

LARIMER COUNTY: ENGINEERING



DOUGLAS ROAD (CR 54)

JANUARY 25, 2018



DOUGLAS ROAD (CR 54)



INTRODUCTIONS

Todd Blomstrom
Public Works Director

Mark Peterson
County Engineer

Terry Gilbert
Community Development Director

Rob Helmick *
Senior Planner

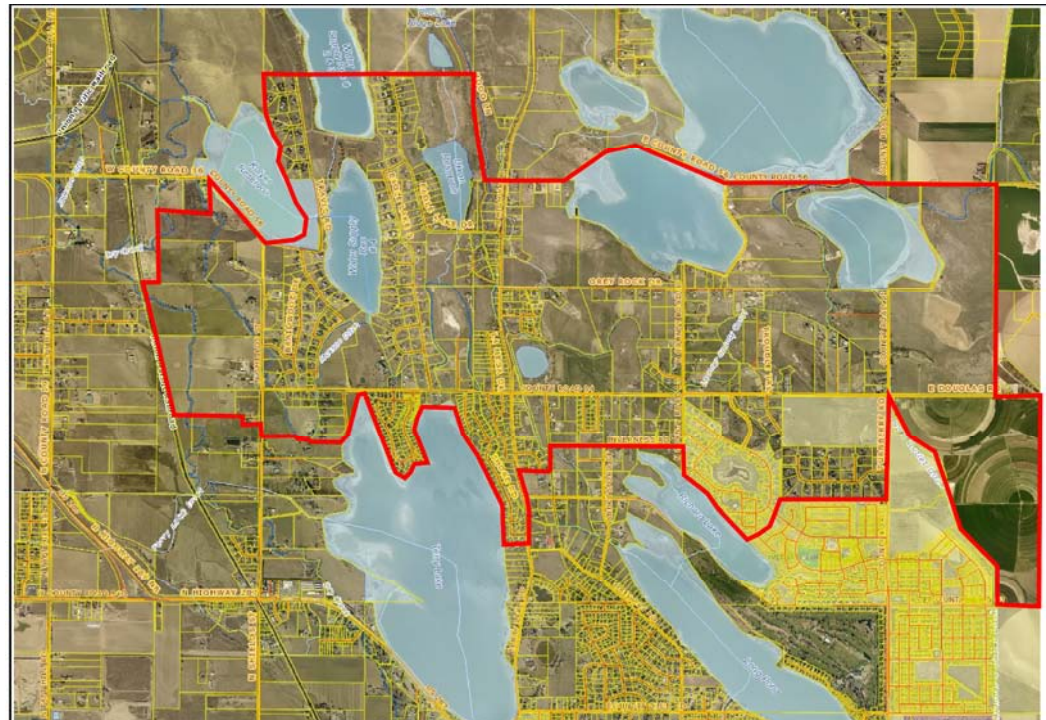
* Pipeline 1041 Application Coordinator


AGENDA

1. Population Growth and Traffic Volumes
 2. Transportation Master Plan
 3. Truck Weights
 4. Roadway Concept Layout
 5. Public Right-of-Way
 6. Proposed Pipeline Corridor Width and Location
 7. Collection of Field Data
- * Questions, Comments, Discussion

COMMUNICATION EFFORTS

- Direct mailing to approx. 900 properties
- Current meeting notice in Coloradoan
- Press release





OPEN HOUSE NOTICE

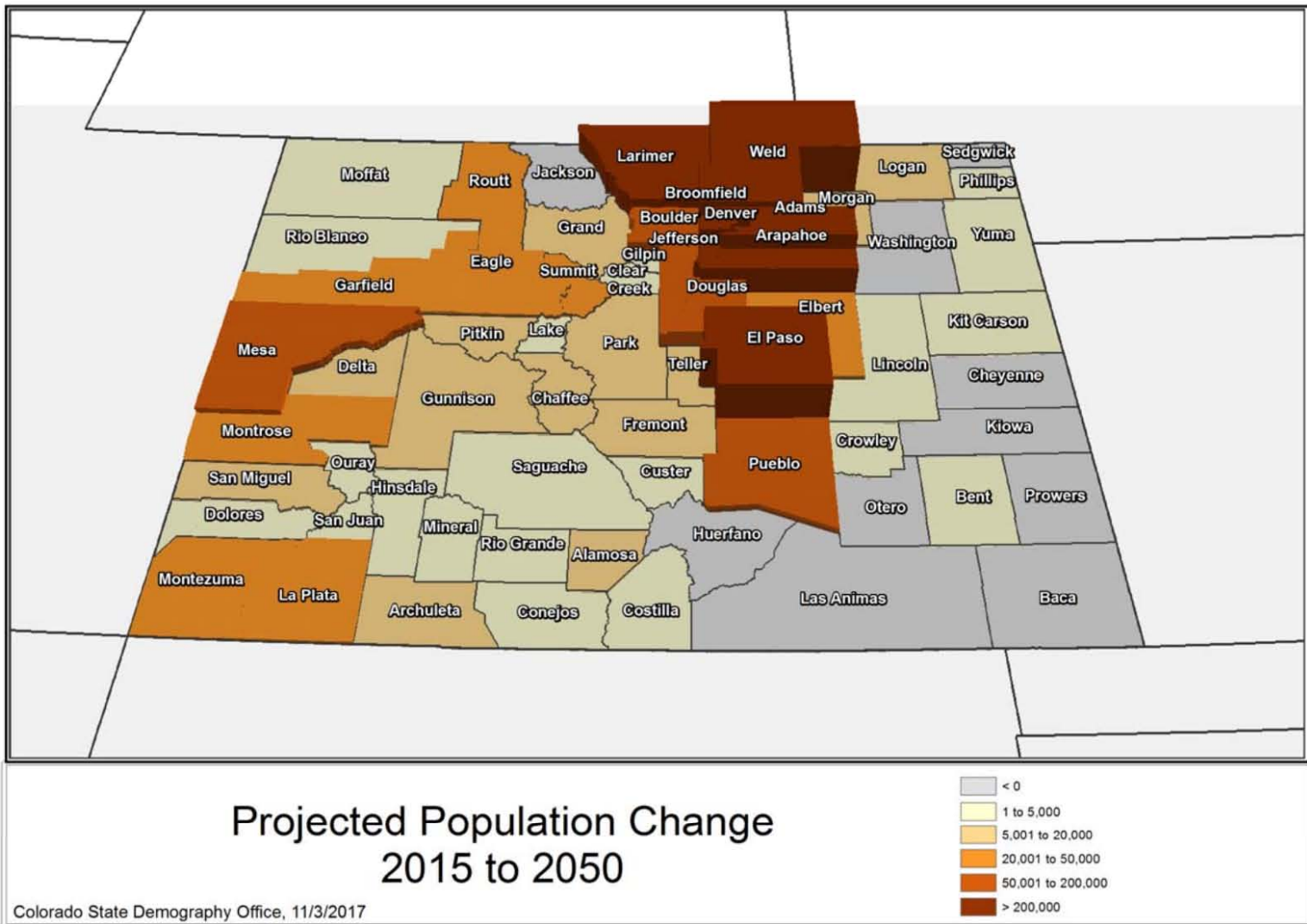
Douglas Road – Potential Roadway Improvements

Thursday, January 25, 2018
5:30 to 7:30 p.m.
Larimer County Courthouse Administration Building
200 West Oak Street, Fort Collins
Hearing Room (1st Floor)
5:30 pm – Open House
6:00 pm – County Staff Presentation
6:45 pm – Questions and Group Discussion

Larimer County will hold a public informational meeting to discuss potential future roadway improvements along Douglas Road between Shields Street and Turnberry Road. The purpose of this meeting is to respond to resident concerns regarding the SH 1/Douglas Road intersection, traffic volume, truck traffic, and potential roadway and right-of-way changes along this segment of Douglas Road.

County engineering staff is preparing a preliminary layout of potential road improvements, which will be available at this meeting. The concept design includes maintaining one travel lane in each direction, adding a center turn lane, widening of paved shoulders/bike lanes, culvert replacements, and intersection improvements, including signalization of the SH 1/CR 54 intersection.

If you are unable to attend the meeting, or would like more information, please contact Mark Peterson, County Engineer at (970) 498-8760 or mpeterson@larimer.org.

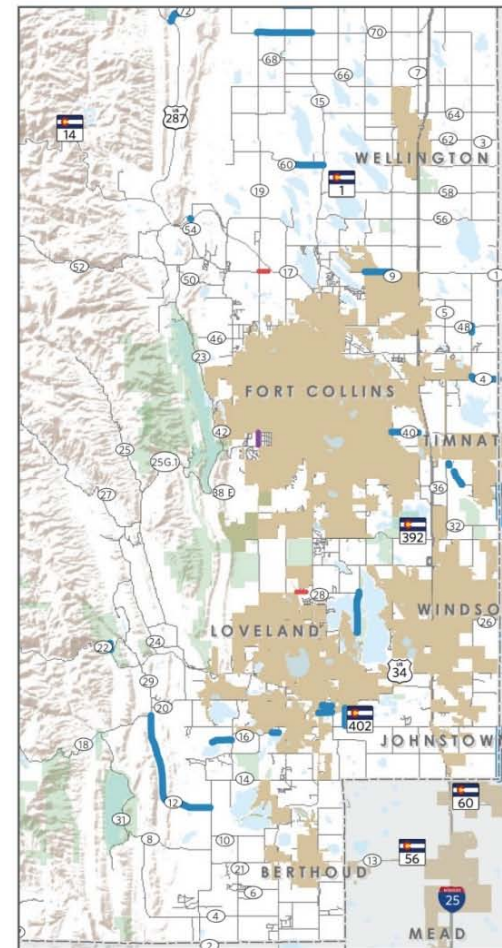
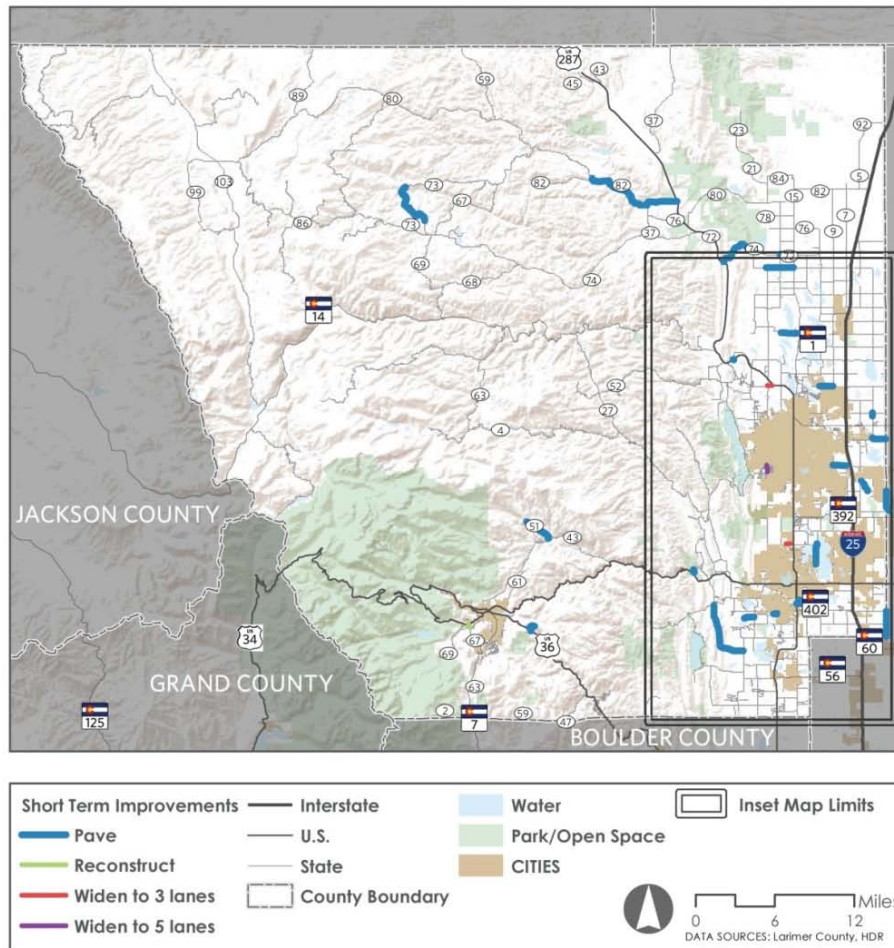


		2015	2020	2025	2030	2015-30			2015	2020	2025	2030
Larimer	Jobs	190,515	205,374	224,269	243,001	52,487	Larimer	Population	332,832	366,154	398,784	429,637
	Growth Rate	2.7%	1.9%	1.6%	1.4%			Growth Rat	2.1%	1.9%	1.7%	1.5%
Weld	Jobs	131,193	141,291	158,277	176,045	44,852	Weld	Population	284,876	337,072	398,330	462,893
	Growth Rate	4.8%	3.3%	2.3%	2.0%			Growth Rat	2.4%	3.4%	3.4%	3.0%



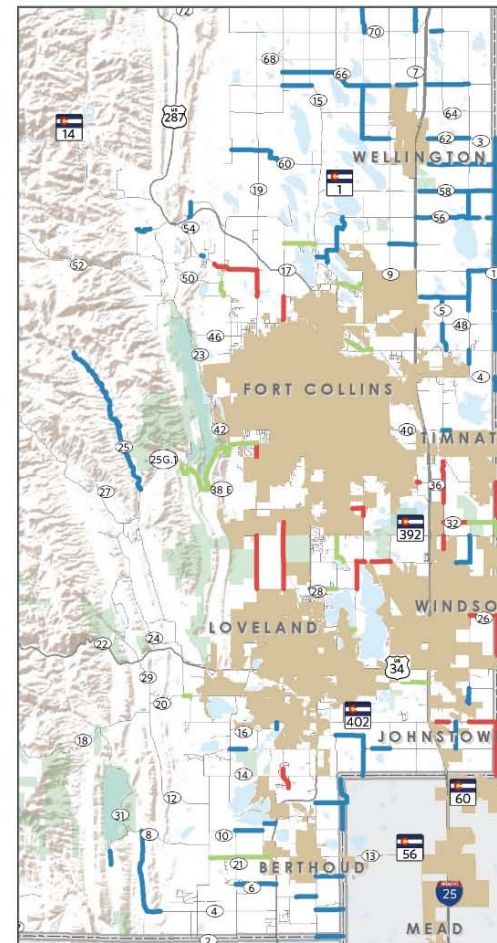
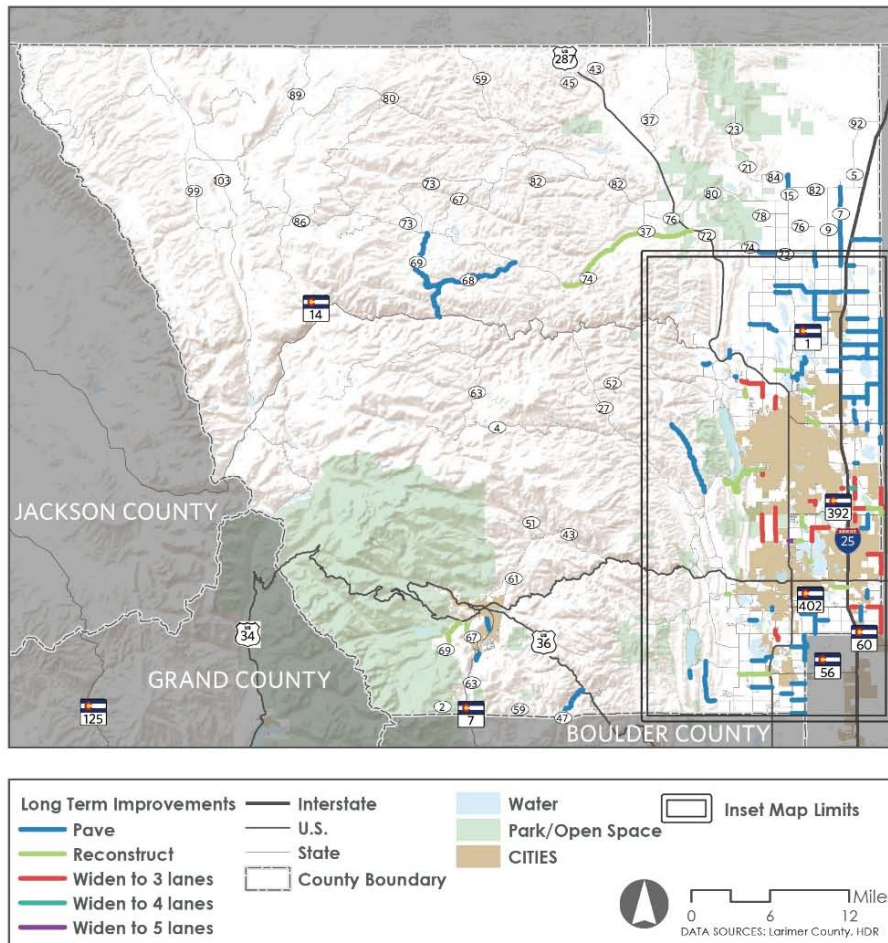
TRANSPORTATION MASTER PLAN

SHORT-TERM CAPACITY NEEDS



TRANSPORTATION MASTER PLAN

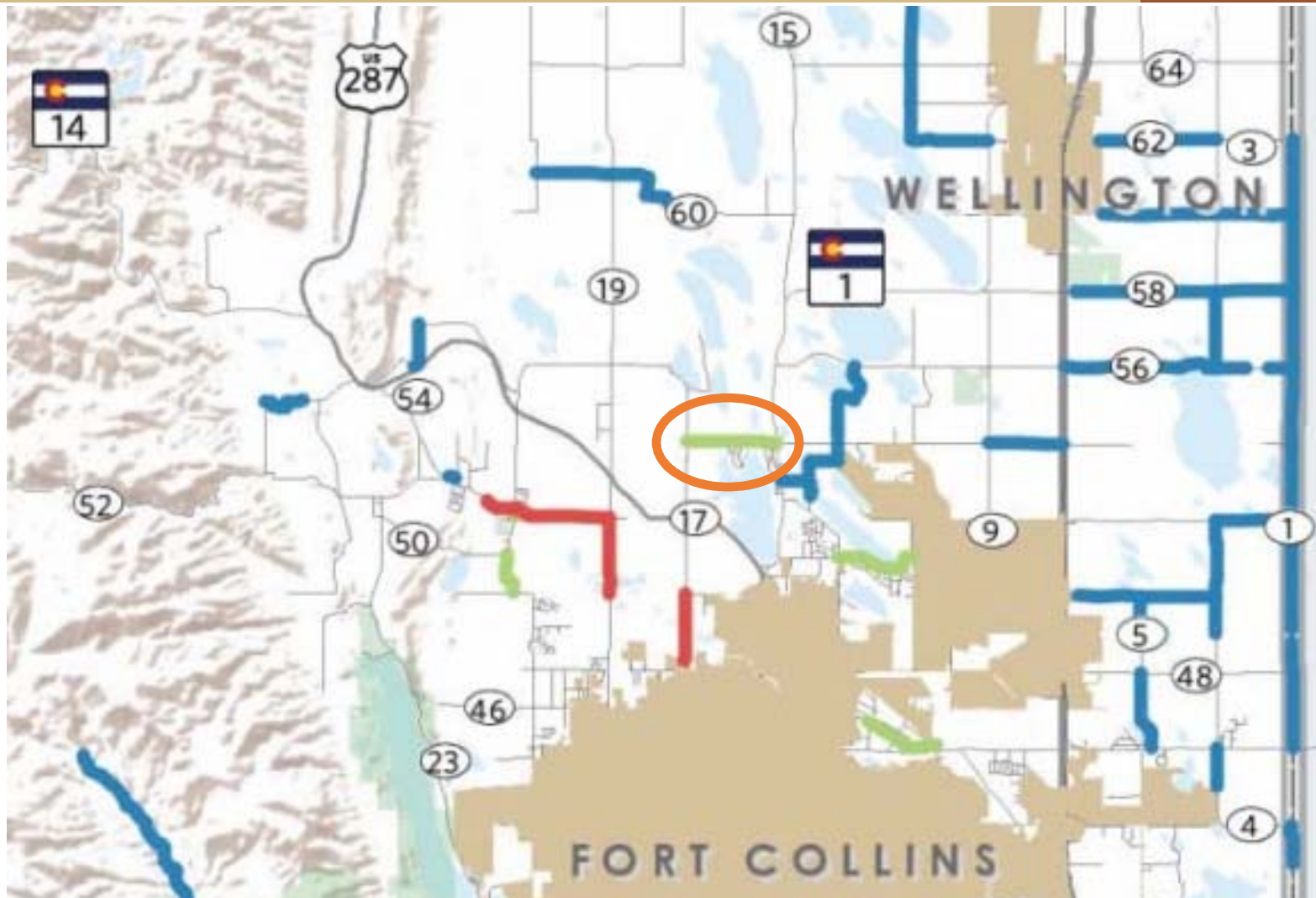
LONG-TERM CAPACITY NEEDS



DOUGLAS ROAD (CR 54)



TRANSPORTATION MASTER PLAN

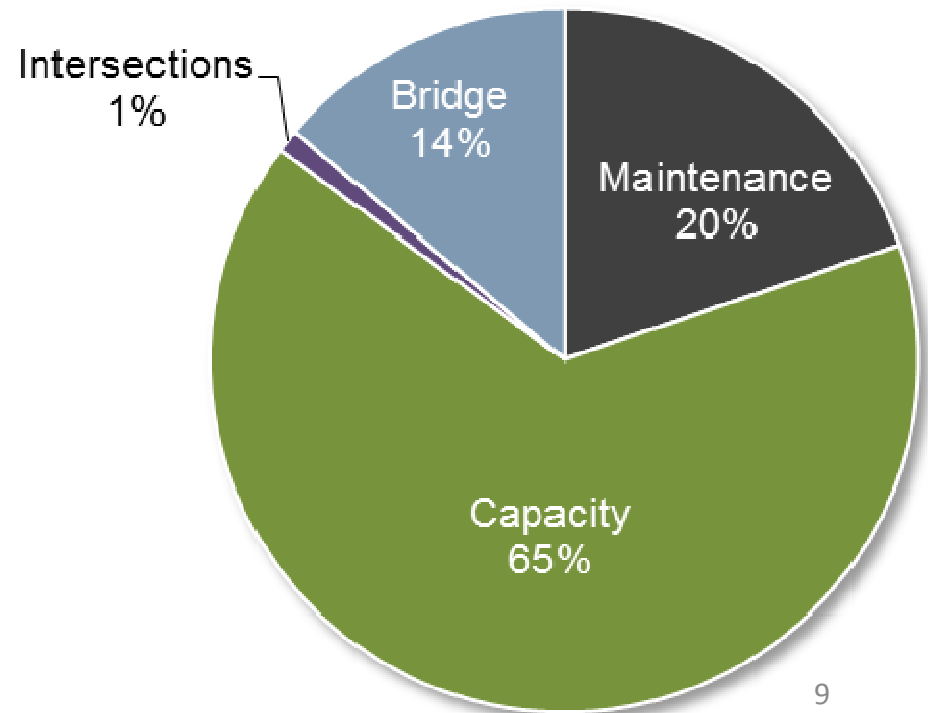


TRANSPORTATION FUNDING NEEDS

Annual Funding Needs – 2017 to 2040

- Capacity: \$13,160,000
- Bridges: \$ 3,500,000
- Safety: \$ 500,000
- Pavement: \$ 4,370,000
- Subdivisions: \$ 3,640,000
- Multi-modal: \$ 750,000
- **Total: \$25,730,000**

Total (2017-2040): \$592 million



TRAFFIC GROWTH

Douglas Road Traffic Increases

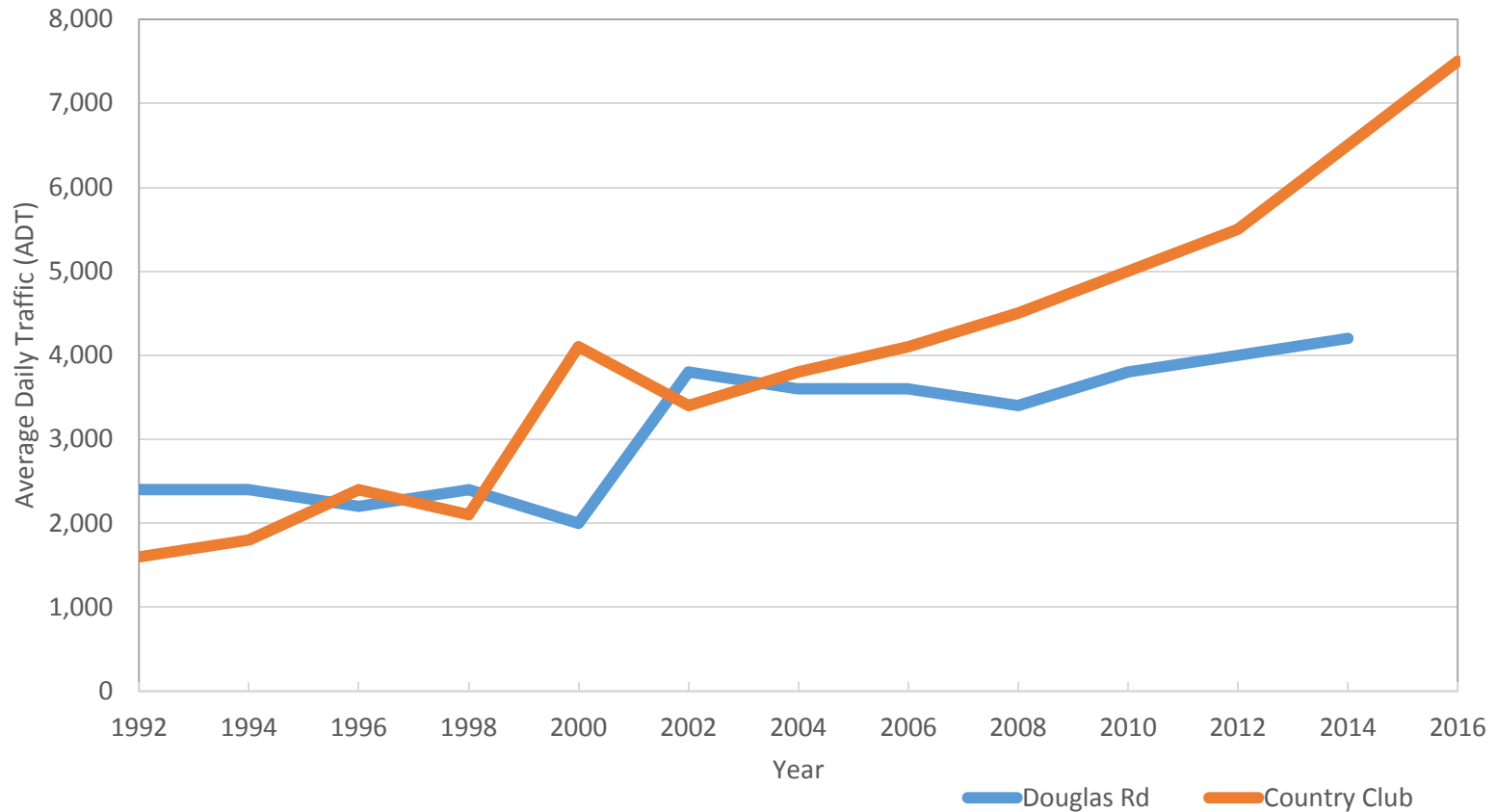
- Regional Growth
- Adjacent Development

Example: Country Club Reserve

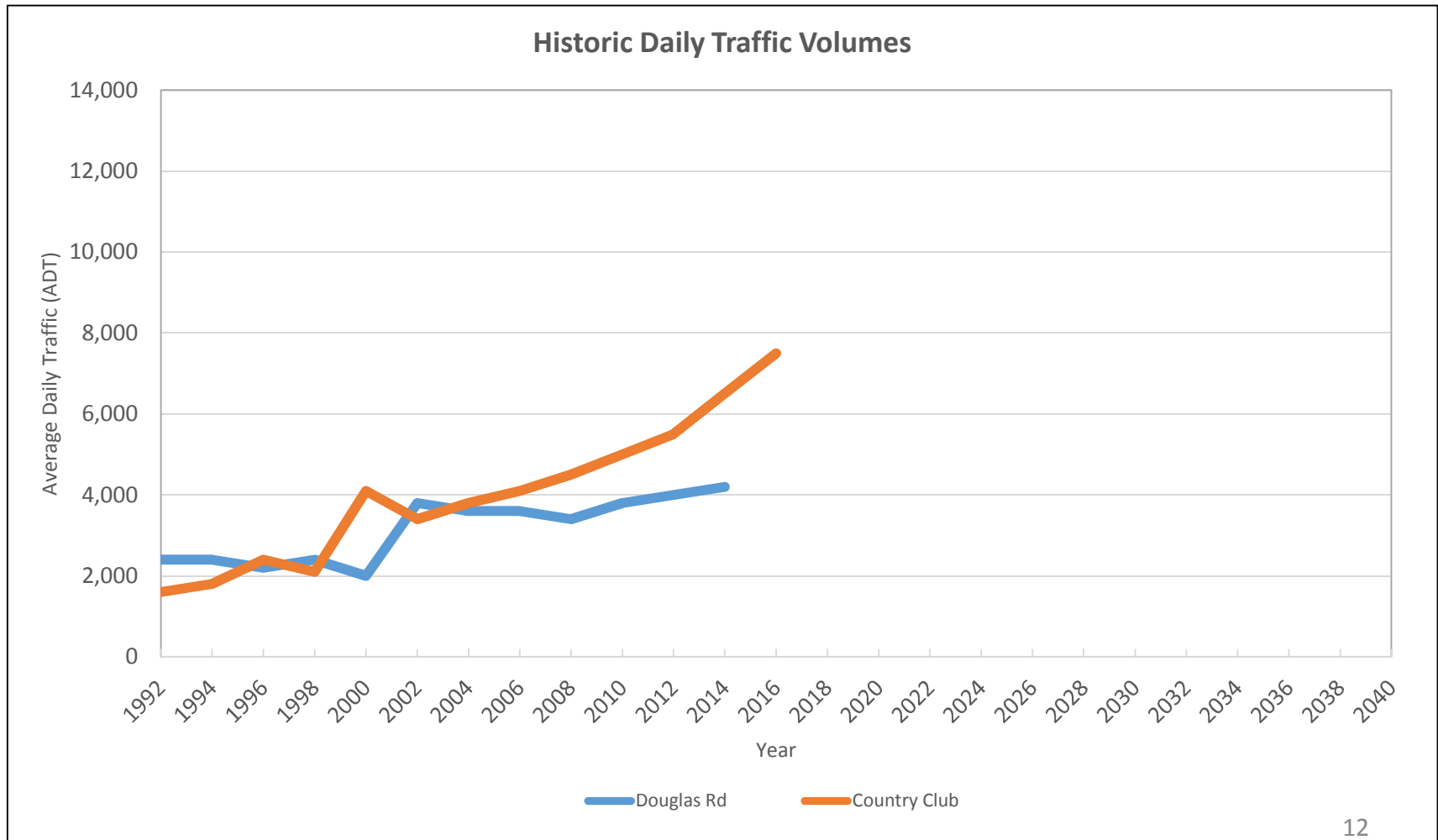
- Southwest corner of Douglas Rd & Turnberry
- ~ 1,500 new daily trips
- 55% of trips estimated to travel west on Douglas Rd

TRAFFIC GROWTH

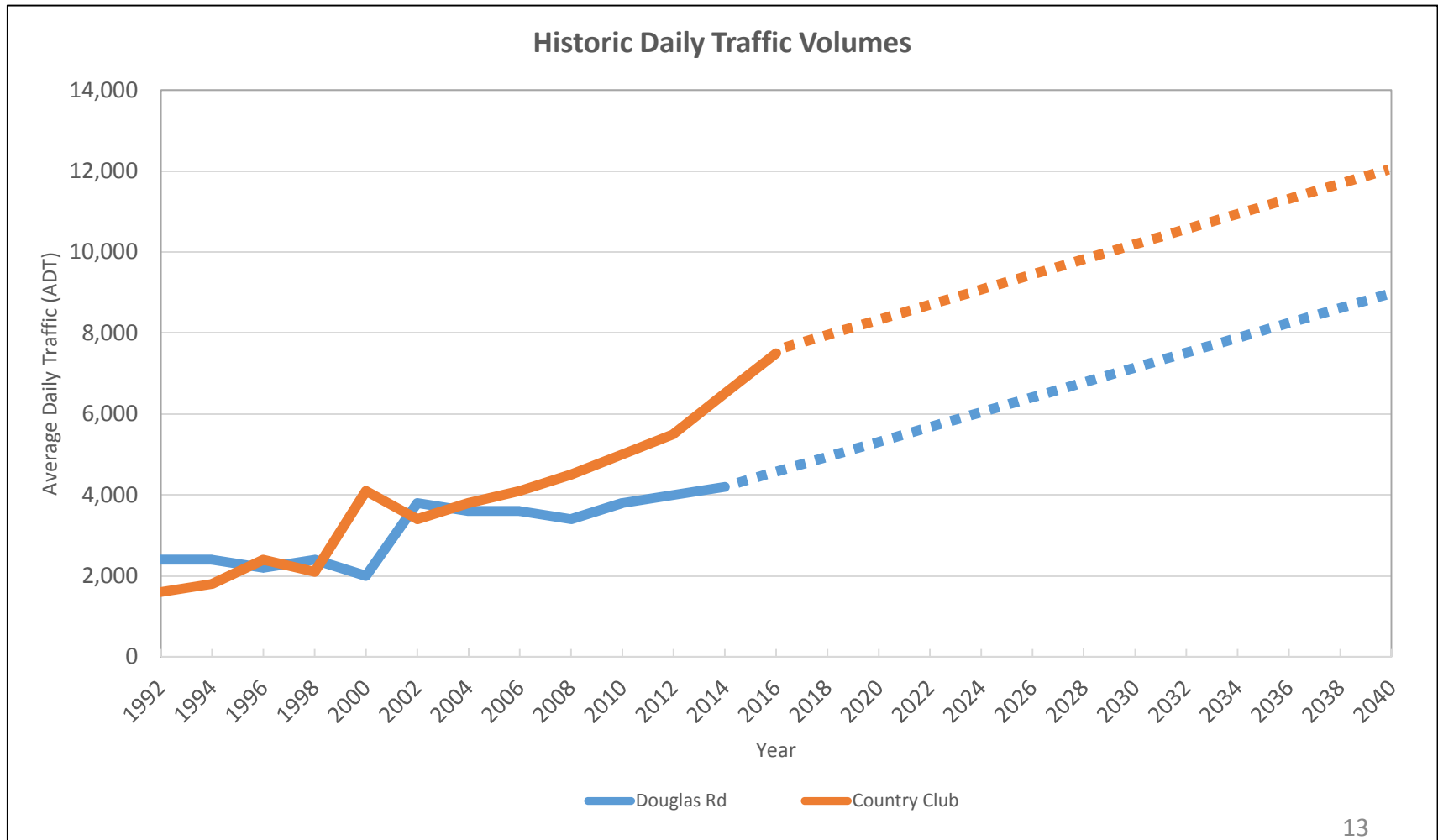
Historic Average Daily Traffic Volumes



TRAFFIC GROWTH

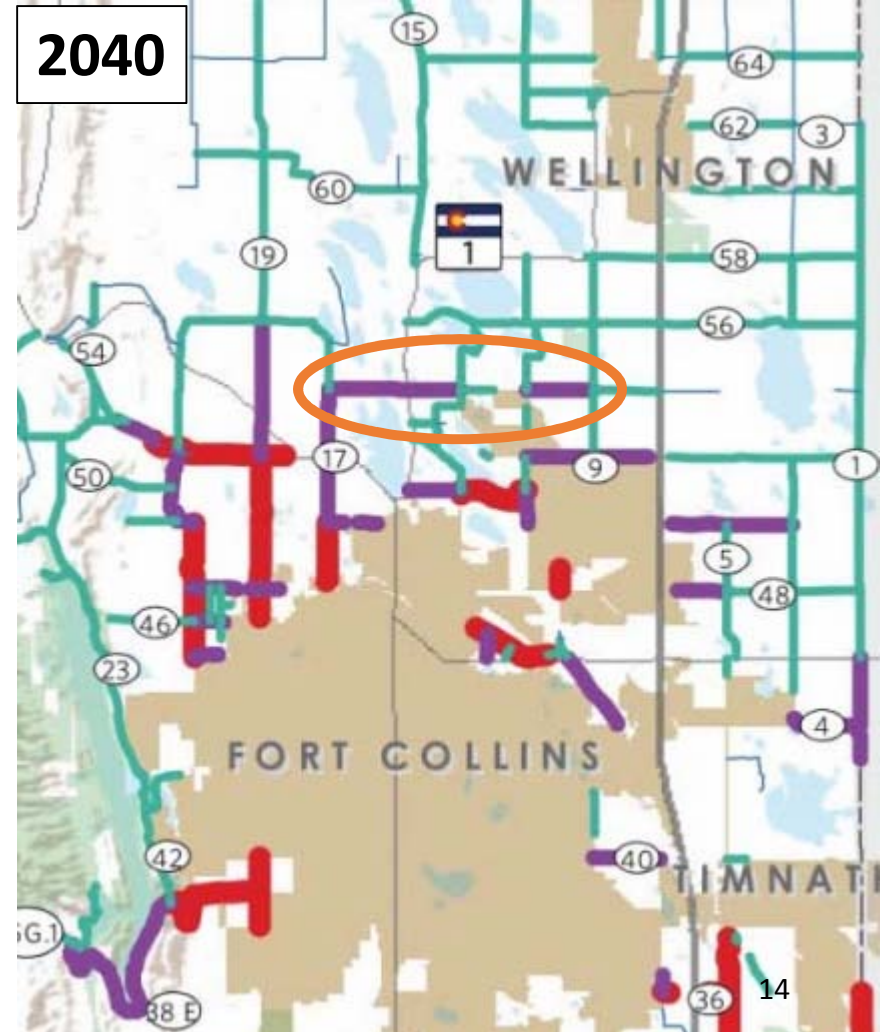
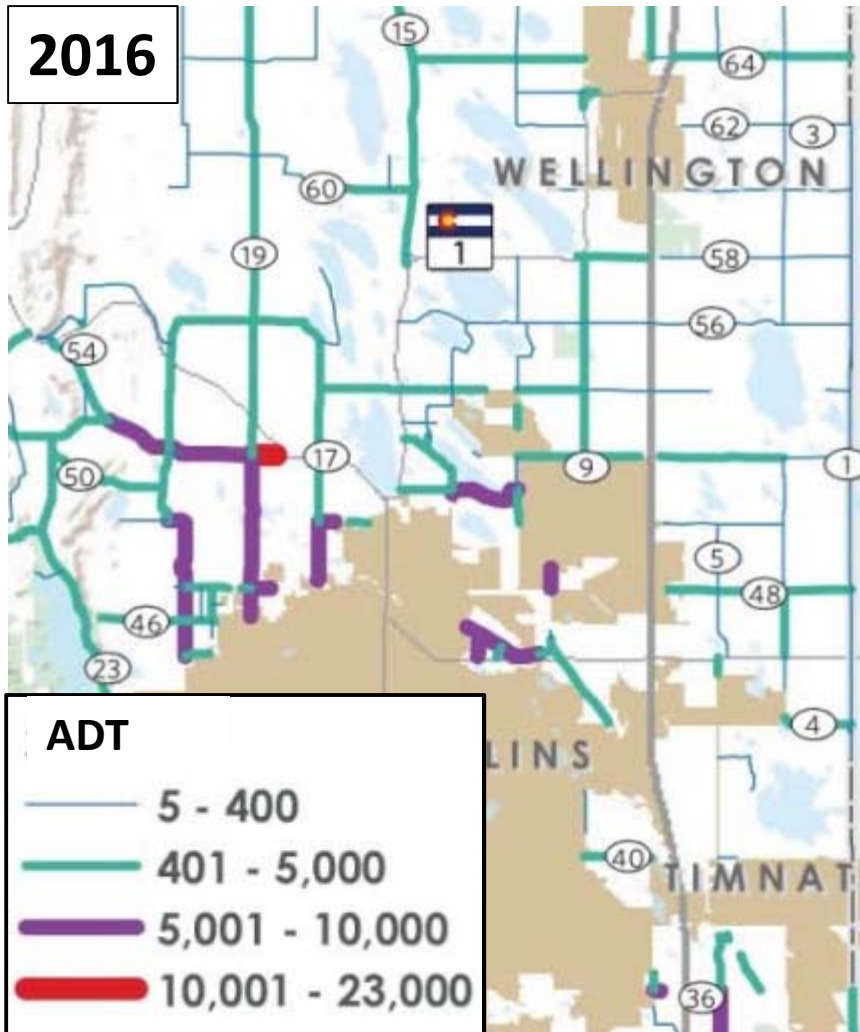


TRAFFIC GROWTH



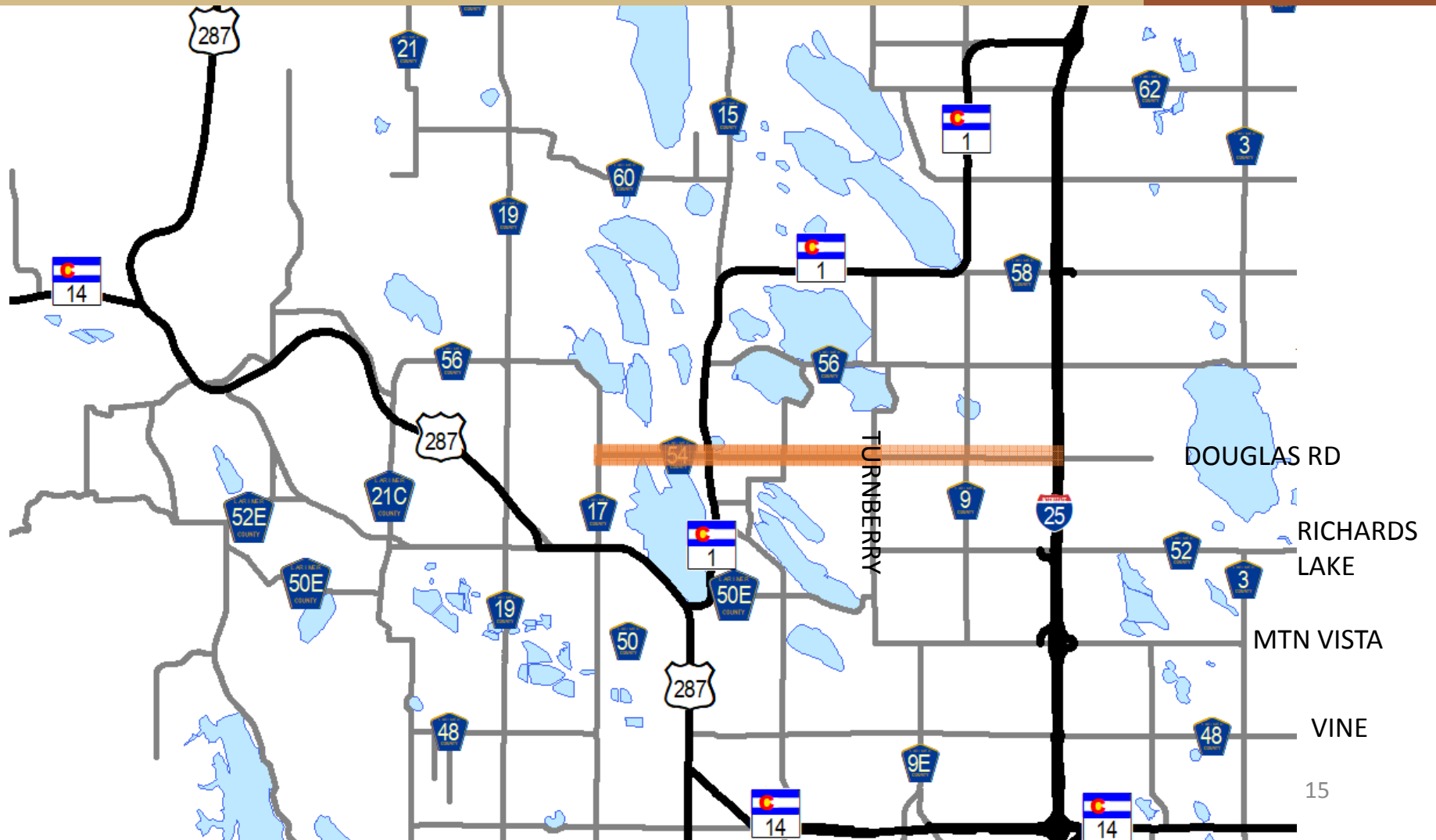
DOUGLAS ROAD (CR 54)

TRAFFIC GROWTH



DOUGLAS ROAD (CR 54)

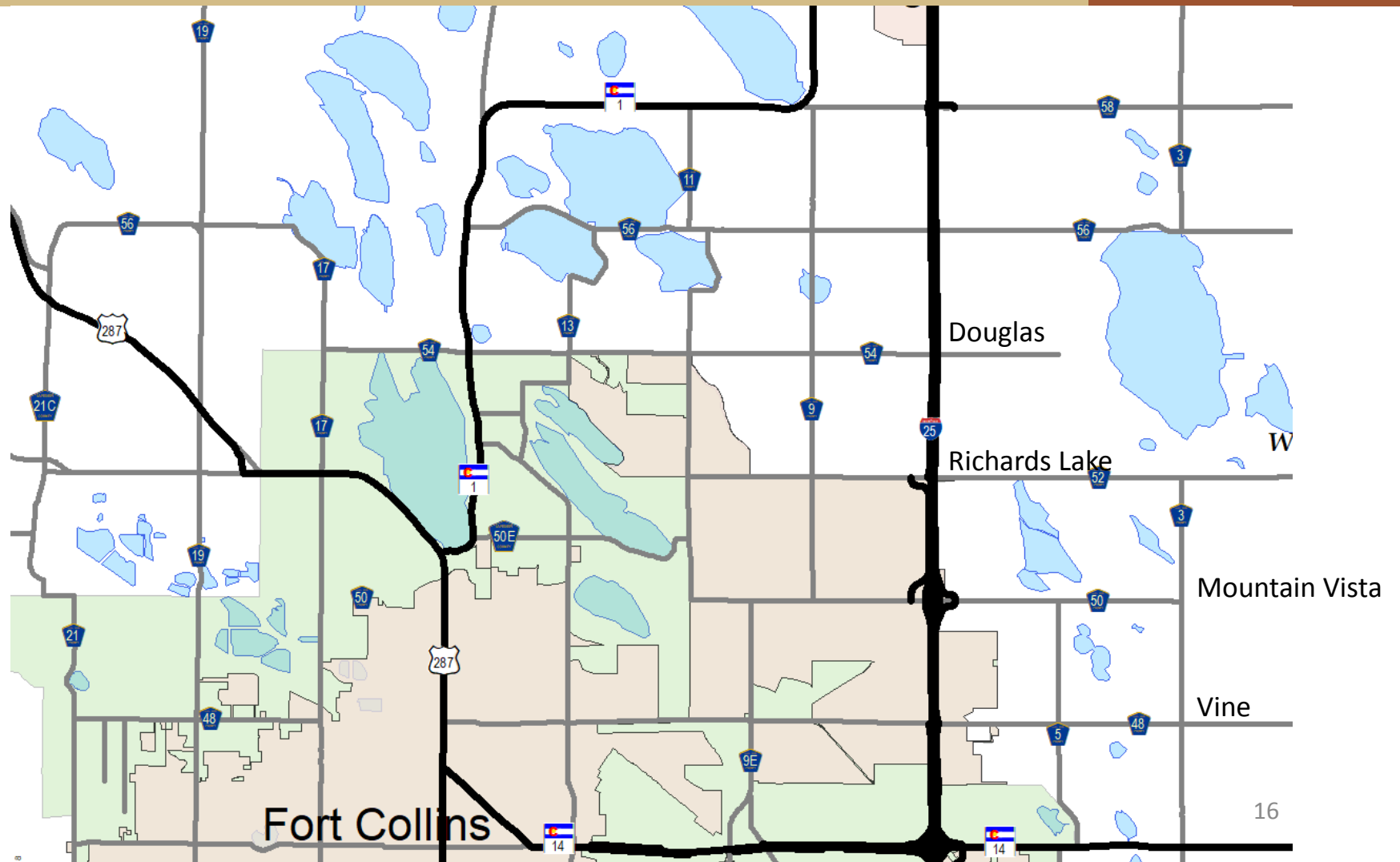
MAJOR ROAD NETWORK



DOUGLAS ROAD (CR 54)

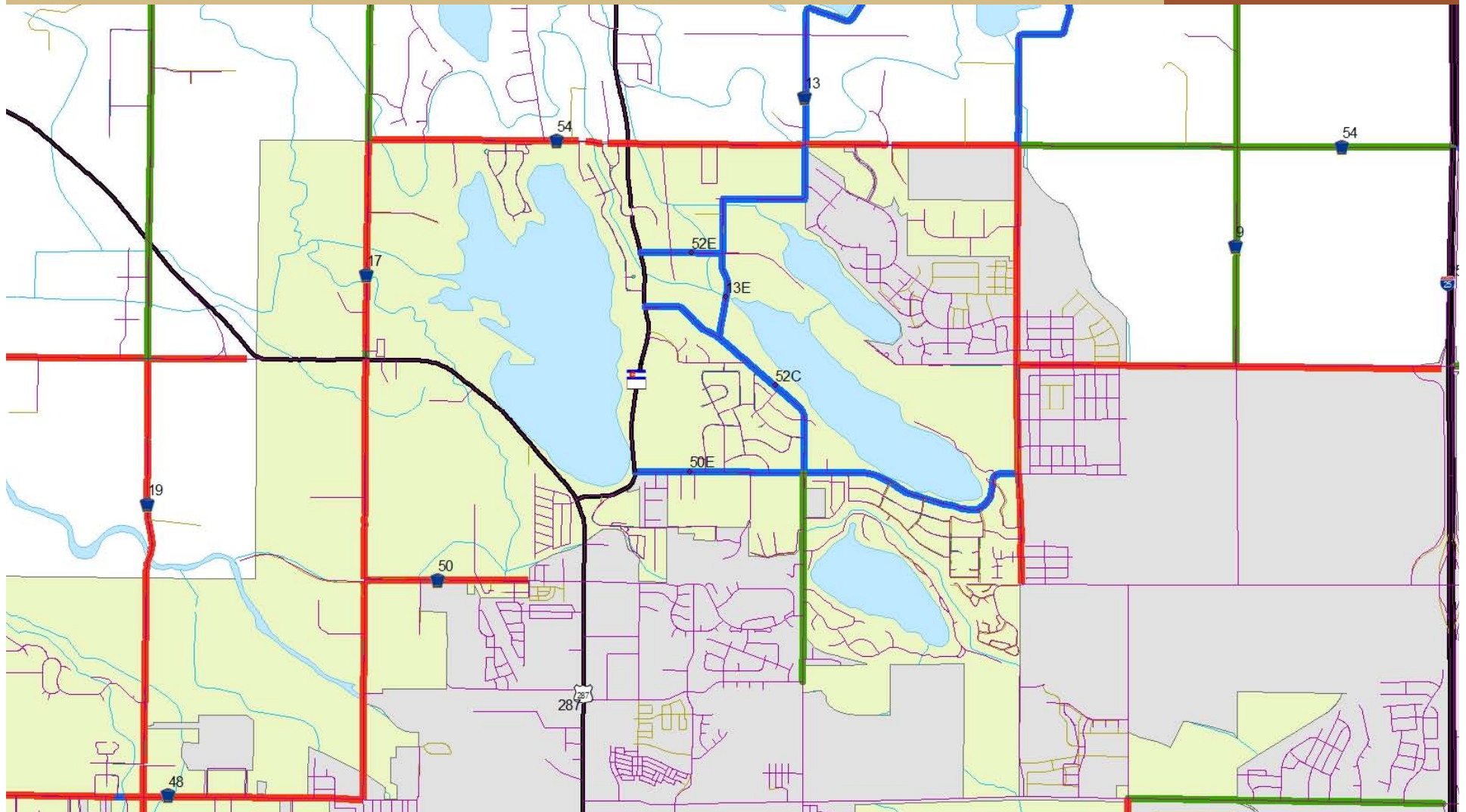


MAJOR ROAD NETWORK



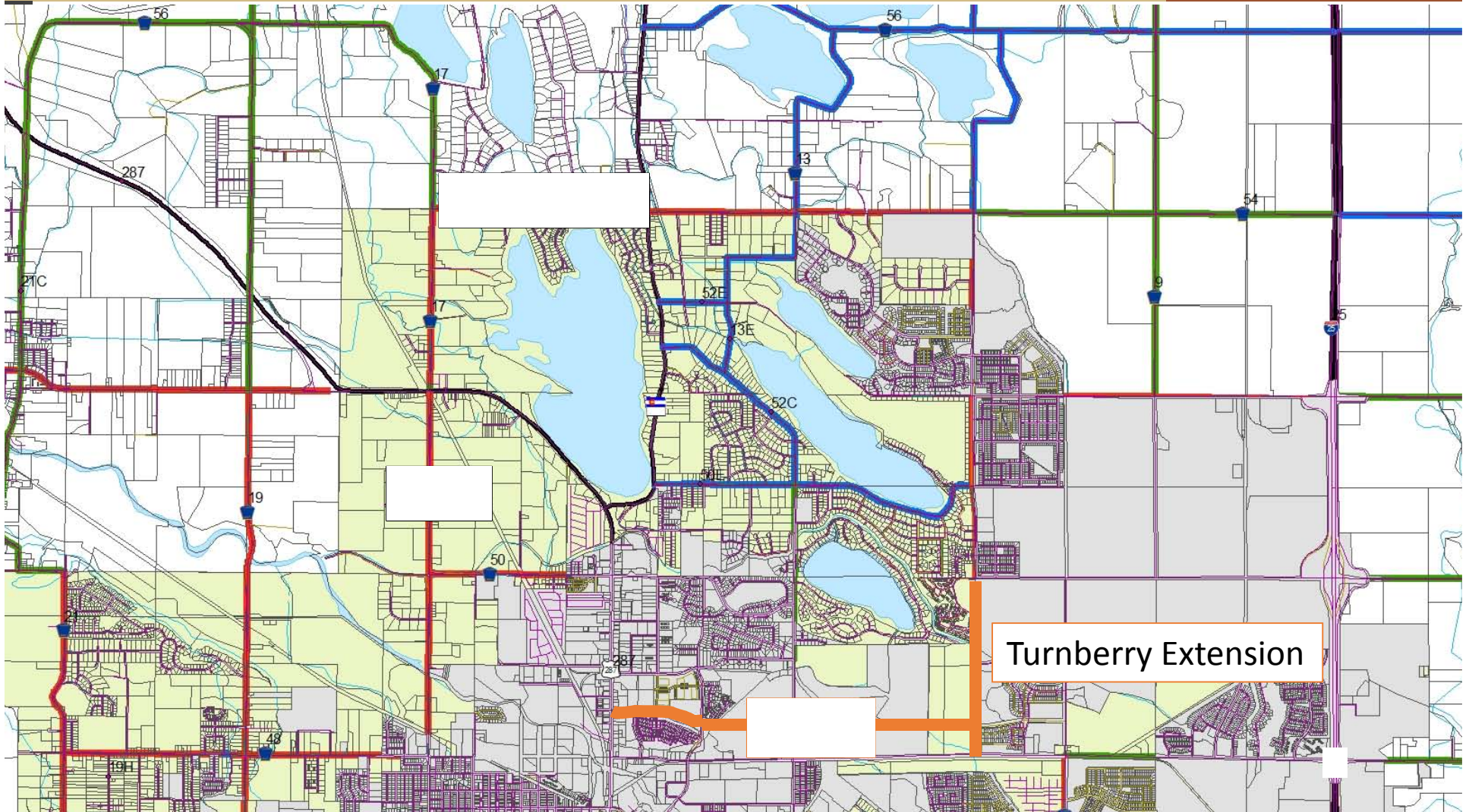
DOUGLAS ROAD (CR 54)

GROWTH IN NORTH FORT COLLINS

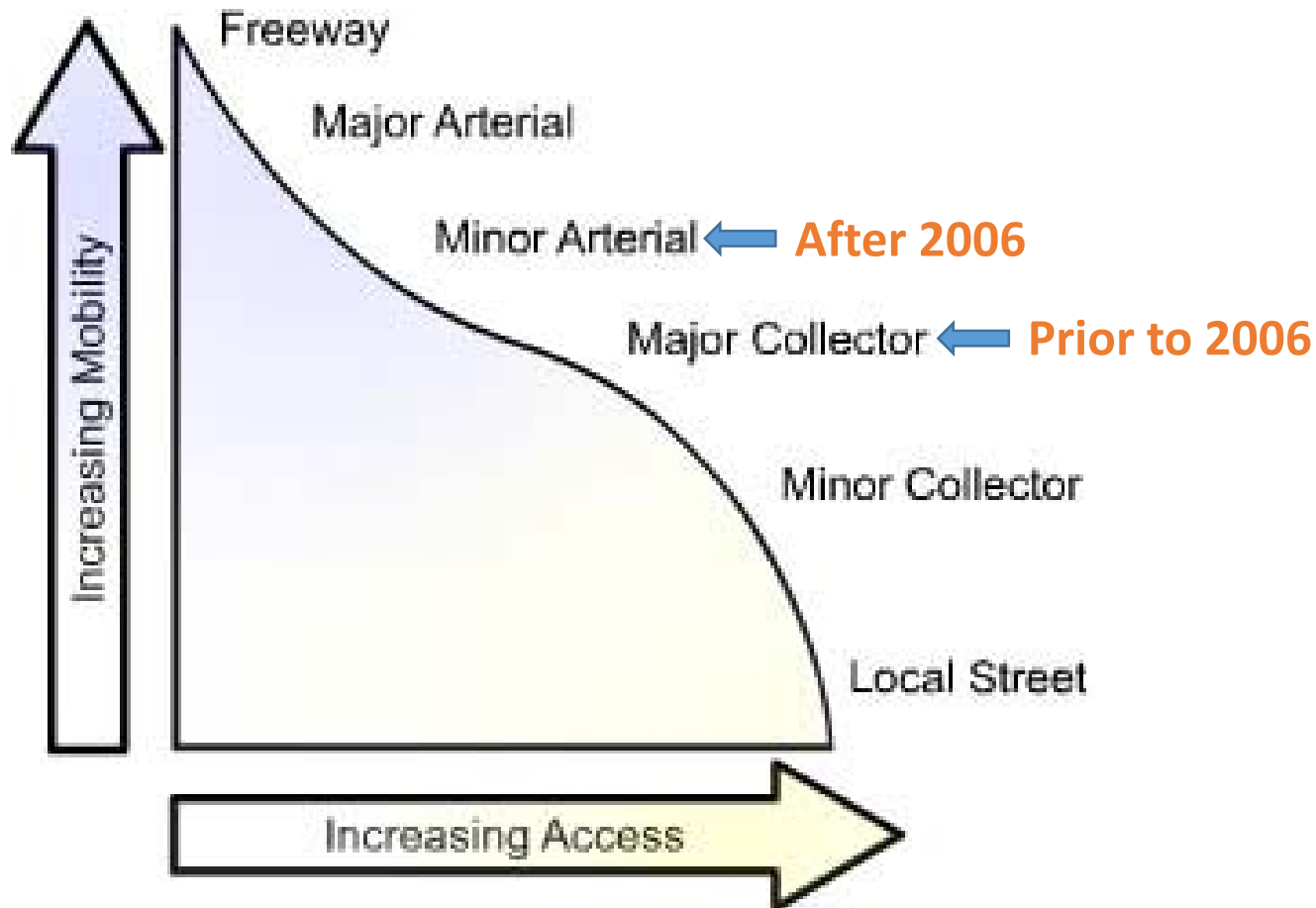


DOUGLAS ROAD (CR 54)

GROWTH IN NORTH FORT COLLINS



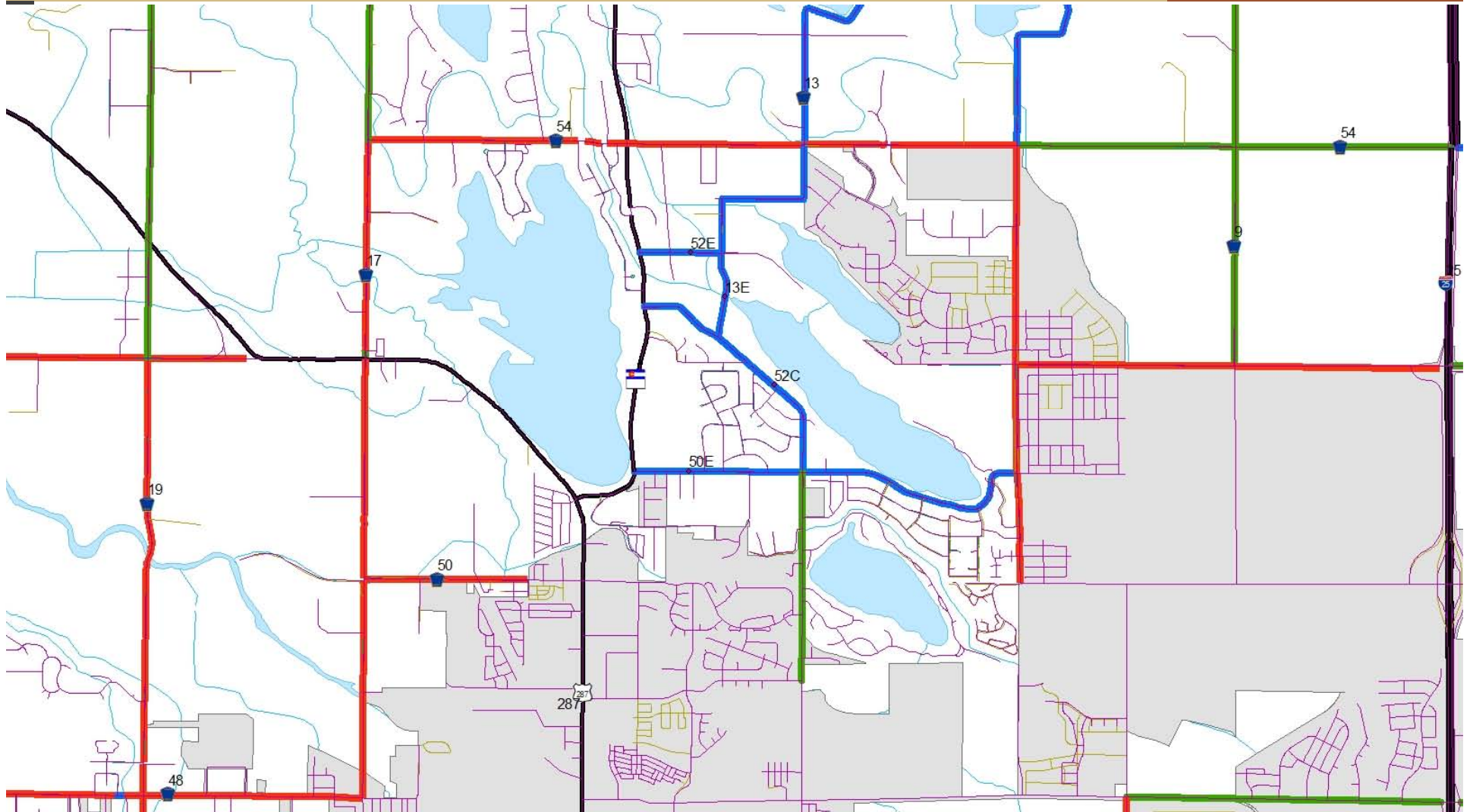
ROAD FUNCTION CLASSIFICATION



DOUGLAS ROAD (CR 54)



ROAD FUNCTION



TRUCK WEIGHTS

Maximum legal load = 85,000 lb

Colorado Legislature authorized overweight permits

- 97,000 lb & 110,000 lb maximums (equipment specific)
- CDOT started issuing permits

Larimer County issuing permits for certain routes –
bridge considerations

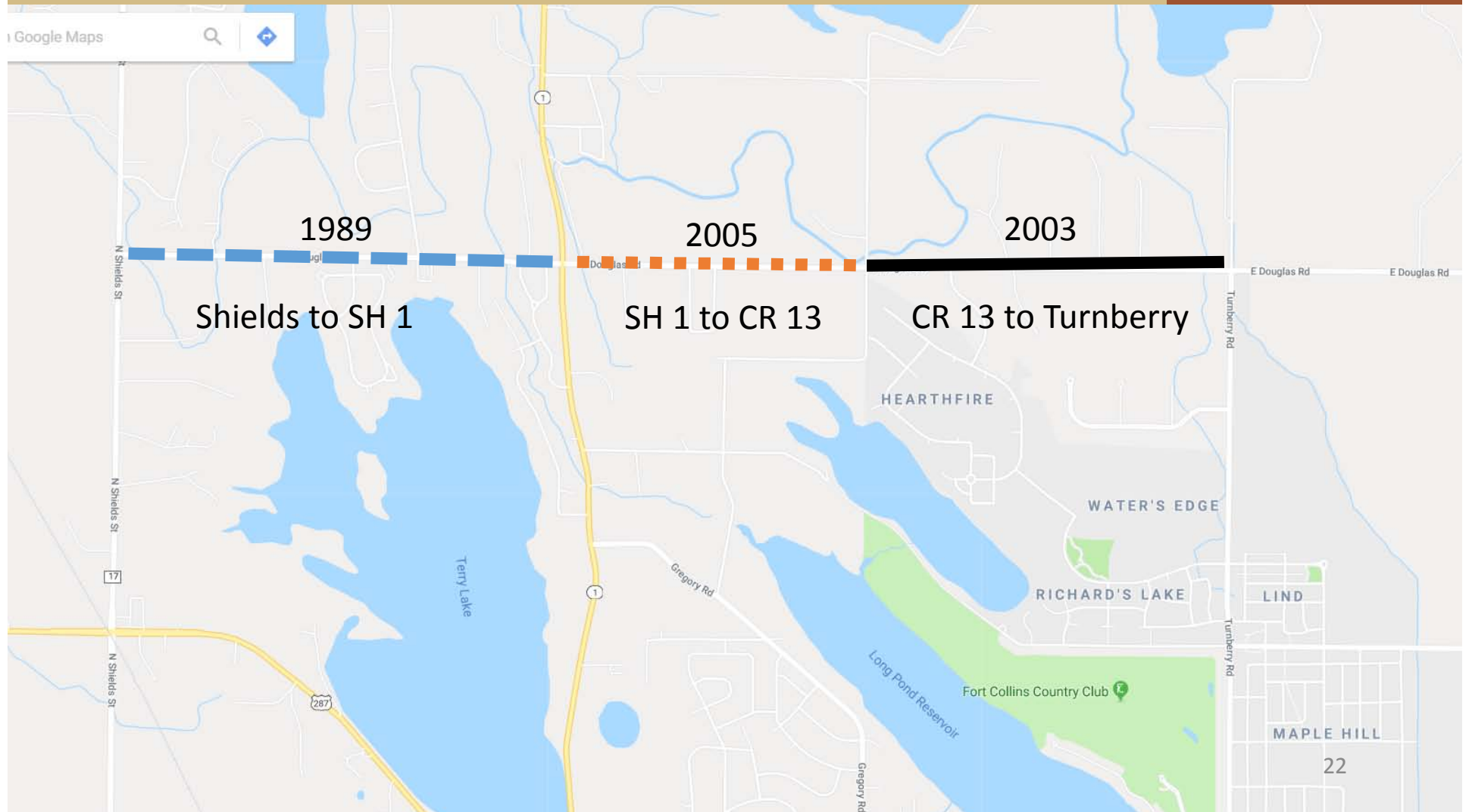
County did not issue permits for use of Douglas Rd.
for overweight loads (>85,000 lb) in 2017

Douglas Road is not a designated truck route

DOUGLAS ROAD (CR 54)

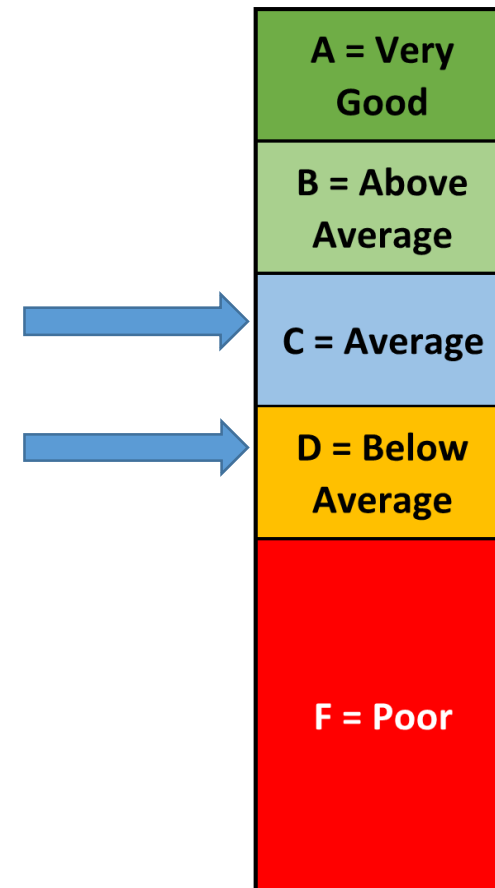


PAVEMENT CONDITION



PAVEMENT CONDITION

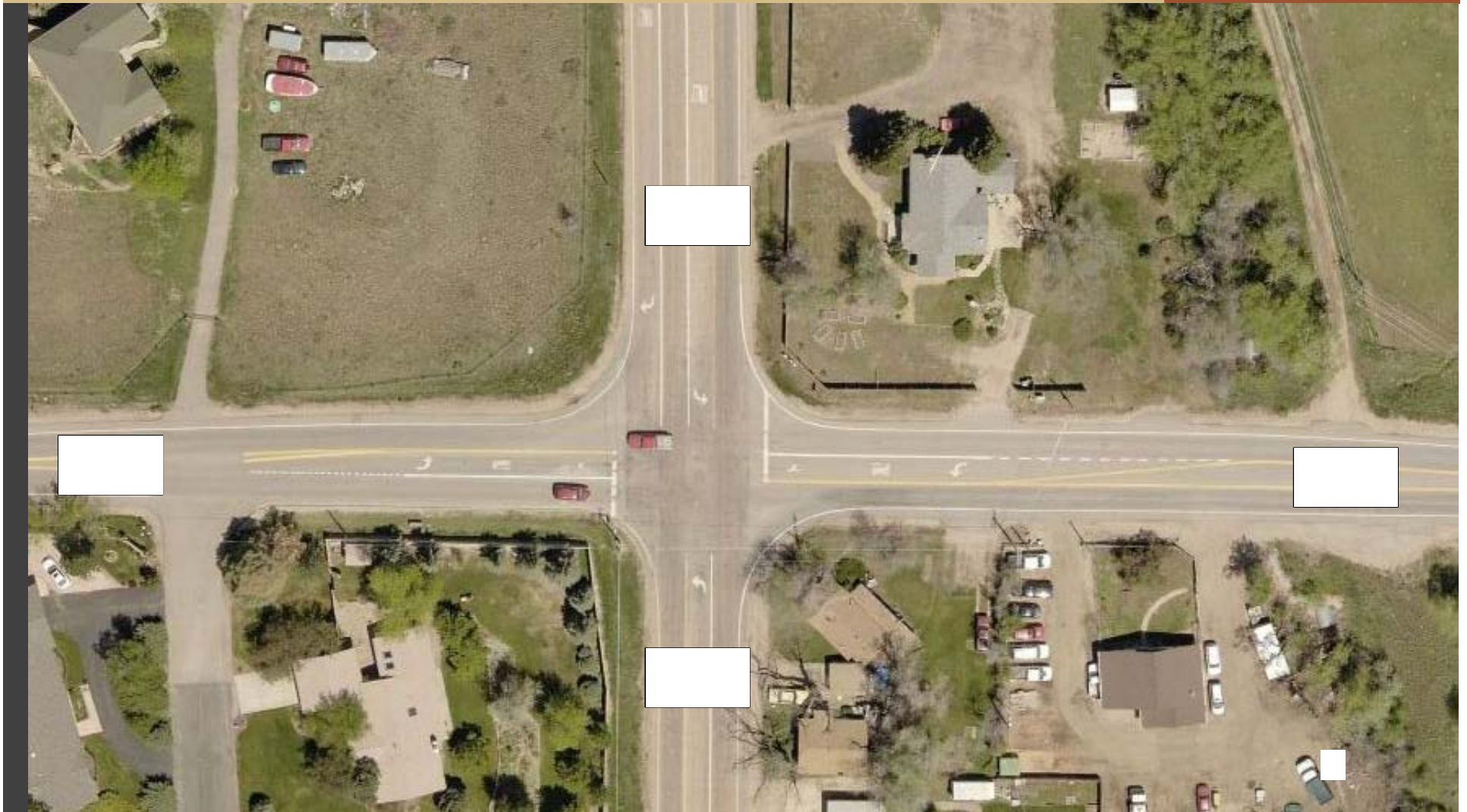
- Analyzed Annually
- 2016 Pavement Condition Index (PCI) on 0 – 100 scale
 - CR 54 west of SH 1 – PCI = **65**
 - CR 54 east of SH 1 – PCI = **52**



DOUGLAS ROAD (CR 54)



DOUGLAS RD – SH 1 INTERSECTION



DOUGLAS RD – SH 1 INTERSECTION

Applied for and awarded a CDOT Signal Grant

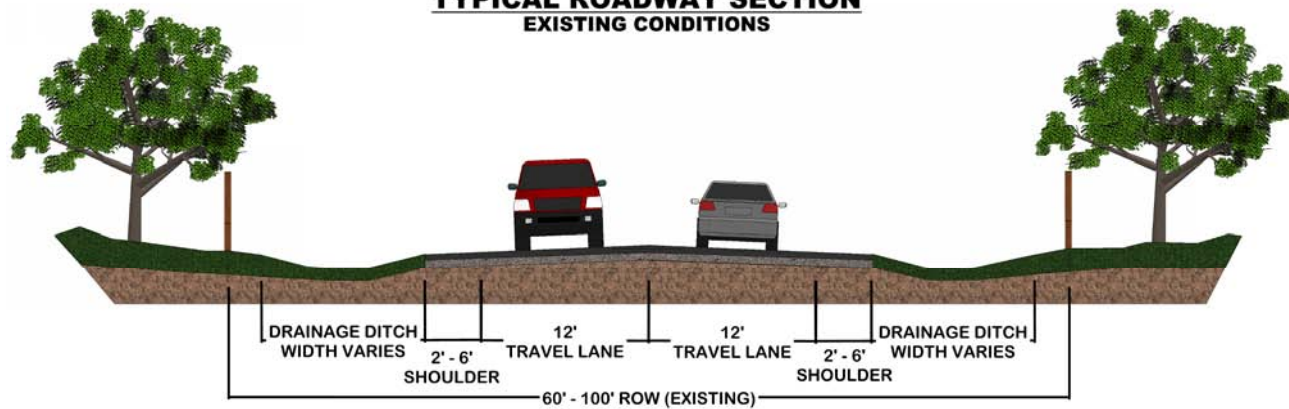
- July 2019 – Design Funding Available
- July 2020 – Construction Funding Available
- Request to CDOT to move funding up a year
- Goal is to improve turn lanes on Douglas Rd.

TYPICAL ROAD ELEMENTS

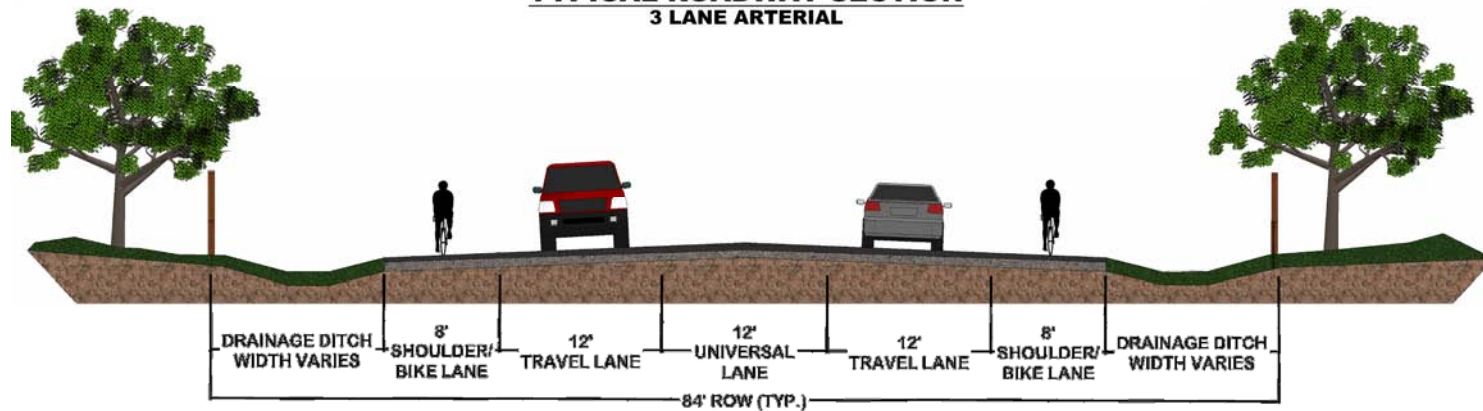
- Maintain one travel lane in each direction
- Rural section generally with roadside drainage
- Widened paved shoulders to support bicyclists, etc.
- Turn lanes – continuous or localized – for both safety and capacity
 - Neighborhood street intersections
 - Driveways directly accessing Douglas Rd.
- Extend or reconstruct drainage & irrigation crossings

TYPICAL ROAD CROSS SECTIONS

**TYPICAL ROADWAY SECTION
EXISTING CONDITIONS**

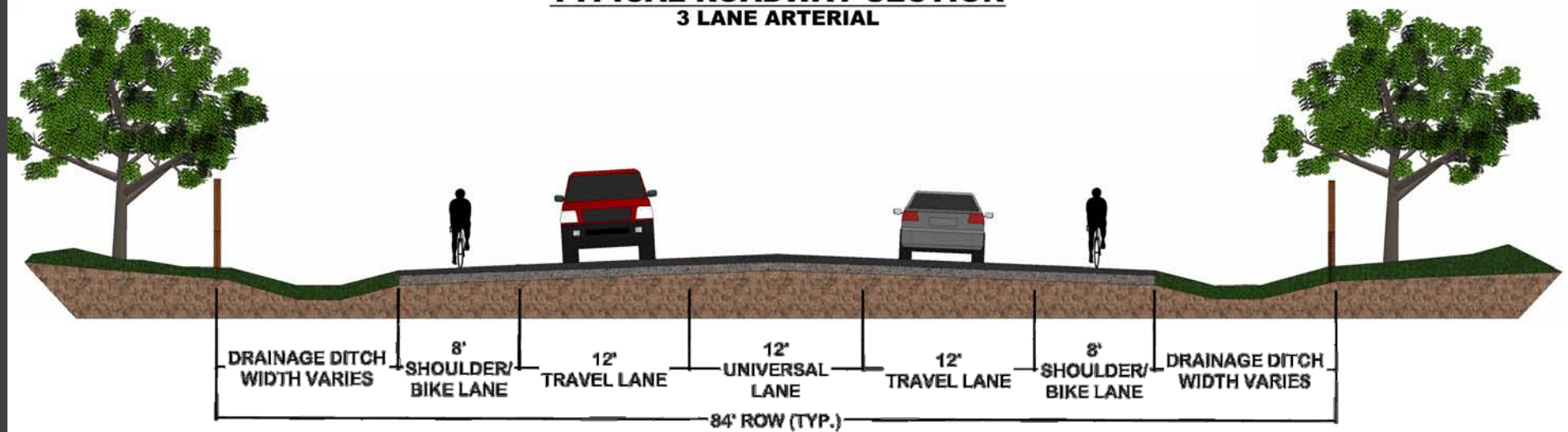


**TYPICAL ROADWAY SECTION
3 LANE ARTERIAL**



RURAL ARTERIAL WITH TURN LANE

TYPICAL ROADWAY SECTION 3 LANE ARTERIAL





Shields Street North of Poudre River



Overland Trail South of Mulberry

RIGHT-OF-WAY (ROW)

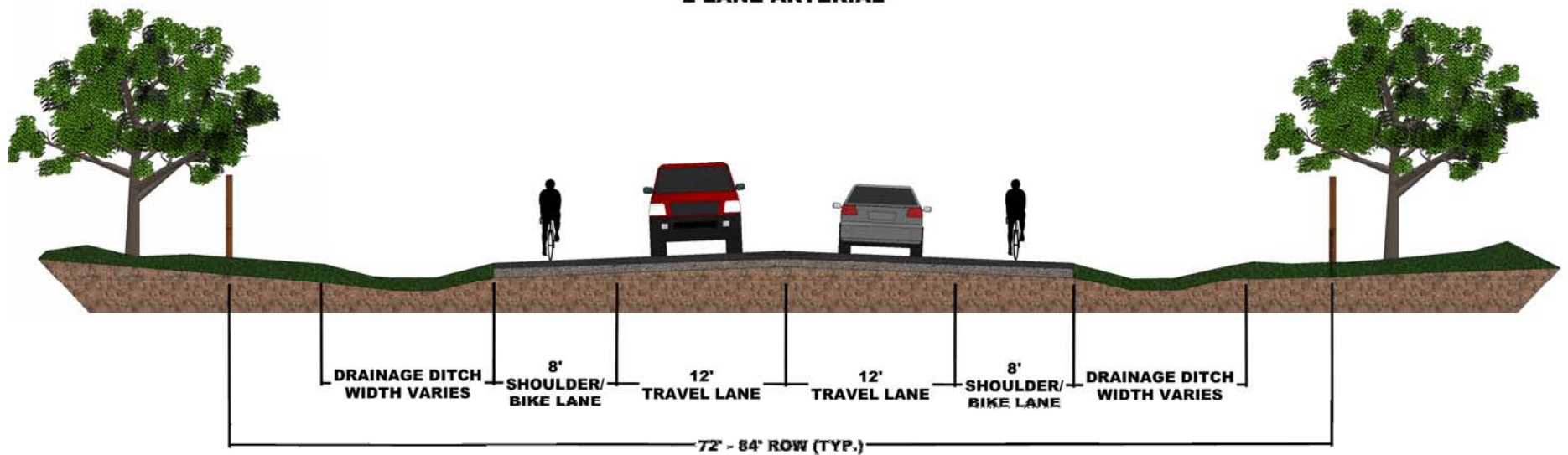
Current right-of-way varies from 60 ft to 100 ft
Only acquire ROW needed for specific road improvement project

- | | |
|--|---------------------|
| • Two 12 ft travel lanes | 24 ft |
| • One 12 ft center turn lane | 12 ft |
| • Two 8 ft paved shoulders | 16 ft |
| • Two roadside drainage ditches | <u>32 ft</u> |
| TOTAL | 84 ft* |

* Dimensions may change based on terrain, embankment slopes and turn lanes

TYPICAL CROSS SECTION

TYPICAL ROADWAY SECTION 2 LANE ARTERIAL



DOUGLAS ROAD (CR 54)



RURAL ARTERIAL – NO TURN LANE



Boyd Lake Ave (CR 11C)

DOUGLAS ROAD (CR 54)

RURAL ARTERIAL – NO TURN LANE



Boyd Lake Avenue (CR 11C)

RIGHT-OF-WAY (ROW)

Current right-of-way varies from 60 ft to 100 ft
Only acquire ROW needed for specific road improvement project

• Two 12 ft travel lanes	24 ft
• One 12 ft center turn lane	12 ft
• Two 8 ft paved shoulders	16 ft
• Two roadside drainage ditches	<u>32 ft</u>
TOTAL	72 ft*

* Dimensions may change based on terrain, embankment slopes and turn lanes

RIGHT OF WAY

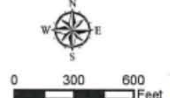
Right-of-Way Corridor

- Use of public right-of-way for roads
- Use by existing utilities
 - Water distribution mains and services
 - culverts and drainage
 - sewer / wastewater
 - electric
 - natural gas
 - cable, phone, data
 - other underground infrastructure

Thornton Water Project



CITY OF THORNTON
COLORADO
 12450 WASHINGTON ST
 THORNTON, CO 80241-2405



- TWP Corridor in Unincorporated Larimer County
- TWP Corridor outside Unincorporated Larimer County
- County Boundary
- Parcel Boundary
- Subdivision
- Railroad
- River/Stream/Canal/Ditch
- *Source Water Pump Station General Location
- Water Tank General Location
- ## Table 3 Parcel Map ID Number

GMA Boundary
 Fort Collins

Figure 3-2
 Vicinity Map


* Final location of the Source Water Pump Station will be determined during design development. Thornton will submit a Site Plan Review permit application to Larimer County after design has progressed to the level necessary to submit the application.

Source: NHD, USGS, CDWR, Larimer and Weld Counties, CDOT, DRCOG, NHD

W:\THORNTON\THORNTON_WATER_PROJECT\FIG_3-2_VICINITY_MAP_12450_WASHINGTON_ST\FIG_3-2_VICINITY_MAP_12450_WASHINGTON_ST.dwg 1/24/2018 11:20 AM


Thornton Water Project





CITY OF THORNTON
COLORADO
12450 WASHINGTON ST
THORNTON, CO 80241-2405

1/2/2018



0 300 600
1 inch = 600 feet
Feet

TWP Corridor in Unincorporated Larimer County	Subdivision	GMA Boundary
TWP Corridor outside Unincorporated Larimer County	River/Stream/Canal/Ditch	Fort Collins
County Boundary	Source Water Pump Station	Corporate Boundary
Parcel Boundary	General Location	Fort Collins
	Water Tank General Location	
	# Table 3 Parcel Map ID Number	

Figure 3-3
Vicinity Map

* Final location of the Source Water Pump Station will be determined during design development. Thornton will submit a Site Plan Review permit application to Larimer County after design has progressed to the level necessary to submit the application.

Sources: NHD, USGS, CDWR, Larimer and Weld Counties, CDOT, DRCDG, NADP

W:\THORNTON\THORNTON_WATER_PROJECT\145K_PROJECT_216_L_FERRATI\GIS\GMAPS\ARC/INFO\WORKSPACE\145K_PROJECT_216_L_FERRATI\GMAPS\VICINITY_MAP_1/2/18.DWG 1/2/2018 4:11:52 PM

PIPELINE CORRIDOR WIDTH

Data Collection Process

- ❖ Field surveying
 - Identify property lines & right-of-way limits
 - Locate trees and other features
 - **Locate overhead and underground utilities**

- ❖ Evaluate pipeline alignment, narrow corridor width

APPLICATION REVIEW

- ❖ Thornton application identified Douglas Road as a portion of the proposed corridor.
- ❖ Staff reviews the application and prepares a recommendation to the Planning Commission and Board of County Commissioners.
- ❖ Board of County Commissioners evaluates and makes a decision on the 1041 application

APPLICATION REVIEW

In response to the application:

- Effort to narrow the 500-ft corridor along Douglas Road, with a goal to have general consistency with the potential future road right-of-way needs.
- Conduct field survey to collect data and evaluate pipe alignment.

PAVEMENT RESTORATION

For linear utility projects, there is a general condition to restore existing roadway pavement to a condition equivalent to pre-project conditions by the applicant.

PIPELINE 1041 PROCESS

Planning Commission Hearing

- February 21, 2018 @ 6:30 PM

Board of County Commissioners Hearing

- March 26, 2018 @ 6:30 PM

QUESTIONS