

Appendix D.

## ALTERNATIVES EVALUATION DOCUMENTATION



## ALTERNATIVES EVALUATION DOCUMENTATION

The alternatives development and evaluation process identified and evaluated a broad range of reasonable improvement alternatives for the Santa Fe study corridor that recognize and respond to the diverse elements of the corridor roadway and multimodal facilities and the context of the surrounding environment. The process included developing evaluation criteria based on the project Purpose and Need, developing a range of improvement concepts, and identifying recommendations through a multi-tiered evaluation process.

This document compiles the following information developed by the project team for the alternatives evaluation with input and review by local jurisdiction and regional agency representatives.

- **No Action Alternative** - The No Action Alternative only includes projects with reasonably expected funding and serves as a base against which to compare benefits and impacts of the alternatives evaluated by the PEL study.
- **Level 1 Evaluation**
  - **Level 1 Evaluation Concepts** – Improvement concepts focused on addressing the project Purpose and Need and issues identified in the evaluation of existing and future conditions
  - **Level 1 Concept Improved Transit Service** – Assumptions of elements included in the Improved Transit Service concept, plus calculations of potential maximum transit ridership and change in traffic volumes along Santa Fe with the application of the concept
  - **Level 1 Screening Matrix** – Evaluation of Level 1 concepts against the Purpose and Need
- **Level 2A Evaluation**
  - **Level 2A Evaluation Criteria** – Criteria developed to compare how well each option meets the Purpose and Need and goals of the project
  - **Level 2A Roadway Classification Options** – Illustrations of roadway classification options evaluated in Level 2A
  - **Level 2A Screening Matrix** – Evaluation of infrastructure options that were applied at specific locations along the corridor
  - **Level 2A Options Results** – Summary of options not recommended, carried forward, or considered to be a future action
- **Level 2B Evaluation**
  - **Level 2B Evaluation Criteria** – Criteria developed to compare how well the improvements within each corridor theme meet the Purpose and Need and goals of the project
  - **Level 2B Corridor Themes** – Corridor-wide themes created by combining the most applicable options carried forward from Level 2A to develop different corridor themes that focus on the primary elements of the project Purpose and Need and goals
  - **Level 2B Land Use Memo** – Evaluation of land use implications of Level 2B themes
  - **Level 2B Evaluation Summary** – Summary of evaluation to identify elements of corridor themes that are most practical or feasible to carry forward as study recommendations, focusing on the near-term, 10-year timeframe.

Built from the elements that best respond to the Purpose and Need and goals of the Santa Fe corridor, the recommendations from the alternatives evaluation provide a reasonable balance of safety, operations, and multimodal connections that consider the differing context along the corridor while minimizing impacts. Several meaningful and more complex options were identified as future actions to provide longer-term corridor benefit, also in accordance with the corridor Purpose and Need and goals.

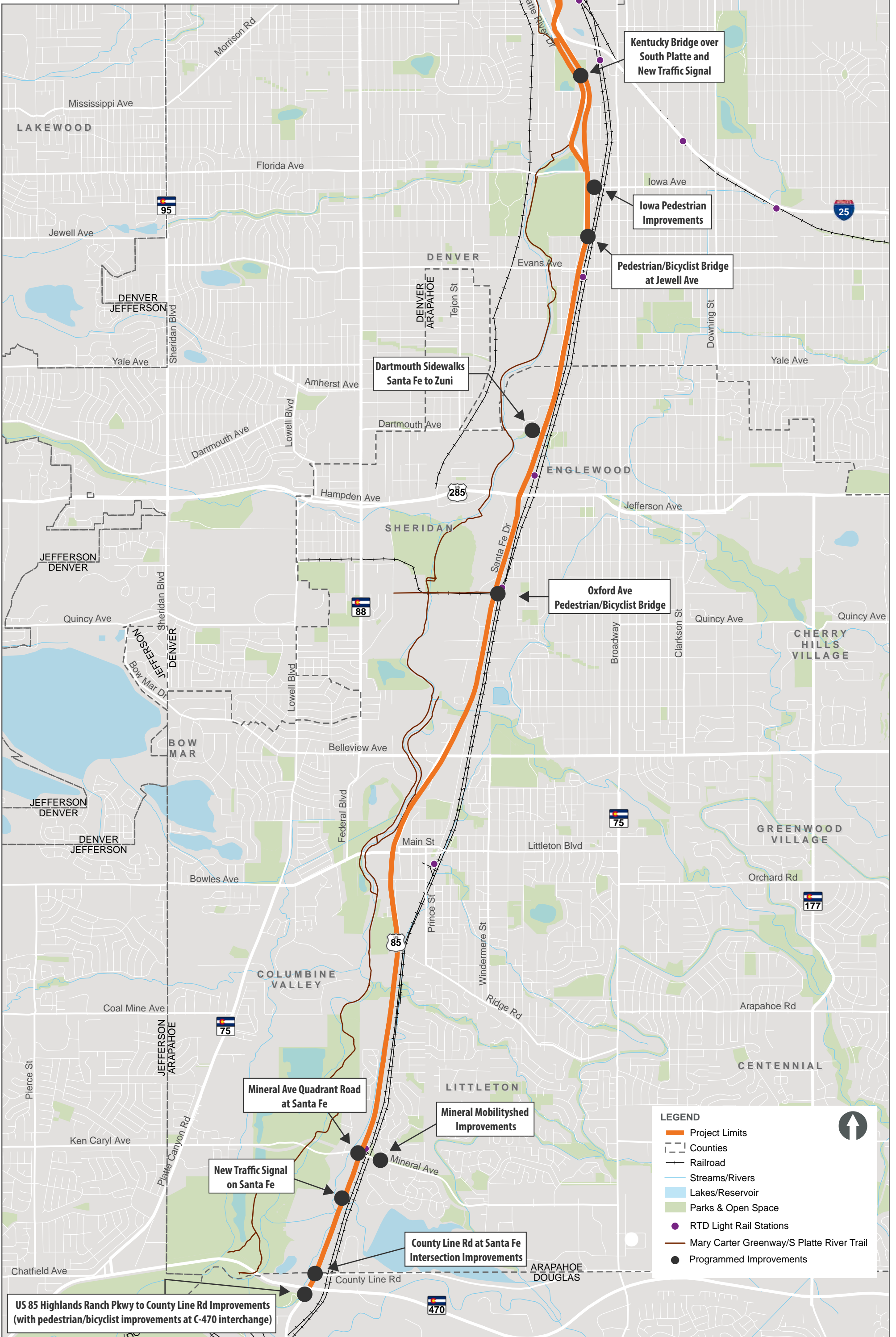
# NO ACTION ALTERNATIVE



NO ACTION ALTERNATIVE



Santa Fe PEL C-470 to I-25



**LEGEND**

- Project Limits
- Counties
- Railroad
- Streams/Rivers
- Lakes/Reservoir
- Parks & Open Space
- RTD Light Rail Stations
- Mary Carter Greenway/S Platte River Trail
- Programmed Improvements



# LEVEL 1 EVALUATION



Santa Fe PEL  
C-470 to I-25

Appendix D. ALTERNATIVES  
EVALUATION  
DOCUMENTATION



## LEVEL 1 CONCEPTS

The intent of the concept development process is to identify a broad range of reasonable improvement concepts for Santa Fe Drive (US 85) that recognizes the diverse elements of the travel corridor. These improvement concepts were developed from reasonable options focused on addressing the project Purpose and Need and issues identified in the evaluation of existing and future conditions. They consist of elements that CDOT and/or the partnering agencies have control over and do not expand outside transportation.

### Cross-sections

Concept	Description
Additional Raised Medians	New raised median in areas without center medians to separate opposing traffic flows and access turn restrictions.
Additional Auxiliary Lanes	New auxiliary lanes connecting major intersections to consistently provide acceleration/deceleration lane in areas of frequent access points.
Peak Period Shoulder Lanes	Use of shoulder as a travel lane to provide additional capacity during peak periods, which may require shoulder widening, clear zone modifications, and turn lane or ramp modifications.
Reversible Lanes	Existing general purpose lanes with conversion of existing managed (HOV) lanes (north of Bowles) to reversible lanes in peak direction during peak periods.
Convert Existing Corridor Lanes/Shoulders for Multimodal	Conversion of area within roadway envelope (e.g. managed (HOV) lanes, general purpose lanes, shoulders area) to provide new bicycle and pedestrian facilities along Santa Fe.
One New General Purpose Lane Each Direction	Conversion of existing managed (HOV) lanes to general purpose lanes (north of Bowles) and widening (south of Bowles) to provide one new general purpose lane in each direction for a total of six lanes (C-470 to Evans) and eight lanes (Evans to I-25), plus multimodal improvements at intersections.
Existing Lanes with Enhanced Managed Lanes – At-Grade	Existing general purpose lanes with one managed lane in each direction with enhanced management via physical separation and/or technology strategies. The managed lanes remain at-grade through at-grade intersections. This concept also includes widening to extend managed lane south of Bowles to C-470 and multimodal improvements at intersections.
Existing Lanes with Enhanced Managed Lanes – Grade-Separated	Existing general purpose lanes with one managed lane in each direction with enhanced management via physical separation and/or technology strategies. The managed lanes are grade-separated at major intersections with limited access points and direct connections at the C-470 and I-25 interchanges. This concept also includes widening to extend managed lane south of Bowles to C-470 and multimodal improvements at intersections.
Two New General Purpose Lanes Each Direction	Conversion of existing managed (HOV) lanes to general purpose lanes (north of Bowles) and widening to provide two new general purpose lanes in each direction for a total of 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	Widening new lanes in each direction to provide a total of 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.
Collector/Distributor Roads between Intersections	New collector/distributor roads between intersections to accommodate shorter, local trips and relieve bottlenecks. Collector/distributor roads also provide pedestrian and bicycle facilities adjacent and parallel to Santa Fe.
Frontage Roads	New frontage roads immediately adjacent to Santa Fe to reduce direct driveway access, increase intersection spacing, and relieve bottlenecks. Frontage roads also provide pedestrian and bicycle facilities adjacent and parallel to 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.

**23143 Santa Fe PEL (C-470 to I-25)**

**LEVEL 1 CONCEPTS**

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**Roadway Classification**

Concept	Description
Freeway	Roadway corridor with the capacity for high speed and relatively high traffic volumes over medium and long distances. All opposing traffic movements are separated with median barriers and grade separations. Access points are limited to on and off ramps and no at-grade intersections. Private driveway access is prohibited without exception.
Expressway	Roadway corridor with the capacity for high speed and relatively high traffic volumes. Public road intersections are spaced at minimum one-mile intervals and no private driveway access is permitted unless reasonable access cannot be obtained from the surrounding street system.
Non-Rural Regional Principal Arterial	Roadway corridor with the capacity for moderate to high speeds and medium to high traffic volumes over medium and long distances. Public road intersections are spaced at minimum half-mile intervals, unless there are no other reasonable alternatives. Intersections should serve as many properties as possible to reduce the number of direct accesses to the roadway. One private driveway access per parcel is provided if reasonable access cannot be obtained from the surrounding street system. Additional right-turn-only or left-turns-in (3/4 movement) accesses may be allowed with acceleration and deceleration lanes meeting design criteria.
Non-Rural Arterial	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-turns-in (3/4 movement) accesses may be allowed with acceleration and deceleration lanes meeting design criteria.

**Intersections/Interchanges**

Concept	Description
Minor Intersection Improvements	Additional turn or auxiliary lanes at or through at-grade signalized intersection, plus appropriate multimodal improvements for bicycle and pedestrian crossings.
Access Closure/Separation	Removal of direct driveway access to Santa Fe, or grade-separation of cross-street crossing without connecting ramps to Santa Fe, plus appropriate multimodal improvements for bicycle and pedestrian crossings. This may also include the grade-separation of the at-grade railroad crossing on Santa Fe.
Enhanced At-Grade Intersection	Modification to major at-grade signalized intersection with configuration and control to accommodate turning traffic demand while remaining at-grade (e.g. channelized T intersection, full or partial displaced left turn intersection, quadrant road intersection, median U-turn intersection), plus appropriate multimodal improvements for bicycle and pedestrian crossings.
Partial Grade-Separated Intersection	Modification to major at-grade signalized intersection to grade-separate specific movements to increase capacity and reduce conflict although a traffic signal remains on Santa Fe (e.g. grade-separated channelized T intersection, echelon interchange, ramp flyover), plus appropriate multimodal improvements for bicycle and pedestrian crossings.
Grade-Separated Interchange	Modification to 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, plus appropriate multimodal improvements for bicycle and pedestrian crossings. Interchange ramp configurations vary to accommodate traffic demand and have a relatively small footprint, such as a Single Point Urban Interchange (SPUI), junior interchange, or tight diamond, due to surrounding physical constraints.

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**LEVEL 1 CONCEPTS**

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**Multimodal Treatments**

Concept	Description
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.
Improved Bus Stop Facilities	Improved sidewalk connections to existing bus stops on or adjacent to Santa Fe, plus added bench, shelter, lighting, security, and/or other amenities.
Improved Wayfinding to Regional Trails and Transit	Improved wayfinding signage and/or pavement markings leading to/from adjacent trail facilities and transit stations to/from and across Santa Fe.
Enhanced Pedestrian Detection at Signalized Intersections	Pedestrian detection infrastructure improvements 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, or more direct paths to/from adjacent trail facilities to/from and across Santa Fe, such as bicycle lanes and facilities and/or improved sidewalk connections on cross streets or off-street.
Improved Connections to Transit	Mobility hub improvements at existing LRT stations along Santa Fe with improved multimodal connections to/from the station to/from and across Santa Fe, such as bicycle lanes and facilities and/or improved sidewalk connections on cross streets or off-street.
Travel Demand Management Programs	Policies and programs that encourage corridor users to utilize existing infrastructure and multimodal facilities in different ways and/or at different times of the day, rather than driving along in the peak traffic period, such as bicycle sharing and bicycle parking or carpools and van pools.
Special Bus Operations	Bus operational improvements through signals for station access and connections, such as Bus on Shoulder operations, bus queue jump lanes, transit signal priority (TSP), and bus slip ramps.
Additional North-South Bicycle Capacity along Corridor	Increased capacity for relatively long trips along corridor via active transportation (e.g. bicycles, scooters, ebikes), or 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 encourage increased ridership, including more frequent service and increased station parking capacity for LRT parallel to Santa Fe, Bus Rapid Transit (BRT) on Broadway and Federal, the Southwest LRT extension, and improved multimodal connections to/from the station to/from and across Santa Fe. Also includes bus services for special events, such as Broncos games, to supplement LRT service and real-time parking information signing for LRT stations parallel to Santa Fe to maximize transit ridership.



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**LEVEL 1 CONCEPTS**

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**Technology**

Concept	Description
Enhanced Communications Infrastructure	Improved fiber optic communications backbone along Santa Fe corridor to support data transmission from ITS devices, enhanced video cameras, 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 signage 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 dynamically open and close individual travel lanes or allowable 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	Enhanced pavement markings, such as inlaid highway shields, and/or in-pavement reflectors or lights to improve driver recognition of roadway geometry and lane configuration changes and other new technology to support driverless vehicle recognition of laneage.
Adaptive Traffic Signal System	Traffic signal control technology in which traffic signal timing changes based on actual traffic demand in real-time to accommodate variable traffic patterns.
Automated Traffic Signal Performance Measures	Continuous traffic signal monitoring with enhanced video cameras and real-time data analysis to proactively update signal timing and identify and correct signal maintenance and operational issues.
Freight Signal Prioritization	Traffic signal system with new controllers and detection equipment that extends the green time for Santa Fe at signalized intersections to allow an approaching truck to make it through the intersection without stopping.
Incident Management Plan	A system to continuously monitor the corridor and agency communication planning for incidents, plus infrastructure like traffic signal communications and staging areas for emergency response.
Traffic Operations Center	Centralized system of corridor traffic signals and real-time data with continuous system monitoring via enhanced detection and video cameras, event management, crisis management, and advanced traffic control functions with information shared across the corridor agencies.
Wayfinding App	Mobile wayfinding app to provide travelers route information, trip planning, and current conditions for all modes with one-stop information for mobility and navigation through corridor area, which may be tied into the larger community information and transit education, tailored to the needs of Santa Fe users, as well as residents and travelers within the corridor area.

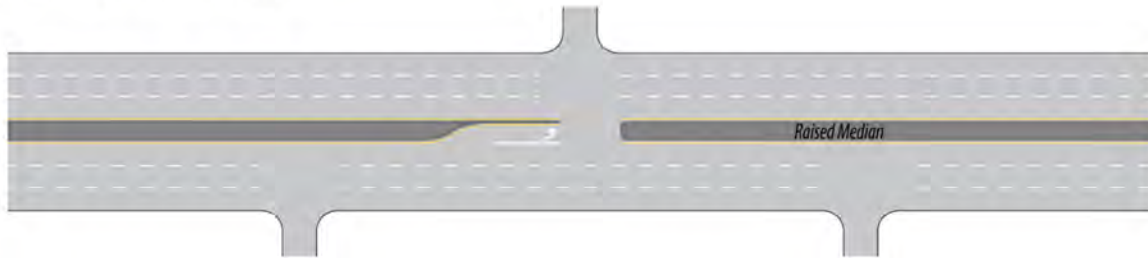
# 23143 Santa Fe PEL (C-470 to I-25)

## LEVEL 1 CONCEPTS

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### Cross-sections

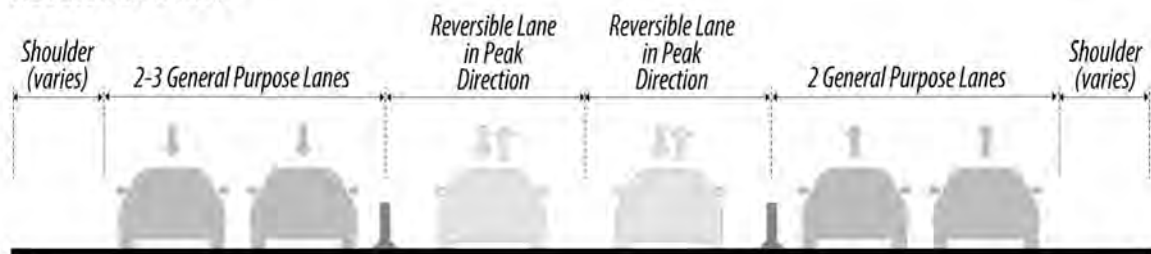
#### Raised Center Median



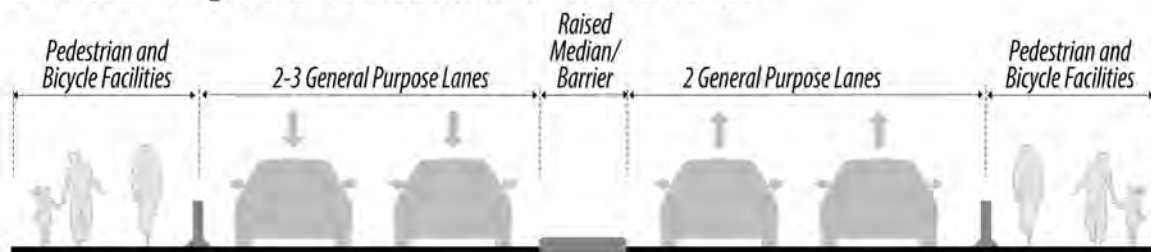
#### Peak Period Shoulder Lanes



#### Reversible Lanes



#### Convert Existing Corridor Lanes/Shoulders for Multimodal

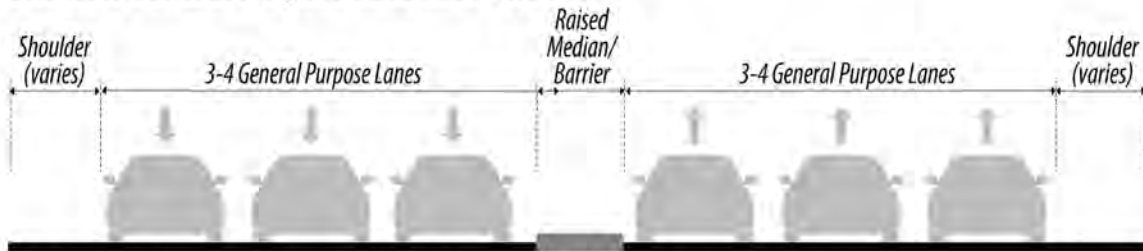


## 23143 Santa Fe PEL (C-470 to I-25)

### LEVEL 1 CONCEPTS

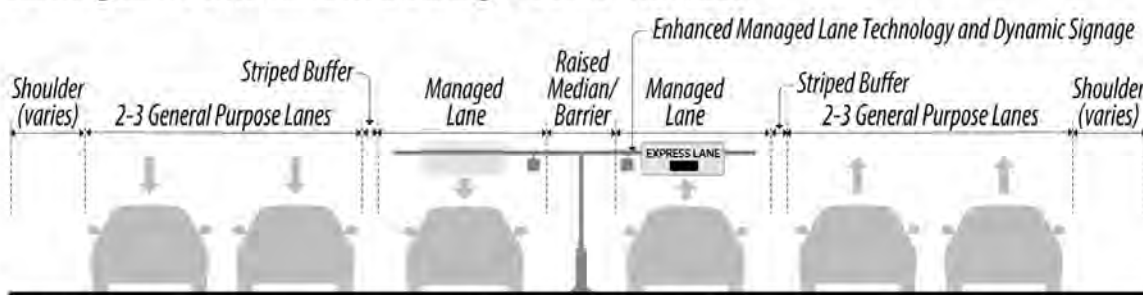
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#### One New General Purpose Lane Each Direction



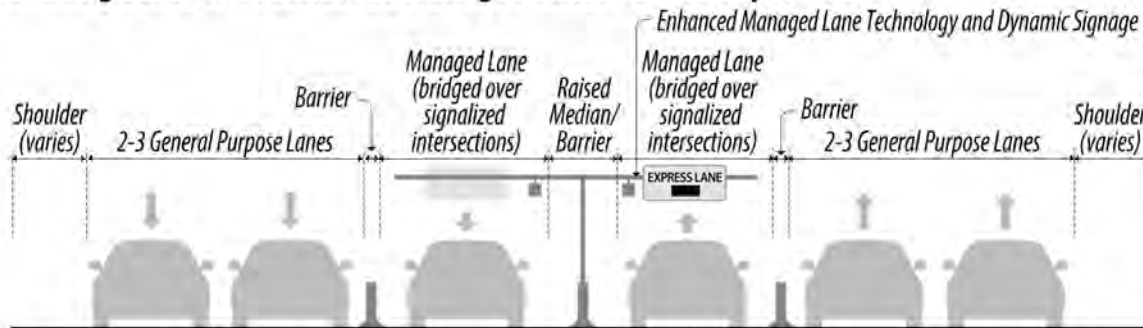
\* includes multimodal improvements at intersections (e.g., added islands, medians, signal timing, enhanced crosswalks)

#### Existing Lanes with Enhanced Managed Lanes - At-Grade



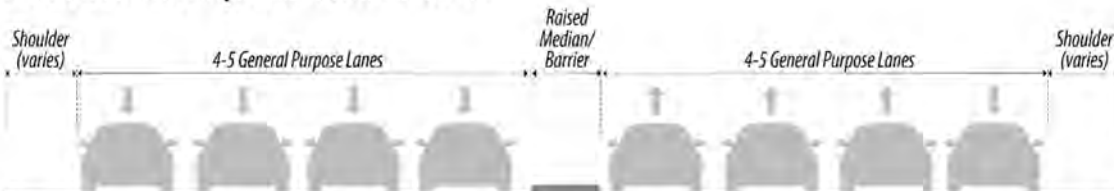
\* includes multimodal improvements at intersections (e.g., added islands, medians, signal timing, enhanced crosswalks)

#### Existing Lanes with Enhanced Managed Lanes - Grade-Separated



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

#### Two New General Purpose Lanes Each Direction



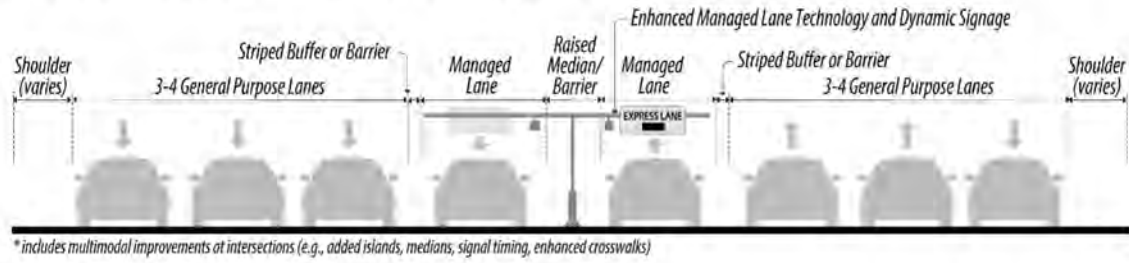
\* includes multimodal improvements at intersections (e.g., added islands, medians, signal timing, enhanced crosswalks)

## 23143 Santa Fe PEL (C-470 to I-25)

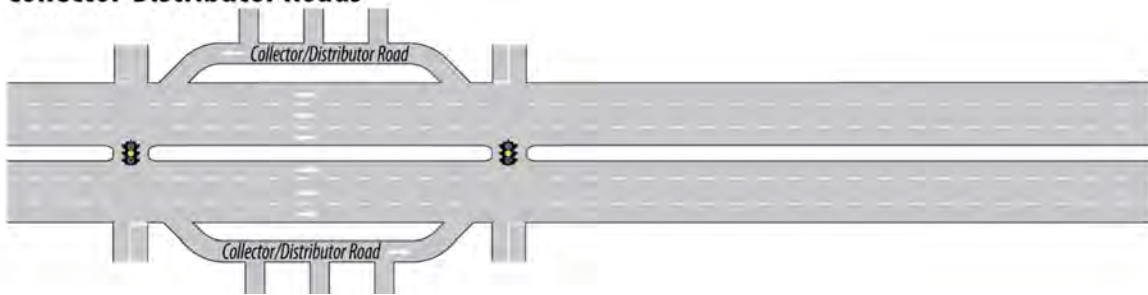
### LEVEL 1 CONCEPTS

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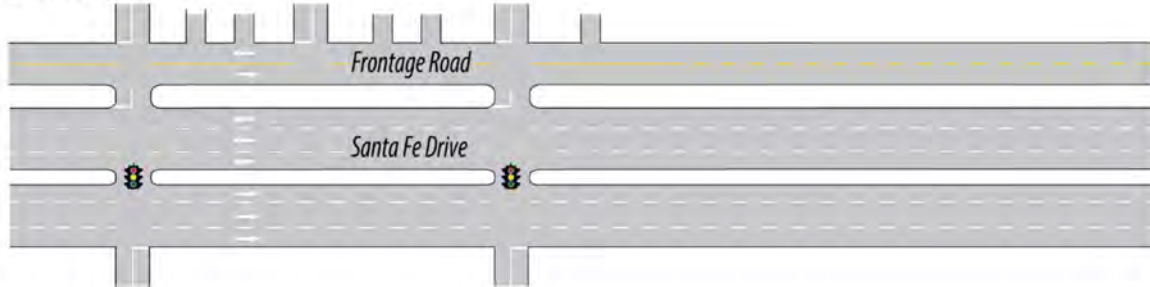
#### One New General Purpose Lane with One Managed Lane Each Direction



#### Collector-Distributor Roads



#### Frontage Road

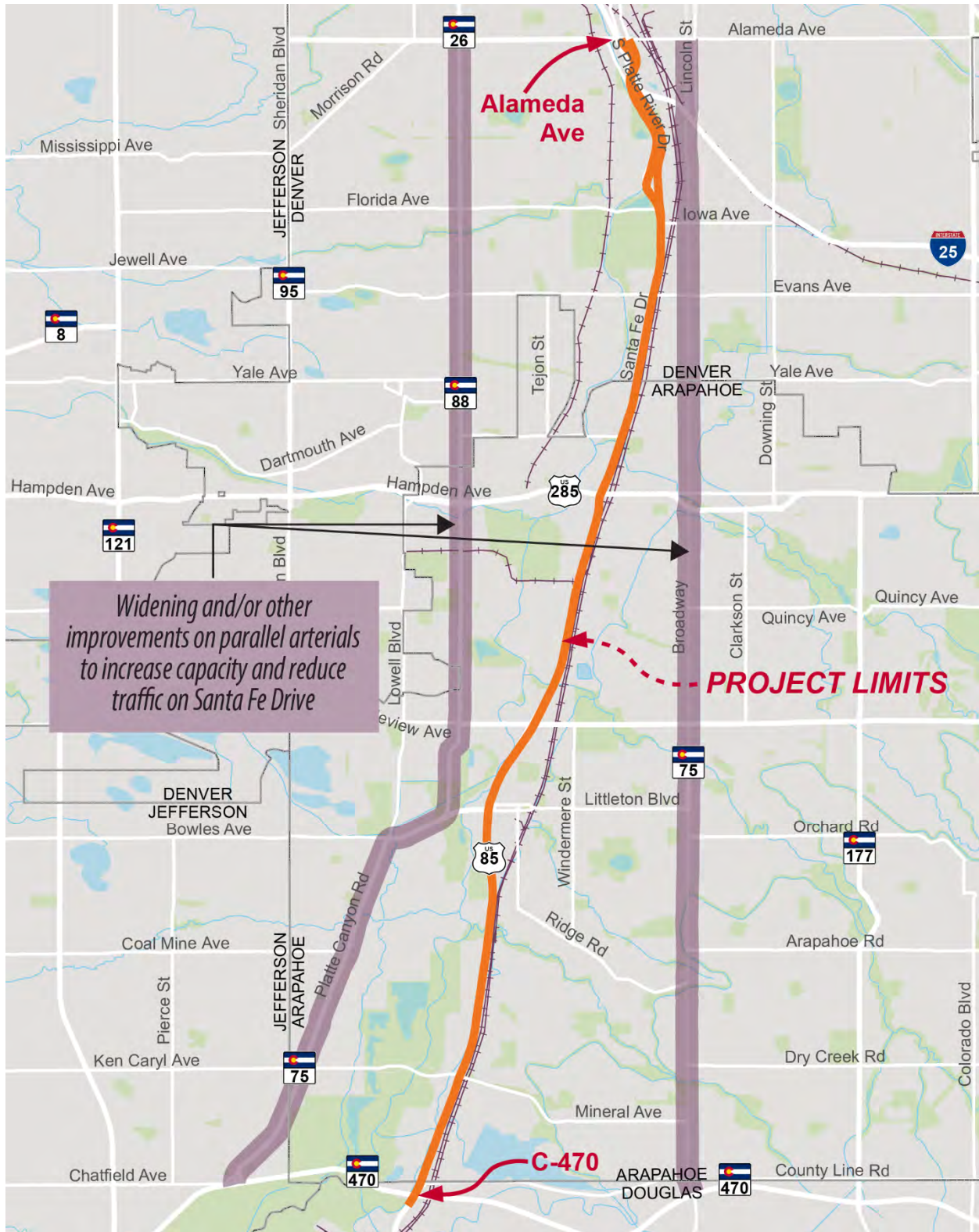


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## LEVEL 1 CONCEPTS

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### Increased Capacity/Widening on Parallel Roadways



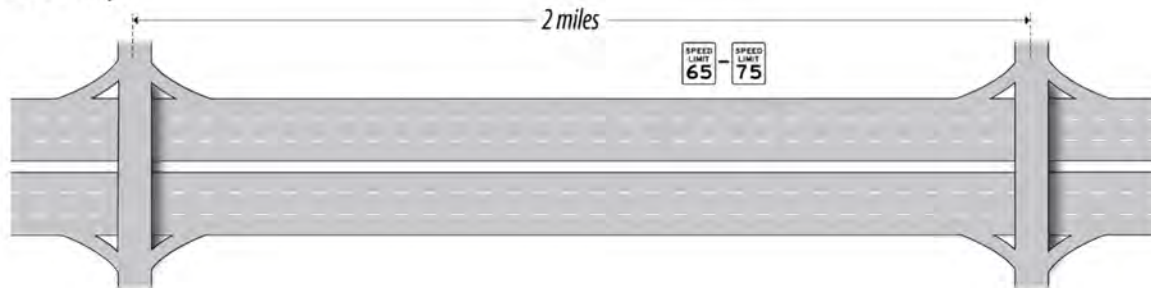
23143 Santa Fe PEL (C-470 to I-25)

LEVEL 1 CONCEPTS

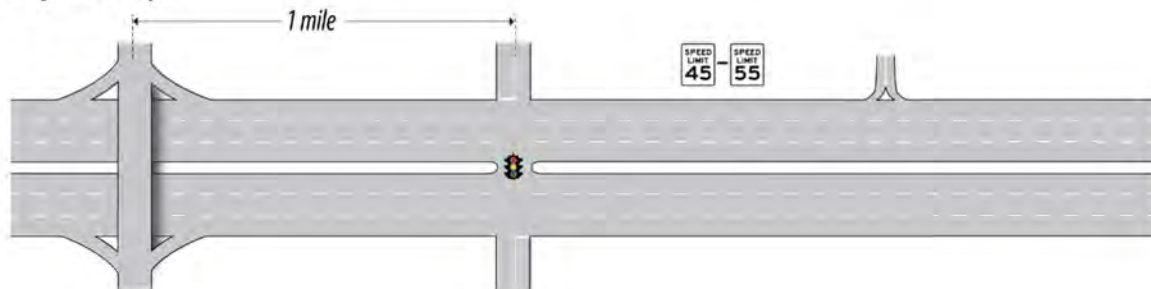
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Roadway Classification

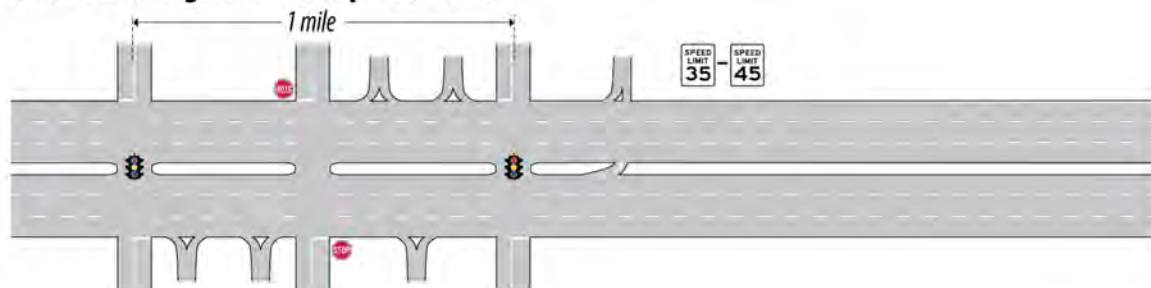
Freeway



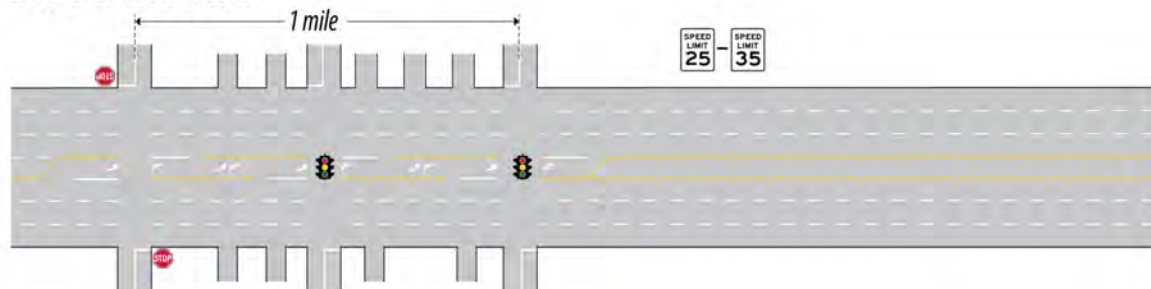
Expressway



Non-Rural Regional Principal Arterial



Non-Rural Arterial



23143 Santa Fe PEL (C-470 to I-25)

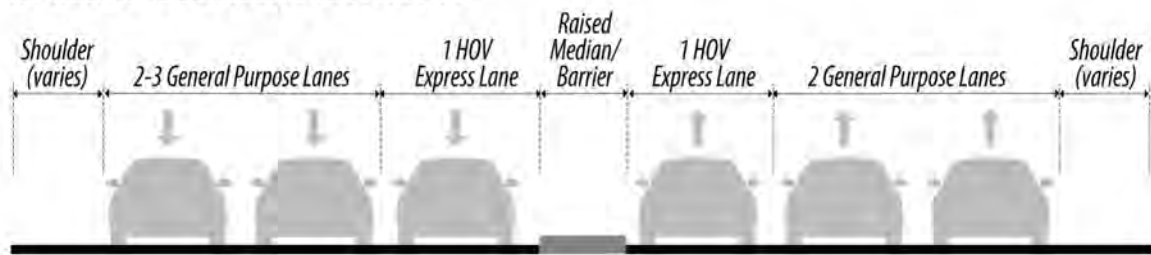
LEVEL 1 CONCEPTS

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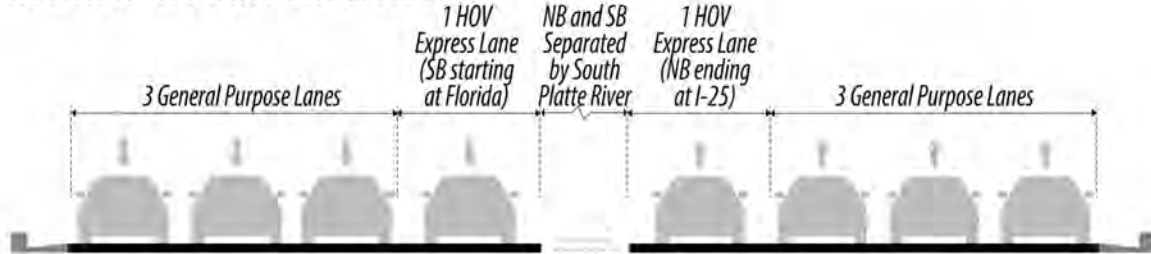
**No Action - C-470 to Bowles Ave**



**No Action - Bowles Ave to Iowa Ave**



**No Action - Iowa Ave to Alameda Ave**





## Santa Fe PEL C-470 to I-25

# Level 1 Concept Improved Transit Service

### 1. Assumptions for Calculation Potential Ridership

- a. Capacity constraints north of study area (central corridor and downtown)
  - i. Assume improvements (double tracking) are made north of I-25 between I-25 and Colfax Avenue to expand capacity.
- b. LRT
  - i. Maximize frequency for service with 16 trains/hour.
  - ii. Maximum number of cars per train (4) with 64 cars/hour and 125 people per car.
  - iii. Assume Southwest Rail Extension to C-470 and Lucent Blvd is complete.
- c. BRT service
  - i. BRT service along Federal Boulevard north of Dartmouth Avenue and along Dartmouth Avenue east to the Englewood Station with 10-minute peak frequency.
  - ii. BRT service along Broadway from Highlands Ranch to Colfax Avenue with 5-minute frequency north of I-25/Broadway, 10-minute frequency north of Englewood, and 15-minute frequency north of Highlands Ranch.
- d. Cross route improvements / access to LRT stations
  - i. Reinstate previously canceled routes within the southern end of the project area.
  - ii. Enhance frequencies of current routes within the northern end of the project area (including and north of Evans Ave). Since the LRT service will be improved, it is assumed that some cross routes will be improved to expand capacity to meet the increased demand for LRT.
- e. Increased park-n-ride capacity
  - i. Assume parking would be expanded throughout the Southwest corridor (Mineral Station is not expanded through FasTracks).
  - ii. Being the end of line station, assume C-470 and Lucent Station would have substantial parking and more than 1,000 spaces as identified in FasTracks.
- f. Access to LRT Stations
  - i. Bike and ped connections are maximized given planned improvements local agencies have planned for completion by 2040.



**23143 Santa Fe PEL (C-470 to I-25)**

**Potential Transit Ridership**

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**2. Potential Ridership**

- a. Overall, the C and D Lines will have the most potential change for increased ridership resulting from shifting people out of vehicles from Santa Fe Drive. While we don't see Federal Boulevard and Broadway as impactful, we are still including them within this analysis since they will be assumed to be BRT service in 2040. Broadway is seen as the more impactful of the two due to closer proximity to the Santa Fe corridor.

**Table 1: Potential Transit Ridership**

Route	% Brackets		+/- 2040 Riders		Santa Fe Area +/-			
	Low	High	Low	High	% of Riders in Area	% Used to Use Santa Fe	Low	High
CD Lines	20%	40%	5,951	11,902	44%	85%	2,226	4,451
Broadway buses	10%	25%	1,228	3,071	29%	30%	107	267
Federal buses	10%	25%	1,162	2,906	42%	10%	49	122
Total			8,342	17,879			2,381	4,841

- b. % Brackets: Overall ridership we expect to occur throughout the entire route. We are basing these estimates on the general rule of thumb that a 100% increase in frequency yields a 30% increase in ridership (0.3 elasticity).
  - i. CD Lines: A range of 20-40% was estimated due to the industry standard of expecting 30% increase in ridership due to a 100% increase in frequency.
  - ii. Broadway/Federal buses: A slightly lower range of 10%-25% was estimated due to service being BRT instead of LRT.
- c. % Used to Use Santa Fe: Percentage of increased ridership that comes directly from Santa Fe Drive to the route.
  - i. CD Lines: The C and D lines are immediately adjacent to the Santa Fe Drive corridor. They also provide access to downtown, which is a prime destination for transit riders along this corridor. Achieving this 85% probably requires substantial investment in additional parking and bike/ped access, and more TOD (land use changes to more residential land uses near the stations).
  - ii. Broadway buses: The Broadway corridor runs the length of the Santa Fe Drive corridor and provides access to downtown but has no parking access. We estimate 30% of the travel shed falls within Santa Fe Drive. Those are travelers that use to travel west to then go north to access downtown, so with the BRT, they would then use the BRT (improved access) on Broadway because they don't have to go out of their way to travel north and access downtown.
  - iii. Federal buses: Similar to Broadway, Federal Boulevard is located near the Santa Fe Drive corridor. The percentage is a little lower (10%) given that there is a smaller travel shed and no direct connection to downtown. It is also really only relevant between Hampden Avenue and Mississippi Avenue.
- d. Santa Fe Area +/-: Anticipated ridership increase based on the other assumptions.



**Possible Results:**

- **Carried Forward** – Meets all of the primary elements of the Purpose and Need
- **Carried Forward as an Element** – Does not fully meet the Purpose and Need, but elements may be evaluated as part of alternatives with further screening levels
- **Eliminated** – Does not meet Purpose and Need, has a fatal flaw, and/or is considered unreasonable

**NOTE:** Not all Carried Forward concepts will be appropriate for the entire length of the Santa Fe corridor. Concepts may be a consideration for only short sections in further evaluation.

**LEVEL 1 SCREENING MATRIX**

Concept	Safety	Operational Performance			Multimodal Connections	Summary of Results	Additional Comments
	Does the concept improve safety for users on Santa Fe Drive?	Does the concept reduce future congestion on Santa Fe Drive?	Does the concept provide more consistent travel time on Santa Fe Drive?	Does the concept improve geometric characteristic that create safety concerns and traffic disruptions on Santa Fe Drive?	Does the concept improve connections across Santa Fe Drive to existing multimodal facilities?		
No Action	No	No	No	No	No	Carried Forward	Carried forward to evaluate as baseline condition for comparison
<b>Cross-sections</b>							
Additional Raised Medians	Yes	No	No	Yes	No	Carried Forward as an Element	
Additional Auxiliary Lanes	Yes	Yes	Yes	Yes	No	Carried Forward as an Element	
Peak Period Shoulder Lanes	Yes	Yes	Yes	No	No	Carried Forward as an Element	
Reversible Lanes	Yes	Yes	Yes	No	No	Carried Forward as an Element	
Convert Existing Corridor Lanes/Shoulders for Multimodal	No	No	No	No	No	Eliminated	Removal of vehicular lanes and/or narrowed shoulders for substantial distance along Santa Fe would reduce safety and operational performance with increased congestion and does not improve multimodal connections across Santa Fe
One New General Purpose Lane Each Direction	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Existing Lanes with Enhanced Managed Lanes – At-Grade	Yes	Yes	Yes	No	Yes	Carried Forward as an Element	
Existing Lanes with Enhanced Managed Lanes – Grade-Separated	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Two New General Purpose Lanes Each Direction	Yes	Yes	Yes	Yes	Yes	Carried Forward	
One New General Purpose Lane with One Managed Lane Each Direction	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Collector/Distributor Roads between Intersections	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Frontage Roads	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Increased Capacity/Widening on Parallel Roadways	No	No	No	No	No	Eliminated	Scope of reasonable capacity improvements that could be made along Broadway, Platte Canyon Rd, or Federal Blvd would not remove enough traffic on Santa Fe to improve identified safety issues or operational performance on the Santa Fe corridor and does not improve multimodal connections across Santa Fe

Concept	Safety	Operational Performance			Multimodal Connections	Summary of Results	Additional Comments
	Does the concept improve safety for users on Santa Fe Drive?	Does the concept reduce future congestion on Santa Fe Drive?	Does the concept provide more consistent travel time on Santa Fe Drive?	Does the concept improve geometric characteristic that create safety concerns and traffic disruptions on Santa Fe Drive?	Does the concept improve connections across Santa Fe Drive to existing multimodal facilities?		
<b>Roadway Classification</b>							
Freeway	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Expressway	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Non-Rural Regional Principal Arterial	Yes	Yes	Yes	Yes	No	Carried Forward as an Element	
Non-Rural Arterial	No	No	No	No	No	Eliminated	Does not improve identified safety issues or operational performance on Santa Fe because it does not best serve high vehicular volumes and regional travel
<b>Intersections/Interchanges</b>							
Minor Intersection Improvements	Yes	Yes	Yes	Yes	Yes	Carried Forward as an Element	Appropriate for early action projects with potential short-term safety, operational, and multimodal benefits at a relatively low cost and impacts, but may require additional improvements to serve long-term vehicular and multimodal travel demand
Access Closure/Separation	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Enhanced At-Grade Intersection	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Partial Grade-Separated Intersection	Yes	Yes	Yes	Yes	Yes	Carried Forward	
Grade-Separated Interchange	Yes	Yes	Yes	Yes	Yes	Carried Forward	

Concept	Safety	Operational Performance			Multimodal Connections	Summary of Results	Additional Comments
	Does the concept improve safety for users on Santa Fe Drive?	Does the concept reduce future congestion on Santa Fe Drive?	Does the concept provide more consistent travel time on Santa Fe Drive?	Does the concept improve geometric characteristic that create safety concerns and traffic disruptions on Santa Fe Drive?	Does the concept improve connections across Santa Fe Drive to existing multimodal facilities?		
<b>Multimodal Treatments</b>							
Improved Crossings for Pedestrians/Bicyclists at Signals	Yes	No	No	No	Yes	Carried Forward as an Element	
Improved Bus Stop Facilities	Yes	No	No	No	Yes	Carried Forward as an Element	
Improved Wayfinding to Regional Trails and Transit	Yes	No	No	No	Yes	Carried Forward as an Element	
Enhanced Pedestrian Detection at Signalized Intersections	Yes	No	No	No	Yes	Carried Forward as an Element	
Pedestrian/Bicyclist Grade Separation	Yes	No	No	No	Yes	Carried Forward as an Element	
Improved Connections to Parallel Trail Facilities	Yes	No	No	No	Yes	Carried Forward as an Element	
Improved Connections to Transit	Yes	Yes	No	No	Yes	Carried Forward as an Element	
Travel Demand Management Programs	No	Yes	Yes	No	No	Carried Forward as an Element	
Special Bus Operations	No	No	No	No	No	Eliminated	With the parallel LRT 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 does not improve safety, operational performance, or multimodal connections across Santa Fe
Additional North-South Bicycle Capacity along Corridor	Yes	No	No	No	Yes	Carried Forward as an Element	
Improved Transit Service along and across Corridor	No	No	Yes	No	Yes	Carried Forward as an Element	