### VII. ENGINEERING AND ENVIRONMENTAL EVALUATION - TRAIL CONNECTIVITY

In the southern portion of the Corridor there is a lack of a sidewalk, trail or bicycle facility within the right-of-way. However, the City of Santa Fe has developed a robust trail system that parallels St. Francis and provides bicycle and trail access without the conflicts that result from combining a busy State Highway with bicycle traffic within constrained right-of-way. The connections between these City facilities across St. Francis Drive are limited and can be improved. Additionally, throughout the public involvement process, requests for improved pedestrian and bicycle safety were presented at every public meeting.

The lack of sidewalks at some locations along the Corridor and the fact that existing sidewalks tend to be placed adjacent to the curbs (with no separation from the vehicle travel lanes) expose pedestrians to a variety of hazards and other discomforts. These include: (a) death or injury due to run-off-the-road crashes; (b) death or injury due to impacts from side mirrors on large vehicles; (c) sand or gravel thrown onto sidewalks by passing snowplows; (d) water and mud splash during and after rain and snow storms; (e) gravel projectiles "launched" by the tires of passing vehicles; (f) high levels of traffic noise; and (g) high levels of air pollution.

There is a need to improve conditions for pedestrians of all ages and abilities, and to bring the pedestrian infrastructure into greater compliance with the current design requirements under the Americans with Disabilities Act (ADA). Accessibility problems tend to occur especially where curb-attached sidewalks intersect streets and driveways. Many opportunities exist to improve geometric conditions along sidewalks -- especially where the sidewalks intersect with streets and driveways -- in order to ensure that people of all ages and abilities can safely and comfortably travel by foot or wheelchair along and across the corridor.

The most troubled areas of the Corridor occur in the southern areas where many intersections include no landing areas, ramps or sidewalk connections to adjacent streets. These intersections require immediate improvements to existing intersections and additional sidewalk areas beyond the St. Francis right-of-way to create a connected pedestrian environment. The intersections in the central portion of the Corridor and continuing north are generally adequate but would benefit from enhancements or improvements. These enhancements, including new striping, signals, controls and improved sidewalk conditions, will greatly enhance pedestrian friendliness and make a safer pedestrian environment for the community.

As part of the detailed study, a gap analysis was conducted to identify gaps in the existing pedestrian and bicycle trail network. A comprehensive review of all pedestrian sidewalks and trails along the Corridor was conducted to identify locations where no connectivity, or insufficient, connectivity is located. Based on this analysis, recommendations for new connections or enhancements have been provided below. Each major intersection was ranked for overall intersection facilities, pedestrian crosswalks, sidewalks, bicycle lanes and connections to surrounding neighborhoods. Finally, specific recommendations have been provided for each major intersection.

A review of the possible improvements or enhancements that could be developed along the Corridor is presented. A total of 24,580 feet, or 4.67 miles of new trails are proposed.

# A. Major Intersections from South to North along the Corridor

St. Francis and Sawmill Road – The Sawmill and St. Francis intersection is the southern-most atgrade intersection along St. Francis Drive. The existing condition includes a partial pedestrian crossing and connection. There are currently pedestrian crosswalks at the intersection. However, the existing intersection improvements do not include pedestrian ramps or sidewalks connecting to the crosswalks. There are sidewalks located just east of the immediate intersection. They are located along the north and south side of Sawmill connecting to the adjacent multi-family developments. No sidewalks or pedestrian connections are located on the west side of St. Francis.

# **Connectivity Assessment**

Overall Intersection Rank Poor

Pedestrian Crosswalks North-South and partial East-West

Sidewalks East Side Only

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods East Side Only

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- 2. Provide new pedestrian ramps and landing areas at all intersection crosswalk locations and construct a new sidewalk connecting to the existing sidewalks east of St. Francis.
- 3. Provide new pedestrian sidewalks on the west side of the intersection that allow for future connections to sidewalks to be located along both sides of Sawmill Road.
- 4. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.



ENHANCE center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

NEW center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

ENHANCE crosswalk, sidewalk, and/or connection to sidewalks

♣ ■ ■ ♦ NEW crosswalk, sidewalk, and/or connection to sidewalks

🗕 🗕 🔶 NEW multi-use path

EXISTING trails

NEW trails proposed by the City of Santa Fe

NEW overpass or underpass

ST. FRANCIS DRIVE CORRIDOR STUDY INITIAL EVALUATION OF ALTERNATIVES











FIGURE 3 SAWMILL ROAD TRAIL IMPROVEMENTS St. Francis and Zia Road – A partial pedestrian connection is provided at the Zia Road and St. Francis intersection. Existing pedestrian connections coming from the east along Zia to the intersection are complete. However, the sidewalk improvements terminate at the west side of the intersection, preventing pedestrian connections from continuing west along Zia. Pedestrian sidewalks, at the north and south side of Zia Road, begin at Galisteo St. and continue west. The missing sidewalks between the intersection and Galisteo St. limit pedestrian connectivity and pose a hazardous pedestrian environment. However, the proposed multi-use trail underpass connecting the Rail Trail and existing Arroyo de Los Chamisos trail will provide an east-west pedestrian and bicycle crossing. There are no designated bicycle lanes in this intersection but the shoulder of the road is adequate for comfortable bicycle use.

# **Connectivity Assessment**

Overall Intersection Rank Poor

Pedestrian Crosswalks North-South and East-West

Sidewalks East Side Only

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods East Side Only

#### Recommendations

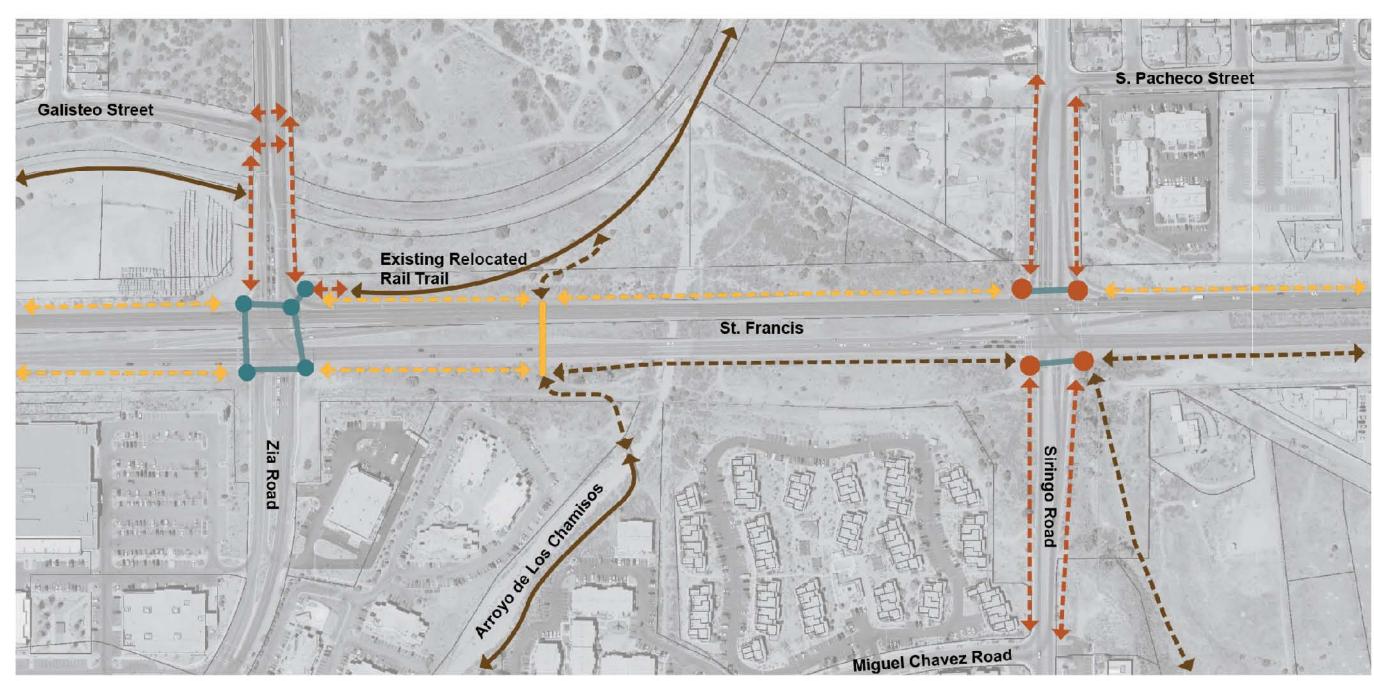
- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- 2. Provide new pedestrian sidewalks on the west side connecting to Galisteo St. for both north and south sections of the road.
- 3. Connect new sidewalk on the north-west side of the intersection to the Rail Trail.
- 4. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.
- 5. Connection to the proposed Multi-Use Trail underpass north of Zia Road.
  - St. Francis and Siringo Road No continuous pedestrian or bicycle connections are provided at the Siringo Road and St. Francis intersection. Although crosswalk striping exists at all east-west crossing points in the intersection, they do not connect to sidewalks and terminate at the edge of the roadway. The nearest sidewalks occur at the intersection of Miguel Chavez Rd. to the East and S. Pacheco St. to the West. Fragmented pedestrian connections such as those mentioned above create a hazardous environment for pedestrians.

#### Connectivity Assessment

Overall Intersection Rank Very Poor Pedestrian Crosswalks East-West only

Sidewalks None
Bicycle Lanes None
Pedestrian and Bike Connections to surrounding neighborhoods No

- 1. Provide North/South Pedestrian Crosswalks with adequate controllers, signals and pedestrian countdown signal heads.
- 2. Provide new pedestrian sidewalk connections to adjacent neighborhood streets Miguel Chavez Rd. to the east and S. Pacheco St. to the west.
- 3. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.





ENHANCE center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

NEW center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

ENHANCE crosswalk, sidewalk, and/or connection to sidewalks

♣ ■ ■ ♦ NEW crosswalk, sidewalk, and/or connection to sidewalks

- - - NEW multi-use path

EXISTING trails

🚣 🕳 🕳 NEW trails proposed by the City of Santa Fe

NEW overpass or underpass













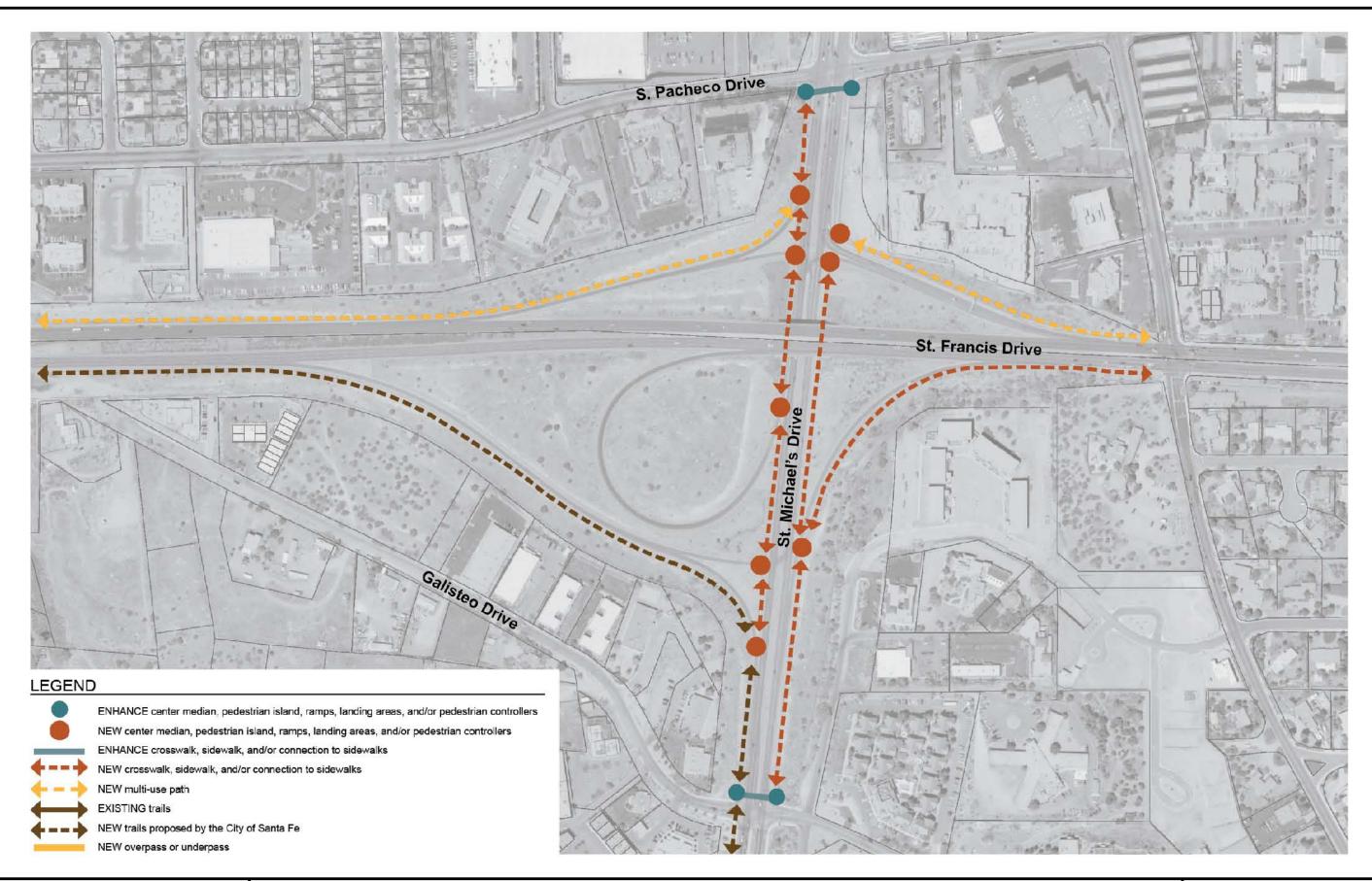
FIGURE 4
ZIA AND SIRINGO TRAIL
IMPROVEMENTS

St. Francis and St. Michael's Drive – No pedestrian or bicycle connections are provided at the St. Michael's Drive and St. Francis intersection. Due to the grade separated intersection and numerous on and off ramps, the intersection is dominated by vehicular traffic, creating a hazardous environment for pedestrians and bicyclists. Although crosswalks are provided at the intersections east and west of St. Francis, there are no crosswalks or sidewalks between Galisteo St. and S. Pacheco St. The current roadway configuration prohibits pedestrian connectivity in both east-west and north-south directions and poses a significant connectivity barrier for the community.

## **Connectivity Assessment**

| Overall Intersection Rank                                    | Very Poor |
|--|-----------|
| Pedestrian Crosswalks  | None      |
| Sidewalks  | None      |
| Bicycle Lanes  | None      |
| Pedestrian and Bike Connections to surrounding neighborhoods | No        |

- 1. Provide new east/west pedestrian crosswalks along both sides of St. Michael's Drive and at all roadway crossings including existing on and off ramps. This will create a continuous pedestrian connection along both sides of the road and increase east-west connectivity in the City. All new pedestrian crosswalks should meet current City, State and ADA regulations.
- 2. Provide new east-west pedestrian sidewalks connecting to the existing sidewalks along St. Michael's Drive near Galisteo St. to the east and S. Pacheco St. to the west.
- 3. Provide enhanced north-south pedestrian crosswalks at Galisteo St. to the east and S. Pacheco St. to the west. This may include improved pedestrian crossings, ramps and sidewalk areas in addition to new pedestrian signal controls, signs and pedestrian countdown signal heads.
- 4. Due to the high vehicular traffic along St. Michael's Drive, bicycle lanes are not recommended for this intersection.



ST. FRANCIS DRIVE CORRIDOR STUDY INITIAL EVALUATION OF ALTERNATIVES











FIGURE 5 ST. MICHAEL'S DRIVE TRAIL IMPROVEMENTS St. Francis and West San Mateo – The pedestrian connectivity at West San Mateo includes four-way crosswalks, three paved ramping and landing areas and sidewalk connections on the southwest corner. The existing pedestrian crosswalk and sidewalk improvements are incomplete. The intersection should be improved to provide new pedestrian controls, signals, landing areas including corner improvements and new sidewalk connections to the connecting streets.

# **Connectivity Assessment**

Overall Intersection Rank Poor

Pedestrian Crosswalks
Ramps and Landing Areas

All four directions
Yes on three corners

(None on southeast corner)

Sidewalks Southwest corner only

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods Southwest corner only

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- 2. Construct a new corner ramp and landing area on the southeast corner.
- 3. Provide new pedestrian sidewalk connections to adjacent neighborhood streets on the northeast, northwest and southeast corners.
- 4. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.





ENHANCE center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

NEW center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

ENHANCE crosswalk, sidewalk, and/or connection to sidewalks

◆ ■ ■ ◆ NEW crosswalk, sidewalk, and/or connection to sidewalks.

<table-cell-rows> 🗕 🔶 NEW multi-use path

EXISTING trails

NEW trails proposed by the City of Santa Fe

NEW overpass or underpass

ST. FRANCIS DRIVE CORRIDOR STUDY INITIAL EVALUATION OF ALTERNATIVES











FIGURE 6
SAN MATEO TRAIL IMPROVEMENTS

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**St. Francis and Alta Vista** – The St. Francis and Alta Vista intersection has four-way crosswalks, corner ramps, landing areas and connections to existing sidewalks in all directions. The existing intersection improvements provide adequate pedestrian connectivity at all corners and connect to adjacent sidewalks.

# **Connectivity Assessment**

Overall Intersection Rank Good
Pedestrian Crosswalks Four-way

Sidewalks Connections at all four corners

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods

Yes (On-street bicycle lanes on Alta

Vista)

#### Recommendations

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- Improve sidewalk connection at northeast corner by providing direct connection to existing trail and sidewalk.
- 3. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.

St. Francis and West Cordova Road – The St. Francis and West Cordova Road intersection has four-way crosswalks, corner ramps, landing areas and connections to existing sidewalks in all directions. The existing intersection improvements provide adequate pedestrian connectivity at all corners and connect to adjacent sidewalks. However, sidewalk connections beyond the immediate intersection should be improved to increase overall pedestrian connectivity to areas east and west.

#### **Connectivity Assessment**

Overall Intersection Rank Good
Pedestrian Crosswalks Four-way

Sidewalks Connections at all four corners

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods

Yes (On-street bicycle lanes)

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners including improved pedestrian landing areas in the medians.
- 2. Improve sidewalk connections to areas beyond intersection. This will require new sidewalk construction and improvements outside the St. Francis right-of-way.
- 3. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.





ENHANCE center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

NEW center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

ENHANCE crosswalk, sidewalk, and/or connection to sidewalks

♦ = = → NEW crosswalk, sidewalk, and/or connection to sidewalks

🗕 🛑 🧼 NEW multi-use path

EXISTING trails

♠ ■ ■ ♦ NEW trails proposed by the City of Santa Fe

NEW overpass or underpass













FIGURE 7
ALTA VISTA AND CORDOVA TRAIL
IMPROVEMENTS

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St. Francis and Cerrillos Road – The St. Francis and Cerrillos Road intersection is one of the busiest along the Corridor and includes NM Rail Runner Express train service, unusual diagonal vehicular circulation and pedestrian crossings. The intersection currently has four-way crosswalks for full pedestrian movement. All crossings, other than the southwest corner, have adequate landings and ramp areas at the corner. Due to the alignment and routing of the NM Rail Runner Express line, the southwest corner has an incomplete landing area and connection to existing sidewalks. This corner should be improved to create a comfortable and safe pedestrian crossing.

## **Connectivity Assessment**

Overall Intersection Rank Fair
Pedestrian Crosswalks Four-way

Sidewalks Connections at all four corners

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods Yes (On-street bicycle lanes)

#### Recommendations

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners including improved pedestrian landing areas in the medians.
- 2. Improve the southwest corner landing area including the connection to existing sidewalks. It should be improved to create a comfortable and safe pedestrian crossing.
- 3. A grade separated crossing just north of the intersection as well as connectivity to the intersection is being considered by the City of Santa Fe. Any improvements should be coordinated with these efforts to provide the greatest benefit to the community.
  - St. Francis and Paseo De Peralta / Hickox Street The St. Francis and Paseo De Peralta / Hickox Street intersection has four-way crosswalks, corner ramps, landing areas and connections to existing sidewalks in all directions. The existing intersection improvements provide adequate pedestrian connectivity at all corners but provide limited pedestrian safety due to limited area and close proximity to vehicular traffic and attached sidewalks. Existing sidewalk connections to adjacent streets are located along north-south St. Francis and eastward along Paseo De Peralta. The sidewalks connections on the west side of the intersection are fragmented or non-existent due to driveway access and parking lot access to private property. Although the existing intersection includes crosswalks and corner improvements for pedestrian movement, the area should be improved to provide a more comfortable and pedestrian friendly connectivity.

### **Connectivity Assessment**

Overall Intersection Rank Fair
Pedestrian Crosswalks Faur-way

Sidewalks Connections at all four corners but improvements

needed to enhance connectivity.

Bicycle Lanes None

Pedestrian and Bike Connections to Yes but needing improvements surrounding neighborhoods (On-street bicycle lanes)

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- 2. Improve sidewalk connections to areas beyond intersection for areas west of St. Francis. This will require new sidewalk construction and improvements outside the St. Francis right-of-way.
- 3. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.



ENHANCE center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

NEW center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

ENHANCE crosswalk, sidewalk, and/or connection to sidewalks

♠ ■ ■ ♦ NEW crosswalk, sidewalk, and/or connection to sidewalks

🕶 💳 🥎 NEW multi-use path

EXISTING trails

NEW overpass or underpass

ST. FRANCIS DRIVE CORRIDOR STUDY INITIAL EVALUATION OF ALTERNATIVES











FIGURE 8
CERRILLOS AND HICKOX TRAIL
IMPROVEMENTS

St. Francis and Agua Fria Street – The St. Francis and Agua Fria Street intersection has four-way crosswalks, corner ramps, landing areas and connections to existing sidewalks in all directions. The existing intersection improvements provide adequate pedestrian connectivity at all corners and connect to adjacent sidewalks. However, the crossing conditions and signal devices can be improved to provide safer connectivity. Improvements to the St. Francis center median should be analyzed to determine if a pedestrian island should be constructed to improve pedestrian safety.

# **Connectivity Assessment**

Overall Intersection Rank Good
Pedestrian Crosswalks Four-way

Sidewalks Connections at all four corners

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods

Yes (On-street bicycle lanes)

## Recommendations

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- 2. Consider improvements to the St. Francis center median and the redesign of the pedestrian island.
- 3. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.

St. Francis and West Alameda Street – The St. Francis and West Alameda Street intersection has four-way crosswalks, corner ramps, landing areas and connections to existing sidewalks in all directions. The existing intersection improvements provide adequate pedestrian connectivity at all corners and connect to adjacent sidewalks. However, the crossing conditions and signal devices can be improved to provide safer connectivity. Improvements to the St. Francis center median should be analyzed to determine if a pedestrian island should be redesigned to improve pedestrian safety.

### **Connectivity Assessment**

Overall Intersection Rank Good
Pedestrian Crosswalks Four-way

Sidewalks Connections at all four corners

Bicvcle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods

Yes (On-street bicycle lanes)

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- 2. Consider improvements to the St. Francis center median and the redesign of the median pedestrian island.
- 3. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.

St. Francis and Paseo De Peralta – The St. Francis and Paso De Peralta intersection has four-way crosswalks, corner ramps, landing areas and connections to existing sidewalks in all directions. The existing intersection improvements provide adequate pedestrian connectivity at all corners and connect to adjacent sidewalks. However, the crossing conditions and signal devices can be improved to provide safer connectivity. Improvements to the St. Francis center median and Paseo De Peralta median should be analyzed to determine if a pedestrian island should be redesigned to improve pedestrian safety. This is especially true of the east side island along Paseo De Peralta.

#### **Connectivity Assessment**

Overall Intersection Rank Good
Pedestrian Crosswalks Four-way

Sidewalks Connections at all four corners

Bicycle Lanes None

Pedestrian and Bike Connections to surrounding neighborhoods

Yes (On-street bicycle lanes)

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and pedestrian countdown signal heads at all corners.
- 2. Consider improvements to the St. Francis center median and the redesign of the median pedestrian islands running north-south and east of the intersection.
- 3. Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder or adjacent multi-use path.



ENHANCE center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

NEW center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

ENHANCE crosswalk, sidewalk, and/or connection to sidewalks

♠ ■ ■ ♦ NEW crosswalk, sidewalk, and/or connection to sidewalks

– 🔷 NEW multi-use path

**EXISTING** trails

NEW trails proposed by the City of Santa Fe

NEW overpass or underpass

ST. FRANCIS DRIVE CORRIDOR STUDY INITIAL EVALUATION OF ALTERNATIVES











FIGURE 9
AQUA FRIA, ALAMEDA AND
PASEO DE PERALTA TRAIL
IMPROVEMENTS

St. Francis and Alamo Drive – No continuous pedestrian or bicycle connections are provided at the Alamo Drive and St. Francis intersection. Although crosswalk signals exist, crosswalk striping is not provided and there is only one existing ramp and sidewalk connection on the southwest corner of the intersection. The next closest sidewalks occur at the intersection of Alamo and Cll Mejia, and south of Alamo and N Guadalupe Street. Fragmented pedestrian connections such as those mentioned above create a hazardous environment for pedestrians.

## **Connectivity Assessment**

Overall Intersection Rank Very Poor Pedestrian Crosswalks None

Sidewalks Southwest corner only

Bicycle Lanes None Pedestrian and Bike Connections to surrounding neighborhoods No

# Recommendations

- 1. Enhance existing crosswalks by providing new striping, pedestrian controllers, signals and timers at all corners.
- 2. Construct new corner ramps and landing areas on all corners and medians with the exception of the southwest corner.
- 3. Provide new pedestrian sidewalk connections to adjacent neighborhood streets on the southeast and northwest corners of the intersection; Alamo Drive to Sabino Street, Alamo Drive to N. Guadalupe Street, and St. Francis to Calle Mejia.
- Allow on-street bicycle circulation integrated with vehicular traffic or along the roadway shoulder.

A complete list of the trail connectivity enhancements is included in Appendix D. The cost estimates prepared for these improvements are based on unit costs for the St. Francis Trail currently being designed for the City of Santa Fe. A separate estimate for the reconstruction of isolated curb returns to allow ADA accessible landings at each intersection is also included in the estimates contained in Appendix D.





ENHANCE center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

NEW center median, pedestrian island, ramps, landing areas, and/or pedestrian controllers

ENHANCE crosswalk, sidewalk, and/or connection to sidewalks

NEW crosswalk, sidewalk, and/or connection to sidewalks

NEW multi-use path

**EXISTING** trails

NEW trails proposed by the City of Santa Fe

NEW overpass or underpass

ST. FRANCIS DRIVE CORRIDOR STUDY INITIAL EVALUATION OF ALTERNATIVES











FIGURE 10
ALAMO DRIVE TRAIL IMPROVEMENTS

#### B. Traffic

This alternative will have a minimal impact on traffic in the southern portions due to the large right-of-way. If bike lanes are implemented in the central and northern portions of the Corridor where there is a narrower right-of-way, the traffic will be impacted since the bicycles would slow down traffic.

## C. Safety

This alternative would likely slightly decrease the amount of traffic along St. Francis due to the increased accessibility to trails and bike lanes. However, due to the speed and amount of traffic along St. Francis, there is a continued concern for pedestrian and bicyclists safety along the Corridor.

## D. Drainage

There are no immediate impacts to the drainage for this alternative. The additional pavement required for the trails may require modifications to existing culverts, roadside ditches or storm drains in the area.

# E. Constructability

This alternative poses no substantial feasibility or constructability difficulty as all construction is within the existing right-of-way. To implement this alternative, intersection improvements including curb ramps and sidewalks would be needed for pedestrian connections. In addition, striping for bike lanes and additional sidewalks, where necessary, would be needed to create a comprehensive trail network.

# F. Right-of-Way

Connections can be made within the existing right-of-way; therefore, this alternative would not need additional right-of-way.

#### G. Costs

The cost for this alternative would be minimal and include extension (or addition) of sidewalk or multiuse path, new curb and gutter (if necessary), as well as bicycle striping and signage.

# H. Environmental / Mitigation

### 1. Biological Resources

Due to the urban composition of the project Corridor, negligible to minor impacts to biological resources are expected as a result of the proposed trail connectivity improvements.

### 2. Air Quality/Noise

Trail connectivity present opportunities to improve air quality and decrease traffic noise levels by providing options to vehicular travel within the Corridor.

#### Visual

Due to the urban composition of the project Corridor, negligible to minor impacts to visual resources are expected as a result of the proposed trail connectivity improvements.

#### 4. Social

Increasing trail connectivity throughout the Corridor is expected to result in a benefit to the social structure of the Corridor and surrounding areas by providing direct and interconnected pedestrian and bicycle access. Current trail connectivity throughout the Corridor includes a combination of pedestrian sidewalks and multi-use trails in a fragmented and non-continuous network, thus limiting connections between neighborhoods, commercial areas and recreational areas. In many instances, pedestrian walkways end without providing clear and direct access to other adjacent areas along the Corridor. The enhancement of the corridor with multi-use facilities has the potential to create greater economic opportunities for existing and future businesses. Further, improved trail connectivity has the potential to provide opportunities for green development and businesses that cater to bicycle and pedestrian trail users.

### 5. Cultural

Due to the urban composition of the project Corridor and the limited footprint of the proposed trail connectivity improvements, negligible to minor impacts to cultural resources are expected. However, further cultural resource investigations would need to be completed prior to construction of any of the proposed trail connectivity improvements.

#### 6. Water Resources

Due to the limited footprint of the proposed trail connectivity improvements, there are no anticipated impacts to water resources. However, further investigations may be required further in project design.

### 7. Hazardous Materials

Due to the limited footprint of the proposed trail connectivity improvements, there are no anticipated impacts to hazardous materials. However, further investigations may be required further in project design.