MILITARY DRIVE

SA TOMORROW
multimodal transportation plan

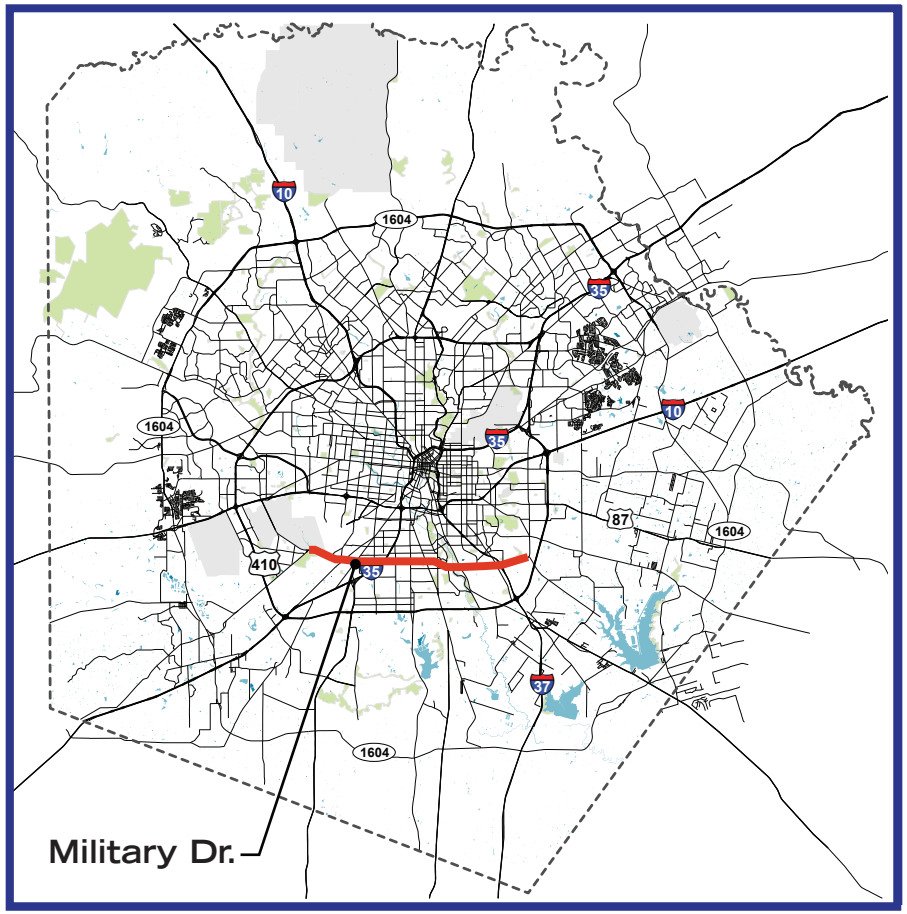
Military Drive Corridor Overview

CONTEXT

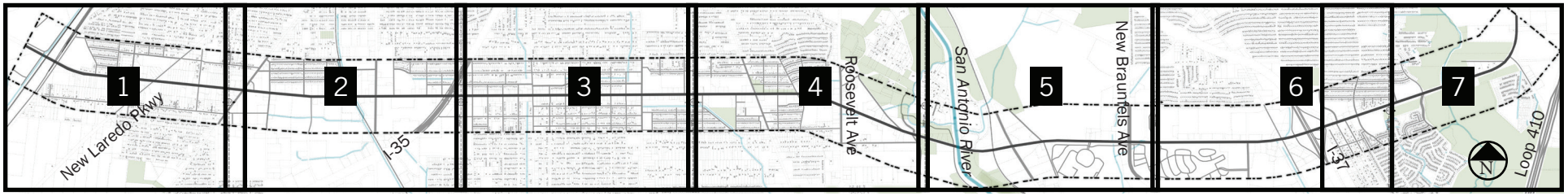
SW and SE Military Drive is a major arterial connecting regional centers at Port San Antonio and Brooks City Base. The arterial runs through south San Antonio and connects to US 90 and Interstate 37 on the east side. SW Military Drive is typically a seven lane road, but a raised median has been installed from Zarzamora to Curtis and from the San Antonio River to Interstate 37.

While not currently over-congested, traffic volumes will increase since the road serves as the primary east-west arterial in south San Antonio and provides connections to Interstates 35 and 37. SW Military also has high pedestrian volumes and high transit ridership. However, between 2012 to 2014, there were 32 crashes involving pedestrians on the corridor, three of them fatal. There are currently no bicycle facilities on SW Military, but cyclists use the nearby trails along the San Antonio River and a connection would provide safer access. There were nine bicycle crashes on the corridor over a three year period, one of them fatal. VIA has designated the corridor as a future Primo transit route. VIA has also identified New Braunfels Ave and the Rockport Subdivision rail line as potential high capacity transit services that would intersect with the corridor.

Land uses along SW Military are commercial; ranging from small retail stores to superstores and a major shopping center, Southpark Mall. Areas around SW Military are primarily residential. SE Military Drive crosses the San Antonio River and provides access to the Mission Reach of the San Antonio River Walk. Roosevelt Avenue connects to Mission San Jose, approximately a quarter mile north of SW Military. The Missions were designated a World Heritage Site and are a popular destination, along with the Mission Reach, for bicyclists.



Military Dr Sheet Set Key — *10.3 Miles*



Observations, Challenges & Vision

Vision

The **SW and SE Military** corridor is envisioned as a multimodal corridor, better serving the already high transit ridership and pedestrian volumes as well as bicyclists through better facilities, services, and more compatible land uses.

Future

- VIA Transit identified on SW Military.
- 2040 Volumes--Daily volumes on SW Military will increase by 90% reaching 45,000 vehicles per day by the year 2040.
- Lone Star Rail is planned to intersect with the corridor at the Rockport Subdivision Railroad alignment.
- Future level of service (LOS)--SW Military will operate at LOS F at all major intersections in 2040.
- Growth Rate--the annual growth rate along SW Military is projected to be about 3% based on data in the Alamo Area MPO model.
- S.W. Military Drive between Hwy. 90 and Old Pearsall Road will undergo a road diet, making it compatible for multimodal transportation with extensive median landscaping and other beautification work.
- A new Southside connection to the Howard W. Peak Greenway Trails is planned. The cycle track and sidewalks along S.W. Military Drive will connect the northern trail head of the Leon Creek Greenway Trail to the southern trail head at Pearsall Park.

Policy & Guidance

Access Control– Strategically close driveways to improve pedestrian paths reduce conflict and minimize driveways adjacent to intersections. Extend the median concept throughout the corridor.


North-Corridor Street Condition


VIA Bus Stop on Military Dr


Attached Sidewalk


Planted Median


Pedestrian Bridge Entrance

Pedestrian Bridge over Military Dr

Policy & Guidance Continued

Zoning – Create an overlay that guides development compatible with the plans for high capacity transit. Consider station area plans for locations near future high capacity transit stations in order to encourage density and transit use.

Vision Zero – Focus on safety for all modes of travel in this corridor, choosing improvements that incorporate design features that protect people biking and walking from vehicular traffic.

Issues

Roadway –Current land uses emphasize vehicle use,and congestion is expected to worsen. Several intersections have experienced a large number of crashes such as Interstate 35, Interstate 37, Roosevelt, and Goliad.

Transit – The corridor has high ridership but few amenities that complement transit service. Barrieris to transit include narrow sidewalks and large parking lots fronting the corridor.

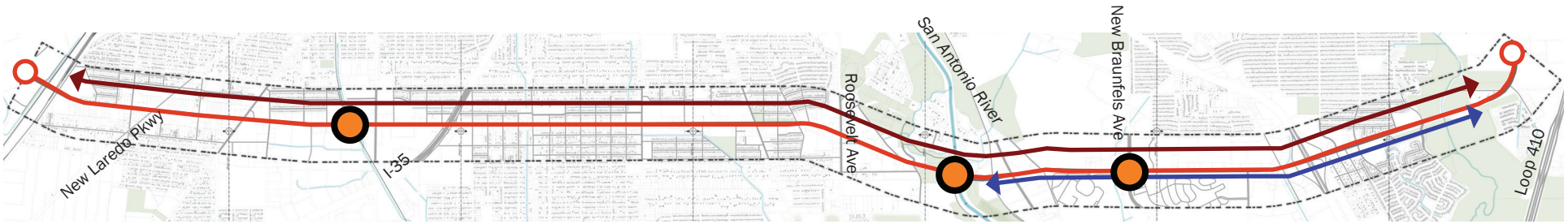
Bicycles –No bicycle facilities exist on SW Military. If bicycles are accommodated, it should be done as a separated facility because of high vehicular speeds and volumes. A grid network of residential streets surrounds the corridor west of the San Antonio River, but there are currently no marked bicycle routes. East of the river, bicycle options are limited for routes parallel to the corridor.

Pedestrian – The corridor had 32 crashes involving pedestrians over a three year period, including three fatalities. High speeds, high traffic volumes, and wide crossing distances create potential hazards for pedestrians.

Land Use – More mixed use developments along the corridor would better complement the improved transit corridor. As redevelopment occurs main street type development would be more compatible with the adjacent neighborhoods.

Long Term Multimodal Options

Future Option 1: Curb Running BRT + Parallel Bike Route



Strategies

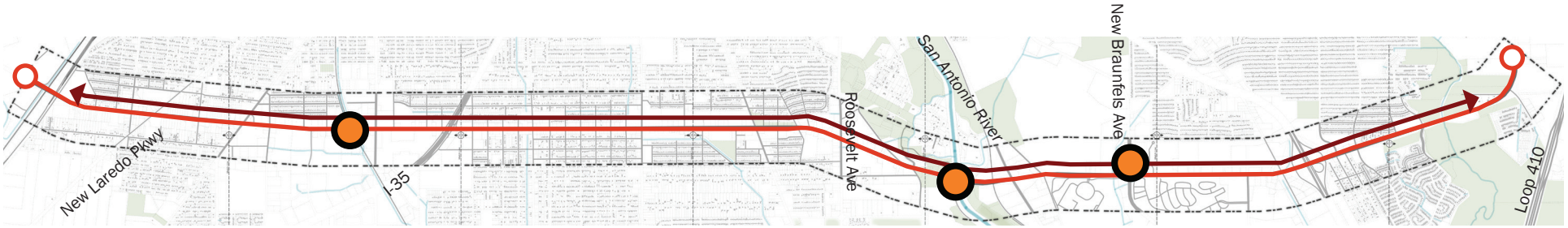
Curb running BRT for the length of the corridor.

Identify parallel routes for bikes.

East of the river, the wider ROW may also accommodate bike facilities on the corridor.

Prioritize redevelopment at potential multimodal nodes such as S New Braunfels Ave, the Rockport RR crossing, and the San Antonio River.

Future Option 2: Mixed Flow BRT + Buffered Cycle Track



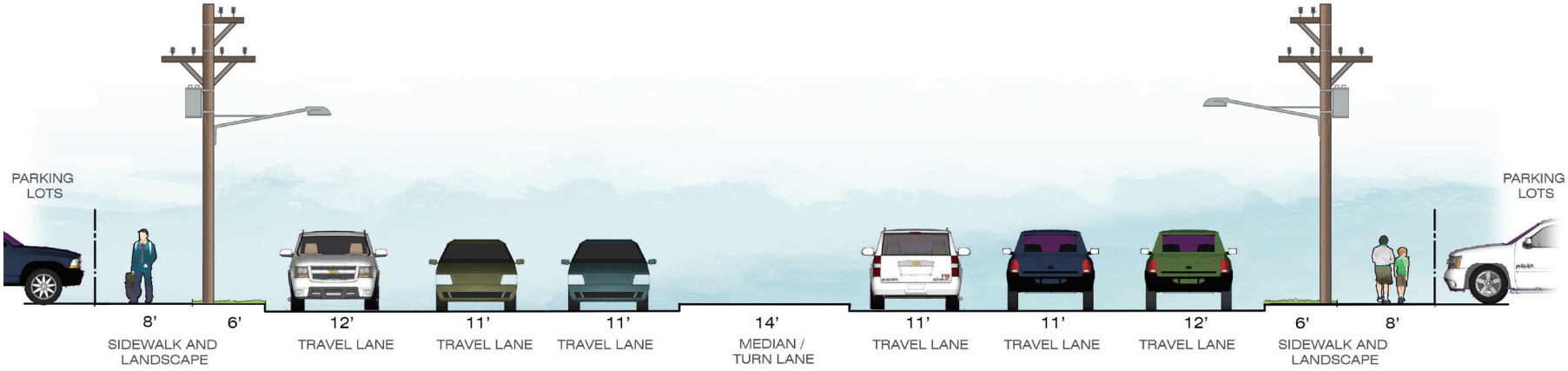
Strategies

Mixed flow BRT for the length of the corridor.

Buffered cycle tracks for the length of the corridor.

Prioritize redevelopment at potential multimodal nodes such as S New Braunfels Ave, the Rockport RR crossing, and the San Antonio River.

Typical Section



EXISTING SECTION: MILITARY DR: QUINTANA TO IH 37

Existing Cross Section

As a six lane divided section, SW Military will operate at LOS F at all major intersections in 2040. Reducing the number of lanes will further increase congestion, however, with the projected 2040 volumes, SW Military will be congested under any configuration. As the primary east-west arterial in south San Antonio, reliable travel modes along the corridor could improve overall mobility as well as spur land use changes.

The removal of a travel lane on SW Military will increase congestion on what will already be a congested corridor in 2040. A traffic analysis in Synchro shows that an approximately ten percent reduction in traffic volumes will be required for levels of delay in 2040 on SW Military with four lanes to be that of the six lane roadway with the 2040 projected volumes.

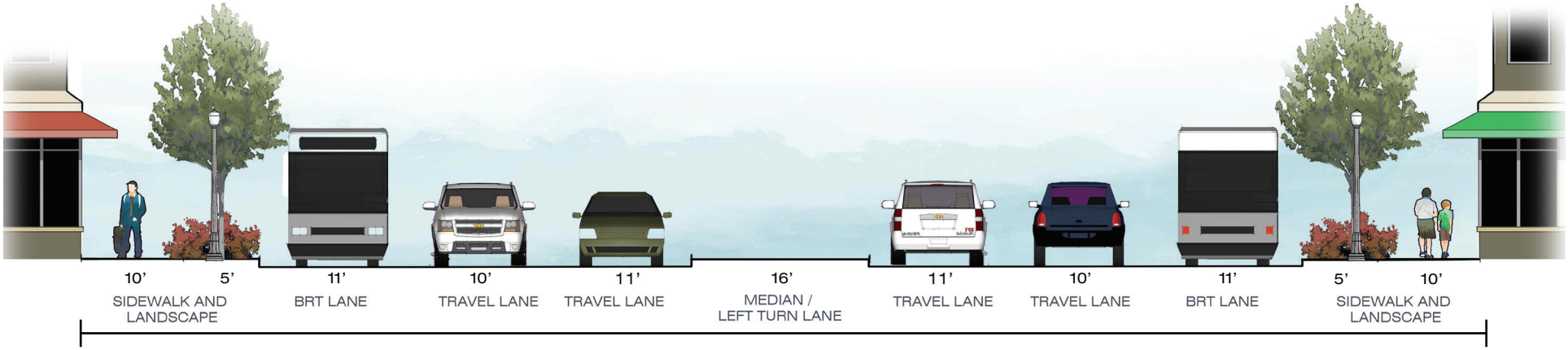
The 2040 projected peak hour volumes, for the peak direction of travel are approximately 2,000 vehicles per hour. For vehicle delays with future options to be similar to delays with the existing geometry in 2040, approximately 200 persons per hour will need to shift from vehicles to other modes. BRT service at ten minute headways can have a capacity of approximately 600 passengers per hour.

Long Term Multimodal Options

Multimodal Opportunities

The SE/SW Military corridor is a major arterial connecting to other high-volume facilities such as IH 37, IH 35 and US Highway 90. Connections are also provided to key destinations such as Mission Reach along the San Antonio River. The corridor also provides important access to economic generators including the Port San Antonio and Brooks City Base. These connections and destinations make this corridor a candidate for multimodal options. Transit service is already offered along the corridor by VIA and the high ridership shows it is well used. The roadway currently carries 40,000 to 60,000 vehicles per day with the highest volumes located near IH 35. Both corridor concepts result in the removal of a lane, increasing congestion. However, they also provide an alternative travel option with the ability to carry more people.

Future Option 1: Curb Running BRT + Parallel Bike Route



MILITARY DR: QUINTANA TO IH 37

Description:

This option provides BRT service in a dedicated lane. As a curb running BRT, right-turns will still be allowed in the transit lane. By removing the bus from the general purpose lane, it will not experience the congestion along the roadway, and rapid, reliable transit service is possible. The BRT lane could also be designated a HOV lane to incentivize car pooling. A dedicated, premium transit service also has the potential to create transit oriented development along the corridor. Dense, mixed use developments can create communities not reliant upon cars. The BRT service can also connect to proposed BRT service on Zarzamora and New Braunfels and help create a city-wide network of premium transit. Providing a dedicated transit lane will not leave room within the right-of-way for bike facilities along the corridor. However, a good grid network of residential streets surrounding the corridor can provide a bike route.

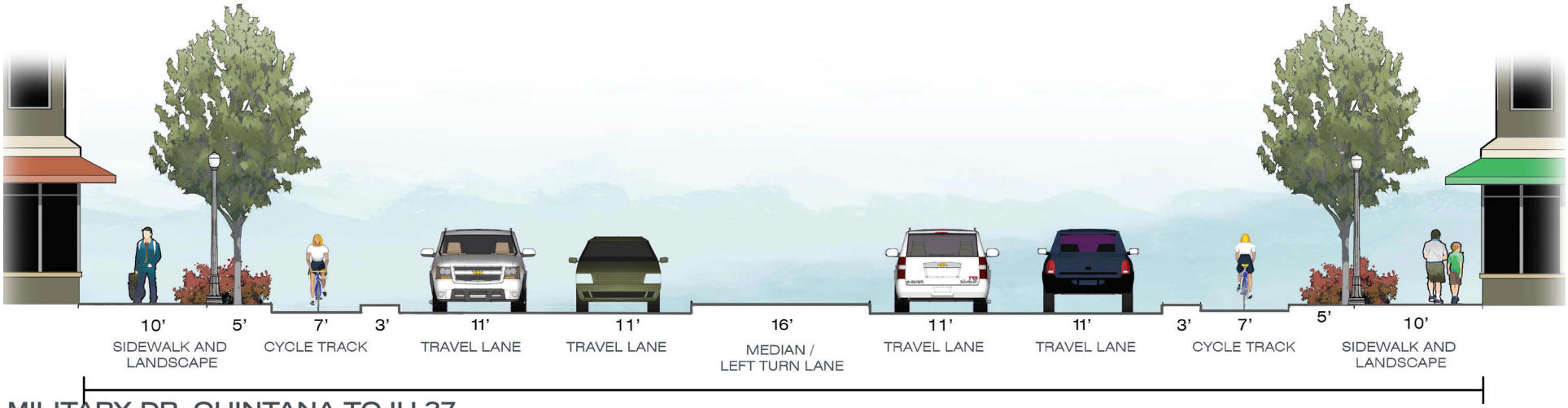
Opportunities:

- Existing high transit ridership provides a good foundation to build upon with a high capacity mode with more frequent service.
- A dedicated lane for BRT vehicles only will provide faster travel times for transit patrons and prevent BRT vehicles from operating in congested conditions. It will also encourage a mode shift.
- There is a good street network grid that will allow access to/from the corridor for bicyclists and pedestrians, creating strong connections to the adjacent neighborhoods.
- Key economic generations, and major attractions along the corridor will support a multimodal transportation solution.

Challenges:

- Locations with high frequencies of crashes demonstrate a need for safety improvements along the corridor and at key locations.
- Closely spaced and numerous driveways create pedestrian, bicycle and vehicle conflicts and contribute to the frequency of angle and left-turn crashes.
- High existing volumes and very high projected volumes will create significant congestion and poor or failing LOS at intersections.

Future Option 2: Mixed Flow BRT + Buffered Cycle Track



MILITARY DR: QUINTANA TO IH 37

Description:

This option accommodates bikes on SW Military with a separated cycle track, providing safe accommodation for bikes along the corridor. This cycle track can provide a connection to trails along the San Antonio River as well as direct access to businesses along the corridor. Sidewalks behind the cycle tracks further separate pedestrians from traffic. At transit stations, the cycle track can transition behind the stations to allow direct boarding. Transit will be mixed flow. While high frequency service can be provided, it will operate in the congested travel lanes and not be as rapid or reliable as service in a dedicated lane.

Opportunities:

- Existing high transit ridership provides a good foundation to build upon with a high capacity mode with more frequent service.
- There is a good street network grid that will allow access to/from the corridor for bicyclists and pedestrians, creating strong connections to the adjacent neighborhoods.
- Key economic generations, and major attractions along the corridor will support a multimodal transportation solution.
- Barrier separated bike facility will appeal to greater population of bicyclists who are not comfortable riding in traffic or without a separation. Providing connectivity to the Mission Reach will appeal to families.

Challenges:

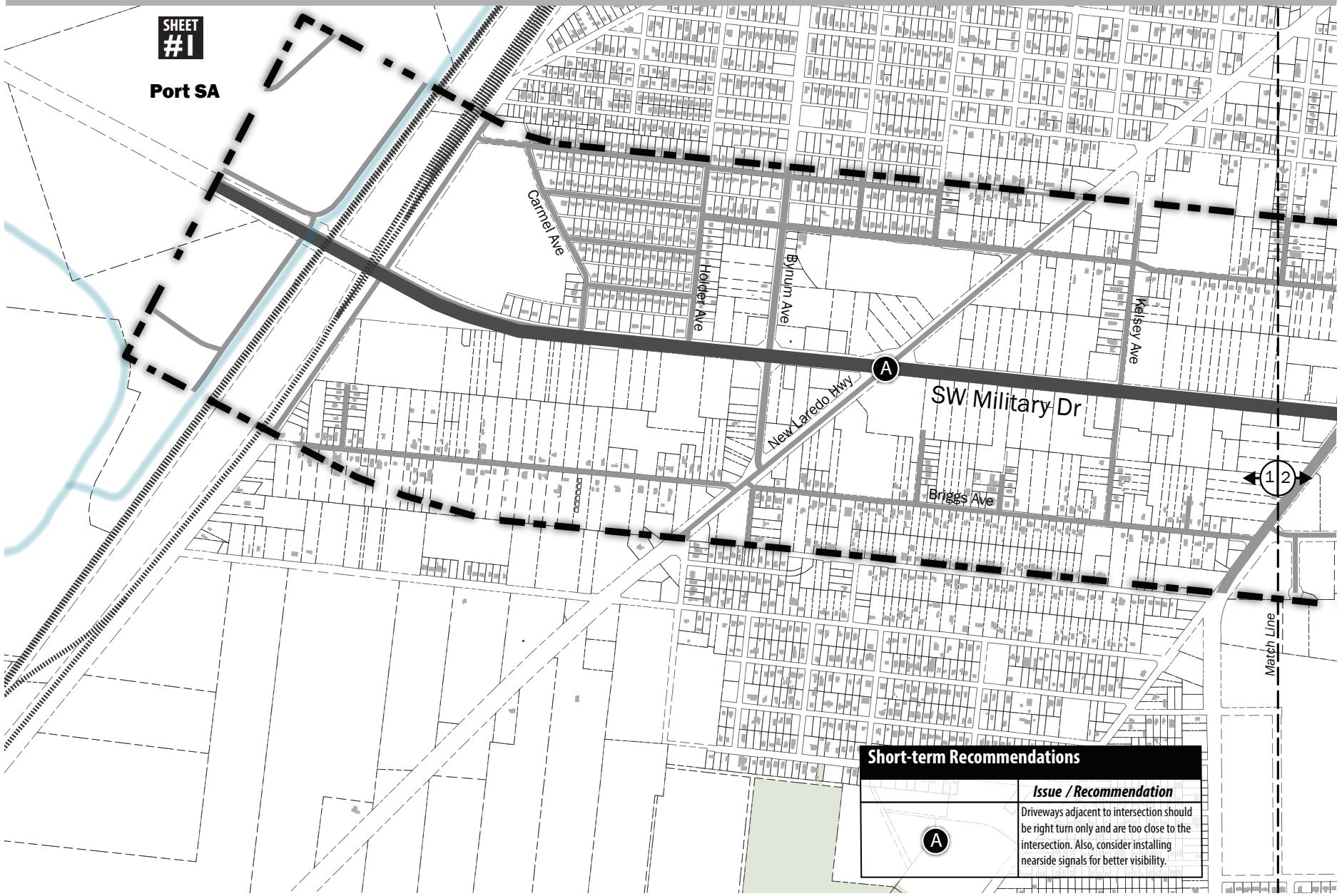
- Locations with high frequencies of crashes demonstrate a need for safety improvements along the corridor and at key locations.
- Closely spaced and numerous driveways create pedestrian, bicycle and vehicle conflicts and contribute to the frequency of angle and left-turn crashes.
- High existing volumes and very high projected volumes will create significant congestion and poor or failing LOS at intersections.
- Transit will be mixed with the general traffic flow and will be subject to the same level of congestion increasing travel times for transit patrons.

Corridor Recommendations

Transit	Pedestrian	Bicycle	Vehicular	Land Use	Recommendations	Benefits
	■			■	Bury overhead utilities	Relocating utilities below grade will improve the pedestrian environment and help the corridor achieve ADA compliant facilities.
	■	■	■		Reduce driveway density	Consolidating driveways will concentrate turning movements to appropriate areas. This will reduce the number of conflict points between cyclists, pedestrians, and vehicles.
		■			Identify and designate parallel bike routes	If a dedicated bike route is not appropriate for Military, consider an adjacent route that can serve as a viable alternative. The careful creation of a direct route will be essential to promoting bicycle movements within this suburban-context corridor.
■				■	Establish high capacity transit on the corridor	Establishing high capacity transit facilities on Military will help to direct future growth to appropriate locations on the corridor, allowing for the avoidance of future vehicular congestion.
	■				Improve pedestrian facilities and identify opportunities for mid-block crossings to shorten distances to crossings.	Military Drive is suburban in form; with long block faces and a discontinuous street network, offering limited alternative routes for transit modes. The addition of mid-block crossings can help to make pedestrian travel safe and accessible.
	■	■	■		Install medians throughout corridor	The instillation of medians will help to direct vehicular turning movements to specific locations and provide refuge for pedestrians crossing the roadway.
■	■	■		■	Prioritize redevelopment at potential multimodal nodes such as S New Braunfels Ave, the Rockport RR crossing, and the San Antonio River	Combining transit with new development allows growth to be directed to locations that are positioned to take full advantage of mobility options. The availability of multiple transportation options can help to alleviate vehicular pressure on streets.

Transit Improvements | Pedestrian Improvements | Bicycle Improvements | Vehicular Improvements | Land Use Improvements

SUBURBAN STREET GRID

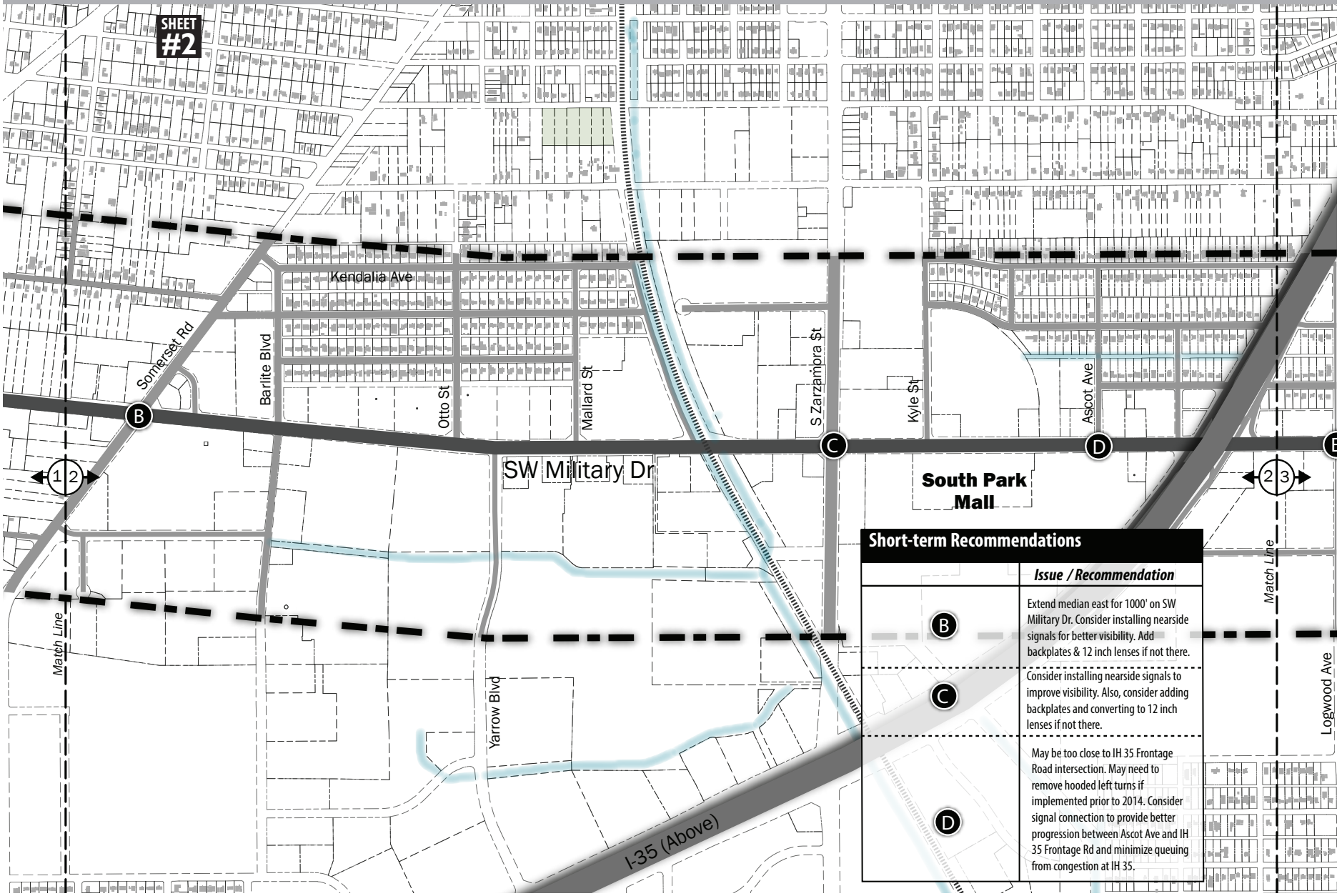


SW Military Dr Corridor Analysis: Sheet 1 Short Term Recommendations

Open Space
Study Area

0' 100' 200'

SUBURBAN



Short-term Recommendations

	Issue / Recommendation
B	Extend median east for 1000' on SW Military Dr. Consider installing nearside signals for better visibility. Add backplates & 12 inch lenses if not there.
C	Consider installing nearside signals to improve visibility. Also, consider adding backplates and converting to 12 inch lenses if not there.
D	May be too close to IH 35 Frontage Road intersection. May need to remove hooded left turns if implemented prior to 2014. Consider signal connection to provide better progression between Ascot Ave and IH 35 Frontage Rd and minimize queuing from congestion at IH 35.

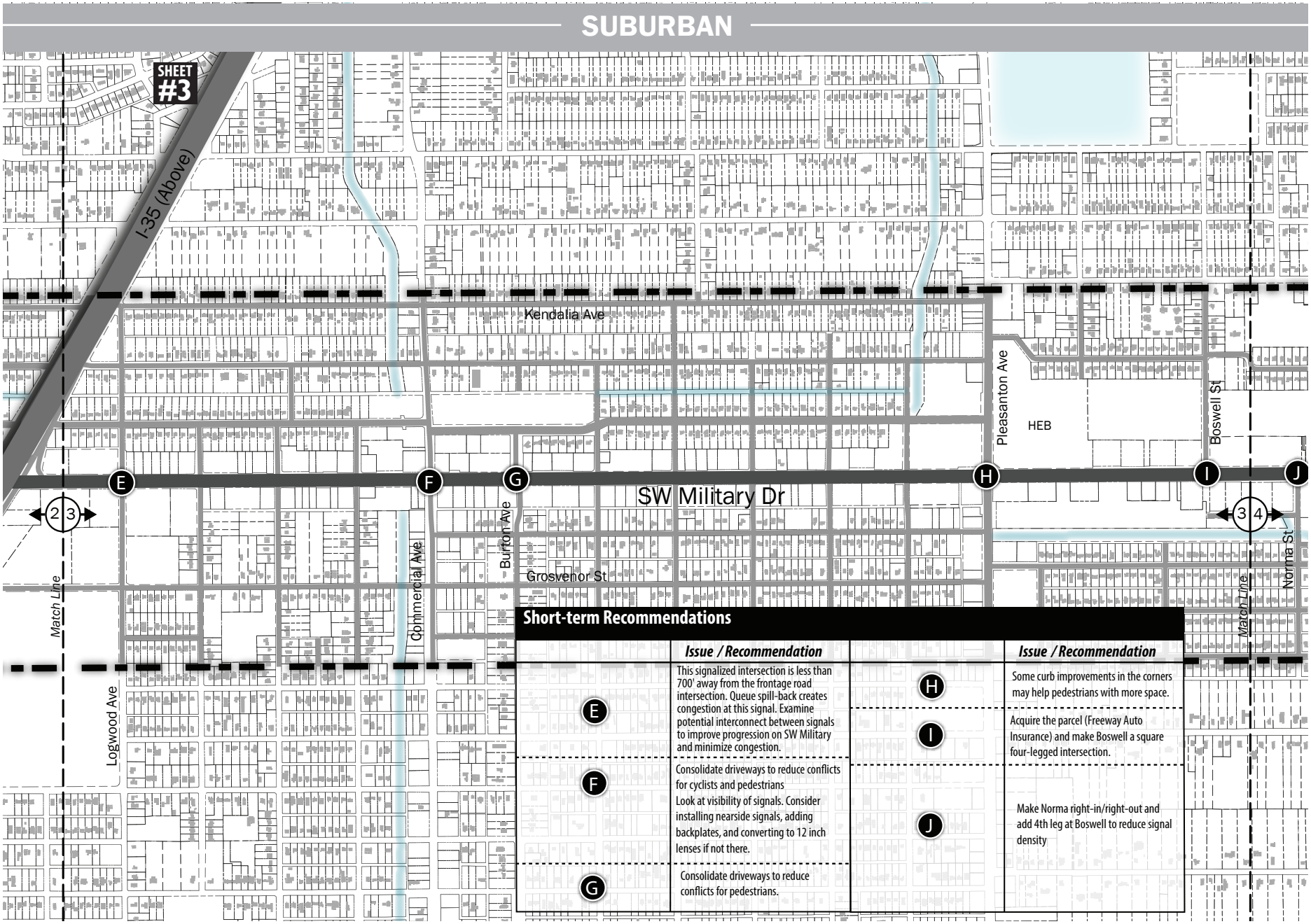
SW Military Dr Corridor Analysis: Sheet 2 Short Term Recommendations

Open Space
Study Area

SA TOMORROW

0' 100' 200'

SUBURBAN



Short-term Recommendations

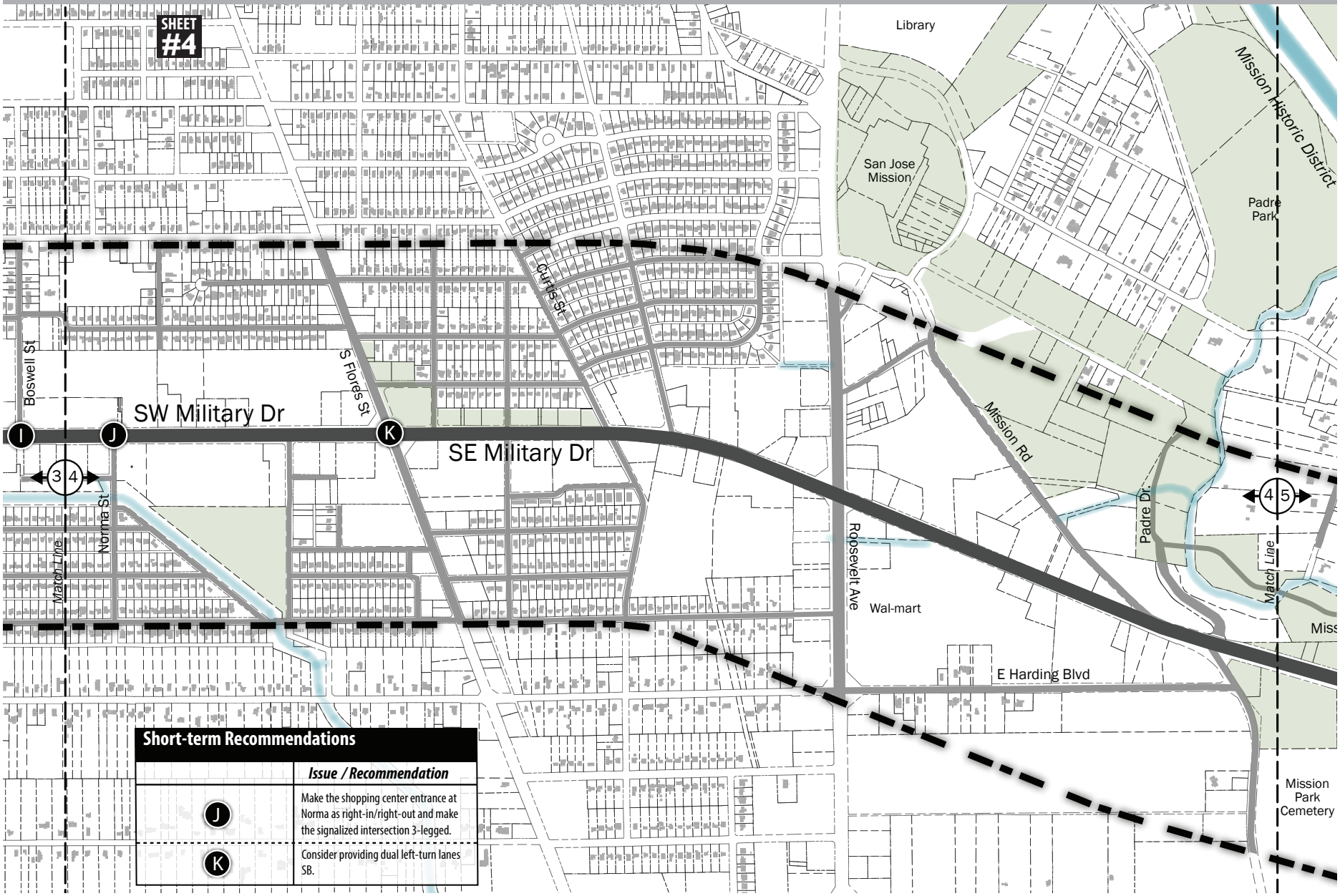
	Issue / Recommendation		Issue / Recommendation
E	This signalized intersection is less than 700' away from the frontage road intersection. Queue spill-back creates congestion at this signal. Examine potential interconnect between signals to improve progression on SW Military and minimize congestion.	H	Some curb improvements in the corners may help pedestrians with more space.
F	Consolidate driveways to reduce conflicts for cyclists and pedestrians Look at visibility of signals. Consider installing nearside signals, adding backplates, and converting to 12 inch lenses if not there.	I	Acquire the parcel (Freeway Auto Insurance) and make Boswell a square four-legged intersection.
G	Consolidate driveways to reduce conflicts for pedestrians.	J	Make Norma right-in/right-out and add 4th leg at Boswell to reduce signal density

SW Military Dr Corridor Analysis: Sheet 3 Short Term Recommendations

Open Space
Study Area

SA TOMORROW 0' 100' 200'

SUBURBAN



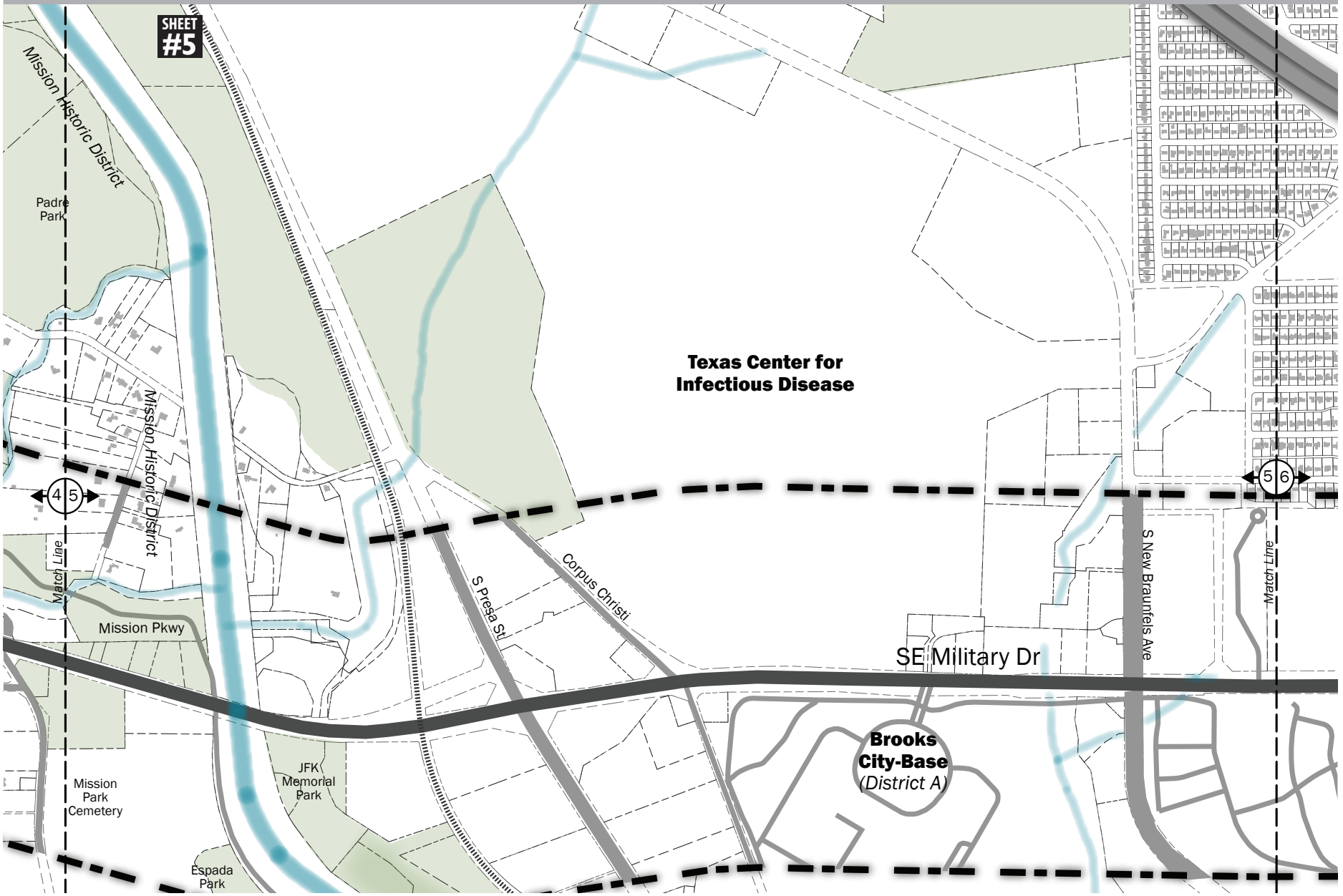
SE Military Dr Corridor Analysis: Sheet 4 Short Term Recommendations

Open Space

Study Area

0’ 100’ 200’

SUBURBAN



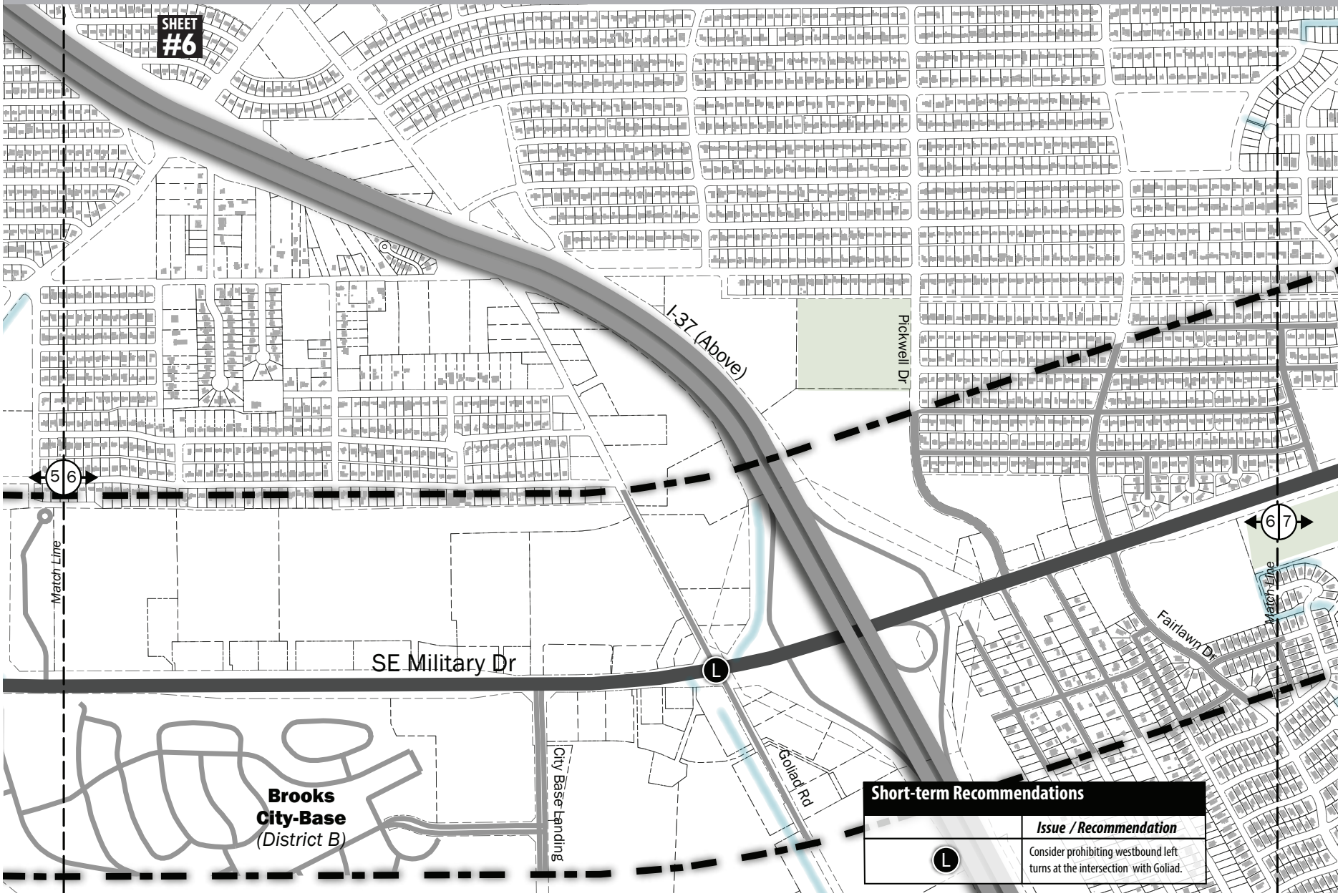
SE Military Dr Corridor Analysis: Sheet 5 Short Term Recommendations

Open Space

Study Area

0’ 100’ 200’

SUBURBAN



SE Military Dr Corridor Analysis: Sheet 6 Short Term Recommendations

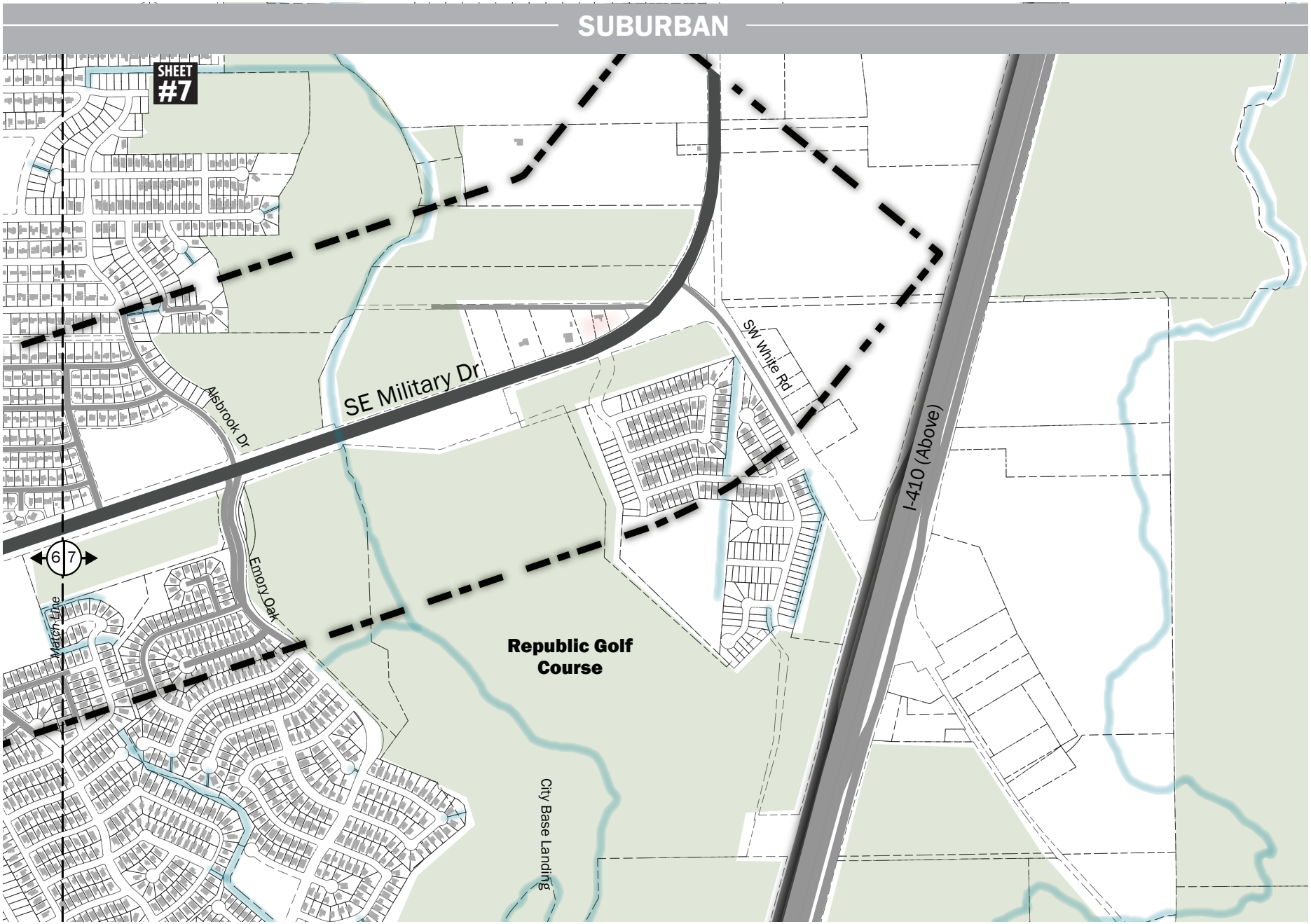
Open Space

Study Area

SA TOMORROW

0’ 100’ 200’

SUBURBAN



SE Military Dr Corridor Analysis: Sheet 7 Short Term Recommendations

Open Space

Study Area

0’ 100’ 200’

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