

# Downtown San Diego Mobility Plan Appendices



*June 2016*

*This page was intentionally left blank.*

# Appendices

Appendix A	Relevant Citywide, Adjacent Community, and Regional Planning Efforts
Appendix B	On-the-Street Survey Forms & Results
Appendix C	San Diego Forward: The Regional Plan Revenue Constrained Transit Network Changes
Appendix D	TDM Strategies
Appendix E	Planning Level Cost Estimates
Appendix F	Intersection Design Concepts
Appendix G	Additional Design Concepts

*This page was intentionally left blank.*

# Appendix A

Relevant Citywide, Adjacent Community, and Regional Planning Efforts

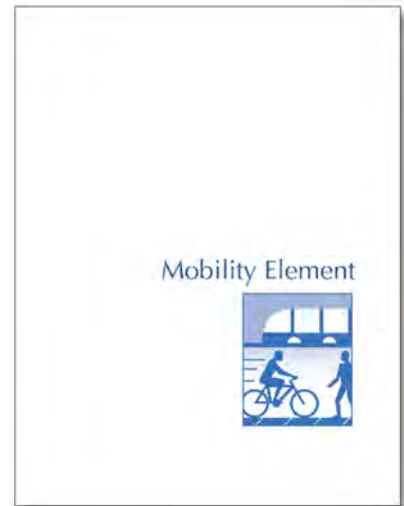
*This page was intentionally left blank.*

## City of San Diego Plans

### City of San Diego General Plan – Mobility Element (2008)

This element from the City of San Diego’s General Plan proposes transportation planning goals and policies related to pedestrian, transit, street and freeway systems, Intelligent Transportation Systems, Transportation Demand Management, bicycling, parking management, airports, passenger rail, goods movement/freight, and regional coordination and financing. The element discusses several key topics related to pedestrian-oriented planning, traffic calming techniques, bicycle facility network improvements, and transit priorities.

The Mobility Element sets forth several goals that are relevant to the current Downtown San Diego Mobility Plan, such as:



#### *Walkable Communities*

- A City where walking is a viable travel choice, particularly for trips of less than one-half mile.
- A safe and comfortable pedestrian environment.
- A complete, functional, and interconnected pedestrian network that is accessible to pedestrians of all abilities.
- Greater walkability achieved through pedestrian-friendly street, site and building design.

#### *Bicycling*

- A city where bicycling is a viable travel choice, particularly for trips less than five miles.
- A safe and comprehensive local and regional bikeway network.
- Environmental quality, public health, recreation and mobility benefits through increased bicycling.

#### *Transit*

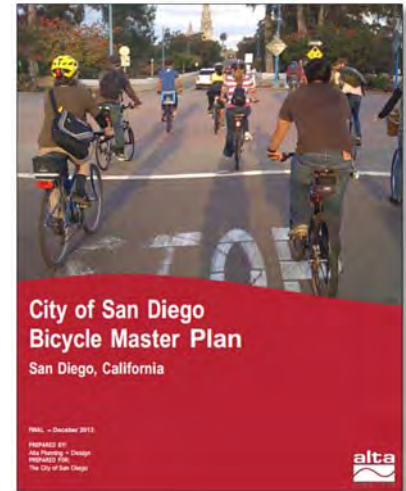
- An attractive and convenient transit system that is the first choice of travel for many of the trips made in the City.
- Increased transit ridership.

#### *Streets and Freeway Systems*

- A street and freeway system that balances the needs of multiple users of the public right away.
- An interconnected street system that provides multiple linkages within and between communities.
- Vehicle congestion relief.
- Safe and efficient street design that minimizes environmental and neighborhood impacts.
- Well maintained streets

## City of San Diego Bicycle Master Plan (2013)

The City of San Diego Bicycle Master Plan Update provides a framework for making cycling a more practical and convenient transportation option for a wider variety of San Diegans with varying riding purposes and skill-levels. The plan update evaluates and builds on the 2002 Bicycle Master Plan so that it reflects changes in bicycle user needs and changes to the City's bicycle network and overall infrastructure. The Plan proposes a dense network of Class III bicycle routes in Downtown San Diego, including in the north-south direction, along Kettner Boulevard, India Street, State Street, Columbia Street, 1<sup>st</sup> Avenue, 4<sup>th</sup> Avenue, 5<sup>th</sup> Avenue, 6<sup>th</sup> Avenue, Park Boulevard, and 14<sup>th</sup> Street. Class III bicycle route is also proposed, in the east-west direction, along A Street, Broadway, Market Street and Island Avenue. Class II bike lane is proposed, in the north-south direction, along portions of State Street, 3<sup>rd</sup> Avenue, 8<sup>th</sup> Avenue, Park Boulevard, and 14<sup>th</sup> Street; while in the east-west direction, bike lane is proposed along Cedar Street, B Street, and C Street.

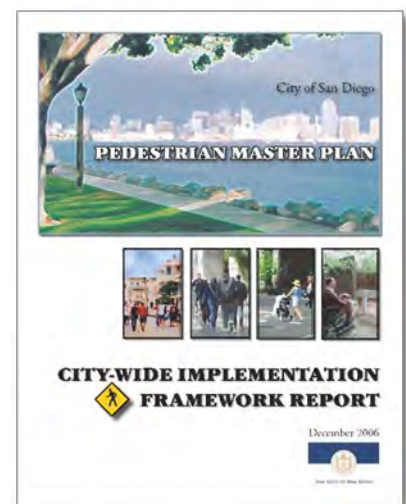


As part of this planning process, forty high priority project were identified through a systematic prioritization effort. Conceptual designs and cost estimates were prepared for the forty high priority projects. Eight of the forty high priority project corridors are located within Downtown San Diego, including the following:

- #2 – Broadway, between Park Boulevard and 19<sup>th</sup> Street (Class III)
- #3 – Ash Street and A Street couplet (Class III)
- #6 – Island Avenue/Market Street connection to Harbor Drive (Class III)
- #7 – Park Boulevard (Class II)
- #9 – 14<sup>th</sup> Street (Class II)
- #12 – 4<sup>th</sup>/5<sup>th</sup> Avenue couplet (Class III)
- #18 – State Street (Class III)
- #26 – 8<sup>th</sup> Avenue (Class II)

## City of San Diego Pedestrian Master Plan (2006)

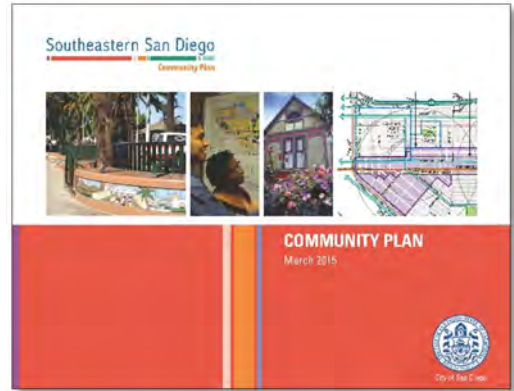
The Pedestrian Master Plan serves guidance for the implementation of pedestrian projects. The document also created a prioritization process used to identify high priority pedestrian routes within community planning areas and a methodology to determine potential pedestrian improvement projects along identified high priority routes. The Pedestrian Master Plan concludes with "Phase Two Guidance" which serves to provide direction for community-level Pedestrian Master Plans (CPMP). The guidance aims to achieve a level of consistency among the plans and analysis methodologies utilized.





### Southeastern San Diego Community Plan Update (Draft)

This document proposes mobility improvements to corridors that connect with the southeastern portion of Downtown San Diego. There are planned Urban Street corridors along Market Street and Imperial Avenue connecting to downtown. There is a planned One-Way Cycle Tracks with and without on-street parking along Market Street and a Class II Bike Lane along Island Avenue that continues into Downtown San Diego. Consistent with the SANDAG 2050 RTP, the Orange Line Trolley shows increased frequencies and the planned Orange Line Express provides service between El Cajon and Downtown San Diego.

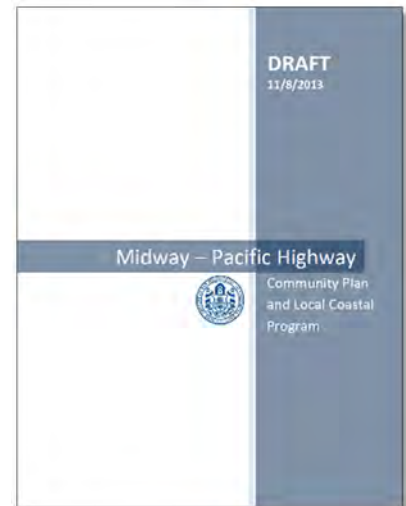


### Barrio Logan Community Plan Update (2014)

This document proposes mobility improvements connecting with the southern portion of Downtown San Diego. The MTS Blue Line and its stations at Cesar E Chavez Parkway, 28<sup>th</sup> Street, and 32<sup>nd</sup> Street connects with the southeastern boundary of Downtown San Diego. A key proposed mobility improvement is to connect Barrio Logan with Downtown San Diego via the Bayshore Bikeway.

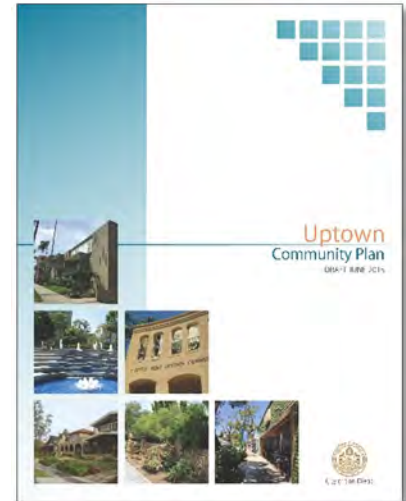
### Midway – Pacific Highway Corridor Community Plan Update (Draft)

This document proposes mobility improvements to corridors that connect with the northwestern portion of Downtown San Diego. Pacific Highway has historically served as a regional conduit for vehicular traffic to Downtown and its intersection with Laurel Street serves as a gateway to Downtown. The planned improvements designate Pacific Highway as a Boulevard street type. Retrofits to Pacific Highway include reducing travel lanes, incorporating bicycle lanes, removing frontage roads, reducing curb cuts, replacing bridges and ramps with signalized intersections, widening sidewalks that can include a double row of street trees, and the incorporation of landscaped medians. The planned Pacific Highway pedestrian route type is Corridor sidewalk and the planned bicycle facility type is Class I Bike Path. Another planned Class II or III bike facility along Kettner Boulevard also connects to the northwestern portion of Downtown San Diego.



### **Uptown Community Plan Update (Draft)**

This document proposes mobility improvements to corridors that connect with the northern portion of Downtown San Diego. Recommendations along Park Boulevard include reduction of travel lane widths, removal of travel lanes, incorporation of a landscaped median, and neckdowned (sidewalk bulb-outs) intersections. The Plan proposes that First, Fourth, and Fifth Avenues focus on creating more pedestrian scale streets, enhancing pedestrian and bicycle facilities, and calming traffic with enhancements.



### **Regional Planning Documents**

#### **2050 Regional Transportation Plan (2011)**

This document proposes a vision for a regional transportation system that further enhances quality of life, promotes sustainability, and offers more mobility options for people and goods. The Plan includes an integrated, multi-modal transportation system proposing transit investments in specific areas. These include creating a system of high-frequency services on many of the existing local bus routes in the urban core. The Plan also proposes constructing Bus Rapid Transit (BRT) routes and stations to provide access to Downtown San Diego from Escondido, Otay Mesa, Mid-City (San Diego State University), and Coronado.

There are planned improvements to the Trolley service including an Orange Line Express from El Cajon to Downtown San Diego and the Blue Line Express from UTC to San Ysidro via Downtown San Diego. The planned trolley system includes a tunnel in Downtown San Diego between the 12<sup>th</sup> Avenue and Imperial Transit Center to the County Center/Little Italy Trolley Station. The Plan also proposes including a streetcar and/or shuttle circulation services to improve mobility within Downtown. The planned streetcar includes a San Diego Loop in Hillcrest, Balboa Park, and Downtown and also from Little Italy to East Village. Improvements to the passenger rail service include plans extending the COASTER to the Convention Center and Petco Park. Other planned improvements consist of double tracking the LOSSAN coastal rail corridor to enable more frequent and reliable service on the COASTER and Amtrak.



#### **San Diego Regional Bike Plan (2010)**

This document proposes a vision for a diverse regional bicycle system of interconnected bicycle corridors, support facilities, and programs to make cycling more practicable and desirable to a broader range of people in the region. The document includes recommendations and goals that seek to increase the number of people who bike and the frequency of bicycle trips for all purposes. It also encourages the development of Complete Streets, to improve safety for bicyclists, and to increase public awareness and support for bicycling in the region.

There are seven “high priority” planned regional corridor alignments reaching into or through Downtown San Diego including:

- *Central Coast Corridor* (runs along Harbor Drive, north of the Coronado Ferry Landing, into Point Loma and northerly via Nimitz Boulevard)
- *Costal Rail Trail* (runs along Pacific Highway into Downtown, ultimately connecting the City of Oceanside to Downtown San Diego)
- *Clairemont – Centre City Corridor* (runs south along Ulric Street into Mission Valley, up Bachman Place and connects into Downtown San Diego along 4<sup>th</sup>/5<sup>th</sup> Avenues and terminates at C Street)
- *North Park – Centre City Corridor* (connects from the City Heights – Old Town Corridor in North Park, through Balboa Park along Park Boulevard, then connects to C Street and runs westerly to the waterfront)
- *Park Boulevard Connector* (provides a connection between the North Park – Centre City Corridor along C Street to Island Avenue in Downtown San Diego, where the Centre City – La Mesa Corridor runs)
- *Centre City – La Mesa Corridor* (runs east-west from La Mesa into Downtown San Diego via Ocean View Boulevard, then Island Avenue, terminating at the Bayshore Bikeway near Harbor Drive and Market Street)
- *Bayshore Bikeway* (runs along Harbor Drive and the waterfront south of the Coronado Ferry Landing and provides a loop around the San Diego Bay)



A number of these corridors have segments near Downtown San Diego that were identified in SANDAG's Early Action Plan (2011) with an estimated schedule for completion around the year 2021.

### Planning and Designing for Pedestrians

This document proposes guidelines to assist local governments and other interested entities in the creation and redevelopment of pedestrian areas and corridors. The guidelines suggest that a municipality or property owner can start at the site design level to incorporate a pedestrian-oriented community structure. A municipality can also require or provide incentives to property owners so they provide amenities such as plazas, pedestrian pass-throughs, or a public bench on their property. Incorporating these amenities supports the vision of the neighborhood, as seen in the pedestrian-friendly design of Little Italy. In addition, sidewalk bulb-outs can reduce street widths and calm traffic, as seen in downtown areas with revitalization efforts and streetscape improvements. In an effort to develop a pedestrian district, the municipality can encourage the development of a pedestrian district by making changes to the public right-of-way that support the eventual transformation of land uses in the area such as widening sidewalks, installing traffic calming measures, and planting street trees.



*This page was intentionally left blank.*

# Appendix B

On-the-Street Survey Forms & Results

*This page was intentionally left blank.*

# Downtown San Diego Mobility Plan Survey

“Excuse me, may I ask you a few questions? I’m with the project team working on the Downtown San Diego Mobility Plan and we’re trying to learn about people’s travel behaviors and preferences to help improve mobility in Downtown San Diego. This will only take a couple of minutes and the information will be kept confidential.”

## Site 3: Broadway

### General Questions

1. Do you live in...
  - a) Downtown SD
  - b) in an immediately adjacent neighborhood
  - c) farther away?
2. Do you work in...
  - a) Downtown SD
  - b) in an immediately adjacent neighborhood
  - c) farther away?
3. What is the main way you travel to Downtown SD?
  - a) Car
  - b) Walk
  - c) Bike
  - d) Trolley/Bus
4. What is the main way you travel within Downtown SD?
  - a) Car
  - b) Walk
  - c) Bike
  - d) Trolley/Bus

### Site Specific Questions

5. If **Broadway** was redesigned to look more like this, would you use it more often than you do today?



- a) Yes
- b) No
- c) Maybe

6. If it was redesigned, which one of these design options/routes (see back) would you prefer?

- Broadway:      a) Do nothing                      b) Design Option #1
- B Street Route:      a) through Concourse                      b) via 3<sup>rd</sup> Avenue

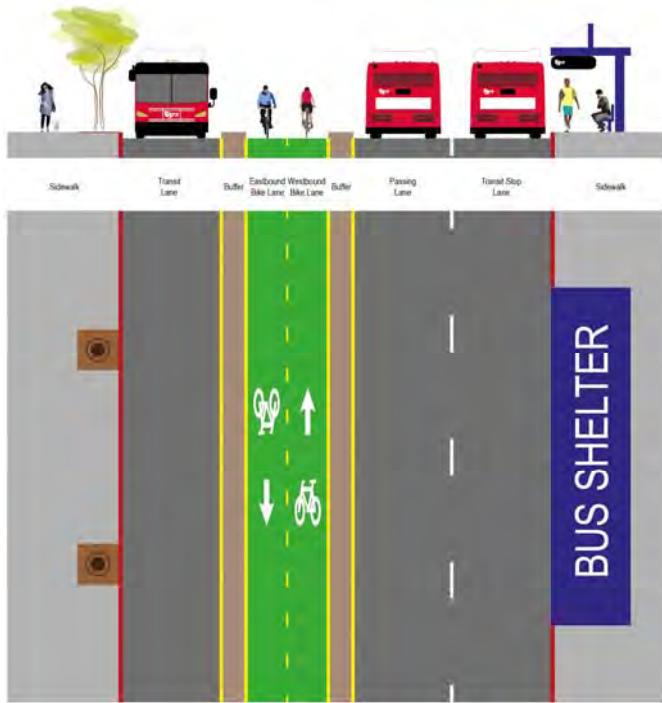
- 6a. Why did you choose that option/route?

**PLEASE TURN THE PAGE**

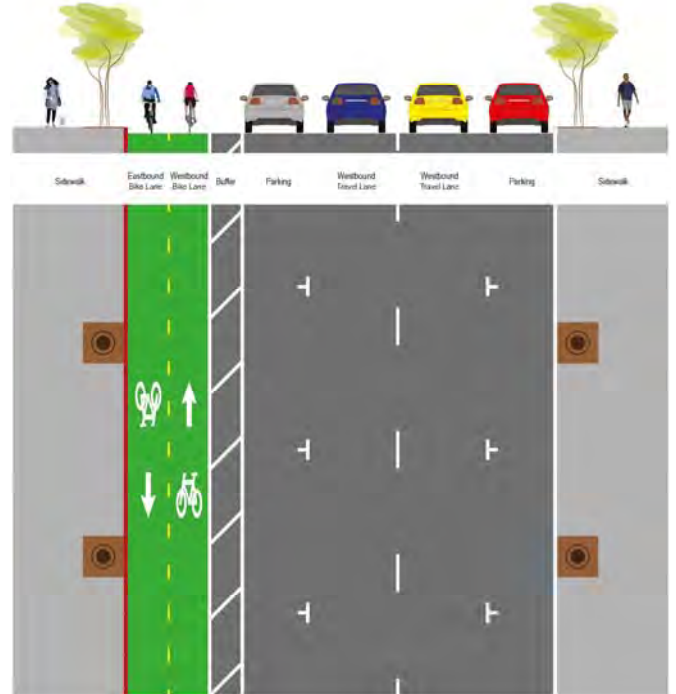
DOWNTOWN SAN DIEGO MOBILITY PLAN | B-1

# Downtown San Diego Mobility Plan Survey

**Broadway Design Option #1**



**B Street Design Concept**




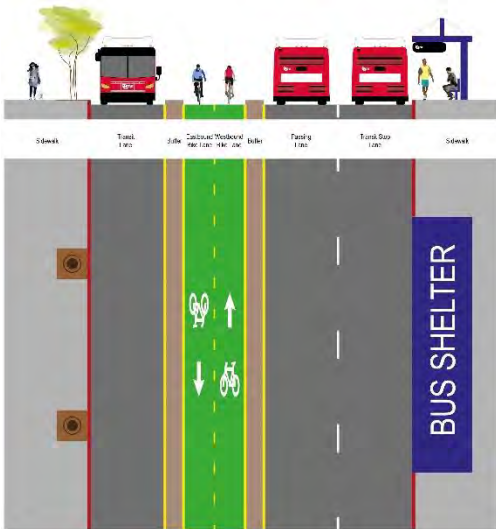
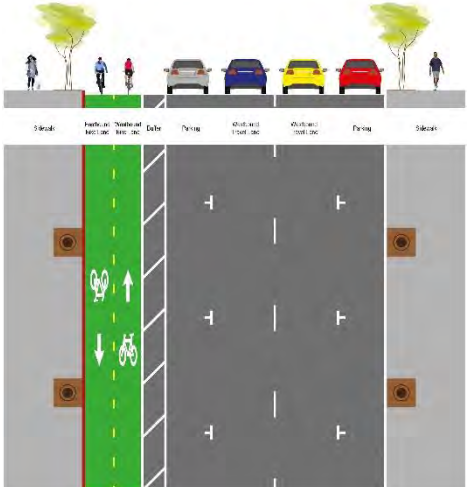
7. To make this design work, the City of San Diego may have to remove a travel lane or on-street parking spaces on one-side. Is this trade-off acceptable to you?
  - a) Yes
  - b) No
  - c) Maybe
  
8. What age range do you fall into:
  - a) <18 years old
  - b) 18-44
  - c) 45-60
  - d) 65+
  
9. Is your combined household income more or less than \$45,000 per year?
  - a) More than \$45,000
  - b) Less than \$45,000

If you would like to learn more about this project, please visit the project website ([www.downtownsdmobility.com](http://www.downtownsdmobility.com)), and/or join us at the next community workshop (6pm, Tuesday 10/7 at Civic San Diego).

Surveyor Name \_\_\_\_\_ Date \_\_\_\_\_



Broadway Street - 11:30 am to 1:30 pm and 4:30 pm to 6:30	
# of people who took the survey	46
Male	31
Female	15
Live in Downtown SD	7
Live in an immediately adjacent neighborhood	19
Live farther away	20
Work in Downtown SD	30
Work in an immediately adjacent neighborhood	4
Work farther away	6
Unemployed/Retired/No Answer	6
# of people who drive to Downtown SD	12
# of people who walk to Downtown SD	3
# of people who ride a bike to Downtown SD	3
# of people who ride the trolley/bus to Downtown SD	28
No Answer	0
# of people who drive <i>within</i> Downtown SD	1
# of people who walk <i>within</i> Downtown SD	39
# of people who ride a bike <i>within</i> to Downtown SD	2
# of people who ride the trolley/bus <i>within</i> Downtown SD	6
No Answer	0
# of people who agreed to use Broadway more if it was redesigned to look like this:	
	27

<p># of people who would not use Broadway more if it was redesigned to look like the previous image.</p>	<p>7</p>
<p># of people indecisive about using Broadway more if it was redesigned to look like the previous image.</p>	<p>12</p>
<p># of people who preferred Option 1:</p>  <p>The diagram for Option 1 shows a street layout from left to right: Sidewalk, Transit Lane (with a red bus), a green Bike Lane (with a bicycle icon and arrows), a red Bus Lane (with a red bus), another red Bus Lane (with a red bus), and another Sidewalk. A blue sign on the right side of the road reads 'BUS SHELTER'.</p>	<p>23</p>
<p># of people who preferred redesigning B Street like this:</p>  <p>The diagram for B Street redesign shows a street layout from left to right: Sidewalk, a green Bike Lane (with a bicycle icon and arrows), a Transit Lane (with a red bus), and three car lanes (with car icons). There are trees and pedestrians on the sidewalks.</p>	<p>5</p>
<p># of people against Option 1 on Broadway</p>	<p>15</p>
<p># of people indecisive about either option</p>	<p>3</p>
<p>Reasons for preferring Option 1</p>	<p>Looks neat, faster for buses, safer for pedestrians</p>
<p>Reasons for preferring the redesign of B Street</p>	<p>Safer for pedestrians and cyclists</p>

<b># of people who agreed to remove car lanes or parking space to redesign E Street</b>	29
<b># of people against removing car lanes or parking space to redesign E Street</b>	12
<b># of people who indecisive about removing car lanes or parking space to redesign E Street</b>	5
<b># of people in the age range of &lt;18</b>	0
<b># of people in the age range of 18-45</b>	29
<b># of people in the age range of 45-60</b>	15
<b># of people in the age range of 65+</b>	2
<b>Combined Household Income More than 45K</b>	23
<b>Combined Household Income Less than 45K</b>	23

# Downtown San Diego Mobility Plan Survey

“Excuse me, may I ask you a few questions? I’m with the project team working on the Downtown San Diego Mobility Plan and we’re trying to learn about people’s travel behaviors and preferences to help improve mobility in Downtown San Diego. This will only take a couple of minutes and the information will be kept confidential.”

## Site 1: E Street

### General Questions

1. Do you live in...  
a) Downtown SD                      b) in an immediately adjacent neighborhood                      c) farther away?
2. Do you work in...  
a) Downtown SD                      b) in an immediately adjacent neighborhood                      c) farther away?
3. What is the main way you travel to Downtown SD?  
a) Car                      b) Walk                      c) Bike                      d) Trolley/Bus
4. What is the main way you travel within Downtown SD?  
a) Car                      b) Walk                      c) Bike                      d) Trolley/Bus

### Site Specific Questions

5. If **E Street** was redesigned to look more like this, would you use it more often than you do today?



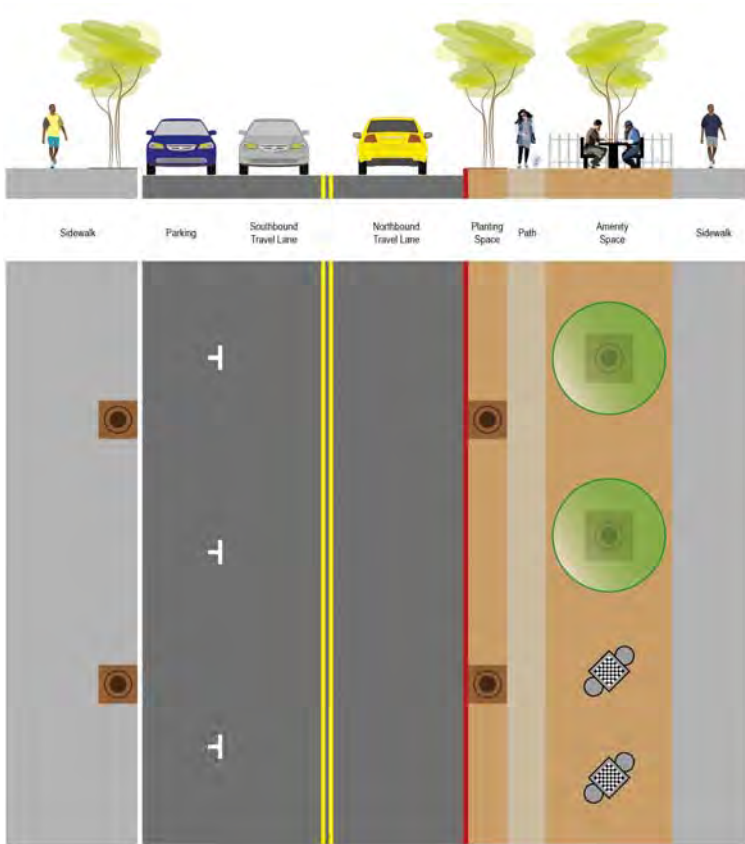
- a) Yes                      b) No                      c) Maybe
6. If it was redesigned, which one of these design options (see back) would you prefer?  
a) Design Option #1                      b) Design Option #2
- 6a. Why did you choose that option?

**PLEASE TURN THE PAGE**

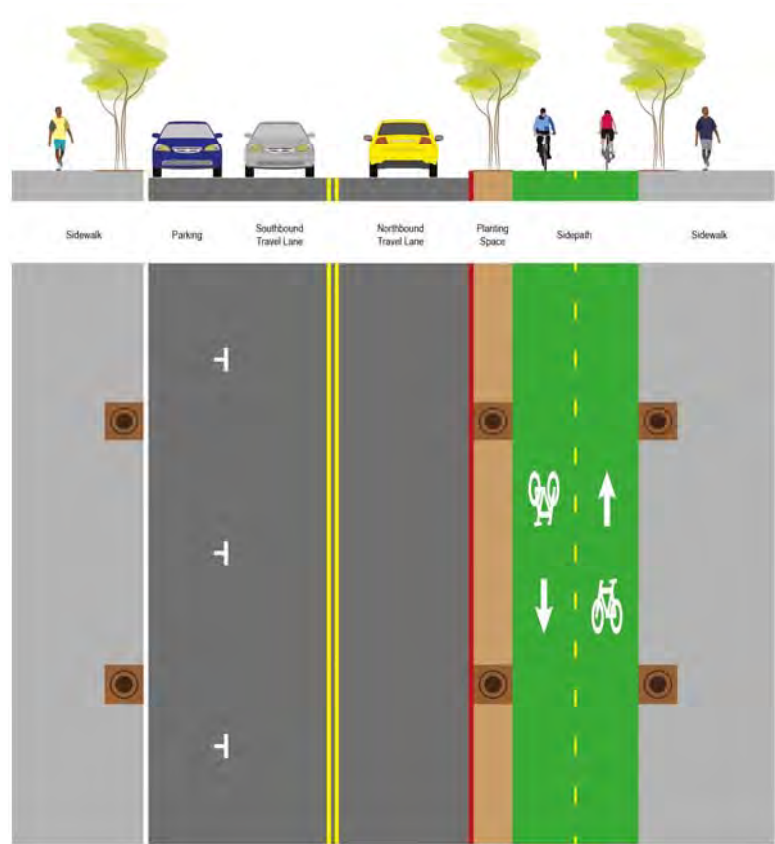


# Downtown San Diego Mobility Plan Survey

**Green Street Design Option #1**



**Green Street Design Option #2**




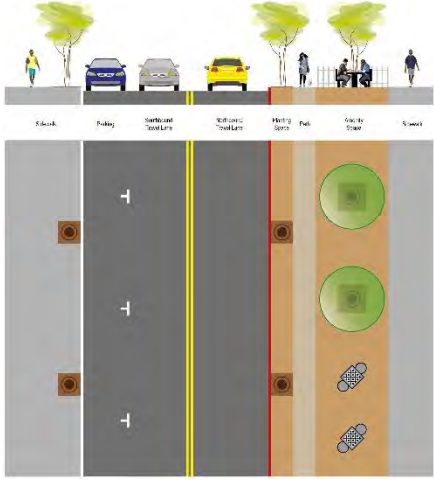
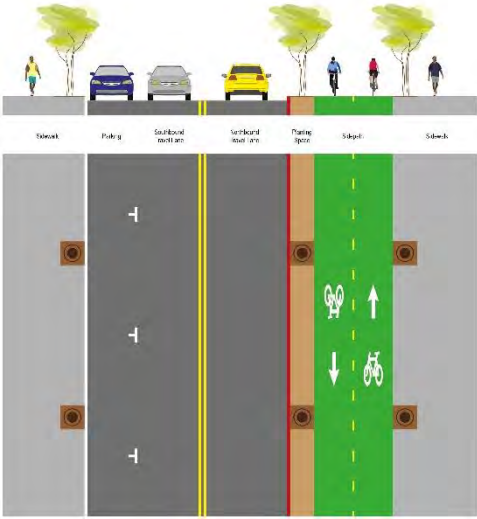
7. To make this design work, the City of San Diego may have to remove a travel lane or on-street parking spaces on one-side. Is this trade-off acceptable to you?
  - a) Yes
  - b) No
  - c) Maybe
8. What age range do you fall into:
  - a) <18 years old
  - b) 18-44
  - c) 45-60
  - d) 65+
9. Is your combined household income more or less than \$45,000 per year?
  - a) More than \$45,000
  - b) Less than \$45,000

If you would like to learn more about this project, please visit the project website ([www.downtownsdmobility.com](http://www.downtownsdmobility.com)), and/or join us at the next community workshop (6pm, Tuesday 10/7 at Civic San Diego).

Surveyor Name \_\_\_\_\_ Date \_\_\_\_\_

## RESULTS

E Street - 11:30 am to 1:30 pm and 4:30 pm to 6:30	
# of people who took the survey	46
Male	31
Female	15
Live in Downtown SD	11
Live in an immediately adjacent neighborhood	16
Live farther away	19
Work in Downtown SD	27
Work in an immediately adjacent neighborhood	5
Work farther away	12
Unemployed/Retired	2
# of people who drive to Downtown SD	19
# of people who walk to Downtown SD	5
# of people who ride a bike to Downtown SD	5
# of people who ride the trolley/bus to Downtown SD	16
# of people who drive <i>within</i> Downtown SD	7
# of people who walk <i>within</i> Downtown SD	26
# of people who ride a bike <i>within</i> to Downtown SD	4
# of people who ride the trolley/bus <i>within</i> Downtown SD	7
# of people who agreed to use E Street more if it was redesigned to look like this:	
	35

<p><b># of people who would not use E Street more if it was redesigned to look like the previous image.</b></p>	<p>6</p>
<p><b># of people indecisive about using E Street more if it was redesigned to look like the previous image.</b></p>	<p>5</p>
<p><b># of people who preferred Option 1:</b></p>  <p>The diagram shows a cross-section of a street with the following lanes from left to right: Sidewalk, Parking, Southbound Truck Lane, Northbound Truck Lane, Mixing Zone, Park, and Sidewalk. The cross-section below shows a grey sidewalk on the left with three trees, a dark grey parking area with three parking spaces, a dark grey truck lane with a yellow double line, a brown mixing zone with a red line, a light brown park area with two green circular trees, and a grey sidewalk on the right with three trees. There are also icons of a person walking, a car, a truck, a person on a bicycle, and a person sitting on a bench.</p>	<p>27</p>
<p><b># of people who preferred Option 2:</b></p>  <p>The diagram shows a cross-section of a street with the following lanes from left to right: Sidewalk, Parking, Southbound road lane, Northbound road lane, Mixing zone, Sidewalk, and Sidewalk. The cross-section below shows a grey sidewalk on the left with three trees, a dark grey parking area with three parking spaces, a dark grey southbound road lane with a yellow double line, a dark grey northbound road lane with a yellow double line, a brown mixing zone with a red line, a green sidewalk area with a dashed yellow line, and a grey sidewalk on the right with three trees. There are also icons of a person walking, a car, a truck, a person on a bicycle, and a person sitting on a bench.</p>	<p>17</p>
<p><b># of people indecisive about either option</b></p>	<p>2</p>

<b>Reasons for preferring Option 1</b>	Safe pedestrian environment, nice place to sit and eat, more exposure to businesses in the area
<b>Reasons for preferring Option 2</b>	Get bikes off sidewalk, safer for pedestrians as well as cyclists, less cars on the road
<b># of people who agreed to remove car lanes or parking space to redesign E Street</b>	36
<b># of people in the age range of &lt;18</b>	0
<b># of people in the age range of 18-45</b>	27
<b># of people in the age range of 45-60</b>	16
<b># of people in the age range of 65+</b>	3
<b>Combined Household Income More than 45K</b>	21
<b>Combined Household Income Less than 45K</b>	25



# Downtown San Diego Mobility Plan Survey

“Excuse me, may I ask you a few questions? I’m with the project team working on the Downtown San Diego Mobility Plan and we’re trying to learn about people’s travel behaviors and preferences to help improve mobility in Downtown San Diego. This will only take a couple of minutes and the information will be kept confidential.”

## Site 2: Market Street

### General Questions

1. Do you live in...  
a) Downtown SD                      b) in an immediately adjacent neighborhood                      c) farther away?
2. Do you work in...  
a) Downtown SD                      b) in an immediately adjacent neighborhood                      c) farther away?
3. What is the main way you travel to Downtown SD?  
a) Car                      b) Walk                      c) Bike                      d) Trolley/Bus
4. What is the main way you travel within Downtown SD?  
a) Car                      b) Walk                      c) Bike                      d) Trolley/Bus

### Site Specific Questions

5. If **Market Street** was redesigned to look more like this, would you use it more often than you do today?



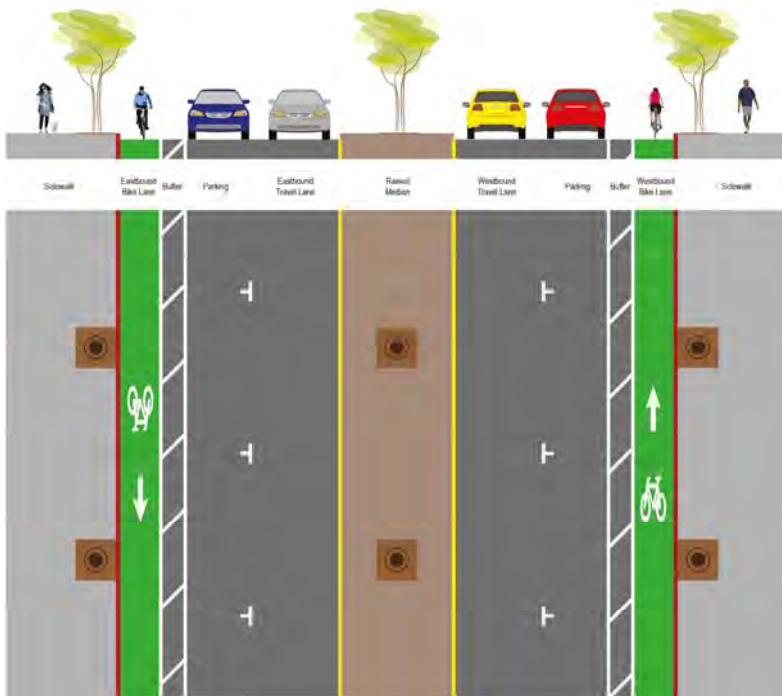
- a) Yes                      b) No                      c) Maybe
6. If it was redesigned, which one of these design options (see back) would you prefer?  
a) Design Option #1                      b) Design Option #2
  - 6a. Why did you choose that option?

**PLEASE TURN THE PAGE**

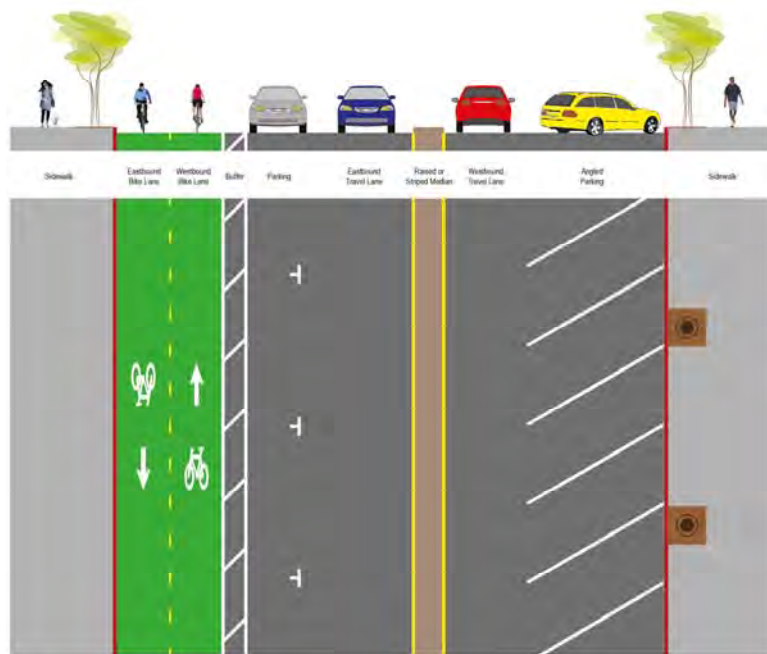


# Downtown San Diego Mobility Plan Survey

**Market Street Design Option #1**




**Market Street Design Option #2**

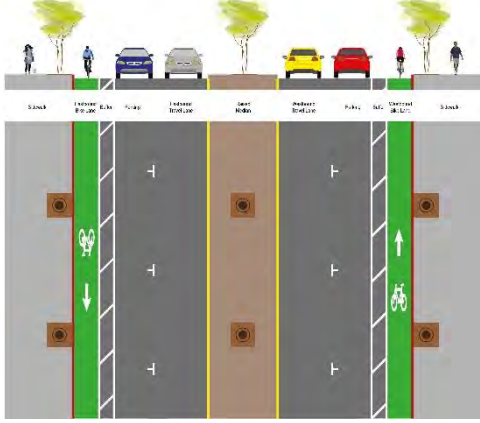
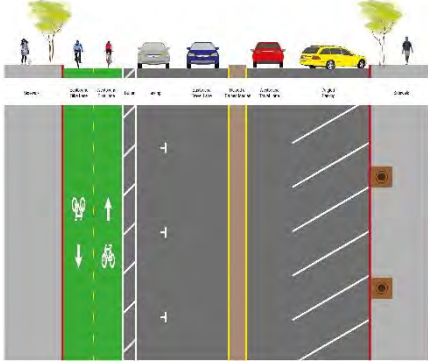


7. To make this design work, the City of San Diego may have to remove a travel lane or on-street parking spaces on one-side. Is this trade-off acceptable to you?
  - a) Yes
  - b) No
  - c) Maybe
  
8. What age range do you fall into:
  - a) <18 years old
  - b) 18-44
  - c) 45-60
  - d) 65+
  
9. Is your combined household income more or less than \$45,000 per year?
  - a) More than \$45,000
  - b) Less than \$45,000

If you would like to learn more about this project, please visit the project website ([www.downtownsdmobility.com](http://www.downtownsdmobility.com)), and/or join us at the next community workshop (6pm, Tuesday 10/7 at Civic San Diego).

Surveyor Name \_\_\_\_\_ Date \_\_\_\_\_

Market Street - 11:30 am to 1:30 pm and 4:30 pm to 6:30	
# of people who took the survey	45
Male	33
Female	12
Live in Downtown SD	26
Live in an immediately adjacent neighborhood	7
Live farther away	13
Work in Downtown SD	24
Work in an immediately adjacent neighborhood	7
Work farther away	9
Unemployed/Retired/No Answer	6
# of people who drive to Downtown SD	22
# of people who walk to Downtown SD	5
# of people who ride a bike to Downtown SD	2
# of people who ride the trolley/bus to Downtown SD	12
No Answer	5
# of people who drive <i>within</i> Downtown SD	4
# of people who walk <i>within</i> Downtown SD	38
# of people who ride a bike <i>within</i> to Downtown SD	4
# of people who ride the trolley/bus <i>within</i> Downtown SD	8
No Answer	0
# of people who agreed to use Market Street more if it was redesigned to look like this:	
	

<p><b># of people who would not use Market Street more if it was redesigned to look like the previous image.</b></p>	<p>8</p>
<p><b># of people indecisive about using Market Street more if it was redesigned to look like the previous image.</b></p>	<p>6</p>
<p><b># of people who preferred Option 1:</b></p> 	<p>26</p>
<p><b># of people who preferred Option 2:</b></p> 	<p>15</p>
<p><b># of people indecisive about either option</b></p>	<p>4</p>
<p><b>Reasons for preferring Option 1</b></p>	<p>Safe pedestrian environment as well as for cyclists, it makes sense.</p>
<p><b>Reasons for preferring Option 2</b></p>	<p>More space to bike, less work as construction would only be taking place on one side of the street</p>

<b># of people who agreed to remove car lanes or parking space to redesign Market Street</b>	29
<b># of people against removing car lanes or parking space to redesign Market Street</b>	8
<b># of people who indecisive about removing car lanes or parking space to redesign Market Street</b>	9
<b># of people in the age range of &lt;18</b>	0
<b># of people in the age range of 18-45</b>	27
<b># of people in the age range of 45-60</b>	12
<b># of people in the age range of 65+</b>	7
<b>Combined Household Income More than 45K</b>	21
<b>Combined Household Income Less than 45K</b>	26

# Downtown San Diego Mobility Plan Survey

“Excuse me, may I ask you a few questions? I’m with the project team working on the Downtown San Diego Mobility Plan and we’re trying to learn about people’s travel behaviors and preferences to help improve mobility in Downtown San Diego. This will only take a couple of minutes and the information will be kept confidential.”

## Site 4: State Street

### General Questions

1. Do you live in...  
a) Downtown SD                      b) in an immediately adjacent neighborhood                      c) farther away?
2. Do you work in...  
a) Downtown SD                      b) in an immediately adjacent neighborhood                      c) farther away?
3. What is the main way you travel to Downtown SD?  
a) Car                      b) Walk                      c) Bike                      d) Trolley/Bus
4. What is the main way you travel within Downtown SD?  
a) Car                      b) Walk                      c) Bike                      d) Trolley/Bus

### Site Specific Questions

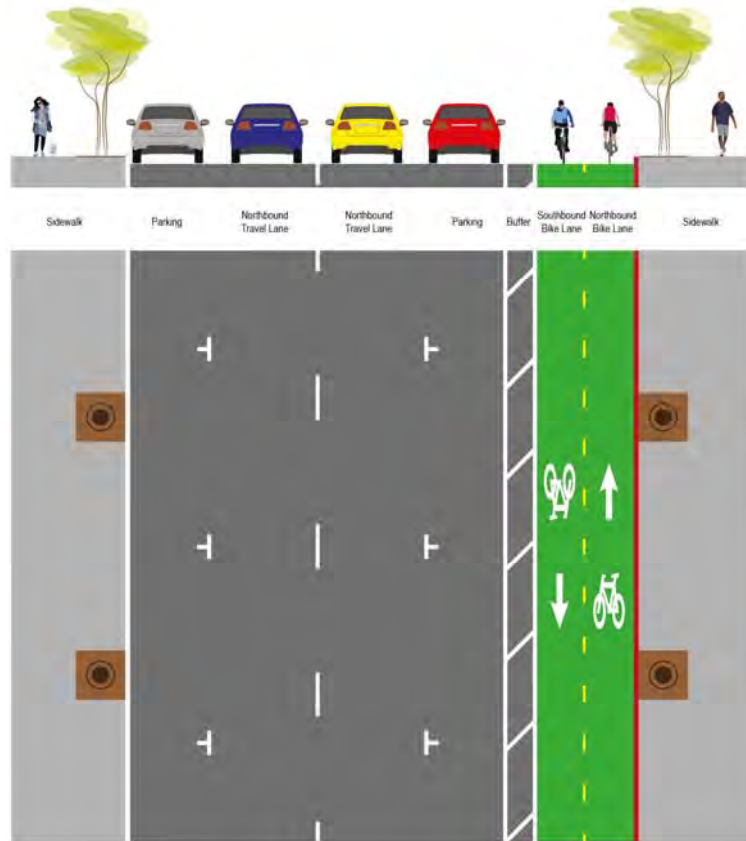
5. If **State Street** was redesigned to look more like this, would you use it more often than you do today?



- a) Yes                      b) No                      c) Maybe
6. If it was redesigned, which one of these design options (see back) would you prefer?  
a) Design Option #1                      b) Do nothing
  - 6a. Why did you choose that option?



# Downtown San Diego Mobility Plan Survey



## State Street Design Concept

7. To make this design work, the City of San Diego may have to remove a travel lane or on-street parking spaces on one-side. Is this trade-off acceptable to you?
- a) Yes                      b) No                      c) Maybe
8. What age range do you fall into:
- a) <18 years old              b) 18-44                      c) 45-60                      d) 65+
9. Is your combined household income more or less than \$45,000 per year?
- a) More than \$45,000              b) Less than \$45, 000

If you would like to learn more about this project, please visit the project website ([www.downtownsdmobility.com](http://www.downtownsdmobility.com)), and/or join us at the next community workshop (6pm, Tuesday 10/7 at Civic San Diego).

Surveyor Name \_\_\_\_\_ Date \_\_\_\_\_

State Street - 11:30 am to 1:30 pm and 4:30 pm to 6:30	
# of people who took the survey	32
Male	19
Female	13
Live in Downtown SD	9
Live in an immediately adjacent neighborhood	10
Live farther away	13
Work in Downtown SD	24
Work in an immediately adjacent neighborhood	1
Work farther away	5
Unemployed/Retired/No Answer	2
# of people who drive to Downtown SD	17
# of people who walk to Downtown SD	5
# of people who ride a bike to Downtown SD	1
# of people who ride the trolley/bus to Downtown SD	5
No Answer	4
# of people who drive <i>within</i> Downtown SD	2
# of people who walk <i>within</i> Downtown SD	28
# of people who ride a bike <i>within</i> to Downtown SD	1
# of people who ride the trolley/bus <i>within</i> Downtown SD	3
No Answer	0



**# of people who agreed to use State Street more if it was redesigned to look like this:**



22

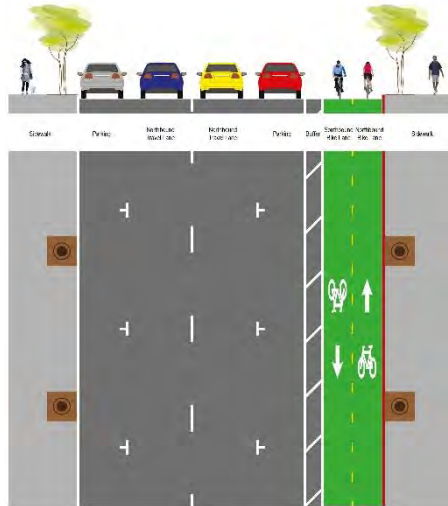
**# of people who would not use State Street more if it was redesigned to look like the previous image.**

5

**# of people indecisive about using State Street more if it was redesigned to look like the previous image.**

5

**# of people who liked the design concept:**



24

**# of people who preferred to keep existing conditions**

8

**Reasons for preferring design concept**

Safe pedestrian environment as well as for cyclists, simple design.

**Reasons for preferring to keep existing conditions**

Don't ride a bike, traffic would get worse

**# of people who agreed to remove car lanes or parking space to redesign State Street**

23

**# of people against removing car lanes or parking space to redesign State Street**

9

**# of people who indecisive about removing car lanes or parking space to redesign State Street**

0

**# of people in the age range of <18**

0

**# of people in the age range of 18-45**

26

**# of people in the age range of 45-60**

6

**# of people in the age range of 65+**

0

**Combined Household Income More than 45K**

15

**Combined Household Income Less than 45K**

17

# **Appendix C**

## **San Diego Forward: The Regional Plan Revenue Constrained Transit Network Changes**

*This page was intentionally left blank.*

### **SANDAG San Diego Forward Regional Plan Revenue Constrained Scenario:**

In the San Diego Forward Regional Plan, the I-5 is slated to be improved from an 8F classification to an 8F+Operational by 2050, at the cost of \$2,919 Million.

SANDAG's *San Diego Forward: The Regional Plan* Revenue Constrained scenario identifies several public transit service improvements within Downtown San Diego. Each of the service improvements are summarized below, including frequency changes, new routes, and anticipated implementation years.

- Coaster, Route 398 – Additional double tracking and increased frequency between Oceanside and Downtown and an extension to the Convention Center/Petco Park. Coaster headways will operate with 20-minute headways during peak periods and 60-minute headways during off-peak periods. The San Diego Forward Regional Plan indicates this will be implemented by 2020.
- Trolley, Route 510 – The Mid-Coast Corridor Transit Project will extend Trolley service from the Santa Fe Depot in Downtown San Diego to the University City community; with peak frequencies of 7.5-minutes. The San Diego Forward Regional Plan estimates completion by 2020.
- BRT, Route 640 – San Ysidro to Downtown San Diego and Kearny Mesa via I-5 shoulder lanes and HOV lanes; via Hillcrest, and Mission Valley. This route will run at 15-minute headways during peak and off-peak hours. According to the San Diego Forward Regional Plan the route will be implemented by 2020.
- Local Buses – According to the San Diego Forward Regional Plan, local buses in key corridors will operate with 15-minute headways during peak and off-peak periods. The San Diego Forward Regional Plan indicates the increased service will begin by 2020.
- Coaster, Route 398 – Double tracking/increased frequency between Oceanside and Downtown San Diego, with an extension to the Convention Center. Peak period service will operate with 20-minute headways and off-peak headways will remain the same as current conditions. The San Diego Forward Regional Plan indicates this route will be implemented by 2035.
- Trolley, Route 520 Orange Line – The San Diego Forward Regional Plan indicates the Orange Line will increase service frequencies to 7.5-minutes during peak periods and off-peak by the year 2035. An extended linkage to the Airport Intermodal Transit Center is also planned by the year 2035.
- Street Car, Route 553 – The Downtown San Diego Street Car will run between Little Italy and the East Village with headways of 10-minutes during both the peak and off-peak periods. According to the San Diego Forward Regional Plan, this route will be implemented by 2035.
- Streetcar, Route 554 – The San Diego Loop will circulate between Downtown San Diego, Hillcrest, and Balboa Park. The route will operate at 10-minute headways during peak and off-peak hours. According to the San Diego Forward Regional Plan, this route will be implemented by 2035.

- Street Car, Route 555 – This circulator will run from 30<sup>th</sup> Street to Downtown San Diego via North Park and Golden Hill. The route will operate with 10-minute headways during peak and off-peak periods. According to the San Diego Forward Regional Plan, the route will begin by 2035.
- Rapid Bus, Route 2 –North Park to Downtown San Diego, via North Park and Golden Hill. This route will run at 10-minute headways during both the peak and off-peak periods. According to the San Diego Forward Regional Plan, this project will be implemented by 2035.
- Rapid Bus, Route 11 –Spring Valley to SDSU via Southeastern San Diego, Downtown San Diego, Hillcrest, and Mid-City. This route will operate with 10-minute headways during peak and off-peak periods. The San Diego Forward Regional Plan indicates this route will be implemented by the year 2035.
- BRT, Route 90 – Santee and El Cajon Transit Centers to Downtown San Diego via SR-94. This route will only run during peak periods, with 105-minute headways. According to the San Diego Forward Regional Plan, this route will be implemented by the year 2035.
- Rapid Bus, Route 120 –Kearny Mesa to Downtown San Diego, via Mission Valley. This route will operate at 10-minute headways during both the peak and off-peak periods. According to the San Diego Forward Regional Plan, the route will be implemented by 2035.
- Rapid Bus, Route 910 –Coronado to Downtown San Diego, via the San Diego-Coronado Bay Bridge. This route will operate with 10-minute headways during peak and off-peak periods. According to the San Diego Forward Regional Plan, the route will be implemented by 2035.
- Local Buses – According to the San Diego Forward Regional Plan, local bus routes in key corridors will operate with 10-minute headways during peak and off-peak periods, by the year 2035.
- Trolley, Route 520 – The Orange Line Express will run between El Cajon and Downtown San Diego with 10-minute headways during peak and off-peak periods. The San Diego Forward Regional Plan indicates this route will be implemented by the year 2050.
- Trolley, Route 530 – The Green Line will operate with 7.5 minutes headways during peak and off-peak periods. The San Diego Forward Regional Plan indicates this service will be operate by the year 2050.
- Trolley, Route 560– This route will run from SDSU to Downtown San Diego via Mid-City, El Cajon Boulevard and Park Boulevard. The route will operate with 7.5-minute headways during peak and off-peak periods. According to the San Diego Forward Regional Plan, this route will be implemented by 2050.

# Appendix D

## TDM Strategies

*This page was intentionally left blank.*



## Active Transportation Demand Management Strategies

### *Wayfinding*

Wayfinding tools, including signs, pavement markings, and maps are an invaluable resource for pedestrians and bicyclists. They are especially needed by those who are not familiar existing routes, such as beginning cyclists or tourists.

Some wayfinding tools are oriented to specific destinations, activity centers or landmarks, whereas others simply help the user navigate through an area regardless of their destination. Successful wayfinding tools are easily understood and allow the pedestrian or bicyclist to quickly orient themselves and determine the most direct, lowest stress, or safest path. Additionally, wayfinding tools serve a marketing purpose and should be attractive and unique, encouraging greater use of bicycle and walking facilities.

Civic San Diego is currently in the process of updating downtown wayfinding signage. The Wayfinding Design Signage Upgrade includes pedestrian circulation signs and kiosks as well as signage to direct pedestrians and bicyclists to nearby trails, but does not comprehensively address bicycle wayfinding needs in Downtown San Diego.

SANDAG publishes a free regional bike map, available online or at local bicycle shops. SANDAG has also developed an online interactive bike map and is incorporated into SANDAG's multi-modal trip planning website *iCommute*.

In addition to these regional resources, the City of San Diego Bicycle Program created a map of the seven mile San Diego Bike Loop in and around Downtown San Diego. The route follows low-stress streets and includes route markers and sharrows to guide cyclists.

### *Bike Parking*

Convenient and secure bike parking is a necessary component of a comprehensive bicycle accommodation strategy. Bike racks should be located in close proximity to building entrances and should be easily visible to passerby.

The San Diego Municipal Code ensures that bike racks will be implemented in new developments and through redevelopment. Businesses can request a bike rack by sending an email to a designated recipient at the City ([trafficops@saniego.gov](mailto:trafficops@saniego.gov)). All costs associated with rack installation and maintenance are borne by the City. Requests for racks in downtown are handled by CivicSD.

### *Bike Sharing*

Over the past five to ten years, bike sharing has emerged as an important component of urban transportation systems. Bike sharing systems allow individuals to borrow or rent a bike for a short period of time, such as an hour or less. Stations tend to be located within close proximity to major destinations and are often very prominent.

The bike sharing program in San Diego is operated in partnership between the City of San Diego and DecoBike. Upon buildout completion, the network will provide approximately 1,800 bikes, dispersed across over 180 stations in San Diego, with the greatest concentration located in downtown. Bike can be rented by the half-hour, or via unlimited ride memberships. DecoBike offers a map of bike-sharing stations, including real-time bike inventories and free docks (<http://www.decobike.com/sandiego/map-location>).

### *Open Streets / Ciclovias / Sunday Parkways*

The term “Ciclovía” refers to a public street that has been closed to vehicular traffic, but remains open to bicyclists and pedestrians. Over the past several years, many cities have created events based on this concept, which originated in Bogota, Columbia. Ciclovias and other car-free events offer an encouraging environment for families and individuals of all skill levels to experience and envision local streets in a new light. They are also seen as having a community-building effect as they bring together a wide range of people and interest to enjoy the public space.

San Diego’s version of the Ciclovía, termed CicloSDias, began in 2011 and was held for the third time in November 2014. The event is organized by the San Diego County Bicycle Coalition with assistance from the City of San Diego and San Diego County, as well as various non-profit and private companies.

In addition to CicloSDias, other community bike rides are held throughout the year. Although they are not necessarily on routes closed to vehicular traffic, these community-oriented rides offer some of the same benefits as an open streets event.

### *Education and Enforcement*

Education of bicyclists and pedestrians is essential to the safe operation of the transportation system. On the part of bicyclists, unsafe behaviors such as wrong-way riding, riding on sidewalks, and running stop signs and red lights not only pose a safety risk, but also generate hostility towards bicyclists. Pedestrian behaviors such as crossing in unexpected locations and disobeying signals have a similar effect. Education of motorists is no less important. Drivers must understand and be able to anticipate bicycle and pedestrian movements, such as where to look for bicyclists and how to safely pass them, and when to yield or stop for pedestrians.

The San Diego County Bicycle Coalition holds classes on a regular basis, including Bicycle Traffic Skills 101, bicycle repair classes, bike rodeos, and classes geared towards women and family riding. Along with their classes, the San Diego County Bike Coalition website has several educational resources addressing topics such as sharrows, bike lanes, roundabouts, and how to pass bikes safely, among others. The SANDAG Bike Map also includes information on bicycle laws and safe riding practices, bike parking, and taking bikes on transit vehicles.

Circulate San Diego provides education and outreach regarding pedestrian safety, Safe Routes to School, and walking routes. Educational materials are incorporated into their advocacy activities, reports, and other resources.

In 2011, the San Diego Police Department issued a memo to its Patrol and Traffic Officers clarifying the application of traffic safety laws to bicyclists on San Diego roadways. More recently, the Department has participated in a multi-agency bike safety campaign to promote the passage of a 3-foot passing law in California. To address distracted driving and walking, the San Diego Police Department recently conducted targeted enforcement of pedestrian and motorist violations that affect pedestrian safety.

### *Outreach and Marketing*

Outreach and marketing related to bicycling and walking builds interest, enthusiasm, and support for non-motorized transportation. Outreach can occur through a wide variety of events and programs, including

bike-to-work day and bike-to-work month, employer-based competitions, Safe Routes to School events, helmet fittings, and equipment giveaways, among others.

In recent years, individualized marketing approaches designed to encourage bicycling, walking, and transit have gained traction. Such programs, which usually go by the name of *Smart Trips*, provide detailed neighborhood-specific information to residents, including relevant bus and bike routes, available incentives and upcoming encouragement events. In limited studies, Smart Trips programs have been shown to be successful at reducing driving alone trips.

The San Diego County Bicycle Coalition offers regular opportunities for beginning bicyclists to practice their skills in a supportive, low-stress environment. More broadly, the Coalition serves as a centralized source of information regarding bike outreach events in the San Diego region. Bike San Diego also promotes bicycling events throughout San Diego.

Other organizations also participate and promote bicycle-related outreach. For example, the East Village Bike Committee hosts a free East Village Bike Affair event, which connects current and potential cyclists with bicycle advocacy organizations and bicycle-related local businesses. It is a family-friendly event that includes bicycle tune-ups, training, live music, and other incentives.

Circulate San Diego also hosts a number of outreach events to promote walking and bicycling. Many of these are targeted toward students, including walking school buses and bicycle trains, walk to school day, a walking pledge program (Mileage Club), and Walkshops.

Through the iCommute program, SANDAG provides mini-grants for bike month activities, including bike rodeos, bike checks, bike map printing, bike-related giveaways, and other education and outreach events. The website also offers a number of resources to promote bicycle commuting, including access to bicycle safety educational materials, wayfinding tools, a ridematcher service, bicycle parking information, and information about integrating bikes with transit. Additionally, a TripTracker tool allows participants to monitor their bicycling activity and to become eligible for incentives. Registered participants in the iCommute program (including pedestrians and bicyclists) are eligible for the Guaranteed Ride Home program.

## **Conventional TDM Strategies**

### *Public Transit*

Transit programs are essential to a successful TDM program, as they offer an alternative to single-occupancy vehicle (SOV) travel that is accessible to a large percentage of the population. While transit agencies provide a public service by offering mobility to transit dependent populations, transit providers also help meet the goals of TDM programs to the extent they are utilized by “choice riders”. Choice riders are individuals who choose transit over driving even though they can afford to drive.

The choice to commute via transit is influenced by a number of factors, including ease of access to transit stops, scheduling, travel time, reliability, personal preference, and cost, among others. Transit TDM programs seek to encourage more commuters to choose transit over driving through enhanced amenities, financial incentives, and first/last mile improvements.

The San Diego region is served by the Metropolitan Transit System (MTS) and the North County Transit District (NCTD). Both systems use the Compass Card fare payment system, which results in a seamless experience for transit riders. Discount cards are offered for seniors, youth, and disabled passengers.

SANDAG has identified a need to look into supporting commuters on the first and/or last mile of their commute. They have found that the primary barrier to using transit, carpooling or vanpooling is the distance commuters would have to travel to get to the pick-up location or transit station. SANDAG funded a study in 2011 which recommended treatments to improve access at specific transit stations.

### *Ridesharing*

Carpooling and vanpooling (known collectively as ridesharing) have the goal of increasing average vehicle occupancy rates on the roadway system. These strategies are among the most cost-effective alternate transportation choices, especially in areas underserved by transit. In addition to lower commute costs, rideshare participants benefit from the use of high-occupancy vehicle (HOV) and high-occupancy toll (HOT) lanes, which reduce commute times. However, ridesharing remains an unattractive option for some commuters due to inconvenient access, inflexibility, and unreliability. There are various TDM strategies to address the limitations of ridesharing, including financial support, rideshare matching, and guaranteed ride home.

Ridesharing in the San Diego region is coordinated by SANDAG through the iCommute program. Services offered include: ridematching, vanpools, and guaranteed ride home, among others.

- *Ridematching /carpooling* – iCommute offers RideMatcher, an online service to help commuters find potential carpooling partners. SANDAG does not subsidize carpooling; however, individuals who carpool are eligible for monthly \$100 giftcard drawings. Registered users of iCommute log trips online in the TripTracker and are automatically entered to win. Carpools are also eligible to use HOV lanes and ExpressLanes at no cost. Additionally, iCommute offers a SchoolPool program to help parents with children in public schools find carpool and walking/biking buddy matches. In FY 2012, there were 68 schools participating in the SchoolPool program and more than 5,500 students participated in the Walk and Bike to School Day.
- *Vanpooling* – SANDAG manages its vanpool program using leased vans owned by vRide or Enterprise Rideshare. They maintain a month-to-month lease which allows them flexibility as demand changes. Vanpools are required to meet an 80 percent occupancy rate, which is tracked through iCommute. Eligible vanpools receive a \$400 monthly subsidy to offset costs. Vanpools are also eligible to use HOV lanes and ExpressLanes at no cost. In FY 2012, there were 726 vanpools with 5,676 daily passengers.
- *Guaranteed Ride Home* – For registered users who walk, bike, take transit, vanpool, or carpool to work, SANDAG’s Guaranteed Ride Home program allows for three free taxi rides per year in the event of a family emergency, if the vanpool/carpool fails to pick them up, or in the event of unscheduled overtime.

### *Carsharing*

Carsharing programs allow registered users to reserve and rent cars at hourly or daily rates. Carshare programs include private companies, non-profit or government run programs, private vehicle fleets, and peer-to-peer services. These companies differentiate their services based on the types of cars they offer, the parking locations, and their pricing schemes; some offer higher hourly rates with free mileage or paid

mileage and lower hourly rates. Private (ZipCar and Car2Go) and non-profit carsharing services (City CarShare) locate their vehicle fleet at convenient locations throughout metropolitan areas. Peer-to-peer carsharing services (RelayRides and Getaround) allow private owners to rent their cars to registered users. Carsharing, in combination with transit and other alternative modes, allow individuals on-demand access to cars without the added costs of vehicle ownership.

Private carsharing companies have operated in San Diego since 2002, when Flexcar (purchased by Zipcar in 2007) began offering services. San Diego selected Flexcar in 2004 for their Station Car Pilot Program to address first/last mile connections. In 2009, SANDAG studied the viability of on-street parking for a carshare system and in 2011, Car2Go service launched and has a current all-electric fleet of 400 vehicles. The peer-to-peer service, RelayRides, also operates in San Diego.

### *Parking Management*

Free parking reduces the overall cost of vehicle ownership and usage, which results in higher levels of SOV usage. Charging for parking in central business districts and other office locations, along with other innovative parking management practices can reduce or eliminate this subsidy and improve overall system efficiency.

The Comprehensive Parking Plan for Downtown San Diego includes a variety of recommendations to improve the management of existing parking capacity. The recommendations include a number of best practices outlined in this report such as unbundled parking and variable parking pricing.

### *Flexible Work Arrangements*

Flexible work arrangements, including teleworking and discretionary arrival/departure times allow employees to forego work trips or modify their timing to avoid travel during peak times. According to the 2009 National Household Travel Survey, around 11 percent of all workers have the option of working from home and almost nine percent work from home exclusively. Around 35 percent of all workers have flexibility with respect to their work arrival time. Among professional, managerial, and technical workers, close to half are afforded this privilege.

SANDAG's iCommute program has a Telework pilot program (*TeleworkSD*) that offers free consulting services for employers who want to effectively implement telecommuting strategies in their work place. The program walks employers through the steps needed to implement a telework program from start to finish. The services are valued at \$20,000.

*This page was intentionally left blank.*

# Appendix E

## Planning Level Cost Estimates

*This page was intentionally left blank.*



## Downtown Mobility Plan Improvement Project Cost Summary

Improvement Type	Cost (\$ in Million)
Greenways	\$25.75
Pedestrian Improvements	\$7.22
Bicycle Improvements	\$10.50
Roadway Improvements	\$19.32
Total	\$62.79

## Downtown Mobility Plan Greenway Improvement Projects

Corridor: **Cedar Street, Pacific Highway to Tenth Avenue: 3,600 lf sidewalk**

Improvement Element Description	Unit Cost	Quantity (lin feet)	Cost
Landscape earthwork	\$ 180.00	3,600	\$ 648,000
Sidewalk paving	\$ 242.00	3,600	\$ 871,200
Landscape planting	\$ 260.00	3,600	\$ 936,000
Furnishings/signage	\$ 190.00	3,600	\$ 684,000
Subtotal			\$ 3,139,200
50% Contingency			\$ 1,569,600
			\$ -
			\$ -
Total Cost:			\$ 4,708,800

Corridor: **E Street, Fourth Avenue to I-5: 2,900 lf sidewalk**

Improvement Element Description	Unit Cost	Quantity	Cost
Landscape earthwork	\$ 180.00	2,990	\$ 538,200
Sidewalk paving	\$ 242.00	2,990	\$ 723,580
Landscape planting	\$ 260.00	2,990	\$ 777,400
Furnishings/signage	\$ 190.00	2,990	\$ 568,100
Subtotal			\$ 2,607,280
50% Contingency			\$ 1,303,640
			\$ -
			\$ -
Total Cost:			\$ 3,910,920

Corridor: **Island Avenue, Union Street to I-5: 4,260 lf sidewalk**

(no sidewalk widening; only new planting areas)

Improvement Element Description	Unit Cost	Quantity	Cost
Landscape earthwork	\$ 180.00	1,000	\$ 180,000
Sidewalk paving	\$ 242.00	1,000	\$ 242,000
Landscape planting	\$ 260.00	1,000	\$ 260,000
Furnishings/signage	\$ 190.00	1,000	\$ 190,000
Subtotal			\$ 872,000
50% Contingency			\$ 436,000
			\$ -
			\$ -
Total Cost:			\$ 1,308,000

Corridor: **Union Street, Date Street to Island Avenue: 3,750 lf sidewalk**

Improvement Element Description	Unit Cost	Quantity	Cost
Landscape earthwork	\$ 180.00	3,750	\$ 675,000
Sidewalk paving	\$ 242.00	3,750	\$ 907,500
Landscape planting	\$ 260.00	3,750	\$ 975,000
Furnishings/signage	\$ 190.00	3,750	\$ 712,500
Subtotal			\$ 3,270,000
50% Contingency			\$ 1,635,000
			\$ -
			\$ -
Total Cost:			\$ 4,905,000

## Downtown Mobility Plan Greenway Improvement Projects

Corridor: Sixth Avenue, Cedar Street to Elm Street: 800 lf sidewalk

Improvement Element Description	Unit Cost	Quantity	Cost
Landscape earthwork	\$ 180.00	800	\$ 144,000
Sidewalk paving	\$ 242.00	800	\$ 193,600
Landscape planting	\$ 260.00	800	\$ 208,000
Furnishings/signage	\$ 190.00	800	\$ 152,000
Subtotal			\$ 697,600
50% Contingency			\$ 348,800
			\$ -
			\$ -
Total Cost:			\$ 1,046,400

Corridor: Eighth Avenue, Date Street to J Street: 4,120 lf sidewalk

Improvement Element Description	Unit Cost	Quantity	Cost
Landscape earthwork	\$ 180.00	4,125	\$ 742,500
Sidewalk paving	\$ 242.00	4,125	\$ 998,250
Landscape planting	\$ 260.00	4,125	\$ 1,072,500
Furnishings/signage	\$ 190.00	4,125	\$ 783,750
Subtotal			\$ 3,597,000
50% Contingency			\$ 1,798,500
			\$ -
			\$ -
Total Cost:			\$ 5,395,500

Corridor: 14th Street, C Street to Commercial Street: 3,420 lf sidewalk

Improvement Element Description	Unit Cost	Quantity	Cost
Landscape earthwork	\$ 180.00	3,420	\$ 615,600
Sidewalk paving	\$ 242.00	3,420	\$ 827,640
Landscape planting	\$ 260.00	3,420	\$ 889,200
Furnishings/signage	\$ 190.00	3,420	\$ 649,800
Subtotal			\$ 2,982,240
50% Contingency			\$ 1,491,120
			\$ -
			\$ -
Total Cost:			\$ 4,473,360

## Downtown Mobility Plan Pedestrian Improvement Projects

Corridor: Hawthorne Street, Harbor Drive to State Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	8,800	\$ 44,000
Curb and Gutter	\$ 30.00	LF	650	\$ 19,500
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	6,740	\$ 67,400
Drainage	\$ 5,000.00	LS	1	\$ 5,000
				\$ -
Subtotal Cost:				\$ 135,900
50% Contingency				\$ 67,950
				<b>Total Cost: \$ 203,850</b>

Corridor: Grape Street, Harbor Drive to State Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	8,800	\$ 44,000
Curb and Gutter	\$ 30.00	LF	650	\$ 19,500
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	6,740	\$ 67,400
Drainage	\$ 5,000.00	LS	1	\$ 5,000
				\$ -
Subtotal Cost:				\$ 135,900
50% Contingency				\$ 67,950
				<b>Total Cost: \$ 203,850</b>

Corridor: Beech Street, Pacific Highway to Sixth Avenue

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	36,050	\$ 180,250
Curb and Gutter	\$ 30.00	LF	2,220	\$ 66,600
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	24,900	\$ 249,000
Drainage	\$ 5,000.00	LS	28	\$ 140,000
				\$ -
Subtotal Cost:				\$ 635,850
50% Contingency				\$ 317,925
				<b>Total Cost: \$ 953,775</b>

Corridor: B Street, Third Avenue to Sixth Avenue

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	3,150	\$ 15,750
Curb and Gutter	\$ 30.00	LF	210	\$ 6,300
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	2,280	\$ 22,800
Drainage	\$ 5,000.00	LS	4	\$ 20,000
				\$ -
Subtotal Cost:				\$ 64,850
50% Contingency				\$ 32,425
				<b>Total Cost: \$ 97,275</b>

## Downtown Mobility Plan Pedestrian Improvement Projects

### Corridor: C Street, Sixth Avenue to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	30,200	\$ 151,000
Curb and Gutter	\$ 30.00	LF	1,610	\$ 48,300
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	26,900	\$ 269,000
Drainage	\$ 5,000.00	LS	5	\$ 25,000
				\$ -
Subtotal Cost:				\$ 493,300
50% Contingency				\$ 246,650
				<b>Total Cost: \$ 739,950</b>

### Corridor: Broadway, Harbor Drive to Third Avenue

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	27,450	\$ 137,250
Curb and Gutter	\$ 30.00	LF	1,975	\$ 59,250
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	17,360	\$ 173,600
Drainage	\$ 5,000.00	LS	2	\$ 10,000
Pavers	\$ 12.00	SF	3,720	\$ 44,640
Concrete Pavement	\$ 15.00	SF	3,840	\$ 57,600
Relocate Art	\$ 10,000.00	EA	6	\$ 60,000
Subtotal Cost:				\$ 542,340
50% Contingency				\$ 271,170
				<b>Total Cost: \$ 813,510</b>

### Corridor: J Street, Harbor Drive to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	35,200	\$ 176,000
Curb and Gutter	\$ 30.00	LF	2,720	\$ 81,600
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	27,400	\$ 274,000
Drainage	\$ 5,000.00	LS	32	\$ 160,000
				\$ -
Subtotal Cost:				\$ 691,600
50% Contingency				\$ 345,800
				<b>Total Cost: \$ 1,037,400</b>

### Corridor: Pacific Highway, Harbor Drive to Laurel Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF		\$ -
Curb and Gutter	\$ 30.00	LF		\$ -
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF		\$ -
Drainage	\$ 5,000.00	LS		\$ -
				\$ -
Subtotal Cost:				\$ -
50% Contingency				\$ -
				<b>Total Cost: \$ -</b>

## Downtown Mobility Plan Pedestrian Improvement Projects

### Corridor: State Street, Market Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	20,350	\$ 101,750
Curb and Gutter	\$ 30.00	LF	1,710	\$ 51,300
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	17,200	\$ 172,000
Drainage	\$ 5,000.00	LS	18	\$ 90,000
				\$ -
Subtotal Cost:				\$ 415,050
50% Contingency				\$ 207,525
<b>Total Cost:</b>				<b>\$ 622,575</b>

### Corridor: Fourth Avenue, B Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	14,300	\$ 71,500
Curb and Gutter	\$ 30.00	LF	740	\$ 22,200
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	9,040	\$ 90,400
Drainage	\$ 5,000.00	LS	3	\$ 15,000
				\$ -
Subtotal Cost:				\$ 199,100
50% Contingency				\$ 99,550
<b>Total Cost:</b>				<b>\$ 298,650</b>

### Corridor: Fifth Avenue, B Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	11,100	\$ 55,500
Curb and Gutter	\$ 30.00	LF	540	\$ 16,200
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	6,940	\$ 69,400
Drainage	\$ 5,000.00	LS	3	\$ 15,000
				\$ -
Subtotal Cost:				\$ 156,100
50% Contingency				\$ 78,050
<b>Total Cost:</b>				<b>\$ 234,150</b>

### Corridor: Sixth Avenue, Rail Line (Green Line) to Beech Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	25,850	\$ 129,250
Curb and Gutter	\$ 30.00	LF	2,940	\$ 88,200
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	43,850	\$ 438,500
Drainage	\$ 5,000.00	LS	17	\$ 85,000
				\$ -
Subtotal Cost:				\$ 740,950
50% Contingency				\$ 370,475
<b>Total Cost:</b>				<b>\$ 1,111,425</b>

## Downtown Mobility Plan Pedestrian Improvement Projects

### Corridor: Park Boulevard, K Street to C Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	49,650	\$ 248,250
Curb and Gutter	\$ 30.00	LF	2,560	\$ 76,800
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	4,750	\$ 47,500
Drainage	\$ 5,000.00	LS	7	\$ 35,000
				\$ -
Subtotal Cost:				\$ 407,550
50% Contingency				\$ 203,775
<b>Total Cost:</b>				<b>\$ 611,325</b>

### Corridor: Park Boulevard, C Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Pavement Removal	\$ 5.00	SF	12,000	\$ 60,000
Curb and Gutter	\$ 30.00	LF	710	\$ 21,300
Bulbout/sidewalk surfacing/ramps	\$ 10.00	SF	10,800	\$ 108,000
Drainage	\$ 5,000.00	LS	1	\$ 5,000
				\$ -
Subtotal Cost:				\$ 194,300
50% Contingency				\$ 97,150
<b>Total Cost:</b>				<b>\$ 291,450</b>

## Downtown Mobility Plan Cycleway Improvement Projects

Corridor: Hawthorne Street, Harbor Drive to State Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	6	\$ 300,000
Slurry Seal	\$ 0.50	SF	185,500	\$ 92,750
Striping	\$ 4.00	SF	15,400	\$ 61,600
				\$ -
Subtotal Cost:				\$ 454,350
50% Contingency				\$ 227,175
				<b>Total Cost: \$ 681,525</b>

Corridor: Grape Street, Harbor Drive to State Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	6	\$ 300,000
Slurry Seal	\$ 0.50	SF	185,500	\$ 92,750
Striping	\$ 4.00	SF	15,400	\$ 61,600
				\$ -
Subtotal Cost:				\$ 454,350
50% Contingency				\$ 227,175
				<b>Total Cost: \$ 681,525</b>

Corridor: Beech Street, Pacific Highway to Sixth Avenue

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	5	\$ 250,000
Slurry Seal	\$ 0.50	SF	416,000	\$ 208,000
Striping	\$ 4.00	SF	35,600	\$ 142,400
				\$ -
Subtotal Cost:				\$ 600,400
50% Contingency				\$ 300,200
				<b>Total Cost: \$ 900,600</b>

Corridor: B Street, Third Avenue to Sixth Avenue

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	4	\$ 200,000
Slurry Seal	\$ 0.50	SF	101,400	\$ 50,700
Striping	\$ 4.00	SF	9,200	\$ 36,800
				\$ -
Subtotal Cost:				\$ 287,500
50% Contingency				\$ 143,750
				<b>Total Cost: \$ 431,250</b>



## Downtown Mobility Plan Cycleway Improvement Projects

Corridor: C Street, Sixth Avenue to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	7	\$ 350,000
Slurry Seal	\$ 0.50	SF	216,400	\$ 108,200
Striping	\$ 4.00	SF	21,640	\$ 86,560
				\$ -
Subtotal Cost:				\$ 544,760
50% Contingency				\$ 272,380
				<b>Total Cost: \$ 817,140</b>

Corridor: Broadway, Harbor Drive to Third Avenue

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	11	\$ 550,000
Slurry Seal	\$ 0.50	SF	369,300	\$ 184,650
Striping	\$ 4.00	SF	31,200	\$ 124,800
Subtotal Cost:				\$ 859,450
50% Contingency				\$ 429,725
				<b>Total Cost: \$ 1,289,175</b>

Corridor: J Street, Harbor Drive to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	4	\$ 200,000
Slurry Seal	\$ 0.50	SF	470,000	\$ 235,000
Striping	\$ 4.00	SF	39,400	\$ 157,600
				\$ -
Subtotal Cost:				\$ 592,600
50% Contingency				\$ 296,300
				<b>Total Cost: \$ 888,900</b>

Corridor: Pacific Highway, Harbor Drive to Laurel Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS		\$ -
Slurry Seal	\$ 0.50	SF	572,000	\$ 286,000
Striping	\$ 4.00	SF	24,700	\$ 98,800
				\$ -
Subtotal Cost:				\$ 384,800
50% Contingency				\$ 192,400
				<b>Total Cost: \$ 577,200</b>

## Downtown Mobility Plan Cycleway Improvement Projects

Corridor: State Street, Market Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	7	\$ 350,000
Slurry Seal	\$ 0.50	SF	366,100	\$ 183,050
Striping	\$ 4.00	SF	34,200	\$ 136,800
				\$ -
Subtotal Cost:				\$ 669,850
50% Contingency				\$ 334,925
				<b>Total Cost: \$ 1,004,775</b>

Corridor: Fourth Avenue, B Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	5	\$ 250,000
Slurry Seal	\$ 0.50	SF	161,900	\$ 80,950
Striping	\$ 4.00	SF	13,200	\$ 52,800
				\$ -
Subtotal Cost:				\$ 383,750
50% Contingency				\$ 191,875
				<b>Total Cost: \$ 575,625</b>

Corridor: Fifth Avenue, B Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	5	\$ 250,000
Slurry Seal	\$ 0.50	SF	157,700	\$ 78,850
Striping	\$ 4.00	SF	13,200	\$ 52,800
				\$ -
Subtotal Cost:				\$ 381,650
50% Contingency				\$ 190,825
				<b>Total Cost: \$ 572,475</b>

Corridor: Sixth Avenue, Rail Line (Green Line) to Beech Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	7	\$ 350,000
Slurry Seal	\$ 0.50	SF	378,900	\$ 189,450
Striping	\$ 4.00	SF	35,400	\$ 141,600
				\$ -
Subtotal Cost:				\$ 681,050
50% Contingency				\$ 340,525
				<b>Total Cost: \$ 1,021,575</b>

## Downtown Mobility Plan Cycleway Improvement Projects

Corridor: Park Boulevard, K Street to C Street

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	4	\$ 200,000
Slurry Seal	\$ 0.50	SF	207,100	\$ 103,550
Striping	\$ 4.00	SF	21,700	\$ 86,800
				\$ -
Subtotal Cost:				\$ 390,350
50% Contingency				\$ 195,175
<b>Total Cost:</b>				<b>\$ 585,525</b>

Corridor: Park Boulevard, C Street to I-5

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Signal Modifications	\$ 50,000.00	LS	4	\$ 200,000
Slurry Seal	\$ 0.50	SF	143,500	\$ 71,750
Striping	\$ 4.00	SF	11,600	\$ 46,400
				\$ -
Subtotal Cost:				\$ 318,150
50% Contingency				\$ 159,075
<b>Total Cost:</b>				<b>\$ 477,225</b>

## Downtown Mobility Plan Roadway Improvement Projects

Improvement Element Description	Unit Cost	Unit	Quantity	Cost
Add Angled Parking	\$ 16.38	LF of Roadway	22400	\$ 366,912
Roadway Directional Conversions	\$ 23.75	LF of Roadway	7950	\$ 188,813
Traffic Signals	\$ 300,000.00	Signal	41	\$ 12,300,000
Add Peak Hour Flex Lane	\$ 5.40	LF of Roadway	3000	\$ 16,200
Stripe a Turn Pocket	\$ 2,000.00	1 Pocket	3	\$ 6,000
50% Contingency				\$ 6,438,962
Total Cost:				\$ 19,316,887

# Appendix F

## Intersection Design Concepts

*This page was intentionally left blank.*

## INTERSECTION DESIGN CONCEPTS

Intersection Type A – State Street and Hawthorn Street .....	F-3
Intersection Type A – State Street and Grape Street .....	F-4
Intersection Type A & L – Fifth Avenue and Sixth Avenue with B Street .....	F-5
Intersection Type B – Pacific Highway and Grape Street .....	F-6
Intersection Type C – Columbia and Grape Street .....	F-7
Intersection Type D – State Street and Date Street.....	F-8
Intersection Type E – Fifth Avenue and Cedar Street.....	F-9
Intersection Type F – Columbia Street and Beech Street.....	F-10
Intersection Type G – Sixth Avenue and J Street .....	F-11
Intersection Type G – State Street and Beech Street .....	F-12
Intersection Type H – Union Street and Beech Street.....	F-13
Intersection Type I – Front Street and First Avenue with Beech Street .....	F-14
Intersection Type J – Fourth Avenue and Fifth Avenue with Beech Street.....	F-15
Intersection Type K & A – Third Avenue and Fourth Avenue with B Street .....	F-16
Intersection Type L – Sixth Avenue and C Street .....	F-17
Intersection Type M – Seventh Avenue and C Street.....	F-18
Intersection Type N – Park Boulevard and C Street.....	F-19
Intersection Type O – Pacific Highway and W. Broadway .....	F-20
Intersection Type P – State Street and Broadway .....	F-21
Intersection Type Q – First Avenue and Broadway.....	F-22
Intersection Type R – Second Avenue and Broadway .....	F-23
Intersection Type S – Third Avenue and Broadway .....	F-24
Intersection Type T – Park Boulevard and Broadway.....	F-25
Intersection Type U – Sixth Avenue and F Street .....	F-26
Intersection Type U – Park Boulevard and E Street.....	F-27
Intersection Type V – Sixth Avenue and K Street.....	F-28

*This page was intentionally left blank.*



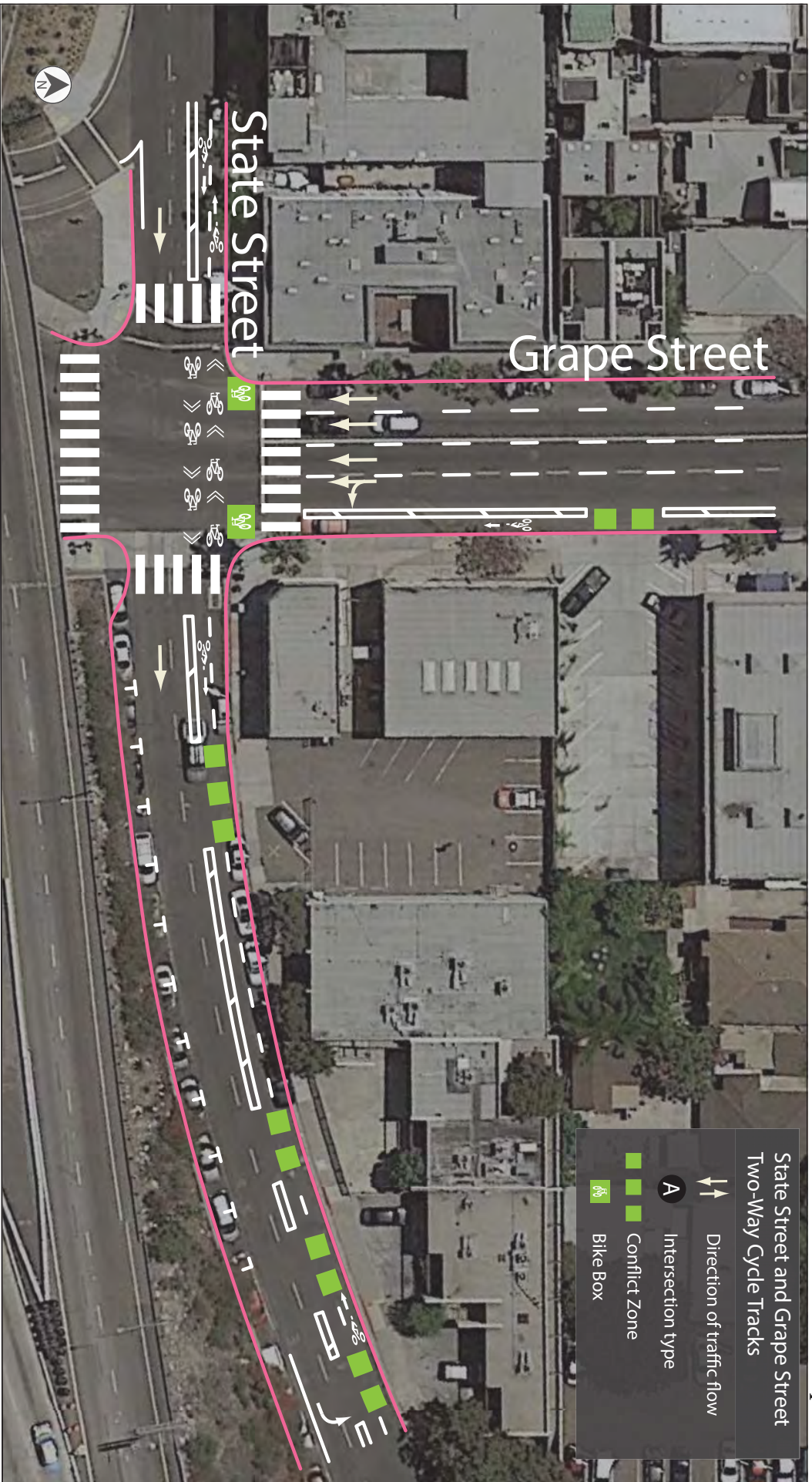
# State Street and Hawthorn Street



## Project Description

- Hawthorne Street: One-way cycle track on the left side of the vehicular travel lanes.
- State Street: Two-way cycle track along the westside.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.



State Street and Grape Street  
Two-Way Cycle Tracks

↕↕ Direction of traffic flow

A Intersection type

■ Conflict Zone

🚲 Bike Box

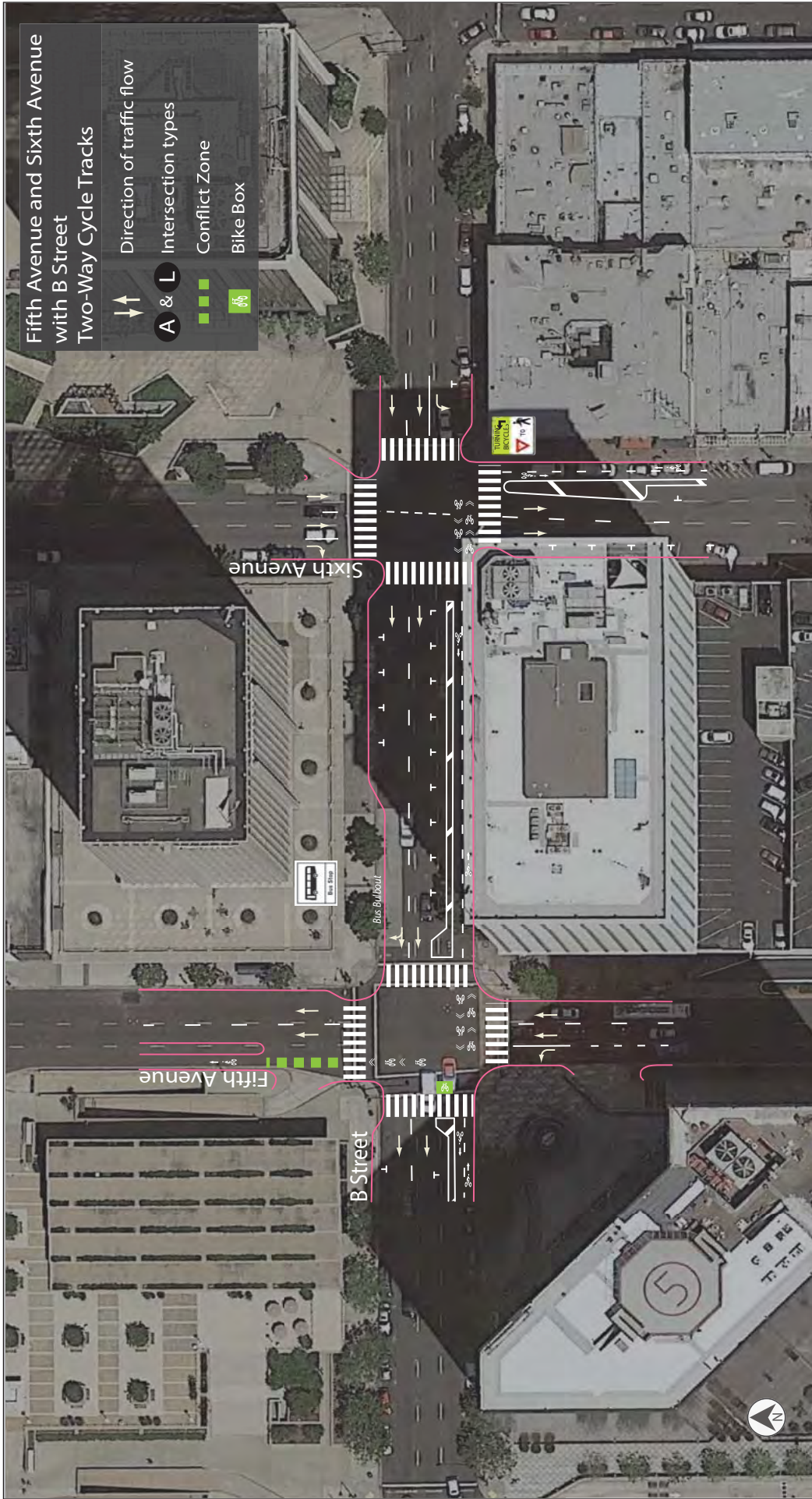
**Project Description**

- Grape Street: One-way cycle track on the left side of the vehicular travel lanes.
- State Street: Two-way cycle track along the westside of State Street.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**State Street and Grape Street  
Intersection Concept Design**

# Fifth Avenue and Sixth Avenue with B Street



## Project Description

- B Street: Two-way cycle track, separated by parallel parking, on the southside of B Street.
- Fifth Avenue: North of B Street, one-way cycle track to the left of the vehicular travel lanes.
- Sixth Avenue: South of B Street, two-way cycle track, separated by parallel parking, along the eastside.
- Signal modifications are proposed at both intersections to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

# Fifth Avenue and Sixth Avenue with B Street Intersection Concept Design



**Project Description**

- Grape Street: Eastbound one-way cycle on the north side of the roadway.
- Pacific Highway: One-way cycle tracks, separated by parallel parking in both directions.
- Signal modifications are proposed to accommodate cyclists.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Pacific Highway and Grape Street Intersection Concept Design**

**Columbia Street and Grape Street**



**Columbia Street and Grape Street One-Way Cycle Tracks**

- Direction of traffic flow
- Intersection type
- Conflict Zone

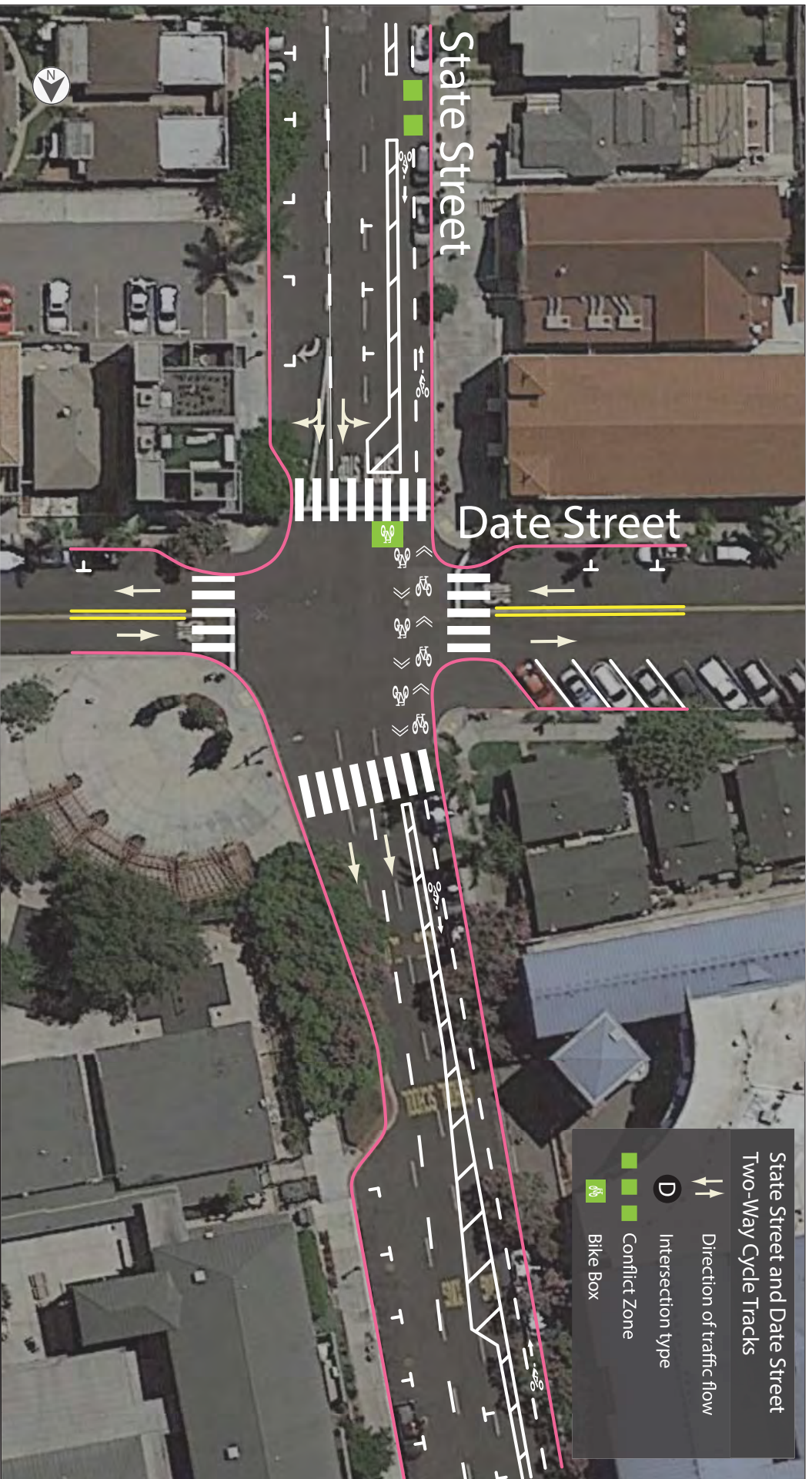
**Project Description**

- Grape Street: One-way cycle track on the left side of the vehicular travel lanes.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Columbia Street and Grape Street Intersection Concept Design**

**Downtown San Diego Mobility Plan**  
**CHEN RYAN**  PLANNING & ENGINEERING, INC.



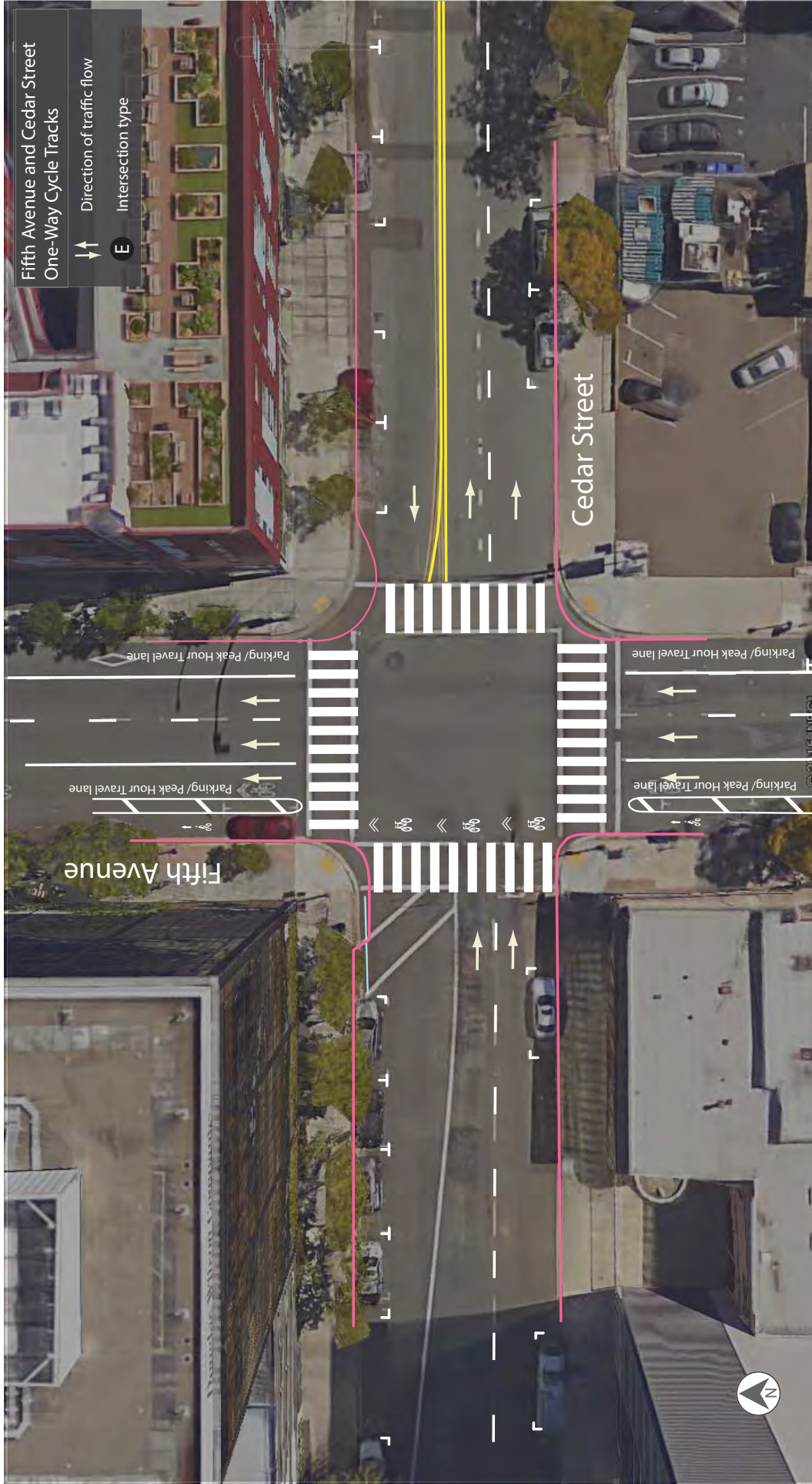
**Project Description**

- State Street: Two-way cycle track, separated by parallel parking, along the westside.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**State Street and Date Street Intersection Concept Design**

# Fifth Avenue and Cedar Street



## Project Description

- Fifth Avenue: One-way cycle track to the left of the vehicular travel lanes.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

# Fifth Avenue and Cedar Street Intersection Concept Design

### Columbia Street and Beech Street



#### Project Description

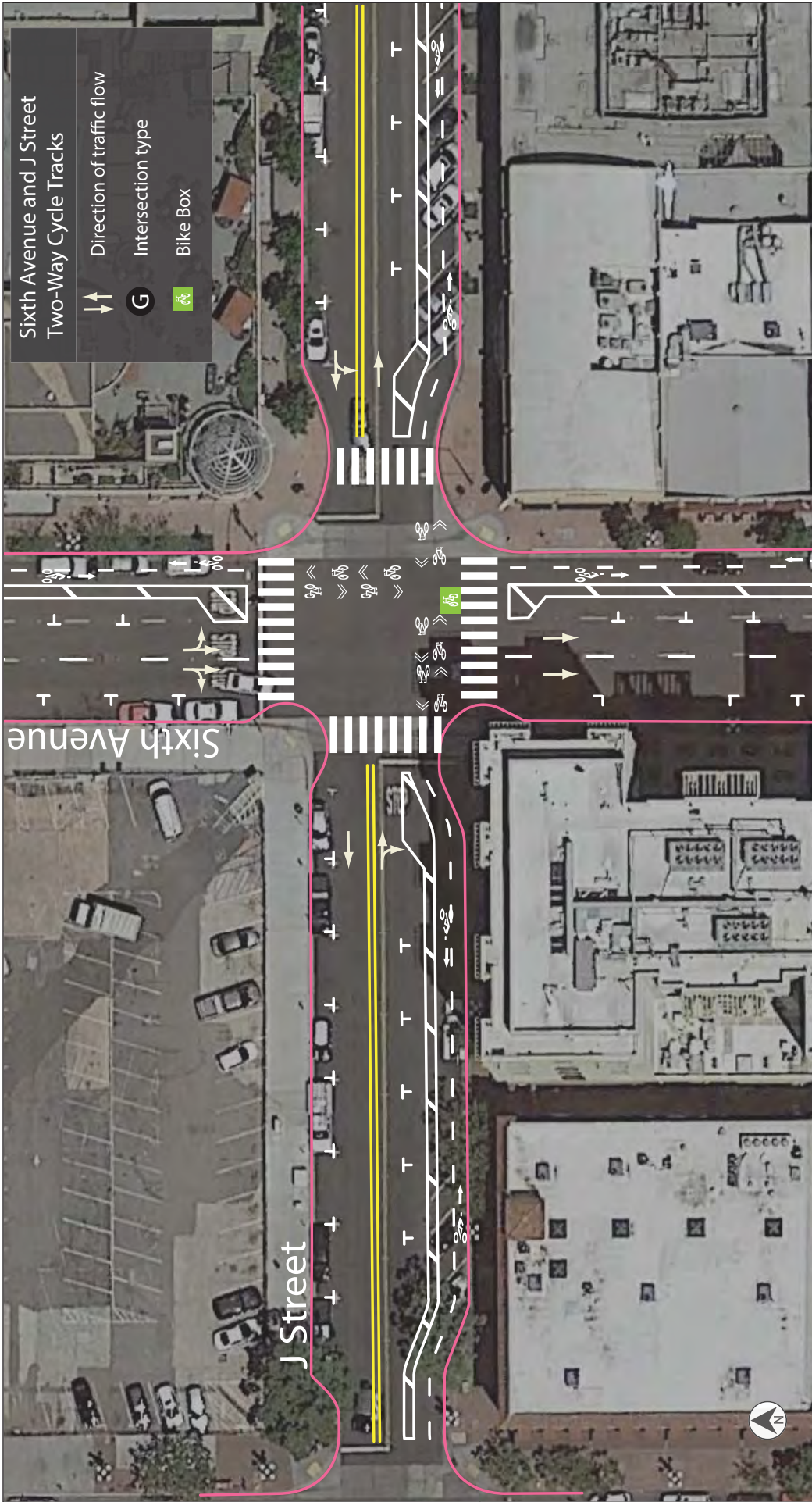
- Beech Street: Two-way cycle track, separated by parallel parking along the southside.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

### Columbia Street and Beech Street Intersection Concept Design



Sixth Avenue and J Street

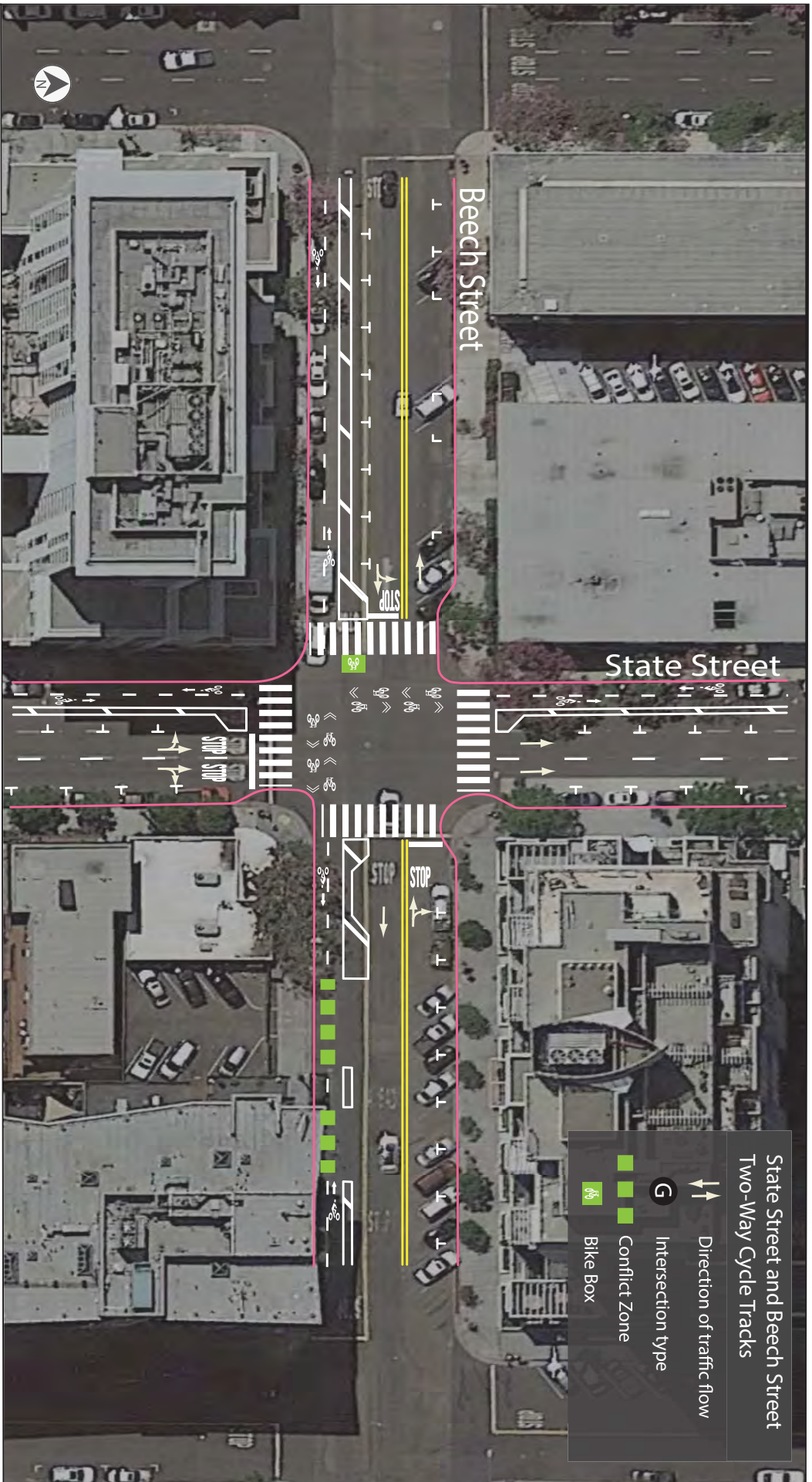


Project Description

- J Street: Two-way cycle track, separated by parallel parking, along the southside.
- Sixth Avenue: Two-way cycle track, separated by parallel parking, along the eastside.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

Sixth Avenue and J Street  
Intersection Concept Design



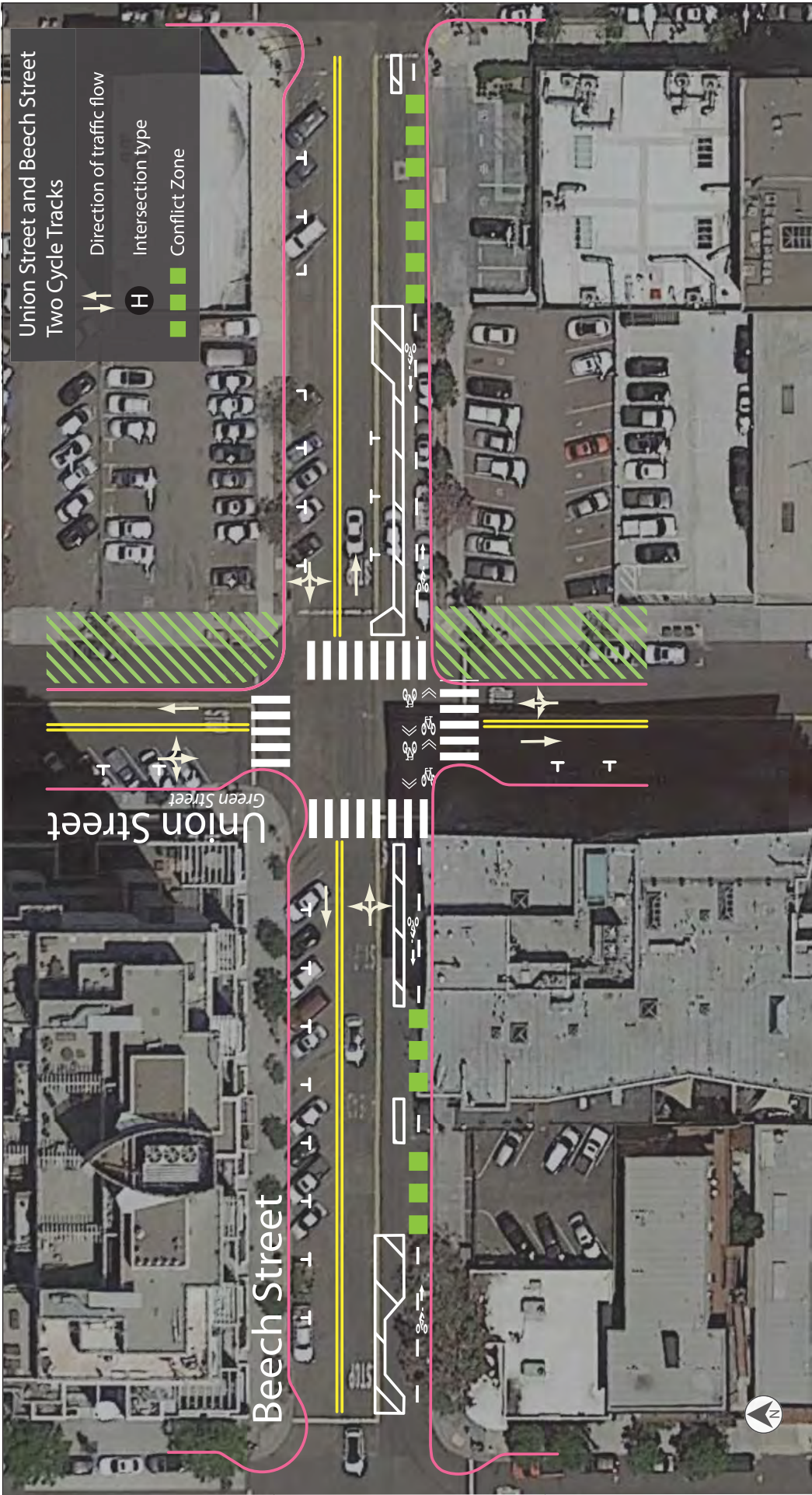
**Project Description**

- State Street: Two-way cycle track, separated by parallel parking, along the westside.
- Beech Street: Two-way cycle track, separated by parallel parking, along the southside.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**State Street and Beech Street Intersection Concept Design**

# Union Street and Beech Street

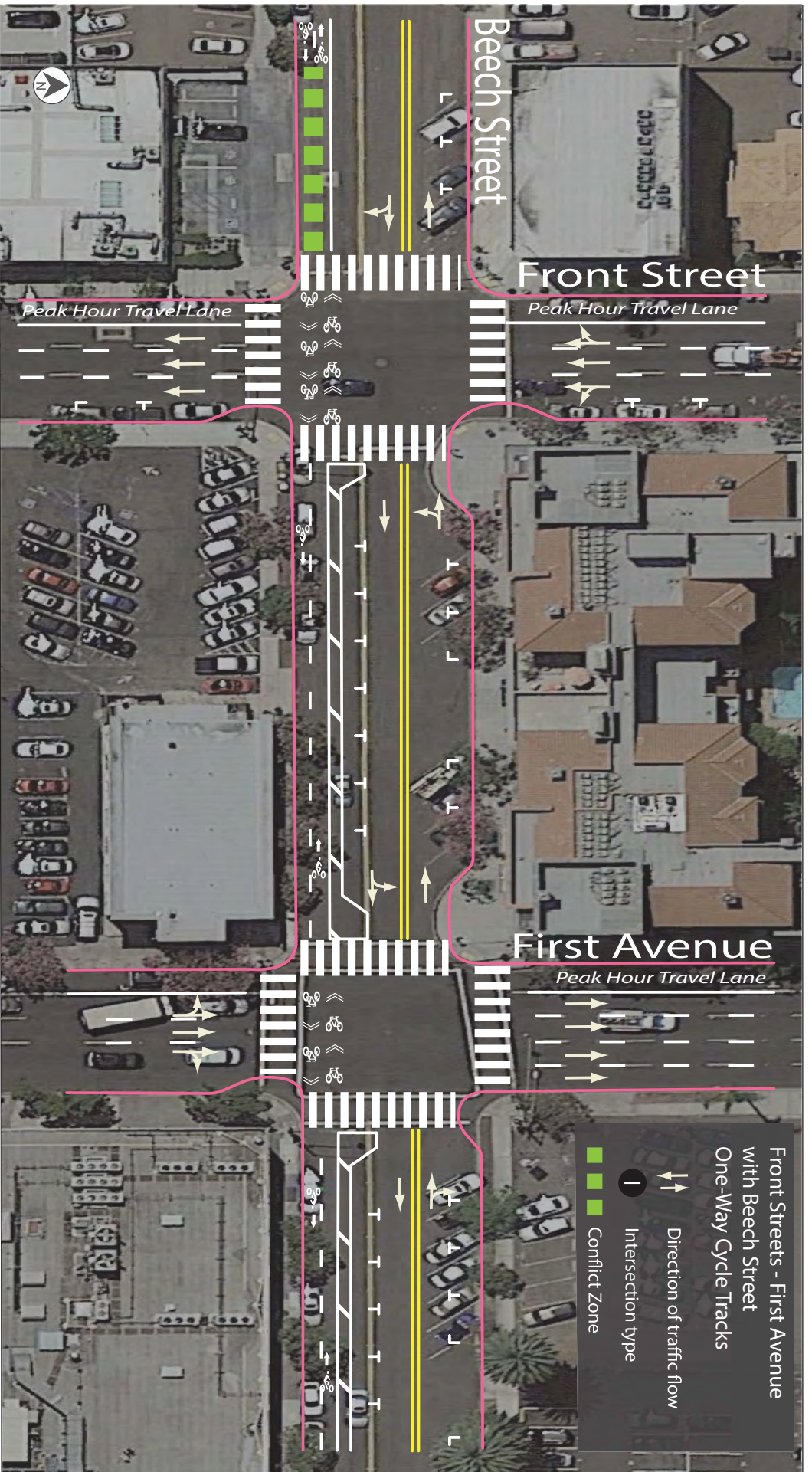


## Project Description

- Beech Street: Two-way cycle track, separated by parallel parking, along the southside.
- Union Street: Designated Green Street.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

# Union Street and Beech Street Intersection Concept Design



**Project Description**

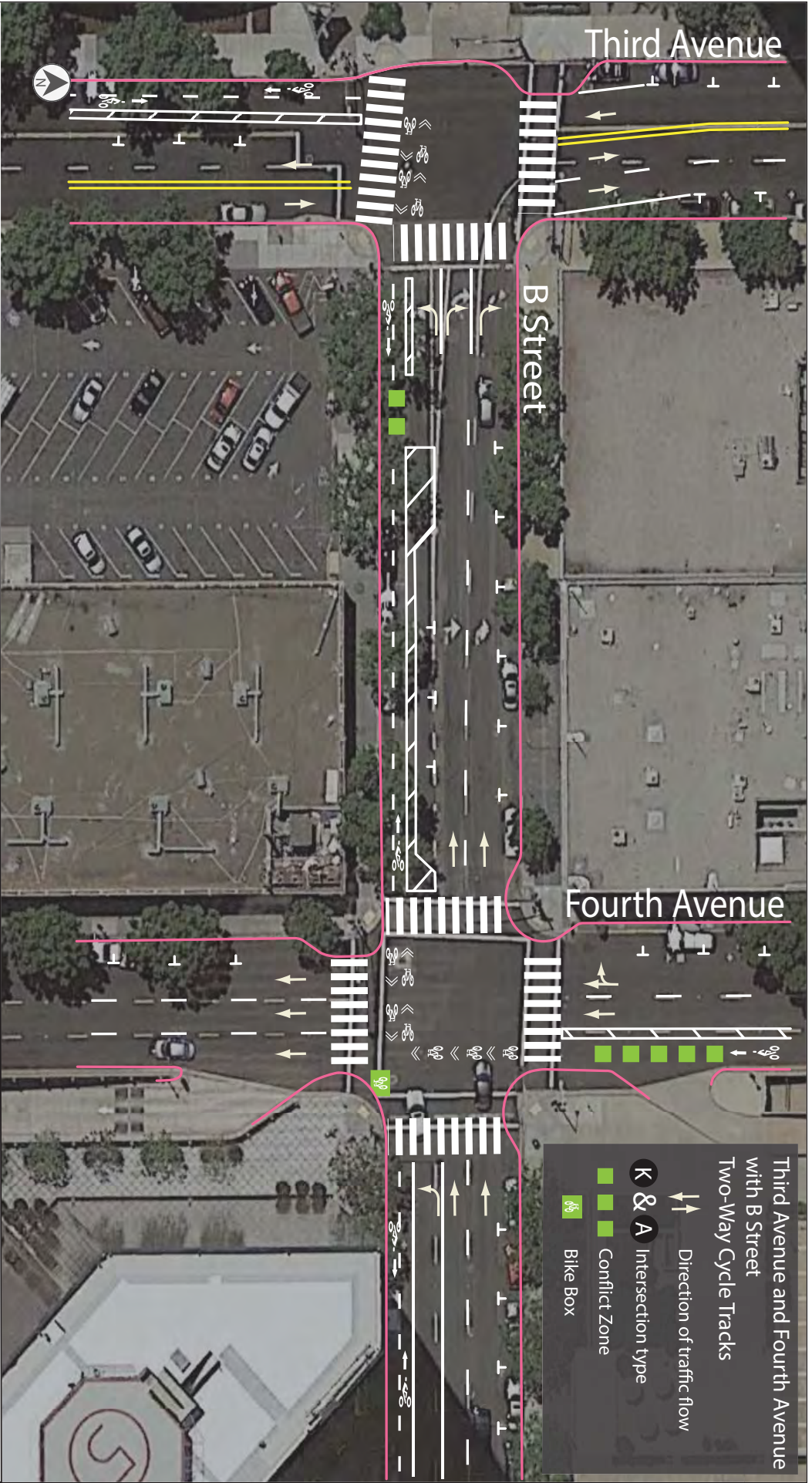
- Beech Street: Two-way cycle track, separated by parallel parking, on the southside.
- Signal modifications are proposed at both intersections to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Front Street - First Avenue and Beech Street Intersection Concept Design**



**Third Avenue - Fourth Avenue and B Street**



**Project Description**

- B Street: Two-way cycle track, separated by parallel parking, along the southside of B Street.
- Fourth Avenue: North of B Street, one-way cycle track terminates at the intersection.
- Third Avenue: South of B Street, two-way cycle track, separated by parallel parking along the westside. Signal modifications are proposed at both intersections to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Third Avenue - Fourth Avenue and B Street Intersection Concept Design**

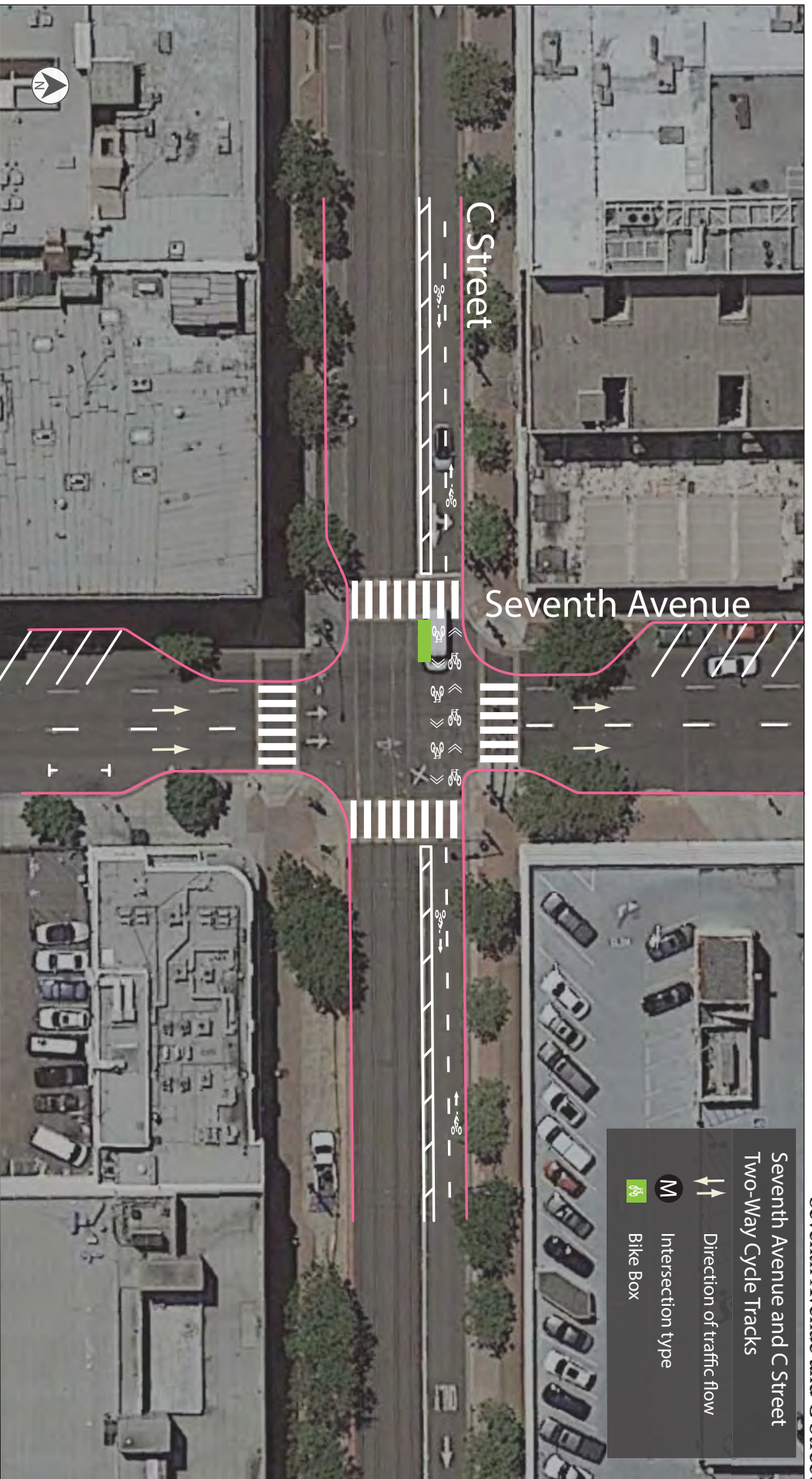
# Sixth Avenue and C Street



## Project Description

- C Street: Two-way cycle track along the northside, east of Sixth Avenue, replacing a single eastbound vehicular travel lane.
- Sixth Avenue: Two-way cycle track along the eastside.
- Signal modifications are proposed to accommodate cyclists.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.



**Project Description**

- C Street: Two-way cycle track along the northside, replacing a single eastbound vehicular travel lane.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Seventh Avenue and C Street Intersection Concept Design**



# Park Boulevard and C Street

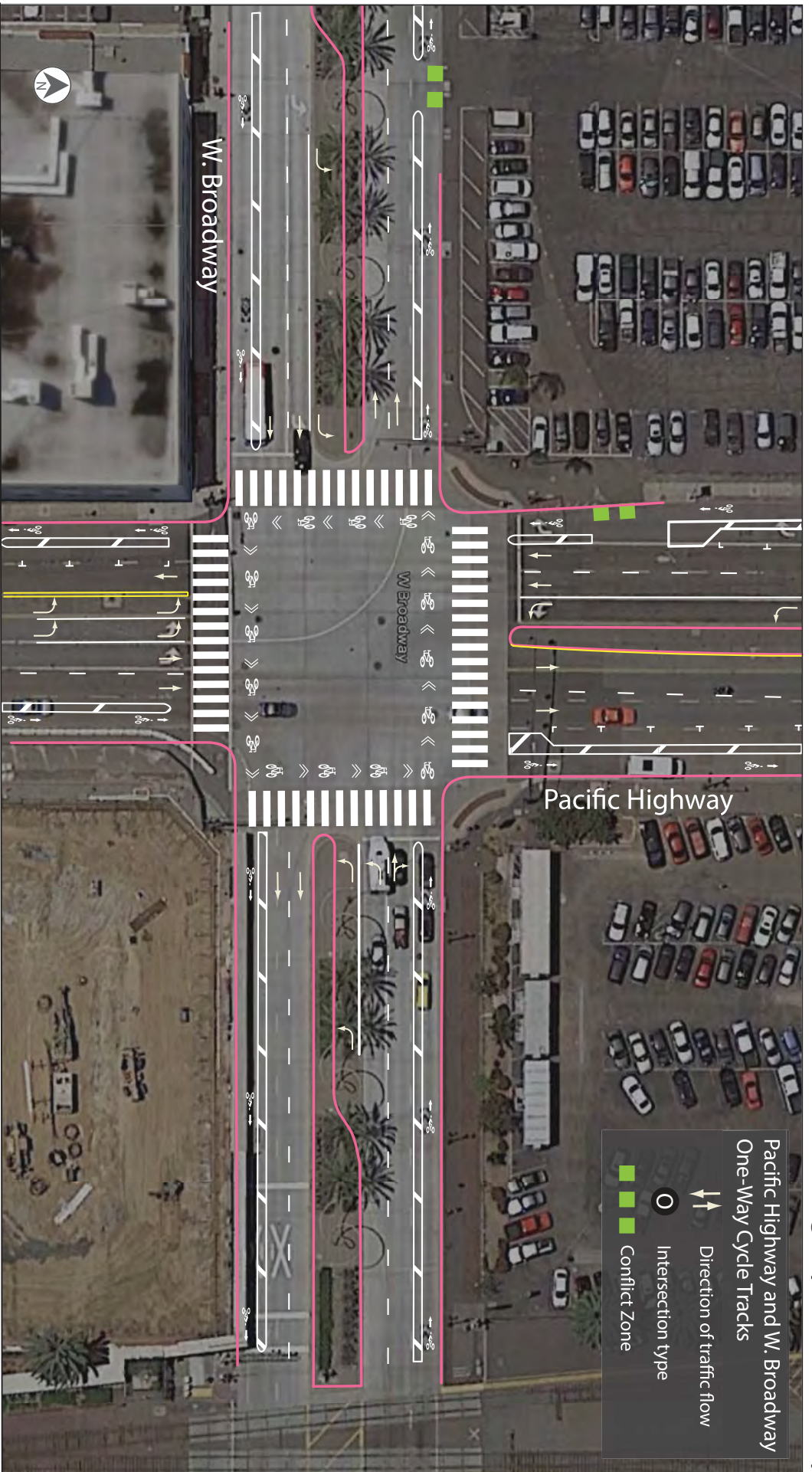


Park Boulevard and C Streets Two-Way Cycle Tracks	
	Direction of traffic flow
	Intersection type
	Conflict Zone
	Bike Box

## Project Description

- C Street: Two-way cycle track along the northside.
- Park Boulevard: North of C Street, one-way cycle tracks in both directions. South of C Street two-way side path on the eastside of the roadway.
- Signal modifications are proposed to accommodate cyclists.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

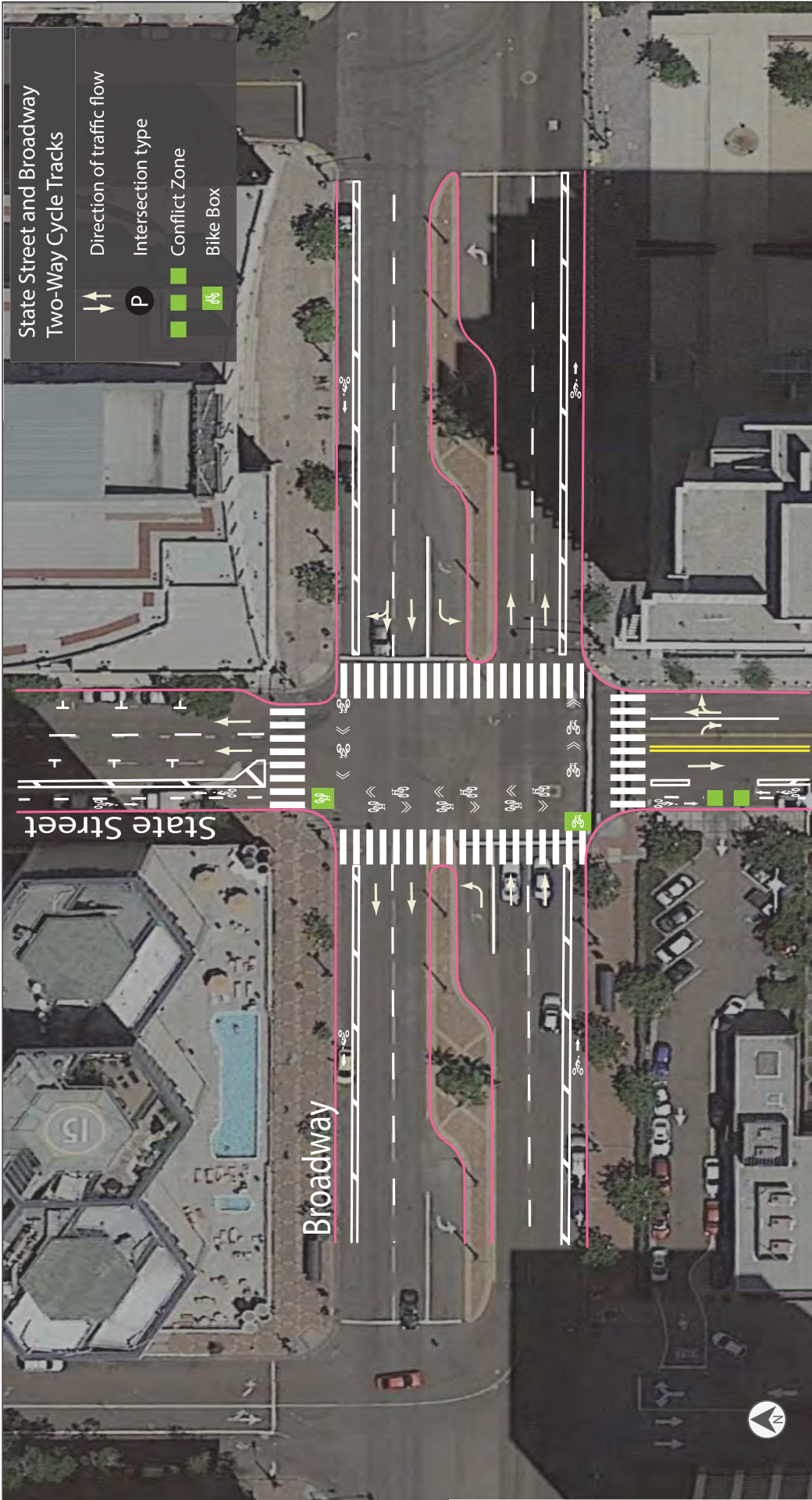


**Project Description**

- West Broadway: One-way cycle tracks in both directions.
- Pacific Highway: One-way cycle tracks in both directions.
- Signal modifications are proposed to accommodate cyclists.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Pacific Highway and W. Broadway  
Intersection Concept Design**

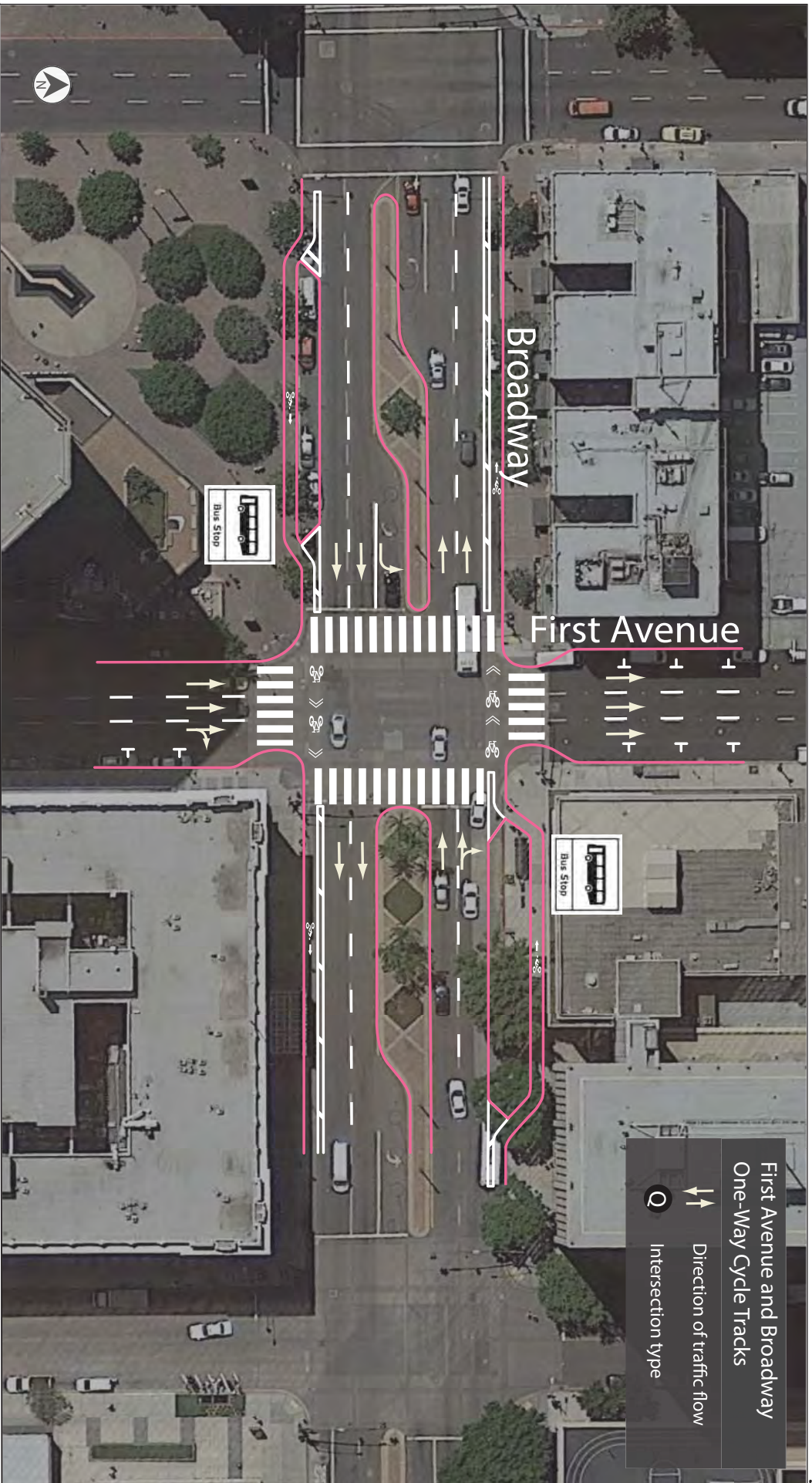


**Project Description**

- Broadway: One-way cycle tracks in both directions.
- State Street: Two-way cycle track on the westside.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

# First Avenue and Broadway



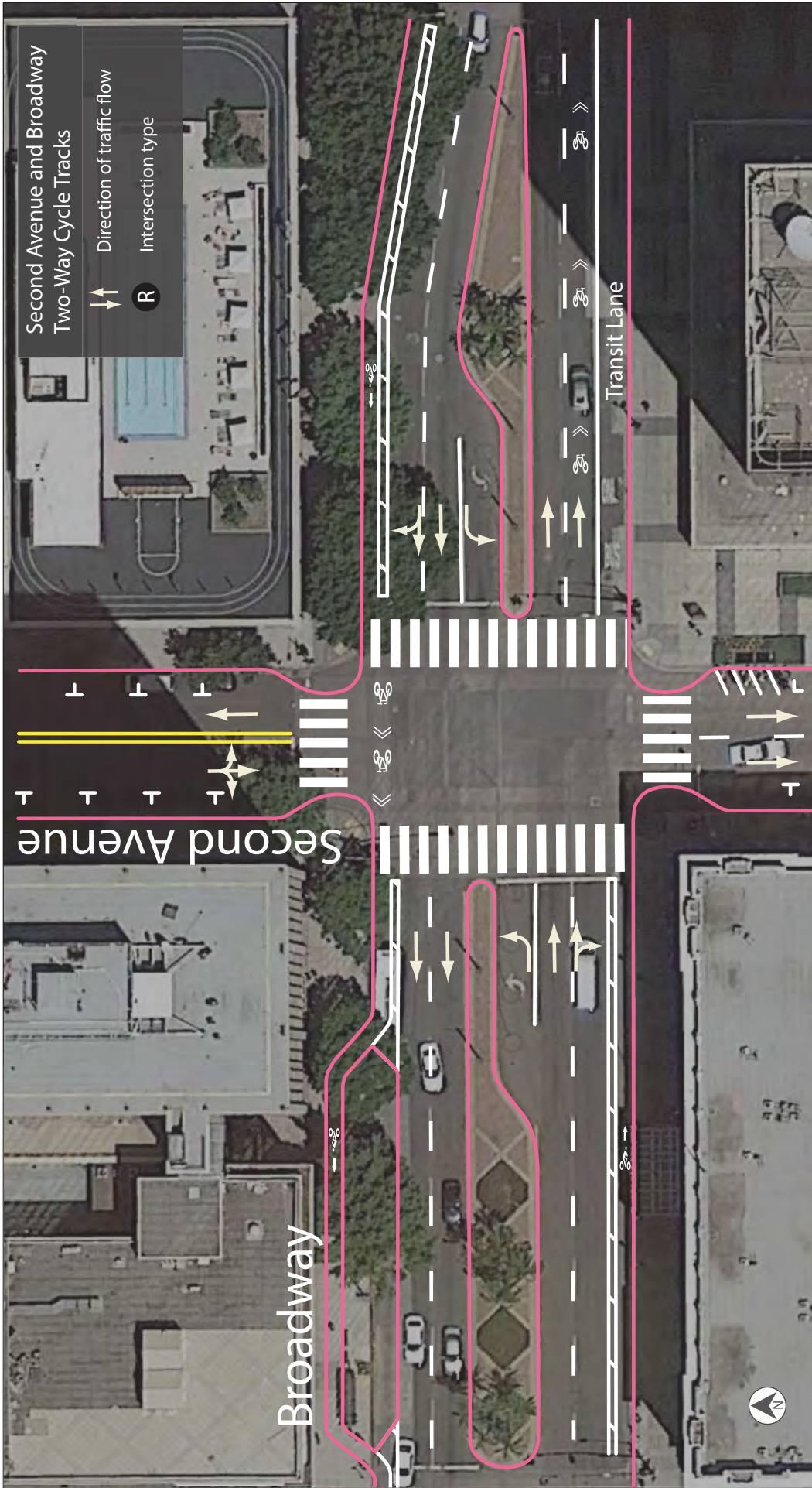
## Project Description

- Broadway: One-way cycle tracks in both directions.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

## First Avenue and Broadway Intersection Concept Design

Second Avenue and Broadway

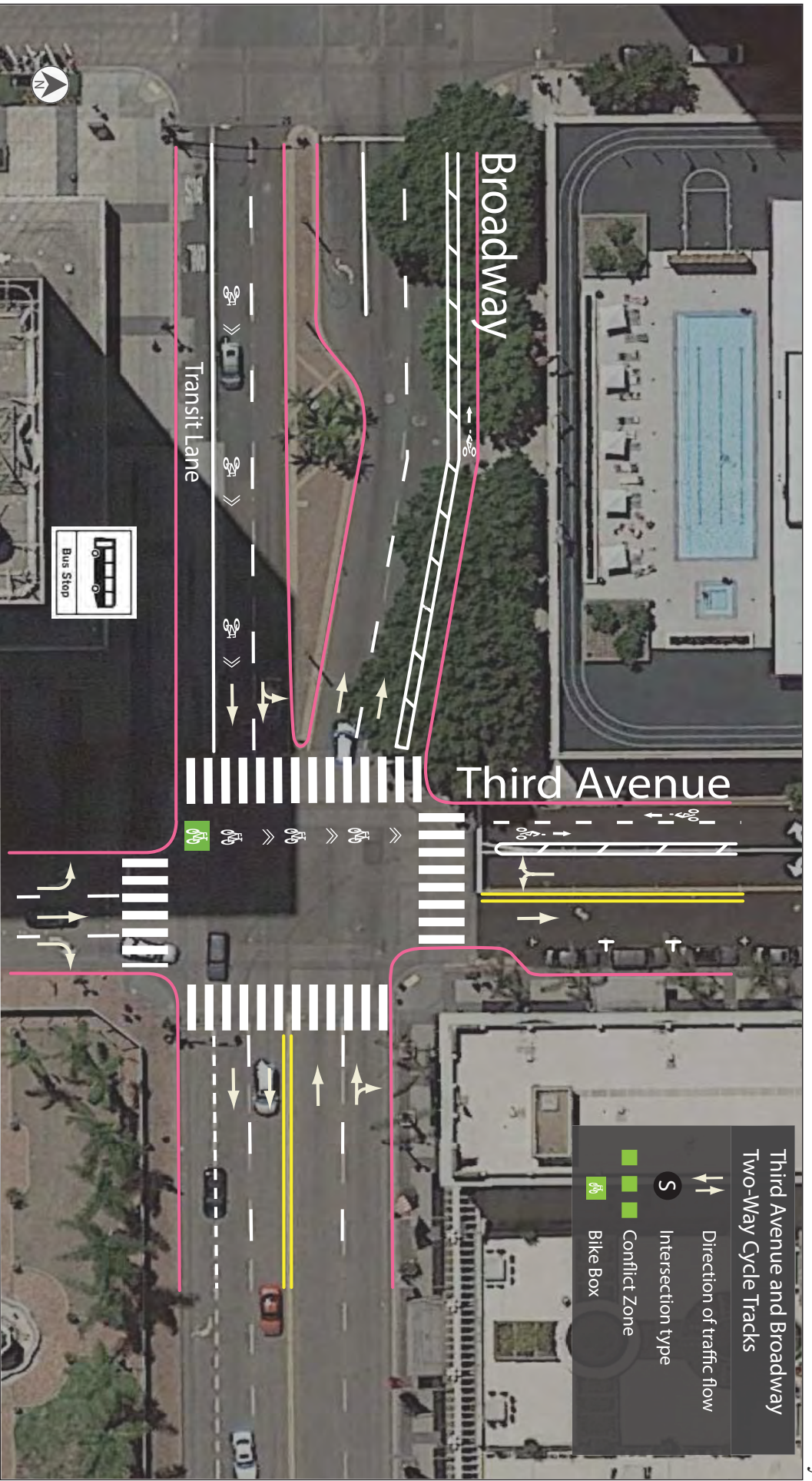


Project Description

- Broadway: One-way cycle tracks, in both directions. East of the intersection the cycle track transitions to shared lane markings to accommodate a brief transit only lane segment (one block).
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

Second Avenue and Broadway  
Intersection Concept Design



**Project Description**

- Broadway: One-way cycle tracks, are proposed along Broadway in the westbound direction.
- Third Avenue: North of Broadway, a two-way cycle track on the westside of the roadway.
- Signal modifications are proposed to accommodate cyclists.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

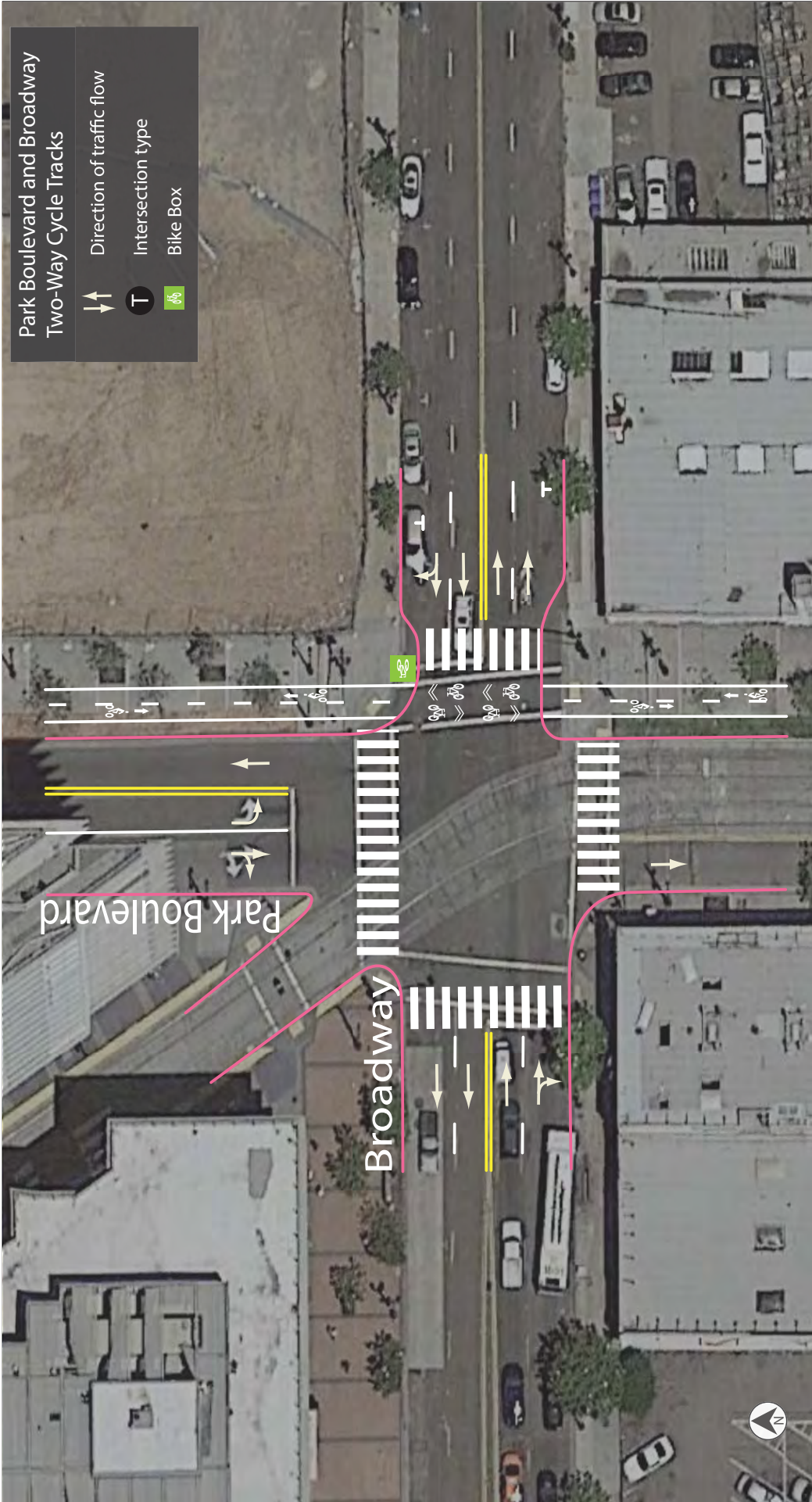
# Park Boulevard and Broadway

**Park Boulevard and Broadway  
Two-Way Cycle Tracks**

Direction of traffic flow

Intersection type

Bike Box



## Project Description

- Park Boulevard: Two-way side path on the eastside.
- Curb extensions are proposed where feasible.
- Signal modifications are proposed to accommodate cyclists.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

# Park Boulevard and Broadway Intersection Concept Design

**Downtown San Diego  
Mobility Plan**  
CHEN RYAN

**KOA CORPORATION**  
Transportation & Infrastructure



**Project Description**

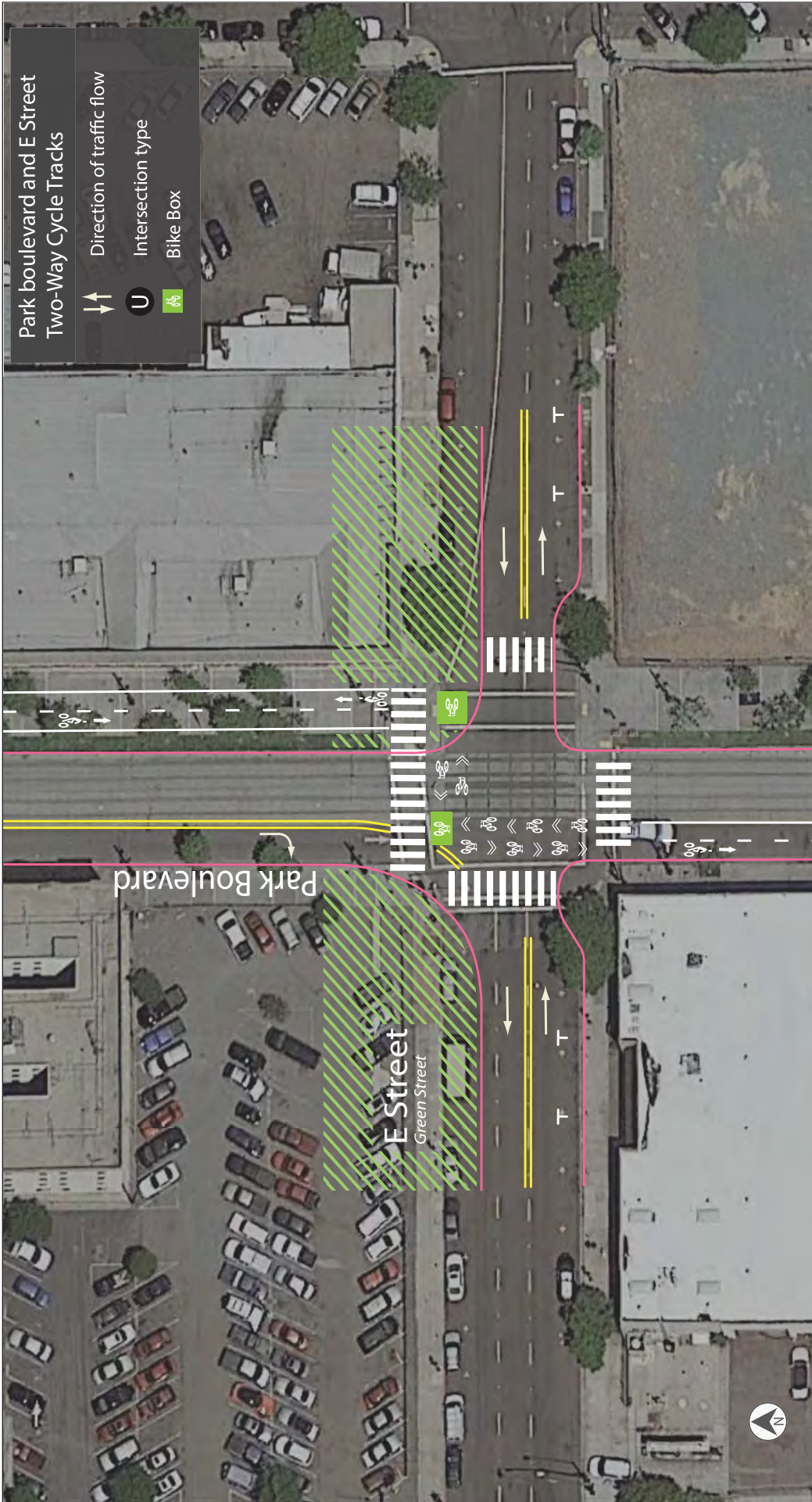
- Sixth Avenue: Two-way cycle track, separated by parallel parking, along the eastside.
- Signal modifications are proposed to accommodate cyclists.
- Curb extensions are proposed where feasible.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Sixth Avenue and F Street Intersection Concept Design**



# Park Boulevard and E Street

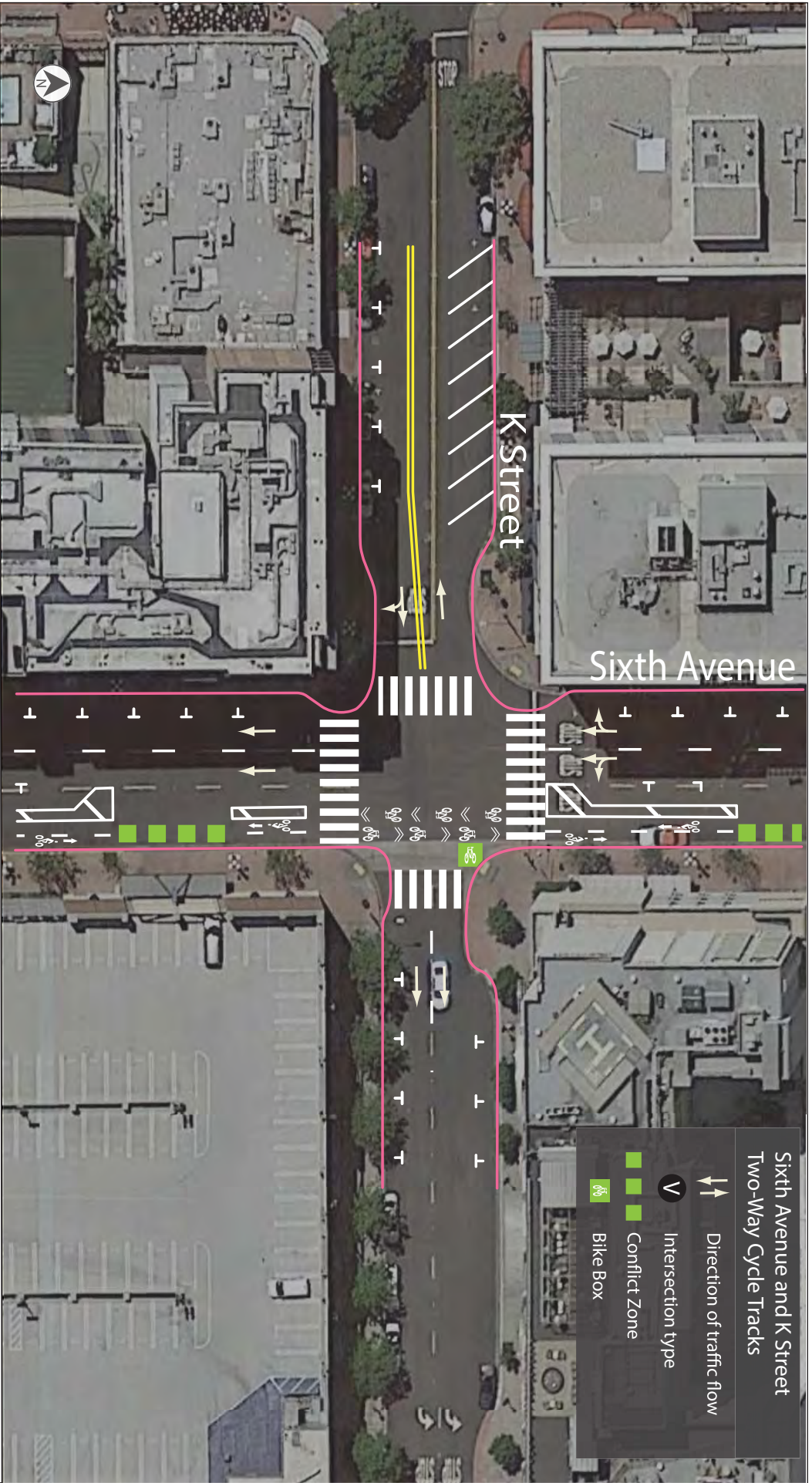


## Project Description

- E Street: Designated Green Street, will also be converted from a one-way eastbound to a two-way roadway.
- Park Boulevard: North of E Street, two-way side path on the eastside of the roadway. South of E Street, two-way cycle track, replacing a vehicular travel lane.
- Signal modifications are proposed to accommodate cyclists.

Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

# Park Boulevard and E Street Intersection Concept Design



**Project Description**

- Sixth Avenue: Two-way cycle track, separated by parallel parking, along the eastside.
- Curb extensions are proposed where feasible.

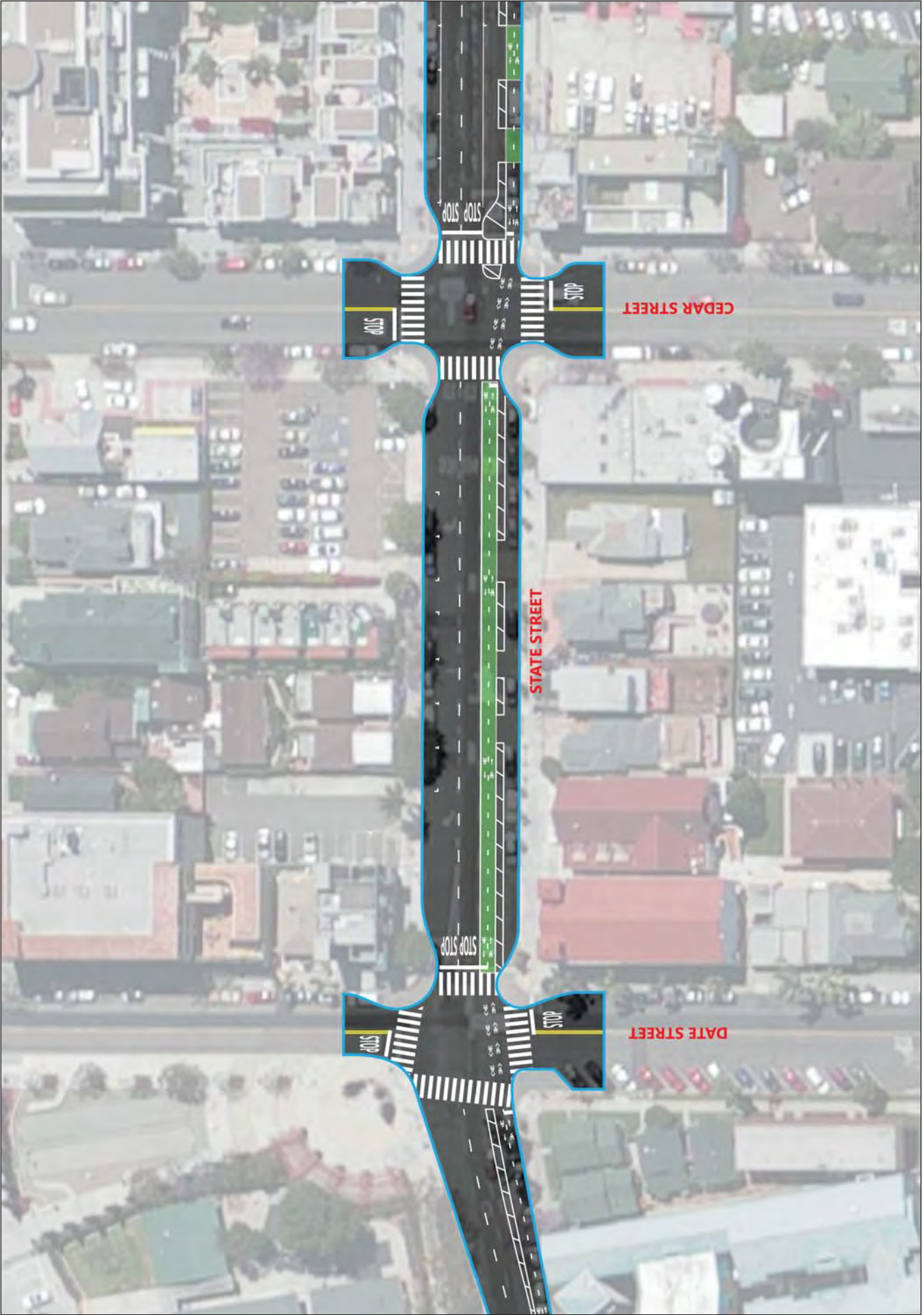
Note that conceptual plan illustrations are provided to demonstrate general feasibility of the subject proposal only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

**Sixth Avenue and K Street Intersection Concept Design**

# Appendix G

## Additional Design Concepts

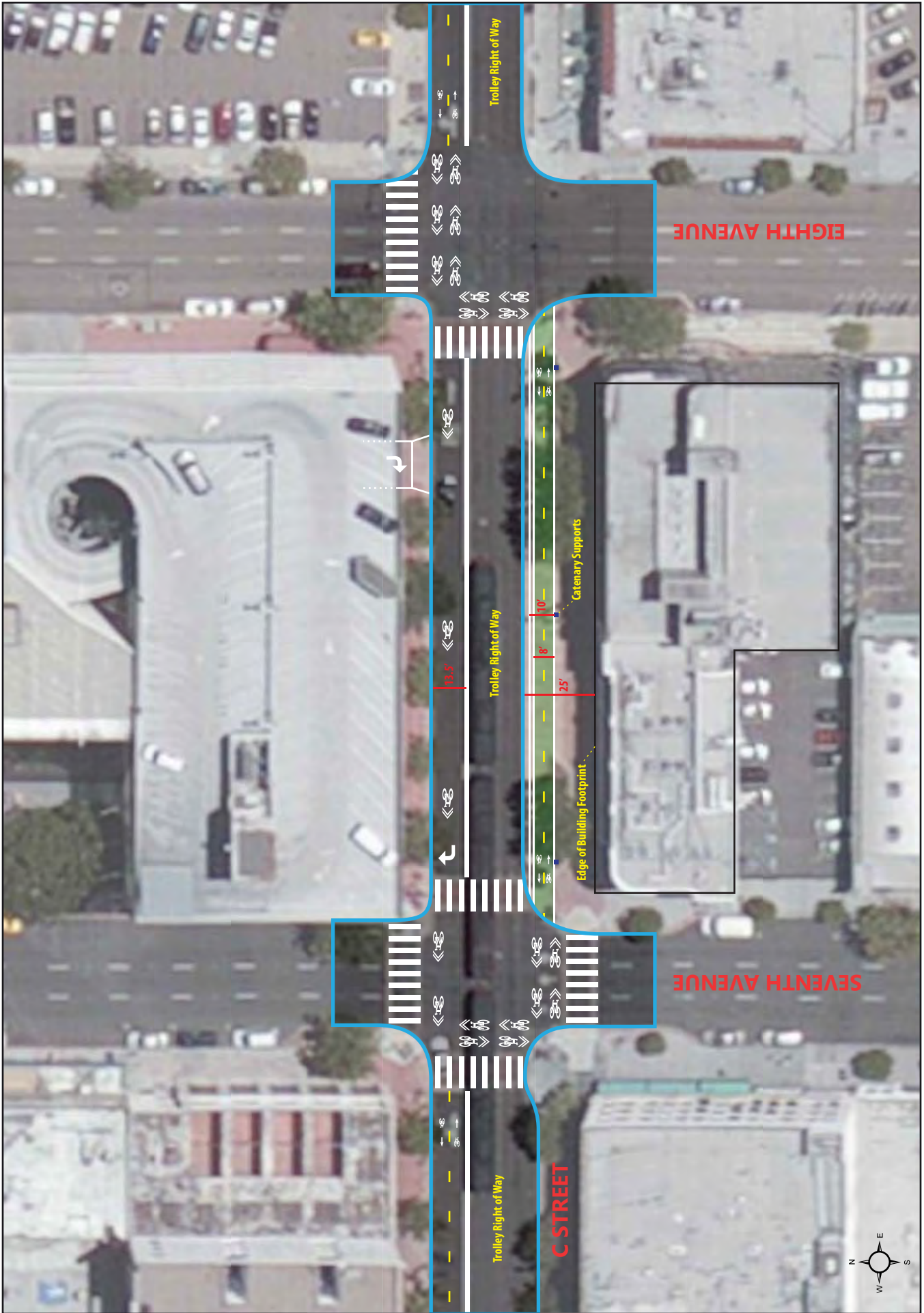
*This page was intentionally left blank.*



State Street between Date Street and Cedar Street

Downtown San Diego  
Mobility Plan





C Street between Seventh Avenue and Eighth Avenue

Downtown San Diego  
Mobility Plan

