jurisdictional Wetlands



0 200 400 Feet

SCALE - 1:4,800 or 1" = 400'

SOURCE: 2001 1/2-foot pixel resolution aerial photography provided by Wilson & Co. Land use and parcel information provided by the City of Loveland. Historic information provided by WCRM. Map produced November 2006 by JFSA.



**Context Map for  
Weber Farm Discussion**

**Figure 4-3**



### **Description of Use of the Weber Farm (5LR10725)**

The widening of SH 402 at this location results in the need for additional right-of-way and a permanent utilities easement from the frontage of the Weber Farm with an approximate width of 58 feet for right-of-way and an additional 25 feet for permanent easement (total of 83 feet) the entire length of the Weber Farm - SH 402 frontage.<sup>2</sup> This results in a total need for an additional 4 acres of new right-of-way for the highway widening and an additional 1.4 acres for the permanent easement. Note that the alignment veers north as SH 402 heads east past the Big Thompson River in the vicinity of a lateral ditch. This slightly reduces the right-of-way and easement requirements from the eastern 500 feet of Weber Farm frontage.

In the vicinity of the buildings on the property, the result will be the loss of the main house (building 1) and chicken brooder house (building 8). These buildings are illustrated in Figure 4-4. The magnitude of this impact is an adverse effect on the NRHP eligible Weber Farm (5LR10725). A Memorandum of Agreement to resolve adverse effects on this property was executed on February 9, 2007 (see *Appendix A*).

#### **4.4.2 De Minimis Findings**

##### **Big Thompson Manufacturing Ditch Segment (5LR10726.1)**

###### *Property Description*

The Big Thompson Manufacturing Ditch system extends 10 miles in length, beginning 0.25 mile east of Wilson Avenue on the Big Thompson River and ending just east of the resource

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<sup>2</sup> Parcel data from the Larimer County Assessor's Office and City of Loveland (2003) show the Weber Farm legal boundary as located within CDOT right-of-way for approximately 1,200 feet of SH 402 frontage. The remaining legal boundary for the Weber property is shown as extending to the existing SH 402 centerline. The numbers described above treat the existing farm fence as the NRHP boundary. This discrepancy in current ownership data does not alter the adverse effect on the historic property.

segment 5LR10726.1. The ditch has been identified as one of the oldest in the system with rights dating back to 1863. The SHPO concurred with the determination that the overall linear feature 5LR10726 is an NRHP eligible resource under Criteria A and C and that segment 5LR10726.1 has a low degree of integrity. The segment under discussion is piped under the existing SH 402 at milepost 1.9 (see Figure 4-1).

###### *Description of Use of the Big Thompson Manufacturing Ditch Segment (5LR10726.1)*

The expansion of SH 402 will increase the length of the pipe under the highway. This would occur with all action alternatives. No other alterations to the ditch are anticipated.

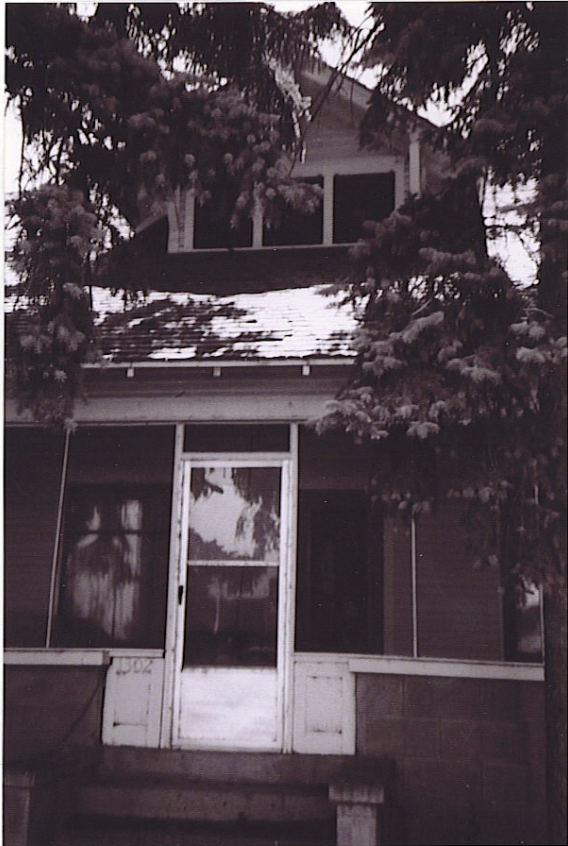
FHWA and CDOT, in consultation with the SHPO, determined that this project widening will result in a finding of no adverse effect under Section 106 of the NRHP. Subsequently, CDOT and FHWA have made a finding for *de minimis* impact under Section 4(f). SHPO concurred with the "no adverse effect" finding in correspondence dated June 29, 2005, and again on September 13, 2006. The City of Loveland Community and Strategic Planning Department was also afforded an opportunity to review the Section 106 findings. CDOT notified the SHPO of the *de minimis* determination for this property in correspondence dated March 10, 2006. FHWA signed the *de minimis* finding for the property on November 15, 2006 (see Appendix A for correspondence).

##### **Weber Farm East (5LR11249)**

###### *Property Description*

The Weber Farm East is under the same ownership as the Weber Farm (5LR10725). The Weber Farm East abuts the south side of existing SH 402 approximately 1.6 miles to the east of the Weber Farm (see Figure 4-1). There are no cross streets in the vicinity, and the eastern boundary is approximately 870 feet west of CR 9E. This property accesses SH 402.

**Figure 4-4. Weber Farm Main House and Chicken Brooder House**



**Main House: front door and dormer, view to south**



**Main House: east elevation, showing bay window, view to south**



**Main House: rear elevation, view to northeast**



**Building 8: chicken brooder house, front elevation, view to northeast**

The Weber Farm East complex was built in the early 1900s with remodels to the main house. The 2.1-acre fenced complex consists of 13 buildings, a feedlot, and tilled fields.

The Weber Farm East is eligible for inclusion in the NRHP under Criterion A because it represents the typical early-to mid-20th century farming lifestyle in the Loveland and Larimer County area. The site is also considered eligible for inclusion in the NRHP under Criterion C as representative of early 20th century farm architecture in the Loveland area.

#### *Description of Use of the Weber Farm East (5LR11249)*

As a result of the identification of the Meander Alternative as the Preferred Alternative, the alignment of the expanded SH 402 remains to the north, holding the existing southern edge of right-of-way the entire length of the Weber Farm East. The only impact on the farm is the acquisition of a 25-foot permanent utility easement across the front of the property. Except for the probable loss of a cottonwood tree associated with placing utilities underground, no other physical features of the Weber Farm East property will be affected. The tree is not considered a part of the historic landscape. Utility poles are currently located in an easement along the front of this property.

FHWA and CDOT, in consultation with the SHPO, determined that this project widening will result in a finding of no adverse effect under Section 106. Subsequently, CDOT and FHWA have made a finding for *de minimis* impact under Section 4(f). SHPO concurred with the “no adverse effect” finding in correspondence dated May 26, 2006, and again on September 13, 2006. The City of Loveland Community and Strategic Planning Department was also afforded an opportunity to review the Section 106 findings. CDOT notified the SHPO of the *de minimis* determination for this property in correspondence dated March 10, 2006. FHWA signed the *de minimis* finding for the property on November 15, 2006 (see *Appendix A* for correspondence).

#### **Propp Farm (5LR11247)**

##### *Property Description*

The Propp Farm abuts the south side of existing SH 402 and is crossed on the east by the Big Thompson Manufacturing Ditch Segment (5LR10726.1). The Weber Farm East (5LR11249) is one property east of the Propp Farm.

The Propp Farm complex was built in the mid-1920s. The current 21.8 acres includes 6 historic buildings and 18.5 acres of alfalfa hayfields.

The Propp Farm is eligible for inclusion in the NRHP under Criterion A for its association with a period of significance, the Colorado Plains – Post 1900 Agricultural – Sugar Beets context. The Propp Farm was part of a larger 80-acre farm then, where sugar beets, hay, and corn were grown.

##### *Description of Use of the Propp Farm (5LR11247)*

As a result of the identification of the Meander Alternative as the Preferred Alternative, the alignment of the expanded SH 402 remains to the north, holding the existing southern edge of right-of-way the entire length of the Propp Farm. The only impact on the farm is the acquisition of a 25-foot permanent utility easement across the 410-foot front of the property.

Except for the possible loss of several trees associated with placing utilities underground, there will be no other impacts on the Propp Farm. Utility poles are currently located in an easement along the front of the property. The trees date from the 1960s and are not part of the historic landscape.

FHWA and CDOT, in consultation with the SHPO, determined that this project widening will result in a finding of no adverse effect under Section 106 of the NRHP. Subsequently, CDOT and FHWA have made a finding for *de minimis* impact under Section 4(f). SHPO concurred with the “no adverse effect” finding in correspondence dated August 22, 2006. The City of Loveland

Community and Strategic Planning Department was also afforded an opportunity to review the Section 106 findings. CDOT notified the SHPO of the *de minimis* determination for this property in correspondence dated August 15, 2006. FHWA signed the *de minimis* finding for the property on November 15, 2006 (see *Appendix A* for correspondence).

### **Mountain View Farm (5LR11242)**

#### *Property Description*

The Mountain View Farm is located in the northwest quadrant of the SH 402 and I-25 interchange.

The Mountain View Farm complex built in the 1920s includes both the farmstead and associated fields. The farmstead includes five historic buildings, six modern buildings, and eight modern features, including a feedlot. According to the current owner, the main house was relocated and remodeled in 1964 due to the construction of I-25.

This property is eligible under Criterion A, for its association with the period of significance in the sugar beets context, even though the house has been moved. Previous owners grew hay, grain, and sugar beets and later ran a dairy at this location.

#### *Description of Use of the Mountain View Farm (5LR11242)*

The SH 402 project will taper from four to two lanes at the I-25 interchange adjacent to and east of the Mountain View Farm. The additional proposed right-of-way would take 35 feet off the front of the property for a distance of 1,935 feet. Potential physical highway improvements would generally remain south of the farm's existing fence line. The shoulder for the expanded SH 402 will end at the current fence; however, fill slopes associated with the construction would intrude further to the north. Possible impacts on features associated with the farm within the expanded right-of-way include loss of frontage

from a modern feedlot, location adjacent to the front of the calving shed, and loss of a bank of weedy species trees located in front of the house. The field survey revealed an unkempt, dense growth of elms, sumac, and juniper. These trees, likely planted after the relocation of the house during the 1960s, are not part of the historic landscape.

FHWA and CDOT, in consultation with the SHPO, determined that this project widening will result in a finding of no adverse effect under Section 106. Subsequently, CDOT and FHWA have made a finding for *de minimis* impact under Section 4(f). SHPO concurred with the "no adverse effect" finding in correspondence dated August 22, 2006. The City of Loveland Community and Strategic Planning Department was also afforded an opportunity to review the Section 106 findings. CDOT notified the SHPO of the *de minimis* determination for this property in correspondence dated August 15, 2006. FHWA signed the *de minimis* finding for the property on November 15, 2006 (see *Appendix A* for correspondence).

## **4.5 Avoidance Alternatives**

Table 4-1 provides a summary of avoidance alternatives.

### **4.5.1 Big Thompson River Relocation Alternative**

The following discussion examines the potential for avoidance of all impacts on the Weber Farm (5LR10725). This alternative would require an adjustment to the Meander Alignment from west of CR 13C to east of CR 11H, a distance of approximately 0.75 mile, to avoid all direct use of the Weber Farm. To accommodate the widened SH 402 and associated utility easement, this segment of SH 402 would have to be shifted 83 feet to the north: 58 feet for the alignment and another 25 feet to locate the utility easement outside the Weber property (see Figure 4-3).

**Table 4-1. Avoidance Alternative Discussion Summary**

Alternative	Weber Farm (5LR10725)	Weber Farm East (5LR11249)	Big Thompson Manufacturing Ditch Segment (5LR10726.1)	Propp Farm (5LR11247)	Mountain View Farm (5LR11242)	Prudent and Feasible
No Action	Avoids	Avoids	Avoids	Avoids	Avoids	No (a,b)
Action Alternative #4 - Meander	Use	No Adverse Effect <i>de minimis</i>	No Adverse Effect <i>de minimis</i>	No Adverse Effect <i>de minimis</i>	No Adverse Effect <i>de minimis</i>	Yes
Big Thompson Relocation Alternative	Avoids or No Adverse Effect <i>de minimis</i>	No Adverse Effect <i>de minimis</i>	No Adverse Effect <i>de minimis</i>	No Adverse Effect <i>de minimis</i>	No Adverse Effect <i>de minimis</i>	No (c)
Parallel Route - US 34 in Lieu of SH 402 improvements	Avoids	Avoids	Avoids	Avoids	Avoids	No (a,b)
Parallel Route - SH 60 in Lieu of SH 402 improvements	Avoids	Avoids	Avoids	Avoids	Avoids	No (a,b)

a) Does not meet the project purpose and need because it does not address mobility concerns or meet regional travel demand

b) Does not meet project purpose and need because it does not address safety concerns

c) Does not meet USCOE permit requirements for least environmentally damaging practicable alternative (LEPDA) per CFR 40 Part 230 Section 404(b)(1). Results in excessive costs.

The US Army Corps of Engineers will issue a permit for only the least environmentally damaging practicable alternative (LEPDA) per *CFR 40 Part 230 Section 404(b)(1)*. The Big Thompson River Relocation Alternative would not meet this requirement due to extensive river relocation (approximately 1,200 feet) and associated wetlands impacts (approximately 1 acre of moderate to high functional value jurisdictional wetlands).

The Big Thompson River Relocation Alternative is not prudent and feasible because it has adverse impacts on the river and it would not be the LEPDA per US Army Corps of Engineers permit requirements.

#### 4.5.2 Parallel Corridor Alternatives

The possibility of new or parallel alignment corridors was also considered. Parallel highway corridors already exist: US 34 and SH 60. The project purpose and need: to improve mobility and safety along SH 402 while meeting 2030 travel demand and expected growth and development for the SH 402 corridor, cannot be met by improvement to either US 34 or SH 60 because shifting the alignment to US 34 or SH 60

would not satisfy safety issues (see Figure 1-1 for parallel corridor locations).

Specific safety issues for the SH 402 corridor are identified in *Section 1.2.3, Crash Analysis*, and include the following observations that are corridor-specific and cannot be remedied by improving parallel corridors:

- ❑ Substandard shoulder widths on SH 402,
- ❑ Close proximity of driveway accesses to intersections and related slowing of drivers to make turns into side roads and driveways increasing risk of rear-end crashes
- ❑ Sight distance problems on SH 402 at numerous intersections.

An Environmental Assessment was completed in April 2007 addressing mobility on US 34 between US 287 to the west and LCR 3 east of I-25. The Action Alternative is for the widening of US 34 from four to six lanes. The proposed SH 402 widening is included in the 2030 travel demand forecast for US 34, meaning that US 34 widening alone will not meet regional travel demand.

An added concern at SH 60, located south of SH 402, is that it does not include full access to

I-25. There are no plans to expand the SH 60/I-25 access, which could cost as much as \$15 million. Assessment of the status of this interchange is included in the separate *North I-25 Front Range EIS*.

### 4.5.3 No Action Alternative

The No Action Alternative does not address FHWA and CDOT project purpose and need, mobility, and safety concerns or 2030 travel demand and expected growth and development needs. The design goal for SH 402 from US 287 to CR 13C was level of service (LOS) D (based on its urban functional classification), with LOS C for the remainder of SH 402 east of CR 13C (based on its rural functional classification).

The No Action Alternative includes developer improvements between US 287 and CR 13C, which result in improved 2030 LOS for the US 287 and CR 13C intersections and through traffic LOS between US 287 and CR 11H.

SH 402 traffic volumes in 2030 under the No Action Alternative will result in LOS F at most intersections east of CR 13C. Highway through segments between intersections are projected to decline to LOS F east of CR 11H in 2030. Therefore, the No Action Alternative is not prudent and feasible.

## 4.6 Measures to Minimize Harm

The following discussion represents efforts made for all possible planning to minimize harm to the Weber Farm property while following the Preferred Alternative, Meander Alternative alignment.

During alternatives development and screening, the cross section was narrowed to a total of 175 feet to reduce potential impacts on adjacent properties, including the Weber Farm, and to respond to public and agency comments, while maintaining desired design characteristics. Later, due to constraints related to the proximity to the

Big Thompson River, the right-of-way in this segment was further reduced to 160 feet.

Even with the reduction in right-of-way through portions of Weber Farm, there is no prudent and feasible alternative that alleviates the use of the Weber Farm (5LR10725).

The SHPO was consulted on the impacts of the project. The following mitigation is recommended for the Weber Farm (5LR10725).

The Weber Farm (5LR10725) was recorded prior to construction so that there is a permanent record of its present appearance and history. Recordation consisted of Level II Documentation as determined in consultation with the SHPO and according to the standards established in Office of Archaeology and Historic Preservation Form #1595. The SHPO accepted the Level II Documentation on May 7, 2007 (see *Appendix A*). Copies of the documentation also will be sent to a local archive designated by the SHPO.

Regarding the alignment of the Preferred Alternative (Meander Alternative), measures to minimize harm to crossing the Big Thompson Manufacturing Ditch Segment (5LR10726.1) include crossing a portion of the ditch that has low integrity. The ditch generally runs perpendicular to SH 402 and any substantial realignment of SH 402 could result in a crossing of a portion of the ditch that may have higher integrity, resulting in an adverse effect on this ditch, rather than the current finding of no adverse effect.

Those measures being used in association with the Preferred Alternative (Meander Alternative) to minimize harm to both the Weber Farm East (5LR11249) and the Propp Farm (5LR11247) result in the identification of only a utility easement across the front of these properties. Some utilities already run across the front of each of these properties in a narrower easement.

Those measures being used in association with the Preferred Alternative (Meander Alternative) to minimize harm to the Mountain View Farm (5LR11242) include the avoidance of loss of any historic buildings. Only a modern feedlot frontage and bank of trees that is not considered part of the historic landscape will be affected.

## 4.7 Coordination

In consultation with the SHPO, the FHWA and CDOT have determined that this project will have adverse effects on the Weber Farm (5LR10725). FHWA, CDOT, and the SHPO agreed that this project will have no adverse effects on the Big Thompson Manufacturing Ditch Segment (5LR10726.1), the Weber Farm East (5LR11249), the Propp Farm (5LR11247), and the Mountain View Farm (5LR11242). The SHPO concurred with these findings and has been informed of the determination of *de minimis* impacts. Relevant Section 106 and 4(f) related correspondence is found in *Appendix A*.

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# Chapter 5

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Cumulative Impacts





## Chapter 5. Cumulative Impacts

This chapter addresses cumulative impacts of the Preferred Alternative (Meander Alternative). Cumulative impacts are defined as “the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or persons undertake such actions” (40 CFR Part 1508.7 Council on Environmental Quality [CEQ] Regulations).

### 5.1 Regulatory Guidelines and Methods

Methods follow those outlined by CEQ (1997) and the Federal Highway Administration (FHWA) (2003). Resource data focus on the human and natural environment features that would be affected by the Meander Alternative in the project area. Available data sources for the project cumulative impacts area include Federal Emergency Management Agency (FEMA), Colorado Division of Wildlife (CDOW), and Colorado Natural Heritage Program (CNHP) mapping; National Wetland Inventory mapping; city of Loveland land use and transportation documents; and Larimer County land use documents. Larimer County and city of Loveland planning documents were reviewed and planners were interviewed to identify cumulative impacts associated with reasonably foreseeable future transportation and development projects in the area of influence. Reasonably foreseeable transportation projects are projects for which funding has been identified, completed projects, and projects in progress. This information, in combination with impacts of past projects, constitutes the “baseline” condition. Impacts expected from implementation of the Meander Alternative were added to the baseline to determine the proposed project’s contribution to cumulative impact.

### 5.2 Scope of Cumulative Impact Analysis

The scope of the cumulative impact analysis for the No Action Alternative is to first identify the past, present, and reasonably foreseeable projects in the area. Second is to provide a discussion on whether implementation of the No Action Alternative will contribute to impacts on surrounding resources.

For the Meander Alternative, the scope consists of identifying those resources upon which the alternative will have an impact and identifying the geographic area and timeframe for the cumulative impact analysis. If the Meander Alternative will not have a direct or an indirect impact on a resource, it is not analyzed for cumulative impacts. The reason is that there is no impact from the action to contribute to the cumulative impacts on that particular resource.

#### 5.2.1 No Action Alternative

The entire area surrounding SH 402 between US 287 and I-25 is zoned for development. The *City of Loveland Land Use Plan* (May 2, 2002; amended March 6, 2007) shows that all parcels adjacent to SH 402 are expected to be converted from agricultural to other land uses. This planned development includes estate, medium, and low-density residential areas, employment centers, and neighborhood activity facilities. This development will change the visual character of the area, increase noise levels, and result in the loss of prime farmlands.

This development is expected to occur regardless of whether improvements are made to the SH 402 corridor. The impacts related to this development will contribute to the overall cumulative impacts for the area.

### **5.2.2 Resources Not Directly or Indirectly Impacted Under the Meander Alternative**

For this local highway safety and mobility improvement project, no direct or indirect effects have been identified for a Preferred Alternative resource; thus, the project is not expected to contribute to cumulative effects on that resource.

No direct or indirect impacts have been identified for the following resources under the Meander Alternative:

- ❑ socioeconomic
- ❑ environmental justice
- ❑ land use
- ❑ recreation
- ❑ emergency services
- ❑ archaeology
- ❑ Native American consultation
- ❑ air quality
- ❑ threatened or endangered species
- ❑ floodplains
- ❑ geology

### **5.2.3 Resources Directly or Indirectly Impacted That May Result in Cumulative Impacts**

Direct or indirect impacts of the Meander Alternative that may contribute to cumulative impacts have been identified for the following resources. Table 5-1 lists possible impacts.

- ❑ visual
- ❑ right-of-way and residential relocations
- ❑ hazardous materials/waste
- ❑ utilities and services
- ❑ historic preservation
- ❑ Section 4(f)/6(f)
- ❑ paleontological resources
- ❑ noise
- ❑ ecology
- ❑ wetlands
- ❑ water quality
- ❑ farmland

### **5.2.4 Geographic Area and Timeframe**

Existing conditions are described only for resources with direct impacts from Meander Alternative construction that may contribute to cumulative impacts. The area of influence is adjacent to the SH 402 right-of-way. Also known as the cumulative effects area, it encompasses the development and ecosystems most likely to be influenced by the proposed project. Past conditions are between 1980 and 2000, present condition is defined as 2000 to present, and the reasonably foreseeable future extends to 2030.

### **5.2.5 Past, Present, and Reasonably Foreseeable Future Actions**

Past actions include gradual development of the area, especially near US 287 and SH 402, extending east toward CR 13C. Present conditions include ongoing residential development, most recently construction of the Waterford Place Apartments. Reasonably foreseeable future actions include residential, commercial, and office development along SH 402. The proposed project is located within the city of Loveland Growth Management Area (GMA). Land use planning guidance features a future neighborhood activity center at US 287 and SH 402, commercial growth adjacent to the interchange at SH 402 and I-25, and development of employment opportunities throughout the south side of the corridor. Residential development is focused on the north side of SH 402. The trend for continued development in the project area is taken into consideration in city of Loveland and Larimer County land use and transportation plans. The Meander Alternative supports these local planning efforts.

Figure 5-1, a city of Loveland future land use plan map, indicates planned growth in the area.

## **5.2.6 Transportation and Development Actions**

A review of the top 15 priority transportation projects identified in the North Front Range 2020 Regional Transportation Plan revealed no other proposed projects in the immediate cumulative impact area of influence. Improvements to I-25 and to US 34 are currently under study. The city of Loveland includes the SH 402 corridor in its GMA and expects increases in population and corresponding traffic volumes in the area.

## **5.2.7 Summary of Cumulative Impacts**

Table 5-1 summarizes potential cumulative impacts associated with SH 402 past, present, and reasonably foreseeable future actions and with the Meander Alternative.

**Table 5-1. Cumulative Impacts on Environmental Resources**

Environmental Resource	Impact of Past and Present Actions	Impact of Foreseeable Future Actions	Impact of Meander Alternative	Cumulative Impact
Visual	Past agricultural, residential, and commercial development in the project area has contributed to visual resource cumulative impacts. Construction of the Waterford Place Apartments has changed the project area's landscape setting.	The visual character of the project area will continue to change as the area develops within the city of Loveland GMA under the guidance of the <i>Loveland Land Use Plan</i> .	Changes are expected to be low contrast to the landscape character in the setting. There will be localized impacts only.	There will be cumulative visual impacts within the SH 402 area of influence (adjacent to SH 402 right-of-way). The visual character will shift from rural and agricultural toward urbanized, with or without the implementation of the Meander Alternative.
Right-of-way and Residential Relocations	SH 402 right-of-way acquisitions and related residential relocations do not carry any associated past or present actions (residential acquisitions) for this corridor. (Also see discussion on Utilities below.)	No foreseeable future actions, other than the SH 402 acquisitions, have been identified. Minor loss of acreage from the future property tax base is not considered a cost when compared with the benefits of the proposed project.	The acquisition of right-of-way (47.58 acres of residential and 7.15 acres of commercial property) for improvements associated with SH 402 will not affect land use patterns or planning. Relocations (6 homes and 3 outbuildings) will be conducted in compliance with the Uniform Act and will not affect overall housing patterns, needs, or availability.	No cumulative impacts have been identified for this mitigated action.
Hazardous Materials/Waste	Fuel-contaminated groundwater could have migrated offsite from the leaking underground storage tank (LUST) site at the Diamond Shamrock gas station. No indications of hazardous materials or waste at the A/B Auto Brokers and Chuck's Towing property currently exist, but historic use raises the potential for contamination.	Contamination related to sites in proximity to SH 402 may affect other area projects in the foreseeable future. These impacts are independent of the proposed project.	Should hazardous materials be encountered as a part of the proposed project, at any sites, any impact will be mitigated at that site.  Transformers on utilities adjacent to SH 402 will be relocated.	No cumulative impacts have been identified for this mitigated action.

Environmental Resource	Impact of Past and Present Actions	Impact of Foreseeable Future Actions	Impact of Meander Alternative	Cumulative Impact
Utilities and Services	Utility corridors often follow linear transportation corridors to minimize impacts. Utilities associated with SH 402 in the past and present remain in this corridor.	It is possible that utility company uses of the SH 402 corridor will vary in the foreseeable future as services are modified or upgraded.	Proximity of major utilities to the existing SH 402 edge of pavement would necessitate relocation of some of these utilities. A 25-foot utility corridor easement on the south side of the Meander Alternative is proposed for existing southside and new utilities. Utilities currently on the north side will be relocated further north within the SH 402 footprint.	Creation of a utility corridor adjacent to SH 402 will not result in a cumulative effect on utilities in the city or county. No cumulative impacts have been identified.
Historic Preservation	Historically, the SH 402 corridor has supported the agricultural heritage of the eastern plains. Numerous farming uses remain today. However, residential and commercial development is encroaching from the west end, and development pressure is also present in the vicinity of I-25.	Many of the historic farms in the corridor will lose their historic integrity as the rural farmsteads and associated lands give way to the construction of residential and commercial projects along SH 402.	There will be an adverse effect on one historic property, the Weber Farm (5LR10725).	The cumulative impacts of the economically supported growth trend outside the SH 402 right-of-way on historic properties are likely to occur as development continues, with or without the implementation of the Meander Alternative.
Sections 4(f)/6(f)	No impacts on parks, recreation areas, wildlife or waterfowl refuges have been identified for this project. One historic property will be used under Section 4(f). See additional discussion under Historic Preservation above.	See additional discussion under Historic Preservation above.	There will be a use of one historic property, the Weber Farm (5LR10725). FHWA has made a finding of <i>de minimus</i> impacts for four properties.	See additional discussion under Historic Preservation above.
Paleontology	Paleontological resources have been salvaged in the Loveland area in the past.	Paleontological resources can continue to be salvaged in the Loveland area in the future.	No known resources will be affected by the proposed project.	Preconstruction salvage, if identified, of potentially impacted fossils will not contribute to loss of paleontological data from the area.

Environmental Resource	Impact of Past and Present Actions	Impact of Foreseeable Future Actions	Impact of Meander Alternative	Cumulative Impact
Noise	No past or present noise-generating transportation projects have been identified in the SH 402 study area; however, continuing traffic increases due to development and growth in the region have contributed to the existing noise environment.	Future noise impacts are possible along SH 402 near the I-25 interchange due to increased traffic volumes on I-25. These impacts will be addressed in a forthcoming I-25 project and are not included in the current project.  Planned development will also contribute to increased noise. Figure 5-1, a city of Loveland land use plan map, indicates the planned development in the area.	Year 2030 noise levels would meet or exceed the CDOT NAC B criterion of 66 dB(A) at 11 residences, not including 2 residences, which would need to be acquired for improvement to be implemented.	Noise pattern changes and decibel level increases are likely to occur as development continues, with or without the implementation of the Meander Alternative.
Ecology	Past and present agricultural and residential/commercial development have affected the quality of the ecological habitat by contributing to fragmentation and removing large tracts of land from natural productivity. Land development, especially along the Big Thompson River riparian areas, has made it more difficult for wildlife to access the river and has fragmented habitat. Past conversion of shortgrass prairie to cropland and residential areas has reduced the diversity of cover, food, and breeding areas available to wildlife. Development has introduced other indirect impacts, including human presence, domestic pets (as predators), noise disturbances, and the dangers associated with roads. Other negative effects include addition of impermeable surfaces that contribute to increased runoff entering creeks and riparian systems, and introduction of non-native or invasive (noxious) weeds.	Planned development in the area will result in further loss and/or fragmentation of riparian habitats and conversion from open cropland to buildings, parking lots, and landscaped areas. Disturbances of this type will decrease the numbers and diversity of wildlife inhabiting the area.	Permanent disturbance of land cover vegetation was estimated at 23.7 acres. Of this, more than 80 percent is crops, pasture, and agricultural uses. The Meander Alternative will not have an impact on high-quality habitat or cause any new fragmentation of habitat.	Additional development is zoned and planned for future conversion to urban land uses with or without the implementation of the Meander Alternative. Based on the minimum habitat losses associated with the Meander Alternative, project implementation will have little cumulative effect on remaining habitat in the study area.

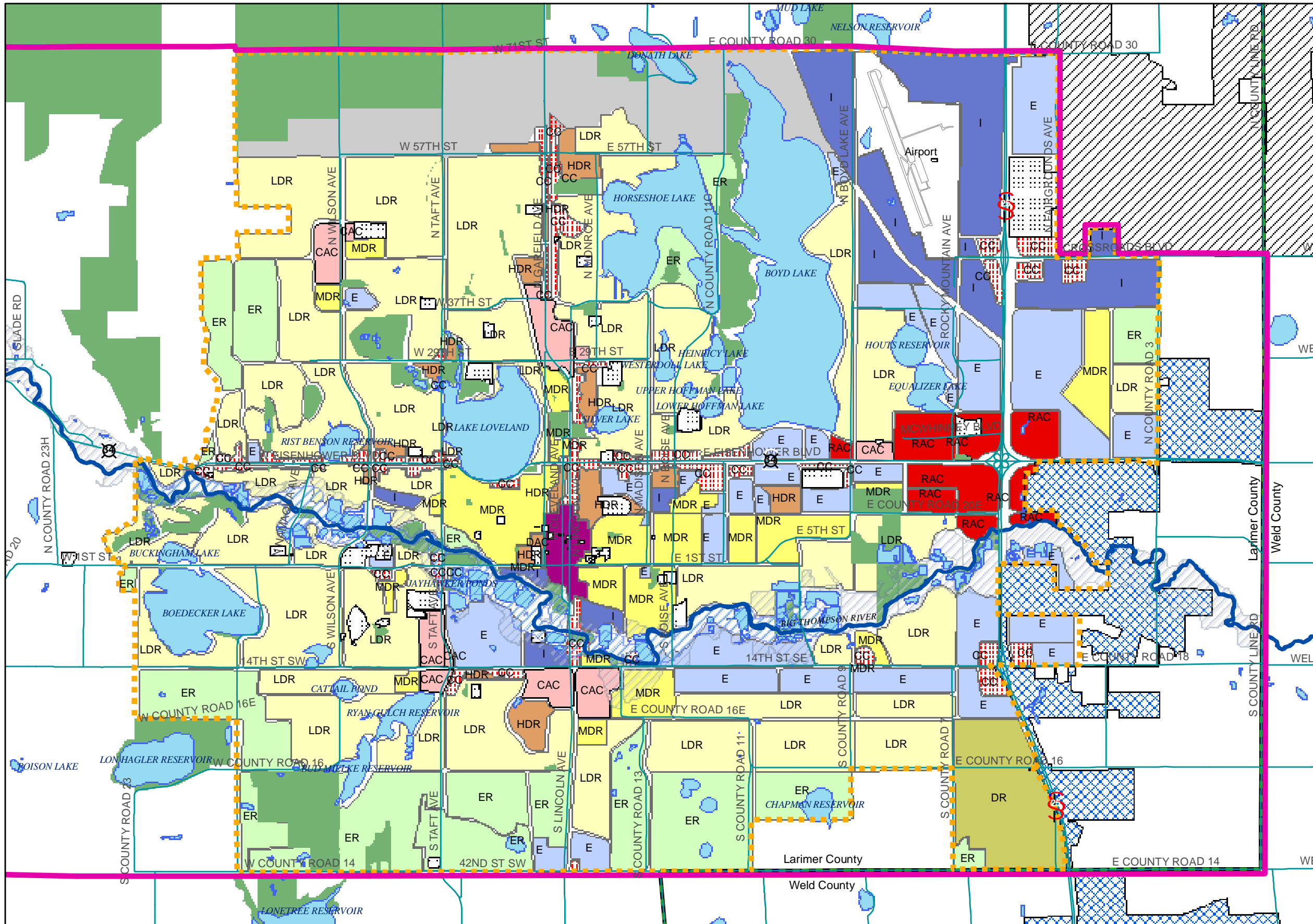


Environmental Resource	Impact of Past and Present Actions	Impact of Foreseeable Future Actions	Impact of Meander Alternative	Cumulative Impact
Wetlands	Project area wetlands have been affected by past activities, including agricultural development, road construction, and residential and commercial development.	Additional development planned for this area, especially along the western part of the corridor, converts land from agricultural use. Impacts on wetlands and other waters of the US include increased erosion, sedimentation, and rapid runoff from paved and nonvegetated surfaces, leading to stream incision and loss of wetland hydrology, area invasion by weed and non-native plant species, and increased concentrations of chemicals such as nitrogen, phosphorus, and heavy metal.	<p>Approximately 0.89 acre of wetlands will be permanently affected by fill actions to expand the roadbed, of which 0.45 acre is jurisdictional. An additional area extending 5 feet from the cut-and-fill line has been included to ensure that impacts were not underestimated.</p> <p>CDOT will replace lost wetlands on a 1:1 basis, resulting in no net loss of wetlands.</p> <p>Replacement wetlands will be developed adjacent to SH 402 or in the study area.</p>	Wetland impacts associated with development planned for the study area will occur with or without the implementation of the Meander Alternative.

Environmental Resource	Impact of Past and Present Actions	Impact of Foreseeable Future Actions	Impact of Meander Alternative	Cumulative Impact
Water Quality	<p>The dominant surface water feature in the project study area is the Big Thompson River. Development to date has affected stormwater runoff to the river. Groundwater in the project study area is also affected by increasing development.</p> <p>Increased development can also increase the potential for hazardous materials spills in the area. According to the hazardous waste M-ESA, the only documented hazardous materials spills in the project corridor have occurred at the I-25/SH 402 interchange.</p> <p>The urban section, which has already been constructed from US 287 to CR 13C, includes a complete curb and gutter drainage system that increases highway runoff to the municipal sewer system that discharges to the Big Thompson River.</p>	<p>The effects of development and urbanization in the Big Thompson watershed are the primary water quality concerns in Larimer County. These development activities can increase stormwater runoff peak flows due to increased impervious surface area, and increase certain types of water pollutant sources. Pollutant sources can include point sources associated with industrial and wastewater discharge and nonpoint sources such as vehicles, commercial operations, and sediment from development construction activities. Existing land uses along the highway that already could have an impact on area water quality include agricultural, residential, commercial, and light industrial operations.</p>	<p>Potential impacts of this alternative include increased highway stormwater runoff because of a nearly 31-acre increased potential for highway runoff pollutants due to a projected 140 percent increase in traffic by year 2030. Increased highway runoff has the potential to impact the Big Thompson River with increased sediments, roadway deicers, metals from vehicle wear, particulates from vehicle exhaust, and petroleum products related to motor vehicles.</p> <p>The urban section of the Meander Alternative includes a complete curb and gutter drainage system and will increase highway runoff to the municipal sewer system that discharges to the Big Thompson River.</p> <p>The rural section of the Meander Alternative will increase highway runoff to roadway ditches and swales. Some highway runoff in combination with other runoff will eventually discharge into the Big Thompson River.</p> <p>No groundwater impacts have been identified for the Meander Alternative.</p>	<p>With continuation of city, county, and CDOT stormwater programs, the increased highway runoff associated with the Meander Alternative and area development is not expected to have an impact on designated uses of the Big Thompson River in the study area.</p> <p>No groundwater impacts have been identified for the project; therefore, no cumulative impacts have been identified.</p> <p>Hazardous materials spill incidents will be addressed appropriately to avoid contamination of surface water and groundwater.</p> <p>Figure 5-1 provides a city of Loveland land use map, which indicates the growth that the city plans for in the area. The Meander Alternative will not affect this plan.</p>

Environmental Resource	Impact of Past and Present Actions	Impact of Foreseeable Future Actions	Impact of Meander Alternative	Cumulative Impact
Farmland	Parts of the SH 402 study area have been converted from agricultural use to commercial and higher-density residential development.	Continued conversion of farmland in the SH 402 corridor within the city of Loveland GMA (under the guidance of the <i>Loveland Land Use Plan</i> ) is expected. All parcels adjacent to SH 402 are zoned for development according to the city's land use plan. This development can be expected to change the visual character of the corridor, increase noise levels, and result in a loss of prime farmland.	For this project, 24.2 acres of prime farmland will be converted to SH 402 right-of-way; 5 acres of which will be used as a 25-foot utility corridor easement. Although land in the SH 402 corridor is composed of prime soil types, the farmland itself is not subject to FPPA. According to 1989 FHWA guidelines, "Prime farmland which is already in or committed to urban development is by definition farmland not subject to the FPPA." All of the land adjacent to SH 402 is shown as residential or activity center mixed uses in the <i>City of Loveland Land Use Plan</i> (May 2, 2000, amended April 3, 2001).	Farmland within the city of Loveland GMA will be converted for future urban development with or without the implementation of the Meander Alternative (see <i>City of Loveland Land Use Plan</i> , May 2, 2000). Right-of-way acquisition for this project will contribute to farmland conversion.

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**Land Use Categories**

**Residential Mixed-Use**

- ER - Estate Residential
- LDR - Low Density Residential
- MDR - Medium Density Residential
- HDR - High Density Residential

**Activity Center Mixed-Use**

- RAC - Regional Activity Center
- DAC - Downtown Activity Center
- CAC - Community Activity Centers
- CC - Corridor Commercial
- E - Employment

**Other Categories**

- I - Industrial
- 100-Year Floodplain (FEMA)
- 100-Year Floodway (FEMA) (see note 3)
- Public Schools, Hospital, Public Facilities
- DR - Development Reserve
- Parks, Open Lands, Conservation Easements, Golf Courses and Cemeteries
- Fort Collins/Loveland Corridor Area Land Use generally north of 57th Street is guided by the document, "Plan for the Region Between Fort Collins and Loveland."

Windsor City Limits  
Johnstown City Limits  
Lakes and Ponds  
GMA - Growth Management Area  
CIA - Community Influence area  
For westerly boundary of the CIA - refer to the Planning Boundaries Map  
Major Streets  
Big Thompson River  
Fort Collins/Loveland Airport Influence Area (see note 2)

(1) This map is intended to serve as a guide for future land use patterns within Loveland's GMA and is advisory in nature. Land use patterns depicted on the map are generalized, recognizing that development proposals may contain a mixture of land uses and density levels which achieve the intent of the Comprehensive Master Plan. All development is subject to City standards for protection of environmentally sensitive areas, and other performance guidelines.

(2) For details regarding appropriate land uses within the Airport Influence Area refer to section 4.6, "Airport and Surrounding Areas" of the Comprehensive Master Plan.

(3) The 100-year Floodway is displayed only within City Limits, awaiting further data.

City of Loveland  
The Logic System

0 0.5 1 2 Miles

**CITY OF LOVELAND  
FUTURE LAND USE PLAN**

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# Chapter 6

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Public Involvement







# Chapter 6. Public Involvement

The Public Involvement Program (PIP) for this project was developed in accordance with Colorado Department of Transportation (CDOT) and Federal Highway Administration (FHWA) guidance and is being conducted throughout the environmental assessment (EA) process to ensure agency and public participation.

The main purpose of the PIP is to inform appropriate local, state, and federal agencies and members of the general public about the project; identify their issues and concerns; and allow for feedback during the entire EA process. A key element of the program is being responsive to agency and public concerns related to the project. This requires an integrated program tailored to meet the needs of agencies and the public.

Program effectiveness requires timely information dissemination. To meet this goal, the following tools have been and continue to be used:

- ❑ agency meetings
- ❑ public workshops
- ❑ project website
- ❑ factsheets and postcards
- ❑ mailings to an extensive list of recipients

The PIP will conclude at the close of the 30-day public and agency review period. Within this period, a public hearing will be conducted and formal comments received. Responses to all comments will be provided in the National Environmental Policy Act (NEPA) decision document.

## 6.1 Public and Agency Involvement Programs

### 6.1.1 Scoping

Although scoping is the first step in the EA process, public and agency involvement is a critical component that continues throughout the

process. Scoping was done at the onset of the project to identify the range or scope of public and agency issues and concerns related to potential widening of SH 402. Scoping identified the alternatives to be studied and shaped the alternatives selection process. Primary issues raised were safety, mobility, potential relocations, and impacts on wetlands, noise, and water quality.

### 6.1.2 Agency Coordination

Local, state, and federal agencies were involved at project initiation and all key milestones in the EA process. FHWA and CDOT solicited input from local and regional planning and transportation representatives and worked with resource and regulatory agencies to help identify environmental issues and potential impacts associated with the project.

Three Agency Status Meetings were conducted to solicit comments from these agencies: the first in October 2001, the second in August 2002, and the third in February 2003. Representatives from the following agencies were invited to attend:

- ❑ CDOT, Region 4 specialists: Environmental, Engineering, Access, Traffic, Design, Right-of-Way, and Utilities
- ❑ Environmental Protection Agency (EPA)
- ❑ Federal Emergency Management Agency (FEMA)
- ❑ US Army Corps of Engineers (USCOE)
- ❑ US Fish and Wildlife Service (USFWS)
- ❑ Natural Resources Conservation Service (NRCS)
- ❑ Colorado Division of Wildlife (CDOW)
- ❑ Colorado Department of Public Health and Environment (CDPHE)
- ❑ Colorado Office of Archaeology and Historic Preservation (OAHP)
- ❑ Larimer County departments: Planning, Public Works, and Engineering

- ❑ City of Loveland departments: Planning, Transportation, and Engineering
- ❑ North Front Range Transportation and Air Quality Planning Council (NFRT & AQPC)

### **October 2001 Agency Status Meeting**

The purpose of the October 2001 Agency Status Meeting was to introduce the project, discuss relevant issues, and obtain input. At this meeting, agency representatives were provided with a presentation of the proposed project: draft purpose and need statement, project goals, project schedule, and description of the environmental assessment process (including PIP). Agency representatives provided comments and preliminary information regarding issues and concerns, and consensus on key elements of the purpose and need statement.

### **August 2002 Agency Status Meeting**

The purpose of the August 2002 Agency Status Meeting was to update agencies on the status of the project and tasks performed to date. The project team sought feedback from agencies on the alternatives analysis. Agency representatives were provided with a presentation of preliminary traffic study results, screening criteria, alternatives developed to date, and initial screening results. In addition, a summary of public comments received was provided. Agencies gave feedback on the information presented, as well as concurrence on the screening process criteria and alternatives being studied.

### **February 2003 Agency Status Meeting**

The chief purpose of the February 2003 Agency Status Meeting was to provide the project team with agency feedback on the recommendation to take the No Action Alternative and Meander Alternative reduced-right-of-way forward into detailed environmental analysis.

The four original action alternatives had a right-of-way width of 225 feet. Initial screening was based on this design, which was presented at the August 2002 Agency Status Meeting. The same

information was presented to the public at a workshop in September 2002. As a result of public feedback and input, FHWA and CDOT decided to explore the concept of narrowing the right-of-way to further minimize impacts before completing the screening process. All four action alternatives were modified to a 160- to 175-foot right-of-way width. *Chapter 2, Alternatives*, includes a detailed discussion of this process. The Meander Alternative was refined to reduce the number of property acquisitions while minimizing environmental impacts. These narrower alternatives were then evaluated against the original screening criteria.

In addition, the project team sought agency input on the information to be presented at the public workshop scheduled for April 2003. At this meeting, agencies agreed that the No Action and Meander Alternatives should progress to detailed environmental analysis.

## **6.1.3 Public Participation**

Throughout the PIP, information about the project has been distributed via mailings, project website ([www.sh402ea.com](http://www.sh402ea.com)), and public workshops held in September 2002 and April 2003.

### **Mailings**

Seven factsheets and one notification letter have been produced and distributed.

**First Factsheet, October 2001.** Shortly after the project began, a factsheet containing a postage-paid comment sheet was mailed to recipients on the project mailing list to solicit input on concerns about the existing highway, potential improvements, and the surrounding environment. In an effort to reach SH 402 corridor users, these materials were left in an information box at the carpool lot at the southwest quadrant of the SH 402 and I-25 interchange. Subsequently, a bulk mailing was sent to the SH 402 addresses on the rural route in the project vicinity. More than 60 comment sheets were returned, and most focused on concerns about safety, access, and potential relocation. A small number

expressed concern about environmental issues such as noise, wetlands, and farmland impacts.

**Second Factsheet, November 2002.** The second factsheet summarized the first public workshop, including a synopsis of comments and feedback provided by attendees, together with the remaining EA schedule and next steps.

**Third Factsheet, April 2003.** The third factsheet notified individuals about the second public workshop scheduled for April 2003, provided an update on refinement of the alternatives, and solicited comments.

**Fourth Factsheet, July 2003.** The fourth factsheet provided an update on the two alternatives that would progress into the next phase of study, environmental analysis, and the No Action Alternative and Meander Alternative. The second public workshop and the comments received were summarized.

**Fifth Factsheet, April 2004.** The fifth factsheet provided the general project status and an update on the forthcoming completion of the EA document and project schedule.

**Notification Letter and Study Area Map to Stakeholders West of SH 402 and US 287, April 2004.** Property owners and business operators located adjacent to the SH 402 and US 287 intersection and west to South Garfield Avenue received a letter and a map illustrating potential intersection improvements should the Meander Alternative be selected as the Preferred Alternative.

**Sixth Factsheet, January 2005.** The sixth factsheet told readers that the EA would include the Meander Alternative and the No Action Alternative. It also included a map of the Meander Alternative and an updated project schedule.

**Seventh Factsheet, September 2005.** The seventh factsheet provided an overview of the project and activities that had occurred during

2005. It also explained the additional research underway for historic preservation. The Meander Alternative alignment was illustrated in this factsheet.

### **Project Website**

A website was established to provide up-to-date information and allow interested members of the public to ask questions, request information, and be placed on the mailing list. Besides being a source of information, the website serves as an alternate method to register comments. The website address is [www.sh402ea.com](http://www.sh402ea.com).

### **Public Workshops**

Two public workshops were held at CDOT, Region 4 Loveland Residency at 2207 East Highway 402 in Loveland. Postcards advertising both events were sent to recipients on the mailing list and to rural route box holders in the study area. In addition, public notices were posted in the *Loveland Reporter-Herald* and on the project website.

**First workshop, September 19, 2002, 4:00 PM to 7:00 PM.** This workshop presented information on the following topics:

- project overview
- environmental assessment process
- project schedule
- project goals
- initial alternatives
- screening criteria
- environmental mapping
- potential impacts associated with the alternatives
- traffic data

The workshop was informal, allowing attendees to discuss the project one-on-one with CDOT, FHWA, and consultant team representatives. Fifty people attended the workshop, and 14 comments were received in the form of Post-It™ notes attached to exhibits and comment sheets. Workshop stations included:

- ❑ Station #1: Attendees were greeted, asked to sign in, and given an information packet. Post-It notes and comment sheets were provided for indicating comments.
- ❑ Station #2: Displays featured the project purpose and need, study area aerial map, project goals, issue identification, and EA process.
- ❑ Station #3: Displays featured traffic growth issues, level of service, traffic safety issues, and cross sections of the existing SH 402 and conceptual action alternatives.
- ❑ Station #4: Displays featured the alternatives analysis, the screening process, and next steps in the EA process.
- ❑ Station #5: Displays featured right-of-way information; two CDOT Right-of-Way staff members were present to answer questions.
- ❑ Station #2: Displays featured project orientation, including project purpose and need, project goals, the EA process, and a map of the entire study area.
- ❑ Station #3: Displays presented information on traffic analysis results and traffic-related safety issues.
- ❑ Station #4: Displays illustrated action alternative cross sections, reduced right-of-way action alternatives, and associated environmental analyses.
- ❑ Station #5: Displays provided right-of-way information; two CDOT Right-of-Way staff members were present to answer questions.
- ❑ Station #6: Displays illustrated next steps in the EA process and PIP information.

**Second workshop, April 15, 2003, 4:00 PM to 7:00 PM.** This workshop presented information on the following topics:

- ❑ reduced right-of-way-width alternatives and alternative analysis update
- ❑ modified screening results
- ❑ alternatives recommended for further environmental analysis

The workshop format was informal and promoted discussion about the project with CDOT, FHWA, and consultant team representatives. Participants were encouraged to use various maps to identify areas of specific interest to them. Forty-five individuals attended the workshop and 13 comments were received. Workshop stations included:

- ❑ Station #1: Attendees were greeted, asked to sign in, and given an information packet. Post-It™ notes and comment sheets were provided for indicating comments.

### **Mailing List**

As of November 2006, the project mailing list contained 302 names and addresses. The list includes federal, state, and local agency representatives; elected officials; special interest groups; business owners; property owners; and other interested parties. The mailing list is updated throughout the life of the project as individuals ask to be added. Besides recipients on the mailing list, SH 402 rural route box holders receive project information.

## **6.2 Program Results**

All of the questions and comments received from agencies and the public were compiled, organized by topic, analyzed, and summarized.

### **6.2.1 Agency Status Meeting Results**

The following summarizes the issues and concerns identified in the Agency Status Meetings held in October 2001, August 2002, and February 2003.

## Project Schedule/Funding

**Issue.** If construction money isn't available, why is the EA on such an aggressive schedule?

**Response.** Construction money is not actually available until after 2008. SH 402 is identified as "future funds" in the current *Statewide Transportation Improvement Program (STIP)* listing of projects. Several activities need to occur between the EA and construction. Once the EA is complete and a public hearing has been held, FHWA will issue a decision document, resulting in selection of either the No Action Alternative or the Meander Alternative. Should the Meander Alternative be selected as the Preferred Alternative, CDOT would complete final design of the alternative and begin working with affected property owners. Only after these steps are complete can construction begin. Please note that this response has been updated to reflect current funding availability and timeframe.

## Traffic/Highway Design

**Issue.** Does the long-range plan call for urban or rural design?

**Response.** The city of Loveland plans for this highway to be a four-lane facility. Based on current land use projections and traffic volumes, an urban design is warranted from US 287 to CR 13C. A rural design is warranted between CR 13C and the I-25 interchange.

**Issue.** Are there any plans to go east of I-25?

**Response.** Current and projected traffic patterns and volumes do not warrant expansion east of the I-25 interchange. Should changes in travel occur, the area to the east would need to be examined in a separate study.

**Issue.** What is the current road width and right-of-way?

**Response.** Current width is approximately 32 feet: two 12-foot lanes and two 4-foot shoulders. The current right-of-way varies but is generally 60 feet wide.

**Issue.** Would fixing the vertical sight distance near Paradise Acres go out of 200 feet planned right-of-way?

**Response.** Yes, but only in a few very limited areas. The planned right-of-way is now 160 to 175 feet.

**Issue.** Do we have a goal for other corridors that can serve the same purpose?

**Response.** FHWA and CDOT examined traffic volumes and patterns and determined that SH 402 as a stand-alone project needs to be improved to address mobility and safety issues specifically associated with the highway. Improvement of parallel roads will not address the needs of SH 402. This need must be addressed regardless of actions taken to improve other facilities in the area.

**Issue.** Explain why an alternative along this corridor is the only option to meet the purpose and need, and why no other roads can improve through traffic flow.

**Response.** Early consensus was reached among the agencies (October 2001 Status Meeting) that the established purpose and need only justified looking at alternatives on the existing alignment.

## Traffic/Highway Design

**Issue.** A raised median should be included in the design for safety/capacity reasons. This should not affect the EA in terms of roadway width.

**Response.** A raised median is included in the design for the urban section from US 287 east to CR 13C. Rural section design includes a center turn lane in the median rather than a raised median. These designs are appropriate for current and projected traffic volumes. The rural section could be modified in the future to include a raised median should this be warranted.

**Issue.** Give consideration to design for joint trench utilities, especially communications providers.

**Response.** All action alternatives include a 25-foot utility corridor on the south side for placement of most utilities. Should an action alternative be selected, CDOT will coordinate closely with responsible parties to ensure appropriate handling of communications services.

**Issue.** Impacts should be evaluated based on the 225-foot cross section.

**Response.** Originally four action alternatives were developed with a right-of-way width of 225 feet on the south side. This information was presented to the public and, as a result of public feedback and input, CDOT decided to investigate narrowing the right-of-way to further minimize impacts before completing screening. As a result, all four action alternatives were modified to a 160- to 175-foot right-of-way. The Meander Alternative was refined to reduce the number of property acquisitions while minimizing environmental impacts. The narrower alternatives were then evaluated with the same criteria applied to the 225-foot alternatives. For more information, see *Chapter 2*.

## Environmental Concerns/Mitigation

**Issue.** How are you going to handle runoff from the section between CR 13C and I-25 where there is no vegetation, curb, or gutter?

**Response.** Roadside ditches will be provided as part of the cross section for the rural portion of SH 402.

**Issue.** Will there be any noise impacts?

**Response.** Noise impacts exceeding 66 dB(A) would occur at eight residential receptors under the No Action Alternative. Three additional residences would be affected by the Meander Alternative. Information specific to noise impacts and mitigation can be found in *Chapter 3, Section 3.15, Noise*.

**Issue.** Are there any environmental justice issues?

**Response.** Based on block level analyses, no environmental justice impacts are expected. Information specific to environmental justice can be found in *Chapter 3, Section 3.3, Environmental Justice*.

## Environmental Concerns/Mitigation

**Issue.** How is air quality affected?

**Response.** Air quality and the potential impacts of the No Action and Meander Alternatives were analyzed; see *Chapter 3, Section 3.16, Air Quality*, for analysis results. The city of Loveland is outside the Fort Collins attainment/maintenance area and is not subject to conformity with their maintenance plan for carbon monoxide. Carbon monoxide hot-spot modeling is not required for SH 402. Because SH 402 is not located in a particulate less than 10 micron nonattainment or maintenance area, a detailed analysis of particulate less than 10 micron impacts is not required. Numerous counties along the Front Range, including Larimer County, are in violation of the 8-hour ozone standard. An Early Action Compact (EAC) designed to achieve and maintain the 8-hour ozone standard has been developed for this nonattainment area. Therefore, the Environmental Protection Agency has deferred the effective date of the nonattainment designation as long as the EAC milestones are met. Conformity to the 8-hour ozone standard does not apply to this project.

**Issue.** Significant sandy gravel resources are present in this area—you may want to include them in your mapping. Mining is governed by state law; the area is zoned commercial-mineral resources.

**Response.** Impacts and mitigation for geology and soils are discussed in *Chapter 3, Section 3.22, Geology*. Gravel mining operations in the area will not be affected by either the No Action Alternative or the Meander Alternative.

**Issue.** Regarding prime farmland, in addition to the National Resources Conservation Service (NRCS) soil analysis, Larimer County adopted the Land Evaluation and Site Assessment (LESA) study.

**Response.** NRCS used LESA guidelines to assess impacts on SH 402 area farmlands. For further discussion, see *Chapter 3, Section 3.5, Farmland*.

**Issue.** Do we have a good feel for floodplain and mapping? With regard to the Big Thompson, cumulative effects will be a big issue.

**Response.** The Meander Alternative does have an impact on the Big Thompson floodplain, but because the floodplain is very wide and flat in the affected area, the Meander Alternative will have minimal effect on base flood elevations. See *Chapter 3, Section 3.20, Floodplains* for further information specific to floodplain impacts and mitigation.

**Issue.** The city of Loveland has an Open Lands Plan that rates natural areas, including wetlands and parks. Also, the Parks Plan has proposed a trail route going through this area.

**Response.** At this time, the city has no plans to develop a trail near the Big Thompson River. Larimer County Open Space officials stated that they requested easements along both sides of the Big Thompson River, but the proposed trail has not been planned at this time.

**Issue.** Mitigate cumulative impacts and demonstrate how you've done so with the city and county. Issues of specific interest are floodplains, wetlands, prime farmlands, and any threatened and endangered species found.

**Response.** Each resource was evaluated for cumulative impacts; specific information can be found in *Chapter 5, Cumulative Impacts*. The information is also summarized at the end of the chapter for easy reference.

**Issue.** If the farmhouses go, then what happens to the integrity of the barns? How does this relate to the complex as a whole?

**Response.** SH 402 will have an adverse effect on the historic Weber Farm as a whole (5LR10725) with the acquisition of the farmhouse and a chicken brooder house. No other historic properties will be adversely impacted by this project.

## Environmental Concerns/Mitigation

**Issue.** The following modifications to the Alternatives Analysis Matrix were suggested: 1) note the mitigation potential for environmental impacts, 2) show acreages for potential threatened and endangered species, 3) give more details for the public workshop, 4) quantify impacts from highest to lowest instead of comparing them, and 5) include the No Action Alternative.

**Response.** 1) Mitigation measures are considered in the environmental analysis phase of the study and can be found in *Chapter 3, Impacts and Mitigation Measures*.

2) The bald eagle is the only threatened or endangered species that may be present. Habitat encroachment is outlined in the Alternatives Analysis Matrix in *Chapter 2, Alternatives*.

3) The Alternatives Analysis Matrix provides an overview of impacts on factors that shape the screening process. Supporting documentation can be found in *Chapter 2, Alternatives*.

4) Quantification, where possible, is provided in the Alternatives Analysis Matrix in *Chapter 2, Alternatives*.

5) The No Action Alternative is included in the Alternatives Analysis Matrix in *Chapter 2, Alternatives*.

## Screening

**Issue.** Do we have any other criteria for screening for migratory birds and terrestrial wildlife?

**Response.** Screening criteria are described in *Chapter 2, Alternatives*, and provided on the Alternatives Analysis Matrix in Chapter 2. New ground disturbance was a screening consideration.

**Issue.** Concerned over considering costs during screening.

**Response.** Cost was not a differentiating factor among the alternatives.

## Public Involvement

**Issue.** Tenants, property owners, and commuters all need to be reached with public involvement.

**Response.** Project information was mailed to property owners and all box holders along Rural Route 402, posted at the carpool lot in the corridor, advertised in local newspapers, and posted on the project website [www.sh402ea.com](http://www.sh402ea.com). Refer to *Section 6.1.3* above for a description of how the PIP was conducted throughout the EA process.

**Issue.** The Johnstown planning consultant should be included in this project as well. Johnstown boundaries come very close to the eastern terminus of the project area.

**Response.** All local and municipal authorities were included in the PIP and have had access to public involvement materials.

## Bicycle/Pedestrian Use

**Issue.** Bicycle/pedestrian use is important. Will 10-foot shoulders be provided now or in the future?

**Response.** A 10-foot shoulder is included in the conceptual design for all action alternatives and could accommodate both pedestrians and bicyclists for the rural section east of CR 13C (St. Louis Avenue). A sidewalk is included in the urban section west of CR 13C. The No Action Alternative has no provision for either mode of transportation.



## 6.2.2 Public Involvement Program Results

The following summarizes issues and concerns identified in responses to Factsheets 1 through 7, and the public workshops held on September 19, 2002, and April 15, 2003. Comments from the

public were associated with access, safety, carpool lot safety, irrigation, right-of-way, traffic, and environmental issues. Table 6-1 provides a tally of outreach and comments received.

**Table 6-1. Summary of Public Outreach and Comments Received**

Factsheets (seven were mailed out)		Totals
Factsheets mailed		3,260
Comments received		64
Public workshops (two were held)		
Total in attendance		95
Comments received		27
Project website		
Total site visits		>100
Comments received		0

Access	
<b>Issue.</b> Access issues include Rocky Mountain Tranquility, property entrances, business entrances, Paradise Acres, and Heron Drive.	<b>Response.</b> Access is considered in the conceptual design. All accesses to Rocky Mountain Tranquility will be maintained—even during construction—should the Meander Alternative be selected as the Preferred Alternative.
<b>Issue.</b> Lanes are needed for turning (especially left) and acceleration; four if possible.	<b>Response.</b> The Meander Alternative includes a center turn lane for vehicles turning left, as well as a 10-foot shoulder and four general-purpose travel lanes.
<b>Issue.</b> Some attendees noted that the roadway cross-section, especially the median and wider shoulder, is a much-needed improvement.	<b>Response.</b> Noted.
<b>Issue.</b> There was some dislike for the raised median (from US 287 to CR 13C) from attendees who are directly affected by losing their access and other attendees.	<b>Response.</b> Noted.

Public Involvement	
<b>Issue.</b> Many attendees expressed appreciation for the workshop and noted that the format was conducive to participating in the process. Some attendees stated that the public workshop was an excellent means of identifying property owner issues.	<b>Response.</b> Noted.

### Safety

**Issue.** Safety concerns include the need for left turn lanes, a wider shoulder, and improved sight distance at intersections. Presently vehicles pass on the shoulders.

**Response.** These features are a part of the proposed project.

### Carpool Lot Safety

**Issue.** A turning lane for the “Park-N-Ride” would improve safety.

**Response.** The Meander Alternative will improve traffic flow (that is, decrease congestion) in the area of the carpool lot. A designated right turn only for the carpool lot is not warranted under the improved condition.

### Irrigation

**Issue.** Concerns about the irrigation ditch include effects on the current ditch, cost to relocate the ditch, and drainage.

**Response.** Potential impacts on irrigation ditches have been examined; should the Meander Alternative be selected, the function of the irrigation ditch will not be affected. Drainage has been examined as part of the environmental analysis and is discussed in *Chapter 3, Impacts and Mitigation Measures*.

**Issue.** Water rights are an issue for some attendees because they have a water right that allows them to draw out of the existing ditches; what would happen if the water were put into pipes?

**Response.** Water rights will not be compromised regardless of whether portions of a ditch would be piped in the vicinity of SH 402. Ditch access will be clarified during design.

### Right-of-Way

**Issue.** How much property (feet) would be used by the expansion? How are structures and property values affected? Some residents prefer other alternatives that don't affect their property.

**Response.** The amount of right-of-way width would increase from approximately 60 to 160 to 175 feet. Should the Meander Alternative be selected, CDOT Right-of-Way staff will work directly with each affected property owner to determine appropriate compensation. If the right-of-way comes within 15 feet of a structure, CDOT considers this an acquisition. If a property extends away from the road, CDOT will discuss on an individual basis the option to relocate the structure should the Meander Alternative be selected.

**Issue.** The majority of support was for the Meander Alternative with a 160- to 175-foot right-of-way. The Meander Alternative was preferred by most of the attendees who commented that this alignment would address most issues within the study area and provide the best balance of environmental impacts.

**Response.** Noted.

### Traffic/Highway Design

**Issue.** Increased traffic volume and congestion are concerns.

**Response.** These factors were considered in both identifying project purpose and need and in conceptual design of the action alternatives.

**Issue.** Will the north or south side be widened?

**Response.** Alternatives that widen to both sides, widen only to the south, widen only to the north, or meander (a limited number of slight shifts in the highway) were all considered in the alternative analysis. A discussion can be found in *Chapter 2, Alternatives*. As a result of screening, only the Meander Alternative progressed into the environmental analysis.

### Environmental Concerns

**Issue.** Issues include: noise, pollution, loss of vegetation, loss of wildlife habitat, and loss of rural character.

**Response.** The Meander Alternative was designed to minimize impacts on the natural and human environments to the greatest extent possible. *Chapter 3* presents a detailed discussion on impacts and mitigation.

### Project Funding

**Issue.** Many attendees wanted to know when construction would begin.

**Response.** Construction money is not available until after 2008.

**Issue.** Will there be enough funds to complete the project?

**Response.** This project is a part of the Statewide Transportation Improvement Program (STIP), and CDOT will budget for completion in a timely manner should the Meander Alternative be selected.

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# Chapter 7

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References





## Chapter 7. References

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