

LEVEL 2A EVALUATION



Santa Fe PEL
C-470 to I-25

Appendix D. ALTERNATIVES
EVALUATION
DOCUMENTATION



LEVEL 2A EVALUATION CRITERIA

The following evaluation criteria were developed to compare how well each option in Level 2 screening meets the Purpose and Need and goals of the project. The performance measures are a mix of qualitative and quantitative assessment, and are based on the criteria and the data available at this stage of development.

Category	Criteria	Performance Measure	Considerations
Safety	Relative level of conflict - Vehicular	Vehicular conflict points	Qualitative and relative <ul style="list-style-type: none"> Level of vehicular conflict
	Relative level of conflict – Pedestrians/bicyclists	Vehicular and pedestrian/bicyclist conflict and exposure/maneuver points	Qualitative and relative
	Potential crash reduction	Anticipated crash reduction for identified predominant crash pattern	Quantitative (when possible) and relative <ul style="list-style-type: none"> Expected change in number of crashes Based on CDOT Safety Performance Factor (SPF) and FHWA Crash Modification Factors (CMFs) for predominant crashes (when available)
Operational Performance	Roadway capacity related to 2040 travel demand	Daily and peak 2040 volume-to-capacity ratio 2040 Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT)	Quantitative
	Volume throughput	2040 traffic volume throughput at key locations <ul style="list-style-type: none"> South of Mineral Ave South of Church Ave North of Belleview Ave North of Dartmouth Ave North of Florida Ave 	Quantitative
	Travel time reliability	Ability of option to improve flexibility of Santa Fe to respond to variations in traffic volume	Qualitative <ul style="list-style-type: none"> Average speed along Santa Fe
	Freight movements	Ability of option to accommodate current and future freight traffic movements with minimal impacts to Santa Fe operations or safety	Qualitative <ul style="list-style-type: none"> Configurations that provide area and channelization for large and slow-moving vehicles facilitate freight movements
	Access operational impacts on Santa Fe Drive	Opportunities to reduce direct access points on Santa Fe Drive	Qualitative <ul style="list-style-type: none"> Configurations that allow access closures on Santa Fe with alternate property access would reduce access points

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Category	Criteria	Performance Measure	Considerations
Multimodal Connections	Enhanced walking and biking crossings	New or enhanced crossing opportunities for pedestrians and bicyclists across Santa Fe Pedestrian/bicyclist crossing type, length, and spacing	Qualitative <ul style="list-style-type: none"> ▪ Differentiating characteristics of pedestrian/bicyclist crossings ▪ Relatively large intersection footprints, wide roadway corridors, or complicated routing is intimidating for pedestrians and bicyclists travel
	Expansion of walking and biking opportunities	New infrastructure and/or wayfinding for pedestrians and bicyclists	Qualitative and relative <ul style="list-style-type: none"> ▪ Differentiating characteristics of new facilities, wayfinding, and/or routes
	Optimized transit use	Enhanced transit service and accessibility	Qualitative and relative <ul style="list-style-type: none"> ▪ Differentiating characteristics of new transit service and/or connections
Community / Quality of Life	Property impacts	Number of properties that may be impacted based on conceptual layout	Quantitative and relative <ul style="list-style-type: none"> ▪ Number of properties impacted ▪ Notable property types (e.g. railroad)
	Property access modifications	Number of property accesses impacted (existing and potential future) Real and perceived difficulty to access area businesses	Qualitative <ul style="list-style-type: none"> ▪ Number of property accesses (driveways) that are expected to be changed with option
	Support of local and regional planning and policy efforts	Noted consistencies and inconsistencies with recommendations within documented plans and local agency policies	Qualitative
Environmental Resources	Potential impacts on environmental resources	Qualitative and quantitative assessment of notable benefits and/or impacts to differentiating environmental resources: <ul style="list-style-type: none"> ▪ Air Quality ▪ Wetlands and other Waters of the U.S. ▪ Noise ▪ Floodplains 	Quantitative (when possible) and relative
	Potential impacts on social and built environment	Qualitative and quantitative assessment of notable benefits and/or impacts to differentiating environmental resources: <ul style="list-style-type: none"> ▪ Environmental Justice and socioeconomic resources ▪ Hazardous materials ▪ Historic resources ▪ Recreational (4(f) & 6(f)) properties ▪ Visual/aesthetics 	Quantitative (when possible) and relative




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Category	Criteria	Performance Measure	Considerations
Constructability	Ease of implementation	Assessment of implementation requirements and/or construction complexity (e.g., permitting, approvals, construction traffic control)	Qualitative <ul style="list-style-type: none"> ▪ Type of permitting and clearance requirements and relative duration ▪ Complexity and/or cost of maintaining traffic during construction, construction duration and phasing ▪ Railroad coordination and approval requirements
	Ability to implement as standalone project	Assessment of ability to construct as separate project from other corridor improvements with a fundable construction project	Qualitative <ul style="list-style-type: none"> ▪ Construction as stand-alone project with operation, safety, and/or multimodal benefits ▪ Level of funding investment and potential funding opportunities

The color ratings shown with the performance measures in the following screening matrices are used as a visual indication of the comparative characteristics of a criterion between options within each category. The colors are not used as an indication of a decision (i.e., an option with many “red” ratings was not automatically rendered unreasonable). The colors are a general indication of the following:

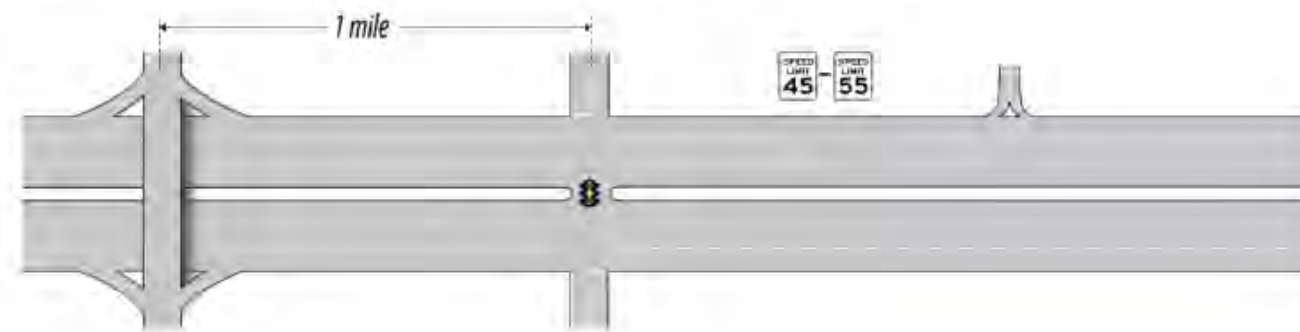
-  Good – Comparatively positive, moderate or major benefits, and/or minor impacts
-  Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts
-  Poor – Comparatively negative and/or major impacts

The evaluation matrix summarizes the recommendation for each option as follows:

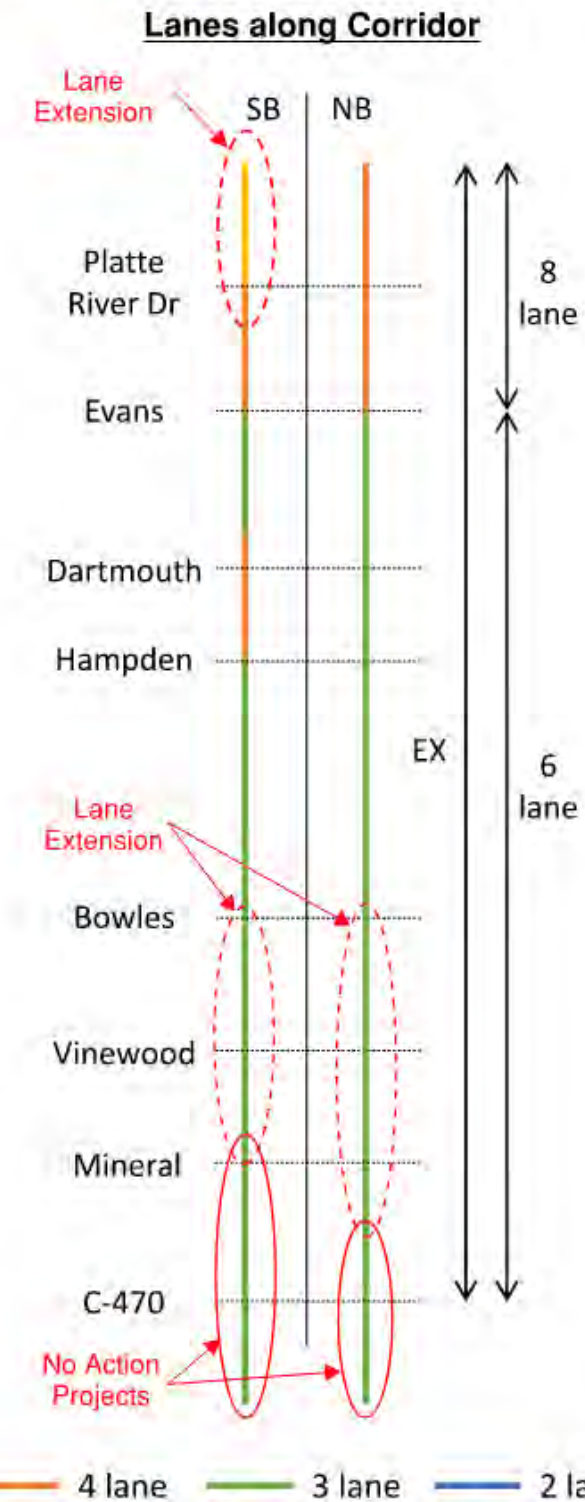
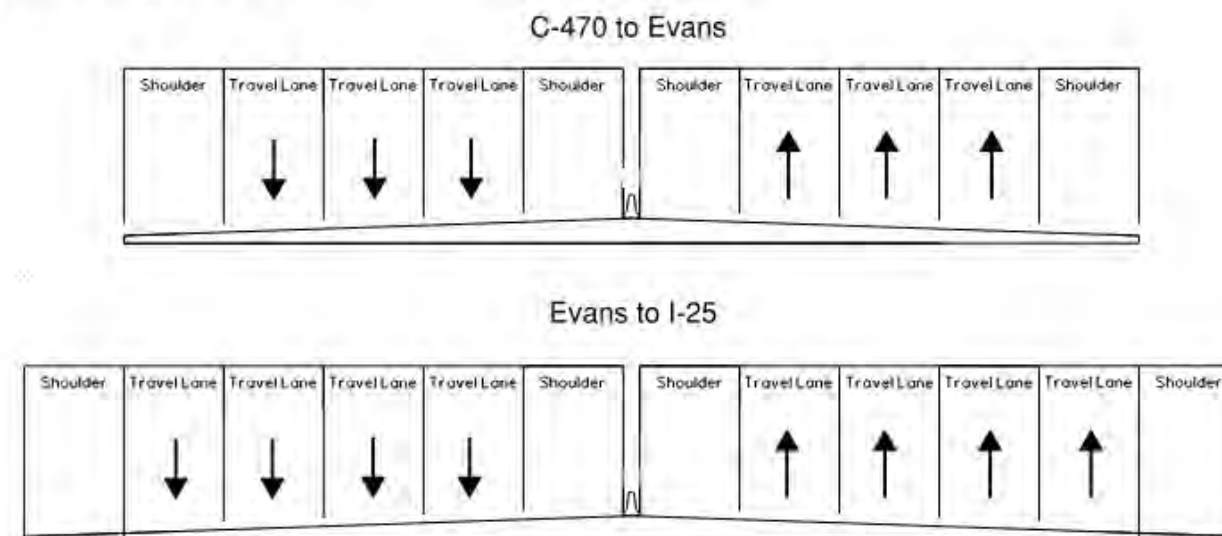
- **CARRIED FORWARD** – Option will be evaluated further with current study as part of potential corridor recommended projects for potential implementation in the near term (10-year timeframe)
- **FUTURE ACTION** – Option will be included in study recommendations for further analysis and considerations with future long-term planning and/or design efforts
- **NOT RECOMMENDED** – Option will not be evaluated further in the study due to comparatively negligible benefits and higher impacts than other options
- **ELIMINATED** – Option does not meet Purpose and Need established with this study

EXPRESSWAY - Conversion of HOV Lane and Extended Lane Bowles to C-470

Expressway classification: 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

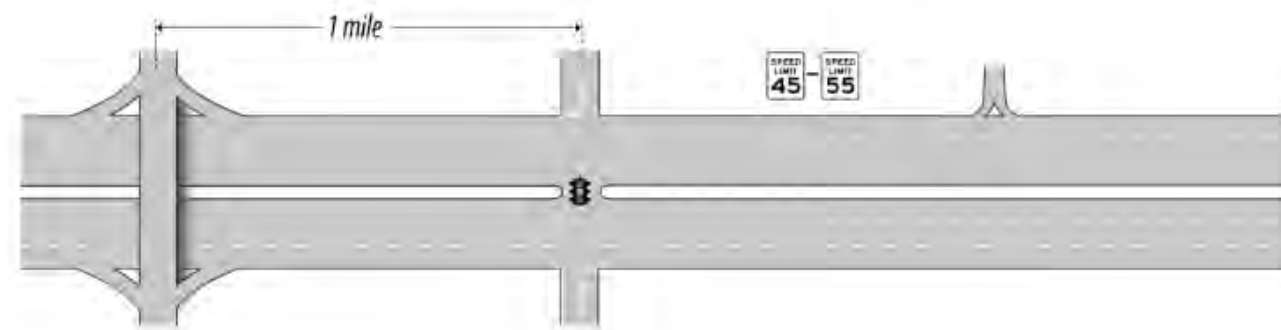


General Cross-section

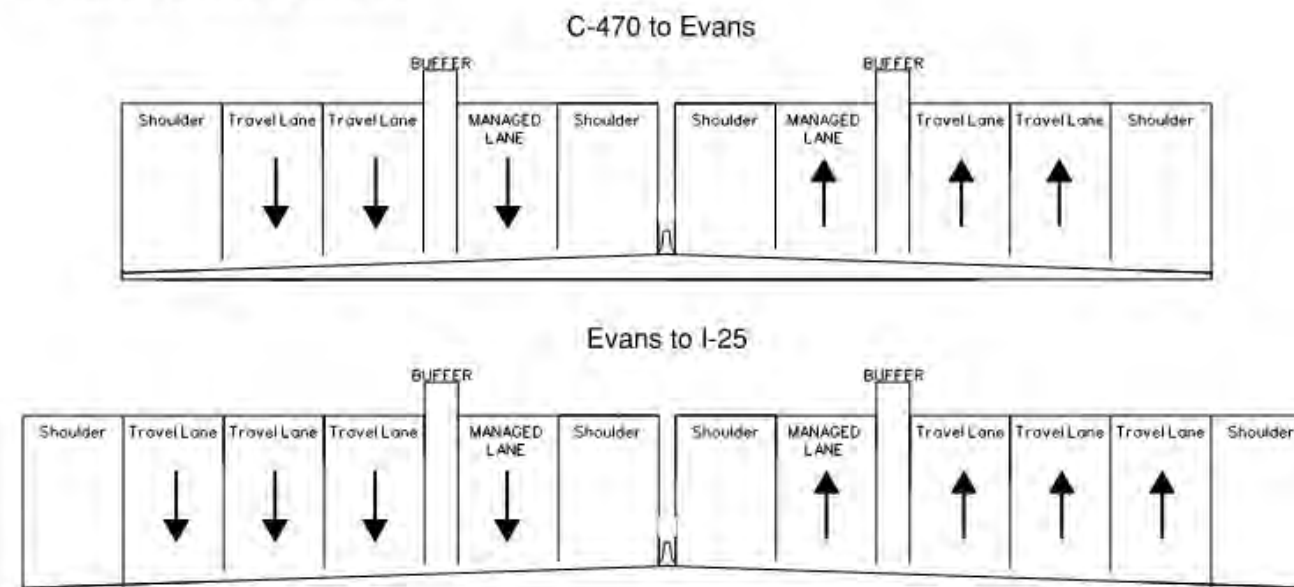


EXPRESSWAY - Enhanced Managed Lane (at-grade intersections) I-25 to C-470

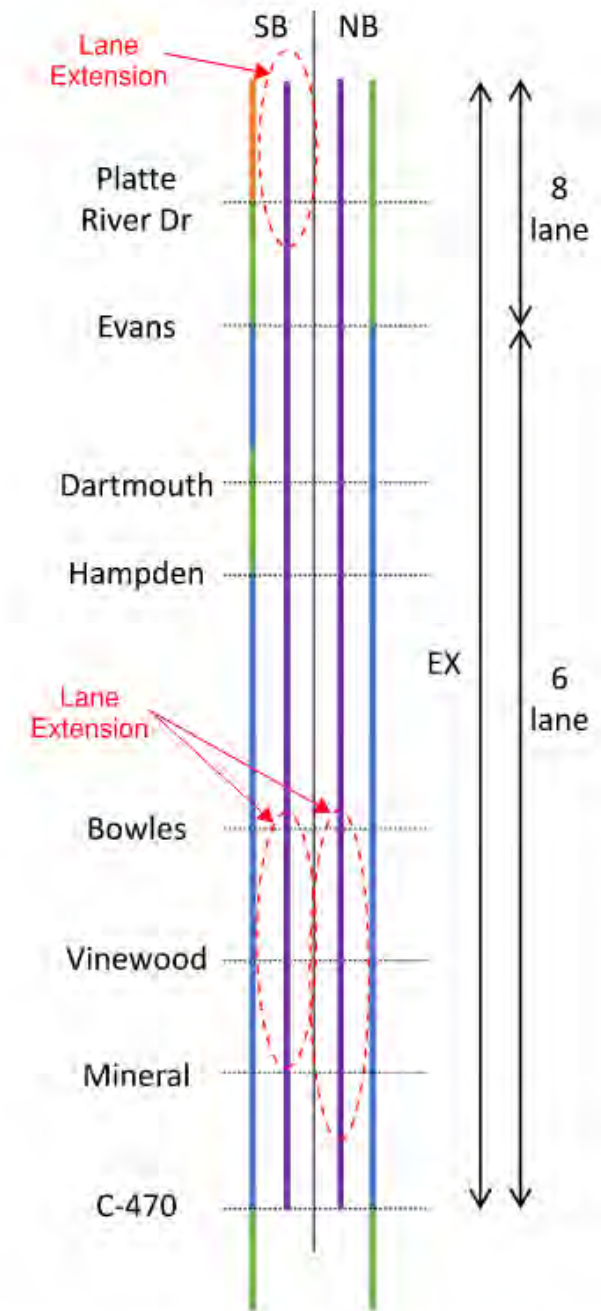
Expressway classification: Roadway corridor with the capacity for high speed and relatively high traffic volumes. Public road intersections are spaced at minimum one-mile intervals and no private driveway access is permitted unless reasonable access cannot be obtained from the surrounding street system



General Cross-section



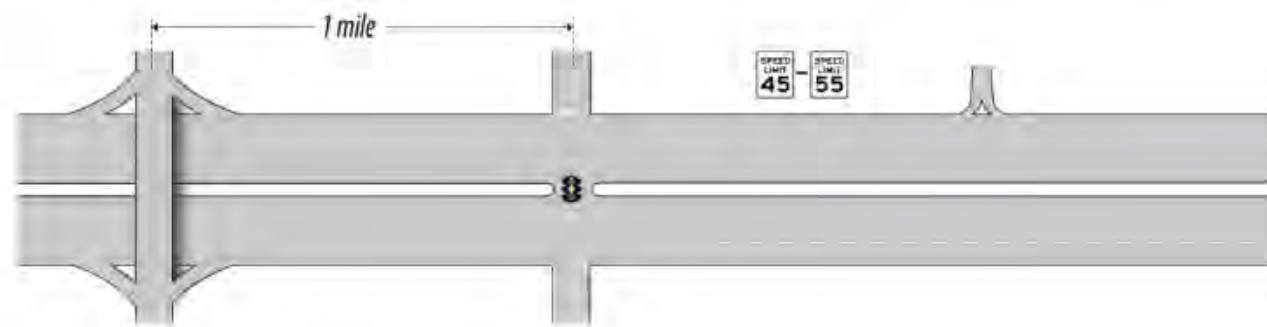
Lanes along Corridor



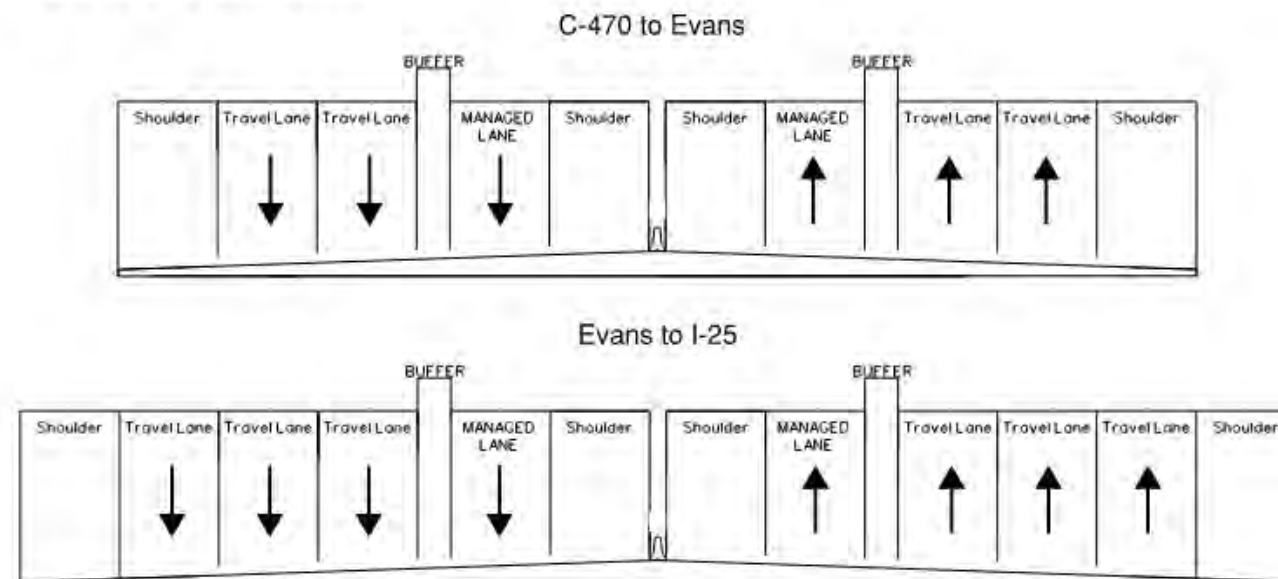
5 lane 4 lane 3 lane 2 lane HOV/ML

EXPRESSWAY - Enhanced Managed Lane (grade-separated at intersections) I-25 to C-470

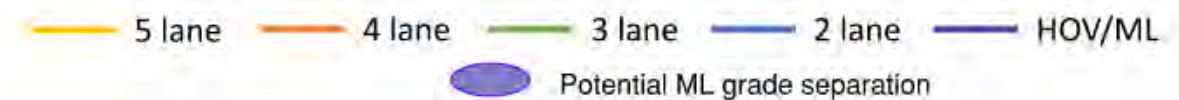
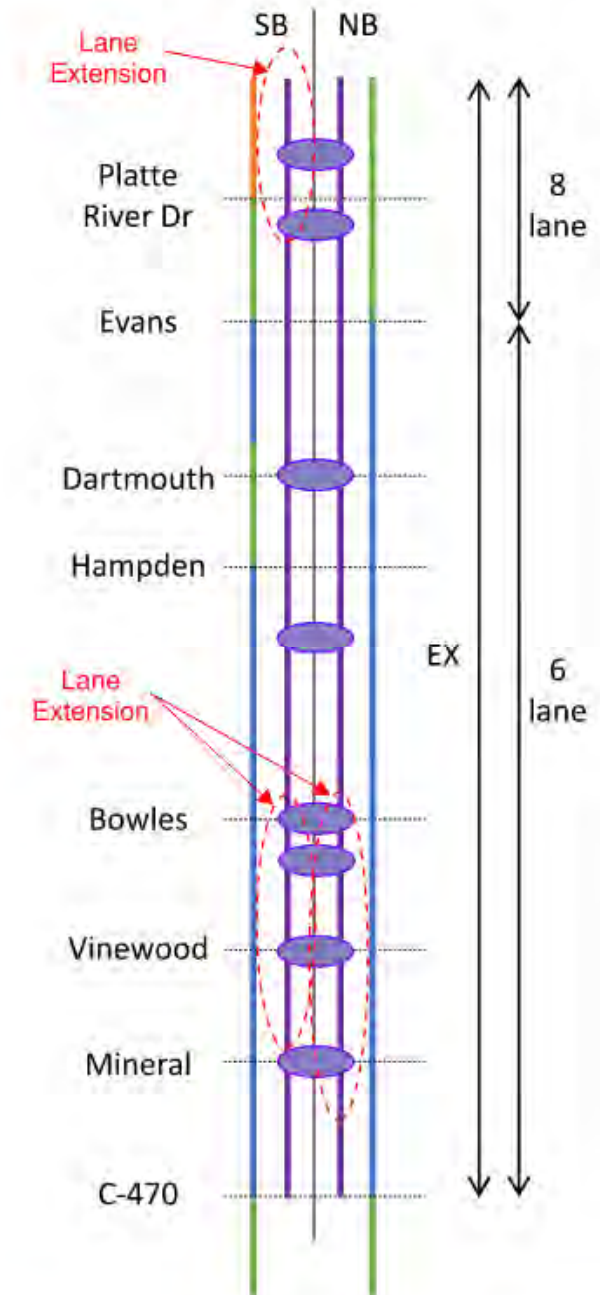
Expressway classification: Roadway corridor with the capacity for high speed and relatively high traffic volumes. Public road intersections are spaced at minimum one-mile intervals and no private driveway access is permitted unless reasonable access cannot be obtained from the surrounding street system



General Cross-section

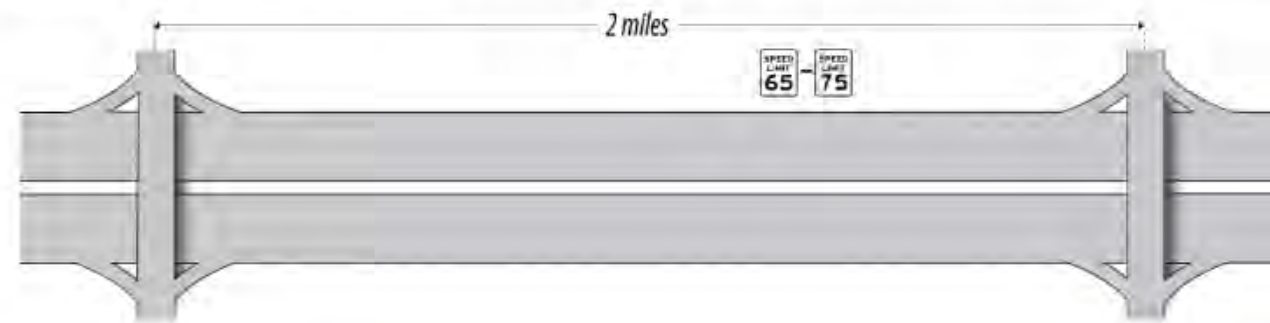


Lanes along Corridor

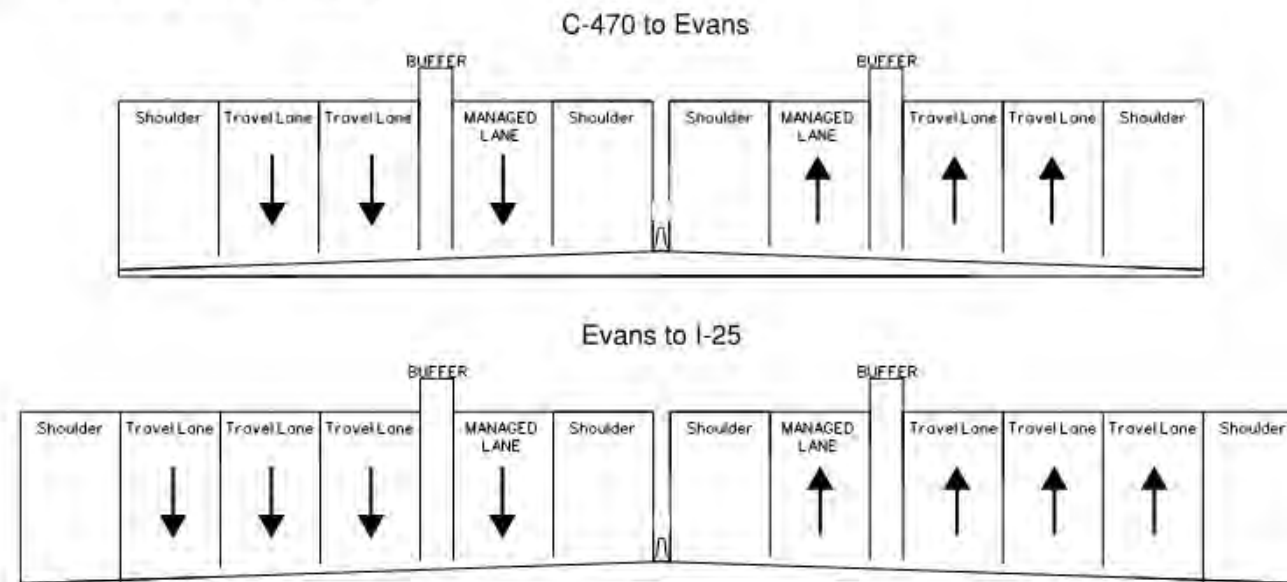


FREEWAY - Managed Lanes and Existing General Purpose Lanes

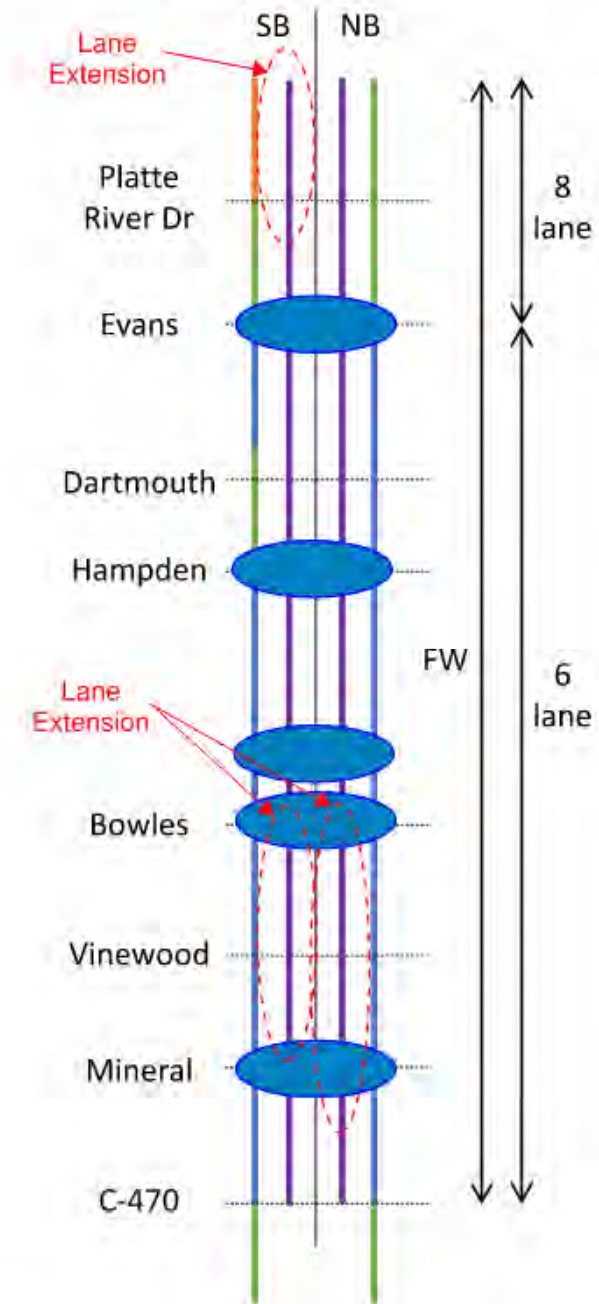
Freeway classification: Roadway corridor with the capacity for high speed and relatively high traffic volumes over medium and long distances. All opposing traffic movements are separated with median barriers and grade separations. Access points are limited to on and off ramps and no at-grade intersections.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



General Cross-section



Lanes along Corridor



QUADRANT ROAD INTERSECTION

What is a quadrant road?

- Intersection design with one main intersection and two secondary intersections that are linked by a connector road in any quadrant of the intersection
- Left-turn vehicles from all four legs of the main intersection use the secondary intersections and connector road, instead of the main intersection, to complete left-turn movements
- Secondary intersections are typically signalized but can also be unsignalized
- When all three intersections are signalized, traffic signals are timed to operate together

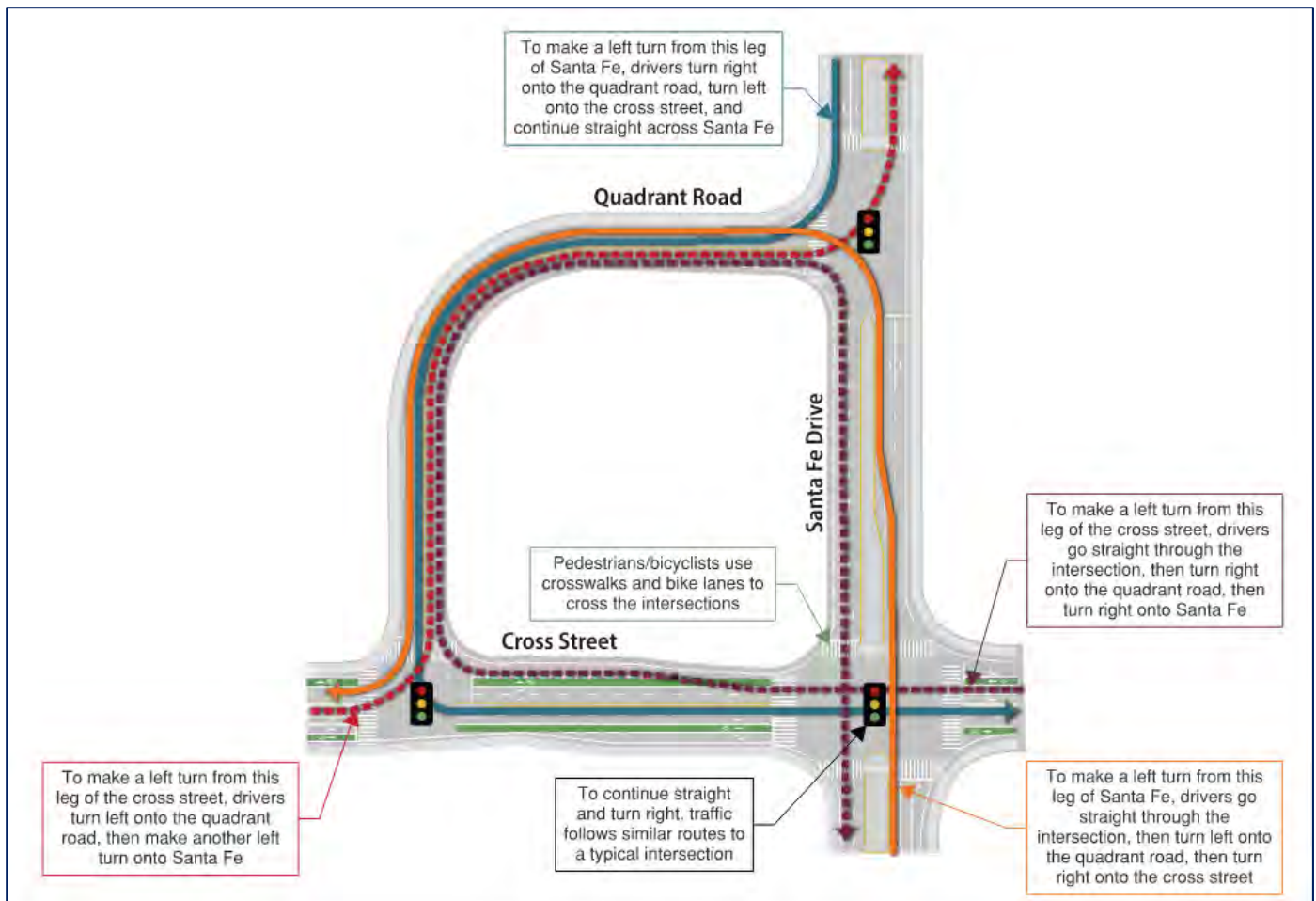
When should it be considered?

- At locations with an existing roadway that can be used as the connector roadway
- At four-legged intersections with heavy through and left-turn traffic volumes on the major and side streets

Benefits

- **Improved safety:** Reduces and spreads out the number of points where vehicles cross paths
- **Increased efficiency:** Rerouting left turns allows for fewer traffic signal phases at the main intersection, which means less time waiting for through and right-turn vehicles
- **Better synchronization:** Synchronization of three signalized intersections improves corridor travel times on both the major and side streets
- **Improved multimodal connections:** Quadrant road signals provide additional signalized pedestrian crossings and removal of left turns at main intersection reduces pedestrian conflicts and narrows crossing distance

How to Navigate



CHANNELIZED T INTERSECTION

What is a channelized T?

- Intersection design where one major street direction of travel (the top side of the “T”) can pass through the intersection without stopping, and the opposite major street direction of travel is controlled by a traffic signal
- Left-turn vehicles from the side street use a channelized receiving lane on the major street to merge onto the major street

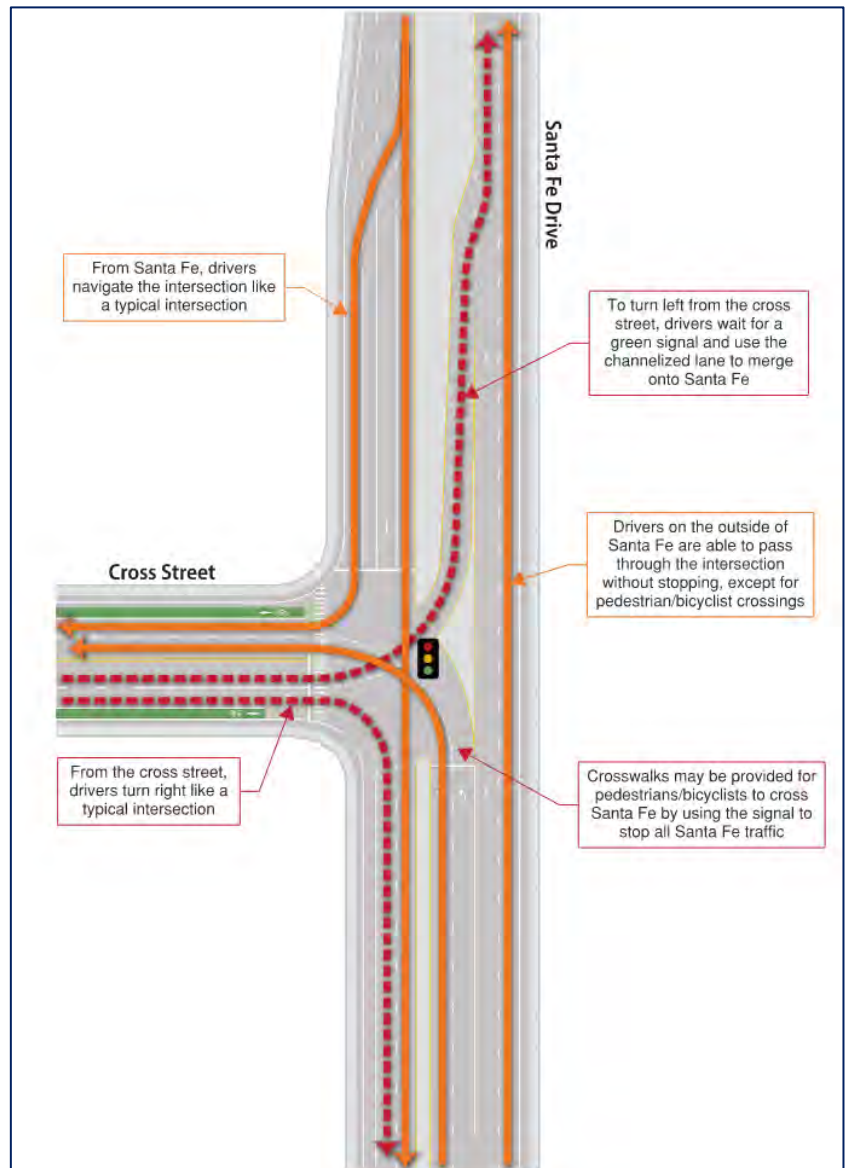
When should it be considered?

- At intersections:
 - » With three legs and heavy through traffic volumes on the major street and moderate to low left-turn traffic volumes on the side street
 - » Where there are no driveways along the major street opposite the side street
 - » With a limited number of pedestrian crossings across the major street or with an alternative pedestrian crossing location nearby

Benefits

- **Improved safety:** Channelizing left-turn vehicles from the side street reduces the potential for angle crashes
- **Increased efficiency:** One direction of travel on the major street is free-flow, and, as a result, more green time can be provided to the other movements, reducing delay
- **Free-flow in one direction:** One direction of travel on the major street never stops, which improves traffic signal synchronization and reduces corridor travel times

How to Navigate



LEVEL 2A SCREENING MATRIX

Roadway – General Classification and Cross-Section Options

Category	Evaluation Criteria	No Action	R1 Expressway – Conversion of HOV to General Purpose and Extended Lanes Bowles to C-470	R2 Expressway – Enhanced Managed Lane (at-grade at intersections) I-25 to C-470	R3 Expressway – Enhanced Managed Lane (grade-separated at intersections) I-25 to C-470	R4 Freeway – Managed Lanes and Existing General Purpose Lanes
Safety	Relative Level of Conflict – Vehicular	Poor Conflicts at at-grade intersections and frequent driveways in areas of congestion	Fair Conflicts at at-grade intersections, but reduction in driveway access points and new interchanges with Expressway	Fair Conflicts at at-grade intersections, but reduction in driveway access points and new interchanges with Expressway	Fair Conflicts at at-grade intersections, but reduction in driveway access points and new interchanges with Expressway	Good No at-grade intersections, no driveway access points and new interchanges throughout
	Relative Level of Conflict – Pedestrians/Bicyclists	Poor Conflicts at at-grade intersections and driveway access points with relatively high-speed traffic along Santa Fe	Fair Conflicts at at-grade intersections, but reduction in driveway access points and new interchanges with Expressway	Fair Conflicts at at-grade intersections, but reduction in driveway access points and new interchanges with Expressway	Good Reduced conflicts at at-grade intersections with separated managed lane and reduction in driveway access points and new interchanges with Expressway	Good Conflicts with high through volumes on Santa Fe eliminated with interchanges, although ramp crossings still remain
	Potential Crash Reduction	Poor No crash reduction and increased crashes expected with increased congestion	Fair ~20% crash reduction with upgraded roadway (e.g. shoulders) and less congestion	Fair ~10% crash reduction with upgraded roadway (e.g. shoulders) and less congestion	Fair ~10% crash reduction with upgraded roadway (e.g. shoulders) and less congestion	Good ~60% crash reduction with upgraded roadway (e.g. shoulders), grade separation and less congestion
Operational Performance	Roadway Capacity related to Travel Demand	Daily segment v/c: 1.0 – 1.3 Peak segment v/c: 1.0 – 1.6 2040 corridor VMT: 834,000 veh-miles	Daily segment v/c: 0.8 – 1.3 Peak segment v/c: 1.0 – 1.4 2040 VMT: 963,000 veh-miles	Daily segment v/c: 0.9 – 1.3 Peak segment v/c: 1.0 – 1.5 2040 Corridor VMT: 950,700 veh-miles	Daily segment v/c: 0.7 – 0.9 Peak segment v/c: 0.8 – 1.2 2040 Corridor VMT: 950,700 veh-miles	Daily segment v/c: 0.7 – 1.0 Peak segment v/c: 0.8 – 1.2 2040 Corridor VMT: 1,397,800 veh-miles
	Volume Throughput	S of Mineral Ave = 60,000 veh/day S of Church Ave = 64,000 veh/day N of Belleview Ave = 78,000 veh/day N of Dartmouth Ave = 98,000 veh/day N of Florida Ave = 106,000 veh/day	S of Mineral Ave = 75,000 veh/day S of Church Ave = 79,000 veh/day N of Belleview Ave = 85,000 veh/day N of Dartmouth Ave = 100,000 veh/day N of Florida Ave = 109,000 veh/day	S of Mineral Ave = 74,000 veh/day S of Church Ave = 78,000 veh/day N of Belleview Ave = 85,000 veh/day N of Dartmouth Ave = 99,000 veh/day N of Florida Ave = 109,000 veh/day	S of Mineral Ave = 74,000 veh/day S of Church Ave = 78,000 veh/day N of Belleview Ave = 85,000 veh/day N of Dartmouth Ave = 99,000 veh/day N of Florida Ave = 109,000 veh/day	S of Mineral Ave = 104,000 veh/day S of Church Ave = 124,000 veh/day N of Belleview Ave = 133,000 veh/day N of Dartmouth Ave = 143,000 veh/day N of Florida Ave = 155,000 veh/day
	Travel Time Reliability	Poor All vehicles travel through signal with high v/c Average speed 31 mph	Fair Intersection improvements and new interchanges with Expressway Average speed 33 mph	Fair Intersection improvements and new interchanges with Expressway Average speed 33 mph	Fair Intersection improvements and new interchanges with Expressway Average speed 33 mph	Good Grade separation and new interchanges with Freeway Average speed 46 mph
	Freight Movements	Poor Freight impacts traffic operations with limited accel/decel and turn areas for slow-moving trucks	Fair Minimal improvements with additional general purpose lane for use by trucks and new interchanges with Expressway	Fair Minimal improvements with new interchanges with Expressway, but no new general purpose lanes	Fair Minimal improvements with new interchanges with Expressway, but no new general purpose lanes	Fair Moderate improvements for accel/decel with all interchanges, but may increase trucks on local streets with reduced access
	Access Operational Impacts	Poor Direct access points for property driveways on Santa Fe create operational issues and crash patterns with turning maneuvers	Fair Reduction in property driveways on Santa Fe with Expressway reduces slowing and turning maneuvers on Santa Fe	Fair Reduction in property driveways on Santa Fe with Expressway reduces slowing and turning maneuvers on Santa Fe	Fair Reduction in property driveways on Santa Fe with Expressway reduces slowing and turning maneuvers on Santa Fe	Good No driveways and no at-grade intersections with Freeway provides major reduction in operational issues and crashes with turn
	Enhanced Walking and Biking Crossings	Poor Long crossing spacing and wide, high-speed corridor is barrier for crossings	Fair Enhanced crossing opportunities with new interchanges with Expressway	Fair Enhanced crossing opportunities with new interchanges with Expressway	Good Increased crossing enhancements with new interchanges with Expressway and managed lane grade separation	Poor Crossing opportunities may be eliminated with at-grade intersections
	Multimodal Connections	Expansion of Biking Opportunities	Poor No new multimodal infrastructure or wayfinding	Fair Opportunities for new multimodal facilities with new interchanges with Expressway	Fair Opportunities for new multimodal facilities with new interchange with Expressway	Fair Opportunities for new multimodal facilities with new interchange with Expressway
Optimized Transit Use		Poor Intersection crossings with wide, high-speed corridor uncomfortable for pedestrian/bicyclist access and congestion hinders driver access to LRT stations	Fair Reduced congestion provides minor improvements to driver LRT station access	Fair Reduced congestion provides minor improvements to driver LRT station access	Fair Reduced congestion provides minor improvements to driver LRT station access	Fair Reduced congestion provides moderate improvements to driver LRT station access, but reduced multimodal crossings hinder pedestrian/bicyclist access

Category	Evaluation Criteria	No Action	R1 Expressway – Conversion of HOV to General Purpose and Extended Lanes Bowles to C-470	R2 Expressway – Enhanced Managed Lane (at-grade at intersections) I-25 to C-470	R3 Expressway – Enhanced Managed Lane (grade-separated at intersections) I-25 to C-470	R4 Freeway – Managed Lanes and Existing General Purpose Lanes
Community / Quality of Life	Property Impacts	No impacts	Multiple properties, including railroad	Multiple properties, including railroad	Multiple properties, including railroad	Multiple properties, including railroad
	Property Access Modifications	Good No property access changes	Fair General reduction in driveway access points with Expressway	Fair General reduction in driveway access points with Expressway	Fair General reduction in driveway access points with Expressway	Poor No driveway access points and increased interchange spacing has major impacts
	Support of Local and Regional Planning and Policy Efforts	Fair Current cross-section would preserve access points and not impact access to Sheridan and its businesses, but no real benefits, beyond minor planned projects and does not address current and future capacity constraints	Fair While option addresses capacity and congestion issues and reduces HOV enforcement burden on local law enforcement, removing HOV does not incentivize or leave open opportunity for other uses to reduce traffic (managed lane, bus services). Option may not address land use access and may continue to isolate east from west sides of the corridor	Fair While option may provide a balance between commuter traffic and local traffic along corridor and address a portion of the capacity and congestion issues, not clear to what extent, and could potentially make east-west connectivity more difficult	Fair Increased capacity would reduce congestion, but space constraints could require loss of land use and access to accommodate interchanges and benefits would go to cross-corridor users and not local communities. Option could induce further demand and create additional externalities (pollution, noise, aesthetic impacts, etc.) beyond other options	Poor Freeway corridor is not consistent with the community vision. Option would primarily benefit cross-corridor users to the detriment of local communities, plus local communities would likely lose access to Santa Fe while experiencing impacts such as pollution, noise, and traffic generated by new users taking advantage of these improvements
Environmental Resources	Potential Environmental Resource Impacts	Good Air Quality: Poor No impacts to other resources	Fair Air Quality: Poor Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Fair Air Quality: Poor Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Fair	Poor Air Quality: Good Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Poor
	Potential Social and Built Environment Impacts	Good No impacts	Fair Environmental Justice: Fair Hazardous Materials: Fair Historic Resources: Fair Recreational 4(f)/6(f): Fair Visual/Aesthetics: Good	Fair Environmental Justice: Fair Hazardous Materials: Fair Historic Resources: Fair Recreational 4(f)/6(f): Fair Visual/Aesthetics: Good	Fair Environmental Justice: Fair Hazardous Materials: Poor Historic Resources: Fair Recreational 4(f)/6(f): Fair Visual/Aesthetics: Fair	Poor Environmental Justice: Poor Hazardous Materials: Poor Historic Resources: Poor Recreational 4(f)/6(f): Poor Visual/Aesthetics: Poor
Constructability	Ease of Implementation	N/A	Poor Challenging and prolonged process for conversion of HOV lane, but typical construction within existing corridor Lane extension south of Bowles presents challenging design and permitting process with ROW acquisition and potential built environment impacts	Poor Additional detailed studies, design, outreach, and clearance processes for identifying managed lane enhancements, tolling, ingress/egress points, and at-grade intersection interactions, although typical construction within existing corridor Lane extension south of Bowles has challenging design and permitting process with ROW acquisition and potential built environment impacts	Poor Additional detailed studies, design, outreach, and clearance processes for identifying managed lane enhancements, tolling, and ingress/egress points Grade-separated managed lanes at intersections present challenging design and prolonged construction impacts Lane extension south of Bowles has challenging design and permitting process with ROW acquisition and potential environment impact	Poor Additional detailed studies, design, outreach, and clearance processes for identifying managed lane enhancements, tolling, and ingress/egress points Challenging and prolonged property owner coordination and acquisition for full access closures and removal of at-grade intersections, in addition to major impactful, long-term construction along Santa Fe corridor and surrounding local roadway system
	Ability to Implement as Standalone Project	N/A	Fair Intersection/interchange improvements can be constructed as separate projects and HOV lane conversion and lanes can be constructed as separate projects with operational benefits with safety and/or congestion funding, but overall corridor is relatively moderate investment	Fair Managed lane enhancements, intersection/interchange improvements, and lanes can be constructed as separate projects in sections with operational benefits with safety, congestion, and managed lane funding, but overall corridor is relatively moderate investment	Poor Managed lane grade-separations, intersection/interchange improvements, and lanes can be constructed as separate projects in sections, but full operational and safety benefits only with corridorwide managed lane construction with relatively large investment	Poor Access closures, interchanges, and lanes can be constructed as separate projects in sections, but corridorwide capacity, operational, and safety benefits need full freeway construction with large investment, including major property acquisition and local roadway system impact
RESULT		CARRIED FORWARD	FUTURE ACTION	FUTURE ACTION	FUTURE ACTION	NOT RECOMMENDED
NOTES		The Level 2A Air Quality performance measure considers Clean Air Act Criteria Pollutants typically associated with congestion The Level 2B evaluation will consider greenhouse gas pollutants typically associated with increases in vehicle miles traveled	Process for lane conversion and funding for lane extension south of Bowles anticipated to be outside near-term timeframe Expressway elements may be carried forward in the near-term implementation plan with moderate safety and operational benefits	Additional processes for managed lane and funding for lane extension south of Bowles anticipated to be outside near-term timeframe Expressway elements may be carried forward in the near-term implementation plan with moderate safety and operational benefits	Additional processes for managed lane and funding for lane extension south of Bowles anticipated to be outside near-term timeframe Expressway elements may be carried forward in the near-term implementation plan with moderate safety and operational benefits	Not recommended for full Santa Fe corridor due to major impacts to local roadway system, circulation, and environmental resources, plus not consistent with land use and mobility visions of local communities Freeway elements may be implemented in sections for smaller-scale safety, capacity, and travel time reliability benefits

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Roadway - Spot Location Options – Table 1 of 2

Category	Evaluation Criteria	R5 South Platte River Pkwy Extension	R6 Four-Lane Freeway – Mineral to Bowles	R7 Aspen Grove Enhanced Access	R8 Access Consolidation of Brewery Ln and Angelo's Access	R9 Additional Connection Vinewood to Brewery Ln	R10 Add New West Side Frontage Rd – S of Weaver Ave	R11 Add New West Side Frontage Rd – Weaver to Church	R12 Downtown Littleton Arterial
Safety	Relative Level of Conflict – Vehicular	Poor No reduction in conflict and potential increase in access to Santa Fe	Good Moderate conflict reduction with grade separations and access removal	Poor No reduction in conflict points	Fair Minor reduction in segment conflict points with access consolidation	Fair Minor reduction in segment conflict points with access consolidation	Fair Minor reduction in segment conflict points with access consolidation	Fair Reduced conflict with closure of driveways in congested area	Poor No reduction in conflict points
	Relative Level of Conflict – Pedestrians/ Bicyclists	Fair New local roadway with potential conflicts, but may reduce conflicts along Santa Fe with new multimodal facilities	Good Conflicts with high through volumes on Santa Fe eliminated with no at-grade intersections	Poor Encourages higher traffic volumes through pedestrian-oriented area	Poor New local connection off Santa Fe with potential conflicts	Fair New local roadway with potential conflicts, but may reduce conflicts along Santa Fe with new multimodal facilities	Fair New local roadway with potential conflicts, but may reduce conflicts along Santa Fe with new multimodal facilities	Fair New local roadway with potential conflicts, but may reduce conflicts along Santa Fe with new multimodal facilities	Fair At-grade signal conflict points remain, but speed reduction may reduce conflicts
	Potential Crash Reduction	Poor No crash reduction due to potential for additional conflict points	Good ~60% crash reduction with upgraded roadway features, grade separations, less congestion	Poor No crash reduction with no change in conflicts or congestion on Santa Fe	Fair ~20% crash reduction through segment of SB Santa Fe	Fair ~20% crash reduction through segment of SB Santa Fe, with access consolidation	Fair ~20% crash reduction through segment of SB Santa Fe	Fair ~18% crash reduction through segment of SB Santa Fe	Poor ~5% crash reduction with improved signal coordination and reduced speeds, but less access control and more congestion
Operational Performance	Roadway Capacity related to Travel Demand	Poor No capacity improvement to Santa Fe or congestion alleviation	Good Freeway provides additional capacity	Poor No capacity improvement to Santa Fe or congestion alleviation	Fair Minimal capacity increase with closure of driveways	Fair Minimal capacity increase with closure of driveways	Fair Minimal capacity increase with closure of driveways	Fair Minimal capacity increase with closure of driveways	Poor Capacity is reduced with less access control and slower speeds
	Volume Throughput	Poor No change to corridor throughput	Fair Additional Freeway capacity may increase segment throughput	Poor No change to corridor throughput	Poor No change to corridor throughput	Poor No change to corridor throughput	Poor No change to corridor throughput	Poor No change to corridor throughput	Poor Arterial with less access control would maintain or reduce throughput
	Travel Time Reliability	Poor Not expected to reduce congestion on Santa Fe	Good Additional Freeway capacity and no delay with grade separations	Poor No change to travel time reliability	Fair Minimal improvement with closure of driveways and reduced crashes	Fair Minimal improvement with closure of driveways and reduced crashes	Fair Minimal improvement with closure of driveways and reduced crashes	Fair Minimal improvement with closure of driveways and reduced crashes	Poor Arterial with less access control would reduce travel time reliability
	Freight Movements	Neutral No change in freight movements on Santa Fe, but freight not an issue in area	Fair Moderate improvements for through movements with grade separations, but may increase trucks on local streets with reduced access	Neutral No change in freight movements on Santa Fe, but freight not an issue in area	Fair Minimal improvements at driveway with access consolidation	Good Moderate improvement at access with heavy freight movements	Fair Minimal improvements with consolidated property access off frontage road	Fair Minimal improvements with consolidated property access off frontage road	Poor Freight impacted with reduced travel time reliability and limited accel/decel and turn areas
	Access Operational Impacts	Poor Increase in access to Santa Fe degrades operations	Good No driveways and no at-grade intersections provide major reduction in operational issues	Fair No change in access at Aspen Grove and access already limited	Good Closure of driveways in congested area reduces slowing and turning maneuvers on Santa Fe	Good Closure of driveways in congested area reduces slowing and turning maneuvers on Santa Fe	Good Closure of driveways in congested area reduces slowing and turning maneuvers on Santa Fe	Good Closure of driveways in congested area reduces slowing and turning maneuvers on Santa Fe	Poor Arterial with less access control may increase driveway access operational issues
Multimodal Connections	Enhanced Walking and Biking Crossings	Poor No new or enhanced crossings	Poor Crossing opportunities may be eliminated with at-grade intersections	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Fair Speed reduction may enhance existing crossings
	Expansion of Biking Opportunities	Good New local roadway may provide new facilities	Poor No new multimodal infrastructure or wayfinding	Fair More traffic on local roadway may discourage biking opportunities	Poor No new multimodal infrastructure or wayfinding	Good New local roadway may provide new facilities	Good New local roadway may provide new facilities	Good New local roadway may provide new facilities	Poor No new multimodal infrastructure or wayfinding
	Optimized Transit Use	N/A No bus route and no LRT station in area	Poor Minimal improvements to driver LRT station access and reduced multimodal crossings hinder pedestrian/bicyclist access	Fair Enhanced driver and multimodal Mineral Station access	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	Fair Reduced congestion provides minimal improvements to driver Littleton Station access

Category	Evaluation Criteria	R5 South Platte River Pkwy Extension	R6 Four-Lane Freeway – Mineral to Bowles	R7 Aspen Grove Enhanced Access	R8 Access Consolidation of Brewery Ln and Angelo's Access	R9 Additional Connection Vinewood to Brewery Ln	R10 Add New West Side Frontage Rd – S of Weaver Ave	R11 Add New West Side Frontage Rd – Weaver to Church	R12 Downtown Littleton Arterial
Community / Quality of Life	Property Impacts	6 properties	More than 40 properties	4 properties	3 properties	10 properties	10 properties	12 properties	More than 20 properties
	Property Access Modifications	Good Opportunity for additional property access	Poor No driveways or at-grade intersections presents major impacts to area properties	Good No property access changes	Fair Closure of 1 driveway on Santa Fe, but access via signal with no out-of- direction travel	Good Opportunity for additional property access via new connection	Fair Closure of up to 5 accesses, but access from frontage road with minor out-of-direction travel	Fair Closure of up to 14 accesses, but access from frontage road with minor out-of-direction travel	Good No property access changes
	Support of Local and Regional Planning and Policy Efforts	Good Consistent with City TMP and provides additional connectivity to Santa Fe	Poor Freeway corridor is not consistent with community vision creating concerns with critical land use access	Good Consistent with ongoing proposed redevelopment of critical commercial area for the City	Fair With adequate capacity for combined access to Santa Fe Drive and improved internal connectivity	Good Improved access and connectivity if incorporated into redevelopment without detracting from the proposed land use	Good Improved access and connectivity if frontage road integrated with land uses	Good Improved access and connectivity if frontage road integrated with land uses	Fair Would reduce barrier Santa Fe currently is for the east and west sides of the City, but major congestion area would still need to be addressed
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: Poor Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Poor	Fair Air Quality: Good Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Good Air Quality: Poor Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Good	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Poor	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Good Air Quality: Poor Wetlands & Waters of the US: Good Noise: Good Floodplains: Good
	Potential Social and Built Environment Impacts	Poor Env Justice: Good Haz Mat: Good Historic Resources: Poor Rec 4(f)/6(f): Poor Visual/Aesthetics: Good	Fair Env Justice: Good Haz Mat: Good Historic Resources: Poor Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Good Env Justice: Good Haz Mat: Good Historic Resources: Fair Rec 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Haz Mat: Good Historic Resources: Good Rec 4(f)/6(f): Good Visual/Aesthetics: Good	Fair Env Justice: Good Haz Mat: Good Historic Resources: Poor Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Good Env Justice: Good Haz Mat: Good Historic Resources: Fair Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Fair Env Justice: Good Haz Mat: Good Historic Resources: Fair Rec 4(f)/6(f): Poor Visual/Aesthetics: Good	Good Env Justice: Good Haz Mat: Good Historic Resources: Good Rec 4(f)/6(f): Good Visual/Aesthetics: Good
Constructability	Ease of Implementation	Good Construction anticipated with property development with minimal impacts to Santa Fe	Poor Construction within existing corridor, but requires extensive design and lengthy outreach and property owner coordination for access and intersection closures with major changes in local roadway circulation and ROW acquisition	Fair Enhancements with property redevelopment with minimal impacts to Santa Fe, but may require lengthy multi- agency coordination for trail/station access	Fair Short new connection with minimal construction impacts, but requires coordination with property owners for access and potential site modifications	Good Construction anticipated with property development with minimal impacts to Santa Fe	Fair Utilizes existing public roadway, but requires coordination with property owners for access and potential site modifications	Fair Utilizes sections of existing public roadway, but requires coordination with property owners for access and potential site modifications	Fair Limited roadway construction impacts with modifications within existing corridor, but requires additional detailed study and outreach process for identifying speed limit, local access, and urban design elements
	Ability to Implement as Standalone Project	Good Local roadway can be constructed as separate project with relatively small public investment	Fair Improvements can be constructed as separate project with operational and safety benefits and safety and/or congestion funding, but with relatively moderate investment	Good Local roadway enhancements can be constructed as separate project with relatively small multimodal funding investment	Good Connection can be constructed as separate project with operational benefits with relatively small investment	Good Local roadway can be constructed as separate project with relatively small public investment	Good Frontage road and driveway closures may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment	Good Frontage road and driveway closures may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment	Fair Modifications can be constructed as separate project, but study needed on potential impacts along Santa Fe outside area Overall modifications are relatively moderate investment for local funding
RESULT		FUTURE ACTION	FUTURE ACTION	NOT RECOMMENDED	CARRIED FORWARD	FUTURE ACTION	CARRIED FORWARD	CARRIED FORWARD	NOT RECOMMENDED
NOTES		Alignment and future property impacts/benefits unknown, but may be considered with private development	Extensive outreach, property coordination, and local land use study and funding investment anticipated to be outside near-term timeframe	Concerns with Santa Fe traffic through development area –does not address congestion issues along Santa Fe		Alignment and future property impacts/benefits unknown, but may be considered with private development			Not recommended because arterial with less access control and more congestion would not address operational and safety issues through area

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Roadway - Spot Location Options – Table 2 of 2

Category	Evaluation Criteria	R13 Downtown Littleton Depressed Freeway	R14 Add New West Side Frontage Rd – Belleview to Oxford	R15 Add New West Side Frontage Rd – Dartmouth to Harvard	R16 Improved South Platte River Drive	R17 Realigned Santa Fe to East of Platte River	R18 Arterial North of Florida	R19 Add New Collector- Distributor – N of Florida	R20 Extend Southbound Lane – I-25 to Florida
Safety	Relative Level of Conflict – Vehicular	Good Moderate conflict reduction with grade separations and access removal	Fair Reduced conflict with closure of driveways in congested area	Fair Reduced conflict with closure of driveways in congested area	Poor No reduction in conflict points	Fair Reduced conflict points overall with no driveways on west side along river	Poor No reduction in conflict points by maintaining arterial classification and access	Fair Reduced conflict with closure of driveways in congested area	Poor Additional lane increases vehicular conflict
	Relative Level of Conflict – Pedestrians/ Bicyclists	Good Conflicts with high through volumes on Santa Fe eliminated with no at-grade intersections	Fair New local roadway with potential conflicts, but may reduce conflicts along Santa Fe with new multimodal facilities	Fair New local roadway with potential conflicts, but may reduce conflicts along Santa Fe with multimodal facilities	Poor Encourages higher traffic volumes through pedestrian/bicyclist-oriented area	Fair Additional conflicts with larger intersections to cross, but reduces conflicts for multimodal facilities on west side of river	Poor No reduction in conflicts by maintaining arterial classification and access	Poor Added crossing conflicts with collector-distributor traffic	Poor Added crossing conflicts with new lane for relatively high-speed traffic along Santa Fe
	Potential Crash Reduction	Good ~40% crash reduction in segment of Santa Fe	Poor ~6% crash reduction in segment of SB Santa Fe	Fair ~10% crash reduction in segment of SB Santa Fe	Poor Minimal crash reduction due to minimal congestion reduction on Santa Fe	Poor Minimal crash reduction due to minimal congestion reduction on Santa Fe	Poor No crash reduction by maintaining arterial classification and access	Fair ~10% crash reduction in segment of SB Santa Fe with access control	Fair Some crash reduction may result from reduced congestion
Operational Performance	Roadway Capacity related to Travel Demand	Good Freeway provides additional capacity	Fair Minimal capacity increase with closure of driveways	Fair Minimal capacity increase with closure of driveways	Poor No capacity improvement to Santa Fe or congestion alleviation	Poor No change in traffic volumes anticipated, no capacity improvements (assumes same lanes)	Poor No capacity improvements by maintaining arterial classification and access	Fair Minimal capacity increase with closure of driveways	Fair HOV lane provides minimal additional capacity
	Travel Time Reliability	Good Additional Freeway capacity and no delay with grade separations	Fair Minimal improvement with closure of driveways and reduced crashes	Fair Minimal improvement with closure of driveways and reduced crashes	Poor Not expected to reduce congestion on Santa Fe	Poor Does not reduce traffic signals and congestion	Poor No change in travel time reliability by retaining classification and access	Fair Minimal improvement with closure of driveways and reduced crashes	Fair HOV lane may have minor congestion reduction
	Freight Movements	Fair Moderate improvements for through movements, but may increase trucks on local streets with reduced access	Fair Minimal improvements with consolidated property access off frontage road	Fair Minimal improvements with consolidated property access off frontage road	Neutral No change in freight movements on Santa Fe, but freight not an issue in area	Neutral No change in freight movements on Santa Fe, but freight not an issue in area	Poor Freight impacted by retaining classification and access	Fair Minimal improvements with consolidated property access	Fair Minimal improvements with congestion reduction
	Access Operational Impacts	Good No driveways and no at-grade intersections provide major reduction in operational issues	Good Closure of driveways in congested area reduces slowing and turning maneuvers on Santa Fe	Good Closure of driveways in congested area reduces slowing and turning maneuvers on Santa Fe	Fair No change in access on Santa Fe at S Platte River Dr and access already limited	Good No driveways on west side along river reduces slowing and turning maneuvers on Santa Fe	Poor No change in multiple direct driveway access points	Good Closure of driveways in congested area reduces slowing and turning maneuvers on Santa Fe	Poor No change in multiple direct driveway access points
Multimodal Connections	Enhanced Walking and Biking Crossings	Poor Crossing opportunities may be eliminated with at-grade intersections	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor Larger intersections for pedestrians/bicyclists to cross	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor Added lane for pedestrians/bicyclists to cross at intersections
	Expansion of Biking Opportunities	Poor No new multimodal infrastructure or wayfinding	Good New local roadway may provide new facilities	Good New local roadway may provide new facilities	Fair More traffic on local roadway may discourage biking opportunities	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding
	Optimized Transit Use	Poor Minimal improvements to driver LRT station access and reduced multimodal crossings hinder pedestrian/bicyclist access	Fair Reduced congestion provides minimal improvements to driver LRT station access	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	Fair Reduced congestion provides minimal improvements to driver Broadway Station access	Poor No improvement in driver or multimodal Broadway Station access	Fair Reduced congestion provides minimal improvements to driver Broadway Station access	Fair Reduced congestion provides minimal improvements to driver Broadway Station access

Category	Evaluation Criteria	R13 Downtown Littleton Depressed Freeway	R14 Add New West Side Frontage Rd – Belleview to Oxford	R15 Add New West Side Frontage Rd – Dartmouth to Harvard	R16 Improved South Platte River Drive	R17 Realigned Santa Fe to East of Platte River	R18 Arterial North of Florida	R19 Add New Collector- Distributor – N of Florida	R20 Extend Southbound Lane – I-25 to Florida
Community / Quality of Life	Property Impacts	More than 15 properties	13 properties	3 properties (includes treatment plan)	More than 25 properties	More than 25 properties	0 properties	More than 35 properties	10 properties
	Property Access Modifications	Poor No driveways or at-grade intersections presents major impacts to area properties	Fair Closure of up to 5 driveways, but access from frontage road with min out-of-direction travel	Fair Closure of up to 7 driveways, but access from frontage road with min out-of-direction travel	Good No property access changes	Fair Properties on west side of river lose direct access to Santa Fe, but access provided via local roadway	Good No property access changes	Fair Closure of up to 14 accesses on Santa Fe, but property access from collector-distributor road	Good No property access changes
	Support of Local and Regional Planning and Policy Efforts	Good If improved access to/from the downtown area is achievable and the surface is able to improve connectivity between the South Platte and downtown	Fair Supports Sheridan economic goals and provides improved access and connectivity if frontage road integrated with land uses, but Englewood concern with property impacts with new road connection	Fair	Good Improves access to local businesses and the South Platte River with multimodal improvements, but does not add substantial capacity to Santa Fe corridor	Fair	Fair	Good	Fair
Environmental Resources	Potential Environmental Resource Impacts	Poor Air Quality: Good Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Poor	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Fair Air Quality: Poor Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Poor	Fair Air Quality: Poor Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Good Air Quality: Poor Wetlands & Waters of the US: Good Noise: Good Floodplains: Good	Fair Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Poor	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Good
	Potential Social and Built Environment Impacts	Poor Env Justice: Good Haz Mat: Good Historic Resources: Poor Rec 4(f)/6(f): Poor Visual/Aesthetics: Good	Fair Env Justice: Good Haz Mat: Poor Historic Resources: Fair Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Fair Env Justice: Poor Haz Mat: Fair Historic Resources: Good Rec 4(f)/6(f): Good Visual/Aesthetics: Good	Fair Env Justice: Fair Haz Mat: Poor Historic Resources: Good Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Poor Env Justice: Poor Haz Mat: Poor Historic Resources: Fair Rec 4(f)/6(f): Poor Visual/Aesthetics: Good	Fair Env Justice: Fair Haz Mat: Fair Historic Resources: Fair Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Fair Env Justice: Fair Haz Mat: Poor Historic Resources: Good Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Poor Env Justice: Poor Haz Mat: Poor Historic Resources: Fair Rec 4(f)/6(f): Poor Visual/Aesthetics: Good
Constructability	Ease of Implementation	Poor Construction within existing corridor, but requires extensive design and environmental process with lengthy outreach with local agency for access and intersection closures and ROW acquisition	Fair Utilizes sections of existing public roadway, but requires coordination with property owners for access and potential site modifications	Fair Utilizes existing public roadway, but requires coordination with property owners for access and potential site modifications	Fair Construction on local roadway with no impacts to Santa Fe, but requires additional detailed study and outreach process with multi-agency coordination to identify improve	Poor Additional detailed study and design of alignment and challenging with prolonged property acquisition process, in addition to major environmental and construction impacts	Good No modifications or roadway construction to maintain arterial classification and access	Poor Requires substantial additional ROW adjacent to Santa Fe and requires coordination with property owners for major access and site modifications, including parking and site configurations	Fair Relatively simple process anticipated with typical construction for added lane along corridor New lane requires ROW acquisition and permitting process for Platte bridge
	Ability to Implement as Standalone Project	Fair Improvements can be constructed as separate project with operational and safety benefits and safety and/or congestion funding, but with relatively moderate investment	Good Frontage road and driveway closures may be constructed as separate project from other corridor improvements with operational benefits and relatively small investm	Good Frontage road and driveway closures may be constructed as separate project from other corridor improvements with operational benefits and relatively small investm	Fair Local roadway improvements can be constructed as separate project with relatively small multimodal funding investment led by local agencies	Poor Realignment can be constructed as separate project from overall corridor, but requires large investment with infrastructure and ROW	Good Roadway section may remain as Arterial with no investment required	Fair Collector-distributor road may be constructed as separate project from other corridor improvements, but with relatively moderate investment due to ROW and property impacts	Good Added lane can be constructed as separate project with safety and/or congestion funding with relatively small investment
RESULT		FUTURE ACTION	CARRIED FORWARD	CARRIED FORWARD	NOT RECOMMENDED	NOT RECOMMENDED	NOT RECOMMENDED	FUTURE ACTION	CARRIED FORWARD
NOTES		Extensive outreach, property coordination, environmental clearances, and funding investment anticipated to be outside near-term timeframe			Not recommended because no reduction in congestion and or safety improvements expected along Santa Fe with minimal traffic diversion	Not recommended because no new capacity or safety improvements and large funding investment required with major construction and environmental impacts	Not recommended because less access control and more congestion would not address operational and safety issues through area	Extensive coordination with major site impacts and additional ROW along constrained area of Santa Fe anticipated to be outside near-term timeframe	

Intersections/Interchanges – Table 1 of 6

Category	Evaluation Criteria	Mineral Ave Signal		Aspen Grove Wy Signal		
		I1 Quadrant Rd (SW or SW & NW)	I2 Tight Diamond/SPUI	I3 Channelized T	I4 Channelized T with SB Grade Separation	I5 NB Left CFI
Safety	Relative Level of Conflict – Vehicular	Fair Slight reduction in conflict points 	Good Lower volume of conflicting traffic 	Fair Reduced conflict for NB through traffic 	Good Removes NB and SB through volumes from intersection 	Fair Slight reduction in high-severity conflict points
	Relative Level of Conflict – Pedestrians/ Bicyclists	Fair Reduced crossing conflicts at main intersection, but potential new conflicts at quadrant road intersections 	Good Conflicts with high through volumes on Santa Fe eliminated although ramp crossings remain 	N/A No crossings at intersection with railroad along east side and no crossing of Aspen Wy	N/A No crossings at intersection with railroad along east side and no crossing of Aspen Wy	N/A No crossings at intersection with railroad along east side and no crossing of Aspen Wy
	Potential Crash Reduction	Fair Reduced congestion and conflict points may reduce crashes 	Good ~42% reduction compared to standard intersection 	Fair ~15% crash reduction at intersection 	Good ~40% reduction compared to standard intersection 	Fair ~10% crash reduction at intersection
Operational Performance	Roadway Capacity related to Travel Demand	Fair Moderate improvement to intersection capacity 	Good Major improvement with removal of signal delay for Santa Fe through traffic 	Fair Minimal improvement for overall intersection, but NB through movement capacity improve 	Good Moderate improvement with no signals for Santa Fe through traffic 	Fair Moderate improvement to intersection capacity
	Travel Time Reliability	Fair Minor improvement due to improved intersection efficiency 	Good Major improvement with removal of bottleneck and reduced crashes 	Fair Improved for NB traffic with no stops at signal 	Good Major improvement with no stops at signal 	Fair Minor improvement due to improved intersection efficiency
	Freight Movements	Fair Moderate improvements on Santa Fe, but reduction in freight efficiencies with turning movements on quadrant roads 	Good Moderate improvements with accel/decel improvements and no stops along Santa Fe 	Fair Minimal improvements with accel/decel and reduced congestion and stopping on NB Santa Fe 	Good Moderate improvements with accel/decel improvements and no stops along Santa Fe 	Fair Minimal improvements with intersection efficiencies
	Access Operational Impacts	Poor Potential added operational impacts with access at and along quadrant road 	Neutral No accesses and no additional access impacts 	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in intersection area
Multimodal Connections	Enhanced Walking and Biking Crossings	Fair Enhanced crossing opportunity with quadrant road intersections 	Good Enhanced crossing opportunity with grade separation of high volumes of Santa Fe through traffic 	N/A No crossings at intersection with railroad along east side	N/A No crossings at intersection with railroad along east side	N/A No crossings at intersection with railroad along east side
	Expansion of Biking Opportunities	Poor No new multimodal infrastructure or wayfinding 	Good New grade separation enhances opportunities for new multimodal infrastructure 	Poor No new multimodal infrastructure or wayfinding 	Poor No new multimodal infrastructure or wayfinding 	Poor No new multimodal infrastructure or wayfinding
	Optimized Transit Use	Fair Reduced congestion provides improvements to Mineral Station access and bus stops on Mineral 	Fair Reduced congestion provides improvements to Mineral Station access and bus stops on Mineral 	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area

Category	Evaluation Criteria	Mineral Ave Signal		Aspen Grove Wy Signal		
		I1 Quadrant Rd (SW or SW & NW)	I2 Tight Diamond/SPUI	I3 Channelized T	I4 Channelized T with SB Grade Separation	I5 NB Left CFI
Community / Quality of Life	Property Impacts	3 properties (includes RTD)	3 properties	3 properties	4 properties (includes multifamily units)	2 properties
	Property Access Modifications	Good Opportunity for additional property access along quadrant road	Good No property access changes	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in intersection area
	Support of Local and Regional Planning and Policy Efforts	Good Consistent with City TMP and current programmed project	Good Consistent with City TMP and future capacity needs	Good Improves capacity and reduces conflict points	Fair Improves capacity and reduces conflict points but provides more of the feel of a Freeway	Fair Concern with additional traffic signal on Santa Fe
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Good Floodplains: Fair	Poor Air Quality: Good Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Poor	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Good	Fair Air Quality: Good Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Good	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Good
	Potential Social and Built Environment Impacts	Good Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Good Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Fair Visual: Fair	Good Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Good Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Good Visual: Fair	Good Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Good Visual: Good
Constructability	Ease of Implementation	Fair Additional signal and infrastructure create moderate design complexities, construction impacts, property owner coordination, and ROW acquisition and permitting processes	Fair Moderate design complexities with adjacent railroad and LRT station bridge, in addition to maintenance challenges for ramps adjacent to railroad/LRT	Good Relatively minor intersection construction with typical construction and ROW impacts within existing corridor area	Fair SB Santa Fe structure creates additional construction complexity with walls and coordination with property owners for ROW and site modifications	Fair Additional signal and infrastructure create moderate design complexities, construction impacts, and ROW acquisition and permitting processes
	Ability to Implement as Standalone Project	Fair Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively moderate investment, funded with local grant programs	Poor Interchange may be constructed as separate project from other corridor improvements with operational benefits, and relatively major investment funded with congestion and/or safety funding	Good Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment, funded with local grant programs	Fair Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively moderate investment, funded with local grant programs
RESULT		CARRIED FORWARD	FUTURE ACTION	CARRIED FORWARD	CARRIED FORWARD	NOT RECOMMENDED
NOTES			Long-term planning for major investment anticipated to be outside near-term timeframe			Not recommended due to added impacts and funding investment with limited benefits over channelized T

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Intersections/Interchanges – Table 2 of 6

Category	Evaluation Criteria	Brewery Ln Signal			Church Ave Signal			Bowles Ave Signal			
		I6 Channelized T	I7 Channelized T with SB Grade Separation	I8 NB Left CFI	I9 Channelized T – Close West Leg	I10 Quadrant Rd (SE corner)	I11 Quadrant Rd with Sumner	I12 CFI	I13 Quadrant Rd (NW corner)	I14 Folded Diamond West Interchange	I15 Quadrant Rd with Prince and Church
Safety	Relative Level of Conflict – Vehicular	Fair Reduced conflict for NB through traffic (Yellow)	Good Removes NB and SB through volumes from intersection (Green)	Fair Slight reduction in high-severity conflict points (Yellow)	Fair Reduced conflict for SB through traffic (Yellow)	Fair Slight reduction in conflict points (Yellow)	Fair Slight reduction in conflict points (Yellow)	Fair Moderate reduction in high-severity conflict points (Yellow)	Fair Slight reduction in conflict points (Yellow)	Good Much lower volume of conflicting traffic (Green)	Fair Slight reduction in conflict points (Yellow)
	Relative Level of Conflict – Pedestrians/Bicyclists	N/A No crossings at intersection with railroad along east side and no crossing of Brewery	N/A No crossings at intersection with railroad along east side and no crossing of Brewery	N/A No crossings at intersection with railroad along east side and no crossing of Brewery	Poor Potential increased conflict with SB traffic (Red)	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections (Yellow)	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections (Yellow)	Fair Minimal reduced conflict with CFI (Yellow)	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections (Yellow)	Good Conflicts with high through volumes on Santa Fe eliminated although ramp crossings remain (Green)	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections (Yellow)
	Potential Crash Reduction	Fair ~15% crash reduction at intersection (Yellow)	Good ~40% reduction at intersection (Green)	Fair ~10% crash reduction at intersection (Yellow)	Fair ~15% crash reduction at intersection (Yellow)	Fair Reduced congestion and conflict points (Yellow)	Fair Reduced congestion and conflict points (Yellow)	Fair ~10% crash reduction at intersection (Yellow)	Fair Reduced congestion and conflict points (Yellow)	Good ~42% reduction at intersection (Green)	Fair Reduced congestion and conflict points (Yellow)
Operational Performance	Roadway Capacity related to Travel Demand	Fair Minimal overall improvement, but NB through movement capacity improved (Yellow)	Good Moderate improvement with no signals for Santa Fe through traffic (Green)	Fair Moderate improvement to intersection capacity (Yellow)	Fair Minimal overall improvement, but SB through movement capacity improved (Yellow)	Fair Moderate improvement to intersection capacity (Yellow)	Fair Moderate improvement to intersection capacity (Yellow)	Fair Moderate improvement to intersection capacity (Yellow)	Fair Moderate improvement to intersection capacity (Yellow)	Good Major improvement with removal of signal delay for Santa Fe through traffic (Green)	Fair Moderate improvement to intersection capacity (Yellow)
	Travel Time Reliability	Fair Improved for NB traffic with no stops at signal (Yellow)	Good Major improvement with no stops at signal (Green)	Fair Minor improvement with improved efficiency (Yellow)	Fair Improved for SB traffic with no stops at signal (Yellow)	Fair Minor improvement with improved efficiency (Yellow)	Fair Minor improvement with improved efficiency (Yellow)	Fair Minor improvement with improved efficiency (Yellow)	Fair Moderate improvement with improved efficiency (Yellow)	Good Major improvement with removed bottleneck and reduced crashes (Green)	Fair Moderate improvement with improved efficiency (Yellow)
	Freight Movements	Fair Minimal improvement with reduced congestion on NB Santa Fe (Yellow)	Good Moderate improvements with no stops along Santa Fe (Green)	Fair Minimal improvements with intersection efficiencies (Yellow)	Fair Minimal improvements with reduced congestion and stopping on SB Santa Fe (Yellow)	Fair Improvements on Santa Fe, but reduction in freight efficiencies with quadrant roads (Yellow)	Fair Improvements on Santa Fe, but reduction in freight efficiencies with quadrant roads (Yellow)	Fair Minimal improvements with intersection efficiencies (Yellow)	Fair Improvements on Santa Fe, but reduction in freight efficiencies with quadrant roads (Yellow)	Good Major improvements with no stops along Santa Fe (Green)	Fair Improvements on Santa Fe, but reduction in freight efficiencies with quadrant roads (Yellow)
	Access Operational Impacts	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in intersection area	Fair Closing west leg access reduces operational impacts (Yellow)	Poor Potential new impacts at/along quadrant road (Red)	Poor Potential major impacts along Sumner (Red)	Neutral No accesses and no additional access impacts (Yellow)	Poor Potential new impacts at/along quadrant road (Red)	Neutral No accesses and no additional access impacts (Yellow)	Poor Potential major impacts along local roads with added traffic (Red)
Multimodal Connections	Enhanced Walking and Biking Crossings	N/A No crossings at intersection with railroad along east side	N/A No crossings at intersection with railroad along east side	N/A No crossings at intersection with railroad along east side	Poor No new or enhanced crossings (Red)	Fair Enhanced crossing opportunity with quadrant road intersections (Yellow)	Fair Enhanced crossing opportunity with quadrant road intersections (Yellow)	Poor No new or enhanced crossings (Red)	Fair Enhanced crossing opportunity with quadrant road intersections (Yellow)	Good Enhanced opportunity with grade separation of Santa Fe traffic (Green)	Poor No new or enhanced crossings and crossing impacts along local roads with added traffic (Red)
	Expansion of Biking Opportunities	Poor No new multimodal infrastructure or wayfinding (Red)	Poor No new multimodal infrastructure or wayfinding (Red)	Poor No new multimodal infrastructure or wayfinding (Red)	Poor No new multimodal infrastructure or wayfinding (Red)	Poor No new multimodal infrastructure or wayfinding (Red)	Poor No new multimodal infrastructure or wayfinding (Red)	Poor No new multimodal infrastructure or wayfinding (Red)	Poor No new multimodal infrastructure or wayfinding (Red)	Good Grade separation enhances opportunities (Green)	Poor No new multimodal infrastructure or wayfinding (Red)
	Optimized Transit Use	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	Fair Reduced congestion provides minimal improvements to stops along Church (Yellow)	Fair Reduced congestion provides minimal improvements to stops along Church (Yellow)	Fair Reduced congestion provides minimal improvements to stops along Church (Yellow)	Fair Reduced congestion to Littleton Station and stops on Bowles (Yellow)	Fair Reduced congestion to Littleton Station and stops on Bowles (Yellow)	Fair Reduced congestion to Littleton Station and stops on Bowles (Yellow)	Fair Minimal reduced congestion to Littleton Station and stops on Bowles (Yellow)

Category	Evaluation Criteria	Brewery Ln Signal			Church Ave Signal			Bowles Ave Signal			
		I6 Channelized T	I7 Channelized T with SB Grade Separation	I8 NB Left CFI	I9 Channelized T – Close West Leg	I10 Quadrant Rd (SE corner)	I11 Quadrant Rd with Sumner	I12 CFI	I13 Quadrant Rd (NW corner)	I14 Folded Diamond West Interchange	I15 Quadrant Rd with Prince and Church
Community / Quality of Life	Property Impacts	4 properties	10 properties	2 properties	More than 15 properties	5 properties (Incl. ACC prkg lo)	4 properties (Incl. ACC prkg lo)	4 properties	4 properties	More than 20 properties	More than 20 properties
	Property Access Modifications	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in intersection area	Poor Closing west leg has major impacts to Hudson Gardens and EchoSt	Fair Moderate access impacts with out-direction travel	Fair Moderate access impacts with out-direction travel	Good No property access changes	Good Opportunity for added property access along quadrant road	Poor Signalized access on Bowles west of Santa Fe impacted	Fair Moderate access impacts with out-direction travel
	Support of Local and Regional Planning and Policy Efforts	Good Improves capacity and reduces conflict points	Fair Improves capacity and reduces conflict points but provides more of the feel of a Freeway with grade separation	Fair Concern with additional traffic signal on Santa Fe	Fair Would require improved alternative access for the land use or completed as part of redevelopment	Fair Concern with potential land use and access impacts to ACC and with additional traffic signal on Santa Fe	Poor Potential extensive out-of-direction movement for SB lefts not consistent with Downtown access goals	Fair With design potentially utilizing existing signals for crossover	Fair Would need to be conducted in cooperation with development of the land	Fair Need to maintain comparable Downtown access and improve connection to South Platte	Poor Potential extensive out-of-direction movement for SB lefts not consistent with Downtown access goals
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Fair	Poor Air Quality: Good Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Poor	Poor Air Quality: Fair Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Poor	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Fair Air Quality: Fair Wetlands & Waters of the US: Good Noise: Poor Floodplains: Good	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Fair Air Quality: Good Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Fair	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Poor Floodplains: Good
	Potential Social and Built Environment Impacts	Good Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Fair Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Fair Visual: Poor	Fair Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Fair Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Fair Visual: Good	Good Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Good Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Poor Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Poor Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Poor Rec 4(f)/6(f): Fair Visual: Good	Good Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Good Visual: Fair	Poor Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Poor Visual: Poor
Constructability	Ease of Implementation	Good Relatively minor intersection construction with typical construction and ROW impacts within existing corridor area	Fair Santa Fe structure adds construction complexity with walls and coordination with property owners for ROW and site modifications	Fair Moderate design complexities, construction impacts, and ROW acquisition and permitting processes	Fair Closing west leg creates moderate complexities, construction impacts, and ROW acquisition and permitting processes	Fair Moderate design complexities, construction impacts, property owner coordination, and ROW acquisition and permitting processes	Fair Moderate construction and environmental impacts and lengthy ROW acquisition and permitting processes	Fair Moderate design complexities, construction impacts, and ROW acquisition and permitting processes	Fair Moderate construction impacts, property owner coordination, and ROW acquisition and permitting processes	Fair Moderate design complexities within constrained area, with construction impacts, and ROW acquisition and permitting processes	Fair Moderate construction impacts and property owner and local agency coordination with changes in local circulation
	Ability to Implement as Standalone Project	Good Intersection may be constructed as separate project and relatively small investment, funded with local grant programs	Fair Intersection may be constructed as separate project with operational benefits and relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project with relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project with relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project with operational benefits and relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project with operational benefits and relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project with relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project with operational benefits and relatively moderate investment, funded with local grant programs	Poor Interchange may be constructed as separate project with operational benefits, but relatively major investment needed with congestion and/or safety funds	Fair Intersection may be constructed as separate project with operational benefits and relatively moderate investment, funded with local grant programs
RESULT		CARRIED FORWARD	CARRIED FORWARD	NOT RECOMMENDED	CARRIED FORWARD	CARRIED FORWARD	NOT RECOMMENDED	CARRIED FORWARD	CARRIED FORWARD	FUTURE ACTION	NOT RECOMMENDED
NOTES				Not recommended due to added impacts and funding investment with limited benefits over channelized T			Not recommended due to added traffic and environmental impacts with limited benefits over SE quadrant road			Long-term planning for major investment anticipated to be outside near-term timeframe	Not recommended due to added traffic and circulation impacts with limited benefits over other options

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Category	Evaluation Criteria	Crestline Unsignalized		Prince St Signal				Bellevue Ave Interchange		
		I16 Close Access	I17 Improved Right-in/Right-out Access	I18 Grade Separation with Bellevue Diamond	I19 Split Diamond Interchange with Bellevue	I20 Convert to Right-in/Right-out (remove signal)	I21 Additional Lanes NB & EB/WB	I22 Remove Lefts, Routed via Bellevue	I23 Add U-Turns in Interchange	I24 Interchange Reconstruction for Pedestrians
Community / Quality of Life	Property Impacts	0 properties	1 property	6 properties	More than 10 properties	0 properties	2 properties	2 properties	5 properties	4 properties
	Property Access Modifications	Fair Moderate impact to local access, but Prince access relatively close	Fair Restricted SB left-turn, but other turns remain	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in intersection area	N/A No accesses in interchange area	N/A No accesses in interchange area
	Support of Local and Regional Planning and Policy Efforts	Fair Consistent with City TMP	Good Consistent with City TMP and maintains movements for adjacent neighborhood	Fair With design for comparable access and improved ramp design for Bellevue interchange	Fair With design for comparable access and improved ramp design for Bellevue interchange	Poor Not consistent with Downtown access goals, limits access for commercial area to the west, and adds more traffic to Santa Fe	Good Provides additional capacity	Fair Would not improve capacity much while forcing vehicles to re-route and adds vehicles to Santa Fe	Fair Concern with impacts of added movements with merging due to deficient length of ramps	Good Consistent with City goals to improve pedestrian and bicycle accommodations
Environmental Resources	Potential Environmental Resource Impacts	Good Air Quality: Poor Wetlands & Waters of the US: Good Noise: Good Floodplains: Good	Fair Air Quality: Poor Wetlands & Waters of the US: Good Noise: Good Floodplains: Good	Poor Air Quality: Good Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Poor	Poor Air Quality: Good Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Poor	Fair Air Quality: Good Wetlands & Waters of the US: Fair Noise: Good Floodplains: Fair	Poor Air Quality: Fair Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Poor	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Poor	Fair Air Quality: Poor Wetlands & Waters of the US: Good Noise: Fair Floodplains: Fair	Fair Air Quality: Poor Wetlands & Waters of the US: Good Noise: Fair Floodplains: Fair
	Potential Social and Built Environment Impacts	Good Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Good Visual: Good	Good Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Good Visual: Good	Poor Env Justice: Good Haz Mat: Good Historic: Poor Rec 4(f)/6(f): Fair Visual: Poor	Poor Env Justice: Good Haz Mat: Good Historic: Poor Rec 4(f)/6(f): Fair Visual: Poor	Fair Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Fair Visual: Good	Poor Env Justice: Good Haz Mat: Good Historic: Poor Rec 4(f)/6(f): Poor Visual: Good	Fair Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Fair Visual: Good	Good Env Justice: Good Haz Mat: Good Historic: Fair Rec 4(f)/6(f): Good Visual/Aesthetics: Fair	Fair Env Justice: Good Haz Mat: Fair Historic: Fair Rec 4(f)/6(f): Fair Visual/Aesthetics: Fair
Constructability	Ease of Implementation	Fair Relatively simple construction, but requires coordination with property owners for access and potential circulation modifications	Fair Relatively simple construction, but requires coordination with property owners for access and potential circulation modifications	Fair Moderate design complexities with interactions and connections between Prince and Bellevue within constrained area	Fair Moderate design complexities with interactions and connections between Prince and Bellevue within constrained area	Poor Relatively simple construction, but requires extensive study and outreach with area businesses/residents for access and circulation impacts	Good Relatively minor intersection construction with typical construction and no ROW impacts within existing corridor area	Fair Relatively simple construction, but requires outreach with area businesses/residents for access and circulation impacts	Fair Moderate design complexity to reconfigure interchange utilizing existing bridge and ramps, but no ROW impacts within interchange area	Fair Moderate design complexity to reconfigure interchange utilizing existing infrastructure, but no ROW impacts within interchange area
	Ability to Implement as Standalone Project	Good Access closure may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment	Good Access restriction may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment	Poor Grade separation may be constructed as separate project with operational benefits, and relatively major investment funded with congestion and/or safety funding	Poor Grade separation may be constructed as separate project with operational benefits, and relatively major investment funded with congestion and/or safety funding	Good Access restriction may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment	Good Lanes may be constructed as separate project with operational benefits and relatively small investment, funded with local grant programs	Good Access restriction may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment	Fair Interchange reconstruction may be constructed as separate project with relatively moderate investment, funded with local grant programs	Good Multimodal improvements may be constructed as separate project with relatively small investment, funded with local grant programs
RESULTS		CARRIED FORWARD	CARRIED FORWARD	FUTURE ACTION	FUTURE ACTION	NOT RECOMMENDED	CARRIED FORWARD	CARRIED FORWARD	FUTURE ACTION	CARRIED FORWARD
NOTES				Long-term planning for major investment anticipated to be outside near-term timeframe	Long-term planning for major investment anticipated to be outside near-term timeframe	Not recommended due to local circulation and multimodal impacts with limited safety benefits over other options			Interchange reconfiguration a major investment anticipated to be outside near-term timeframe	

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Intersections/Interchanges – Table 4 of 6

Category	Evaluation Criteria	Union Ave Signal		Oxford Ave Signal			Hampden Ave Interchange	
		I25 Channelized T	I26 Channelized T with SB Grade Separation	I27 NB/SB Lefts CFI	I28 Quadrant Rd (SW corner)	I29 Tight Diamond Interchange	I30 Tight Diamond/DDI/SPUI	I31 Folded Diamond West Interchange
Safety	Relative Level of Conflict – Vehicular	Fair Reduced conflict for NB through traffic	Good Removes NB and SB through volumes from intersection	Fair Moderate reduction in high-severity conflict points	Fair Slight reduction in conflict points	Good Much lower volume of conflicting traffic	Fair Conflict points signals are shifted to lower volume roadway	Fair Conflict points signals are shifted to lower volume roadway
	Relative Level of Conflict – Pedestrians/ Bicyclists	Neutral No crossing of Santa Fe with railroad along east side; conflicts across Union remain	Neutral No crossing of Santa Fe with railroad along east side; conflicts across Union remain	Fair Minimal reduced conflict with CFI	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections	Good Conflicts with high through volumes on Santa Fe eliminated	Good Opportunity to improve current grade separated crossing of Santa Fe and provide new crossing for Hampden although ramp crossings remain	Good Opportunity to improve current grade separated crossing of Santa Fe and provide new crossing for Hampden although ramp crossings remain
	Potential Crash Reduction	Fair ~15% crash reduction	Good ~40% crash reduction	Fair ~10% crash reduction at intersection	Fair Reduced congestion and conflict points	Good ~42% reduction at intersection	Fair Signals relocated to lower volume and lower speed roadway	Fair Signals relocated to lower volume and lower speed roadway
Operational Performance	Roadway Capacity related to Travel Demand	Fair Minimal overall improvement, but NB through movement capacity improved	Good Moderate improvement with no signals for Santa Fe through traffic	Fair Moderate improvement to intersection capacity	Fair Moderate improvement to intersection capacity, slight benefit compared to CF	Good Major improvement with removal of signal delay for Santa Fe through traffic	Good Moderate improvement with removal of signals for Santa Fe through traffic, although Hampden operations may be degraded	Good Moderate improvement with removal of signals for Santa Fe through traffic, although Hampden operations may be degraded
	Travel Time Reliability	Fair Improved for NB traffic with no stops at signal	Good Major improvement with no stops at signal	Fair Minor improvement with improved efficiency	Fair Minor improvement with improved efficiency	Good Major improvement with removal of signal bottleneck and reduced crashes on Santa Fe	Good Major improvement with removed bottleneck and reduced crash	Good Major improvement with removed bottleneck and reduced crash
	Freight Movements	Fair Minimal improvement with accel/decel improvements and reduced congestion at stopping on NB Santa Fe	Good Moderate improvements with accel/decel improvements and no stops along Santa Fe	Fair Minimal improvements with intersection efficiencies	Fair Improvements on Santa Fe, but reduction in freight efficiencies with quadrant roads	Good Major improvements with no stops along Santa Fe	Good Moderate improvements with no stops along Santa Fe, although new signals on Hampden may impact turning trucks	Good Moderate improvements with no stops along Santa Fe, although new signals on Hampden may impact turning trucks
	Access Operational Impacts	Poor Property driveways near intersection remain	Good Reduction in driveways reduces slowing and turning maneuvers on Santa Fe	Fair May impact accesses on Oxford which may reduce operational impacts on Santa Fe	Poor Potential new impacts at/along quadrant road	Good Grade separation reduces Santa Fe operational impacts from turning movements on Oxford	N/A No accesses in interchange area	N/A No accesses in interchange area
Multimodal Connections	Enhanced Walking and Biking Crossings	N/A No crossings at intersection with railroad along east side	N/A No crossings at intersection with railroad along east side	Poor No new or enhanced crossings	Neutral Likely no enhanced crossing opportunity with quadrant road intersections with railroad along east side	Good Enhanced opportunity with grade separation of Santa Fe traffic	Good Opportunity to improve current grade separated crossing of Santa Fe and provide new crossing for Hampden	Good Opportunity to improve current grade separated crossing of Santa Fe and provide new crossing for Hampden
	Expansion of Biking Opportunities	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Good Grade separation enhances opportunities	Good Interchange reconstruction provides opportunity for improvements along and across Hampden	Good New grade separation enhances opportunities for new multimodal infrastructure
	Optimized Transit Use	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	Fair Reduced congestion provides minimal improvements to Oxford-City of Sheridan Station and bus stops along Oxford	Fair Reduced congestion provides minimal improvements to Oxford-City of Sheridan Station and bus stops along Oxford	Good Reduced congestion and grade separation provide moderate improvements to Oxford-City of Sheridan Station and bus stops along Oxford	Good Reduced congestion and interchange reconstruction provide moderate driver and multimodal access improvements to Englewood Station	Good Reduced congestion and interchange reconstruction provide moderate driver and multimodal access improvements to Englewood Station

Category	Evaluation Criteria	Union Ave Signal		Oxford Ave Signal			Hampden Ave Interchange	
		I25 Channelized T	I26 Channelized T with SB Grade Separation	I27 NB/SB Lefts CFI	I28 Quadrant Rd (SW corner)	I29 Tight Diamond Interchange	I30 Tight Diamond/DDI/SPUI	I31 Folded Diamond West Interchange
Community / Quality of Life	Property Impacts	7 properties (includes railroad)	15 properties (includes railroad)	6 properties (includes railroad)	15 properties	More than 10 properties	4 properties	More than 10 properties (includes railroad)
	Property Access Modifications	Good No property access changes	Fair Potential impacts to 3 driveways without existing alternate access	Poor May impact driveway and signal access on Oxford	Fair Moderate access impacts with out-of-direction trav	Poor May impact driveway and signal access on Oxford	N/A No accesses in interchange area	N/A No accesses in interchange area
	Support of Local and Regional Planning and Policy Efforts	Good Maintains business access to the Business Park and would function well with a frontage road	Good Maintains business access to the Business Park and would improve SB Santa Fe traffic flow	Fair Improves NB vehicular access to River Point and reduces conflicts, but may degrade multimodal crossing comfort with increased intersection size	Fair Added intersection capacity and potential for access, but diverts left turning movements into local streets whereas they are currently contained in the existing intersection	Fair Results in efficiency improvements for intersection, but construction impacts may be significant and reduce access to River Point	Fair Improves interchange vehicular and multimodal infrastructure and slows down Hampden traffic, but signals may increase delay on Hampden	Fair Does not have significant construction impacts or new patterns for drivers to learn, but lacks significant benefits over current configuration
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Good Floodplains: Fair	Fair Air Quality: Good Wetlands & Waters of the US: Fair Noise: Good Floodplains: Fair	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Good Floodplains: Good	Fair Air Quality: Good Wetlands & Waters of the US: Good Noise: Poor Floodplains: Good	Good Air Quality: Good Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good	Good Air Quality: Good Wetlands & Waters of the US: Good Noise: Fair Floodplains: Good
	Potential Social and Built Environment Impacts	Good Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Good Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Fair Visual/Aesthetics: Good	Good Env Justice: Good Haz Mat: Fair Historic: Good Rec 4(f)/6(f): Fair Visual: Good	Fair Env Justice: Good Haz Mat: Poor Historic: Good Rec 4(f)/6(f): Good Visual: Good	Poor Env Justice: Good Haz Mat: Poor Historic: Good Rec 4(f)/6(f): Fair Visual: Poor	Good Env Justice: Good Haz Mat: Fair Historic Resources: Fair Rec 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Haz Mat: Fair Historic Resources: Fair Rec 4(f)/6(f): Good Visual/Aesthetics: Good
Constructability	Ease of Implementation	Good Relatively minor intersection construction with typical construction and ROW impacts within existing corridor area	Fair SB Santa Fe structure creates additional construction complexity with walls and coordination with property owners for ROW access and site modification	Fair Moderate design complexities, construction impacts, and ROW acquisition and permitting processes	Good May utilize existing local street with minor construction impacts and ROW acquisition and permitting processes	Fair Moderate design complexities within constrained area, with construction impacts and permitting processes, but opportunities for improvements with River Point access	Good Relatively minor design complexity to reconfigure interchange utilizing existing infrastructure and no ROW impacts within interchange area	Good Relatively minor design complexity to reconfigure interchange utilizing existing infrastructure and no ROW impacts within interchange area
	Ability to Implement as Standalone Project	Good Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment, funded with local grant programs	Fair Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively moderate investment, funded with local grant programs	Fair Interchange may be constructed as separate project with operational benefits, with relatively moderate investment, funded with local grant programs	Fair Intersection may be reconstructed as separate project with operational benefits and relatively moderate investment, funded with local grant programs	Fair Intersection may be reconstructed as separate project with operational benefits and relatively moderate investment, funded with local grant programs
RESULTS		CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD
NOTES								

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Intersections/Interchanges – Table 5 of 6

Category	Evaluation Criteria	Dartmouth Ave Signal				Evans Ave Interchange	Jewell Ave Unsignalized			Iowa Ave Signal	
		I32 Additional Lanes NB/SB	I33 Quadrant Rd (SW & NW corners)	I34 CFI	I35 Interchange	I36 Interchange Reconstruction for Pedestrians	I37 Close Access	I38 Convert to Right-out Only	I39 Convert to Right-in Only	I40 Channelized T	I41 Channelized T with NB Grade Separation
Safety	Relative Level of Conflict – Vehicular	Poor More lanes increase conflict points	Fair Slight reduction in conflict points	Fair Moderate reduction in high-severity conflict points	Good Much lower volume of conflicting traffic	Poor No reduction in vehicular conflict	Good All conflict points removed	Fair Some reduction in vehicular conflict	Fair Some reduction in vehicular conflict	Fair Reduced conflict with SB movement not stopping at sign	Good Removes NB and SB through volumes from intersection
	Relative Level of Conflict – Pedestrians/Bicyclists	Poor Added crossing conflicts with new lane for relatively high-speed traffic along Santa Fe	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections	Fair Minimal reduced conflict with CFI	Good Eliminates conflicts with high volumes of Santa Fe traffic	Good Safety improvements for pedestrians/bicyclists	Good Pedestrians/bicyclists crossing conflicts removed	Fair Pedestrians/bicyclists crossing conflicts with Santa Fe some turns removed	Fair Pedestrians/bicyclists crossing conflicts with Santa Fe some turns removed	Poor Potential increased conflict with SB traffic	Fair Conflict with NB volumes on Santa Fe removed, but conflict with SB traffic remains
	Potential Crash Reduction	Fair Added capacity may reduce congestion related crashes	Fair Reduced congestion and conflict points	Fair ~ 10% crash reduction in intersection crashes at high-crash location	Good ~ 40% crash reduction at high-crash location	Fair Slight reduction in crashes after fact improvements	Good Low-crash location, but all intersection crashes removed	Fair Low-crash location, but may mitigate some future risk	Fair Low-crash location, but may mitigate some future risk	Fair ~15% crash reduction at intersection	Good ~40% reduction at intersection
Operational Performance	Roadway Capacity related to Travel Demand	Fair Moderate improvement to intersection capacity	Fair Minor improvement to intersection capacity, slight benefit compared to CFI	Fair Minor improvement to intersection capacity	Good Major improvement with removal of signal delay for Santa Fe through traffic	Poor No improvement to Santa Fe capacity	Fair Removes turbulence due to turning vehicles	Poor Turning vehicles may still impact operations	Poor Turning vehicles may still impact operations	Fair Minimal overall improvement, but SB through movement capacity improved	Good Major improvement with no signals for Santa Fe through traffic
	Travel Time Reliability	Fair Moderate improvement due to increased capacity	Fair Minor improvement due to improved intersection efficiency	Fair Minor improvement due to improved intersection efficiency	Good Major improvement with removal of signal bottleneck and reduced crashes on Santa Fe	Poor No improvement to Santa Fe travel time reliability	Fair Minimal improvement by removal of turning movements	Poor No improvement to Santa Fe travel time reliability	Poor No improvement to Santa Fe travel time reliability	Fair Improved for SB traffic with fewer stops at signal	Good Major improvement for Santa Fe traffic with no stops at signal
	Freight Movements	Fair Moderate improvements with intersection efficiencies	Fair Improvements on Santa Fe, but reduced freight efficiencies with quadrant roads	Fair Minimal improvements with intersection efficiencies	Good Major improvements with no stops along Santa Fe	Neutral No change in freight movements on Santa Fe	Neutral No change in freight movements on Santa Fe	Neutral No change in freight movements on Santa Fe	Neutral No change in freight movements on Santa Fe	Fair Minimal improvement with reduced congestion and stopping on SB Santa Fe	Good Moderate improvements with no stops along Santa Fe
	Access Operational Impacts	Poor Property driveways near intersection remain	Poor Potential new impacts at/along quadrant	Poor Property driveways near intersection remain	Good Reduction in direct access reduces slowing and turning maneuvers on Santa Fe	N/A No accesses in interchange area	Good Access closure reduces slowing and turning on Santa Fe	Fair Minimal reduction in impact with turn restriction	Fair Minimal reduction in impact with turn restriction	Poor Access near intersection remains	Good Reduction in direct access reduces slowing and turning on Santa Fe
Multimodal Connections	Enhanced Walking and Biking Crossings	Poor No new or enhanced crossings	Fair Enhanced crossing opportunity with quadrant road intersections	Poor No new or enhanced crossings	Good Enhanced opportunity with grade separation of Santa Fe traffic	Good Improvements for pedestrian/bicyclist crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings	Poor No new or enhanced crossings
	Expansion of Biking Opportunities	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Good New grade separation enhances opportunities for new multimodal infrastructure	Good Opportunities for new multimodal infrastructure	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding	Poor No new multimodal infrastructure or wayfinding
	Optimized Transit Use	Fair Improvements to Englewood Station access and stops on Dartmouth	Fair Improvements to Englewood Station access and stops on Dartmouth	Fair Improvements to Englewood Station access and stops on Dartmouth	Good Grade separation and reduced congestion provides bus improvement on Dartmouth	Fair Improvements to Englewood Station access and stops on Dartmouth	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area

Category	Evaluation Criteria	Dartmouth Ave Signal				Evans Ave Interchange	Jewell Ave Unsignalized			Iowa Ave Signal	
		I32 Additional Lanes NB/SB	I33 Quadrant Rd (SW & NW corners)	I34 CFI	I35 Interchange	I36 Interchange Reconstruction for Pedestrians	I37 Close Access	I38 Convert to Right-out Only	I39 Convert to Right-in Only	I40 Channelized T	I41 Channelized T with NB Grade Separation
Community / Quality of Life	Property Impacts	13 properties (includes railroad)	12 properties	More than 10 properties (includes railroad)	More than 10 properties (includes railroad)	0 properties	0 properties	2 properties	1 property	6 properties	13 properties
	Property Access Modifications	Good No property access changes	Fair Moderate access impacts with out-of-direction travel	Good No property access changes	Fair Closure of intersections on Santa Fe, but property access via Dartmouth and existing frontage road	N/A No accesses in interchange area	Fair Moderate impact to local access with shift through neighborhood	Fair Minor impact to local access with shift through neighborhood	Fair Minor impact to local access with shift through neighborhood	Good No property access changes	Fair Potential impact to multiple properties without existing alternate access
	Support of Local and Regional Planning and Policy Efforts	Fair	Fair	Fair	Good	Good	Fair	Good	Poor Concern with pedestrian/bicyclist conflicts with turns from Santa Fe	Poor Concern with ped/bike crossing impacts, unless they can be maintained	Poor Concern with ped/bike crossing impacts, unless they can be maintained
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Poor Air Quality: Fair Wetlands & Waters of the US: Poor Noise: Poor	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Poor	Poor Air Quality: Good Wetlands & Waters of the US: Poor Noise: Poor	Fair Air Quality: Poor Wetlands & Waters of the US: Good Noise: Fair	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Good	Fair Air Quality: Poor Wetlands & Waters of the US: Good Noise: Poor	Fair Air Quality: Poor Wetlands & Waters of the US: Good Noise: Fair	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Good	Fair Air Quality: Good Wetlands & Waters of the US: Good Noise: Fair
	Potential Social and Built Environment Impacts	Fair Env Justice: Poor Haz Mat: Fair Historic: Good Rec 4(f)/6(f): Poor Visual: Good	Poor Env Justice: Poor Haz Mat: Poor Historic: Fair Rec 4(f)/6(f): Poor Visual: Good	Fair Env Justice: Poor Haz Mat: Fair Historic: Good Rec 4(f)/6(f): Poor Visual: Good	Poor Env Justice: Poor Haz Mat: Fair Historic: Good Rec 4(f)/6(f): Poor Visual: Good	Good Env Justice: Good Haz Mat: Fair Historic: Fair Rec 4(f)/6(f): Good Visual: Good	Good Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Good Visual: Good	Good Env Justice: Good Haz Mat: Fair Historic: Good Rec 4(f)/6(f): Good Visual: Good	Good Env Justice: Good Haz Mat: Good Historic: Good Rec 4(f)/6(f): Good Visual: Good	Fair Env Justice: Good Haz Mat: Fair Historic: Poor Rec 4(f)/6(f): Good Visual: Good	Poor Env Justice: Good Haz Mat: Fair Historic: Poor Rec 4(f)/6(f): Good Visual: Poor
Constructability	Ease of Implementation	Good Relatively minor intersection construction with typical construction and no ROW impacts within existing corridor area	Fair Moderate construction impacts, property owner coordination, and ROW acquisition and permitting processes	Fair Moderate design complexities, construction impacts, and ROW acquisition and permitting processes	Poor Prolonged process for ramp in railroad ROW and/or mobile home community impacts, in addition to maintenance challenges for ramps adjacent to railroad/LRT station	Fair Moderate design complexity to reconfigure interchange utilizing existing infrastructure, but no ROW impacts within interchange area	Fair Relatively simple construction, but requires coordination for access and potential circulation modifications	Fair Relatively simple construction, but requires coordination for access and potential circulation modifications	Fair Relatively simple construction, but requires coordination for access and potential circulation modifications	Good Relatively minor intersection construction with typical construction and ROW impacts within existing corridor area	Poor NB structure creates added construction complexity and coordination with property owners for access and site modifications
	Ability to Implement as Standalone Project	Good Lanes may be constructed as separate project with operational benefits and relatively small investment, funded with local grant programs	Fair Intersection may be constructed as separate project with relatively moderate investment, funded with local grant programs	Fair Intersection may be constructed as separate project with relatively moderate investment, funded with local grant programs	Poor Interchange may be constructed as separate project from other corridor improvements with operational benefits, but relatively major investment with congestion and/or safety funding	Good Multimodal improvements may be constructed as separate project with relatively small investment, funded with local grant programs	Good Access closure may be constructed as separate project from other corridor improvements with relatively small investment	Good Access restriction may be constructed as separate project from other corridor improvements with relatively small investment	Good Access restriction may be constructed as separate project from other corridor improvements with relatively small investment	Good Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment, funded with local grant program	Fair Intersection may be constructed as separate project with relatively major investment, funded with local grant programs
RESULTS		CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	FUTURE ACTION	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	FUTURE ACTION
NOTES					Long-term planning for major investment and environmental permitting anticipated to be outside near-term timeframe						Property impacts and construction impacts anticipated to be outside near-term timeframe




















Intersections/Interchanges – Table 6 of 6













Category	Evaluation Criteria	Florida Ave Signal			Mississippi Ave Signal			Kentucky Ave Signal
		I42 Offset T – Close East Leg	I43 Interchange - Iowa Closure with Connections	I44 Interchange with Extension to Broadway	I45 Quadrant Rd Intersection (SE & NW corners)	I46 Quadrant Rd with Grade Separation	I47 Diamond/DDI/SPUI	I48 Channelized T
Safety	Relative Level of Conflict – Vehicular	Fair Reduced conflict although east leg volumes are low	Good Much lower volume of conflicting traffic	Good Much lower volume of conflicting traffic	Fair Slight reduction in conflict points	Good Much lower volume of conflicting traffic	Good Much lower volume of conflicting traffic	Fair Reduced conflict for SB through traffic
	Relative Level of Conflict – Pedestrians/ Bicyclists	Fair Minimal reduced conflict with T intersections	Good Conflicts with high through volumes on Santa Fe eliminated although ramp crossings remain	Good Conflicts with high through volumes on Santa Fe eliminated although ramp crossings remain	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections	Fair Reduced crossing conflicts at main intersection, but new conflicts at quadrant road intersections	Good Conflicts with high through volumes on Santa Fe eliminated although ramp crossings remain	Poor Potential increased conflict with SB traffic
	Potential Crash Reduction	Fair ~10% crash reduction at intersection	Good ~ 40% crash reduction in intersection crashes at high-crash location	Good ~ 40% crash reduction in intersection crashes at high-crash location	Fair Reduced congestion and conflict points	Good Grade separation would support a ~30-40% reduction	Good ~40% reduction if Diamond/SPUI ~55% reduction if DDI configuration	Fair ~15% crash reduction at intersection
Operational Performance	Roadway Capacity related to Travel Demand	Fair Minor improvement and potential to channelize NB traffic	Good Major improvement with removal of signal delay for Santa Fe through traffic	Good Major improvement with removal of signal delay for Santa Fe through traffic	Fair Moderate improvement to intersection capacity	Good Major improvement with removal of signal delay for Santa Fe through traffic	Good Major improvement with removal of signal delay for Santa Fe through traffic	Fair Minimal overall improvement, but SB through movement capacity improved
	Travel Time Reliability	Fair Minor improvement with improved efficiency	Good Major improvement with removed bottleneck and reduced crashes	Good Major improvement with removed bottleneck and reduced crashes	Fair Minor improvement with improved efficiency	Good Major improvement with removed bottleneck and reduced crashes	Good Major improvement with removed bottleneck and reduced crashes	Fair Improved for SB traffic with no stops at signal
	Freight Movements	Fair Minimal improvements with intersection efficiencies	Good Major improvements with no stops along Santa Fe	Good Major improvements with no stops along Santa Fe	Fair Minimal improvements with intersection efficiencies	Good Major improvements with no stops along Santa Fe	Good Major improvements with no stops along Santa Fe	Fair Minimal improvement with reduced congestion on SP Santa Fe
	Access Operational Impacts	Fair Closing east leg access reduces operational impacts	Good Reduction in driveways reduces slowing and turning maneuvers on Santa Fe	Good Reduction in driveways reduces slowing and turning maneuvers on Santa Fe	Poor Potential added operational impacts with access at and along quadrant road	Fair Reduction in driveways reduces maneuvers on Santa Fe, but potential added impacts with access at and along quadrant road	Good Reduction in driveways reduces slowing and turning maneuvers on Santa Fe	N/A No accesses in intersection area
Multimodal Connections	Enhanced Walking and Biking Crossings	Poor No new or enhanced crossings	Good Enhanced opportunity with grade separation of Santa Fe traffic	Good Enhanced opportunity with grade separation of Santa Fe traffic	Fair Enhanced crossing opportunity with quadrant road intersections	Good Enhanced opportunity with grade separation of Santa Fe traffic	Good Enhanced opportunity with grade separation of Santa Fe traffic	Poor No new or enhanced crossings
	Expansion of Biking Opportunities	Poor No new multimodal infrastructure or wayfind	Good Grade separation enhances opportunities	Good Grade separation enhances opportunities	Poor No new multimodal infrastructure or wayfind	Good Grade separation enhances opportunities	Good Grade separation enhances opportunities	Poor No new multimodal infrastructure or wayfind
	Optimized Transit Use	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	Fair Reduced congestion provides minimal improvements to Broadway Station/parking access and bus stops along Mississippi	Fair Reduced congestion provides minimal improvements to Broadway Station/parking access and bus stops along Mississippi	Fair Reduced congestion provides minimal improvements to Broadway Station/parking access and bus stops along Mississippi	Fair Moderate improvements to Broadway Station/parking access

Category	Evaluation Criteria	Florida Ave Signal			Mississippi Ave Signal			Kentucky Ave Signal
		I42 Offset T – Close East Leg	I43 Interchange - Iowa Closure with Connections	I44 Interchange with Extension to Broadway	I45 Quadrant Rd Intersection (SE & NW corners)	I46 Quadrant Rd with Grade Separation	I47 Diamond/DDI/SPUI	I48 Channelized T
Community / Quality of Life	Property Impacts	4 properties	More than 15 properties	More than 20 properties	More than 30 properties	More than 30 properties	More than 25 properties	5 properties
	Property Access Modifications	Poor Closing east leg has major impacts to multiple properties with no alternate access to SB Santa Fe	Poor Impacts up 5 driveways on Santa Fe and access on Florida	Poor Impacts up 5 driveways on Santa Fe and access on Florida	Fair May impact direct accesses on Santa Fe with opportunity for additional property access along quadrant road	Fair Impacts direct accesses on Santa Fe with opportunity for additional property access along quadrant road	Poor Impacts up to 10 driveways on Santa and access on Mississippi	N/A No accesses in intersection area
	Support of Local and Regional Planning and Policy Efforts	Poor	Poor	Good	Poor	Poor	Poor	Good
Environmental Resources	Potential Environmental Resource Impacts	Good Air Quality: Fair Wetlands & Waters of the US: Good Noise: Good Floodplains: Fair	Fair Air Quality: Good Wetlands & Waters of the US: Good Noise: Poor Floodplains: Fair	Fair Air Quality: Good Wetlands & Waters of the US: Good Noise: Poor Floodplains: Fair	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Fair Floodplains: Fair	Poor Air Quality: Good Wetlands & Waters of the US: Fair Noise: Poor Floodplains: Poor	Poor Air Quality: Good Wetlands & Waters of the US: Poor Noise: Poor Floodplains: Fair	Fair Air Quality: Fair Wetlands & Waters of the US: Fair Noise: Good Floodplains: Poor
	Potential Social and Built Environment Impacts	Fair Env Justice: Good Haz Mat: Fair Historic Resources: Poor Rec 4(f)/6(f): Good Visual/Aesthetics: Good	Poor Env Justice: Good Haz Mat: Fair Historic Resources: Poor Rec 4(f)/6(f): Poor Visual/Aesthetics: Poor	Poor Env Justice: Good Haz Mat: Poor Historic Resources: Poor Rec 4(f)/6(f): Poor Visual/Aesthetics: Poor	Fair Env Justice: Poor Haz Mat: Poor Historic: Good Rec 4(f)/6(f): Fair Visual: Good	Poor Env Justice: Poor Haz Mat: Poor Historic: Good Rec 4(f)/6(f): Fair Visual: Poor	Poor Env Justice: Poor Haz Mat: Poor Historic: Good Rec 4(f)/6(f): Poor Visual: Poor	Fair Env Justice: Good Haz Mat: Fair Historic Resources: Good Rec 4(f)/6(f): Fair Visual/Aesthetics: Good
Constructability	Ease of Implementation	Fair Closing east leg creates moderate design and coordination complexities, construction impacts, and ROW acquisition and permitting processes	Fair Moderate design complexities within constrained area, with construction impacts, and ROW acquisition and permitting processes	Poor Additional study needed for extension to Broadway with prolonged process for new railroad grade separation and major design complexities within constrained area, with construction impacts, and ROW acquisition and permitting processes	Fair Moderate construction impacts, property owner coordination, and ROW acquisition and permitting processes	Fair Grade separations create additional construction complexity and coordination with property owners for access and site modifications	Fair Moderate design complexities within constrained area, with construction impacts, and ROW acquisition and permitting processes	Good Relatively minor intersection construction with typical construction and ROW impacts within existing corridor area
	Ability to Implement as Standalone Project	Fair Intersection may be constructed as separate project with relatively moderate investment, funded with local grant programs	Poor Interchange may be constructed as separate project with operational benefits, but relatively major investment needed with congestion and/or safety funding	Poor Interchange may be constructed as separate project with operational benefits, but relatively major investment with limited funding opportunities	Fair Intersection may be constructed as separate project with relatively moderate investment, funded with local grant programs	Poor Grade separations may be constructed as separate project with operational benefits, but relatively major investment needed with congestion and/or safety funding	Poor Interchange may be constructed as separate project with operational benefits, but relatively major investment needed with congestion and/or safety funding	Good Intersection may be constructed as separate project from other corridor improvements with operational benefits and relatively small investment, funded with local grant programs
RESULTS		CARRIED FORWARD	FUTURE ACTION	FUTURE ACTION	CARRIED FORWARD	FUTURE ACTION	FUTURE ACTION	CARRIED FORWARD
NOTES			Long-term planning for major investment anticipated to be outside near-term timeframe	Long-term planning for major investment anticipated to be outside near-term timeframe		Long-term planning for major investment anticipated to be outside near-term timeframe	Long-term planning for major investment anticipated to be outside near-term timeframe	

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Multimodal Infrastructure – Pedestrian/Bicyclist Grade Separation

Category	Evaluation Criteria	M1 C-470 Interchange Improved N/S Crossing	M2 Englewood Station Bridge	M3 Iliff Ave Bridge
Safety	Relative Level of Conflict – Pedestrians/ Bicyclists	Fair Reduces vehicular, pedestrian, and bicyclist conflicts through interchange 	Good Reduction in vehicular, pedestrian, and bicyclist conflicts with high volumes of Santa Fe traffic at adjacent at-grade intersections 	Good Reduction in vehicular, pedestrian, and bicyclist conflicts with high volumes of Santa Fe traffic at adjacent at-grade intersections 
	Enhanced Walking and Biking Crossings	Good Enhanced pedestrian/bicyclist connection crossing C-470 	Good New grade separation with pedestrian/bicyclist connections substantially enhances crossings of Santa Fe 	Good New grade separation with pedestrian/bicyclist connections substantially enhances crossings of Santa Fe 
Multimodal Connections	Expansion of Biking Opportunities	Fair Enhanced connection provides opportunities for trails but currently no facility north of C-470 along Santa Fe 	Good Grade separation enhances opportunities for connections to area trails, LRT station, and residential and development areas 	Good Grade separation enhances opportunities for connections to area trails, Evans LRT station, and residential areas 
	Optimized Transit Use	Fair Enhanced connection across C-470 improves access to bus stops at County Line Road 	Good New pedestrian/bicyclist bridge and connections provides major improvements to multimodal access to Englewood Station 	Good New pedestrian/bicyclist bridge and connections provides major improvements to multimodal access to Evans Station 
	Property Impacts	1 property 	2 properties 	4 properties 
Community / Quality of Life	Property Access Modifications	N/A No accesses in area of C-470 interchange	N/A No accesses in area of bridge or connections	Fair Potential property access impacts on local streets with bridge and connections 
	Support of Local and Regional Planning and Policy Efforts	Good 	Good Consistent with recommendations in multiple recent studies and provides major bike and pedestrian improvements with minimal impacts to Santa Fe, beyond temporary construction 	Good 

Category	Evaluation Criteria	M1 C-470 Interchange Improved N/S Crossing	M2 Englewood Station Bridge	M3 Iliff Ave Bridge
Environmental Resources	Potential Environmental Resource Impacts	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good 	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good 	Fair Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Fair 
	Potential Social and Built Environment Impacts	Good Environmental Justice: Good Hazardous Materials: Good Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good 	Fair Environmental Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Fair 	Fair Environmental Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Fair 
Constructability	Ease of Implementation	Good Minor impacts and anticipated typical construction within existing interchange area 	Fair Minor impacts and moderate design complexities with connections to Englewood Station and parking structure and construction requires bridge placement over Santa Fe 	Fair Additional study and outreach needed to identify facility type and location of bridge and connections with potential impacts to existing properties and construction requires bridge placement over Santa Fe 
	Ability to Implement as Standalone Project	Good Pedestrian/bicyclist connections may be constructed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 	Good Pedestrian/bicyclist bridge and connections may be constructed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 	Good Pedestrian/bicyclist bridge and connections may be constructed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 
RESULT		CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD
NOTES				



Good – Comparatively positive, moderate or major benefits and/or minor impacts






























































Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts






Poor – Comparatively negative and/or major impacts

Multimodal Infrastructure – Improved Connections to Parallel Trail Facilities – Table 1 of 2

Category	Evaluation Criteria	M4 Lee Gulch Trail Paving	M5 Littleton Community Trail Paving	M6 Santa Fe Dr Sidewalk Gaps	M7 Bowles Connection to Mary Carter Greenway Trail	M8 Trail Connection at Crestline	M9 Bellevue Ave Sidewalk
Safety	Relative Level of Conflict – Pedestrians/ Bicyclists	Neutral No change from No Action with grade separation at Santa Fe 	Neutral No change from No Action with separation from vehicular traffic 	Good New sidewalk for pedestrians and a fence to guide people toward signalized crossings 	Neutral No change from No Action with separation from vehicular traffic 	Good New grade separation across Santa Fe eliminates vehicular, pedestrian, and bicyclist conflicts with high volumes of Santa Fe traffic 	Neutral No change from No Action with current sidewalk on Bellevue Avenue 
Multimodal Connections	Enhanced Walking and Biking Crossings	Good Trail paving enhances existing grade separated crossing with improved connection to existing trails 	N/A No crossings with Santa Fe	Fair Pedestrians still cross Santa Fe at signalized intersections, but with pedestrian enhancements 	N/A No crossings with Santa Fe	Good New grade separation with pedestrian/bicyclist connections substantially enhances crossings of Santa Fe 	N/A No crossings with Santa Fe
	Expansion of Biking Opportunities	Good Trail paving provides improved surface and improved connections to existing trails 	Good Trail paving provides improved surface and improved connections to existing trails 	Fair Provides new facility adjacent to Santa Fe 	Fair Provides minor benefits of direct connection on Bowles Avenue 	Good New grade separation and connections substantially improves connections to trails 	Fair Expansion of current sidewalk enhances connection from Mary Carter Greenway Trail to Santa Fe 
	Optimized Transit Use	N/A No bus route and no LRT station in area	Fair Trail paving provides improved connection for minor improvements to multimodal access to bus stops on Prince 	N/A No bus route and no LRT station in area	Fair Direct connection provides minor improvement to bus stops on Bowles 	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area
Community / Quality of Life	Property Impacts	0 properties 	More than 5 properties 	More than 20 properties 	0 properties 	3 properties 	4 properties 
	Property Access Modifications	Good No property access changes 	Good No property access changes 	Fair Potential modifications to multiple property driveways with sidewalk adjacent to Santa Fe 	Good No property access changes 	Good No property access changes 	Fair Potential modifications to multiple property driveways with sidewalk changes adjacent to Santa Fe 
	Support of Local and Regional Planning and Policy Efforts	Good Improved access and connectivity of trail to provide for all users 	Good Improved access and connectivity of trail to provide for all users 	Fair Alternative parallel pedestrian route improvements may be more practical and enticing to users Partly depends on future land use and completion of proposed frontage road. Concern about look and effectiveness of fencing 	Good Improved access and connectivity of trail system 	Good Included in City TMP and proposed by South Platte Working Group Connectivity Study, provide much needed grade separated access across Santa Fe Drive and to the Mary Carter Greenway 	Good Included in City TMP and proposed by South Platte Working Group Connectivity Study, provide improved accessibility to the Mary Carter Greenway 

Category	Evaluation Criteria	M4 Lee Gulch Trail Paving	M5 Littleton Community Trail Paving	M6 Santa Fe Dr Sidewalk Gaps	M7 Bowles Connection to Mary Carter Greenway Trail	M8 Trail Connection at Crestline	M9 Bellevue Ave Sidewalk
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair 	Good Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Good 	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good 	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good 	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good 	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good 
	Potential Social and Built Environment Impacts	Good Environmental Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good 	Good Environmental Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good 	Good Environmental Justice: Good Hazardous Materials: Good Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good 	Good Environmental Justice: Good Hazardous Materials: Good Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good 	Fair Environmental Justice: Good Hazardous Materials: Fair Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good 	Good Environmental Justice: Good Hazardous Materials: Good Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good 
Constructability	Ease of Implementation	Good Paving existing trail relatively easy construction with minimal approval process required 	Good Paving existing trail relatively easy construction with minimal approval process required 	Fair Sidewalk relatively easy construction, but with substantial property owner coordination required for ROW and site impacts, including access and parking impacts 	Good Minor connection relatively easy construction with minimal approval process required 	Fair New trail connection easy construction with moderate property impacts and underpass construction may require substantial traffic control on Santa Fe 	Fair Expansion of sidewalk relatively easy construction, but with substantial property owner coordination required for ROW and site impacts, including access and parking impacts 
	Ability to Implement as Standalone Project	Good Trail paving may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 	Good Trail paving may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 	Good Sidewalk construction may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 	Good Small connection may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 	Good Trail connection and underpass may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 	Good Expansion of sidewalk may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs 
RESULT		CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD
NOTES							

 Good – Comparatively positive, moderate or major benefits and/or minor impacts  Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts  Poor – Comparatively negative and/or major impacts

Multimodal Infrastructure – Improved Connections to Parallel Trail Facilities – Table 2 of 2

Category	Evaluation Criteria	M10 Oxford Ave Sidewalk	M11 Oxford Ave Bike Lanes	M12 Hampden Ave Path	M13 Little Dry Creek Widening	M14 Improved Mississippi Connection to Platte River Trail
Safety	Relative Level of Conflict – Pedestrians/ Bicyclists	Good New sidewalk reduces pedestrian conflicts along Oxford 	Fair New bike lanes reduce bicyclist conflicts along Oxford 	Good New path reduces pedestrian conflicts along Hampden 	Neutral No change from No Action with sidewalk on Dartmouth Avenue 	Fair Reduces conflicts at intersection with expanded space and enhanced access to trail
Multimodal Connections	Enhanced Walking and Biking Crossings	Good New sidewalk connection for pedestrians leading to signalized crossing of Santa Fe 	Good New biking connection to signalized crossing of Santa Fe 	Good New path connection for pedestrians/bicyclists along Hampden under Santa Fe 	Fair Minor improvements to Santa Fe crossing at Dartmouth with path enhancements 	Fair Minor improvements with enhanced crossing at intersection with expanded space
	Expansion of Biking Opportunities	Poor No new biking infrastructure or wayfinding 	Good New biking facility enhances connection from Mary Carter Greenway Trail 	Good New pedestrian/bicyclist facility provides major improved connection from residential and employment area across Santa Fe 	Fair Expansion of pedestrian/bicyclist connection enhances connection from Mary Carter Greenway Trail to Santa Fe 	Fair Enhanced connection provides opportunity for improved facility and wayfinding, but no expansion from current facility
	Optimized Transit Use	Good Improved access to bus stops on west side of Oxford 	Good New bicyclist connection provides improved bicyclist access to Oxford Station 	Good New pedestrian/bicyclist connection provides improved multimodal access to Englewood Station 	Fair Minor improvements to multimodal access to bus stops on Dartmouth 	Fair Minor improvements to multimodal access to bus stops on Mississippi
Community / Quality of Life	Property Impacts	1 property 	7 properties 	2 properties 	1 property 	0 properties
	Property Access Modifications	Good No property access changes 	Good No property access changes 	Good No property access changes 	Good No property access changes 	Good No property access changes
	Support of Local and Regional Planning and Policy Efforts	Good Supports pedestrian/bicyclist connectivity at Oxford intersection, consistent with City goals, and social paths current exist and indicate a need for sidewalks 	Good Consistent with recommendations by South Platte Working Group Connectivity Study and supports bicyclist connections to regional trail system 	Good Consistent with recommendations in multiple recent studies and social paths exist and indicate a need for sidewalks 	Good 	Good

Category	Evaluation Criteria	M10 Oxford Ave Sidewalk	M11 Oxford Ave Bike Lanes	M12 Hampden Ave Path	M13 Little Dry Creek Widening	M14 Improved Mississippi Connection to Platte River Trail
Environmental Resources	Potential Environmental Resource Impacts	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair
	Potential Social and Built Environment Impacts	Good Environmental Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Environmental Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Fair Environmental Justice: Good Hazardous Materials: Fair Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Environmental Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Environmental Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good
Constructability	Ease of Implementation	Good Minor sidewalk connection with relatively easy construction with minimal approval process required	Good Signing and striping improvement with minimal construction	Good Path with relatively easy construction with minimal approval process required within Hampden interchange ROW	Good Expansion of path relatively easy construction with minimal approval process required	Fair Expansion of space and trail access relatively moderate construction impacts with signal and intersection reconstruction in highly congested area
	Ability to Implement as Standalone Project	Good New sidewalk connection may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Bike lanes may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Path construction may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Expansion of path may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Fair Enhanced trail connection may be completed as separate project from other corridor improvements with multimodal benefits, but relatively moderate investment due to intersection and traffic impacts and environmental process
RESULT		CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD
NOTES						

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts





































Multimodal Infrastructure – Improved Connections to Transit

Category	Evaluation Criteria	M15 Littleton/Mineral Station Parking Lot Path	M16 Mineral Sidewalk and Pedestrian Bridge Widening	M17 Structured Parking at Littleton/Mineral Station	M18 Littleton/Downtown Connection Improvements	M19 Oxford-Sheridan Station Pedestrian/Bicycle Bridge	M20 Oxford-Sheridan Station Additional Parking and Sidewalk (east side)	M21 Broadway Station Bridge over Railroad
Safety	Relative Level of Conflict – Pedestrians/Bicyclists	Good New path reduces pedestrian conflicts through parking area	Neutral No change from No Action with sidewalk and bridge connection	Fair Expansion of parking may result in more vehicles in area, but design may mitigate additional pedestrians/bicyclists conflicts	Neutral No change from No Action with separation from vehicular traffic	Good Reduction in vehicular, pedestrian, and bicyclist conflicts with high volumes of Santa Fe traffic at adjacent at-grade intersections	Fair Added parking may result in more vehicles in area, but new sidewalk may mitigate additional pedestrians/bicyclists conflicts	Good Reduces potential pedestrian and bicyclist conflicts at railroad
	Enhanced Walking and Biking Crossings	Good New delineated path enhances existing grade separated crossing with improved connection to existing trails and Littleton/Mineral Station	Good Sidewalk and bridge improvements enhance existing grade separated crossing with improved connection to existing trails and Littleton/Mineral Station	N/A No crossings with Santa Fe	Good Trail improvements enhances existing grade separated crossing with improved connection to existing trails and Littleton/Downtown Station	Good New grade separation with pedestrian/bicyclist connections substantially enhances crossing of Santa Fe	N/A No crossings with Santa Fe	N/A No crossings with Santa Fe
	Expansion of Biking Opportunities	Good New delineated biking facility enhances connection to Mary Carter Greenway Trail and Littleton/Mineral Station	Good Enhancement of existing biking facility improves connections to trails and Littleton/Mineral Station	Poor No new multimodal infrastructure or wayfinding	Good Enhancement of existing biking facility improves connections to trails and Littleton/Downtown Station	Good Grade separation enhances opportunities	Poor No new multimodal infrastructure or wayfinding	Good Grade separation of railroad enhances opportunities for connections to area trails and Broadway Station
Multimodal Connections	Optimized Transit Use	Good New pedestrian/bicyclist connection provides moderate improvements to multimodal access to Littleton/Mineral Station	Good Improved pedestrian/bicyclist connections provide moderate improvements to multimodal access to Littleton/Mineral Station	Good Increases parking capacity to improve use of Littleton/Mineral Station	Fair Improvements provide minor improvements to multimodal access to bus stops on Prince Street and Littleton/Downtown Station	Good New pedestrian/bicyclist bridge and connections provides major improvements to multimodal access to Oxford-Sheridan Station	Good Increases parking capacity to improve use of Oxford-Sheridan Station	Good New pedestrian/bicyclist bridge provides moderate improvements to multimodal access to Broadway Station with new development
	Property Impacts	2 properties	0 properties	0 properties	0 properties	2 properties	More than 2 properties	More than 5 properties
	Property Access Modifications	N/A No accesses in area	N/A No accesses in area	N/A No accesses in area	N/A No accesses in area	N/A No accesses in area	Fair Potential property access impacts on local streets with bridge and connections	Fair Likely moderate property access impacts on local streets with parking and new sidewalk
Community / Quality of Life	Support of Local and Regional Planning and Policy Efforts	Good Consistent with recommendations in South Platte Working Group Connectivity Study for much needed improved access for pedestrians/bicyclists in the Littleton/Mineral Station parking lot	Good Consistent with City goals for regional multimodal connections as pedestrian bridge serves not only Littleton/Mineral Station patrons but also Mary Carter Greenway Trail	Good Included in City TMP and would facilitate the potential for new transit oriented development on RTD parcel	Good Included in City TMP and provides connection between the Mary Carter Greenway and Littleton/Downtown Station	Good Supported by local plans, which encourages transit oriented development at this location	Fair Supported by Sheridan Comprehensive plan, which encourages transit oriented development at this location, but Englewood concern with property impacts in constrained area	Good

Category	Evaluation Criteria	M15 Littleton/Mineral Station Parking Lot Path	M16 Mineral Sidewalk and Pedestrian Bridge Widening	M17 Structured Parking at Littleton/Mineral Station	M18 Littleton/Downtown Connection Improvements	M19 Oxford-Sheridan Station Pedestrian/Bicycle Bridge	M20 Oxford-Sheridan Station Additional Parking and Sidewalk (east side)	M21 Broadway Station Bridge over Railroad
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Fair	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good
	Potential Social and Built Environment Impacts	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Fair	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Fair	Fair Env Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good
Constructability	Ease of Implementation	Good Path relatively easy construction with minimal approval process required	Fair Moderate design complexities with station impacts and Santa Fe traffic impacts for bridge construction	Fair Relatively typical construction, but moderate design complexities with additional study and impacts to station during construction	Good Relatively easy construction with minimal approval process required	Poor Moderate design complexities with connections to station, substantial property owner coordination for ROW and site impacts, and construction requires bridge placement over Santa Fe	Poor Prolonged process for additional study and outreach needed to identify parking location and connections, plus substantial property owner coordination required for ROW and site impacts, including access and parking impacts	Poor Prolonged process for railroad approvals, in addition to substantial property owner coordination required for ROW and site impacts
	Ability to Implement as Standalone Project	Good Path construction may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Pedestrian/bicyclist bridge and connections may be constructed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Poor Structured parking may be constructed as separate project from other corridor improvements, but relatively major investment	Good Path improvements may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Fair Pedestrian/bicyclist bridge and connections may be constructed as separate project from other corridor improvements with multimodal benefits and relatively moderate investment due to ROW, funded with local grant programs	Fair Parking and sidewalk may be constructed as separate project from other corridor improvements, but with limited operational benefits and moderate investment due to ROW and limited funding opportunities outside redevelopment	Fair Pedestrian/bicyclist bridge and connections may be constructed as separate project from other corridor improvements with multimodal benefits, but relatively moderate investment with limited funding opportunities outside property development
RESULT		CARRIED FORWARD	CARRIED FORWARD	FUTURE ACTION	CARRIED FORWARD	FUTURE ACTION	FUTURE ACTION	FUTURE ACTION
NOTES				Additional study, coordination, and major funding investment anticipated to be outside near-term timeframe		Extensive outreach, property owner coordination, and potential site impacts with moderate funding investment anticipated to be outside near-term timeframe	Additional study, coordination, and design to identify location and property impacts/benefits and moderate funding investment anticipated to be outside near-term timeframe	Location, design, and future property impacts/benefits unknown, but may be considered with private development

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts

Multimodal Infrastructure – Additional North-South Bicycle Capacity along Corridor

Category	Evaluation Criteria	M22 Mary Carter Greenway Trail Bridge Expansion near Mineral	M23 Community Trail Extension to Mineral	M24 Prince St Bike Lanes	M25 Mary Carter Greenway Trail Bridge Expansion near Bowles	M26 Mary Carter Greenway Trail Widening at Oxford	M27 South Platte River Dr Bike Lanes	M28 Mary Carter Greenway Trail Bridge near Jewell
Safety	Relative Level of Conflict – Pedestrians/ Bicyclists	Neutral No change from No Action with separation from vehicular traffic 	Fair Depending on alignment, new trail provides minor reduction in vehicular, pedestrian, and bicyclist conflicts with Santa Fe traffic by providing a separated facility 	Fair New bike lanes reduce bicyclist conflicts along Prince 	Neutral No change from No Action with separation from vehicular traffic 	Fair Improved facility for pedestrians/bicyclists has potential to reduce conflicts with Santa Fe traffic 	Fair Improved facility for pedestrians/bicyclists has potential to reduce conflicts with Santa Fe traffic 	Neutral No change from No Action with separation from vehicular traffic 
Multimodal Connections	Enhanced Walking and Biking Crossings	N/A No crossings with Santa Fe	N/A No crossings with Santa Fe	Fair New biking connection to signalized crossing of Santa Fe 	N/A No crossings with Santa Fe	N/A No crossings with Santa Fe	N/A No crossings with Santa Fe	N/A No crossings with Santa Fe
	Expansion of Biking Opportunities	Fair Bridge expansion provides improved trail 	Good New pedestrian/bicyclist facility provides major improvement to biking connection 	Good New facility provides moderate improvement to biking connection 	Fair Bridge expansion provides improved trail 	Fair Trail expansion provides minor improvement 	Good New facility provides moderate improvement to biking connection 	Fair Grade separation enhances opportunities for connections to area trails and crossing the South Platte River 
	Optimized Transit Use	Fair Improved trail bridge provides minor improvements for access to Littleton/Mineral Station 	Good New bicycle/pedestrian connection provides moderate improvements for access to Littleton/Mineral Station 	Good New biking facility provides connection for moderate improvements to multimodal access to bus stops on Prince 	N/A No bus route and no LRT station in area	N/A No bus route and no LRT station in area	Good New biking facility provides connection for moderate improvements to multimodal access to bus stops on Dartmouth 	N/A No bus route and no LRT station in area
Community / Quality of Life	Property Impacts	0 properties 	Multiple properties (alignment undefined) 	Multiple properties (if on-street parking is maintained) 	0 properties 	0 properties 	3 properties 	0 properties 
	Property Access Modifications	N/A No accesses in area	Fair Potential for moderate property access impacts, depending on alignment and facility type 	Good No property access changes 	N/A No accesses in area	N/A No accesses in area	Good No property access changes 	N/A No accesses in area
	Support of Local and Regional Planning and Policy Efforts	Good Frequently utilized bridge currently provides limited access and sight distance 	Fair Consistent with long-range planning to provide improved connectivity through the community, but has limitations due to available ROW 	Good Included in City TMP and would fill a gap in the bike lane network, while improving accessibility to downtown 	Good Frequently utilized bridge currently provides limited access and sight distance 	Good Consistent with recommendations for additional capacity in the South Platte Connections Study 	Good 	Good 

Category	Evaluation Criteria	M22 Mary Carter Greenway Trail Bridge Expansion near Mineral	M23 Community Trail Extension to Mineral	M24 Prince St Bike Lanes	M25 Mary Carter Greenway Trail Bridge Expansion near Bowles	M26 Mary Carter Greenway Trail Widening at Oxford	M27 South Platte River Dr Bike Lanes	M28 Mary Carter Greenway Trail Bridge near Jewell
Environmental Resources	Potential Environmental Resource Impacts	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Good	Good Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Good	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Fair	Good Air Quality: N/A Wetlands & Waters of the US: Good Noise: N/A Floodplains: Fair	Fair Air Quality: N/A Wetlands & Waters of the US: Fair Noise: N/A Floodplains: Fair
	Potential Social and Built Environment Impacts	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Fair	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Fair Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Good Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Fair	Good Env Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good	Good Env Justice: Good Hazardous Materials: Fair Historic Resources: Good Recreational 4(f)/6(f): Good Visual/Aesthetics: Good
Constructability	Ease of Implementation	Good Relatively typical construction with moderate approval process required for environmental permitting	Poor Prolonged process for additional study, design, and outreach to identify new alignment and facility type with substantial property owner coordination required for ROW impacts	Good Mostly signing and striping modifications with minimal roadway construction and impacts	Good Relatively typical construction with moderate approval process required for environmental permitting	Good Relatively typical construction with moderate study and approval process	Good Mostly signing and striping modifications with minimal roadway construction and impacts	Fair Relatively typical construction, but with moderate property owner coordination required for ROW impacts and potential construction impacts to area roadways
	Ability to Implement as Standalone Project	Good Path improvements may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Fair Trail may be completed as separate project from other corridor improvements with multimodal benefits, but relatively moderate investment due to study and ROW, funded with local grant programs	Good Bike lanes may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Pedestrian/bicyclist bridge expansion may be constructed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Path improvements may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Bike lanes may be completed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs	Good Pedestrian/bicyclist bridge may be constructed as separate project from other corridor improvements with multimodal benefits and relatively small investment, funded with local grant programs
RESULT		CARRIED FORWARD	FUTURE ACTION	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD	CARRIED FORWARD
NOTES			Location, design, and future property impacts/benefits unknown and study and outreach anticipated to be outside near-term timeframe					

Good – Comparatively positive, moderate or major benefits and/or minor impacts Fair or Neutral – Comparatively neutral, minor benefits, and/or moderate impacts Poor – Comparatively negative and/or major impacts



LEVEL 2A OPTIONS – RESULTS

General Corridor Classifications and Cross-Sections

FUTURE ACTION

- R1. Expressway – Conversion of HOV to General Purpose and Extended Lanes Bowles to C-470
- R2. Expressway – Enhanced Managed Lane (at-grade at intersections) I-25 to C-470
- R3. Expressway – Enhanced Managed Lane (grade-separated at intersections) I-25 to C-470

NOT RECOMMENDED

- R4. Freeway – Managed Lanes and Existing General Purpose Lanes

Spot Locations

CARRIED FORWARD

- R8. Access Consolidation of Brewery Lane and Angelo's access
- R10. Add New West Side Frontage Road – south of Weaver Avenue via Vinewood extension
- R11. Add New West Side Frontage Road – Weaver Avenue to Church Avenue
- R14. Add New West Side Frontage Road – Belleview to Oxford
- R15. Add New West Side Frontage Road – Dartmouth to Harvard
- R20. Extend Southbound Lane – I-25 to Florida

FUTURE ACTION

- R5. South Platte River Parkway Extension – south of Mineral (with redevelopment)
- R6. Four-Lane Freeway – Mineral to Bowles
- R9. Additional Connection Vinewood to Brewery Lane (with redevelopment)
- R13. Downtown Littleton Depressed Freeway
- R19. Add New Collector-Distributor N of Florida

NOT RECOMMENDED

- R7. Aspen Grove Enhanced Access
- R12. Downtown Littleton Arterial
- R16. Improved South Platte River Drive
- R17. Realigned Santa Fe Drive to East of Platte River
- R18. Arterial North of Florida

Intersections/Interchanges

CARRIED FORWARD

Mineral Avenue Signal

- **I1.** Quadrant Road Intersection (southwest corner or southwest and northwest corner)

Aspen Grove Way Signal

- **I3.** Channelized T Intersection
- **I4.** Channelized T with SB Grade Separation

Brewery Lane Signal

- **I6.** Channelized T Intersection
- **I7.** Channelized T with SB Grade Separation

Church Avenue Signal

- **I9.** Channelized T - Close West Leg
- **I10.** Quadrant Road Intersection (SE corner)

Bowles Avenue Signal

- **I12.** CFI
- **I13.** Quadrant Road Intersection (NW corner)

Crestline Unsignalized

- **I16.** Close Access
- **I17.** Improved Right-in/Right-out Access

Prince Street Signal

- **I21.** Additional Lanes (NB and EB/WB)
- **I22.** Remove Lefts, Routed via Bellevue

Bellevue Interchange

- **I24.** Interchange Reconstruction (considering pedestrians across Santa Fe Drive)

Union Avenue Signal

- **I25.** Channelized T Intersection
- **I26.** Channelized T with SB Grade Separation

Oxford Avenue Signal

- **I27.** NB/SB Lefts CFI
- **I28.** Quadrant Road Intersection (southwest corner)
- **I29.** Tight Diamond Interchange (southbound button hook ramps)

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

Level 2A Options – Results

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Hampden Avenue Interchange

- **I30.** Tight Diamond/DDI/SPUI
- **I31.** Folded Diamond West

Dartmouth Avenue Signal

- **I32.** Additional Lanes through Intersection (northbound/southbound)
- **I33.** Quadrant Road Intersection (southwest and northwest corner)
- **I34.** CFI

Evans Avenue Interchange

- **I36.** Interchange Reconstruction for Pedestrians (across Santa Fe Drive)

Jewell Avenue Unsignalized

- **I37.** Close Access
- **I38.** Convert to Right-out Only (channelized to Evans Avenue off ramp)
- **I39.** Convert to Right-in Only

Iowa Avenue Signal

- **I40.** Channelized T Intersection

Florida Avenue Signal

- **I42.** Offset T Intersections – close east leg at Florida and operate with Iowa as offset T

Mississippi Avenue Signal

- **I45.** Quadrant Road Intersection (southeast and northwest corner)

Kentucky Avenue Signal (new signal in No Action)

- **I48.** Channelized T Intersection

FUTURE ACTION

Mineral Avenue Signal

- **I2.** Tight Diamond/Single Point Urban Interchange (SPUI)

Bowles Avenue Signal

- **I14.** Folded Diamond West Interchange

Prince Street Signal

- **I18.** Grade Separation with Belleview Diamond
- **I19.** Split Diamond Interchange with Belleview

Belleview Interchange

- **I23.** Add U-turns in Interchange

Dartmouth Avenue Signal

- **I35.** Interchange

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

Level 2A Options – Results

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Iowa Avenue Signal

- **I41.** Channelized T with NB Grade Separation

Florida Avenue Signal

- **I43.** Interchange - Iowa closure with connections
- **I44.** Interchange with Extension to roadway (and Iowa closure with connections)

Mississippi Avenue Signal

- **I46.** Quadrant Road Intersection with Grade Separation
- **I47.** Tight Diamond/Diverging Diamond Interchange (DDI)/SPUI

NOT RECOMMENDED

Aspen Grove Way Signal

- **I5.** NB Left CFI

Brewery Lane Signal

- **I8.** NB Left CFI

Church Avenue Signal

- **I11.** Quadrant Road Intersection with Sumner

Bowles Avenue Signal

- **I15.** Quadrant Road Intersection with left turns at Prince and Church

Prince Street Signal

- **I20.** Convert to Right-in/Right-out (remove signal)

Multimodal Infrastructure

CARRIED FORWARD

Pedestrian/Bicyclist Grade Separation

- **M1.** C-470 Interchange Improved N/S Crossing
- **M2.** Englewood Station Bridge
- **M3.** Iliff Ave Bridge

Improved Connections to Parallel Trail Facilities

- **M4.** Lee Gulch Trail Paving
- **M5.** Littleton Community Trail Paving
- **M6.** Santa Fe Drive Sidewalk Gaps
- **M7.** Bowles Connection to Mary Carter Greenway Trail
- **M8.** Trail Connection at Crestline
- **M9.** Belleview Avenue Sidewalk
- **M10.** Oxford Avenue Sidewalk
- **M11.** Oxford Avenue Bike Lanes
- **M12.** Hampden Avenue Path
- **M13.** Little Dry Creek Widening
- **M14.** Improved Mississippi Connection to Platte River Trail

Improved Connections to Transit

- **M15.** Littleton/Mineral Station Parking Lot Path
- **M16.** Mineral Sidewalk and Pedestrian Bridge Widening
- **M18.** Littleton/Downtown Connection Improvements

Additional North-South Bicycle Capacity along Corridor

- **M22.** Mary Carter Greenway Trail Bridge Expansion near Mineral Avenue
- **M24.** Prince Street Bike Lanes
- **M25.** Mary Carter Greenway Trail Bridge Expansion near Bowles Avenue
- **M26.** Mary Carter Greenway Trail Widening at Oxford
- **M27.** South Platte River Drive Bike Lanes
- **M28.** Mary Carter Greenway Trail Bridge near Jewell Avenue

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

Level 2A Options – Results

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FUTURE ACTION

Improved Connections to Transit

- **M17.** Structured parking at Littleton/Mineral Station
- **M19.** Oxford-Sheridan Station Bicycle/Pedestrian Bridge
- **M20.** Oxford-Sheridan Station Additional Parking and Sidewalk (east side)
- **M21.** Broadway Station Bridge Over Railroad (with development)

Additional North-South Bicycle Capacity along Corridor

- **M23.** Community Trail Extension to Mineral Avenue