DRAFT

V. Mobility

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V. Mobility

A. Introduction

This chapter of the Specific Plan discusses the roles of mobility to support the vision and goals for the planning area. This chapter presents improvements for the main thoroughfares of the Urban Core and other streets within the Specific Plan area, including pedestrian, bicycle facilities, transit, vehicular and parking opportunities.

The Specific Plan strives to create pedestrian-friendly destinations in the Urban Core. The Mobility chapter is intended to foster a downtown environment that is the heart of the City with active, engaged, human-oriented streetscapes and where the car is not viewed as the only mode of travel for the people who live, work, or shop here.

Although mobility in many forms is encouraged and needed throughout the Urban Core, the hierarchy of emphasis is: pedestrian, bicycle, transit, and finally, the automobile. However, the mode emphasis will vary from street to street and neighborhood to neighborhood. For instance, H Street is the transit and vehicle backbone for the Urban Core, yet still provides enhanced pedestrian and bicycle amenities. For Third Avenue, the pedestrian takes precedence and vehicle speeds are reduced. While different streets will have varying emphasis on the type of travel modes utilized, it is a goal of the Specific Plan that non-motorized trip making will be the fastest growing component of all types of trips made, rather than trips by private vehicle.

Information contained in this chapter relies in large part on the traffic engineering analyses conducted for the Urban Core by Kimley-Horn and Associates, Inc., and is also complemented by the policies contained in Chapter VIII - Public Realm Design Guidelines. For the complete traffic analyses, see Appendix B - Traffic Impact Analysis.

B. Pedestrian Facilities

1. Introduction

Creating better pedestrian facilities and providing an expanded and enhanced pedestrian environment is a primary objective of the Urban Core. In fact, almost all of Chapter VIII - Public Realm Design Guidelines is devoted to improving the pedestrian environment. With the increased density, mix of uses, and pedestrian improvements, walking will become a preferred way to move about the Urban Core.

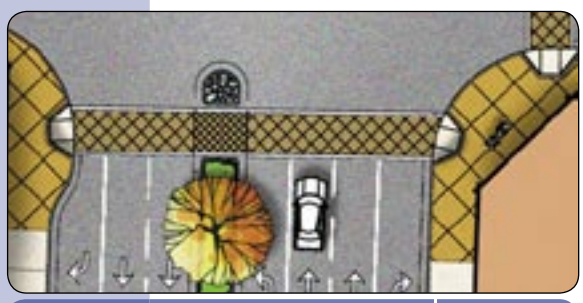
Widened sidewalks are proposed for all key streets including Third Avenue, E Street, F Street, H Street and Broadway. In Chapter VIII - Public Realm Design Guidelines, direction is provided for sidewalks, crosswalks, furnishings, intersections, trees and other landscaping, lighting, plazas and paseos -- all in support of improving the pedestrian experience and encouraging "feet on the street." In this chapter, focus is provided on traffic calming elements in support of pedestrian circulation.

2. Traffic Calming Design Elements

The potential design elements described below aim to balance the needs to effectively moderate vehicle speeds and improve the pedestrian environment while conforming to acceptable engineering standards. These traffic calming tools include adding median refuge islands, corner curb extensions or "bulbouts," accent paving at crosswalks, and speed tables, as well as narrowing traffic lanes. Design elements should be considered at key intersections, such as those described in Chapter VIII - Public Realm Design Guidelines, Section H. Sidewalk and Pedestrian Improvements. Specific locations for these elements will be identified through a Streetscape Master Plan or other similar improvement plans.

a. Refuge Islands

Medians can be used to create pedestrian "refuge islands" that reduce the number of lanes a pedestrian must cross at one time. Refuge islands are extensions of the median that create a protected crosswalk in the middle of the street. Refuge islands should be considered on streets where medians are provided: Third Avenue, H Street, F Street and Broadway.



Example of a refuge island — Fg. 5.1

b. Bulbouts

Example of a bulbout

Fg. 5.2

The use of curb extensions or "bulbouts' is also suggested at selected intersections in the Urban Core including Third Avenue, F Street, Broadway and Woodlawn. Bulbouts extend the curbs to widen the sidewalk area at crosswalk locations. This reduces the distance that pedestrians must cross. Intersections that include bulbouts shall be designed so that the outer travel lanes have adequate clearance for turning of larger vehicles such as trucks. Drainage issues with bulbouts are also an important consideration, particularly in Chula Vista where much of the drainage is surface. So where gutter flow cannot be accommodated around the perimeter of a bulbout, it may be necessary to incorporate features such as removable grates to facilitate water flow. Fire lane access also can be accommodated successfully with thoughtful design.

c. Street Trees

Street trees offer an aesthetic alternative to the wide-open speedway feeling of a treeless arterial. Street trees planted at the sidewalk edge and in medians have a traffic calming effect as they create a visually enclosed and perceptually narrower street scene. Street trees are encouraged throughout the Specific Plan area. Within Chapter VIII - Public Realm Design Guidelines, conceptual streetscape plans incorporating street trees are provided for Third Avenue, E Street, F Street, H Street, and Broadway as well as other primary streets and neighborhoods streets. Street tree species recommendations are provided as well as complementary landscape palettes.

d. Accent Paving

Accent paving such as unit pavers or colored concrete can be used on crosswalks to accentuate pedestrian crossings. The change in texture gives motorists a visual and audible heightened awareness which in turn can slow traffic. Please refer to Chapter VIII - Public Realm Design Guidelines for additional information on accent paving and pedestrian crossings.

e. Narrowed Travel Lanes

Narrowing travel lanes, such as those proposed for H Street and Broadway, encourage slower vehicle speeds and reduce the pedestrian crossing distances. Drivers have been found to travel more slowly on streets with narrower lane widths. The effect is largely psychological. Narrower travel lanes and street widths require more attention from drivers and are often used in downtown

environments that experience a higher degree of potential conflicts, such as pedestrians, frequent movements to and from side streets, and vehicles making parking maneuvers.

Narrower lanes also have the benefit of reducing pedestrian crossing distances (which is also a safety benefit) and freeing up space for other uses such as parking, bike lanes, medians, and widened sidewalks. The street cross sections provided in the following section of this chapter provide for the least wide travel lanes while still meeting traffic engineering needs.

C. Bicycle Facilities

The bicycle is an important component to any mobility plan in Chula Vista, and especially for the Urban Core. Bicycling offers enjoyment and quality of life for residents of Chula Vista, and it also offers a valuable, cost-effective, and environmentally sensitive form of transportation. The Circulation Element of the General Plan and the Bikeway Master Plan have targeted corridors in areas of the City for improvement with regard to bicycle facilities. Presently the General Plan does not contain plans to add bikeways routes or upgrade classifications of existing bikeways in the Urban Core. Despite higher volumes of traffic on many of the Urban Core roadways, bicyclists will still access downtown businesses and attractions and, therefore, will need to be considered in any planning efforts encompassing this area. Therefore the Specific Plan provides an opportunity to address deficiencies in the bikeway network. Figure 5.4 presents a graphic depiction of the Existing and Proposed Bikeways.

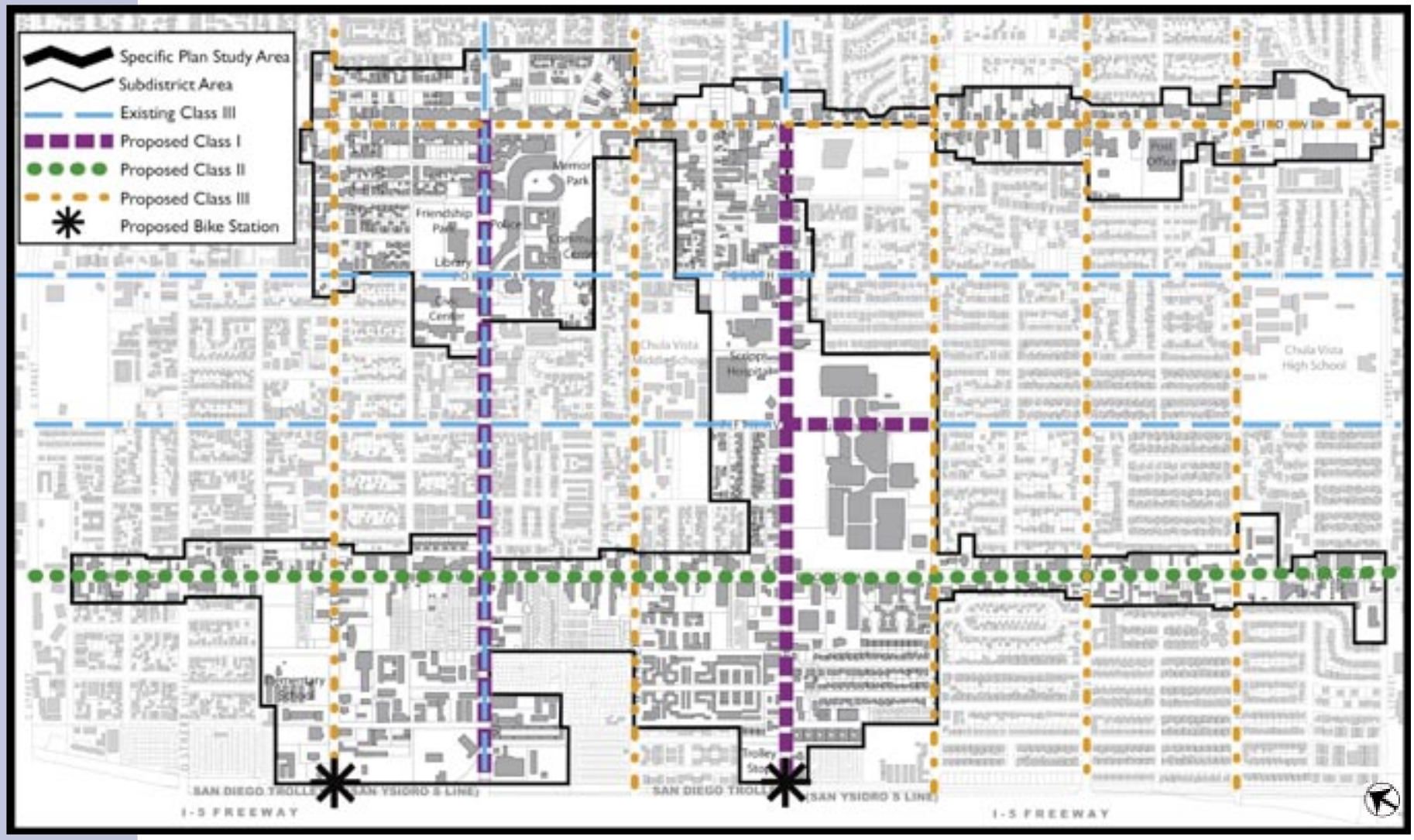
Class I Bikeway	Referred to as a bike path or multi-use trail. Provides for bicycle travel on a paved right-of-way completely separated from any street or highway.
Class II Bikeway	Referred to as a bike lane. Provides a striped and stenciled lane for one-way travel on a street or highway.
Class III Bikeway	Referred to as a bike route. Provides for shared use with pedestrian or motor vehicle traffic and is identified only by signing and stenciling.

Bikeway classifications **Fg. 5.3**

Class III bikeways (signs, no paint in right-of-way) are presently provided on the following roadways within the Urban Core:

- *Fourth Avenue*
- *Fifth Avenue (except between H and I Streets)*
- *F Street*
- *J Street*

As a project feature of the Specific Plan, Class I bike paths are proposed to be added to F Street and H Street. Both F and H Streets are excellent candidates for enhanced bicycle transit due to the available right-of-way and connectivity with the Bayfront. Bike path and lanes (Class I or Class II facilities respectively) are typically more attractive to families and casual cyclists. The proposed improvements parallel E Street and G Street, and provide an improved opportunity for east-west bicycle travel. F Street and H Street cross sections and proposed improvements are described under the Future Conditions and Street Improvement Opportunities section found in Section E. Vehicle Traffic. Bicycle paths should also be evaluated for Davidson Street and G Street.



Existing and Proposed Bikeways

Fig. 5.2

Bicycle facilities improvements are proposed for the following roadway segments:

- *Third Avenue - Class III*
- *Fifth Avenue (between H Street and I Street) – Class I (Future redevelopment of Chula Vista Center may allow the opportunity to complete this link.)*
- *Broadway (between C Street and L Street) – Class II*
- *E Street – Class III*
- *F Street (between 3rd Avenue and I-5) - Class I*
- *G Street – Class III*
- *H Street (between Third Avenue and I-5) – Class I*
- *I Street – Class III*
- *J Street – Class III*

Bike lanes on arterials with raised medians and bikeways in low traffic volume neighborhoods should also be pursued. Higher traffic volumes on most streets dictate Class II facilities, although bike lanes are generally not compatible with diagonal parking. Further, the street network within transit focus areas should accommodate at least Class I bicycle facilities to accommodate bicycle commuters accessing public transit at the stations located at H Street/I-5 and E Street/I-5, as well as the potential Bus Rapid Transit station at Third Avenue/ H Street. Opportunities may also exist for the addition of Class III bike lanes on other streets within the Urban Core, such as Woodlawn Avenue.

Off-street facilities for bicycles (bicycle parking) are also integral to cyclists for accessibility. Convenient bicycle parking should be provided along Third Avenue, Fourth Avenue, Broadway, F Street, H Street, and J Street, as well as at transit focus areas such as Third Avenue/H Street, H Street/I-5 and E Street/I-5. Convenient bicycle parking should also be provided in commercial parking lots, including destinations such as malls, and in commercial areas, event locations, transit stops, and parks. Bicycle racks should be placed along the street where appropriate and provided in parking lots at 5% of the number of vehicle stalls. Racks in off-street locations should be visible and well lit to discourage theft or vandalism and be placed to be convenient to the cyclist. Refer to Chapter VIII - Public Realm Design Guidelines for guidance on bicycle rack design.

In addition, bike stations should be considered at the H Street trolley and E Street trolley centers. Bike stations should be located close to connections to different modes of transit, to allow bicycle riders to make a convenient switch in transportation choices without limiting mobility. Bike stations offer a secure parking area, changing rooms, restrooms and showering facilities for bicycle riders. There may also be shops for bicycle rentals, repairs and accessories.

D. Transit Routes

Chula Vista is presently served by a variety of local and regional transit systems. These networks are planned to grow over the next thirty years. Provision of adequate transit service is a key component for creating the desirable pedestrian and urban environment envisioned for the Specific Plan.

1. Existing Conditions

The Urban Core is currently served by 11 Chula Vista (CVT) routes (Routes 701, 702, 703, 704, 705, 706, 707, 708, 709, 711 and 712), two Metropolitan Transit System (MTS) routes (Routes 929 and 932), and the San Diego Trolley's Blue Line. Several CVT transit routes circulate within the Urban Core and Bayfront area; others serve the greater Chula Vista area and provide connections to National City Transit and other transit providers. MTS route 929 runs along Third and Fourth Avenues through the Urban Core; MTS transit route 932 runs along Broadway.

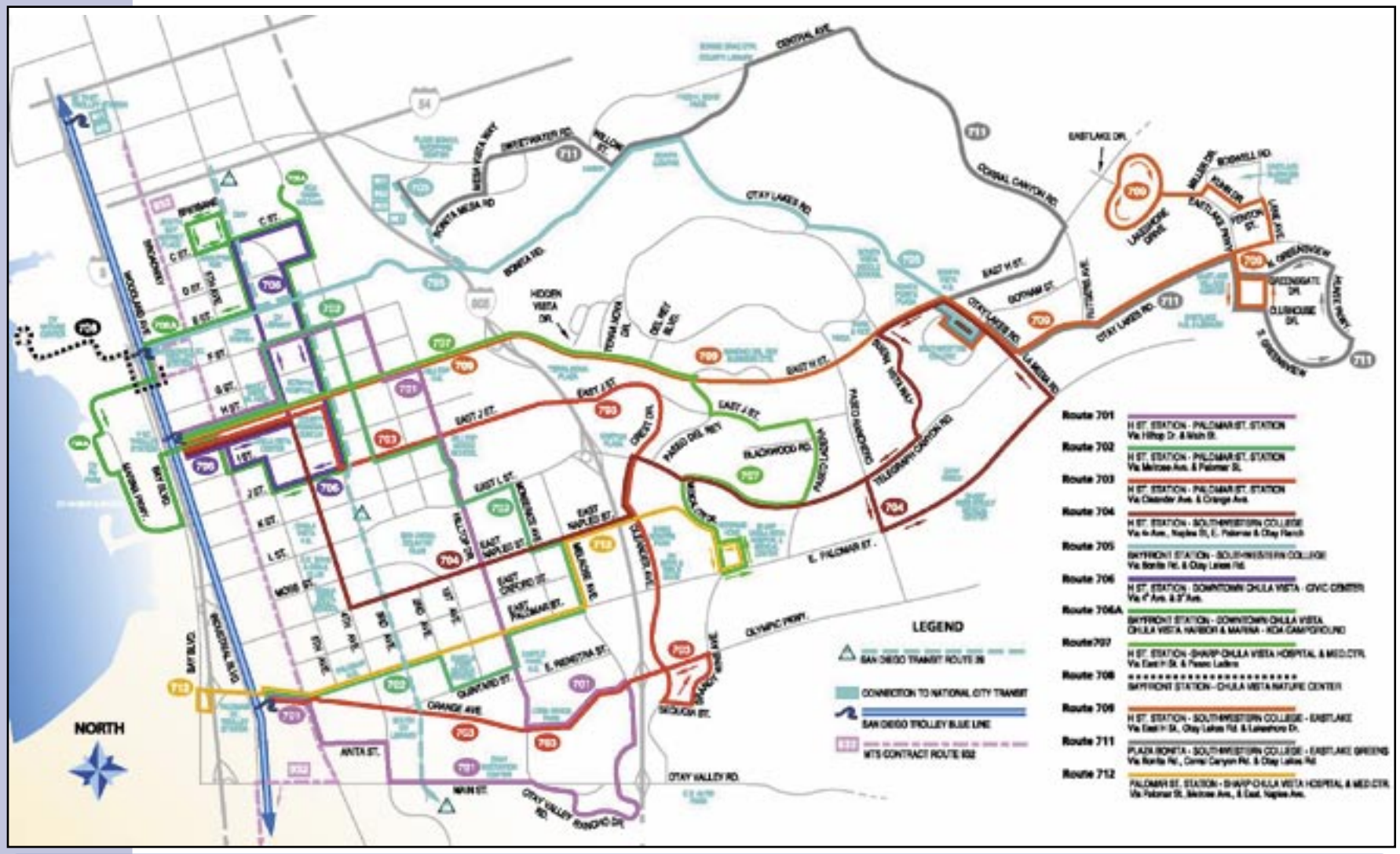
The San Diego Trolley's Blue Line provides service between Qualcomm Stadium and San Ysidro/Tijuana and extends through the Urban Core parallel to and on the east side of I-5, with stations at Bayfront/E Street and H Street. Service is provided seven days a week with service starting at around 5:00 a.m. and ending around 12:00 a.m. During the peak periods, service is provided with 7.5-minute headways and additional service to America Plaza/Old Town is available. Headways of 15 minutes are provided during off-peak periods. Existing transit routes are illustrated in Figure 5.5.

2. Future Conditions

Building upon the existing transit network, a number of regional transit improvements are envisioned that will serve the Urban Core area. Many of these lines provide transit stations within the Specific Plan and are integrated with the land use concepts and planning. Other routes are located with transit stations nearby; these routes could serve the Urban Core area. Figure 5.6 depicts the planned routes in the South Bay.

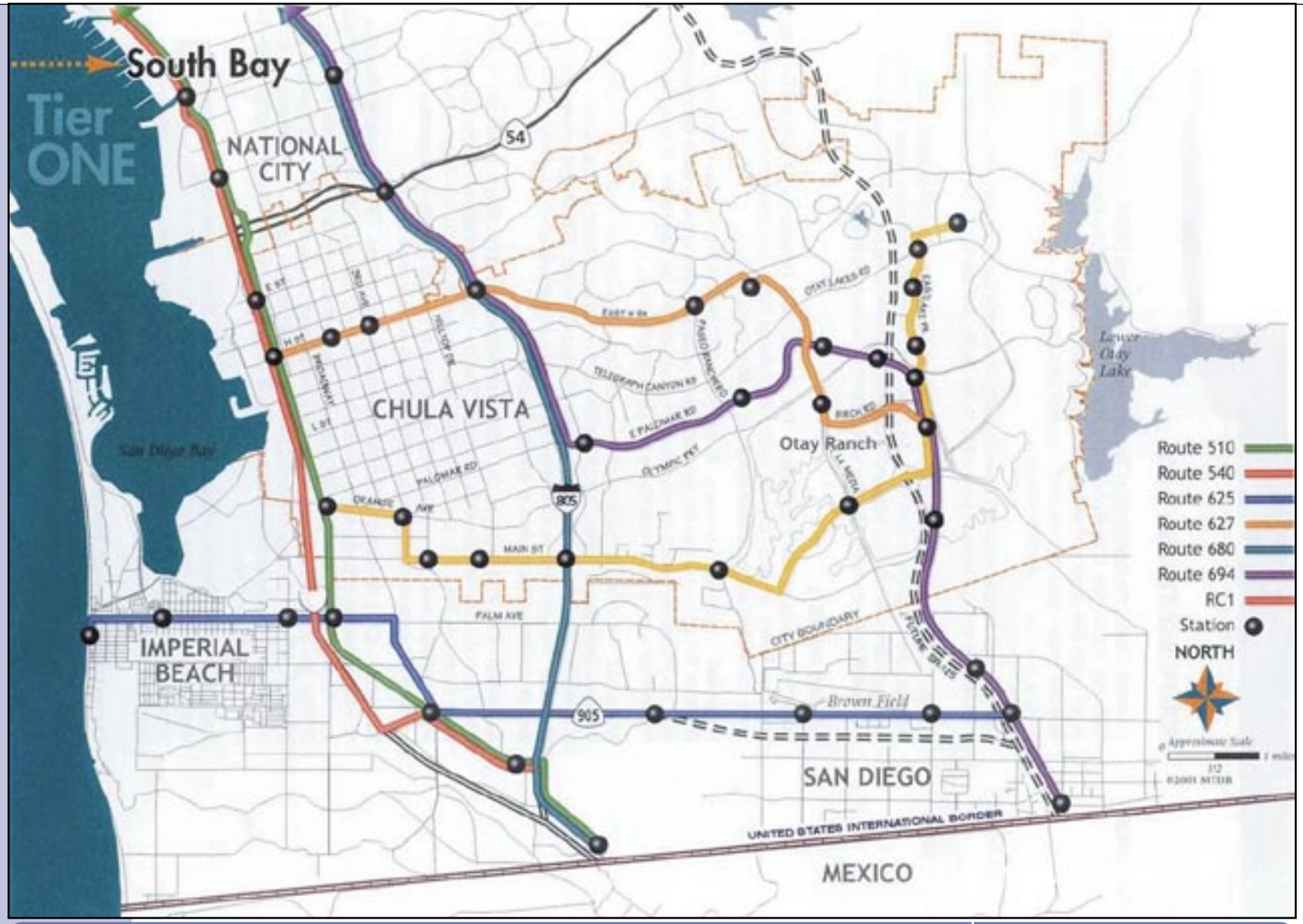
a. Route 510 (Existing Blue Line Trolley)

This route would have increased frequency of service. Light Rail Transit (LRT) headways would be reduced from ten minutes to five minutes. In order to achieve this level of transit service, it would be necessary to grade separate the LRT tracks from key surface streets, such as E Street and H Street within the project area.



Existing Transit Routes (Source: Kimley-Horn and Associates)

Fg. 5.5



Future Regional Transit Routes (Source: SANDAG)

Fg. 5.6

Public Hearing Draft

b. South Bay Transit First Project

This project would provide regional Bus Rapid Transit (BRT) service between Otay Ranch in eastern Chula Vista and downtown San Diego. As described in the transit first report, the first phase of the project would follow I-805 and SR-94, along with East Palomar Street. Phase 1 of the project could be completed by Year 2010. The second phase of the project would extend the line to the Otay Border crossing and serve businesses in Otay Mesa.

c. Route 540 (I-5 Express Service)

This route would provide regional Bus Rapid Transit (BRT) service from San Ysidro to downtown San Diego and Old Town. This route would use median lanes in the I-5 Freeway and would have a transit stop at H Street (with elevators to the H Street overcrossing at I-5). This route would have infrequent stations, which would allow for shorter travel times, as compared to Route 510.

d. Route 627 (H Street BRT)

This route would provide a transit connection between the Specific Plan area and Southwestern College and the Eastern Urban Center. This route will connect the major activity centers in the redeveloping areas of western Chula Vista to the rapidly growing areas of eastern Chula Vista.

e. Route 628 (Sorrento Valley to San Ysidro International Border)

This route would provide regional BRT service between the San Ysidro and Sorrento Mesa along the I-805 corridor. This service would connect Chula Vista to major employment centers in Kearny Mesa and Sorrento Mesa. Transit stations for this route would be located on I-805 at H Street.

f. West Side Shuttle

This project is a concept proposed to serve both the Specific Plan and Bayfront Master Plan areas in western Chula Vista. This service would complement existing and planned future transit improvements. The shuttle would provide localized service between various uses in western Chula Vista and provide connections to the regional transit system. (See Figure 5.7 for proposed West Side Shuttle Route.) The shuttle would provide regional connectivity with the existing E Street and H Street trolley stations (Routes 510, 540, and 627) and with the future station at Third Avenue. In addition, five other stations are planned to serve destinations within the Specific Plan, along with three additional stations within the Bayfront Master Plan. Formation of the West Side Shuttle is included as an implementation action in Chapter X - Plan Implementation and Community Benefits Program.

West Side Shuttle Proposed Route (Source: Kimley-Horn and Associates)

Fig. 5.7

E. Vehicle Traffic

1. Existing Conditions

The existing roadway network is based upon a traditional grid system. "Streets" typically running east-west and "Avenues" typically running north-south. Some areas of the grid system have been interrupted over time. Following are descriptions of the main roadways within the Urban Core; City roadway classifications are illustrated in Figure 5.8. Existing daily traffic volumes are shown in Figure 5.9. Existing Average Daily Traffic Volumes. As a rule of thumb, typical existing dimensions for four lane east-west streets in the Urban Core is 64 feet of curb-to-curb roadway width on 80 feet of right-of-way. Typical existing dimensions for north-south avenues in the Urban Core is 80 feet of curb-to-curb roadway width on 100 feet of right-of-way. The descriptions of the following roadways are based on the new classifications as provided for in the General Plan Update (2005).

a. Third Avenue

Third Avenue is a north-south roadway. Third Avenue is classified as a four-lane commercial boulevard between C Street and E Street and between H Street and L Street and a two or four-lane downtown promenade between E Street and H Street. Third Avenue is two lanes between E Street and F Street, approximately 72 feet in width. Between F Street and Madrona Street, Third Avenue is a four-lane roadway with a raised median, approximately 101 feet in width. Between Madrona Street and G Street, Third Avenue is four lanes and approximately 72' feet in width. Angled parking is provided in these first three sections. Third Avenue is a four-lane roadway with a center two-way left-turn lane between G Street and H Street; it is approximately 66 feet in width and parallel parking is provided. Sidewalks are provided on both sides of the street in all four sections. The posted speed limit is 35 mph.

b. E Street

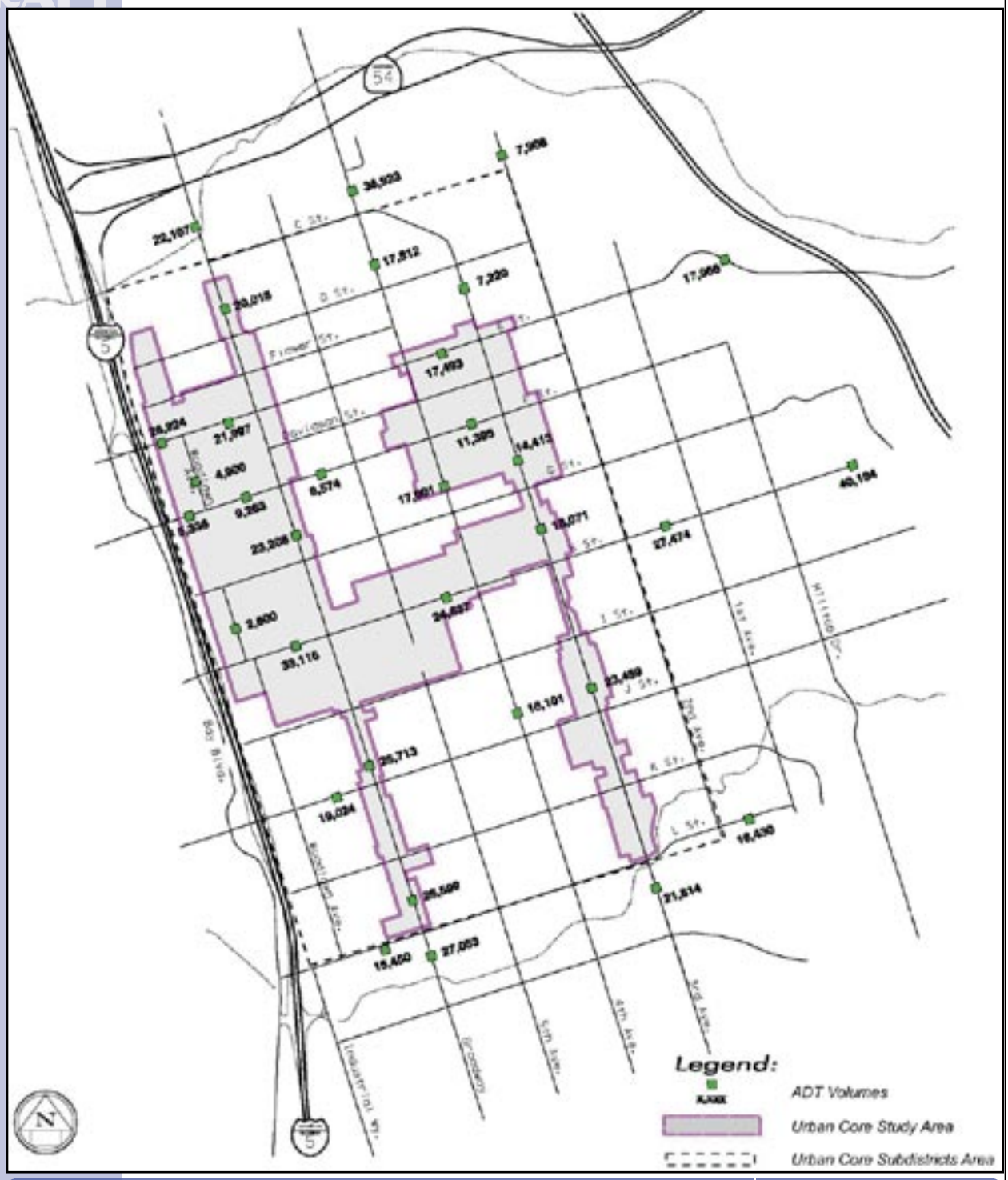
E Street is an east-west roadway. E Street is classified as a four-lane gateway between I-5 and I-805, with the exception of the segment between Broadway and First Avenue, which is classified as a four-lane arterial. E Street is four lanes between Third Avenue and Broadway, approximately 62 feet in width. Parallel parking is provided on both sides of the street in this section. E Street to the west of Broadway has four lanes plus a two-way left turn lane and no on-street parking; it is approximately 70 feet in width. Sidewalks are provided on both sides of the roadway in both sections. The posted speed is 30 mph.

c. F Street

F Street is an east-west roadway. F Street is classified as a four-lane downtown promenade between I-5 and Broadway and as a two-lane downtown promenade

City of Chula Vista Roadway Classifications (Source: City of Chula Vista)

Fig. 5.8



Existing Average Daily Traffic Volumes (Source: Kimley-Horn and Associates)

Fg. 5.9

between Broadway and Third Avenue. F Street is four lanes between Third Avenue and Fourth Avenue with a raised median in the center and is approximately 65 feet in width. The only on-street parking provided in this segment is limited parallel parking on the north side of F Street between Third Avenue and Garret Avenue. Between Fourth Avenue and Broadway, F Street is a two-lane roadway, approximately 40 feet in width with parallel parking on both sides. F Street has four lanes between Broadway and I-5 with parallel parking on both sides and is approximately 66 feet in width. Sidewalks are provided on both sides of the roadway in all three sections. The posted speed limit is 30 mph.

d. H Street

H Street is an east-west roadway with a center two-way left turn lane. H Street is classified as a six-lane gateway street between I-5 and Broadway and between Hilltop Drive and I-805 and as a four-lane urban arterial between Broadway and Hilltop Drive; however, it should be noted that H Street is not built to its ultimate classification and functions as a four-lane roadway between I-5 and Broadway. Parking is provided on-street east of Third Avenue. H Street is approximately 70 feet in curb-to-curb width between Third Avenue and Broadway and 64 feet in curb-to-curb width between Broadway and I-5. Sidewalks are provided on both sides of the street. The posted speed limit is 35 mph.

e. Broadway

Broadway is a north-south roadway. Broadway is classified as a four-lane gateway street between SR-54 and C Street and as a four-lane commercial boulevard between C Street and L Street; parallel parking is provided on both sides of the roadway in these sections. Broadway is approximately 68 feet in width between E Street and F Street. Between F Street and H Street, there is a two-way left turn lane and the roadway is approximately 82 feet in width. Sidewalks are provided on both sides of the street. The posted speed limit is 35 mph.

f. Neighborhood Streets

Neighborhood streets are located throughout the Specific Plan study area, mostly outside the focus areas and sub-districts. These streets predominantly serve established single-family and some multi-family neighborhoods. Neighborhood streets generally are two lanes in width with on-street parking on both sides. Figure 5.35 shows Woodlawn Avenue at 36' in width. Sidewalks and curb improvements are typically provided. Street surface and landscaping conditions vary from street to street.

g. Alleys

The alley system within the urban core allow for increased access for delivery services, as well as for residential and commercial parking areas. In addition to providing alternate access routes, the alleys also somewhat relieve traffic volume along the major corridors.

h. Roadway Segments

Currently all roadway segments within the Urban Core are performing at a Level of Service (LOS) C or better, based on volume to capacity ratio.

i. Intersections

Intersections within the Specific Plan area presently operate at Level of Service (LOS) D or better during both a.m. and p.m. peak periods, except for the following intersections:

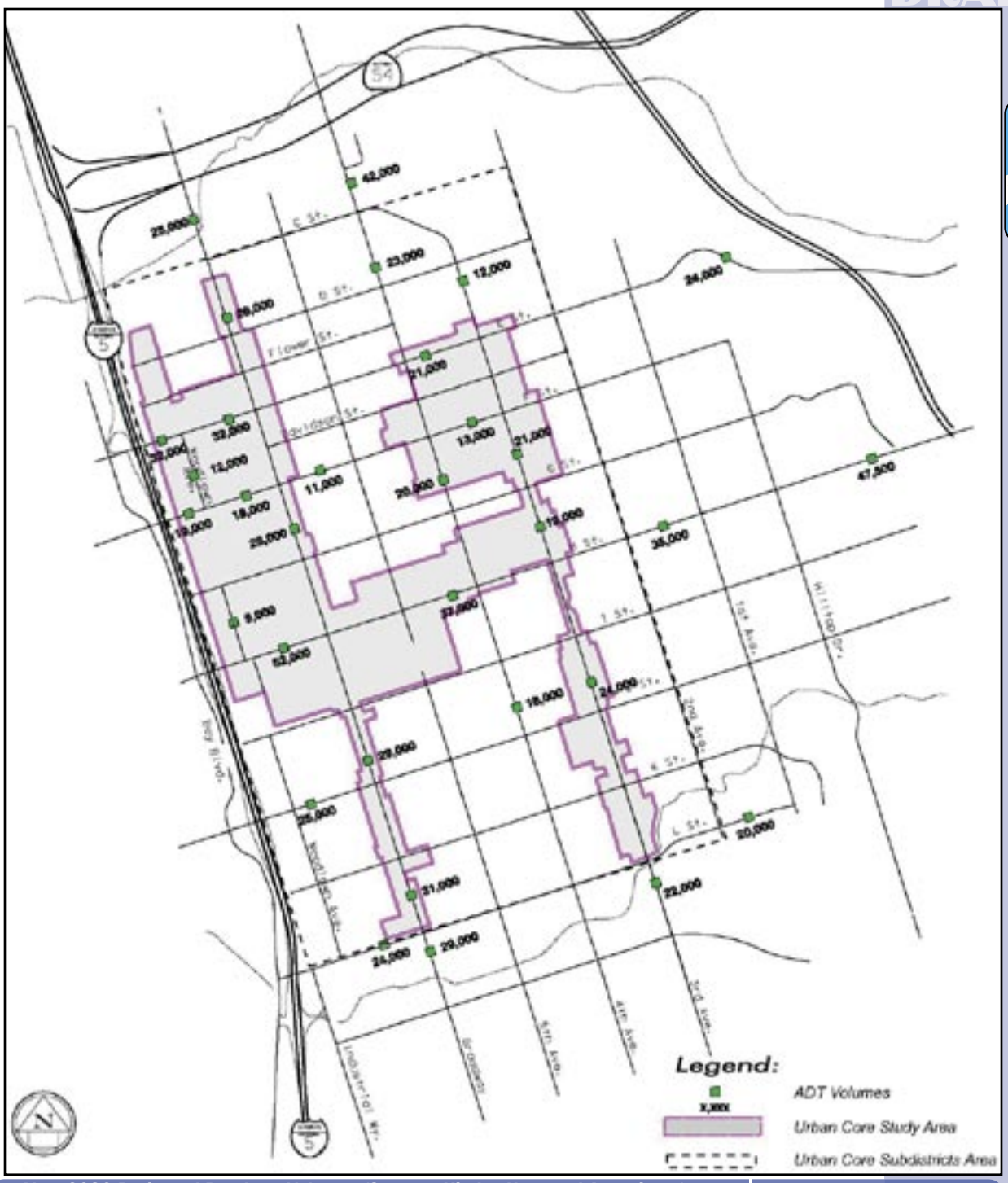
- *I-5 Northbound Ramp at E Street (LOS F - PM Peak)*
- *Woodlawn Avenue at H Street (LOS F – PM Peak)*
- *Broadway at SR-54 Westbound Ramp (LOS F – AM Peak)**
- *L Street at Bay Boulevard (LOS F – PM Peak)**
- *Bay Boulevard at I-5 Southbound Ramp (LOS E – PM Peak)**

The above intersections marked with an asterisk (*) are outside of the Specific Plan Study Area boundary but are presented as the functioning of these intersections affects traffic movement within the urban core.

3. Future Conditions and Street Improvement Opportunities

Following General Plan guidance, the Urban Core will provide a mix of housing, offices, retail, civic and hospitality uses to support a vibrant urban environment. Growth factors determined through computer modeling were applied to existing traffic volumes at intersections to determine projected conditions in twenty five years (Year 2030). The average growth in the Urban Core area was estimated to be 10 percent. (See Figure 5.10 Year 2030 Projected Roadway Volumes.)

In developing the street improvement opportunities, focus was given to providing a street environment that not only moves vehicle traffic and transit but creates a safer and more enjoyable environment for pedestrians and bicycles in the Specific Plan area. As noted previously, each street is intended to serve a multi-modal function, with different modes of travel emphasized to a greater or lesser extent on each street. The following section describes the improvements along the roadway segments in the Urban Core area, specifically focusing on roadway operational characteristics. The Mobility chapter concentrates only on curb-to-curb street improvements that facilitate traffic flow. Although some information is provided regarding parkway treatment and size, this element is a focus of Chapter VIII - Public Realm Design Guidelines. The following recommendations are to be used in conjunction with the recommendations contained in Chapter VIII - Public Realm Design Guidelines. The improvements will be implemented over the term of the Specific Plan and may occur as comprehensive street improvements or may be improved in phases as part of the redevelopment process.



Year 2030 Projected Roadway Volumes (Source: Kimley-Horn and Associates)

Fg. 5.10

Chula Vista Urban Core Specific Plan Proposed Roadway Segment Changes												
Street Segment	**Total Existing Travel Lanes**	**Total Proposed Travel Lanes**	**Existing Turn Lane/Median/Bike Facilities**	**Proposed Turn Lane/Median/Bike Facilities**	**Existing ROW**	**Proposed ROW**	**Existing Curb-to-Curb Width**	**Proposed Curb-to-Curb Width**	**Existing Parking**	**Proposed Parking**	**Existing Bike Lanes**	**Proposed Bike Lanes**
Third Avenue between E Street and F Street	2	2	No Median	No Median	100'	100'	72'	24'/72' *	Y	Y/N *	N	N
Third Avenue between F Street and Madrona Street	4	2	Raised Median	Raised Median	100'	100'	101'	24'/72' *	Y	Y/N *	N	N
Third Avenue between Madrona Street and G	4	2	No Median	No Median	100'	100'	72'	24'/72' *	Y	Y/N *	N	N
F Street between Third Avenue and Fourth Avenue	4	2	Raised Median, Bike Routes (Class III)	Two-Way Left Turn Lane/Raised Median, Bike Paths (Class I)	80'	80'	65'	48'	Y	Y	Y	Y
F Street between Fourth Avenue and I-5	2	2	No Median, Bike Routes (Class III)	Two-Way Left Turn Lane, No Median, Bike Paths (Class I)	80'	80'	40'	48'	Y	Y	Y	Y
H Street between Third Avenue and Broadway	4	4	Two-Way Left Turn Lane	Raised Median, Bike Paths (Class I)	80'-106'	102'	70'	70'	N	Y	N	Y
Broadway between C Street and F Street	4	4	No Raised Median	Raised Median, Bike Lanes (Class II)	100'	100'	68'/82'	82'	Y	Y	N	Y
Broadway between F Street and H Street	4	4	Two-Way Left Turn Lane	Raised Median, Bike Lanes (Class II)	100'	100'	82'	82'	Y	Y	N	Y
Woodlawn Avenue between E Street and H Street	2	2	No Median	Park Area	60'	Varies	36'	Varies	Y	Y	N	N
Traffic Improvements												
E Street between Woodlawn Avenue and 300' east of I-5	4	4	Two-Way Left Turn Lane, Westbound Right Turn Lane	Two-Way Left Turn Lane, Westbound Right Turn Lane @ I-5	80'	76'	70'	76'	N	N	N	N
H Street between Broadway and I-5	4	6	Two-Way Left Turn Lane	Two-Way Left Turn Lane/Raised Median, Bike Paths (Class I)	80'	118'	64'	86'	N	N	N	N

* The 24' cross section assumes no parking along Third Avenue and the 72' cross section assumes diagonal parking on both sides of Third Avenue.

Proposed Roadway Segment Changes **Fig. 5.11**

Figure 5.11 summarizes the proposed changes to the existing roadway network. The table shows existing versus proposed conditions for the number of total travel lanes, turn lanes or raised medians, curb-to-curb width, parking and bike lanes. It should be noted that roadway segments that do not have any changes compared to existing conditions are omitted from the table.

In addition to improvements to existing street segments, reintroduction of the traditional street grid is proposed. By adding street segments, additional routes choices are provided to all modes of travel (pedestrian, bicycle, transit and vehicles). These reintroduced connections are especially important within an approximately one-mile radius of the transit focus areas (E Street/I-5, H Street/ I-5 and Third Avenue/H Street). New connections could include:

a. *Davidson Street between Woodlawn Avenue and Broadway – This roadway segment could also be considered for future bikeway improvements and providing bikeway priority at intersections due to the lower vehicle volumes and direct connection to the future transit focus area at E Street/I-5.*

b. *Woodlawn Avenue between F Street and G Street*

c. *Jefferson Avenue between E Street and H Street – This segment potentially could also be extended to F Street or H Street*

d. *Parkway between Broadway and Woodlawn Avenue extension*

e. *Oaklawn Avenue between Flower Street and G Street*

The reintroduction of roadway segments is a long range vision that can only be accomplished if and when development occurs. The above segments are provided only as examples of where the street segments could be reintroduced. The City would evaluate the merits of such connections and retain its full discretion as to whether such actions are in the City's best interest.

a. Third Avenue

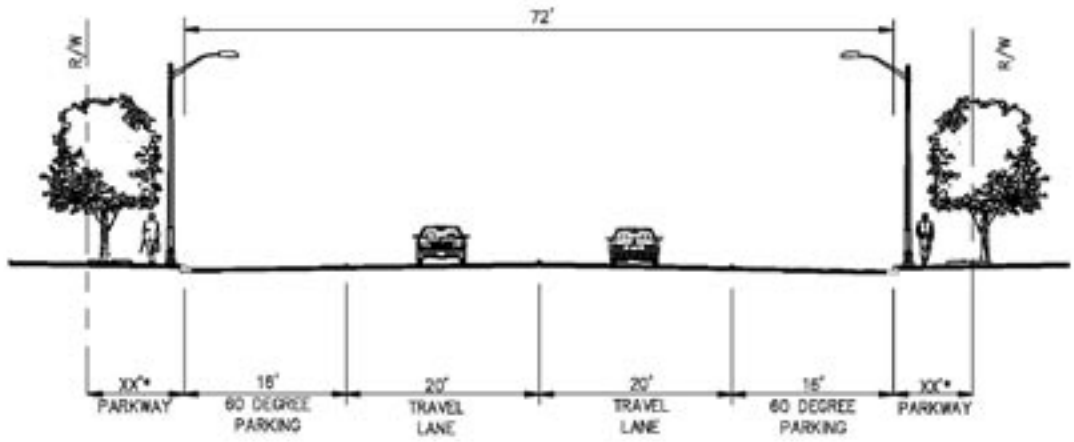
As a project feature of the Specific Plan, the sidewalks on Third Avenue between E Street and G Street will be widened. The widening of the sidewalks will encourage a higher pedestrian use of Third Avenue and provide opportunities for greater outdoor activities such as outdoor dining within the Village area. The cross section of Third Avenue varies greatly between E Street and G Street. The roadway varies between 72 feet and 101 feet.

The roadway will be narrowed to provide one through lane in each direction between E Street and G Street. The remainder of Third Avenue to L Street will stay in the current four-lane configuration. It is proposed to retain the existing median. Three distinct cross sections will be provided. On-street parking may be reduced with the implementation of the Third Avenue enhancements. It is recommended that these enhancements be provided in coordination with the provision of off-street parking in the vicinity so that parking impacts do not occur to surrounding areas.

Diagonal parking will be provided for most parts of Third Avenue. Figure 5.16 shows the cross section where angled parking is permitted. Due to relatively high through traffic volumes, it is recommended that the roadway be of sufficient width to allow vehicles to back out without blocking the through traffic lane. It should be noted that the curb-to-curb dimension is not reduced where diagonal parking is provided on the segment of Third Avenue between E Street and F Street.

Figure 5.17 illustrates selected mid-block locations where pedestrian crossing will occur. The roadway will be narrowed to 24 feet by extending the curb into the street. Curbs will be extended toward the roadway centerline about 38 feet on each side of the roadway. This reconfiguration will allow for additional pedestrian crossings with reduced crossing distances at selected locations.

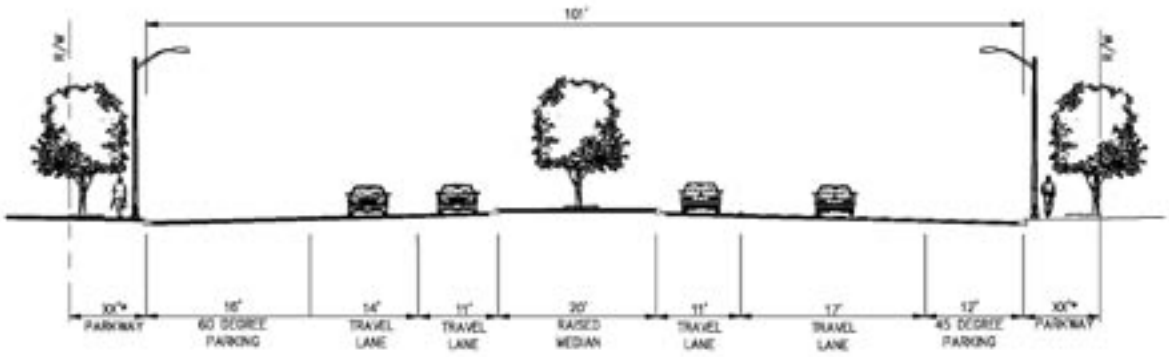
Figure 5.18 shows the treatment at intersections. This cross section allows for a right-turn lane and a left-turn lane to be provided. Although the turning volumes from Third Avenue are not very high, these lanes are needed to remove turning traffic from the through traffic. Turning vehicles will need to yield to anticipated high pedestrian traffic volumes; the turn lanes allow these yielding vehicles to pull out of the through travel lanes. This intersection configuration will adequately accommodate future traffic demands along Third Avenue while providing a significantly enhanced pedestrian friendly streetscape.



*Dimension varies

Existing Third Avenue between E Street and F Street (Source: Kimley-Horn and Associates)

Fg. 5.12



*Dimension varies

Existing Third Avenue between F Street and Madrona Street (Source: Kimley-Horn and Associates)

Fg. 5.13

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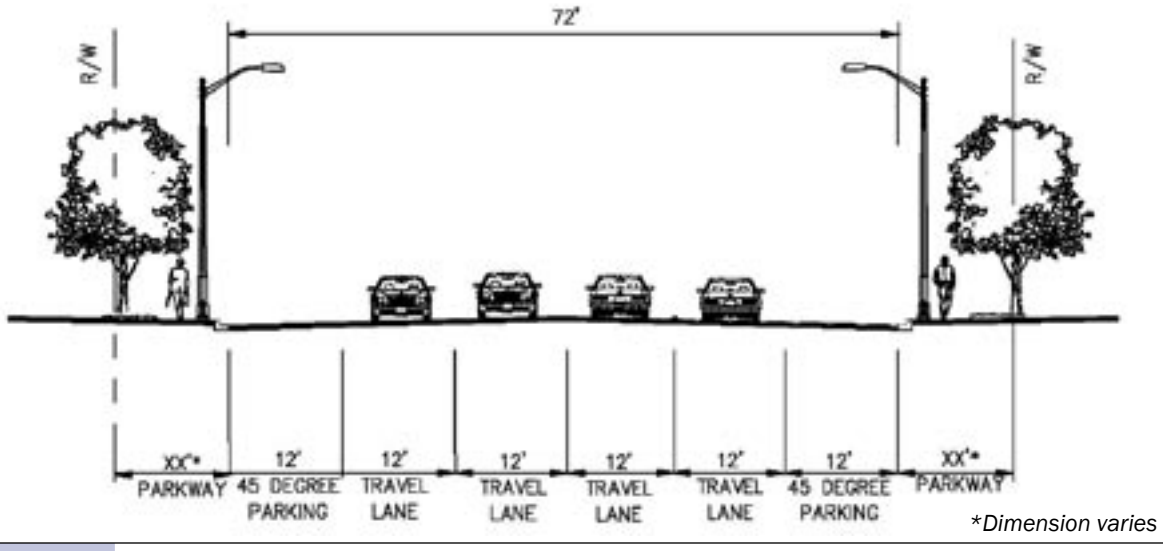
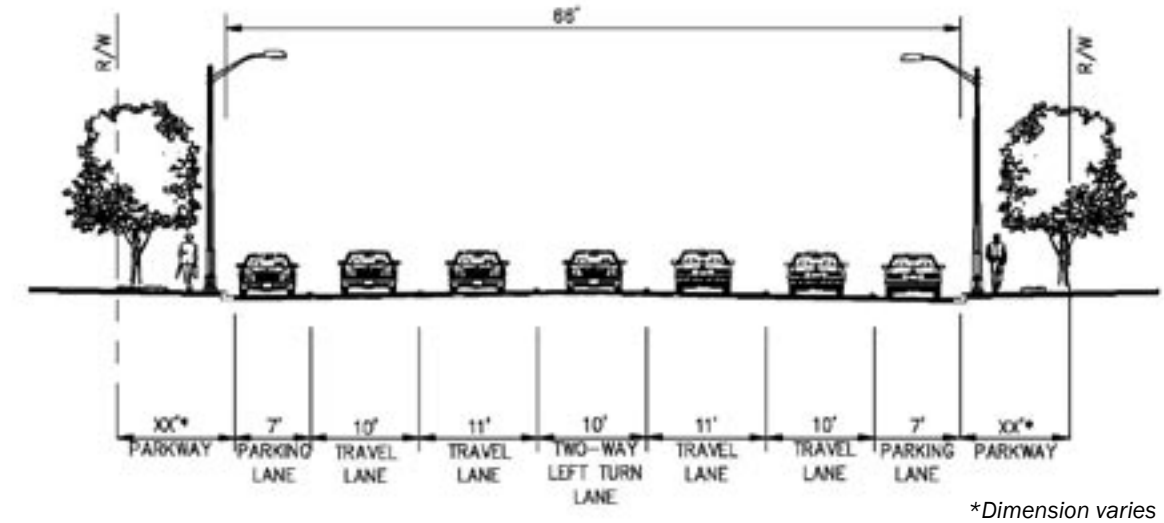


Existing Third Avenue between Madrona Street and G Street

Fg. 5.14



Existing Third Avenue between G Street and H Street

Fg. 5.15

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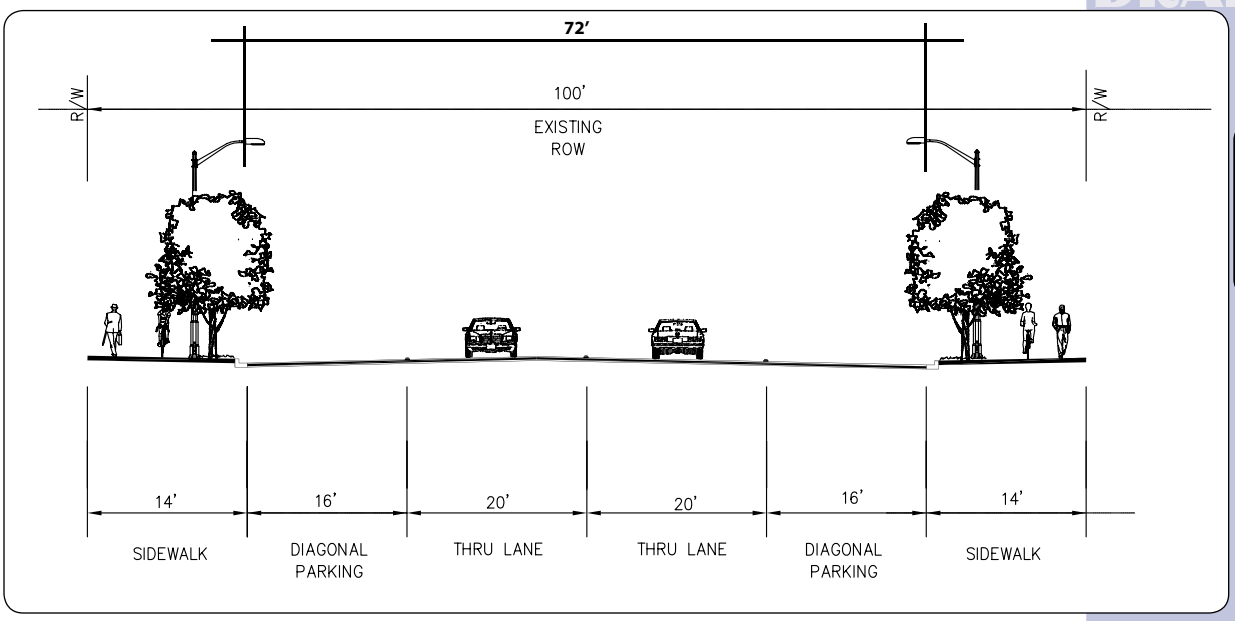
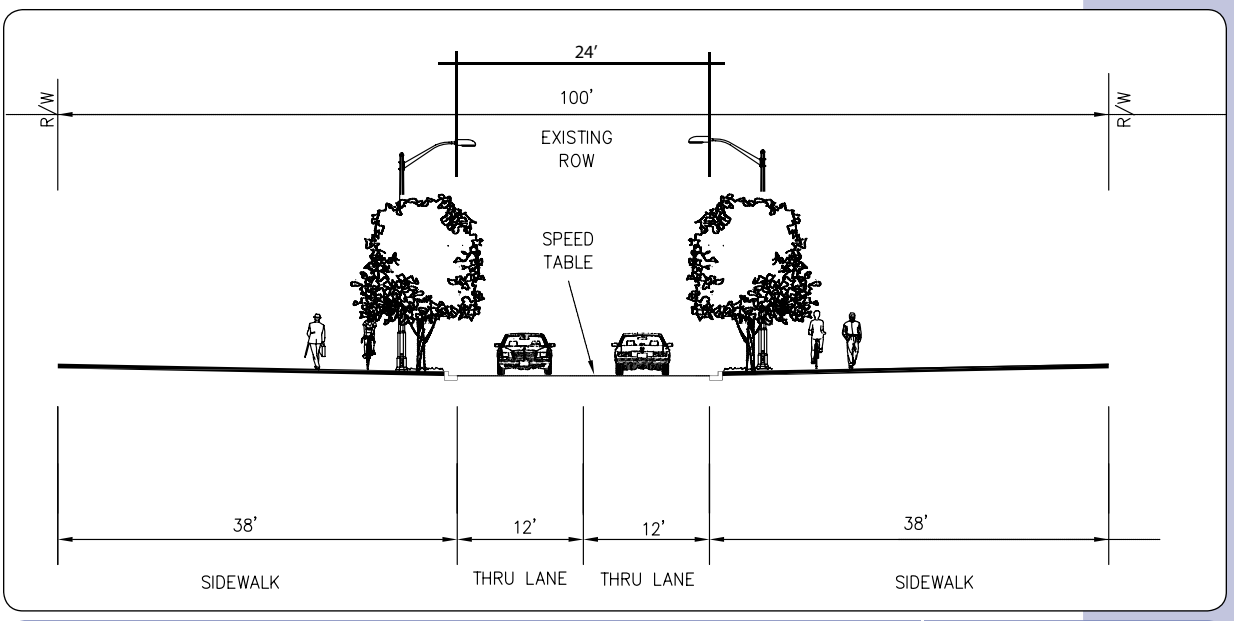
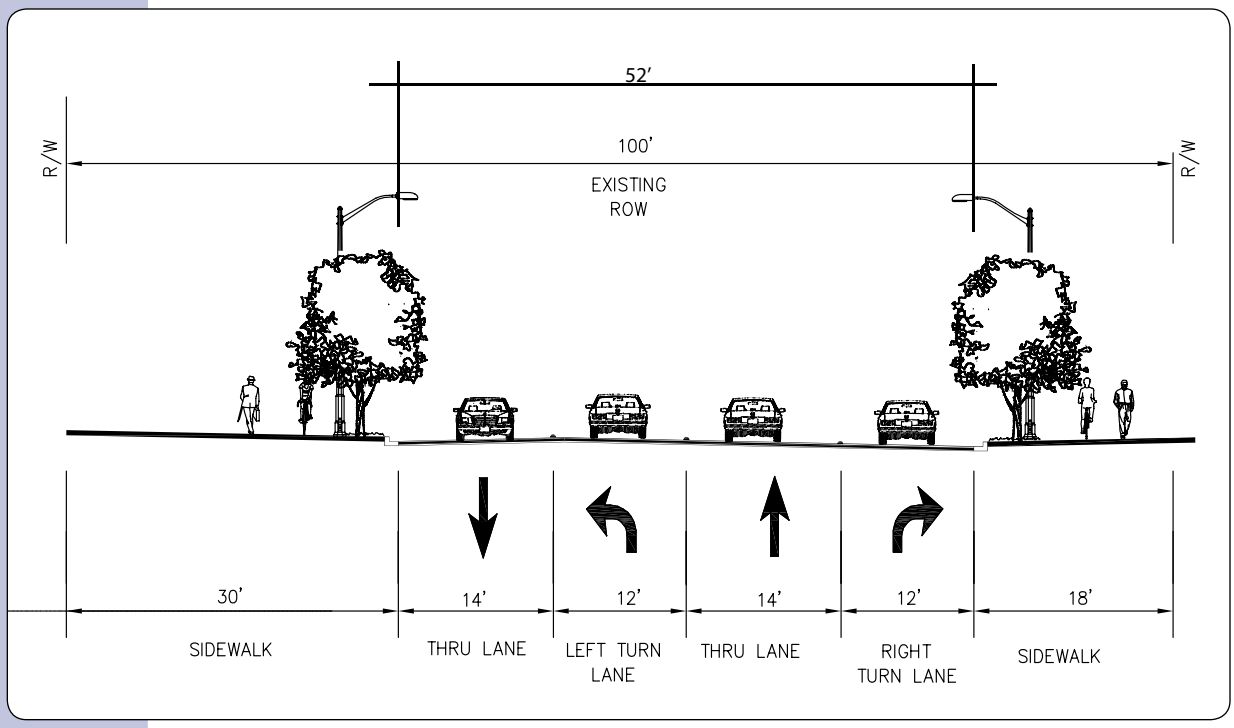


Proposed Third Avenue between E Street and G Street with diagonal parking **Fg. 5.16**



Proposed Third Avenue between E Street and G Street without diagonal parking **Fg. 5.17**

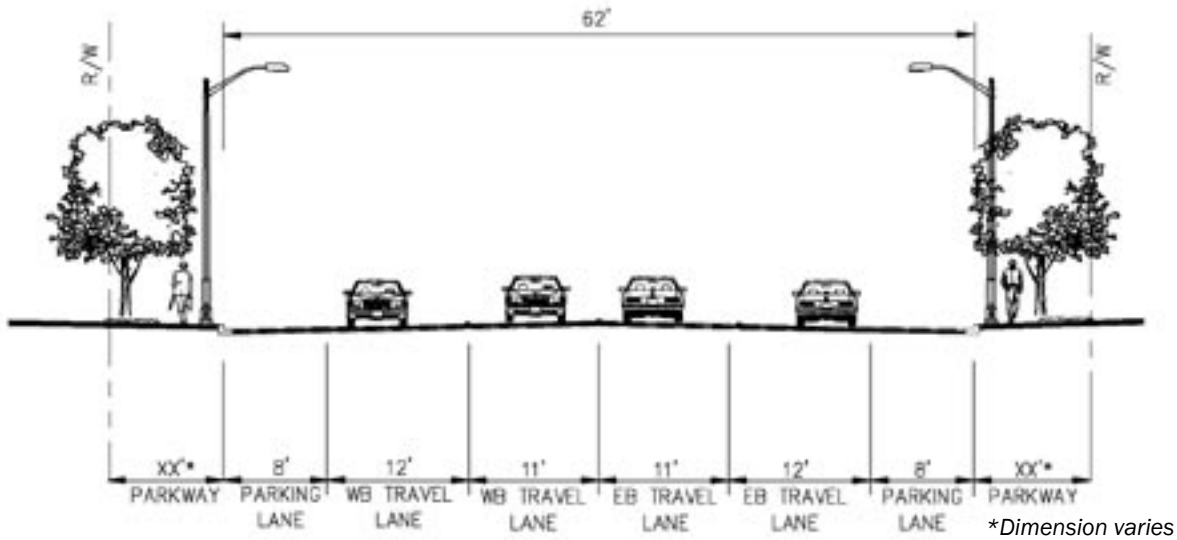


Proposed Third Avenue at signalized intersections (Source: Kimley-Horn and Associates)

Fg. 5.18

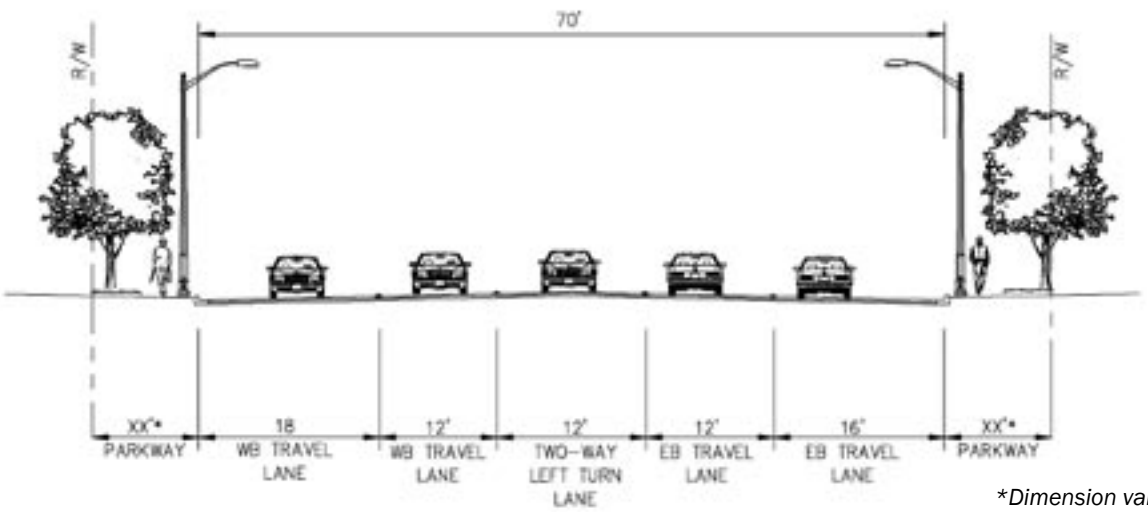
b. E Street

The existing roadway cross section on E Street is adequate to serve future traffic needs except for the segment between I-5 and 300' east I-5. To mitigate the intersection impact at the I-5 northbound ramp with E Street, a westbound right-turn lane is required. It is recommended that E Street be widened between Woodlawn Avenue and I-5, which will add an additional six feet in the curb-to-curb width. This segment will need an additional 22 feet of right-of-way. This added width will allow for an extended right-turn lane on westbound E Street onto the I-5 northbound on-ramp. This improvement will help to reduce the queues in the westbound direction and will improve the operations at the I-5 northbound ramp at the Woodlawn Avenue intersection.



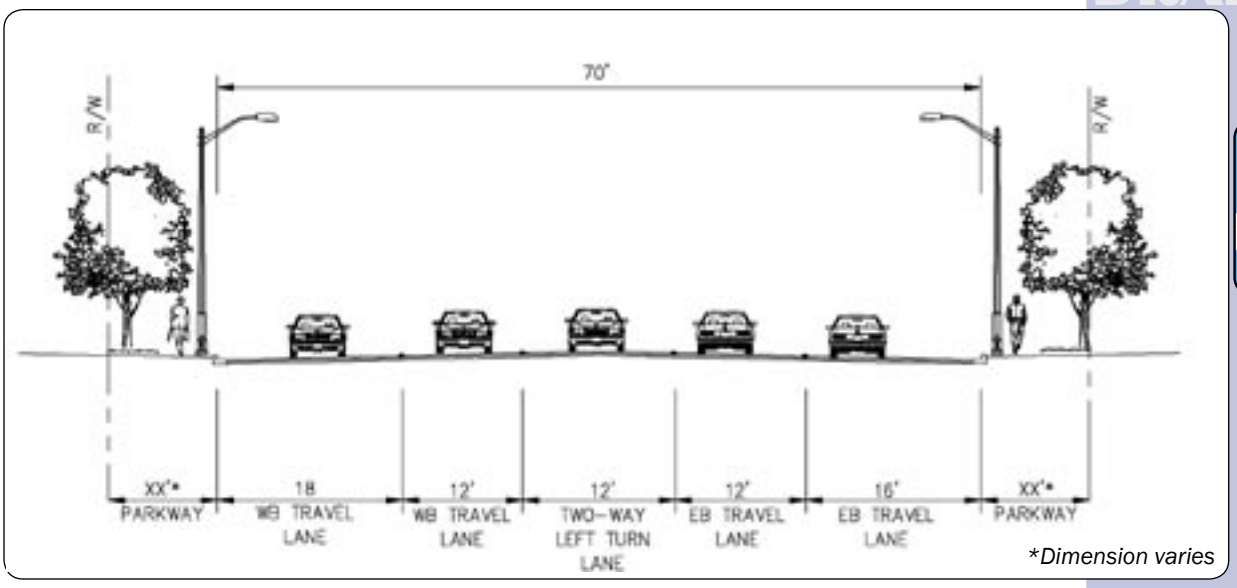
Existing E Street between Third Avenue and Broadway (Source: Kimley-Horn and Associates)

Fg. 5.19



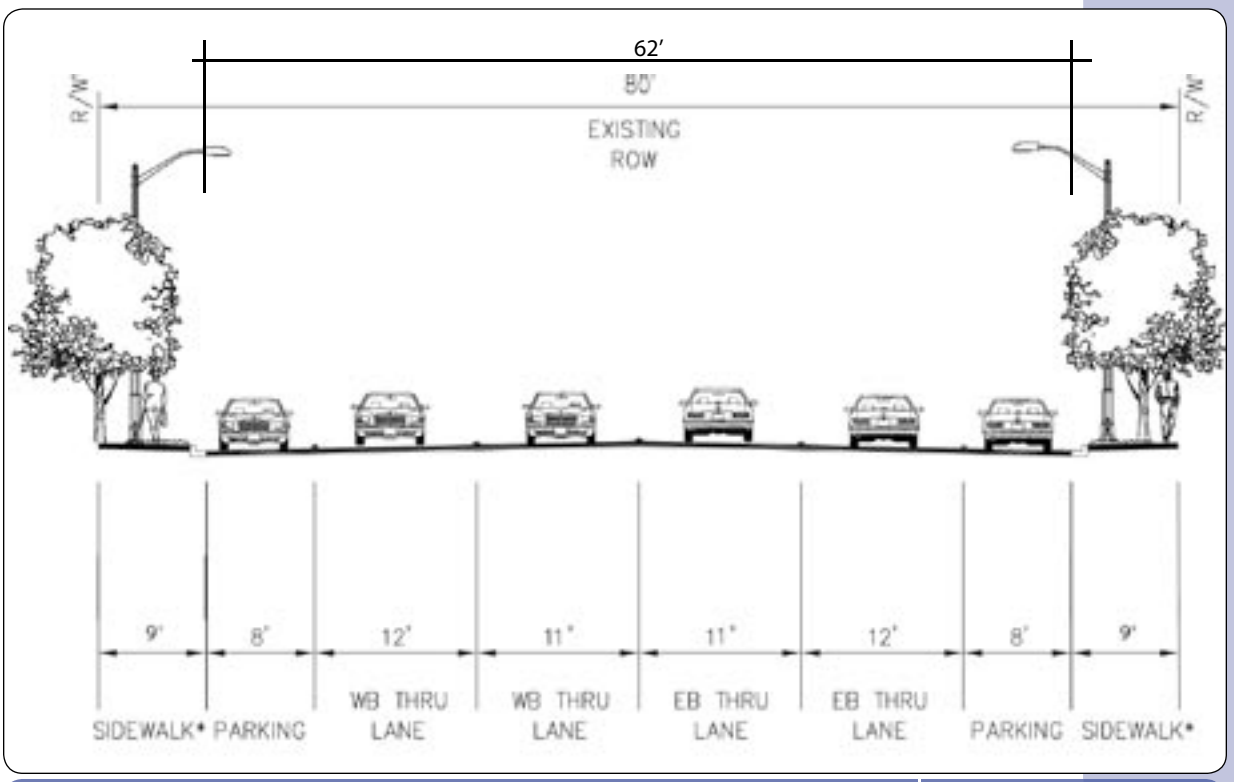
Existing E Street between Broadway and Woodlawn Avenue (Source: Kimley-Horn and Associates)

Fg. 5.20



Existing E Street between Woodlawn Avenue and I-5 (Source: Kimley-Horn and Associates)

Fg. 5.21



Proposed E Street between Third Avenue and Broadway (Source: Kimley-Horn and Associates)

Fg. 5.22

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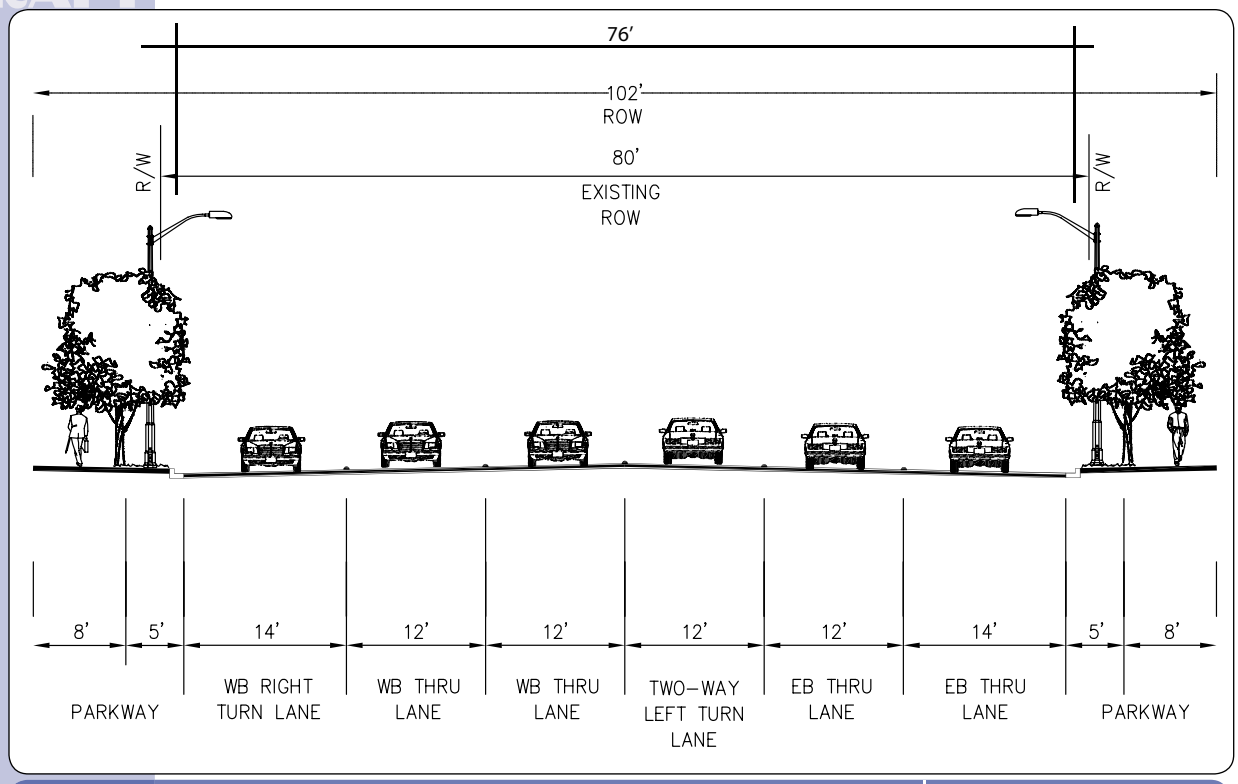


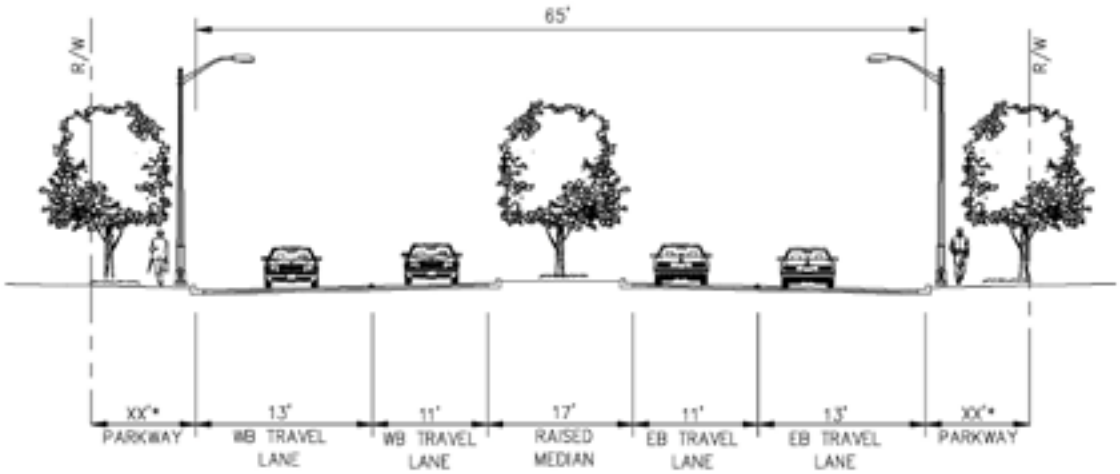
Proposed E Street between I-5 and 300' east of I-5 (Source: Kimley-Horn and Associates)

Fg. 5.23

c. F Street

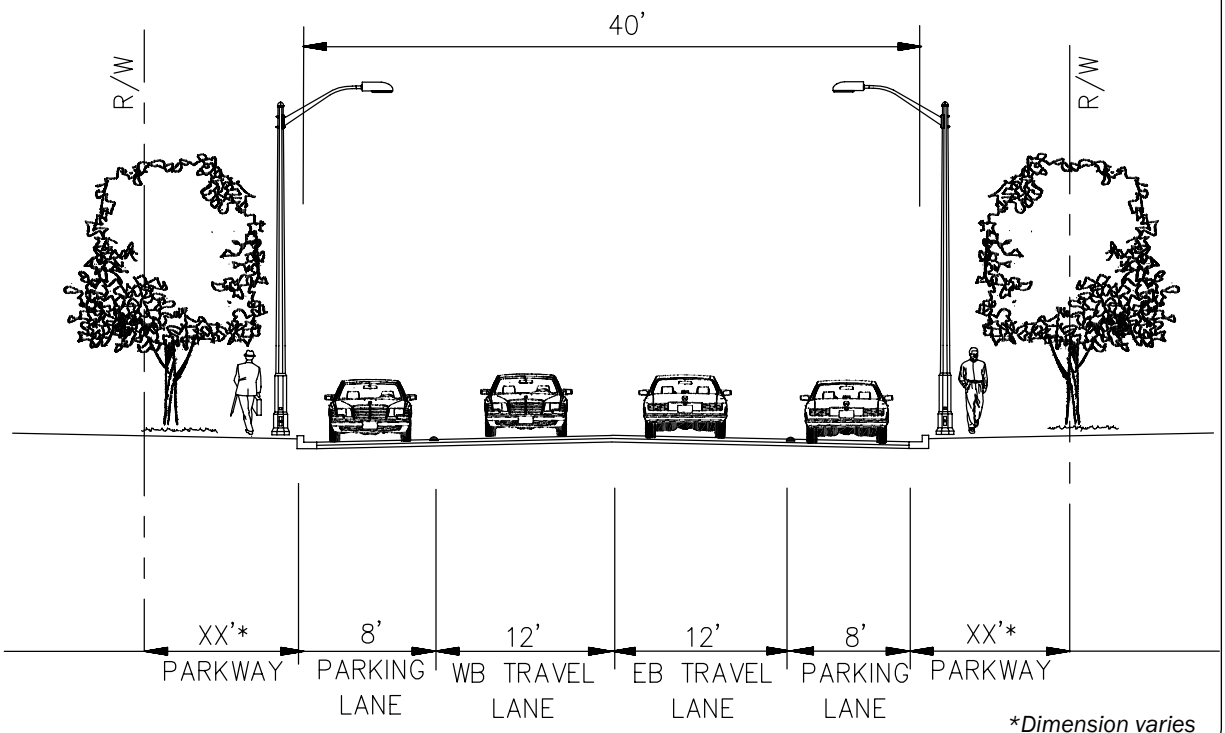
As a project feature of the Specific Plan, Class I bike lanes will be added to F Street between Third Avenue and I-5, as illustrated in Figure 5.27. The new Class I bike paths will improve the connectivity of the Urban Core to the Bayfront. Greater synergy between the two areas will be fostered through pedestrian and bicyclist opportunities. Wide parkways, off-street bike lanes, and wide sidewalks will provide an opportunity to stroll or bicycle through the Urban Core. A Class II facility will exist on F Street where a Class I bike path cannot be accommodated due to mature trees or new/existing medians.

For F Street, a 16-foot parkway is provided between Fourth Avenue and Broadway and a 12-foot parkway is provided between Third Avenue and Fourth Avenue. The exact location and configuration of bike path and parkway amenities will be decided through a future Streetscape Master Plan or other similar improvement plan. Existing trees from Third Avenue to Broadway are proposed to be preserved and incorporated into the streetscape theme. It is also recommended that the overhead utility line be placed underground as part of this improvement project.



** Parallel parking exists on north side of F Street between Garret Avenue and Third Avenue; Dimension varies*

Existing F Street between Third Avenue and Fourth Avenue (Source: Kimley-Horn and Associates) **Fg. 5.24**



**Dimension varies*

Existing F Street between Fourth Avenue and Broadway (Source: Kimley-Horn and Associates) **Fg. 5.25**

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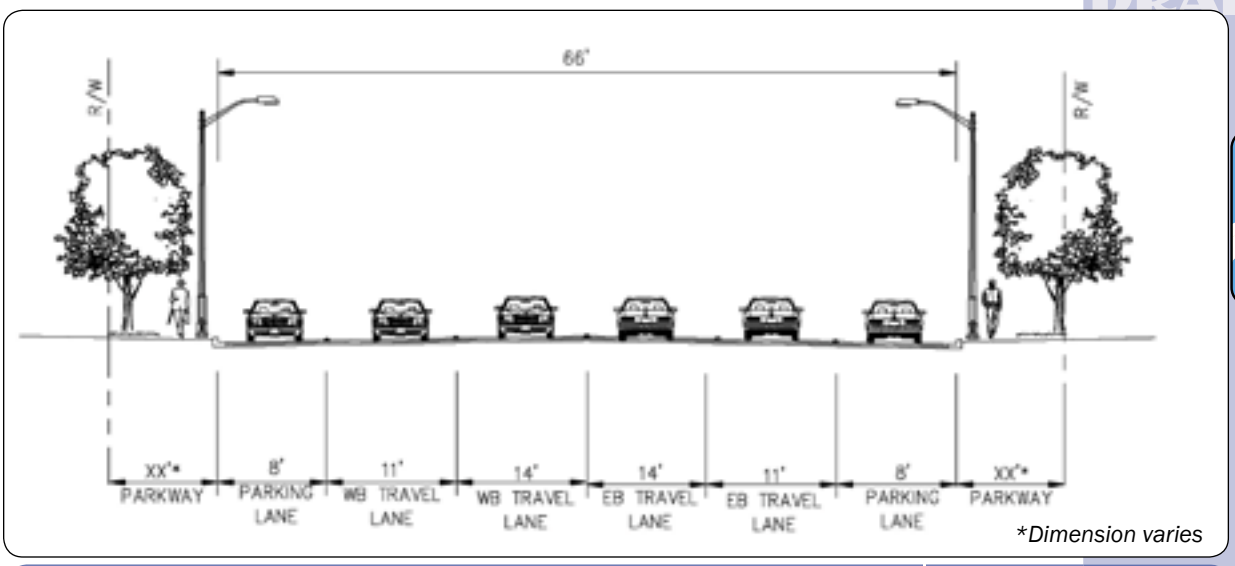
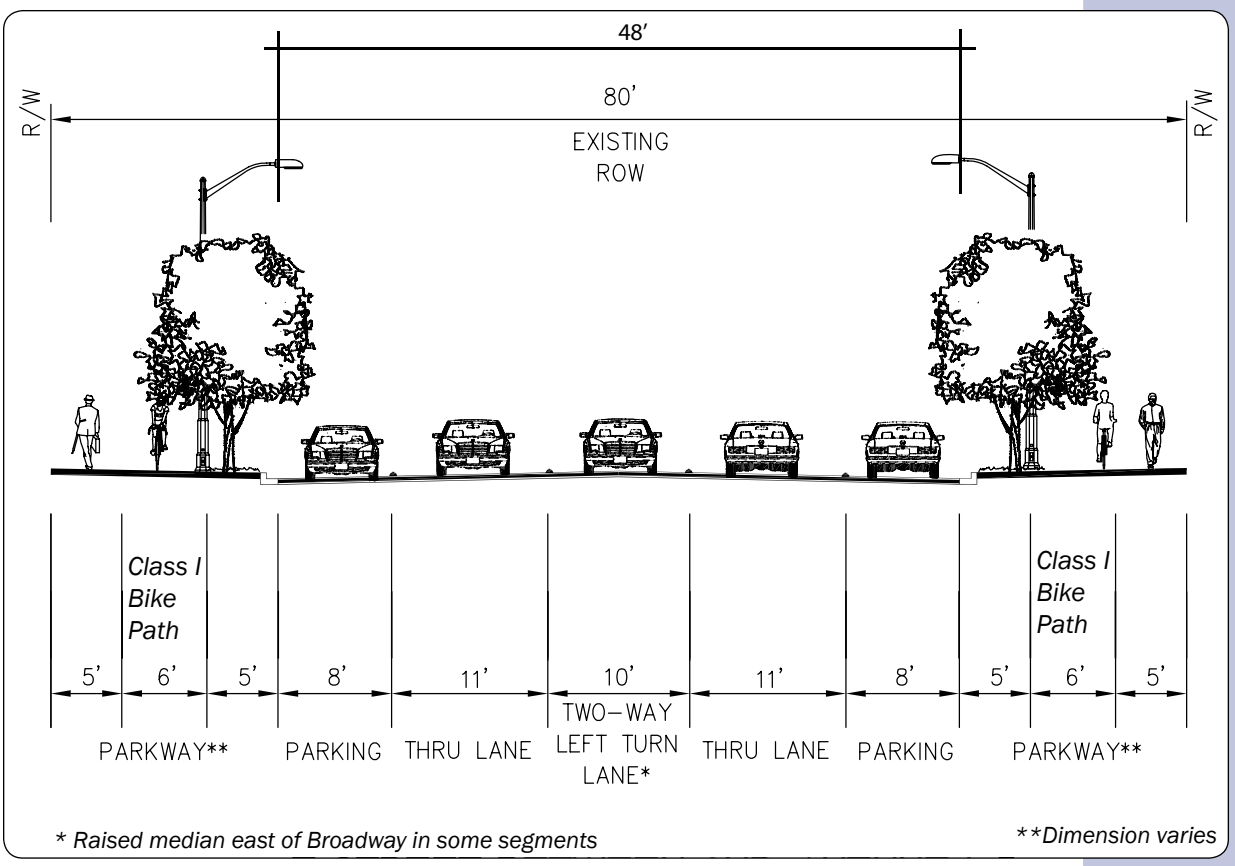


Existing F Street between Broadway and I-5 (Source: Kimley-Horn and Associates)

Fg. 5.26



Proposed F Street between Fourth Avenue and I-5 (Source: Kimley-Horn and Associates)

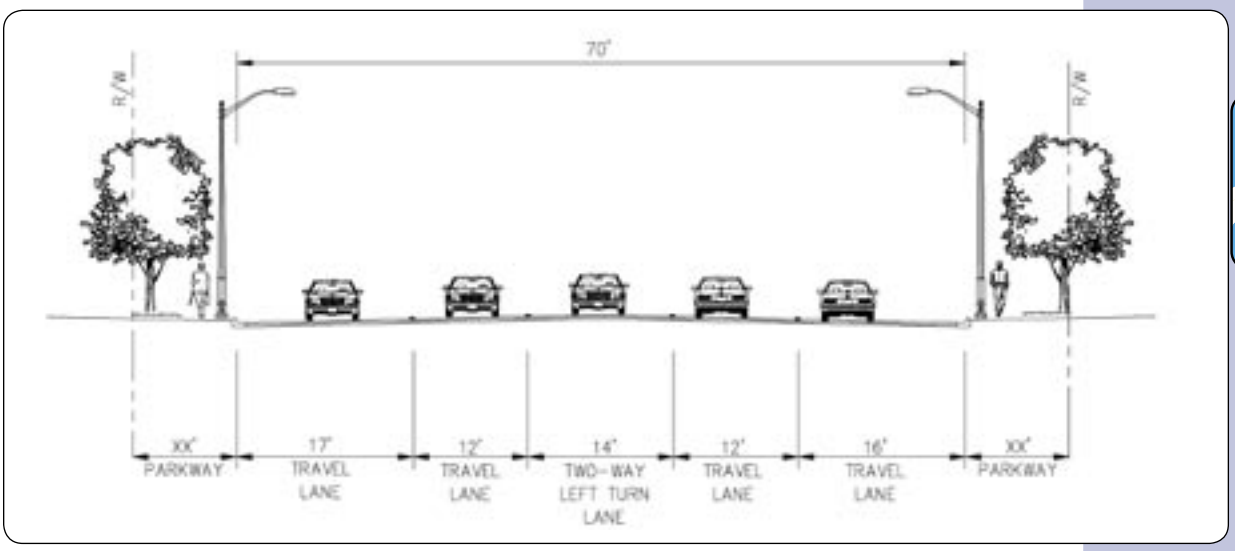
Fg. 5.27

d. H Street

The segment of H Street from Third Avenue to Broadway will be widened by eight feet. The new segment configuration will feature two travel lanes, a raised center median, and a Class I bike path on both sides of the street. One side of the street will also have parallel parking.

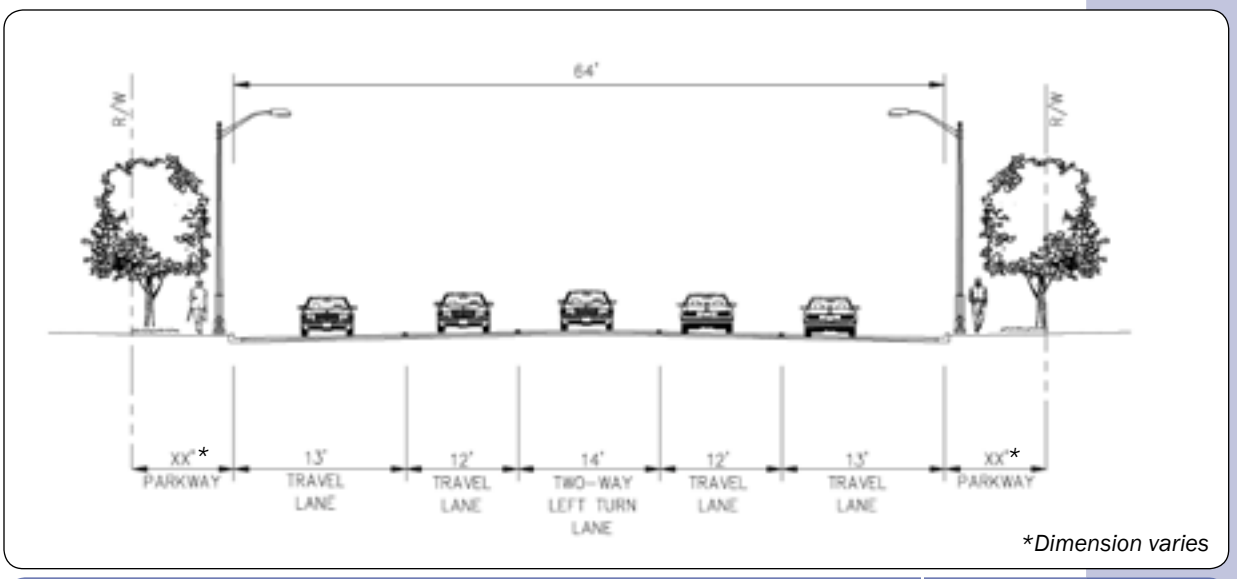
An additional 22 feet in the curb-to-curb width will be added to H Street between Broadway and I-5 to include an additional travel lane in both directions. This improvement is consistent with the ultimate classification of H Street as defined in the General Plan (2005). The additional travel lane is needed to accommodate buildout daily and peak-hour traffic on H Street and would improve the operations along this segment.

Further, a Class I bike path is proposed to be added to H Street between Third Avenue and I-5. H Street is intended as the "backbone" of the Urban Core, as it connects the transit focus areas at H Street/Third Avenue and H Street/I-5 and facilitates local and regional transit routes (and Bus Rapid Transit in the future). A sixteen-foot wide parkway is proposed in order to create a grand boulevard feeling and promote pedestrian use. The exact location of bike path and other amenities will be decided through a future Streetscape Master Plan or other similar improvement plans.



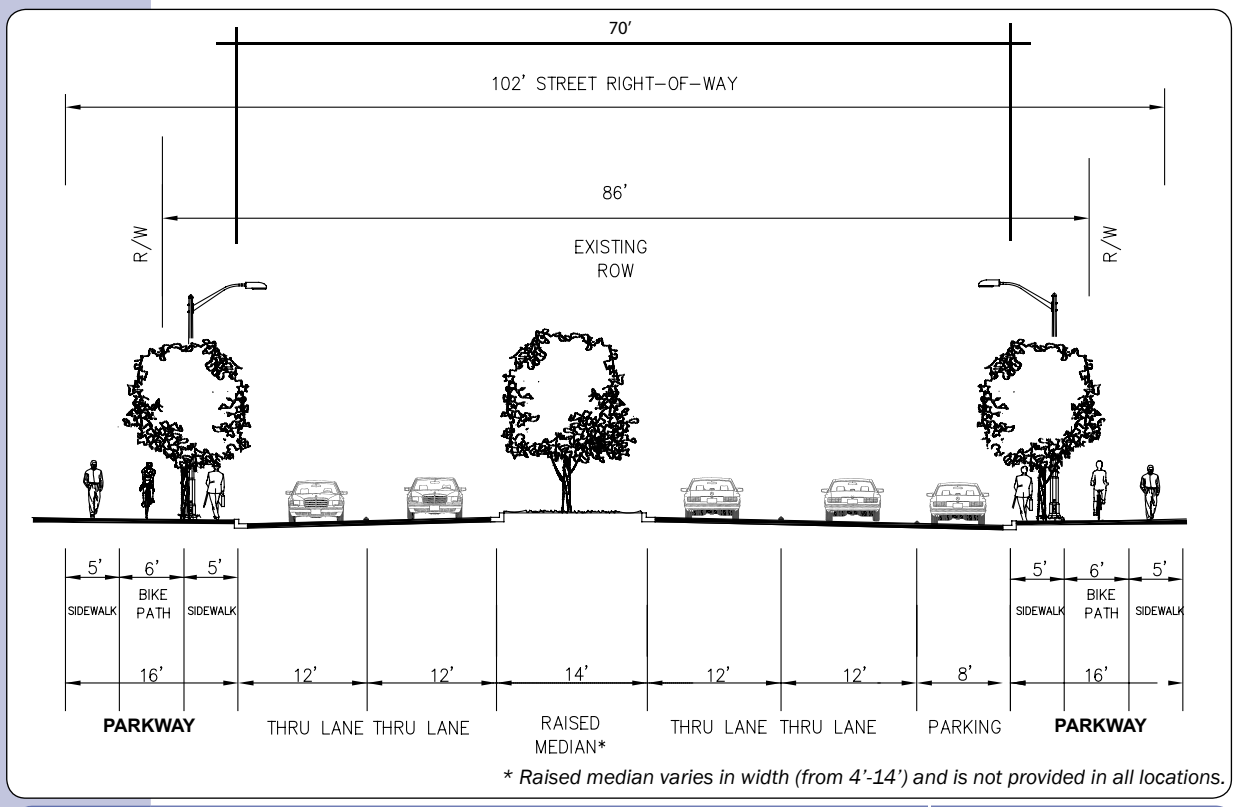
Existing H Street between Third Avenue and Broadway (Source: Kimley-Horn and Associates)

Fg. 5.28

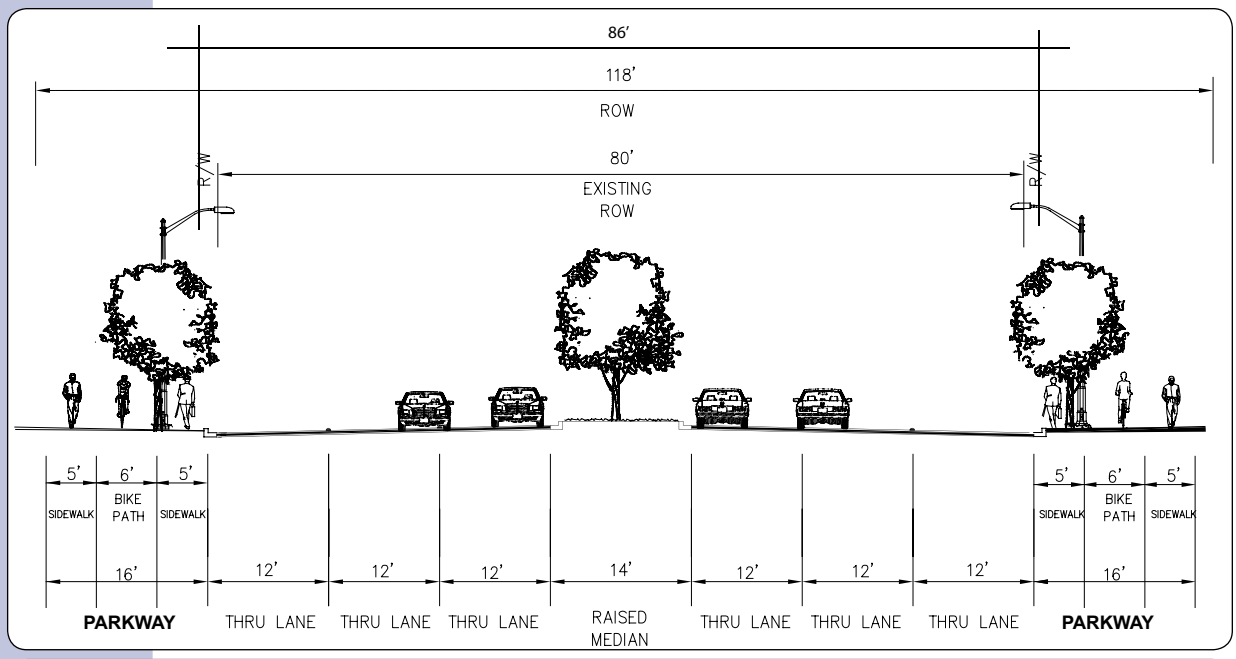


Existing H Street between Broadway and I-5 (Source: Kimley-Horn and Associates)

Fg. 5.29



Proposed H Street between Third Avenue and Broadway (Source: Kimley-Horn and Associates) **Fig. 5.30**



Proposed H Street between Broadway and I-5 (Source: Kimley-Horn and Associates) **Fig. 5.31**

e. Broadway

Broadway will be improved by adding a 12-foot raised median as a project feature. In addition, a Class II bikeway is proposed to be added along Broadway between C Street and L Street. Broadway will be widened by 14 feet between E Street and F Street to accommodate a final consistent configuration consisting of the raised median, bike lanes in both directions, and narrower traffic lanes. Between F Street and H Street, the roadway will not need to be widened and the existing median will be converted to a raised median. Nine-foot wide sidewalks will support pedestrian circulation. It is proposed to retain the existing palm trees within parkway areas.

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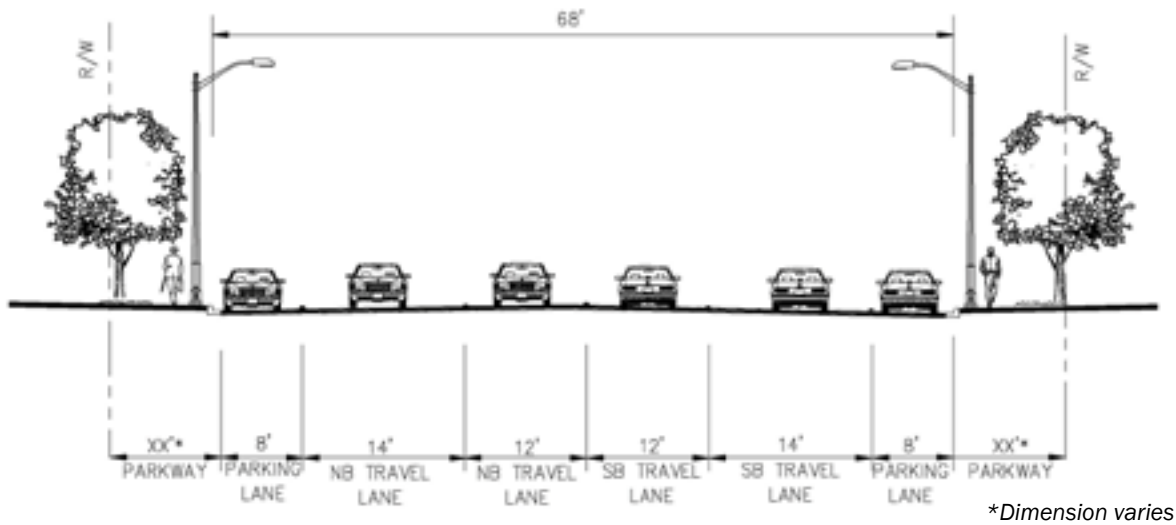
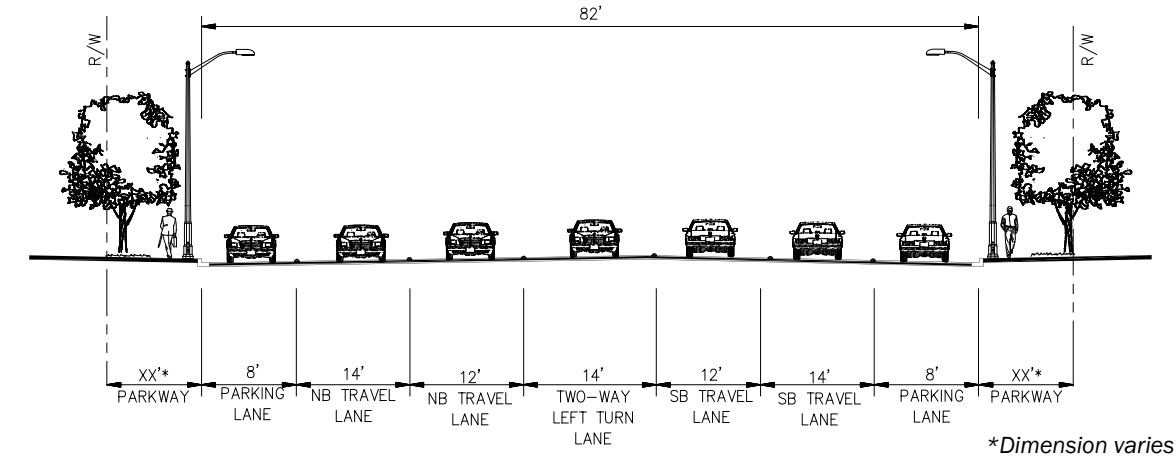


Existing Broadway between E Street and F Street (Source: Kimley-Horn and Associates)

Fig. 5.32



Existing Broadway between F Street and H Street (Source: Kimley-Horn and Associates)

Fig. 5.33

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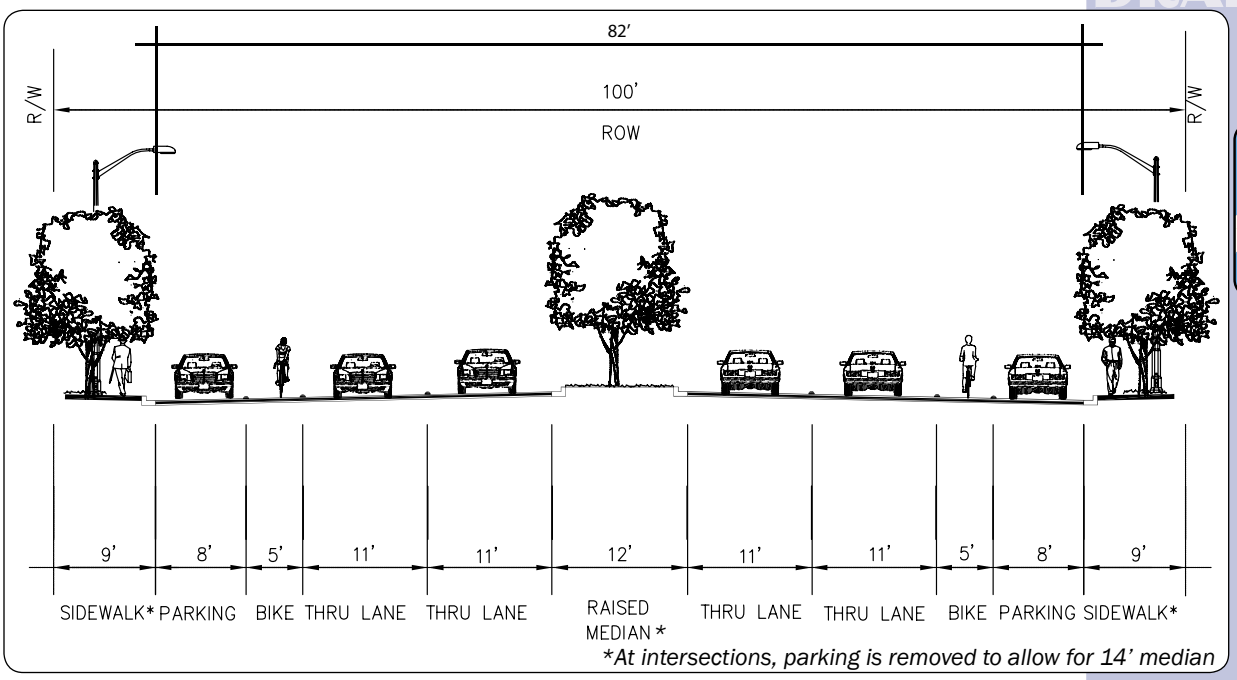
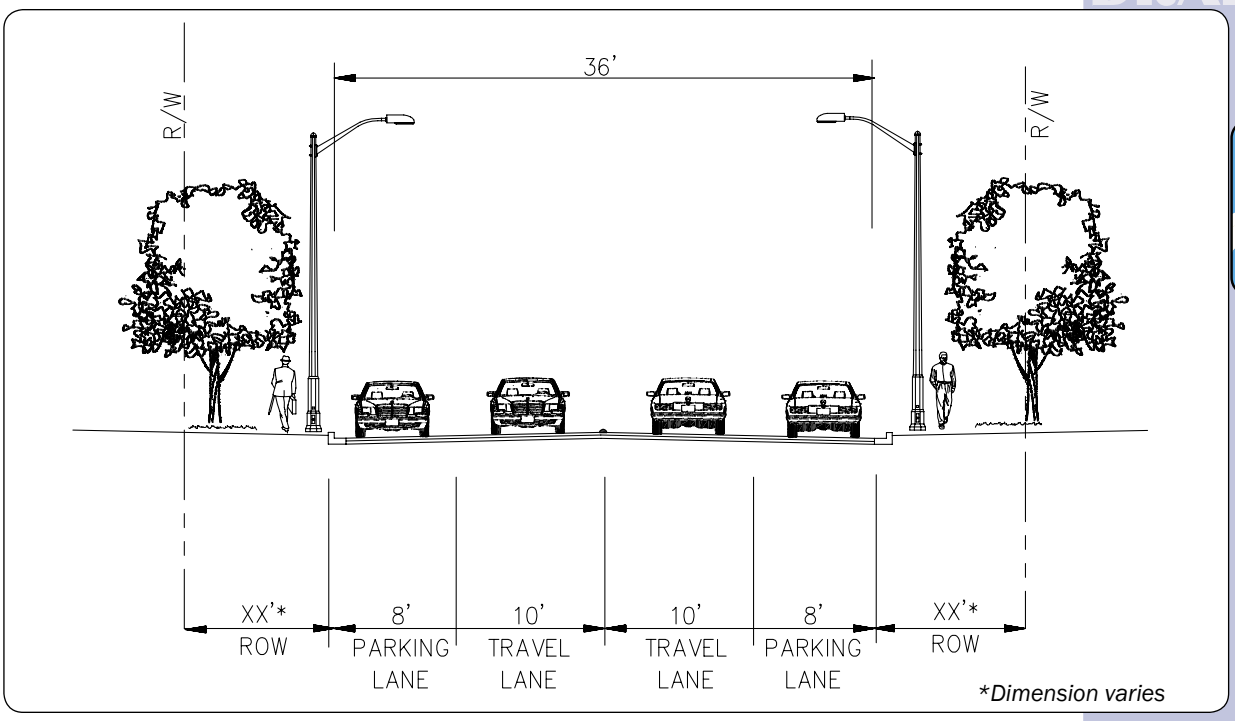


Proposed Broadway from C Street to L Street (Source: Kimley-Horn and Associates)

Fg. 5.34

f. Woodlawn Avenue Couplet

Woodlawn Avenue is not currently built as a continuous roadway between E Street and H Street, but it is recommended that the street grid be recreated by adding the currently missing segments. As redevelopment occurs, Woodlawn Avenue will be extended and converted to a one-way couplet between south of E Street and north of H Street. The creation of the one-way couplet could include the addition of a neighborhood public park between two one-way streets. The neighborhood park may include a variety of uses, such as playgrounds, walkways and basketball courts. The couplet would likely be implemented over time as property redevelops.



Existing segments of Woodlawn Avenue between E Street and H Street (Source: Kimley-Horn and Associates)

Fig. 5.35

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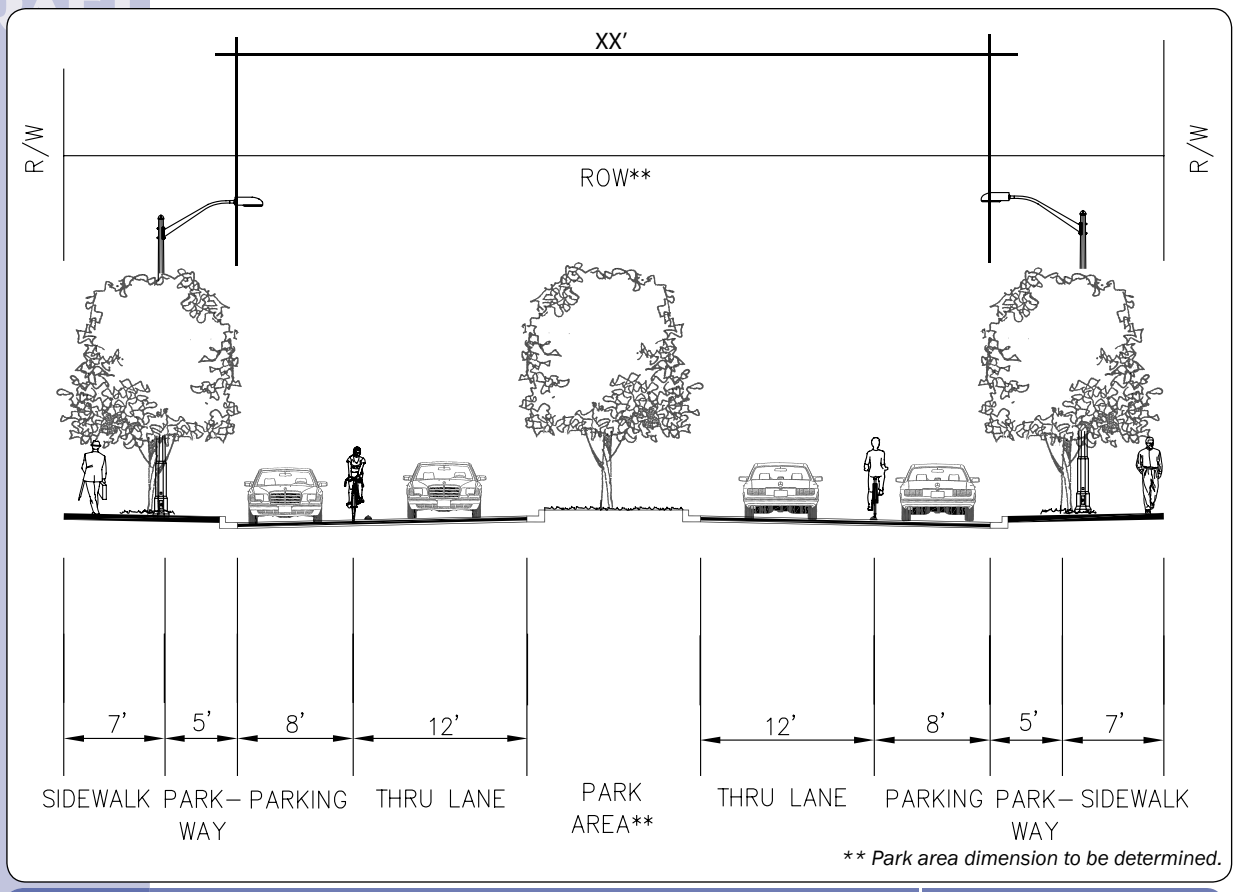

Proposed Woodlawn Avenue entire length (Source: Kimley-Horn and Associates)

Fg. 5.36

g. Neighborhood Streets

Enhancement strategies for neighborhood streets focus on the public realm rather than roadway width and lane configuration; therefore, these strategies are described in Chapter VIII - Public Realm Design Guidelines. Such improvements will focus on beautification, landscaping, improving sidewalk and street conditions, and pedestrian system improvements such as crosswalks where warranted. New connections reintroducing the grid system are also possible and should be encouraged as development occurs or planned as capital improvements projects in the long-term.

h. Alleys

Alleys, to the extent feasible, will allow for short-term loading and unloading and other delivery services. Alleys will also function as alternative access to uses and parking areas.

i. Roadway Segment Levels of Service

With the implementation of recommended improvements and reclassifications, Urban Core roadways will perform at an acceptable level of service with the exception of Third Avenue between E and G Streets. This segment will be reclassified to a two-lane roadway and result in lower the level of service. However, Third Avenue intersections would operate at acceptable levels of service and the narrowing of Third Avenue and increasing the width of sidewalks and usable outdoor area would create a desirable, pedestrian-friendly environment.

j. Intersection Improvements

Intersection improvements have been identified at 23 intersections related to implementation of the Specific Plan. (See Figures 5.37 and 5.38 Proposed Intersection Improvements.) Note: Three of the improvements are proposed as project features to enhance pedestrian circulation rather than improvements identified to reduce traffic impacts. Those intersections are Third Avenue and E, F, and G Streets. After implementation of recommended improvements, 20 of the intersections would be improved to acceptable levels of service. Three intersections would be improved to operation at LOS E: H Street/Broadway, Third Avenue/J Street, and Hilltop/H Street. Although mitigation options have been explored, improvement to an acceptable LOS of D is not feasible due to right-of-way and existing building constraints or impediments to pedestrian circulation.

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Chula Vista Urban Core Specific Plan Intersection Improvements	
Intersection	**Recommended Improvements**
Bay Boulevard/I-5 SB Ramp/E Street	Add EBT, EBR, SBL, SBR, and NBR lanes*
I-5 NB Ramp/E Street	Add WBR lane and Light Rail Transit grade separation*
Third Avenue/E Street	Covert NBT shared RT lane and SBT shared RT lane into exclusive RT lanes
Broadway/F Street	Add EBR lane
Third Avenue/F Street	Separate SBT shared RT lane into an exclusive SBR lane and a SBT lane; convert the NBT shared RT lane into an exclusive NBR lane.
Third Avenue/G Street	Convert NBT shared RT lane and SBT shared RT lane into exclusive RT lanes
I-5 SB Ramp/H Street	Add SBL, EBT, and EBR lanes*
I-5 NB Ramp/H Street	Add WBR, WBT, restripe south approach to accommodate dual left turns and Light Rail Transit grade separation*
Woodlawn Avenue/H Street	Change Woodlawn Avenue to a one-way couplet
Broadway/H Street	Add EBT Queue Jumper Lane, WBT and WBR lanes
Fifth Avenue/H Street	Change NB and SB approaches to protective plus permissive phasing in traffic signal and add WBR lane
Fourth Avenue/H Street	Add EBR and WBR lanes
Hilltop Drive/H Street	No improvements recommended due to ROW constraints
Broadway/SR-54 WB Ramp	Add WBR lane*
Fourth Avenue/SR-54 EB Ramp	Add EBR lane*
Fourth Avenue/Brisbane Street	Add SBR overlap phase
Third Avenue/J Street	No improvements recommended due to ROW constraints
Second Avenue/D Street	Convert to an all-way stop controlled intersection
J Street/I-5 NB Ramp	Add EBL and WBR lanes*
L Street/Bay Boulevard	Add SBL lane, signalize intersection, and add NBR overlap phasing to traffic signal
Bay Boulevard/I-5 SB Ramp	Signalize intersection*
Industrial Boulevard/I-5 NB Ramp	Signalize intersection*

RT = Right turn lane
EBL = Eastbound left turn lane
EBT = Eastbound through lane
EBR = Eastbound right turn lane
WBT = Westbound through lane
WBR = Westbound right turn lane
NBT = Northbound through lane
NBR = Northbound right turn lane
SBL = Southbound left turn lane
SBT = Southbound through lane
SBR = Southbound right turn lane
*Coordination with Caltrans is required

Proposed Intersection Improvements (Source: Kimley-Horn and Associates) **Fig. 5.37**

4. Conclusions

The Specific Plan emphasizes a multi-modal strategy and provides project benefit features in addition to required mitigation measures. This approach accommodates additional development intensity while providing sufficient levels of service.

The comprehensive traffic impact analysis for the Specific Plan evaluated a total of 64 intersections and 32 roadways. Under existing conditions, five intersections operate at LOS E or worse during peak periods and all roadway segments function at an acceptable LOS. With implementation of the Specific Plan, proposed improvements and multi-modal strategies, future conditions show three intersections operating at LOS E or worse. One roadway segment is projected to operate at LOS E or worse (Third Avenue between E Street and G Street) as discussed above. This service level is due to the proposed pedestrian improvements. However, intersections along Third Avenue will operate at acceptable levels of service. The analysis shows that overall future levels of service are projected to be maintained relative to existing conditions with implementation of the recommended improvements and project features.

F. Parking

1. Existing Conditions

Parking within the Specific Plan area is primarily provided for individual land uses on-site. For example, commercial and office uses along H Street and Broadway meet their parking demand on-site, and existing residential uses are required to provide on-site parking. In addition, many of the major and neighborhood streets with the Urban Core have on street parking available to the general public.

In addition to on-site parking, a parking district has been established along Third Avenue and abutting streets within the Village District. The parking district through a metered system includes public parking both on Third Avenue, and a series of small to large public parking lots. Within the Village parking district approximately 509 metered spaces are on street and 1,205 spaces are provided in 11 different public parking lot locations. The parking district establishes parking supply for existing and new (permitted) commercial uses in the Village commercial corridor and provides a mechanism for new conditionally permitted commercial uses to pay an in-lieu fee instead of providing new on-site parking spaces, which is often infeasible given the developed condition of the commercial corridor. The district also provides a comprehensive maintenance program of existing parking lots.

On-street parking is provided in some areas | Fg. 5.38

2. Parking New Uses

Successful implementation of the Specific Plan, which promotes pedestrian-friendly and transit-friendly streetscapes and development, will cause a gradual transition to a "park-once/walk-many" environment. This would be in stark contrast to the current pattern, where many customers park at one business then take a short car trip to the next business. Proper design and promotion of local transit and the proposed West Side Shuttle could promote the arrival of customers by bus and bicycle/pedestrian travel to each business. Although alternative modes of transportation (walking, bicycling and transit) are foundational to the Specific Plan, vehicle use may remain one of the primary means of access throughout the Urban Core. Therefore, in concert with the pedestrian, bicycle and transit centered improvements recommended in the Specific Plan, the provision of an adequate parking supply is necessary in order to provide for all modal types of trips.

Parking supply will need to be balanced and should not overshadow the primary goal of creating a vibrant pedestrian friendly urban core. It is also recognized that one of the greatest challenges to revitalization of properties within the Specific Plan area may be the ability to provide adequate on-site parking for new commercial uses. With limited land resources and the additional costs typically associated with infill development, provision of on-site parking is often financially challenging, and can make or break the success of a commercial project.

Diagonal parking such as that above is provided on portions of Third Avenue

Fig. 5.39

The Specific Plan allows an intensification of development in the Urban Core which will create an increased demand for off-street parking. Chapter VI - Land Use and Development Regulations identify parking requirements such as the minimum number of parking spaces required per use and parking locations. Parking standards are identified for residential, guest, and non-residential uses; parking locations are for the most required on-site parking. In addition, Chapter VII - Development Design Guidelines provides guidance on the design of parking lots and facilities, with an emphasis on accessibility and safety. As new development occurs compliance with the development regulations and design guidelines will be required.

While the majority of new uses will provide parking on-site, there are specific locations such as within the Village district and transit focus areas that allow some of the parking needs to be met off-site and/or through alternative means such as in lieu fees and shared parking arrangements. This approach is appropriate given the planned land uses for these subdistricts which are primarily mixed use and typically have opposing peak parking demands. As part of the approval process, projects will need to demonstrate that sufficient parking will be made available with their development. The following section further describes potential parking improvement strategies within the Urban Core.

3. Parking Improvement Strategies

a. Parking Circulation

Parking should always be designed with accessibility and safety in mind. In areas where pedestrian streetscapes and site design will be promoted, it is desirable to provide buffers between pedestrians and traffic as much as possible. Buffers can include low-profile elements such as bollards near the

curb or additional parkway/tree well landscaping. A consistent layout of on-street parking also helps to create visual separation between roadway traffic and sidewalk areas. Properly designed buffers induce a feeling of safety by pedestrians and help define crosswalk and outside seating areas. These design principles are described in further detail in Chapter VII - Development Design Guidelines and Chapter VIII - Public Realm Design Guidelines.

Access to new parking areas should be designed carefully so that incoming traffic to centralized parking lots does not conflict with pedestrian circulation either on major streets such as Third Avenue, H Street and Broadway, or internally through parking lots and garages. Traffic should be routed onto major streets by a directional sign program, so that undue incursions into nearby residential neighborhoods do not occur. Alleys, although not currently a predominant feature within the Urban Core, should be dedicated and extended with proper site planning for new development. Alleys can provide additional access routes to both on-site and centralized parking lots.

Example of parking structure wrapped with retail uses **Fig. 5.40**

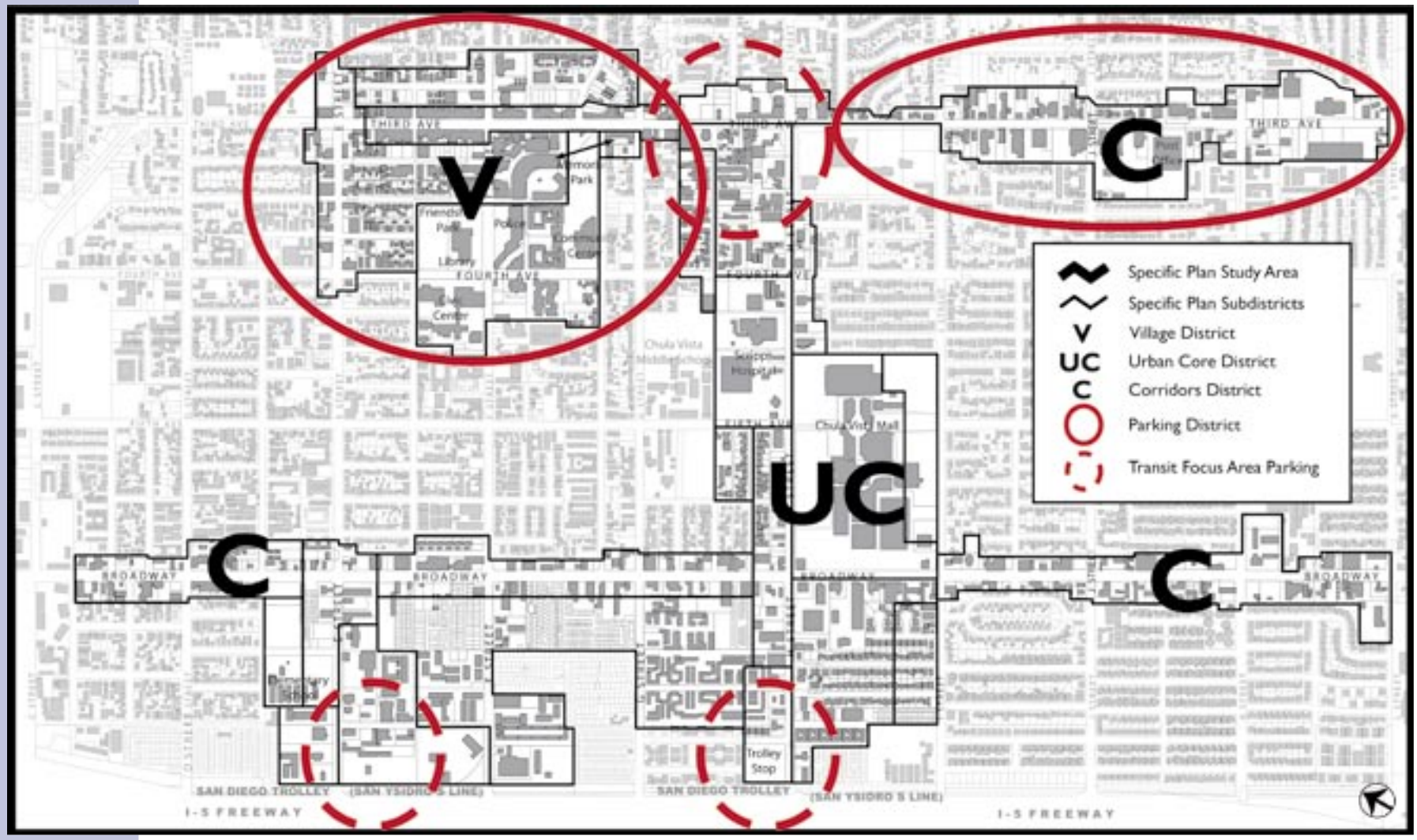
b. Parking Reductions

One method to create incentives for redevelopment and restructuring of the urban form is to minimize the number of required parking spaces at identified transit nodes and mixed-use areas. As set forth in Chapter VI - Land Use and Development Regulations, parking requirements have been reduced to be more consistent with urban standards and reflective of the multi-modal design principles embraced by the Specific Plan.

c. Parking Districts

Parking Districts can be very effective tools to help create more parking, to promote efficient use of existing parking spaces, and to provide a means for allowing shared parking and off-site, remote parking for a development site. A parking district was established several years ago in the Village District. Figure 5.42. Parking Strategy Map indicates areas within the Urban Core where additional parking districts and transit focus area parking may be studied and located. Future parking districts should be developed in cooperation with area property owners and business owners.

Consideration should be given to expanding the Village parking district to better align the boundaries with the Village subdistricts. On-site parking for new commercial uses should not impede the intended pedestrian character of the area, and may be better suited in centralized easy to reach locations. In



Parking Strategy Map

Fig. 5.41

The pedestrian area is separated from parking areas

Fg. 5.42

addition, some diagonal parking may be phased out along Third Avenue as pedestrian and landscaping improvements are implemented. Replacement parking should be provided if determined to be necessary in the short term.

An expanded in-lieu parking fee program may be another means to providing efficient parking supply within the parking districts. The in-lieu fee program could assist some new businesses in locating within the Urban Core, as the expense of providing on-site parking would be offset. The assessment could also assist the City by providing reimbursement for property acquisition, capital funding, and operating funds for new parking lots or structures. The existing in lieu fee program within the Village District should be reevaluated to ensure adequate funding or reimbursement for new publicly owned parking lots is being assessed. Parking developed under an in- lieu program would need to be strategically timed in order to ensure a proper balance between parking demand and supply.

Unlike a parking assessment district, the in-lieu fee program would not be a local tax that would be levied upon all business owners in a designated area. The in-lieu fee would be optional and only assessed on new commercial developments within a specified area if on-site parking is not provided. The in-lieu fee would be based on the number of required parking spaces that could not be provided on-site by the development. A radius from a particular development could be utilized, between one-quarter mile and one-eighth mile walking distance, to determine the location of the nearest off-street parking lots that could feasibly serve that particular business. This assessment would need to evaluate the availability of parking in the identified lots, including both the existing demand and parking supply commitments made to other nearby developments.

Multi-level parking facility with retail on ground floor

Fg. 5.43

d. Parking Structures

The use of structured parking can be particularly effective in allowing increased densities. The Specific Plan recommends parking structures where feasible, and in particular within the transit focus areas (such as UC-2, UC-12 and

UC-15), to encourage the intensification of mixed-use, commercial, office and residential projects where parking can be provided on-site in a structured format. Land values and the proximity to transit in these areas tend to support the higher economic investment necessary to construct parking structures. These parking structures could serve individual development sites, provide shared facilities and/or serve as additional public parking facilities.

Over the mid to long-term, parking structures may also be warranted in the area around Third Avenue, since existing surface parking lots may only be sustainable in the near term. As existing public surface lots redevelop, new development should be required to replace public parking either on or off site. In addition, where appropriate and feasible, the use of the incentives program should be encouraged to enhance public parking opportunities (See Chapter VI - Land Use and Development Regulations.)

New surface parking lots should be well landscaped **Fg. 5.44**