



Outrider Planning

CDOT Division of Transit & Rail

July 17, 2019



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01

Introduction

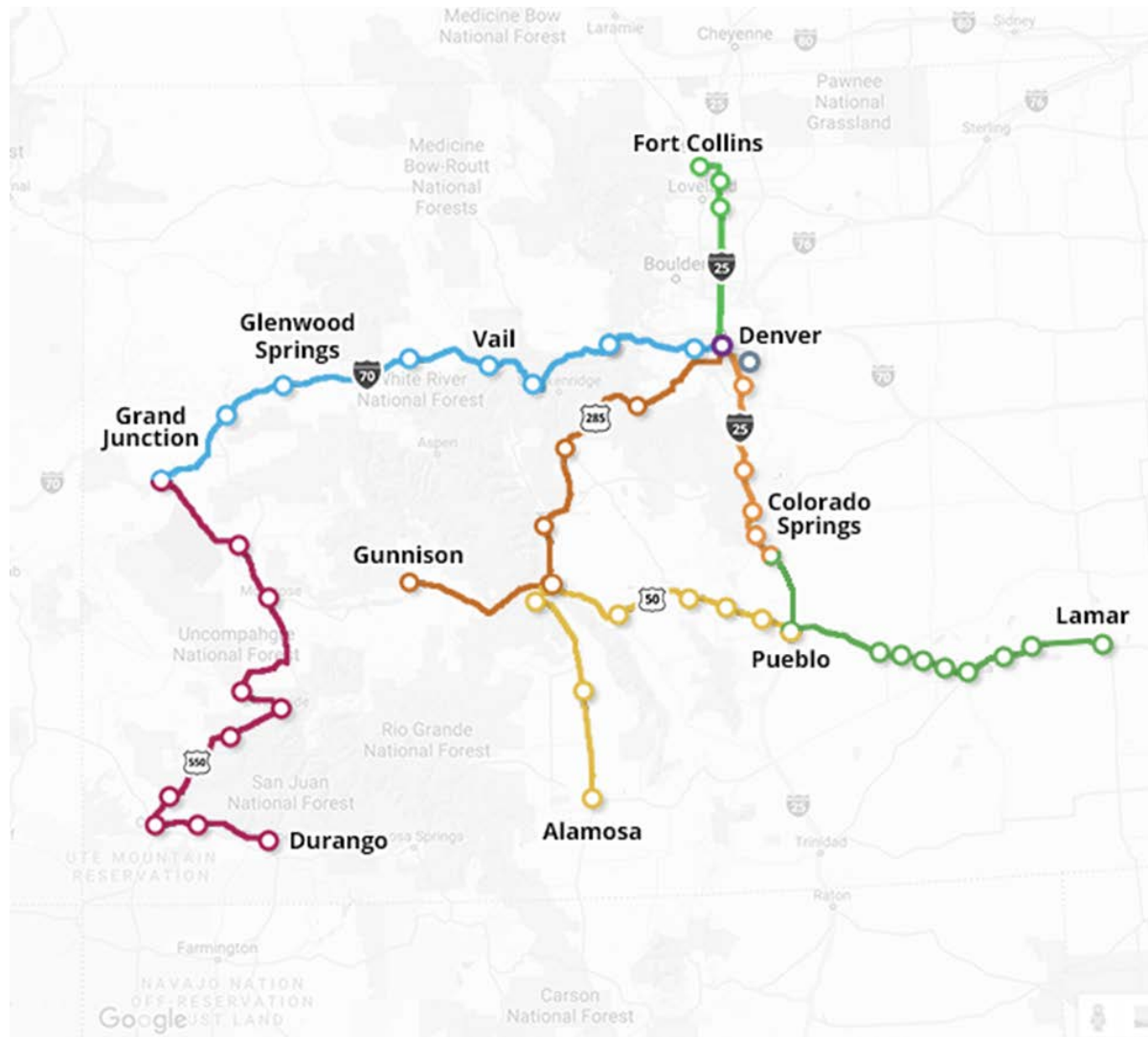
About Outrider

- Outrider is a rural regional bus service
- Outrider connects smaller cities and towns
- Outrider has a different funding mechanism than Bustang

Purpose & Background

- Analyze and prioritize **21 potential Outrider routes**
- Potential routes were identified by DTR and through **stakeholder phone interviews** (Jan. – Feb. 2018)
- Potential Bustang routes were evaluated but eventually excluded

Existing Routes



BUSTANG ROUTES

ALL ROUTES | NORTH LINE
FORT COLLINS ↔ DENVER

ALL ROUTES | WEST LINE
GRAND JUNCTION ↔ DENVER BUS CENTER

ALL ROUTES | SOUTH LINE
COLORADO SPRINGS ↔ DENVER

COLORADO SPRINGS - DTC
COLORADO SPRINGS ↔ DENVER TECH CENTER

DTC - COLORADO SPRINGS
DENVER TECH CENTER ↔ COLORADO SPRINGS

OUTRIDER ROUTES

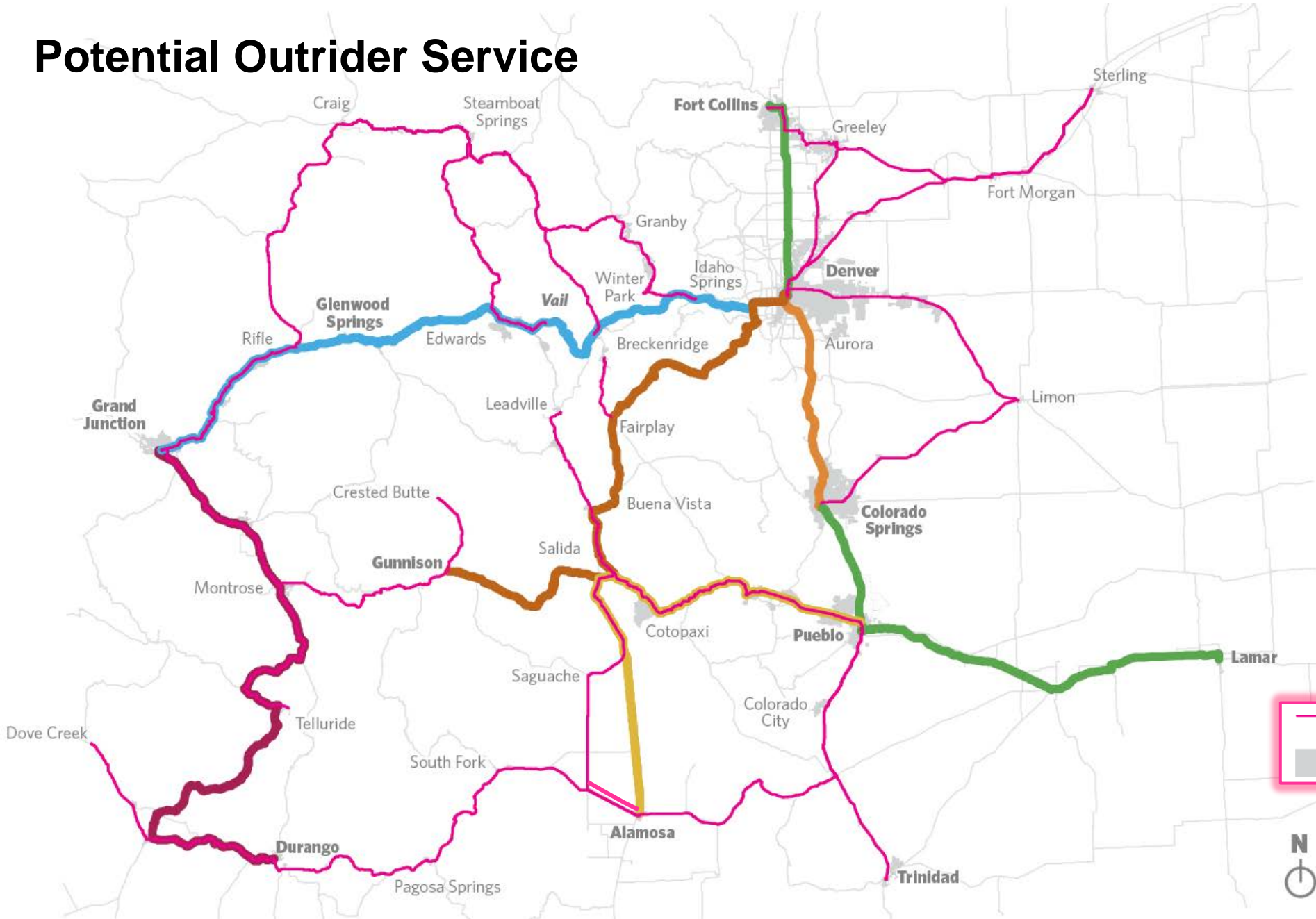
LAMAR - COLORADO SPRINGS
LAMAR ↔ COLORADO SPRINGS

ALL ROUTES | ALAMOSA - PUEBLO
ALAMOSA ↔ PUEBLO

ALL ROUTES | DURANGO - GRAND JUNCTION
DURANGO ↔ GRAND JUNCTION

GUNNISON - DENVER
GUNNISON ↔ DENVER

Potential Outrider Service



BUSTANG ROUTES

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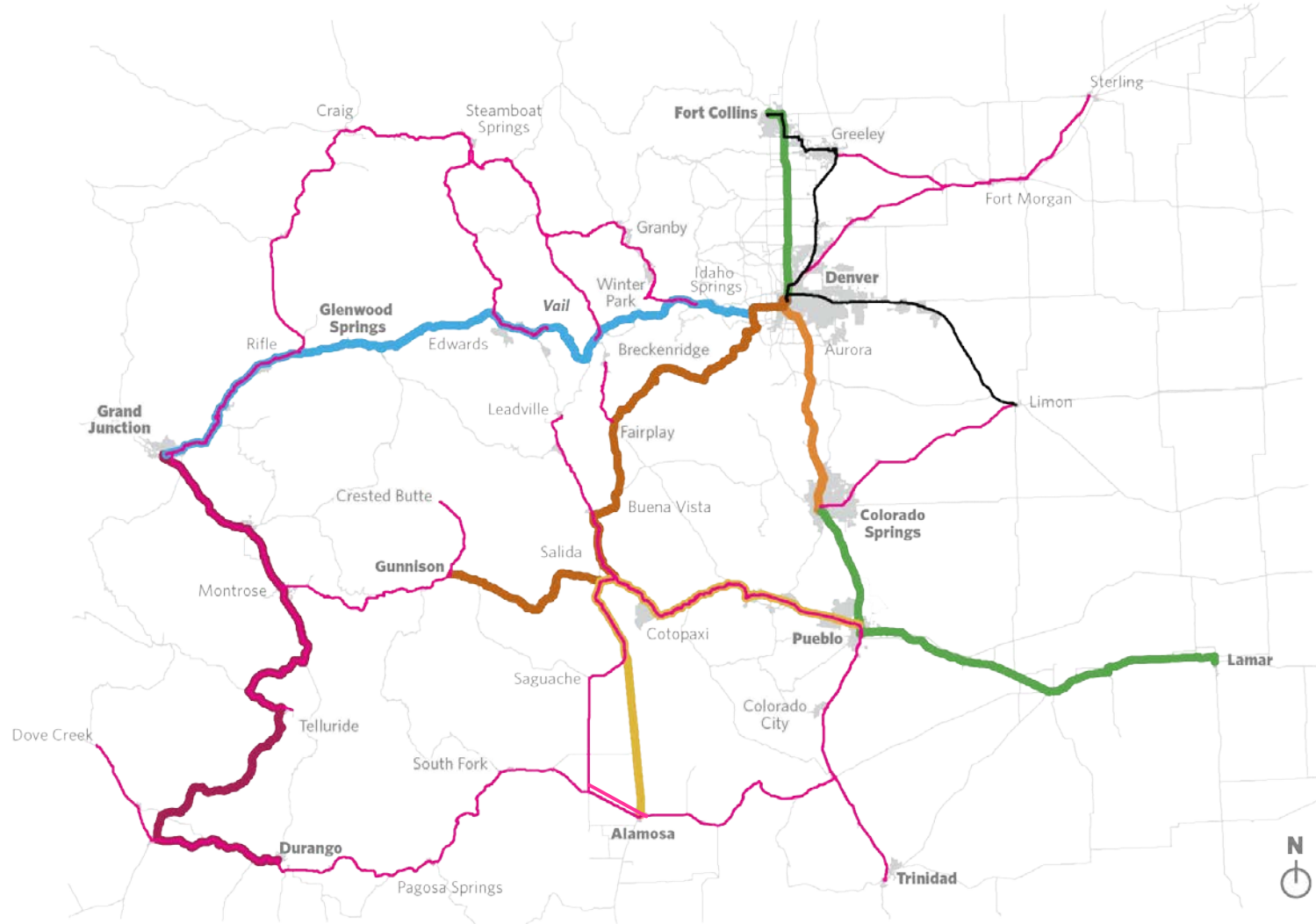
GUNNISON - DENVER
GUNNISON ↔ DENVER

— Potential Outrider Service

■ Intersecting Census-Designated "Place"



Potential Bustang Service



BUSTANG ROUTES

ALL ROUTES | NORTH LINE
FORT COLLINS ↔ DENVER

ALL ROUTES | WEST LINE
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ALL ROUTES | SOUTH LINE
COLORADO SPRINGS ↔ DENVER

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COLORADO SPRINGS ↔ DENVER TECH CENTER

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DENVER TECH CENTER ↔ COLORADO SPRINGS

OUTRIDER ROUTES

LAMAR - COLORADO SPRINGS
LAMAR ↔ COLORADO SPRINGS

ALL ROUTES | ALAMOSA - PUEBLO
ALAMOSA ↔ PUEBLO

ALL ROUTES | DURANGO - GRAND JUNCTION
DURANGO ↔ GRAND JUNCTION

GUNNISON - DENVER
GUNNISON ↔ DENVER

- Potential Bustang Service
- Potential Outrider Service
- Intersecting Census-Designated "Place"

Process Timeline

Winter 2019

Spring 2019

Summer 2019

Fall 2019

Conduct Planning Evaluation

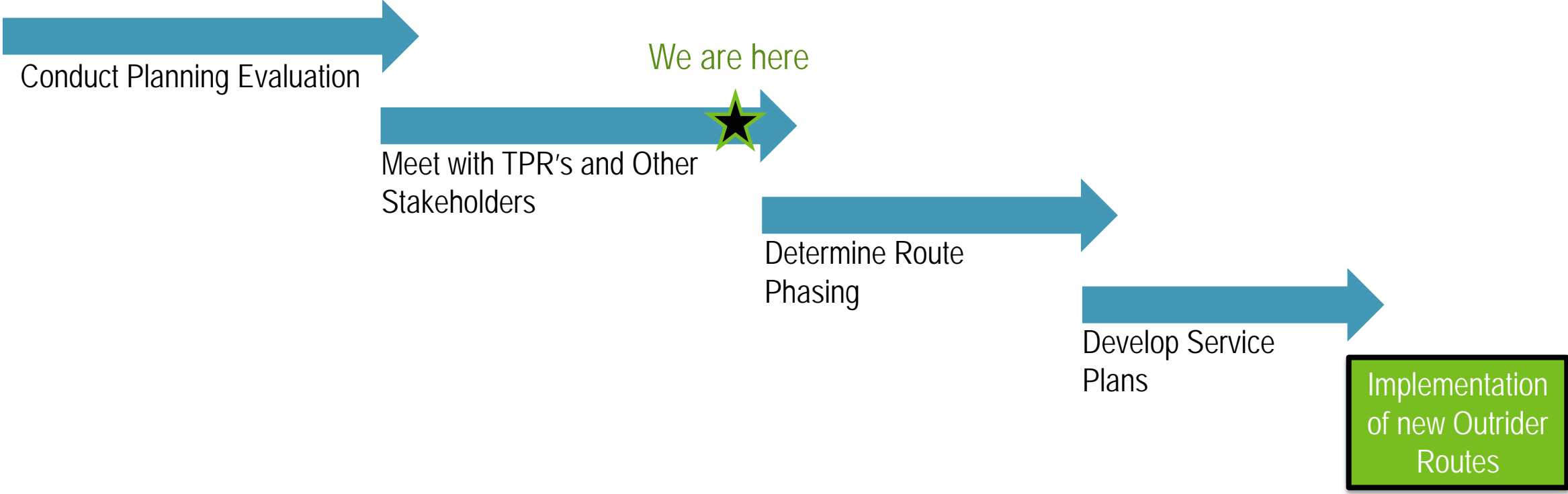
Meet with TPR's and Other Stakeholders

Determine Route Phasing

Develop Service Plans

Implementation of new Outrider Routes

We are here





02

Scoring Methodology

Criteria

1. Implementation Feasibility
2. Social Equity
3. Geographic Equity
4. Ridership/Productivity

Implementation Feasibility Data Analysis

The feasibility included research and calculation to determine the following information:

- associated **cost** required to operate new service (based on predicted daily hours, daily cost, daily ridership, daily revenue),
- existing service **currently operated** along the route,
- **previous planning** efforts identify the proposed route as a priority (based on phone interviews and research),
- new service is an **extension of an existing route** (only extensions from the termini under 50 miles),
- there is considerable **stakeholder support** (based on interviews conducted between January and February 2018)

Social and Geographic Equity Data Analysis

1. Gather Data

- Percent Minority (Hispanic and Non-White)
- Percent Below Poverty Line
- Percent Households without Access to Vehicles

2. **Aggregate Data** by Census Designated Places within a 0.5-mile buffer of each potential route

3. Rank each factor by low, medium and high

4. Determine the CDOT Transportation Region and Transportation Planning Region for each route

Ridership Forecasts

- **Gather Data**

- Population and Employment plus disadvantaged populations

- **Aggregate Data and Assign Score**

- Sum census designated places (CDPs) within 0.5-mile buffer of each potential route

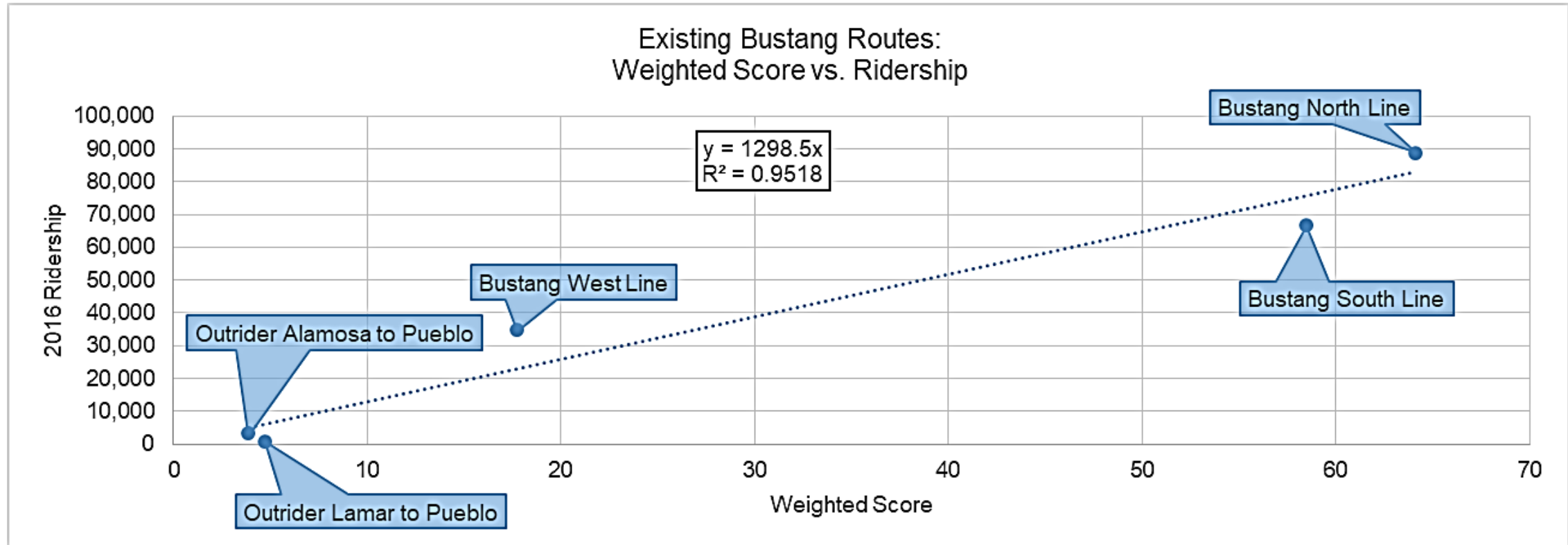
- **Normalize and Weight Datasets**

- » Population = 15%
- » Employment = 15%
- » Disadvantaged Population = 35%
 - Seniors
 - Below Poverty Line
 - Disabled
- » Households without Vehicle Access = 35%

- **Weigh the scores by one-way travel time**

Ridership Forecasts

1. Score existing Bustang and Outrider routes using same methodology
2. Plot weighted score and 2017 ridership
3. Use best-fit line equation to project ridership of the potential routes





03

Results

Scoring Summary

	Implementation	Social Equity	Geographic Equity		Potential Ridership
<u>Proposed Transit Route (not ranked)</u>	<u>Implementation Rating</u>	<u>Social Equity Rating</u>	<u>CDOT Transportation Planning Region</u>	<u>CDOT Transportation Region</u>	<u>Potential Annual Ridership: Best Fit Line</u>
Between Alamosa and Salida, via 285 through	High	High	San Luis Valley	5	1,159
Between Craig and Frisco	High	Medium	Intermountain, Northwest	3	755
Between Crested Butte and Gunnison	High	Low	Gunnison Valley	3	799
Between Durango and Pagosa Springs	High	Medium	Southwest	5	1,127
Between Limon and Colorado Springs	Medium	Medium	Pikes Peak Area, Eastern, Central Front Range	2, 4	20,185
Between Craig and Grand Junction	Medium	Medium	Grand Valley, Intermountain, Northwest	3	3,268
Between Craig and Idaho Springs	Low	Low	Greater Denver Area, Northwest	1,3	539
Between Craig and Vail	Low	Medium	Intermountain, Northwest	3	981
Between Durango and Dove Creek	Medium	Medium	Southwest	5	1,235
Between Durango and Pueblo	Medium	High	Pueblo Area, Southwest, Central Front Range, San Luis Valley, South Central	5,2	2,700
Between Fairplay and Breckenridge	High	Low	Intermountain, Central Front Range	2, 3	615
Between Grand Junction and Telluride	High	High	Grand Valley, Gunnison Valley	3,5	3,203
Between Montrose and Gunnison	Medium	Medium	Gunnison Valley	3	1,575
Between Salida and Leadville	Low	Medium	San Luis Valley, Intermountain	3,5	757
Between Salida and Pueblo	High	Low	Pueblo Area, San Luis Valley, Central Front Range	5,2	7,075
Between Sterling and Denver	Medium	High	Greater Denver Area, Eastern, Upper Front Range	4, 1	33,896
Between Sterling and Greeley	Medium	Medium	North Front Range, Eastern, Upper Front Range	4	5,774
Between Trinidad and Pueblo	Medium	High	Pueblo Area, South Central	2	8,329

Routes by MPO Region



	Implementation	Social Equity	Potential Ridership
Proposed Transit Route (not ranked)			
	<u>Implementation Rating</u>	<u>Social Equity Rating</u>	<u>Potential Annual Ridership: Best Fit Line</u>
Betw een Sterling and Greeley	Medium	Medium	5,800



04

Next Steps

Moving Forward

Meet with all Transportation Planning Regions (TPRs)

- Provide a general project overview and discussion of the route selection process
- Solicit feedback regarding potential funding, stop locations, routing and operational considerations, timing for service implementation and other factors
- Key stakeholders interviewed during the onset of the project will be invited to participate

Develop service plans for top prioritized routes

- Routing
- Stop locations
- Layover locations
- Number of trips per day
- Potential ridership
- Productivity (rides per plat hour)
- Garage pull time
- Number and type of buses required

Process Timeline

Winter 2019

Spring 2019

Summer 2019

Fall 2019

Conduct Planning Evaluation

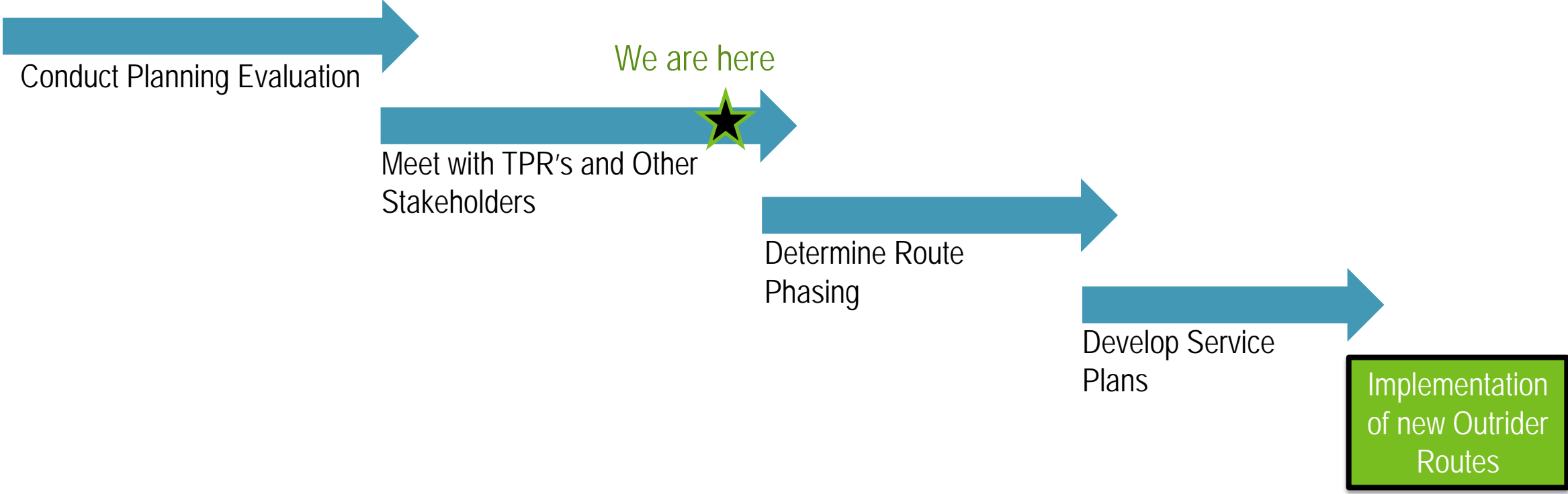
Meet with TPR's and Other Stakeholders

Determine Route Phasing

Develop Service Plans

Implementation of new Outrider Routes

We are here





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Questions

Contact Information

- Meghan Boydston – meghan.boydston@hdrinc.com
- Mike Timlin - michael.timlin@state.co.us
- Jeff Prillwitz - jeffrey.prillwitz@state.co.us



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Additional Information

Implementation Feasibility

Highest rated:

- Between Alamosa and Salida, via 285 through Saguache and Monte Vista
- Between Grand Junction and Telluride
- Between Limon and Colorado Springs
- Between Crested Butte and Gunnison
- Between Craig and Frisco
- Between Fairplay and Breckenridge
- Between Durango and Pagosa Springs

Implementation								
<u>Proposed Transit Route (not ranked)</u>	<u>Subsidy Per Passenger</u>	<u>Existing Service Exists</u>	<u>Transit Service Name</u>	<u>Extension of Existing Outrider Route</u>	<u>Stakeholder Support</u>	<u>Suitable for Outrider</u>	<u>Identified as Priority in Planning Efforts</u>	<u>Implementation Rating</u>
Between Alamosa and Salida, via 285 through Saguache and Monte Vista	-\$148.45	Yes	Outrider	Yes	didn't mention	Yes		High
Between Craig and Frisco	-\$145.90	Yes	(Greyhound)	No	Yes	Yes		High
Between Crested Butte and Gunnison	-\$65.62	Yes	Gunnison V	Yes (27 miles)	Yes	Yes		High
Between Durango and Pagosa Springs	-\$96.04	Yes	Durango Air	Yes	Yes	Yes	Yes	High
Between Limon and Colorado Springs	\$7.62	Yes	Outback Exp	No	No	Yes		Medium
Between Craig and Grand Junction	-\$67.78	No		No (114 miles to Grand Junction)	Yes	Yes		Medium
Between Craig and Idaho Springs	-\$708.20	No	(Greyhound indirect)	No	n/a	Yes		Low
Between Craig and Vail	-\$283.18	No		No (87 miles to Vail)	n/a	Yes		Low
Between Durango and Dove Creek	-\$111.59	Yes	MoCo bus	Maybe (78 miles from Durango)	Yes	Yes		Medium
Between Durango and Pueblo	-\$184.67	No		No	Yes	Yes		Medium
Between Fairplay and Breckenridge	-\$89.76	No	(shuttle only)	No - Fairplay not terminus	Yes	Yes	Yes	High
Between Grand Junction and Telluride	-\$72.31	Yes	Greyhound	Yes	Yes	Yes	Yes	High
Between Montrose and Gunnison	-\$72.63	No	(two shuttle services exist)	No (65 miles from Montrose)	Mixed - Not a	Yes	Yes	Medium
Between Salida and Leadville	-\$361.71	No		No - Salida not terminus	Yes	Yes		Low
Between Salida and Pueblo	-\$14.13	Yes	Bustang	Yes	n/a	Yes		High
Between Sterling and Denver	\$1.65	Yes	Burlington T	No	Yes	Yes		Medium
Between Sterling and Greeley	-\$17.50	No		No	n/a	Yes		Medium
Between Trinidad and Pueblo	-\$2.45	Yes	Greyhound	No (84 miles to Pueblo)	n/a	Yes		Medium

Social Equity

Highest rated routes from a social equity perspective:

- Between Alamosa and Salida, via 285 through Saguache and Monte Vista
- Between Durango and Pueblo
- Between Grand Junction and Telluride
- Between Sterling and Denver
- Between Trinidad and Pueblo

	Social Equity			
<u>Proposed Transit Route (not ranked)</u>	<u>Minority Population Rating</u>	<u>Below Poverty Line Rating</u>	<u>People without Cars Rating</u>	<u>Social Equity Rating</u>
Between Alamosa and Salida, via 285 through Saguache and Monte Vista	High	High	Low	High
Between Craig and Frisco	Medium	Medium	Medium	Medium
Between Crested Butte and Gunnison	Low	Low	Medium	Low
Between Durango and Pagosa Springs	Medium	Medium	Low	Medium
Between Limon and Colorado Springs	Medium	Low	Medium	Medium
Between Craig and Grand Junction	Medium	Medium	Medium	Medium
Between Craig and Idaho Springs	Low	Low	Medium	Low
Between Craig and Vail	Medium	Low	Medium	Medium
Between Durango and Dove Creek	Medium	Medium	Low	Medium
Between Durango and Pueblo	High	High	Medium	High
Between Fairplay and Breckenridge	Low	Medium	Low	Low
Between Grand Junction and Telluride	Medium	High	High	High
Between Montrose and Gunnison	Medium	Medium	Medium	Medium
Between Salida and Leadville	Medium	Low	Medium	Medium
Between Salida and Pueblo	Medium	Low	Low	Low
Between Sterling and Denver	High	Medium	Medium	High
Between Sterling and Greeley	Medium	Low	Medium	Medium
Between Trinidad and Pueblo	High	Medium	High	High

Geographic Equity

	Geographic Equity	
Proposed Transit Route (not ranked)	<u>CDOT Transportation Planning Region</u>	<u>CDOT Transportation Region</u>
Between Alamosa and Salida, via 285 through	San Luis Valley	5
Between Craig and Frisco	Intermountain, Northwest	3
Between Crested Butte and Gunnison	Gunnison Valley	3
Between Durango and Pagosa Springs	Southwest	5
Between Limon and Colorado Springs	Pikes Peak Area, Eastern, Central	2, 4
Between Craig and Grand Junction	Grand Valley, Intermountain, Northwest	3
Between Craig and Idaho Springs	Greater Denver Area, Northwest	1,3
Between Craig and Vail	Intermountain, Northwest	3
Between Durango and Dove Creek	Southwest	5
Between Durango and Pueblo	Pueblo Area, Southwest, Central	5,2
Between Fairplay and Breckenridge	Intermountain, Central Front Range	2, 3
Between Grand Junction and Telluride	Grand Valley, Gunnison Valley	3,5
Between Montrose and Gunnison	Gunnison Valley	3
Between Salida and Leadville	San Luis Valley, Intermountain	3,5
Between Salida and Pueblo	Pueblo Area, San Luis Valley, Central	5,2
Between Sterling and Denver	Greater Denver Area, Eastern, Upper	4, 1
Between Sterling and Greeley	North Front Range, Eastern, Upper	4
Between Trinidad and Pueblo	Pueblo Area, South Central	2

Potential Ridership

- Highest rated routes from a ridership perspective:
- Between Sterling and Denver
 - Between Limon and Colorado Springs
 - Between Trinidad and Pueblo
 - Between Salida and Pueblo
 - Between Sterling and Greeley
 - Between Craig and Grand Junction

<u>Proposed Transit Route (not ranked)</u>	Potential Ridership					
	<u>Population/ Employment Score</u>	<u>Raw Score</u>	<u>Mileage (O ne-Way)</u>	<u>Weighted Score</u>	<u>One-Way Travel Time (Minutes)</u>	<u>Potential Annual Ridership: Best Fit Line</u>
Between Alamosa and Salida, via 285 through Saguache	124	92	98	0.9	103	1,159
Between Craig and Frisco	209	38	59	0.6	66	755
Between Crested Butte and Gunnison	46	22	28	0.6	35	799
Between Durango and Pagosa Springs	174	59	60	0.9	68	1,127
Between Limon and Colorado Springs	2,512	1,259	73	15.5	81	20,185
Between Craig and Grand Junction	657	370	126	2.5	147	3,268
Between Craig and Idaho Springs	207	88	175	0.4	212	539
Between Craig and Vail	318	120	135	0.8	159	981
Between Durango and Dove Creek	208	81	80	1.0	85	1,235
Between Durango and Pueblo	843	609	273	2.1	293	2,700
Between Fairplay and Breckenridge	60	17	22	0.5	35	615
Between Grand Junction and Telluride	645	375	150	2.5	152	3,203
Between Montrose and Gunnison	144	91	65	1.2	75	1,575
Between Salida and Leadville	68	90	134	0.6	155	757
Between Salida and Pueblo	808	610	96	5	112	7,075
Between Sterling and Denver	6,062	3,211	125	26.1	123	33,896
Between Sterling and Greeley	829	454	96	4.4	102	5,774
Between Trinidad and Pueblo	611	507	87	6.4	79	8,329

2045 RTP Scenarios & Plan Projects

Technical Advisory Committee (TAC)

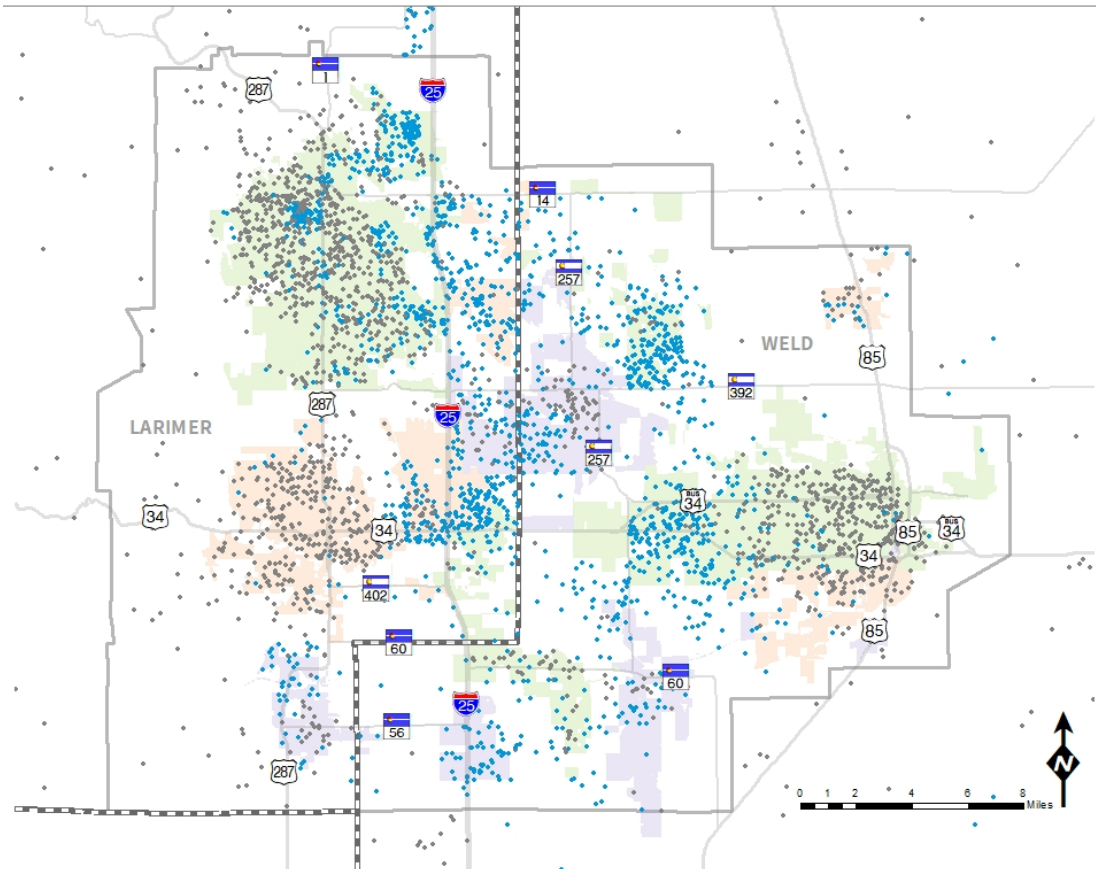


North Front Range
Metropolitan
Planning
Organization

July 17, 2019

Land Use Forecast

Households



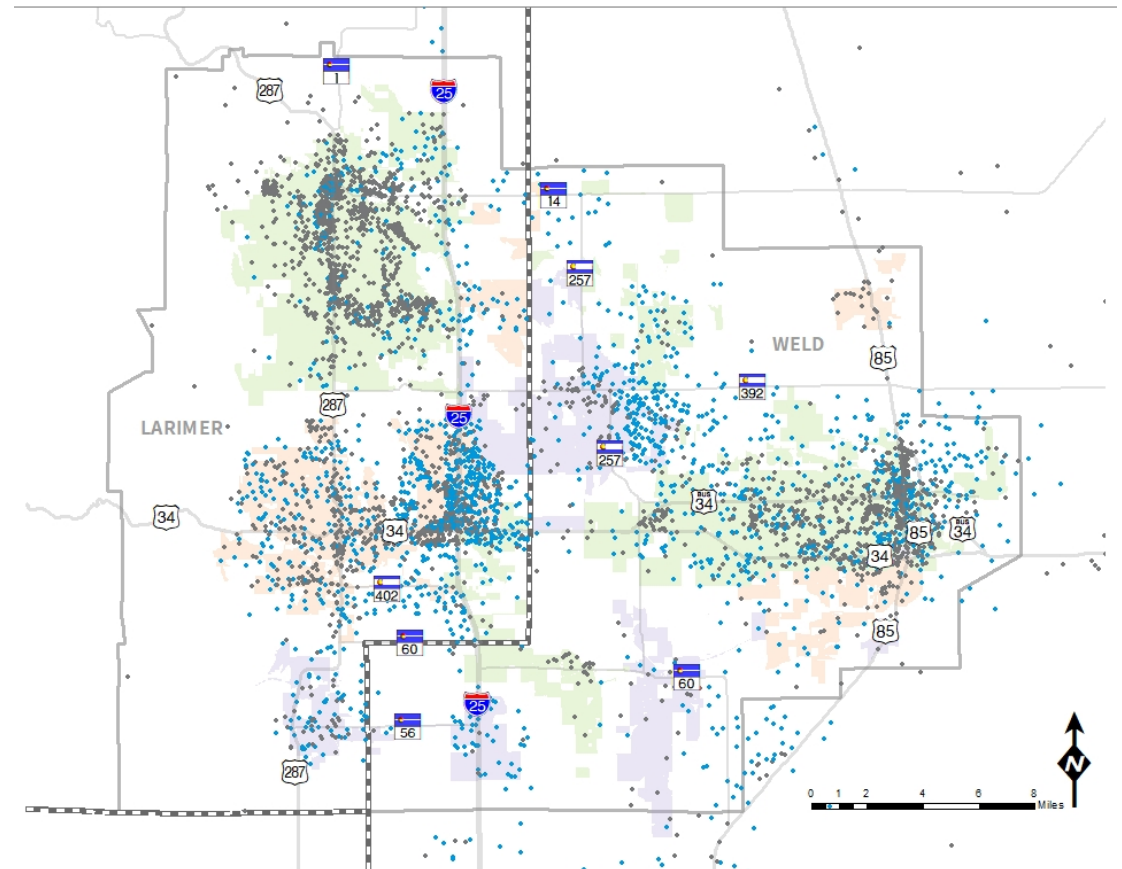
Legend

- 100 Households in 2015
- 100 Households added by 2045
- Highways
- Major Roads
- ⊞ NFRMPO Boundary
- ⊞ County Boundary

July 2019
Sources: CDOT, NFRMPO



Jobs



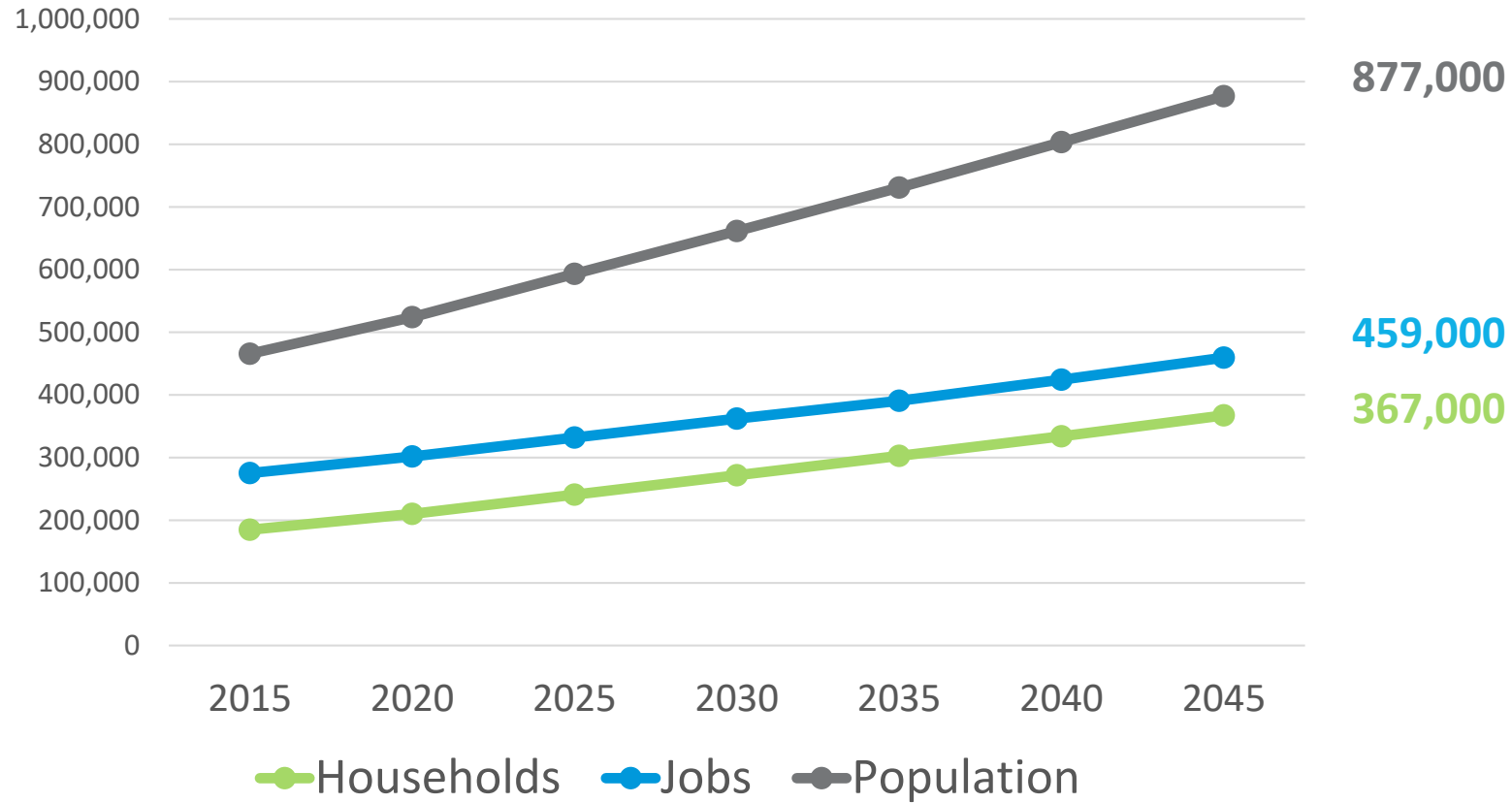
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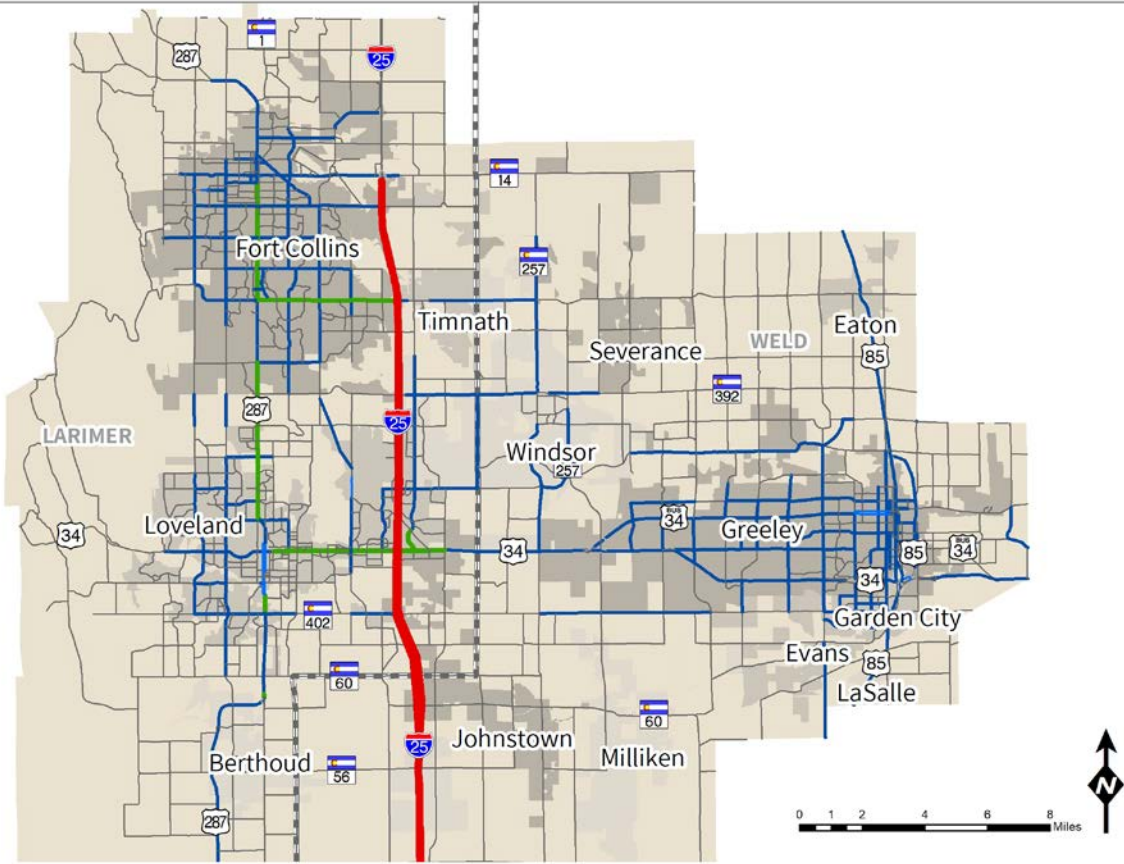
July 2019
Sources: CDOT, NFRMPO



Land Use Forecast





Travel Demand Analysis: 2045 Network

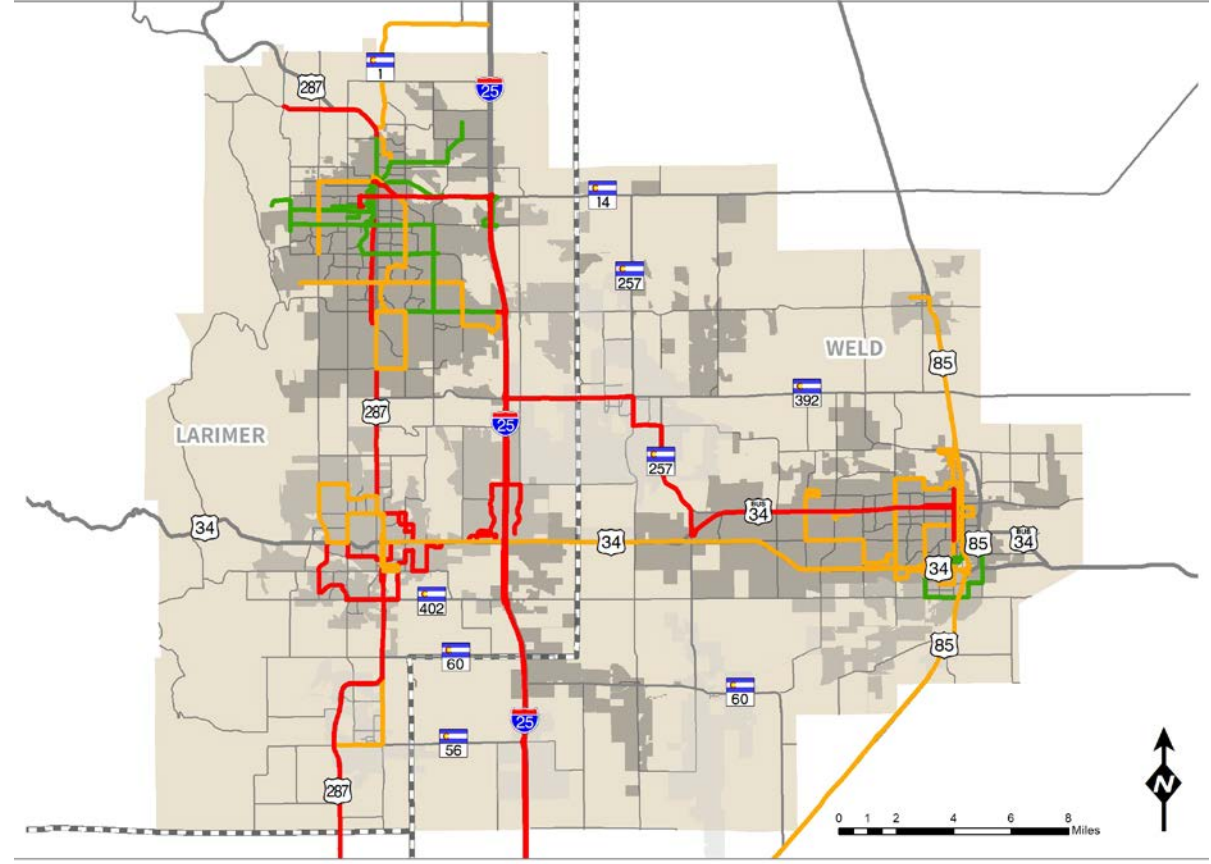


Legend

Number of Lanes

- 1
- 2
- 3
- 4
- 6
- 2 General Purpose + 1 Express Lane in each direction
-  County Boundary
-  NFRMPO Boundary

July 2019
Sources: CDOT, NFRMPO  North Front Range
Metropolitan
Planning
Organization



Legend

Peak Period Headways

- 10-15 minutes
- 20-30 minutes
- 60+ minutes
-  County Boundary
-  NFRMPO Boundary

July 2019
Sources: CDOT, NFRMPO  North Front Range
Metropolitan
Planning
Organization

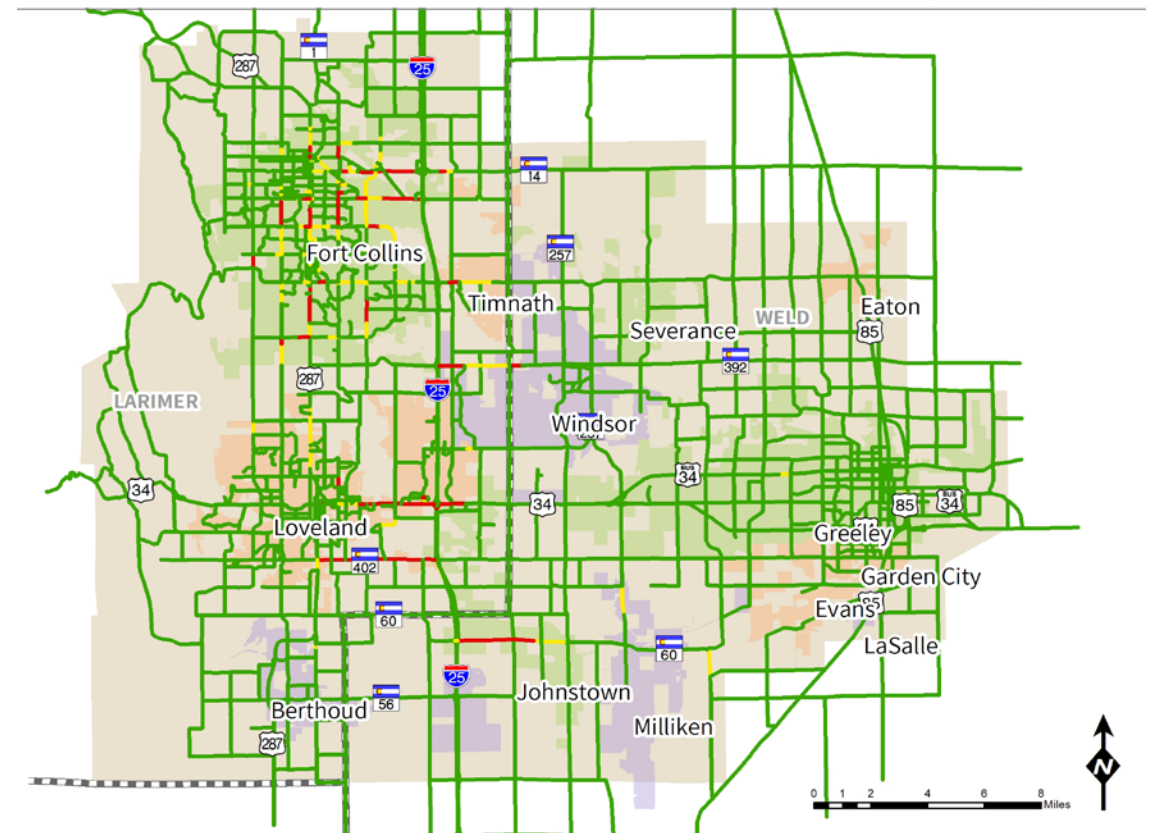
Land Use Scenarios

- Baseline Forecast
- High Density Scenario

Transportation Scenarios

- Baseline Forecast
- No Build Scenario
- Fiscally Constrained Transit Investment
- Fiscally Constrained I-25 Investment
- Unconstrained: All Identified Projects

2015 Travel Time Index (TTI)



Legend

- Not Congested (0.00-1.29)
- Congesting (1.30-1.49)
- Congested (1.50 - 5.39)
- County Boundary
- NFRMPO Boundary

July 2019
Sources: CDOT, NFRMPO



Plan Scenarios

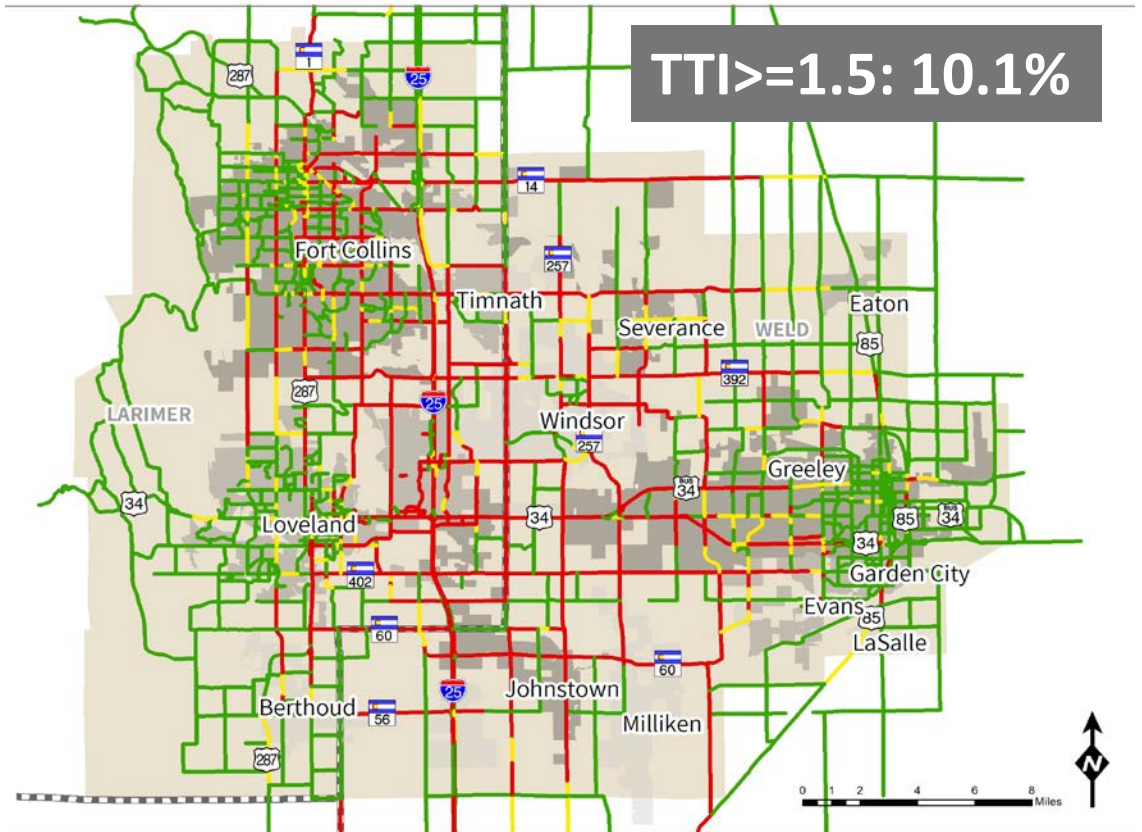
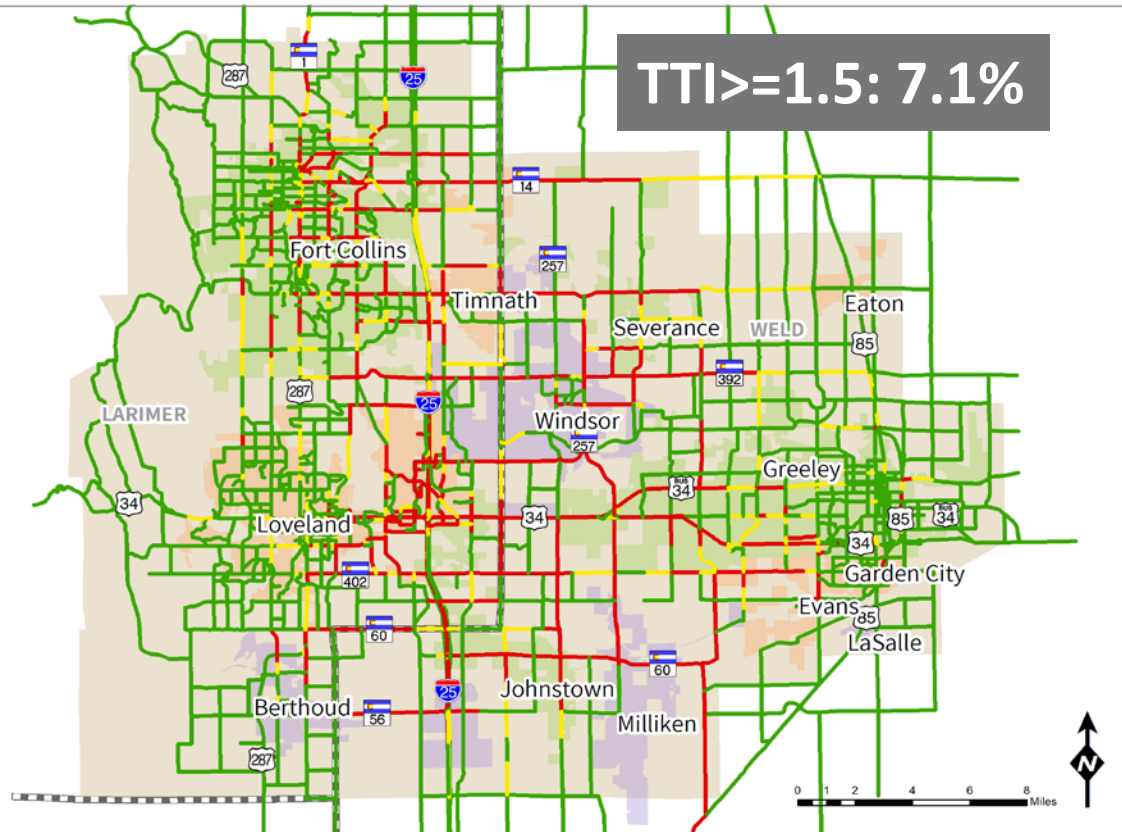
Build

Travel Time Index (TTI)

No Build

TTI \geq 1.5: 7.1%

TTI \geq 1.5: 10.1%



Legend

- Not Congested (0.00 - 1.29)
- Congesting (1.30 - 1.49)
- Congested (1.50 - 23.20)
-  County Boundary
-  NFRMPO Boundary

July 2019
Sources: CDOT, NFRMPO



Legend

- Not Congested (0.00 - 1.29)
- Congesting (1.30 - 1.49)
- Congested (1.50 - 36.71)
-  County Boundary
-  NFRMPO Boundary

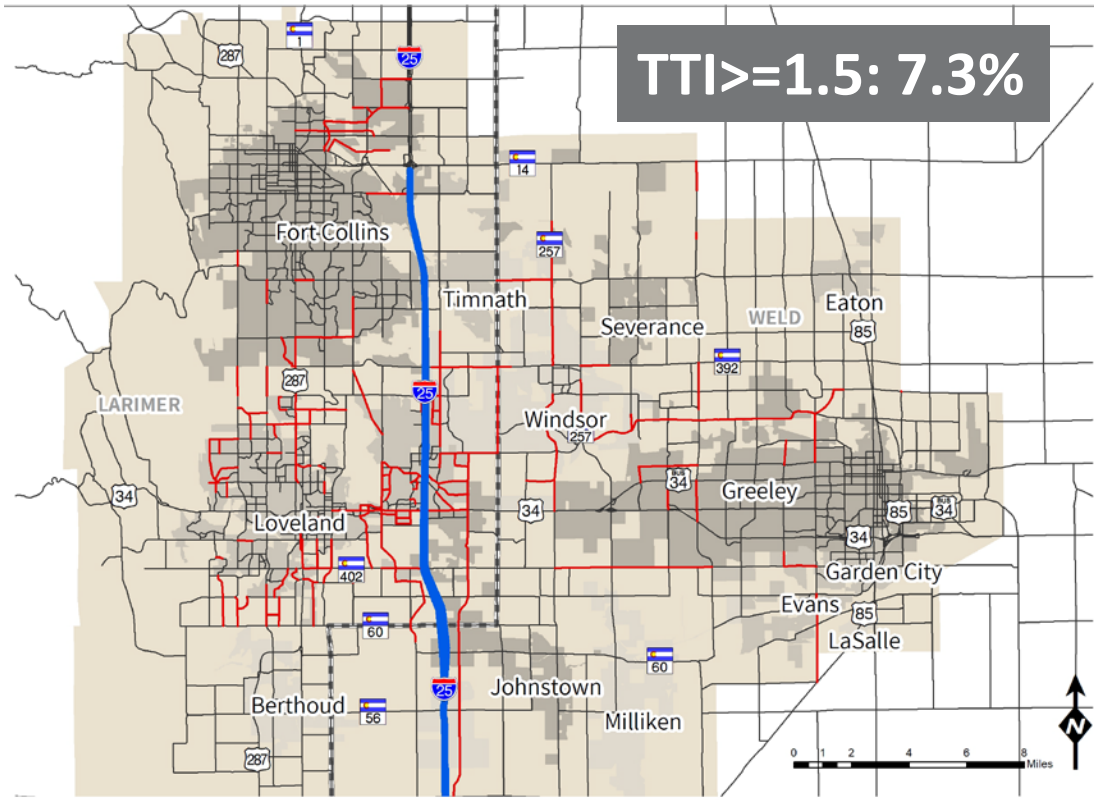
July 2019
Sources: CDOT, NFRMPO





Plan Scenarios

I-25 Investment Scenario

TTI ≥ 1.5 : 7.3%



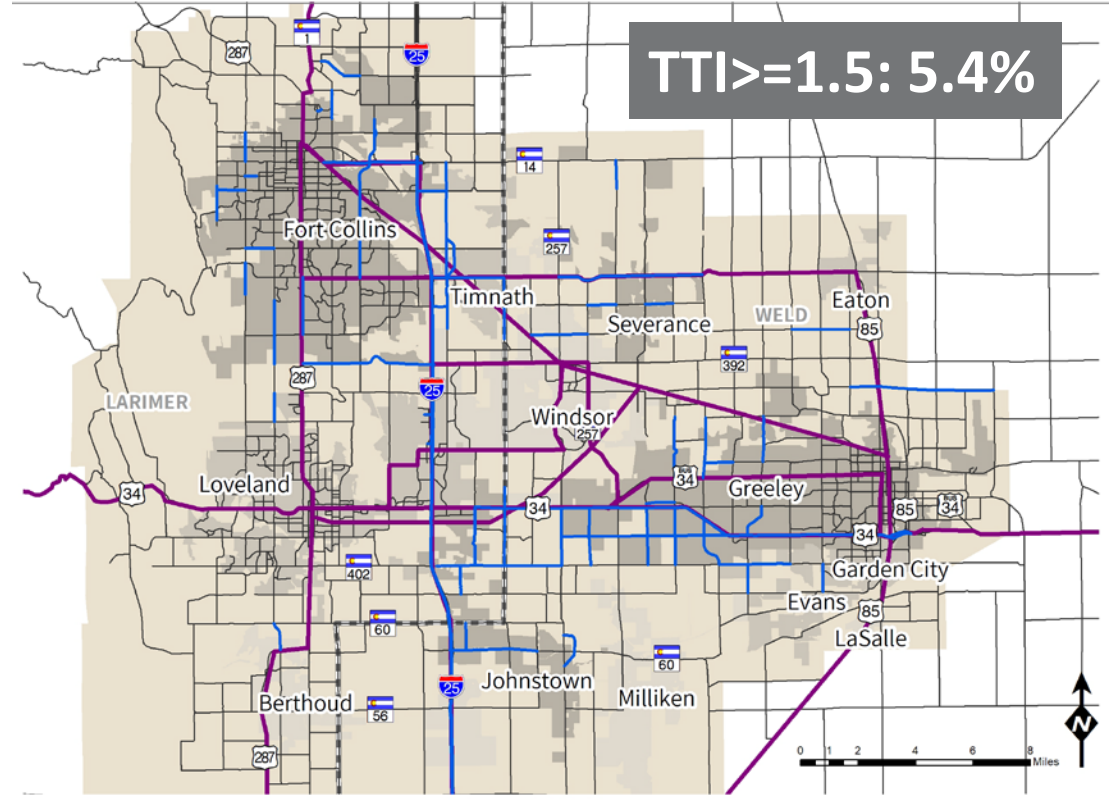
Legend

- Added Project (3 General Purpose + 1 Express Lane in each direction)
- Removed Projects
- Roadway Network
-  County Boundary
-  NFRMPO Boundary


July 2019
Sources: CDOT, NFRMPO 

Unconstrained Scenario

TTI ≥ 1.5 : 5.4%

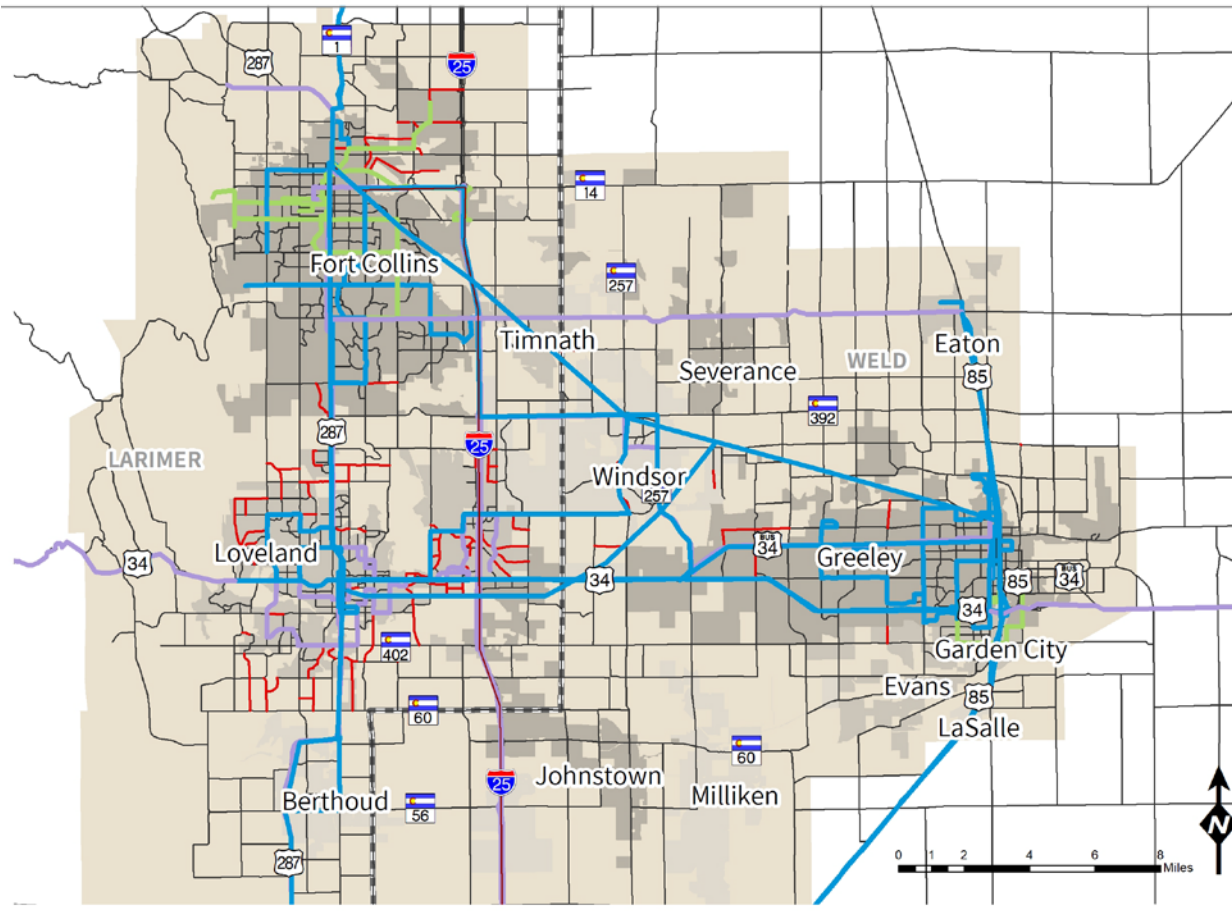


Legend

- Added Roadway Projects
- Added Transit Projects
- Roadway Network
-  County Boundary
-  NFRMPO Boundary

July 2019
Sources: CDOT, NFRMPO 

Plan Scenarios



Legend



July 2019
Sources: CDOT, NFRMPO



Fiscally Constrained Transit Investment Scenarios

Baseline Land Use

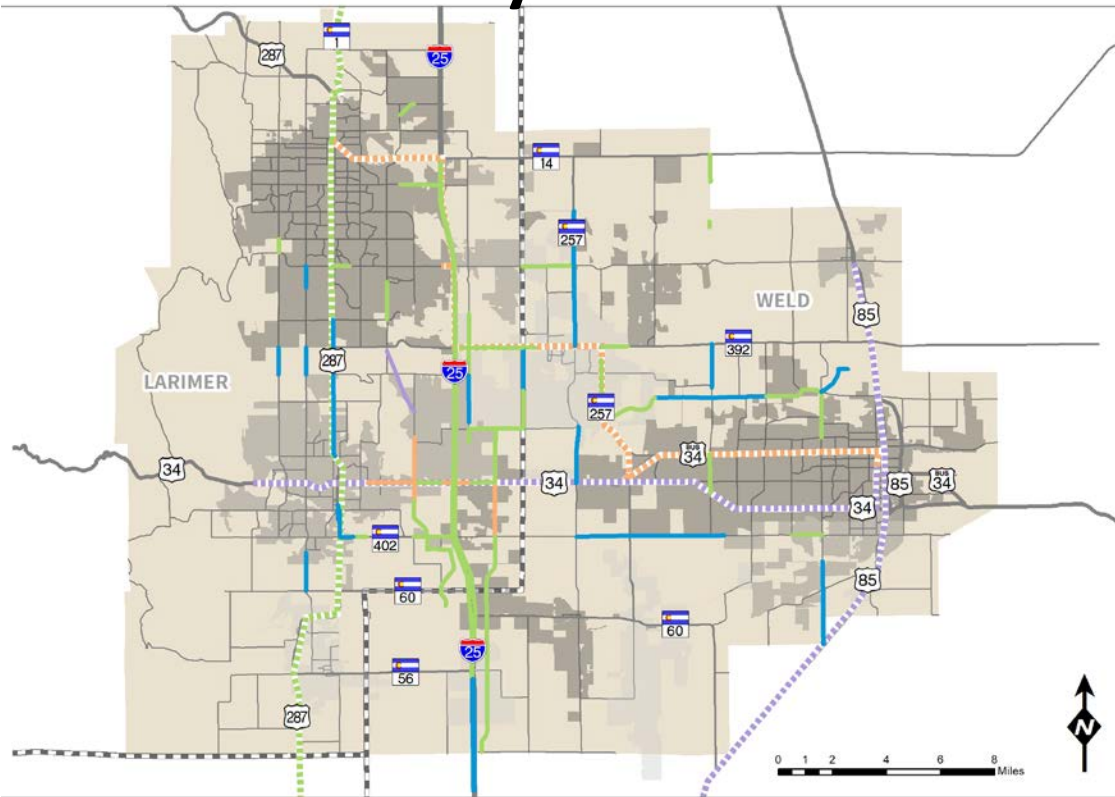
- 11% increase in ridership

High Density Land Use

- 172% increase in ridership

Plan Projects

Fiscally Constrained





Legend

Roadway Projects by Staging Period

- 2020
- 2021-2030
- 2031-2040
- 2041-2045

Transit Projects by Staging Period

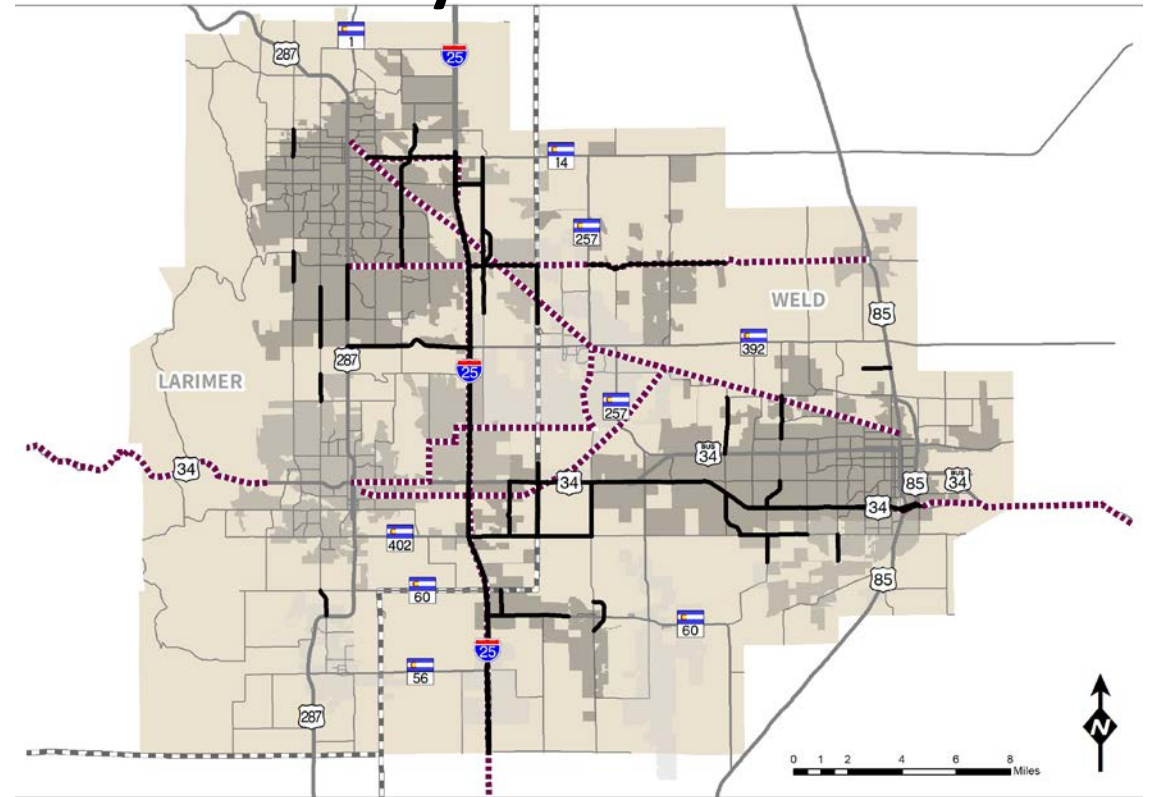
- - - 2020
- - - 2021-2030
- - - 2041-2045

-  County Boundary
-  NFRMPO Boundary

July 2019
Sources: CDOT, NFRMPO





Fiscally Unconstrained



Legend

Fiscally Unconstrained Projects

- Roadway Projects
- - - Transit Projects

-  County Boundary
-  NFRMPO Boundary

July 2019
Sources: CDOT, NFRMPO



Fiscally Constrained Roadway Capacity Projects, 2020

Map ID	RSC	Facility	Project Limits	Improvement Type	Length (Mi)	Remaining Project Cost (\$M, YOE)
1	2	US34	Boyd Lake Ave to Boise Ave	Widen from 4 lanes to 6 lanes	1.7	\$8.6
2	2	US34	Centerra Pkwy to Rocky Mountain Ave	Widen from 4 lanes to 6 lanes	1.0	\$6.8
3	14	LCR3	LCR18 to US34	Pave unpaved road	2.0	\$11.0
4	16	Boyd Lake Ave	LCR20C to 37 th St	Widen from 2 lanes to 4 lanes	2.3	\$16.6

Fiscally Constrained Transit Capacity Projects, 2020

Map ID	Agency	Corridor	Project Type	RTC	Length (Mi)	Remaining Capital Cost through 2045(\$M, YOE)	Remaining Operating Cost through 2045 (\$M, YOE)
A	GET	Poudre Express	New Service	8	37	\$3.7	\$18.9