Mid-Region Metropolitan Planning Organization

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TO: TCC (Transportation Coordinating Committee)

FR: Dave Pennella, Transportation Program Manager

Date: June 6, 2013

RE: **MPO Staff Recommendation and Findings**
Roadway Access Policies Change Request from City of Albuquerque for Volcano Heights Sector Plan Area

Vision and Goals of the Volcano Heights Sector Plan

The Mid-Region Metropolitan Planning Organization (MRMPO) has reviewed the Volcano Heights Sector Plan (VHSP) and finds it to be in conformance with the 2035 Metropolitan Transportation Plan. The sector plan's emphasis on coordinating land-use and transportation to create a walkable, urban district and activity center that can support employment, a sustainable mix of uses, and transit-supportive development match MRMPO's current goals and key comprehensive strategies outlined in the *2035 Metropolitan Transportation Plan (MTP)*. Key strategies of the 2035 MTP are as follows:

- Expand transit and alternative modes of transportation
- Integrate land use and transportation planning
- Maximize the efficiency of existing infrastructure

It is also important to note that MRMPO recognizes the positive impact that the Volcano Heights Sector Plan can have on our regional transportation network, future economic activity, and expanded growth. In the Albuquerque Metropolitan Planning Area (AMPA), transportation planners, decision makers, and the general public alike realize that the "building our way out of congestion" approach to transportation in the region will no longer suffice. This is especially true as we are faced with limited funding sources, significant growth projections, and the mounting challenges of rising oil prices and future air quality concerns. To keep a projected population of 1.3 million moving in 2035, the strategies above must be taken into greater consideration. MRMPO believes that the Volcano Heights Sector Plan will support and work in tandem with the MTP's strategies for managing future growth.

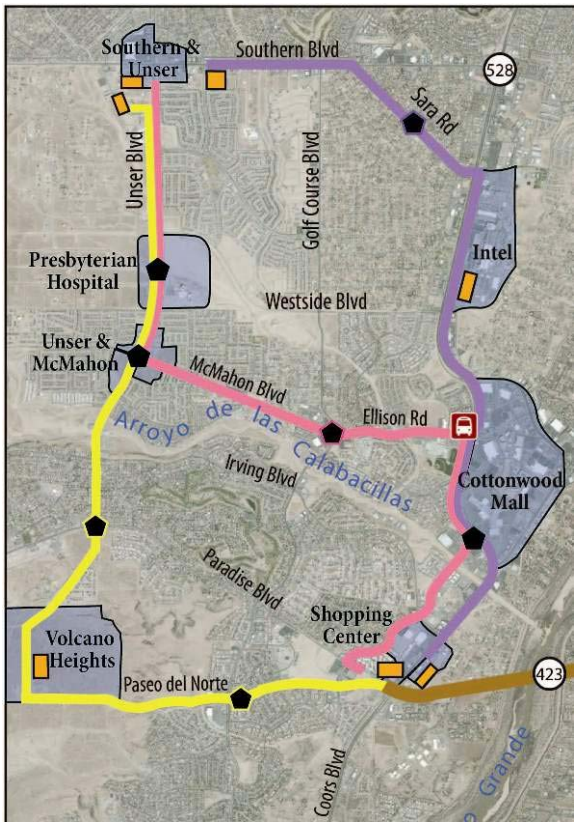
Summary and Recommendations

The vision and goals of the VHSP are consistent with the goals and objectives of the 2035 MTP. MRMPO staff recommends supporting the VHSP goals and objectives.

High Capacity Transit

The Paseo del Norte High Capacity Transit Study (HCTS), conducted by the Rio Metro Regional Transit District with the participation of MRMPO, is considering connections from northwest Albuquerque and southern Rio Rancho to the North I-25/Jefferson St corridor and other activity centers east of the Rio Grande. With its emphasis on river crossing travel, the HCTS is a critical step in achieving the regional mode share goals established in the 2035 MTP, which call for 10 percent of river crossing trips to be completed by transit by 2025 and 20 percent by 2035

The Yellow Route is the only one of three alignments proposed in the northwest portion of the study area provides connections to the Volcano Heights Town Center. The Yellow Route has the fastest travel times of the northwest alignments and the greatest potential for dedicated transit infrastructure in the long-term because of the wide rights-of-way on Paseo and Unser. It is in the highest growth portion of the study area which means it has the highest potential for long-term ridership (an estimated 6,800 riders per day in 2035 for service through Volcano Heights to the Jefferson St/Journal Center corridor and UNM), and it provides the most transit coverage to previously underserved parts of the region. Although a preferred route has not yet been selected, the Yellow Route is a logical candidate to emerge as the locally-preferred alternative alignment.



But the success of the Yellow Route really depends on creating transit supportive land uses, and a critical site in the Yellow Route alignment is the station at Volcano Heights. The current area around Volcano Heights is generally difficult to serve with transit because few locations have high enough densities or are easily accessible. To provide opportunities to forgo some vehicle trips to make transit more viable, it is critical to develop more transit-supportive land uses. Without transit-supportive land uses, all service would be oriented around park and ride facilities. There would be little activity outside of the peak periods and it would be less efficient to provide regular service. Nevertheless, like any alignment in the northwest area, the Yellow Route also requires access to park and ride facilities since the route would draw from a large commuter-shed. It is therefore essential to accommodate both types of demands for access – motorized and non-motorized – as much as possible. In short, if Volcano Heights doesn't develop in ways similar to what is proposed in the plan, it undermines the potential of the Yellow Route.

Summary and Recommendations

In order to achieve the increased transit mode share goal passed by the MTB, the creation of high capacity transit in the northwest metro area is essential. Therefore, MRMPO staff recommends supporting the VHSP as a means of encouraging transit usage and developing alternatives to single-occupancy vehicle travel in the region.

Land Use and Transportation Coordination

The 2035 MTP stresses the symbiotic relationship between land use and transportation planning to address the region's projected traffic congestion problems. The Volcano Heights Sector Plan is an exemplary model for coordinating land use and transportation planning across multiple agencies to provide a different development pattern for Albuquerque's West Side. MRMPO recognizes the balanced approach between transportation access, land use, and the development of a walkable and bikeable mixed-use activity center. In particular, the VHSP calls for transit-supportive development patterns that enable good access to nearby services and provide multi-modal transportation options so that some trips can be made by modes other than just single-occupancy vehicle.

The Volcano Heights Sector Plan serves as a new blueprint for future development within the Albuquerque metropolitan area. The VHSP contains approximately 460 acres of vacant land within the Established Urban Area of the Albuquerque/Bernalillo County Comprehensive Plan and is located in an area long foreseen as a major activity center. The high level of land use intensity called for in the plan concentrates jobs and housing to support the presence of premium transit and more pedestrian-friendly development, and also creates shorter trip lengths to services, which encourages those trips to be made by foot, bike or transit.

The 2035 MTP clearly established that Albuquerque faces a worsening congestion crisis on its river crossings, which places a tremendous strain on the region's economy, transportation infrastructure, and limited surface transportation dollars. The VHSP offers means of alleviating mobility concerns and improving livability by providing a vital activity center for residents of Albuquerque's growing West Side.

Summary and Recommendations

The creation of transit supportive land uses is essential to the success of high capacity transit in the northwest metro area, which also supports the increased transit mode share goal passed by the MTB. The VHSP establishes a departure from the "business as usual" approach to development on the metro area's West Side. The 2035 MTP and previous MTP's have concluded that auto-oriented development is not sustainable or affordable. Continued development, in order to be sustainable and affordable, will require a new approach that fully integrates land use with transportation. The VHSP does achieve that goal. MPO staff recommends supporting the VHSP for this reason.

Housing and Employment

The severe congestion projected on the region's river crossings, and to a lesser extent the congestion on the few arterial roads on the West Side, warrants a new approach to future development on the West Side. The focus on mixed use development in Volcano Heights provides the opportunity to address the imbalance of jobs and housing on the metro area's east and west sides that hugely contributes to the region's traffic congestion. Recent analysis on projected employment and housing within the Volcano Heights area was produced by Dekker/Parish/Sabatini as part of the Paseo del Norte High Capacity Transit Study. Projections from the draft 2012 sector plan and typical community activity center densities indicate that the Volcano Heights activity center will yield nearly 4,600 jobs and more than 6,750 dwelling units. These figures vary drastically from the 2035 MTP which referred to the 2006 Sector Development Plan. The earlier version encouraged more office park and big box development land uses (shown in Table 1), whereas the VHSP encourages a greater mix of uses and emphasis on multi-family housing.

Table 1 Volcano Heights Station Area Development Potential

Potential employment & housing	2035 MTP	Volcano Heights Draft 2012 SDP
Retail employment	-	723
Other employment	-	3853
Total employment	**6520**	**4576**
Single-family dwelling units	1218	496
Multi-family dwelling units	838	6270
Total dwelling units	**2056**	**6766**

Source: Paseo del Norte High Capacity Transit Study

Summary and Recommendations

MRMPO believes that there will be an opportunity for many of the projected jobs in the area to be supplied by future residents of Volcano Heights. The proposed development creates an attractive, vibrant major activity center that provides employment opportunities, services, amenities, different housing options, land use flexibility, and transportation choices for the larger region as part of a sustainable community on Albuquerque's West Side. It will therefore enable West Side residents to make shorter trips to good and services. And as congestion continues to increase on river crossings, the opportunities to live, work, and play in the same area will become increasingly attractive to people in the region and importantly will help create a sense of place for the West Side. MRMPO staff recommends supporting the VHSP as an effective way to address the West Side's jobs-to-housing imbalance and improving access to goods and services.

Economic Development and Financial Incentives

An emerging consideration in economic development is the attractiveness of a place or region to not only employers, but future employees. Businesses are increasingly looking for urban environments that will attract young professionals, in particular places that offer a diversity of transportation and housing options. The West Side currently lacks such locations. Yet the VHSP provides an opportunity to improve the diversity of land uses and create a setting that attracts new businesses and new residents to the region, as well as retain existing residents.

In order to grow more sustainably, the City of Albuquerque might also consider the strategic use of incentives that will work to bring the vision of Volcano Heights into reality. This could be tied into a larger city-wide effort that incentivizes development that meets certain sustainability goals, is master-planned to be compact and transit-supportive, and/or incorporates form-based codes to create multi-modal districts. El Paso is a model in this regard, as it has recently instituted innovative financing and incentive strategies based on the type and location of the development. For one development in El Paso, a financial impact analysis was performed to determine the amount of property taxes expected from a conventional, suburban development pattern versus a compact, multi-modal development pattern. The multi-modal development was expected to bring in hundreds of millions of dollars more. Based on this analysis, the City of El Paso agreed to provide a property tax rebate to help cover the cost of more expensive infrastructure needed to support the sustainable development. It was a win/win for the City of El Paso and the developer, and the City continues to work with the developer to provide BRT transit service to link the development to the downtown core.

Summary and Recommendations

Development in this area will concentrate employment rather than dispersing it around the region. This will make Volcano Heights more desirable for employers because of the ease of transit access and the urban atmosphere that are attractive to potential employees and which corporations look for when selecting new business locations. This is an especially important consideration as it was recently reported that for the first time in decades New Mexico experienced negative net migration, meaning more people left the state than moved here. MRMPO staff recommends supporting the VHSP for the long-term opportunities to create value in the West Side.

Intersection Spacing on Unser Boulevard and Paseo del Norte

Paseo del Norte and Unser Boulevard are regionally significant thoroughfares with access regulated by the regional *Roadway Access Policies* of the Mid-Region Council of Governments. These policies establish the spacing of signalized intersections at ½ mile. The proposed Volcano Heights Sector Plan proposes intersections at lesser intervals.

In our review of the proposed change, spacing requirements in other states and locales were reviewed. The spacing of signalized intersections and the cycle length of traffic signals correlate to the progression speed of traffic through a given corridor. The recommended spacing of signalized intersections varies from state to state and ranges from Delaware's minimum "ideal distance of 350 feet," Georgia's urban spacing of 0.189 mile (1000 feet) minimum, to the use of signalized spacing tables based on progression speed and signal cycle length used by many other states and cities (see tables below).

Transportation Access Management Guidelines - City of Tucson
(Table 4-1 Optimum Spacing of Signalized Intersections)

Cycle Length (sec)	Operating Speed (mph)					
	30	35	40	45	50	55
	Distance in Feet with selected Mile Reference					
60	1320 ¼ mi	1540	1760 ⅓ mi	1980	2200	2430
70	1540	1800	2050	2310	2560	2830
80	1760 ⅓ mi	5050	2350	2640 ½ mi	2930	3230
90	1980	2310	2640 ½ mi	2970	3300	3630
100	2200	2570	2930	3300	3670	4030
110	2420	2830	3220	3630	4040	4430
120	2640 ½ mi	3080	3520	3960 ¾ mi	4400	4840
150	3300	3850	4400	4950	5500	6050

DelDOT Road Design Manual - Delaware Department of Transportation
(Section 7.1.6 November 2006)

"For other types of public intersections [other than driveways], there are no fixed criteria as to frequency or distance to allow the proper development of all necessary turning lanes, bypass lanes, and, if signalized, proper signal coordination. Ideally this distance should be at least 350 feet or more. Where intersections are closely spaced, several considerations should be kept in mind. It may be necessary to impose turn restrictions at some locations, prohibit pedestrian crossings, or provide frontage roads for access to intersecting roads. Where crossroads are widely spaced each at-grade intersection must necessarily accommodate all cross, turning and pedestrian movements."

Spacing of Signalized Intersections - Georgia Department of Transportation
(ww.dot.ga.gov/doingbusiness/PoliciesManuals/roads/encroachment/chapter3.pdf - Table 3-3)

Roadway Type	**Minimum Signal Spacing (in Feet)**
Rural	1320 (0.25 mile)
Urban	1000 (0.189 mile)

"The spacing guidelines provided above are indicative of conditions that normally offer better signal progression for arterial traffic flow. It is recognized that under certain conditions, better operation may result from the introduction of signals with less spacing if the alternative forces high volumes of traffic to an adjacent intersection. Consideration should be given to developing multiple access strategies to a site including access to adjacent signalized intersections. When the applicant can show, through an alternatives analysis, that better operations can be achieved with less spacing, the Department will consider an exception to the provisions of Table 3-3."

Virginia DOT Access Management Design Standards for Entrances and Intersections Dec. 28, 2007 & Transportation Research Board Access Manual, 2003

Cycle Length (in seconds)	Signalized Intersection Spacing			
	1/8 mile (600 ft)	1/4 mile (1,320 ft)	1/3 mile (1,760 feet)	1/2 mile (2,640 feet)
	Progression Speed (mph)			
60	15	30	40	60
70	13	26	34	51
80	11	22	30	45
90	10	20	27	40
100	9	18	24	36
110	8	16	22	33
120	7.5	15	20	30

Signal Spacing A Technical Memorandum October 2007 - Center for Urban Transportation Research, University of Florida

Exhibit 10: Progression Speed in mph as a Function of Signal Spacing and Cycle Length

Cycle Length (sec.)	Spacing in Miles (feet)					
	1/8-mile (660 ft.)	1/4-mile (1,320 ft.)	1/3-mile (1,760 ft.)	1/2-mile (2,640 ft.)	3/4-mile (3,960 ft.)	1-mile (5,280 ft.)
60	15	30	40	60	90	120
65	14	28	37	55	83	110
70	13	26	34	51	77	103
75	12	24	32	48	72	96
80	11	22	30	45	67	90
85	10.5	21	28	42	64	85
90	10	20	27	40	60	80
95	9.5	19	25	38	57	76
100	9	18	24	36	54	72
105	8.5	17	23	34	51	69
110	8	16	22	33	49	65
115	7.8	15.7	21	31	47	63
120	7.5	15	20	30	45	60

$$V = \text{Velocity in mph} = \frac{1.3636\ (\text{a constant}) \times \text{Spacing (in ft.)}}{\text{Signal Cycle Length (in sec.)}} = \frac{1.3636S}{C}$$

Summary and Recommendations

The sector plan integrates land-use with transportation and fully integrates high-capacity transit with compatible transit supportive land uses. The VHSP moves away from the auto-oriented approach to land development and moves toward the accommodation of various transportation modes. This will be a great help in achieving the MTB's mode share goal of 10 percent of river crossing trips to be completed by transit by 2025 and 20 percent by 2035.

At issue is the proposed spacing of signalized intersections presented in the VHSP.

Signal Spacing Polices Elsewhere: **While the current policy of ½ mile spacing is consistent with many states' and local polices, other states allow for shorter distance spacing. This indicates that other metro areas are able to sustain traffic flow with varied and lesser spacing between signalized intersections. An example of shorter signal spacing within the Albuquerque metro area is Louisiana Blvd through Uptown. However, signal spacing does not, on its own, provide for ideal traffic flow. The land uses, development patterns and the level of connectivity in an area also affect traffic conditions. If the proposed development were to be a general shopping mall and/or office park, the current signal spacing policy would work. But, such an area would then be just another auto-intensive area with a majority of trips occurring during peak hours and providing people with no opportunity to live and work in the same area and lacking a development pattern that encourages alternate modes of transportation.**

Traffic Analysis: The city's consultant conducted a traffic analysis (current ½ mile policy compared to the proposed revisions) which shows an improvement in future Level of Service (LOS) with the additional access locations as opposed to the ½ mile spacing in the current policy. Overall speeds through the area decrease only 1-3 mph. This is a clear indication that the closer spacing not only will maintain traffic flow but actually improves the LOS due to increased accessibility allowing traffic to disperse at multiple locations across an expanded roadway network. Both analyses show Paseo del Norte reaching full capacity with Unser Blvd in this area at approximately half capacity. Thus maintaining the current, signal spacing policy does not significantly affect the volume to capacity ratios.

ITS & Traffic Management: **The ability of utilizing real-time signal operations through the use of ITS from a traffic operations center to mitigate reduced signal spacing should be taken into consideration. MRMPO staff believes there is an opportunity to mitigate the effects of the VHSP's proposed shorter signalized intersection spacing by utilizing the proposed TMC (Transportation Management Center) and current and future ITS technologies. The region has programmed over $17 million to implement this traffic management facility.**

North-South Travel: **Unser Blvd in the immediate area of VHSP experiences lower traffic volumes south of Paradise Blvd than the north segment in each analysis year. This pattern is due to the fact that many commuters utilize Paradise Blvd to access the Paseo del Norte bridge over the Rio Grande rather than the intersection of Paseo del Norte and Unser Blvd. North-South traffic flow from Rio Rancho to I-40 will have additional and more direct routes to utilize in the future as Rainbow Blvd and Universe Blvd are slated for improvements, thus providing additional north-south capacity and opportunities to bypass Unser Blvd in the VHSP area. (See Select Link Analysis below.)**

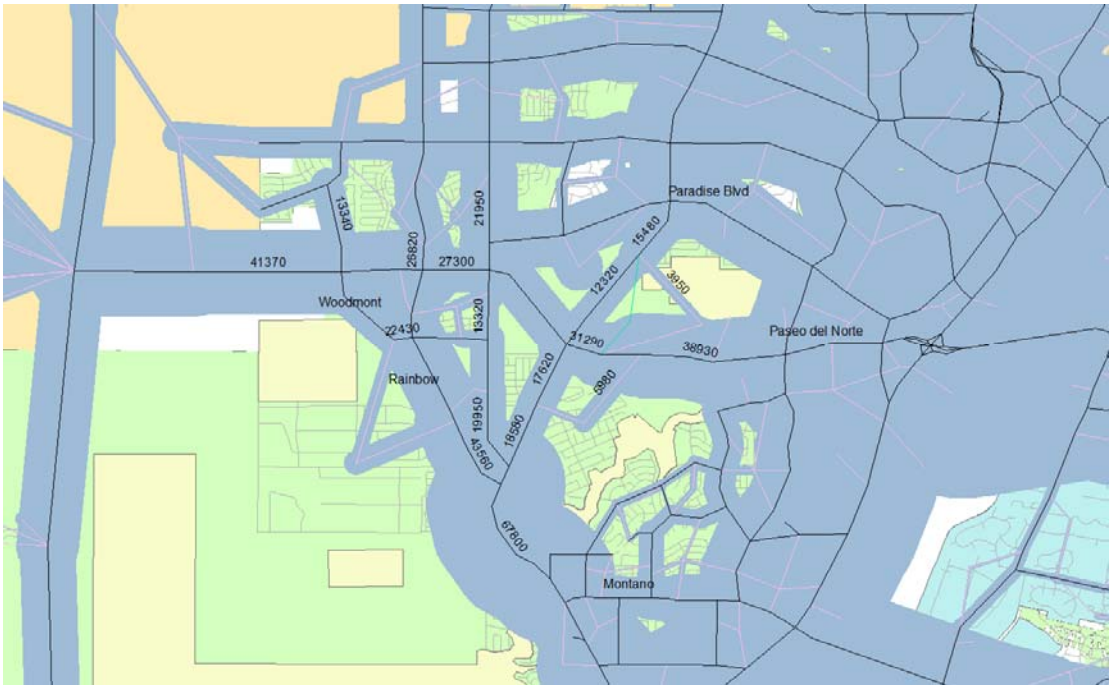
Regional and Project Area Travel Patterns

Year **2025** Travel Demand Model Interim Analysis, Volcano Heights Transportation Assessment - REVISED

The following is an assessment of the **2025** transportation scenario for the proposed Volcano Heights Sector Plan. Of particular consideration is the proposal to MRCOG's Roadway Advisory Committee (RAC) to modify access within the development on facilities currently designated as limited access. The MRCOG Travel Demand Model was used to provide a basic assessment of regional travel flow within the development, as well as a better understanding of

the regional travel flows in a larger context. This includes the flows exhibited upstream and downstream of the project area in order to provide additional information in the decision to modify access. This particular analysis should be consistent with that included in the transportation analyses included in the *Volcano Heights Multi-Modal Transportation Assessment* because the same travel model dataset and output was used. The volume data shown in the graphics below coincide with those in Figure 1-7 in the referenced assessment document.

The following graphic shows the "interim-year" **2025** raw-model volumes from the 2035 MTP.



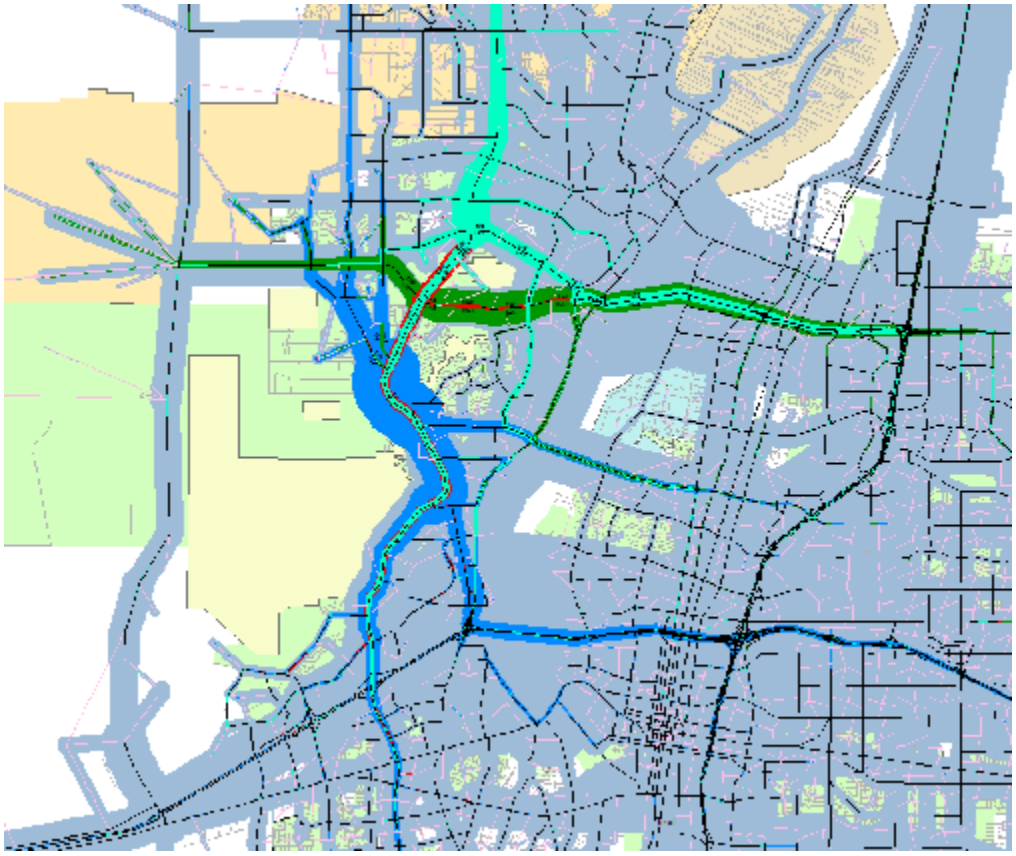
In the graphic above, travel model daily volumes are shown in gray "graduated width", meaning the thickness of the gray line is based on the volume on the link (similar to the MRCOG traffic flow map).

Additional analyses were conducted for the year 2025 per request of the RAC and are included below with the PowerPoint presentation with graphics included in Attachment A. In these analyses, the travel model was queried to reveal travel patterns associated with particular locations in the VHSP area in order to identify local and regional travel demand on the transportation network. It should be noted that Paseo Del Norte is a four lane facility east of Kimmick Road, and is two lanes west of Kimmick Road.

In viewing those model results, noteworthy observations are as follows:

- Because it is consistent with the 2035 MTP, the modeling scenario presented here does not create the level of access that the VHSP call for.
- Select-link analysis from the travel demand model was used with several locations within and adjacent to the VHSP area being selected to identify "travel markets" in the vicinity of the project area.

- There is a predominant east-west travel pattern along Paseo del Norte with many trip origins from the west of the VHSP area associated with travel flow to destinations located to the east and south.



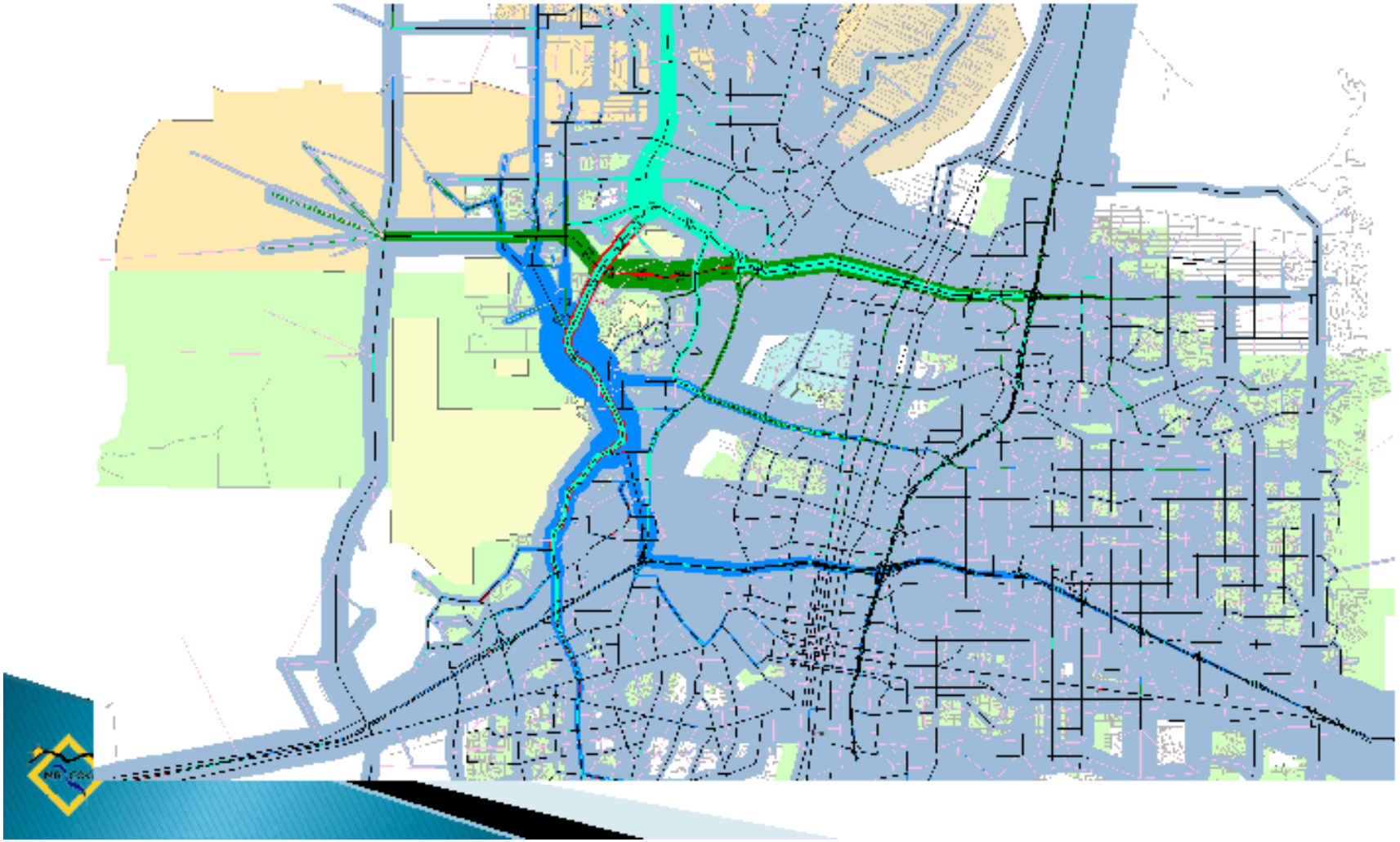
- Trips using Unser Blvd in the immediate VHSP vicinity between Paradise Blvd and Paseo del Norte demonstrate a predominant north-south travel pattern.
- Trips using Unser Blvd, represented in the select-link location north of Paradise Blvd distribute more equally, with approximately:
    - 40% of the PM trips distributing to Paradise Blvd to the east,
    - 32% distributing to the South along Unser Blvd, and
    - 31% distributing west along Paradise Blvd west of Unser.
- Trips using Unser Blvd at the location South of Rainbow Blvd show a predominance of travel contributed from the north and south, but with a notable predominance from Rainbow Blvd to the north.
    - 56% of the trips on Unser Blvd south of Rainbow Blvd are form Rainbow
    - 43% are from Unser along Both Universe Blvd (26%) and Unser Blvd north of Universe Blvd (18%)
- The non-grid network in the VHSP area presents unique travel patterns with the primary travel markets utilizing travel patterns along non-north-south, and east-west routes such as on Unser Blvd and Rainbow Blvd.
- In other words, Paseo del Norte is not the only important east-west facility in the study area. Paradise Blvd is projected to be heavily utilized as an alternative to Paseo del Norte, regardless of the access points or signal spacing in the VHSP area.

- continue to Appendices A and B -
Appendix A - MRCOG Travel Demand Model Select Link Analysis
Appendix B - Pedestrian Travel Comparison for Volcano Heights

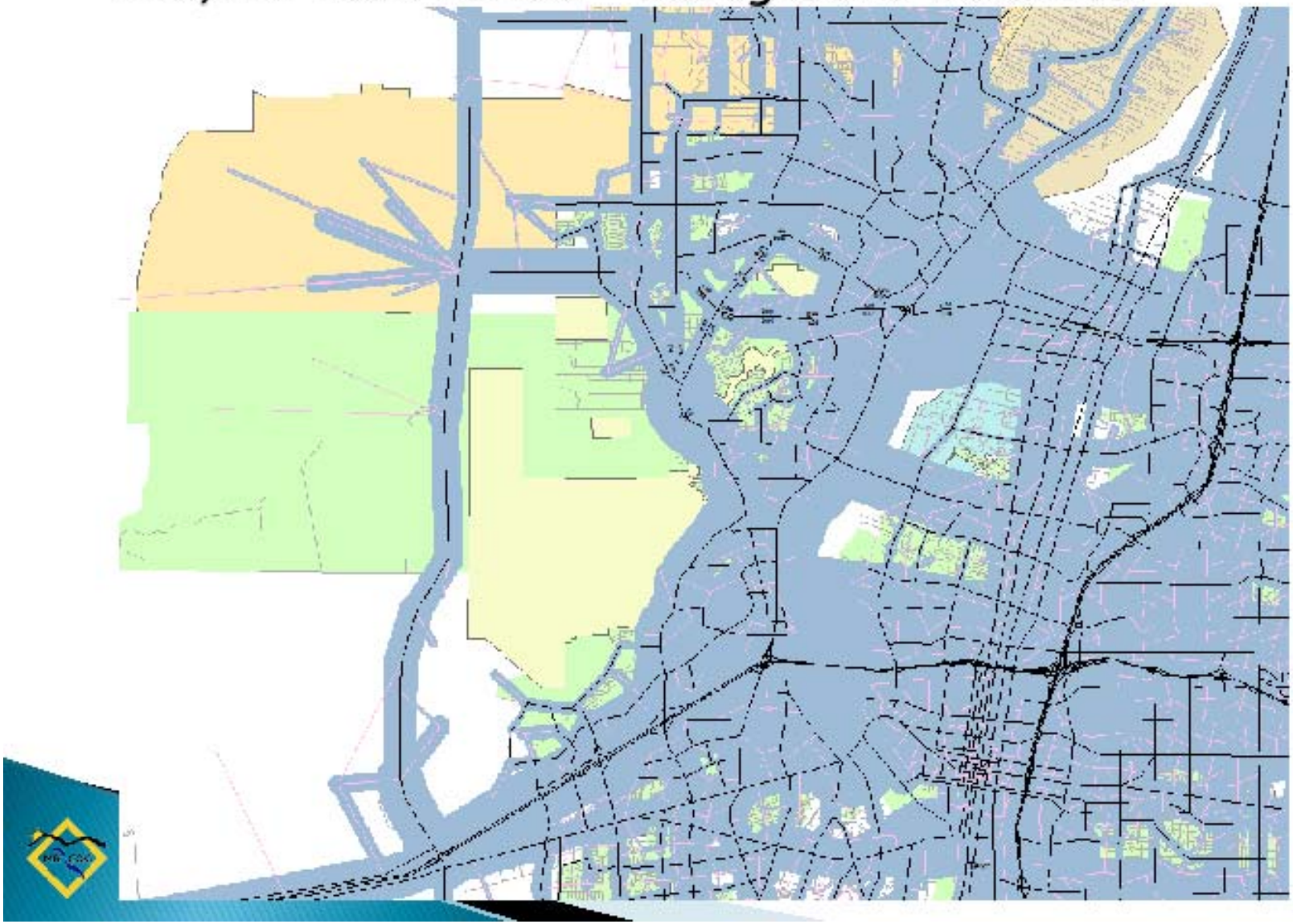
APPENDIX A

Volcano Heights Transportation Assessment
MRCOG Travel Demand Model Select Link Analysis
Year 2025 of 2035 MTP Approved Dataset

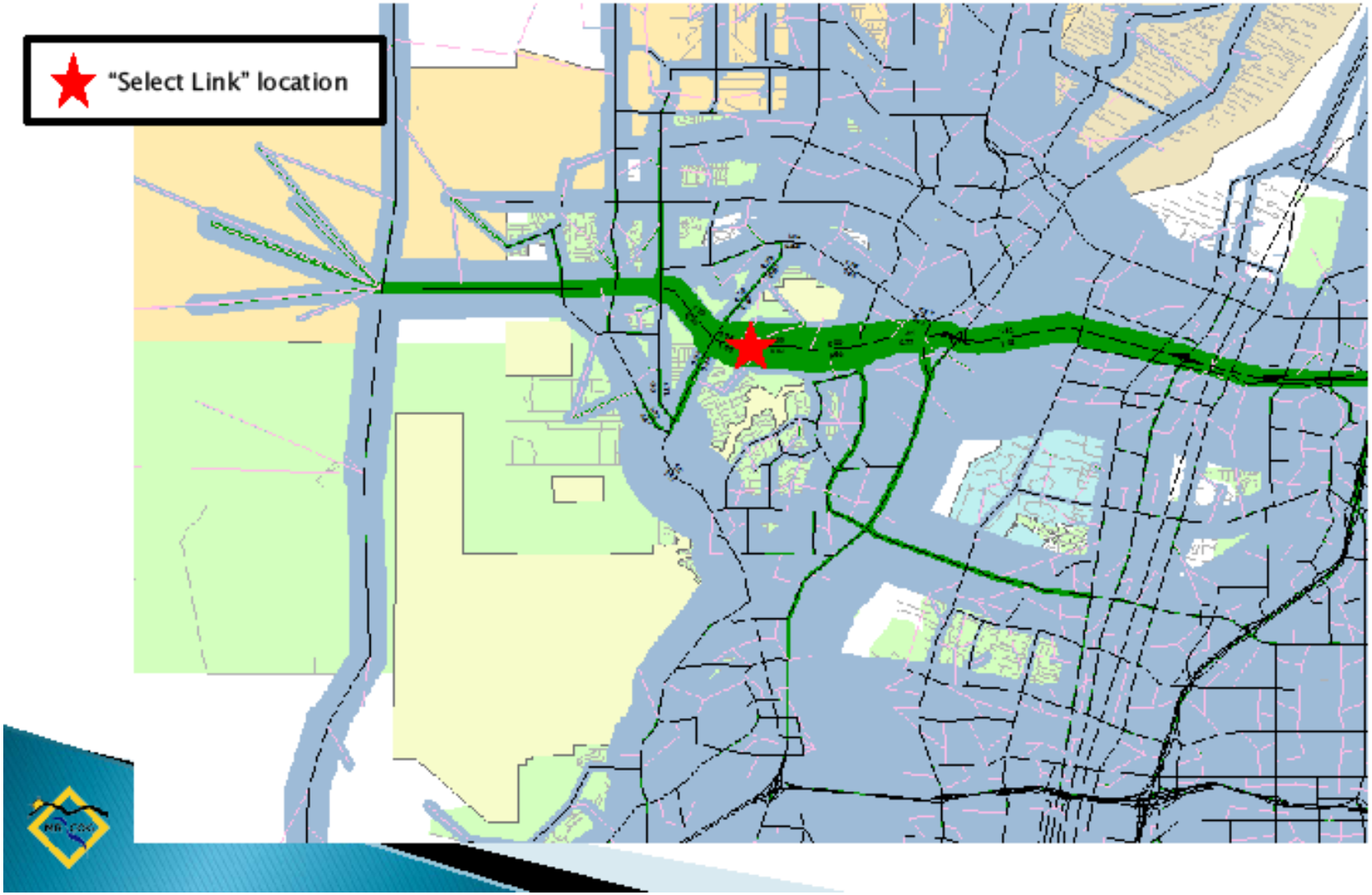
CUBE 2025 MTP Scenario, background flows/select-link travel markets for the PM Peak Period:



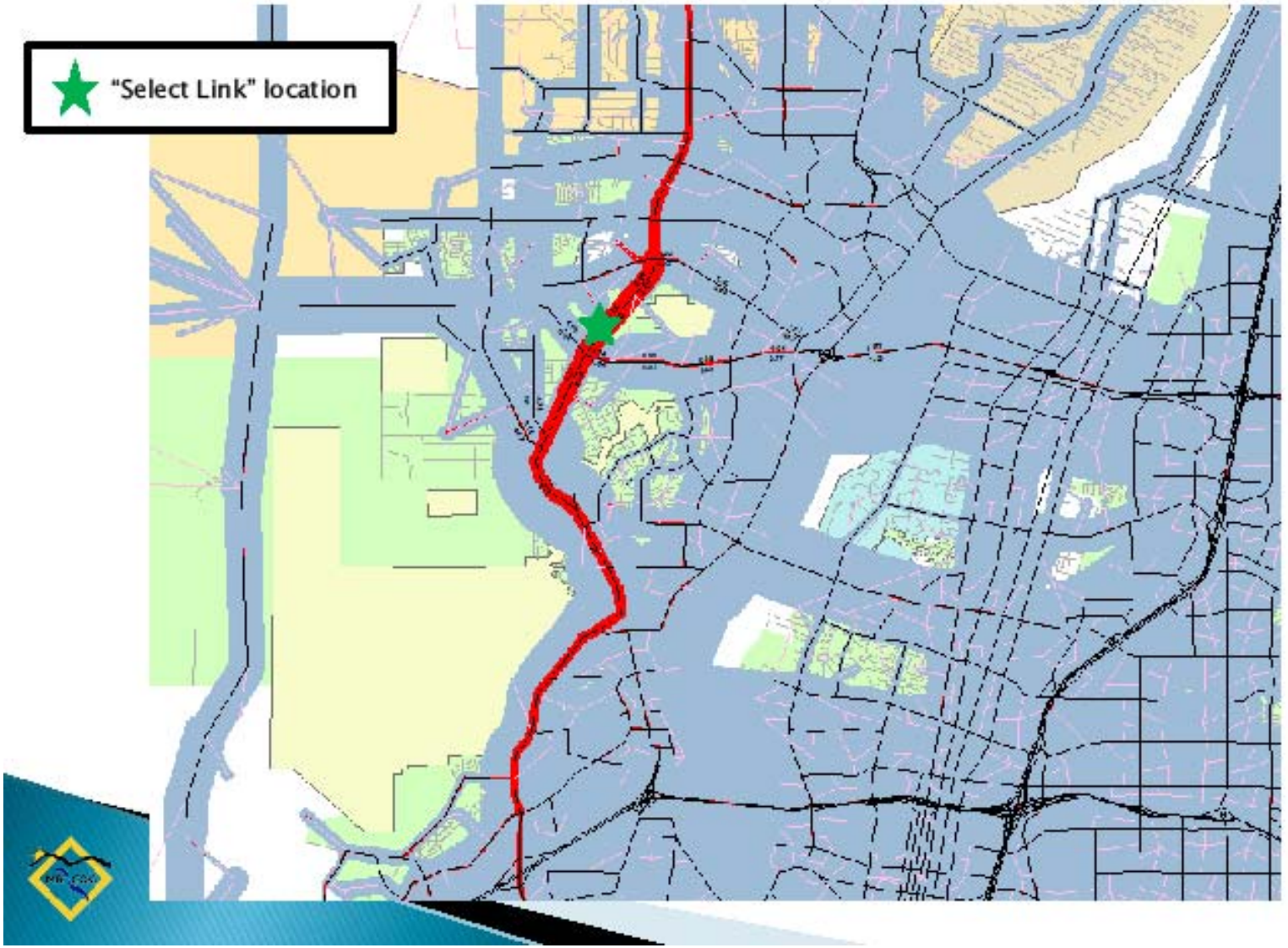
CUBE 2025 MTP Scenario, associated flows/select link, PM Peak Period – Background Volumes:



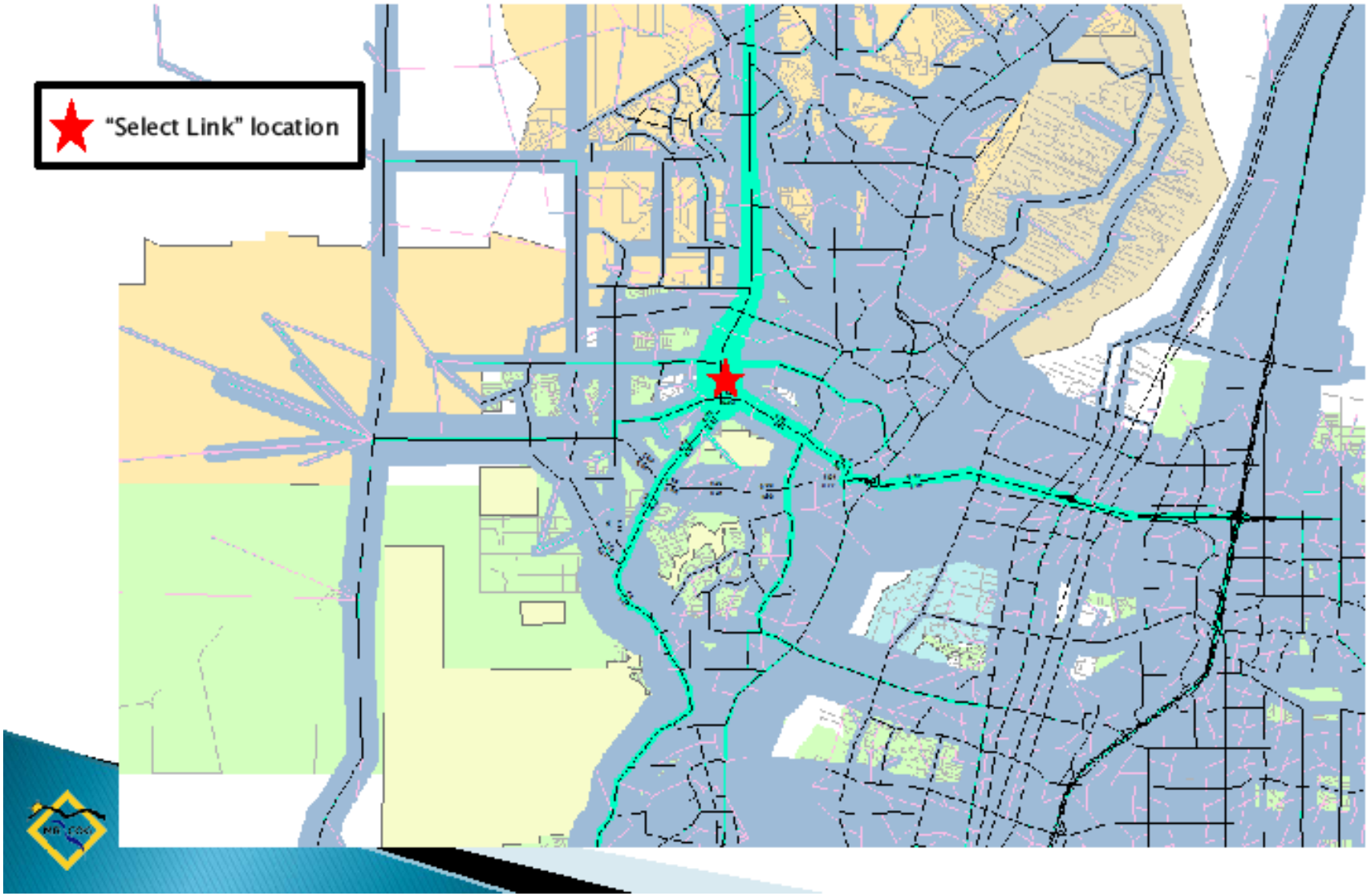
CUBE 2025 MTP Scenario, associated flows/select link, PM Peak Period – PdN East of Unser:



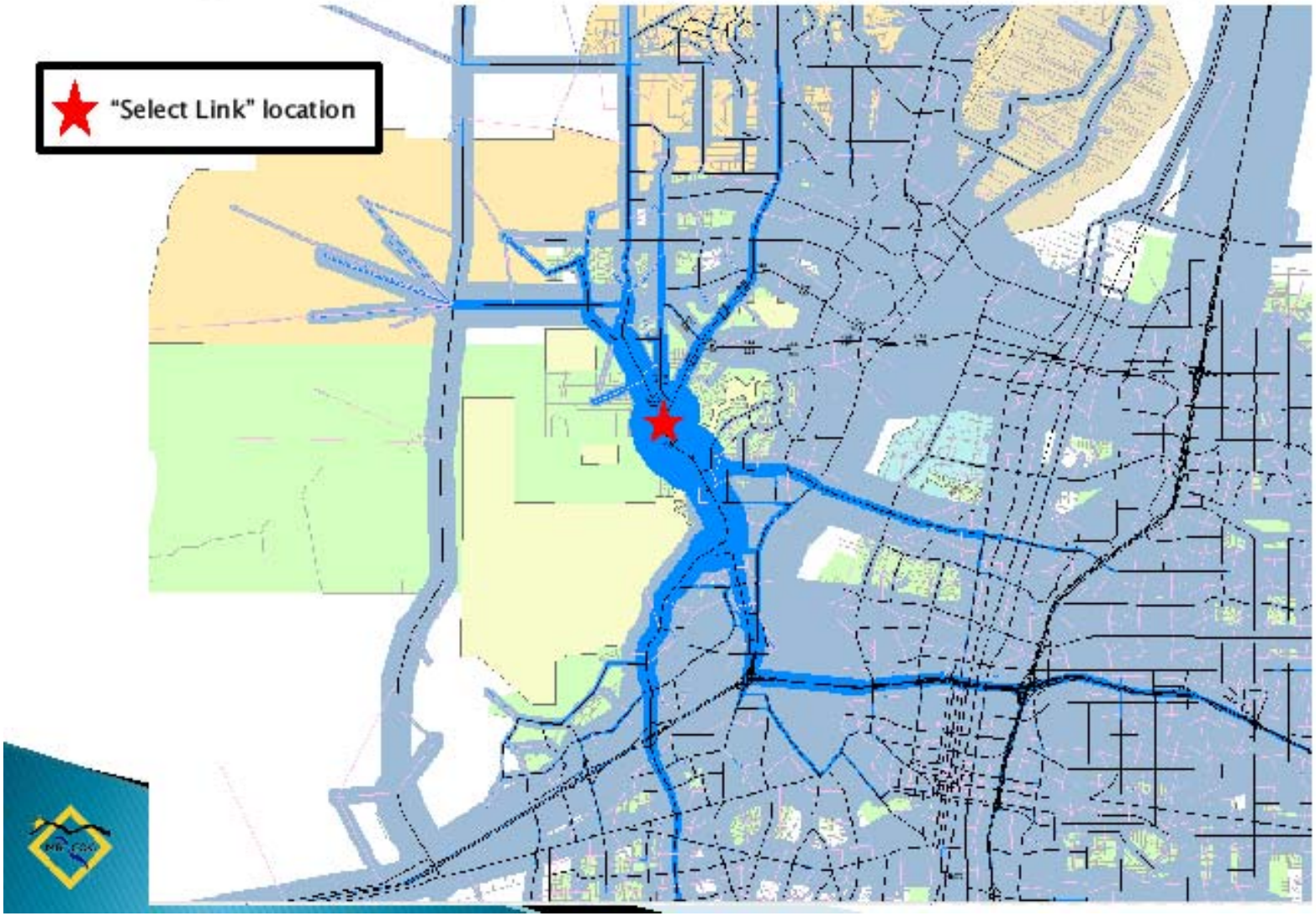
CUBE 2025 MTP Scenario, associated flows/select link, PM Peak Period – Unser North of PdN:



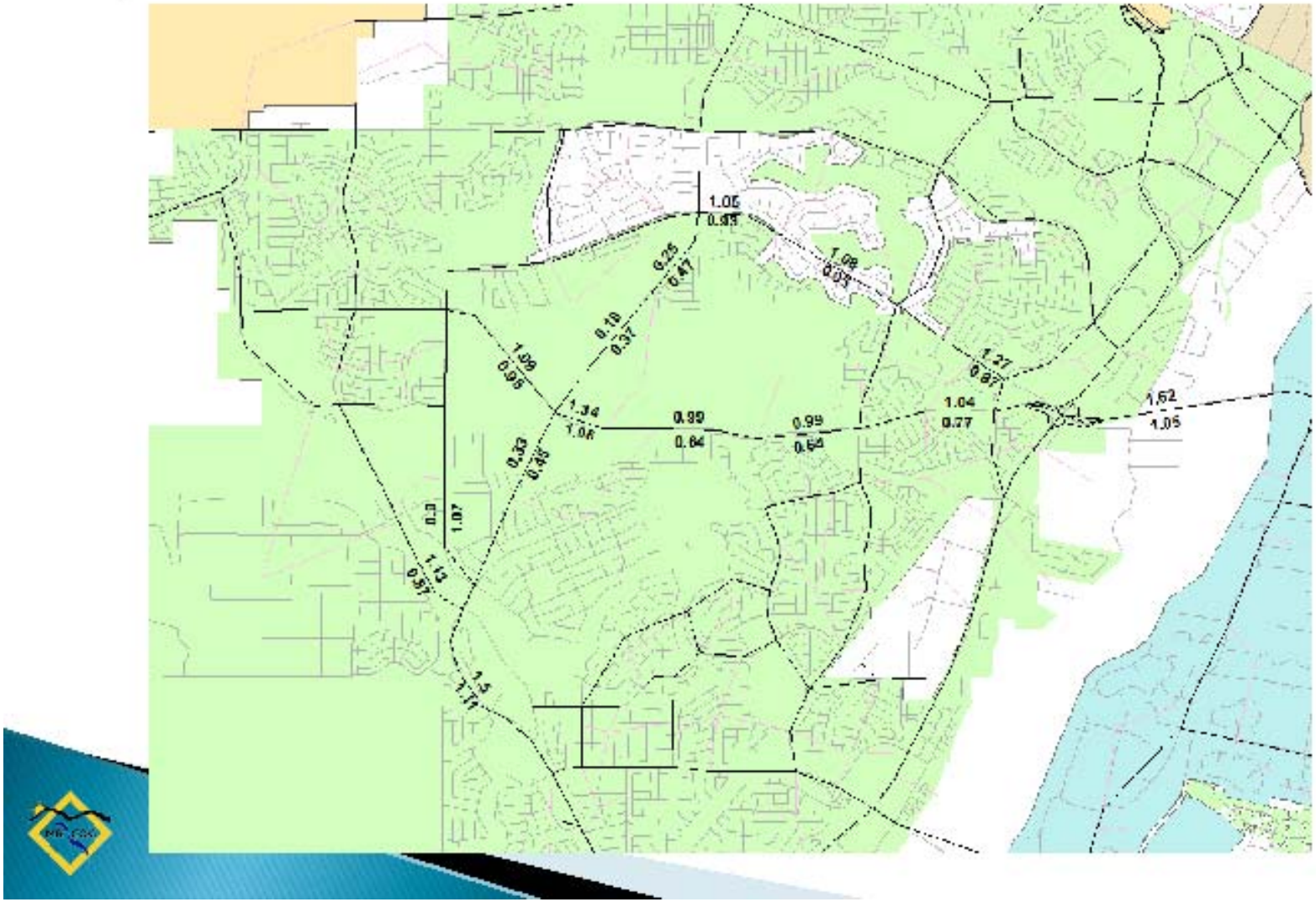
CUBE 2025 MTP Scenario, associated flows/select link, PM Peak Period – Unser North of Paradise:



CUBE 2025 MTP Scenario, associated flows/select link, PM Peak Period – Unser South of Rainbow:



CUBE 2025 MTP Scenario, PM Peak Period V/C, non-grid network/out-of-direction travel partially explains this phenomenon:



APPENDIX B

Pedestrian Travel Comparison of Volcano Heights Original Roadway Network to Roadway Network with Half-Mile Full-Intersection Spacing

Pedestrian Travel Comparison of Volcano Heights Original Roadway Network to a Roadway Network with Half-Mile Full-Intersection Spacing

The Transportation Accessibility Model (TRAM) was used to compare pedestrian accessibility between the original roadway network in the Volcano Heights Sector Development Plan, loosely based on quarter-mile spacing between full access intersections and hereafter referred to as Scheme A, and a roadway network with half-mile full-intersection spacing with right-in, right-out intersections no less than a quarter-mile apart, hereafter referred to as Scheme B.

The following figures show the roads and intersections for Scheme A and Scheme B. In Scheme B, right-in, right-out intersections are located in between full-intersections. Although motor-vehicle traffic will only be allowed to make right-in, right-out manuvers, it is assumed that pedestrians can use the intersection to make any desired crossing.

FIGURE 1: *Scheme A – Original Roadway Network*

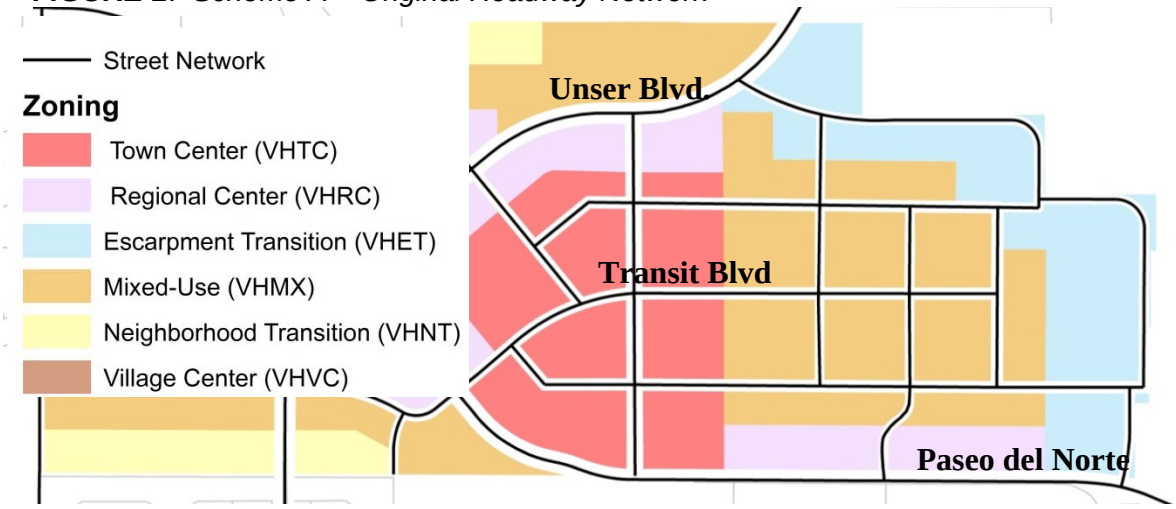
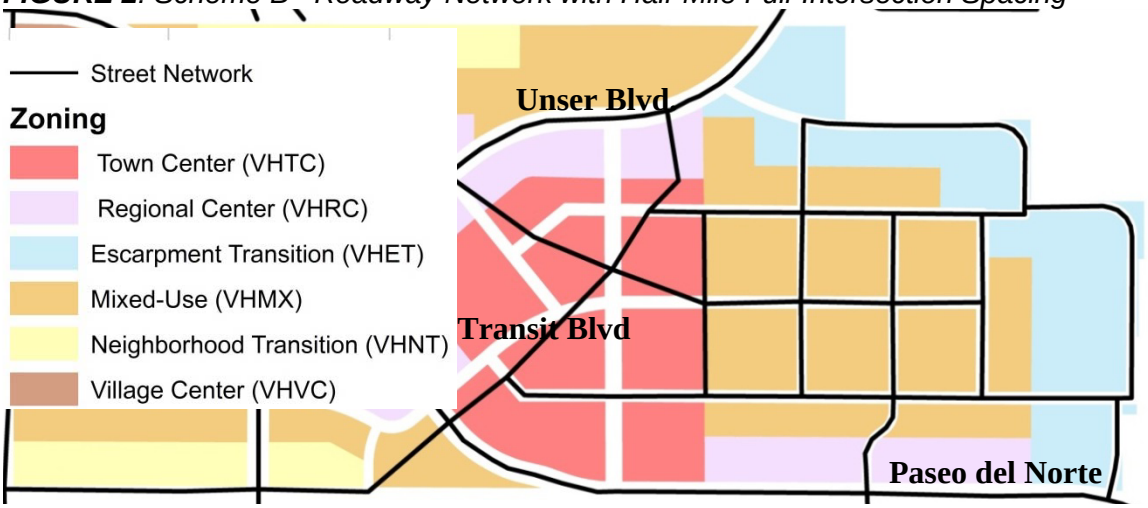


FIGURE 2: *Scheme B –Roadway Network with Half-Mile Full-Intersection Spacing*



TRAM models the areas accessible by a quarter-mile walk and half-mile walks from a given location on the roadway networks. The following scenarios were examined:

Scenario 1: Pedestrian Access with a Single Bus Rapid Tranist (BRT) Stop
Scenario 2: Pedestrian Access with Two Bus Rapid Transit (BRT) Stops
Scenario 3: Pedestrian Access from Neighborhoods west of the Intersection of Paseo del Norte and Unser

SUMMARY

Scheme A provided very efficient access from a single, centrally located BRT stop, with 75% of the Town Center accessible within a half-mile walk. Scheme B provided access to 55% of the Town Center with a single stop. The differences were slightly smaller when the accessiblility from two BRT stops was modeled. In this case, Scheme A provided accessibility to 85% of the Town Center within a half mile walk of either of the two stops, and Scheme B provided accessibility to 70% of the Town Center. There was an interesting downside to having two BRT stops in Scheme A. With the single, centrally located stop, the street network provided a round, center-like, accessible area versus an elongated, corridor-like accessible area that was created with two stops.

Neighborhoods west of Paseo del Norte and Unser have limited access to the Town Center for both networks. Both networks have the same roadway configuration northwest of this major intersection, and the Town Center is not accessible within a half-mile walk from the northern area. Scheme A has improved access from the southwest neighborhoods. The very edge of the Town Center is reachable within a quarter-mile walk from the southern area in Scheme A. Unfortunately, the trip west to Universe is too long in Scheme B to make travel east to the Town Center in a half-mile walk.

DETAIL RESULTS

SCENARIO 1: Pedestrian Access with a Single Bus Rapid Transit Stop
In this scenario a single bus rapid transit (BRT) stop was selected along the Transit Blvd. centrally located in the Town Center. Quarter-mile and half-mile walks are indicated from this stop. Scheme A and a centrally located bus stop provides an accessible area that is round or center-like as opposed to an elongated corridor.

***FIGURE 4**: Single Bus Rapid Transit Stop on Scheme A*

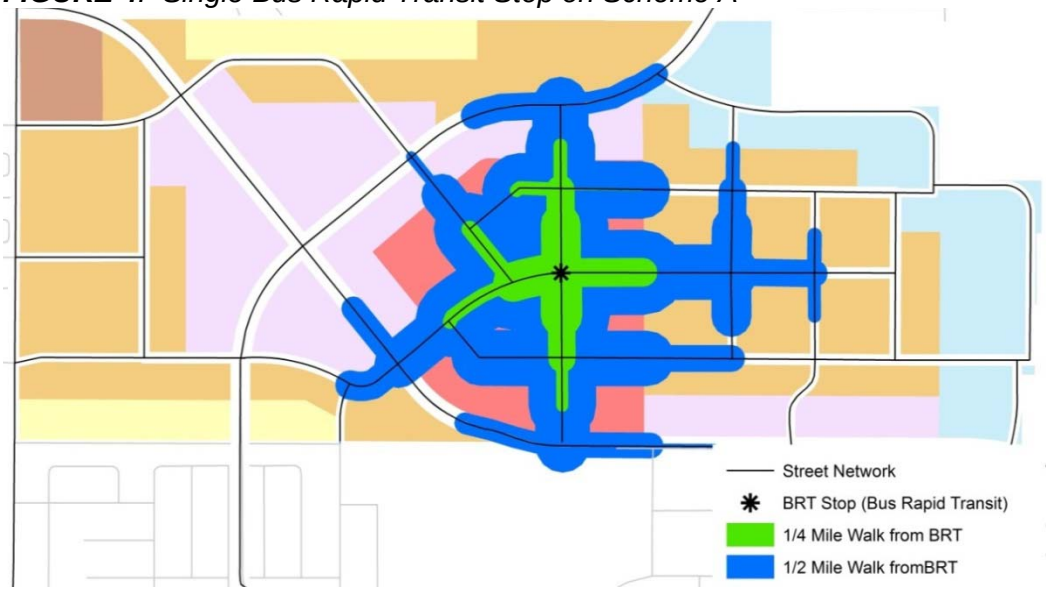


***FIGURE 5**: Single Bus Rapid Transit Stop on Scheme B*

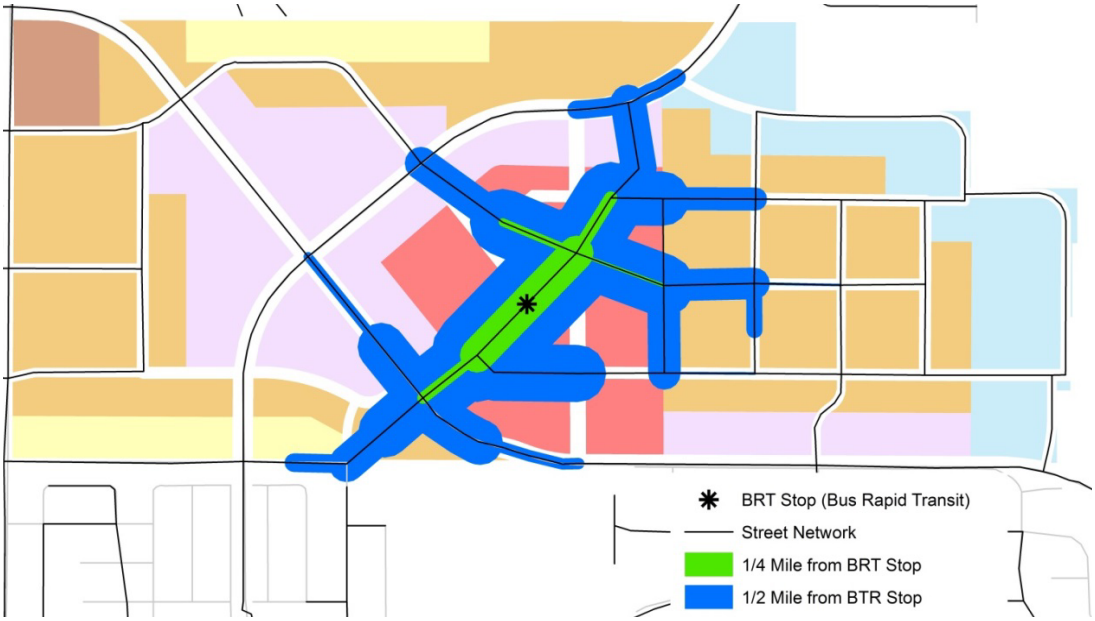


***TABLE 1**: Single Bus Rapid Transit Stop Scenario*

	Scheme A	Scheme B
Total accessible acres in a 1/2 mile walk or less	75.6	55.7
Total acres accessible in Town Center	50.8	37.1
Percent of Town Center Accessible	75%	55%

SCENARIO 2: Pedestrian Access with a Two Bus Rapid Transit Stops
Although the single bus rapid transit stop provided good accessiblility to the Town Center, a second bus rapid transit scenario was examined. Scheme A allows for the two stops to be located at interesections that are approximately a quarter-mile apart. Scheme B has two stops at interesctions, but the spacing between the stops is a little closer at 1/5 mile.

***FIGURE 6**: Two Bus Rapid Transit Stops on Scheme A*

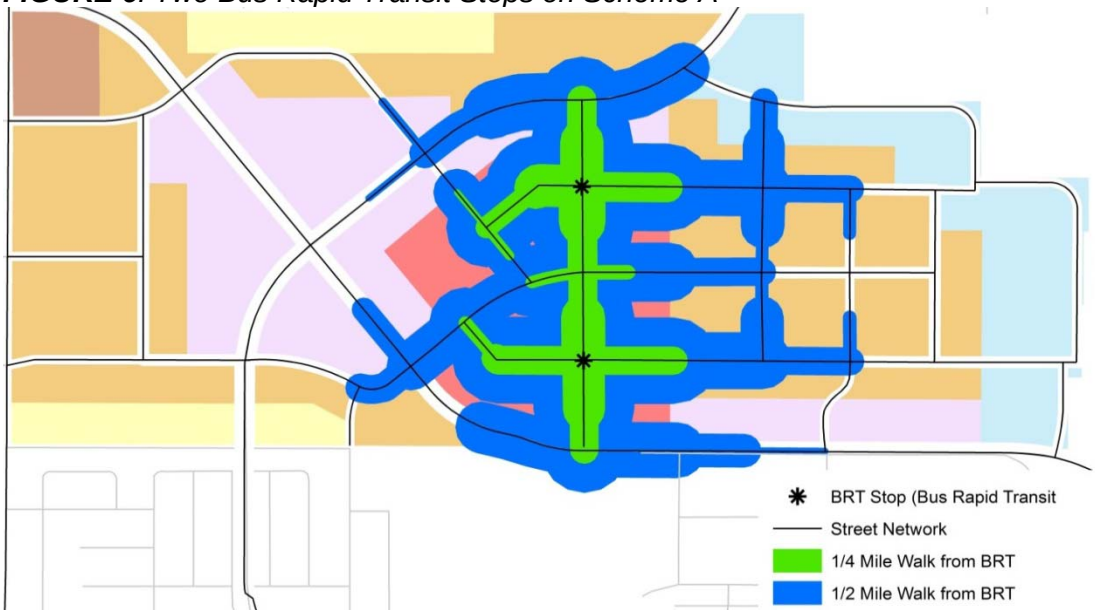


***FIGURE 7**: Two Bus Rapid Transit Stops on Scheme B*

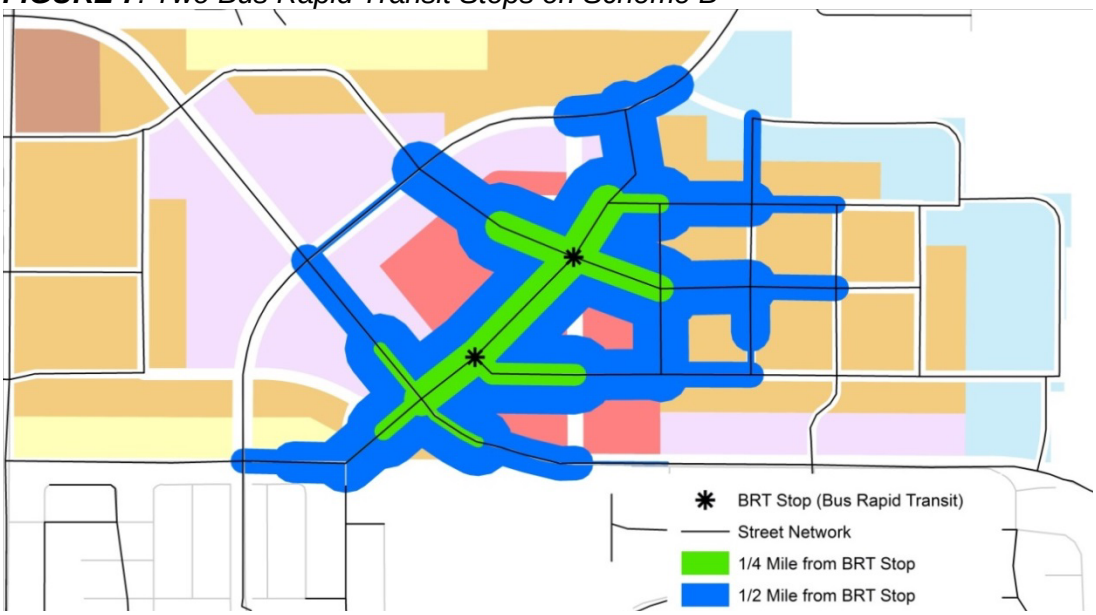


***TABLE 2**: Two Bus Rapid Transit Stops Scenario*

	Scheme A	Scheme B
Total accessible acres in a 1/2 mile walk or less	102.7	92.0
Total acres accessible in Town Center	57.4	47.0
Percent of Town Center Accessible	85%	70%

Scenario 3: Pedestrian Access From Neighborhoods West of the Paseo del Norte/Unser Boulevard Intersection

This scenario looks at neighborhood intersections physically closest to the Town Center. Often a large challenge occurs when homes are located relatively close to destinations, but the roadway network does not allow efficient access. Scheme A provides better access to the Town Center from neighborhoods southwest of Paseo del Norte & Unser.

***FIGURE 10**: Walking Access from West of Paseo del Norte and Unser on Scheme A*

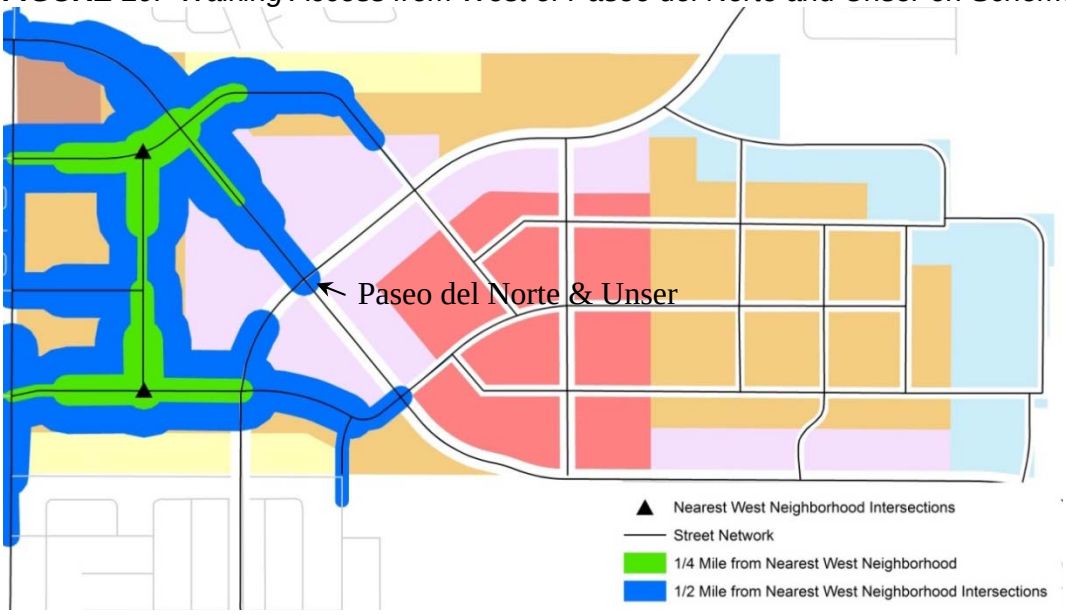


***FIGURE 11**: Walking Access from West of Paseo del Norte and User on Scheme B*