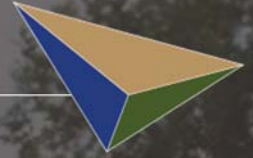


Chapter 2

Existing Transportation System



Riverside Park in Evans. Image Credit: City of Evans

Chapter 2: Existing Transportation System

A. Regionally Significant Corridors

The concept of Regionally Significant Corridors (RSCs) was used in previous regional transportation plans (RTPs) to focus limited transportation dollars on the corridors most significant to the region. Since this plan is corridor-based, the RSCs set the stage for the overall plan.

Identification and grouping of individual corridors was done in the 2035 RTP. The corridors were updated and affirmed in the 2035 RTP and carried forward in this RTP as ungrouped individual corridors. A RSC in the North Front Range Metropolitan Planning Organization (NFRMPO) is defined as:

An important link in a multi-modal, regional network comprised of existing or new transportation corridors that connect communities and/or activity centers by facilitating the timely and safe movement of people, goods, information, and services.

Three criteria were used to identify RSCs:

1. Includes all State Highways
 - ▶ Colorado Department of Transportation (CDOT) requires a corridor vision be developed for all state highways as part of the regional transportation plan. Since this is required by CDOT, and most state highways are regional in nature, this was established as the first criteria.
2. Functional Classification
 - ▶ Roadways must have a functional classification of minor arterial or higher, as defined by the appropriate government agency.
 - ▶ The higher the functional classification, the greater the likelihood trips are longer and the roadway connects more than one community or destination.
3. Connectivity
 - ▶ The corridor must go through, or plan to go through, more than one governmental jurisdiction and connect activity centers.

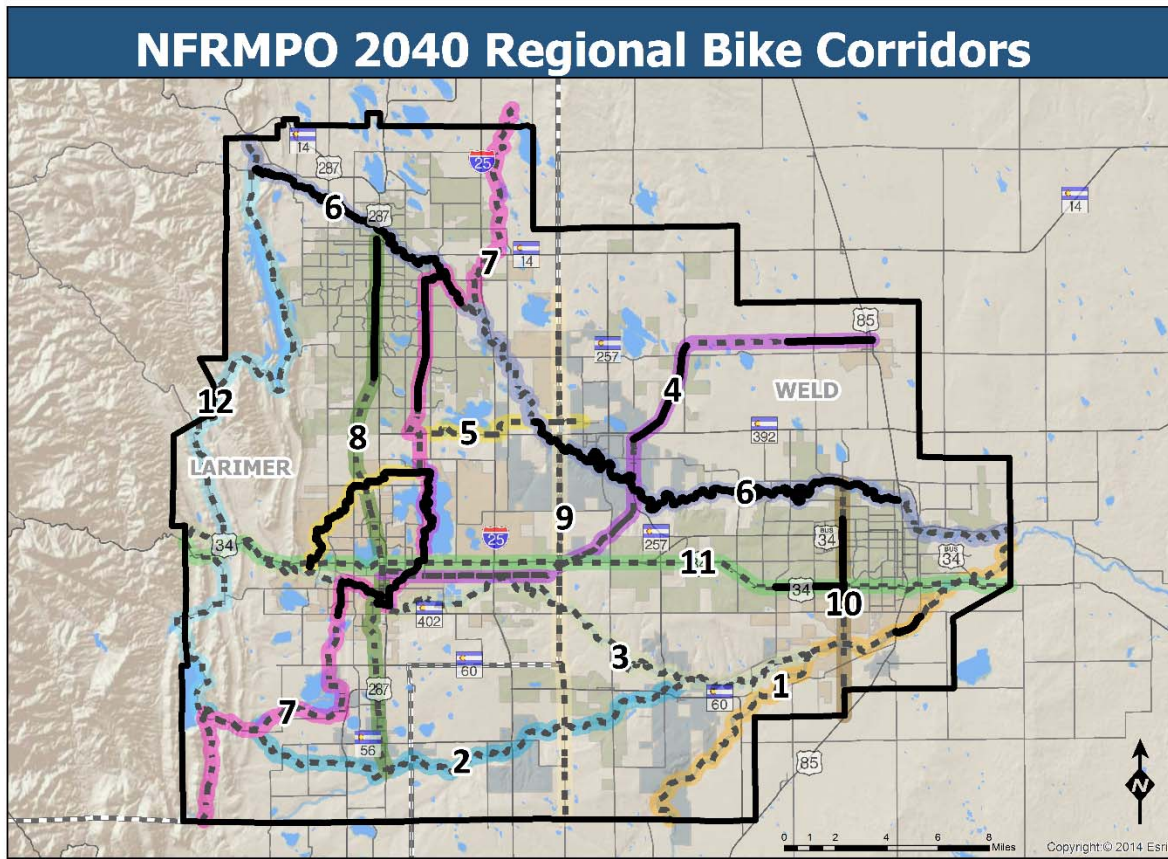
This plan used the Colorado State Parks' [Colorado Front Range Trail Corridor Plan](#), the CDOT [Eastern Colorado Mobility Study](#), and the NFRMPO's [2013 Regional Bike Plan](#) to define the criteria for RSCs. The RSCs are organized by alpha/numeric order from Interstate, US Highway, State Highway, Larimer County Road, Weld County Road, and then the remaining corridors. **Table 2-1** describes the 27 RSCs whose numbers correspond to the locations in **Figure 2-1**. The plan also includes the 12 Regional Bike Corridors (RBCs) from the Bike Plan, **Table 2-2**, whose numbers correspond to the locations in **Figure 2-2**. A vision plan detailing each corridor is included in **Chapter 9**.

Table 2-1: Regionally Significant Corridors

Corridor Number	Corridor Name/Component	Description
1	I-25	Northern NFRMPO boundary to southern NFRMPO boundary
2	US 34	Western NFRMPO boundary to eastern NFRMPO boundary
3	US 34 Business Route	US 34 on the west to eastern NFRMPO boundary
4	US 85	Weld CR 70 on the north to Weld CR 48 on the south
5	US 85 Business Route	US 34 on the west to US 85 on the east
6	US 287	Northern NFRMPO boundary to southern NFRMPO boundary, includes Berthoud Bypass
7	SH 1	Northern NFRMPO boundary to US 287 on the south
8	SH 14	US 287 on the west to eastern NFRMPO boundary
9	SH 56	US 287 on the west to Weld CR 17 on the east
10	SH 60	Larimer CR 17 on the west to Two Rivers Parkway on the east
11	SH 257	SH 14 on the north to SH 60 on the south, includes offset in Windsor
12	SH 392	US 287 on the west to US 85 on the east
13	SH 402	Larimer CR 17 on the west to US 85 on the east
14	Larimer CR 3	Crossroads Boulevard on the north to southern NFRMPO boundary
15	Larimer CR 5	SH 14 on the north to US 34 on the south
16	Larimer CR 17	US 287 on the north to SH 56 on the south
17	Larimer CR 19	US 287 on the north to US 34 on the south
18	Weld CR 13	SH 14 on the north to the southern NFRMPO boundary
19	Weld CR 17	Crossroads Boulevard Extension on the north to southern NFRMPO boundary
20	35 th Avenue	O Street on the north to US 85 on the south
21	65 th Avenue	SH 392 on the north to 59 th Street on the south
22	83 rd Avenue	Northern NFRMPO boundary to southern NFRMPO boundary
23	Crossroads Boulevard	I-25 on the west to US 85 on the east
24	Harmony Road	Larimer CR 17 on the west to the eastern NFRMPO boundary
25	Mulberry Street	Larimer CR 19 on the west to Riverside Avenue (SH 14) on the east
26	Prospect Road	US 287 on the west to Larimer CR 5 on the east
27	Timberline Road	Vine Drive on the north to the southern NFRMPO boundary, following Timberline Road to Larimer CR 9E (road approximate) to Weld CR 7

Table 2-2: Regional Bike Corridors	
Corridor Number	Corridor Name
1	South Platte/American Discovery Trail
2	Little Thompson River
3	Big Thompson River
4	Great Western/Johnstown/Loveland
5	North Loveland/Windsor
6	Poudre River Trail
7	Front Range Trail (West)
8	BNSF Fort Collins/Berthoud
9	Johnstown/Timnath
10	Greeley/LaSalle
11	US 34 Non-motorized
12	Carter Lake/Horsetooth Foothills Corridor

Figure 2-2: NFRMPO 2040 Regional Bike Corridors



Jun, 2015
Sources: CDOT, NFRMPO

Legend

- | | | |
|--|-------------------------------|---|
| — Existing | 5: North Loveland/Windsor | 11: US 34 Non-motorized |
| - - - Future | 6: Poudre River Trail | 12: Carter Lake/Horsetooth Foothills Corridor |
| 1: South Platte/American Discovery Trail | 7: Front Range Trail (West) | ▭ NFRMPO Boundary |
| 2: Little Thompson River | 8: BNSF Fort Collins/Berthoud | ▭ County Boundary |
| 3: Big Thompson River | 9: Johnstown/Timnath | |
| 4: Great Western/Johnstown/Loveland | 10: Greeley/LaSalle | |

B. Roadway System

Currently, the roadway system is the principal transportation component within the region. This network provides a system for vehicular traffic, such as cars and trucks, but it also provides basic infrastructure for transit service and non-motorized traffic.

Functional Classification

The roadway network is comprised of a hierarchy of facilities defined by their functional classification and how they serve the mobility and access needs of the users. As mobility increases on a roadway, access decreases; and conversely, as access increases, mobility decreases.

The functional classification descriptions that follow are the basis for the 2040 Regional Travel Demand Model (RTDM). The definitions are based on the Federal Highway Administration's (FHWA) Highway Functional Classification Concepts, Criteria and Procedures document.³ The functional classification of each roadway reflects its role in the regional system. Functional classification has specific implications for the administration of federal aid highway programs. Transportation planning agencies use functional classification as a means to identify corridor preservation, access management, and roadway design requirements.

- ▶ **Interstates:** All routes which comprise the Interstate Highway system are considered interstate highways. Interstates are designed with mobility and long-distance travel in mind. I-25 is the only interstate highway in the North Front Range region.
- ▶ **Freeway and Expressways:** Freeways and expressways have directional travel lanes, which are usually separated by some type of physical barrier, and their access and egress points are limited to on- and off-ramp locations or a very limited number of at-grade intersections. Freeways and expressways are designed and constructed to maximize their mobility function, and abutting land uses are not directly served by them.
- ▶ **Principal Arterial:** Urban Principal Arterials serve major activity centers, the highest traffic volume corridors, and longest trip demands. Principal Arterials interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban areas and movements through the urban area. They serve demand for intra-area travel between the central business district and outlying residential areas.
- ▶ **Minor Arterial:** Minor arterials collect and distribute traffic from principal arterials, freeways, and expressways to streets of lower functional classification and, in some cases, allow traffic to directly access properties. They serve secondary traffic generators such as community business centers, neighborhood shopping centers, multifamily residential areas, and traffic between neighborhoods. Access to land use activities is generally permitted, but should be consolidated, shared, or limited to larger-scale users. Minor arterial street spacing is recommended to be at half-mile intervals.
- ▶ **Major Collectors:** Major collectors serve traffic circulation in higher density residential and commercial/industrial areas. They distribute and channel trips between Local Roads and Arterials, usually over a distance of greater than three-quarters of a mile. They allow for higher speeds and more signalized intersections.

³ http://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/fcauab.pdf

- ▶ **Minor Collectors:** Minor collectors serve traffic circulation in lower density residential and commercial/industrial areas. They distribute and channel trips between Local Roads and Arterials, usually over a distance of less than three-quarters of a mile. They allow for lower speeds and fewer signalized intersections
- ▶ **Local:** The primary function of local roads is to provide access to adjacent land uses in both urban and rural areas. They carry no through-traffic movement and constitute the mileage not classified as part of the Arterial and Collector systems.

Table 2-3 summarizes these classifications and provides examples of roads within the North Front Range region. The lane mileage provided represents the lane mileage included in the 2040 Regional Travel Demand Model (RTDM) and does not include all of the lane miles in the region.

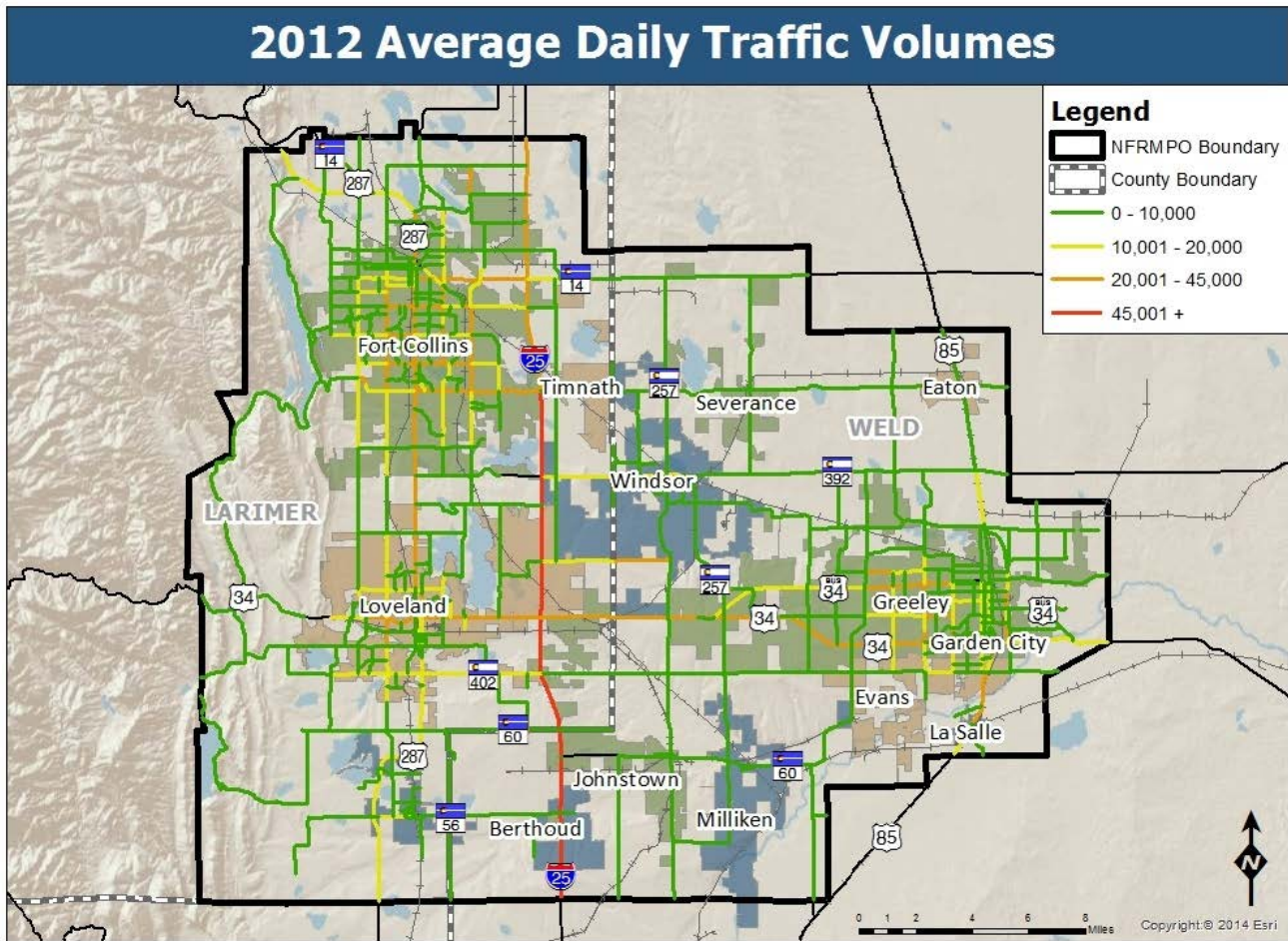
Table 2-3: Examples of Functional Classification in the NFRMPO Model		
Functional Class	Lane Mileage (2012)	Regional Examples
Freeway	109	Interstate 25
Expressway	232	US Route 85, US Route 34
Principal Arterial	573	State Highway 392
Minor Arterial	737	State Highway 14/Mulberry Street
Collector	1,144	Weld County Route 39, Larimer County Route 19/Taft Hill Road
Ramps	16	I-25 Entrance and Exit Ramps
Frontage Road	60	I-25 Frontage Road
Total	2,870	

Source: North Front Range 2012 Base Year Regional Travel Model

Existing Daily Traffic Volumes

Figure 2-3 shows the 2012 daily traffic volumes on major roadways on and off the National Highway System (NHS) in region. The major traffic volumes are located along the major routes within the region. I-25 south of Harmony Road/Weld County Route 74 has the highest traffic volume in the region with over 45,000 daily trips, with US 34 and US 287 seeing heavy traffic as well. Conversely, many collectors see less than 10,000 trips per day.

Figure 2-3: Average Daily Traffic Volumes



Apr, 2015

Sources: CDOT, 2015

Roadway Surface Condition

CDOT monitors roadway conditions on the State Highway system on a weekly basis and completes a pavement review annually. Roadways are given a rank based on the roughness and rutting of the roadway surface, as well as the amount of cracking and patching. A “good” surface condition corresponds to a remaining service life greater than 11 years; a “fair” surface condition corresponds to a remaining service life between six and 11 years; and a “poor” surface condition corresponds to a remaining service life of less than six years. Roadway conditions from CDOT’s system are shown in **Figure 2-4**. Many of the region’s important highways and connections are in “poor” condition.

In 2013, CDOT shifted from using “Remaining Service Life” to “Drivability Life”. Drivability Life focuses on how long a highway segment will have acceptable driving conditions based on an assessment of pavement smoothness, surface cracking, rutting, and safety.⁴ There are three categories: “High Drivability Life” will have

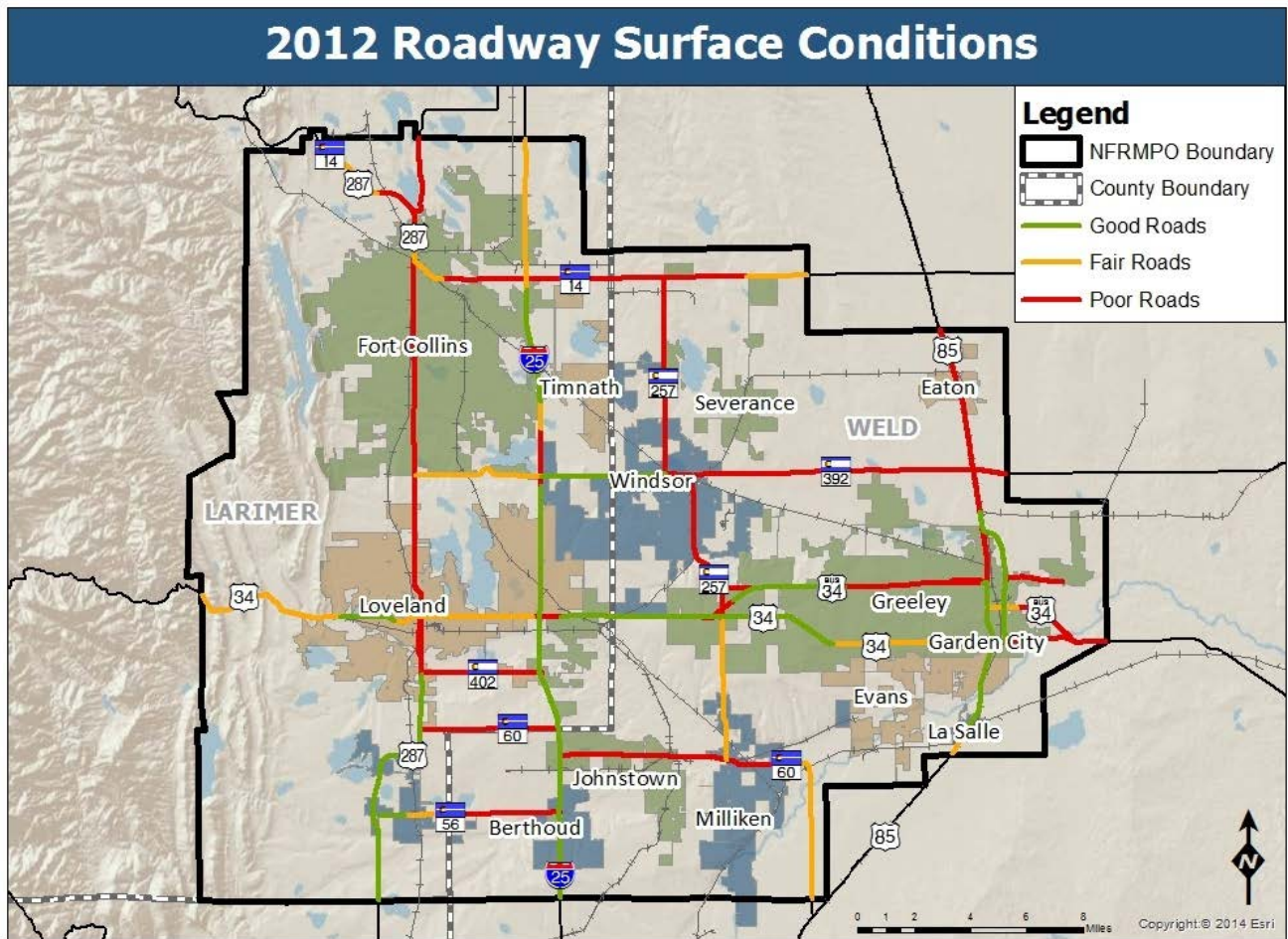
⁴ CDOT 2014 Transportation Deficit Report, 2014.

<https://www.codot.gov/library/AnnualReports/2014-annual-transportation-deficit-report.pdf>

acceptable driving conditions for more than 10 years; “Moderate Drivability Life” will have acceptable driving conditions for four to 10 years; and “Low Drivability Life” will have acceptable driving conditions for fewer than four years. In the future, the NFRMPO will address Drivability Life when considering roadway surface conditions during the Call for Projects and Transportation Improvement Program (TIP) processes.

A variety of construction projects have improved roadway surface quality in certain areas, while other areas have not been improved and have deteriorated. Noticeable improvements can be seen along the I-25 corridor south of CO 392 to the NFRMPO’s southern boundary, and along portions of US 34. Meanwhile, US 287 has seen roadway surface quality decrease although there is significant construction underway or planned in 2015.

Figure 2-4: 2012 Roadway Surface Conditions



Apr, 2015

Sources: CDOT, 2015

Special Roadway Corridors

Roadways are categorized by their regional and national significance or by their scenic or historic value. Multiple roadways within the NFRMPO’s boundaries fit the NHS criteria based on their significance and one regional highway is considered scenic and historic.

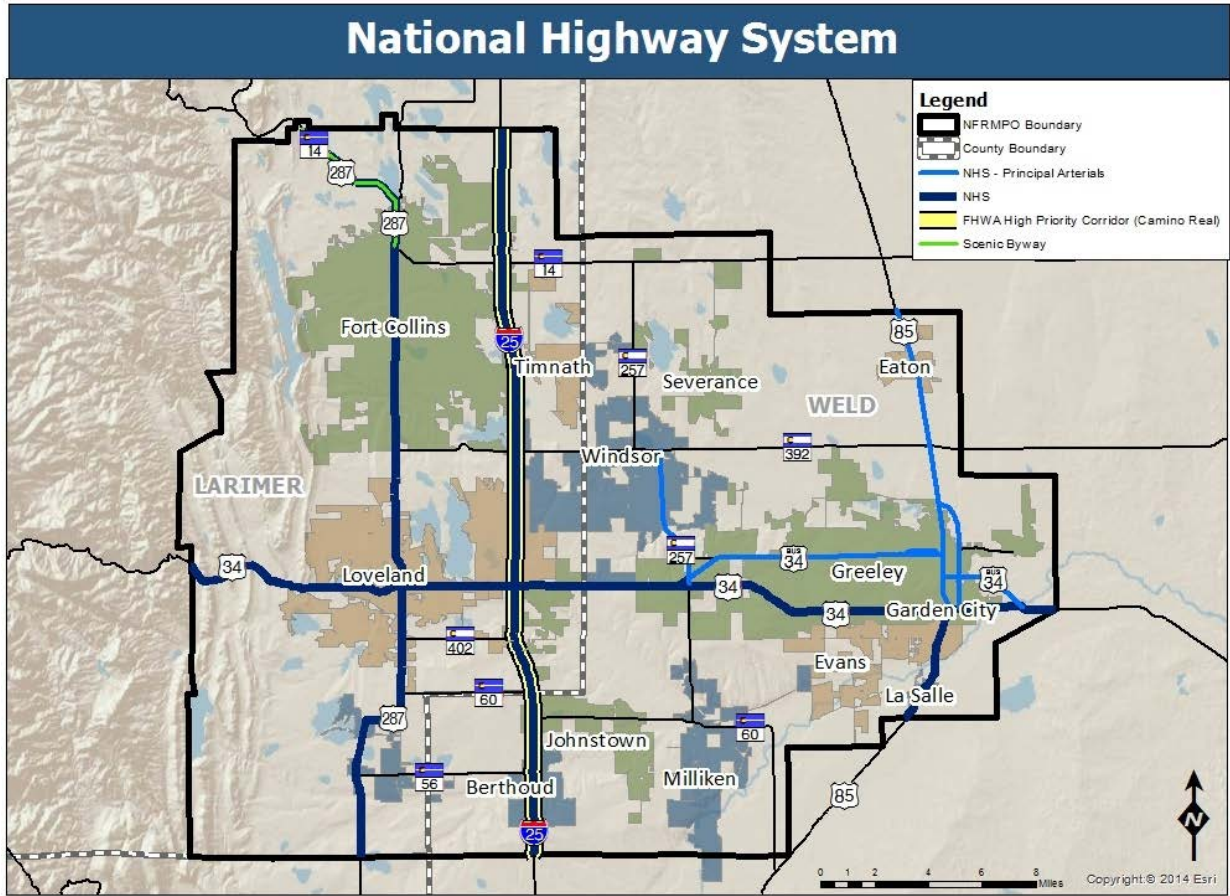
National Highway System

The NHS includes interstate highways as well as a portion of the urban and rural major arterial system. Approximately 102 miles of NHS roadways are within the NFRMPO boundary, as shown on **Figure 2-5**. FHWA has designated “High Priority Corridors” as a focus for improvements to enhance mobility for trade (both domestic and international) and to promote economic development. Camino Real, the High Priority Corridor in the North Front Range region, extends from Mexico to Canada via I-25 through Colorado.

Scenic and Historic

The State of Colorado has identified more than 2,000 miles of roadway as Scenic Byways. The Cache la Poudre - North Park (SH 14 and US 287) is the only designated Scenic Byway within the NFRMPO boundary. Approximately seven miles of this byway are within the northern portion of the region. The route follows US 287 from the Cache La Poudre River northwest as shown in **Figure 2-5**.

Figure 2-5: National Highway System



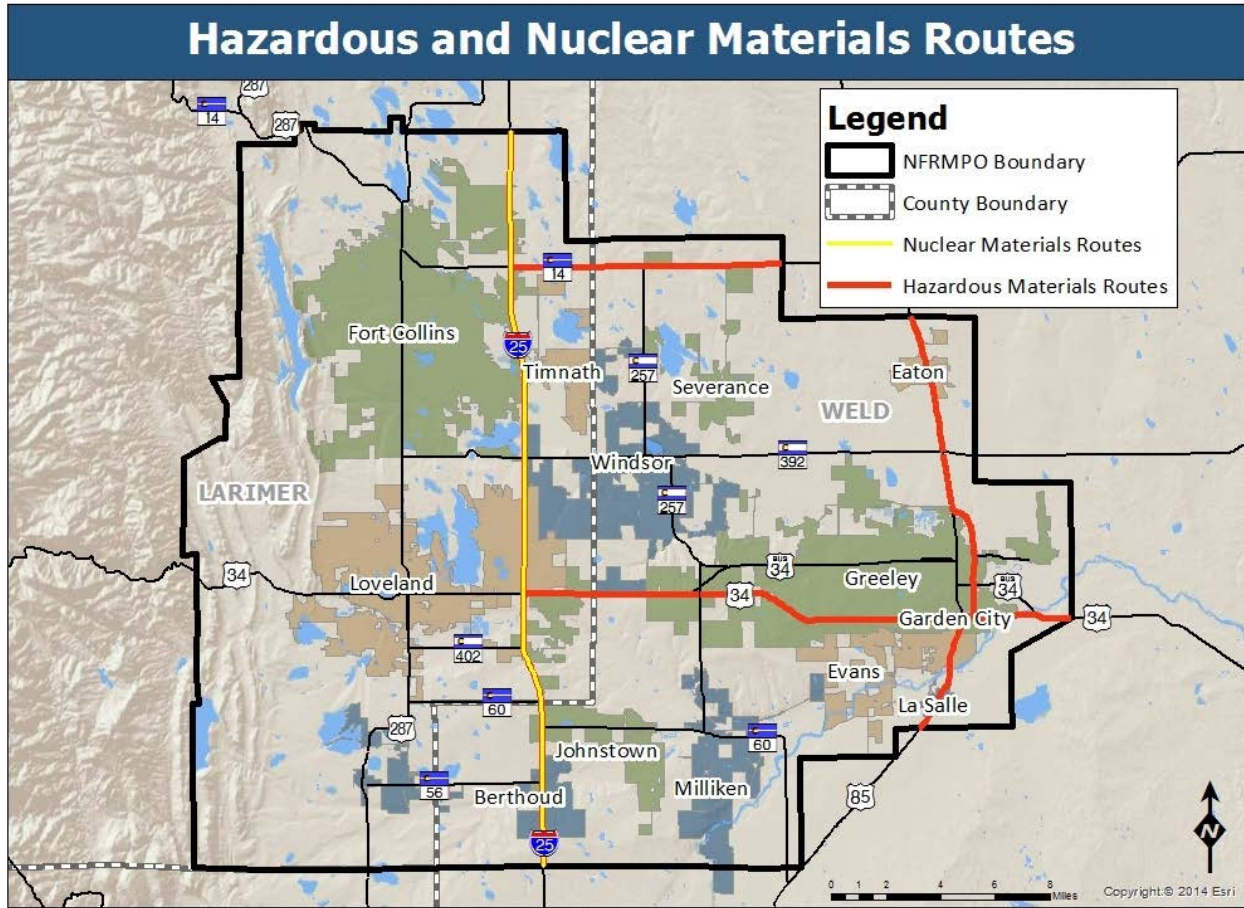
Apr, 2015
Sources: CDOT, 2015

Hazardous and Nuclear Materials

Due to safety reasons, the transportation of hazardous and nuclear materials is limited to designated roadways. **Figure 2-6** illustrates the roadways in the region the State of Colorado has designated for the transportation of hazardous and nuclear materials. As shown, three routes are designated for transporting hazardous materials (I-

25, SH 14, US 34, and US 85), while one route is designated for transporting nuclear materials (I-25). Federal and State regulations prohibit these materials from being shipped using other routes.

Figure 2-6: Hazardous and Nuclear Materials Routes



Apr, 2015

Sources: CDOT, 2014

Bridge Conditions

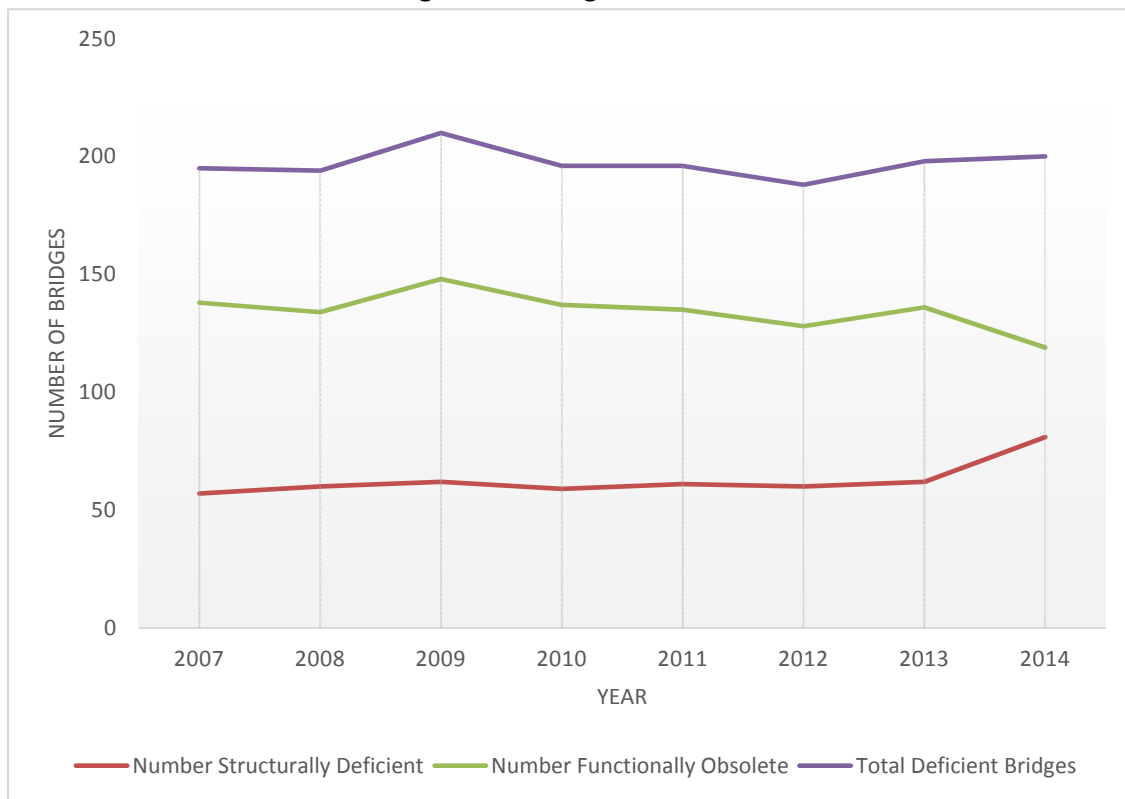
Major strides have been made to fix and repair bridges within the State using Highway Safety Improvement Program (HSIP) or Funding Advancements for Surface Transportation Economic Recovery Act (FASTER) funding. Colorado voters approved FASTER in 2009. The FASTER program designated State funds for safety improvements, bridge repairs, and transit expansion. Working with CDOT, municipalities within the region have invested a variety of resources and funds into fixing bridges.

CDOT defines structurally deficient bridges as those needing to be monitored and/or repaired, but does not imply possible collapse or unsafe driving conditions.⁵ If a structurally deficient bridge becomes unsafe, the structure will be closed. Functionally obsolete bridges are those built to standards not used today. Possible standards include adequate lane widths, shoulder widths, or vertical clearances for current or expected traffic.

⁵ CDOT FASTER Bridge Enterprise FAQ, 2015. <https://www.codot.gov/programs/BridgeEnterprise/BridgeFAQs>

FHWA produces an annual National Bridge Inventory (NBI), which is the result of surveying the number of structurally deficient and functionally obsolete bridges across the country. Since 2007, 58 new bridges have been constructed in Larimer and Weld counties. The number of structurally deficient bridges has increased, though the number of functionally obsolete bridges has decreased. **Figure 2-7** shows the combined number of structurally deficient, functionally obsolete, and total deficient (combined structurally deficient and functionally obsolete) bridges in Larimer and Weld counties, from 2007-2014. The increase in structurally deficient bridges is attributed to the 2013 floods in Northern Colorado. Many of these bridges should be repaired or reconstructed using flood relief funding.

Figure 2-7: Bridge Conditions

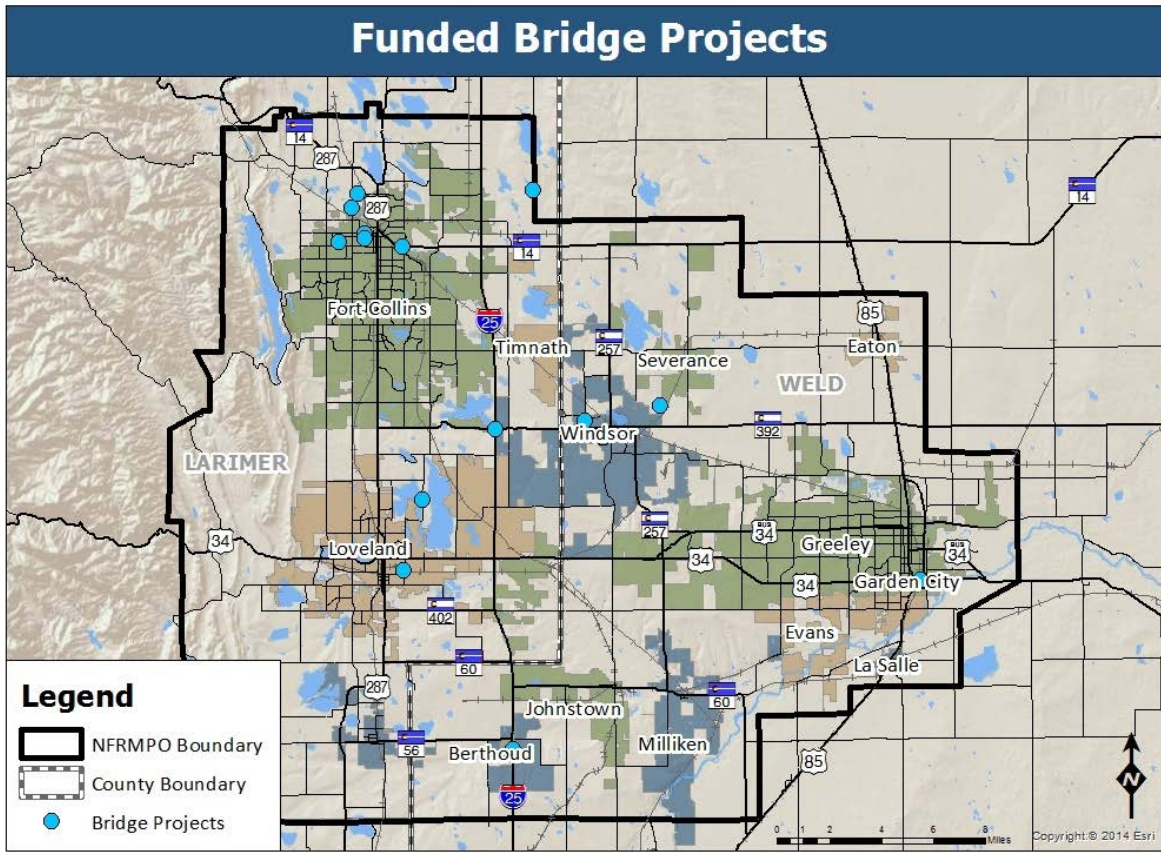


Source: National Bridge Inventory, 2015

Fifteen bridges have been or are in the process of being repaired using State funding, as shown in **Table 2-4**. These projects repair deficient bridges along major corridors within the region. **Figure 2-8** maps the projects listed in **Table 2-4**.

Table 2-4: Funded Bridge Projects			
Bridge	Municipality	Project Status	Funding Source
US 85 Bypass: 5 th -US 34	Greeley	In design	Bridge On-System
US 34/85 Interchange	Greeley	In design	Bridge On-System
US 34 & US 85 Bridge	Greeley	In design	Bridge On-System
Larimer CR 50 at Larimer and Weld Canal	Larimer County	In design	Bridge Off-System
Larimer CR 3 at Larimer County Canal	Larimer County	Under construction	Bridge Off-System
Larimer CR 17 at Poudre River	Larimer County	Under construction	Bridge Off-System
LaPorte-Whitcomb Bridge at Arthur's Ditch	Fort Collins	Complete	Bridge Off-System
Madison Avenue at Greeley-Loveland Canal	Loveland	Complete	Bridge Off-System
Weld CR 21 at Greeley No. 2 Canal	Weld County	Complete	Bridge Off-System
Shields Street at Larimer County Canal No. 2	Fort Collins	Complete	Bridge Off-System
Bryan Avenue at Mulberry Street	Fort Collins	Complete	Bridge Off-System
Windsor 15 th Street at Greeley No. 2 Canal	Windsor	Complete	Bridge Off-System
Larimer CR 11C at Horseshoe Lake Spillway	Larimer County	Complete	Bridge Off-System
SH 14: Cache La Poudre	Fort Collins	Under construction	Bridge Enterprise Pool
I-25 Service Road over Little Thompson River	Berthoud	Complete	Bridge Enterprise Pool
Larimer County Road 48 over I-25	Larimer County	Not Yet Scheduled	Bridge Enterprise Pool
US 287 at Meadow Lane (over Draw)	Larimer County	Complete	Bridge Enterprise Pool
I-25 & SH 392 Interchange	Windsor	Under construction	Safety Pool
<i>Source: CDOT FASTER projects, http://www.coloradodot.info/projects/faster, 2014</i>			

Figure 2-8: Funded Bridge Projects



Apr, 2015

Sources: NFRMPO, CDOT, 2015

In addition to the construction projects listed in **Table 2-4**, CDOT has identified additional bridges rated in poor condition, **Table 2-5**. These bridges may receive funding to fix structural deficiencies as it becomes available.

Bridge	Municipality	Rating	Type of Work
Prospect Road over I-25	Fort Collins	49	Replacement
US 287 at Meadow Lane (over Draw)	Larimer County	47.2	Replacement
Larimer County Road 48 over I-25	Larimer County	46.2	Yet to be Determined
I-25 Service Road over Little Thompson River	Weld County	45.3	Replacement
SH14 over Coal Bank Creek	Weld County	28.7	Replacement

Source: <http://www.coloradodot.info/programs/BridgeEnterprise/poor-bridges/>

Safety

Crash data for State and federal roadways within the NFRMPO are collected annually by CDOT. **Table 2-6** shows the crash rate per 100M vehicle miles traveled (VMT) for the major State and federal highways based on crash data from 2008 to 2012. The Crash Rate per 100M VMT was calculated using FHWA’s formula:

$$R = \frac{C \times 100,000,000}{V \times 365 \times N \times L}$$

R = Crash Rate

C = Number of Crashes

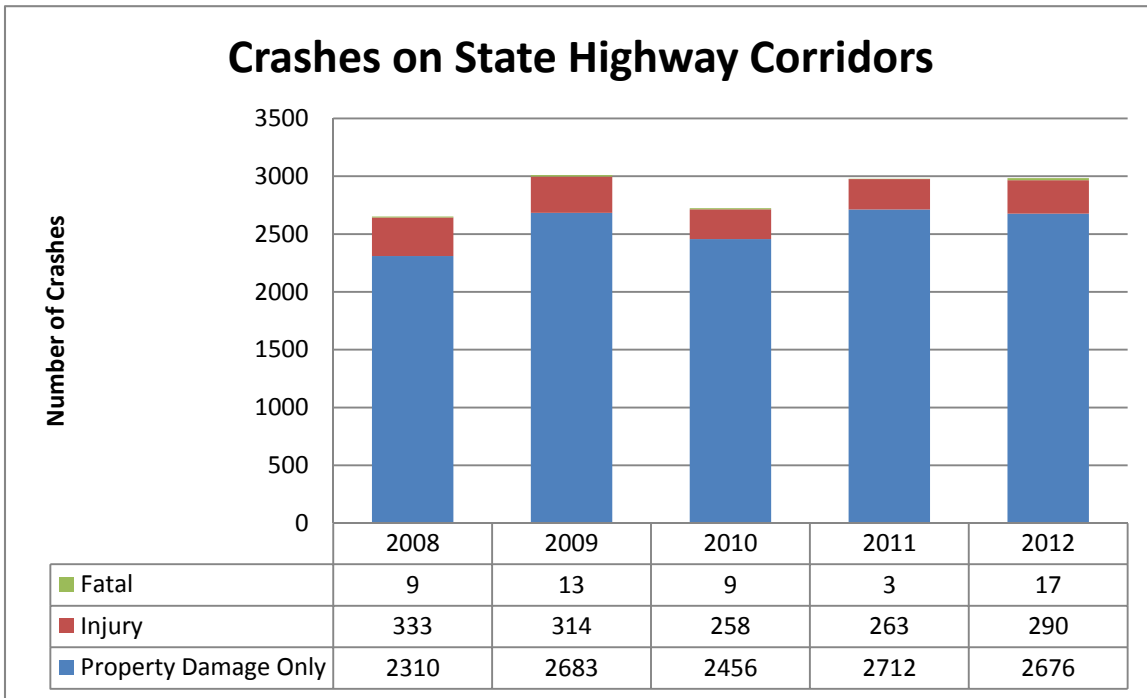
V = AADT

Table 2-6: Crash Rate per 100M VMT (2008-2012)		
Route	Total Crashes	Crash Rate Per 100M VMT
I-25	3,024	83.23
US 287	4,281	359.52
SH 1	91	259.20
SH 257	325	120.82
US 85	952	209.26
SH 14	776	133.95
SH 392	677	173.56
US 34	2,265	140.81
US 34 Business	1,411	445.67
SH 60/SH 56	414	157.27
SH 263	34	152.96
SH 402	123	137.15
State Facilities Average	--	197.78
<i>Source: CDOT Crash Data, 2008–2012</i>		

As shown in **Table 2-6**, many of the region’s busiest roads have higher crash rates per 100M VMT than more rural facilities. These corridors should be targeted for safety improvements in the future.

Figure 2-9 shows the total number of crashes on State and federal highways within the region divided into fatal, injury, and property damage only (PDO) crashes. Crashes have steadily increased from 2008 to 2012, with a sharp increase in fatal and PDO crashes. In all, there were nearly 3,000 crashes within the region; of those, 300 crashes had at least one injury, while 17 were fatal. More severe crashes occurred within municipal boundaries at or near intersections. Arterial roadways, particularly through more densely populated areas, often experience high crash rates due to interchange access and intersection related crashes. Crashes along I-25 may be attributed to congestion and heavy directional flow during peak hours.

Figure 2-9: Crashes on State Highway Corridors



Source: CDOT Crash Data, 2008–2012

C. Freight

FHWA estimates by 2040 the nation’s transportation system will handle cargo valued at more than \$39 Trillion, compared with \$17.4 Trillion in 2012.⁶ Volumes, in tons, will increase by nearly 45 percent over 2012 levels by 2040 from 19.7 Billion to 28.5 Billion respectively. These huge increases in freight movement will place even greater demands on the nation’s transportation system. It is critical for transportation planning agencies throughout the country to integrate freight considerations into their long range planning processes. It is clear a variety of strategies are needed to address the challenges surrounding the projected growth of freight transportation.

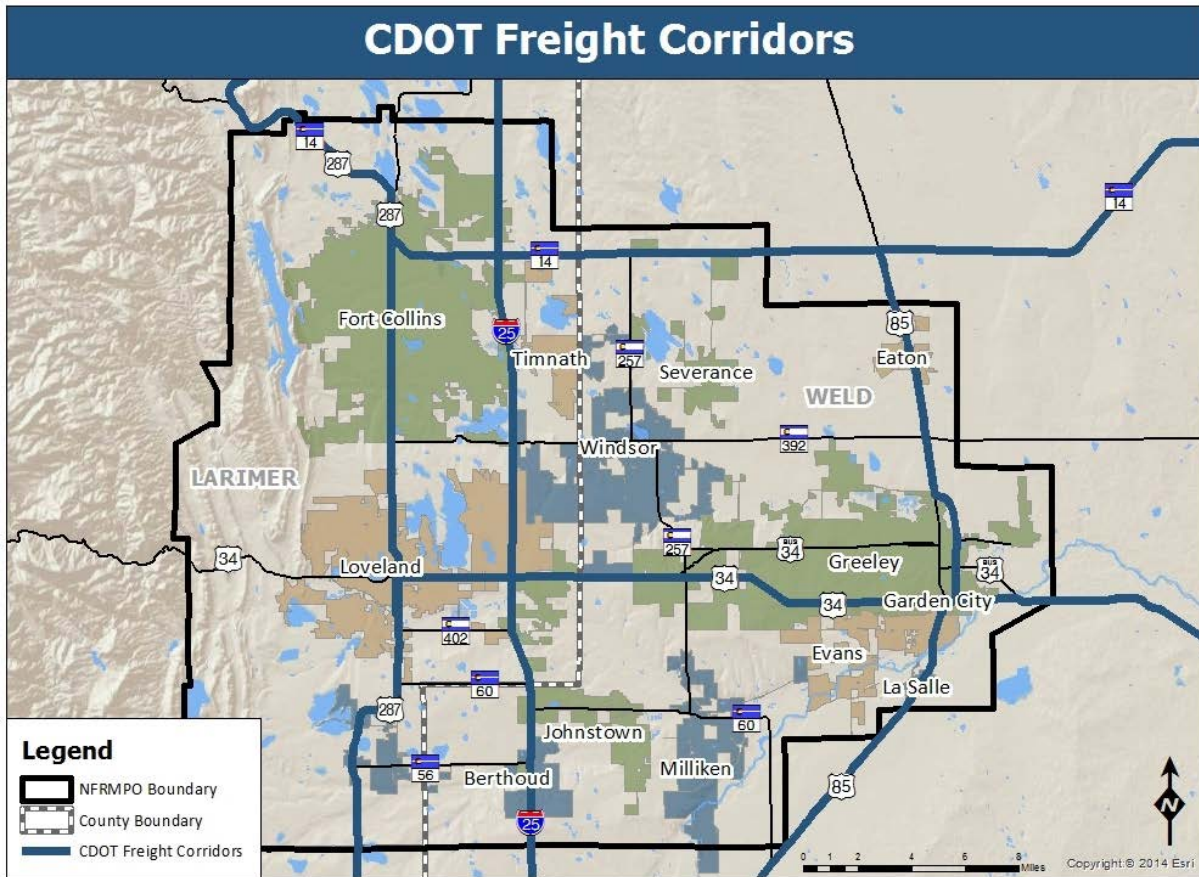
Truck Freight

As part of the State Highway Freight Plan, CDOT identified Freight Corridors throughout the State with input from the freight industry and other key stakeholders. Within the region, these corridors are: I-25; US 34; US 85; US 287; and SH 14. The corridors are shown in **Figure 2-10**.

⁶ FHWA Freight Facts and Figures 2013:

http://www.ops.fhwa.dot.gov/Freight/freight_analysis/nat_freight_stats/docs/13factsfigures/pdfs/fff2013_highres.pdf

Figure 2-10: CDOT Freight Corridors



Apr, 2015
Sources: CDOT, 2015

A large amount of freight is moved by truck through the region. **Table 2-7** shows the commodity flows in all of Larimer and Weld counties for 2010 and predicted for 2040. Total tonnage moved through the region is expected to increase by 63.6 percent by 2040. Long-haul freight truck traffic is concentrated on major routes connecting metropolitan areas, ports, border crossings, and major hubs.⁷

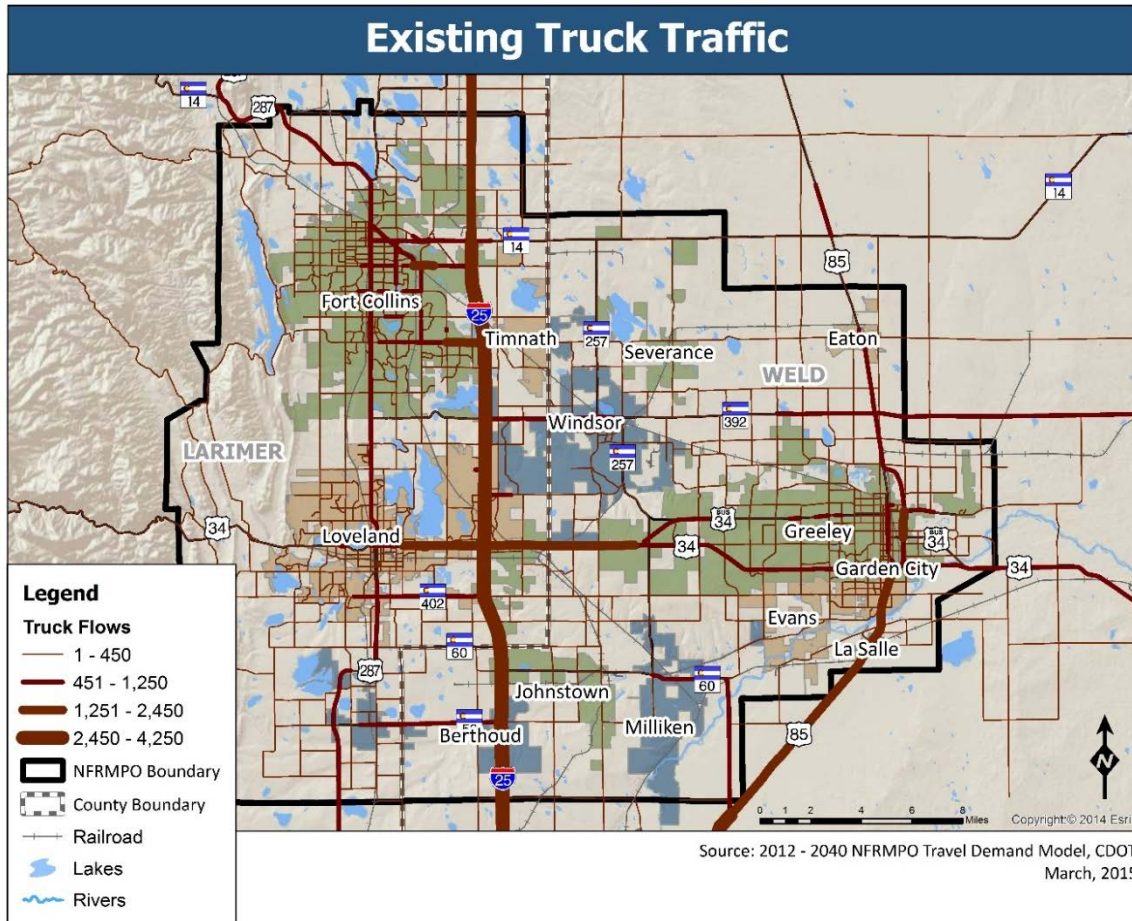
County	Inbound Tonnage (thousands)		Outbound Tonnage (thousands)		Total Tonnage (thousands)	
	2010	2040	2010	2040	2010	2040
Larimer	8,901.73	11,999.59	9,361.32	17,616.89	18,263.04	31,825.94
Weld	14,209.05	25,672.22	17,846.56	30,210.83	29,846.16	55,883.05

Source: Transearch 2010; IHS Global Insight, CDOT, 2015

⁷ FHWA Freight Facts and Figures 2013:
http://www.ops.fhwa.dot.gov/Freight/freight_analysis/nat_freight_stats/docs/13factsfigures/pdfs/fff2013_highres.pdf

Figure 2-11 shows the existing level of truck traffic from the 2040 RTDM, using natural breaks in the data set. The numbers provided are total flows, or the total number of trucks in both directions per day. The most heavily used truck routes in the region are I-25, US 34, US 85, US 287, and SH 14. As shown, I-25 carries the heaviest volume of truck traffic, followed by US 85 and US 34. The Port of Entry, located on I-25 in Fort Collins, recorded a total of 960,759 trucks in 2014, with 215,999 passing through the port itself.⁸

Figure 2-11: Existing Truck Traffic



To evaluate the safety of truck travel on the roadway network, the percentage of overall crashes involving trucks was compared against the percentage of truck traffic on the region’s top 10 truck routes. **Table 2-8** compares Annual Average Daily Truck Traffic (AADTT), Annual Average Daily Traffic (AADT), and the percent truck crashes along the heaviest-traveled corridors. This comparison can be used to evaluate safety on routes with high truck traffic. **Table 2-8** uses the percentage of truck traffic, a weighted average of the State Highway segments that comprise the corridor, and the percentage of truck crashes (the percent of the total crashes involving a truck), which is also a weighted average for the corresponding State Highway segments. Due to limitations in the data for non-State Highway facilities, this comparison is limited to the State Highway portions of the RSCs. The truck traffic is for the year 2012 and the truck crash percentages are for the five year period from 2008 to 2012. As

⁸ Colorado State Patrol, 2015.

shown in **Table 2-8**, there does not appear to be a clear correlation between the percent truck traffic and the percent truck crashes.

Table 2-8: Truck Crash Rates						
Roadway	AADTT (Truck)	AADT (All Traffic)	Percent Truck Traffic	Total Crashes	Truck Crashes	Percent Truck Crashes
I-25	6,780	57,520	11.8%	3,024	184	6.1%
US 85	1,385	15,750	8.8%	952	78	8.2%
SH 257	454	6,730	6.8%	325	13	4.0%
SH 392	606	9,060	6.7%	677	29	4.3%
SH 14	1,236	19,641	6.3%	776	36	4.6%
US 34	1,328	26,956	4.9%	3,676	95	2.6%
US 85 Business	497	10,550	4.7%	446	19	4.3%
SH 60	321	6,907	4.7%	312	18	5.8%
US 287	880	20,404	4.3%	2,512	38	1.5%
SH 56	358	8,300	4.3%	102	3	2.9%
<i>Sources: CDOT, 2015</i>						

Freight Rail

Rail freight in the region is primarily moved on the BNSF Railway and Union Pacific Railroad (UPRR) lines, which carry between two and 17 trains per day. In 2012, freight railroads originated 30.6M tons of commodities and terminated 29.7M tons within Colorado. **Tables 2-9 and 2-10** show the top five commodities originated and terminated within the State in 2012. Coal was the largest commodity shipped from and within Colorado, making up 74 percent of originating rail traffic and 58 percent of terminating rail traffic.

Table 2-9: Colorado Originated Rail Freight (2012)		
Commodity	Percent of Total	Tons
Coal	74%	22,776,000
Other	11%	3,354,000
Cement	6%	1,721,000
Food Products	3%	954,000
Waste & Scrap	3%	947,000
<i>Source: Association of American Railroads, Rail Fast Facts, 2015</i>		

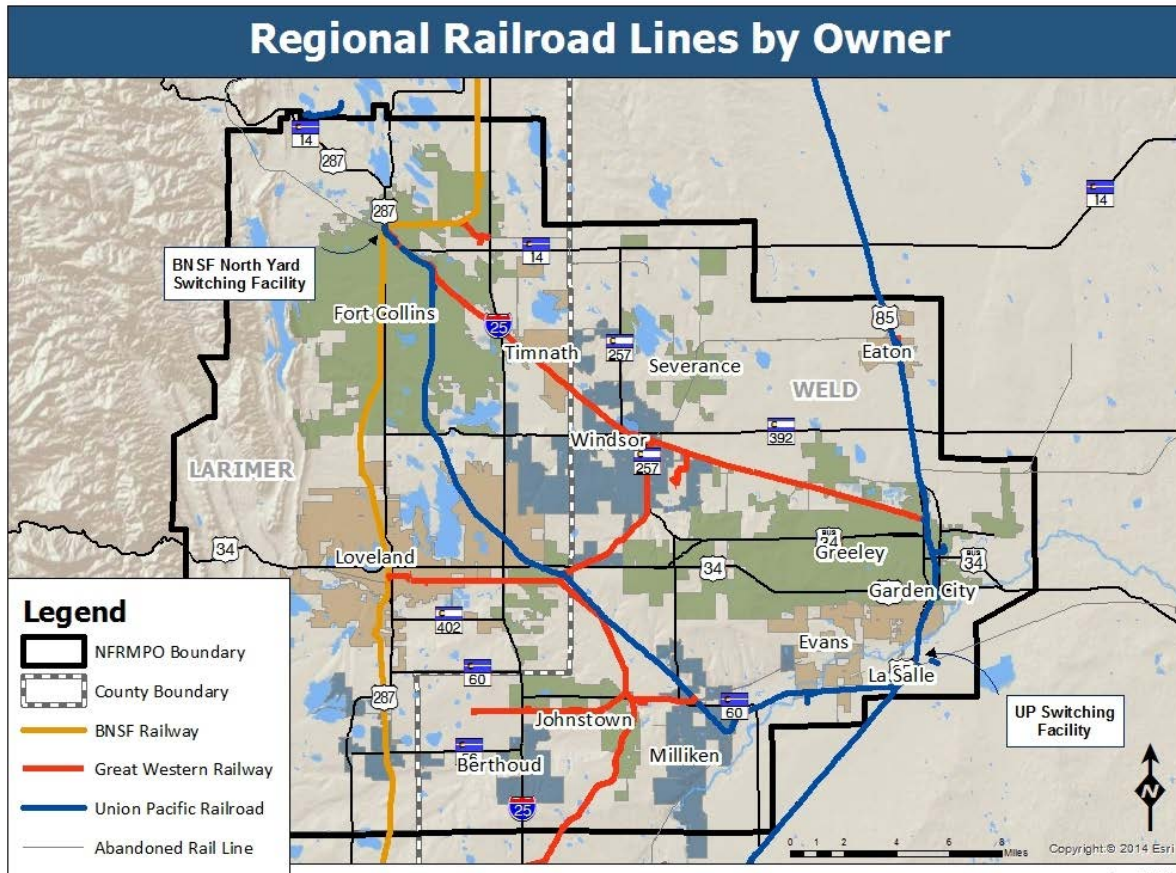
Commodity	Percent of Total	Tons
Coal	58%	17,138,000
Other	23%	6,856,000
Stone, sand, gravel	8%	2,475,000
Intermodal	4%	1,132,000
Food Products	4%	1,059,000

Source: Association of American Railroads, Rail Fast Facts, 2015

Railroads are classified according to the annual gross operating revenue from the railroad operations. A Class I Railroad is a railroad which had an operating revenue of at least \$433.2M in 2011. A regional or short-line railroad has annual operating revenue of less than \$20M and typically services a small number of towns or businesses or performs short haul trips between larger railroad lines. Both BNSF Railway and UPRR are classified as Class I Railroads and the Great Western Railway is considered a regional/short-line railway. These railroads are described in more detail in the following section and shown in **Figure 2-12**.

- ▶ **Union Pacific Railroad (UPRR):** UPRR is a Class I Railroad which has several rail lines in the North Front Range region. The north-south line runs from the Denver metro region through the North Front Range to Wyoming, generally following the US 85 Corridor. The majority of the east-west line of the UPRR runs between Milliken and LaSalle, with a switching yard in LaSalle, and from Milliken into Fort Collins. There are 17 trains per day on the UPRR.
- ▶ **BNSF Railway:** BNSF is a Class I Railroad which travels the length of the NFRMPO region, passing through Fort Collins, Loveland, and Berthoud, parallel to US 287, with a switch yard in Fort Collins. Six trains operate per day on the BNSF line.
- ▶ **Great Western Railway of Colorado (GWR):** GWR is a regional/short-line railroad. GWR operates a total of 80 miles of track and interchanges with both BNSF and UPRR. The company operates freight service between Loveland and Johnstown, with spur lines to Milliken and Longmont. Another line connects north from Kelim (east of Loveland) to Windsor, and from there to Greeley and Fort Collins. GWR also owns a branch line from Johnstown to Welty (just west of Johnstown). GWR serves a diverse customer base including the Great Western Industrial Park. GWR is managed by OmniTRAX.

Figure 2-12: Regional Railroad Lines by Owner



Apr, 2015
Sources: CDOT, 2015

Freight Safety

Freight vehicles and passenger vehicles interact on the roadway system and at the 316 at-grade railroad crossings in the region. **Table 2-11** lists the number of crashes at these at-grade rail crossings. In the 10-year period between 2004 and 2014, 25 incidents between trains and passenger vehicles occurred at regional at-grade railroad crossings, with nine injuries and two fatalities.

Table 2-11: Railroad Crossing Crashes

Year	Railroad	County	City/Town	Crossing ID	Roadway Name	Crossing Protection	Fatality	Injury
2005	GWR	Weld	Windsor	S45106Y	SH 257	Watchman	--	1
	UP	Weld	Eaton	804856D	CR 76	Stop signs	--	--
	UP	Weld	Greeley	816131K	22 nd Street	Cross bucks	--	--
2006	GWR	Larimer	Loveland	872128C	Denver Avenue	Highway traffic signal, Cross bucks	--	--
	GWR	Weld	Windsor	871917X	Eastman Park Drive	Cross bucks, Flagged by crew	--	--
	UP	Weld	Milliken	804538S	SH 257	Standard Flashing Light Signal, Audible, Cross bucks	--	--
	UP	Weld	Milliken	804539Y	CR 52	Cross bucks	--	3
2007	BNSF	Larimer	Fort Collins	244622C	Horsetooth Road	Gates, Cantilever Flashing Light Signal	1	--
	UP	Weld	Eaton	804853H	2 nd Street	Gates, Standard Flashing Light Signal, Audible, Cross bucks	--	--
	GWR	Weld	Windsor	244889T	CR 15	Cross bucks	--	--
2008	GWR	Larimer	Fort Collins	244647X	Summit View	Gates, Standard Flashing Light Signal, Audible, cross bucks	--	--
	GWR	Larimer	Loveland	921967R	Boise Avenue	Highway Traffic Signals, Wigwags, Bells	--	--
	UP	Weld	Eaton	804852B	CR 72	Cross bucks, Stop sign	--	--
	UP	Weld	LaSalle	804355Y	CR 48	Cross bucks, Stop sign	--	--
2010	BNSF	Larimer	Fort Collins	244632H	Plus Street	Cross bucks	1	--
	UP	Weld	Eaton	804855W	5 th Street	Cross bucks	--	--
	GWR	Weld	Windsor	245106Y	CR 23	Cross bucks	--	1
2011	BNSF	Larimer	Loveland	245032J	Private Road	Stop signs	--	--
	UP	Weld	Eaton	804852B	CR 72	Stop signs	--	--
2012	UP	Larimer	Fort Collins	804501C	CR 32	Gates	--	--

D. Bicycle and Pedestrian System

Bicycle System

Regional Bicycle Plan

The NFRMPO completed and adopted the NFRMPO Regional Bicycle Plan on March 7, 2013. This plan reports existing and proposed bicycle facilities on RSCs. The purpose of the plan is to:

- ▶ Provide a summary of existing bicycle facilities;
- ▶ Identify opportunities to connect and enhance the regional bicycle system;
- ▶ Identify regional bicycle corridors and provide implementation steps;
- ▶ Provide member governments with tools to support local bicycle planning;
- ▶ Position the NFRMPO to pursue multiple funding sources (including State and federal sources); and
- ▶ Fulfill the federal requirement to address bicycle planning as a component of the RTP.

The plan identifies existing facilities within the region, as well as 12 regional bicycle corridors which could serve as main routes for bicycle and pedestrian travel between and through local communities as well as connections to areas adjacent to the region. While certain segments of the regional bicycle corridors exist today, much of the network remains conceptual. One of the goals outlined in the plan is for the NFRMPO to provide local assistance in the planning and funding of these corridors. **Table 2-1** lists locations of the 12 regional bicycle corridors as outlined in the plan.

Existing Bicycle Facilities

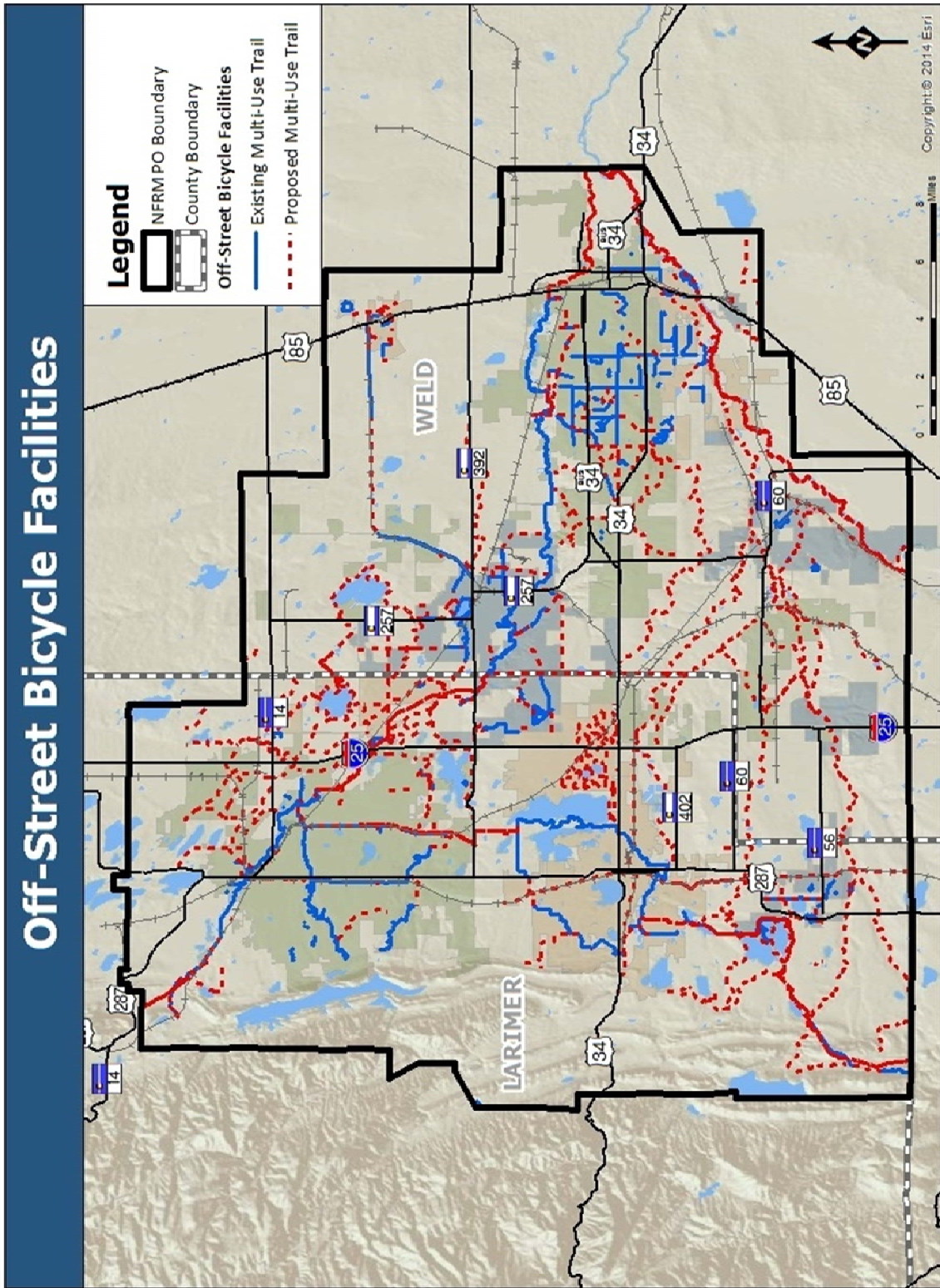
Facilities identified in the plan include multi-use off-street trails, on-street bicycle lanes, and on-street bicycle routes. The following are common definitions of these facilities:

- ▶ **Multi-Use Off-Street Facility** – a hard or soft surface trail designed to be used by commuters and recreationalists. These facilities are accessible to bicycles, pedestrians, equestrians, and other non-motorized users.
- ▶ **On-Street Bicycle Lane** - an on-street bicycle facility delineated by pavement markings and signage for the use of bicyclists. Typically located on roadways with a classification of collector and above.
- ▶ **On-Street Bicycle Route** – an on-street bicycle facility, delineated by signage only. These facilities tend to be located on lower volume residential streets or in semi-rural areas.

The facilities shown in **Figures 2-13 and 2-14** were identified from a number of sources, the NFRMPO Regional Bicycle Plan, local Master Street Plans and Standards, as well as existing local bicycle and pedestrian plans. They were further refined during discussions with individual local governments. **Table 2-12** shows the miles of bicycle facilities currently exist in the region.

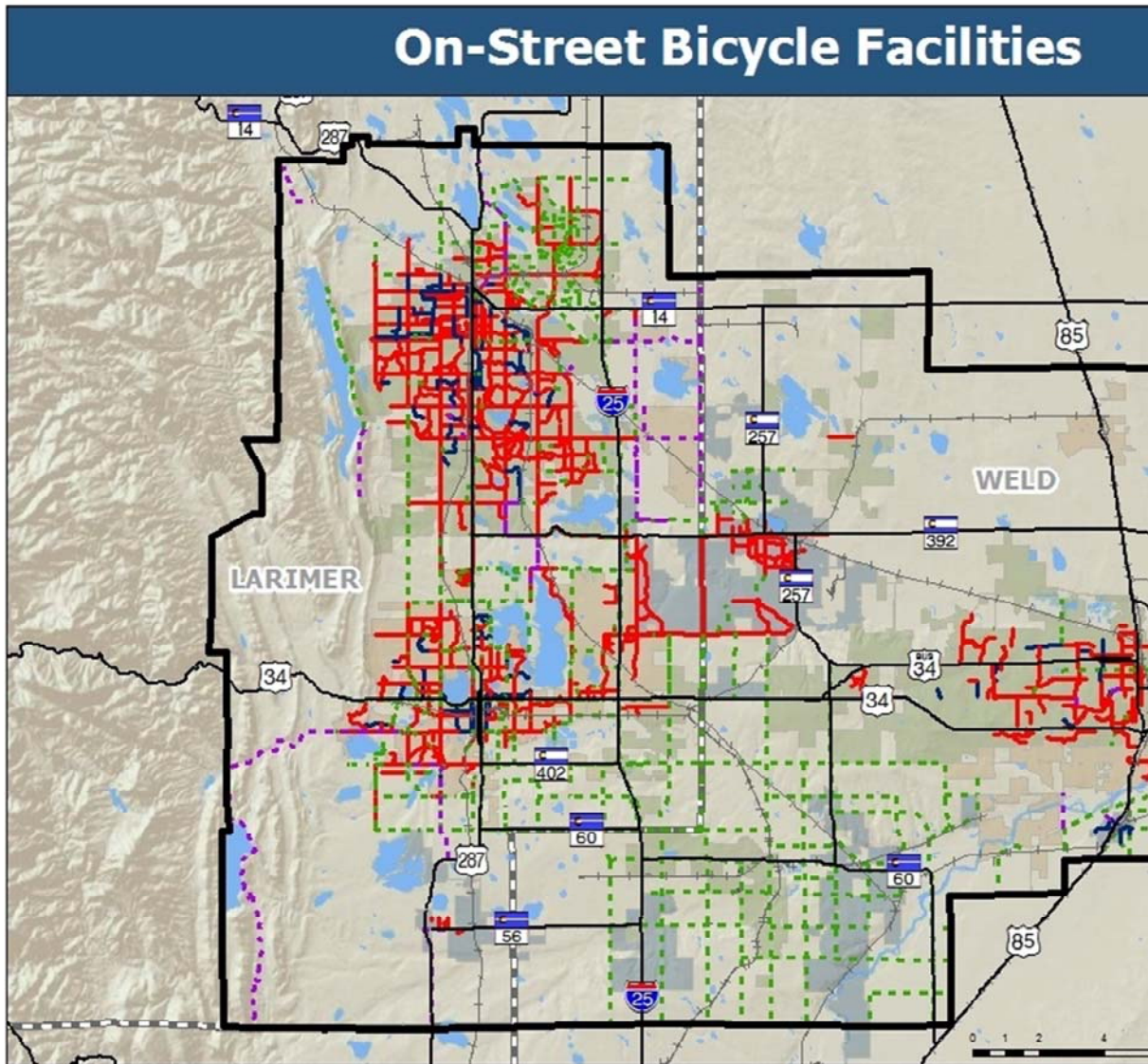
Table 2-12: Existing Bicycle Facility Miles			
Community	On-Street Bike Lane Miles	On-Street Bicycle Route Miles	Multi-Use Off-Street Facility Miles
Berthoud	2	0	1
Eaton	0	0	2
Evans	0	0	24
Fort Collins	142	25	31
Greeley	44	39	34
Garden City	0	0	0
Johnstown	2	0	0
LaSalle	0	2	0
Loveland	83	15	3
Milliken	0	0	4
Severance	1	0	0
Timnath	0	0	1
Windsor	20	0	22
Larimer County	69	2	26
Weld County	11	0	59
Total:	374	83	207
<i>Source: NFRMPO Regional Bicycle Plan, 2013</i>			

Figure 2-13: Off-Street Bicycle Facilities



Apr, 2015
Sources: CDOT, 2014

Figure 2-14: On-Street Bicycle Facilities



Pedestrian System

Existing Pedestrian Facilities

The NFRMPO also gathered data on existing pedestrian facilities, which includes multi-use off-street trails and sidewalks. The following are common definitions of these types of facilities:

- ▶ **Multi-Use Off-Street Facility** – a hard or soft surface trail designed to be used by commuters and recreationalists. These facilities are accessible to bicycles, pedestrians, equestrians, and other non-motorized users. **Figure 2-15** shows multi-use off-street facilities.
- ▶ **Sidewalk** – a paved walkway along the side of an existing street or roadway. Sidewalks are essential to support local transit service access.

The facilities in **Figure 2-15** were identified from a number of sources, the NFRMPO Regional Bicycle Plan, local Master Street Plans and Standards, as well as existing local bicycle and pedestrian plans. They were further refined by discussions with individual local governments. Sidewalk totals were only gathered for the communities of Evans, Fort Collins, Greeley, Loveland, and portions of Windsor due to limited Geographic Information Systems (GIS) resources in many of the member communities.

Table 2-13 shows current data gathered on the number of pedestrian facilities within the region.

Table 2-13: Existing Pedestrian Facilities		
Community	Multi-Use Off-Street Facility	Sidewalk Miles
Berthoud	1	--
Eaton	2	--
Evans	24	147
Fort Collins	31	844
Greeley	34	968
Garden City	0	--
Johnstown	0	--
LaSalle	0	--
Loveland	3	475
Milliken	4	--
Severance	0	--
Timnath	1	--
Windsor	22	--
Larimer County	26	--
Weld County	59	--
Total:	207	2,434
<i>Sources: NFRMPO Regional Bicycle Plan, 2013; NFRMPO Cities, Towns, and Counties, 2014</i>		

Bicycle and Pedestrian Count Locations

One challenge to implementing a regional bicycle system is documenting the system’s performance. In 2010, CDOT established a formal bicycle and pedestrian counting program which included the purchase of permanent and mobile bicycle and pedestrian counters for the State. In November 2014, NFRMPO staff met with CDOT, the City of Fort Collins, and Colorado State University (CSU) to establish the location for a permanent counter along a regional and local bicycle facility. It was determined a counter should be placed at the intersection of the Mason Corridor Trail (RBC 8: BNSF Fort Collins/Berthoud Trail) and the Spring Creek Trail in Fort Collins to gather accurate, year-round information on both bicycle commuters and recreational trail users. RBC 8 was identified as a possible location for a permanent bicycle counter location in the Regional Bicycle Plan.

Currently, the cities of Fort Collins, Greeley, and Loveland are the only municipalities collecting count data on their bicycle and pedestrian trail systems. Greeley and Loveland use mobile electronic counters to gather data, while Fort Collins recruited volunteers to conduct manual counts at the locations provided in **Tables 2-14 through 2-16**. Counts were collected between January, 2013 and September, 2014.

Table 2-14: Fort Collins Bicycle and Pedestrian Counts	
Location	Estimated Daily Average
Ziegler Road and Kechter Road	200
Power Trail at Horsetooth Road Trailhead	500
Mason Trail at Horsetooth Road Trailhead	650
Spring Creek Trail at Drake Road Trailhead	1,400
Horsetooth Road and Shields Street Intersection	450
Fossil Creek Trail at Spring Canyon Park Trailhead	900
Poudre River Trail at Lincoln Avenue Trailhead	950
Spring Creek Trail at Lee Martinez Park Trailhead	1,700
Mountain Avenue at Mason Street Intersection	1,150
Laurel Street and Remington Street Intersection	1,800
Prospect Road at Remington Street Intersection	1,800
Spring Creek Trail at Centre Avenue Trailhead	1,200
Taft Hill Avenue at LaPorte Avenue Intersection	750
Mountain Avenue at Remington Street Intersection	450
<i>Source: City of Fort Collins, 2014</i>	

Table 2-15: Greeley Bicycle and Pedestrian Counts

Location	Daily Average	Peak Day Volume	Peak Day	Count Month
Poudre River Trail at Island Grove Trailhead	69	211	Monday	January
Poudre River Trail at 25 th Avenue Trailhead	72	335	Sunday	January
Poudre River Trail at 35 th Avenue Trailhead	149	437	Sunday	May
Poudre River Trail at 35 th Avenue Trailhead	240	403	Saturday	July

Source: City of Greeley, 2014

Table 2-16: Loveland Bicycle and Pedestrian Counts

Location	Daily Average	Peak Day Volume	Peak Day	Count Month
North Taft Avenue – Between 8 th Street and 10 th Street	46	49	Wednesday	June 4 – December 31, 2013

Source: City of Loveland, 2014

E. Transportation Demand Management Program

Transportation Demand Management (TDM) strategies are actions which improve transportation system efficiency by altering transportation system demand rather than roadway capital expansion. TDM strategies include the following:

- ▶ Reducing trip length or time;
- ▶ Encouraging off-peak travel; and
- ▶ Reducing single-occupancy vehicles (SOV) on roadways.

In 1996, the NFRMPO began implementation of the SmartTrips™ program for Northern Colorado with designated staff from the NFRMPO and the communities of Fort Collins, Greeley, and Loveland. The program was part of a package of strategies developed to reach the goals established by the NFRMPO which include reducing the number of trips made by SOVs by 10 percent by the year 2015.

The NFRMPO currently provides several TDM programs, including the VanGo™ vanpooling program, ride matching through the Go Portal (www.smarttrips.org), and business outreach services and events.

NFRMPO Household Survey of 2010 and Implications for TDM

The NFRMPO conducted a household survey in 2009 for the NFRMPO sub-regions. Staff collected data throughout the region and documented it in the NFRMPO Household Survey of 2010. The survey was conducted

in the same manner across all sub-regions, providing a snapshot of current travel behavior throughout the North Front Range. The data has been used to target TDM service improvements for existing programs as well as exploring the potential for new services and programs in the region.

Key differences between the cities, towns, and rural areas in the region are reflected in household travel behavior. Some characteristics include:

- ▶ **Fort Collins** – Fort Collins households report smaller-than-average household sizes and fewer vehicles. These households report the highest levels of non-motorized travel in a typical week and the highest levels of transit pass ownership. Household members have higher-than-average education levels and more students per household than the other areas. Fort Collins respondents have a higher average number of bicycles per household and report riding a bicycle or walking to work or school more frequently than other parts of the region.
- ▶ **Greeley/Evans** – Households in the Greeley/Evans area are the most unique of the four areas. Consisting of more retirees and minorities than other areas, these households tend to be smaller, with fewer vehicles, fewer students, fewer workers, lower incomes, and the highest disability rates. The Greeley/Evans area has higher renter rates, and respondents are more likely to hold a transit pass than other areas of the region, with the exception of Fort Collins. Households in the Greeley/Evans area use transit more frequently than other parts of the region. Thirteen percent of Greeley/Evans drivers do not have a driver’s license, which may contribute to higher levels of walking or transit use.
- ▶ **Loveland** – Loveland households tend towards average regional characteristics. They report somewhat smaller household sizes and number of workers per household, but higher-than-average renters. Loveland households have above-average transit usage for the region.
- ▶ **Larimer County** – Household size in unincorporated Larimer County is smaller than average, but respondents report the highest number of vehicles per household. They have the highest licensure rate, lowest levels of disability, above-average number of workers per household, and have the highest reported income levels in the region.
- ▶ **Weld County** – Respondents in unincorporated Weld County are similar to those in Larimer County, with the exception that they have lower education rates and more Hispanic households than the regional average. They are younger, have more students, and report the largest household size. Transit use is lowest in unincorporated areas of Weld County.

I-25 Carpool Park and Ride Study

In the summer of 2010, the NFRMPO conducted a survey to determine how Park-n-Rides (PNRs) were being used along the I-25 corridor in the region. The six regional PNRs were surveyed during the morning (a.m.) and evening (p.m.) peak periods on weekdays, during July and August 2010. The regional PNRs include:

- ▶ Harmony Road (Fort Collins) –Exit #265
- ▶ SH 392 (Windsor) – Exit #262
- ▶ US 34 (Loveland) – Exit #257

- ▶ SH 402 (Loveland) – Exit #255
- ▶ SH 60 (Johnstown) – Exits #252 and #254
- ▶ SH 56 (Berthoud) – Exit #250

The results of the surveys show a significant change in PNR use compared to previous surveys. Highlights from the 2010 survey include:

- ▶ SH 402 and SH 60 approached or exceeded 100 percent capacity on the days surveyed. At the SH 402 PNR, which currently has 88 paved spaces, users were also parking in a makeshift unpaved extension of the lot.
- ▶ SH 392 had the largest drop in use (from 36 vehicles in previous surveys to 11-12 vehicles).
- ▶ License plate data collected from 532 license plates and matched with home addresses in Northern Colorado revealed 38 percent of the cars at the six PNRs were from the Fort Collins area, while 25 percent were from the Loveland area. Berthoud, Greeley, Johnstown, and Denver Metro area each yielded between 9 and 10 percent.
- ▶ Carpools represent more than 70 percent of the overall usage at PNRs in the NFRMPO region. Vanpools accounted for 24 percent of the vehicles leaving in the morning and 20 percent of the vehicles arriving in the afternoon. The Harmony Road PNR had the largest number of morning and afternoon carpools (39 and 48 vehicles, respectively).
- ▶ 54 percent of carpools in both the morning and afternoon contained two passengers while the three passenger vehicles accounted for 11 and 18 percent, respectively.

Regional TDM Efforts

NFRMPO serves as the regional coordinator for TDM programs in the North Front Range. This includes the VanGo™ Vanpool Services program and business outreach.

VanGo™

The VanGo™ program, managed by the NFRMPO, provides vanpool services to meet the origin and destination needs of commuters in the region and between the North Front Range and the Denver Metro area. The program, which began in 1994, has grown over the last 20 years to more than 400 riders and 74 routes in 2014.

SmartTrips™

The NFRMPO has focused on regional modes of transportation, including carpooling and vanpooling along with the ridesharing website www.smarttrips.org. The NFRMPO developed a free online tool, The Go Portal, which allows commuters to find carpool matches, calculate commute savings, and get information on commute options.

CarGo™

Carpool matching is provided by CarGo™, a ridesharing system available through the SmartTrips™ website. The CarGo™ program enables users to receive personalized carpool matches. The tool matches carpool participants who live near each other and are traveling in the same direction, during the same time period, to share the ride to school or work.

Bicycle Programs

The NFRMPO works with CDOT and local governments to promote Bike Month and Bike to Work Day every June. Additionally, there are more than 290 miles of bicycle facilities (bike routes, paths, lanes, and off-street trails) within ¼-mile of the RSCs in the region (I-25, US 34, and US 287 and parallel facilities, as defined in *Section A*). The SmartTrips™ website allows users to track miles of bicycle travel. Tracking these miles serves as an important performance measure for the program. Personal and employer incentives will need to be employed to increase reporting participation.

Local Government TDM Efforts

Local governments in the region are also involved in TDM efforts. Transit and bicycle programs are the most common focus of TDM efforts in the NFRMPO region. Some local governments have also developed ITS which provide information to travelers about traffic, weather, construction, and other travel factors.

City of Fort Collins

The City of Fort Collins is the largest city in the NFRMPO region, with a population of 143,986 (2010 Census). It is an economic and academic hub within the region and is home to CSU.

FCTrip

FCTrip is a web-based application that provides information to travelers in the City of Fort Collins, including:

- ▶ Timely and accurate information regarding traffic conditions;
- ▶ Information on weather conditions;
- ▶ Information on work area traffic, road construction, and road/lane closures; and
- ▶ Up-to-the-minute photographs of major intersections.

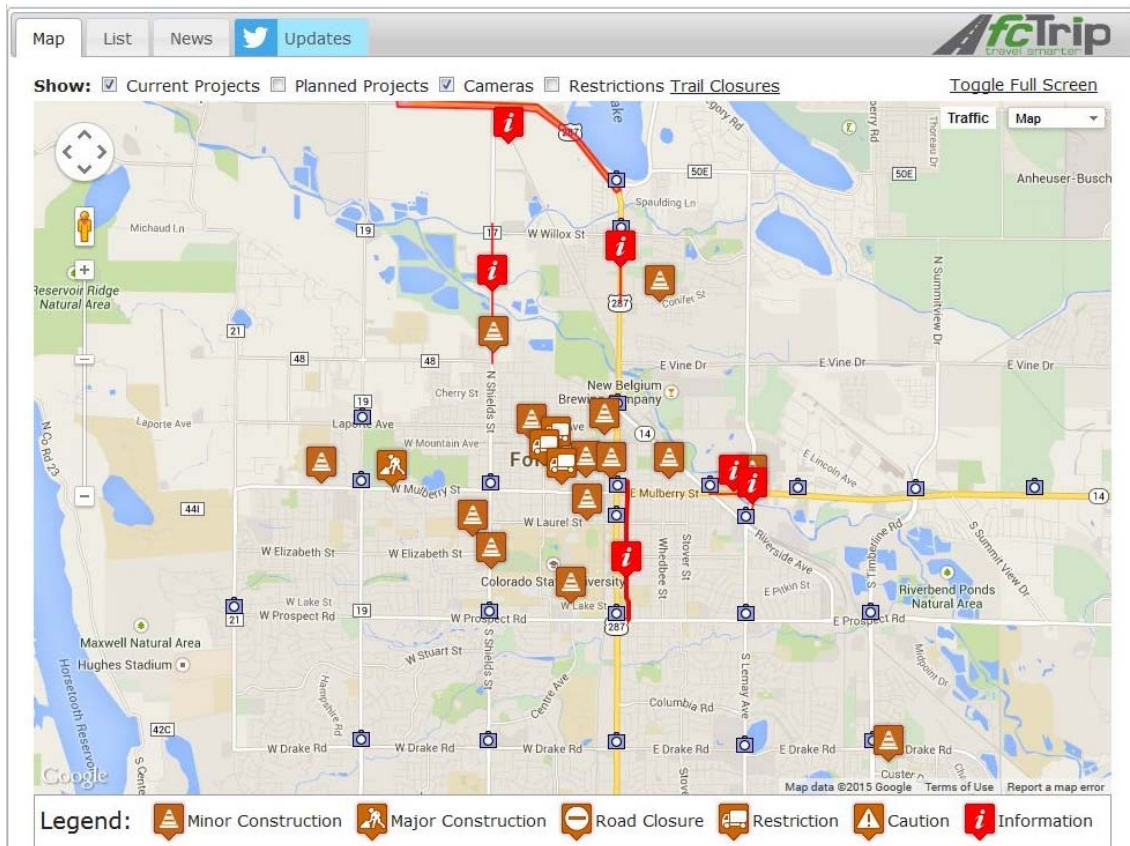
FCTrips provides this information through a network of closed-circuit television cameras, video detectors, and pavement sensors. Users are able to view real-time maps that provide information on traffic conditions, construction, and road closures. An example FCTrip map is shown in **Figure 2-16**.

Fort Collins Bike Library

The Fort Collins Bike Library was established in conjunction with FC Bikes – City of Fort Collins, New Belgium Brewery, the Downtown Development Authority, and Bike Fort Collins – a non-profit group established in 2005 for bicycle advocacy. The Bike Library provides bicycle and equipment rental service for residents, students, and visitors to Fort Collins for a minimal cost (first day free, \$10 each additional day). Members can borrow a bike for as short as one hour or for as long as seven days. The bike library provides a fleet of commuter bikes, cruiser bikes, children’s bikes, striders, tandem bicycles, and bicycle trailers to attract a broad user base. As of May 2015, just over 24,000 registered patrons have checked out over 24,000 bikes, logged over 275,000 miles, 109,000 rider days, and prevented nearly 125 metric tons of CO₂ from being released into the atmosphere.⁹

⁹ According to FC Bikes and Bike Fort Collins

Figure 2-16: FCTrip Map



Transfort

Transfort offers Passfort, an employer-based bus program which allows for a bulk purchase of bus passes. All buses are equipped with bicycle racks to increase multimodal transportation opportunities.

FC Bikes

FC Bikes is the bicycle program established for the City of Fort Collins. In 2014, Fort Collins completed an updated Bicycle Master Plan that covers a cost-effective approach to bicycle infrastructure, connectivity, policies, and programs. The plan aims to implement bicycle infrastructure improvements which will help the City achieve Diamond Status on Bicycle Friendliness by the League of American Bicyclists by the year 2020. The goals, principles, and policies that pertain to bicycling established in the City’s Plan and the Transportation Master Plan have laid the foundation for the current policies, projects, and programs as well as the focus for the numerous recommendations provided. In addition, FC Bikes promotes bicycling in the City by sponsoring events such as Bike to Work Day, Winter Bike to Work Day (in December), and BikeWinter, encouraging cyclists to ride throughout the winter. Winter Bike to Work Day in December is the cornerstone event, with increased numbers of participants in each year since its inception in 2007. The City of Fort Collins Transportation Board incorporated a bicycle sub-committee in 2009.

Climatewise

Climatewise is a free, voluntary City of Fort Collins program that assists local businesses and the environment through the promotion of waste reduction, energy savings, alternative transportation, water conservation, and practicing pollution prevention.

Colorado State University – TDM Programs

With an enrollment of 26,775 students for the 2015 Spring Semester,¹⁰ CSU has a significant transportation impact on the City of Fort Collins. The presence of students and faculty impacts the City's demographics and transportation system. For example, Fort Collins has a higher level of bicycle commuting than the national average and other parts of the region. This can be partially attributed to the student population. In addition, more than 35 percent of Fort Collins households reported that someone walks or bikes to work or school at least once a week.¹¹ CSU has implemented TDM programs to alleviate parking issues and congestion on campus.

All CSU students, faculty, and staff are able to ride the Transfort bus system at no cost, using their university identification card. The transit center at Lory Student Center, opened in 2006, includes a Transfort customer counter, flat screen monitors displaying departure times and news stories, and an indoor passenger waiting area to increase comfort and convenience. The transit center is certified LEED Gold.

The Fort Collins Bike Library also has a station at the Lory Student Center, providing students, faculty, and staff access to bicycles. CSU has hundreds of user-friendly bike racks to accommodate an estimated 14,200 bicycle parking spaces on the main campus and 1,100 spaces at the satellite campuses.¹² CSU also provides a full subsidy for employee vanpools through the VanGo™ program.

City of Loveland

In 2012, the City of Loveland completed their Bicycle and Pedestrian Plan which covers strategies and activities to increase the use and convenience of bicycle and pedestrian facilities throughout the City. The plan aims to provide goals and objectives to provide a safe and effective bicycle and pedestrian system, fill in missing segments in the system, design and develop a complete streets system, and develop a continued source of funding for bicycle and pedestrian infrastructure.

Loveland also sponsors an annual Bike to Work Day event, including a business challenge to encourage employers to promote cycling as a transportation option to their employees. Additionally, the City of Loveland's Engineering Department has partnered with the Thompson School District to promote Safe Routes to School Program. This program benefits children and the community by reducing traffic congestion in school zones, improving air quality, increasing physical activity for children and adults, and promoting safe neighborhoods.

City of Greeley

The City of Greeley is home to approximately 115 miles of bike lanes, trails, and paths and was designated a Bronze Level Bicycle Friendly CommunitySM by the League of American Bicyclists in May 2013. Greeley's Bicycle

¹⁰ Colorado State University Census Enrollment, spring 2015. Department of Institutional Research, Colorado State University

¹¹ NFRMPO Household Survey of 2010

¹² Colorado State University Bicycle Master Plan, 2014

Master Plan was adopted in May 2015 and aims to increase investment in the bicycle and pedestrian system through a dedicated budget and implementation of a complete street program.

The City also hosts a number of cycling events throughout the year, including bike to work day and pop-up demonstrations of enhanced bicycle facilities. Greeley has also used the Safe Routes to School Program to provide funding for school zone enhancements to the bicycle and pedestrian system.

Local Transit Programs

Transit is a large portion of TDM and *Section H* of this chapter provides more detail about the various regional transit programs.

Employer-based TDM programs

Employer-promoted TDM programs are an effective, locally-based mechanism to increase employee use of alternative modes for their commute to work.

A notable employer-based TDM effort in the region is the New Belgium Brewery. New Belgium actively promotes and supports bicycle commuting within their company and nation-wide. New Belgium employees receive a custom cruiser bicycle after one year of employment with the company. Team Wonderbike is New Belgium's bicycle commuter advocacy program with more than 10,000 members who have pledged to offset more than eight million car miles per year by riding their bikes. New Belgium also offers local grants, sponsorships, and product donations to applicants whose objectives align with New Belgium's.

CDOT offers TDM programs to its employees located throughout Colorado. Employees who work in the NFRMPO region are provided with a monthly commuter check worth \$35 to subsidize vanpool costs. Employees who travel to the Denver metro area for meetings are provided with a RTD Eco Pass allowing them to ride transit. Full-time employees who commute to the Denver region from the NFRMPO region are also provided with Eco Passes. CDOT sponsors Bike to Work Day events in June at all of its statewide offices and provides incentives for employees to ride their bikes to work through the month of July.

Several regional employers promote transportation alternatives in conjunction with other events at the workplace, most commonly health fairs, including:

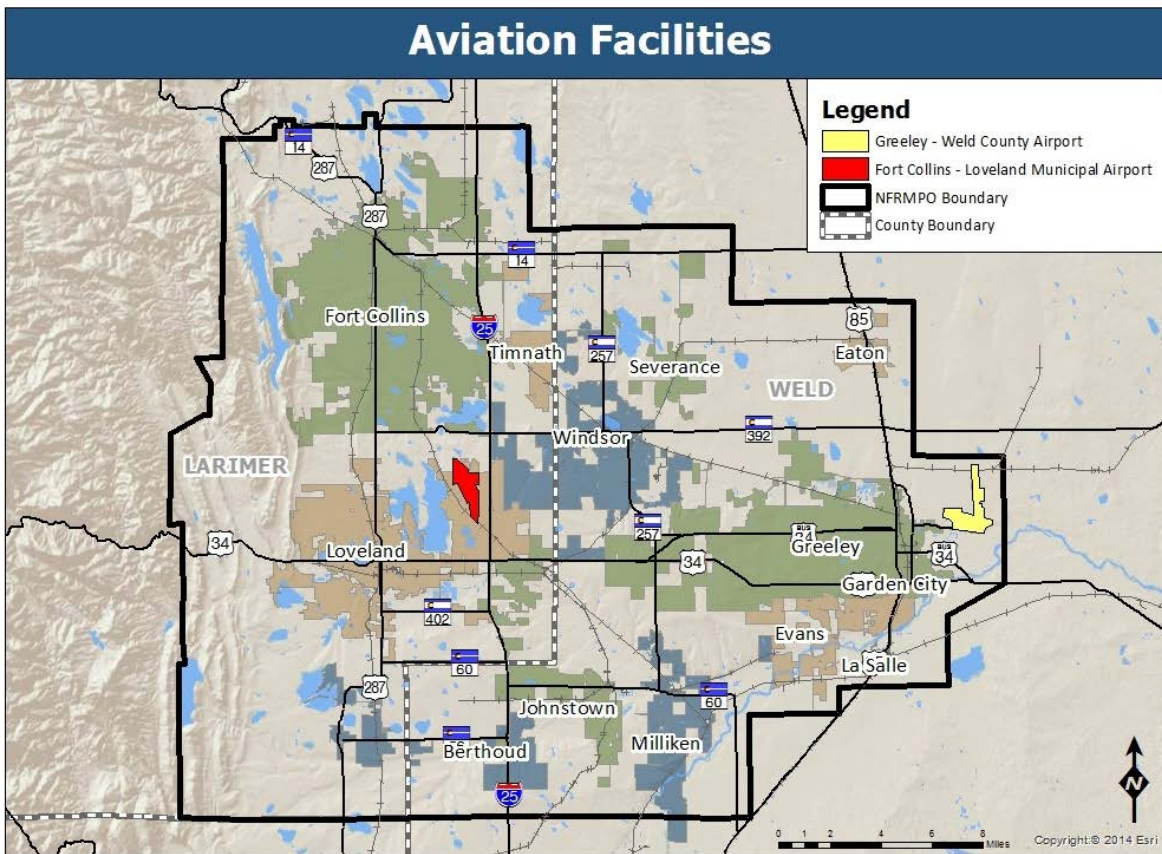
- ▶ Advanced Energy, Inc.
- ▶ AMD
- ▶ Avago Technologies
- ▶ Gallegos Sanitation
- ▶ Hach
- ▶ Hewlett-Packard
- ▶ Intel
- ▶ LSI Corporation
- ▶ McKee Medical Center
- ▶ Platte River Power Authority - Rawhide Power Plant
- ▶ Rickards Long & Rulon, LLP
- ▶ Poudre River Public Library District

- ▶ State Farm Insurance – Great Western Region
- ▶ Weld County
- ▶ Woodward Governor

F. Aviation Facilities

Two airports currently operate within the NFRMPO region: Fort Collins-Loveland Municipal and Greeley-Weld County. The Fort Collins Downtown Airport closed in 2006. Each of the two operating facilities is described in more detail in the following sections. **Figure 2-17** shows the location of the two regional airports.

Figure 2-17: Regional Airports



Apr, 2015
Sources: CDOT, 2015

Fort Collins-Loveland Municipal Airport

Fort Collins-Loveland Municipal Airport (FNL) is a Major Commercial Service Aviation airport, which operates under a limited Federal Aviation Regulation (FAR) Part 139 certificate. This Regulation establishes operation procedures for commercial service. The airport previously had regularly scheduled commercial service through Allegiant Air, which was discontinued in October 2012. The airport has two runways - 15/33 and 6/24. Runway 15/33 is 8,500 feet in length and has a width of 100 feet. This runway has an asphalt surface with high intensity runway lighting. Runway 6/24 is 2,273 feet in length and 40 feet in width. This runway has an asphalt surface, but does not have any runway lighting. The airport is equipped with a VHF (Very High Frequency) Omni-

directional Range (VOR), an Instrument Landing System (ILS), and a Global Positioning Satellite (GPS) as navigation aids.

In 2013, the airport had approximately 95,000 flight operations including air carrier, private charter, corporate, air ambulance transport, aerial fire suppression, flight training, and general aviation usage. An estimated 4,000 inbound and outbound flight passengers used the airport via charter services.¹³ According to the CDOT Division of Aeronautics, approximately 54,000 passengers arrive at the airport annually.¹⁴ In 2013, the airport employed 826 people with a total payroll of approximately \$24.8 M. The total economic impact of the airport (including direct, indirect, and induced impacts) is estimated to be \$129.4 M.¹⁵ The airport also has 215 based aircraft including single-use aircraft, multi-use aircraft, jet aircraft, and helicopters.

In 2007, a master plan for the airport was completed to evaluate existing and future aviation facilities and demands. The plan covers a 20-year time horizon and predicts future aviation and general development needs for the airport. Sections of the plan include an inventory of existing conditions, forecasts of aviation activities, capacity analysis and future facility requirements and expansion, a development plan, environmental analysis and impacts, financial impact analysis, and future development needs and layout plans. Future plans call for runway 15/33 to be expanded to 9,500 feet in length and 150 feet in width to accommodate larger commercial aircraft, as well as an increase in weight accommodation with an asphalt overlay. Runway 6/24 is expected to be expanded to 60 feet in width and maintain its existing length. The airport also plans to construct an additional runway west of 15/33 with a length of 6,700 feet and width of 75 feet to accommodate additional operations of smaller aircraft. The airport expansion plans are estimated to maintain 179,364 annual operations, an increase of 84,364 annual operations from 2013 estimates.

Table 2-17 shows changes in total employment and economic output at the Fort Collins–Loveland Airport from 2003–2013.

Table 2-17: Fort Collins – Loveland Municipal Airport Economic Factors			
	2003	2008	2013
Total Employment	619	749	826
Total Economic Output	\$37,178,00	\$56,316,800	\$129,426,000
<i>Source: CDOT Economic Impact Study for Colorado Airports, 2013</i>			

Greeley-Weld County Airport

The Greeley-Weld County Airport (GXY) is a Major General Aviation airport with two runways: 10/28 and 17/35. Runway 10/28 is 5,801 feet long and 100 feet wide. This runway has an asphalt surface and medium intensity runway lighting. Runway 17/35 is 10,000 feet long and 100 feet wide. This runway also has an asphalt surface

¹³ City of Loveland. Fort Collins – Loveland Annual Report, 2013

¹⁴ CDOT Economic Impact Study for Colorado Airports, 2013

¹⁵ CDOT 2014 Annual Report, Division of Aeronautics

with medium intensity runway lighting. The airport is equipped with VOR, ILS, GPS, and Non-Directional Radio Beacon (NDB) as navigation aids.

In 2014, the airport had 145,000 annual operations including jet aircraft, helicopter, general aviation, and military usage. According to the CDOT Division of Aeronautics, approximately 23,000 passengers arrive at the airport annually.¹⁶ In 2013, the airport employed 672 people with a total payroll of approximately \$30.8 M.¹⁷ The total economic impact of the airport (including direct, indirect, and induced impacts) is estimated to be \$94.1 M. The airport also has a total of 224 total based aircraft including single-engine aircraft, multi-engine aircraft, jet aircraft, and helicopters.

In early 2004, a master plan was completed to identify future planning needs and improvements. The plan covers a 20-year time horizon and includes airport zoning, runway layout and expansion, airport terminal and hangar expansion, land use, noise mitigation, and utility layout plans.

Table 2-18 shows changes in total employment and economic output at the Greeley – Weld County Airport from 2003–2013.

Table 2-18: Greeley – Weld County Airport Economic Factors			
	2003	2008	2013
Total Employment	1,436	1,766	672
Total Economic Output	\$73,102,000	\$120,814,200	\$94,091,000
<i>Source: CDOT Economic Impact Study for Colorado Airports, 2013</i>			

G. Intelligent Transportation System (ITS)

The uncertainty of funding for transportation and the need for continued bailout of the federal trust fund means that funding for large scale transportation projects cannot be guaranteed. ITS has become more popular because it improves the existing roadway system’s operations in a cost effective manner. ITS uses technology to improve mobility, increase safety, and reduce delays. Various ITS techniques within the North Front Range include:

- ▶ Adaptive Signal Systems
- ▶ Automatic Traffic Recording Devices - Tube Counters, Inductive Loop Detection, Bluetooth, Wi-Fi, Video Vehicle Detection
- ▶ Backup Traffic Signal Control Cabinets
- ▶ Closed Circuit TV
- ▶ Dynamic Message Signage

¹⁶ CDOT Economic Impact Study for Colorado Airports, 2013

¹⁷ Airport Data, www.gxy.net/airport-data, 2015

- ▶ Fiber Optic Communications (I-25, US 34, and throughout Greeley)
- ▶ In-Pavement Traffic Sensor - Inductive Loop Detection
- ▶ Lane Control Signage
- ▶ Maintenance Decisions Support System (MDSS) – Winter weather event maintenance
- ▶ Pavement Condition Detection
- ▶ Traffic Operation Centers
- ▶ Road and Weather Information Service (RWIS) – monitors weather conditions and traffic signals programmed to adapt their timing in response to traffic congestion
- ▶ Weather Stations – Provide precipitation detection, visibility measurements, wind speed, surface condition, etc.

Communities in the North Front Range have partnered with CDOT to implement a variety of projects. In 2011, CDOT, NFRMPO, and local jurisdictions developed the [CDOT Region 4 Intelligent Transportation Systems Strategic Implementation Plan](#). The plan serves as the guiding document for ITS projects in the region to 2021, and identifies the funding needs, recommended deployment time frames, and potential funding sources.

In addition to projects sponsored by local communities, CDOT operates its COTRIP website (www.cotrip.org) offering travel alerts, road conditions, speeds, and road work advisories for the entire State. Using this website, residents can use the State’s available ITS information to choose the best routes, best mode, or view any detours. The program takes advantage of previously completed ITS projects to offer commuters an idea of conditions before they begin their travel. Traffic cameras around the region provide live updates on traffic. The cameras are located in municipalities as well as key spots along the I-25 corridor. CDOT also provides an App, CDOT Mobile, which provides real-time travel information. Travelers can also sign up for text messages and emails which provide similar updates.

Within the region, the cities of Fort Collins, Greeley, and Loveland use ITS to monitor traffic and control traffic signals.

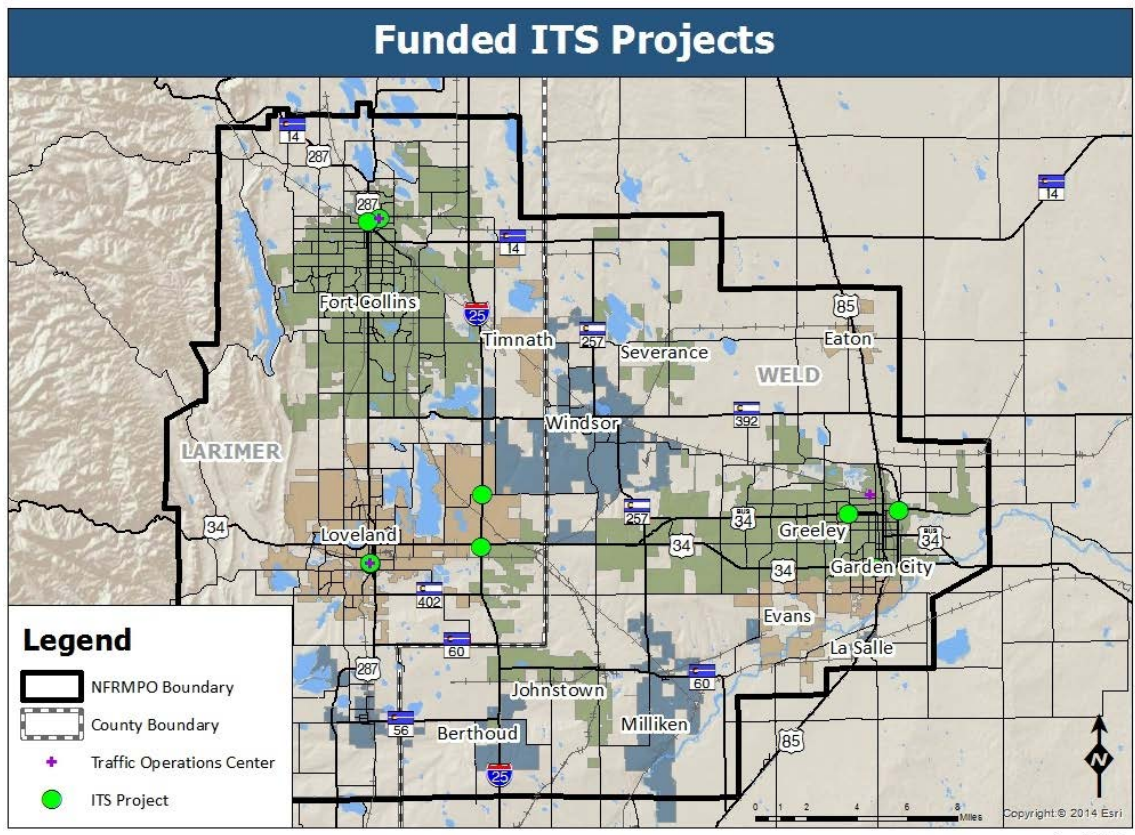
- ▶ From the City’s Traffic Operations Center (TOC), Fort Collins uses Advanced Traffic Management System (ATMS), which consists of wireless communication and fiber optic technology to connect 175 traffic signals; 42 closed circuit television cameras (CCTV); and remote data sensors. With this system, Fort Collins can monitor the transportation system, modify signal timing, and troubleshoot signal malfunctions. In 2014, the City introduced a system which measures travel time using Bluetooth readers throughout the City. Using the Bluetooth signal from passing devices, the TOC can monitor travel times along major corridors. The sensors can be read in real-time, allowing TOC staff to adjust traffic signals as needed. Additionally, the sensors allow City staff to study traffic patterns over time which can lead to adjustments in the traffic signal timing.
- ▶ From Loveland’s TOC, the City can use CCTV, variable message signs (VMS), weather-monitoring stations, and the fiber optic network to adjust traffic signals and to improve the flow of traffic. Loveland has completed projects adding fiber optic cables to enhance communication to local traffic controllers. The City of Loveland is currently exploring Bluetooth technology to monitor travel times throughout the City.

- Between 2009 and 2014, the City of Greeley made a concentrated effort to bring their traffic signal operation into the 21st century. The City has installed a Traffic Management Center, upgraded all signals with Advanced Traffic Controllers, connected 117 traffic signals through 30 miles of fiber optic cable, installed 20 CCTV cameras, added two weather stations, and installed six permanent count locations. In addition, Greeley was the first in Colorado to install Adaptive Signal Control Technologies (ASCT) for the 15 traffic signals on the 10th Street Corridor. This adaptive signal operation has improved travel times and reduced accidents along the corridor. In 2015, the City will work with CDOT to add an additional 12 traffic signals along the US 85 and US 34 Bypass corridors to the adaptive system. The City of Greeley is currently exploring Bluetooth technology to monitor travel times throughout the City.

CDOT is currently installing fiber optics on I-25, which will act as the backbone for larger ITS projects on state highways. The project includes fiber wiring and cameras as well as hooking up the permanent Vehicle Messaging Services (VMS). CDOT Region 4 is installing fiber, cameras and VMS on US 34 from I-25 to west Greeley and will be installing ramp meters between SH 392 and Harmony Road.

Figure 2-18 shows the projects funded in the FY 2012-2017 Transportation Improvement Program (TIP). Many of the projects were city-wide, including improvements to traffic control centers and traffic signal upgrades. In these cases, the point shows the location of the traffic control center rather than a specific project location. Table 2-19 shows the location and funding sources for each of the ITS project.

Figure 2-18: Funded ITS Projects



Project	Funding Source	Location
Northern Fort Collins Rail Crossing Signals	CMAQ	Fort Collins
Greeley Fiber Optic Communication	CMAQ	Greeley
Loveland Traffic Signals Controllers	CMAQ	Loveland
Loveland I-25/US 34/Crossroads VMS	CMAQ	Loveland
Loveland Traffic Operations Center	STP-Metro	Loveland
Greeley Fiber Optic Communication	STP-Metro	Greeley
Implementation of Network Management System	FASTER	Fort Collins
Adaptive Signal Control US 85 (Greeley)	RAMP	Greeley
US 34 Bypass (Greeley) Adaptive Signals	RAMP	Greeley
US 34 from I-25 to West Yard Fiber Installation	RAMP	Greeley
<i>Source: NFRMPO FY2012-2017 TIP</i>		

H. Transit System

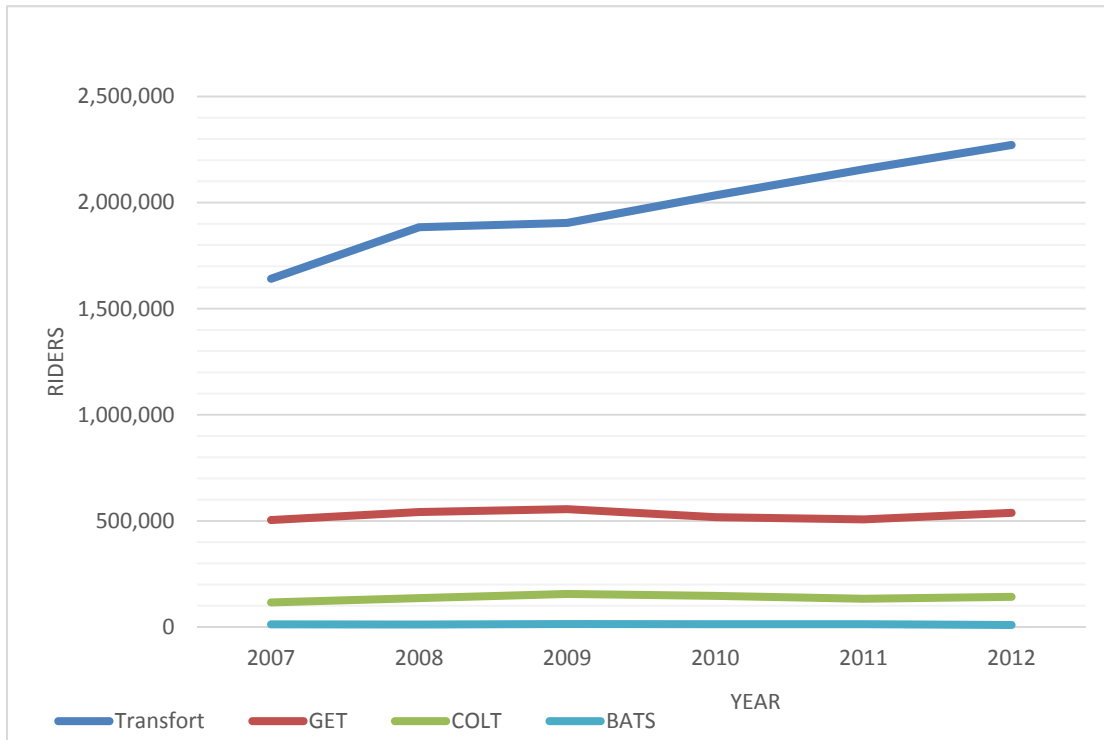
This section provides information on municipal, county, private, and non-profit transit providers. These entities operate services in both urban and rural areas, including limited interregional services.

Public Transportation Providers

Current public transportation systems in the North Front Range region include those operated by the cities of Fort Collins, Greeley, and Loveland, and the Town of Berthoud. Other transportation services active in the region include transportation services provided by volunteers, such as Senior Alternatives In Transportation (SAINT) and Rural Alternative for Transportation (RAFT), several commercial transportation providers, and the NFRMPO VanGo™ subscription vanpool program.

Public transportation in the region has evolved primarily as a city government function. SAINT and the Berthoud Area Transportation Services (BATS) evolved to meet the needs of seniors, while the transit services in Fort Collins, Greeley, and Loveland operate fixed-routes and paratransit services which serve broad markets. **Figure 2-19** illustrates the comparative levels of ridership among the publicly funded systems.

Figure 2-19: Ridership on Publicly Funded Services



Source: BATS, COLT, GET, and Transfort, 2013-2015

Transfort – The City of Fort Collins

The Transfort system is owned and operated by the City of Fort Collins. Transfort provides fixed-route and paratransit services. The paratransit service is known as Dial-a-Ride.

Transfort’s fixed-routes are illustrated in **Figure 2-20**. Transfort operates 20 local routes, two late night weekend services, one bus rapid transit route, and one regional route. Routes generally run from 6:30 a.m. until 6:30 p.m., Monday through Saturday, but there is considerable variation with some routes to the CSU campus operating until 10:00 p.m.

Transfort charges a single ride fare of \$1.25, discounted to \$0.60 for seniors (60+) and disabled or Medicare recipients. The fare for the late night weekend service is \$1.00 each way, discounted to \$0.50 for seniors and disabled or Medicare recipients. There is no fare for transfers, youths (17 and under), and full-time CSU students, faculty, and staff with a valid RamCard.

Service Characteristics

In 2012, Transfort carried more than 2.29 Million passengers on the fixed-route system, which increased from 1.9 Million passengers in 2009. The fixed-route system has a productivity of 29.2 riders per hour. Routes 2, 3,

and 11 serve the CSU campus and are some of the most productive in the system.¹⁸ These three routes carry a combined average of 73 passengers per hour. Similarly, routes 91 and 92 are designed to serve Poudre School District (PSD) students and operate limited hours with high productivity. The remaining routes average 22.9 riders per hour.

As required by the federal government, Transfort operates Dial-a-Ride service within ¼-mile of regular fixed-routes. In 2012, the system provided 19,429 hours of service and carried 37,747 riders. Transfort provides travel training to Dial-a-Ride users who are interested in learning to use the fixed-route buses for some or all of their trips.

Vehicles

Transfort operates a fleet of 43 vehicles, ranging in age from two to 18 years old, with the average vehicle age of 7.6 years. All vehicles are Americans with Disabilities Act (ADA) accessible. The entire fleet is expected to be fueled by Compressed Natural Gas (CNG) within the next 2 years. Veolia Transportation leases six vehicles from Transfort to operate all paratransit service within the Transfort service area.

Excluding buses earmarked for disposal in 2015, there are currently six vehicles in the Transfort fleet in excess of Federal Transit Administration (FTA) service life standards. Two of the six vehicles are five years past their service life and the remaining four are four years past their service life.

System Characteristics

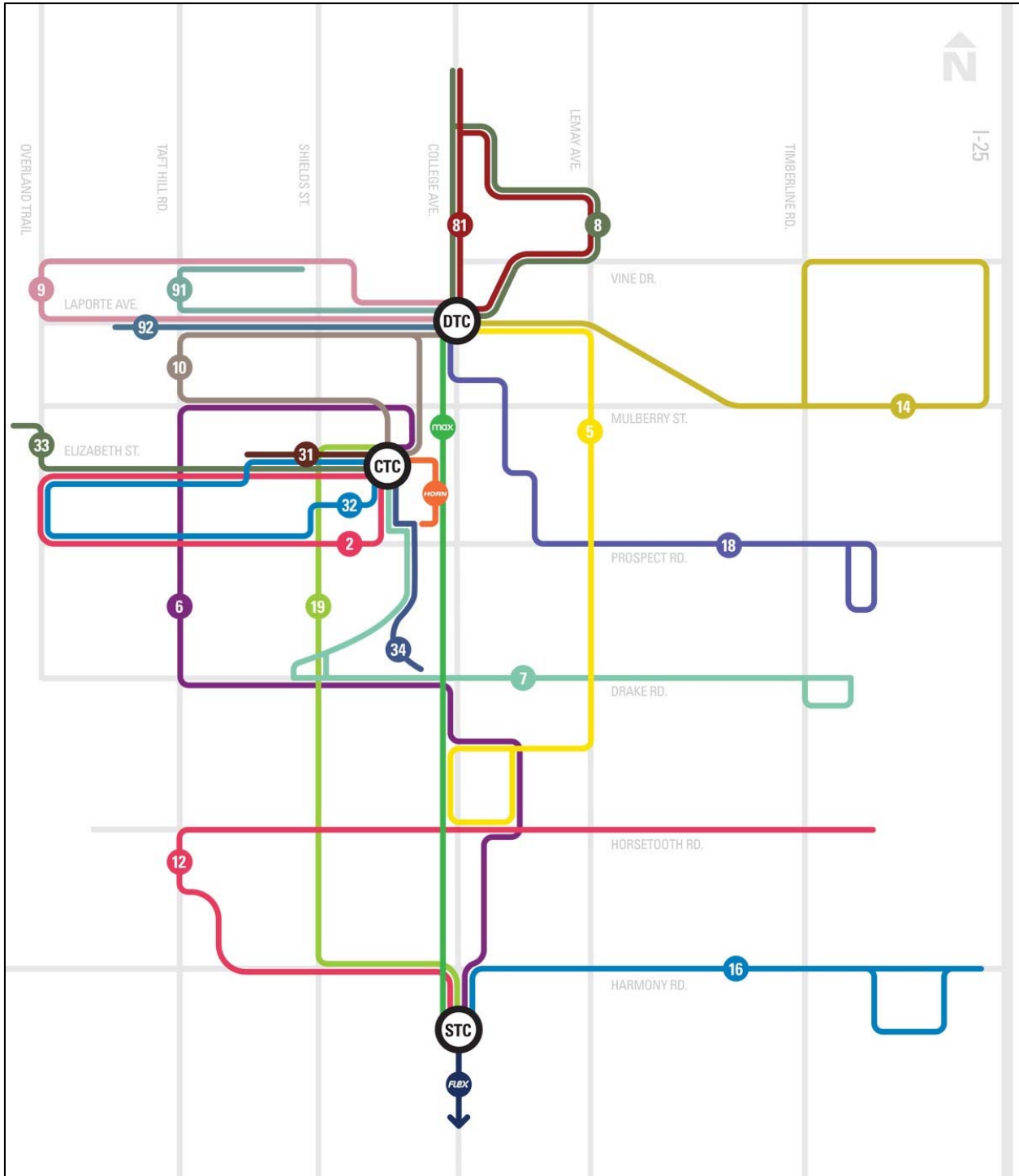
Table 2-20 shows the system-wide characteristics over the six year period of 2007 to 2013. All categories show a steady increase, with a 38.4 percent increase in ridership and 44.7 percent increase in service hours.¹⁹ There was a 49.2 percent increase in costs and a 74.2 percent increase in fare revenues during this period.

The City of Fort Collins funds Transfort with a combination of FTA urbanized area funds, city general funds, operating revenues, and contract revenue for CSU and PSD students. **Table 2-21** illustrates the system-wide performance measures for Transfort.

¹⁸ In 2014, Route 3 became Route 32 and Route 11 became Route 31.

¹⁹ Population assumption of 148,167 in 2012, provided by Colorado's DOLA.

Figure 2-20: Transfort System Map



Source: Transfort, 2015

Table 2-20: Transfort Trends, 2007-2012					
Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Costs	Annual Fares
2007	1,641,407	774,466	66,675	\$5,857,751	\$663,213
2008	1,884,197	798,952	68,368	\$6,288,216	\$699,681
2009	1,904,229	791,627	69,984	\$6,001,968	\$790,883
2010	2,034,195	913,682	75,563	\$6,267,239	\$869,409
2011	2,156,732	995,858	77,355	\$7,121,053	\$951,141
2012	2,271,732	1,028,405	78,551	\$7,303,399	\$955,073
2013	2,270,148	1,188,513	96,512	\$8,739,326	\$1,155,348
<i>Source: Transfort, 2014</i>					

Table 2-21: Transfort 2013 System-Wide Performance Measures	
Performance Measure	Total
Cost per Operating Hour	\$90.55
Passengers per Operating Hour	23.52
Cost per Passenger Trip	\$3.85
Subsidy per Passenger Trip	\$3.34
Farebox Recovery	13.2%
Ridership per Capita	14.93
Cost per Capita	\$57.47
<i>Source: Transfort, 2014</i>	

Mason Express (MAX) Service

Construction began on the MAX bus rapid transit service in summer of 2012, with service beginning in May 2014. The service provides an express bus service at 10-minute intervals during peak hours, a 20-minute trip from the Downtown Transit Center to the South Transit Center along the Mason corridor; **Figure 2-21**.

The MAX serves major activity and employment centers throughout Fort Collins, including Midtown, CSU, and Downtown. The MAX links with other Transfort bus routes, PNRs, the City’s bicycle/pedestrian trail system, and other local and regional transit routes providing seamless service for passengers.

The MAX's system has a partially dedicated corridor which runs parallel to the BNSF Railway Line, between the South Transit Center (south of Harmony Road) and Horsetooth Road and between Drake Road and University Avenue (CSU). This dedicated route is an integral part of the MAX service and is independent of traffic conditions. The MAX stations are spaced further apart than regular local-service bus routes, cutting transit commute times.

MAX implements a number of ITS technologies to ensure efficient service. Each bus stop is equipped with Dynamic Message Signs (DMS) to show passengers anticipated wait times. On board, DMS inform passengers of upcoming stops. Automatic vehicle location technologies help inform both the passenger and operator of bus location. Transit signal priority gives MAX buses reduced traffic signal wait times. Off-board fare collection increases system speed by eliminating driver interaction with fares. Automated passenger counters record system use and stop popularity. MAX buses have cameras on-board and at each stop for security and bus location purposes. Passengers can access also access MAX’s free on-board Wi-Fi.

FLEX Regional Transit Service

Prior to June 2010, the FoxTrot route operated between the cities of Fort Collins and Loveland. In June 2010, the FoxTrot route was replaced with the FLEX route, extending service from Loveland to Berthoud and Longmont. The route currently terminates at RTD’s Longmont 8th and Coffman PNR station, **Figure 2-22**. The service is operated by Transfort and funded through a regional partnership between the cities of Fort Collins, Longmont, and Loveland, the Town of Berthoud, and Boulder County. This service began as a three-year pilot project to connect riders in the North Front Range with the Boulder and Denver metro areas. During peak morning and

Figure 2-21: MAX Service Route Map

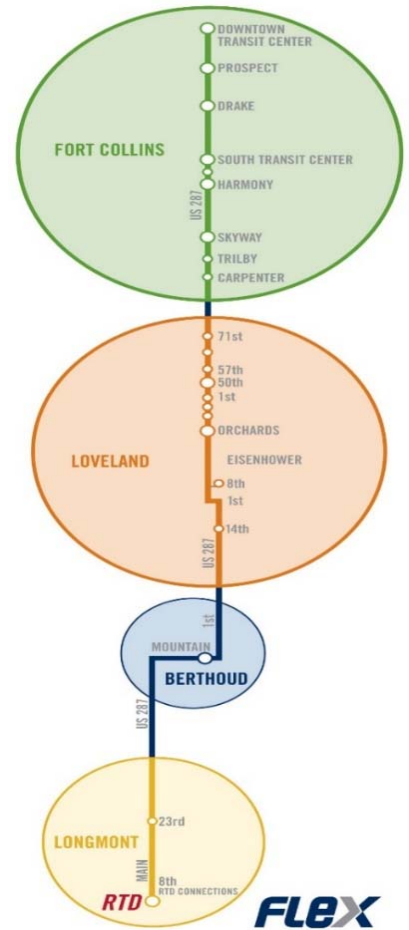


Source: Transfort, 2015

afternoon commute times, an express route operates on 30-minute headways at key stops between Fort Collins and Longmont. Off-peak service is provided at one-hour headways between Fort Collins and Loveland. In 2015, the service was awarded funding through the Denver Region Council of Governments (DRCOG) Congestion Mitigation and Air Quality (CMAQ) call for projects to expand service to the City of Boulder beginning in 2016.

In 2012, FLEX carried 184,649 passengers during 9,187 service hours or 18.5 passengers per hour. Service characteristics and performance measures for FLEX are listed in **Tables 2-22 and 2-23**.

Figure 2-22: FLEX Service Route Map



Performance Measure	Total
Cost per Operating Hour	\$83.42
Passengers per Operating Hour	18.47
Cost per Passenger Trip	\$4.52
Subsidy per Passenger Trip	\$4.21
Farebox Recovery	6.8%

Source: Transfort, 2015

Service	Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Costs	Annual Fares
FoxTrot	2007	89,642	67,128	3,930	\$227,848	\$14,827
	2008	108,176	66,911	3,918	\$211,604	\$15,958
	2009	111,228	67,347	3,973	\$350,740	\$14,965
FoxTrot & FLEX	2010	134,982	139,903	6,851	\$594,555	\$24,934
FLEX	2011	168,609	202,418	9,152	\$759,359	\$41,216
	2012	184,649	204,726	9,197	\$744,654	\$50,164
	2013	169,205	203,949	9,161	\$764,222	\$52,215

Source: Transfort, 2015

Greeley-Evans Transit (GET)

Greeley-Evans Transit (GET) is operated by the City of Greeley and provides fixed-route, paratransit services, and the door-to-door on-demand service, Call-N-Ride, to the public.

As of 2015, GET operates seven local fixed-routes, including a campus shuttle for the University of Northern Colorado (UNC), the UNC Boomerang. Additionally, GET provides evening demand-response service. **Figure 2-23** illustrates the system's fixed-routes through December 2015. **Figure 2-24** shows the system's fixed-routes proposed to begin in January 2016, operating out of a temporary transfer center north of Lincoln Park in downtown Greeley. The numbers on the map show the proposed corresponding route number. Routes generally run from 6:30 a.m. to 7:30 p.m., Monday through Friday and from 7:00 a.m. to 5:30 p.m. on Saturdays. The UNC Boomerang operates Monday through Friday when UNC is in session. Paratransit service, a door-to-door service for persons who qualify under the ADA, is operated within $\frac{3}{4}$ -mile of fixed-routes during the same time as fixed routes. Demand-response service operates within the same service area as paratransit and offers extended service during the evening for the general public, until 8:30 p.m. Monday through Saturday. Demand-response service is also available on Sunday from 7:45 a.m. until 1:45 p.m. There is no service on major holidays.

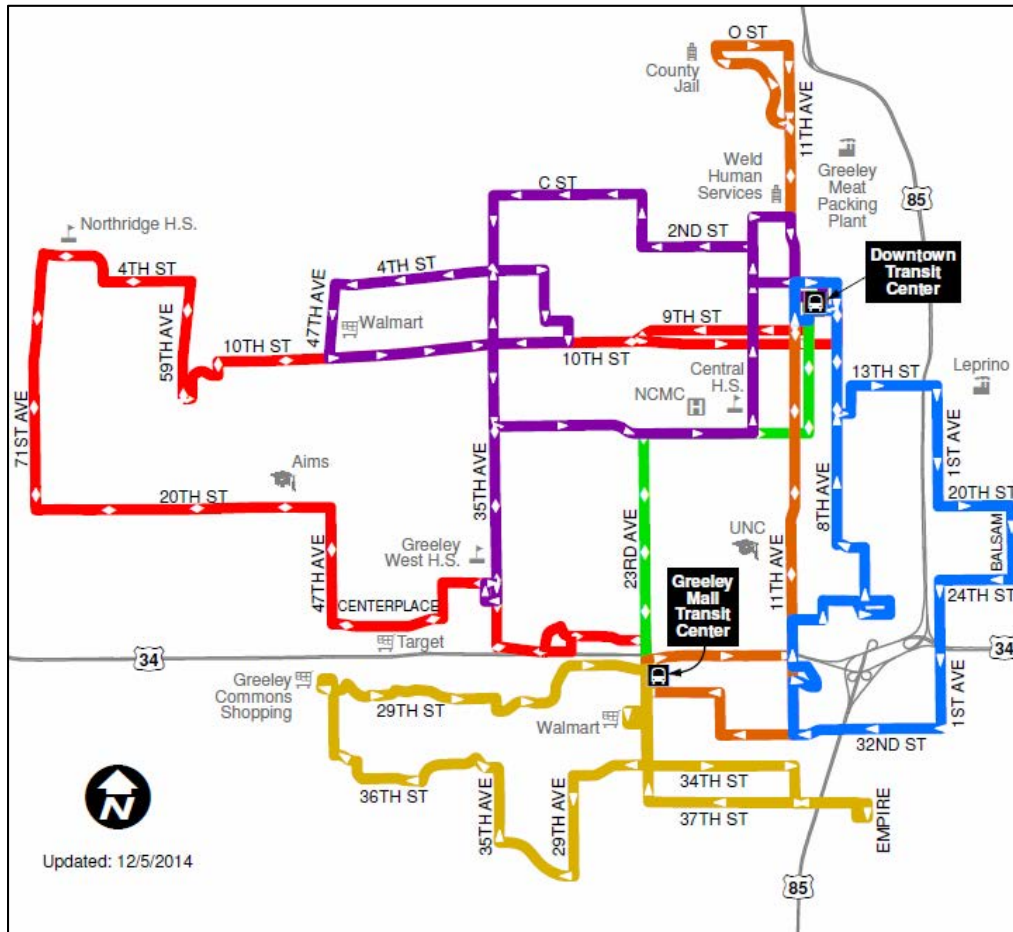
GET charges a basic single ride fare of \$1.50, discounted to \$0.75 for seniors, the disabled, Medicare recipients, and youth six to 18 years old. Children five years and under ride free. In August 2014, GET began its *Ride Free with a School ID* program which allows any student with a valid student ID to ride any GET bus for free. Student ridership increased from 12,858 in 2013 to 32,541 in 2014, a 153 percent increase. UNC students are not included in this program; however, they are allowed to ride for free under the University program. Aims Community College students are eligible to purchase a semester pass for \$64, but are not able to ride for free. A variety of multiple ride tickets and passes are also sold at a discount. Transfers are free.

Service Characteristics

In 2013, GET carried over 532,000 passengers on their fixed-route system. The fixed-route system's productivity was 16.47 riders per hour, as shown in **Table 2-24**. Ridership has varied over the past few years due to significant route changes to the UNC Boomerang, negatively impacting ridership. Without including the UNC Boomerang service, ridership throughout the GET system has continued to grow.

The paratransit and demand-response services combined, operated 13,328 hours of service, and carried 25,007 riders for an average productivity of 1.88 riders per hour. This is up from 1.7 riders per hour in 2009. The paratransit and demand-response services use one-third of the total system's service hours. GET provides travel training to assist riders in learning to use the fixed-route buses.

Figure 2-23: GET Fixed Route Bus Services



Source: City of Greeley – GET, 2015

Figure 2-24: Proposed 2016 GET Fixed Route Bus Service

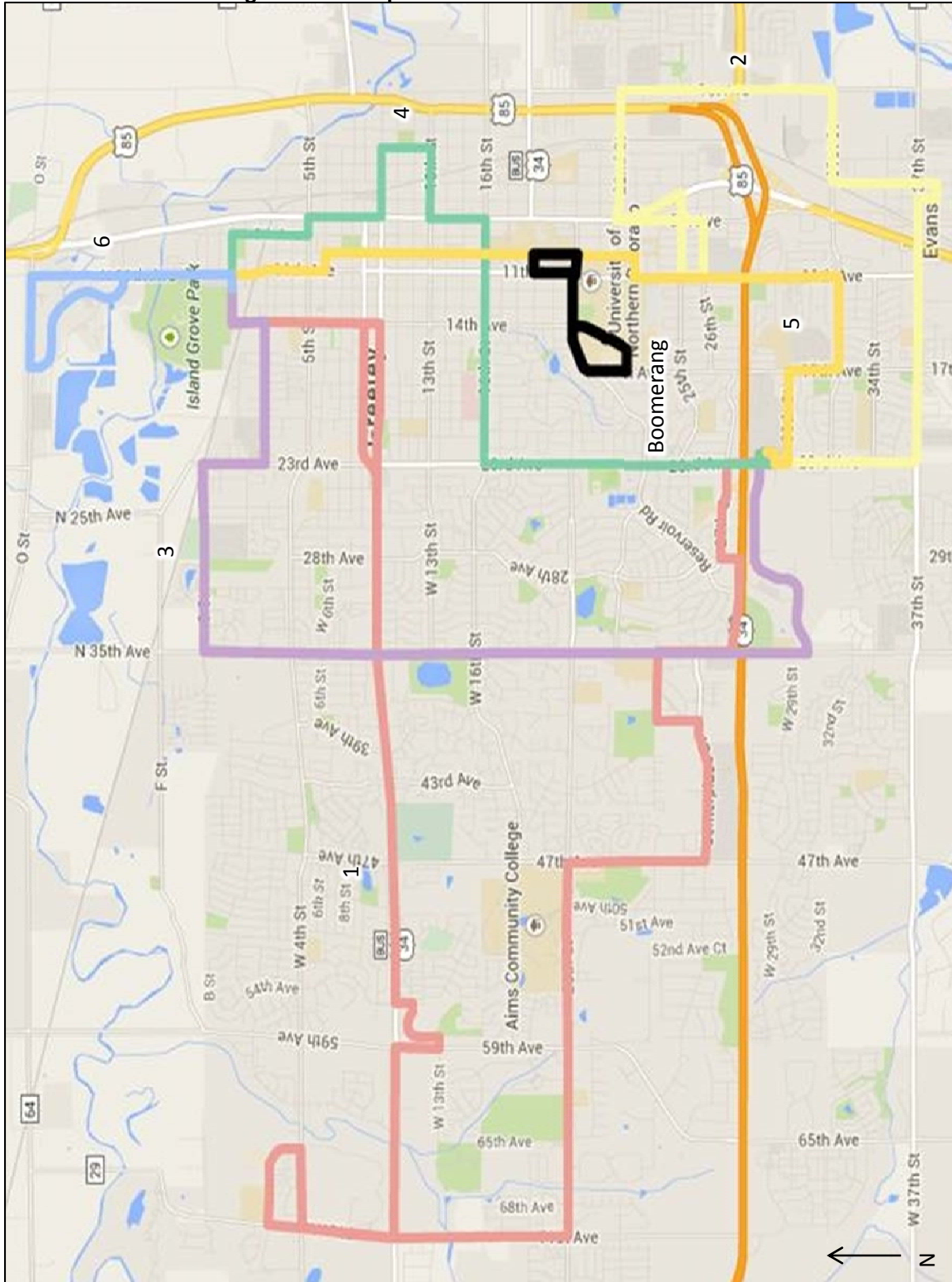


Table 2-24: GET Route and Service Statistics, 2013

Route	Annual Passengers	Annual Service Hours	Passengers per Hour
Red Route (1)	107,758	6,671	16.15
Gold Route (2)	26,509	3,382	7.84
Purple Route (3)	32,767	3,380	9.69
Green Route (4)	40,794	3,413	11.95
Orange Route (5)	216,261	10,126	21.36
Blue Route (6)	43,849	3,335	13.15
UNC Boomerang	64,156	2,006	31.98
<i>Fixed-Route Subtotal</i>	<i>532,904</i>	<i>32,312</i>	<i>16.47</i>
Paratransit/Demand-Response	25,007	13,328	1.88
TOTAL	557,101	45,641	12.21

Source: City of Greeley – GET, 2015

Vehicles

GET has a fleet of 27 vehicles, all running on diesel. GET uses nine vehicles for demand-response service and 18 for fixed-route service. All of the vehicles are wheelchair accessible, with two wheelchair tie-downs on the fixed-route vehicles and three on the demand-response vehicles.

Of the active GET fleet, 15 vehicles are currently past their useful life. Four of the vehicles will be replaced in 2015, the remaining vehicles will be replaced between FY2016 and FY2019 with CMAQ funds awarded to GET during the NFRMPO’s FY2016-2019 Call for Projects.

System Characteristics

Trends in basic system characteristics are illustrated in **Table 2-25**. Over the six-year period from 2007 to 2012, ridership grew by 9.1 percent, service miles decreased by 0.5 percent, and service hours were reduced by 2.1 percent. Operating costs increased by 42.6 percent, while annual fare revenue increased by 98.5 percent. This increase in fare revenue was due to increased ridership on the fixed-route service as well as a fare increase in September 2008 and a bus pass increase in July 2010.

Table 2-25: GET Trends, 2007-2012

Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Costs	Annual Fares
2007	504,487	589,635	45,222	\$2,111,672	\$282,296
2008	541,770	557,739	45,997	\$2,557,364	\$349,936
2009	555,754	537,251	45,285	\$2,553,479	\$406,712
2010	517,582	527,931	44,369	\$2,542,641	\$366,671
2011	507,271	555,751	46,492	\$2,684,182	\$466,439
2012	538,034	571,576	44,568	\$2,633,583	\$481,126
2013	550,193	586,791	46,182	\$3,010,244	\$560,372

Source: GET, 2015

GET funds its \$2.6M annual operating costs through fares, UNC contract revenues, and local and FTA funding. Service is provided to the City of Evans and Garden City through a purchase of service contract.

GET system performance measures are shown in **Table 2-26**. The system has a low cost per operating hour compared to COLT and Transfort at \$65.18, reflecting the limited staff available to run the system. The other performance measures reflect a basic system with a high level of paratransit service compared to the fixed-route services provided.

Table 2-26: GET 2013 System-Wide Performance Measures

Performance Measure	Total
Cost per Operating Hour	\$65.18
Passengers per Operating Hour	11.91
Cost per Passenger Trip	\$5.47
Subsidy per Passenger Trip	\$4.09
Farebox Recovery	18.62%
Ridership per Capita	4.67
Cost per Capita	\$25.55

Source: GET, 2015

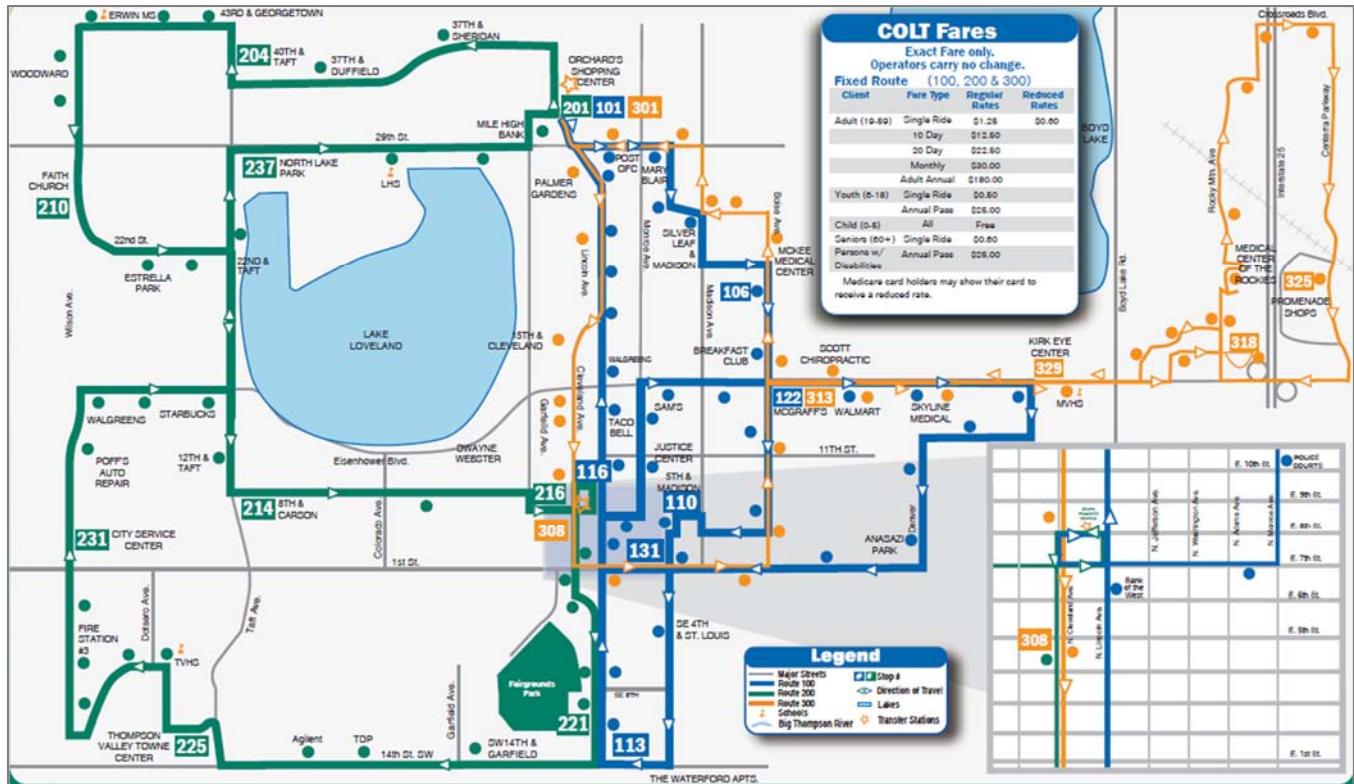
City of Loveland Transit (COLT)

The City of Loveland Transit (COLT) system is operated by the City of Loveland’s Public Works Department. COLT’s fixed-route service runs from 6:48 a.m. to 6:40 p.m., Monday through Friday and from 8:48 a.m. to 5:40 p.m. on Saturdays, with one-hour headways. Paratransit and senior door-to-door service is available during the same hours for eligible passengers. The service is divided into three routes: 100, 200, and 300, as shown in **Figure 2-25**.

A regular one-way adult fare is \$1.25 and reduced fares are offered for seniors, youth, ADA passengers, and those with limited income. COLT offers 10-day, 20-day, and monthly passes, as well as discounted annual passes

for persons with disabilities, seniors, and students. Regular paratransit trips are \$2.00 each way and \$1.00 for ADA eligible passengers and those with limited income. COLT offers a monthly billing process for all paratransit passengers. Youth ages 17 and under ride free.

Figure 2-25: COLT Fixed Route Bus Services



Source: City of Loveland– COLT, 2015

Vehicles

COLT has a fleet of 10 ADA accessible vehicles:

- ▶ One Chevrolet Entervan,
- ▶ Three Ford cutaway paratransit buses,
- ▶ Three Ford cutaway fixed-route buses, and
- ▶ Three 32-passenger Gillig transit-style buses.

Of the 10 buses in the COLT fleet, currently only one vehicle is past its useful service life.

System Characteristics

While the smallest of the fixed-route systems, COLT saw increases in all of its ridership and annual vehicle miles traveled from 2007 to 2013, **Table 2-27**. During this period, ridership increased by 23.2 percent, service miles increased by 20 percent, and vehicle hours increased by 3.4 percent. Financially, COLT has seen an increase of almost 27 percent in its annual operating cost and a 20 percent increase in annual fare revenues.

Table 2-28 shows COLT’s system-wide performance measures. The system has the lowest cost per capita of all the fixed-route systems.

Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Costs	Annual Fares
2007	115,895	184,058	13,617	\$900,070	\$68,518
2008	136,255	192,481	14,112	\$948,463	\$75,332
2009	155,695	200,370	12,237	\$978,013	\$76,468
2010	146,467	194,753	12,041	\$952,127	\$79,705
2011	133,555	207,048	13,265	\$1,071,550	\$114,240
2012	142,144	214,414	14,092	\$1,150,000	\$108,368
2013	142,803	220,916	14,085	\$1,142,916	\$82,208
<i>Source: COLT, 2015</i>					

Performance measures for the system show COLT’s operational costs are average, **Table 2-28**, and the riders per hour are comparable to GET. As with GET, this reflects a relatively high percentage of demand-response service and healthy ridership on the fixed-routes. COLT has the lowest cost per capita of any of the fixed-route systems. This is a reflection both of the operational efficiency and level of service. The City of Loveland provides 0.19 service hours per capita, compared to 0.38 for Greeley and 0.55 for Fort Collins.

Performance Measure	Total
Cost per Operating Hour	\$79.72
Passengers per Operating Hour	12.18
Cost per Passenger Trip	\$11.90
Subsidy per Passenger Trip	\$10.71
Farebox Recovery	9.40%
Ridership per Capita	2.15
Cost per Capita	\$17.42
<i>Source: COLT, 2015</i>	

Bustang

The CDOT Bustang service is an interregional express bus service provided by CDOT through a contracted operator, Ace Express Coaches. The Bustang service provides a connection between the North Front Range region and Denver with six northbound and six southbound buses Monday through Friday. There are three stops in the region: US 34 and I-25 in Loveland, Harmony Road, and the Downtown Transit Center in Fort Collins. The schedule is shown in **Table 2-29**. No trips are allowed that are entirely within either Larimer County or the RTD District. One-way and multi-trip discount tickets are available, with single tickets available for purchase on all buses. There is also a 25 percent discount for disabled persons and adults 65 years and over.²⁰ The service route shown in **Figure 2-26**, the line to the North Front Range region is shown in green.

Figure 2-26: Bustang North Line



Table 2-29: Bustang North Line Schedule

South Bound: Fort Collins Downtown Transit Center to Denver Bus Center (Monday-Friday Schedule)				
Fort Collins Downtown Transit Center	Harmony Road Transit Center	Loveland-Greeley PNR	Denver Union Station	Denver Bus Center
--	5:30 AM	5:40 AM	6:40 AM	6:50 AM
--	5:45 AM	5:55 AM	6:55 AM	7:05 AM
--	6:15 AM	6:25 AM	7:25 AM	7:35 AM
--	6:45 AM	6:55 AM	7:55 AM	8:05 AM
11:00 AM	11:20 AM	11:30 AM	12:20 PM	12:30 PM
3:00 PM	3:20 PM	3:30 PM	4:20 PM	4:30 PM
North Bound: Denver Bus Center to Fort Collins Downtown Transit Center to (Monday-Friday Schedule)				
Denver Bus Center	Denver Union Station	Loveland-Greeley PNR	Harmony Road Transit Center	Fort Collins Downtown Transit Center
8:30 AM	8:45 AM	9:35 AM	9:50 AM	10:10 AM
1:00 PM	1:15 PM	2:10 PM	2:25 PM	2:45 PM
4:15 PM	4:30 PM	5:20 PM	5:35 PM	--
4:30 PM	4:45 PM	5:35 PM	5:50 PM	--
5:00 PM	5:15 PM	6:05 PM	6:20 PM	--
5:50 PM	6:10 PM	7:00 PM	7:15 PM	--

Source: CDOT, 2015

Source: CDOT, 2015

²⁰ www.ridebustang.com/north-line

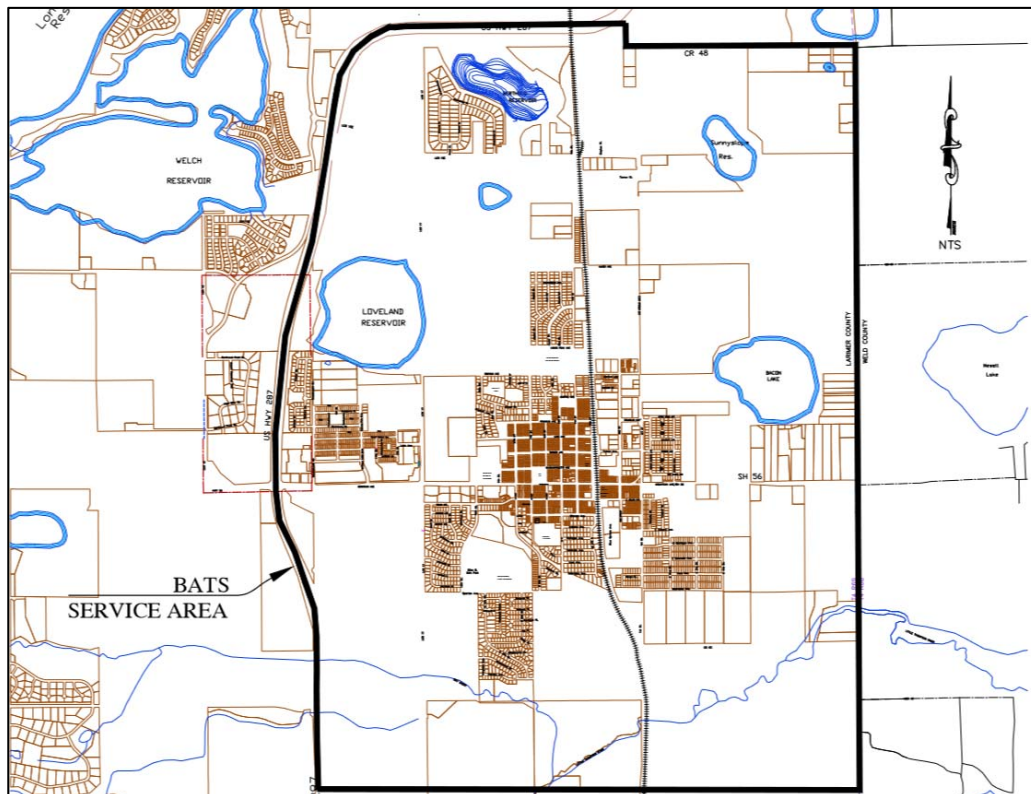
Berthoud Area Transportation Services (BATS)

BATS is operated by the Town of Berthoud. BATS provides shared-ride demand-response service for residents in an approximately eight-square mile service area, **Figure 2-27**. The service area includes the developed portion of Berthoud and the immediate area surrounding the Town.

BATS transports riders to Longmont on Mondays, with trips to Loveland provided Tuesday through Friday. Out-of-town rider pickups begin at 8:00 a.m. with a return trip to Berthoud at 11:30 a.m. In-town trips are provided from 8:00 a.m. to 4:00 p.m., Monday through Friday. There is no service on holidays and all rides must be scheduled at least 24-hours in advance.

BATS fares are \$1.00 for in-town trips and \$4.00 for out-of-town trips, each way. The system has a small source of consistent revenue through a one-cent Town sales tax.

Figure 2-27: BATS Service Area



Source: Town of Berthoud, 2015

Vehicles

The BATS fleet includes three buses equipped with wheelchair lifts, acquired through CDOT grants.

BATS Service Characteristics

BATS service characteristics and performance measures reflect the demand-response service mode. In March 2013, the BATS service area was reduced to an eight-square mile area. From 2007 to 2012, BATS ridership decreased by 20 percent, vehicle miles increased by 1.3 percent, vehicle hours decreased by 2.9 percent,

operating costs increased by 12 percent, and annual fare revenues increased by 142 percent, see **Table 2-30**. BATS 2012 performance measures are shown in **Table 2-31**.

Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Costs	Annual Fares
2007	12,189	81,642	5,378	\$187,414	\$8,520
2008	11,885	99,696	5,822	\$220,746	\$13,520
2009	14,273	112,172	6,253	\$209,975	\$17,571
2010	13,397	112,867	6,397	\$284,675	\$18,897
2011	13,254	112,224	6,493	\$288,015	\$20,771
2012	9,739	82,731	5,222	\$210,324	\$20,613
2013	4,715	23,596	2,250	\$125,346	\$8,103

Source: Town of Berthoud—BATS, 2015

BATS service characteristics and performance measures reflect the demand-response service mode. Considering the large geographic area the system covers, the system productivity is relatively high. BATS characteristics can best be compared with SAINT, although BATS uses paid drivers rather than volunteers. Their budget and cost per hour remain low. While the riders per capita is low, considering this is a demand-response system, 1.27 riders per capita shows solid community use.

Performance Measure	Total
Cost per Operating Hour	\$40.28
Passengers per Operating Hour	1.9
Cost per Passenger Trip	\$21.60
Subsidy per Passenger Trip	\$19.48
Farebox Recovery	9.8%
Ridership per Capita	1.27
Cost per Capita	\$27.53

Source: Town of Berthoud—BATS, 2015

SAINT – Senior Alternatives in Transportation

SAINT is a 501(c)(3) non-profit providing rides to seniors 60+ and adults with disabilities in Fort Collins and Loveland. SAINT volunteers drive their own vehicles. SAINT staff recruits volunteers, schedules rides, and provides a mileage allowance and extra insurance to the volunteers. SAINT’s 500 clients are served by 160

volunteers and four staff members (one full-time and three part-time). In 2012, volunteer drivers in Fort Collins and Loveland provided over 25,000 rides to seniors in need.²¹

SAINT operates from 8:15 a.m. to 4:00 p.m., Monday through Friday. Weekend and evening rides are available in Fort Collins by special request. Riders must call to make reservations at least three business days in advance, with reservations taken Monday through Friday from 8:00 a.m. to 12:00 p.m. No fare is required; however, donations of \$1.00 are suggested, with the average donation being \$1.15.

Table 2-32 shows SAINT’s performance measures for the period of 2007 to 2012. The number of passengers, service hours, and miles all increased by 26 percent, while the cost increased by 14 percent.

Year	Passengers	Service Hours	Miles (Volunteer)	Cost	Donations ²²
2007	20,186	10,093	161,488	\$176,750	\$23,214
2008	20,165	10,083	161,320	\$184,172	\$23,190
2009	19,327	9,664	154,616	\$179,900	\$22,226
2010	19,648	9,824	157,184	\$182,900	\$22,595
2011	21,079	10,540	168,632	\$189,750	\$24,241
2012	25,454	12,727	203,632	\$202,345	\$29,272
2013	26,103	13,051	208,824	\$215,189	\$26,164

Source: SAINT, 2015

RAFT

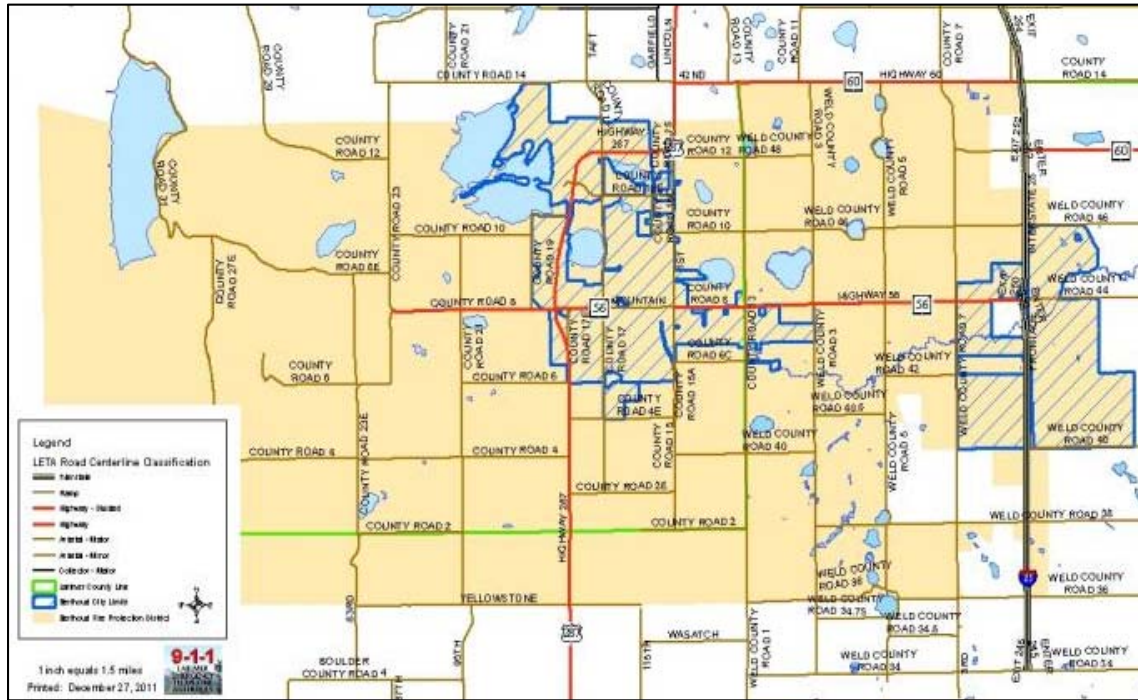
RAFT began in January 2014 due to the reduction in the service area of BATS. RAFT is a non-profit volunteer transportation service which offers door-to-door, on-demand services to eligible seniors (65+) and adults (18+) with disabilities. RAFT operates under the Berthoud Area Community Center/Golden Links, Inc. The service relies on volunteer drivers; however, the service acquired an ADA van with funds from a NFRMPO New Freedom sub-grant. During its first year of service, volunteers drove approximately 22,000 miles providing 960 trips for eligible individuals.

To be eligible, individuals must reside within the area served by the Berthoud Fire Protection District (zip code 80513), **Figure 2-28**, in counties surrounding Berthoud, but outside of the area served by BATS. RAFT volunteers take riders to Berthoud, Longmont, Loveland, and adjacent areas. Individuals choosing to use RAFT must pre-register as a rider.

²¹ SAINT website: www.saintvolunteertransportation.org

²² Donations estimated based on number of passengers and average donation per trip of \$1.15.

Figure 2-28: RAFT Service Area



Source: RAFT website, 2015

Windsor Senior Ride Program

Senior Ride provides transportation assistance to Windsor residents age 55 and older who are unable to drive themselves. The service maintains one wheelchair accessible 13-passenger Starcraft van. The van can hold up to two wheelchairs and 11 passengers. The service employs two drivers who split the driving duties. Rides are provided to and from medical appointments, as well as to and from Senior Nutrition Lunches at the Windsor Community Recreation Center on Wednesdays and Fridays. Rides to and from grocery stores in town are available on Thursdays and Fridays, **Table 2-33**.

Table 2-33: Windsor Senior Ride Program Schedule			
Day	Appointment Times	Location	Fee
Monday	8:00 a.m. – 3:30 p.m.	Greeley, Fort Collins, Loveland, Windsor	\$6.00
Tuesday	8:00 a.m. – 3:30 p.m.	Greeley, Fort Collins, Loveland, Windsor	\$6.00
Wednesday	8:00 a.m. – 3:30 p.m.	Windsor	\$4.00
Thursday	8:00 a.m. – 3:30 p.m.	Windsor	\$4.00

Source: Town of Windsor—Windsor Senior Ride Program, 2015

VanGo™ – Van Pool Program

VanGo™ Vanpool Services is a provider which links an average of six people with similar daily commutes together to share a van. Vanpool members pay a monthly fee to cover the costs of the administration of the program, fuel, maintenance, and insurance. Driving responsibility is shared among the vanpool members. VanGo™ reports the vehicle and passenger miles traveled to FTA to fund the vehicles.

The VanGo™ fares are calculated using a zone system. There are a total of 13 20–square mile service areas, with VanGo™ currently serving 10 of the areas. Fares are computed according to the number of zones in the vanpool’s route. For example, in 2012 a trip from Fort Collins to downtown Denver cost \$227 per person, per month. The average price for a gallon of gasoline in 2012 was \$3.60, making the VanGo™ vanpool option a cheaper alternative to driving to Denver alone on a daily basis.

Figure 2-29 illustrates the volume of VanGo™ trips in 2012 from various locations within the region and the Denver metropolitan area. Services along I-25, US 287, and US 85 are the most popular routes for vanpools. In 2012, there were 75 separate vanpools with 95 percent of the available seats occupied, 428 seats reserved out of 450 available seats.

