



>> Welcome >>> Introduction Purpose, Need and Goals >>> How does Santa Fe Drive function now? 55 How could Santa Fe Drive function in the future? Share your concerns on the comment map >>> Where are we in the process? Signature Level 1 Evaluation Level 1 Results Level 1 Selected Concepts Next Steps When will improvements take Translate This Site: Select Language Copyright © 2020 Colorado Department of Transportation

Welcome

HOW TO NAVIGATE

- Click on the Next arrow (\rightarrow) at the bottom right of each page to advance to the next page.
- Click on the Previous arrow ($\boldsymbol{\xi}$ -) at the bottom left side of each page to return to the previous page.
- The pages are intended to be viewed in order to provide information about the study. However, you may use the tabs on the left side of the page to select any page.

HOW TO PARTICIPATE

4

- Click through all the slides to learn more about the study.
- Provide comments on the Interactive Comment Map.
- Answer the survey questions along the way to provide comments (when you are finished, please make sure to hit submit!).

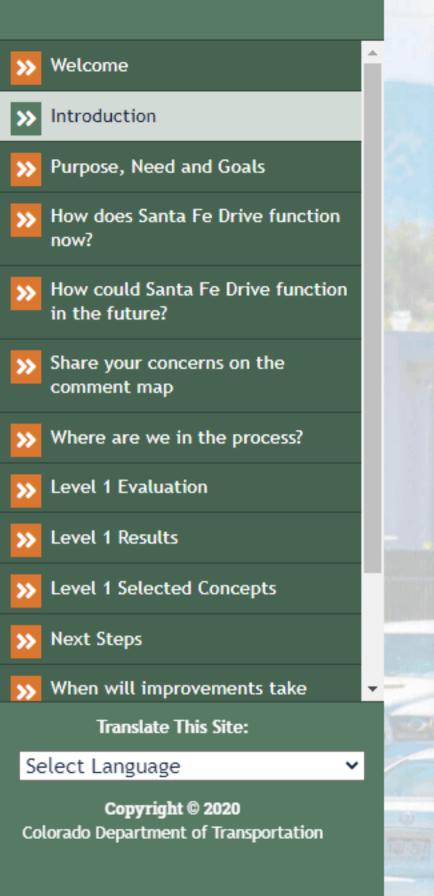


Santa Fe PEL Study Overview

Watch the video below to get a better understanding of the Santa Fe Drive PEL Study before we dive into the details.







What is the Santa Fe Drive PEL Study?

The Colorado Department of Transportation (CDOT) is conducting this PEL Study to identify shortand long-term options for making transportation and safety improvements to an 11-mile segment of Santa Fe Drive, from C-470 to the junction of Alameda Avenue and I-25. The reason this PEL study is being conducted is to examine alternatives that will address overall congestion on Santa Fe Drive by making recommendations to improve safety, traffic operations, travel time, and multi-modal person-trip capacity.

Santa Fe Drive is located in three counties and four municipalities (as shown below) which are all funding partners in this PEL study.

PROJECT PARTNERS



Englewood











What is a PEL Study?

DOUGLAS COUNTY

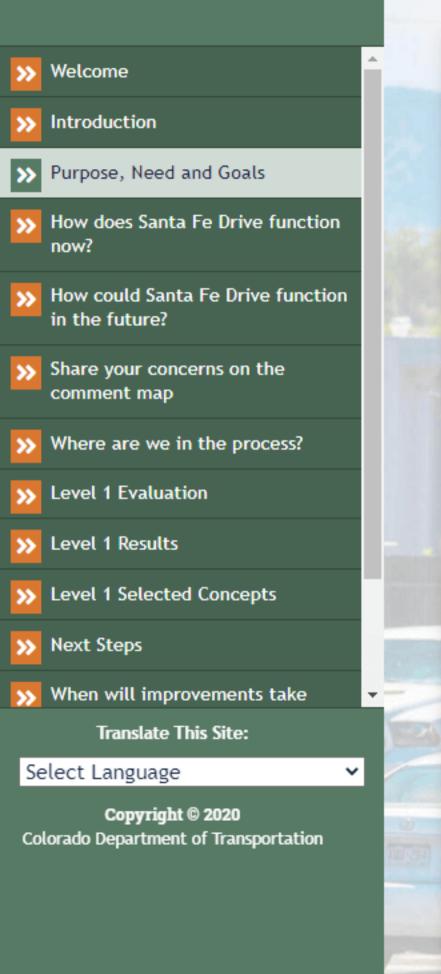
This video describes what steps take place during a Planning and Environmental Linkages (PEL) study.











Purpose, Need and Goals

Purpose

4

The purpose of the recommended transportation improvements from this study is to improve safety for all users, improve operational performance, and enhance multimodal connectivity for the Santa Fe Drive (US 85) corridor from C-470 to I-25 through Arapahoe County, City and County of Denver, Douglas County, and the cities of Englewood, Littleton, and Sheridan.

Santa Fe PEL C-470 to I-25



Need

- Increase safety on the corridor by reducing crashes caused by congestion and direct access to the corridor from local roads and driveways
- Increase the operational performance of the corridor that currently results in poor travel-time reliability and congestion
- Enhance multimodal connections, including pedestrian, bicycle, and transit

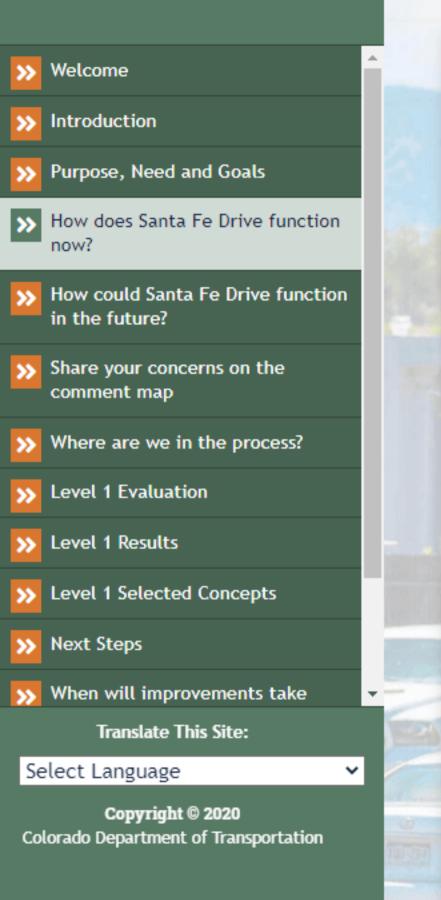
Goals

- · Consider local community surroundings and context
- Support local and regional planning efforts
- Minimize environmental impacts as practicable
- Balance local access and regional travel with consistent application of the defined-access category for Santa Fe Drive
- Optimize transit use and multi-modal travel opportunities for the travel corridor
- Enhance connections and wayfinding to adjacent pedestrian and bicycle facilities
- Provide redundancy for the regional transportation system to accommodate traffic when incidents impact other north-south routes such as I-25, Broadway, or Federal









How does Santa Fe Drive function now?

Here's what the data tells us...

CRASHES



4

- From 2016 to 2018, there were 2,282 crashes on Santa Fe Drive
- Total crash rates on all segments of Santa Fe Drive exceed the CDOT average rate for an expressway facility
- Common crash types are typically related to vehicular congestion
- Crashes highly concentrated during the peak commuting periods at signalized intersections
- Areas with more frequent direct-access driveways and intersections see an increased proportion of rear-end and angle crashes, and an increase in overall crash frequency



TRAVEL TIME

(لم)

- Travel times during the AM and PM peak hours are up to 40% longer than the travel time to drive the corridor at free-flow speeds
- Bottlenecks with congestion and long queues regularly occur at the signalized intersections
- The percentage of truck traffic to the overall daily volume is approximately 4 times higher than a typical urban principal arterial highway, approximately 2% (Santa Fe is 7.5% - 9.2%)
- Unreliable or unpredictable travel times along the corridor cause difficulty in trip planning and have negative impacts for freight operators

MULTIMODAL CONNECTIONS

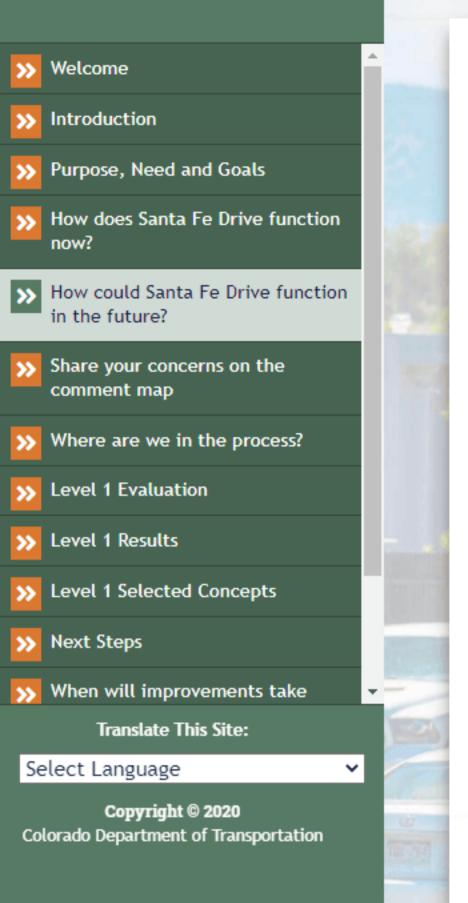


- Lack of adequate facilities to accommodate pedestrian and bicyclist crossings of Santa Fe Drive
- Lack of sidewalks and pedestrian crossing opportunities impact comfort and safety at bus stops on streets crossing Santa Fe Drive and along Santa Fe Drive such as at County Line Road and Mineral Avenue
- Lack of connections across Santa Fe Drive to access the adjacent RTD light rail facility









How could Santa Fe Drive function in the future?

Here's what we heard from you...

STAKEHOLDER INTERVIEWS

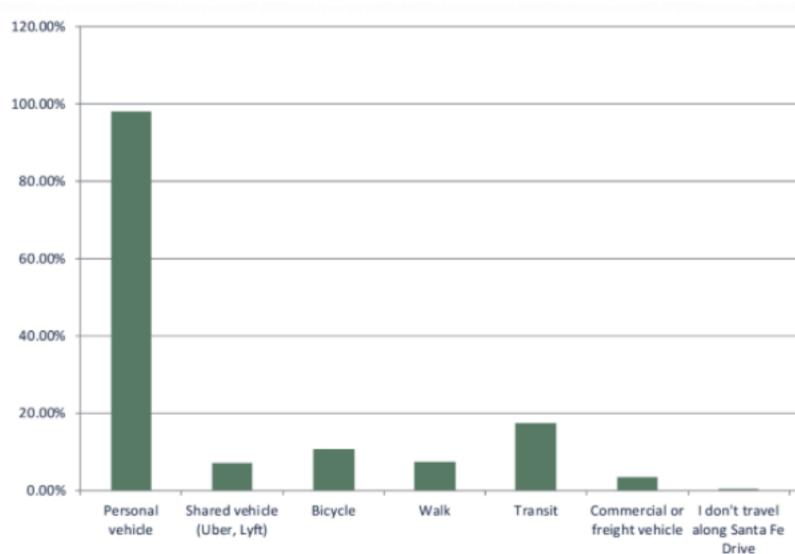
We had several one-on-one discussions with major businesses and organizations along the corridor, including:

- Englewood Chamber of Commerce
- Rocky Mountain ADA
- DRMAC
- Breckenridge Brewery
- Colorado Center for the Blind
- Hudson Gardens

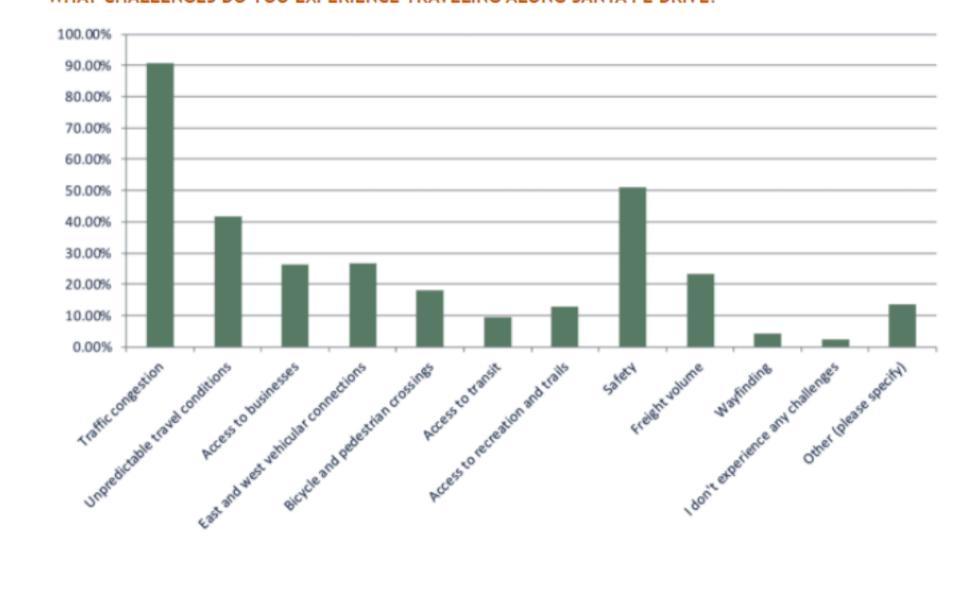
SURVEY RESULTS

We also conducted a public survey that received nearly 500 responses. Here are some highlights of those results.

HOW DO YOU TRAVEL ALONG SANTA FE DRIVE?



WHAT CHALLENGES DO YOU EXPERIENCE TRAVELING ALONG SANTA FE DRIVE?



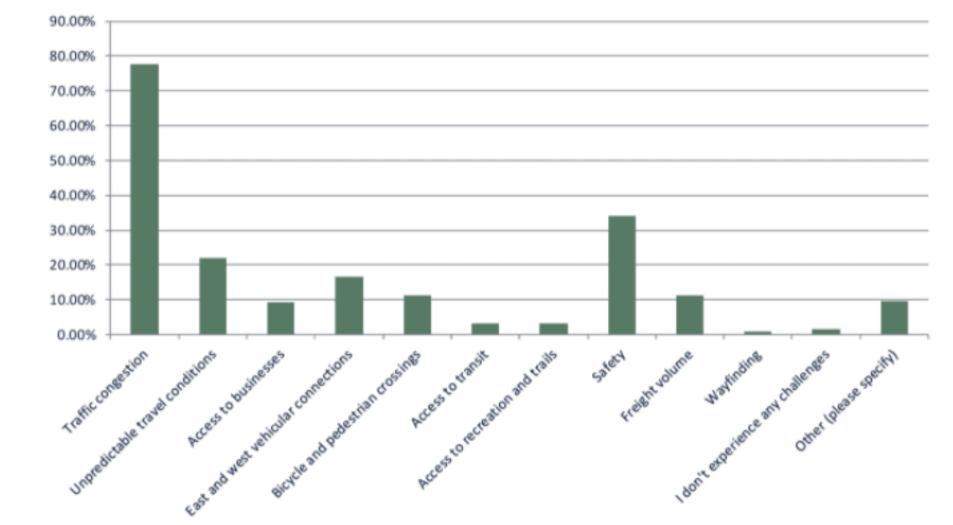


- Colorado Cross-Disability Coalition
- Overland Golf Course
- Breakfast King
- Jazz Car Wash
- Arapahoe Community College

- Colorado Motor Carrier Association
- South Metro Fire
- Platte River Bar and Grill
- River Point Shopping Center
- DISH Network

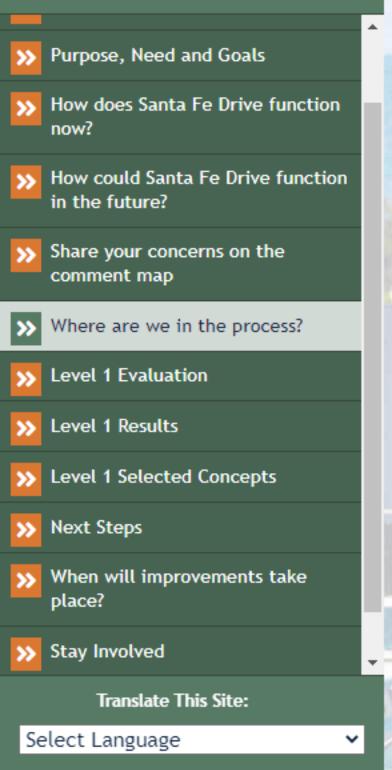












Copyright © 2020 Colorado Department of Transportation

Where are we in the process?

TASKS COMPLETED TO-DATE

 <u>The Corridor Conditions Report</u> summarizes existing conditions, infrastructure, and travel conditions. It also shows social, built, and natural environmental resources within the Santa Fe Drive corridor.

PROJECT TIMELINE

	2020				
	APR	MAY	JUN	JUL	AUG
PUBLIC AND STAKEHOLDER					
ORRIDOR CONDITIONS AND PURPOSE AND NEED DEVELOPMENT					
CREENING CRITERIA DEVELOPMENT					
EVEL 1 ALERNATIVES DEVELOPMENT AND SCREENING					
EVEL 2 ALERNATIVES DEVELOPMENT AND SCREENING					
EL STUDY DOCUMENTATION					
CONSIDERATION OF EARLY					

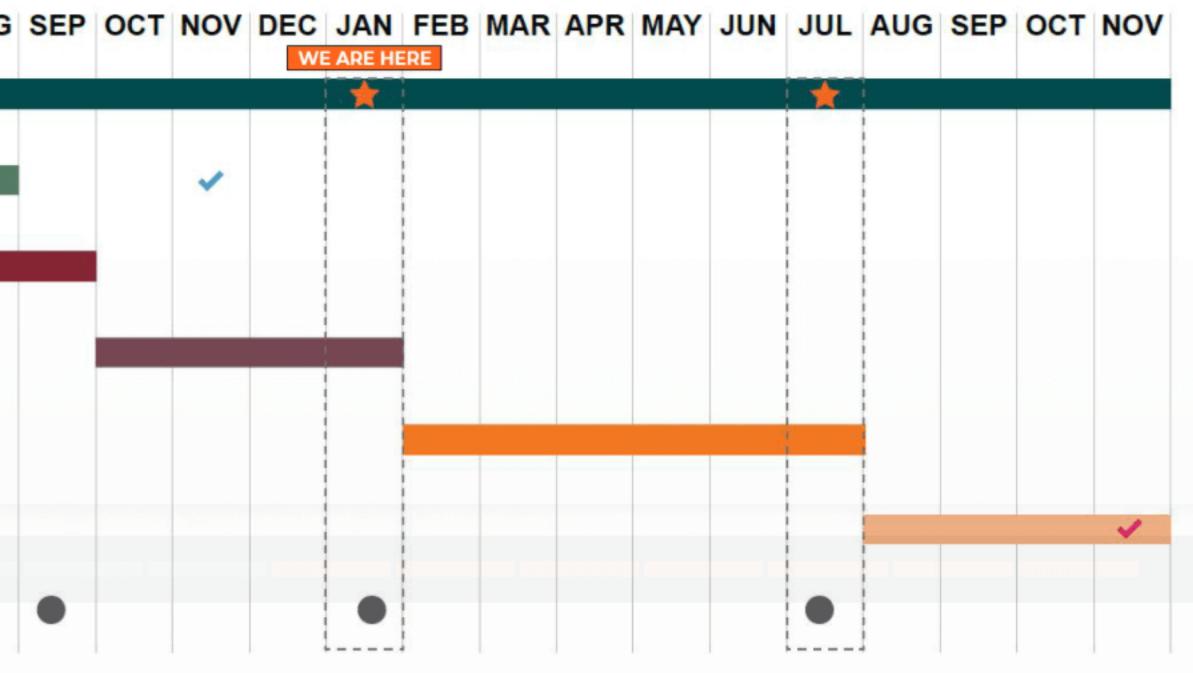


Q Click the image above to enlarge.



- The project Purpose and Need was developed based on the findings of the Corridor Conditions Report and stakeholder involvement, and endorsed by CDOT and local agency partners.
- Draft criteria and a range of alternatives were developed and evaluated. Continue through this webpage to see the results.

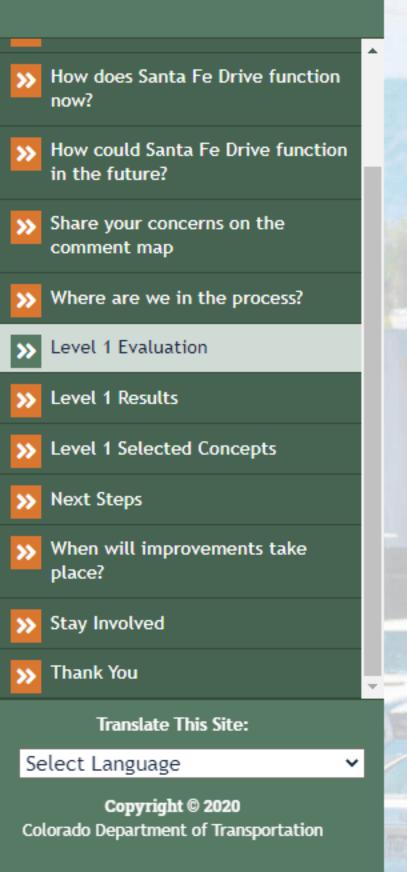
2021



✓ Publish Corridor Conditions Report and Purpose and Need

Publish PEL Study and Appendices





Level 1 Evaluation

What does Level 1 evaluation mean?

During Level 1 Evaluation, we looked at various roadway concepts (or alternatives) to help address the purpose and need of this study. Concepts were categorized into the following t Click on each to get a definition.

Cross-sections ^

A cross-section means layout across a road. It addresses the amount of lanes, if there are sidewalks, curb and gutters, HOV or expressway lanes, etc. and the dimensions of each.

Roadway Classification ^

A roadway classification means the type of road, i.e. local road, highway, expressway, etc.

Intersections/Interchanges ^

There are several types of intersections and interchanges that have different traffic patterns allowing for intersecting roads and highways.

Multimodal Treatments ^

Multimodal treatments promote safety and accessibility for all users, including pedestrians, bicyclists, ADA community, and transit users.

Technology ^

There are several new technologies used to prevent congestion and safety issues, including smart signals, signal prioritization, and other technologies that prepare for the future of electric and autonomous vehicles.



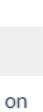
leth	the Purp
ng topics.	the Fulp

SCREENING CRITERIA

When evaluating different concepts, we selected the best ones using screening criteria based on pose and Need of the project. We asked ourselves, does the concept:

- Improve safety for users?
- Reduce future congestion?
- Provide more consistent travel time?
- Remove geometric characteristics that create safety problems and traffic disruptions?
- Enhance connections across Santa Fe Drive to existing multimodal facilities?



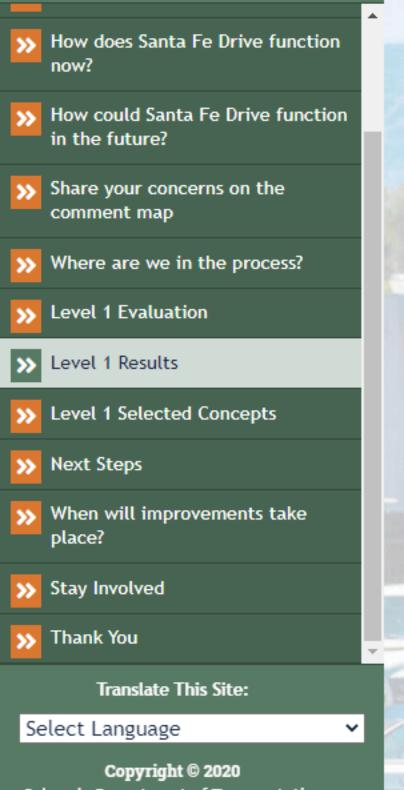












Colorado Department of Transportation

Level 1 Results

Which concepts aren't moving forward?

Out of the concepts that were analyzed, the following four concepts will not move forward to Level 2 evaluation because they don't meet the Level 1 criteria. Click on each topic for a further definition of the concept.

Cross-sections (2 concepts) ^

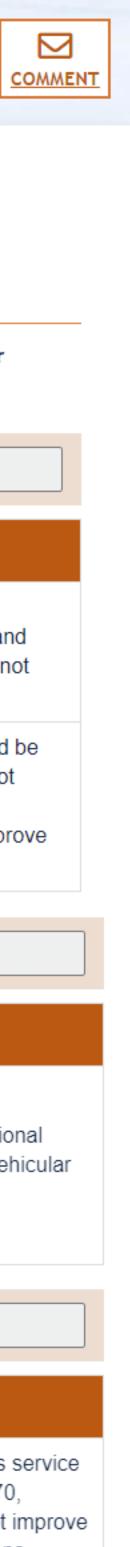
Concept	Definition	Reason	
Convert Existing Corridor Lanes/Shoulders for Multimodal	Conversion of the area within the roadway envelope (e.g. managed (HOV) lanes, general-purpose lanes, shoulders area) to provide new bicycle and pedestrian facilities along Santa Fe.	Removal of vehicular lanes and/or narrow shoulders for a substantial distance along Santa Fe would reduce safety and operational performance, increase congestion, and would not improve multimodal connections across Santa Fe.	
Increased Capacity / Widening on Parallel Roadways	Widening and/or other operational improvements to increase capacity of parallel local facilities, such as Platte Canyon, Federal, and Broadway, to reduce trips on Santa Fe without improvements on Santa Fe.	The scope of reasonable capacity improvements that could be made along Broadway, Platte Canyon, or Federal would not remove enough traffic on Santa Fe to improve safety or operational performance on the corridor and would not improve multimodal connections across Santa Fe.	

Roadway Classifications (1 concepts) ^

Concept	Definition	Reason
Non-Rural Arterial (NR-B)	Roadway corridor with the capacity for moderate speeds and medium-to-high traffic volumes over medium and short distances. Full-movement intersections and driveway accesses are spaced at half-mile intervals or less. Additional right-turn-only or left-turn- in (3/4 movement) accesses may be allowed with acceleration and deceleration lanes meeting design criteria.	This would not improve identified safety issues or operational performance on Santa Fe. It would not best serve high vehicular volumes and regional travel.

Multimodal Treatments (1 concepts) ^

Concept	Definition	Reason
Special Bus Operations	Bus operational improvements through signals for station access and connections, such as bus on shoulder operations, bus queue- jump lanes, and bus slip ramps.	With the parallel light rail route and therefore minimal bus service on Santa Fe (a single route only travels through the C-470, County Line, and Mineral signals), this concept would not improve safety, operational performance, or multimodal connections across Santa Fe.









>>	How does Santa Fe Drive function now?
	How could Santa Fo Drive function

in the future?

Share your concerns on the comment map

>> Where are we in the process?

Level 1 Evaluation

Level 1 Results

>>> Level 1 Selected Concepts

Next Steps

When will improvements take place?

Stay Involved

እ Thank You

Translate This Site:

Select Language

Copyright © 2020 Colorado Department of Transportation



Level 1 Selected Concepts

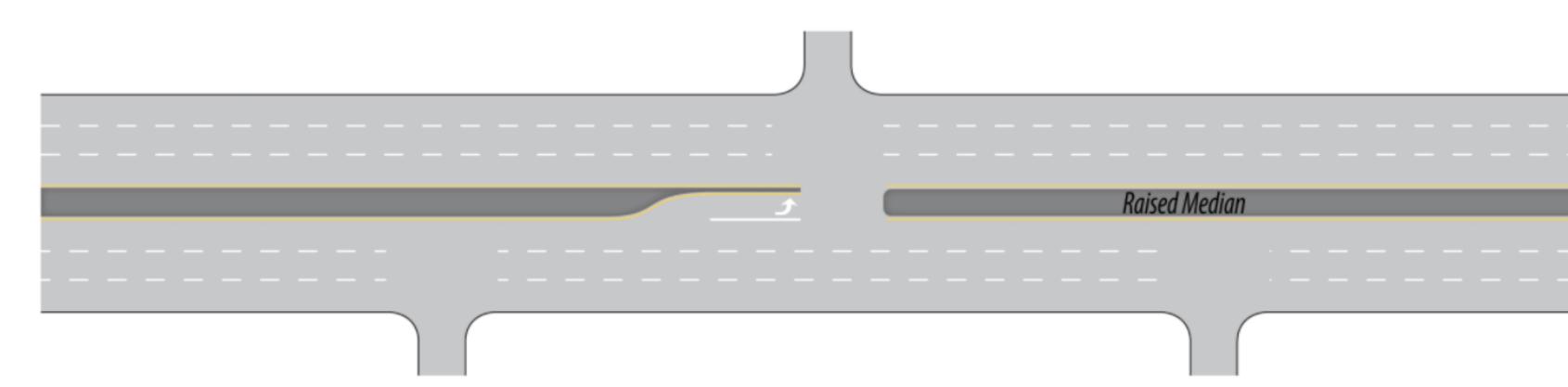
Which concepts are moving forward to Level 2 Evaluation?

Below are the concepts that will move forward to Level 2 Evaluation. Click on each of the topics below to learn more details about the topic and concept.

Cross-sections (11 concepts) ^

Additional Raised Medians +

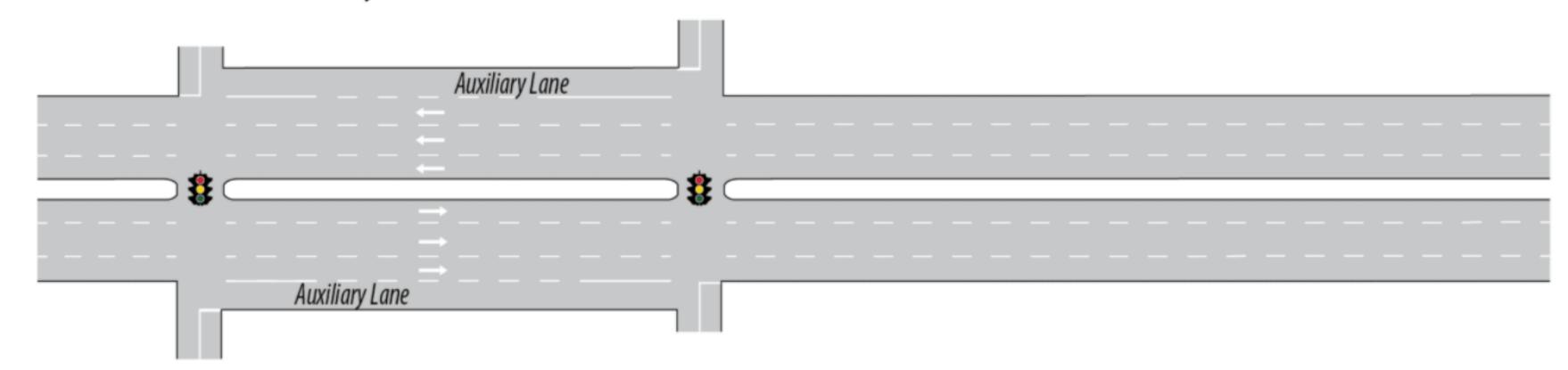
Raised Center Median



New raised median in areas without center medians to separate opposing traffic flows and access turn restrictions.

Additional Auxiliary Lanes +

Additional Auxiliary Lanes



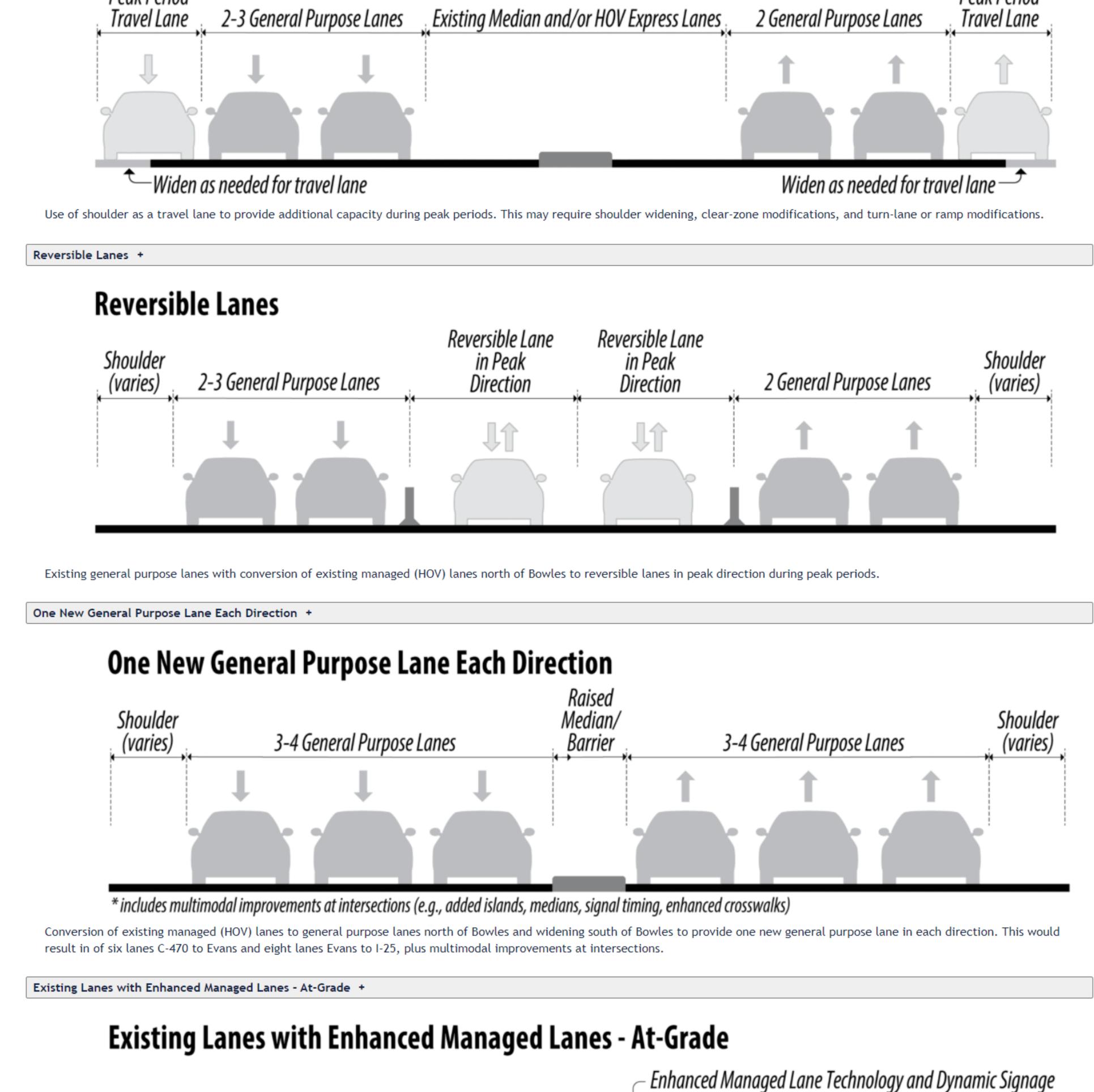
New auxiliary lanes connecting major intersections to consistently provide acceleration/deceleration lanes in areas of frequent access points.

Peak Period Shoulder Lanes +

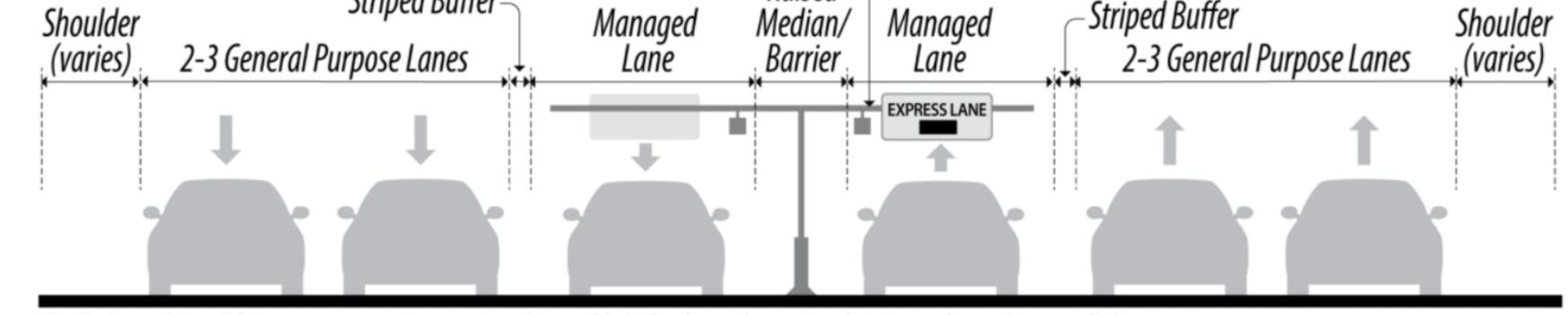
Peak Period Shoulder Lanes

Shoulder/ Peak Period





Raised Striped Buffer-

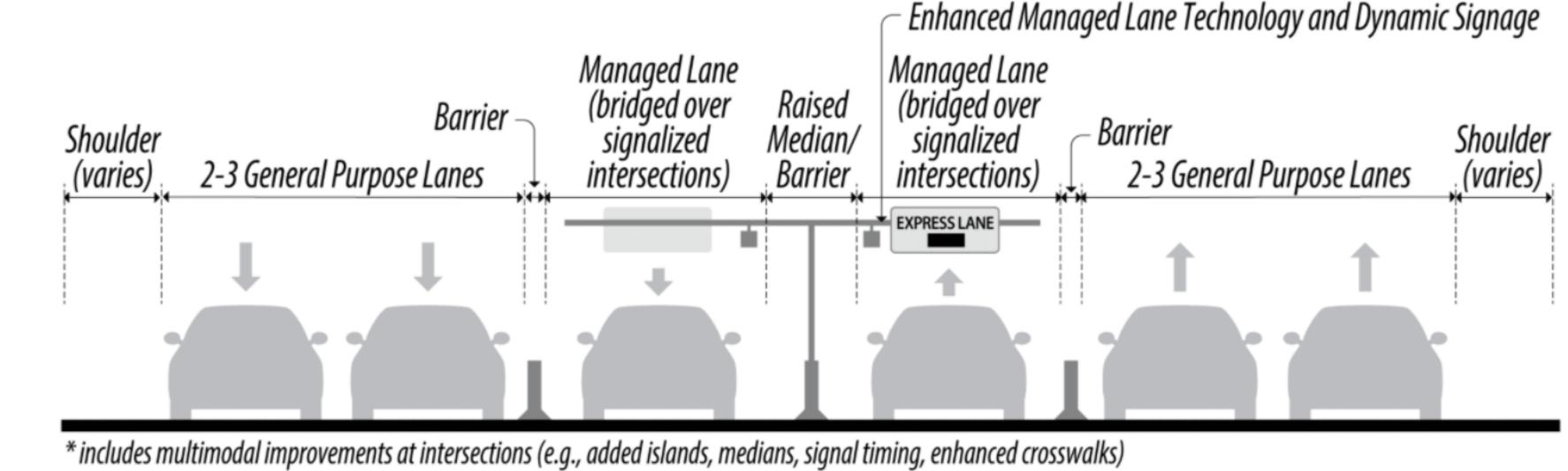


** includes multimodal improvements at intersections (e.g., added islands, medians, signal timing, enhanced crosswalks)*

Existing general purpose lanes with one managed lane in each direction, using physical separation and/or technology strategies. The managed lanes remain at-grade through at-grade intersections. Widen to extend managed lane south of Bowles to C-470 with multimodal improvements at intersections.



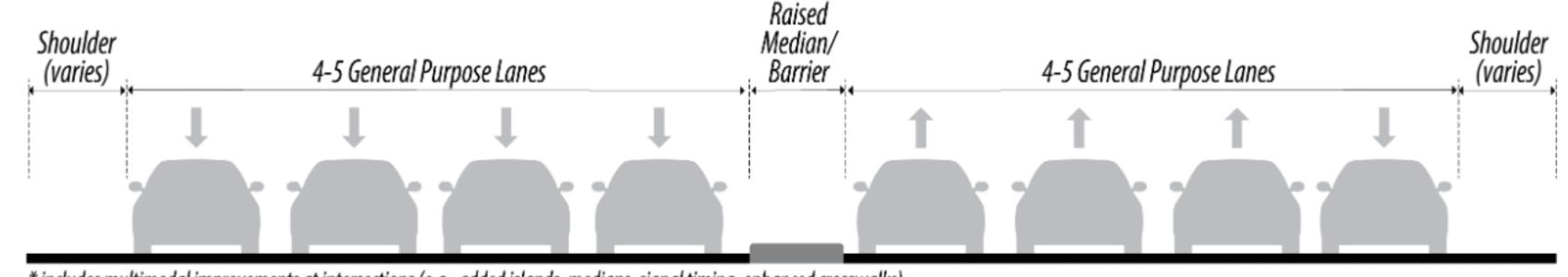
Existing Lanes with Enhanced Managed Lanes - Grade-Separated



Existing general purpose lanes with one managed lane in each direction, using physical separation and/or technology strategies. Managed lanes grade-separated at major intersections with limited access points and direct connections at the C-470 and I-25. Widen to extend managed lane south of Bowles to C-470 and multimodal improvements at intersections.

Two New General Purpose Lanes Each Direction +

Two New General Purpose Lanes Each Direction



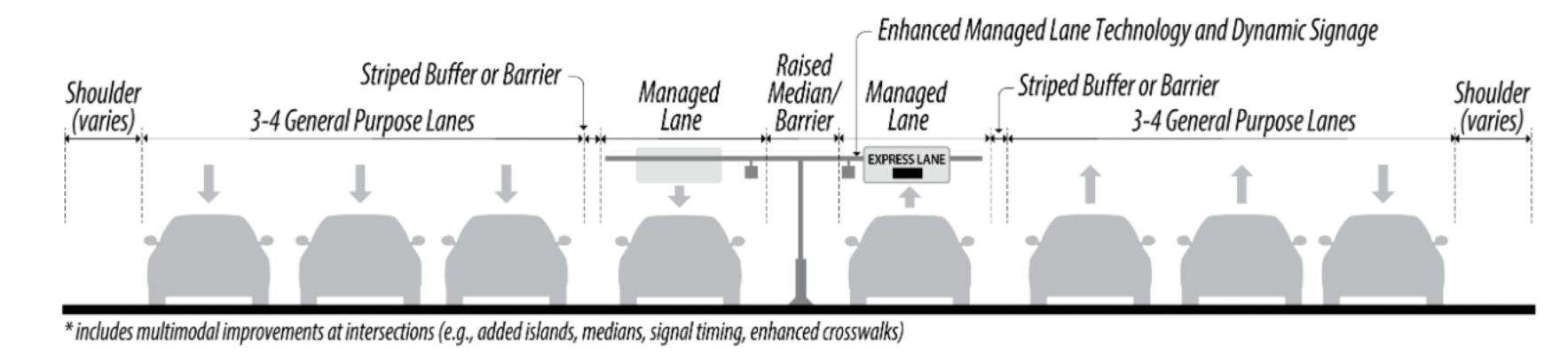
* includes multimodal improvements at intersections (e.g., added islands, medians, signal timing, enhanced crosswalks)

Conversion of existing managed (HOV) lanes to general purpose lanes north of Bowles, widen to provide two new general purpose lanes in each direction. This would result in eight lanes C-470 to Evans and ten lanes Evans to I-25, plus multimodal improvements at intersections.

One New General Purpose Lane with One Managed Lane Each Direction +

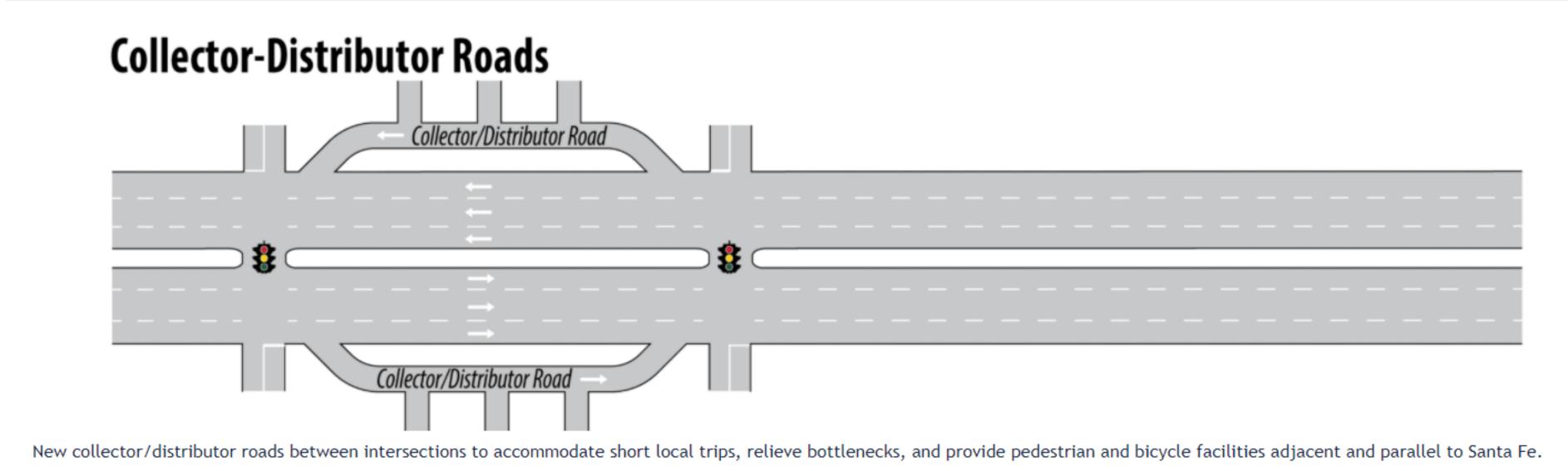
One New General Purpose Lane with One Managed Lane Each Direction



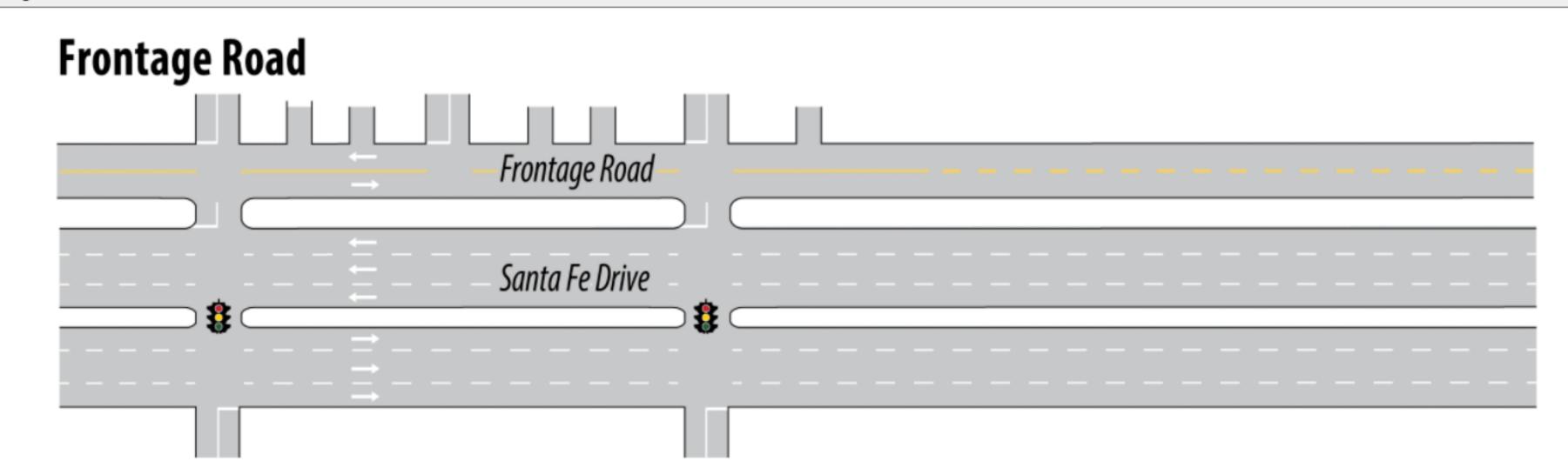


Widening new lanes in each direction to provide six general purpose with two managed lanes (C-470 to Evans) and eight general purpose with two managed lanes (Evans to I-25), plus multimodal improvements at intersections.





Frontage Roads +



New frontage roads immediately adjacent to Santa Fe would reduce direct driveway access, increase intersection spacing, relieve bottlenecks, and provide pedestrian and bicycle facilities adjacent and parallel to Santa Fe.



- How could Santa Fe Drive function in the future?
- Share your concerns on the comment map
- >> Where are we in the process?
- Level 1 Evaluation
- Level 1 Results
- >>> Level 1 Selected Concepts
- » Next Steps
- When will improvements take place?
- Stay Involved
- እ Thank You
 - Translate This Site:
- Select Language
- Copyright © 2020 Colorado Department of Transportation



Level 1 Selected Concepts

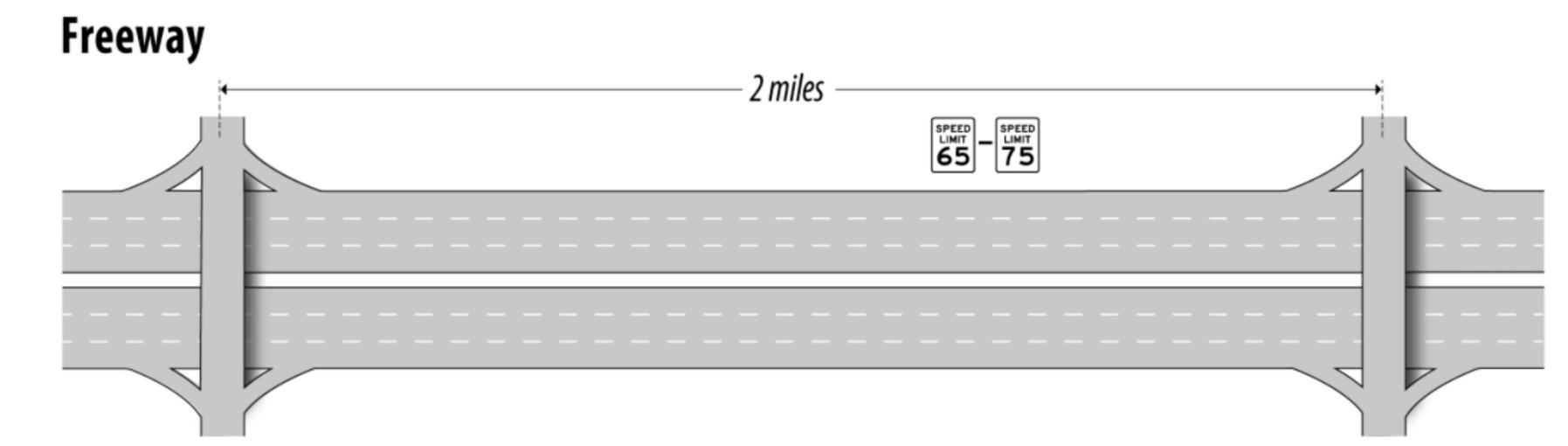
Which concepts are moving forward to Level 2 Evaluation?

Below are the concepts that will move forward to Level 2 Evaluation. Click on each of the topics below to learn more details about the topic and concept.

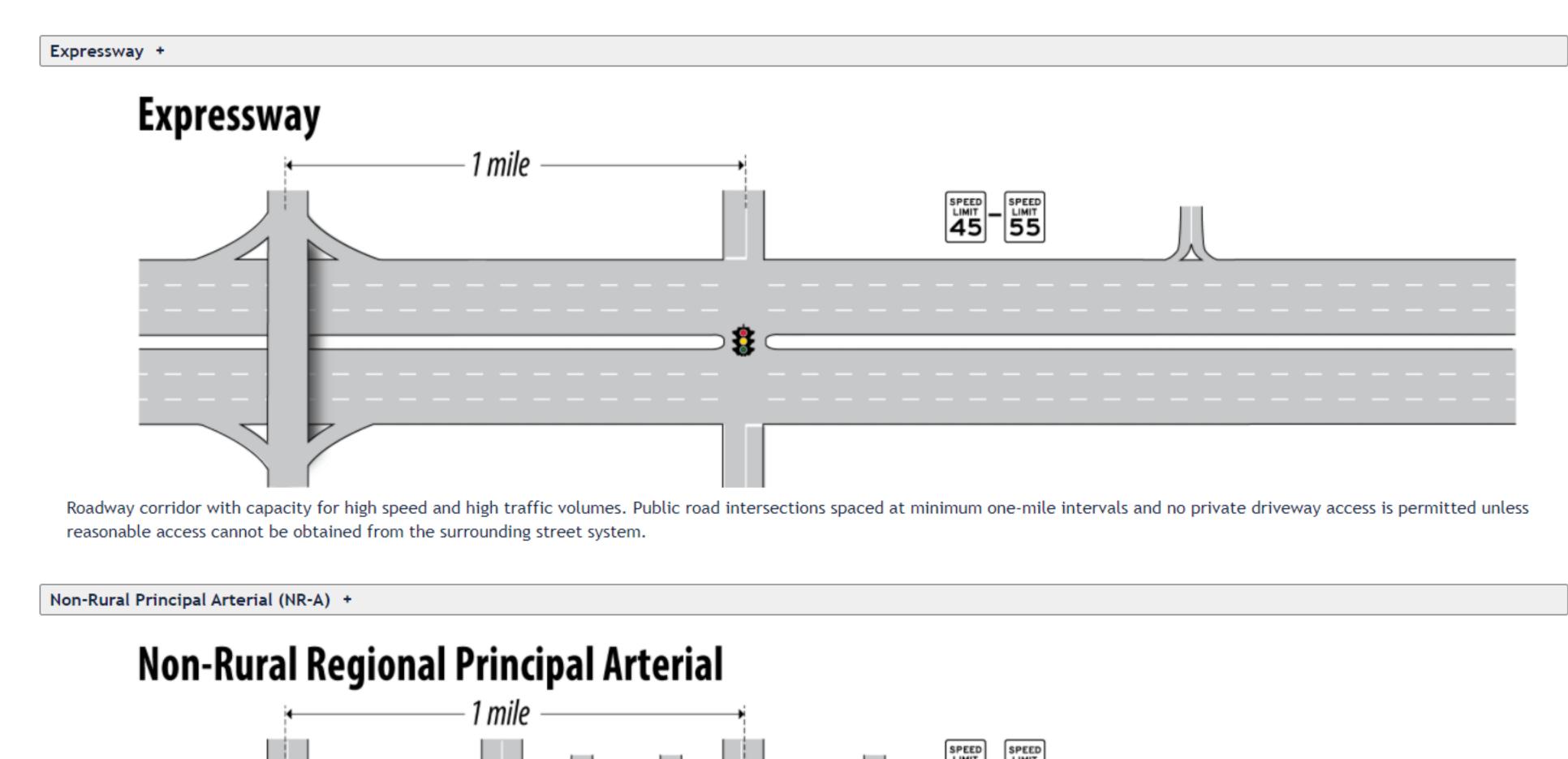
Cross-sections (11 concepts) ~

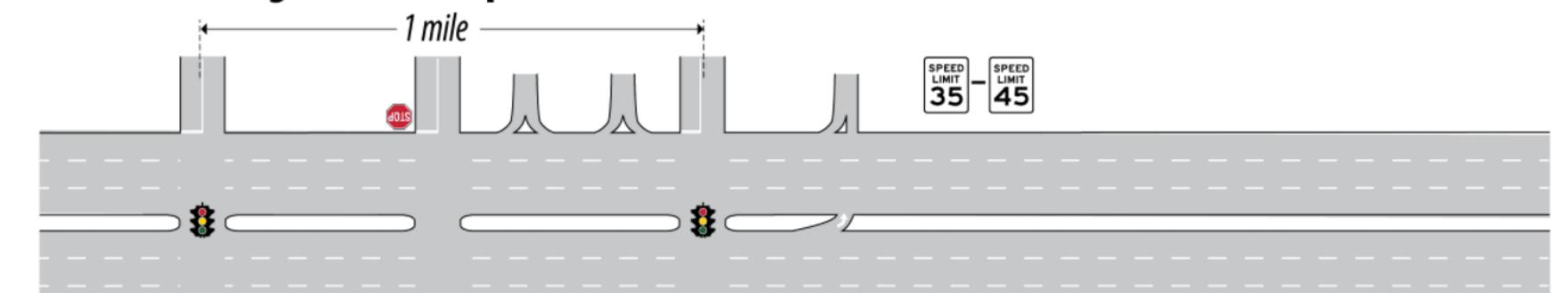
Roadway Classifications (3 concepts) ^





Roadway corridor with capacity for high speed and high traffic volumes over medium and long distances. All opposing traffic movements separated with median barriers and grade separations. Access points limited to on and off ramps and no at-grade intersections. Private driveway access prohibited without exception.

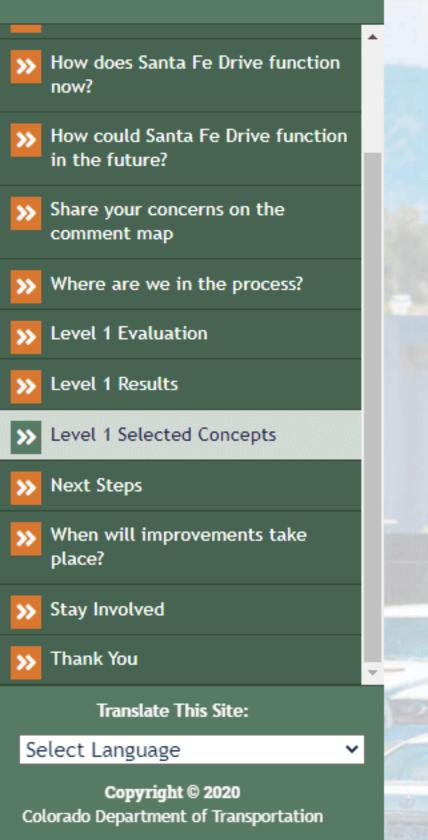






Roadway corridor with capacity for moderate to high speeds and medium to high traffic volumes over medium and long distances. Public road intersections spaced at minimum half-mile intervals, unless there are no other reasonable alternatives. Intersections should serve as many properties as possible reducing the number of direct accesses to the roadway. One private driveway access per parcel provided if reasonable access cannot be obtained from the surrounding street system. Additional right-turn-only or left-turn-in (3/4 movement) accesses may be allowed with acceleration and deceleration lanes meeting design criteria.





Level 1 Selected Concepts

Which concepts are moving forward to Level 2 Evaluation?

Below are the concepts that will move forward to Level 2 Evaluation. Click on each of the topics below to learn more details about the topic and concept.

Cross-sections (11 concepts) ~

Roadway Classifications (3 concepts) ~

Intersections/Interchanges (5 concepts) ^

Minor Intersection Improvements +

Additional turn or auxiliary lanes at or through at-grade signalized intersections, and multimodal improvements for bicycle and pedestrian crossings.

Access Closure/Separation +

Removal of direct driveway access to Santa Fe, or grade-separation of cross-street without connecting ramps to Santa Fe, and multimodal improvements for bicycle and pedestrian crossings. May also include grade-separation of the at-grade railroad crossing on Santa Fe.

Enhanced At-Grade Intersection +

Modification of major at-grade signalized intersection to accommodate turning traffic demand while remaining at-grade, and multimodal improvements for bicycle and pedestrian crossings.

Partial Grade-Separated Intersection +

Modification of major at-grade signalized intersection to grade-separate specific movements, increase capacity, reduce conflict, and add multimodal improvements for bicycle and pedestrian crossings.

Grade-Separated Interchange +

Modification of major at-grade signalized intersection by lowering Santa Fe under, or raising Santa Fe over, the cross street with connecting ramps to serve traffic turning onto or off of the highway corridor. Multimodal improvements for bicycle and pedestrian crossings.

































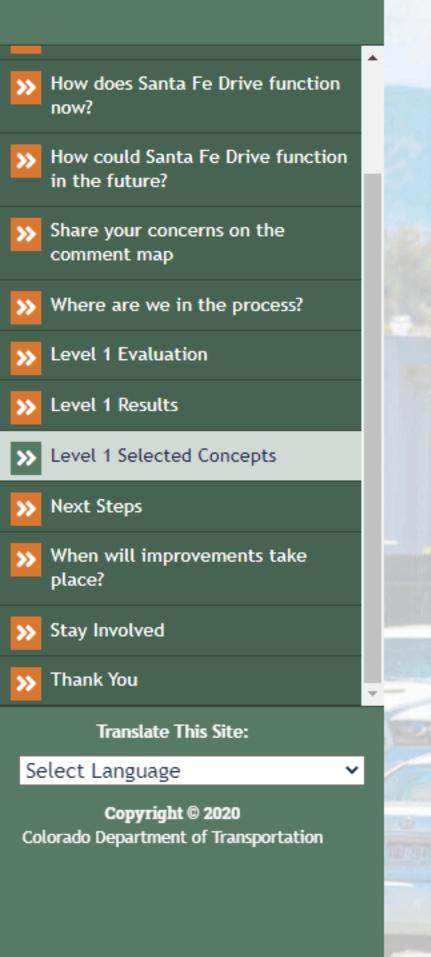












Which concepts are moving forward to Level 2 Evaluation?

Below are the concepts that will move forward to Level 2 Evaluation. Click on each of the topics below to learn more details about the topic and concept.

Cross-sections (11 concepts) ~

Roadway Classifications (3 concepts) ~

Intersections/Interchanges (5 concepts) ~

Multimodal Treatments (10 concepts) ^

Improved Crossings for Pedestrians/Bicyclists at Signals +

Installation of treatments such as traffic controls, high-visibility crosswalk treatments, improved island refuge areas, wider median areas, and improved geometry of right turn lanes to increase driver awareness of pedestrian/bicyclist crossing movements at signalized intersections. May also include grade-separation of the at-grade railroad crossing on Santa Fe.

Improved Bus Stop Facilities +

Improved sidewalk connections to existing bus stops on or adjacent to Santa Fe with added bench, shelter, lighting or other amenities.

Improved Wayfinding to Regional Trails and Transit +

Improved wayfinding signage and pavement markings for adjacent trail facilities and transit stations at Santa Fe.

Enhanced Pedestrian Detection at Signalized Intersections +

Improved pedestrian detection infrastructure at signalized intersections to improve crossing times and detection for pedestrians and bicyclists.

Pedestrian/Bicyclist Grade Separation +

New overpass or underpass separation for pedestrians and bicyclists crossing Santa Fe, replacing at-grade crossings or as supplemental crossing opportunities.

Improved Connections to Parallel Trail Facilities +

Additional, improved, and more direct paths to trail facilities across Santa Fe, including bicycle lanes, facilities, and improved sidewalk connections on cross streets or off-street.

Improved Connections to Transit +

Mobility hub improvements at existing light rail stations along Santa Fe. Improved multimodal connections, such as bicycle lanes and facilities and improved sidewalk connections on cross streets.

Travel Demand Management Programs +

Policies and programs that encourage corridor users to utilize existing infrastructure and multimodal facilities in different ways.

Additional North-South Bicycle Capacity Along Corridor +

Increased capacity for long trips along corridor via active transportation (e.g. bicycles, scooters, e-bikes). Enhancements along existing parallel trail corridors, such as the Mary Carter Greenway Trail, to encourage active transportation travel.

Improved Transit Service Along and Across Corridor +

Transit service improvements to increase ridership including more frequent service and increased station parking for light rail transit, bus rapid transit, Southwest LRT extension, and improved multimodal connections. Includes bus services for special events, such as Broncos games, to supplement service and real-time parking information for stations to maximize transit ridership.





]

-]



How does Santa Fe Drive function now?	-
How could Santa Fe Drive function in the future?	
Share your concerns on the comment map	
Where are we in the process?	
>>> Level 1 Evaluation	
>>> Level 1 Results	
>>> Level 1 Selected Concepts	
» Next Steps	
When will improvements take place?	
>>> Stay Involved	
<u>>></u> Thank You	+
Translate This Site:	1
Select Language 🗸 🗸	
Copyright © 2020 Colorado Department of Transportation	

Level 1 Selected Concepts

Which concepts are moving forward to Level 2 Evaluation?

Below are the concepts that will move forward to Level 2 Evaluation. Click on each of the topics below to learn more details about the topic and concept.

Cross-sections (11 concepts) ~

Roadway Classifications (3 concepts) ~

Intersections/Interchanges (5 concepts) ~

Multimodal Treatments (10 concepts) ~

Technology (14 concepts) ^

Enhanced Communications Infrastructure +

Improved fiber-optic communications along Santa Fe corridor to support data transmission from intelligent transportation system (ITS) devices and vehicle-to-infrastructure technology.

Improved Traveler Information Signs +

New and additional electronic display signs to notify motorists of upcoming roadway, incident, weather, and traffic-related conditions.

Variable Speed Limits +

Dynamically-adjusted speed limits via changeable electronic signs to maintain appropriate travel speeds based on traffic, weather, or other roadway conditions.

Dynamic Lane Use +

Use of advanced warning or lane-use control signs to open and close individual traffic lanes or allow movements to improve traffic operations and respond to congestion or incidents based on real-time data.

Queue Warnings +

Use of real-time traffic information to alert motorists of downstream stopped traffic using warning signs and flashing lights.

Enhanced Pavement Markings +

other new technology to support driverless vehicles.

Adaptive Traffic Signal System +

Traffic signal control technology in which traffic signal timing changes based on traffic demand and variable traffic patterns.

Automated Traffic Signal Performance Measures +

Continuous traffic signal monitoring with real-time data analysis to proactively update signal timing and identify and correct signal maintenance and operational issues.

Freight Signal Prioritization +

the intersection without stopping.

Incident Management Plan +

Continual incident monitoring, and infrastructure like traffic signal communications and staging areas for emergency response.

Traffic Operations Center +

information shared across the corridor agencies.

Wayfinding App +

Mobile wayfinding app to provide travelers route information, trip planning, and current conditions for all modes. Includes one-stop information for mobility and navigation through corridor area. This may be tied into the larger community information and transit education, tailored to the needs of Santa Fe users.

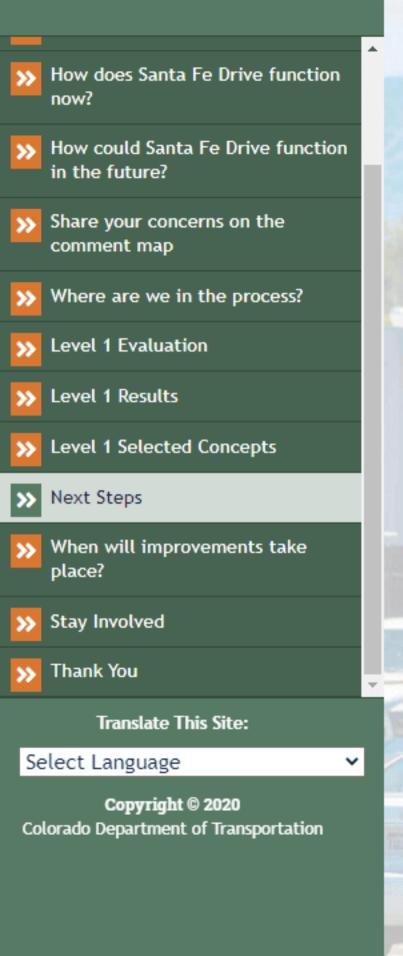


Enhanced pavement markings, such as inlaid highway shields, in-pavement reflectors, and lights to improve driver recognition of roadway geometry and lane configuration changes. May include

Traffic signal system with new controllers and detection equipment that extends the green time for Santa Fe at signalized intersections. This will allow an approaching truck to make it through

Centralized system of corridor traffic signals and real-time data with continuous system monitoring, event management, crisis management, and advanced traffic control functions with





Next Steps

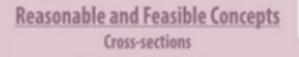
Level 2 Evaluation

During the Level 2 Evaluation we will take the Level 1 Evaluation results and identify more details for each alternative that will be further analyzed and screened. Additional analysis will include details such as:

- · Prioritization and comparisons
- Recommendations
- Project definitions and costs
- Potential impacts

←





Roadway Classification Interchange/Intersection Types **Multimodal Treatments** Technologies

LEVEL 1 PURPOSE AND NEED SCREENING

Evaluate broad range of concepts versus the Purpose and Need qualitatively with available data

Location-Specific Options

Roadway Segment Interchange/Intersection Multimodal Technology

Packaged Corridor Alternatives

Potential Projects

LEVEL 2 COMPARATIVE SCREENING

Compare alternatives with qualitative and quantitative evaluation based on the Purpose and Need and Goals

LEVEL 2A INFRASTRUCTURE OPTIONS

Utilize planning-level analysis to identify location-specific options

LEVEL 2B CORRIDOR ALTERNATIVES

Analyze corridor alternatives considering interactions of location-specific option

RECOMMENDATIONS

PROJECT DEFINITION AND COSTS

RECOMMENDED PLAN AND IDENTIFIED PROJECTS









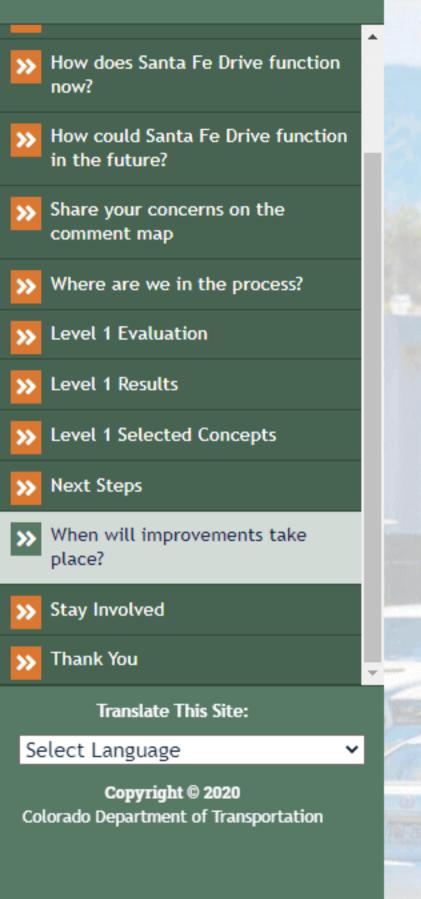












When will improvements take place?

PEL Study Recommended Projects

The PEL study is analyzing substantial improvements for the entire corridor. Since those improvements have not been identified and no construction or design funding has been allocated, it is likely major improvements won't take place for at least a few years. The PEL study will prioritize those major improvements and then each one will need to go through additional steps which are likely to include:

- Securing funding
- · Conducting environmental clearances
- · Completing preliminary and final design
- Purchasing right of way

EARLY ACTION PROJECTS

The PEL study team is also identifying early action projects in this process and those have the potential to be implemented sooner. These early action projects will be analyzed with the goal of addressing existing issues in the near term.

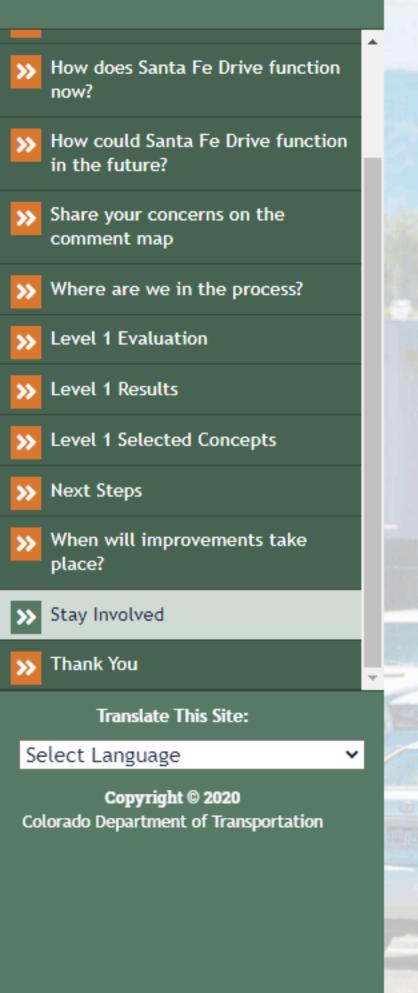
Early action projects consist of projects that have low construction costs and low construction efforts, but can result in noticeable improvements to safety and operations on the Santa Fe corridor.

Santa Fe PEL C-470 to I-25









Stay Involved

<i>Your thoughts and concerns are critical to the success of this study.</i>	Vis	
Toom more an contration	TEL	
Learn more or contact us	Pleas	
Visit the project website to learn more:	optio	
www.codot.gov/projects/santafepel	This s	
CALL US		
Call us at 303-524-8386		



4

EMAIL US santafepel@gmail.com

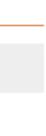


sitor Survey

ELL US ABOUT YOURSELF

ase fill out the following information to help us further understand how you travel along Santa Fe Drive. Note: This survey is onal and all information is kept confidential and will be used to help inform the Santa Fe PEL Study and engagement approach.

survey is now closed.











 \rightarrow

