



3.0 PROJECT CONTEXT

In order to assess potential effects of alternatives on the environment, inventories were conducted of existing environmental resources and constraints. Generally, mapping from existing data sources was utilized. Only limited field work was conducted, consisting of only “windshield surveys” to verify mapping or to acquire data where existing mapping was not available. The following sections discuss the existing conditions in the corridor which form the project context. The discussions in this report are summaries of the detailed technical memoranda prepared for each of the resources under this EOS. Detailed information regarding each of the resources is located in the respective technical memorandum in the *SH 392 EOS Existing Conditions Technical Memoranda*.

3.1 Transportation System

This section discusses the existing transportation system in the study area, which consists of SH 392 and other roadways, transit, and multi-modal elements.

3.1.1 Existing Traffic and Levels of Service

Existing volumes on SH 392 were primarily taken from traffic counts obtained in December 2004 and January 2005. Intersection counts near I-25 were obtained in August 2004. These counts were further supplemented with historical data collected in 2002 to arrive at the existing volumes used for this study. Refer to *Section 2.0, Corridor Identification* for Existing Traffic and LOS.

3.1.2 2030 No-Action Traffic and Levels of Service

Future traffic projections were made using the *2030 NFRMPO Travel Demand Model*. No changes were made to the population and employment data in the model. Network changes were made as appropriate for the various alternatives. 2030 traffic volumes are forecasted to be, on average, two to three times existing volumes. The highest volumes are in the I-25 interchange area, and are approximately 37,500 vpd. These future volumes taper off to approximately 21,000 vpd east of US 287, to approximately 24,600 vpd through Windsor, and finally to about 13,000 vpd east of Windsor. Refer to Figure 3.1 for 2030 No-Action Traffic and LOS.

Table 3.1 shows a comparison of existing and 2030 No-Action traffic and LOS for various roadway sections of the SH 392 corridor. The volumes shown are average daily traffic (ADT) for the respective roadway segment, and the LOS shown is the mainline LOS for peak hour volumes for that segment.



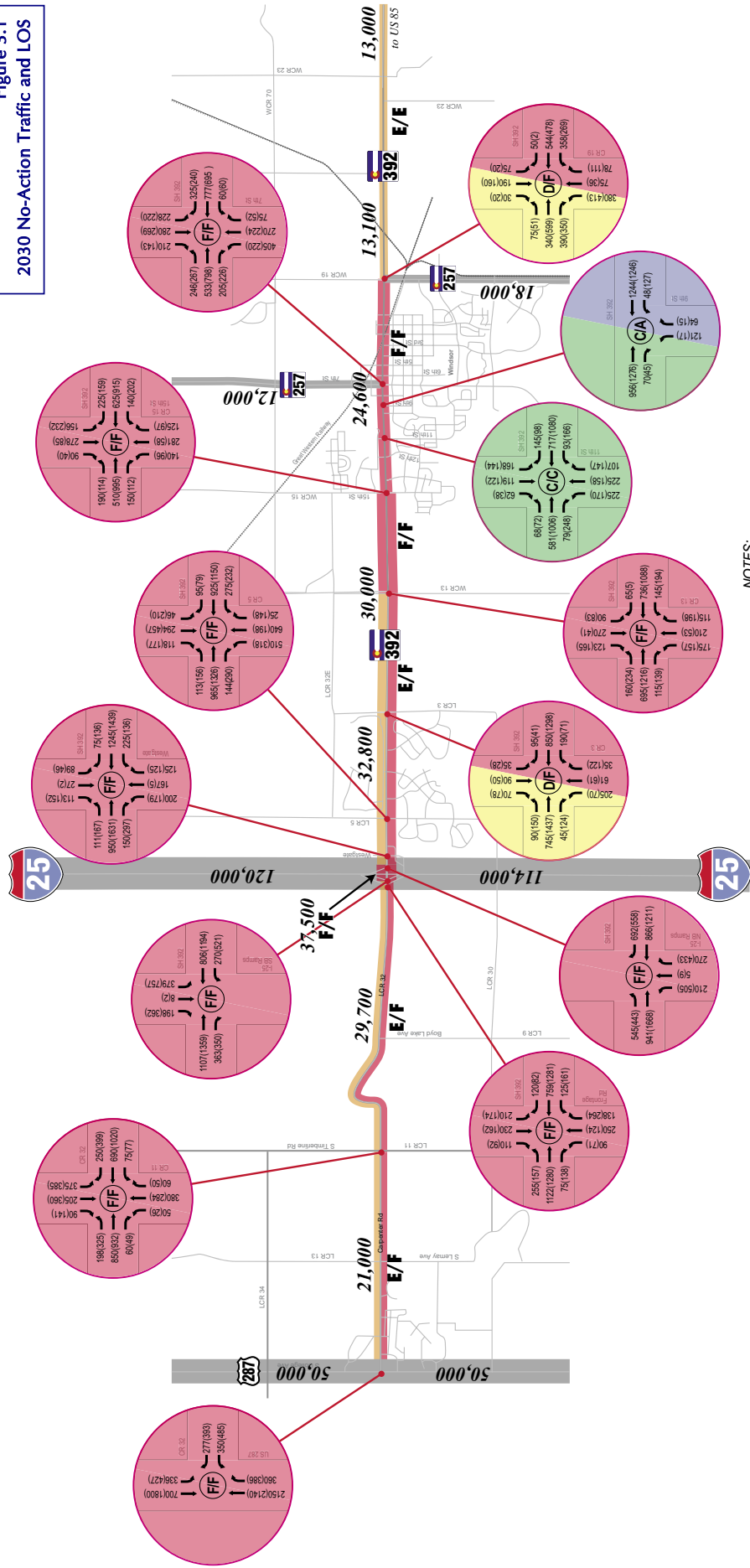
**Table 3.1
Existing and 2030 Mainline and LOS Traffic**

Highway Section	Existing ADT	Existing LOS (AM/PM)	2030 ADT	2030 LOS (AM/PM)
US 287 to LCR 13	9,000	A/A	21,000	E/F
LCR 13 to LCR 11	9,000	A/A	21,000	E/F
LCR 11 to LCR 9	10,226	B/B	29,700	E/F
LCR 9 to I-25	10,226	B/B	29,700	E/F
I-25 to LCR 5	20,419	D/E	37,500	F/F
LCR 5 to Highlands Meadows Parkway	15,759	C/C	32,800	E/F
Highlands Meadows Parkway to LCR 3	15,759	C/C	32,800	E/F
LCR 3 to WCR 13	15,759	C/C	30,000	E/F
WCR 13 to WCR 15	16,377	B/B	30,000	C/E
WCR 15 to SH 257 North	16,377	B/B	24,600	C/E
SH 257 North to SH 257 South	9,665	B/B	24,600	F/F
SH 257 South to WCR 21	NA	NA	13,100	F/F
WCR 21 to WCR 23	NA	NA	13,100	F/F
WCR 23 to WCR 25	NA	NA	13,000	E/E

Source: Existing traffic counts are from data collected from 2002 to 2005, and projections are from the NFRMPO Regional Travel Demand Model.

Table 3.2 summarizes intersection operations for existing and 2030 No-Action conditions. In general, existing signalized intersections operate at LOS C or better, but in the 2030 No-Action condition, they generally degrade to LOS F.

Figure 3.1
2030 No-Action Traffic and LOS



NOTES:

- Levels of service shown for the EOS are composite ratings based on several shorter segments of roadway, and may therefore vary nominally from the more detailed information presented by the ACP study
- Intersections that do not show Level of Service are unsignalized
- Forecasted volumes were generated from the NFR MPO 2030 Travel Demand Model

Legend

(X) = AMPM Signalized Intersection Level of Service
 XX,XXX = Average Daily Traffic Volumes
 XXXXXX = AMPM Turning movement counts
 (XX) = Date of Traffic Counts

Level of Service A (Blue)
 Level of Service B (Light Blue)
 Level of Service C (Green)
 Level of Service D (Yellow)
 Level of Service E (Orange)
 Level of Service F (Red)

AMPM Signalized Intersection Level of Service (Blue box)
 AMPM Turning movement counts (Yellow box)
 Date of Traffic Counts (Red box)

Anterior Average Daily Traffic Volumes

Less than 20,000	Level of Service A
20,000 to 30,000	Level of Service B
30,000 to 50,000	Level of Service C
50,000 to 70,000	Level of Service D
Greater than 70,000	Level of Service E

Not to Scale



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**Table 3.2
Existing and 2030 Intersection LOS**

Intersection	Existing LOS (AM/PM)	2030 LOS (AM/PM)
SH 392/US 287	B/B	F/F
SH 392/LCR 13	NA	NA
SH 392/LCR 11	A/A	F/F
SH 392/West Frontage Road	C/D	F/F
SH 392/I-25 SB ramps	B/C	F/F
SH 392/I-25 NB ramps	B/C	F/F
SH 392/East Frontage Road	B/C	F/F
SH 392/LCR 5	B/A	F/F
SH 392/LCR 3	C/C	D/F
SH 392/WCR 13	B/A	F/F
SH 392/15 th Street	B/C	F/F
SH 392/11 th Street	C/C	C/C
SH 392/9 th Street	A/A	C/A
SH 392/SH257 North	C/C	F/E
SH 392/SH 257 South	A/B	D/F

3.1.3 Existing Transit Service

There is one existing bus route in the study area. The City of Fort Collins' TransFort bus system runs the Fox Trot service hourly on US 287 between Fort Collins and Loveland.

In addition to this existing bus service, two projects are listed on the NFRMPO 2030 RTP. These projects are the Fort Collins to Greeley Transit Service during peak hours with four round trips each weekday, and the Windsor Transit Service, that would establish transit service in the Windsor Area.

3.1.4 Multi-modal Elements

There are several existing bike trails in the project area. These trails include systems located near the water features of Fossil Creek Reservoir, Boyd Lake, Windsor Lake, and the along the Poudre River. Bike lanes exist along major roads in Fort Collins, Loveland, and Windsor. Within neighborhoods and communities in Fort Collins and Windsor, multi-purpose trails and bike lanes also exist. Planned trails projects include bicycle and pedestrian improvements along South College Avenue/US 287 from Harmony Road to Carpenter Road, Poudre River trail underpass at SH 392, and I-25 frontage road bicycle lanes.



3.1.5 Accident History

Vehicular crash data for the period of January 1, 1999 through December 31, 2003 was analyzed to determine the type and frequency of crashes along the SH 392 corridor (refer to Figure 3.2). The crash rate during this period was 1.8 crashes per million vehicle miles traveled (MVMT), which was below the statewide average of 2.03 crashes per MVMT. However, the segment between WCR 13 and SH 257 in Windsor exhibited crash rates between 15-30 percent higher than the state average for the past four years.

Approximately 460 crashes occurred within the study corridor during the study period. This includes accidents reported on the intersecting streets at SH 392 intersections. Fixed object and overturning collisions were the predominant crash types on the highway mainline. This may indicate insufficient shoulder widths and clear zones, resulting in driver inability to take corrective action before striking an object or overturning on the side of the road.

Rear end collisions made up the majority of intersection-related accidents, perhaps resulting from lack of driver expectancy. The SH 392/I-25 interchange had 59 collisions recorded in this period, with 85 percent of them being rear-end type collisions. The SH 392/US 287 intersection had 58 accidents between January 1, 1999 and December 13, 2003. Within the Town of Windsor, the SH 392/SH 257 South intersection had 28 recorded crashes, which was the highest number within the town limits. Crashes were clustered at various intersections within the Town of Windsor. The incidence of rear end crashes may result from the lack of turn lanes in certain areas within downtown Windsor.

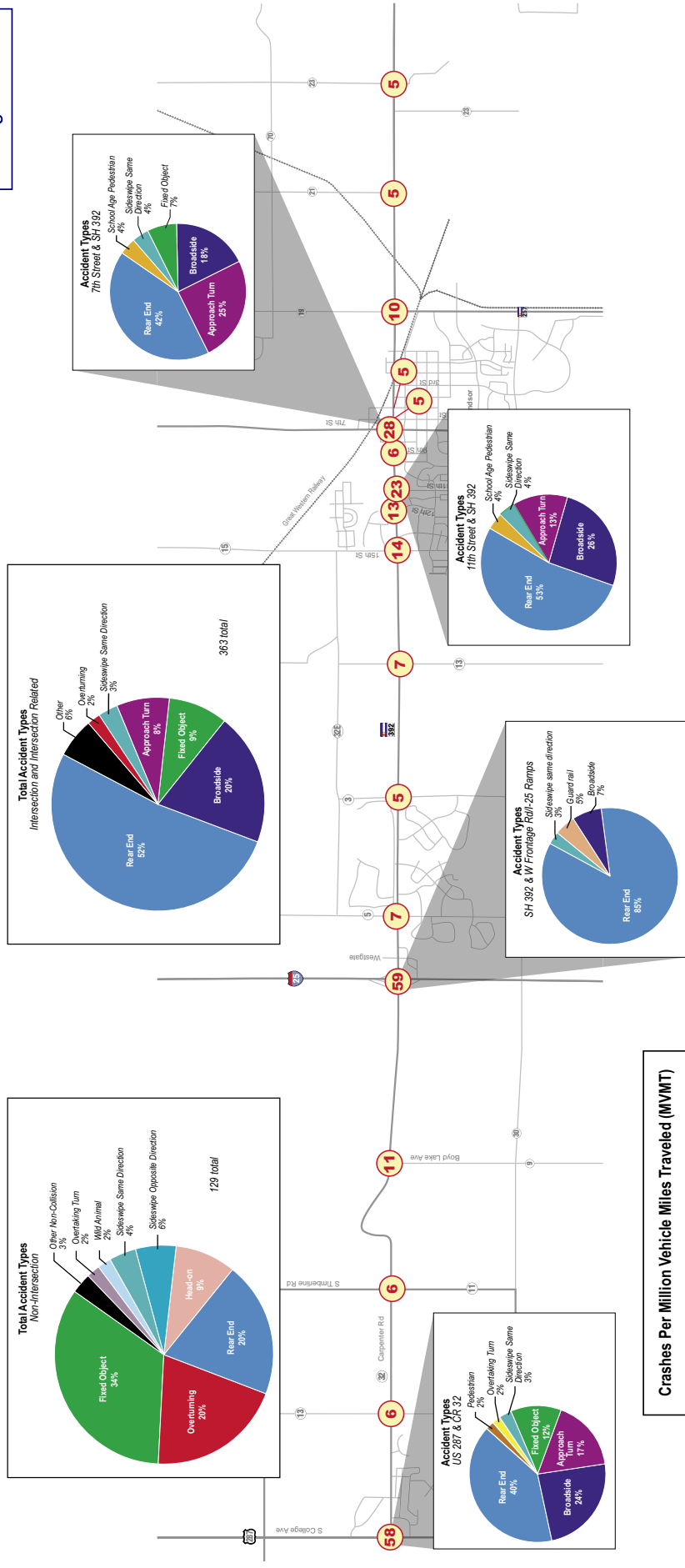
3.2 Compatibility with Land Use Plans

The project area is characterized by two distinct land uses patterns, divided by I-25. East of I-25, the study area consists of higher-intensity residential and employment land uses. West of I-25, development is less dense and includes open space, residential subdivisions, and rural estate residential development. Specific residential land uses within the project area consist of large-lot, low, and medium density residential areas, with average densities of approximately three dwelling units per acre. With over 1.5 jobs per household, the project area is composed of large amounts of retail, office and industrial land uses. These uses are located along the primary transportation corridors such as SH 392.

Though large areas of vacant land are still present, these parcels are experiencing intense development pressures as the entire area is one of the fastest growing regions in the state. Figure 3.3 shows the status of developments in the area, and distinguishes between those which have begun the formal development review process and those which have been discussed by developers, but not yet submitted for review. A number of new developments currently platted in the area are expected to be completed within several years. Longer term future land uses will include new residential communities, and retail, office, and industrial areas. Employers like Kodak in Windsor and new employment centers near I-25, along Harmony Road and US 34, adjacent to the Loveland-Fort Collins Airport, and developments such as the Ranch, will greatly influence future land use in the area.



Figure 3.2
Existing Crash Data



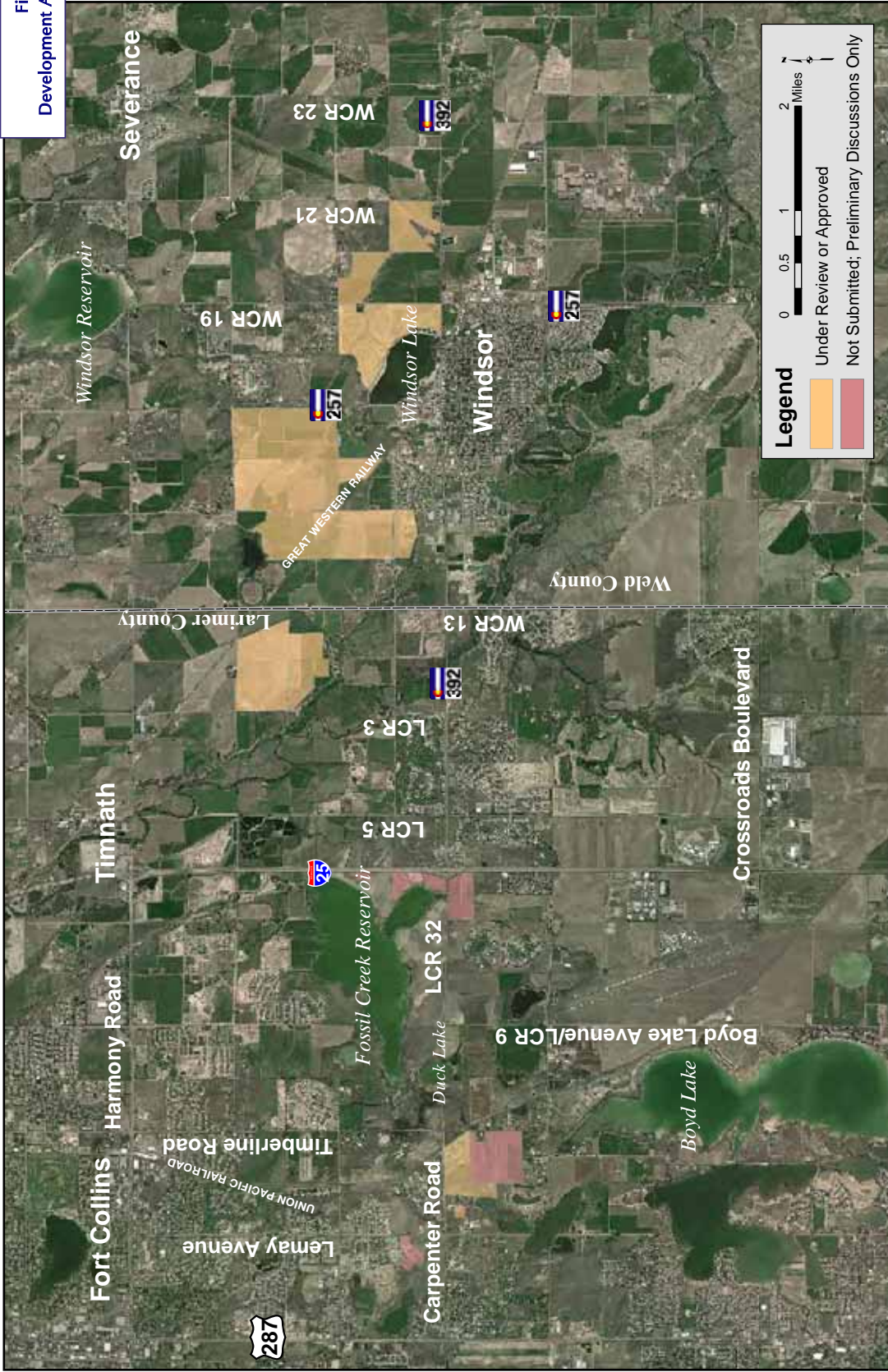
Crashes Per Million Vehicle Miles Traveled (MVMt)
Statewide Average = **2.03**
SH 392 Corridor East of I-25 = **1.80**

Legend

= Number of Intersection Related Accidents (Accident Data Collected 1/1/99 to 12/31/03)

Source: CDOT
Note: Exhibit shows crash data for portions of the corridor currently designated as State or U.S. Highways. No data was obtained for Carpenter Road and LCR 32 sections.

Figure 3.3
Development Activities





3.3 Geology

Geology encompasses several resource types: soil type, oil and gas, geologic hazards, and shallow ground water. Three types of soils are found in the study area; *colluvium*, *alluvium*, and *eolian*. Alluvial gravels occur along the alignment, and may be encountered particularly near Duck Lake, around the Town of Windsor and to the east of I-25 near Fossil Creek. An active aggregate pit mine exists at the intersection of WCR 13.

3.3.1 Oil & Gas Resources

The Loveland Oil Field underlies the project area from US 287 to I-25. This oil field is still in production. The method of production utilizes a deep extraction method that pulls primarily from the Dakota Formation. The proposed project is not expected to affect any of the existing extraction locations and will not affect the production of the oil field.

3.3.2 Geologic Hazards

Potential geologic hazards to construction or roadway stability include seismic activity, swelling soils and collapsible soils. SH 392 is located in an area of low seismic activity with no recent faulting and low topographic relief. SH 392 has not historically experienced differential movements due to swelling or expansive soils. The presence of eolian soils in the study area may indicate the presence of collapsible soils. Collapsible soils generally are fine-grained deposits with a meta-stable structure that have never been fully saturated with water. Upon inundation with water, these deposits undergo sudden changes in structural configuration with an accompanying decrease in volume. Loess and eolian deposits are often susceptible to hydrocompaction or collapse when wetted.

3.3.3 Shallow Groundwater

Wetland areas are visible along the existing alignment in several locations. They occur primarily between Timberline Road and I-25 with waters originating from western fork of Fossil Creek, Duck Lake and surface runoff. A more detailed discussion of wetlands is located in the Wetlands section of this chapter. Due to the presence of these surface waters along the alignment, shallow groundwater will also likely be encountered in these areas. Shallow water surfaces can contribute to the instability of slopes.

It is possible that shallow groundwater contributed to a significant settlement in the existing roadway just east of LCR 3, and should be expected to be a major issue with future construction in the area.

3.4 Prime and Unique Farmlands

Prime and unique farmlands are identified by soil types that are classified as “prime and unique” by the Natural Resources Conservation Service. Over twenty-three soil types occur in Larimer and Weld Counties. However, farmlands can be classified as “prime and unique” only if they contain these soil types and are actively irrigated. This study did not conduct a site visit to determine if any parcels with these soil types were irrigated. The study used aerial photography



to identify 37 potential properties in agricultural use. Figure 3.4 shows the potential prime and unique farmlands in the study area.

3.5 Section 4(f)/Section 6(f) Resources

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 (49 United States Code (USC) 303), provides protection for publicly owned parks, recreation areas, wildlife and/or waterfowl refuges, and historic/archaeological sites of national, state, or local significance from conversion to a transportation use. Section 4(f) is also applicable to historic properties if the properties are eligible for listing, or are listed on the National Register of Historic Places (NRHP).

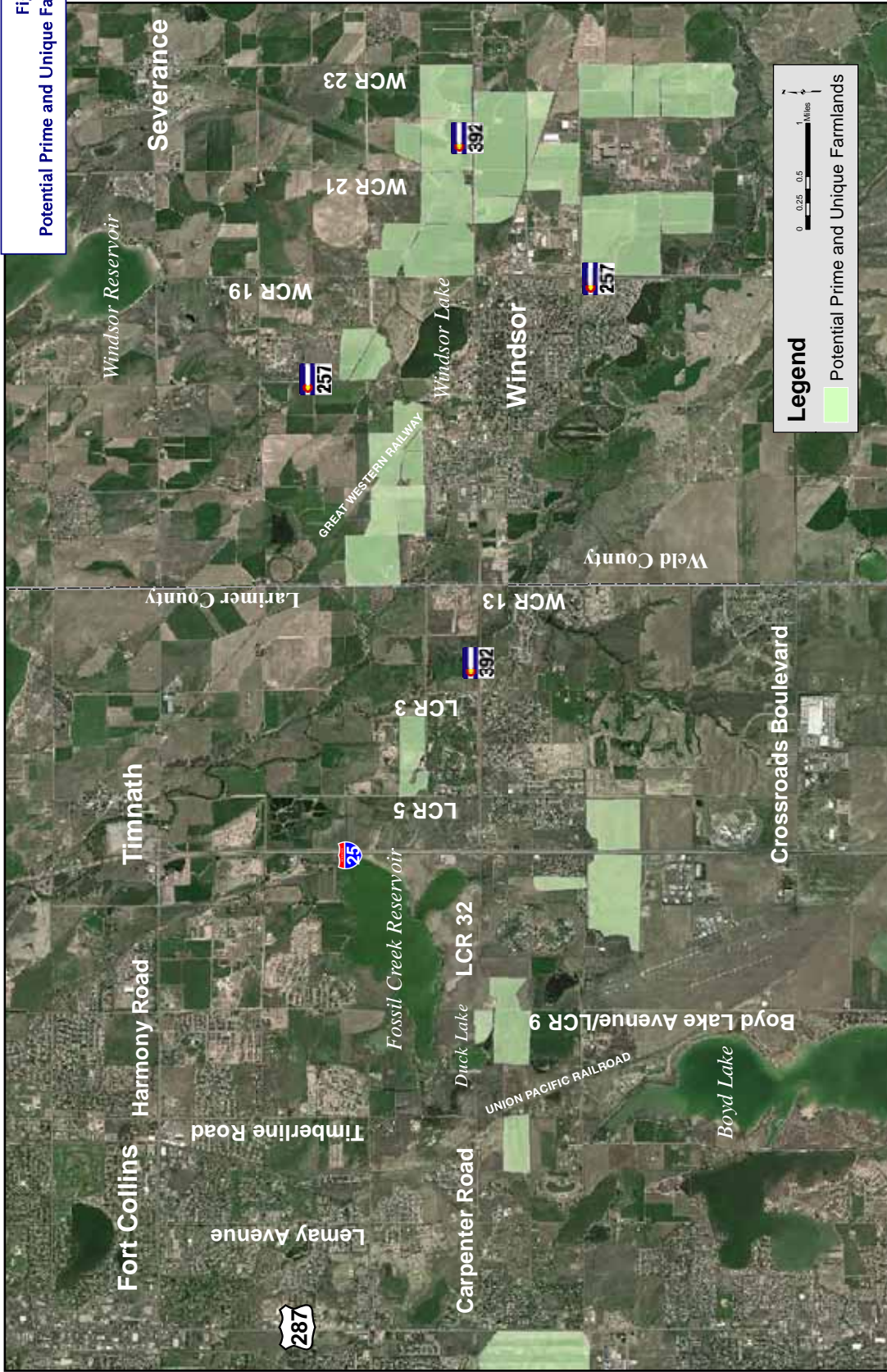
Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 (16 USC 460.4 to 460.11) provides protection for lands that are purchased with grants from the LWCF. Under these regulations, “no property acquired or developed with assistance under this section shall, without approval of the Secretary [of the Interior], be converted to other than public outdoor recreation uses.” Land proposed for conversion to a different use must be replaced with “...other recreation properties of at least equal fair market value and or reasonably equivalent usefulness and location...” Coordination with and approval from the National Park Service (NPS) and the U.S. Department of Interior (DOI) are necessary for properties where this funding has been used that might be impacted by a Federally-funded transportation improvement.

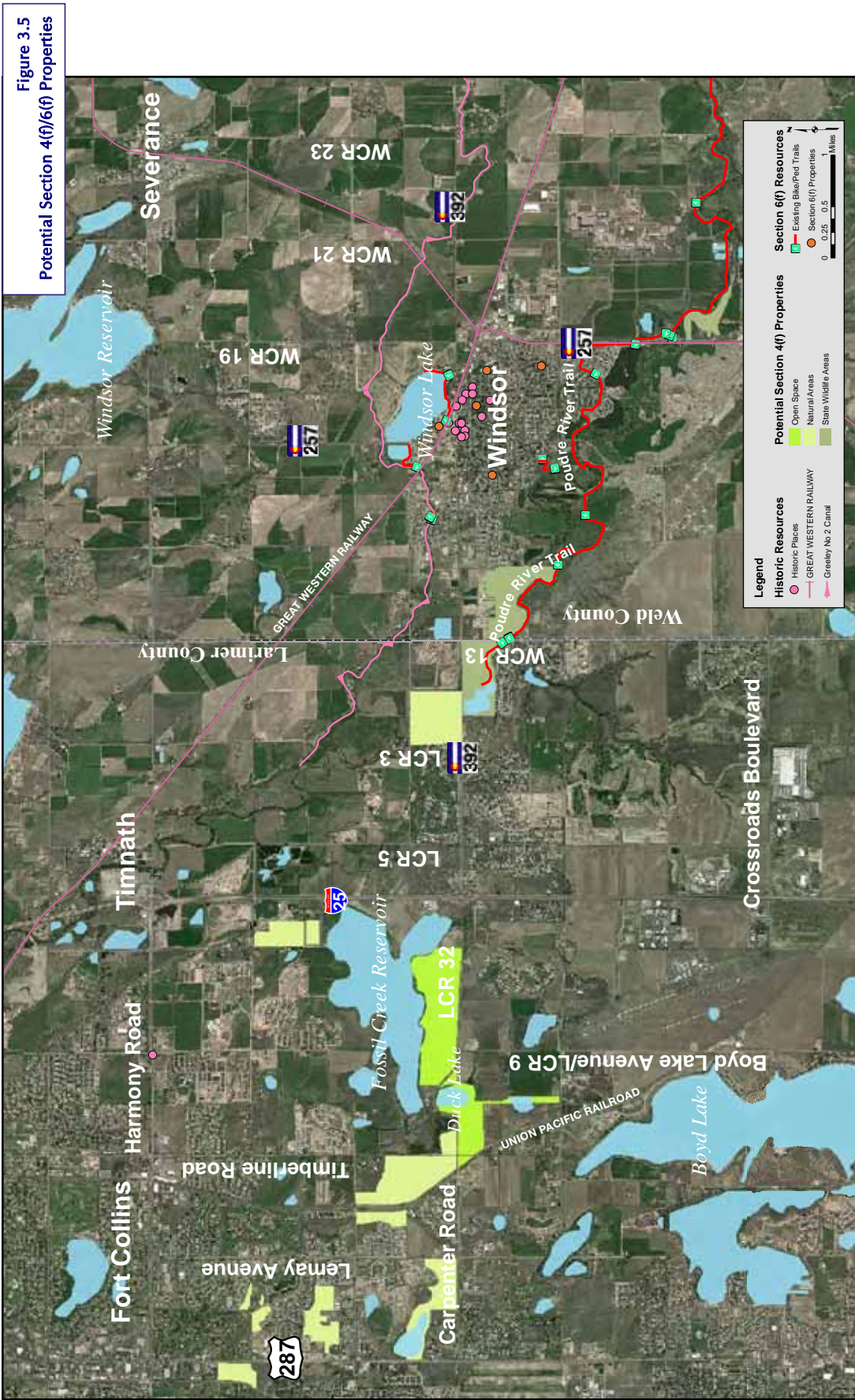
Figure 3.5 presents the potential 4(f)/6(f) resources within the study area.

3.5.1 Section 4(f) Properties

Table 3.3 presents resources that are likely to be eligible for Section 4(f) protection within the SH 392 corridor project area.

Figure 3.4
Potential Prime and Unique Farmlands







**Table 3.3
Properties Identified for Potential Section 4(f) Applicability**

Property	Location	Recreation, Refuge, or Historic
Pelican Marsh Natural Area	Carpenter Road/Lemay	Refuge
Prairie Dog Meadow Natural Area	Trilby Road/College Avenue	Refuge
Redtail Grove Natural Area	Fossil Creek/College Avenue	Refuge
Two Creeks Natural Area	Fossil Creek/east of College Avenue	Refuge
Hidden Cattails Natural Area (Privately owned and managed under the City of Fort Collins Natural Areas Certification Program)	South of Harmony Road and east of US 287	Refuge
Fossil Creek Reservoir Natural Area	Carpenter Road/east of Timberline Road	Refuge
Fossil Creek Wetlands Natural Area	Carpenter Road/west of Timberline Road	Refuge
Eagle View Natural Area	LCR 36/LCR 7	Refuge
Fossil Creek Reservoir Regional Open Space ¹	SH 392/LCR 9	Recreation and Refuge
River Bluffs Open Space (Jacoby)	SH 392/LCR 3	Future Recreation
Frank SWA	South of SH 392/WCR 13	Recreation and Refuge
Kodak SWA	South of SH 392/SH 257	Refuge
Windsor Wye, Great Western Railroad	Weld County	Historic
Bruce Siding, Great Western Railroad	Weld County	Historic
Greeley Canal #2	Weld County	Historic
First Methodist Episcopal Church	501 Walnut Street, Windsor	Historic
Windsor Milling & Elevator Co. Building	301 Main Street, Windsor	Historic
Windsor Town Hall	116 5 th Street, Windsor	Historic
Preston Farm	4605 S. Ziegler Road, Fort Collins	Historic
St. Albans Episcopal Church ²	531 Walnut Street, Windsor	Potentially historic
Zion Evangelical Catholic Church ²	129 Walnut Street, Windsor	Potentially historic

Table 3.3 (Continued)
Properties Identified for Potential Section 4(f) Applicability

Property	Location	Recreation, Refuge, or Historic
St. Johns Evangelical Church ²	102 Elm Street, Windsor	Potentially historic
German Congregational Church ²	130 Elm Street, Windsor	Potentially historic
Residence ²	401 Locust Street, Windsor	Potentially historic
Dr. Porter House ²	530 Main Street, Windsor	Potentially historic
Residence ²	222 Oak Street, Windsor	Potentially historic
Hotel ²	204-208 Walnut Street, Windsor	Potentially historic
Residence ²	601 Walnut Street, Windsor	Potentially historic
Layborne-Warner House ²	608 Walnut Street, Windsor	Potentially historic
Windsor Sugar Company ²	Windsor	Potentially historic
Windsor Hospital ²	216 5 th Street, Windsor	Potentially historic
Residence ²	230 5 th Street, Windsor	Potentially historic

¹ Portions of the Fossil Creek Reservoir Regional Open Space are privately owned and are not protected under Section 4(f).

² Indicates historic resources that have been determined field eligible for listing on the NRHP based on a project level reconnaissance survey. Until eligibility is confirmed by the State Historic Preservation Office, it is not known whether these resources would have protection under Section 4(f).

Three different school districts have facilities within the project area: Poudre Valley, Thompson (Loveland/Berthoud), and Windsor. Each school district has different policies regarding the public use of their facilities, including ball fields and playgrounds. If it is determined that a transportation alternative would impact one or more of the facilities within these public school districts, additional research would be necessary to determine whether a Section 4(f) use would occur.

3.5.2 Section 6(f) Properties

A database search was conducted to determine recreation properties that have been recipients of grants from the LWCF within the SH 392 corridor project area. Coordination with the jurisdictional agency and the DOI/NPS should be conducted if it is determined that a land conversion is likely as a result of improvements to the SH 392 corridor. Table 3.4 summarizes properties and locations within the project area for which LWCF grants have been applied.



Table 3.4
Properties Identified for Potential Section 6(f) Applicability

Property	Location	Grant Type
Boardwalk Park	Windsor	Development
Community Park	Windsor	Development
Town Park No. 2	Windsor	Development
Windsor West Park	Windsor	Development
Windsor Village Park	Windsor	Development
Poudre River Trail	Greeley	Development
Windsor Lake Trail	Windsor	Development

The proposed Poudre River Trail is included in local and regional trail master plans and is thus eligible for protection under Section 4(f). The trail also received LWCF funds to construct portions of the trail in the Greeley area. Additional research and coordination with the NPS and FHWA will be necessary to determine the applicability of Section 6(f) to this linear resource and the proposed crossing of SH 392, since it is far removed from where the LWCF funds were used.

Alternatives developed during the EOS and subsequent project development efforts should include all possible efforts to minimize harm to the resources identified in the corridor, per Federal regulations. FHWA makes the final determination on whether or not Section 4(f) applies to properties based on guidelines in the Federal regulations governing these properties and the *FHWA Section 4(f) Policy Paper* (FHWA, 2005). The DOI determines whether a Section 6(f) land conversion will occur as a result of a proposed project.

3.6 Socioeconomic Factors

The SH 392 corridor serves as a regional highway linking various regions and communities in Northern Colorado, primarily the four communities of Fort Collins, Loveland, Windsor, and Greeley. The town of Severance is located just north of SH 392 and also influences the socio-economics of the region. The projected regional population for Weld and Larimer County will approach one million people by 2030, as shown in Table 3.5.



**Table 3.5
Population for Study Area Counties and Municipalities**

County, City, Town	April 2000	July 2001	July 2002	July 2003	Forecasted Population for 2030
Larimer County	251,494	260,221	263,900	265,489	440,675*
Fort Collins	118,652	122,521	124,428	125,426	205,613**
Loveland	50,608	53,345	54,862	55,905	87,699**
Timnath	223	230	229	226	386**
Windsor (MCP)	284	662	1,044	1,167	492**
Unincorp. Area	68,819	69,845	69,469	68,825	NA***
Weld County	180,926	193,838	201,164	209,909	475,519*
Greeley	76,930	80,806	82,091	84,519	198,864**
Severance	597	700	876	1,180	1,543**
Windsor (MCP)	9,612	10,510	10,832	11,026	24,847**
Unincorp. Area	41,832	42,305	42,168	42,477	NA***

Source: April 2000, U.S. Census Bureau and July 2001 through July 2003 estimates are created by the Colorado Demography Office.

(MCP) Indicates Multi-County Places.

*Source: November 2004, from Colorado Division of Local Affairs, Demography Office, Table 1. Preliminary Population Forecasts by Region, 2000-2030.

**Projections were calculated by PBS&J based upon average annual percent change for five year increments from 2000 through 2030 as noted in Preliminary Population Forecasts by Region, 2000-2030.

***Not Available.

Weld County is experiencing an average 3.7 percent growth rate with an influx of residential and commercial development. The existing population is approximately 220,125 and is projected to be 475,519 by the year 2030. The labor force had grown to 86,210 employees in the year 2001, and according to the DOLA, 80.7 percent of workers commute within the county to their places of employment. DOLA has estimated that 8,475 residents of Weld County commute to Larimer County. The 2000 Census estimated workers journey to work travel time for Weld County as 23.7 minutes. Therefore, Weld County has a variety of intra-county travel demand needs which existing infrastructure cannot adequately meet.

The 2000 census population for Larimer County was 251,494 residents. DOLA forecasts a population of 440,675 residents in Larimer County by 2030. Larimer County experienced an average growth rate of 1.3 percent from 2000 to 2005 and is anticipated to experience a 2.2 percent average annual percent change in growth from 2010 to 2015. Growth has occurred through a mix of residential, industrial, and commercial development.

The labor force in Larimer County had grown to 156,630 employees by the year 2002 with only 146,204 estimated jobs in the county. This forces over 10,000 employees to find work outside of the county. DOLA has estimated that 6,292 residents of Larimer County commute to Weld



County. The 2000 Census estimated that the average length of commute in Larimer County was 21.4 minutes. The majority of the jobs are through government, retail and manufacturing sectors.

3.6.1 Minority Communities

In order to examine environmental justice concerns on the SH 392 corridor, the most recent census demographic data (year 2000) for minority and Hispanic populations were analyzed at the Census Block Group (CBG) level. Economic data was also reviewed at the CBG level for median and household incomes.

The project study area captures fifteen CBGs in Larimer County and five CBGs in Weld County. Tables 3.6 and 3.7 display the minority and Hispanic populations within the study area, respectively.

**Table 3.6
Minority Populations**

	Weld County Census Block Groups Combined	Weld County	Larimer County Census Block Groups Combined	Larimer County
Population 2000	12,454	180,936	24,586	251,494
Minority Population	960	33,320	1,826	21,451
% Minority	7.71%	18.42%	7.43%	8.53%

Source: U.S. Census Bureau

**Table 3.7
Hispanic Populations**

	Weld County Census Block Groups Combined	Weld County	Larimer County Census Block Groups Combined	Larimer County
Population 2000	12,454	180,936	24,586	251,494
Hispanic Population	1,286	48,898	1,507	20,631
% Hispanic	10.33%	27.03%	6.13%	8.20%

Source: U.S. Census Bureau

The individual CBGs with the percentage of minority or Hispanic populations are shown on Figures 3.6 and 3.7, respectively.



The percent of minority populations in the five CBGs in Weld County is 7.71 percent. The Weld County average for minority populations is 18.42 percent. The percent of Hispanic populations in the five CBGs in Weld County is 1.33 percent. The Weld County average for Hispanic populations is 27.03 percent.

The percent of minority populations in the fifteen CBGs in Larimer County is 7.43 percent. The percent of Hispanic populations in the fifteen CBGs in Larimer County is 6.13 percent. There are several CBGs in Larimer County with minority and Hispanic percentages higher than the county’s percentages of 8.53 percent and 8.20 percent respectively. There are several CBGs of interest for the SH 392 corridor, because they are located to the north of the corridor at the intersection of US 287 and the vicinity around Fossil Creek Reservoir. These CBGs will require further investigation as potential effects are defined through project design. There are also two Hispanic CBGs, one located in the northeast corner of the US 287/Carpenter Road intersection, and the second located west of Boyd Lake. Further investigation will be required in regards to the CBG located at US 287 and Carpenter Road.

3.6.2 Area Incomes

To determine the presence of potential low income communities, an income threshold of 30 percent of Area Median Income (AMI) was used. Anyone with an income below this threshold could be considered low income. Figure 3.8 was produced from Census 2000 data and identifies the potential Environmental Justice communities at the CBG level falling under the 30 percent AMI limit. The thresholds for Larimer and Weld Counties are 11.5 percent and 14.47 percent, respectively, of each county’s total population. Median incomes for the counties are shown in Table 3.8.

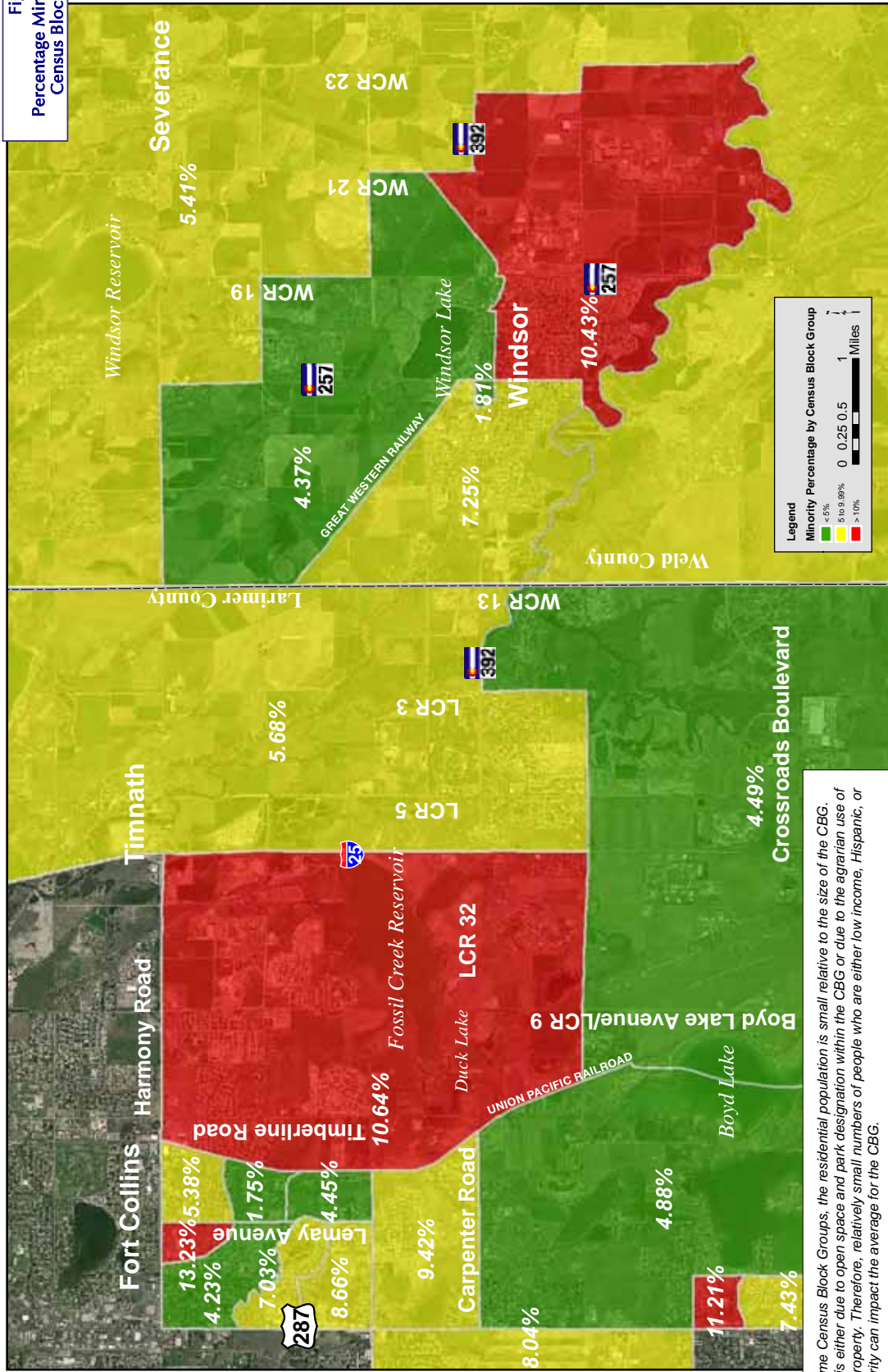
Table 3.8
Year 2000 County Median Incomes

	Weld County	Larimer County
Year 2000 Area Median Income	\$42,321	\$48,655
30% of Year 2000 County Area Median Income	\$12,696	\$14,596

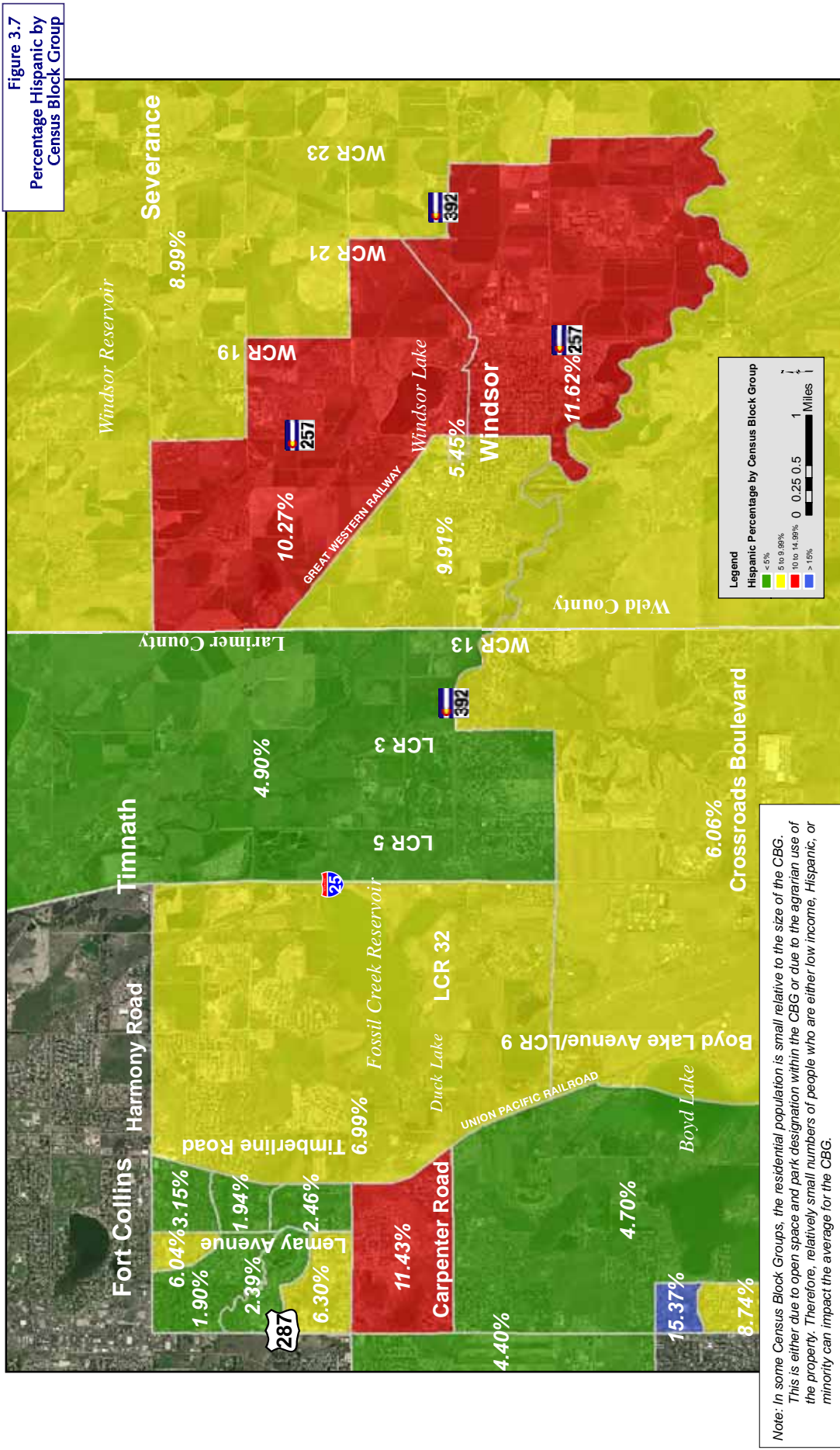
Source: U.S. Census Bureau

There are no CBGs in the Weld County portion of the study area higher than the county’s threshold of 14.47 percent. There is only one CBG in the Larimer County portion of the study area higher than the county’s threshold of 11.5 percent; however, this CBG is located approximately two miles south of SH 392, and will not have any direct effects. Therefore it is not anticipated that it will be subject to environmental justice.

Figure 3.6
Percentage Minority by
Census Block Group



Note: In some Census Block Groups, the residential population is small relative to the size of the CBG. This is either due to open space and park designation within the CBG or due to the agrarian use of the property. Therefore, relatively small numbers of people who are either low income, Hispanic, or minority can impact the average for the CBG.





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3.7 Right of Way

The existing SH 392 ROW was determined from Larimer and Weld County Assessor’s data and existing as-built drawings. The existing ROW width in the study corridor varies between 65 feet and 145 feet. This width is adequate for a two-lane road. Multiple planning documents have identified the SH 392 corridor as a regional mobility corridor requiring four to six lanes. The sections of SH 392 that have an existing ROW of less than 100 feet will not be able to accommodate the number of lanes proposed in these planning documents.

3.8 Utilities

Major utilities, defined as those that had a critical nature and/or a potential high cost and complexity of relocation, can significantly impact the cost or even location of a transportation project if they require relocation. In the corridor, these include: wet utility pipelines with diameters equal to or greater than 60 inches, electric transmission lines, and fiber backbone (trunkline). Table 3.9 summarizes the four major utilities that cross SH 392 within in the study area. Other utilities including smaller wet utility pipelines, gas and electric distribution and service lines, and other telecommunications lines are available in the *SH 392 EOS Utilities Technical Memorandum* located in the *SH 392 EOS Existing Conditions Technical Memoranda*. These utilities will need to be taken into consideration during design and construction of any transportation improvements, and could require relocation.

**Table 3.9
Major Utilities**

Utility Owner	Description	Location
AT&T	Buried transcontinental fiber-optic line	West of LCR 3, trending north-south
City of Greeley	60-inch steel water line in 72-inch steel casing, installed in 2004	Crosses SH 392 at WCR 19, trending northwest-southeast.
Platte River Power Authority	Overhead 230 kV electric transmission line	Midway between Lemay and Timberline, trending north-south
Xcel Energy	Overhead 230 kV electric transmission line	In western railroad right of way east of WCR 19, trending northeast-southwest

Source: *SH 392 EOS Utilities Technical Memorandum*

The South Fort Collins Sanitation District (SFCSD) disposes of sludge from their wastewater treatment operation at Fossil Creek Reservoir by distributing the sludge on fields nearby the plant. The land application is conducted on two quarter sections owned by SFCSD – the one commonly known as the Dickinson Conservation Easement and the one in the southwest quadrant of LCR 32 and LCR 9. The primary access to these parcels is off LCR 9, but a secondary access point is on LCR 32 west of LCR 9.

3.9 Air Quality

The Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants to protect the public from health effects associated



with air pollution. These six criteria pollutants are carbon monoxide, ozone, nitric oxide, sulfur dioxide, lead, and particulate matter (10 microns or less in diameter and 2.5 microns or less in diameter).

The EOS study area is contained within portions of Weld and Larimer Counties. Both Counties are contained within the North Front Range Transportation and Air Quality Planning Council (NFRT&AQPC) boundaries. The EPA, Colorado Department of Public Health and Environment (CDPHE), and the NFRT&AQPC have designated the areas including and surrounding the Cities of Greeley and Fort Collins as carbon monoxide (CO) attainment areas. Both attainment areas are in a “maintenance” status. These maintenance areas have recorded violations in the past, but according to the *Colorado Air Quality Control Commission Report to the Public, 2003-2004*, there have been no recorded CO violations of the NAAQS in the North Front Range Region over the last 18 years, and they have clearly demonstrated that future violations and near violations will not occur.

3.10 Noise

The noise analysis conducted for this EOS was limited to assessing the potential noise impacts due to the alternatives considered. No mitigation analysis was performed. Instead, it only identified potential areas of noise impacts. Accordingly, CDOT’s standard tests of reasonability and feasibility were not performed.

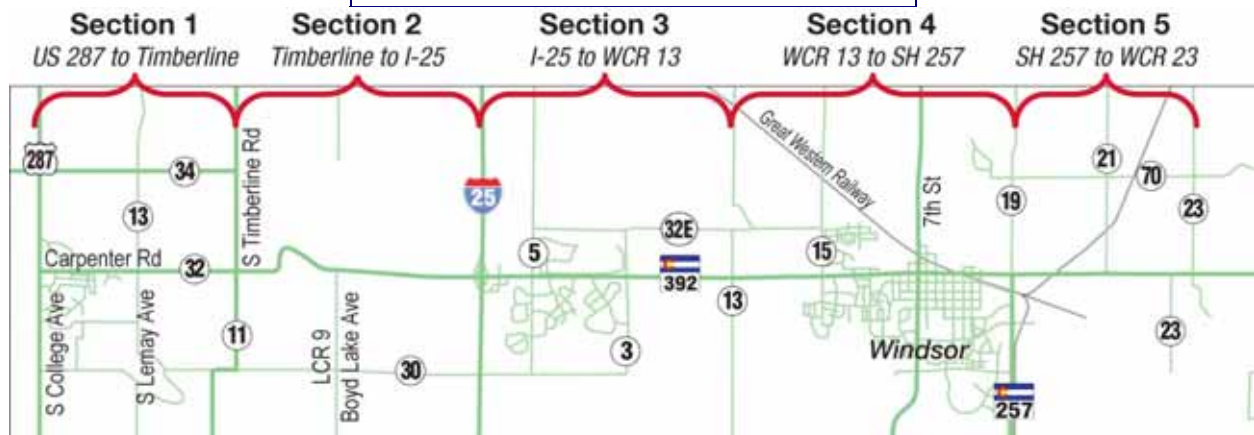
Noise measurements were taken in accordance with *CDOT’s Noise Analysis and Abatement Guidelines*, December 2002. The CDOT noise guidelines are consistent with *23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise* and have been approved by FHWA. A noise sensitive site is any property (owner occupied, rented, or leased) where frequent exterior human use occurs and where a lowered noise level would be of benefit. CDOT has established noise levels at which noise abatement must be considered. Known as Noise Abatement Criteria (NAC), these criteria vary according to a property’s land use category.

Figure 3.9 identifies the roadway sections used in the noise analysis. Table 3.10 lists the location of the field measurement used to verify the noise model. Land Use/Activity Category B¹ sites were identified and analyzed as part of this noise study. Single-family homes were the primary land use type in the project area.

¹ Category B Land use has a sensitivity of an Leq (h) of 66 dBA and includes: Picnic areas, recreational areas, hospitals, residences, playgrounds, active sports areas, parks, motels, hotels, schools, churches, and libraries.



**Figure 3.9
Roadway Sections Used for Noise Analysis**



**Table 3.10
Baseline Noise Data Collection Location**

SH 392 Location	Time (PM)	Field Measured Level (Decibels (dBA))	Comments
Open field south of WCR 70 and west of WCR 19	12:00-12:10 p.m.	41.0	Ambient reading near Alternative "M1-R"

Table 3.11 lists the distance from SH 392 centerline to the 66dBA contour line for existing conditions, and the number of receivers within this contour.

**Table 3.11
Existing Condition 66 dBA Contour Distances and NAC B Effects by Section**

Roadway Description	66 dBA Contour Distance (ft) from Centerline					66 dBA Contour Number of Impacted Receivers				
	1	2	3	4	5	1	2	3	4	5
Existing	94	98	130	67	67	19	1	10	72	1



3.11 Hazardous Waste Sites

Sites where known, recent, or past releases of hazardous substances, including petroleum products, have occurred to soil or groundwater were identified for the project area. The criteria established for the database search and minimum search distances from SH 392 are presented in the *SH 392 EOS Hazardous Materials Technical Memorandum* located in the *SH 392 EOS Existing Conditions Technical Memoranda*.

A total of 107 known or potential hazardous waste sites were identified in the database search of the SH 392 corridor. After the initial screening of the sites based on distance, a second screening was conducted based on the direction of groundwater flow, type of hazardous material present, distance from the highway and available file information. All of the sites identified were ranked according to severity of release or potential for release of contaminated materials to the environment. The types of sites identified included leaking underground storage tank (LUST) sites, underground storage tank (UST) sites, RCRA-Small Quantity Generator sites, Large Quantity Generator sites, spill sites, corrective action sites and historic landfills.

Of the 107 sites along the SH 392 corridor, none were ranked as having a high potential for concern. Twenty-nine sites have a moderate potential to impact SH 392. With the exception of the Burlington Northern Santa Fe Railroad, all of these sites are underground storage tank sites. No release has been reported from any of these sites as of June 1, 2005. Conditions at these sites are subject to change, as releases from USTs may not be noticed until upgrades or maintenance to the tank system occurs. The ranking was determined based on distance from the highway corridor and the potential for a release to occur that might impact SH 392. Twelve sites have a low potential for impact on the proposed SH 392 corridor. Sixty-six sites would have a negligible impact along the highway corridor largely due to the site's distance from the corridor and the negligible environmental impact that the sites posed.

3.12 Cultural Resources

Cultural resources include historic, archeological, and paleontologic resources, and are discussed in the following sections.

3.12.1 Historic Resources

Reconnaissance Survey of the SH 392 corridor identified a total of 112 properties that are considered to be potential historic resources. The complete list can be found in the appendix to the *SH 392 EOS Historical Reconnaissance Survey Report* within the *SH 392 EOS Existing Conditions Technical Memoranda*. The properties listed are counted as one resource although they may contain more than one building.

Of the historic properties 50 years or older identified during a database search, there are twenty resources within the Reconnaissance Survey area that were determined to be eligible for either the National Register, State Register, Local Landmark or NRHP guidelines. Historic resources listed on the National Register are automatically listed on the Colorado State Register. There are three properties in the study area that are on both lists and are shown in Table 3.12.



Table 3.12
Sites on the National & State Registers of Historic Properties

Property	Address	City	Built	Eligibility	Notes
First Methodist Episcopal Church	501 Walnut Street	Windsor	1923	NR ¹ , 2004	5WL2495
Windsor Milling & Elevator Co. Building	301 Main Street	Windsor	1899	NR, 1998	5WL838
Windsor Town Hall	116 Fifth Street	Windsor	1909	NR, 1999	5WL2050

*Source: SH 392 EOS Historical Reconnaissance Survey Report
 1 National Register (NR)*

There is only one historic property identified in the reconnaissance study area as a local landmark. This property is the Old Cheese Factory in Windsor.

Within the project area, three properties were found that are officially eligible and field eligible properties. These properties are listed in Table 3.13.

Table 3.13
Officially Eligible Properties

Property	Address	Listed	State Id. No.
Cache la Poudre Canal (Greeley Canal # 2)	Weld County	1989	5WL842
Windsor Wye, Great Western Railroad	Weld County	1989	5WL866
Bruce Siding, Great Western Railroad	Weld County	1989	5WL867

Source: SH 392 EOS Historical Reconnaissance Survey Report

Of the historic properties 50 years or older identified during the Office of Archaeology and Historic Preservation (OAHP) database search, only thirteen were found to be field eligible to the NRHP and located within the Reconnaissance Survey area. These properties are shown in Table 3.14.

**Table 3.14
Field Eligible Properties**

Property	Address	Listed	State Id. No.
St Albans Episcopal Church	531 Walnut St. Windsor	1997	5WL833
Zion Evangelical Catholic Church	129 Walnut St. Windsor	1997	5WL835
St. Johns Evangelical Church	102 Elm St. Windsor	1997	5WL836
German Congregational Church	130 Elm St., Windsor	1997	5WL537
Residence	401 Locust St. Windsor	1997	5WL2333
Dr. Porter House	530 Main St. Windsor	1997	5WL2464
Residence	222 Oak St. Windsor	1997	5WL2470
Hotel	204-208 Walnut St. Windsor	1997	5WL2486
Residence	601 Walnut St. Windsor	1997	5WL2498
Layborne-Warner House	608 Walnut St., Windsor	1997	5WL2499
Windsor Sugar Company	Windsor	1997	5WL2524
Windsor Hospital	216 Fifth St. Windsor	1997	5WL2525
Residence	230 Fifth St., Windsor	1998	5WL3172

Source: SH 392 EOS Historical Reconnaissance Survey Report

3.12.2 Archaeological and Paleontological Resources

A literature and records search was conducted at the OAHF with additional research supplied by COMPASS, the OAHF's Web site of recorded sites and isolated finds. Seventeen prior cultural resource investigations have been conducted in the study area with only three prehistoric sites and two isolated finds previously recorded in the project area. Isolated finds are, by definition, officially not eligible for the NRHP. Of the three prehistoric sites, one prehistoric open camp site (5LR1052) is located between Fossil Creek Reservoir and Swede Lake, adjacent to Swede Lake to the north. This site was unofficially recommended as not eligible to the NRHP. Another open camp site (5LR1800) is located adjacent to SH 392 to the south in the northeastern quarter of Section 23 (Township 6N, Range 68W) and has been officially determined to be not eligible to the NRHP. The third site is a prehistoric bison kill (5LR3953). The site is located several miles west of Windsor and is within one mile south of SH 392 in Section 24, Township 6N, Range 68W. This site is listed as officially eligible and is listed on the NRHP and the State Register. This site is of a very sensitive and significant nature, and must be avoided.

Very few prehistoric Native American sites were recorded during the 17 projects previously undertaken in the study area. There may be more sites that have yet to be discovered. The existing site data for the project area, although limited, suggests that the highest probability for prehistoric sites exists near permanent water sources since all of the previously recorded sites and isolated finds in the study area have been recorded within one half mile or less from rivers, creeks, or lakes. Additional sites are also likely to be located beyond the areas immediately adjacent to water since the topography in much of the project area is relatively open and either flat or gently sloping and would afford good locations for prehistoric camps or activity areas.



3.13 Railroads

Two main rail lines are present in the study area, which include the UPRR and the Great Western Railway.

The UPRR crossing of SH 392 and Timberline Road presents some issues to be addressed. Any realignment of the highway to the south of Duck Lake will cross Timberline Road and merge back to the current SH 392 alignment between the two existing crossings. Both horizontal and vertical alignments will need to be carefully designed.

The Great Western Railway has two at grade crossings of SH 392, one in Windsor and the other just east of Windsor. The Great Western received authority to abandon and remove from service the Eaton Branch, located east of Windsor. Consequently, the railroad has removed all trackage and structures from the north edge of the pavement of its crossing with SH 392. The railroad left the rails in the crossing—assuming a favorable decision by the Colorado Public Utilities Commission to remove them will be granted. The one remaining crossing of the Great Western and SH 392 is located at the eastern edge of downtown Windsor.

3.14 Wildlife and Threatened, Endangered, and Special Status Species

Wildlife and Threatened, Endangered, and Special Status Species were assessed for their potential presence in the study area. Wildlife generally refers to all non-domesticated animals which live outdoors, including mammals, birds, and fish. Special status species are those listed, or are candidates for listing, as threatened or endangered under the Federal Endangered Species Act, and species in Colorado designated as endangered, threatened, or of special concern.

3.14.1 Wildlife

Riparian, wetland, open water, and mixed-grass prairie habitats can all be found in the study corridor. These habitats provide the primary food, shelter, and movement corridors for wildlife in the study area. Wildlife species potentially found within the study area include common mammals, birds, reptiles/amphibians, and fish found in Larimer and Weld Counties. A full list of the potential wildlife species in the corridor is located in the *SH 392 EOS Wildlife Technical Memorandum* located within the *SH 392 EOS Existing Conditions Technical Memoranda*. Urban and agricultural developments can limit the distribution of larger mammals within the study area (such as mule and white-tailed deer). Open water and riparian habitats (primarily mature stands of cottonwoods) within the study area provide suitable nesting and foraging areas for a variety of avian species. Mixed grass prairie also provides important habitat for native songbirds. Habitat types within the study area are discussed in the *SH 392 EOS Wildlife Technical Memorandum*.

3.14.2 Threatened, Endangered, and Special Status Species

Special status species that might be found in the SH 392 study area are listed in Table 3.15. The U.S. Fish and Wildlife Service (USFWS) has provided comments on Federal threatened, endangered, and candidate species that are present or whose historic range is within Larimer and Weld Counties (USFWS, 2005). Species of concern in the State of Colorado potentially



occurring in the study area were identified through the Colorado Natural Diversity Information Source.

**Table 3.15
Special Status Species Potentially Found within the Study Area**

Species	Status	Source
Raptors		
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Federally Threatened Species State Threatened Species	USFWS 2005 CDOW**
Burrowing owl (<i>Athene cunicularia</i>)	State Threatened Species	CDOW
Ferruginous hawk (<i>Buteo regalis</i>)	State Species of Special Concern	CDOW
Peregrine falcon (<i>Falco peregrinus</i>)	State Species of Special Concern	CDOW
Waterbirds		
*Whooping crane (<i>Grus americana</i>)	Federally Endangered State Endangered	USFWS 2005 CDOW
Least tern, interior population* (<i>Sterna antillarum</i>)	Federally Endangered State Endangered	USFWS 2005 CDOW
Long-billed curlew	State Species of Special Concern	CDOW
*Piping plover (<i>Charadrius melodus</i>)	Federally Threatened State Threatened	USFWS 2005 CDOW
Sandhill crane (<i>Grus Canadensis</i>)	State Species of Special Concern	CDOW
Other Birds		
Mountain plover (<i>Charadrius montanus</i>)	State Species of Special Concern	CDOW
Large Mammals		
Swift fox (<i>Vulpes velox</i>)	State Species of Special Concern	CDOW
Small Mammals		
Preble's meadow jumping mouse (<i>Zapus hudsonius preblei</i>)	Federal Threatened Species, State Threatened Species	USFWS 2005 CDOW
Black-tailed prairie dog (<i>Cynomys ludovicianus</i>)	State Species of Special Concern	USFWS 2005
Black-footed ferret (<i>Mustela nigripes</i>)	Federal Endangered, State Endangered Species	USFWS 2005 CDOW
Reptiles		
Common garter snake (<i>Thamnopsis sirtalis</i>)	State Species of Special Concern	CDOW



Table 3.15 (Continued)
Special Status Species Potentially Found within the Study Area

Amphibians		
Northern leopard frog (<i>Rana pipiens</i>)	State Species of Special Concern	CDOW
Fishes		
*Palid sturgeon (<i>Scaphirhynchus albus</i>)	Federal Endangered Species	CDOW
Plants		
Ute ladies'- tresses orchid (<i>Spiranthes diluvialis</i>)	Federal Threatened Species	USFWS 2005
Colorado butterfly plant (<i>Gaura neomexicana ssp. coloradensis</i>)	Federal Threatened Species	USFWS 2005
*Western prairie fringed orchid (<i>Platanthera praeclara</i>)	Federal Threatened Species	USFWS 2005

**Indicates species and/or critical habitat that may be affected in downstream reaches due to depletions in the South Platte River or its tributaries*

***Colorado Division of Wildlife (CDOW)*

Source: SH 392 EOS Wildlife Technical Memorandum

A description of the habitat requirements of the special status species is located in the *SH 392 EOS Wildlife Technical Memorandum* located within the *SH 392 EOS Existing Conditions Technical Memoranda*.

3.15 Water Resources

The SH 392 EOS study area is contained within the Cache La Poudre watershed. Waterway crossings, any Federal Emergency Management Agency (FEMA) regulated floodplains, water quality concerns and/or any major issues are listed in this section. The hydraulics for any crossings will and must comply with local, state and Federal regulations. Any effects to water quality would be mitigated through the use of established practices for meeting state requirements on water quality.

Data was gathered from FEMA, the Colorado Division of Water Resources Web site, the impaired waters list from the CDPHE Web site, and past water quality planning and design experience and previous knowledge of the project area. Table 3.16 lists the water resources in the study area.



**Table 3.16
Water Resources in Study Area**

Water Resources in Study Area
Poudre River
John Law Ditch
Whitney Ditch
Outlet from Duck Lake
Duck lake
Fossil Creek
Consolidated Law Ditch
Greeley No. 2 Canal
Mud Lake
Nelson Lake
Louden Ditch
Fossil Creek Reservoir
Swede Lake
Robert Benson Lake
Windsor Lake

The Poudre River is the primary watercourse in the study area. A number of smaller existing waterway crossings also occur. These crossings include two culverts for the John Law Ditch and the Whitney Ditch, one culvert outlet to Duck Lake, a crossing at Fossil Creek, Consolidated Law Ditch and Greeley No. 2 Canal. There is also a drainage basin east of the Poudre River that contributes significant flow towards the highway.

Currently, there are no impaired water bodies adjacent to or crossing the highway according to the CDPHE year 2004 list of impaired waters. While no water bodies are classified as impaired, Duck Lake has a number of water quality issues. In 2002, Duck Lake was determined to be eutrophic and evidence suggested that fish would not be able to survive in the lake. In 2004, another study was conducted on Duck Lake and it did not note any improvement in the conditions. Duck Lake has no water circulating within the lake and the inflow water is not high quality, most of it flowing directly from Mud Lake. During small storm events, virtually no direct runoff reaches the lake because the tributary basin is mostly undeveloped fallow or cropland which allows the rainfall to infiltrate the soil and then used by the crops. There is no drain for the lake; however, there is a 24-inch diameter corrugated metal pipe that acts as a spillway when the lake is full. Mud Lake, which is just upstream of Duck Lake, most likely has very poor water quality according to analysis of soil samples taken in 2002 when the lake was dry. Current contaminants are likely from a dairy farm that is located upstream of Mud Lake. Runoff carries manure from the farm to Mud Lake and then the contaminated water travels to Duck Lake. It should be noted that although the water quality in Duck Lake is questionable, there is no question that there are many who take a very strong position on the value of Duck Lake as a



valuable water resource. Their position is that the lake provides valuable aquatic and waterfowl habitat. This will be a critical issue for consideration in future studies, so it is recommended that a detailed assessment of these resources be performed in future studies, as the potential effects will be a critical factor in the identification of a recommended alternative. This recommendation is discussed further in *Section 7.0, Next Steps*. The highway is located approximately three miles from the Laramie-Fox Hills Groundwater Aquifer. There is no aquifer directly under the project area.

The only FEMA regulated floodplain that is crossed is the floodplain for the Poudre River. The 100-year floodplain overtops the roadway to the east of the bridge at a low point in the road, with most of the flow going under the existing bridge. The entire floodplain of the Poudre River approaches one mile wide at SH 392. There is no information on the John Law Ditch in the *FEMA Flood Insurance Study*. The John Law Ditch has a Zone A floodplain, meaning there has been no detailed study for it. Fossil Creek Reservoir, Duck Lake, and Windsor Lake do not have FEMA regulated floodplains, therefore the criteria for spanning any or all of these water bodies will fall to the various ownership entities.

3.16 Wetlands and Riparian Resources

Wetland and riparian features throughout the study area are typically associated with river and stream corridors and areas of open water (such as ponds and reservoirs). In addition, several larger irrigation canals also have established riparian vegetation and small wetland fringes along the banks.

A desktop study was conducted to determine the extent of wetlands within the study area. This study consisted of reviewing National Wetland Inventory (NWI) Maps (USFWS, 1975), aerial photography, and topographical maps. A windshield survey was conducted in the summer of 2005 to verify the presence of wetlands. Aerial photography was used to compare NWI mapped locations to developed lands. No wetland delineations have been conducted. Wetland polygons were digitized using ArcView GIS and acreages were determined for each wetland. Major wetland and riparian features within the study area are discussed below and wetland acreages are presented in Table 3.17 and shown in Figure 3.10.



**Table 3.17
Wetlands within the Study Area**

Wetland Area	Acreage
Boxelder Ditch	19
Boyd Lake	67
Poudre River	699
Donath Reservoir	57
Duck Lake	64
Eaton Ditch	13
Fossil Creek	157
Fossil Creek Reservoir	269
Fossil Creek Reservoir Inlet	12
Fossil Creek Reservoir Wetlands Natural Area	28
Greeley No. 2 Canal	45
Horseshoe Lake	33
Lake Canal	13
Louden Ditch	65
Mail Creek Ditch	18
Mud Lake	17
Potentially Isolated	317
Robert Benson Lake	8.6
Whitney Ditch	4
Windsor Reservoir	23.67
Wetlands Associated with Unnamed Drainages	314
Wetlands Associated with Unnamed Open Bodies of Water	226
TOTAL	2,469

Source: NWI 1975

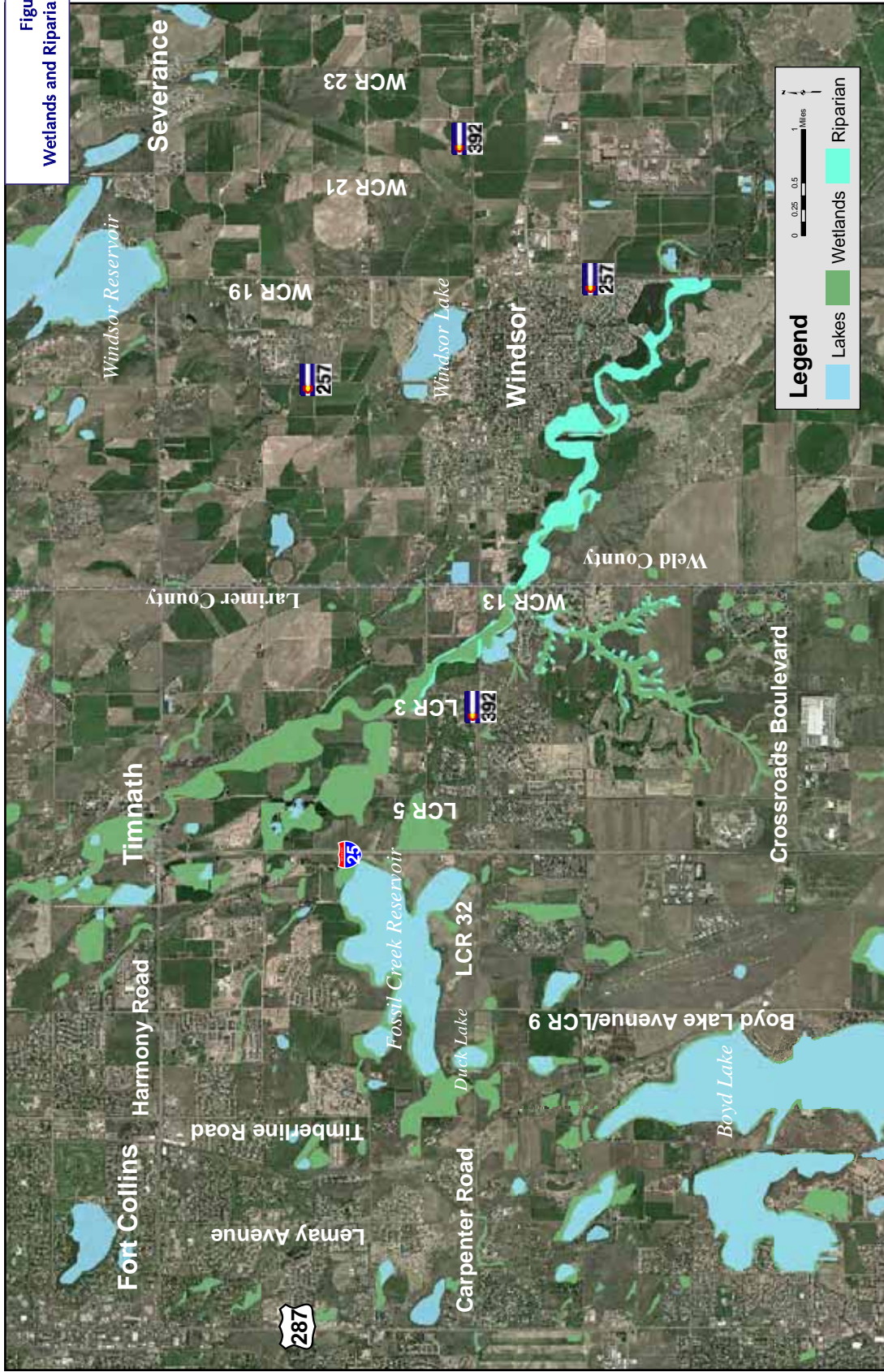
3.16.1 Wetlands and Riparian Areas Connected to Jurisdictional Water Bodies

Water bodies that may be considered jurisdictional waters by the U.S. Army Corps of Engineers (USACE) include streams/channel beds, wetlands, and ponds (including perennial and seasonal ponds). The following water resources are jurisdictional water bodies, therefore, wetlands associated with them would be considered jurisdictional.

3.16.1.1 Fossil Creek

Riparian vegetation along Fossil Creek is limited. The stream corridor is dominated by emergent wetland vegetation that is typically confined within the banks and bed of the stream.

Figure 3.10
Wetlands and Riparian Areas





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3.16.1.2 Poudre River

The Poudre River is a major tributary to the South Platte and has the most developed and extensive riparian habitat within the study area. The riparian corridor along the Poudre can vary in size and overall quality due to the effects of channelization. In certain areas where channelization has occurred (and the banks are incised) the river has been isolated from its floodplain, thus reducing the development of wetland and riparian areas. Many nonnative and invasive weedy species have also become well established in riparian areas as a result of historic land uses.

Wetland areas also exist in fringes or benches along one or both banks of the Poudre. Wetlands occur in areas where the river still has a hydrological connection to its banks and vegetation is typically dominated by reed canary grass, curly dock, and sandbar willow. Several bridges cross the Poudre River within the study area. Upgrading or replacing existing structures over the Poudre could potentially impact wetlands and riparian habitat.

3.16.1.3 Fossil Creek Reservoir and Fossil Creek Wetlands Natural Area

Fossil Creek Reservoir supports an extensive cottonwood/willow riparian community on the north shore of the reservoir. The riparian vegetation on the south shore occurs in more narrow bands and appears to be deteriorating due to the age of the cottonwoods (EDAW, 2003). In general, the reservoir supports large stands of mature cottonwoods with an understory that commonly includes cattails, reed canary grass, willows, and other weedy species. A large wetland area (primarily cattails) can also be found where Fossil Creek enters the reservoir (at the west end). Other large wetland areas can be found on the southeast shore of Swede Lake, which is the southeast arm of the reservoir.

3.16.1.4 Duck and Mud Lakes

Both Mud and Duck Lakes are located in natural depressions within the landscape and receive water runoff primarily from adjacent lands. Wetland areas are primarily located on the shoreline of Duck Lake. In addition, wetland areas can also be found to the east and west of Duck Lake and to the south of Mud Lake. Wetland vegetation in these areas is dominated by cattails. No riparian habitat exists around these open bodies of water.

3.16.2 Wetlands and Riparian Areas Not Connected to Jurisdictional Water Bodies

Various wetland areas are located adjacent to major highways/roadways located throughout the study area. These wetland areas are typically associated with culverts or ditches and have been created due to poor drainage and receive hydrology primarily from stormwater runoff. Wetlands associated with natural and manmade ponds may be considered jurisdictional, depending on the degree of their isolation. It should be noted that CDOT regulates effects to non-jurisdictional wetlands based upon an agreement with FHWA. It is important to note that the jurisdictional status of each wetland is subject to a review and official determination by the USACE.



3.17 Visual Character

The study area contains three distinct visual character units: rural/natural areas, urbanizing area, and town centers. Representative photographs of these three visual character units are shown below. The eastern and northern edges of the study area contain the town centers of Windsor, Timnath, and Severance, where foreground views of retail and historic establishments dominate the character. Rural and natural lands, including cultivated landscapes, farms and related outbuildings, water bodies and wetlands, and county residential lots, are located west of I-25 and in other areas distant from the town centers. Agricultural lands in the foreground of these areas provide open, sweeping views of the foothills and Front Range backdrop to the west and the expansiveness of the Great Plains to the east. The Poudre River corridor and Fossil Creek are significant components of the rural/natural area. The urbanizing unit is composed of once-rural areas surrounding Timnath, Windsor, Severance, and major transportation corridors that are becoming increasingly fragmented by residential neighborhoods of one dwelling unit per acre or higher.

Other sensitive scenic resources include Duck Lake, Fossil Creek Reservoir, Poudre River riparian corridor, Frank State Wildlife Area, Kodak Watchable Wildlife Area, and the prominent river bluffs located along the south side of the Poudre River between Windsor and Greeley.

