Active Transportation Strategic Plan

Volume III: Appendices

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Metro

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APPENDIX

A BENEFITS AND EFFECTS OF ACTIVE TRANSPORTATION

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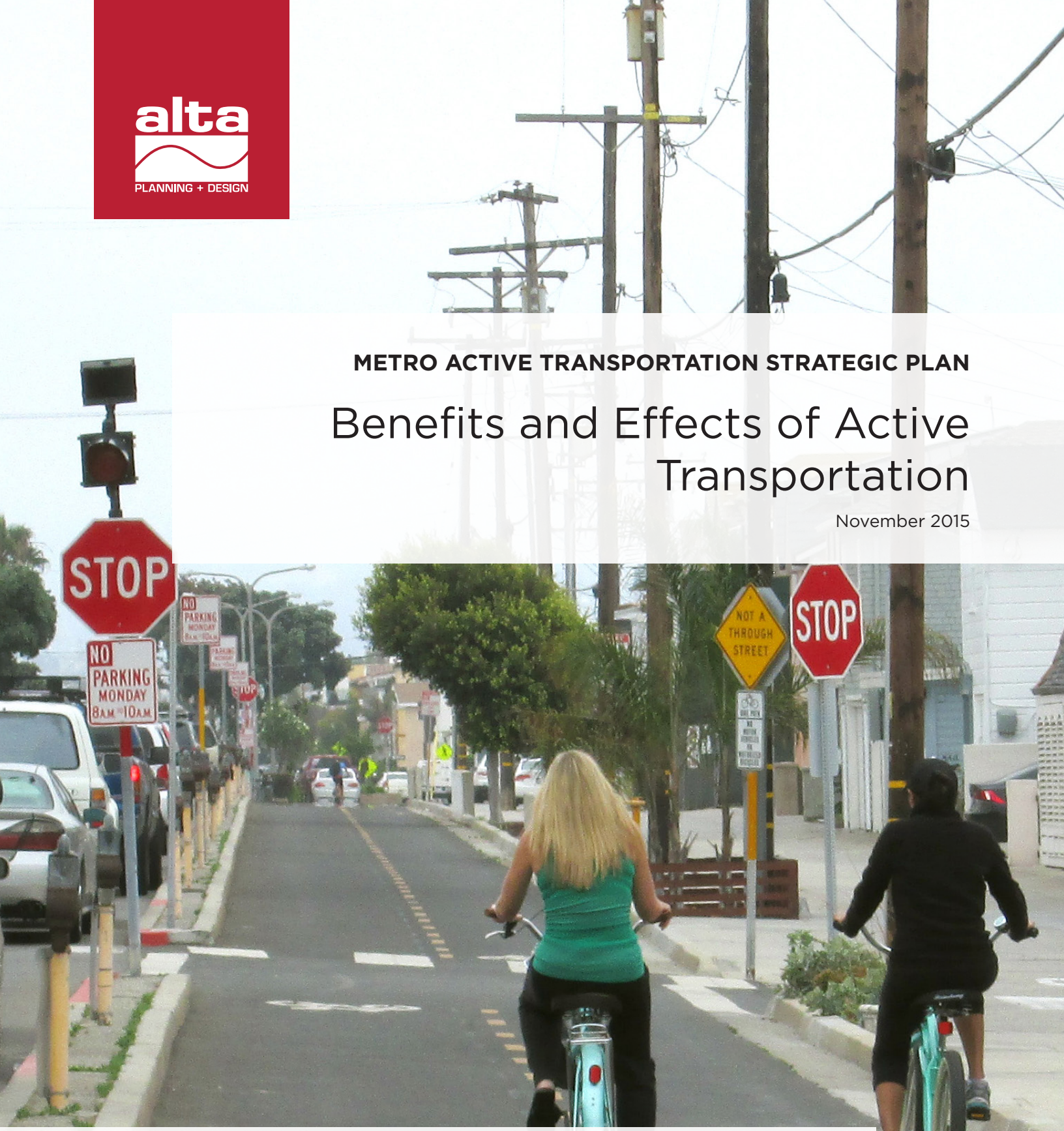
PLANNING + DESIGN



METRO ACTIVE TRANSPORTATION STRATEGIC PLAN

Benefits and Effects of Active Transportation

November 2015

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BENEFITS AND EFFECTS OF ACTIVE TRANSPORTATION

In 2012, at the grand opening of downtown Chicago's newest protected bicycle lane, Chicago Mayor Rahm Emanuel declared, "I expect not only to take all of [Seattle and Portland's] bikers, but I also want all the jobs that come with this, all the economic growth that comes with this, all the opportunities of the future that come with this" (Furcoloro, 2012). Mayor Emanuel's comments echo a sentiment that is increasingly apparent in America's large cities: that investment in active transportation provides a host of benefits beyond mobility. The benefits described in this report—related to mobility, economy, health, safety and environment—can be understood from a variety of angles. They affect individual residents, businesses, and the county as a whole. This summary of active transportation benefits outlines the potential return on investment for increasing active and multi-modal transportation options in Los Angeles County.

If you build it, they will come...

The provision of active transportation infrastructure is intimately linked to the use of that infrastructure. For example, at the beginning of the Transportation Equity Act for the 21st Century (TEA21) era in 1999, federal funding for active transportation increased to $360 million per year from $5 million per year. Beginning in 2006 (the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) era), active transportation investment increased to almost $1 billion per year. In response to these investments, the number of people who ride bicycles to work in the United States has increased by 60 percent in the last ten years alone (USDOC, 2014a).

National trends in active transportation investment and uptake are mirrored in Los Angeles County, where bicycle commute trips have increased 81 percent since 2006 (USDOC, 2014a). In Long Beach, a 33 percent increase in people riding bicycles and a 15 percent increase in people walking occurred on Broadway and Third Streets one year after the implementation of protected bicycle lanes (KOA Corporation, 2013). In Eagle Rock, bicycle lanes were constructed on York Boulevard in 2010, contributing to a 140 percent increase in the number of people riding bicycles between 2009 and 2011 (City of Los Angeles, 2013a). In Santa Monica, the construction of 45 new lane-miles of bikeways between 2011 and 2013 accommodated a 71 percent increase in people riding bicycles to work (City of Santa Monica, 2014). Simply put, more people choose to walk and ride their bicycles when infrastructure investment enables them to do so safely and easily.

FROM 2006-2014
bicycle commute trips in Los Angeles County increased by

81%

(USDOC, 2014a)

Increased investment in active transportation infrastructure over the past ten years has led to an increase in bicycle commuting trips.

01 Mobility Benefits

Active transportation (i.e. transportation via walking, bicycling or rolling) provides benefits to all citizens. Many Americans have realized the benefits of walking and bicycling, and a majority (53 percent) now say that they would like to bicycle more than they currently do (People For Bikes, 2015). They are bringing to light a powerful latent demand for healthy and economical travel options.

Active transportation investment enables better connectivity between modes – particularly for transit. Many people who could potentially take transit choose not to when transit stops are not conveniently located at their starting points and final destinations.

These situations require "first and last mile" connections, and walking and bicycling are particularly well-suited to these relatively short, transit-linked trips. Enabling people to walk or ride a bicycle to or from transit expands the menu of transportation choices and may make transit a more attractive option than driving for certain trips. It creates a seamless travel experience that may not be practical using transit alone, particularly in areas of Los Angeles County with fewer or less frequent transit routes. In this way, active transportation improvements that link to transit expand the effective reach of the transit network and add value to Metro's ongoing capital investments around the county.

Riding a bicycle not only saves money - it saves time.

When the direct and indirect costs of transportation - such as the hours spent earning money to purchase and operate a motor vehicle - are accounted for, riding a bicycle is effectively "faster" than driving a car. In Los Angeles, people riding bicycles only need to travel at 8 miles per hour to achieve higher effective speeds than the average motor vehicle.

(Tranter, 2012)

Bicycles have higher effective speeds than cars in urban environments (Tranter, 2012) and can link areas where transit service is lacking.

The first-last mile barrier to transit use can be bridged by providing walking and bicycling facilities that link to transit stops and stations.

Improving active transportation connections to and from transit stops and stations enhances the transit system by making it more connected to residents, workplaces and other destinations. This increases mobility options, as locations that were previously only accessible by motor vehicle may be reached by transit, active transportation or a combination of both. This offers residents the flexibility to choose the transportation mode that best fits their trip purpose.

Evidence suggests that walking and bicycling investment - unlike highway investment - supports transit, rather than competing with it. Metro conducted a 2011 study to "identify the potential benefits of constructing the Metro Orange Line," a 14-mile-long Bus Rapid Transit route that extends from the terminus of the Metro Red Line in North Hollywood to Warner Center in Woodland Hills. The line was intended to serve as "an integrated transportation system where transit, bicycle, and pedestrian travel modes are included." (Metro, 2011). A bikeway was constructed along with the busway and, since then, the Metro Orange Line has experienced increased transit ridership. The bicycle facility has also seen increased use and has assisted in bringing new public transit riders to the Orange Line stations.

Among Metro Orange Line park-and-ride respondents:

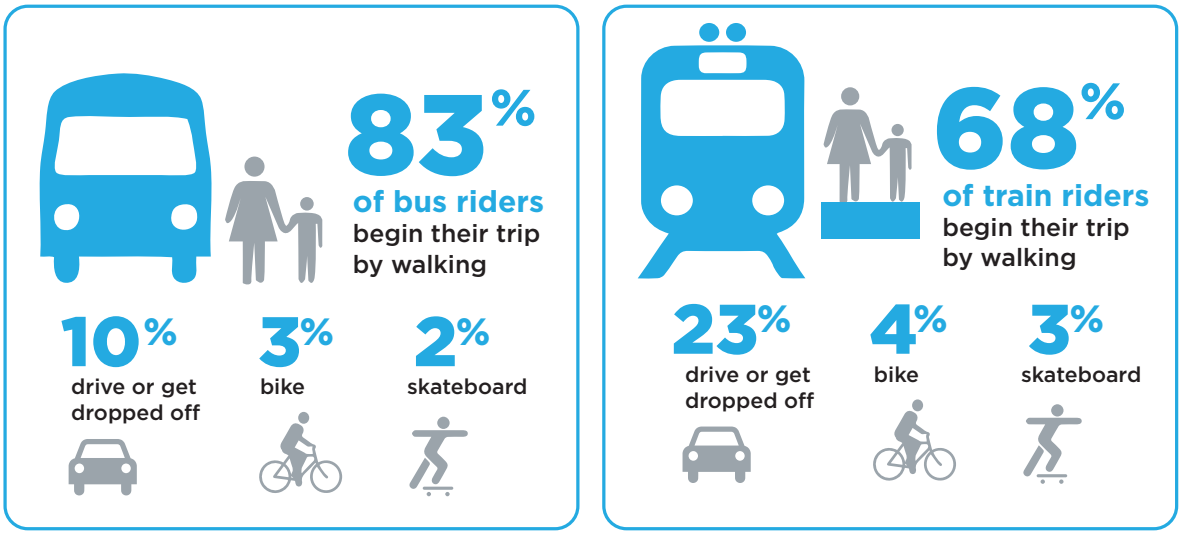
19% say the bike path has influenced their use of a bicycle for transportation

24% have considered walking or bicycling to the station

39% reported using the path at some point

(Metro, 2011)

The Spring 2015 Metro Customer Survey found that:



(Metro, 2015)

Metro's 2015 Customer Survey revealed that Orange Line bicycle facilities have influenced people who typically drive to Orange Line Stations, with 39 percent of park-and-ride users reporting using the path.

(Metro, 2015)

Parking Benefits

With the high rate of car ownership in Los Angeles County, there is a perceived scarcity of parking spaces. An increase in people walking and bicycling offsets motor vehicle trips, reducing demand for motor vehicle parking. This can potentially increase parking space availability and reduce cost for both users (lower prices) and developers (fewer parking spaces needed in new buildings).

Active transportation investment is being used to mitigate the parking impacts of population growth in cities across California. In 2010, Santa Monica approved a resolution intended to reduce the transportation impacts of new developments in the city. The resolution outlines a Transportation Impact Fee (TIF) that requires developers to offset traffic impacts by contributing to alternative transportation options, such as public transit, bicycling, ridesharing and walking (City of Santa Monica, 2010).

In the City of Los Angeles, a Bicycle Parking Ordinance has been in effect since 2013 which requires both short and long term bicycle parking for new buildings and additions of at least 50,000 square feet (City of Los Angeles, 2013b). Along with requiring bicycle parking, shower and locker facilities are also required for all non-residential bicycle parking spaces. A further incentive included in the ordinance is the ability for building owners to replace up to 20 percent of required motor vehicle parking with bicycle parking, at a rate of four bicycles spaces for each vehicle space. Sonny Astani, a developer in Los Angeles, was able to save more than $3 million dollars by cutting 110 of the legally required vehicular spaces and replacing these spaces with bicycle parking (Lee, 2013).

18% & 35%

OF BUS RIDERS **OF TRAIN RIDERS**

CHOOSE TRANSIT DESPITE OWNING A VEHICLE

(Metro, 2015)

On-street bicycle corrals can secure 12 or more bicycles within a typical curbside parking space.

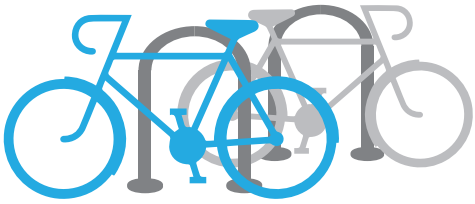
The overall cost of providing parking spaces in the United States (including the cost of maintenance) was $127 billion in 2002 ($168 billion in 2015 dollars). The typical cost of a structured parking space ranges from $15,000 to $30,000 (USDOE, 2013). Nonetheless, 99 percent of car trips in the US end up in a free parking spot (Shoup, 2011). Bicycle parking is more efficient than vehicle parking in terms of both space and cost. Up to ten bicycles can fit in a parking space originally designed for a motor vehicle, and the cost per vehicle is 200 to 300 times lower as shown by the graphic below.

Improving active transportation connections to and from parking lots expands the range of destinations served by existing parking spaces. “Park once” trips—park in one place and then make stops on foot rather than driving—are more practical when destinations are connected with safe walking and cycling facilities. This not only reduces vehicle trips but also the amount of parking spaces required.

Without safe, convenient and visible bicycle parking, many potential cyclists may not be able to ride.

Bicycle parking is a cost-effective investment due to its low cost relative to automobile parking. Assuming that new bicycle parking will be highly utilized, converting vehicle parking to bicycle parking is a cheap, easy and effective way to relieve parking capacity issues. High utilization of bicycle parking occurs when the full suite of bicycle infrastructure - such as bikeways, end-of-trip facilities and supporting programs and policies - are in place.

The average estimated cost of parking per space is:



$75-$110 PER BIKE*

*in short-term bike racks

(NCHRP, 2006; expressed in 2013 dollars)

vs.

$15K-30K PER CAR*

*in a parking garage structure

(USDOE, 2013)

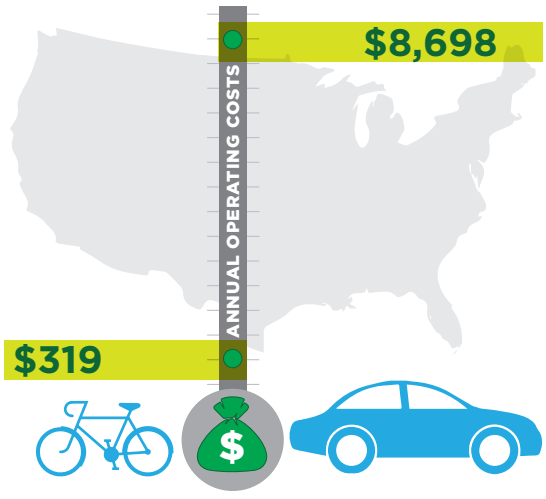
02 Economic Benefits

Affordability

Active transportation is the most affordable means of transportation available to Los Angeles County residents. Even with fluctuating fuel prices, households still devote high percentages of their total budget to transportation costs. Replacing vehicle trips with bicycling offers immediate financial benefit for households.

Moderate-income residents in the Los Angeles metropolitan area spend 27 percent of their income, on average, on transportation costs. In comparison to the other top 5 populated metro areas in the United States, Los Angeles falls in the middle, with New York and Chicago spending less and Dallas and Houston spending more (Center For Housing Policy & CNT, 2012).

Metro Vancouver, Canada has been uniquely successful at improving conditions for people walking, riding bicycles and taking transit. The region achieved a 16.5 percent decline in total vehicle miles traveled (VMT) between 2007 and 2014, and an even larger per-capita VMT reduction of 26 percent, accounting for rapid population growth (Litman, 2015). As a result, "Vancouver region households devote just 12.4 percent of their household budgets to transportation, the least of any North American city for which data are available, and 3.4 percentage points less than the average of other cities. This provides $2,623 average annual savings per household (Litman, 2015). Reductions in travel costs enable residents to save money and invest these additional funds in income-generating investments, rather than spending money on gasoline and maintenance.



(Mohn 2012, expressed in 2015 dollars; AAA Newsroom, 2015)

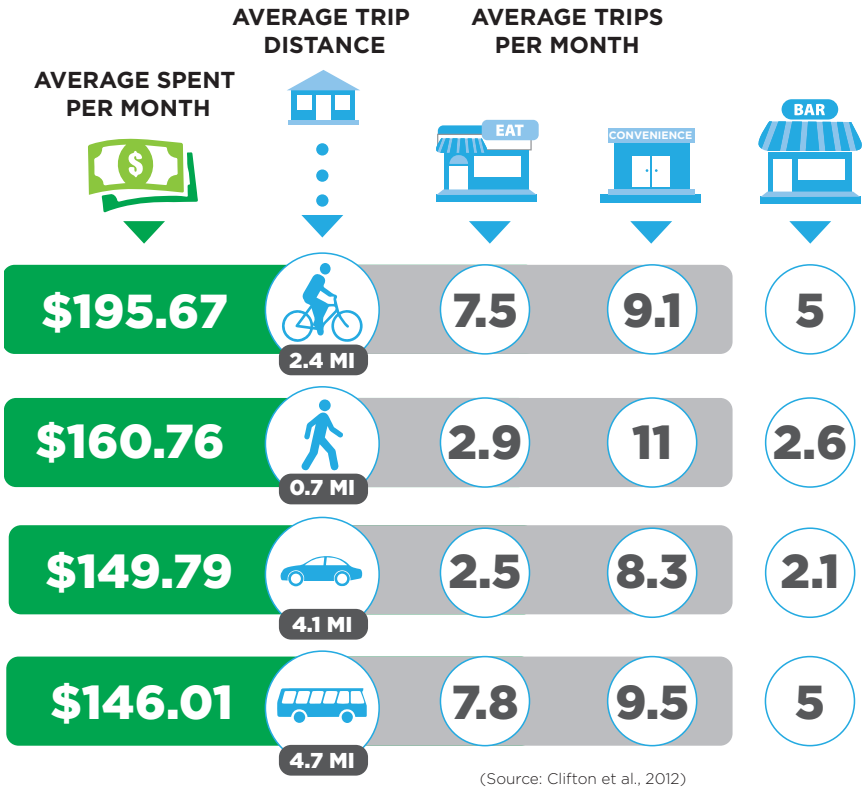
The annual operating costs for owning a vehicle as opposed to a bicycle are significantly higher.

Local Economic Impacts

At first glance, it may seem that people who walk and bicycle to reach local businesses spend less money compared to those driving a car. Yet people who arrive by walking and bicycling actually spend more.

A Portland State University research team conducted a study (Clifton et al., 2012) that surveyed 1,884 people as they left convenience stores, restaurants, and bars at 78 establishments in the Portland metropolitan area. The results showed that, per trip, people who drove outspent people walking, bicycling and taking transit. However, over time, people walking and riding bicycles spent more than people driving because they made more frequent trips. People taking transit also made more regular shopping trips than people driving and spent about the same amount per month (**see graphic on next page**). "It's not just a phenomenon born of the need to carry things," Clifton says, "A community that invests in walking and bicycling facilitates interaction between patrons and businesses, which, as a result, creates more regular customers."

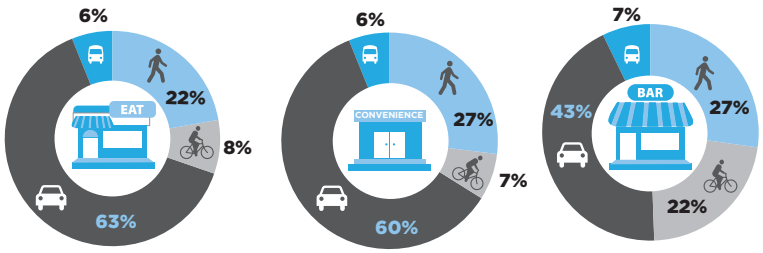
Nice Ride Minnesota is a bicycle sharing program that offers short-term bicycle rentals and subscriptions at 146 stations in Minneapolis and St. Paul. Researchers from the University of Minnesota conducted a survey near Nice Ride bicycle sharing stations in commercial areas and found that Nice Ride users spend $1.29 per week more than non-users. The researchers then extrapolated this amount to all bicycle share subscribers in the Twin Cities and estimated that the



(Source: Clifton et al., 2012)

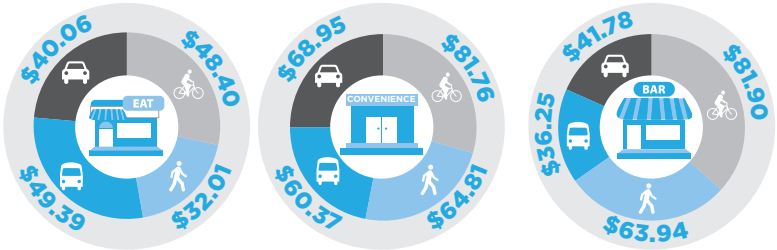
According to a Portland-based study, people who walk make more trips to convenience stores than all other modes of transportation, while people who ride transit and bicycles make the most trips to restaurants and bars.

AVERAGE PERCENT OF MODE SHARES BY ESTABLISHMENT TYPE



AVERAGE AMOUNT SPENT PER MONTH BY MODE AND ESTABLISHMENT TYPE

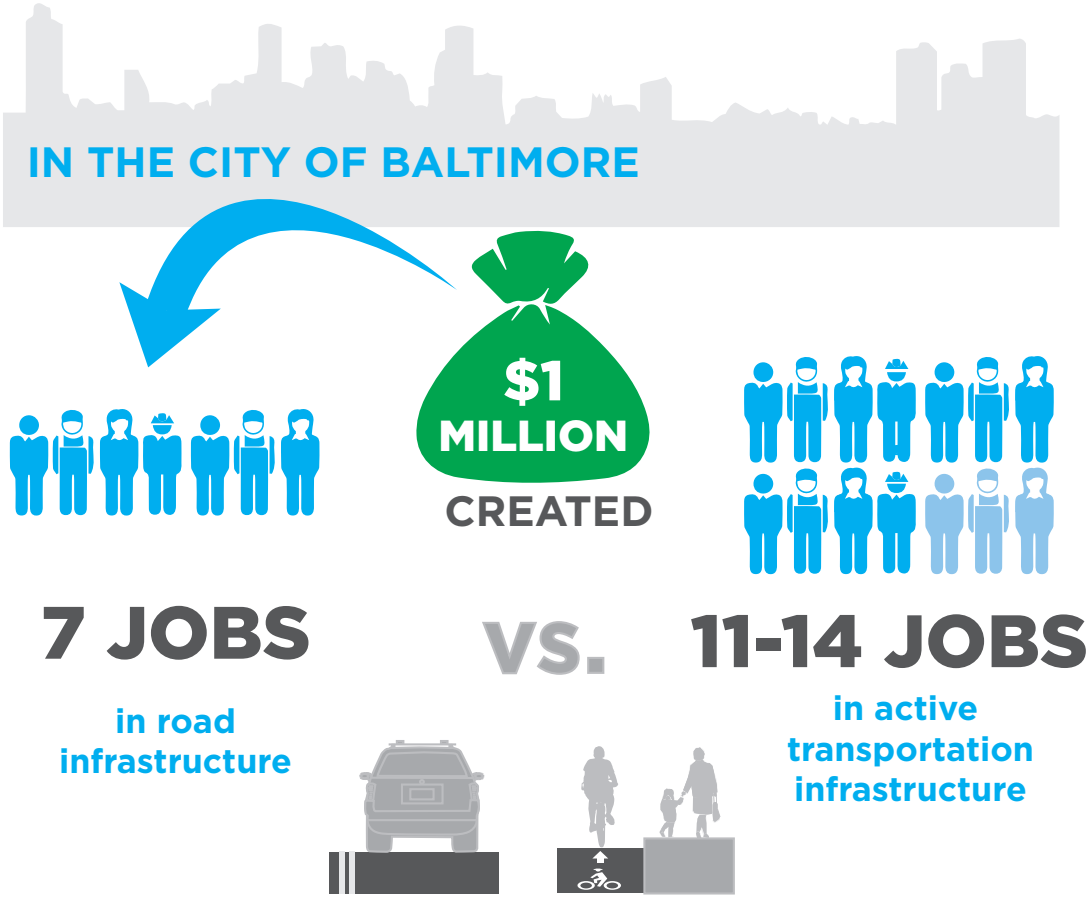
The survey found that people who ride transit spend more overall at restaurants than all other modes of transportation, while people who ride bicycles spend the most at convenience stores and bars.



(Source: Clifton et al., 2012)

system generates an additional $150,000 in retail spending during the bicycling season (Schoner, 2012).

Active transportation infrastructure thus has a direct economic impact on local economies through increased retail activity (sales and rentals) and tax revenues. It can also lead to direct job creation resulting from the design and construction of non-motorized infrastructure. In the City of Baltimore, every $1 million spent on bicycle and pedestrian infrastructure projects created 11 to 14 jobs, compared to only 7 jobs for each $1 million in roadway infrastructure (Garrett-Peltier, 2010). This estimate includes direct jobs (engineering and construction), indirect jobs (related to engineering and construction) and induced effects (impacts on other industries, such as retail).



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New York City is a leader in creating people-friendly improvements, such as protected bicycle lanes and pedestrian plazas, in dense urban environments. Their protected bicycle lanes are installed along some of the busiest streets in the country. NYCDOT's "Measuring the Street" report (2012) illustrates the impact of active transportation improvements on the local economy. Following the installation of protected bicycle lanes on 8th and 9th Avenues in Manhattan, retail sales increased by 49 percent at local businesses (compared to a 3 percent increase borough-wide).

Meanwhile, the installation of dedicated bus and bicycle lanes on 1st and 2nd Avenues contributed to a reduction in commercial vacancies of 47 percent (compared to a 2 percent increase borough-wide). Creating a large pedestrian plaza and installing protected bicycle lanes around Union Square North resulted in a similar 49 percent decrease in commercial vacancies (compared to a 5 percent increase borough-wide).

Washington, DC's Barracks Row, a three-quarter mile strip, was experiencing a steady decline of commercial activity due to uninviting sidewalks, lack of streetlights and speeding traffic. After a $9 million investment that included new patterned sidewalks, more efficient public parking, and new traffic signals, Barracks Row attracted 40 new businesses and 200 new jobs. Economic activity on Barracks Row (measured by sales,

Before and after images of the 1st Avenue lane re-configuration in New York City (NYCDOT, 2015).

Before

After

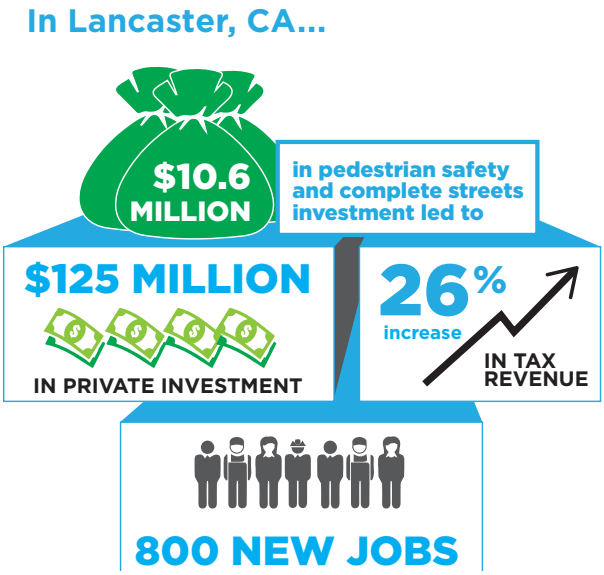
Before and after of Barracks Row street improvements in Washington DC (Town of Mansfield, 2014).

employees, and number of pedestrians) has more than tripled since implementation of the project (Town of Mansfield, 2014).

The San Francisco Department of Parking and Traffic implemented a roadway improvement project on Valencia Street that included bicycle lanes and traffic calming. A survey of 122 merchants and neighborhood associations on Valencia Street (including bicycle shops, book stores, grocery stores and other retail establishments) found that a majority (65 percent) of merchants believed the project brought benefits to the neighborhood. When asked if they would support additional traffic calming measures on Valencia Street, 65 percent responded "Yes."

In Mountain View, California, the addition of space for sidewalk cafes and a pedestrian-friendly street re-design were followed by $150 million in private investment, including residential, retail, and offices, resulting in a vibrant downtown destination (Smart Growth America, 2013).

As part of The BLVD, a downtown revitalization effort, Lancaster, CA re-designed its main street, Lancaster Boulevard. The re-design included a road diet, a pedestrian-only plaza, wider sidewalks and landscaping. After a $10.6 million public investment, the project helped attract nearly $125 million in private investment, resulting in a 26 percent increase in sales tax revenue and 800 new jobs (Smart Growth America, 2013). The project was awarded a 2012 National Award for Smart Growth Achievement in the category of "Overall Excellence" (USEPA, 2015).



(Source: Smart Growth America, 2013)

The City of Lancaster is an example of how the addition of pedestrian safety features to downtown can have positive economic impacts.

Before

During Construction

After

Before, in progress, and after images of downtown revitalization with added pedestrian safety features in Lancaster, CA (City of Lancaster, 2015).

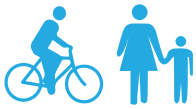
Regional Economic Impacts

The traffic analysis software company INRIX found that Americans wasted $124 billion sitting in traffic in 2013, costing families an average of $1,700 per year in wasted time (opportunity cost). Los Angeles County accounted for nearly 20 percent of the total opportunity cost of congestion nationwide, at $23.2 billion annually. This figure is forecasted to grow to $38.4 billion by 2030 (INRIX, 2014). Travelers in the greater Los Angeles area spend an average of 80 hours per year in traffic according to the most recent Urban Mobility Scorecard (Texas A&M Transportation Institute, 2015).

A study of regional transportation spending in Portland, OR found that varying levels of investment are required to attract a "new rider" to different transportation modes. The study looked at a twenty-year period between 1990 and 2009, and found that walking and bicycling investments were three times more cost-effective in terms of mode shift potential than motor vehicle investments (Anderson, 2011).

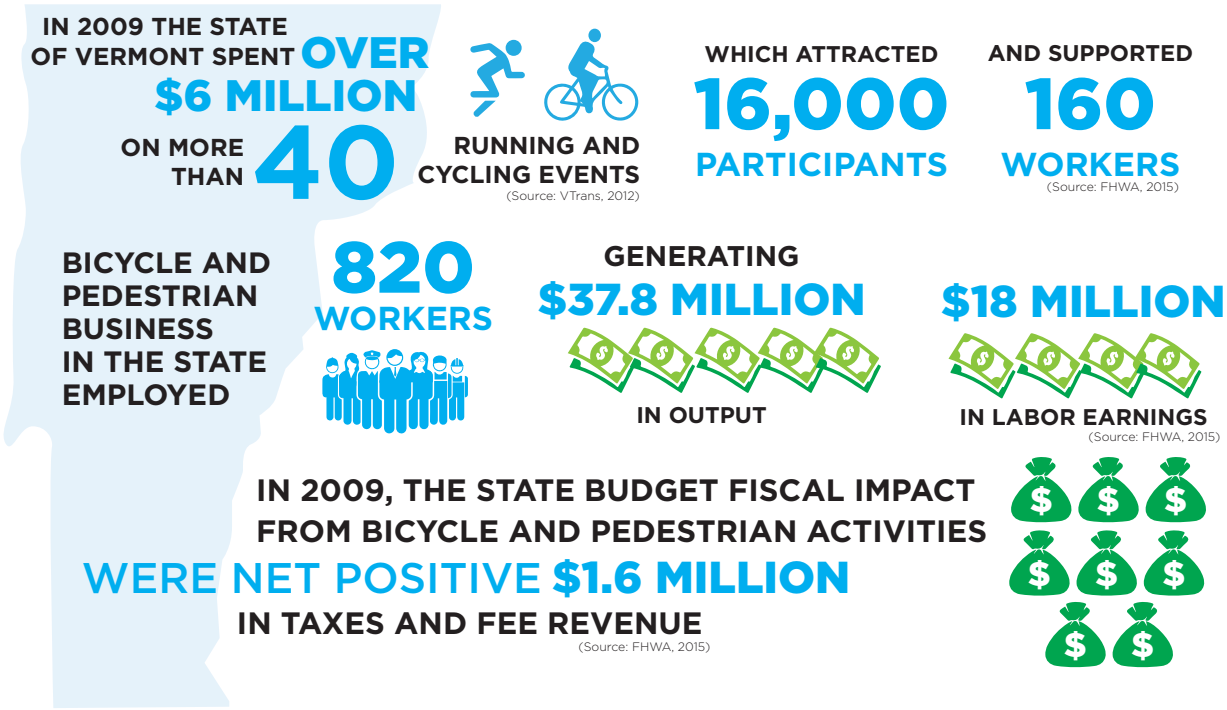
THE AVERAGE INVESTMENT REQUIRED TO SHIFT ONE TRAVELER TO A NEW MODE:

$5,538
for a new pedestrian or bicycle traveler



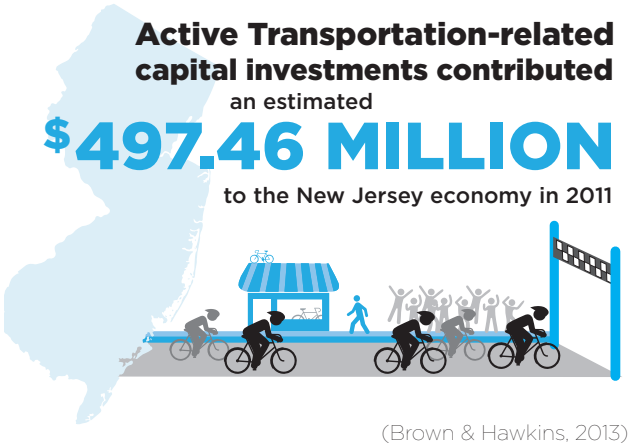
$18,072
for a new motor vehicle traveler

According to a 20-year assessment of investment and mode shift patterns in the Portland, OR region.
(Anderson, 2011)



The State of Vermont's 2009 State Budget Fiscal Impact Report is a great example of how supporting events that promote active transportation can result in economic gains through tax and fee revenue and labor earnings (VTrans, 2012).

In 2012, the Vermont Agency of Transportation conducted a study called Economic Impact of Bicycling in Vermont (VTrans, 2012). The analysis team looked at one year of "direct, indirect, and induced economic activity attributed to bicycling and walking." The net fiscal impact from active transportation investment was found to be $1.6 million.



(Brown & Hawkins, 2013)

The State of New Jersey - with a population and GDP similar to Los Angeles County, spread out over roughly twice the land area - has also enjoyed the economic benefits of investing in bicycling and walking-related infrastructure and improvements. A study conducted in 2012 by the Alan M. Voorhees Transportation Center analyzed active transportation–related capital investments, businesses and events (e.g. sidewalks, bicycle shops and bicycle races) to estimate economic activity generated and jobs supported. The findings were startling: "In total, active transportation–related infrastructure, businesses, and events were estimated to have contributed $497.46 million to the New Jersey economy in 2011," a return that was nearly eight times the estimated amount invested in active transportation infrastructure that year. The $497.46 million supported over 4,000 jobs in New Jersey and $153 million in wages. It generated approximately $49 million in total tax revenue and added approximately $278 million to state GDP (Brown and Hawkins, 2013).

Employee Recruitment and Retention

Major corporations, such as Amazon, Facebook, Google, and Walmart, have recognized the benefits of active transportation and are making investments in partnership with cities across the United States. The following examples illustrate how leading corporations are actively planning and funding innovative bicycle and pedestrian infrastructure and accommodations as a means to gain competitive advantage and improve quality of life for employees.

In Seattle, Amazon contributed $250,000 to investigate planning and design options for the construction of a two-block protected bicycle lane and bicycle corrals along its office towers on 7th Avenue. The retail giant also pledged to fund two blocks of protected bicycle lanes on the same street (Bhatt, 2013).

Facebook, a major employer in Menlo Park, CA, has a goal to have half of their workforce get to or from work using means other than their personal vehicles. Employees are encouraged to bicycle to work and are supported by multiple bicycle amenities on campus. Facebook integrates bicycling into corporate life by providing a fleet of company bicycles to get around campus, secure bicycle parking, interior and exterior bicycle racks, secure bicycle shelters and support for improving regional bikeway networks. Thanks to these improvements, Facebook is one of only five institutions in California to achieve a Platinum Level Bike Friendly Business designation from the League of American Bicyclists. With upwards of 5,000 employees, Facebook is the largest private employer in the United States to receive this distinction (LAB, 2015).

Google has committed to encourage walking and bicycling in an effort to reduce single-occupancy vehicle trips to and from their Santa Clara County campus. The company offers amenities to encourage employees to bicycle to work. The campus has a fleet of over 1,000 employee bicycles, bicycle storage on its shuttle bus fleet, bicycle parking inside buildings, and helmets at each building entrance and exit. Moreover, most buildings on campus are equipped with showers, lockers and changing rooms. Google's 2015 Vision Plan seeks to connect the campus to the rest of the region, creating a network of 277 connected miles of bikeways (Google, 2015).

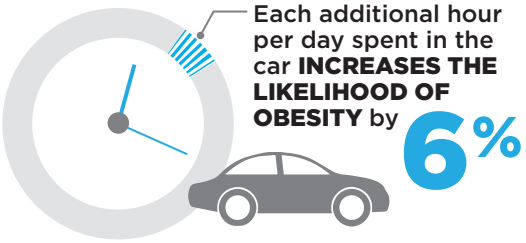
Google also provides a large-scale fleet of shuttle buses for its employees living more than ten miles away. These employee shuttles serve an average of 6,400 round-trips per day (Google Green, 2015). According to a survey of Silicon Valley shuttle riders, 48 percent would choose to drive alone if corporate shuttle services were discontinued (Dai and Weinzimmer, 2014).

In an effort to recruit talented young employees, the Walton Family Foundation has made substantial investments in its hometown of Bentonville, Arkansas and the surrounding Northwest Arkansas (NWA) area. Since 2000, it has invested more than $50 million into the NWA trail system, including $18 million for the iconic Razorback Regional Greenway - nearly half the total cost of the project. A 2015 count of NWA trail users found very high usage - around 11 people walking and bicycling per 100,000 population. This activity level is comparable to the busiest trails in Minneapolis, Portland, San Francisco and San Diego (Bowden, 2015).

03 Health Benefits

Regular aerobic activity (i.e. 30 minutes per day, 5 days per week) improves health by lowering the risk of heart attack and stroke (AHA, 2015). Active transportation increases opportunities to meet this minimum threshold of aerobic activity through regular daily travel.

Los Angeles health outcomes - such as premature death, poor or fair health, etc. - compare unfavorably against other California counties with large populations (over 1 million people) such as Orange and San Diego Counties (County Health Rankings, 2015). Many of the factors contributing to LA County's low health outcomes are related to physical environment, such as air quality, access to recreation and exercise opportunities, long commutes and a high percentage of residents that drive alone. All of these factors can be improved with active transportation investment.



(SCAG, 2012)

35%
OF AMERICAN ADULTS **DO NOT ACHIEVE THE RECOMMENDED**
150 MINUTES
OF WEEKLY PHYSICAL ACTIVITY PER WEEK

(CDC, 2015)

of Los Angeles County residents **ARE OBESE**
and **30%** of low income residents **ARE OBESE**

(County Health Rankings, 2015)

CARDIOVASCULAR DISEASE is ranked **#1** for the **CAUSE OF DEATH** in the U.S.

with **2,600 DEATHS EVERY DAY**

costing **$300 BILLION** in health expenditures

DIABETES RANKS 7th

Both can be improved through PHYSICAL ACTIVITY

(USDHHS, 2010 | CDC, 2015)

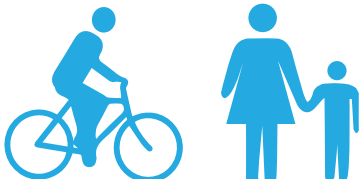
Close to **1 in 4** Children in Los Angeles County are **OBESE**

(County of LA Public Health, 2011)

The average benefit-cost ratio is

13:1

for active transportation investment



Several studies have estimated the benefits of walking and bicycling improvements to be significant - on average 13:1. This average is even higher in the UK, at 19:1 (Davis, 2010).

Active transportation infrastructure improvements have the ability to reduce health care costs by reducing the prevalence of obesity and associated health conditions. It has been found that, with significant investment in bicycle facilities in the range of $138 to $605 million, the benefit-cost ratios for health care and fuel savings alone are in the range of 1.2:1 to 3.8:1 (Gotschi, 2011).

Enabling people to ride bicycles to work can also improve the health of the workforce. Studies in the Netherlands and the United Kingdom have found that people who regularly bicycle to work take fewer sick days than average - 1.3 and 2.1 fewer sick days, respectively - per year (Hendriksen et al., 2010; Sustrans, 2013).

CYCLING TO WORK

RESULTS IN

1.3 FEWER SICK DAYS ANNUALLY IN THE NETHERLANDS

AND 2.1 FEWER SICK DAYS ANNUALLY IN THE UK

Commuting to work via bicycle instead of by motor vehicle can result in fewer sick days

(Hendriksen et al., 2010 | Sustrans, 2013)

04 Environmental Benefits

Cars and trucks pollute the air during vehicle operation, manufacturing, and disposal and these major pollutants—such as particulate matter and greenhouse gases—have detrimental effects on the environment and our lungs (Shapiro, 2002). The transportation sector is a significant source of air and water pollution in Los Angeles County and accounts for 37 percent of greenhouse gas (GHG) emissions (CARB, 2014). The annual report released in 2014 by the American Lung Association placed the Los Angeles Basin and California's Central Valley as the areas with the nation's highest levels of ozone and fine particle pollution. Los Angeles topped the list of cities with the worst smog in the nation, violating federal health standards for ozone an average of 122 days per year.

Reducing vehicle miles traveled (VMT) in fossil fuel-burning vehicles is a pillar of efforts to reduce airborne pollutants and GHGs. Active transportation plays a role in reducing VMTs by offering a transportation alternative that enables people to leave their cars at home.

Active transportation is already being used in this capacity as a strategy to improve air quality in Los Angeles County. The Mobile Source Air Pollution Reduction Review Committee (MSRC)'s 2015 Clean Transportation Funding program offers to co-fund clean air projects to support cities' and counties' air quality improvement needs. The only transportation projects that qualify for funding are active transportation projects, since these modes can contribute significantly to offsetting motor vehicle trips and produce zero direct greenhouse gas emissions.

"In 2013, transportation contributed more than half of the carbon monoxide and nitrogen oxides and almost a quarter of the hydrocarbons emitted into our air"

(Union of Concerned Scientists, 2013).

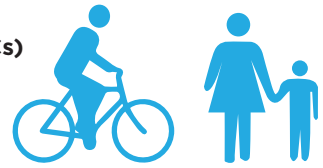
Adding sidewalks to all roadways can result in a VMT reduction of 1.14 miles per person-day. Even small gains in an area's level of walk-and bicycle-friendliness can result in environmental benefits. For instance, a study evaluated the association between a single index of walkability (that incorporated land use mix, street connectivity, net residential density, and retail floor area ratios) and greenhouse gas emissions. It found that increasing a neighborhood's walkability by five percent can result in a 32 percent increase in active travel and a 6.5 percent reduction in VMT (Frank et al., 2006).

The addition of sidewalks and safer crossings can create a more pedestrian friendly environment, motivating more people to walk instead of using vehicles and reducing VMTs.

INCREASING A NEIGHBORHOOD'S WALKABILITY BY 5% CAN RESULT IN:

5.5% fewer grams
of volatile organic compounds (VOCs)

5.6% fewer grams
of Nitrogen oxide (NO_x)



32.1% **per capita increase in active travel by foot or bicycle results in**

- **0.23-point reduction** **in body mass index**
- **6.5%** **fewer VMT**

(Frank, et al., 2006)

Constructing multi-use paths provides non-motorized alternatives and improves access to recreational opportunities and nature.

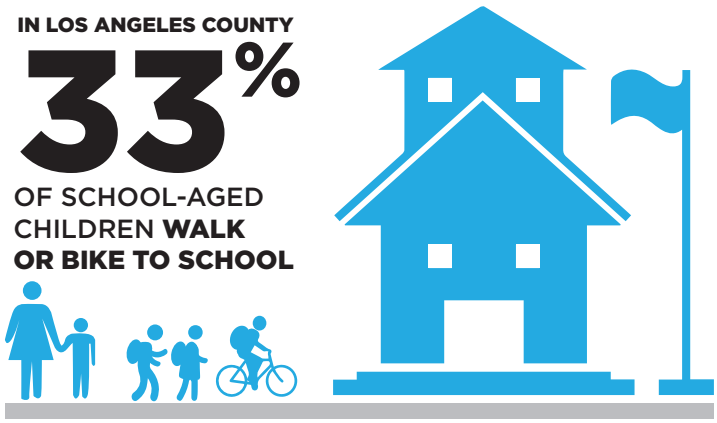
05 Safety Benefits

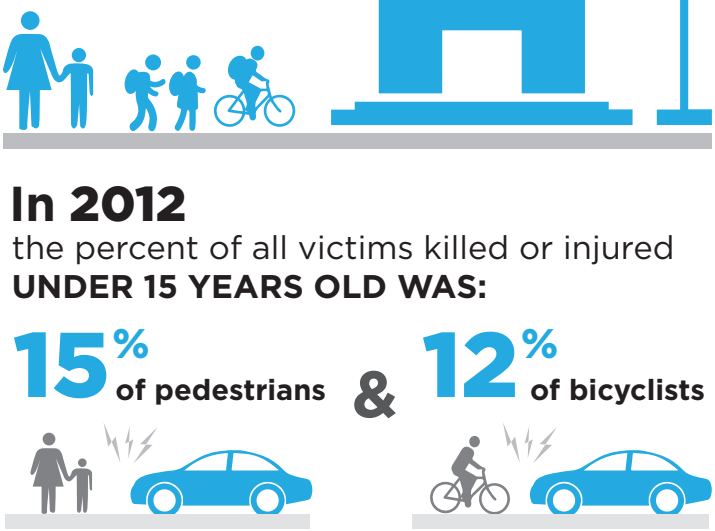
People walking and riding bicycles account for a disproportionate number of fatalities on the streets of Los Angeles County. These modes represent 19 percent of all trips but 40 percent of all traffic fatalities (McGuckin, 2012; TIMS, 2009-2013).

Safety in Numbers

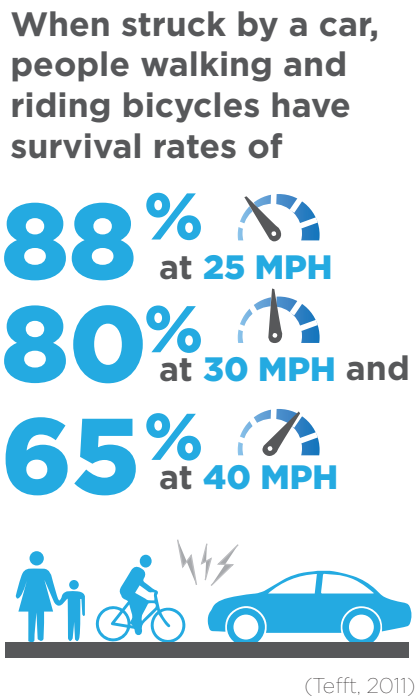
Improved safety for all road users may result when the number of people riding bicycles reaches a critical threshold. Between 1987 and 2000, the number of people who rode bicycles to work increased by 50 percent in the province of Quebec, Canada, yet bicycling fatalities decreased by 42 percent and serious injuries fell by 56 percent (Pucher and Buehler, 2005). In other words, the number of injuries and fatalities did not scale up as the number of bicycle trips increased. These long-term statistics support the "safety in numbers" principle, which holds that walking and bicycling becomes statistically less dangerous when more people walk and ride bicycles (Jacobsen, 2003). This principle is supported by a variety of research, including a study that found an inverse association between bicycle mode share and bicycle fatality risk across nine of North America's leading bicycling cities (Pucher et al., 2011a). These results show that bicycling infrastructure could lead to not only an increase in active transportation usage but also improved safety.

Safety is an area of particular concern for school trips. There has been a dramatic decrease in children walking and riding bicycles to school in the past 30 to 50 years. In 1969, 48 percent of children aged 5 to 14 years old walked or bicycled to school in LA County, compared to just 13 percent in 2009 (NCSRTS, 2015). However, changing a city's





(McGuckin, 2013 | California OTS, 2012)



(Tefft, 2011)

approach to street design and implementing Safe Routes to School Programs can result in behavior and attitude changes. Nationwide, the percentage of parents agreeing that their children's schools supported active transportation increased from 25 to 33 percent between 2007 and 2012 (NCSRTS, 2013). During this time period, the number of students walking and riding bicycles to and from school increased by 2.9 percentage points (to 17.9 percent of trips) and 3.5 percentage points (to 21.9 percent of trips), respectively.

The financial loss for each person killed in a traffic collision is $4,628,000 (NSC, 2015). Between 2009 and 2013, an average of 196 pedestrians and 28 bicyclists were killed in collisions with motor vehicles in Los Angeles County each year (TIMS, 2009-2013). Using these figures, the financial loss due to active transportation fatalities was more than $1 billion per year - a figure that does not include the emotional cost to the families and friends of these victims.

The estimated costs include "wage and productivity losses, medical expenses, administrative expenses, motor vehicle damage, and employers' uninsured costs." The calculations also include "a measure of the value of lost quality of life which was obtained through empirical studies of what people actually pay to reduce their safety and health risks" (NSC, 2015).

Between 2009 and 2013 an average of

4,480 BICYCLISTS AND **4,904** PEDESTRIANS

WERE INJURED IN COLLISIONS WITH MOTOR VEHICLES PER YEAR

AND IN THE COUNTY ACTIVE TRANSPORTATION ACCOUNTS FOR

19% OF ALL TRIPS BUT **40%** OF TRAFFIC FATALITIES

(FHWA, 2009 | TIMS, 2009-2013)

The estimated cost of each person killed in a traffic crash is

$4,628,000

196 pedestrians killed per year totaling over **$908 MILLION**

AND

28 bicyclists killed per year totaling over **$131 MILLION**

result in an estimated average cost of

$1,040,374,000

ANNUALLY IN FATALITIES

The estimated costs include "wage and productivity losses, medical expenses, administrative expenses, motor vehicle damage, and employers' uninsured costs." The calculations also include "a measure of the value of lost quality of life which was obtained through empirical studies of what people actually pay to reduce their safety and health risks" (NSC, 2015).

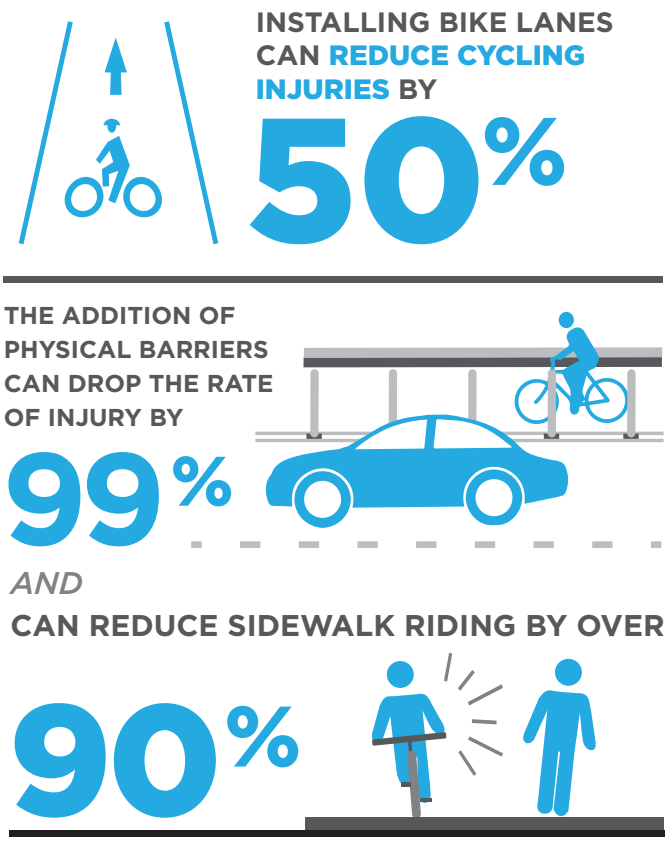
The Metro Active Transportation Strategic Plan addresses safety concerns through physical and programmatic improvements, mirroring the region's commitment to its citizens by valuing quality of life, comfort and safety for all street users.

Safety Benefits of Infrastructure Improvements

In New York City, a road diet was implemented on Prospect Park West. These designs included a reduction in general purpose travel lanes from three to two, the addition of a two-way protected bicycle lane, as well as updated signage and signals. Along with a near-tripling in the number of people riding bicycles (up 190 percent), the percentage of people riding bicycles on the sidewalk fell from 46 percent of bicycle riders to 3 percent - a decrease of over 90 percent (NYCDOT, 2012). This represented a significant safety improvement for people walking and riding bicycles. The latter are 1.8 times more likely to experience an injury while riding on the sidewalk than on the roadway (Wachtel and Lewiston, 1994).

Complete streets tend to reduce the number and severity of traffic collisions. Studies show that slower motor vehicle speeds exponentially increase collision survival rates for people walking and riding bicycles.

Results from the Highway Safety Information System (FHWA, 2010) indicate that road diets are effective at reducing collisions for all road users in a variety of urban contexts. On state highways in Iowa, collision rates have been found to decrease by 47 percent following road diet implementation. In suburban corridors of larger cities (sampled from cities including Oakland, San Francisco, Sacramento, Mountain View, San Leandro and Sunnydale, California) such improvements have reduced collisions by 19 percent.



A study conducted by the University of British Columbia that compared cycling injuries on 14 route types found that bicycle lanes reduce injuries substantially, while protected bicycle lanes can nearly eliminate injuries (Teschke et al., 2012). Moreover, constructing protected bike lanes has been shown to decrease sidewalk riding, creating a safer pedestrian environment (NYCDOT, 2011).

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APPENDIX

B LOCAL JURISDICTIONS: RELATED PLANS & POLICIES

DRAFT

Jurisdiction	Adoption Year	Plan	Comment
Agoura Hills	2010	City of Agoura Hills General Plan Update	Complete Streets policy within Mobility Element
Agoura Hills	2015	Las Virgenes-Malibu Council of	Plan covers all LVMCOG member cities
Alhambra	DRAFT	Alhambra Bicycle	
Arcadia	2010	Arcadia General Plan	Complete Streets policy within Circulation &
Artesia	2010	Artesia General Plan 2030	Complete Streets policy within Sustainability
Artesia	2011	Artesia Boulevard Corridor Specific Plan	
Artesia	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Avalon	2013	City of Avalon 2030 General Plan/ Local	Complete Streets policy within Circulation
Avalon	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Azusa	2011	Azusa Complete Streets	
Baldwin Park	2011	Baldwin Park Complete	
Baldwin Park	2014	San Gabriel Valley Regional Bicycle Master Plan	Plan covers 5 San Gabriel Valley Cities: Monterey Park, San
Bell	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Bell Gardens	DRAFT	Gateway Council of Governments Strategic	Plan covers all Gateway cities
Bellflower	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Bellflower	IN PROGRESS	Bellflower-Paramount	
Bradbury	DRAFT	City of Bradbury General Plan 2012-2030	Complete Streets policy within Circulation
Burbank	2009	City of Burbank Bicycle	
Burbank	2013	Burbank 2035 General Plan	Complete Streets policy within Mobility Element
Calabasas	2007	Calabasas Trails Master	
Calabasas	2013	Calabasas Bicycle	
Calabasas	2015	Las Virgenes-Malibu Council of	Plan covers all LVMCOG member cities
Calabasas	DRAFT	Calabasas Pedestrian	
Carson	2006	Carson Street Mixed-Use District Master Plan	Promotes active transportation through
Carson	2013	Carson Master Plan of	
Carson	2014	Carson Safe Routes to	
Cerritos	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Claremont	2007	Claremont Bicycle Plan	

Jurisdiction	Adoption Year	Plan	Comment
Commerce	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Compton	2015	City of Compton Bicycle	
Compton	DRAFT	Compton General Plan 2030	Complete Streets policy within Circulation
Compton	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Covina	2011	City of Covina Bicycle	
Cudahy	2015	Cudahy Safe Routes to	
Cudahy	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Culver City	2010	Culver City Bicycle and	
Culver City	2010	Culver City Safe Routes	
Downey	2010	City of Downey Downtown Specific Plan	Promotes active transportation through
Downey	2015	City of Downey Bicycle	
Downey	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
El Monte	2011	City of El Monte General Plan	Complete Streets policy within Circulation
El Monte	2014	San Gabriel Valley Regional Bicycle Master Plan	Plan covers 5 San Gabriel Valley Cities: Monterey Park, San
El Segundo	2000	El Segundo Downtown Specific Plan	Promotes active transportation through
El Segundo	2011	South Bay Bicycle Master Plan	Plan covers 7 South Bay Cities: El Segundo, Gardena, Hermosa Beach, Lawndale,
Gardena	2011	South Bay Bicycle Master Plan	Plan covers 7 South Bay Cities: El Segundo, Gardena, Hermosa Beach, Lawndale,
Glendale	2011	Glendale Downtown	
Glendale	2011	Glendale Safe & Healthy Streets Plan	Recommends the creation/adoption of a
Glendale	2012	City of Glendale Bicycle	
Hawaiian Gardens	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Hermosa Beach	2011	Beach Cities Livability Plan	Plan covers Hermosa Beach, Manhanttan Beach, and Redondo Beach; promotes active

Jurisdiction	Adoption Year	Plan	Comment
Hermosa Beach	2011	South Bay Bicycle Master Plan	Plan covers 7 South Bay Cities: El Segundo, Gardena, Hermosa Beach, Lawndale,
Hermosa Beach	2012	Living Streets Policy	Plan contains Complete Streets and active
Hidden Hills	2015	Las Virgenes-Malibu Council of	Plan covers all LVMCOG member cities
Huntington Park	2008	Downtown Huntington Park Specific Plan	Promotes active transportation through
Huntington Park	2012	City of Huntington Park	
Huntington Park	2012	Middleton Elementary School and Middle	
Huntington Park	2014	City of Huntington Park Bicycle Transportation	
Huntington Park	DRAFT	Gateway Cities Cities Council of	Plan covers all Gateway cities
Industry	2014	Industry General Plan	Complete Streets policy within Circulation
Inglewood	2009	Hollywood Park Specific Plan	Promotes active transportation through
Inglewood	IN PROGRESS	City of Inglewood	
La Canada Flintridge	2013	City of La Canada Flintridge General Plan	Complete Streets policy within Circulation
La Habra Heights	2014	City of La Habra General Plan 2035	Complete Streets policy within Circulation
La Habra Heights	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
La Mirada	2012	Imperial Highway Specific Plan	Promotes active transportation through
La Mirada	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Lakewood	DRAFT	Gateway Council of Governments Strategic	Plan covers all Gateway cities
Lancaster	2008	Downtown Lancaster Specific Plan	Promotes active transportation through
Lancaster	2012	City of Lancaster	
Lawndale	2009	Lawndale Safe Routes	
Lawndale	2011	South Bay Bicycle Master Plan	Plan covers 7 South Bay Cities: El Segundo, Gardena, Hermosa Beach, Lawndale,
Long Beach	2001	Long Beach Bicycle	
Long Beach	2011	Long Beach Safe Routes	

Jurisdiction	Adoption Year	Plan	Comment
Long Beach	2013	Long Beach General Plan 2035	Complete Streets policy within Mobility Element. Provides a foundation for updating the Bicycle Master Plan, but the Bicycle Master
Long Beach	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Long Beach	IN PROGRESS	Healthy Active Long	
Los Angeles City	2011	2010 Bicycle Plan	
Los Angeles City	2014	Street Design Manual	Part of the City of Los Angeles Mobility Element. Has Complete
Los Angeles City	2016	Mobility Plan 2035	Complete Streets policy
Los Angeles County	2012	Bicycle Master Plan	
Los Angeles County	2015	Los Angeles County General Plan	Complete Streets policy within Mobility Element
Lynwood	2013	Lynwood Bicycle and	
Lynwood	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Lynwood	IN PROGRESS	Lynwood Transit Area Strategic Plan	Promotes active transportation through
Malibu	2015	Las Virgenes-Malibu Council of	Plan covers all LVMCOG member cities
Manhattan Beach	2011	Beach Cities Livability Plan	Plan covers Hermosa Beach, Manhanttan Beach, and Redondo Beach. Promotes active
Manhattan Beach	2011	South Bay Bicycle Master Plan	Plan covers 7 South Bay Cities: El Segundo, Gardena, Hermosa Beach, Lawndale,
Manhattan Beach	DRAFT	Manhattan Beach	Complete Streets policy
Maywood	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Montebello	DRAFT	Gateway Council of Governments Strategic	Plan covers all Gateway cities
Monterey Park	2014	San Gabriel Valley Regional Bicycle Master Plan	Plan covers 5 San Gabriel Valley Cities: Monterey Park, San
Norwalk	DRAFT	Gateway Council of Governments Strategic	Plan covers all Gateway cities
Palmdale	IN PROGRESS	Active Transportation	
Paramount	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities

Jurisdiction	Adoption Year	Plan	Comment
Paramount	IN PROGRESS	Bellflower-Paramount	
Pasadena	2006	Pasadena Pedestrian	
Pasadena	2015	Bicycle Transportation	
Pasadena	2015	Pasadena General Plan Update	Complete Streets policy within Mobility Element
Pico Rivera	2014	City of Pico Rivera General Plan	Complete Streets policy within Circulation
Pico Rivera	2014	Pico Rivera Safe Routes	
Pico Rivera	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Pomona	2012	Active Transportation Plan: Bicycle Master	
Pomona	2012	City of Pomona Green Plan	Sustainability plan with Complete Streets
Pomona	2012	Pedestrian Design	
Pomona	2014	City of Pomona General Plan Update	Complete Streets policy within Mobility &
Ranchos Palos Verdes	1993	Conceptual Trails Plan	Contains the Conceptual Bikeways
Ranchos Palos Verdes	DRAFT	City of Ranchos Palos Verdes General Plan	Complete Streets policy within Circulation
Redondo Beach	2011	Beach Cities Livability Plan	Plan covers Hermosa Beach, Manhanttan Beach, and Redondo Beach. Promotes
Redondo Beach	2011	South Bay Bicycle Master Plan	Plan covers 7 South Bay Cities: El Segundo, Gardena, Hermosa Beach, Lawndale,
Rosemead	2012	City of Rosemead	
San Dimas	2011	City of San Dimas	
San Fernando	2013	San Fernando Safe	
San Gabriel	2004	San Gabriel Mission District Specific Plan	Promotes active transportation through
San Gabriel	2006	Valley Boulevard Neighborhoods	Promotes active transportation through
San Gabriel	2014	San Gabriel Valley Regional Bicycle Master Plan	Plan covers 5 San Gabriel Valley Cities: Monterey Park, San
Santa Clarita	2011	City of Santa Clarita General Plan	Complete Streets policy within Circulation
Santa Clarita	2014	City of Santa Clarita	
Santa Fe Springs	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
Santa Monica	2010	Santa Monica General Plan	Complete Streets policy within the Land Use

Jurisdiction	Adoption Year	Plan	Comment
Santa Monica	2011	Santa Monica Bike	
Santa Monica	2012	Santa Monica Safe	
Santa Monica	DRAFT	Santa Monica	
Sierra Madre	2015	2015 General Plan	Complete Streets policy within Circulation
Signal Hill	2009	City of Signal Hill General Plan	Complete Streets policy within Circulation
Signal Hill	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
South El Monte	2014	San Gabriel Valley Regional Bicycle Master Plan	Plan covers 5 San Gabriel Valley Cities: Monterey Park, San
South Gate	2009	South Gate General Plan 2035	Complete Streets policy within Mobility Element
South Gate	2012	South Gate Bicycle	
South Gate	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
South Pasadena	2011	City of South Pasadena	
Temple City	2011	City of Temple City	
Torrance	2011	South Bay Bicycle Master Plan	Plan covers 7 South Bay Cities: El Segundo, Gardena, Hermosa Beach, Lawndale,
Vernon	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities
West Covina	DRAFT	West Covina General Plan	Complete Streets policy within Circulation
West Hollywood	2003	Bicycle and Pedestrian	
West Hollywood	2011	West Hollywood General Plan 2035	Complete Streets policy within Mobility Element
Westlake Village	2015	Citywide Bike Plan City	
Whittier	2012	Strategic Community Action Plan	Plan focuses on improving health and wellness; includes plans
Whittier	2013	City of Whittier Bicycle	
Whittier	DRAFT	Gateway Cities Council of Governments	Plan covers all Gateway cities

APPENDIX

C

STAKEHOLDER OUTREACH

DRAFT

Stakeholder Outreach

During the development of the Active Transportation Strategic Plan (ATSP or Plan), the project team engaged and solicited feedback from various Metro departments, as well as agency partners, including the Metro Technical Advisory Committee and its Subcommittees; sub-regional Councils of Governments (COGs); state, regional, and local governments; nonprofit and community groups; and other stakeholders. Outreach to inform the ATSP consisted of the formation of a project Technical Advisory Committee, presentations to various stakeholder groups, two rounds of ATSP Stakeholder Workshops throughout the county, an online survey, and social media activities. Metro staff presented at numerous meetings to engage stakeholders and seek input, as shown in Table 1.

Table 1. Stakeholder Outreach Meetings

MEETING DATE & TIME	ORGANIZATION
Thu, 4/2/2015, 9-11am	Active Transportation Strategic Plan Project Technical Advisory Committee (Meeting #1 Kick-off)
Thu, 6/15/2015, 12pm	San Gabriel Valley Council of Governments - Public Works Technical Advisory Committee
Tue, 6/16/2015, 9:30am	Metro Bus Operations Subcommittee
Thu, 6/18/2015, 9:30am	Metro Streets and Freeways Subcommittee
Mon, 6/25/2015, 12pm	San Gabriel Valley Council of Governments - Planners Technical Advisory Committee
Wed, 7/1/2015, 4pm	Gateway Cities Council of Governments - Transportation Committee
Tue, 7/7/2015, 9am-11am	Active Transportation Strategic Plan Project Technical Advisory Committee (Meeting #2)
Wed, 7/8/2015, 8am	Gateway Cities Council of Governments - Planning Directors
Tue, 8/4/2015, 4pm-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 1 (San Gabriel Valley & Surrounding Area)
Tue, 8/11/2015, 4-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 1 (Westside & Surrounding Area)
Wed, 8/12/2015, 4-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 1 (Central & Surrounding Area)
Thu, 8/13/2015, 4pm-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 1 (North County & Surrounding Area)
Mon, 8/17/2015, 4pm-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 1 (South Bay & Surrounding Area)
Wed, 8/19/2015, 12pm	South Bay Cities Council of Governments - Infrastructure Working Group
Mon, 8/24/2015, 4pm-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 1 (Gateway Cities & Surrounding Area)
Wed, 8/26/2015, 4pm - 6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 1 (San Fernando Valley & Surrounding Area)
Thu, 9/10/2015, 4pm	San Gabriel Valley Council of Governments - Transportation Committee
Fri, 9/11/2015, 2pm	Natural Resources Defense Council
Wed, 9/16/2015, 2:30pm - 4:30pm	South Bay Cities Council of Governments - Livable Communities Working Group
Wed, 9/23/2015, 6pm-7:30pm	Metro Bicycle Roundtable
Wed, 10/7/2015, 9:30am	Metro Technical Advisory Committee
Wed, 10/7/2015, 6pm	Gateway Cities Council of Governments Board Meeting

MEETING DATE & TIME	ORGANIZATION
Wed, 10/14/2015, 10:30am	Metro Transportation Demand Management & Sustainability Subcommittee
Wed, 10/14/2015, 11am	Metro Ad Hoc Sustainability Committee
Thur, 10/15/2015, 9:30am	Metro Streets and Freeways Subcommittee
Tue, 10/20/2015, 9:30am	Metro Bus Operations Subcommittee
Thur, 10/29/2015, 2:30pm	Metro Local Transit Systems Subcommittee
Tue, 11/3/2015, 2pm-4pm	Active Transportation Strategic Plan Project Technical Advisory Committee (Meeting #3)
Wed, 11/18/2015, 4:30pm	City of Compton
Thu, 12/3/2015, 4-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 2 (North Hollywood)
Mon, 12/7/2015, 4-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 2 (Norwalk)
Tue, 12/8/2015. 4-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 2 (Torrance)
Wed, 12/9/2015, 4-6pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 2 (Baldwin Park)
Mon, 12/14/15, 9-11am	Active Transportation Strategic Plan Stakeholder Workshops – Round 2 (Los Angeles)
Tue, 12/15/2015, 5-7pm	Active Transportation Strategic Plan Stakeholder Workshops – Round 2 (Santa Clarita)
Tue, 1/5/2016, 10am	County of Los Angeles
Wed, 1/6/2016, 2:00pm	California High Speed Rail Project
Thu, 1/7/2016, 4pm	San Gabriel Valley Council of Governments
Wed, 1/20/2016, 2pm	Metro Planning & Programming Committee
Tue, 2/9/2016, 1pm	City of Los Angeles

Project Technical Advisory Committee

Metro formed a project Technical Advisory Committee, which consisted of internal Metro departments and external stakeholders. The purpose of the committee was to provide input and guidance on the development of the ATSP. Committee members were identified based on previous involvement in the development of Metro's First Last Mile Strategic Plan, their specific expertise, or because they represent an important perspective. Three committee meetings were held during the process of Plan development.

Active Transportation Strategic Plan Stakeholder Workshops

Metro hosted two rounds of stakeholder workshops to gather public input in order to develop a meaningful and effective plan. In the first round, seven stakeholder workshops were held throughout the County in August 2015. The goal of this round was to gather input on improving first and last mile access to transit, improvements to the regional network of walking and bicycling facilities, and opportunities for supporting local and regional partners to get these projects and programs implemented. Metro invited all sub-regional COGs to co-host these workshops and three accepted the offer, including Gateway Cities, San Gabriel Valley, and San Fernando Valley COGs. These workshops were attended by over 250 attendees in total and included representatives of local, regional, and state government agencies; elected offices; sub-regional councils of governments; nonprofit organizations; community groups; advocates; private firms; transit operators; transit riders; public health professionals; and other stakeholders.

In the second round, six stakeholder workshops were held throughout the County in December 2015. The goal of this round was to gather input on the proposed regional network of bicycle and multi-use path facilities, discuss strategies for first last mile improvements to key transit stops and stations, seek feedback on performance measures and discuss roadmap towards implementation of these projects and programs. Over 120 stakeholders attended in total. Figures 1-4 show invitation flyers and photos of the two rounds of stakeholder workshops.

Figure 1. Invitation flyers for Active Transportation Strategic Plan Stakeholder Workshops (Round 1), which included English and Spanish versions.

Active Transportation Strategic Plan
Open House Workshops

We want to hear from you! Metro is developing an Active Transportation Strategic Plan to identify needs, resources and strategies to improve and increase walking, bicycling and transit use in LA County, and your input will help create a meaningful, effective plan.

The workshops will

- Gather input on improving first and last mile access to transit and improvements to the regional network of walking and bicycling facilities, including shared-use paths and on-street bikeways
- Explore opportunities for supporting local and regional partners to get these projects and programs implemented

San Gabriel Valley & Surrounding Area

Tuesday, August 4, 2015
4-6pm

Grace Black Auditorium
3130 Tyler Avenue
El Monte, CA 91731

Co-hosted with San Gabriel Valley Council of Governments

Westside & Surrounding Area

Tuesday, August 11, 2015
4-6pm

Veterans Memorial Building
Rotunda Room
4117 Overland Avenue
Culver City, CA 90230

Central & Surrounding Area

Wednesday, August 12, 2015
4-6pm

Union Station
Historic Ticketing Concourse
800 North Alameda Street
Los Angeles, CA 90012

North County & Surrounding Area

Thursday, August 13, 2015
4-6pm

Cultural Center Room
38350 Sierra Highway
Palmdale, CA 93550

South Bay & Surrounding Area

Monday, August 17, 2015
4-6pm

Lawndale Community Center
14700 Burin Avenue, 3rd fl
Lawndale, CA 90260

Gateway Cities & Surrounding Area

Monday, August 24, 2015
4-6pm

16401 Paramount Boulevard, 2nd fl
Paramount, CA 90723

Co-hosted with Gateway Cities Council of Governments

San Fernando Valley & Surrounding Area

Wednesday, August 26, 2015
4-6pm

150 N Third Street,
Room 104
Burbank, CA 91502

Co-hosted with San Fernando Valley Council of Governments

323.466.3876
Español
한국어
中文
Հայերէն
Tiếng Việt
日本語
русский
ภาษาไทย
ហាងមែង

Metro

The workshops are designed for planners, engineers, traffic safety professionals, public health and injury prevention professionals, advocates, transit riders, transit operators, non-profit organizations, decision-makers, and other interested stakeholders. Each workshop will include information about the overall plan and information specific to the sub-region. We encourage you to attend the workshop specific to your sub-region; however, staff will be available to answer questions and gather input at all workshops.

ADA accommodations and translations are available by calling 213.922.2606 at least 72 hours before the meeting.

For more information, visit www.metro.net/walkbikeroll or contact Tham Nguyen at nguyentha@metro.net or 213.922.2606.

Plan Estratégico de Transporte Activo
Talleres Comunitarios

¡Queremos oír de ti! Metro está desarrollando un Plan Estratégico de Transporte Activo para identificar necesidades, recursos y estrategias para mejorar y aumentar caminar, andar en bicicleta y el uso del transporte en el condado de Los Ángeles, y su aportación ayudará a crear un plan útil y importante.

Los talleres van a lograr

- Obtener ideas para mejorar acceso de primera y última milla para el tránsito, mejoras a la red regional de instalaciones para andar en pie o en bicicleta, incluyendo caminos de uso compartido y carriles de bici en la vía pública
- Explorar las oportunidades para apoyar a las agencias locales y regionales para cumplir estos proyectos y programas

Valle San Gabriel y Alrededores

Martes| Agosto 4 | 4-6pm

Grace Black Auditorium
3130 Tyler Avenue
El Monte, CA 91731

Co-organizado con Consejo de Gobiernos del Valle San Gabriel

Westside y Alrededores

Martes| Agosto 11 | 4-6pm

Veterans Memorial Building
Rotunda Room
4117 Overland Avenue
Culver City, CA 90230

Centro y Alrededores

Miercoles| Agosto 12 | 4-6pm

Union Station
Historic Ticketing Concourse
800 North Alameda Street
Los Angeles, CA 90012

Norte del Condado y Alrededores

Jueves | Agosto 13 | 4-6pm

Cultural Center Room
38350 Sierra Highway
Palmdale, CA 93550

South Bay y Alrededores

Lunes| Agosto 17 | 4-6pm

Lawndale Community Center
14700 Burin Avenue
tercer piso
Lawndale, CA 90260

Cuidades Gateway y Alrededores

Lunes| Agosto 24 | 4-6pm

16401 Paramount Boulevard
segundo piso
Paramount, CA 90723

Co-organizado con Consejo de Gobiernos Gateway

Valle San Fernando y Alrededores

Miercoles| Agosto 26 | 4-6pm

150 N Third Street, Room 104
Burbank, CA 91502

Co-organizado con Consejo de Gobiernos del Valle San Fernando

323.466.3876
Español
한국어
中文
Հայերէն
Tiếng Việt
日本語
русский
ภาษาไทย
ภาษาษัย

Metro

Los talleres están diseñados para los planeadores, ingenieros, profesionales de la seguridad de tráfico, la salud pública y los profesionales de la prevención de lesiones, defensores, los usuarios del transporte, operadores de transporte, organizaciones sin fines de lucro, tomadores de decisiones y otros actores interesados. Cada taller incluirá información sobre el plan general y la información específica de la subregión. Le animamos a asistir al taller específico para su subregión; sin embargo, estarámos disponible para responder preguntas y reunir información en todos los talleres.

Alojamiento ADA y traducciones están disponibles llamando al 213.922.2606 por lo menos 72 horas antes de la reunión.

Para obtener más información, visite www.metro.net/walkbikeroll o póngase en contacto Tham Nguyen en nguyentha@metro.net o 213.922.2606.

Figure 2. Stakeholder participation at Active Transportation Strategic Plan Stakeholder Workshops (Round 1) during August 2015. From left to right, starting from upper left: San Gabriel Valley workshop - August 4, Westside workshop - August 11, Central workshop - August 12, South Bay workshop - August 17, Gateway Cities workshop – August 24, North County workshop - August 13, and San Fernando Valley - August 26.







Develop a funding strategy

Figure 3. Invitation flyers for Active Transportation Strategic Plan Stakeholder Workshops (Round 2), which included English and Spanish versions.

Join us for the Active Transportation Strategic Plan Stakeholder Workshops

The Los Angeles County Metropolitan Transportation Authority (Metro) is developing an Active Transportation Strategic Plan (Plan) to identify needs, resources and strategies to improve and increase walking, bicycling and transit use in LA County. We held the first round of stakeholder workshops and launched an online survey in August 2015 to gather input. Please join us for a second round of workshops to learn about the status of the Plan, provide additional critical feedback, and ask questions.

THE WORKSHOPS WILL:

- Gather input on the proposed regional network of bicycle and multi-use path facilities
- Discuss strategies for first last mile improvements to key transit stops and stations
- Seek feedback on performance measures
- Discuss roadmap towards implementation of these projects and programs

THE WORKSHOPS ARE DESIGNED FOR:

Practitioners who implement walking/bicycling/transit improvements; applicable agency representatives; planners; engineers; traffic safety professionals; public health and injury prevention professionals; advocates; non-profit organizations; decision-makers; and other interested stakeholders.

PLEASE JOIN US AT ONE OF THE FOLLOWING SESSIONS:

Thursday, December 3, 2015 **4:00pm-6:00pm (4:15pm presentation)** North Hollywood Senior Citizen Center 11430 Chandler Boulevard North Hollywood, CA 91601	**Monday, December 7, 2015** **4:00pm-6:00pm (4:15pm presentation)** Norwalk Community Meeting Center Sproul Room 13200 Clarkdale Avenue Norwalk, CA 90650	**Tuesday, December 8, 2015** **4:00pm-6:00pm (4:15pm presentation)** Torrance Cultural Arts Center George Nakano Theatre 3330 Civic Center Drive Torrance, CA 90503
Wednesday, December 9, 2015 **4:00pm-6:00pm (4:15pm presentation)** Julia McNeill Senior Center Celebration Hall 4100 Baldwin Park Boulevard Baldwin Park, CA 91706	**Monday, December 14, 2015** **9:00am-11:00am (9:15am presentation)** Roy A. Anderson Recreation Center Comrie Hall 3980 Bill Robertson Lane Los Angeles, CA 90037	**Tuesday, December 15, 2015** **5:00pm-7:00pm (5:15pm presentation)** Santa Clarita Activities Center Sycamore Room 20880 Centre Pointe Parkway Santa Clarita, CA 91350

All sessions will cover the same topics. Please choose the session that is most convenient for you. There will be an open house during the first 15 minutes of the workshop. A presentation will start 15 minutes after the listed start time.

Metro

Please register early since space is limited! Register here:
https://www.metro.net/projects/active-transportation/strategic-plan/

ADA accommodations and translations are available by calling 213.922.2606 at least 72 hours before the meeting. For more information, visit www.metro.net/walkbikeroll or contact Tham Nguyen at nguyentha@metro.net or 213.922.2606.

Acompáñenos para los Talleres del Plan Estratégico de Transportación Activa

La Autoridad de Transportación del Condado de Los Ángeles (Metro) esta desarrollando un Plan Estratégico de Transportación Activa (el Plan) para identificar necesidades, recursos y estrategias para mejorar andar a pie y en bicicleta, y facilitar el uso de transito en el condado de Los Ángeles. Sostuvimos la primera ronda de talleres y la encuesta por internet en agosto de 2015 para colectar información. Por favor acompáñenos durante la segunda ronda de talleres para aprender mas sobre el estatus del Plan, proveernos mas información critica, y hacernos preguntas.

LOS TALLERES VAN A:

- Colectar información sobre la propuesta red regional de bicicleta y de las instalaciones de paseo de uso múltiple
- Discutir estrategias para mejoramientos de ultima/primera milla en paradas principales
- Obtener información sobre medidas de desempeño
- Discutir el mapa de implementación hacia estos proyectos y programas

LOS TALLERES ESTÁN DISEÑADOS PARA:

Profesionales que implementan mejoramientos de transportación activa; representativos de agencias aplicables; planificadores; ingenieros; profesionales de seguridad de trafico; profesionales de la salud publica y de la prevención de lesiones; abogados; organizaciones no lucrativas; oficiales; y otros partidos interesados

POR FAVOR ACOMPÁÑENOS DURANTE LAS SIGUIENTE SESIONES:

Jueves, Diciembre 3, 2015 **4:00pm-6:00pm (4:15pm presentación)** North Hollywood Senior Citizen Center 11430 Chandler Boulevard North Hollywood, CA 91601	**Lunes, Diciembre 7, 2015** **4:00pm-6:00pm (4:15pm presentación)** Norwalk Community Meeting Center Salón: Sproul 13200 Clarkdale Avenue Norwalk, CA 90650	**Martes, Diciembre 8, 2015** **4:00pm-6:00pm (4:15pm presentación)** Torrance Cultural Arts Center George Nakano Theatre 3330 Civic Center Drive Torrance, CA 90503
Miércoles, Diciembre 9, 2015 **4:00pm-6:00pm (4:15pm presentación)** Julia McNeill Senior Center Celebration Hall 4100 Baldwin Park Boulevard Baldwin Park, CA 91706	**Lunes, Diciembre 14, 2015** **9:00am-11:00am (9:15am presentación)** Roy A. Anderson Recreation Center Comrie Hall 3980 Bill Robertson Lane Los Angeles, CA 90037	**Martes, Diciembre 15, 2015** **5:00pm-7:00pm (5:15pm presentación)** Santa Clarita Activities Center Salón: Sycamore 20880 Centre Pointe Parkway Santa Clarita, CA 91350

Todas las sesiones cubrirán el mismo tema. Por favor atienda la sesión mas conveniente para usted. Habrá una exhibición durante los primeros 15 minutos del taller. La presentación empezara dentro 15 minutos del taller.

El espacio es limitado, por favor regístrese temprano! Regístrese Aquí
https://www.metro.net/projects/active-transportation/strategic-plan/

Metro

Acomodaciones ADA y traducciones son disponibles llamando al *213.922.2606 por lo menos 72 horas antes del taller. Para mas información, visite www.metro.net/walkbikeroll o contacte a Tham Nguyen por correo electrónico nguyentha@metro.net o al 213.922.2606.*

Figure 4. Stakeholder participation at Active Transportation Strategic Plan Stakeholder Workshops (Round 2) during December 2015. From left to right, starting from upper left: North Hollywood – December 3, Norwalk – December 7, Torrance – December 8, Los Angeles – December 14, Santa Clarita – December 15, Baldwin Park – December 9.

Stakeholder Survey

Metro launched an online survey to gather additional input from stakeholders during Summer 2015 in addition to providing printed copies of the survey during the August 2015 ATSP Stakeholder workshops. The survey was intended to gather input on people's top priorities for improving walking and bicycling to train station(s) and major bus stop(s) and along regional bikeways or shared-use paths and to identify challenges and opportunities. Over 200 responses were received from the general public. Figure 5 shows the survey form in both English and Spanish.

Figure 5. Stakeholder survey form, English and Spanish versions.

Take the Survey!

Active Transportation Strategic Plan

Metro is working on an Active Transportation Strategic Plan, which will identify strategies to improve and increase walking, bicycling, and transit use in Los Angeles County. We want to hear from you! We want your input about what your top priorities are for improving walking and bicycling to train station(s) and major bus stop(s) and along regional bikeways or shared-use paths. Please help us out by answering these 8 quick questions. Your answers will remain confidential and will not be used to target you for future solicitations. The information you provide will not be shared with any other organization for commercial purposes. You will be entered to win a prize upon completion. The survey will be open until **Wednesday, September 30, 2015.**

To answer this survey online, please visit www.metro.net/walkbikeroll. Select "Take our survey!"

1. List the transit stop(s), such as street intersections or station name, where you think improvements are most needed in Los Angeles County. See online survey for the map of 661 major transit stops.

2. Based on the answer to the question above, tell us what challenges exist to walking and bicycling access to those locations? Please check all that apply and list applicable transit stop location.

	Challenge	Transit Stop Location(s)
	Freeway Ramps	
	Poor sidewalk conditions or lack of sidewalk	
	Poor crosswalks or lack of crosswalks	
	No safe place to bicycle	
	Vehicle speed and traffic	
	Poor lighting	
	Poor signage	
	Lack of enforcement of traffic violations	
	No Shade	
	No bicycle parking (for example, no bicycle racks)	
	Personal safety concerns	
	Destinations are too far away	
	Bad driver behavior	
	Lack of worksite facilities (for example, showers or lockers)	
	Other challenges not listed above:	

See Reverse

3. Suggest additional routes or locations that you think need improvements for people on foot or bike.

   Consider suggesting locations or routes that fill a gap in the bikeway network, cross major barriers (such as freeways, rivers, or rail lines), connect to multiple cities and communities, and/or provide access to regional destinations (such as employment centers, shopping districts and government facilities).

Please describe the location:

Starting Point:

End Point:

4. Do you take transit? If yes, for what purpose? Please check all that apply.

	Work
	School
	Errands
	Shopping
	Play
	Other purposes not listed above:
	N/A – I do not take transit

5. Do you use any of the following to get to transit or for short trips? If yes, please select all that apply.

	Bike
	Walk
	Scooter
	Skateboard
	Rollerblade
	Other ways not listed above:
	N/A – I do not use any of these to get to transit or for short trips.

6. How often do you walk or bike to transit?

	I have taken it one time
	About once a month
	About once a week
	Multiple times a week
	N/A – I do not walk or bike to transit
	N/A – I never take transit

7. What types of improvements would encourage you to take transit and/or walk or bike more often?

8. Tell us where you live. (Optional) Zip Code:

Email address to enter to win. (Optional):

*** Please drop this survey in the box marked "Surveys and Comment Forms" at the workshop. Or submit this form via email to nguyentha@metro.net or mail to Tham Nguyen, One Gateway Plaza, Mail Stop 99-22-6, Los Angeles, CA 90012. Thank you!**

¡Tome la Encuesta!

Metro está desarrollando un Plan Estratégico de Transporte Activo para identificar estrategias para mejorar y aumentar caminar, andar en bicicleta y el uso de transporte público en el condado de Los Ángeles. ¡Queremos oír de ti! Queremos su opinión para saber cuáles son sus principales prioridades para mejorar y aumentar el acceso para peatones y ciclistas a estaciones de tren y paradas principales de autobús y a carriles de bicicleta regionales o caminos de uso-compartido. Por favor ayúdenos al contestar estas 8 preguntas. Sus respuestas permanecerán confidenciales y no serán usadas para solicitaciones en el futuro. La información que usted nos provee no será compartida con ninguna otra organización para fines comerciales. Al completar la encuesta, usted podría ganar un premio. La encuesta estará abierta hasta el **Miércoles, 30 de septiembre del 2015.**

Para tomar la encuesta por internet, visite www.metro.net/walkbikeroll. Seleccione "Take the Survey!" (Traducción: ¡Tome la Encuesta!)

1. Liste las parada(s) de tránsito, por nombre o por las intersecciones de calle, que usted piense que más necesitan mejoramiento en el Condado de Los Ángeles. Vea la encuesta vía internet para ver el mapa que contiene 661 paradas principales de tránsito.

2. ¿Basado en su respuesta a la pregunta anterior, cuales retos existen para peatones o ciclistas para llegar a esas paradas? Elija todas las opciones aplicables y liste la parada correspondiente.

	Reto	Parada(s) de Transito
	Rampas de autopista	
	Condiciones pobres de acera o falta de acera	
	Cruces en pobres condiciones o falta de cruces	
	No hay lugar seguro para andar en bicicleta	
	Velocidad de vehículos y tráfico	
	Mala iluminación	
	Señalización deficiente	
	Infracciones de trafico no son forzadas	
	No hay sombra	
	No hay aparcamiento para bicicletas (como rejillas para bicicletas)	
	Preocupaciones por la seguridad personal	
	Los destinos están demasiado lejos	
	Mal comportamiento de conductors	
	Falta de instalaciones como duchas o armarios en los sitios de aparcamiento para bicicletas.	
	Otros retos no mencionados	

Vea el Reverso

3. Sugiera rutas adicionales o ubicaciones que piensa que necesitan ser mejoradas para peatones y ciclistas.

   Considere ubicaciones o rutas que llenan huecos en la red de carriles de bicicleta, cruzan barreras (autopistas, ríos, vías de tren etc.) conectan a múltiples ciudades y comunidades, y/o proveen acceso a destinaciones regionales (centros de empleo, distritos de comercio, facilidades del gobierno etc.).

Por favor describa la ubicación

Punto de partida:

Punto final:

4. ¿Usted usa transportación pública? Si sí, para que fin? Marque lo que aplique.

	Trabajo
	Escuela
	Mandados
	Compras
	Ir a jugar
	Para otros fines no mencionados
	No es aplicable - Yo no uso transportación publica

5. ¿Usa alguna de las siguientes opciones para llegar a tránsito o para viajes cortos? Marque lo que aplique.

	Bicicleta
	Caminar
	Patinete
	Patineta
	Patines
	Otras maneras no mencionadas
	No es aplicable - Yo no uso ninguna opción mencionada

6. ¿Con que frecuencia camina o usa su bicicleta para conseguir acceso a transportación publica?

	Solo una vez lo he usado
	Una vez por mes
	Una vez por semana
	Multiples veces por semana
	No es aplicable – Yo no camino o uso mi bicicleta para conseguir acceso a paradas de tránsito
	No es aplicable – Yo no uso tránsito público

7. ¿Qué tipos de mejorías le animarían a utilizar el transito público, y/o viajar a pie o en bicicleta con más frecuencia?

8. ¿Cuál es su código postal? (Opcional)

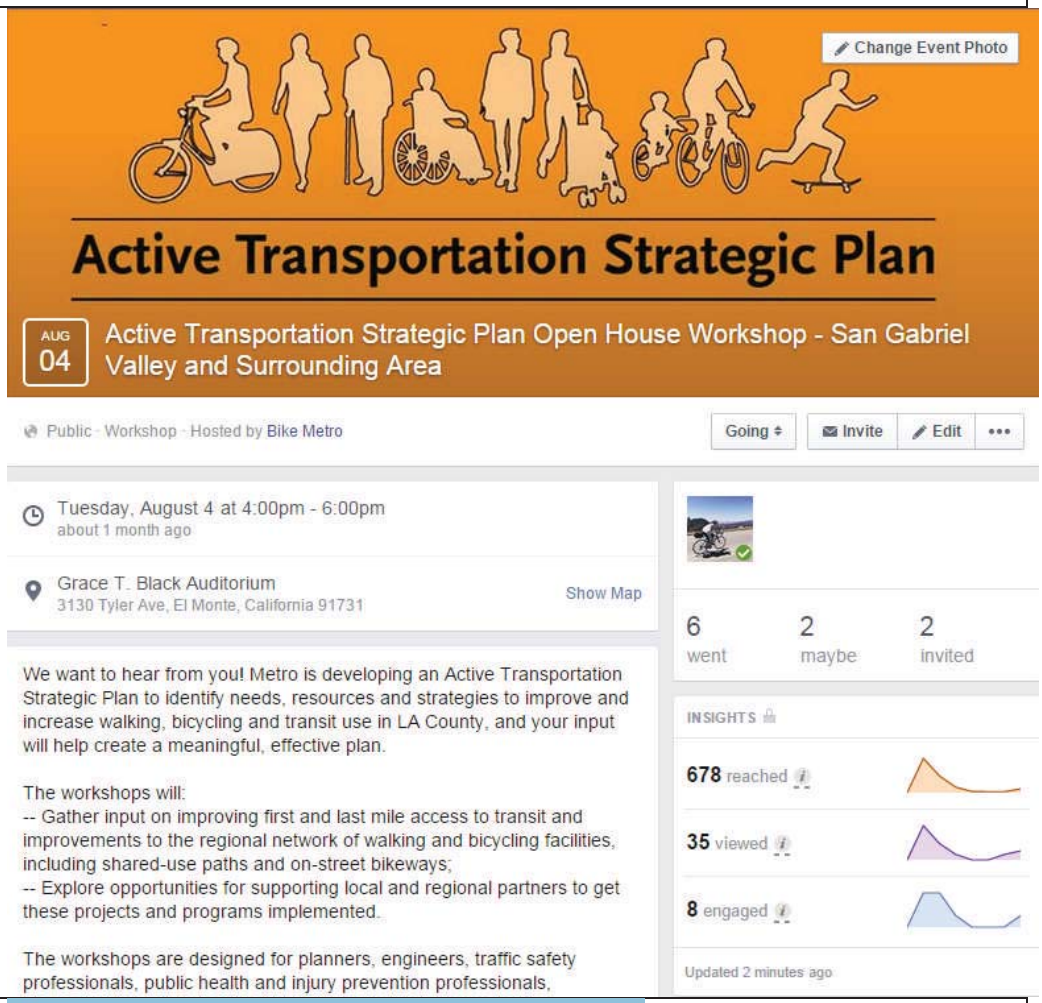
   ¿Dirección de correo electrónico para notificarle si ganó premio? (Opcional)

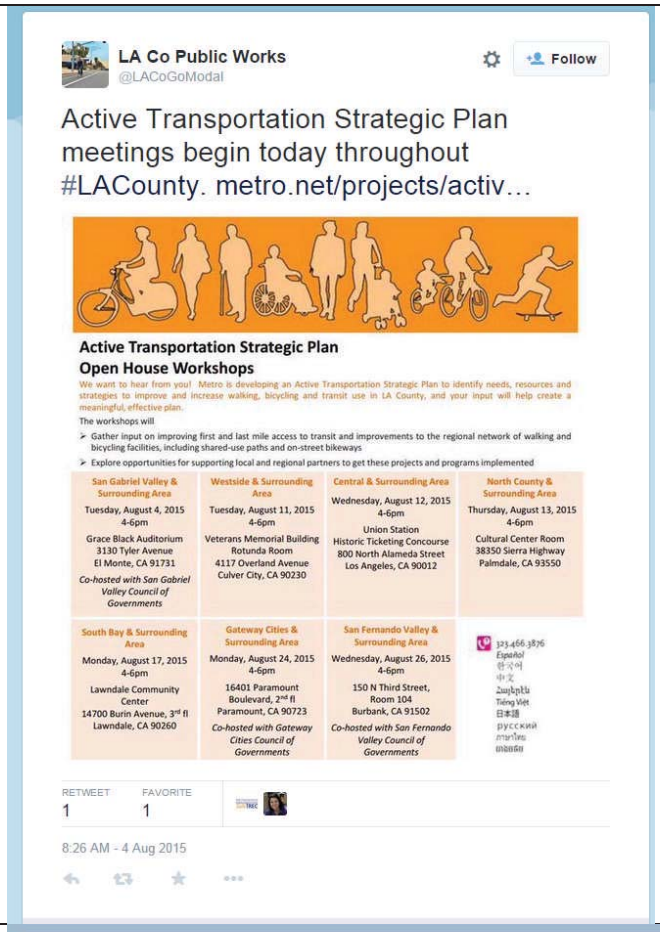
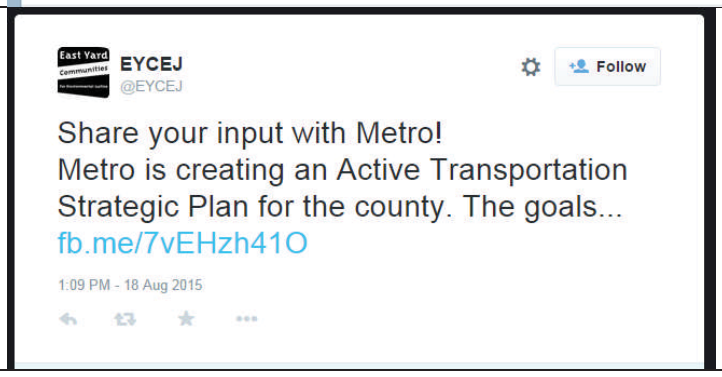
*** Por favor entregue esta forma en la caja marcada "Surveys and Comment Forms" durante el taller. También puede mandar la forma por internet a nguyentha@metro.net o mándela por correo a One Gateway Plaza, Mail Stop 99-22-6, Los Angeles, CA 90012. ¡Gracias!**

Social Media Activities

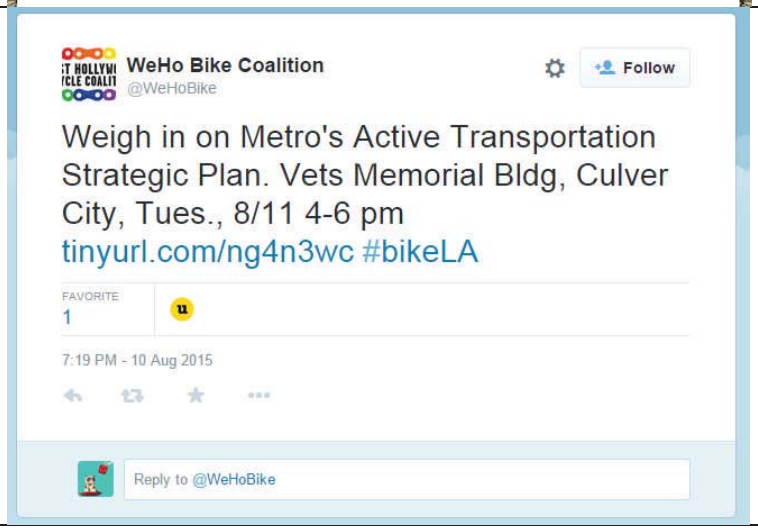
Metro was active on social media to promote the Active Transportation Strategic Plan, stakeholder workshops, and online survey, with additional partners and stakeholders helping to spread the word. Table 2 lists the social media posts.

Table 2. Lists of social media posts about the Active Transportation Strategic Plan

Tweet/Post Link	Screenshot
https://www.facebook.com/events/1473977855931102/	
https://twitter.com/BikeMetro/status/628656833159368708	

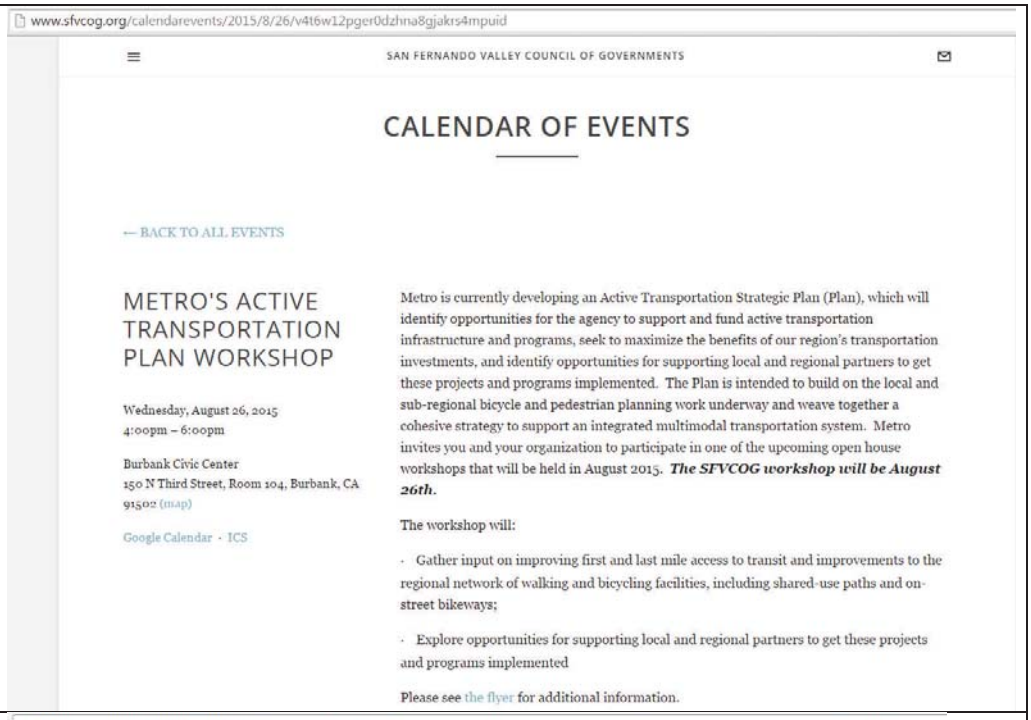
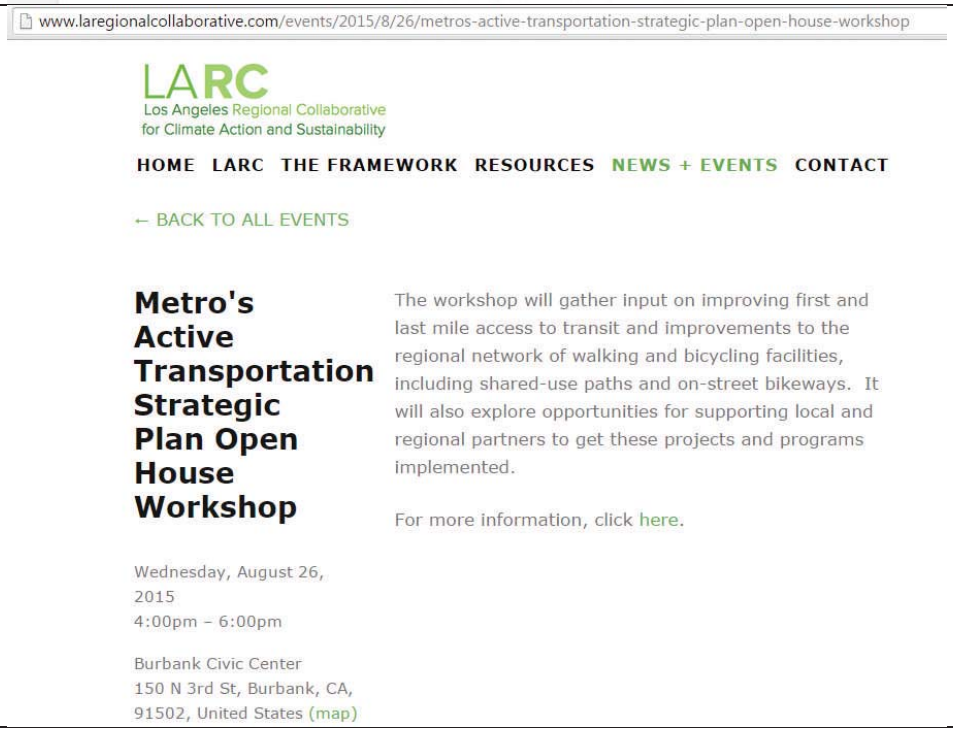
https://twitter.com/LACoGoModal/status/628587829866541056	
https://twitter.com/crenshawrail/status/628600582668951552	
https://twitter.com/EYCEJ/status/633732514910068736	

https://twitter.com/BikeMetro/status/631274933230809088

https://twitter.com/LADOTBikeProg/status/631150572553437184	
https://twitter.com/WeHoBike/status/630926486246035456	

https://twitter.com/SafeRoutesCA/status/623635159582027776	
http://www.myvalleyvillage.com/category/active-transportation-strategic-plan/	

http://empowerla.org/metro-to-host-active-transportation-workshops/	
https://twitter.com/amyshimshon/status/623645074811957248	

http://www.sfvcog.org/calendarevents/2015/8/26/v4t6w12pger0dzhna8gjakrs4mpuid	
http://www.laregionalcollaborative.com/events/2015/8/26/metros-active-transportation-strategic-plan-open-house-workshop	

http://www.losangeleswalks.org/metro-atsp/	www.losangeleswalks.org/metro-atsp/ Home About Us Campaigns Donate Español Resources Calendar ← Previous Next → **Metro Active Transportation Wants to Hear from You!** Posted on July 30, 2015  Para Espanol Click Aqui! Join an open house workshop with Metro to identify needs for the upcoming Active Transportation Strategic Plan. The goal of this project is to improve the bicycling, walking, and transit use in your area, so first we need to develop the plan. The workshops will: 1. *Gather input on improving the first and last mile access to transit and improvements to the regional network of walking and bicycling facilities, including shared-use paths and on-street bikeways.* 2. *Explore opportunities for supporting local and regional partners to get these programs implemented*
http://www.advancedtransportationcenter.org/event/metro-active-transportation-strategic-plan-open-house-workshops-4/	ADVANCED TRANSPORTATION CENTER of Southern California Fuels Vehicles Technologies Programs About Contact **Metro Active Transportation Strategic Plan Open House Workshops** August 17 @ 4:00 pm - 6:00 pm Metro is developing an Active Transportation Strategic Plan to identify needs, resources and strategies to improve and increase walking, bicycling and transit use in LA County, and your input will help create a meaningful, effective plan. The workshops will: • Gather input on improving first and last mile access to transit and improvements to the regional network of walking and bicycling facilities, including shared-use paths and on-street bikeways • Explore opportunities for supporting local and regional partners to get these projects and programs implemented The workshops are designed for planners, engineers, traffic safety professionals, public health and injury prevention professionals, advocates, transit riders, transit operators, non-profit organizations, decision makers, and other interested stakeholders. Each workshop will include information about the overall plan and information specific to the sub-region. We encourage you to attend the workshop specific to your sub-region; however, staff will be available to answer questions and gather input at all workshops. + GOOGLE CALENDAR + ICAL EXPORT Details Date: August 17 Time: 4:00 pm - 6:00 pm Website: http://www.metro.net/projects/active-transportation/strategic-plan/ Organizer Metro Website: http://www.metro.net/ CA Energy Commission Awards Grant to CSE for First Standards-Based Smart EV Charging Platform Driving Mobility Advanced Transportation Event Features Key Leaders, June 18 MOEV Inc. develops distributed power smart-charging systems Mayor Garcetti Announces Dept of Transportation Technology Advisor

http://vnnc.org/2015/07/metro-to-host-active-transportation-workshops/

Van Nuys Neighborhood Council

The Van Nuys Neighborhood Council meets on the second Wednesday of the month at 7pm. The General Meeting is held at 6262 Van Nuys Blvd.

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Metro To Host Active Transportation Workshops

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Metro To Host Active Transportation Workshops

Metro is developing an Active Transportation Strategic Plan to identify needs, resources and strategies to improve and increase walking, bicycling and transit use in LA County, and your input at a series of Open House Workshops will help create a meaningful, effective plan.

The workshops will gather input on improving first and last mile access to transit and improvements to the regional network of walking and bicycling facilities, including shared-use paths and on-street bikeways, and explore opportunities for supporting local and regional partners to get these projects and programs implemented.

The workshops are designed for planners, engineers, traffic safety professionals, public health and injury prevention professionals, advocates, transit riders, transit operators, non-profit organizations, decision-makers, and other interested stakeholders. Each workshop will include information about the overall plan and information specific to the sub-region. We encourage you to attend the workshop specific to your sub-region; however, staff will be available to answer questions and gather input at all workshops.

The Active Transportation Strategic Plan is a county wide effort to identify needs, resources, and strategies to improve and increase walking, bicycling and transit use in Los Angeles County. It is led by the Los Angeles County Metropolitan Transportation Authority (Metro). The Plan's policy and infrastructure recommendations will require collaboration between Metro, local and regional agencies, and other stakeholders to ensure implementation. The Plan will focus on improving first and last mile access to transit and propose a regional network of active transportation facilities, including shared-use paths and on-street bikeways, and develop a funding strategy to get them built.

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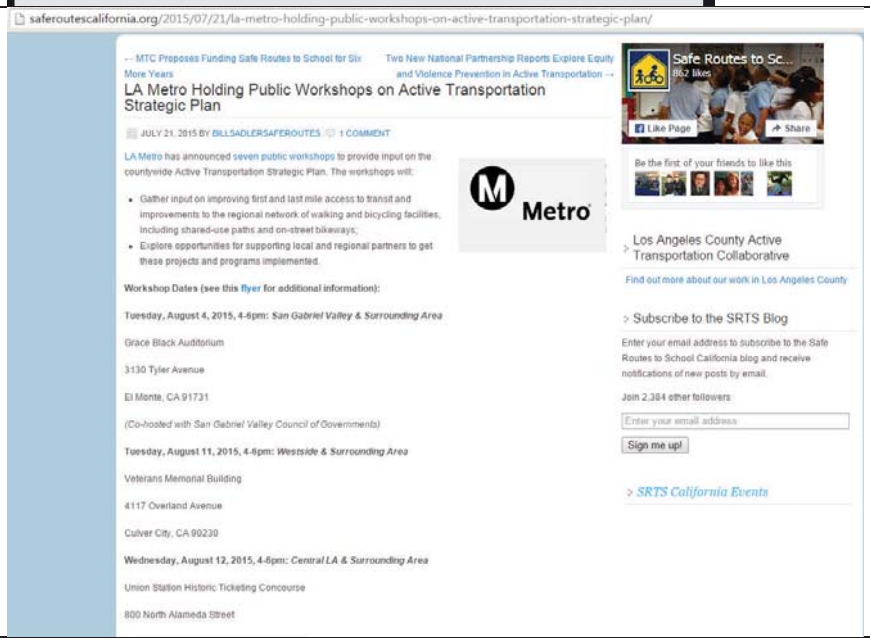
http://saferoutescalifornia.org/2015/07/21/la-metro-holding-public-workshops-on-active-transportation-strategic-plan/		

http://bitchonabike.blogspot.com/2015/08/metros-active-transportation-plan-needs.html

MONDAY, AUGUST 31, 2015

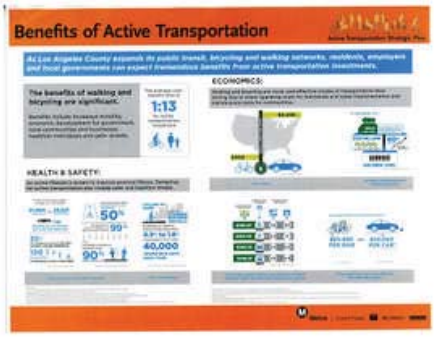
Metro's Active Transportation Plan needs your input!

Good advice lasts. I remember hearing a talk in November of 2008 entitled "*Leading Professional and Institutional Change through Subversion, Revolution and Meterology.*" The speaker was Debra R. Rolison of the U. S. Naval Research Laboratory. She told us about the **Rule of 18**, which states that when you take a new research direction, it will take 18 months to get yourself up to speed in the [new] area.

Last week I attended an Open House Workshop about active transportation in the San Fernando Valley. I didn't study transportation planning or urban design in school, so it has taken some time to learn the ins and outs of the transit system here in Southern California. I will try to explain some of the basics here so that **you** can take part in the conversation, too.

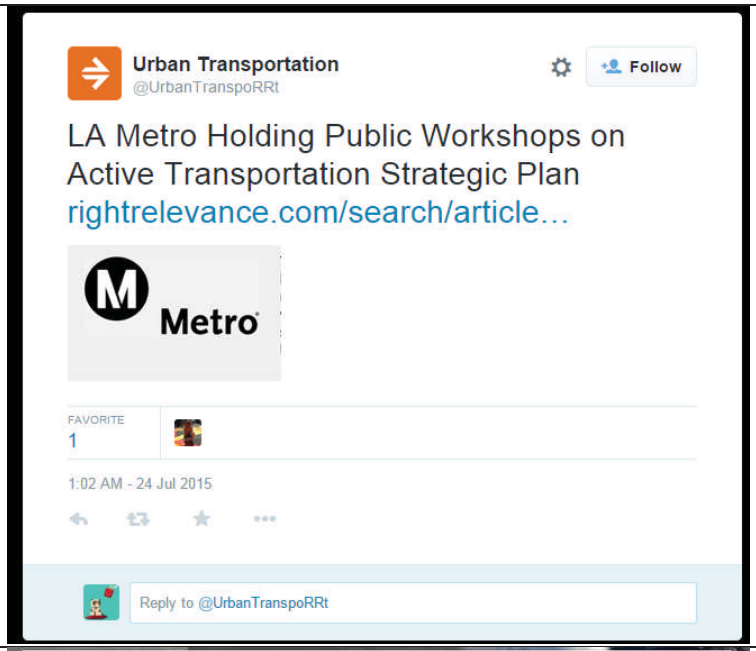
Metro is the major operator of bus and rail service in Los Angeles County, California. Metro hosted the first round of Open House Workshops as part of the development of the Active Transportation Strategic Plan. **Active transportation** refers to any form of human-powered transportation – walking, cycling, using a wheelchair, in-line skating or skateboarding. There are many ways to engage in active transportation, whether it is walking to the bus stop, or cycling to school/work.

Councils of governments (CoGs—also known as regional councils, regional commissions, regional planning commissions, and planning districts) are regional governing and/or coordinating bodies that exist throughout the United States. The Open House Workshop we attended was co-hosted by Metro and the San Fernando Valley Council of Governments (http://www.sfvcog.org/). The SFVCoG represents parts of Los Angeles County: Burbank, Glendale, San Fernando and Santa Clarita. The Southern California Association of Governments (SCAG) is the nation's largest metropolitan planning organization, representing six counties, 191 cities and more than 18 million residents.



When we arrived at the open house, there were posters on the perimeter of the room and Metro provided copies of the posters in 8.5" x 11" format. We scanned them and some are posted here. The pillars of Metro's Active Transportation Strategic Plan are:

- Acess to transit

https://twitter.com/UrbanTranspoRRt/status/624489754730496000	
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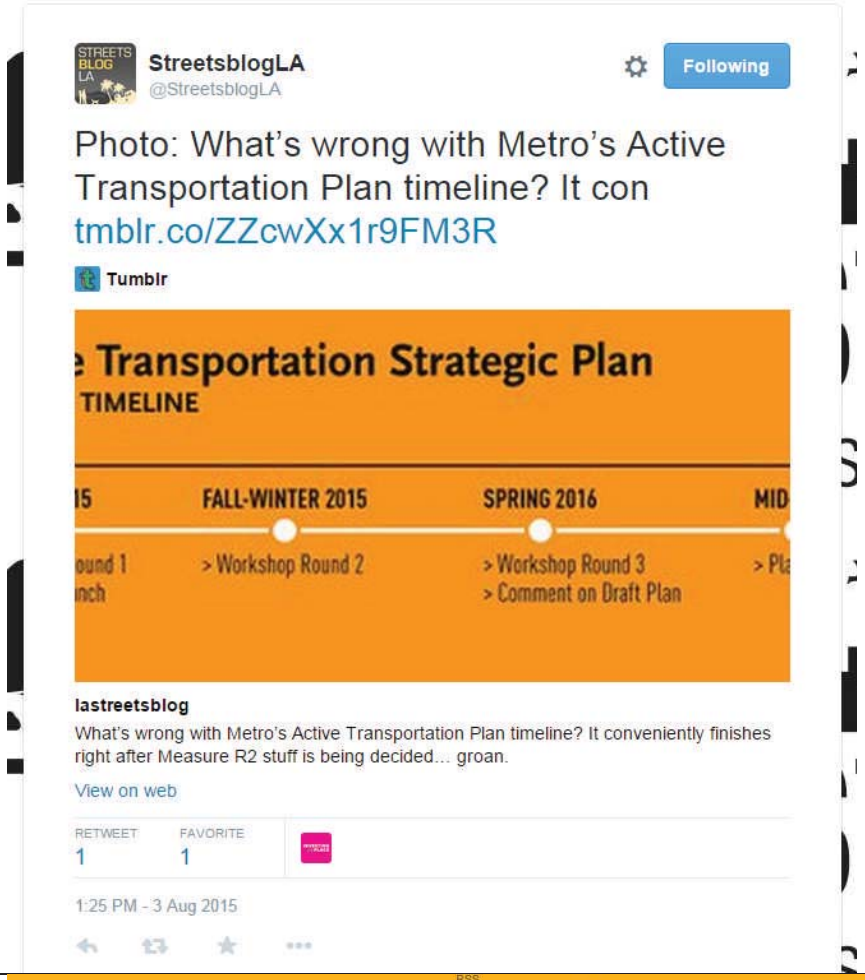
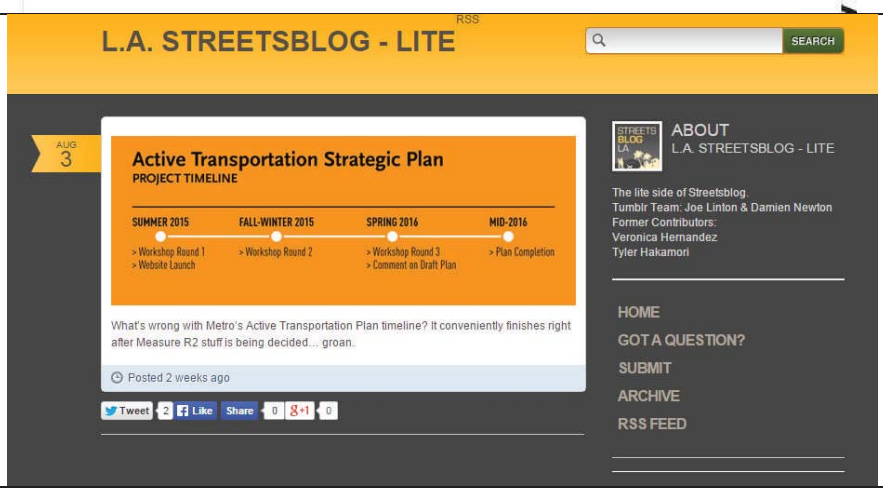
https://twitter.com/StreetsblogLA/status/628300791225425920	
http://lastreetsblog.tumblr.com/post/125782810843/whats-wrong-with-metros-active-transportation	

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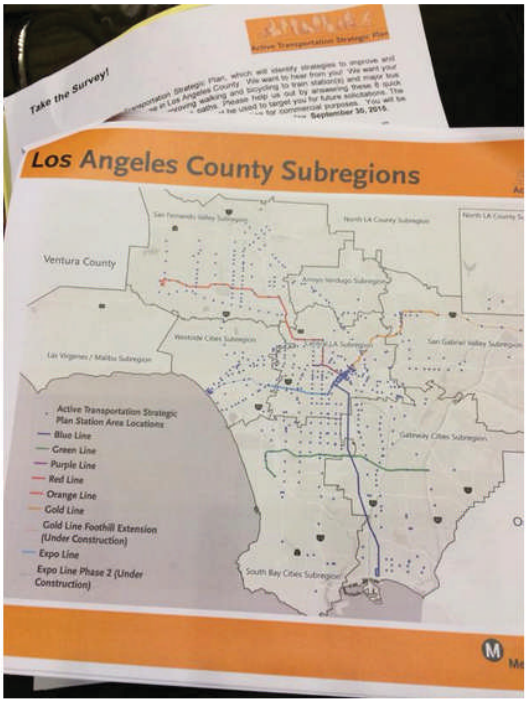
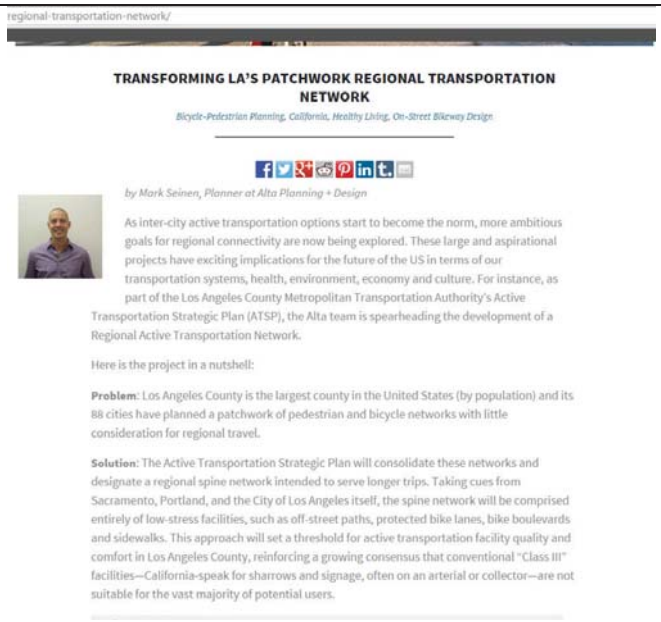
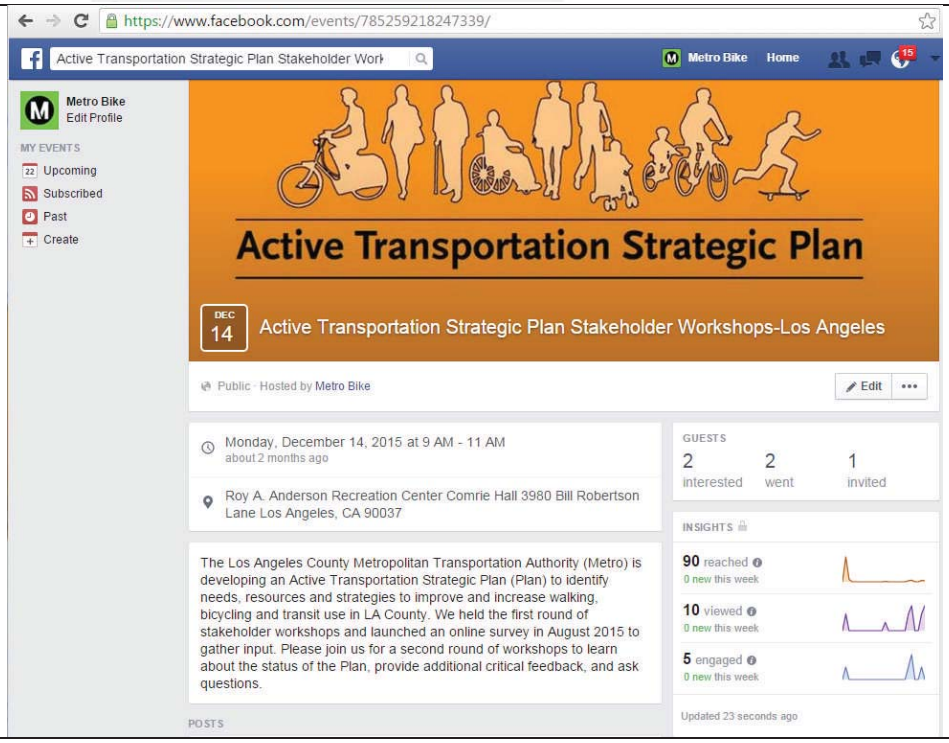
https://twitter.com/woolie/status/639457286319161344	Ian @woolie Follow Awesome: LA Metro's Active Transportation Strategic Plan analysis of 661 station areas. True progressive transit. #transitGIS @FehrAndPeers RETWEETS 2 FAVORITES 2 8:17 AM - 3 Sep 2015 Reply to @woolie @FehrAndPeers Ian @woolie · Sep 3 Presentation was preview of station analysis methods: walksheds, density, landuse, ridership, etc. Hope it's made public!! @metrolosangeles 2
https://twitter.com/InvestinPlace/status/636685397339213824	Investing in Place @InvestinPlace Follow See the blue dots - those are proposed active transportation strategic plan area locations 

https://www.facebook.com/RepRoybalAllard/posts/1144003788947481	**Rep. Lucille Roybal-Allard** Like Page August 20 at 12:48pm On Monday, August 24, from 4-6 PM, Metro will be holding an open house workshop on the second floor of 16401 Paramount Blvd. in Paramount. The workshop is being held to gather input on Metro's development of an Active Transportation Strategic Plan, which aims to improve and increase walking, bicycling and transit use throughout LA County. If you would like to hear more about this plan, or would like to offer any thoughts on this subject, feel free to stop by. For more info about the plan, please refer to this fact sheet: roybal-allard.house.gov ROYBAL-ALLARD.HOUSE.GOV Like Comment Share 5 people like this.
https://www.facebook.com/valley.bikery/posts/1058669370809793?pnref=story	**Valley Bikery** shared Bike Metro's event. August 25 at 2:01pm Tomorrow night (8/26, 4-6 pm) in Burbank, Metro Los Angeles will be holding a meeting for their Active Transportation Strategic Plan. If you walk, ride a bike, or use public transit in the 818 and want to make sure your voice is heard and/or find out what's in store for the future of transportation in the San Fernando Valley, please attend!  26 AUG **Active Transportation Strategic Plan Ope...** Wed 4 PM · 150 N Third Street, Room 104, Burbank, ... Justin Garcia went Going Like Comment Share Kathryn Savage and Linda Coburn like this.

http://blog.altaplanning.com/transforming-la-patchwork-regional-transportation-network/	
https://www.facebook.com/events/785259218247339/	

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Active Transportation Strategic Plan StakeholderWorkshops conta.cc/1NAIs7o

Join us for the Active Transportation Strategic Plan Stakeholder Workshops

The Los Angeles County Metropolitan Transportation Authority (Metro) is developing an Active Transportation Strategic Plan (Plan) to identify needs, resources and strategies to improve and increase walking, bicycling and transit use in LA County. We held the first round of stakeholder workshops and launched an online survey in August 2015 to gather input. Please join us for a second round of workshops to learn about the status of the Plan, provide additional critical feedback, and ask questions.

THE WORKSHOPS WILL:

- Gather input on the proposed regional network of bicycle and multi-use path facilities
- Discuss strategies for first last mile improvements to key transit stops and stations
- Seek feedback on performance measures
- Discuss roadmap towards implementation of these projects and programs

THE WORKSHOPS ARE DESIGNED FOR:

Practitioners who implement walking/bicycling/transit improvements; applicable agency representatives; planners; engineers; traffic safety professionals; public health and injury prevention professionals; advocates; non-profit organizations; decision makers; and other interested stakeholders.

PLEASE JOIN US AT ONE OF THE FOLLOWING SESSIONS:

Thursday, December 3, 2015 **4:00pm-6:00pm (4:15pm presentation)** North Hollywood Senior Citizen Center 11430 Chandler Boulevard North Hollywood, CA 91601	**Monday, December 7, 2015** **4:00pm-6:00pm (4:15pm presentation)** Norwalk Community Meeting Center Sproul Room 13200 Clarkdale Avenue Norwalk, CA 90650	**Tuesday, December 8, 2015** **4:00pm-6:00pm (4:15pm presentation)** Torrance Cultural Arts Center George Nakano Theatre 3330 Civic Center Drive Torrance, CA 90503
Wednesday, December 9, 2015 **4:00pm-6:00pm (4:15pm presentation)** Julia McNeill Senior Center Celebration Hall 4100 Baldwin Park Boulevard Baldwin Park, CA 91706	**Monday, December 14, 2015** **9:00am-11:00am (9:15am presentation)** Roy A. Anderson Recreation Center Connie Hall 3980 Bill Robertson Lane Los Angeles, CA 90037	**Tuesday, December 15, 2015** **5:00pm-7:00pm (5:15pm presentation)** Santa Clarita Activities Center Sycamore Room 20880 Centre Pointe Parkway Santa Clarita, CA 91350

All sessions will cover the same topics. Please choose the session that is most convenient for you. There will be an open house during the first 15 minutes of the workshop. A presentation will start 15 minutes after the listed start time.

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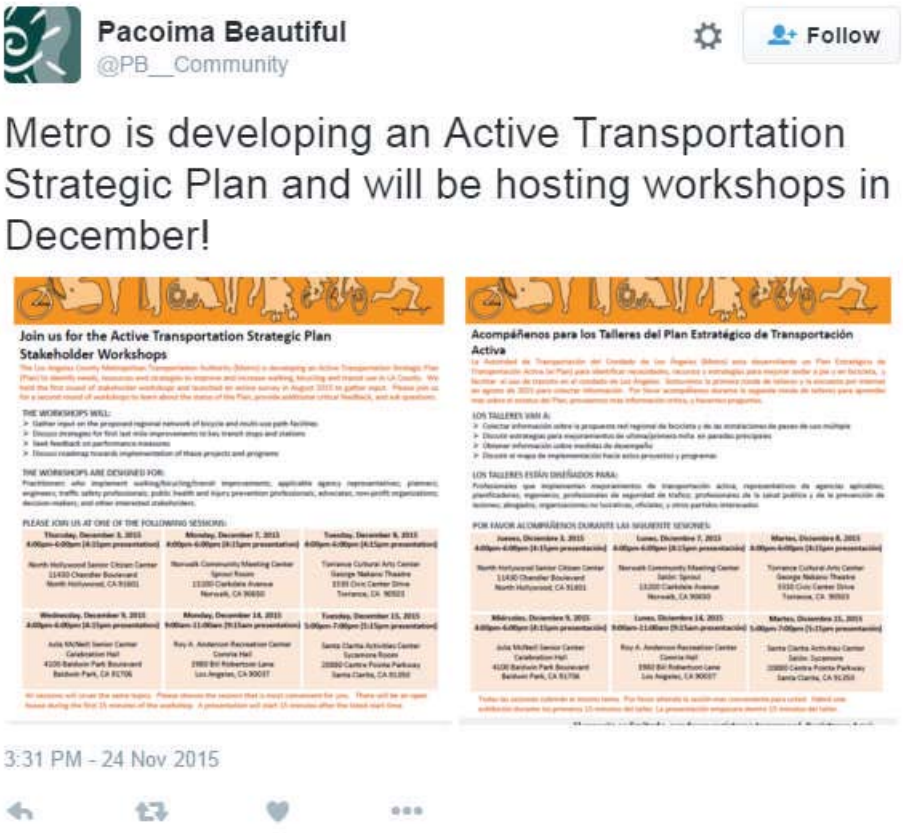
https://twitter.com/PB__Community/status/669297390768275456	
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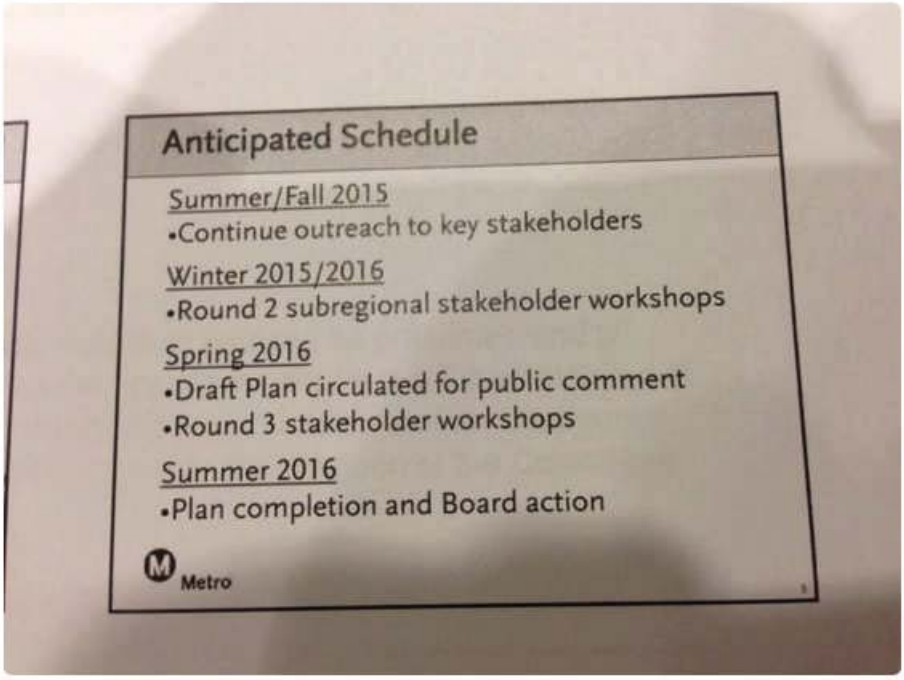
https://twitter.com/StreetsblogLA/status/654377296694935552	StreetsblogLA @StreetsblogLA Following Metro Sustainability Cmte: Metro Active Transportation Strategic Plan appears designed to miss out on Measure R2$  LIKE 1

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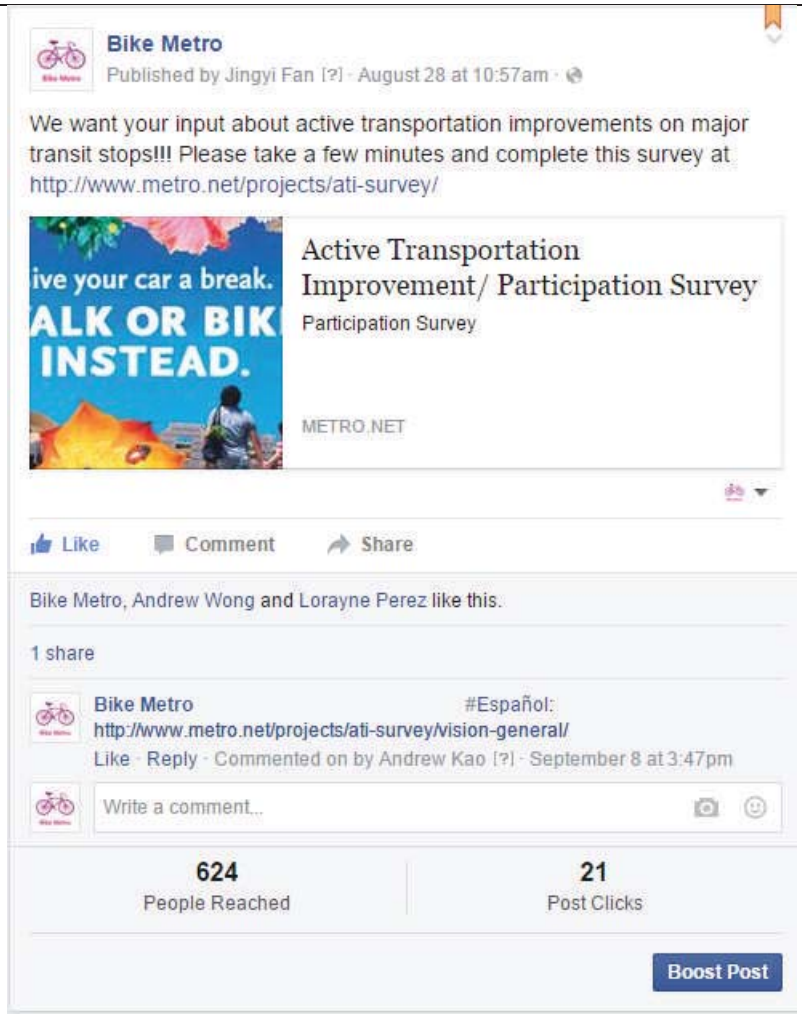
https://www.facebook.com/bikemetro?fref=nf	
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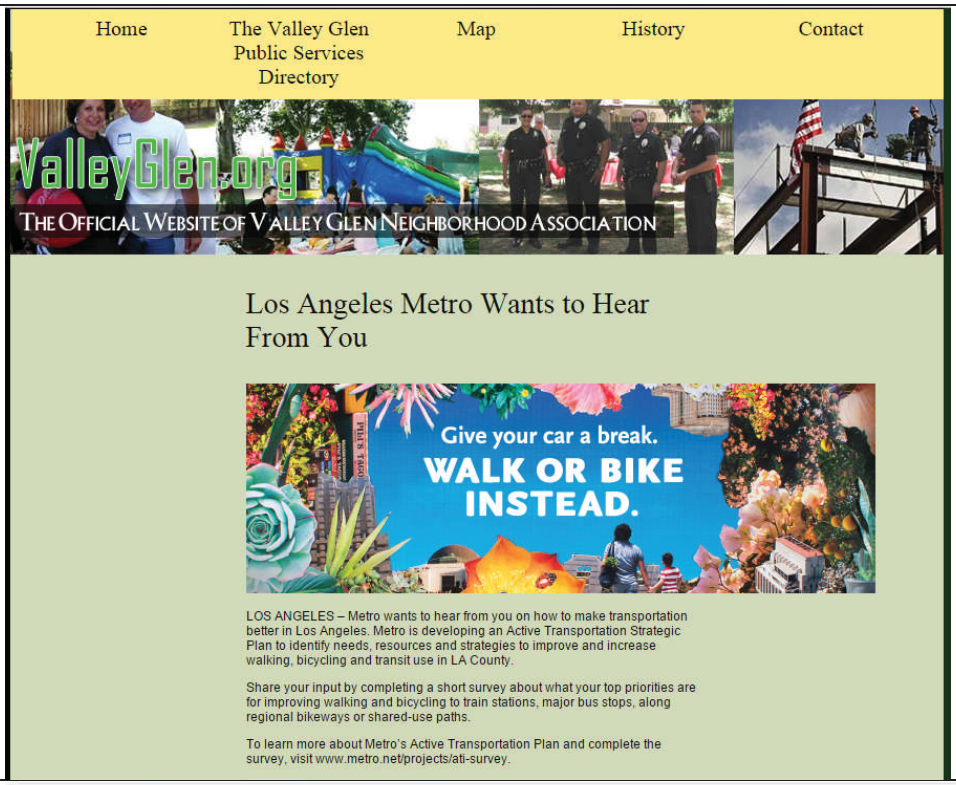
http://www.valleyglen.org/los-angeles-metro-wants-to-hear-from-you/	
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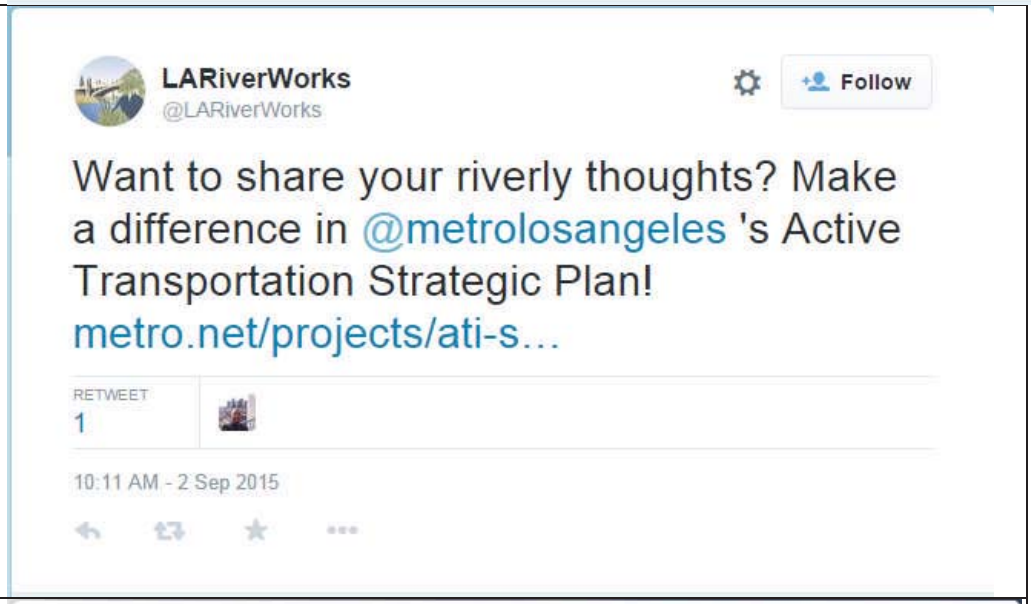
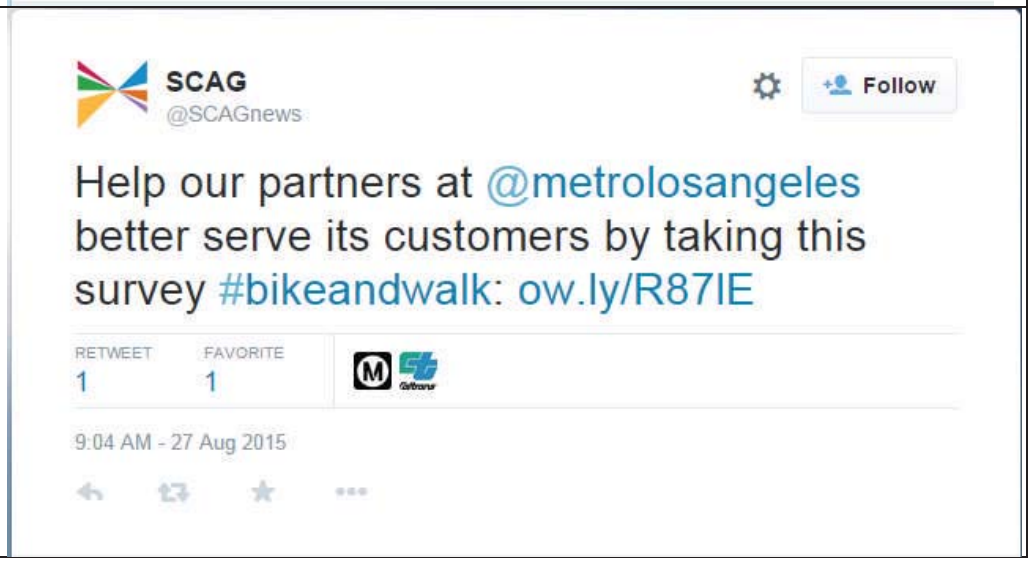
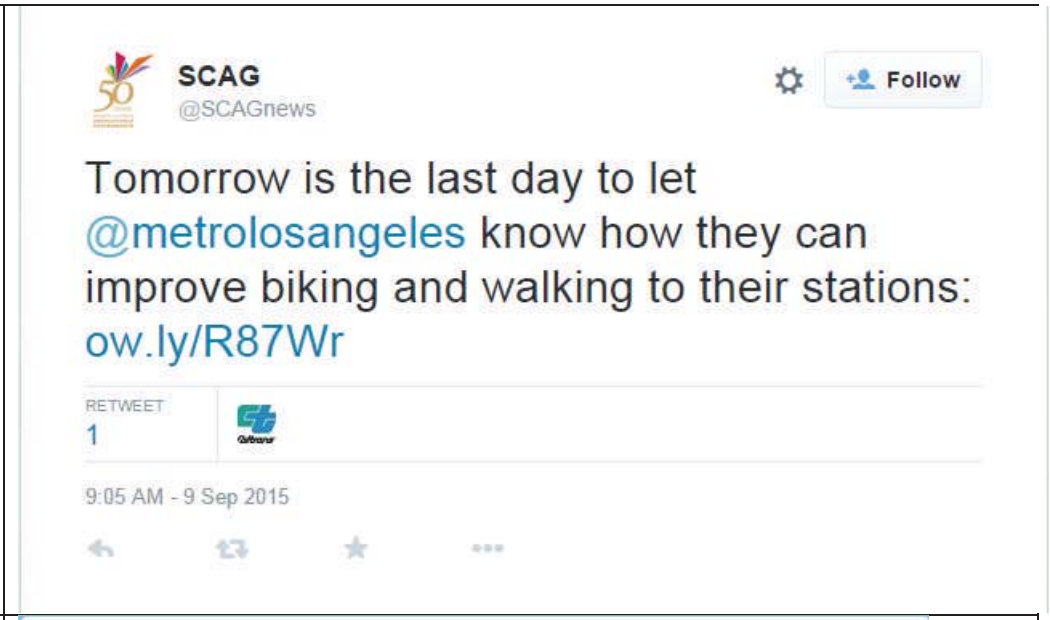
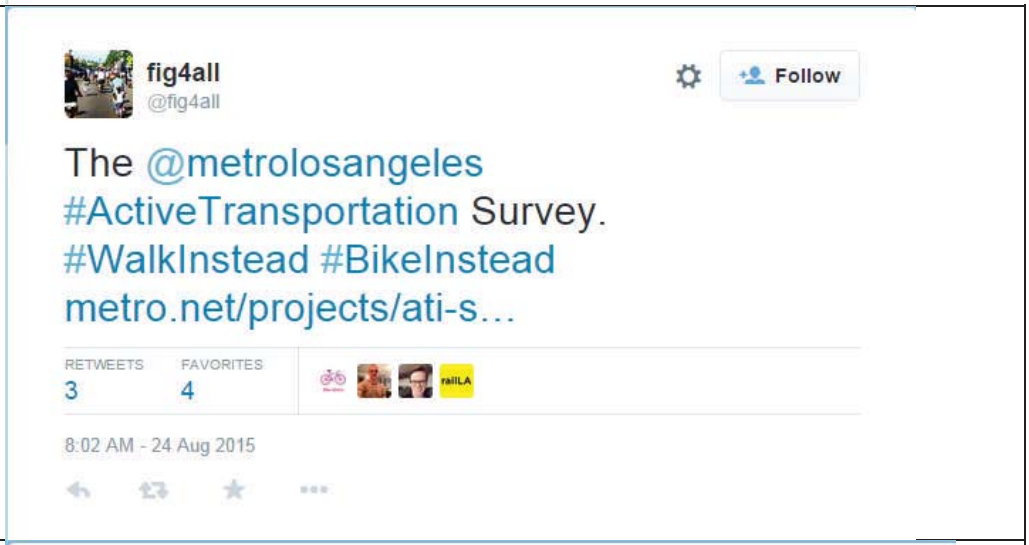
https://twitter.com/LARiverWorks/status/639123521482788864	
https://twitter.com/SCAGnews/status/636932248055488512?lang=en	

https://twitter.com/SCAGnews/status/641643483523100673	
https://twitter.com/WeHoBike/status/633868714488655872?lang=en	
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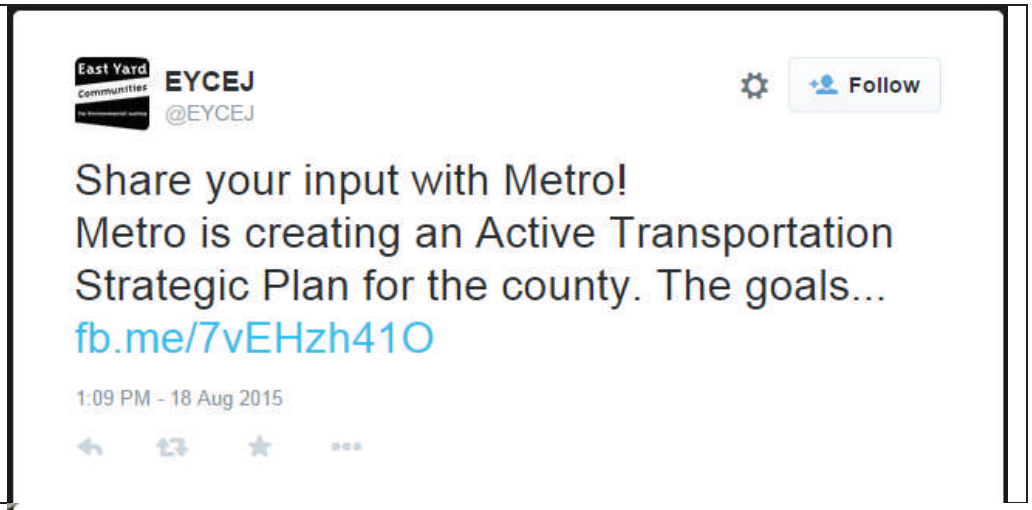
https://twitter.com/EYCEJ/status/633732514910068736	
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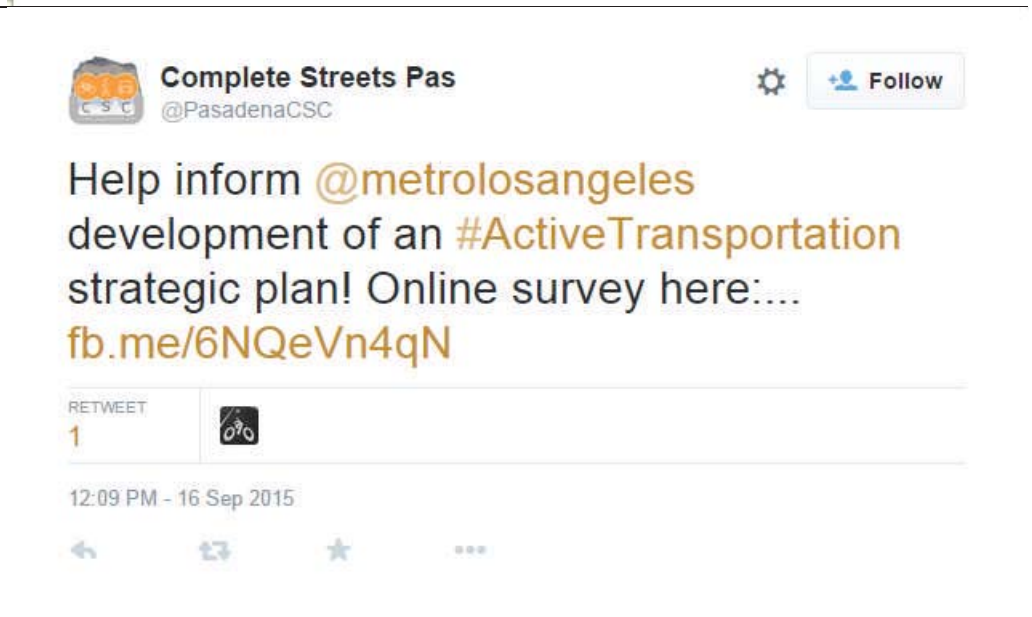
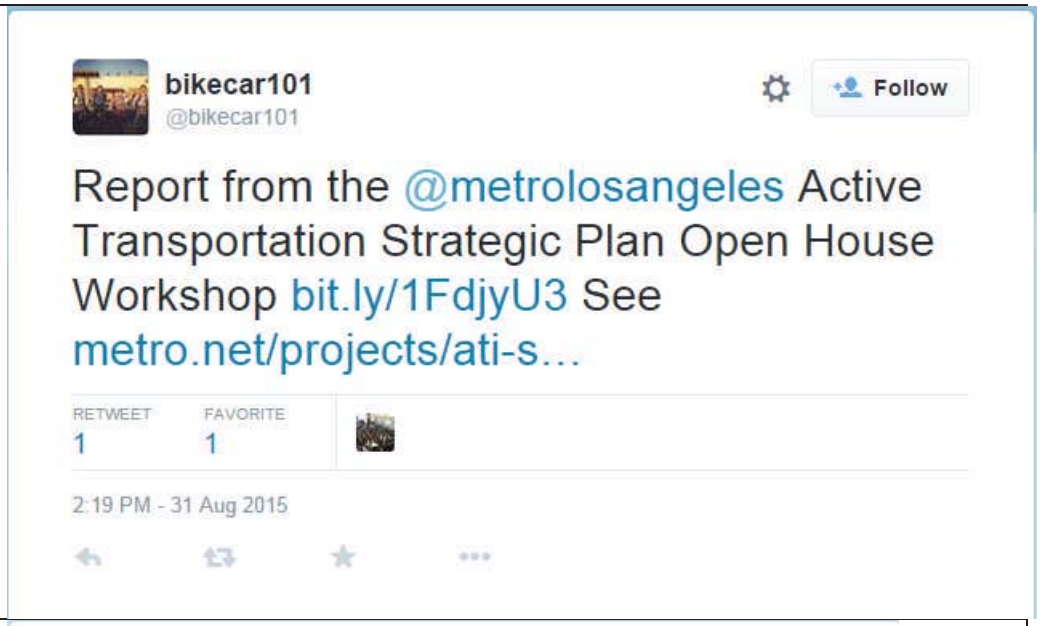
https://twitter.com/PasadenaCSC/status/644226549588340736	

https://twitter.com/bikecar101/status/638461087554269184	
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https://www.facebook.com/EYCEJ/posts/1220969981261955	East Yard Communities for Environmental Justice August 18 · Like Page Share your input with Metro! Metro is creating an Active Transportation Strategic Plan for the county. The goals of the plan are to "identify needs, resources, and strategies to improve and increase walking, bicycling and transit use in Los Angeles County." They are looking to improve and expand upon the 650+ transit locations throughout the County. They are in the very first phase of this plan, and one of the outreach tools is a survey to gather input for improvements, found here: http://www.metro.net/projects/ati-survey/  Active Transportation Improvement/ Participation Survey Participation Survey METRO.NET Like Comment Share David de la Cruz likes this.
https://twitter.com/BikeMetro/status/647579019702050816?lang=en	Bike Metro LA County @BikeMetro Following Only one week left fill out #ActiveTransportortation survey!!! ow.ly/SB9Ct #WalkInstead #BikeInstead 

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APPENDIX

D SELECTION OF 661 STATION AREAS

DRAFT

FEHR PEERS

MEMORANDUM

Date: June 19, 2015
To: Tham Nguyen, Los Angeles County Metropolitan Transportation Authority
From: Matt Benjamin, Jacqui Swartz and Chelsea Richer, Fehr & Peers
Subject: ***Documentation - Development of Station Areas for Analysis***

Ref: LA15-2735

A total of 661 station areas will be analyzed in the Active Transportation Strategic Plan (ATSP). The development of this list of station areas occurred in three primary stages, in response to feedback from the project Technical Advisory Committee (TAC) and discussions by the project team. This memorandum documents the process of compiling the set of 661 station areas for analysis within the ATSP.

The first set of 565 station areas were developed by collapsing every stop or station on a Metro Rail, Metro Rapid, or Metrolink line into a "station area" that captured the stops and stations within 300 feet of an intersection. This enabled stops that were on opposite sides of the street, rail stations that had rapid bus stops nearby, or stations that had more than one portal, to be treated as one area rather than multiple areas with duplicative analysis. Therefore the first set of 565 station areas contains 1,427 stops and stations, but aggregates these spatially into a more meaningful and efficient unit of analysis.

The second set of 92 station areas were developed in response to TAC input, suggesting that the analysis also include high-ridership Metro Local and municipal transit operators in areas where there were no Rapid, Rail, or Metrolink stations to prompt their inclusion into the original set of 565 station areas. Following this suggestion, Metro reached out to municipal transit operators to collect stop-level boardings and alightings. Ultimately, seven municipal transit operators returned data in this format, which enabled comparison across Metro and other providers.

In order to capture all the transit activity occurring at an intersection, a 300 foot buffer around the intersection was created, all bus stops falling within that buffer were assigned to the intersection, and ridership was aggregated across municipal transit providers and Metro Local buses. The intersections that were within a half mile of one of the existing 565 station areas were eliminated to prevent duplicative analysis. The remaining intersections were sorted by ridership, and every intersection with more than 800 daily boardings and alightings were selected, adding 92 new "station areas" for analysis.[i]

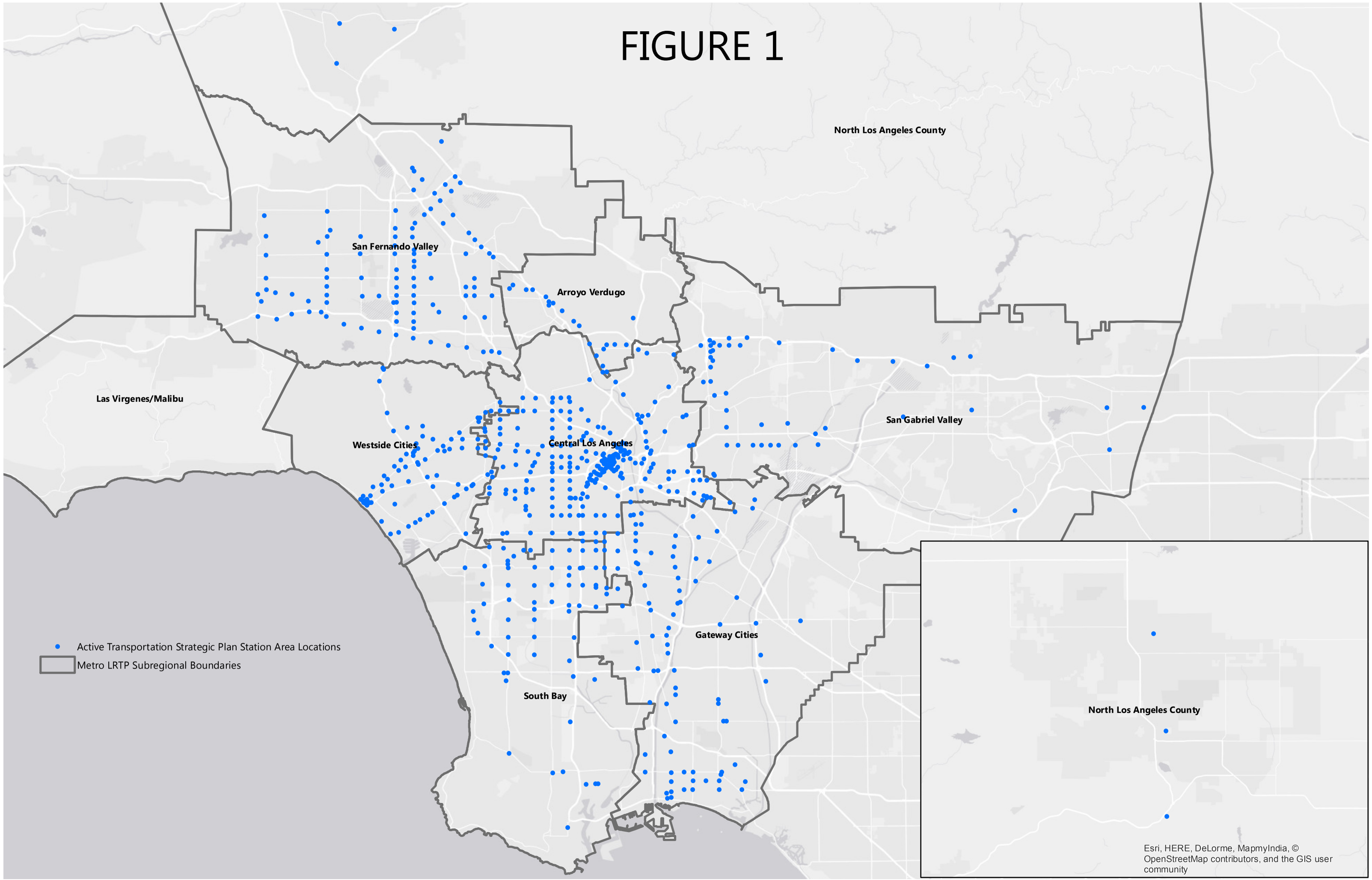
Four (4) future station areas on the Crenshaw light rail line (scheduled to open in 2019) were also added.[ii] The inclusion of these stations was in response to TAC input and subsequent discussion among the project team.

The attached map, Figure 1, illustrates the distribution of our final set of 661 station areas. These station areas are served by Metro Rapid, Metro Local, Metro Rail, Metrolink, Culver CityBus, Santa Monica Big Blue Bus, Gardena Municipal Bus, LADOT Transit, Montebello Bus, and Long Beach Transit lines.

[i] Selecting a threshold of 800 daily boardings and alightings incorporated a geographically diverse set of additional stations, while ensuring a manageable number of additional station areas to be analyzed. This threshold produced a manageable number of additional stations that was within the ridership range of existing station areas and was geographically diverse.

[ii] Six Crenshaw Line stations will be constructed, but two are already included in the data set because they are served by Metro Rapid Bus lines. Therefore only four (4) additional station areas were added to the data set.

FIGURE 1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San Gabriel Valley
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APPENDIX

E STATION TYPOLOGY

DRAFT

FEHR PEERS

MEMORANDUM

Date: February 25, 2016

To: Tham Nguyen, Los Angeles County Metropolitan Transportation Authority

From: Miguel Núñez and Chelsea Richer, Fehr & Peers

Subject: ***Station Typology Development***

Ref: LA15-2735

INTRODUCTION

This memorandum summarizes the approach to developing a typology of station areas to select a diverse set of station areas to comprise the example case studies developed for the Active Transportation Strategic Plan (ATSP). By capturing and representing the wide range of diverse characteristics across the county, the resource will be most useful for numerous communities in Los Angeles County. The approach was informed by previous Metro studies and other studies in Southern California.

The approach considered a set of contexts that ranged from urban to suburban and exurban; very dense population to less dense population; many intersections per square mile to few intersections per square mile. The approach ultimately created 12 categories and categorized the set of 661 station areas included in the ATSP. Twenty example case study sites were selected to obtain coverage across these 12 categories.

SUMMARY OF PREVIOUS STUDIES

Two previous Metro studies include information pertinent to the development of a Station Typology. The Metro Countywide Sustainability Planning Policy (2012) and the Metro First Last Mile Strategic Plan (2014) each used a process for identifying and categorizing the underlying characteristics of a community in order to capture the differences in communities across the county.

The Metro Countywide Sustainability Planning Policy looks at residential density and employment density, creating a grid of nine "place types" based on an assessment of low-medium-high density and centrality. Nine place types were then developed into an "accessibility index" comprised of four clusters, ranging from very dense and very central to not dense and not central. These clusters – named A, B, C, and D – are incorporated as one parameter into the ATSP Station Typology. The Metro First Last Mile Strategic Plan utilizes the Accessibility Clusters and the station classification method to select case studies that encompass the diversity of place within the county.

In addition to these Metro studies, the Smart Growth Place Type, developed by the San Diego Association of Governments (SANDAG) for the Safe Routes to Transit initiative, informed the ATSP Station Typology. The SANDAG process set a minimum threshold for employment and residential density, and also

considered street network density and the type of transit service found in the place type. These additions capture the walkability of the space and the characteristics of the transit type in the area, which are particularly important for those who use active modes to access the area. This method results in seven more descriptive place types: Metropolitan Center, Urban Center, Town Center, Community Center, Rural Village, Special Use Center, and Mixed Use Transit Corridor.

ACTIVE TRANSPORTATION STRATEGIC PLAN APPROACH

The Station Typology for the Active Transportation Strategic Plan is informed by the previous studies described above. Three parameters were chosen based on previous efforts at categorizing "place type" within Southern California:[1]

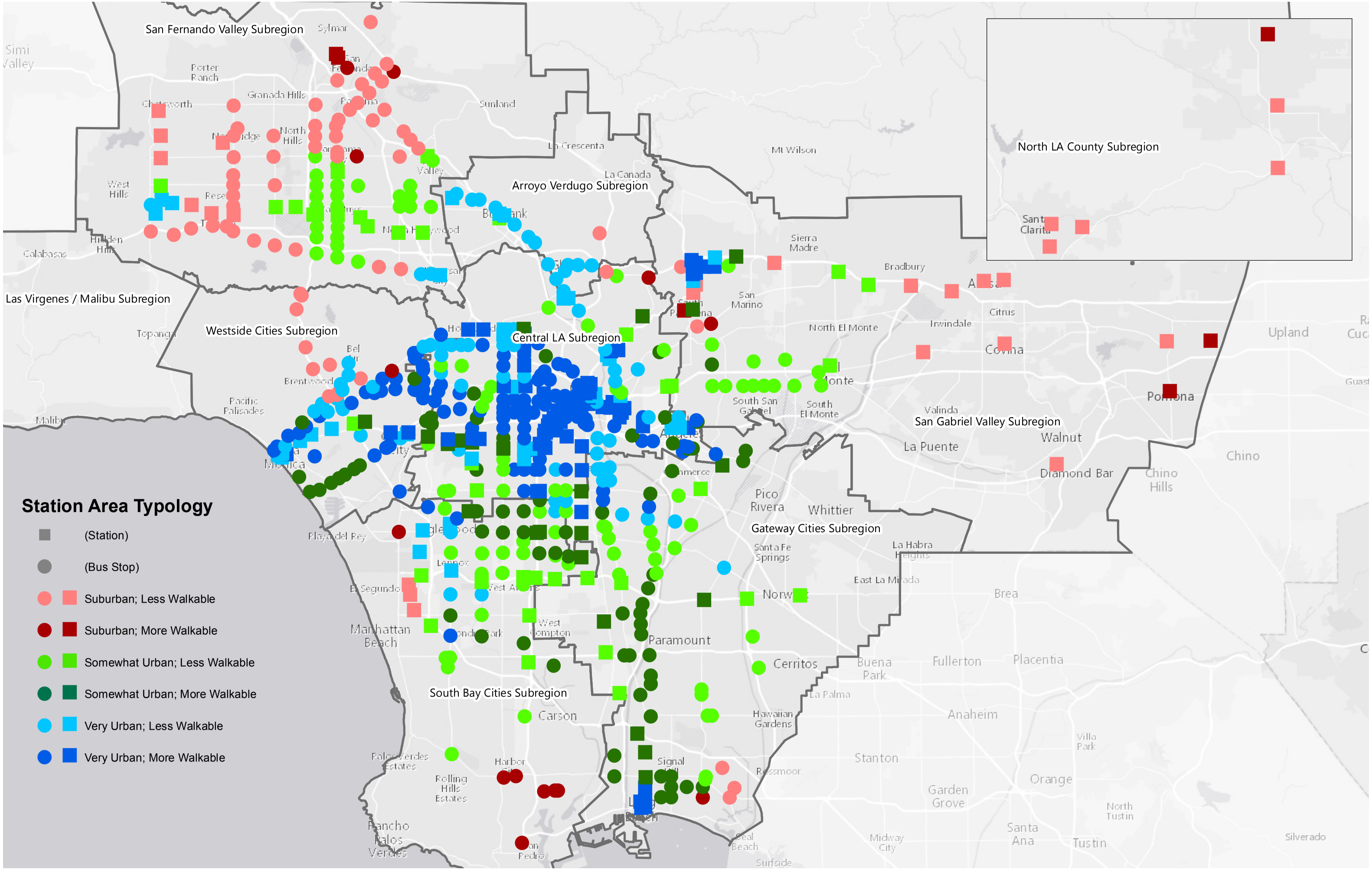
- Accessibility Cluster, based on the Countywide Sustainability Planning Policy, based on residential density and employment centrality
- Station or Bus Stop, based on the station or stop around which the existing conditions analysis was conducted
- Street Grid Density, based on the number of intersections per mile within a half mile of the station or stop around which the existing conditions analysis was conducted

These parameters result in a combined 12 Station Area types. Figure 1 (attached) shows the spatial distribution of these types across the county for the set of 661 Station Areas. Ultimately, the distribution of Station Areas selected as case studies reflect, among other criteria, distribution across the Station Area typology, with at least one case study per type. The distribution of the 661 Station Areas across the 12 types is shown in Table 1, below.

[1] Previous efforts include the Metro Sustainability Planning Policy, the Southern California Association of Governments (SCAG) Urban Footprint project and the Regional Transportation Plan / Sustainable Communities Strategy, the SANDAG Smart Growth project (part of the SANDAG Regional Comprehensive Plan), and the Congress for New Urbanism input to the LEED-Neighborhood Development process. The development of "place types" within each of these projects includes a combination of population and employment density, transit access and quality of transit, and "walkability" or intersection density.

Table 1: Station Areas Distributed Across Typology Categories

	Station		*Bus Stop*		
	Fewer Intersections per Mile	**More Intersections Per Mile**	**Fewer Intersections per Mile**	**More Intersections Per Mile**	**Total**
Low Employment Centrality/Residential Density	26 (3.9%)	6 (0.9%)	63 (9.5%)	14 (2.1%)	109 (16.5%)
Medium Employment Centrality/Residential Density	37 (5.6%)	22 (3.3%)	97 (14.6%)	69 (10.4%)	225 (34.0%)
High Employment Centrality/Residential Density	45 (6.9%)	107 (16.2%)	73 (11.1%)	102 (15.4%)	327 (49.5%)
Total	108 (16.3%)	135 (20.4%)	233 (35.3%)	185 (28.0%)	661 (100.0%)


San Fernando Valley Subregion
North LA County Subregion
Arroyo Verdugo Subregion
Las Virgenes / Malibu Subregion
Westside Cities Subregion
Central LA Subregion
San Gabriel Valley Subregion
Gateway Cities Subregion
South Bay Cities Subregion
Station Area Typology
(Station)
(Bus Stop)
Suburban; Less Walkable
Suburban; More Walkable
Somewhat Urban; Less Walkable
Somewhat Urban; More Walkable
Very Urban; Less Walkable
Very Urban; More Walkable

APPENDIX

F PERFORMANCE METRICS

FEHR PEERS

MEMORANDUM

Date: January 25, 2016

To: Tham Nguyen, Los Angeles County Metropolitan Transportation Authority

From: Matt Benjamin and Chelsea Richer, Fehr & Peers

Subject: ***Goals, Objectives and Performance Metrics***

Ref: LA15-2735

INTRODUCTION

The process of developing performance metrics for the Active Transportation Strategic Plan (ATSP) began in April 2015 in advance of the first project Technical Advisory Committee (TAC) meeting. The project team used the first project TAC meeting as an opportunity to crowd-source ideas about measuring performance from informed and locally-engaged experts. This process commenced with the development of goals and objectives for the ATSP, to ensure that all performance metrics recommendations would be tied to the fundamental purpose of the project.

The summary of recommended metrics for the ATSP is as follows:

- Levels of bicycling and walking to transit
- Levels of overall bicycling and walking
- Levels of facilities installed at and around stations
- Levels of facilities installed across the county
- Funding levels for biking and walking
- Collision statistics
- Levels of bicycle access to origins and destinations
- Levels of greenhouse gas emissions
- Equity

Figure 1 summarizes the goals, objectives, and performance metrics. The remainder of this memorandum thoroughly describes the process of developing these recommended performance metrics, benchmarks, and data sources, including the following sections:

1. Active Transportation Strategic Plan Goals
2. Active Transportation Strategic Plan Objectives
3. Performance Metrics Best Practices
    a. Best Practices
    b. Project TAC Input
4. Recommended Active Transportation Strategic Plan Performance Metrics
5. Conclusion

These sections detail the responsibility of collecting and reporting data, whether the data should be collected at the project level or at the county level, benchmarks, and available data sources.

Finally, there are a number of performance measure initiatives at Metro taking place concurrently to this ATSP effort. These include the performance measures under review for the upcoming Long Range Transportation Plan update, those set forth in the Metro Countywide Sustainability Planning Policy and Implementation Plan and in the Urban Greening Plan, and those to be included in an upcoming Quality of Life project. Where possible, Metro should streamline data collection and avoid duplication of efforts, as many of the types of data recommended for these various efforts are very similar. For example, in the Proposed Performance Metrics Framework for the 2017 LRTP Update (Attachment A of the Metro Board Report from October 12, 2015), recommended performance measures include (among others) fatalities per miles traveled, injuries per miles traveled, linkages to major employment/activity centers, and job accessibility by population subgroup. These are similar to several of the recommended performance metrics in this memorandum, and the ATSP metrics should be aligned with those that are already underway at the point of ATSP adoption.

1. ACTIVE TRANSPORTATION STRATEGIC PLAN GOALS

The Active Transportation Strategic Plan (ATSP) goals were crafted to reflect the overarching vision of the active transportation planning process at Metro. The following goals are a synthesis of those outlined in previous Metro documents that informed the development of the ATSP. Goals were reviewed from the Bicycle Transportation Strategic Plan (2006), the Long Range Transportation Plan (2009), the Countywide Sustainability Planning Policy (2012), the First Last Mile Strategic Plan (2014), the Complete Streets Policy (2014), and the Mobility Matrices (2015).

The six goals of active transportation planning at Metro, based on the above referenced documents, are:

1. Improve access to transit.

2. Establish active transportation as integral elements of the countywide transportation system.

3. Enhance safety, remove barriers to access, or correct unsafe conditions in areas of heavy traffic, high transit use, and dense bicycle and pedestrian activity.

4. Promote clean transportation options to reduce criteria pollutants and greenhouse gas emissions, and improve air quality.

5. Improve public health through traffic safety, reduced exposure to pollutants, and design and infrastructure that encourage residents to use active transportation as a way to integrate physical activity into their daily lives.

6. Foster healthy, equitable, and economically vibrant communities where all residents have greater transportation choices and access to key destinations, such as jobs, medical facilities, schools, and recreation.

Though these goals were developed to specifically relate to active transportation, many of the goals are multi-modal in nature and will result in benefits for all users of the transportation system throughout Los Angeles County.

2. ACTIVE TRANSPORTATION STRATEGIC PLAN OBJECTIVES

The Objectives were crafted to identify the specific ways in which the scope of the ATSP supports the overarching vision outlined by the goals above. Compared to the goals, which are aspirational in nature and may be affected by other Metro efforts or other trends outside Metro's control, the objectives are more specific to the ATSP and the actions that Metro can take related to the implementation of the plan. These objectives speak to all of the goals articulated in Metro's guiding policies and plans and discussed in the above section. The objectives also address the six overarching themes from the recent Mobility Matrices process: mobility, safety, sustainability, accessibility, economy, and state of good repair.

The five objectives of the ATSP are as follows:

1. Identify improvements that increase first and last mile access to transit for people who walk and bicycle.

2. Work with partners to create a regional active transportation network.

3. Develop supporting programs and policies related to education, enforcement, encouragement, and evaluation.

4. Provide guidance for setting regional active transportation policies and guidelines to guide future investments.

5. Develop a funding strategy and explore opportunities to expedite implementation.

3. PERFORMANCE METRICS BEST PRACTICES

As part of the screening process to develop the recommendations included in section four, the project team identified "best practice" performance metrics from two key national sources of guidance: the National Complete Streets Coalition (NCSC) and the National Association of City Transportation Officials (NACTO). These two key sources are both non-profit organizations which advance the practice of multi-modal transportation planning in urban areas. These organizations are discussed in more detail below.

The project team also reviewed benchmarks set by peer agencies in California and across the nation to understand how agencies track progress on each selected metric. Overall, there is no clear "best" set of metrics or benchmarks; the process and selection of metrics and benchmarks is context-sensitive to each location and tied to the overarching organizational goals of the agency. As such, Metro has an opportunity to lead the field in setting robust metrics, ambitious benchmarks, and clear data reporting processes beyond what exists for other major multi-modal transportation agencies across the country.

Best Practices

NCSC is a membership-based program of Smart Growth America, working to advance the ideas of "complete streets" since 2004. The steering committee of NCSC includes transportation and planning

professional organizations, such as the American Public Transportation Association, the American Planning Association and the Institute of Transportation Engineers, civil engineering firms such as AECOM, and other non-profits which support the goals of NCSC, such as the AARP and the National Association of REALTORS.

According to the NCSC's *Measuring Performance*, the following best practices exist for multi-modal performance measurement, and reinforce the process of developing the recommended performance metrics for the ATSP:[1]

- Transportation departments should not be the only ones to track performance. They can collaborate with others to collect and analyze data, including the health department and public health organizations; law enforcement agencies and emergency responders; and advocacy groups, including those focused on equity.
- Use rates, rather than straight numbers, to show changes in safety and mode shift over time.
- Establish baseline data so as to better illustrate successes.
- Be clear about measuring outputs (such as blocks of sidewalks built or repaired) versus outcomes (such as increases in walking rates).
- Create metrics that are specific to community goals.

NACTO is a non-profit facilitating information sharing and the exchange of ideas among representatives from major cities, with the goal of raising the state of the practice for street design and transportation. NACTO member cities include Los Angeles along with 20 other major US Cities, as well as Santa Monica as an affiliate member. The Board is primarily made up of public officials in transportation agencies within the member cities. Two NACTO design guides have been published: the Urban Street Design Guide (2013) and the Urban Bikeway Design Guide (2012). The Federal Highway Administration issued a memorandum in August 2013 officially supporting the Urban Bikeway Design Guide.

NACTO offers guidance on the development of performance metrics that are broader than the traditional Level of Service metric used to measure the performance of projects for vehicles.[2] Recognizing that collecting and reporting data on each and every metric listed below would be a time-consuming undertaking, NACTO suggests the following performance metrics as a broad range of options that an agency could use to balance the way performance of streets is measured in order to capture the effects on all modes. Depending on the context, agencies may find it desirable to collect and report all metrics, one or more metrics per mode, or one or more metrics per organizational goal (i.e., safety, efficiency, cost-effectiveness).

PEDESTRIANS

- Safety: Rate of crashes, injuries, and fatalities (typically based on Police Records)
- Pedestrian LOS (Highway Capacity Manual)
- Public Life Surveys
- WalkScore (walkability ratings)
- Pedestrian Environmental Quality Index (PEQI)
- Minimal delay at crossings

[1] These best practices are taken directly from the Smart Growth America guidance, found here: http://www.smartgrowthamerica.org/complete-streets/implementation/measuring-performance.
[2] These are taken directly from NACTO guidance. More information can be found here: http://nacto.org/usdg/design-controls/performance-measures/.

- Foot traffic volume

BICYCLISTS
- Safety: Crash records, injuries, and fatalities
- Bicycle LOS (Highway Capacity Manual)
- Travel Time and Delay
- Bicycle Environmental Quality Index
- Bicycle counts

VEHICLES
- LOS
- Travel Time
- Corridor Impact Analysis
- Safety: Crash records, injuries, and fatalities

TRANSIT
- On-time performance
- Average speed
- Farebox recovery ratio
- Ridership per revenue hour
- Operating cost per hour

FREIGHT
- Freight delivered by hour
- Time spent loading/unloading

EMERGENCY VEHICLES
- Response time

SUSTAINABILITY
- LEED Neighborhood Development
- STARS
- GreenRoads

MULTI-MODAL
- Multi-Modal LOS
- Retail revenues and business growth

Some of these metrics presented by NACTO are not relevant to the specific aims of the ATSP. Therefore, this list is provided as the best practice and cutting edge for measuring street performance and are not included wholesale into the list of recommended performance metrics.

The development of benchmarks was also informed by a review of peer agencies' metrics and benchmarks to understand how "cutting edge" regions are collecting and reporting data, and measuring progress. The following review highlights some examples of benchmarking by other cities and regions in the US, but is not an exhaustive list of every performance metric benchmarking effort. The project team aimed to provide a representative sample which shows trends and the diversity in methods used by agencies at different levels.

A national review showed substantial variety between the Portland region, Seattle region, and New York City in how performance metrics are measured and tracked.

- Oregon Metro[3,4] in the Portland region sets explicit modeshare benchmarks overall, as well as varied by area of the region.
    - Triple walking and biking mode share from 2010 levels by 2040 (8.8% for walking in 2010 to a target of 27% in 2040; 3.1% for biking in 2010 to a target of 9% in 2040)
    - Mode share goals are also broken down by community type, including 60-70% non-drive alone modal target in the Central City, 45-55% non-drive alone modal target in Regional centers, town centers, and main streets, and 40-45% non-drive alone modal target in Industrial areas and neighborhoods.
    - Increase by 50% the miles of sidewalk, bikeways and trails compared to 2010 levels by 2040.
- Puget Sound Regional Council[5] and the City of Seattle[6] both set benchmarks based on modeshare, funding, and access.
    - The Puget Sound Regional Council Transportation 2040 Plan includes the target of increasing non-motorized mode share from 10.2% (2010) to 12.3% (2040).
    - The Puget Sound Regional Council Transportation 2040 Plan also includes the target of increasing walk trips by 62%, increasing bike trips by 58%, and increasing walk to transit trips by 160% (over 2006 levels).
    - The City of Seattle Bicycle Master Plan includes the target of funding bicycle projects and programming commensurate to the US Census "Commute by Bike" mode share percentage.
    - The City of Seattle Bicycle Master Plan aims to quadruple bicycle ridership between 2014 and 2030, based on annual counts.
    - The City of Seattle Bicycle Master Plan also states the target of having 100% of households within ¼ of a mile of an "all ages and abilities" bicycle facility by 2035.
- New York City[7,8] sets seasonal modeshare targets for cycling.
    - Double "In-Season Cycling Indicator" by 2020.

[3] http://www.oregonmetro.gov/sites/default/files/RTP-2014-final.PDF
[4] http://www.oregonmetro.gov/sites/default/files/2014_regional_active_transportation_plan_0.pdf
[5] http://www.psrc.org/assets/10541/T2040Update2014AppendixH.pdf?processed=true
[6] http://www.seattle.gov/transportation/docs/bmp/apr14/SBMP_21March_FINAL_full%20doc.pdf
[7] http://www.nyc.gov/html/onenyc/downloads/pdf/publications/OneNYC.pdf
[8] http://www.nyc.gov/html/dot/downloads/pdf/2014-isci.pdf

Within other California regions, the Bay Area Metropolitan Transportation Commission (MTC), the San Francisco Municipal Transportation Agency (SFMTA), and the City of San Luis Obispo have set benchmarks through various planning efforts that relate to modeshare and plan implementation.

- Bay Area MTC[9,10] sets benchmarks in their Plan Bay Area, including the following:
    - Increase the average daily time walking or biking per person for transportation by 70 percent (for an average of 15 minutes per person per day) by 2040
    - Increase non-auto mode share by 10 percentage points (to 26 percent of trips) by 2040
- SFMTA[11] sets benchmarks in their 2013 Bicycle Strategy for modeshare:
    - 8-10% bicycle mode share by 2018 (compared to 3.5% in 2010)
    - 19-21% walking mode share by 2018 (compared to 17.5% in 2010)
- San Luis Obispo[12] sets benchmarks in their General Plan Circulation Element for modeshare:
    - 50 percent motor vehicles by 2035
    - 12 percent transit by 2035
    - 20 percent bicycles by 2035
    - 18 percent walking, car pools, and other forms by 2035
- San Luis Obispo allocates general fund transportation spending at the same ratio as the modeshare target desired.

Locally, the City of Los Angeles[13] and the City of Santa Monica[14] have both set modeshare benchmarks as part of each city's Sustainable City Plan.

- The City of LA set a target of 35% combined walk, bike, and transit modeshare by 2025
- The City of Santa Monica includes three key benchmarks:
    - 25% combined walk, bike and transit trips by 2020
    - 15% combined walk and bike trips by 2020

[9] http://planbayarea.org/pdf/final_supplemental_reports/FINAL_PBA_Performance_Assessment_Report.pdf
[10] http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/5-Performance.pdf
[11] https://www.sfmta.com/sites/default/files/BicycleStrategyFinal_0.pdf
[12] http://www.slo2035.com/images/pubdraft/luce_volume_II_appendix_b_draft_circulation_element_2014_06_web.pdf
[13] https://performance.lacity.org/en/stat/goals/yn4r-yz4i/3uu3-hzur/3qct-edmu
[14] http://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable-City-Plan.pdf

- 100% bicycle network build-out by 2020

Finally, major US cities are increasingly signing on to the Vision Zero safety targets of eliminating traffic fatalities and severe injuries, along different time horizons. These cities include, among others, the City of Los Angeles, New York City, Seattle, and San Diego, as well as Chicago which has stated similar safety goals (though not officially branded "Vision Zero").

Technical Advisory Committee Input

The project Technical Advisory Committee (TAC) was asked for input on performance metrics and benchmarks during the first TAC meeting on April 2, 2015. The project team received 14 responses from TAC members, including a variety of metrics and suggested ways to measure change over time. The project team reviewed and discussed all suggestions from the TAC; many of the ideas are reflected in the list of recommended metrics discussed above. Some reasons why suggested metrics were eliminated include:

- Metric not relevant to the goals or objectives of the ATSP
- Data are not readily available
- Metric is duplicative of other (included) metrics.

Appendix 1 (Excel document) lists the full set of performance metrics and benchmarks suggested by the TAC. Many of the metrics suggested by the TAC have been used in previous studies in the region to assess progress towards achieving the active transportation-related goals and objectives. In Appendix 1, the "Previous Use" column identifies other local, regional, and national documents and plans that have used the metric listed or a similar metric.

4. RECOMMENDED ACTIVE TRANSPORTATION STRATEGIC PLAN PERFORMANCE METRICS

Progress toward the goals and objectives discussed above can be measured by process-oriented performance metrics, which capture how much of a particular activity is being undertaken, and by outcome-oriented metrics, which capture the broader effects of these activities and typically cannot be attributed exclusively to the actions of Metro or the implementing agencies. Both types of metrics are important to track so that Metro has an understanding of the broader trends that may influence or be influenced by Metro's active transportation investments.

Figure 2 shows the relationship of the goals and objectives discussed above to the summarized categories of recommended performance metrics.

Table 1 includes the full set of performance metrics recommended for the ATSP, based upon the goals and objectives described above, and informed by the project TAC input and best practices described in the following sections (3b and 3c). Additionally, based on discussions among the project team, these recommended metrics were screened from an extensive array of options based on the following guiding principles:

- Applicability: Can the Metro ATSP projects and programs be realistically expected to "move the needle" using the proposed metric?
- Replicability: Will the metric be relevant to all project types in all contexts in Los Angeles County?
- Accuracy: Is the metric able to isolate project-specific outcomes from more general trends?

- Availability of data: Does it currently exist? If not, how will it be collected?
- Efficiency: What combination of metrics provides the most impactful set of information, while keeping the number of performance measures to a minimum?
- Level of Effort: What is the level of effort required to collect data and complete analysis?
- Agency Capacity: Who will be expected to conduct each method of evaluation?
- Equity: Does the metric improve our understanding of whether the plan is being implemented in an equitable way across the county?

The first set of metrics would be collected and maintained by Metro, in partnership with local jurisdictions. These metrics are optimal for the county level, so Metro can understand the overall, county-wide effects of the active transportation investments. Tracking at the county-wide level is critical as some metrics may see an exponential effect – where the observed increases or decreases are greater than the sum of the activity occurring right around the project location.

The benchmarks are set as an opportunity for Metro to be a leader in the field of active transportation planning. They were developed after a review of benchmarks set by other regions and cities, as described above, and are specifically tied to the context of Los Angeles County in terms of our current baseline. The horizon year of 2025 was selected for most of the potential benchmarks because the ten-year horizon is generally the time frame in which active transportation plans are refreshed and updated, and would be a good point to revisit benchmarks.

Table 1: Recommended Performance Metrics					
Performance Metric	**Project Level**	**County-Wide Level**	**Initial Baseline (2015)**	**Potential Benchmark**	**Available Data Sources**
Collected by Metro					
Number and percent bicycle-to-transit[15]		X	4% (Rail) 3% (Bus)	100% increase by 2025	Metro On-Board Surveys
Number and percent walk-to-transit		X	68% Walk (Rail) 4% Skated (Rail) 83% Walk (Bus) 2% Skated (Bus)	10 percentage point increase (walk to rail) by 2025 5 percentage point increase by 2025 (walk to bus)	Metro On-Board Surveys
Percent trips completed by bicycle in Los Angeles County		X	1.4% Bike	100% increase by 2025	2009 National Household Travel Survey
Percent trips completed by walking in Los Angeles County		X	17.6% Walk	50% increase by 2025	2009 National Household Travel Survey
Means of transportation to work		X	3.8% Combined Bike + Walk (0.9% Bicycle, 2.9% Walk)	100% increase by 2025 in combined Bike + Walk	2013 American Communities Survey 5-Year Estimate

[15] Because the percent of transit riders who walk or bike to transit is already very high, it is critical to also collect the number of riders who walk or bike to a station, so that net ridership increases are captured in addition to any increase in walk-or-bike-to-transit ridership.

Table 1: Recommended Performance Metrics					
Performance Metric	**Project Level**	**County-Wide Level**	**Initial Baseline (2015)**	**Potential Benchmark**	**Available Data Sources**
Miles of installed bicycle facilities, by class		X	2014: Class IV = 6 miles (2015) Class III = 614 miles Class II = 1,046 miles Class I = 341 miles	100% increase per year for class IV 10% increase per year for each class I, II and III	Self-reported by jurisdictions
Metro capital funding allocated to bicycle/pedestrian improvements		X	To Be Determined	To Be Determined	Self-tracked/self-reported by Metro
Percent of bicycle/pedestrian improvement projects funded by Metro capital funding that benefits a disadvantaged community[16]		X	n/a	50% per funding cycle	Self-tracked/self-reported by Metro
Number of station areas receiving Metro capital funding or external funding allocated to bicycle/pedestrian access improvement treatments		X	To Be Determined	100% of 661 station areas served by 2030	Self-tracked/self-reported by Metro
Number of station areas with completed bicycle/pedestrian access improvement treatments funded by Metro capital funding or external funding		X	To Be Determined	100% of 661 station areas served by 2035	Self-tracked/self-reported by Metro
External (non-Metro) discretionary grant funding won within LA County for active transportation projects		X	To Be Determined	Proportional to LA County population or greater	Self-reported by jurisdictions and implementing agencies
Collision statistics (number by mode, percent by mode for severe injury and fatal crashes)		X	2012: Total Collisions=51,207 Total Injuries=50,622 Total Severe Injuries=2,300 Total Fatalities=585 Ped Collisions=5,024 Ped Injuries=4,821 Ped Fatalities=203 Bike Collisions=4,955 Bike Injuries=4,926 Bike Fatalities=29	Support benchmark of local municipalities with Vision Zero Policies Decrease overall collisions by 10% per year countywide	State-Wide Integrated Traffic Reporting System (SWITRS)
Greenhouse gas reductions	X	X	To Be Determined	Evaluate against forecasts and inputs	SCAG, Self-reported by implementing agencies

[16] Disadvantaged Community is characterized as one of the following: The median household income is less than 80% of the statewide median based on the most current census tract level data from the American Community Survey, an area identified as among the most disadvantaged 25% in the state of California according to the CalEPA and based on the latest version of the California Communities Environmental Health Screening Tool (CalEnviroScreen) scores, or at least 75% of public school students in the project area are eligible to receive free or reduced-price meals under the National School Lunch Program.

Table 1: Recommended Performance Metrics					
Performance Metric	**Project Level**	**County-Wide Level**	**Initial Baseline (2015)**	**Potential Benchmark**	**Available Data Sources**
Collected by Implementing Agencies					
Number and percent of people who walk	X		Baseline set by implementing agency before project implementation	100% increase by 2025	Self-reported by implementing agencies via pedestrian counts, Baseline available in the ATSP existing conditions analysis
Number and percent of people who bike	X		Baseline set by implementing agency before project implementation	100% increase by 2025	Self-reported by implementing agencies via bicycle counts, Baseline available in the ATSP existing conditions analysis
Number of households within ¼ mile of a low-stress bicycle facility	X		Baseline set by implementing agency before project implementation	Increase by 20% per year, countywide	US Census American Communities Survey, Self-reported by implementing agencies, Baseline available in the ATSP existing conditions analysis
Number of jobs within ¼ mile of a low-stress bicycle facility	X		Baseline set by implementing agency before project implementation	Increase by 20% per year, countywide	US Census American Communities Survey, Self-reported by implementing agencies, Baseline available in the ATSP existing conditions analysis
Number of destinations (schools, medical, parks, recreational, etc.) within ¼ mile of a low-stress bicycle facility	X		Baseline set by implementing agency before project implementation	Increase by 20% per year, countywide	Self-reported by implementing agencies; Baseline available in the ATSP existing conditions analysis

5. CONCLUSION

The recommendations presented above are the result of a process that included internal goal-setting and identification of project objectives, input from the project TAC, review of national best practices and regional examples of performance measuring, and screening through an additional set of guiding principles. The recommended metrics are anticipated to support and align with other Metro performance measurement efforts, and to demonstrate the impact of Metro's active transportation investments on all modes of travel across the county.

APPENDIX

G COST ESTIMATES

DRAFT

FEHR PEERS

MEMORANDUM

Date: February 25, 2016

To: Tham Nguyen, Los Angeles County Metropolitan Transportation Authority

From: Miguel Núñez and Chelsea Richer, Fehr & Peers

Subject: ***High-Level Cost Estimate Documentation***

Ref: LA15-2735

INTRODUCTION

This memorandum documents the approach to developing a high-level cost estimate for the Active Transportation Strategic Plan (ATSP). This cost estimate includes four components, providing a comprehensive estimate of the cost to building out a high quality active transportation environment throughout Los Angeles County. The cost parameters are based on other projects in Southern California, or national sources where local costs were not available. All costs are presented in a low-medium-high range, based on the ranges presented in the source documents or information provided by Metro. Where cost ranges were unavailable, the high cost was assumed to be 523% of the reported cost, and the low cost was assumed to be 6.2% of the reported cost. These factors are based on the range of actual construction costs for Class I bikeways projects provided by Metro in an email dated November 4, 2015. This range was then applied to any projects where a range was unavailable in the original source documentation, with the exception of the walkshed and bikeshed estimates. The high value and low value for the walkshed and bikeshed estimates are based on average deviations from the "Medium Estimate" in SANDAG's Safe Routes to Transit report.

A summary of the four categories' costs can be found in the accompanying attachments to this document. The four categories included in the high-level cost estimate are as follows:

1. **Walkshed**: This category includes all pedestrian treatments within the walksheds (½ mile radius, taking into account the network and the slope) of each station area included in the 661 ATSP station areas. Six sets of treatments were specified, based on the typology of station types developed in the previous stage of the project. The six sets include different existing conditions, and therefore different costs.
2. **Bikeshed**: This category includes all bicycle treatments within the bikesheds (3 mile radius, taking into account the network and the slope) of each station area included in the 661 ATSP station areas. Six sets of treatments were specified, based on the typology of station types developed in the previous stage of the project. The six sets include different existing conditions, and therefore different costs.

3. **Regional Active Transportation Network**: This category includes all facilities on the ATSP Regional Active Transportation Network, including Class I, II+, III+, and IV bikeways and mixed use paths for people on foot or people on bike. The mileage of this network was derived from the Draft Regional Active Transportation Network as of 2/4/16, and includes all unbuilt facilities on the Regional Active Transportation Network.
4. **Local Bicycle/Pedestrian Networks**: This category includes all potential additional bicycle facilities that would not be included in the bikeshed or Regional Active Transportation Network, but could be included in local plans, and all additional pedestrian treatments that would not be included in the walkshed but could be implemented by cities or included in local pedestrian plans. For the local bike network, the mileage of this network was derived by taking all the network miles within Los Angeles County minus the bikeshed area included in the category above. Using the Santa Monica bike network as a model it was assumed that a percent of these streets would include Class II and Class III facilities as part of the local networks, and applying a per-mile cost for Class II and Class III facilities. For the local pedestrian network, the total walkshed square mileage was subtracted from the square mileage of the urbanized area in Los Angeles County, and the per-square-mile costs associated with a basic treatment package of pedestrian improvements was applied.

The categories and cost parameters are described more fully, below. Any of the per-unit costs, assumptions, or cost parameters described below can be easily adjusted to reflect different assumptions or priorities for the ATSP, for Metro, or for LA County.

WALKSHED

This category includes all pedestrian treatments within the walksheds (½ mile radius, taking into account the network and the slope) of each station area included in the 661 ATSP station areas. Six sets of treatments were specified, based on the typology of station types developed in the previous stage of the project and an associated Case Study. Each type includes different existing conditions which results in different levels of treatments and cost.

Table 1 shows the walkshed and bikeshed projects assumed within each station typology, based on the cost estimates associated with the example Case Studies produced for the ATSP. These projects are used at differing levels of intensity (more or fewer, depending on the existing conditions) for each of the different types. The walkshed and bikeshed total costs include hard and soft costs, including a construction contingency, planning/design/environmental costs, and costs for construction engineering.

Table 1: Walkshed and Bikeshed Projects for Each Station Typology

Walkshed	Bikeshed
Signal modification	Bike Parking
Ped Scramble Phase	Bike Wayfinding Signs
Countdown Pedestrian Signalhead	One-way Cycle Track (striped buffer)
High-Visibility Crosswalks	One-way Cycle Track (raised median)
Directional Curb Ramps	Class II Bike Lanes
Sidewalk Reconstruction	Class III Sharrows
Curb/Gutter Reconstruction	Bike signals
Street Trees	Bicycle detection
Pedestrian Street Lighting	Bicycle and pedestrian bridge

Pedestrian Wayfinding Signs	
Curb Extensions	
Traffic signal	
Bus shelter, bench, trash receptacles	
Median refuge islands	
Neighborhood traffic circles	
Speed treatments	
Diverters	
Chicanes	
Bollards	
Stop signs	

The total walkshed square mileage of each station type was derived using a Geographic Information System (GIS) analysis, and an associated cost was applied. These planning level costs were derived from counting the number and types of treatments suggested in the Case Study for each type within the typology. The per-unit costs were based on estimates provided by Michael Baker International, provided with sources as an attachment to this document.

Overall, the treatment package applied to the more suburban stations cost more per square mile than the treatment package applied to the more urban stations, due to the lack of existing infrastructure. For the purposes of this high-level cost estimate, treatment packages were assumed to be the same for fixed-guideway stations and non-fixed-guideway stops within the same type of walkability and suburban/urban categorization. Table 2 shows the six categories and the number of station areas within each category. This categorization also applies to the bikeshed process described in the next section. For any overlapping square mileage – space that was in two separate station areas' walksheds – the cost per square mile was based on the "somewhat urban, more walkable" and "very urban, less walkable" station types because together, these encompass one third of all the station areas, and the associated Case Studies have the same cost estimates.

Table 2: Station Areas Distributed Across Typology Categories	
Very urban, more walkable	209
Very urban, less walkable	118
Somewhat urban, more walkable	91
Somewhat urban, less walkable	134
Suburban, more walkable	20
Suburban, less walkable	89
Total	661

The total square mileage of the walksheds by typology category, and the per unit cost parameters can be found in the Walkshed attachments to this document,

BIKESHED

This category includes all bicycle treatments within the bikesheds (3 mile radius, taking into account the network and the slope) of each station area included in the 661 ATSP station areas. Six sets of treatments were specified, based on the typology of station types developed in the previous stage of the project and

an associated Case Study. Each type includes different existing conditions which results in different levels of treatments and cost.

Using GIS, the total bikeshed square mileage of each station type was derived, and an associated cost was applied. These planning level costs were derived from counting the number and types of treatments suggested in the Case Study for each type within the typology. The per-unit costs were based on estimates provided by Michael Baker International, provided with sources as an attachment to this document.

Overall, the treatment package applied to the Somewhat Urban, More Walkable stations cost the least per square mile, and the treatment package applied to the Very Urban, More Walkable stations cost the most per square mile, generally due to the need for more intense infrastructure such as a pedestrian/bicycle bridge. For the purposes of this high-level cost estimate, treatment packages were assumed to be the same for fixed-guideway stations and non-fixed-guideway stops within the same type of walkability and suburban/urban categorization. For any overlapping square mileage – space that was in two separate station areas' bikesheds – the cost per square mile was based on the "very urban, less walkable" because the associated Case Study has the median cost of all six station area types.

The total square mileage of the bikesheds by typology category, and the per unit cost parameters can be found in the Bikeshed attachments to this document,

REGIONAL ACTIVE TRANSPORTATION NETWORK

This category includes all facilities on the ATSP Regional Active Transportation Network, including Class I, II+, III+, and IV bikeways and mixed use paths for people on foot or people on bike. The mileage of this network was derived from the Draft Regional Active Transportation Network as of 2/4/16, and includes all unbuilt facilities on the Regional Active Transportation Network. Table 3 provides a summary of the relevant bike facility class types.

Table 3: Bicycle Facility Class Types for Regional Network

Class I: Off-street bicycle-only or off-street mixed-use path for people walking or biking	

Class II+: Buffered bike lane. Traditional Class II bicycle lane with additional painted buffer to the left and/or the right of the bike lane between travel lanes and/or parking lanes provide additional protection and visibility for people on bicycles.	
Class III+: Bicycle Boulevard. Painted sharrows and bicycle route signage, combined with additional traffic calming elements, such as curb extensions, chicanes, traffic diverters, bicycle-friendly traffic signals, and other tools decrease the speed of travel and provide comfortable, safe accommodation for people on bicycles.	 

Class IV: Protected bike lane (cycletrack). Vertical elements added to an additional buffer, such as a curb, planters, or parked cars, provide additional protection for people on bicycles.	

As of 2/4/16, the Regional Active Transportation Network was categorized into "Off-Street" (Class I), "Dedicated On-Street" (enhanced on-street facilities including Class II+, Class IV), and "Shared On-Street" (Class III+). The per-mile cost applied to Off-Street facilities is based on a list of projects provided by Metro for Class I facilities. The per-mile cost applied to Dedicated and Shared On-Street facilities is based on the Gateway Cities COG Active Transportation Plan and recently-constructed Class II+, Class III+ and Class IV facilities, enhanced facilities, averaged together to create a per-mile cost for enhanced On-Street facilities. Where a construction year was available, costs were escalated 3% per year based on Metro guidance in order to capture the annual increase in costs associated with construction and implementation. There are also about 15 miles of facilities that are currently under study by Metro and are not added into the total cost of the Regional Active Transportation Network, though the mileage is itemized in the Unbuilt Regional Network tab.

These cost parameters and the total mileage of the Regional Active Transportation Network by class type are itemized in the Unbuilt Regional Active Transportation Network attachment to this document.

LOCAL BICYCLE/PEDESTRIAN NETWORKS

This category includes all potential additional bicycle facilities that would not be included in the bikeshed or Regional Network, but could be included in local plans. This includes Class II or Class III facilities (i.e., not part of the Regional Network) outside the bikeshed area. It also includes all potential additional pedestrian improvements that would not be included in the walkshed, but could be implemented by local cities or included in local pedestrian plans.

For the bicycle network, using GIS, the mileage of this network was derived by taking all the network miles within Los Angeles County minus the bikeshed area included in the category above, applying a "local network factor" which assumes a percent of these streets would include Class II and Class III facilities as part of the local networks, and applying a per-mile cost for Class II and Class III facilities.

The "local network factor" was based on the City of Santa Monica's bicycle network, one of the more comprehensive bicycle facility networks in the county. The total percentage of streets covered by Class II and Class III facilities in Santa Monica is 7% each. Therefore, 14% of the LA County street mileage outside

the bikesheds was assumed to be the basis for future local bike networks, with 7% taking the Class II per-mile cost, and 7% taking the Class III per-mile cost.

For the pedestrian network, using GIS, the total square mileage of urbanized Los Angeles County was derived. The non-overlapping square mileage of all the walksheds for the 661 transit station areas included in the ATSP was then subtracted from this total. Based on the Case Study cost estimates, the cost of the least-intensive pedestrian treatment package was then applied, reflecting the role of Metro in providing pedestrian infrastructure in the areas with lowest-intensity land use, the development context present in much of the area that falls outside the walksheds.

The per-mile cost parameters and the "local bicycle/pedestrian network factor" calculations are shown in the attachments to this document.

SUMMARY

A summary of all the information described above is shown in the attachment to this document, along with all supporting documentation including per-unit costs, walkshed and bikeshed mileage, Regional Network mileage, and local bicycle and pedestrian network mileage.

Cost Category	Total Costs		
	Low	Medium	High
Walkshed	$1,376,971,892	$1,858,261,700	$2,397,157,544
Bikeshed	$5,569,152,365	$7,515,725,189	$9,695,285,494
Regional Network	$94,282,934	$1,516,222,738	$7,933,342,350
Local Bike/Ped Networks	$6,924,501,334	$9,378,166,026	$12,241,273,915
TOTAL	$13,964,908,500	$20,268,375,700	$32,267,059,300

Description	Cost		
	Low	**Medium**	**High**
First Last Mile Access to Major Transit Stops/Stations	$347,306,213	$468,699,344	$604,622,152
Regional Active Transportation Network	$4,714,147	$75,811,137	$396,667,117
Local Active Transportation Networks	$346,225,067	$468,908,301	$612,063,696
Total Annual Capital Cost - Active Transportation Network	**$698,245,426**	**$1,013,418,783**	**$1,613,352,965**
Metro Bike Services - Annual Capital Costs	$1,068,100	$2,205,900	$3,496,500
Metro Bike Services - Annual Operations and Maintenance	$13,635,000	$26,921,000	$40,016,000
Education & Encouragement Programs - Annual Costs	$24,357,776	$30,010,552	$35,734,663
Total Annual Cost Range	**$737,306,302**	**$1,072,556,235**	**$1,692,600,128**

Total overall cost for buildout	*$13,964,908,525*	*$20,268,375,652*	*$32,267,059,303*
	20 year buildout	$1,013,418,782.62	
	40 year buildout	$506,709,391.31	

Walkshed				Total Cost			Cost per Station		
	Typology	**# of Stations**	**Total Area (sq mi)**	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**
1	Very urban, more walkable	209	24	$135,520,052	$182,888,059	$235,925,596	$648,421	$875,062	$1,128,831
2	Very urban, less walkable	118	21	$117,882,211	$159,085,305	$205,220,044	$999,002	$1,348,181	$1,739,153
3	Somewhat urban, more walkable	91	25	$136,483,142	$184,187,776	$237,602,231	$1,499,815	$2,024,041	$2,611,014
4	Somewhat urban, less walkable	134	35	$214,431,352	$289,381,042	$373,301,544	$1,600,234	$2,159,560	$2,785,832
5	Suburban, more walkable	20	6	$41,590,411	$56,127,410	$72,404,359	$2,079,521	$2,806,371	$3,620,218
6	Suburban, less walkable	89	23	$501,634,888	$676,970,160	$873,291,506	$5,636,347	$7,606,406	$9,812,264
Overlap			41	$229,429,835	$309,621,910	$399,412,264			
TOTAL		661	175	**$1,376,971,892**	**$1,858,261,662**	**$2,397,157,544**	**$2,083,165**	**$2,811,288**	**$3,626,562**

Bikeshed				Total Cost			Cost per Station		
	Typology	**# of Stations**	**Total Area (sq mi)**	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**
1	Very urban, more walkable	209	6	$129,920,474	$175,331,274	$226,177,343	$621,629	$838,906	$1,082,188
2	Very urban, less walkable	118	9	$80,963,040	$109,261,863	$140,947,803	$686,127	$925,948	$1,194,473
3	Somewhat urban, more walkable	91	20	$50,279,585	$67,853,691	$87,531,262	$552,523	$745,645	$961,882
4	Somewhat urban, less walkable	134	55	$266,067,674	$359,065,688	$463,194,737	$1,985,580	$2,679,595	$3,456,677
5	Suburban, more walkable	20	24	$217,848,180	$293,992,146	$379,249,868	$10,892,409	$14,699,607	$18,962,493
6	Suburban, less walkable	89	53	$637,879,219	$860,835,653	$1,110,477,993	$7,167,182	$9,672,311	$12,477,281
Overlap			452	$4,186,194,192	$5,649,384,875	$7,287,706,489			
TOTAL		661	619	**$5,569,152,365**	**$7,515,725,189**	**$9,695,285,494**	**$8,425,344**	**$11,370,235**	**$14,667,603**

Unbuilt Regional Active Transportation Network

Class Type	Unbuilt Mileage	Total Costs		
		Low	Medium	High
Off-Street (Class I)	297.20	$48,760,159.66	$781,984,441	$4,093,276,059
Dedicated On-Street (Class II+, Class IV)	1385.87	$42,821,325.16	$690,666,535	$3,612,185,977
Shared On-Street (Class III+)	55.33	$2,701,449.23	$43,571,762	$227,880,314
Metro Under Study	14.91	$0.00	$0.00	$0.00
TOTAL		$94,282,934	$1,516,222,738	$7,933,342,350

Local Bicycle and Pedestrian Networks

Class Type	Total Local Mileage	Unit	Santa Monica Factor	Total Costs		
				Low	Medium	High
Class II	12,117	lane miles	7%	$1,515,070	$24,436,605	$127,803,446
Class III	12,117	lane miles	7%	$742,104	$11,969,420	$62,600,069
Pedestrian treatments outside walkshed	1,262	square miles	n/a	$6,922,244,160	$9,341,760,000	$12,050,870,400
TOTAL				$6,924,501,334	$9,378,166,026	$12,241,273,915

Metro Active Transportation Strategic Plan

CASE STUDY: Type 1, Local and Rapid Bus Stop

UNIT COST SUMMARY

Michael Baker INTERNATIONAL

Last updated2/22/2016

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
1	**PEDESTRIAN**				
1.1	New Traffic Signal - Single Post	EA	$6,000		$0
1.2	New Traffic Signal - Post & Mast Arm	EA	$25,000		$0
1.3	New Traffic Signal	EA	$250,000	1	$250,000
1.4	Signal Modification (protected lefts)	EA	$40,000	2	$80,000
1.5	RRFB Flashing Beacon (Solar)	EA	$15,000	4	$60,000
1.6	Pedestrian Scramble Phase	EA	$50,000	2	$100,000
1.7	Pedestrian (Countdown) Signal	EA	$900	128	$115,200
1.8	Pedestrian Push Button with Sign (includes new post)	EA	$1,400	6	$8,400
1.9	Pedestrian Push Button with Sign (attach to exist pole)	EA	$700		$0
1.10	Crosswalk (Striped Continental)	EA	$4,000	52	$208,000
1.11	Crosswalk (In-Pavement Flashing Markers)	EA	$35,000	4	$140,000
1.12	Thermoplastic Pavement Marking (Symbols, Arrows, Letters, etc.)	EA	$250	22	$5,500
1.13	Curb Ramp (incl detectable warning surface)	EA	$5,000	185	$926,400
1.14	Remove Existing Tree	EA	$900	8	$7,200
1.15	Construct Sidewalk	SF	$10	48,600	$486,000
1.16	Construct Curb and Gutter	LF	$24	1,000	$24,000
1.17	Remove Concrete Curb and Gutter	LF	$16	1,000	$16,000
1.18	Remove Sidewalk	SF	$3	5,000	$15,000
1.19	Trees / Landscape	Block	$40,000	6	$240,000
1.20	60 Day Maintenance	EA	$3,500	3	$10,500
1.21	Street Lighting	EA	$3,000	74	$222,000
1.22	Wayfinding Signs	EA	$900	64	$57,600
1.23	Bus Shelter	EA	$12,000	26	$312,000
1.24	Bench	EA	$1,600	20	$32,000
1.25	Trash Receptacle	EA	$1,400	46	$64,400
				Pedestrian Subtotal	**$3,380,000**

2	**BICYCLE**				
2.1	Bicycle Parking (Inverted-U rack)	EA	$500	64	$32,000
2.2	Bicycle Parking (7-bicycle wave rack)	EA	$750	16	$12,000
2.3	Wayfinding Signs	EA	$900	48	$43,200
2.4	One-way Cycle Track w/5' raised median - includes Pavement reconstruction and C&G, signing, and striping	Mile	$1,710,000		$0
2.5	One-way Cycle Track w/3' striped buffer - includes Pavement reconstruction and C&G, signing, and striping	Mile	$890,000	1	$890,000

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
2.6	One-way Cycle Track w/5' raised median - includes signing and striping (no pavement reconstruction)	Mile	$930,000	2	$1,860,000
2.7	One-way Cycle Track w/3' striped buffer - includes signing and striping (no pavement reconstruction)	Mile	$100,000	1	$100,000
2.8	Class II Bike Lanes (Signing, Striping, & Pavement Reconstruction)	Mile	$655,000	1	$655,000
2.9	Class II Bike Lanes (Signing and Striping Only)	Mile	$56,000	2	$112,000
2.10	Class III Bike Route (Signing and Striping Only)	Mile	$17,000	9.0	$153,000
2.11	Bicycle Signal (added to exist signalized intersection)	EA	$25,000	16	$400,000
2.12	Bicycle Signal (added to exist unsignalized intersection)	EA	$250,000		$0
2.13	Bicycle Loop Detection	EA	$2,500	32	$80,000
2.14	Bicycle Push Button (attach to exist pole)	EA	$700	36	$25,200
2.15	Bicycle and Pedestrian Bridge	SF	$250	35,700	$8,925,000
				Bicycle Subtotal	**$13,290,000**

3	TRAFFIC CALMING				
3.1	Median Refuge Islands	SF	$15	6,400	$96,000
3.2	Curb Extensions (w/directional curb ramps)	EA	$30,000	8	$240,000
3.3	Neighborhood Traffic Circles	EA	$25,000	16	$400,000
3.4	Speed Treatments (humps)	EA	$2,500	27	$67,500
3.5	Diverters	EA	$20,000	2	$40,000
3.6	Chicanes	EA	$10,000		$0
3.7	Bollards (Metal)	EA	$800	32	$25,600
3.8	Stop Sign	EA	$300	8	$2,400
				Traffic Calming Subtotal	**$870,000**

	- Subtotal -	**$17,540,000**

4	MOBILIZATION				
4.1	Mobilization (10% Items 1 to 3)				$1,750,000
				PROJECT SUBTOTAL (Items 1 to 4)	**$19,290,000**

5	OTHER PROJECT SUPPORT				
5.1	**R/W Allowance (20% Project Subtotal)**				**$3,850,000**
5.2	**Utility Relocations (10% Project Subtotal)**				**$1,920,000**
5.3	**Contingency (25% Project Subtotal + R/W + Utilities)**				**$6,260,000**
5.4	**Planning/Design/Environmental/CM (25% Project Subtotal)**				**$4,820,000**
5.5	**NPDES/Water Quality/BMPs (3% Project Subtotal)**				**$570,000**
				Other Project Support Subtotal	**$17,420,000**

6	PROJECT TOTAL (per square mile)	$36,700,000

Assuming Traffic Calming (3) cost evenly split for Pedestrian (1) and Bicycle (2), and other Project Support (5) cost is split proportionally:

7	PEDESTRIAN GRAND TOTAL (per square mile)	$7,700,000

8	BICYCLE GRAND TOTAL (per square mile)	$29,000,000

Metro Active Transportation Strategic Plan

CASE STUDY: Type 2, Multi-Agency Bus Stop

UNIT COST SUMMARY

Michael Baker INTERNATIONAL

Last updated2/22/2016

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
1	**PEDESTRIAN**				
1.1	New Traffic Signal - Single Post	EA	$6,000		$0
1.2	New Traffic Signal - Post & Mast Arm	EA	$25,000		$0
1.3	New Traffic Signal	EA	$250,000	0	$0
1.4	Signal Modification (protected lefts)	EA	$40,000	2	$80,000
1.5	RRFB Flashing Beacon (Solar)	EA	$15,000	2	$30,000
1.6	Pedestrian Scramble Phase	EA	$50,000	9	$450,000
1.7	Pedestrian (Countdown) Signal	EA	$900	256	$230,400
1.8	Pedestrian Push Button with Sign (includes new post)	EA	$1,400	2	$2,800
1.9	Pedestrian Push Button with Sign (attach to exist pole)	EA	$700	4	$2,800
1.10	Crosswalk (Striped Continental)	EA	$4,000	88	$352,000
1.11	Crosswalk (In-Pavement Flashing Markers)	EA	$35,000	4	$140,000
1.12	Thermoplastic Pavement Marking (Symbols, Arrows, Letters, etc.)	EA	$250	24	$6,000
1.13	Curb Ramp (incl detectable warning surface)	EA	$5,000	188	$940,000
1.14	Remove Existing Tree	EA	$900	2	$1,800
1.15	Construct Sidewalk	SF	$10	5,200	$52,000
1.16	Construct Curb and Gutter	LF	$24	500	$12,000
1.17	Remove Concrete Curb and Gutter	LF	$16	500	$8,000
1.18	Remove Sidewalk	SF	$3	1,000	$3,000
1.19	Trees / Landscape	Block	$40,000	12	$480,000
1.20	60 Day Maintenance	EA	$3,500	6	$21,000
1.21	Street Lighting	EA	$3,000	27	$81,000
1.22	Wayfinding Signs	EA	$900	32	$28,800
1.23	Bus Shelter	EA	$12,000	15	$180,000
1.24	Bench	EA	$1,600	40	$64,000
1.25	Trash Receptacle	EA	$1,400	55	$77,000
				Pedestrian Subtotal	**$3,240,000**

2	**BICYCLE**				
2.1	Bicycle Parking (Inverted-U rack)	EA	$500	32	$16,000
2.2	Bicycle Parking (7-bicycle wave rack)	EA	$750	24	$18,000
2.3	Wayfinding Signs	EA	$900	48	$43,200
2.4	One-way Cycle Track w/5' raised median - includes Pavement reconstruction and C&G, signing, and striping	Mile	$1,710,000		$0
2.5	One-way Cycle Track w/3' striped buffer - includes Pavement reconstruction and C&G, signing, and striping	Mile	$890,000	2	$1,780,000

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
2.6	One-way Cycle Track w/5' raised median - includes signing and striping (no pavement reconstruction)	Mile	$930,000	2	$1,860,000
2.7	One-way Cycle Track w/3' striped buffer - includes signing and striping (no pavement reconstruction)	Mile	$100,000	3	$300,000
2.8	Class II Bike Lanes (Signing, Striping, & Pavement Reconstruction)	Mile	$655,000		$0
2.9	Class II Bike Lanes (Signing and Striping Only)	Mile	$56,000	3.0	$168,000
2.10	Class III Bike Route (Signing and Striping Only)	Mile	$17,000	4.0	$68,000
2.11	Bicycle Signal (added to exist signalized intersection)	EA	$25,000	16	$400,000
2.12	Bicycle Signal (added to exist unsignalized intersection)	EA	$250,000		$0
2.13	Bicycle Loop Detection	EA	$2,500	32	$80,000
2.14	Bicycle Push Button (attach to exist pole)	EA	$700	28	$19,600
2.15	Bicycle and Pedestrian Bridge	SF	$250		$0
2.16	Bike Share Station	EA	$40,000	9	$360,000
				Bicycle Subtotal	**$5,110,000**

3	**TRAFFIC CALMING**				
3.1	Median Refuge Islands	SF	$15	6,400	$96,000
3.2	Curb Extensions (w/directional curb ramps)	EA	$30,000	16	$480,000
3.3	Neighborhood Traffic Circles	EA	$25,000	12	$300,000
3.4	Speed Treatments (humps)	EA	$2,500	18	$45,000
3.5	Diverters	EA	$20,000	16	$320,000
3.6	Chicanes	EA	$10,000		$0
3.7	Bollards (Metal)	EA	$800	32	$25,600
3.8	Stop Sign	EA	$300	6	$1,800
				Traffic Calming Subtotal	**$1,270,000**

	- Subtotal -	**$9,620,000**

4	**MOBILIZATION**				
4.1	Mobilization (10% Items 1 to 3)				$960,000
				PROJECT SUBTOTAL (Items 1 to 4)	**$10,580,000**

5	**OTHER PROJECT SUPPORT**				
5.1	R/W Allowance (20% Project Subtotal)				$2,110,000
5.2	Utility Relocations (10% Project Subtotal)				$1,050,000
5.3	Contingency (25% Project Subtotal + R/W + Utilities)				$3,430,000
5.4	Planning/Design/Environmental/CM (25% Project Subtotal)				$2,640,000
5.5	NPDES/Water Quality/BMPs (3% Project Subtotal)				$310,000
				Other Project Support Subtotal	**$9,540,000**

6	**PROJECT TOTAL (per square mile)**	**$20,100,000**

Assuming Traffic Calming (3) cost evenly split for Pedestrian (1) and Bicycle (2), and other Project Support (5) cost is split proportionally:

7	**PEDESTRIAN GRAND TOTAL (per square mile)**	**$7,600,000**

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
8	BICYCLE GRAND TOTAL (per square mile)				$12,500,000

Metro Active Transportation Strategic Plan

CASE STUDY: Type 3, Metro Rail (above ground)

UNIT COST SUMMARY

Michael Baker INTERNATIONAL

Last updated2/22/2016

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
1	**PEDESTRIAN**				
1.1	New Traffic Signal - Single Post	EA	$6,000		$0
1.2	New Traffic Signal - Post & Mast Arm	EA	$25,000		$0
1.3	New Traffic Signal	EA	$250,000	1	$250,000
1.4	Signal Modification (protected lefts)	EA	$40,000	4	$160,000
1.5	RRFB Flashing Beacon (Solar)	EA	$40,000	4	$160,000
1.6	Pedestrian Scramble Phase	EA	$50,000	2	$100,000
1.7	Pedestrian (Countdown) Signal	EA	$900	128	$115,200
1.8	Pedestrian Push Button with Sign (includes new post)	EA	$1,400	2	$2,800
1.9	Pedestrian Push Button with Sign (attach to exist pole)	EA	$700	2	$1,400
1.10	Crosswalk (Striped Continental)	EA	$4,000	28	$112,000
1.11	Crosswalk (In-Pavement Flashing Markers)	EA	$35,000	4	$140,000
1.12	Thermoplastic Pavement Marking (Symbols, Arrows, Letters, etc.)	EA	$250	22	$5,500
1.13	Curb Ramp (incl detectable warning surface)	EA	$5,000	88	$440,000
1.14	Remove Existing Tree	EA	$900	2	$1,800
1.15	Construct Sidewalk	SF	$10	11,600	$116,000
1.16	Construct Curb and Gutter	LF	$24	500	$12,000
1.17	Remove Concrete Curb and Gutter	LF	$16	500	$8,000
1.18	Remove Sidewalk	SF	$3	1,000	$3,000
1.19	Trees / Landscape	Block	$40,000	17	$680,000
1.20	60 Day Maintenance	EA	$3,500	9	$29,750
1.21	Street Lighting	EA	$3,000	92	$276,000
1.22	Wayfinding Signs	EA	$900	40	$36,000
1.23	Bus Shelter	EA	$12,000	16	$192,000
1.24	Bench	EA	$1,600	30	$48,000
1.25	Trash Receptacle	EA	$1,400	46	$64,400
				Pedestrian Subtotal	**$2,950,000**

2	**BICYCLE**				
2.1	Bicycle Parking (Inverted-U rack)	EA	$500	32	$16,000
2.2	Bicycle Parking (7-bicycle wave rack)	EA	$750	16	$12,000
2.3	Wayfinding Signs	EA	$900	56	$50,400
2.4	One-way Cycle Track w/5' raised median - includes Pavement reconstruction and C&G, signing, and striping	Mile	$1,710,000		$0
2.5	One-way Cycle Track w/3' striped buffer - includes Pavement reconstruction and C&G, signing, and striping	Mile	$890,000		$0

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
2.6	One-way Cycle Track w/5' raised median - includes signing and striping (no pavement reconstruction)	Mile	$930,000		$0
2.7	One-way Cycle Track w/3' striped buffer - includes signing and striping (no pavement reconstruction)	Mile	$100,000		$0
2.8	Class II Bike Lanes (Signing, Striping, & Pavement Reconstruction)	Mile	$655,000		$0
2.9	Class II Bike Lanes (Signing and Striping Only)	Mile	$56,000	3.0	$168,000
2.10	Class III Bike Route (Signing and Striping Only)	Mile	$17,000	12.0	$204,000
2.11	Bicycle Signal (added to exist signalized intersection)	EA	$25,000	16	$400,000
2.12	Bicycle Signal (added to exist unsignalized intersection)	EA	$250,000	1	$250,000
2.13	Bicycle Loop Detection	EA	$2,500	32	$80,000
2.14	Bicycle Push Button (attach to exist pole)	EA	$700	8	$5,600
2.15	Bicycle and Pedestrian Bridge	SF	$250		$0
				Bicycle Subtotal	**$1,190,000**

3	**TRAFFIC CALMING**				
3.1	Median Refuge Islands	SF	$15	6,400	$96,000
3.2	Curb Extensions (w/directional curb ramps)	EA	$30,000	18	$540,000
3.3	Neighborhood Traffic Circles	EA	$25,000	8	$200,000
3.4	Speed Treatments (humps)	EA	$2,500	18	$45,000
3.5	Diverters	EA	$20,000	4	$80,000
3.6	Chicanes	EA	$10,000	2	$20,000
3.7	Bollards (Metal)	EA	$800	32	$25,600
3.8	Stop Sign	EA	$300	6	$1,800
				Traffic Calming Subtotal	**$1,010,000**

	- Subtotal -	**$5,150,000**

4	**MOBILIZATION**				
4.1	Mobilization (10% Items 1 to 3)				$510,000
				PROJECT SUBTOTAL (Items 1 to 4)	**$5,660,000**

5	**OTHER PROJECT SUPPORT**				
5.1	R/W Allowance (20% Project Subtotal)				$1,130,000
5.2	Utility Relocations (10% Project Subtotal)				$560,000
5.3	Contingency (25% Project Subtotal + R/W + Utilities)				$1,830,000
5.4	Planning/Design/Environmental/CM (25% Project Subtotal)				$1,410,000
5.5	NPDES/Water Quality/BMPs (3% Project Subtotal)				$160,000
				Other Project Support Subtotal	**$5,090,000**

6	**PROJECT TOTAL (per square mile)**	**$10,800,000**

Assuming Traffic Calming (3) cost evenly split for Pedestrian (1) and Bicycle (2), and other Project Support (5) cost is split proportionally:

7	**PEDESTRIAN GRAND TOTAL (per square mile)**	**$7,400,000**

8	**BICYCLE GRAND TOTAL (per square mile)**	**$3,400,000**

Metro Active Transportation Strategic Plan

CASE STUDY: Type 4, BRT and local bus

UNIT COST SUMMARY

Michael Baker INTERNATIONAL

Last updated2/22/2016

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
1	**PEDESTRIAN**				
1.1	New Traffic Signal - Single Post	EA	$6,000		$0
1.2	New Traffic Signal - Post & Mast Arm	EA	$25,000		$0
1.3	New Traffic Signal	EA	$250,000	1	$250,000
1.4	Signal Modification (protected lefts)	EA	$40,000	4	$160,000
1.5	RRFB Flashing Beacon (Solar)	EA	$15,000		$0
1.6	Pedestrian Scramble Phase	EA	$50,000		$0
1.7	Pedestrian (Countdown) Signal	EA	$900	128	$115,200
1.8	Pedestrian Push Button with Sign (includes new post)	EA	$1,400	4	$5,600
1.9	Pedestrian Push Button with Sign (attach to exist pole)	EA	$700		$0
1.10	Crosswalk (Striped Continental)	EA	$4,000	44	$176,000
1.11	Crosswalk (In-Pavement Flashing Markers)	EA	$35,000	3	$105,000
1.12	Thermoplastic Pavement Marking (Symbols, Arrows, Letters, etc.)	EA	$250	12	$3,000
1.13	Curb Ramp (incl detectable warning surface)	EA	$5,000	138	$690,800
1.14	Remove Existing Tree	EA	$900	8	$7,200
1.15	Construct Sidewalk	SF	$10	100,200	$1,002,000
1.16	Construct Curb and Gutter	LF	$24	7,000	$168,000
1.17	Remove Concrete Curb and Gutter	LF	$16	7,000	$112,000
1.18	Remove Sidewalk	SF	$3	10,000	$30,000
1.19	Trees / Landscape	Block	$40,000	8	$320,000
1.20	60 Day Maintenance	EA	$3,500	4	$14,000
1.21	Street Lighting	EA	$3,000	86	$258,000
1.22	Wayfinding Signs	EA	$900	64	$57,600
1.23	Bus Shelter	EA	$12,000	16	$192,000
1.24	Bench	EA	$1,600	8	$12,800
1.25	Trash Receptacle	EA	$1,400	24	$33,600
				Pedestrian Subtotal	**$3,710,000**

2	**BICYCLE**				
2.1	Bicycle Parking (Inverted-U rack)	EA	$500	64	$32,000
2.2	Bicycle Parking (7-bicycle wave rack)	EA	$750	4	$3,000
2.3	Wayfinding Signs	EA	$900	32	$28,800
2.4	One-way Cycle Track w/5' raised median - includes Pavement reconstruction and C&G, signing, and striping	Mile	$1,710,000		$0
2.5	One-way Cycle Track w/3' striped buffer - includes Pavement reconstruction and C&G, signing, and striping	Mile	$890,000	2	$1,780,000

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
2.6	One-way Cycle Track w/5' raised median - includes signing and striping (no pavement reconstruction)	Mile	$930,000		$0
2.7	One-way Cycle Track w/3' striped buffer - includes signing and striping (no pavement reconstruction)	Mile	$100,000		$0
2.8	Class II Bike Lanes (Signing, Striping, & Pavement Reconstruction)	Mile	$655,000		$0
2.9	Class II Bike Lanes (Signing and Striping Only)	Mile	$56,000	2	$112,000
2.10	Class III Bike Route (Signing and Striping Only)	Mile	$17,000	4	$68,000
2.11	Bicycle Signal (added to exist signalized intersection)	EA	$25,000	16	$400,000
2.12	Bicycle Signal (added to exist unsignalized intersection)	EA	$250,000	1	$250,000
2.13	Bicycle Loop Detection	EA	$2,500	32	$80,000
2.14	Bicycle Push Button (attach to exist pole)	EA	$700	32	$22,400
2.15	Bicycle and Pedestrian Bridge	SF	$250		$0
				Bicycle Subtotal	**$2,780,000**

3	TRAFFIC CALMING				
3.1	Median Refuge Islands	SF	$15	12,800	$192,000
3.2	Curb Extensions (w/directional curb ramps)	EA	$30,000	4	$120,000
3.3	Neighborhood Traffic Circles	EA	$25,000	8	$200,000
3.4	Speed Treatments (humps)	EA	$2,500	27	$67,500
3.5	Diverters	EA	$20,000	2	$40,000
3.6	Chicanes	EA	$10,000		$0
3.7	Bollards (Metal)	EA	$800	88	$70,400
3.8	Stop Sign	EA	$300	6	$1,800
				Traffic Calming Subtotal	**$690,000**

	- Subtotal -	**$7,180,000**

4	MOBILIZATION				
4.1	Mobilization (10% Items 1 to 3)				$710,000
				PROJECT SUBTOTAL (Items 1 to 4)	**$7,890,000**

5	OTHER PROJECT SUPPORT				
5.1	R/W Allowance (20% Project Subtotal)				$1,570,000
5.2	Utility Relocations (10% Project Subtotal)				$780,000
5.3	Contingency (25% Project Subtotal + R/W + Utilities)				$2,560,000
5.4	Planning/Design/Environmental/CM (20% Project Subtotal)				$1,570,000
5.5	NPDES/Water Quality/BMPs (3% Project Subtotal)				$230,000
				Other Project Support Subtotal	**$6,710,000**

6	**PROJECT TOTAL (per square mile)**	**$14,600,000**

Assuming Traffic Calming (3) cost evenly split for Pedestrian (1) and Bicycle (2), and other Project Support (5) cost is split proportionally:

7	**PEDESTRIAN GRAND TOTAL (per square mile)**	**$8,200,000**

8	**BICYCLE GRAND TOTAL (per square mile)**	**$6,500,000**

Metro Active Transportation Strategic Plan

CASE STUDY: Type 5, Metrolink

UNIT COST SUMMARY

Michael Baker INTERNATIONAL

Last updated2/22/2016

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
1	**PEDESTRIAN**				
1.1	New Traffic Signal - Single Post	EA	$6,000		$0
1.2	New Traffic Signal - Post & Mast Arm	EA	$25,000		$0
1.3	New Traffic Signal	EA	$250,000	1	$250,000
1.4	Signal Modification (protected lefts)	EA	$40,000	2	$80,000
1.5	RRFB Flashing Beacon (Solar)	EA	$15,000	6	$90,000
1.6	Pedestrian Scramble Phase	EA	$50,000	4	$200,000
1.7	Pedestrian (Countdown) Signal	EA	$900	128	$115,200
1.8	Pedestrian Push Button with Sign (includes new post)	EA	$1,400	2	$2,800
1.9	Pedestrian Push Button with Sign (attach to exist pole)	EA	$700	2	$1,400
1.10	Crosswalk (Striped Continental)	EA	$4,000	50	$200,000
1.11	Crosswalk (In-Pavement Flashing Markers)	EA	$35,000	6	$210,000
1.12	Thermoplastic Pavement Marking (Symbols, Arrows, Letters, etc.)	EA	$250	30	$7,500
1.13	Curb Ramp (incl detectable warning surface)	EA	$5,000	164	$820,000
1.14	Remove Existing Tree	EA	$900	2	$1,800
1.15	Construct Sidewalk	SF	$10	15,200	$152,000
1.16	Construct Curb and Gutter	LF	$24	500	$12,000
1.17	Remove Concrete Curb and Gutter	LF	$16	500	$8,000
1.18	Remove Sidewalk	SF	$3	2,000	$6,000
1.19	Trees / Landscape	Block	$40,000	32	$1,280,000
1.20	60 Day Maintenance	EA	$3,500	16	$56,000
1.21	Street Lighting	EA	$3,000	108	$324,000
1.22	Wayfinding Signs	EA	$900	40	$36,000
1.23	Bus Shelter	EA	$12,000	12	$144,000
1.24	Bench	EA	$1,600	40	$64,000
1.25	Trash Receptacle	EA	$1,400	52	$72,800
				Pedestrian Subtotal	**$4,130,000**

2	**BICYCLE**				
2.1	Bicycle Parking (Inverted-U rack)	EA	$500	32	$16,000
2.2	Bicycle Parking (7-bicycle wave rack)	EA	$750	22	$16,500
2.3	Wayfinding Signs	EA	$900	48	$43,200
2.4	One-way Cycle Track w/5' raised median - includes Pavement reconstruction and C&G, signing, and striping	Mile	$1,710,000		$0
2.5	One-way Cycle Track w/3' striped buffer - includes Pavement reconstruction and C&G, signing, and striping	Mile	$890,000	1.0	$890,000

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
2.6	One-way Cycle Track w/5' raised median - includes signing and striping (no pavement reconstruction)	Mile	$930,000	2	$1,860,000
2.7	One-way Cycle Track w/3' striped buffer - includes signing and striping (no pavement reconstruction)	Mile	$100,000	8	$800,000
2.8	Class II Bike Lanes (Signing, Striping, & Pavement Reconstruction)	Mile	$655,000	1	$655,000
2.9	Class II Bike Lanes (Signing and Striping Only)	Mile	$56,000	3.0	$168,000
2.10	Class III Bike Route (Signing and Striping Only)	Mile	$17,000	2.0	$34,000
2.11	Bicycle Signal (added to exist signalized intersection)	EA	$25,000	16	$400,000
2.12	Bicycle Signal (added to exist unsignalized intersection)	EA	$250,000	1	$250,000
2.13	Bicycle Loop Detection	EA	$2,500	48	$120,000
2.14	Bicycle Push Button (attach to exist pole)	EA	$700	32	$22,400
2.15	Bicycle and Pedestrian Bridge	SF	$250		$0
				Bicycle Subtotal	**$5,280,000**

3	TRAFFIC CALMING				
3.1	Median Refuge Islands	SF	$15	6,400	$96,000
3.2	Curb Extensions (w/directional curb ramps)	EA	$30,000	20	$600,000
3.3	Neighborhood Traffic Circles	EA	$25,000	8	$200,000
3.4	Speed Treatments (humps)	EA	$2,500	27	$67,500
3.5	Diverters	EA	$20,000	12	$240,000
3.6	Chicanes	EA	$10,000	8	$80,000
3.7	Bollards (Metal)	EA	$800	32	$25,600
3.8	Stop Sign	EA	$300	6	$1,800
				Traffic Calming Subtotal	**$1,310,000**

	- Subtotal -	**$10,720,000**

4	MOBILIZATION				
4.1	Mobilization (10% Items 1 to 3)				$1,070,000
				PROJECT SUBTOTAL (Items 1 to 4)	**$11,790,000**

5	OTHER PROJECT SUPPORT				
5.1	R/W Allowance (20% Project Subtotal)				$2,350,000
5.2	Utility Relocations (10% Project Subtotal)				$1,170,000
5.3	Contingency (25% Project Subtotal + R/W + Utilities)				$3,820,000
5.4	Planning/Design/Environmental/CM (25% Project Subtotal)				$2,940,000
5.5	NPDES/Water Quality/BMPs (3% Project Subtotal)				$350,000
				Other Project Support Subtotal	**$10,630,000**

6	PROJECT TOTAL (per square mile)	$22,400,000

Assuming Traffic Calming (3) cost evenly split for Pedestrian (1) and Bicycle (2), and other Project Support (5) cost is split proportionally:

7	PEDESTRIAN GRAND TOTAL (per square mile)	$10,000,000

8	BICYCLE GRAND TOTAL (per square mile)	$12,400,000

Metro Active Transportation Strategic Plan

CASE STUDY: Type 6, Metrolink

UNIT COST SUMMARY

Michael Baker INTERNATIONAL

Last updated2/22/2016

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
1	**PEDESTRIAN**				
1.1	New Traffic Signal - Single Post	EA	$6,000		$0
1.2	New Traffic Signal - Post & Mast Arm	EA	$25,000		$0
1.3	New Traffic Signal	EA	$250,000	8	$2,000,000
1.4	Signal Modification (protected lefts)	EA	$40,000	2	$80,000
1.5	RRFB Flashing Beacon (Solar)	EA	$15,000	4	$60,000
1.6	Pedestrian Scramble Phase	EA	$50,000		$0
1.7	Pedestrian (Countdown) Signal	EA	$900	8	$7,200
1.8	Pedestrian Push Button with Sign (includes new post)	EA	$1,400	2	$2,800
1.9	Pedestrian Push Button with Sign (attach to exist pole)	EA	$700		$0
1.10	Crosswalk (Striped Continental)	EA	$4,000	56	$224,000
1.11	Crosswalk (In-Pavement Flashing Markers)	EA	$35,000	6	$210,000
1.12	Thermoplastic Pavement Marking (Symbols, Arrows, Letters, etc.)	EA	$250	26	$6,500
1.13	Curb Ramp (incl detectable warning surface)	EA	$5,000	268	$1,340,000
1.14	Remove Existing Tree	EA	$900		$0
1.15	Construct Sidewalk	SF	$10	449,960	$4,499,600
1.16	Construct Curb and Gutter	LF	$24	21,000	$504,000
1.17	Remove Concrete Curb and Gutter	LF	$16	4,200	$67,200
1.18	Remove Sidewalk	SF	$3	9,000	$27,000
1.19	Trees / Landscape	Block	$40,000	72	$2,880,000
1.20	60 Day Maintenance	EA	$3,500	36	$126,000
1.21	Street Lighting	EA	$3,000	354	$1,062,000
1.22	Wayfinding Signs	EA	$900	72	$64,800
1.23	Bus Shelter	EA	$12,000	56	$672,000
1.24	Bench	EA	$1,600	40	$64,000
1.25	Trash Receptacle	EA	$1,400	76	$106,400
				Pedestrian Subtotal	**$14,000,000**

2	**BICYCLE**				
2.1	Bicycle Parking (Inverted-U rack)	EA	$500	20	$10,000
2.2	Bicycle Parking (7-bicycle wave rack)	EA	$750	10	$7,500
2.3	Wayfinding Signs	EA	$900	56	$50,400
2.4	One-way Cycle Track w/5' raised median - includes Pavement reconstruction and C&G, signing, and striping	Mile	$1,710,000	1	$1,710,000
2.5	One-way Cycle Track w/3' striped buffer - includes Pavement reconstruction and C&G, signing, and striping	Mile	$890,000	3.0	$2,670,000

Item Number	Item Description	Unit	Unit Cost	Estimated Quantities	Item Cost
2.6	One-way Cycle Track w/5' raised median - includes signing and striping (no pavement reconstruction)	Mile	$930,000		$0
2.7	One-way Cycle Track w/3' striped buffer - includes signing and striping (no pavement reconstruction)	Mile	$100,000	2	$150,000
2.8	Class II Bike Lanes (Signing, Striping, & Pavement Reconstruction)	Mile	$655,000	1.5	$982,500
2.9	Class II Bike Lanes (Signing and Striping Only)	Mile	$56,000	1.0	$56,000
2.10	Class III Bike Route (Signing and Striping Only)	Mile	$17,000	3.0	$51,000
2.11	Bicycle Signal (added to exist signalized intersection)	EA	$25,000	1	$25,000
2.12	Bicycle Signal (added to exist unsignalized intersection)	EA	$250,000	8	$2,000,000
2.13	Bicycle Loop Detection	EA	$2,500		$0
2.14	Bicycle Push Button (attach to exist pole)	EA	$700		$0
2.15	Bicycle and Pedestrian Bridge	SF	$250		$0
				Bicycle Subtotal	**$7,710,000**

3	TRAFFIC CALMING				
3.1	Median Refuge Islands	SF	$15	3,200	$48,000
3.2	Curb Extensions (w/directional curb ramps)	EA	$30,000	20	$600,000
3.3	Neighborhood Traffic Circles	EA	$25,000	8	$200,000
3.4	Speed Treatments (humps)	EA	$2,500	27	$67,500
3.5	Diverters	EA	$20,000	12	$240,000
3.6	Chicanes	EA	$10,000	12	$120,000
3.7	Bollards (Metal)	EA	$800	16	$12,800
3.8	Stop Sign	EA	$300	8	$2,400
3.9	Construct street segment	LF	$190	2,900	$551,000
				Traffic Calming Subtotal	**$1,290,000**

	- Subtotal -	**$23,000,000**

4	MOBILIZATION				
4.1	Mobilization (10% Items 1 to 3)				$2,300,000
				PROJECT SUBTOTAL (Items 1 to 4)	**$25,300,000**

5	OTHER PROJECT SUPPORT				
5.1	R/W Allowance (10% Project Subtotal)				$2,530,000
5.2	Utility Relocations (10% Project Subtotal)				$2,530,000
5.3	Contingency (25% Project Subtotal + R/W + Utilities)				$7,590,000
5.4	Planning/Design/Environmental/CM (25% Project Subtotal)				$6,320,000
5.5	NPDES/Water Quality/BMPs (3% Project Subtotal)				$750,000
				Other Project Support Subtotal	**$19,720,000**

6	**PROJECT TOTAL (per square mile)**	**$45,000,000**

Assuming Traffic Calming (3) cost evenly split for Pedestrian (1) and Bicycle (2), and other Project Support (5) cost is split proportionally:

7	**PEDESTRIAN GRAND TOTAL (per square mile)**	**$28,900,000**

8	**BICYCLE GRAND TOTAL (per square mile)**	**$16,100,000**

Cost Methodology and Assumptions

One-Way Cycletrack (Reconstruct Pavement/New Striping & Signing)- Unit Cost per Mile

Assumptions:

8' Wide, One-Way (one lane) Cycletrack installed in existing roadway in outer lane --> no clearing and grubbing; reconstruct pavement & curb and gutter

One side	C&G (Reconstruct)	*assume C&G already existing in roadway (do not include in cost)*
Other Side - Option A	3' striped barrier	
Other Side - Option B	5' raised median	

Item	Unit	Qty	Unit Cost	Cost $	Notes
Remove pavement and excavate base	CY	1830	$ 100	$ 183,000	assume 14" (pvmt depth + base); 8' wide cycletrack
Pavement	CY	790	$ 250	$ 197,500	assume 6" PCC pvmt depth
Aggregate Base	CY	1050	$ 100	$ 105,000	assume 8" base
Curb and Gutter Reconstruction	LF	5280	$ 56	$ 295,680	Remove at $16 + Construct @ $40
Signs	EA	150	$ 300	$ 45,000	Washington DC, L Street cycletrack project - 237 signs over 1.4 miles (170 signs/mile) - oneway/lane cycletrack; Washington DC, M Street cycletrack project - 169 signs over 1.3 miles (130 signs/mile) - oneway/lane cycletrack;
Striping (centerline, for two-way)	LF	0	$ 1.75	$ -	One-way cycletrack (no centerline striping)
Pavement Markings (Paint)	EA	22	$ 250	$ 5,500	assume 1 symbol every 250'
Subtotal				$ 831,680	per route mile
Option A: 3' Striped Barrier					
Striping (solid white line)	LF	10560	$ 1.75	$ 18,480	2 continuous longitudinal lines (CAMUTCD Figure 9C-104(CA)); "*Chevron or diagonal markings may be omitted from bicycle lane buffer areas less than 4' wide* " - CAMUTCD Ch. 9C
Chevron Striping	SF	1584	$ 6.00	$ 9,504	3sf striping spaced at 10' intervals
Channelizer/Self Re-Erecting Post/Bollard	EA	106	$ 250.00	$ 26,500	For example: K71 Flexible Bollard/Post; Spaced at 50' intervals ; Washington D.C. cycletrack final plans: 20' intervals, 28" high channelizers
Subtotal Option A				$ 54,484	per cycletrack mile
Total Option A (Cycletrack with pavement reconstruction)				**$ 890,000**	per route mile
Option B: 5' Raised Median (Landscaping not included)					
Remove pavement and excavate base	CY	690	$ 100	$ 69,000	5' Median width + 2' c/g on car side * 6" base under c/g
Aggregate Base	CY	690	$ 100	$ 69,000	5' Median width + 2' c/g on car side * 6" base under c/g
Concrete Median	SF	21120	$ 15	$ 316,800	4' concrete median width + 6" top of curb (both sides) = 5' total median width
Curb and Gutter (New)	LF	10560	$ 40	$ 422,400	Curb (no gutter) along cycle track side; Curb with gutter on car side
Landscaping	LS			$ -	*Landscaping not included*
Subtotal Option B				$ 877,200	per mile
Total Option B (Cycletrack with pavement reconstruction)				**$ 1,710,000**	per mile

One-Way Cycletrack (New Striping & Signing; No Pavement Reconstruction)- Unit Cost per Mile

Assumptions:

8' Wide, One-Way (one lane) Cycletrack installed in existing roadway in outer lane --> use existing roadway pavement as-is

One side	C&G (Reconstruct)	*assume C&G already existing in roadway (do not include in cost)*
Other Side - Option A	3' striped barrier	
Other Side - Option B	5' raised median	

Item	Unit	Qty	Unit Cost	Cost $	Notes
Remove pavement and excavate base	CY	0	$ 100	$ -	assume reuse existing pavement as-is
Pavement	CY	0	$ 250	$ -	assume reuse existing pavement as-is
Aggregate Base	CY	0	$ 100	$ -	assume reuse existing pavement as-is
Curb and Gutter Reconstruction	LF	0	$ 56	$ -	assume no c/g reconstruction
Signs	EA	150	$ 300	$ 45,000	Washington DC, L Street cycletrack project - 237 signs over 1.4 miles (170 signs/mile) - oneway/lane cycletrack; Washington DC, M Street cycletrack project - 169 signs over 1.3 miles (130 signs/mile) - oneway/lane cycletrack;
Striping (centerline, for two-way)	LF	0	$ 1.75	$ -	One-way cycletrack (no centerline striping)
Pavement Markings (Paint)	EA	22	$ 250	$ 5,500	assume 1 symbol every 250'
Subtotal				$ 50,500	per route mile
Option A: 3' Striped Barrier					

Striping (solid white line)	LF	10560	$ 1.75	$ 18,480	2 continuous longitudinal lines (CAMUTCD Figure 9C-104(CA)); "*Chevron or diagonal markings may be omitted from bicycle lane buffer areas less than 4' wide* " - CAMUTCD Ch. 9C
Chevron Striping	SF	1584	$ 6.00	$ 9,504	3sf striping spaced at 10' intervals
Channelizer/Self Re-Erecting Post/Flexible Bollard	EA	106	$ 250.00	$ 26,500	For example: K71 Flexible Bollard/Post; Spaced at 50' intervals ; Washington D.C. cycletrack final plans: 20' intervals, 28" high channelizers
Subtotal Option A				$ 54,484	per cycletrack mile
Total Option A (Cycletrack reusing existing pavement as-is)				**$ 100,000**	per route mile
Option B: 5' Raised Median (Landscaping not included)					
Remove pavement and excavate base	CY	690	$ 100	$ 69,000	5' Median width + 2' c/g on car side * 6" base under c/g
Aggregate Base	CY	690	$ 100	$ 69,000	5' Median width + 2' c/g on car side * 6" base under c/g
Concrete Median	SF	21120	$ 15	$ 316,800	4' concrete median width + 6" top of curb (both sides) = 5' total median width
Curb and Gutter (New)	LF	10560	$ 40	$ 422,400	Curb (no gutter) along cycle track side; Curb with gutter on car side
Landscaping	LS			$ -	*Landscaping not included*
Subtotal Option B				$ 877,200	per mile
Total Option B (Cycletrack reusing existing pavement as-is)				**$ 930,000**	per mile

Class II Bike Lane (Signing and Striping Only) - Unit Cost per Mile

Assumptions:

Unit cost for one-way; No re-paving; Only striping and signing for bike route (*increase cost if need to re-stripe additional lanes*)
Unit cost will vary depending on existing or proposed path conditions (intersections, adjacent to parking and rt-turn lanes, etc.)

Item	Unit	Qty	Unit Cost	Cost $	Notes
Striping (solid white line)	LF	10560	$ 1.75	$ 18,480	2 lines on either side of bike lane
Re-striping (existing lanes)	LF	0	$ 2.50	$ -	Includes removal of exist striping
Pavement Markings (Paint)	EA	29	$ 250	$ 7,250	assume 1 symbol every 250' + 1 at each block (assume 8 blocks);
Signs	EA	100	$ 300	$ 30,000	Based on DC cycletrack projects, assume 100 signs per mile
Total Class II Bike Route - Unit Cost per Mile (signing and striping only)				$ 56,000	per mile, which is conservative compared to SANDAG study with costs of $13.5k/mi low, $19k med, $25k high LA County Bicycle Master Plan, $26k/direction (omitted PM), Table H-1.

Class II Bike Lane (Signing, Striping, and Pavement Reconstruction) - Unit Cost per Mile

Assumptions:

Unit cost for one-way/lane; pavement reconstruction, striping and signing for bike route (*increase cost if need to re-stripe additional lanes*)
Unit cost will vary depending on existing or proposed path conditions (intersections, adjacent to parking and rt-turn lanes, etc.)
5' bike lane

Item	Unit	Qty	Unit Cost	Cost $	Notes
Remove pavement and excavate base	CY	1150	$ 100	$ 115,000	assume excavate 14" (pvmt depth + base); 5' wide bike lane
Pavement	CY	490	$ 250.00	$ 122,500	assume 6" PCC pvmt depth,
Aggregate Base	CY	660	$ 100	$ 66,000	assume 8" base, Class 2 $80/CY, Class 3 $120/CY per Caltrans Cost Data
Curb and Gutter Reconstruction	LF	5280	$ 56	$ 295,680	Remove at $16 + Construct @ $40
Striping (solid white line)	LF	10560	$ 1.75	$ 18,480	2 lines on either side of bike lane
Re-striping (existing lanes)	LF	0	$ 1.50	$ -	
Pavement Markings (Paint)	EA	29	$ 250	$ 7,250	assume 1 symbol every 250' + 1 at each block (assume 8 blocks);
Signs	EA	100	$ 300	$ 30,000	Based on DC cycletrack projects, assume 100 signs per mile
Total Class II Bike Route - Unit Cost per Mile (with pavement reconstruction)				$ 655,000	LA County Bicycle Master Plan, $1.023M/direction, Table H-2

Class III Bike Route (Signing and Striping Only) - Unit Cost per Mile

Assumptions:

Unit cost for one-way; No re-paving; Only striping and signing for bike route (*increase cost if need to re-stripe existing lanes*)
Unit cost will vary depending on existing or proposed path conditions (intersections, adjacent to parking and rt-turn lanes, etc.)

Item	Unit	Qty	Unit Cost	Cost $	Notes

Pavement Markings (Paint)	EA	29	$ 250	$ 7,250	"*Should be placed immediately after an intersection and spaced at intervals not greater than 250' thereafter* " - CAMUTCD Section 9C.07; assume 1 symbol every 250' + 1 at each block (assume 8 blocks);
Re-striping (existing lanes)	LF	0	$ 1.50	$ -	
Signs	EA	32	$ 300	$ 9,600	Assume 8 blocks per mile, 4 signs per block
Total Class II Bike Route - Unit Cost per Mile (signing and striping only)				$ 17,000	SANDAG study costs of $6k/mi low, $9k med, $14k high. LA County Bicycle Master Plan, $14.6k/direction (Sign/PM), Table H-5.

See also "Pedestrian Backup" tab for Pedestrian and Bicycle Information Center data for bicycle costs

Note: References to "SANDAG study" are the SANDAG Safe Routes to Transit Plan.

Online Resources

http://www.pedbikeinfo.org/data/library/casestudies_details.cfm?id=4876		MBI Costs		SANDAG Costs		
Crosswalk (Striped Continental)	EA (intersection)	$4,000		$0	*$3,200*	typical cost (online research) is $7/sf. SANDAG I/S cost $2400-$4000/IS.
						If $7/sf, assume cross streets at 80' and 60' averages, 10' wide crosswalk, 1/3 painted area = $4,130 /intersection location, say $4000
Wayfinding Signs	EA	$400			900	Assume higher cost than nominal off the shelf signage for custom wayfinding signs. Use SANDAG costs of $900/sign
Bus Shelter	EA	$10,000		$0		typical cost (online research). Assume bus shelters needed every 1/4 mile for 2 N/S streets and 2 E/W streets. Case Study for Van Nuys Stn had 1 shelter in 1 sq mile.

www.walkinginfo.org/download/PedBikeCosts.pdf
Pedestrian and Bicycle Information Center, "Costs for Pedestrian and Bicyclist Infrastructure Improvements", July 2013.

Infrastructure Facility, Median cost, Average cost, Minimum cost, Maximum Cost, Unit of measure, Number of Sources (Observations)

Bicycle Lane, $89,470, $133,170, $5,360, $536,680, Mile, 6 (6)

Bicycle Rack, $540, $660, $64, $3,610, Each, 19 (21)

Concrete Sidewalk, $27, $32, $2.09, $410, Linear Foot, 46 (164)

Curb and Gutter, $20, $21, $1.05, $120, Linear Foot, 16 (108)

Curb Extension/ Choker/ Bulb-Out, $10,150, $13,000, $1,070, $41,170, Each, 19 (28)

Flashing Beacon, $5,170, $10,010, $360, $59,100, Each, 16 (25)

High Visibility Crosswalk, $3070, $2,540, $600, $5,710, Each, 4(4)

Multi-Use Trail - Paved, $261,000, $481,140, $64,710, $4,288,520, Mile, 11 (42)

Multi-Use Trail - Unpaved, $83,870, $121,390, $29,520,$412,720, Mile, 3 (7)

Pedestrian Crossing, $310, $360, $240, $1,240, Each, 4 (6)

Pedestrian Hybrid Beacon, $51,460, $57,680, $21,440, $128,660, Each, 9 (9)

Pedestrian Rail, $95, $100, $7.20, $690, Linear Foot, 29 (83)

Pedestrian Signal, $980, $1480, $130, $10,000, Each, 22 (33)

Raised Crosswalk, $7,110, $8,170, $1,290, $30,880, Each, 14 (14)

Rapid Rectangular Flashing Beacon, $14,160, $22,250, $4,520, $52,310, Each, 3 (4)

Shared Lane/Bicycle Marking, $160, $180, $22, $600, Each, 15 (39)

Signed Bicycle Route, $27,240, $25,070, $5,360, $64,330, Mile, 3 (6)

Speed Bump, $1,670, $1,550, $540, $2,300, Each, 4 (4)

Speed Hump, $2,130, $2,640, $690, $6,860, Each, 14 (14)

Speed Table, $2,090, $2,400, $2,000, $4,180, Each, 5 (5)

Speed Trailer, $9,480, $9,510, $7,000, $12,410, Each, 6 (6)

Stop/Yield Signs, $220, $300, $210, $560, Each, 4 (4)

Streetlight, $3,600, $4,880, $310, $13,900, Each, 12 (17)

Striped Crosswalk, $340, $770, $110, $2,090, Eac,h 8 (8)

Wheelchair Ramp, $740, $810, $89, $3,600, Each, 16 (31)

Item No.	Item	Unit	Avg Unit Price	Notes/Conversions to other units
Caltrans Cost Data (2013-2015, D7, 8, & 12)				
	Minor Concrete	CY	$ 2,200	
025028	Precast concrete trash receptacle	EA	$ 800	
025030	Prefabricated Metal Bench	EA	$ 1,500	
120165	Channelizer (Surface Mounted)	EA	$ 45	Caltrans Std plan A73C; not sturdy enough for cycletrack barrier
150768	Remove Asphalt Concrete Pavement	CY	$ 300	
150770	Remove Asphalt Concrete Pavement	SF	$ 3.25	
150847	Remove Concrete Pavement and Base	CY	$ 125	
150853	Remove Concrete Pavement	SY	$ 15	
150854	Remove Concrete Pavement	CY	$ 150	
153130	Remove Concrete Curb	LF	$ 13	
153215	Remove Concrete (Curb and Gutter)	LF	$ 16	
190101	Roadway Excavation	CY	$ 100	
566011	Roadside Sign - One Post	EA	$ 300	
566012	Roadside Sign - Two Post	EA	$ 750	
731502	Minor Concrete (Misc Construction)	CY	$ 1,040	
731504	Minor Concrete Curb and Gutter	CY	$ 640	Type A2-8 = 0.06379 CY/LF --> $41/LF
731521	Minor Concrete Sidewalk	CY	$ 610	4" depth --> $7.50/SF
731623	Minor Concrete Curb Ramp	CY	$ 1,130	
731656	Curb Ramp Detectable Warning Surf	SF	$ 53	A=3'x4' = 12sf --> $636/ea
731511	Mincor Concrete Island Paving	CY	$ 740	
Striping				
840655	Paint Traffic Stripe (1 coat)	LF	$ 0.50	
840656	Paint Traffic Stripe (2 coat)	LF	$ 0.60	
Pavement Marking				
840505	6" Thermoplastic traffic stripe	LF	$ 1.50	
840519	Thermoplastic Crosswalk and Pavement Marking	SF	$ 3.50	
850101	Pavement Marker (Non-Reflective)	EA	$ 2.80	
850111	Pavement Marker (Retroreflective)	EA	$ 5.20	
CAMUTCD				
Sharrows	Total Marking Height = 112"			
	Total Marking Width = 40"			
LA County Department of Public Works Online Cost Database				
300.02.003	Unclassified Excavation	CY	$ 100.00	

Striping & Pavement Marking					
310.05.007	Detail 1 Thermoplastic	LF	$	1.75	Caltrans: Centerline
310.05.007	Detail 8 Thermoplastic	LF	$	1.75	Caltrans: Lane lines
310.05.129	Remove pavement markings	SF	$	5.00	
310.05.131	Remove striping and markings	SF	$	5.50	
Trees					
308.04.013	Furnish and Plant 15 Gallon Tree	EA	$	330	
308.04.015	Furnish and Plant 24" Box Tree, Case 1	EA	$	690	
308.04.015	Furnish and Plant 24" Box Tree, Case 2	EA	$	605	
308.04.015	Furnish and Plant 36" Box Tree, Case 1	EA	$	600	
		average unit cost	**$**	**556**	

Costs for Pedestrian and Bicyclist Infrastructure Improvements, UNC Highway Safety Research Center, October 2013

Infrastructure	Description, Number of Sources (Observations)	Unit	Cost		Cost type
Chicane	Chicanes, 8 (9)	Each	$	8,050.00	Median
		Each	$	9,960.00	Average
		Each	$	2,140.00	Minimum
		Each	$	25,730.00	Maximum
Curb Extension	Curb Extension/Choker/Bulb-out, 19(28)	Each	$	10,150.00	Median
		Each	$	13,000.00	Average
		Each	$	1,070.00	Minimum
		Each	$	41,170.00	Maximum
Diverter	Diverter, 5 (6)	Each	$	22,790.00	Median
		Each	$	26,040.00	Average
		Each	$	10,000.00	Minimum
		Each	$	51,460.00	Maximum
Island	Median Island, 17 (19)	Each	$	10,460.00	Median
		Each	$	13,520.00	Average
		Each	$	2,140.00	Minimum
		Each	$	41,170.00	Maximum
Island	Median Island, 6 (15)	SF	$	9.80	Median
		SF	$	10	Average
		SF	$	2.28	Minimum
		SF	$	26	Maximum

Roundabout/ Traffic Circle	Roundabout/ Traffic Circle, 11 (14)	Each	$	27,190.00	Median
		Each	$	85,370.00	Average
		Each	$	5,000.00	Minimum
		Each	$	523,080.00	Maximum
Speed Table	Speed Table, 5 (5)	Each	$	2,090.00	Median
		Each	$	2,400.00	Average
		Each	$	2,000.00	Minimum
		Each	$	4,180.00	Maximum
Bollard	Bollard, 28 (42)	Each	$	650.00	Median
		Each	$	730.00	Average
		Each	$	62.00	Minimum
		Each	$	4,130.00	Maximum
Lighting	In-Pavement Lighting, 4 (4)	Total	$	18,250.00	Median
		Total	$	17,620.00	Average
		Total	$	6,480.00	Minimum
		Total	$	40,000.00	Maximum
Lighting	Streetlight, 12 (17)	Each	$	3,660.00	Median
		Each	$	4,880.00	Average
		Each	$	310.00	Minimum
		Each	$	13,900.00	Maximum
Overpass/ Underpass	Pre-Fab Steel Bridge, 5 (5)	Each	$	191,400	Median
		Each	$	206,290	Average
		Each	$	41,850	Minimum
		Each	$	653,840	Maximum
Street Furniture	Street Trees, 7 (7)	Each	$	460	Median
		Each	$	430	Average
		Each	$	54	Minimum
		Each	$	940	Maximum
Street Furniture	Bench, 15 (17)	Each	$	1,660	Median
		Each	$	1,550	Average
		Each	$	220	Minimum
		Each	$	5,750	Maximum
Street Furniture	Bus Shelter, 4 (4)	Each	$	11,490	Median

		Each	$	11,560	Average
		Each	$	5,230	Minimum
		Each	$	41,850	Maximum
Street Furniture	Trash/ Recycling Receptacle, 12 (13)	Each	$	1,330	Median
		Each	$	1,420	Average
		Each	$	310	Minimum
		Each	$	3,220	Maximum
Crosswalk	High Visibility Crosswalk, 4 (4)	Each	$	3,070	Median
		Each	$	2,540	Average
		Each	$	600	Minimum
		Each	$	5,710	Maximum
Sidewalk	Concrete Paved Shoulder, 1 (11)	SF	$	6.10	Median
		SF	$	6.64	Average
		SF	$	2.79	Minimum
		SF	$	58	Maximum
Flashing Beacon	RRFB, 3 (4)	Each	$	14,160	Median
		Each	$	22,250	Average
		Each	$	4,520	Minimum
		Each	$	52,310	Maximum
Signal	Countdown Timer Module, 14 (18)	Each	$	600	Median
		Each	$	740	Average
		Each	$	190	Minimum
		Each	$	1,930	Maximum
Signs	Stop/Yield Signs, 4 (4)	Each	$	220	Median
		Each	$	300	Average
		Each	$	210	Minimum
		Each	$	560	Maximum
Pavement Marking Symbol	Pedestrian Crossing, 4 (6)	Each	$	310	Median
		Each	$	360	Average
		Each	$	240	Minimum
		Each	$	1,240	Maximum
Pavement Marking Symbol	Shared Lane / Bicycle Marking, 15 (39)	Each	$	160	Median
		Each	$	180	Average
		Each	$	22	Minimum
		Each	$	600	Maximum

Pedestrian/ Bike Detection	Bicycle Loop Detection (authors note)	Each	$	1,920	Average
		Each	$	1,070	Typical Range Low
		Each	$	2,680	Typical Range High
Pedestrian/ Bike Detection	Push Button, 22 (34)	Each	$	230	Median
		Each	$	350	Average
		Each	$	61	Minimum
		Each	$	2,510	Maximum

Authors note, "Some information about signals is not included in the table, namely bicycle signals, which have an average cost of $12,800."

More detailed infrastructure cost information can be found in the larger database, located at bit.ly/pedbikecosts.
The final database, including more detailed information about the data source, is located at the following URL:
http://katana.hsrc.unc.edu/cms/downloads/Costs-for-Pedestrian-Bicycle-Infrastructure-Improvements.xlsx.
In addition, more information, such as materials, classes, and types of treatments, is also included in the final database.

APPENDIX

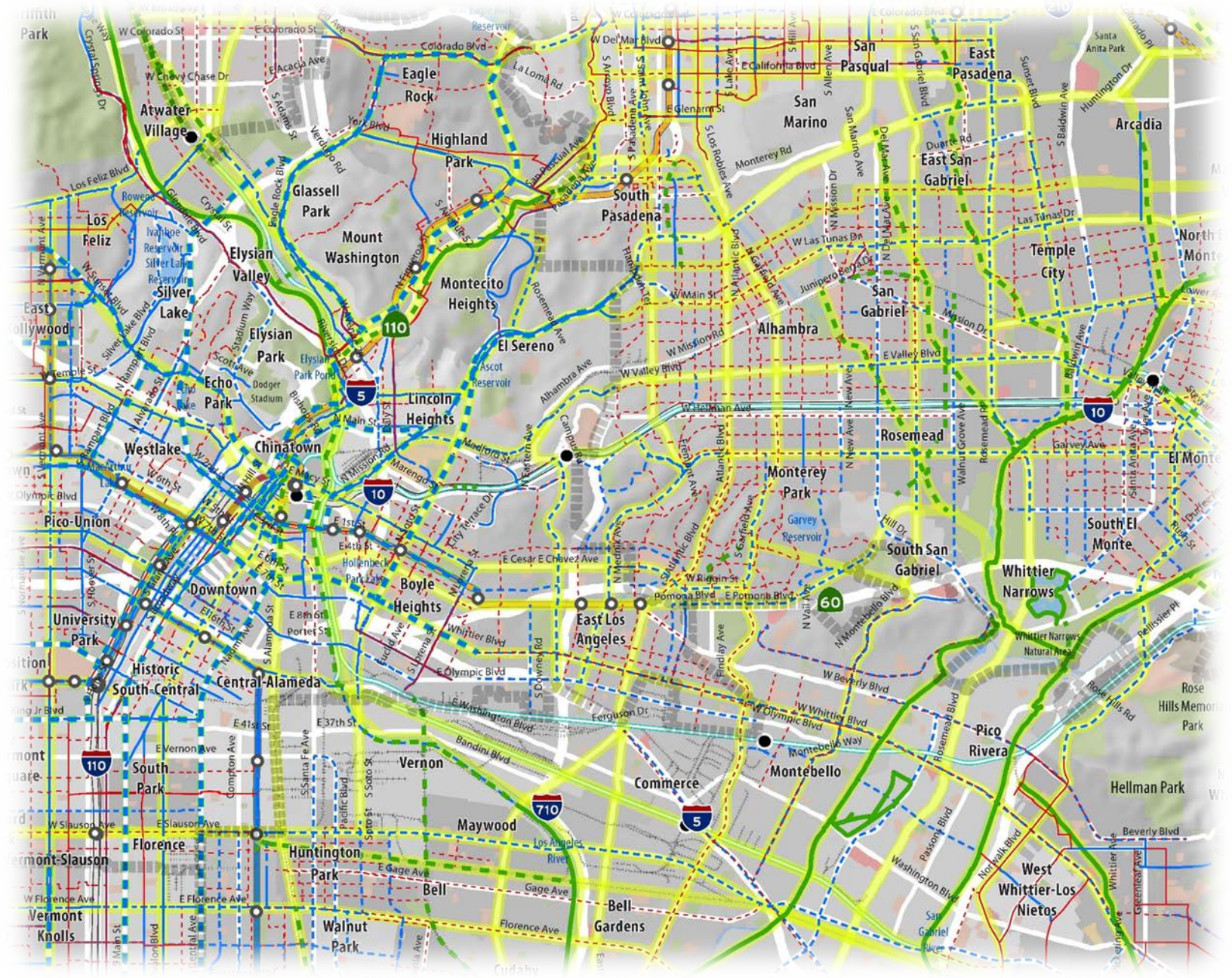
H

REGIONAL ACTIVE TRANSPORTATION NETWORK METHODOLOGY & ANALYSIS

DRAFT

Metro Active Transportation Strategic Plan

Regional Active Transportation Network Methodology



alta PLANNING + DESIGN

Table of Contents

1 Introduction

Active transportation network development is the art and science of planning complete, interconnected transportation facilities that effectively serve non-motorized travel needs in a given geographic area.

The Los Angeles County Metropolitan Transportation Authority (Metro) began planning a Regional Active Transportation Network (then-called the Inter-Jurisdictional Bikeway Network) in the 2006 Bicycle Transportation Strategic Plan (BTSP). The BTSP provides a framework for active transportation network development that is based around a geographic analysis of gaps in the network. This approach forms the basis of continued Regional Active Transportation Network development in the Active Transportation Strategic Plan, and is expanded upon in this document to include discussion of facility types and geographically-dependent route planning.

Since 2006, transportation planning has evolved considerably in California. Statewide legislation now encourages the implementation of Complete Streets (AB 1358) and mandates reductions in Greenhouse Gas emissions (SB 375). Moreover, there is a growing consensus that successful active transportation facilities accommodate a wide range of users. This memorandum describes ways in which the 2006 BTSP approach is to be modified and enhanced.

The methodology presented here combines quantitative analysis with qualitative assessment. Techniques are included that extend the analysis conducted in the BTSP with tools inspired by best practices found in California, the United States, and internationally. It is important that active transportation network development be based around sound and, to the greatest extent possible, measureable principles. However, the process should also be flexible and responsive to local conditions, allowing room for professional judgment and the input of stakeholders.

2 Regional Active Transportation Network Guiding Principles

A first step in Regional Active Transportation Network development is the establishment of Guiding Principles. These are high-level, general objectives that inform the entire network development process and help to frame assumptions for the transportation professional.

Table 1: Regional Active Transportation Network Guiding Principles

Guiding Principle	Description
Connect cities and communities	The network emphasizes connectivity between communities, as opposed to connectivity within local jurisdictions. However, regional routes will still play a role in local travel.
Serve desire lines	The network enables bicycle travel on the routes that people want to use. People generally want routes that are *direct* and *safe*.
Serve Main Street	The network embraces routes that link directly to the cores of cities, serving historic Main Streets and Central Business Districts.
Harness continuous rights-of-way	The network relies upon continuous rights-of-way (both natural and human-made) to provide unhindered movement for long stretches.
Link to transit	The network seeks opportunities to connect with major[1] transit hubs, particularly if these hubs are located in population centers.
Address existing safety problems	The network improves travel conditions along routes with a history of bicycle crashes.
Design for all ages and abilities	The facilities comprising the Regional Active Transportation Network meet a minimum standard of service, suitable for use by children and seniors.

[1] Transit hubs that have regional benefits are defined elsewhere in the Active Transportation Strategic Plan.

3 Regional Active Transportation Network Development Process

A ten-step process for active transportation network development is shown in Table 2. This memorandum covers the process up to and including step eight (linear route identification). The steps listed beyond this point are the domain of detailed facility design and construction engineering, and should be carried out following the identification of linear gaps in steps 6 and 8.

Table 2: Regional Active Transportation Network Development Process

No.	Step
1.	Identify existing and planned regional routes
2.	Define applicable facilities
3.	Establish network density standards
4.	Establish gap typology
5.	Identify and map activity centers
6.	Identify and inventory linear gaps
7.	Identify area gaps
8.	Identify and inventory linear routes that resolve area gaps
9.	Select facility types using latest guidance
10.	Conduct detailed facility feasibility studies

3.1 Identify existing and planned regional routes

In order to perform gap analysis at the regional scale, the existing Regional Active Transportation Network must be identified. The Regional Active Transportation Network – including the current Inter-Jurisdictional Bikeway Network – is defined as "an interconnected system of active transportation routes, not necessarily reliant on transit, but connecting to major destinations, linking cities or as routes to transit destinations" (Metro 2006, pg. 100).

Planned and existing routes were identified through the consolidation of data from regional and municipal sources throughout Los Angeles County, including SCAG's Backbone Bikeway Network (2010), Metro's Bicycle Transportation Strategic Plan (2006), the City of Los Angeles Mobility Plan 2035 (2015), subregional-scale plans such as the San Gabriel Valley and Las Virgenes-Malibu Council of Governments Bicycle Master Plans, as well as bicycle transportation plans from individual cities and unincorporated areas throughout the county. Where facilities overlapped, those of lower user protection were overridden by those of higher user protection, e.g. Class III facilities were replaced by Class II, and Class II by Class I.

3.2 Define applicable facilities

The BTSP's vision of the Inter-Jurisdictional Bikeway Network included all three classes of bikeway infrastructure available at the time (Class I, II and III) and considered each of these classes as potential options to close gaps and complete the network. The Active Transportation Strategic Plan's Regional Active Transportation Network maintains each of these options, with certain modifications and additions.

Additions to the 2006 BTSP facility types

Since 2006, Class IV Protected Bicycle Lanes (also known as cycle tracks) have begun to appear across the United States and have received preliminary approval for use in California (AB 1193). Class IV facilities are traffic-protected bicycle lanes that use the existing road right-of-way. For these reasons, Class IV bikeways provide increased safety and directness, making them candidates for longer trips on busy streets. They are an appropriate addition to the Regional Active Transportation Network and should be, along with Class I Shared-Use Paths, a prioritized facility type for regional routes.

Modifications to the 2006 BTSP facility types

Alongside the need to develop new facilities is the need to attract new users. Facility types offering a greater degree of protection and/or separation from traffic (namely Class I paths and Class IV protected bicycle lanes) are preferred by people who bicycle and are most effective at drawing users (Winters and Teschke, 2010). The safety and comfort benefits of these facilities can largely be replicated in Class II and Class III facilities through engineering enhancements. Adding buffers to Class II bicycle lanes can improve user comfort while riding on-street, as can the addition of traffic calming measures to Class III bicycle routes, such as traffic diverters, roundabouts, and chicanes.

Based on these considerations, the Active Transportation Strategic Plan establishes a threshold of facility comfort for routes that comprise the Regional Active Transportation

Network. The current and future Regional Active Transportation Network is comprised of the following facility types – each of which may be used to close gaps in the network:

Table 3: Facility types comprising the Regional Active Transportation Network

Facility Type	Eligible Under the Following Conditions
Class I Shared-Use Path	Always
Class II Bicycle Lane	Facilities are buffered with additional lateral striping or are located on a low-stress roadway
Class III Bicycle Route	Facilities qualify only if they are located on a low-stress roadway or incorporate auxiliary traffic calming measures to create a low-stress environment
Class IV Protected Bicycle Lane	Always

The definitions provided in Table 3 and visualized in Figure 1 apply to both the existing, currently planned (if adopted),[2] and future proposed networks for the purposes of gap analysis and network development. For the existing and currently planned network, these facility type definitions provide a framework to identify the network elements to be analyzed. For the future proposed network, these definitions refine the design options that may be employed to close gaps in the network.

[2] The successful implementation of currently planned routes is assumed if these plans have been adopted by their respective jurisdictions. For the purposes of this analysis, these routes may be combined with the existing bikeway network. Currently planned routes that are in a draft or proposal stage are not included in the existing bikeway network, but are incorporated at later stages of the analysis.

Not all existing or planned facilities meeting the criteria described in Table 3 and visualized in Figure 1 are part of the Regional Active Transportation Network. An additional step is necessary at this stage to relegate segments from the Regional Active Transportation Network to local networks if they do not play a role in linking cities, major destinations or transit hubs. Once this refined version of the existing and previously-planned Regional Active Transportation Network dataset is prepared, gaps in that network can be identified and new linkages can be defined. This process is described in section 3.6.

The Regional Active Transportation Network is intended to serve both people walking and people riding bicycles. However, the network planning process primarily takes cues from best practices in regional bikeway network development, for the following reasons:

- Pedestrian trips are inherently less regional in scale than bicycle trips due to differences in travel speed;
- The Active Transportation Strategic Plan includes detailed transit station area plans that emphasize pedestrian connectivity;
- The Regional Active Transportation Network will directly serve pedestrian travel on all of its recommended Class I (shared-use path) facilities;
- The Regional Active Transportation Network will indirectly improve pedestrian conditions around many of its other facilities (for instance, protected bicycle lanes reduce sidewalk riding, calm traffic and shorten crossing distances, all of which improve pedestrian safety and comfort); and
- The inclusion of sidewalks can be assumed on all on-street facilities with low-stress bikeways, such as protected bicycle lanes (Class IV) or bicycle boulevards (Class III).

Figure 1: Facility Types Comprising the Regional Active Transportation Network

Class I Shared-Use path

Class II Bicycle Lane (Buffered)

Class II Bicycle Lane (On a Low-Stress Street)

Class III Bicycle Route (On a Traffic-Calmed Bicycle Boulevard)

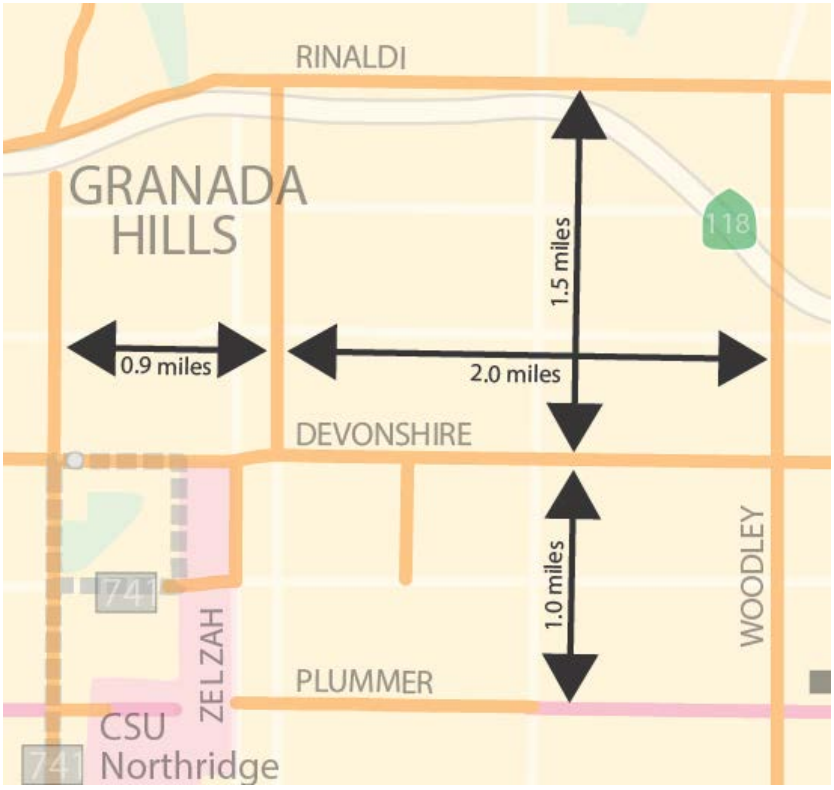
Class IV Protected Bicycle Lane

Sidewalk

3.3 Establish network density standards

Active transportation network density is a measure of internal cohesion (i.e. how well the active transportation network connects with itself). It is defined as the actual or target distance between parallel facilities in the network. An active transportation network with a low density of routes will have fewer intersections and limited routing alternatives compared with a high density network. Network density statistics may be calculated to describe an existing active transportation network or may serve as a target for future network development.

Figure 2: Network Density Visualized



In this Granada Hills neighborhood, bikeway spacing ranges from 0.9 to 2.0 miles for north-south routes and 1.0 to 1.5 miles for east-west routes.

Like roadways in general, scale is the most important determinant of active transportation network densities. Local active transportation networks, like local streets, should form a highly connected grid, with numerous junctions and alternative routes in a relatively small area. At the regional scale, active transportation networks should form a grid resembling a freeway network, with a much lower number of routes that connect with one another intermittently. Regional networks – whether intended for bicycles or motor vehicles – prioritize directness, quantity of traffic, speed and comfort over connectivity, resiliency and route choice. Both networks are vital to the functioning of a regional transportation system.

The interaction between local and regional networks are similar for both bicycle and motor vehicle travel. In both cases, local and regional networks must feed seamlessly into one another, with regional networks serving as spine connections between local networks. Local networks, in turn, provide first- and last-mile access to residential communities and destinations within local jurisdictions, such as employment centers, transit destinations, and schools.

Network density standards are applied in both the north-south and east-west directions, and are customized to fit the geometry of underlying street grids. Network density standards apply only to contiguous urban and suburban, or "built-up," areas. The target network density is contingent upon social and physical characteristics of these areas, such as the density of population, destinations and places of employment, topography, and existing street patterns. Outside of urban areas (in wilderness or rural settings), transportation professionals are expected to identify routes on a case-by-case basis, prioritizing connectivity, open space, habitat, and/or existing land uses as dictated by a specific area's needs.

Common practice targets customized network densities for different network scales within the built-up area. Sacramento's *Regional Bicycle, Pedestrian and Trails Master Plan* (2013) specifies a 1.5 to 2-mile spacing of bikeways in outlying areas of the city, and recommends bikeways on all streets serving as feeders into the central business district and major employment centers. *Portland's Regional Active Transportation Plan* (2014) evaluated a grid of regional bikeways with an approximate 2-mile spacing, emphasizing connectivity between employment centers and households. This plan found that areas with high numbers of destinations were associated with higher numbers of bicycle trips. As such, the 2-mile grid rule was adjusted for greater density in these areas, and for areas with greater planned numbers of households, jobs, and destinations.

Minnesota's *Twin Cities Regional Bicycle Study* (2014) and the *Minneapolis Bicycle Master Plan* (2011) include further guidance for network density. The Twin Cities study recommends a spacing of ½ mile in core cities out to one mile in surrounding suburbs, prioritizing routes that connect to the transit system and regional destinations. Minneapolis established a hierarchy of bikeways and network spacing, with arterial (1-2 miles), collector (1/2 mile), and neighborhood levels.

In the Netherlands, Delft targets a 0.31-mile network density for citywide routes, 0.19 miles for district-level routes within the city and 0.06 miles at the local level within districts. Similarly, the Dutch city of Valkenswaard targets a network density of 0.31 to 0.37 miles for the Primary bikeway network and a tighter standard of 0.12 to 0.19 miles for the Secondary network. All of these approaches operate on the logic that spine routes should be citywide, spaced relatively widely, and overlaid onto denser bikeway networks that serve local travel needs and connect to the spine network. The Regional Active Transportation Network will scale this network density methodology up to a countywide level.

In order to accommodate Los Angeles County's wide range of land uses and characteristics, a multi-tiered system of network density targets be employed, corresponding to degrees of built-up urban areas. These tiers are a combination of strategies used in the above-cited

examples, modified to fit a highly variable urban landscape. Each tier is defined through a geospatial analysis of activity centers, population density, employment density, land use, and topography. Recommended network density standards are provided in Table 4.

Only built-up areas are assigned a specific network density guideline. Rural/wilderness areas are treated on a case-by-case basis due to their low population densities, limited street grids, and greater incidence of steep topography, sensitive habitat, surface water, and other physical constraints.

Table 4: Recommended Regional Active Transportation Network Density Standards

Geography	Network Density
Tier 1 (Highest Density/Urban Core)	**0.25-1.0 Miles**
Tier 2 (Medium Density)	**1.0-3.0 Miles**
Tier 3 (Lowest Urban/Suburban Density)	**2.0-4.0 Miles**
Rural/Wilderness	**Case-by-case analysis**

3.4 Establish gap typology

The Regional Active Transportation Network employs gap analysis to identify necessary improvements to the existing and planned active transportation network. Two basic gap types present opportunities for network evaluation at the regional scale: linear gaps and area gaps. These two gap types are defined in Table 5, and their respective analyses are described in detail in section 3.6 and 3.7.

A number of other, more localized, gap types often included in network analyses are shown in Table 5. However, these are "spot" gaps that are specific to an intersection or block. These local gaps are of too fine a scale to include in a Regional Active Transportation Network gap analysis, and therefore fall under the purview of local jurisdictions. However, the key to a fully functional transportation network of any kind is the establishment of strong links between regional and local networks. The Regional Active Transportation Network will address these local gaps at strategic points where the regional and local networks converge.

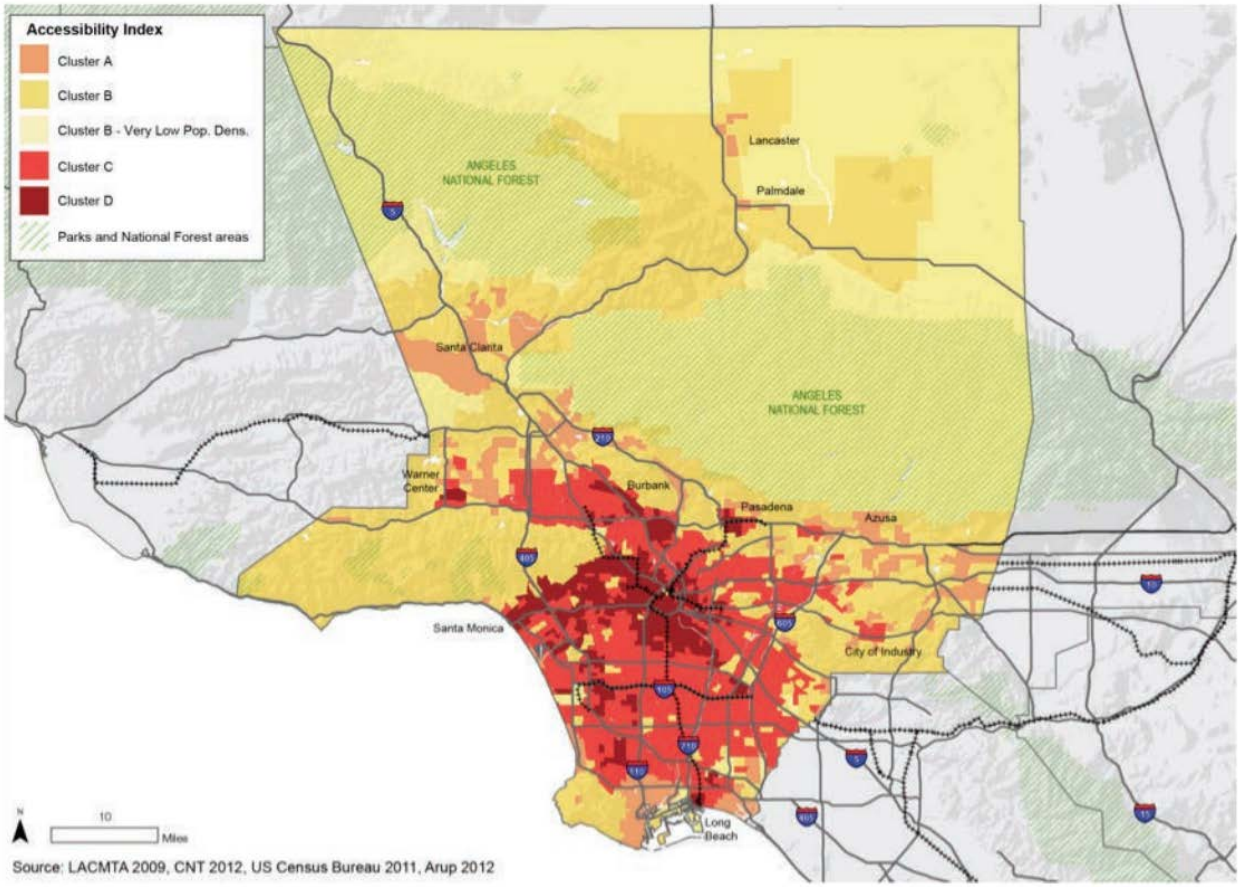
Table 5: Gap Typology

Regional Gap Types		Local Gap Types	
Name	*Description*	*Name*	*Description*
Linear Gap	A corridor serving a major desire line that is lacking a regional active transportation connection	**Crossing Gap**	A location where an active transportation facility meets a major (collector or arterial) crossing without adequate crossing treatments
Area Gap	An area serving major desire line(s) that is lacking regional active transportation connection(s)	**Drop Gap**	A location where an active transportation facility terminates unexpectedly, either mid-block or at an intersection
		Transition Gap	A location where an active transportation facility transitions from a facility of higher user comfort to one of lower comfort (e.g. from a Class I path to an on-street signed Class III route)

3.5 Identify and map activity centers

Mapping activity centers helps visualize the intensity of activity across Los Angeles County. Guidance is available in the accessibility cluster mapping in Metro's Countywide Sustainability Planning Policy (CSPP) and Implementation Plan, which is based around Residential Density and Employment Centrality metrics. Accessibility clusters represent areas of significant residential density, measured as households per census tract, and job centrality, which represents the number of jobs and distance from dense residential tracts (Metro CSPP, pg. 10). These clusters must be made accessible via the Regional Active Transportation Network, and are shown in Figure 3.

Figure 3: Accessibility Clusters across Los Angeles County (Metro CSPP)



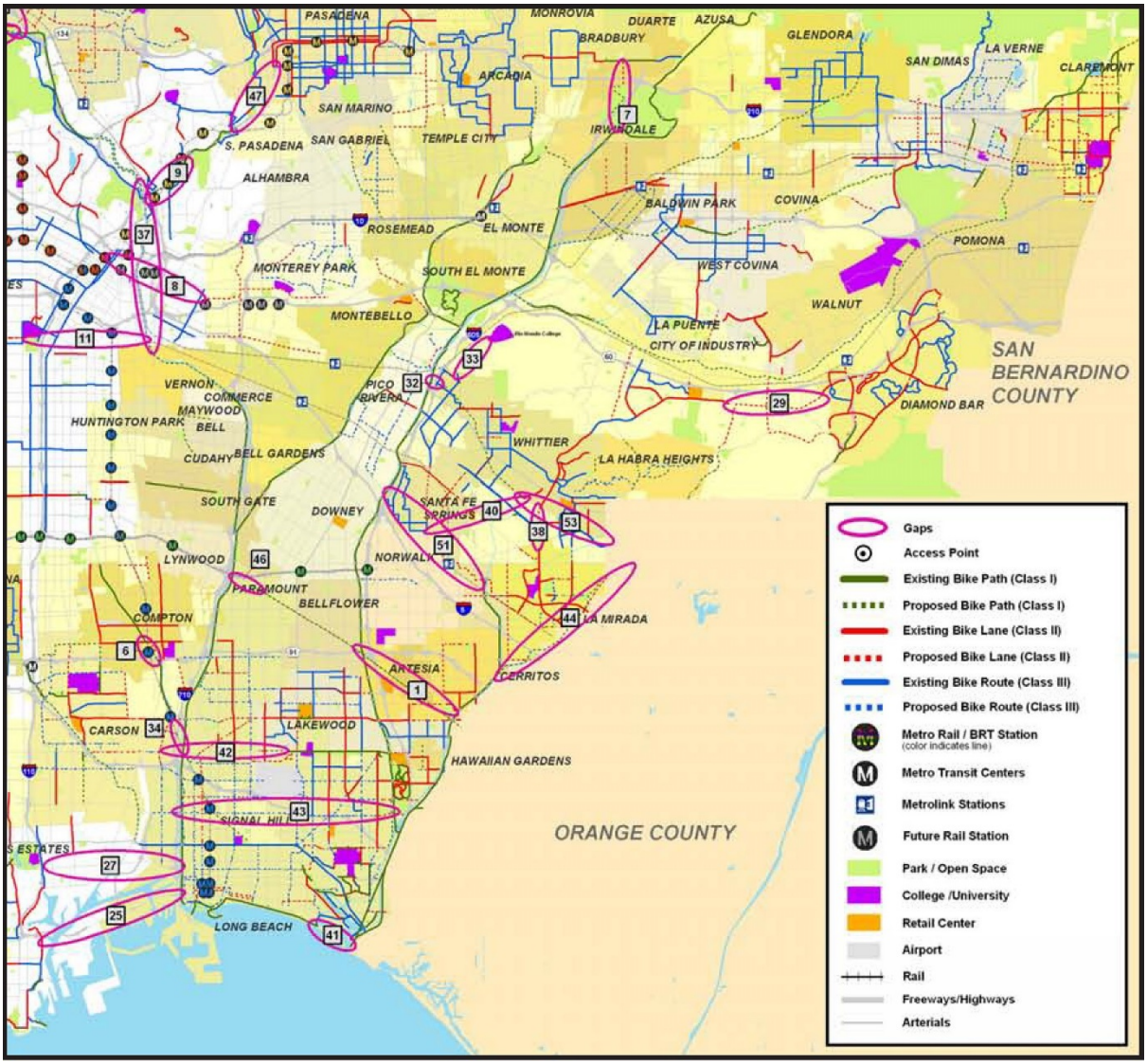
In addition to mapping residential and workplace density, other land uses should be considered, such as regional retail, schools, public facilities, and parks. These land uses, when layered with the results of accessibility cluster mapping, identify a complete spectrum of areas for regional network connectivity.

3.6 Identify and inventory linear gaps

The identification and inventory of linear gaps begins with an update and assessment of the gaps identified in the 2006 BTSP. The gap inventory is first revised to remove any gaps that have been resolved since 2006 as a result of new bikeway construction.

Following this update, the Regional Active Transportation Network is re-mapped according to the identification process described in Section 3.1. This adjustment results in a refined network and simplified map compared to those produced for the BTSP (Figure 4), by removing segments that fail to meet the comfort standards of a regional facility. This filtering of the network to only show high-comfort facilities reveals linear gaps that were otherwise not apparent. These gaps form the linear gap inventory.

Figure 4: Linear gap identification in the Metro Bicycle Transportation Strategic Plan (2006)



3.7 Identify area gaps

Following the linear gap analysis, a second round of gap identification occurs which focuses on area-wide gaps. This analysis relies upon the network density standards developed in section 3.3. With a network density standard of an active transportation route every 1-4 miles, a 0.5-mile buffer is drawn around all routes comprising the existing and planned Regional Active Transportation Network. A half-mile buffer drawn around a linear feature has a radius of 0.5 miles and a diameter of one mile. Gaps are revealed between parallel active transportation routes when facilities are more than one mile apart. Areas falling outside of a buffer are tentatively classified as gap areas. These gap areas are examined in further detail, first to confirm that they are home to significant activity and then to verify that they are located along a "desire line," a route identified by the transportation professional and through public feedback as having regional importance. If both of these conditions are met, the area is considered a gap requiring resolution. An example of area gap analysis in Los Angeles County, including only existing and planned bikeways, is shown in Figure 5, with white areas representing locations greater than ½ mile from a bicycle facility. See the accompanying Regional Active Transportation Network Analysis memorandum for detailed analysis of gaps.

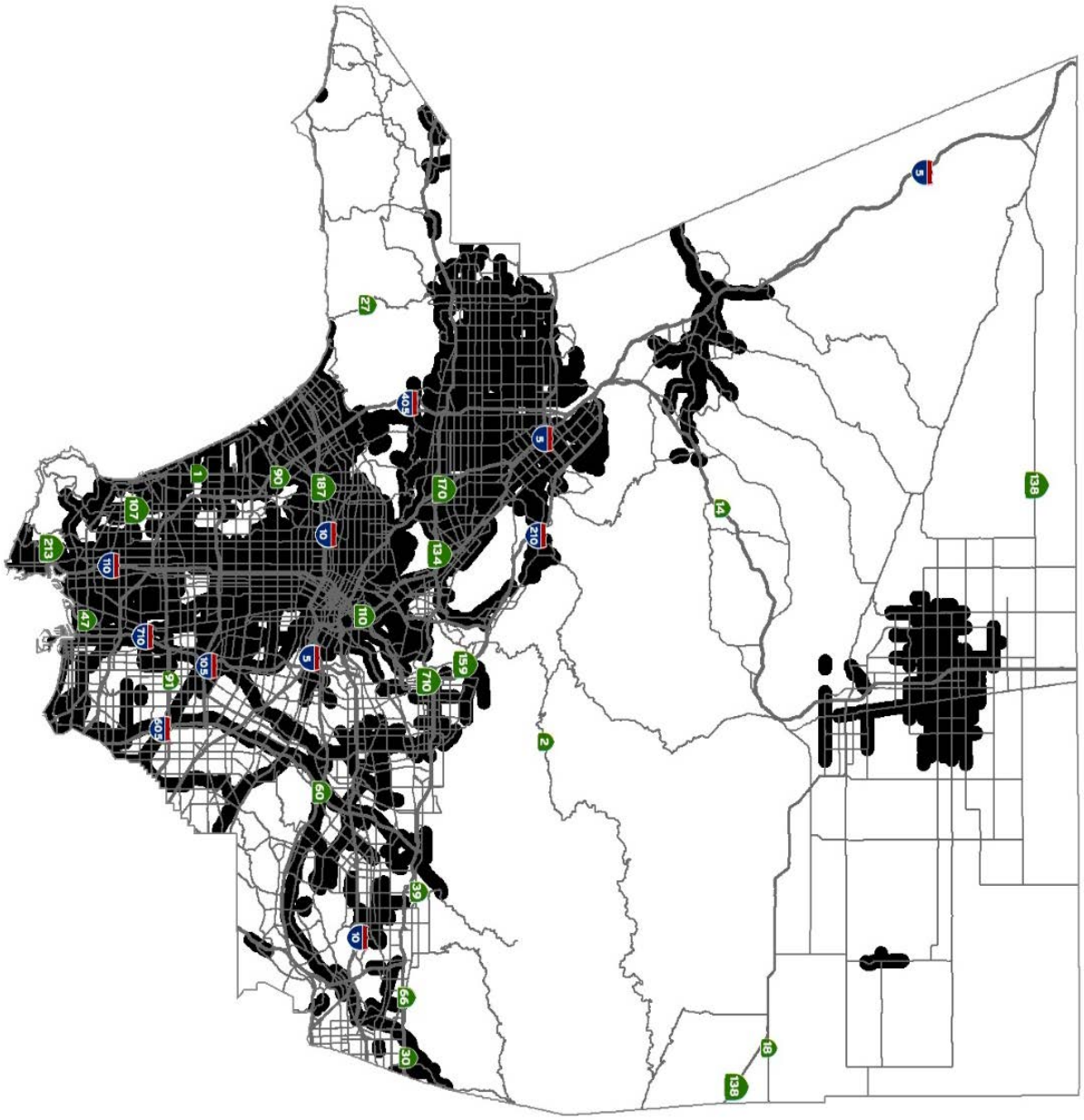
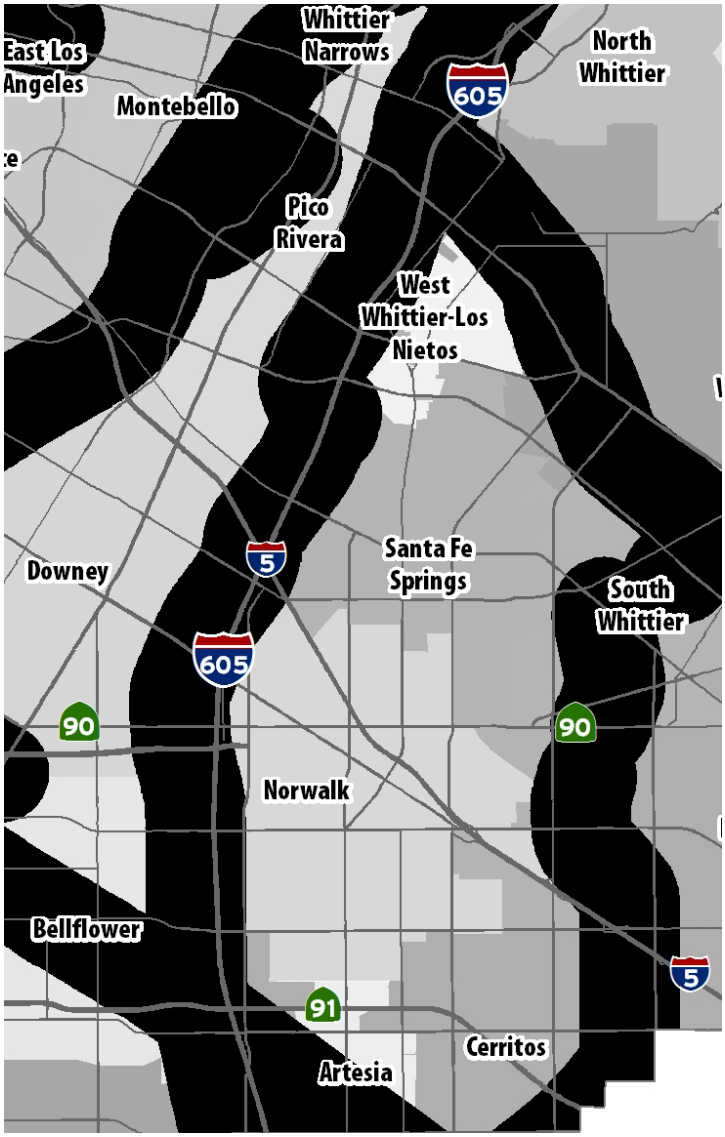


Figure 5: Area gap identification in Los Angeles County

Although it is possible to conduct area gap analysis using distinct east-west and north-south network grids, a simplified approach that consolidates directional considerations is recommended, as street grids may not follow strict north-south alignments. An examination of the shape and orientation of gap areas is typically sufficient to understand the nature of the gaps in question. For instance, in the example shown in Figure 6, areas in white and gray indicate the presence of long vertical (north-south) gaps between parallel north-south bikeways, hinting at the need for supplementary horizontal (east-west) bikeways to close these gaps.

Figure 6: Vertical (North-South) Gaps between Bikeways



3.8 Identify and inventory linear routes that resolve area gaps

The process of identifying area gaps as described in section 3.7 focuses the attention of the transportation professional on specific areas in Los Angeles County where active transportation networks are absent. Within each area, a limited number of linear corridors (consistent with the network density standards introduced in section 3.2) are then identified which connect across the gap area.

The purpose of this exercise is to derive a set of linear gaps from each area gap (some gaps may be closed with a single link, while others may require both a north-south and east-west route). In this way, gaps can be inventoried in a manner that is compatible with the linear gaps originally identified in section 3.5. Framing gaps as linear corridors (rather than areas) provides a means to seamlessly translate gaps into recommended routes.

Targeted Active transportation Improvements

The linear and area gap analyses described in this memorandum are designed to guide active transportation improvements at a high-level regional scale. However, they do not always capture the intricacies of network design and may overlook areas of greater need. For this reason, a thorough review is performed by a transportation professional with local knowledge, to ensure that the Regional Active Transportation Network is connected, direct and safe, independent of the linear and area gap analyses.

A supplemental analysis is performed that considers special exceptions to the linear and area gap analyses. This includes the entirety of the available existing and planned bikeway datasets, even if the planned routes are in Draft form only. It also includes consideration of major potential barriers to route creation, such as topography and surface water. This allows the transportation professional to study all existing and planned routes in detail and consider linkages that may not have been captured in the previous analyses.

It is important to note that an existing active transportation should never be shifted to an adjacent street in order to satisfy a general network density standard. In many situations, duplication or redundancy in the active transportation network, or increased route density, is beneficial. Some reasons for duplication or increased active transportation network density include:

- to provide increased route choice;
- to provide multiple facilities on the same corridor (e.g. Class I and Class II) ;
- to serve high-traffic desire lines and city centers; and
- one-way couplets on parallel one-way streets.

This stage of the process ends with the selection and inventory of preferred routes. Specific facility selection will occur at the local level, as part of detailed feasibility studies and project-level implementation planning, and will rise out of partnerships between Metro and local jurisdictions.

4 References

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Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
Arroyo Verdugo	**35.88**		**15.39**	**3.68**	**54.95**	**4.74**	**59.69**	**$ 3,813,436**	**$ 61,275,537**	**$ 320,652,189**
Burbank	**10.75**		**3.00**	**0.80**	**14.55**	**4.74**	**19.29**	**$ 863,469**	**$ 13,881,784**	**$ 72,637,045**
CORRIDOR: BARHAM-OLIVE	**2.87**				**2.87**		**2.87**	**$ 88,797**	**$ 1,432,207**	**$ 7,490,444**
Sprr Burbank To La River										
W OLIVE AV	2.87				2.87		2.87	$ 88,797	$ 1,432,207	$ 7,490,444
CORRIDOR: CHANDLER			**0.76**	**0.25**	**1.01**	**1.99**	**3.00**	**$ 136,152**	**$ 2,184,638**	**$ 11,434,550**
La River To E Verdugo Ave										
CHANDLER CONNECTOR			0.62		0.62		0.62	$ 101,234	$ 1,623,528	$ 8,498,313
Off Street			0.14		0.14	1.99	2.13	$ 22,728	$ 364,492	$ 1,907,925
S FRONT ST				0.25	0.25		0.25	$ 12,190	$ 196,618	$ 1,028,312
CORRIDOR: GLENOAKS BLVD	**3.28**				**3.28**		**3.28**	**$ 101,307**	**$ 1,633,991**	**$ 8,545,773**
Foothill Fwy To Verdugo Wash										
N GLENOAKS BLVD	2.61				2.61		2.61	$ 80,520	$ 1,298,711	$ 6,792,256
S GLENOAKS BLVD	0.67				0.67		0.67	$ 20,787	$ 335,281	$ 1,753,517
CORRIDOR: LANCASTER-SANTA CLARITA-SFV	**0.01**				**0.01**	**2.02**	**2.02**	**$ 256**	**$ 4,129**	**$ 21,595**
Ave H To Sp Rr Burbank										
E BURBANK BLVD	0.01				0.01		0.01	$ 256	$ 4,129	$ 21,595
Off Street						2.02	2.02	$ -	$ -	$ -
CORRIDOR: RIVERSIDE-VERDUGO	**3.21**				**3.21**		**3.21**	**$ 99,107**	**$ 1,598,502**	**$ 8,360,168**
Van Nuys Blvd To Van Nuys Blvd										
E VERDUGO AV	0.41				0.41		0.41	$ 12,718	$ 205,128	$ 1,072,817
W VERDUGO AV	2.80				2.80		2.80	$ 86,389	$ 1,393,375	$ 7,287,351
CORRIDOR: SAN FERNANDO			**0.52**		**0.52**		**0.52**	**$ 85,575**	**$ 1,372,405**	**$ 7,183,818**
Verdugo Ave To Figueroa St										
Off Street			0.52		0.52		0.52	$ 85,575	$ 1,372,405	$ 7,183,818
CORRIDOR: SPRR-BURBANK WESTERN	**1.38**		**1.72**	**0.55**	**3.65**	**0.73**	**4.39**	**$ 352,274**	**$ 5,655,910**	**$ 29,600,697**
Lassen St To La River										
N BUENA VISTA ST				0.10	0.10		0.10	$ 4,734	$ 76,350	$ 399,310
Off Street			1.72		1.72	0.73	2.45	$ 282,834	$ 4,535,919	$ 23,743,146
PACIFIC AV				0.45	0.45		0.45	$ 21,930	$ 353,706	$ 1,849,880
VANOWEN ST	1.34				1.34		1.34	$ 41,452	$ 668,589	$ 3,496,718
W BURBANK BLVD	0.04				0.04		0.04	$ 1,324	$ 21,347	$ 111,644
Glendale	**20.07**		**12.39**	**2.78**	**35.24**		**35.24**	**$ 2,788,838**	**$ 44,794,902**	**$ 234,423,153**
CORRIDOR: ARROYO-VERDUGO	**3.06**			**0.70**	**3.75**		**3.75**	**$ 128,520**	**$ 2,072,899**	**$ 10,841,262**
Van Nuys Blvd To York Blvd										
HONOLULU AV	2.21			0.70	2.91		2.91	$ 102,538	$ 1,653,845	$ 8,649,612
PENNSYLVANIA AV	0.24				0.24		0.24	$ 7,530	$ 121,449	$ 635,178
VERDUGO BLVD	0.60				0.60		0.60	$ 18,451	$ 297,605	$ 1,556,473
CORRIDOR: BRAND-GLENDALE-HYPERION-HIGHLAND-REDONDO	**1.76**			**0.85**	**2.61**		**2.61**	**$ 95,904**	**$ 1,546,845**	**$ 8,090,001**
Verdugo Wash To Rodeo Rd										
GLENDALE BLVD	0.22				0.22		0.22	$ 6,719	$ 108,375	$ 566,800
N BRAND BLVD				0.85	0.85		0.85	$ 41,499	$ 669,338	$ 3,500,639
S BRAND BLVD	1.54				1.54		1.54	$ 47,686	$ 769,132	$ 4,022,562
CORRIDOR: BROADWAY-WILSON	**1.55**			**1.00**	**2.55**		**2.55**	**$ 96,671**	**$ 1,559,205**	**$ 8,154,643**
San Fernando Bike Path To La River										
E BROADWAY	0.01				0.01		0.01	$ 316	$ 5,091	$ 26,625
E WILSON AV	1.54				1.54		1.54	$ 47,689	$ 769,175	$ 4,022,783
W WILSON AV				1.00	1.00		1.00	$ 48,666	$ 784,940	$ 4,105,235
CORRIDOR: COLORADO-FOOTHILL	**2.37**				**2.37**		**2.37**	**$ 73,250**	**$ 1,181,452**	**$ 6,178,995**
La River To San Antonio Wash										
COLORADO ST	0.03				0.03		0.03	$ 971	$ 15,659	$ 81,898
E COLORADO ST	1.46				1.46		1.46	$ 45,138	$ 728,034	$ 3,807,620
SAN FERNANDO RD	0.04				0.04		0.04	$ 1,327	$ 21,407	$ 111,958
W COLORADO ST	0.84				0.84		0.84	$ 25,814	$ 416,352	$ 2,177,518
CORRIDOR: FOOTHILL-SUNLAND-VINELAND	**2.25**				**2.25**		**2.25**	**$ 69,551**	**$ 1,121,786**	**$ 5,866,941**
Ventura Blvd To Verdugo Wash										
FOOTHILL BLVD	1.24				1.24		1.24	$ 38,285	$ 617,500	$ 3,229,525
OCEAN VIEW BLVD	0.38				0.38		0.38	$ 11,591	$ 186,949	$ 977,741
VERDUGO RD	0.64				0.64		0.64	$ 19,675	$ 317,338	$ 1,659,675
CORRIDOR: GLENDALE AVE	**2.93**				**2.93**		**2.93**	**$ 90,431**	**$ 1,458,562**	**$ 7,628,279**
N Verdugo Rd To San Fernando Rd										
N GLENDALE AV	1.24				1.24		1.24	$ 38,445	$ 620,088	$ 3,243,061
S GLENDALE AV	1.68				1.68		1.68	$ 51,985	$ 838,474	$ 4,385,217
CORRIDOR: GLENOAKS BLVD	**2.88**			**0.05**	**2.93**		**2.93**	**$ 91,431**	**$ 1,474,700**	**$ 7,712,679**
Foothill Fwy To Verdugo Wash										
N PACIFIC AV				0.05	0.05		0.05	$ 2,344	$ 37,803	$ 197,708
W GLENOAKS BLVD	2.88				2.88		2.88	$ 89,088	$ 1,436,897	$ 7,514,970
CORRIDOR: RIVERSIDE-SONORA	**1.38**				**1.38**		**1.38**	**$ 42,652**	**$ 687,938**	**$ 3,597,914**
Burbank Western Channel To W Glenoaks Blvd										
RIVERSIDE DR	0.45				0.45		0.45	$ 14,037	$ 226,398	$ 1,184,063
SONORA AV	0.93				0.93		0.93	$ 28,615	$ 461,539	$ 2,413,851
CORRIDOR: SAN FERNANDO			**4.67**		**4.67**		**4.67**	**$ 765,606**	**$ 12,278,304**	**$ 64,270,444**
Verdugo Ave To Figueroa St										
Off Street			4.67		4.67		4.67	$ 765,606	$ 12,278,304	$ 64,270,444
CORRIDOR: SPRR-BURBANK WESTERN			**0.36**		**0.36**		**0.36**	**$ 58,597**	**$ 939,741**	**$ 4,919,048**
Lassen St To La River										
Off Street			0.36		0.36		0.36	$ 58,597	$ 939,741	$ 4,919,048
CORRIDOR: VERDUGO RD	**1.81**				**1.81**		**1.81**	**$ 56,075**	**$ 904,440**	**$ 4,730,219**
Glendale Ave To Eagle Rock Blvd										
N VERDUGO RD	1.08				1.08		1.08	$ 33,284	$ 536,846	$ 2,807,706
S VERDUGO RD	0.74				0.74		0.74	$ 22,791	$ 367,593	$ 1,922,513
CORRIDOR: VERDUGO WASH	**0.07**		**7.37**	**0.19**	**7.63**		**7.63**	**$ 1,220,150**	**$ 19,569,031**	**$ 102,432,729**
Honolulu Ave To La River										
CANADA BLVD	0.07				0.07		0.07	$ 2,266	$ 36,543	$ 191,122
NEW YORK AV				0.19	0.19		0.19	$ 9,156	$ 147,682	$ 772,376
Off Street			7.37		7.37		7.37	$ 1,208,728	$ 19,384,805	$ 101,469,231
La Canada Flintridge	**2.99**			**0.10**	**3.09**		**3.09**	**$ 97,151**	**$ 1,566,945**	**$ 8,195,125**
CORRIDOR: ARROYO-VERDUGO	**2.76**			**0.08**	**2.84**		**2.84**	**$ 89,113**	**$ 1,437,314**	**$ 7,517,153**
Van Nuys Blvd To York Blvd										
BERKSHIRE AV	1.36				1.36		1.36	$ 41,992	$ 677,289	$ 3,542,221
CHEVY CHASE DR	0.24				0.24		0.24	$ 7,516	$ 121,231	$ 634,039

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
DESCANSO DR	0.86				0.86		0.86	$ 26,561	$ 428,405	$ 2,240,560
HWY 159				0.08	0.08		0.08	$ 3,851	$ 62,118	$ 324,880
Off Street	0.10				0.10		0.10	$ 3,240	$ 52,257	$ 273,302
VERDUGO BLVD	0.19				0.19		0.19	$ 5,953	$ 96,014	$ 502,151
CORRIDOR: FOOTHILL-SUNLAND-VINELAND	**0.23**				**0.23**		**0.23**	**$ 7,023**	**$ 113,277**	**$ 592,439**
Ventura Blvd To Verdugo Wash										
FOOTHILL BLVD	0.23				0.23		0.23	$ 7,023	$ 113,277	$ 592,439
CORRIDOR: PASADENA-YORK				**0.02**	**0.02**		**0.02**	**$ 1,014**	**$ 16,354**	**$ 85,533**
Oak Grove To Eagle Rock Blvd										
OAK GROVE DR				0.02	0.02		0.02	$ 1,014	$ 16,354	$ 85,533
Los Angeles	**0.06**				**0.06**		**0.06**	**$ 1,859**	**$ 29,985**	**$ 156,821**
CORRIDOR: RIVERSIDE-SONORA	**0.06**				**0.06**		**0.06**	**$ 1,859**	**$ 29,985**	**$ 156,821**
Burbank Western Channel To W Glenoaks Blvd										
RIVERSIDE DR	0.06				0.06		0.06	$ 1,859	$ 29,985	$ 156,821
Unincorporated	**2.01**				**2.01**		**2.01**	**$ 62,119**	**$ 1,001,921**	**$ 5,240,046**
CORRIDOR: FOOTHILL-SUNLAND-VINELAND	**2.01**				**2.01**		**2.01**	**$ 62,119**	**$ 1,001,921**	**$ 5,240,046**
Ventura Blvd To Verdugo Wash										
FOOTHILL BLVD	1.24				1.24		1.24	$ 38,234	$ 616,673	$ 3,225,202
OCEAN VIEW BLVD	0.77				0.77		0.77	$ 23,885	$ 385,247	$ 2,014,844
Central Los Angeles	**231.66**	**0.51**	**14.23**	**9.11**	**255.51**	**9.82**	**265.33**	**$ 9,937,396**	**$ 160,066,589**	**$ 837,315,707**
Beverly Hills	**0.20**				**0.20**		**0.20**	**$ 6,201**	**$ 100,015**	**$ 523,076**
CORRIDOR: SAN VICENTE BLVD	**0.20**				**0.20**		**0.20**	**$ 6,201**	**$ 100,015**	**$ 523,076**
Santa Monica Blvd To Venice Blvd										
S ORLANDO AV	0.01				0.01		0.01	$ 262	$ 4,232	$ 22,131
S SAN VICENTE BLVD	0.19				0.19		0.19	$ 5,939	$ 95,783	$ 500,945
Huntington Park		**0.06**			**0.06**		**0.06**	**$ -**	**$ -**	**$ -**
CORRIDOR: RAIL TO RIVER		**0.06**			**0.06**		**0.06**	$ -	$ -	$ -
La River To Long Beach Ave										
Off Street		0.06			0.06		0.06	$ -	$ -	$ -
Los Angeles	**217.37**	**0.19**	**14.23**	**9.11**	**240.90**	**9.82**	**250.73**	**$ 9,495,780**	**$ 152,943,749**	**$ 800,063,254**
CORRIDOR: 1ST-2ND-GLENDALE	**7.41**				**7.41**		**7.41**	**$ 229,072**	**$ 3,694,705**	**$ 19,323,305**
Fletcher Dr To Eastern Ave										
E 1ST ST	3.20				3.20		3.20	$ 99,009	$ 1,596,926	$ 8,351,925
GLENDALE BLVD	2.97				2.97		2.97	$ 91,752	$ 1,479,877	$ 7,739,754
W 1ST ST	0.08				0.08		0.08	$ 2,477	$ 39,959	$ 208,985
W 2ND ST	1.16				1.16		1.16	$ 35,832	$ 577,943	$ 3,022,641
CORRIDOR: ALAMEDA	**1.74**		**2.24**		**3.98**		**3.98**	**$ 421,823**	**$ 6,769,850**	**$ 35,432,727**
Spring St To La River										
Off Street			2.24		2.24		2.24	$ 368,202	$ 5,904,985	$ 30,909,479
S ALAMEDA ST	1.74				1.74		1.74	$ 53,622	$ 864,866	$ 4,523,247
CORRIDOR: ARLINGTON-VAN NESS	**9.81**			**0.31**	**10.13**		**10.13**	**$ 318,436**	**$ 5,136,072**	**$ 26,861,656**
Franklin Ave To E Manchester Ave										
ARLINGTON AV	4.06				4.06		4.06	$ 125,527	$ 2,024,622	$ 10,588,771
N WILTON PL	2.23				2.23		2.23	$ 68,814	$ 1,109,901	$ 5,804,784
S VAN NESS AV	2.15				2.15		2.15	$ 66,458	$ 1,071,899	$ 5,606,034
S VAN NESS PL	0.23				0.23		0.23	$ 7,012	$ 113,094	$ 591,482
S WILTON PL	1.15			0.31	1.45		1.45	$ 50,428	$ 813,348	$ 4,253,811
W 3RD ST				0.00	0.00		0.00	$ 199	$ 3,207	$ 16,775
CORRIDOR: ARROYO SECO			**1.77**		**1.77**	**2.16**	**3.93**	**$ 290,261**	**$ 4,655,025**	**$ 24,366,602**
San Pascual Ave To Ave 19										
Off Street			1.77		1.77	2.16	3.93	$ 290,261	$ 4,655,025	$ 24,366,602
CORRIDOR: ARROYO-VERDUGO	**0.87**				**0.87**		**0.87**	**$ 26,862**	**$ 433,254**	**$ 2,265,917**
Van Nuys Blvd To York Blvd										
SAN PASCUAL AV	0.87				0.87		0.87	$ 26,862	$ 433,254	$ 2,265,917
CORRIDOR: AVALON BLVD	**0.55**				**0.55**		**0.55**	**$ 17,068**	**$ 275,282**	**$ 1,439,726**
E Imperial Hwy To Harry Bridges Blvd										
AVALON BLVD	0.55				0.55		0.55	$ 17,068	$ 275,282	$ 1,439,726
CORRIDOR: AVE 19-FIGUEROA	**6.61**				**6.61**		**6.61**	**$ 204,386**	**$ 3,296,551**	**$ 17,240,962**
Colorado Blvd To La River										
N AVE 19	0.57				0.57		0.57	$ 17,579	$ 283,526	$ 1,482,842
N FIGUEROA ST	5.23				5.23		5.23	$ 161,510	$ 2,604,995	$ 13,624,123
N SPRING ST	0.70				0.70		0.70	$ 21,481	$ 346,468	$ 1,812,027
S AVE 19	0.12				0.12		0.12	$ 3,817	$ 61,562	$ 321,969
CORRIDOR: BALLONA CREEK						**0.06**	**0.06**	**$ -**	**$ -**	**$ -**
Pacific Ave To Venice Blvd										
Off Street						0.06	0.06	$ -	$ -	$ -
CORRIDOR: BARHAM-OLIVE	**0.05**				**0.05**		**0.05**	**$ 1,593**	**$ 25,697**	**$ 134,394**
Sprr Burbank To La River										
BARHAM BLVD	0.05				0.05		0.05	$ 1,593	$ 25,697	$ 134,394
CORRIDOR: BEVERLY-TEMPLE	**8.73**				**8.73**		**8.73**	**$ 269,660**	**$ 4,349,359**	**$ 22,747,147**
Santa Monica Blvd To La River										
BEVERLY BLVD	5.23				5.23		5.23	$ 161,582	$ 2,606,154	$ 13,630,187
E TEMPLE ST	0.29				0.29		0.29	$ 9,000	$ 145,168	$ 759,226
SILVER LAKE BLVD	0.24				0.24		0.24	$ 7,338	$ 118,356	$ 619,004
W TEMPLE ST	2.97				2.97		2.97	$ 91,740	$ 1,479,681	$ 7,738,731
CORRIDOR: BRAND-GLENDALE-HYPERION-HIGHLAND-REDONDO	**5.37**			**5.69**	**11.06**		**11.06**	**$ 443,932**	**$ 7,160,189**	**$ 37,447,788**
Verdugo Wash To Rodeo Rd										
FRANKLIN AV				3.38	3.38		3.38	$ 165,127	$ 2,663,333	$ 13,929,232
GLENDALE BLVD	0.61				0.61		0.61	$ 18,817	$ 303,496	$ 1,587,286
HYPERION AV	0.57				0.57		0.57	$ 17,642	$ 284,541	$ 1,488,149
N HIGHLAND AV	2.20				2.20		2.20	$ 68,083	$ 1,098,113	$ 5,743,130
ROWENA AV				0.13	0.13		0.13	$ 6,173	$ 99,571	$ 520,754
S HIGHLAND AV	1.68				1.68		1.68	$ 51,883	$ 836,818	$ 4,376,556
S LA BREA AV	0.31				0.31		0.31	$ 9,546	$ 153,967	$ 805,245
S REDONDO BLVD				1.70	1.70		1.70	$ 83,155	$ 1,341,211	$ 7,014,533
SAINT GEORGE ST				0.48	0.48		0.48	$ 23,507	$ 379,140	$ 1,982,903
CORRIDOR: BROADWAY-FOUNTAIN-SANTA MONICA	**1.82**			**1.12**	**2.94**		**2.94**	**$ 110,723**	**$ 1,785,855**	**$ 9,340,021**
Ocean Ave To W Sunset Blvd										
FOUNTAIN AV	1.82			0.87	2.69		2.69	$ 98,841	$ 1,594,212	$ 8,337,731
LA MIRADA AV				0.13	0.13		0.13	$ 6,200	$ 99,998	$ 522,992
N BRONSON AV				0.04	0.04		0.04	$ 2,168	$ 34,973	$ 182,911

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	Not Usable As Built MetroStudy Metro Regional ATN	Not Usable As Built Off-Street Metro Regional ATN	Not Usable As Built Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
N VAN NESS AV				0.07	0.07		0.07	$ 3,272	$ 52,777	$ 276,026
SEWARD ST				0.00	0.00		0.00	$ 241	$ 3,893	$ 20,362
CORRIDOR: BROADWAY-SPRING	**4.48**				**4.48**		**4.48**	**$ 138,321**	**$ 2,230,984**	**$ 11,668,047**
N Mission Rd To S Main St										
N BROADWAY	3.04				3.04		3.04	$ 93,837	$ 1,513,502	$ 7,915,613
N SPRING ST	0.46				0.46		0.46	$ 14,296	$ 230,588	$ 1,205,977
S SPRING ST	0.98				0.98		0.98	$ 30,187	$ 486,894	$ 2,546,456
CORRIDOR: BROADWAY-WILSON	**0.33**				**0.33**		**0.33**	**$ 10,342**	**$ 166,811**	**$ 872,422**
San Fernando Bike Path To La River										
W BROADWAY	0.33				0.33		0.33	$ 10,342	$ 166,811	$ 872,422
CORRIDOR: CENTRAL AVE-COMPTON CREEK	**8.59**				**8.59**		**8.59**	**$ 265,389**	**$ 4,280,467**	**$ 22,386,844**
E 1St St To E Artesia Blvd										
CLOVIS AV	0.01				0.01		0.01	$ 163	$ 2,623	$ 13,720
S CENTRAL AV	8.58				8.58		8.58	$ 265,226	$ 4,277,844	$ 22,373,124
CORRIDOR: CHAVEZ-SUNSET-RIGGIN	**11.52**				**11.52**		**11.52**	**$ 356,022**	**$ 5,742,297**	**$ 30,032,213**
N Fairfax Ave To Alhambra Wash										
E CESAR E CHAVEZ AV	2.90				2.90		2.90	$ 89,510	$ 1,443,711	$ 7,550,610
HOLLYWOOD BLVD	4.33				4.33		4.33	$ 133,909	$ 2,159,827	$ 11,295,893
W CESAR E CHAVEZ AV	0.59				0.59		0.59	$ 18,344	$ 295,872	$ 1,547,413
W SUNSET BLVD	3.70				3.70		3.70	$ 114,259	$ 1,842,887	$ 9,638,298
CORRIDOR: COLLIS-HILL	**2.20**				**2.20**		**2.20**	**$ 67,982**	**$ 1,096,485**	**$ 5,734,619**
N Figueroa St To Huntington Dr S										
COLLIS AV	1.34				1.34		1.34	$ 41,276	$ 665,742	$ 3,481,829
HILL DR	0.02				0.02		0.02	$ 647	$ 10,432	$ 54,560
S AVE 60	0.84				0.84		0.84	$ 26,059	$ 420,312	$ 2,198,229
CORRIDOR: COLORADO-FOOTHILL	**3.35**				**3.35**		**3.35**	**$ 103,573**	**$ 1,670,527**	**$ 8,736,855**
La River To San Antonio Wash										
COLORADO BLVD	2.92				2.92		2.92	$ 90,284	$ 1,456,195	$ 7,615,900
COLORADO ST	0.37				0.37		0.37	$ 11,581	$ 186,791	$ 976,915
I-5 N EXIT 142	0.06				0.06		0.06	$ 1,708	$ 27,541	$ 144,040
CORRIDOR: CORONADO-RAMPART	**1.67**				**1.67**		**1.67**	**$ 51,464**	**$ 830,067**	**$ 4,341,252**
W Sunset Blvd To W 7Th St										
COUNCIL ST	0.06				0.06		0.06	$ 1,853	$ 29,886	$ 156,302
N CORONADO ST	0.70				0.70		0.70	$ 21,671	$ 349,525	$ 1,828,018
N RAMPART BLVD	0.11				0.11		0.11	$ 3,552	$ 57,292	$ 299,638
S RAMPART BLVD	0.79				0.79		0.79	$ 24,389	$ 393,364	$ 2,057,295
CORRIDOR: CRENSHAW-ARDEN	**8.75**			**1.70**	**10.45**		**10.45**	**$ 353,267**	**$ 5,697,857**	**$ 29,799,793**
Highland Ave To Pch										
ARDEN PL				0.05	0.05		0.05	$ 2,302	$ 37,124	$ 194,161
COLE AV				0.88	0.88		0.88	$ 42,872	$ 691,479	$ 3,616,436
CRENSHAW BLVD	6.92				6.92		6.92	$ 213,865	$ 3,449,429	$ 18,040,512
N ARDEN BLVD	0.66				0.66		0.66	$ 20,504	$ 330,710	$ 1,729,611
N CAHUENGA BLVD	1.14				1.14		1.14	$ 35,120	$ 566,455	$ 2,962,557
N ROSSMORE AV	0.03				0.03		0.03	$ 786	$ 12,672	$ 66,276
S ARDEN BLVD				0.77	0.77		0.77	$ 37,519	$ 605,143	$ 3,164,896
W 3RD ST				0.01	0.01		0.01	$ 300	$ 4,846	$ 25,344
CORRIDOR: CULVER-ROBERTSON	**0.39**				**0.39**		**0.39**	**$ 11,911**	**$ 192,119**	**$ 1,004,784**
Santa Monica Blvd To Lincoln Blvd										
N ROBERTSON BLVD	0.08				0.08		0.08	$ 2,418	$ 39,008	$ 204,011
S ROBERTSON BLVD	0.31				0.31		0.31	$ 9,493	$ 153,111	$ 800,773
CORRIDOR: EAGLE ROCK BLVD	**2.95**				**2.95**		**2.95**	**$ 91,017**	**$ 1,468,010**	**$ 7,677,694**
Colorado Blvd To N San Fernando Rd										
EAGLE ROCK BLVD	2.95				2.95		2.95	$ 91,017	$ 1,468,010	$ 7,677,694
CORRIDOR: EXPOSITION BLVD	**4.62**				**4.62**		**4.62**	**$ 142,609**	**$ 2,300,149**	**$ 12,029,777**
W Jefferson Blvd To S Main St										
BROADWAY PL	0.09				0.09		0.09	$ 2,740	$ 44,197	$ 231,152
EXPOSITION BLVD	3.97				3.97		3.97	$ 122,789	$ 1,980,475	$ 10,357,884
S HARCOURT AV	0.07				0.07		0.07	$ 2,102	$ 33,897	$ 177,281
W 37TH ST	0.48				0.48		0.48	$ 14,978	$ 241,580	$ 1,263,461
CORRIDOR: FAIRFAX	**3.48**				**3.48**		**3.48**	**$ 107,525**	**$ 1,734,282**	**$ 9,070,294**
Hollywood Blvd To Ballona Creek										
N FAIRFAX AV	0.89				0.89		0.89	$ 27,437	$ 442,525	$ 2,314,407
S FAIRFAX AV	2.59				2.59		2.59	$ 80,089	$ 1,291,757	$ 6,755,887
CORRIDOR: FIRESTONE-MANCHESTER	**3.52**				**3.52**		**3.52**	**$ 108,880**	**$ 1,756,136**	**$ 9,184,590**
Culver Blvd To La River										
E MANCHESTER AV	3.52				3.52		3.52	$ 108,880	$ 1,756,136	$ 9,184,590
CORRIDOR: FLETCHER-SILVER LAKE	**4.24**				**4.24**		**4.24**	**$ 131,144**	**$ 2,115,227**	**$ 11,062,638**
Silver Lake Blvd To Eagle Rock Blvd										
FLETCHER DR	1.75				1.75		1.75	$ 53,936	$ 869,933	$ 4,549,747
SILVER LAKE BLVD	2.38				2.38		2.38	$ 73,552	$ 1,186,315	$ 6,204,426
W AVE 36	0.12				0.12		0.12	$ 3,657	$ 58,980	$ 308,465
CORRIDOR: FLORENCE AVE	**4.54**				**4.54**		**4.54**	**$ 140,159**	**$ 2,260,622**	**$ 11,823,053**
Bnsf Railroad To Alameda St										
E FLORENCE AV	1.02				1.02		1.02	$ 31,385	$ 506,212	$ 2,647,490
W FLORENCE AV	3.52				3.52		3.52	$ 108,773	$ 1,754,410	$ 9,175,562
CORRIDOR: FLOWER-WASHINGTON	**4.91**				**4.91**		**4.91**	**$ 151,810**	**$ 2,448,541**	**$ 12,805,869**
W 2Nd St To La River										
E WASHINGTON BLVD	2.59				2.59		2.59	$ 80,115	$ 1,292,173	$ 6,758,065
S FLOWER ST	1.92				1.92		1.92	$ 59,235	$ 955,405	$ 4,996,766
W WASHINGTON BLVD	0.40				0.40		0.40	$ 12,460	$ 200,963	$ 1,051,039
CORRIDOR: HILLCREST-HAWTHORNE			**1.89**		**1.89**		**1.89**	**$ 310,055**	**$ 4,972,460**	**$ 26,028,207**
Slauson Blvd To Palos Verdes Dr										
Off Street			1.89		1.89		1.89	$ 310,055	$ 4,972,460	$ 26,028,207
CORRIDOR: HUNTINGTON-MAIN	**15.52**				**15.52**		**15.52**	**$ 479,510**	**$ 7,734,039**	**$ 40,449,023**
E Huntington Dr To E Imperial Hwy										
HUNTINGTON DR	0.07				0.07		0.07	$ 2,190	$ 35,329	$ 184,771
HUNTINGTON DR N	0.95				0.95		0.95	$ 29,372	$ 473,739	$ 2,477,655
HUNTINGTON DR S	1.76				1.76		1.76	$ 54,335	$ 876,364	$ 4,583,382
MAYCREST AV	0.02				0.02		0.02	$ 524	$ 8,459	$ 44,239
N ALAMEDA ST	0.02				0.02		0.02	$ 683	$ 11,014	$ 57,604
N MAIN ST	2.63				2.63		2.63	$ 81,134	$ 1,308,611	$ 6,844,038

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
N MISSION RD	1.13				1.13		1.13	$ 34,841	$ 561,944	$ 2,938,968
S MAIN ST	8.95				8.95		8.95	$ 276,432	$ 4,458,579	$ 23,318,366
CORRIDOR: IMPERIAL HWY	**3.57**				**3.57**		**3.57**	**$ 110,233**	**$ 1,777,956**	**$ 9,298,710**
Coast To Orange County Line										
E IMPERIAL HWY	2.55				2.55		2.55	$ 78,638	$ 1,268,349	$ 6,633,467
W IMPERIAL HWY	1.02				1.02		1.02	$ 31,596	$ 509,607	$ 2,665,243
CORRIDOR: LA RIVER			**4.98**		**4.98**	**7.32**	**12.30**	**$ 816,267**	**$ 13,090,771**	**$ 68,523,279**
Canoga Ave To Coyote Creek										
Off Street			4.98		4.98	7.32	12.30	$ 816,267	$ 13,090,771	$ 68,523,279
CORRIDOR: MAIN ST				**0.27**	**0.27**		**0.27**	**$ 13,030**	**$ 210,168**	**$ 1,099,180**
Huntington Dr N To Arrow Hwy										
POPLAR BLVD				0.27	0.27		0.27	$ 13,030	$ 210,168	$ 1,099,180
CORRIDOR: MELROSE AVE	**6.16**				**6.16**		**6.16**	**$ 190,197**	**$ 3,067,694**	**$ 16,044,040**
Santa Monica Blvd To W Sunset Blvd										
MELROSE AV	5.00				5.00		5.00	$ 154,493	$ 2,491,823	$ 13,032,232
MYRA AV	0.25				0.25		0.25	$ 7,636	$ 123,163	$ 644,140
N HOOVER ST	0.02				0.02		0.02	$ 471	$ 7,595	$ 39,721
N VIRGIL AV	0.50				0.50		0.50	$ 15,511	$ 250,175	$ 1,308,414
SANTA MONICA BLVD	0.39				0.39		0.39	$ 12,086	$ 194,939	$ 1,019,533
CORRIDOR: MISSION-VALLEY	**4.40**				**4.40**		**4.40**	**$ 135,820**	**$ 2,190,644**	**$ 11,457,070**
E Cesar E Chavez Ave To La Puente Creek										
N MISSION RD	1.27				1.27		1.27	$ 39,189	$ 632,075	$ 3,305,754
VALLEY BLVD	3.13				3.13		3.13	$ 96,631	$ 1,558,569	$ 8,151,316
CORRIDOR: PASADENA-YORK	**2.76**		**0.14**		**2.91**		**2.91**	**$ 109,075**	**$ 1,757,100**	**$ 9,191,338**
Oak Grove To Eagle Rock Blvd										
Off Street			0.14		0.14		0.14	$ 23,764	$ 381,117	$ 1,994,945
YORK BLVD	2.76				2.76		2.76	$ 85,311	$ 1,375,983	$ 7,196,394
CORRIDOR: PICO-GATEWAY-OCEAN PARK	**12.06**				**12.06**		**12.06**	**$ 372,762**	**$ 6,012,295**	**$ 31,444,305**
Barnard Way To Central Ave										
E PICO BLVD	0.96				0.96		0.96	$ 29,582	$ 477,131	$ 2,495,395
W PICO BLVD	11.11				11.11		11.11	$ 343,180	$ 5,535,164	$ 28,948,910
CORRIDOR: RAIL TO RIVER		**0.19**			**0.19**		**0.19**	**$ -**	**$ -**	**$ -**
La River To Long Beach Ave										
Off Street		0.19			0.19		0.19	$ -	$ -	$ -
CORRIDOR: S FIGUEROA ST	**3.01**				**3.01**		**3.01**	**$ 92,886**	**$ 1,498,169**	**$ 7,835,424**
W 7th St To W Martin Luther King Junior Blvd										
S FIGUEROA ST	3.01				3.01		3.01	$ 92,886	$ 1,498,169	$ 7,835,424
CORRIDOR: SAN FERNANDO	**3.07**			**0.03**	**3.10**		**3.10**	**$ 96,244**	**$ 1,552,317**	**$ 8,118,620**
Verdugo Ave To Figueroa St										
CYPRESS AV	1.69				1.69		1.69	$ 52,311	$ 843,722	$ 4,412,667
N SAN FERNANDO RD	1.38				1.38		1.38	$ 42,670	$ 688,231	$ 3,599,450
VERDUGO RD				0.03	0.03		0.03	$ 1,263	$ 20,364	$ 106,502
CORRIDOR: SAN VICENTE BLVD	**3.62**				**3.62**		**3.62**	**$ 111,949**	**$ 1,805,625**	**$ 9,443,418**
Santa Monica Blvd To Venice Blvd										
	0.06				0.06		0.06	$ 1,789	$ 28,856	$ 150,919
BURTON WY	0.78				0.78		0.78	$ 24,135	$ 389,274	$ 2,035,902
S ORLANDO AV	0.02				0.02		0.02	$ 510	$ 8,233	$ 43,058
S SAN VICENTE BLVD	0.35				0.35		0.35	$ 10,845	$ 174,919	$ 914,828
SAN VICENTE BLVD	2.42				2.42		2.42	$ 74,669	$ 1,204,342	$ 6,298,710
CORRIDOR: SLAUSON	**2.67**		**2.88**		**5.54**		**5.54**	**$ 554,241**	**$ 8,896,115**	**$ 46,560,520**
Sepulveda Blvd To La River										
SLAUSON BLVD			2.88		2.88		2.88	$ 471,795	$ 7,566,352	$ 39,605,864
W SLAUSON AV	2.67				2.67		2.67	$ 82,445	$ 1,329,762	$ 6,954,656
CORRIDOR: SOTO	**4.69**				**4.69**		**4.69**	**$ 144,819**	**$ 2,335,791**	**$ 12,216,187**
Mission Road To La River										
N SOTO ST	2.57				2.57		2.57	$ 79,374	$ 1,280,222	$ 6,695,562
S SOTO ST	2.12				2.12		2.12	$ 65,445	$ 1,055,569	$ 5,520,625
CORRIDOR: SPRR-BURBANK WESTERN			**0.33**		**0.33**		**0.33**	**$ 54,131**	**$ 868,114**	**$ 4,544,120**
Lassen St To La River										
Off Street			0.33		0.33		0.33	$ 54,131	$ 868,114	$ 4,544,120
CORRIDOR: VENTURA-CALABASAS	**0.35**				**0.35**		**0.35**	**$ 10,932**	**$ 176,323**	**$ 922,168**
Ventura County Line To N Cahuenga Blvd										
N HIGHLAND AV	0.19				0.19		0.19	$ 5,763	$ 92,958	$ 486,170
ODIN ST	0.17				0.17		0.17	$ 5,169	$ 83,365	$ 435,997
CORRIDOR: VERDUGO RD	**1.12**				**1.12**		**1.12**	**$ 34,716**	**$ 559,931**	**$ 2,928,441**
Glendale Ave To Eagle Rock Blvd										
S VERDUGO RD	0.12				0.12		0.12	$ 3,646	$ 58,810	$ 307,576
VERDUGO RD	1.01				1.01		1.01	$ 31,070	$ 501,122	$ 2,620,866
CORRIDOR: VERMONT	**18.25**				**18.25**		**18.25**	**$ 563,795**	**$ 9,093,467**	**$ 47,558,831**
Los Feliz Blvd To W Anaheim St										
N VERMONT AV	2.64				2.64		2.64	$ 81,579	$ 1,315,789	$ 6,881,574
S VERMONT AV	15.61				15.61		15.61	$ 482,216	$ 7,777,678	$ 40,677,257
CORRIDOR: WHITTIER BLVD	**3.00**				**3.00**		**3.00**	**$ 92,646**	**$ 1,494,295**	**$ 7,815,165**
Central Ave To Washington Blvd										
E 6TH ST	0.71				0.71		0.71	$ 21,803	$ 351,667	$ 1,839,219
WHITTIER BLVD	2.29				2.29		2.29	$ 70,843	$ 1,142,628	$ 5,975,946
CORRIDOR: WILSHIRE-SAN VICENTE	**8.01**				**8.01**		**8.01**	**$ 247,584**	**$ 3,993,298**	**$ 20,884,947**
Ocean Ave To Central Ave										
E 7TH ST	0.76				0.76		0.76	$ 23,602	$ 380,678	$ 1,990,947
W 7TH ST	2.61				2.61		2.61	$ 80,780	$ 1,302,904	$ 6,814,187
WILSHIRE BLVD	4.63				4.63		4.63	$ 143,202	$ 2,309,715	$ 12,079,812
CORRIDOR: WESTWOOD-SPRR-JEFFERSON	**5.35**				**5.35**	**0.28**	**5.63**	**$ 165,338**	**$ 2,666,741**	**$ 13,947,054**
Le Conte Ave To S Figueroa St										
Off Street						0.28	0.28	$ -	$ -	$ -
W JEFFERSON BLVD	5.35				5.35		5.35	$ 165,338	$ 2,666,741	$ 13,947,054
CORRIDOR: MLK-RODEO	**7.26**				**7.26**		**7.26**	**$ 224,317**	**$ 3,618,015**	**$ 18,922,220**
Ballona Creek To S Central Ave										
E MARTIN LUTHER KING JR BLVD	1.00				1.00		1.00	$ 31,049	$ 500,792	$ 2,619,140
RODEO RD	1.51				1.51		1.51	$ 46,734	$ 753,771	$ 3,942,220
W MARTIN LUTHER KING JR BLVD	4.74				4.74		4.74	$ 146,534	$ 2,363,453	$ 12,360,860
Montebello	**0.05**				**0.05**		**0.05**	**$ 1,595**	**$ 25,722**	**$ 134,526**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	Not Usable As Built MetroStudy Metro Regional ATN	Not Usable As Built Off-Street Metro Regional ATN	Not Usable As Built Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
CORRIDOR: ALTADENA-LONG BEACH	0.05				0.05		0.05	$ 1,595	$ 25,722	$ 134,526
Loma Alta Dr To La River										
S GARFIELD AV	0.05				0.05		0.05	$ 1,595	$ 25,722	$ 134,526
Unincorporated	**14.04**	**0.25**			**14.29**		**14.29**	**$ 433,820**	**$ 6,997,104**	**$ 36,594,851**
CORRIDOR: 1ST-2ND-GLENDALE	1.09				1.09		1.09	$ 33,833	$ 545,701	$ 2,854,014
Fletcher Dr To Eastern Ave										
E 1ST ST	1.09				1.09		1.09	$ 33,833	$ 545,701	$ 2,854,014
CORRIDOR: ALTADENA-LONG BEACH	0.39				0.39		0.39	$ 12,056	$ 194,448	$ 1,016,965
Loma Alta Dr To La River										
S GARFIELD AV	0.39				0.39		0.39	$ 12,056	$ 194,448	$ 1,016,965
CORRIDOR: CHAVEZ-SUNSET-RIGGIN	2.05				2.05		2.05	$ 63,376	$ 1,022,190	$ 5,346,056
N Fairfax Ave To Alhambra Wash										
CESAR E CHAVEZ AV	2.05				2.05		2.05	$ 63,376	$ 1,022,190	$ 5,346,056
CORRIDOR: FREMONT-PASADENA	1.56				1.56		1.56	$ 48,168	$ 776,897	$ 4,063,169
E Union St To Whittier Blvd										
N MEDNIK AV	0.49				0.49		0.49	$ 15,284	$ 246,511	$ 1,289,255
S ARIZONA AV	0.64				0.64		0.64	$ 19,893	$ 320,858	$ 1,678,085
S MEDNIK AV	0.42				0.42		0.42	$ 12,991	$ 209,527	$ 1,095,829
CORRIDOR: GARVEY-RAMONA	2.82				2.82		2.82	$ 87,197	$ 1,406,402	$ 7,355,480
Whittier Blvd To Sp Rr										
N EASTERN AV	1.68				1.68		1.68	$ 51,760	$ 834,833	$ 4,366,174
RAMONA RD	0.24				0.24		0.24	$ 7,556	$ 121,876	$ 637,411
S EASTERN AV	0.90				0.90		0.90	$ 27,881	$ 449,693	$ 2,351,895
CORRIDOR: RAIL TO RIVER		0.25			0.25		0.25	$ -	$ -	$ -
La River To Long Beach Ave										
Off Street		0.25			0.25		0.25	$ -	$ -	$ -
CORRIDOR: SLAUSON	2.48				2.48		2.48	$ 76,482	$ 1,233,588	$ 6,451,663
Sepulveda Blvd To La River										
W SLAUSON AV	2.48				2.48		2.48	$ 76,482	$ 1,233,588	$ 6,451,663
CORRIDOR: WHITTIER BLVD	3.65				3.65		3.65	$ 112,708	$ 1,817,878	$ 9,507,504
Central Ave To Washington Blvd										
WHITTIER BLVD	3.65				3.65		3.65	$ 112,708	$ 1,817,878	$ 9,507,504
Gateway Cities	**194.67**	**12.44**	**47.92**	**4.75**	**259.78**	**82.11**	**341.89**	**$ 14,108,395**	**$ 226,834,079**	**$ 1,186,906,134**
Artesia	**1.19**		**0.64**		**1.82**		**1.82**	**$ 140,884**	**$ 2,262,768**	**$ 11,841,754**
CORRIDOR: ARTESIA-HERONDO	1.19				1.19		1.19	$ 36,618	$ 590,618	$ 3,088,931
Coast To Orange County Line										
ARTESIA BLVD	1.19				1.19		1.19	$ 36,618	$ 590,618	$ 3,088,931
CORRIDOR: SALT LAKE- UP-PE RR ROW			0.64		0.64		0.64	$ 104,266	$ 1,672,150	$ 8,752,822
La River To Coyote Creek										
Off Street			0.64		0.64		0.64	$ 104,266	$ 1,672,150	$ 8,752,822
Bell Gardens	**1.76**				**1.76**	**2.64**	**4.40**	**$ 54,347**	**$ 876,557**	**$ 4,584,394**
CORRIDOR: ALTADENA-LONG BEACH	1.76				1.76		1.76	$ 54,347	$ 876,557	$ 4,584,394
Loma Alta Dr To La River										
EASTERN AV	0.02				0.02		0.02	$ 559	$ 9,009	$ 47,119
GARFIELD AV	1.74				1.74		1.74	$ 53,788	$ 867,548	$ 4,537,275
CORRIDOR: RIO HONDO						2.64	2.64	$ -	$ -	$ -
Peck Rd To La River										
Off Street						2.64	2.64	$ -	$ -	$ -
Bellflower	**8.35**		**2.44**		**10.78**		**10.78**	**$ 657,560**	**$ 10,569,183**	**$ 55,305,491**
CORRIDOR: ARTESIA-HERONDO	2.59				2.59		2.59	$ 79,921	$ 1,289,053	$ 6,741,750
Coast To Orange County Line										
ARTESIA BLVD	2.59				2.59		2.59	$ 79,921	$ 1,289,053	$ 6,741,750
CORRIDOR: LAKEWOOD-ROSEMEAD	2.94				2.94		2.94	$ 90,889	$ 1,465,958	$ 7,666,962
E Orange Grove Blvd To Pch										
LAKEWOOD BLVD	2.94				2.94		2.94	$ 90,889	$ 1,465,958	$ 7,666,962
CORRIDOR: SALT LAKE- UP-PE RR ROW			2.44		2.44		2.44	$ 399,590	$ 6,408,368	$ 33,544,427
La River To Coyote Creek										
Off Street			2.44		2.44		2.44	$ 399,590	$ 6,408,368	$ 33,544,427
CORRIDOR: WOODRUFF AVE	2.82				2.82		2.82	$ 87,160	$ 1,405,804	$ 7,352,353
Firestone Blvd To E Willow St										
WOODRUFF AV	2.82				2.82		2.82	$ 87,160	$ 1,405,804	$ 7,352,353
Carson	**0.44**				**0.44**		**0.44**	**$ 13,583**	**$ 219,084**	**$ 1,145,809**
CORRIDOR: ARTESIA-HERONDO	0.44				0.44		0.44	$ 13,583	$ 219,084	$ 1,145,809
Coast To Orange County Line										
CENTRAL AVE	0.44				0.44		0.44	$ 13,583	$ 219,084	$ 1,145,809
Cerritos	**10.44**		**2.86**		**13.30**	**2.90**	**16.20**	**$ 791,891**	**$ 12,729,418**	**$ 66,608,518**
CORRIDOR: ARTESIA-HERONDO	3.31				3.31		3.31	$ 102,354	$ 1,650,869	$ 8,634,043
Coast To Orange County Line										
ARTESIA BLVD	3.31				3.31		3.31	$ 102,354	$ 1,650,869	$ 8,634,043
CORRIDOR: BLOOMFIELD AVE	2.83				2.83		2.83	$ 87,508	$ 1,411,422	$ 7,381,736
Whittier-Uprr To Carson St										
BLOOMFIELD AV	2.83				2.83		2.83	$ 87,508	$ 1,411,422	$ 7,381,736
CORRIDOR: Del Amo Blvd	4.30				4.30		4.30	$ 132,719	$ 2,140,625	$ 11,195,468
Coast To Coyote Creek										
DEL AMO BLVD	4.30				4.30		4.30	$ 132,719	$ 2,140,625	$ 11,195,468
CORRIDOR: SALT LAKE- UP-PE RR ROW			2.86		2.86		2.86	$ 469,310	$ 7,526,503	$ 39,397,271
La River To Coyote Creek										
Off Street			2.86		2.86		2.86	$ 469,310	$ 7,526,503	$ 39,397,271
CORRIDOR: SAN GABRIEL RIVER						2.90	2.90	$ -	$ -	$ -
Old San Gabriel Cyn To Coyote Creek										
Off Street						2.90	2.90	$ -	$ -	$ -
Commerce	**2.61**		**2.52**		**5.13**		**5.13**	**$ 494,729**	**$ 7,941,536**	**$ 41,563,933**
CORRIDOR: ALTADENA-LONG BEACH	2.61				2.61		2.61	$ 80,631	$ 1,300,503	$ 6,801,628
Loma Alta Dr To La River										
GARFIELD AV	2.61				2.61		2.61	$ 80,631	$ 1,300,503	$ 6,801,628
CORRIDOR: RANDOLPH AVE RAIL ROW			2.52		2.52		2.52	$ 414,098	$ 6,641,033	$ 34,762,305
E Slauson Ave To La River										
Off Street			2.52		2.52		2.52	$ 414,098	$ 6,641,033	$ 34,762,305
Compton	**10.19**		**0.86**		**11.04**	**3.01**	**14.06**	**$ 455,226**	**$ 7,329,487**	**$ 38,343,289**
CORRIDOR: ALAMEDA	3.40		0.12		3.52		3.52	$ 124,957	$ 2,013,603	$ 10,532,578
Spring St To La River										

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	Not Usable As Built MetroStudy Metro Regional ATN	Not Usable As Built Off-Street Metro Regional ATN	Not Usable As Built Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
ALAMEDA ST	3.40				3.40		3.40	$ 104,988	$ 1,693,362	$ 8,856,284
Off Street			0.12		0.12		0.12	$ 19,968	$ 320,241	$ 1,676,295
CORRIDOR: ARTESIA-HERONDO	**2.40**				**2.40**		**2.40**	**$ 74,063**	**$ 1,194,570**	**$ 6,247,601**
Coast To Orange County Line										
E ARTESIA BLVD	0.86				0.86		0.86	$ 26,485	$ 427,183	$ 2,234,168
W ARTESIA BLVD	1.54				1.54		1.54	$ 47,578	$ 767,387	$ 4,013,433
CORRIDOR: CENTRAL AVE-COMPTON CREEK			**0.73**		**0.73**	**2.85**	**3.58**	**$ 120,434**	**$ 1,931,447**	**$ 10,110,104**
E 1St St To E Artesia Blvd										
Off Street			0.73		0.73	2.85	3.58	$ 120,434	$ 1,931,447	$ 10,110,104
CORRIDOR: EL SEGUNDO BLVD	**0.88**				**0.88**		**0.88**	**$ 27,248**	**$ 439,482**	**$ 2,298,490**
Coast To Alameda St										
W EL SEGUNDO BLVD	0.88				0.88		0.88	$ 27,248	$ 439,482	$ 2,298,490
CORRIDOR: LA RIVER						**0.16**	**0.16**	**$ -**	**$ -**	**$ -**
Canoga Ave To Coyote Creek										
Off Street						0.16	0.16	$ -	$ -	$ -
CORRIDOR: REDONDO BEACH BLVD	**3.51**				**3.51**		**3.51**	**$ 108,524**	**$ 1,750,385**	**$ 9,154,515**
Flagler Ln To Salt Lake- Up-Pe Rr Row										
E COMPTON BLVD	1.52				1.52		1.52	$ 46,934	$ 756,999	$ 3,959,105
W COMPTON BLVD	1.99				1.99		1.99	$ 61,590	$ 993,386	$ 5,195,410
Cudahy			**1.21**		**1.21**	**0.85**	**2.06**	**$ 198,527**	**$ 3,183,856**	**$ 16,665,808**
CORRIDOR: LA RIVER						**0.85**	**0.85**	**$ -**	**$ -**	**$ -**
Canoga Ave To Coyote Creek										
Off Street						0.85	0.85	$ -	$ -	$ -
CORRIDOR: SALT LAKE- UP-PE RR ROW			**1.21**		**1.21**		**1.21**	**$ 198,527**	**$ 3,183,856**	**$ 16,665,808**
La River To Coyote Creek										
Off Street			1.21		1.21		1.21	$ 198,527	$ 3,183,856	$ 16,665,808
Downey	**11.61**		**0.82**		**12.44**	**1.42**	**13.86**	**$ 494,103**	**$ 7,956,996**	**$ 41,624,792**
CORRIDOR: FIRESTONE-SPRR	**3.25**		**0.50**		**3.75**		**3.75**	**$ 181,784**	**$ 2,924,555**	**$ 15,301,249**
La River To Artesia Blvd										
FIRESTONE BLVD	3.25				3.25		3.25	$ 100,531	$ 1,621,470	$ 8,480,288
SPRR			0.50		0.50		0.50	$ 81,253	$ 1,303,085	$ 6,820,960
CORRIDOR: IMPERIAL HWY	**3.11**				**3.11**		**3.11**	**$ 96,233**	**$ 1,552,147**	**$ 8,117,731**
Coast To Orange County Line										
E IMPERIAL HWY	0.64				0.64		0.64	$ 19,753	$ 318,599	$ 1,666,272
IMPERIAL HWY	2.48				2.48		2.48	$ 76,480	$ 1,233,548	$ 6,451,458
CORRIDOR: LAKEWOOD-ROSEMEAD	**3.72**				**3.72**		**3.72**	**$ 114,871**	**$ 1,852,754**	**$ 9,689,903**
E Orange Grove Blvd To Pch										
LAKEWOOD BLVD	3.72				3.72		3.72	$ 114,871	$ 1,852,754	$ 9,689,903
CORRIDOR: SALT LAKE- UP-PE RR ROW			**0.33**		**0.33**		**0.33**	**$ 54,020**	**$ 866,340**	**$ 4,534,833**
La River To Coyote Creek										
Off Street			0.33		0.33		0.33	$ 54,020	$ 866,340	$ 4,534,833
CORRIDOR: SAN GABRIEL RIVER						**1.42**	**1.42**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						1.42	1.42	$ -	$ -	$ -
CORRIDOR: WOODRUFF AVE	**1.53**				**1.53**		**1.53**	**$ 47,194**	**$ 761,200**	**$ 3,981,076**
Firestone Blvd To E Willow St										
WOODRUFF AV	1.53				1.53		1.53	$ 47,194	$ 761,200	$ 3,981,076
Hawaiian Gardens	**1.17**				**1.17**		**1.17**	**$ 36,300**	**$ 585,482**	**$ 3,062,073**
CORRIDOR: BLOOMFIELD AVE	**0.11**				**0.11**		**0.11**	**$ 3,498**	**$ 56,425**	**$ 295,103**
Whittier-Uprr To Carson St										
BLOOMFIELD AV	0.11				0.11		0.11	$ 3,498	$ 56,425	$ 295,103
CORRIDOR: CARSON ST	**1.06**				**1.06**		**1.06**	**$ 32,802**	**$ 529,057**	**$ 2,766,970**
N Long Beach Blvd To Bloomfield Ave										
CARSON ST	1.06				1.06		1.06	$ 32,802	$ 529,057	$ 2,766,970
Huntington Park	**1.58**	**4.23**		**0.49**	**6.30**		**6.30**	**$ 72,454**	**$ 1,168,618**	**$ 6,111,874**
CORRIDOR: ALAMEDA	**0.54**			**0.49**	**1.03**		**1.03**	**$ 40,445**	**$ 652,337**	**$ 3,411,724**
Spring St To La River										
S ALAMEDA ST	0.54			0.49	1.03		1.03	$ 40,445	$ 652,337	$ 3,411,724
CORRIDOR: PACIFIC BLVD	**1.04**				**1.04**		**1.04**	**$ 32,009**	**$ 516,281**	**$ 2,700,149**
Slauson Ave To Southern Ave										
PACIFIC BLVD	1.04				1.04		1.04	$ 32,009	$ 516,281	$ 2,700,149
CORRIDOR: RAIL TO RIVER		**0.45**			**0.45**		**0.45**	**$ -**	**$ -**	**$ -**
La River To Long Beach Ave										
Off Street		0.45			0.45		0.45	$ -	$ -	$ -
CORRIDOR: RANDOLPH AVE RAIL ROW		**2.41**			**2.41**		**2.41**	**$ -**	**$ -**	**$ -**
E Slauson Ave To La River										
Off Street		2.41			2.41		2.41	$ -	$ -	$ -
CORRIDOR: SLAUSON		**1.37**			**1.37**		**1.37**	**$ -**	**$ -**	**$ -**
Sepulveda Blvd To La River										
Slauson AV		1.37			1.37		1.37	$ -	$ -	$ -
La Mirada	**4.86**		**6.73**		**11.59**		**11.59**	**$ 1,254,415**	**$ 20,131,279**	**$ 105,365,785**
CORRIDOR: ARTESIA-HERONDO	**0.96**				**0.96**		**0.96**	**$ 29,562**	**$ 476,809**	**$ 2,493,712**
Coast To Orange County Line										
ARTESIA BLVD	0.96				0.96		0.96	$ 29,562	$ 476,809	$ 2,493,712
CORRIDOR: COYOTE CREEK EAST			**2.20**		**2.20**		**2.20**	**$ 360,647**	**$ 5,783,829**	**$ 30,275,293**
Imperial Hwy To Artesia Blvd										
Off Street			2.20		2.20		2.20	$ 360,647	$ 5,783,829	$ 30,275,293
CORRIDOR: FIRESTONE-SPRR			**1.15**		**1.15**		**1.15**	**$ 188,539**	**$ 3,023,662**	**$ 15,827,273**
La River To Artesia Blvd										
Off Street			1.15		1.15		1.15	$ 188,539	$ 3,023,662	$ 15,827,273
CORRIDOR: IMPERIAL HWY	**3.91**				**3.91**		**3.91**	**$ 120,708**	**$ 1,946,901**	**$ 10,182,294**
Coast To Orange County Line										
IMPERIAL HWY	3.91				3.91		3.91	$ 120,708	$ 1,946,901	$ 10,182,294
CORRIDOR: LA MIRADA CREEK			**3.38**		**3.38**		**3.38**	**$ 554,959**	**$ 8,900,078**	**$ 46,587,213**
Orange County Line To Coyote Creek										
Off Street			3.38		3.38		3.38	$ 554,959	$ 8,900,078	$ 46,587,213
Lakewood	**12.91**				**12.91**	**1.57**	**14.48**	**$ 398,836**	**$ 6,432,846**	**$ 33,643,785**
CORRIDOR: ALTADENA-LONG BEACH	**4.85**				**4.85**		**4.85**	**$ 149,818**	**$ 2,416,427**	**$ 12,637,914**
Loma Alta Dr To La River										
CHERRY AV	4.85				4.85		4.85	$ 149,818	$ 2,416,427	$ 12,637,914
CORRIDOR: BLOOMFIELD AVE	**0.88**				**0.88**		**0.88**	**$ 27,119**	**$ 437,402**	**$ 2,287,610**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
Whittier-Uprr To Carson St										
BLOOMFIELD AV	0.88				0.88		0.88	$ 27,119	$ 437,402	$ 2,287,610
CORRIDOR: CARSON ST	**0.97**				**0.97**		**0.97**	**$ 29,828**	**$ 481,100**	**$ 2,516,153**
N Long Beach Blvd To Bloomfield Ave										
E CARSON ST	0.97				0.97		0.97	$ 29,828	$ 481,100	$ 2,516,153
CORRIDOR: Del Amo Blvd	**1.25**				**1.25**	**0.51**	**1.75**	**$ 38,573**	**$ 622,144**	**$ 3,253,813**
Coast To Coyote Creek										
DEL AMO BLVD	1.25				1.25		1.25	$ 38,573	$ 622,144	$ 3,253,813
Off Street						0.51	0.51	$ -	$ -	$ -
CORRIDOR: LAKEWOOD-ROSEMEAD	**2.45**				**2.45**		**2.45**	**$ 75,598**	**$ 1,219,315**	**$ 6,377,016**
E Orange Grove Blvd To Pch										
N LAKEWOOD BLVD	2.45				2.45		2.45	$ 75,598	$ 1,219,315	$ 6,377,016
CORRIDOR: SAN GABRIEL RIVER						**1.07**	**1.07**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						1.07	1.07	$ -	$ -	$ -
CORRIDOR: WOODRUFF AVE	**2.52**				**2.52**		**2.52**	**$ 77,900**	**$ 1,256,459**	**$ 6,571,278**
Firestone Blvd To E Willow St										
WOODRUFF AV	2.52				2.52		2.52	$ 77,900	$ 1,256,459	$ 6,571,278
Long Beach	**49.27**		**4.60**	**2.03**	**55.90**	**24.55**	**80.45**	**$ 2,376,201**	**$ 38,256,657**	**$ 200,136,438**
CORRIDOR: 223RD-WARDLOW	**2.13**				**2.13**		**2.13**	**$ 65,788**	**$ 1,061,094**	**$ 5,549,523**
Vermont Ave To Long Beach Blvd										
E WARDLOW RD	0.19				0.19		0.19	$ 5,883	$ 94,887	$ 496,258
W WARDLOW RD	1.94				1.94		1.94	$ 59,905	$ 966,207	$ 5,053,265
CORRIDOR: 3RD-BROADWAY-LOS CERRITOS	**4.92**		**1.76**	**0.18**	**6.86**	**3.93**	**10.80**	**$ 449,947**	**$ 7,230,704**	**$ 37,837,321**
Golden Ave To Pch										
CLARK AV	0.86				0.86		0.86	$ 26,490	$ 427,256	$ 2,234,550
E 3RD ST	3.46				3.46		3.46	$ 107,027	$ 1,726,245	$ 9,028,261
E BROADWAY	0.60				0.60		0.60	$ 18,426	$ 297,198	$ 1,554,347
IROQUOIS AV				0.18	0.18		0.18	$ 8,841	$ 142,593	$ 745,759
Off Street			1.76		1.76	2.84	4.61	$ 289,163	$ 4,637,412	$ 24,274,404
W 3RD ST						0.54	0.54	$ -	$ -	$ -
W BROADWAY						0.55	0.55	$ -	$ -	$ -
CORRIDOR: ALAMEDA			**0.26**		**0.26**		**0.26**	**$ 42,515**	**$ 681,824**	**$ 3,568,991**
Spring St To La River										
Off Street			0.26		0.26		0.26	$ 42,515	$ 681,824	$ 3,568,991
CORRIDOR: ALTADENA-LONG BEACH	**2.16**				**2.16**		**2.16**	**$ 66,821**	**$ 1,077,764**	**$ 5,636,706**
Loma Alta Dr To La River										
	0.30				0.30		0.30	$ 9,339	$ 150,629	$ 787,791
CHERRY AV	1.86				1.86		1.86	$ 57,482	$ 927,135	$ 4,848,915
CORRIDOR: ANAHEIM ST	**5.03**				**5.03**		**5.03**	**$ 155,428**	**$ 2,506,898**	**$ 13,111,075**
S Western Ave To Pch										
E ANAHEIM ST	3.44				3.44		3.44	$ 106,305	$ 1,714,596	$ 8,967,335
W ANAHEIM ST	1.59				1.59		1.59	$ 49,123	$ 792,302	$ 4,143,741
CORRIDOR: ARTESIA-HERONDO	**3.21**				**3.21**		**3.21**	**$ 99,238**	**$ 1,600,607**	**$ 8,371,174**
Coast To Orange County Line										
E ARTESIA BLVD	2.96				2.96		2.96	$ 91,413	$ 1,474,404	$ 7,711,134
W ARTESIA BLVD	0.25				0.25		0.25	$ 7,825	$ 126,203	$ 660,040
CORRIDOR: CARSON ST	**1.65**				**1.65**	**3.79**	**5.44**	**$ 50,918**	**$ 821,256**	**$ 4,295,169**
N Long Beach Blvd To Bloomfield Ave										
E CARSON ST	1.65				1.65		1.65	$ 50,918	$ 821,256	$ 4,295,169
Off Street						3.79	3.79	$ -	$ -	$ -
CORRIDOR: CORONADO AVE			**0.04**	**0.47**	**0.51**		**0.51**	**$ 29,099**	**$ 468,769**	**$ 2,452,107**
E 3Rd St To La River										
			0.04		0.04		0.04	$ 6,187	$ 99,222	$ 519,377
CORONADO AV				0.47	0.47		0.47	$ 22,912	$ 369,547	$ 1,932,731
CORRIDOR: Del Amo Blvd	**2.42**				**2.42**		**2.42**	**$ 74,883**	**$ 1,207,790**	**$ 6,316,742**
Coast To Coyote Creek										
E DEL AMO BLVD	1.75				1.75		1.75	$ 54,004	$ 871,034	$ 4,555,505
W DEL AMO BLVD	0.68				0.68		0.68	$ 20,879	$ 336,756	$ 1,761,236
CORRIDOR: LA RIVER				**1.38**	**1.38**	**13.66**	**15.04**	**$ 67,581**	**$ 1,090,017**	**$ 5,700,791**
Canoga Ave To Coyote Creek										
E OCEAN BLVD				1.38	1.38		1.38	$ 67,581	$ 1,090,017	$ 5,700,791
Off Street						13.66	13.66	$ -	$ -	$ -
CORRIDOR: LAKEWOOD-ROSEMEAD	**0.15**				**0.15**		**0.15**	**$ 4,695**	**$ 75,725**	**$ 396,041**
E Orange Grove Blvd To Pch										
LOS ALAMITOS CIR	0.15				0.15		0.15	$ 4,695	$ 75,725	$ 396,041
CORRIDOR: LONG BEACH BLVD	**5.79**				**5.79**	**0.42**	**6.21**	**$ 178,789**	**$ 2,883,689**	**$ 15,081,695**
Coyote Creek To E Broadway										
LONG BEACH BLVD	0.50				0.50		0.50	$ 15,443	$ 249,078	$ 1,302,681
N LONG BEACH BLVD	5.29				5.29	0.42	5.71	$ 163,346	$ 2,634,611	$ 13,779,014
CORRIDOR: LOS COYOTES-TERMINO	**5.32**				**5.32**	**0.18**	**5.50**	**$ 164,259**	**$ 2,649,336**	**$ 13,856,029**
Carson St To E 3Rd St										
LOS COYOTES DIAGONAL	3.70				3.70		3.70	$ 114,195	$ 1,841,857	$ 9,632,913
N LAKEWOOD BLVD	0.11				0.11		0.11	$ 3,408	$ 54,967	$ 287,480
N TERMINO AV	1.51				1.51		1.51	$ 46,656	$ 752,512	$ 3,935,637
Off Street						0.18	0.18	$ -	$ -	$ -
CORRIDOR: PCH	**8.49**				**8.49**		**8.49**	**$ 262,321**	**$ 4,230,978**	**$ 22,128,017**
Esplanade To San Gabriel River										
E PACIFIC COAST HWY	6.03				6.03		6.03	$ 186,409	$ 3,006,604	$ 15,724,537
N PACIFIC COAST HWY	0.42				0.42		0.42	$ 12,912	$ 208,254	$ 1,089,169
W PACIFIC COAST HWY	2.04				2.04		2.04	$ 62,999	$ 1,016,121	$ 5,314,311
CORRIDOR: PEROW-LONG BEACH			**2.01**		**2.01**		**2.01**	**$ 329,226**	**$ 5,279,912**	**$ 27,637,552**
La River To Long Beach Blvd										
Off Street			2.01		2.01		2.01	$ 329,226	$ 5,279,912	$ 27,637,552
CORRIDOR: SAN GABRIEL RIVER						**2.56**	**2.56**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						2.56	2.56	$ -	$ -	$ -
CORRIDOR: SEPULVEDA-WILLOW	**5.97**		**0.53**		**6.50**		**6.50**	**$ 271,853**	**$ 4,376,713**	**$ 22,896,484**
Torrance Blvd To Coyote Creek										
E SEPULVEDA BLVD	0.06				0.06		0.06	$ 1,839	$ 29,655	$ 155,097
E WILLOW ST	4.19				4.19		4.19	$ 129,552	$ 2,089,551	$ 10,928,353

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
W WILLOW ST	1.71				1.71		1.71	$ 52,967	$ 854,314	$ 4,468,062
WILLOW ST			0.53		0.53		0.53	$ 87,495	$ 1,403,192	$ 7,344,971
CORRIDOR: WOODRUFF AVE	**2.03**				**2.03**		**2.03**	**$ 62,842**	**$ 1,013,579**	**$ 5,301,020**
Firestone Blvd To E Willow St										
WOODRUFF AV	2.03				2.03		2.03	$ 62,842	$ 1,013,579	$ 5,301,020
Los Angeles	**0.37**				**0.37**		**0.37**	**$ 11,570**	**$ 186,611**	**$ 975,974**
CORRIDOR: ALAMEDA	**0.37**				**0.37**		**0.37**	**$ 11,570**	**$ 186,611**	**$ 975,974**
Spring St To La River										
ALAMEDA ST	0.37				0.37		0.37	$ 11,570	$ 186,611	$ 975,974
Lynwood	**3.89**		**2.33**	**1.23**	**7.45**		**7.45**	**$ 562,810**	**$ 9,042,517**	**$ 47,319,795**
CORRIDOR: ALAMEDA	**1.38**				**1.38**		**1.38**	**$ 42,692**	**$ 688,576**	**$ 3,601,250**
Spring St To La River										
ALAMEDA ST	1.38				1.38		1.38	$ 42,692	$ 688,576	$ 3,601,250
CORRIDOR: CENTURY-MLK-PE ROW			**2.33**	**1.23**	**3.56**		**3.56**	**$ 442,587**	**$ 7,103,444**	**$ 37,178,444**
Alameda St To Salt Lake- Up-Pe Rr Row										
ATLANTIC AV				0.33	0.33		0.33	$ 16,164	$ 260,712	$ 1,363,526
CALIFORNIA AV				0.15	0.15		0.15	$ 7,277	$ 117,366	$ 613,825
FERNWOOD AV				0.11	0.11		0.11	$ 5,550	$ 89,510	$ 468,135
MARTIN LUTHER KING JR BLVD				0.50	0.50		0.50	$ 24,228	$ 390,781	$ 2,043,783
Off Street			2.33		2.33		2.33	$ 382,436	$ 6,133,261	$ 32,104,386
PLATT AV				0.03	0.03		0.03	$ 1,227	$ 19,788	$ 103,490
SANBORN AV				0.12	0.12		0.12	$ 5,706	$ 92,027	$ 481,299
CORRIDOR: IMPERIAL HWY	**2.51**				**2.51**		**2.51**	**$ 77,531**	**$ 1,250,497**	**$ 6,540,100**
Coast To Orange County Line										
E IMPERIAL HWY	2.51				2.51		2.51	$ 77,531	$ 1,250,497	$ 6,540,100
Maywood		**1.86**			**1.86**		**1.86**	**$ -**	**$ -**	**$ -**
CORRIDOR: SLAUSON		**1.86**			**1.86**		**1.86**	$ -	$ -	$ -
Sepulveda Blvd To La River										
Slauson AV		1.86			1.86		1.86	$ -	$ -	$ -
Montebello	**4.96**				**4.96**	**3.65**	**8.61**	**$ 153,259**	**$ 2,471,917**	**$ 12,928,125**
CORRIDOR: ALTADENA-LONG BEACH	**1.57**				**1.57**		**1.57**	**$ 48,520**	**$ 782,580**	**$ 4,092,895**
Loma Alta Dr To La River										
N GARFIELD AV	1.57				1.57		1.57	$ 48,520	$ 782,580	$ 4,092,895
CORRIDOR: RIO HONDO						**3.65**	**3.65**	**$ -**	**$ -**	**$ -**
Peck Rd To La River										
Off Street						3.65	3.65	$ -	$ -	$ -
CORRIDOR: TELEGRAPH RD	**1.37**				**1.37**		**1.37**	**$ 42,430**	**$ 684,348**	**$ 3,579,139**
Garfield Ave To Imperial Hwy										
TELEGRAPH RD	1.37				1.37		1.37	$ 42,430	$ 684,348	$ 3,579,139
CORRIDOR: WHITTIER BLVD	**2.02**				**2.02**		**2.02**	**$ 62,309**	**$ 1,004,989**	**$ 5,256,091**
Central Ave To Washington Blvd										
E WHITTIER BLVD	0.29				0.29		0.29	$ 8,837	$ 142,526	$ 745,411
W WHITTIER BLVD	1.73				1.73		1.73	$ 53,473	$ 862,463	$ 4,510,679
Monterey Park	**0.48**				**0.48**		**0.48**	**$ 14,946**	**$ 241,069**	**$ 1,260,790**
CORRIDOR: CHAVEZ-SUNSET-RIGGIN	**0.48**				**0.48**		**0.48**	**$ 14,946**	**$ 241,069**	**$ 1,260,790**
N Fairfax Ave To Alhambra Wash										
E POMONA BLVD	0.48				0.48		0.48	$ 14,946	$ 241,069	$ 1,260,790
Norwalk	**8.08**				**8.08**	**3.25**	**11.33**	**$ 249,618**	**$ 4,026,102**	**$ 21,056,515**
CORRIDOR: BLOOMFIELD AVE	**2.08**				**2.08**		**2.08**	**$ 64,242**	**$ 1,036,155**	**$ 5,419,089**
Whittier-Uprr To Carson St										
BLOOMFIELD AV	2.08				2.08		2.08	$ 64,242	$ 1,036,155	$ 5,419,089
CORRIDOR: FIRESTONE-SPRR	**3.09**				**3.09**		**3.09**	**$ 95,415**	**$ 1,538,957**	**$ 8,048,744**
La River To Artesia Blvd										
FIRESTONE BLVD	3.09				3.09		3.09	$ 95,415	$ 1,538,957	$ 8,048,744
CORRIDOR: IMPERIAL HWY	**2.91**				**2.91**		**2.91**	**$ 89,961**	**$ 1,450,991**	**$ 7,588,682**
Coast To Orange County Line										
IMPERIAL HWY	2.91				2.91		2.91	$ 89,961	$ 1,450,991	$ 7,588,682
CORRIDOR: SAN GABRIEL RIVER						**3.25**	**3.25**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						3.25	3.25	$ -	$ -	$ -
Paramount	**4.47**		**1.69**		**6.15**	**2.22**	**8.38**	**$ 414,749**	**$ 6,664,131**	**$ 34,873,258**
CORRIDOR: ALTADENA-LONG BEACH	**2.08**				**2.08**		**2.08**	**$ 64,328**	**$ 1,037,556**	**$ 5,426,419**
Loma Alta Dr To La River										
GARFIELD AV	2.08				2.08		2.08	$ 64,328	$ 1,037,556	$ 5,426,419
CORRIDOR: LA RIVER						**2.22**	**2.22**	**$ -**	**$ -**	**$ -**
Canoga Ave To Coyote Creek										
Off Street						2.22	2.22	$ -	$ -	$ -
CORRIDOR: REDONDO BEACH BLVD	**2.38**				**2.38**		**2.38**	**$ 73,657**	**$ 1,188,011**	**$ 6,213,300**
Flagler Ln To Salt Lake- Up-Pe Rr Row										
SOMERSET BLVD	2.38				2.38		2.38	$ 73,657	$ 1,188,011	$ 6,213,300
CORRIDOR: SALT LAKE- UP-PE RR ROW			**1.69**		**1.69**		**1.69**	**$ 276,764**	**$ 4,438,564**	**$ 23,233,540**
La River To Coyote Creek										
Off Street			1.69		1.69		1.69	$ 276,764	$ 4,438,564	$ 23,233,540
Pico Rivera	**8.55**		**0.17**		**8.72**	**7.37**	**16.09**	**$ 291,582**	**$ 4,700,422**	**$ 24,585,172**
CORRIDOR: LAKEWOOD-ROSEMEAD	**4.63**				**4.63**		**4.63**	**$ 143,059**	**$ 2,307,405**	**$ 12,067,730**
E Orange Grove Blvd To Pch										
ROSEMEAD BLVD	4.63				4.63		4.63	$ 143,059	$ 2,307,405	$ 12,067,730
CORRIDOR: RIO HONDO						**1.61**	**1.61**	**$ -**	**$ -**	**$ -**
Peck Rd To La River										
Off Street						1.61	1.61	$ -	$ -	$ -
CORRIDOR: SAN GABRIEL RIVER						**5.77**	**5.77**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						5.77	5.77	$ -	$ -	$ -
CORRIDOR: TELEGRAPH RD	**2.26**				**2.26**		**2.26**	**$ 69,756**	**$ 1,125,098**	**$ 5,884,261**
Garfield Ave To Imperial Hwy										
TELEGRAPH RD	2.26				2.26		2.26	$ 69,756	$ 1,125,098	$ 5,884,261
CORRIDOR: WHITTIER BLVD	**1.66**				**1.66**		**1.66**	**$ 51,344**	**$ 828,126**	**$ 4,331,099**
Central Ave To Washington Blvd										
E WHITTIER BLVD	0.18				0.18		0.18	$ 5,560	$ 89,671	$ 468,980
WHITTIER BLVD	1.48				1.48		1.48	$ 45,784	$ 738,455	$ 3,862,119
CORRIDOR: WHITTIER-UPRR-SPRR			**0.17**		**0.17**		**0.17**	**$ 27,423**	**$ 439,792**	**$ 2,302,081**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
San Gabriel River To Orange County Line										
Off Street			0.17		0.17		0.17	$ 27,423	$ 439,792	$ 2,302,081
Santa Fe Springs	**6.04**		**3.20**		**9.24**	**1.51**	**10.75**	**$ 710,898**	**$ 11,418,046**	**$ 59,753,981**
CORRIDOR: BLOOMFIELD AVE	**3.13**				**3.13**		**3.13**	**$ 96,810**	**$ 1,561,449**	**$ 8,166,377**
Whittier-Uprr To Carson St										
SANTA FE SPRINGS RD	3.13				3.13		3.13	$ 96,810	$ 1,561,449	$ 8,166,377
CORRIDOR: COYOTE CREEK			**0.53**		**0.53**	**1.51**	**2.04**	**$ 86,198**	**$ 1,382,388**	**$ 7,236,073**
Telegraph Rd To Ocean Ave										
Off Street			0.53		0.53	1.51	2.04	$ 86,198	$ 1,382,388	$ 7,236,073
CORRIDOR: FIRESTONE-SPRR			**2.39**		**2.39**		**2.39**	**$ 392,853**	**$ 6,300,324**	**$ 32,978,873**
La River To Artesia Blvd										
Off Street			2.39		2.39		2.39	$ 392,853	$ 6,300,324	$ 32,978,873
CORRIDOR: LA MIRADA CREEK			**0.28**		**0.28**		**0.28**	**$ 45,133**	**$ 723,815**	**$ 3,788,791**
Orange County Line To Coyote Creek										
Off Street			0.28		0.28		0.28	$ 45,133	$ 723,815	$ 3,788,791
CORRIDOR: TELEGRAPH RD	**2.91**				**2.91**		**2.91**	**$ 89,904**	**$ 1,450,070**	**$ 7,583,867**
Garfield Ave To Imperial Hwy										
TELEGRAPH RD	2.91				2.91		2.91	$ 89,904	$ 1,450,070	$ 7,583,867
South Gate	**8.06**		**4.53**		**12.60**	**5.68**	**18.28**	**$ 992,798**	**$ 15,944,705**	**$ 83,444,147**
CORRIDOR: ALTADENA-LONG BEACH	**2.93**				**2.93**		**2.93**	**$ 90,479**	**$ 1,459,342**	**$ 7,632,359**
Loma Alta Dr To La River										
EASTERN AV	0.01				0.01		0.01	$ 305	$ 4,912	$ 25,691
GARFIELD AV	2.92				2.92		2.92	$ 90,175	$ 1,454,430	$ 7,606,667
CORRIDOR: CENTURY-MLK-PE ROW	**0.75**				**0.75**		**0.75**	**$ 23,027**	**$ 371,396**	**$ 1,942,403**
Alameda St To Salt Lake- Up-Pe Rr Row										
CENTURY BLVD	0.75				0.75		0.75	$ 23,027	$ 371,396	$ 1,942,403
CORRIDOR: FIRESTONE-MANCHESTER	**1.23**				**1.23**	**2.29**	**3.52**	**$ 38,108**	**$ 614,639**	**$ 3,214,561**
Culver Blvd To La River										
FIRESTONE BLVD	0.36				0.36		0.36	$ 11,130	$ 179,515	$ 938,866
Off Street						2.29	2.29	$ -	$ -	$ -
S SANTA FE AV	0.22				0.22		0.22	$ 6,746	$ 108,804	$ 569,043
SOUTHERN AVE	0.65				0.65		0.65	$ 20,232	$ 326,320	$ 1,706,653
CORRIDOR: FIRESTONE-SPRR	**0.89**		**1.00**		**1.89**		**1.89**	**$ 191,973**	**$ 3,081,252**	**$ 16,126,746**
La River To Artesia Blvd										
FIRESTONE BLVD	0.89				0.89		0.89	$ 27,451	$ 442,760	$ 2,315,636
SPRR			1.00		1.00		1.00	$ 164,522	$ 2,638,491	$ 13,811,110
CORRIDOR: IMPERIAL HWY	**1.24**				**1.24**		**1.24**	**$ 38,453**	**$ 620,208**	**$ 3,243,687**
Coast To Orange County Line										
E IMPERIAL HWY	1.24				1.24		1.24	$ 38,453	$ 620,208	$ 3,243,687
CORRIDOR: LA RIVER						**1.64**	**1.64**	**$ -**	**$ -**	**$ -**
Canoga Ave To Coyote Creek										
Off Street						1.64	1.64	$ -	$ -	$ -
CORRIDOR: PACIFIC BLVD	**1.02**				**1.02**		**1.02**	**$ 31,622**	**$ 510,035**	**$ 2,667,481**
Slauson Ave To Southern Ave										
LONG BEACH BLVD	1.02				1.02		1.02	$ 31,622	$ 510,035	$ 2,667,481
CORRIDOR: RIO HONDO						**1.76**	**1.76**	**$ -**	**$ -**	**$ -**
Peck Rd To La River										
Off Street						1.76	1.76	$ -	$ -	$ -
CORRIDOR: SALT LAKE- UP-PE RR ROW			**3.53**		**3.53**		**3.53**	**$ 579,137**	**$ 9,287,834**	**$ 48,616,909**
La River To Coyote Creek										
Off Street			3.53		3.53		3.53	$ 579,137	$ 9,287,834	$ 48,616,909
Unincorporated	**23.04**	**1.33**	**6.37**		**30.73**	**14.58**	**45.31**	**$ 1,756,476**	**$ 28,234,493**	**$ 147,741,330**
CORRIDOR: ALAMEDA	**1.85**		**0.06**		**1.91**	**1.83**	**3.74**	**$ 67,763**	**$ 1,091,974**	**$ 5,711,784**
Spring St To La River										
ALAMEDA ST	1.85				1.85		1.85	$ 57,150	$ 921,772	$ 4,820,867
Off Street			0.06		0.06	1.83	1.89	$ 10,613	$ 170,202	$ 890,918
CORRIDOR: ALAMEDA-UPRR	**0.98**				**0.98**		**0.98**	**$ 30,172**	**$ 486,639**	**$ 2,545,122**
La River To Harry Bridges Blvd										
S ALAMEDA ST	0.87				0.87		0.87	$ 26,884	$ 433,605	$ 2,267,756
S SANTA FE AV	0.11				0.11		0.11	$ 3,288	$ 53,034	$ 277,367
CORRIDOR: AVALON BLVD	**2.55**				**2.55**		**2.55**	**$ 78,704**	**$ 1,269,415**	**$ 6,639,040**
E Imperial Hwy To Harry Bridges Blvd										
AVALON BLVD	2.55				2.55		2.55	$ 78,704	$ 1,269,415	$ 6,639,040
CORRIDOR: CENTRAL AVE-COMPTON CREEK			**0.88**		**0.88**		**0.88**	**$ 144,698**	**$ 2,320,574**	**$ 12,146,980**
E 1St St To E Artesia Blvd										
Off Street			0.88		0.88		0.88	$ 144,698	$ 2,320,574	$ 12,146,980
CORRIDOR: CENTURY-MLK-PE ROW			**0.13**		**0.13**		**0.13**	**$ 20,961**	**$ 336,163**	**$ 1,759,635**
Alameda St To Salt Lake- Up-Pe Rr Row										
Off Street			0.13		0.13		0.13	$ 20,961	$ 336,163	$ 1,759,635
CORRIDOR: COLIMA RD	**1.39**				**1.39**		**1.39**	**$ 43,077**	**$ 694,786**	**$ 3,633,731**
Telegraph Rd To Orange County Line										
MILLS AV	1.39				1.39		1.39	$ 43,077	$ 694,786	$ 3,633,731
CORRIDOR: COYOTE CREEK			**1.23**		**1.23**	**11.89**	**13.12**	**$ 201,410**	**$ 3,230,082**	**$ 16,907,774**
Telegraph Rd To Ocean Ave										
Off Street			1.23		1.23	11.89	13.12	$ 201,410	$ 3,230,082	$ 16,907,774
CORRIDOR: COYOTE CREEK EAST			**2.17**		**2.17**		**2.17**	**$ 355,894**	**$ 5,707,599**	**$ 29,876,272**
Imperial Hwy To Artesia Blvd										
Off Street			2.17		2.17		2.17	$ 355,894	$ 5,707,599	$ 29,876,272
CORRIDOR: EL SEGUNDO BLVD	**2.51**				**2.51**		**2.51**	**$ 77,436**	**$ 1,248,974**	**$ 6,532,136**
Coast To Alameda St										
E EL SEGUNDO BLVD	2.03				2.03		2.03	$ 62,706	$ 1,011,386	$ 5,289,549
W EL SEGUNDO BLVD	0.48				0.48		0.48	$ 14,730	$ 237,588	$ 1,242,588
CORRIDOR: FIRESTONE-MANCHESTER	**1.54**				**1.54**		**1.54**	**$ 47,735**	**$ 769,913**	**$ 4,026,648**
Culver Blvd To La River										
E FIRESTONE BLVD	1.54				1.54		1.54	$ 47,576	$ 767,361	$ 4,013,298
FIRESTONE BLVD	0.01				0.01		0.01	$ 158	$ 2,552	$ 13,349
CORRIDOR: FLORENCE AVE	**1.26**				**1.26**		**1.26**	**$ 38,983**	**$ 628,751**	**$ 3,288,369**
Bnsf Railroad To Alameda St										
E FLORENCE AV	1.26				1.26		1.26	$ 38,983	$ 628,751	$ 3,288,369
CORRIDOR: IMPERIAL HWY	**1.66**				**1.66**		**1.66**	**$ 51,237**	**$ 826,401**	**$ 4,322,076**
Coast To Orange County Line										

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
E IMPERIAL HWY	0.27				0.27		0.27	$ 8,334	$ 134,414	$ 702,987
IMPERIAL HWY	1.39				1.39		1.39	$ 42,903	$ 691,987	$ 3,619,090
CORRIDOR: LA MIRADA CREEK			**0.94**		**0.94**		**0.94**	**$ 154,087**	**$ 2,471,155**	**$ 12,935,194**
Orange County Line To Coyote Creek										
Off Street			0.94		0.94		0.94	$ 154,087	$ 2,471,155	$ 12,935,194
CORRIDOR: LA RIVER			**0.18**		**0.18**	**0.85**	**1.04**	**$ 30,119**	**$ 483,022**	**$ 2,528,367**
Canoga Ave To Coyote Creek										
Off Street			0.18		0.18	0.85	1.04	$ 30,119	$ 483,022	$ 2,528,367
CORRIDOR: PACIFIC BLVD	**0.57**				**0.57**		**0.57**	**$ 17,721**	**$ 285,821**	**$ 1,494,844**
Slauson Ave To Southern Ave										
PACIFIC BLVD	0.57				0.57		0.57	$ 17,721	$ 285,821	$ 1,494,844
CORRIDOR: PECK RD	**1.91**				**1.91**		**1.91**	**$ 58,886**	**$ 949,780**	**$ 4,967,348**
Huntington Dr To Whittier Blvd										
PECK RD	0.13				0.13		0.13	$ 3,991	$ 64,379	$ 336,700
WORKMAN MILL RD	1.78				1.78		1.78	$ 54,895	$ 885,401	$ 4,630,648
CORRIDOR: RANDOLPH AVE RAIL ROW		**0.34**			**0.34**		**0.34**	**$ -**	**$ -**	**$ -**
E Slauson Ave To La River										
Off Street		0.34			0.34		0.34	$ -	$ -	$ -
CORRIDOR: REDONDO BEACH BLVD	**2.01**				**2.01**		**2.01**	**$ 62,187**	**$ 1,003,015**	**$ 5,245,768**
Flagler Ln To Salt Lake- Up-Pe Rr Row										
E COMPTON BLVD	0.59				0.59		0.59	$ 18,358	$ 296,100	$ 1,548,601
E REDONDO BEACH BLVD	1.03				1.03		1.03	$ 31,856	$ 513,800	$ 2,687,176
W REDONDO BEACH BLVD	0.39				0.39		0.39	$ 11,973	$ 193,115	$ 1,009,992
CORRIDOR: SLAUSON			**0.74**		**0.74**		**0.74**	**$ 122,085**	**$ 1,957,918**	**$ 10,248,668**
Sepulveda Blvd To La River										
SLAUSON AVE			0.74		0.74		0.74	$ 122,085	$ 1,957,918	$ 10,248,668
CORRIDOR: TELEGRAPH RD	**2.45**				**2.45**		**2.45**	**$ 75,603**	**$ 1,219,402**	**$ 6,377,473**
Garfield Ave To Imperial Hwy										
TELEGRAPH RD	2.45				2.45		2.45	$ 75,603	$ 1,219,402	$ 6,377,473
CORRIDOR: WHITTIER BLVD	**2.36**				**2.36**		**2.36**	**$ 72,919**	**$ 1,176,114**	**$ 6,151,074**
Central Ave To Washington Blvd										
WHITTIER BLVD	2.36				2.36		2.36	$ 72,919	$ 1,176,114	$ 6,151,074
CORRIDOR: WHITTIER-UPRR-SPRR			**0.03**		**0.03**		**0.03**	**$ 4,801**	**$ 76,995**	**$ 403,028**
San Gabriel River To Orange County Line										
Off Street			0.03		0.03		0.03	$ 4,801	$ 76,995	$ 403,028
CORRIDOR: WILLOWBROOK AV		**0.98**			**0.98**		**0.98**	**$ -**	**$ -**	**$ -**
E Imperial Hwy To E El Segundo Blvd										
S WILLOWBROOK AV		0.98			0.98		0.98	$ -	$ -	$ -
Vernon	**1.98**	**3.42**	**3.34**		**8.74**	**0.82**	**9.55**	**$ 609,167**	**$ 9,775,041**	**$ 51,162,774**
CORRIDOR: ALAMEDA	**1.63**				**1.63**		**1.63**	**$ 50,391**	**$ 812,752**	**$ 4,250,695**
Spring St To La River										
S ALAMEDA ST	1.56				1.56		1.56	$ 48,244	$ 778,127	$ 4,069,607
UP RR	0.07				0.07		0.07	$ 2,147	$ 34,625	$ 181,088
CORRIDOR: LA RIVER			**2.67**		**2.67**	**0.82**	**3.49**	**$ 438,379**	**$ 7,030,450**	**$ 36,800,700**
Canoga Ave To Coyote Creek										
Off Street			2.67		2.67	0.82	3.49	$ 438,379	$ 7,030,450	$ 36,800,700
CORRIDOR: RAIL TO RIVER		**1.77**			**1.77**		**1.77**	**$ -**	**$ -**	**$ -**
La River To Long Beach Ave										
Off Street		1.77			1.77		1.77	$ -	$ -	$ -
CORRIDOR: SALT LAKE- UP-PE RR ROW		**1.18**	**0.67**		**1.85**		**1.85**	**$ 109,630**	**$ 1,758,181**	**$ 9,203,151**
La River To Coyote Creek										
Off Street		1.18	0.67		1.85		1.85	$ 109,630	$ 1,758,181	$ 9,203,151
CORRIDOR: SLAUSON		**0.47**			**0.47**		**0.47**	**$ -**	**$ -**	**$ -**
Sepulveda Blvd To La River										
Slauson AV		0.47			0.47		0.47	$ -	$ -	$ -
CORRIDOR: SOTO	**0.35**				**0.35**		**0.35**	**$ 10,767**	**$ 173,657**	**$ 908,229**
Mission Road To La River										
S SOTO ST	0.35				0.35		0.35	$ 10,767	$ 173,657	$ 908,229
Whittier	**5.49**		**3.23**		**8.72**	**4.67**	**13.39**	**$ 699,388**	**$ 11,231,898**	**$ 58,780,822**
CORRIDOR: BLOOMFIELD AVE	**0.83**				**0.83**		**0.83**	**$ 25,525**	**$ 411,692**	**$ 2,153,150**
Whittier-Uprr To Carson St										
SANTA FE SPRINGS RD	0.83				0.83		0.83	$ 25,525	$ 411,692	$ 2,153,150
CORRIDOR: COLIMA RD	**3.35**				**3.35**		**3.35**	**$ 103,583**	**$ 1,670,697**	**$ 8,737,743**
Telegraph Rd To Orange County Line										
COLIMA RD	2.43				2.43		2.43	$ 75,142	$ 1,211,975	$ 6,338,629
MILLS AV	0.66				0.66		0.66	$ 20,329	$ 327,888	$ 1,714,856
WHITTIER BLVD	0.26				0.26		0.26	$ 8,112	$ 130,833	$ 684,259
CORRIDOR: LA MIRADA CREEK			**0.29**		**0.29**		**0.29**	**$ 48,364**	**$ 775,631**	**$ 4,060,020**
Orange County Line To Coyote Creek										
Off Street			0.29		0.29		0.29	$ 48,364	$ 775,631	$ 4,060,020
CORRIDOR: PECK RD	**1.14**				**1.14**		**1.14**	**$ 35,112**	**$ 566,329**	**$ 2,961,902**
Huntington Dr To Whittier Blvd										
NORWALK BLVD	0.84				0.84		0.84	$ 26,061	$ 420,341	$ 2,198,385
WORKMAN MILL RD	0.29				0.29		0.29	$ 9,051	$ 145,988	$ 763,517
CORRIDOR: WHITTIER BLVD	**0.18**				**0.18**		**0.18**	**$ 5,408**	**$ 87,229**	**$ 456,206**
Central Ave To Washington Blvd										
WHITTIER BLVD	0.18				0.18		0.18	$ 5,408	$ 87,229	$ 456,206
CORRIDOR: WHITTIER-UPRR-SPRR			**2.93**		**2.93**	**4.67**	**7.60**	**$ 481,396**	**$ 7,720,320**	**$ 40,411,802**
San Gabriel River To Orange County Line										
Off Street			2.93		2.93	4.67	7.60	$ 481,396	$ 7,720,320	$ 40,411,802
Avalon				**0.99**	**0.99**		**0.99**	**$ 48,533**	**$ 782,792**	**$ 4,093,999**
CORRIDOR: AVALON				**0.99**	**0.99**		**0.99**	**$ 48,533**	**$ 782,792**	**$ 4,093,999**
Ferry Landing To Rifle Range Rd										
Avalon Canyon				0.46	0.46		0.46	$ 22,355	$ 360,569	$ 1,885,774
Claressa Ave				0.27	0.27		0.27	$ 13,301	$ 214,527	$ 1,121,976
Pebbly Beach Rd				0.17	0.17		0.17	$ 8,537	$ 137,690	$ 720,121
Tremont St				0.09	0.09		0.09	$ 4,340	$ 70,005	$ 366,128
Bell		**1.60**	**0.39**		**2.00**	**1.42**	**3.42**	**$ 64,666**	**$ 1,037,078**	**$ 5,428,558**
CORRIDOR: LA RIVER						**1.42**	**1.42**	**$ -**	**$ -**	**$ -**
Canoga Ave To Coyote Creek										
Off Street						1.42	1.42	$ -	$ -	$ -

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	Not Usable As Built MetroStudy Metro Regional ATN	Not Usable As Built Off-Street Metro Regional ATN	Not Usable As Built Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
CORRIDOR: RANDOLPH AVE RAIL ROW		1.60	0.15		1.75		1.75	$ 24,266	$ 389,165	$ 2,037,071
E Slauson Ave To La River										
Off Street		1.60	0.15		1.75		1.75	$ 24,266	$ 389,165	$ 2,037,071
CORRIDOR: SALT LAKE- UP-PE RR ROW			0.25		0.25		0.25	$ 40,400	$ 647,914	$ 3,391,487
La River To Coyote Creek										
Off Street			0.25		0.25		0.25	$ 40,400	$ 647,914	$ 3,391,487
Signal Hill	2.88				2.88		2.88	$ 88,876	$ 1,433,490	$ 7,497,152
CORRIDOR: ALTADENA-LONG BEACH	1.40				1.40		1.40	$ 43,229	$ 697,236	$ 3,646,543
Loma Alta Dr To La River										
CHERRY AV	1.40				1.40		1.40	$ 43,229	$ 697,236	$ 3,646,543
CORRIDOR: SEPULVEDA-WILLOW	1.48				1.48		1.48	$ 45,648	$ 736,254	$ 3,850,608
Torrance Blvd To Coyote Creek										
E WILLOW ST	1.48				1.48		1.48	$ 45,648	$ 736,254	$ 3,850,608
Las Virgenes/Malibu	43.82				43.82		43.82	$ 1,354,114	$ 21,840,541	$ 114,226,029
Agoura Hills	4.19				4.19		4.19	$ 129,482	$ 2,088,424	$ 10,922,457
CORRIDOR: VENTURA-CALABASAS	4.19				4.19		4.19	$ 129,482	$ 2,088,424	$ 10,922,457
Ventura County Line To N Cahuenga Blvd										
AGOURA RD	4.19				4.19		4.19	$ 129,482	$ 2,088,424	$ 10,922,457
Calabasas	5.38				5.38		5.38	$ 166,084	$ 2,678,771	$ 14,009,973
CORRIDOR: MALIBU CANYON	3.51				3.51		3.51	$ 108,474	$ 1,749,576	$ 9,150,282
Mureau Rd To Pch										
LAS VIRGENES RD	3.51				3.51		3.51	$ 108,474	$ 1,749,576	$ 9,150,282
CORRIDOR: VENTURA-CALABASAS	1.86				1.86		1.86	$ 57,610	$ 929,195	$ 4,859,691
Ventura County Line To N Cahuenga Blvd										
CALABASAS RD	1.63				1.63		1.63	$ 50,225	$ 810,075	$ 4,236,695
MUREAU RD	0.24				0.24		0.24	$ 7,385	$ 119,120	$ 622,997
Malibu	21.67				21.67		21.67	$ 669,462	$ 10,797,776	$ 56,472,371
CORRIDOR: MALIBU CANYON	1.12				1.12		1.12	$ 34,660	$ 559,031	$ 2,923,732
Mureau Rd To Pch										
S MALIBU CANYON RD	1.12				1.12		1.12	$ 34,660	$ 559,031	$ 2,923,732
CORRIDOR: COASTAL ROUTE-BEACH PATH	20.54				20.54		20.54	$ 634,802	$ 10,238,746	$ 53,548,639
Ventura County Line To La River										
PACIFIC COAST HWY	20.54				20.54		20.54	$ 634,802	$ 10,238,746	$ 53,548,639
Unincorporated	11.01				11.01		11.01	$ 340,263	$ 5,488,117	$ 28,702,853
CORRIDOR: MALIBU CANYON	5.19				5.19		5.19	$ 160,383	$ 2,586,815	$ 13,529,041
Mureau Rd To Pch										
LAS VIRGENES RD	1.44				1.44		1.44	$ 44,561	$ 718,730	$ 3,758,959
N MALIBU CANYON RD	1.25				1.25		1.25	$ 38,730	$ 624,673	$ 3,267,042
S MALIBU CANYON RD	2.49				2.49		2.49	$ 77,091	$ 1,243,411	$ 6,503,040
CORRIDOR: VENTURA-CALABASAS	3.50				3.50		3.50	$ 108,126	$ 1,743,960	$ 9,120,910
Ventura County Line To N Cahuenga Blvd										
AGOURA RD	1.65				1.65		1.65	$ 50,854	$ 820,229	$ 4,289,797
MUREAU RD	1.85				1.85		1.85	$ 57,271	$ 923,731	$ 4,831,113
CORRIDOR: COASTAL ROUTE-BEACH PATH	2.32				2.32		2.32	$ 71,755	$ 1,157,343	$ 6,052,902
Ventura County Line To La River										
PACIFIC COAST HWY	2.32				2.32		2.32	$ 71,755	$ 1,157,343	$ 6,052,902
Westlake Village	1.58				1.58		1.58	$ 48,822	$ 787,452	$ 4,118,374
CORRIDOR: VENTURA-CALABASAS	1.58				1.58		1.58	$ 48,822	$ 787,452	$ 4,118,374
Ventura County Line To N Cahuenga Blvd										
AGOURA RD	1.58				1.58		1.58	$ 48,822	$ 787,452	$ 4,118,374
North Los Angeles County	133.55		26.95		160.50	20.05	180.55	$ 8,547,752	$ 137,461,688	$ 719,241,743
Lancaster	26.79		3.08		29.87		29.87	$ 1,332,743	$ 21,449,567	$ 112,217,455
CORRIDOR: 30TH ST	6.04				6.04		6.04	$ 186,539	$ 3,008,690	$ 15,735,451
Ave H To Ave P										
30TH ST W	6.04				6.04		6.04	$ 186,539	$ 3,008,690	$ 15,735,451
CORRIDOR: AVE J	11.62				11.62		11.62	$ 359,079	$ 5,791,593	$ 30,290,032
65Th St W To 50Th St E										
AVE J	11.62				11.62		11.62	$ 359,079	$ 5,791,593	$ 30,290,032
CORRIDOR: AVE L	7.07				7.07		7.07	$ 218,352	$ 3,521,802	$ 18,419,026
70Th St W To 50Th St E										
25TH ST W	0.13				0.13		0.13	$ 3,933	$ 63,430	$ 331,741
AVE L	6.94				6.94		6.94	$ 214,419	$ 3,458,372	$ 18,087,286
CORRIDOR: LANCASTER-SANTA CLARITA-SFV	2.07		3.08		5.14		5.14	$ 568,774	$ 9,127,481	$ 47,772,946
Ave H To Sp Rr Burbank										
Off Street			3.08		3.08		3.08	$ 504,946	$ 8,097,999	$ 42,388,753
SIERRA HWY	2.07				2.07		2.07	$ 63,828	$ 1,029,482	$ 5,384,193
Palmdale	27.49		7.16		34.64		34.64	$ 2,023,582	$ 32,530,783	$ 170,220,222
CORRIDOR: AVE L	4.07				4.07		4.07	$ 125,799	$ 2,029,014	$ 10,611,742
70Th St W To 50Th St E										
AVE L	4.07				4.07		4.07	$ 125,799	$ 2,029,014	$ 10,611,742
CORRIDOR: AVE N	2.11				2.11		2.11	$ 65,051	$ 1,049,205	$ 5,487,340
50Th St To Sierra Bike Path										
AVE N	2.11				2.11		2.11	$ 65,051	$ 1,049,205	$ 5,487,340
CORRIDOR: AVE P	4.56				4.56		4.56	$ 140,898	$ 2,272,550	$ 11,885,434
30Th St W To 50Th St E										
RANCHO VISTA BLVD	4.56				4.56		4.56	$ 140,898	$ 2,272,550	$ 11,885,434
CORRIDOR: AVE S	6.12		1.43		7.55		7.55	$ 423,461	$ 6,808,521	$ 35,625,383
Tovey Ave To 70Th St E										
AVE S	6.12				6.12		6.12	$ 188,989	$ 3,048,213	$ 15,942,156
Off Street			1.43		1.43		1.43	$ 234,472	$ 3,760,308	$ 19,683,227
CORRIDOR: HIGH DESERT CORRIDOR	10.63				10.63		10.63	$ 328,565	$ 5,299,439	$ 27,716,068
Elizabeth Lake Rd To San Bernardino County										
ELIZABETH LAKE RD	1.35				1.35		1.35	$ 41,676	$ 672,197	$ 3,515,592
PALMDALE BLVD	9.28				9.28		9.28	$ 286,889	$ 4,627,242	$ 24,200,476
CORRIDOR: LANCASTER-SANTA CLARITA-SFV			5.73		5.73		5.73	$ 939,809	$ 15,072,054	$ 78,894,254
Ave H To Sp Rr Burbank										
Off Street			5.73		5.73		5.73	$ 939,809	$ 15,072,054	$ 78,894,254
Santa Clarita	12.24		3.43		15.67	20.05	35.72	$ 941,182	$ 15,128,752	$ 79,163,756
CORRIDOR: GOLDEN VALLEY			0.54		0.54	8.54	9.08	$ 88,489	$ 1,419,127	$ 7,428,382
The Old Road To Sierra Hwy										
Off Street			0.54		0.54	8.54	9.08	$ 88,489	$ 1,419,127	$ 7,428,382

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
CORRIDOR: LANCASTER-SANTA CLARITA-SFV	9.41				9.41	1.25	10.65	$ 290,722	$ 4,689,061	$ 24,523,789
Ave H To Sp Rr Burbank										
SANTA CLARA RIVER TR						1.25	1.25	$ -	$ -	$ -
SIERRA HWY	6.22				6.22		6.22	$ 192,060	$ 3,097,737	$ 16,201,164
SOLEDAD CANYON RD	3.19				3.19		3.19	$ 98,662	$ 1,591,324	$ 8,322,625
CORRIDOR: NEWHALL AVE	2.83				2.83	1.91	4.75	$ 87,452	$ 1,410,512	$ 7,376,976
Santa Clara River To Sierra Hwy										
NEWHALL AV	1.19				1.19		1.19	$ 36,781	$ 593,234	$ 3,102,614
Off Street						1.91	1.91	$ -	$ -	$ -
UP RR	1.64				1.64		1.64	$ 50,671	$ 817,278	$ 4,274,362
CORRIDOR: SANTA CLARA RIVER						8.35	8.35	$ -	$ -	$ -
Ventura County Line To Sierra Hwy										
SANTA CLARA RIVER TR						8.35	8.35	$ -	$ -	$ -
CORRIDOR: SANTA CLARA RIVER EXT			2.89		2.89		2.89	$ 474,520	$ 7,610,052	$ 39,834,609
The Old Road To Bouquet Cyn Rd										
Off Street			2.89		2.89		2.89	$ 474,520	$ 7,610,052	$ 39,834,609
Unincorporated	67.04		13.28		80.32		80.32	$ 4,250,244	$ 68,352,586	$ 357,640,310
CORRIDOR: 30TH ST	2.02				2.02		2.02	$ 62,534	$ 1,008,612	$ 5,275,043
Ave H To Ave P										
30TH ST W	2.02				2.02		2.02	$ 62,534	$ 1,008,612	$ 5,275,043
CORRIDOR: AVE H	6.84				6.84		6.84	$ 211,211	$ 3,406,629	$ 17,816,672
30Th St W To 37Th St E										
AVE H	6.84				6.84		6.84	$ 211,211	$ 3,406,629	$ 17,816,672
CORRIDOR: AVE L	1.00				1.00		1.00	$ 30,908	$ 498,515	$ 2,607,236
70Th St W To 50Th St E										
AVE L	1.00				1.00		1.00	$ 30,908	$ 498,515	$ 2,607,236
CORRIDOR: AVE N	3.24				3.24		3.24	$ 100,095	$ 1,614,431	$ 8,443,473
50Th St To Sierra Bike Path										
AVE N	3.24				3.24		3.24	$ 100,095	$ 1,614,431	$ 8,443,473
CORRIDOR: AVE S	0.31				0.31		0.31	$ 9,580	$ 154,510	$ 808,088
Tovey Ave To 70Th St E										
AVE S	0.31				0.31		0.31	$ 9,580	$ 154,510	$ 808,088
CORRIDOR: GOLDEN VALLEY			0.17		0.17		0.17	$ 28,172	$ 451,802	$ 2,364,945
The Old Road To Sierra Hwy										
Off Street			0.17		0.17		0.17	$ 28,172	$ 451,802	$ 2,364,945
CORRIDOR: HIGH DESERT CORRIDOR	20.59				20.59		20.59	$ 636,184	$ 10,261,029	$ 53,665,180
Elizabeth Lake Rd To San Bernardino County										
240TH ST	1.53				1.53		1.53	$ 47,291	$ 762,763	$ 3,989,251
AVE P	2.00				2.00		2.00	$ 61,784	$ 996,515	$ 5,211,775
ELIZABETH LAKE RD	0.80				0.80		0.80	$ 24,741	$ 399,053	$ 2,087,048
PALMDALE BLVD	16.26				16.26		16.26	$ 502,367	$ 8,102,697	$ 42,377,106
CORRIDOR: LANCASTER-SANTA CLARITA-SFV	24.29		0.16		24.45		24.45	$ 776,253	$ 12,517,860	$ 65,470,247
Ave H To Sp Rr Burbank										
Off Street			0.16		0.16		0.16	$ 25,670	$ 411,681	$ 2,154,930
SIERRA HWY	0.82				0.82		0.82	$ 25,331	$ 408,568	$ 2,136,810
SOLEDAD CANYON RD	23.47				23.47		23.47	$ 725,252	$ 11,697,611	$ 61,178,506
CORRIDOR: SANTA CLARA RIVER			7.41		7.41		7.41	$ 1,215,898	$ 19,499,797	$ 102,071,150
Ventura County Line To Sierra Hwy										
Off Street			7.41		7.41		7.41	$ 1,215,898	$ 19,499,797	$ 102,071,150
CORRIDOR: THE OLD ROAD	8.75		5.54		14.29		14.29	$ 1,179,410	$ 18,939,401	$ 99,118,278
Lake Hughes Rd To Sierra Hwy										
Off Street			5.54		5.54		5.54	$ 909,135	$ 14,580,131	$ 76,319,293
THE OLD RD	8.75				8.75		8.75	$ 270,275	$ 4,359,271	$ 22,798,985
San Fernando Valley	229.53		70.79	0.25	300.57	28.04	328.61	$ 18,718,312	$ 300,843,632	$ 1,574,245,230
Los Angeles	226.86		69.68	0.25	296.79	26.87	323.66	$ 18,454,261	$ 296,601,389	$ 1,552,045,275
CORRIDOR: ALISO WASH			6.80		6.80		6.80	$ 1,115,938	$ 17,896,709	$ 93,679,831
Rinaldi St To La River										
Off Street			6.80		6.80		6.80	$ 1,115,938	$ 17,896,709	$ 93,679,831
CORRIDOR: ARROYO-VERDUGO	10.82				10.82		10.82	$ 334,435	$ 5,394,105	$ 28,211,168
Van Nuys Blvd To York Blvd										
HONOLULU AV	0.25				0.25		0.25	$ 7,745	$ 124,918	$ 653,319
LA TUNA CANYON RD	5.96				5.96		5.96	$ 184,159	$ 2,970,308	$ 15,534,711
ROSCOE BLVD	3.32				3.32		3.32	$ 102,473	$ 1,652,783	$ 8,644,057
TUXFORD ST	1.30				1.30		1.30	$ 40,058	$ 646,096	$ 3,379,081
CORRIDOR: BALBOA BLVD	10.10				10.10	1.18	11.29	$ 312,222	$ 5,035,841	$ 26,337,450
San Fernando Rd To Ventura Blvd										
BALBOA BLVD	10.10				10.10		10.10	$ 312,222	$ 5,035,841	$ 26,337,450
Off Street						1.18	1.18	$ -	$ -	$ -
CORRIDOR: BRAND	1.32				1.32		1.32	$ 40,690	$ 656,288	$ 3,432,388
Sepulveda Blvd To San Fernando Rd										
S BRAND BLVD	1.32				1.32		1.32	$ 40,690	$ 656,288	$ 3,432,388
CORRIDOR: BROWNS CANYON			3.51		3.51		3.51	$ 575,233	$ 9,225,214	$ 48,289,128
Sprr Burbank To La River										
Off Street			3.51		3.51		3.51	$ 575,233	$ 9,225,214	$ 48,289,128
CORRIDOR: BROWNS CREEK	1.29				1.29		1.29	$ 39,850	$ 642,744	$ 3,361,553
Victory Blvd To Ventura Blvd										
TOPANGA CANYON BLVD	1.29				1.29		1.29	$ 39,850	$ 642,744	$ 3,361,553
CORRIDOR: CHANDLER	2.67				2.67	7.51	10.17	$ 82,454	$ 1,329,902	$ 6,955,387
La River To E Verdugo Ave										
CHANDLER BLVD	2.67				2.67		2.67	$ 82,454	$ 1,329,902	$ 6,955,387
Off Street						7.51	7.51	$ -	$ -	$ -
CORRIDOR: DEVONSHIRE ST	8.69				8.69	0.60	9.29	$ 268,465	$ 4,330,084	$ 22,646,342
Topanga Canyon Blvd To Pacoima Wash										
DEVONSHIRE ST	8.69				8.69		8.69	$ 268,465	$ 4,330,084	$ 22,646,342
Off Street						0.60	0.60	$ -	$ -	$ -
CORRIDOR: EAST DIVERSION CHANNEL			2.37		2.37		2.37	$ 388,393	$ 6,228,806	$ 32,604,511
Gavina Ave To La River										
Off Street			2.37		2.37		2.37	$ 388,393	$ 6,228,806	$ 32,604,511
CORRIDOR: FALBROOK AVE	3.68				3.68		3.68	$ 113,636	$ 1,832,838	$ 9,585,743
Roscoe Blvd To Ventura Blvd										
FALLBROOK AV	3.68				3.68		3.68	$ 113,636	$ 1,832,838	$ 9,585,743

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
CORRIDOR: FOOTHILL-SUNLAND-VINELAND	**13.90**				**13.90**		**13.90**	**$ 429,595**	**$ 6,928,953**	**$ 36,238,425**
Ventura Blvd To Verdugo Wash										
FOOTHILL BLVD	3.68				3.68		3.68	$ 113,752	$ 1,834,714	$ 9,595,557
PENROSE ST	0.10				0.10		0.10	$ 3,171	$ 51,150	$ 267,517
SUNLAND BLVD	4.81				4.81		4.81	$ 148,582	$ 2,396,479	$ 12,533,587
VINELAND AV	5.31				5.31		5.31	$ 164,090	$ 2,646,609	$ 13,841,765
CORRIDOR: GLENOAKS BLVD	**9.61**				**9.61**		**9.61**	**$ 296,843**	**$ 4,787,793**	**$ 25,040,159**
Foothill Fwy To Verdugo Wash										
GLENOAKS BLVD	9.61				9.61		9.61	$ 296,843	$ 4,787,793	$ 25,040,159
CORRIDOR: HUBBARD-RINALDI	**11.83**				**11.83**	**1.50**	**13.33**	**$ 365,451**	**$ 5,894,367**	**$ 30,827,538**
Independence Ave To Pacoima Wash										
GAVINA AV	0.48				0.48		0.48	$ 14,889	$ 240,146	$ 1,255,965
HUBBARD ST	3.36				3.36		3.36	$ 103,958	$ 1,676,743	$ 8,769,364
S HUBBARD AV	0.04				0.04		0.04	$ 1,247	$ 20,113	$ 105,193
Lassen St To Pacoima Wash										
Off Street						1.50	1.50	$ -	$ -	$ -
RINALDI ST	7.94				7.94		7.94	$ 245,357	$ 3,957,365	$ 20,697,017
CORRIDOR: LA RIVER			**17.30**		**17.30**	**1.85**	**19.15**	**$ 2,838,323**	**$ 45,519,219**	**$ 238,269,098**
Canoga Ave To Coyote Creek										
Off Street			17.30		17.30	1.85	19.15	$ 2,838,323	$ 45,519,219	$ 238,269,098
CORRIDOR: LANCASTER-SANTA CLARITA-SFV	**3.05**		**6.98**		**10.02**	**1.90**	**11.92**	**$ 1,238,796**	**$ 19,875,655**	**$ 104,031,778**
Ave H To Sp Rr Burbank										
Off Street			6.98		6.98	1.90	8.88	$ 1,144,659	$ 18,357,319	$ 96,090,884
SAN FERNANDO RD	2.69				2.69		2.69	$ 83,114	$ 1,340,547	$ 7,011,060
SIERRA HWY	0.36				0.36		0.36	$ 11,023	$ 177,788	$ 929,833
CORRIDOR: LANKERSHIM	**7.04**				**7.04**		**7.04**	**$ 217,675**	**$ 3,510,893**	**$ 18,361,970**
Sp Rr Burbank To W Cahuenga Blvd										
LANKERSHIM BLVD	7.04				7.04		7.04	$ 217,675	$ 3,510,893	$ 18,361,970
CORRIDOR: LAUREL CANYON BLVD	**11.78**				**11.78**		**11.78**	**$ 364,136**	**$ 5,873,156**	**$ 30,716,606**
Polk St To Ventura Blvd										
LAUREL CANYON BLVD	11.78				11.78		11.78	$ 364,136	$ 5,873,156	$ 30,716,606
CORRIDOR: ORANGE LINE	**0.25**				**0.25**	**10.09**	**10.33**	**$ 7,636**	**$ 123,166**	**$ 644,160**
Lassen St To Victory Blvd										
Off Street						4.16	4.16	$ -	$ -	$ -
Rinaldi St To Victory Blvd										
CANOGA AV	0.25				0.25		0.25	$ 7,636	$ 123,166	$ 644,160
Off Street						5.93	5.93	$ -	$ -	$ -
CORRIDOR: PACOIMA WASH/CHANNEL			**13.08**		**13.08**	**0.46**	**13.55**	**$ 2,146,255**	**$ 34,420,273**	**$ 180,171,971**
Gavina Ave To La River										
Off Street			13.08		13.08	0.46	13.55	$ 2,146,255	$ 34,420,273	$ 180,171,971
CORRIDOR: PARTHENIA ST	**8.49**				**8.49**		**8.49**	**$ 262,260**	**$ 4,230,001**	**$ 22,122,903**
Canoga Ave To Van Nuys Blvd										
PARTHENIA ST	8.49				8.49		8.49	$ 262,260	$ 4,230,001	$ 22,122,903
CORRIDOR: PLUMMER-VALLEY CIRCLE	**15.98**		**0.40**	**0.25**	**16.63**	**0.37**	**17.00**	**$ 571,811**	**$ 9,216,735**	**$ 48,208,238**
Ventura Blvd To Woodman Ave										
LAKE MANOR DR	0.17				0.17		0.17	$ 5,154	$ 83,123	$ 434,731
N UNIVERSITY DR				0.25	0.25		0.25	$ 12,202	$ 196,808	$ 1,029,307
Off Street			0.40		0.40	0.37	0.77	$ 65,724	$ 1,054,035	$ 5,517,317
PLUMMER ST	9.04				9.04		9.04	$ 279,371	$ 4,505,987	$ 23,566,313
VALLEY CIRCLE BLVD	6.78				6.78		6.78	$ 209,360	$ 3,376,782	$ 17,660,570
CORRIDOR: RESEDA BLVD	**7.39**				**7.39**		**7.39**	**$ 228,371**	**$ 3,683,397**	**$ 19,264,168**
Rinaldi St To Ventura Blvd										
RESEDA BLVD	7.39				7.39		7.39	$ 228,371	$ 3,683,397	$ 19,264,168
CORRIDOR: RIVERSIDE-VERDUGO	**5.57**				**5.57**		**5.57**	**$ 172,006**	**$ 2,774,294**	**$ 14,509,560**
Van Nuys Blvd To Van Nuys Blvd										
CAMARILLO ST	1.57				1.57		1.57	$ 48,448	$ 781,412	$ 4,086,784
RIVERSIDE DR	4.00				4.00		4.00	$ 123,559	$ 1,992,883	$ 10,422,776
CORRIDOR: ROSCOE BLVD	**2.83**				**2.83**		**2.83**	**$ 87,425**	**$ 1,410,081**	**$ 7,374,726**
Valley Circle Blvd To Canoga Ave										
ROSCOE BLVD	2.83				2.83		2.83	$ 87,425	$ 1,410,081	$ 7,374,726
CORRIDOR: SANTA SUSANA-SPRR	**2.07**		**1.81**		**3.88**		**3.88**	**$ 360,905**	**$ 5,793,807**	**$ 30,322,918**
Ventura County Line To Lassen St										
Off Street			1.81		1.81		1.81	$ 297,090	$ 4,764,538	$ 24,939,845
SANTA SUSANA PASS RD	2.07				2.07		2.07	$ 63,815	$ 1,029,268	$ 5,383,074
CORRIDOR: SEPULVEDA	**15.73**				**15.73**		**15.73**	**$ 486,181**	**$ 7,841,623**	**$ 41,011,688**
Rinaldi St To Venice Blvd										
N SEPULVEDA BLVD	15.73				15.73		15.73	$ 486,181	$ 7,841,623	$ 41,011,688
CORRIDOR: SHERMAN WAY	**16.33**				**16.33**		**16.33**	**$ 504,447**	**$ 8,136,237**	**$ 42,552,518**
Victory Blvd To Vineland Ave										
CALDUS AV	0.01				0.01		0.01	$ 186	$ 3,008	$ 15,731
ETIWANDA AV	0.00				0.00		0.00	$ 150	$ 2,419	$ 12,650
PLATT AV	0.83				0.83		0.83	$ 25,545	$ 412,017	$ 2,154,850
SHERMAN WY	15.48				15.48		15.48	$ 478,249	$ 7,713,698	$ 40,342,638
VANALDEN AV	0.01				0.01		0.01	$ 169	$ 2,726	$ 14,255
VARIEL AV	0.00				0.00		0.00	$ 147	$ 2,370	$ 12,394
CORRIDOR: SPRR-BURBANK WESTERN	**0.53**		**14.42**		**14.95**		**14.95**	**$ 2,382,797**	**$ 38,215,281**	**$ 200,035,658**
Lassen St To La River										
Off Street			14.42		14.42		14.42	$ 2,366,446	$ 37,951,564	$ 198,656,420
VANOWEN ST	0.53				0.53		0.53	$ 16,350	$ 263,717	$ 1,379,239
CORRIDOR: THE OLD ROAD	**0.14**				**0.14**		**0.14**	**$ 4,446**	**$ 71,713**	**$ 375,058**
Lake Hughes Rd To Sierra Hwy										
THE OLD RD	0.14				0.14		0.14	$ 4,446	$ 71,713	$ 375,058
CORRIDOR: TUJUNGA WASH			**3.01**		**3.01**		**3.01**	**$ 494,278**	**$ 7,926,911**	**$ 41,493,199**
Hansen Dam Bike Path To Pacoima Diversion Channel										
Off Street			3.01		3.01		3.01	$ 494,278	$ 7,926,911	$ 41,493,199
CORRIDOR: VAN NUYS BLVD	**10.22**				**10.22**		**10.22**	**$ 315,896**	**$ 5,095,094**	**$ 26,647,340**
Foothill Blvd To Ventura Blvd										
VAN NUYS BLVD	10.22				10.22		10.22	$ 315,896	$ 5,095,094	$ 26,647,340
CORRIDOR: VENTURA-CALABASAS	**19.24**				**19.24**		**19.24**	**$ 594,420**	**$ 9,587,427**	**$ 50,142,241**
Ventura County Line To N Cahuenga Blvd										
CAHUENGA BLVD W	2.38				2.38		2.38	$ 73,495	$ 1,185,405	$ 6,199,666

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
CALABASAS RD	0.14				0.14		0.14	$ 4,458	$ 71,905	$ 376,063
MULHOLLAND DR	0.09				0.09		0.09	$ 2,821	$ 45,504	$ 237,986
VALLEY CIRCLE BLVD	0.11				0.11		0.11	$ 3,292	$ 53,095	$ 277,686
VENTURA BLVD	16.52				16.52		16.52	$ 510,354	$ 8,231,518	$ 43,050,839
CORRIDOR: VICTORY-SPRR	**4.11**				**4.11**		**4.11**	**$ 126,946**	**$ 2,047,509**	**$ 10,708,470**
Ventura County Line To Canoga Ave										
VICTORY BLVD	4.11				4.11		4.11	$ 126,946	$ 2,047,509	$ 10,708,470
CORRIDOR: WINNETKA AVE	**5.91**				**5.91**		**5.91**	**$ 182,619**	**$ 2,945,469**	**$ 15,404,803**
Devonshire St To Ventura Blvd										
WINNETKA AV	5.91				5.91		5.91	$ 182,619	$ 2,945,469	$ 15,404,803
CORRIDOR: WOODLEY	**6.40**				**6.40**	**1.41**	**7.80**	**$ 197,698**	**$ 3,188,671**	**$ 16,676,747**
Rinaldi St To La River										
Off Street						1.41	1.41	$ -	$ -	$ -
WOODLEY AV	6.40				6.40		6.40	$ 197,698	$ 3,188,671	$ 16,676,747
CORRIDOR: WOODMAN AVE	**9.89**				**9.89**		**9.89**	**$ 305,730**	**$ 4,931,134**	**$ 25,789,832**
San Fernando Rd To Ventura Blvd										
FOX ST	1.46				1.46		1.46	$ 45,066	$ 726,863	$ 3,801,493
WOODMAN AV	8.44				8.44		8.44	$ 260,665	$ 4,204,271	$ 21,988,340
San Fernando	**2.19**		**1.11**		**3.29**	**1.17**	**4.46**	**$ 249,108**	**$ 4,001,224**	**$ 20,939,427**
CORRIDOR: BRAND	**0.53**				**0.53**		**0.53**	**$ 16,370**	**$ 264,036**	**$ 1,380,906**
Sepulveda Blvd To San Fernando Rd										
S BRAND BLVD	0.53				0.53		0.53	$ 16,370	$ 264,036	$ 1,380,906
CORRIDOR: GLENOAKS BLVD	**1.27**				**1.27**		**1.27**	**$ 39,319**	**$ 634,176**	**$ 3,316,739**
Foothill Fwy To Verdugo Wash										
GLENOAKS BLVD	1.27				1.27		1.27	$ 39,319	$ 634,176	$ 3,316,739
CORRIDOR: HUBBARD-RINALDI	**0.38**				**0.38**		**0.38**	**$ 11,851**	**$ 191,149**	**$ 999,707**
Independence Ave To Pacoima Wash										
HUBBARD ST	0.01				0.01		0.01	$ 192	$ 3,096	$ 16,191
N HUBBARD AV	0.27				0.27		0.27	$ 8,418	$ 135,772	$ 710,088
S HUBBARD AV	0.10				0.10		0.10	$ 3,241	$ 52,281	$ 273,428
CORRIDOR: LANCASTER-SANTA CLARITA-SFV						**1.17**	**1.17**	**$ -**	**$ -**	**$ -**
Ave H To Sp Rr Burbank										
Off Street						1.17	1.17	$ -	$ -	$ -
CORRIDOR: PACOIMA WASH/CHANNEL			**1.11**		**1.11**		**1.11**	**$ 181,568**	**$ 2,911,864**	**$ 15,242,075**
Gavina Ave To La River										
Off Street			1.11		1.11		1.11	$ 181,568	$ 2,911,864	$ 15,242,075
Unincorporated	**0.48**				**0.48**		**0.48**	**$ 14,943**	**$ 241,019**	**$ 1,260,529**
CORRIDOR: PLUMMER-VALLEY CIRCLE	**0.48**				**0.48**		**0.48**	**$ 14,943**	**$ 241,019**	**$ 1,260,529**
Ventura Blvd To Woodman Ave										
LAKE MANOR DR	0.31				0.31		0.31	$ 9,443	$ 152,303	$ 796,546
SMITH RD	0.03				0.03		0.03	$ 992	$ 15,999	$ 83,677
VALLEY CIRCLE BLVD	0.15				0.15		0.15	$ 4,508	$ 72,716	$ 380,306
San Gabriel Valley	**243.73**		**85.14**	**27.45**	**356.32**	**34.50**	**390.82**	**$ 22,839,528**	**$ 367,099,021**	**$ 1,920,929,795**
Alhambra	**9.13**		**1.51**	**4.33**	**14.97**		**14.97**	**$ 740,821**	**$ 11,926,052**	**$ 62,390,988**
CORRIDOR: ALTADENA-LONG BEACH	**2.65**				**2.65**		**2.65**	**$ 81,895**	**$ 1,320,881**	**$ 6,908,210**
Loma Alta Dr To La River										
N GARFIELD AV	0.86				0.86		0.86	$ 26,460	$ 426,766	$ 2,231,987
S GARFIELD AV	1.79				1.79		1.79	$ 55,435	$ 894,115	$ 4,676,222
CORRIDOR: FREMONT-PASADENA	**2.70**			**0.22**	**2.92**		**2.92**	**$ 94,308**	**$ 1,521,098**	**$ 7,955,343**
E Union St To Whittier Blvd										
N FREMONT AV				0.22	0.22		0.22	$ 10,948	$ 176,581	$ 923,519
S FREMONT AV	2.70				2.70		2.70	$ 83,360	$ 1,344,517	$ 7,031,825
CORRIDOR: GARVEY-RAMONA	**0.66**				**0.66**		**0.66**	**$ 20,259**	**$ 326,753**	**$ 1,708,919**
Whittier Blvd To Sp Rr										
RAMONA RD	0.38				0.38		0.38	$ 11,790	$ 190,169	$ 994,584
S GARVEY AV	0.27				0.27		0.27	$ 8,468	$ 136,584	$ 714,335
CORRIDOR: MAIN ST	**2.12**			**0.86**	**2.97**		**2.97**	**$ 107,173**	**$ 1,728,594**	**$ 9,040,549**
Huntington Dr N To Arrow Hwy										
E MAIN ST	0.89				0.89		0.89	$ 27,603	$ 445,211	$ 2,328,453
POPLAR BLVD				0.86	0.86		0.86	$ 41,804	$ 674,261	$ 3,526,386
W MAIN ST	1.22				1.22		1.22	$ 37,766	$ 609,122	$ 3,185,710
CORRIDOR: MISSION-VALLEY	**1.01**			**2.03**	**3.04**		**3.04**	**$ 130,334**	**$ 2,102,160**	**$ 10,994,298**
E Cesar E Chavez Ave To La Puente Creek										
E VALLEY BLVD	0.85				0.85		0.85	$ 26,152	$ 421,799	$ 2,206,010
VALLEY BLVD	0.01				0.01		0.01	$ 197	$ 3,173	$ 16,595
W VALLEY BLVD	0.15			2.03	2.19		2.19	$ 103,986	$ 1,677,188	$ 8,771,693
CORRIDOR: SPRR-SAN GABRIEL			**1.51**	**1.22**	**2.73**		**2.73**	**$ 306,852**	**$ 4,926,565**	**$ 25,783,670**
Fremont Ave To Eaton Wash										
FRONT ST				1.22	1.22		1.22	$ 59,594	$ 961,194	$ 5,027,044
Off Street			1.51		1.51		1.51	$ 247,258	$ 3,965,371	$ 20,756,626
Arcadia	**9.66**		**0.12**		**9.78**	**1.56**	**11.34**	**$ 318,811**	**$ 5,140,241**	**$ 26,884,927**
CORRIDOR: COLORADO-FOOTHILL	**3.02**				**3.02**		**3.02**	**$ 93,165**	**$ 1,502,655**	**$ 7,858,887**
La River To San Antonio Wash										
E HUNTINGTON DR	0.63				0.63		0.63	$ 19,349	$ 312,085	$ 1,632,206
W COLORADO PL	0.53				0.53		0.53	$ 16,329	$ 263,368	$ 1,377,414
W COLORADO ST	1.56				1.56		1.56	$ 48,233	$ 777,944	$ 4,068,648
W HUNTINGTON DR	0.30				0.30		0.30	$ 9,254	$ 149,258	$ 780,620
CORRIDOR: DUARTE-EL MONTE	**2.18**				**2.18**		**2.18**	**$ 67,234**	**$ 1,084,415**	**$ 5,671,490**
W Huntington Dr To Rio Hondo										
CAMPUS DR	0.35				0.35		0.35	$ 10,810	$ 174,355	$ 911,879
EL MONTE AV	1.75				1.75		1.75	$ 54,089	$ 872,402	$ 4,562,661
W DUARTE RD	0.08				0.08		0.08	$ 2,335	$ 37,658	$ 196,950
CORRIDOR: HUNTINGTON-MAIN	**2.13**				**2.13**		**2.13**	**$ 65,963**	**$ 1,063,915**	**$ 5,564,277**
E Huntington Dr To E Imperial Hwy										
HUNTINGTON DR	0.16				0.16		0.16	$ 4,902	$ 79,061	$ 413,492
W HUNTINGTON DR	1.98				1.98		1.98	$ 61,061	$ 984,854	$ 5,150,785
CORRIDOR: MAIN ST	**2.10**				**2.10**		**2.10**	**$ 64,812**	**$ 1,045,358**	**$ 5,467,224**
Huntington Dr N To Arrow Hwy										
E LIVE OAK AV	0.82				0.82		0.82	$ 25,190	$ 406,291	$ 2,124,901
LAS TUNAS DR	1.23				1.23		1.23	$ 38,070	$ 614,030	$ 3,211,379
W LIVE OAK AV	0.05				0.05		0.05	$ 1,552	$ 25,037	$ 130,945

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CORRIDOR: PECK RD	0.23				0.23		0.23	$ 7,200	$ 116,125	$ 607,335
Huntington Dr To Whittier Blvd										
PECK RD	0.23				0.23		0.23	$ 7,200	$ 116,125	$ 607,335
CORRIDOR: RIO HONDO			0.12		0.12	1.56	1.69	$ 20,438	$ 327,772	$ 1,715,713
Peck Rd To La River										
Off Street			0.12		0.12	1.56	1.69	$ 20,438	$ 327,772	$ 1,715,713
Azusa	7.32		1.45	1.16	9.93	3.46	13.39	$ 520,211	$ 8,368,763	$ 43,785,635
CORRIDOR: ARROW-BONITA	1.13				1.13		1.13	$ 34,972	$ 564,071	$ 2,950,093
Live Oak Ave To San Antonio Wash										
W ARROW HWY	1.13				1.13		1.13	$ 34,972	$ 564,071	$ 2,950,093
CORRIDOR: AZUSA AVE	2.81			1.16	3.97		3.97	$ 143,661	$ 2,317,114	$ 12,118,506
San Gabriel River To Colima Rd										
N AZUSA AV	1.79				1.79		1.79	$ 55,195	$ 890,244	$ 4,655,978
N SAN GABRIEL AV				0.21	0.21		0.21	$ 10,139	$ 163,524	$ 855,231
S AZUSA AV	1.02				1.02		1.02	$ 31,669	$ 510,792	$ 2,671,441
SAN GABRIEL CANYON RD				0.96	0.96		0.96	$ 46,658	$ 752,554	$ 3,935,856
CORRIDOR: BIG DALTON WASH			0.97		0.97		0.97	$ 159,107	$ 2,551,650	$ 13,356,544
Big Dalton Debris Dam To Walnut Creek										
Off Street			0.97		0.97		0.97	$ 159,107	$ 2,551,650	$ 13,356,544
CORRIDOR: COLORADO-FOOTHILL	2.88				2.88		2.88	$ 88,883	$ 1,433,605	$ 7,497,753
La River To San Antonio Wash										
E ALOSTA AV	1.08				1.08		1.08	$ 33,295	$ 537,017	$ 2,808,601
E FOOTHILL BLVD	0.81				0.81		0.81	$ 24,952	$ 402,448	$ 2,104,801
W FOOTHILL BLVD	0.99				0.99		0.99	$ 30,637	$ 494,140	$ 2,584,350
CORRIDOR: LITTLE DALTON WASH			0.48		0.48		0.48	$ 77,988	$ 1,250,714	$ 6,546,829
Little Dalton Wash To E Alosta Ave										
Off Street			0.48		0.48		0.48	$ 77,988	$ 1,250,714	$ 6,546,829
CORRIDOR: SAN GABRIEL RIVER						3.46	3.46	$ -	$ -	$ -
Old San Gabriel Cyn To Coyote Creek										
Off Street						3.46	3.46	$ -	$ -	$ -
CORRIDOR: SUNSET AVE	0.50				0.50		0.50	$ 15,600	$ 251,608	$ 1,315,911
Foothill Blvd To Puente Creek										
IRWINDALE AV	0.50				0.50		0.50	$ 15,600	$ 251,608	$ 1,315,911
Baldwin Park	5.11		4.70		9.81	1.35	11.16	$ 928,618	$ 14,907,050	$ 78,019,163
CORRIDOR: BADILLO-RAMONA	3.33				3.33		3.33	$ 102,997	$ 1,661,247	$ 8,688,322
Mission-Valley Sprr To W Bonita Ave										
BADILLO ST	0.56				0.56		0.56	$ 17,243	$ 278,117	$ 1,454,550
RAMONA BLVD	2.78				2.78		2.78	$ 85,754	$ 1,383,130	$ 7,233,771
CORRIDOR: BIG DALTON WASH			2.09		2.09		2.09	$ 342,923	$ 5,499,578	$ 28,787,388
Big Dalton Debris Dam To Walnut Creek										
Off Street			2.09		2.09		2.09	$ 342,923	$ 5,499,578	$ 28,787,388
CORRIDOR: LOS ANGELES-LOWER AZUSA	1.77				1.77		1.77	$ 54,794	$ 883,767	$ 4,622,100
Rosemead Blvd To Big Dalton Wash										
LOS ANGELES ST	1.77				1.77		1.77	$ 54,794	$ 883,767	$ 4,622,100
CORRIDOR: SAN GABRIEL RIVER						1.35	1.35	$ -	$ -	$ -
Old San Gabriel Cyn To Coyote Creek										
Off Street						1.35	1.35	$ -	$ -	$ -
CORRIDOR: WALNUT CREEK			2.61		2.61		2.61	$ 427,904	$ 6,862,459	$ 35,921,352
San Gabriel River To Fairplex Dr										
Off Street			2.61		2.61		2.61	$ 427,904	$ 6,862,459	$ 35,921,352
Claremont	5.81		2.43		8.24	2.84	11.08	$ 577,914	$ 9,284,683	$ 48,587,465
CORRIDOR: ARROW-BONITA	1.73		0.33		2.06		2.06	$ 107,164	$ 1,723,546	$ 9,017,990
Live Oak Ave To San Antonio Wash										
E 1ST ST	0.59				0.59		0.59	$ 18,351	$ 295,978	$ 1,547,966
E BONITA AV	0.75				0.75		0.75	$ 23,207	$ 374,308	$ 1,957,632
N COLLEGE AV	0.14				0.14		0.14	$ 4,273	$ 68,927	$ 360,488
Off Street			0.33		0.33		0.33	$ 53,573	$ 859,172	$ 4,497,311
W BONITA AV	0.25				0.25		0.25	$ 7,760	$ 125,161	$ 654,593
CORRIDOR: COLORADO-FOOTHILL	2.38				2.38		2.38	$ 73,653	$ 1,187,947	$ 6,212,960
La River To San Antonio Wash										
E FOOTHILL BLVD	0.69				0.69		0.69	$ 21,306	$ 343,646	$ 1,797,270
W FOOTHILL BLVD	1.69				1.69		1.69	$ 52,347	$ 844,300	$ 4,415,691
CORRIDOR: SAN JOSE-THOMPSON-LA PUENTE	0.12		2.10		2.22	2.84	5.06	$ 348,406	$ 5,587,853	$ 29,249,203
Puente Creek To San Antonio Dam										
Off Street			2.10		2.10	2.84	4.94	$ 344,767	$ 5,529,150	$ 28,942,183
W BASELINE RD	0.12				0.12		0.12	$ 3,640	$ 58,704	$ 307,020
CORRIDOR: TOWNE AVE	1.58				1.58		1.58	$ 48,691	$ 785,337	$ 4,107,312
Base Line Rd To San Bernardino County Line										
N TOWNE AV	1.58				1.58		1.58	$ 48,691	$ 785,337	$ 4,107,312
Covina	8.56		1.84		10.39		10.39	$ 565,654	$ 9,095,845	$ 47,592,877
CORRIDOR: ARROW-BONITA	0.47				0.47		0.47	$ 14,661	$ 236,470	$ 1,236,738
Live Oak Ave To San Antonio Wash										
E ARROW HWY	0.47				0.47		0.47	$ 14,661	$ 236,470	$ 1,236,738
CORRIDOR: AZUSA AVE	1.41				1.41		1.41	$ 43,675	$ 704,439	$ 3,684,216
San Gabriel River To Colima Rd										
N AZUSA AV	1.40				1.40		1.40	$ 43,359	$ 699,336	$ 3,657,530
S AZUSA AV	0.01				0.01		0.01	$ 316	$ 5,103	$ 26,686
CORRIDOR: BADILLO-RAMONA	4.15				4.15		4.15	$ 128,083	$ 2,065,848	$ 10,804,384
Mission-Valley Sprr To W Bonita Ave										
E BADILLO ST	2.63				2.63		2.63	$ 81,191	$ 1,309,534	$ 6,848,863
W BADILLO ST	1.52				1.52		1.52	$ 46,891	$ 756,314	$ 3,955,521
CORRIDOR: BIG DALTON WASH			0.37		0.37		0.37	$ 60,013	$ 962,450	$ 5,037,916
Big Dalton Debris Dam To Walnut Creek										
Off Street			0.37		0.37		0.37	$ 60,013	$ 962,450	$ 5,037,916
CORRIDOR: GLENDORA-GRAND	1.94				1.94		1.94	$ 60,059	$ 968,687	$ 5,066,234
Little Dalton Wash To Sp Rr										
N GLENDORA AV	1.17				1.17		1.17	$ 36,072	$ 581,800	$ 3,042,812
S GRAND AV	0.78				0.78		0.78	$ 23,987	$ 386,887	$ 2,023,421
CORRIDOR: WALNUT CREEK	0.58		1.47		2.05		2.05	$ 259,164	$ 4,157,952	$ 21,763,390
San Gabriel River To Fairplex Dr										
E PUENTE ST	0.58				0.58		0.58	$ 17,960	$ 289,685	$ 1,515,052

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Off Street			1.47		1.47		1.47	$ 241,203	$ 3,868,267	$ 20,248,338
Diamond Bar	**1.63**				**1.63**		**1.63**	**$ 50,364**	**$ 812,317**	**$ 4,248,418**
CORRIDOR: COLIMA RD	**1.63**				**1.63**		**1.63**	**$ 50,364**	**$ 812,317**	**$ 4,248,418**
Telegraph Rd To Orange County Line										
BREA CANYON RD	0.30				0.30		0.30	$ 9,342	$ 150,685	$ 788,081
GOLDEN SPRINGS DR	0.40				0.40		0.40	$ 12,481	$ 201,311	$ 1,052,858
LEMON AV	0.41				0.41		0.41	$ 12,780	$ 206,134	$ 1,078,082
LYCOMING ST	0.51				0.51		0.51	$ 15,760	$ 254,187	$ 1,329,396
Duarte	**2.43**				**2.43**		**2.43**	**$ 75,143**	**$ 1,211,987**	**$ 6,338,693**
CORRIDOR: COLORADO-FOOTHILL	**2.43**				**2.43**		**2.43**	**$ 75,143**	**$ 1,211,987**	**$ 6,338,693**
La River To San Antonio Wash										
HUNTINGTON DR	2.43				2.43		2.43	$ 75,143	$ 1,211,987	$ 6,338,693
El Monte	**12.31**		**3.57**		**15.88**	**3.66**	**19.54**	**$ 965,468**	**$ 15,518,436**	**$ 81,203,377**
CORRIDOR: BADILLO-RAMONA	**1.66**				**1.66**		**1.66**	**$ 51,254**	**$ 826,682**	**$ 4,323,546**
Mission-Valley Sprr To W Bonita Ave										
RAMONA BLVD	1.66				1.66		1.66	$ 51,254	$ 826,682	$ 4,323,546
CORRIDOR: DUARTE-EL MONTE	**0.20**		**0.11**		**0.31**		**0.31**	**$ 23,979**	**$ 385,137**	**$ 2,015,533**
W Huntington Dr To Rio Hondo										
EL MONTE AV	0.20				0.20		0.20	$ 6,312	$ 101,805	$ 532,439
Off Street			0.11		0.11		0.11	$ 17,667	$ 283,332	$ 1,483,095
CORRIDOR: EATON WASH			**1.20**		**1.20**		**1.20**	**$ 197,064**	**$ 3,160,392**	**$ 16,542,987**
New York Dr To Rio Hondo										
Off Street			1.20		1.20		1.20	$ 197,064	$ 3,160,392	$ 16,542,987
CORRIDOR: GARVEY-RAMONA	**2.32**				**2.32**		**2.32**	**$ 71,811**	**$ 1,158,236**	**$ 6,057,572**
Whittier Blvd To Sp Rr										
E GARVEY AV	0.49				0.49		0.49	$ 15,141	$ 244,205	$ 1,277,193
GARVEY AV	1.83				1.83		1.83	$ 56,670	$ 914,030	$ 4,780,379
CORRIDOR: LOS ANGELES-LOWER AZUSA	**3.25**				**3.25**		**3.25**	**$ 100,343**	**$ 1,618,428**	**$ 8,464,377**
Rosemead Blvd To Big Dalton Wash										
LOWER AZUSA RD	3.25				3.25		3.25	$ 100,343	$ 1,618,428	$ 8,464,377
CORRIDOR: MISSION-VALLEY	**0.83**		**2.26**		**3.09**		**3.09**	**$ 395,929**	**$ 6,352,013**	**$ 33,247,581**
E Cesar E Chavez Ave To La Puente Creek										
Off Street			2.26		2.26		2.26	$ 370,226	$ 5,937,451	$ 31,079,424
VALLEY BLVD	0.83				0.83		0.83	$ 25,703	$ 414,562	$ 2,168,157
CORRIDOR: PECK RD	**4.05**				**4.05**		**4.05**	**$ 125,088**	**$ 2,017,549**	**$ 10,551,781**
Huntington Dr To Whittier Blvd										
PECK RD	4.05				4.05		4.05	$ 125,088	$ 2,017,549	$ 10,551,781
CORRIDOR: RIO HONDO						**3.66**	**3.66**	**$ -**	**$ -**	**$ -**
Peck Rd To La River										
Off Street						3.66	3.66	$ -	$ -	$ -
Glendora	**5.72**		**7.98**	**0.43**	**14.12**		**14.12**	**$ 1,506,172**	**$ 24,173,142**	**$ 126,519,399**
CORRIDOR: BIG DALTON WASH			**4.38**		**4.38**		**4.38**	**$ 718,095**	**$ 11,516,348**	**$ 60,282,007**
Big Dalton Debris Dam To Walnut Creek										
Off Street			4.38		4.38		4.38	$ 718,095	$ 11,516,348	$ 60,282,007
CORRIDOR: COLORADO-FOOTHILL	**4.01**				**4.01**		**4.01**	**$ 123,984**	**$ 1,999,740**	**$ 10,458,639**
La River To San Antonio Wash										
E FOOTHILL BLVD	0.50				0.50		0.50	$ 15,486	$ 249,768	$ 1,306,288
E ROUTE 66	2.51				2.51		2.51	$ 77,497	$ 1,249,949	$ 6,537,233
W ROUTE 66	1.00				1.00		1.00	$ 31,001	$ 500,023	$ 2,615,119
CORRIDOR: GLENDORA-GRAND	**1.71**			**0.43**	**2.13**		**2.13**	**$ 73,564**	**$ 1,186,523**	**$ 6,205,514**
Little Dalton Wash To Sp Rr										
E ADA AV				0.05	0.05		0.05	$ 2,571	$ 41,461	$ 216,843
S GLENDORA AV	1.71				1.71		1.71	$ 52,779	$ 851,266	$ 4,452,123
S VIS BONITA AV				0.08	0.08		0.08	$ 4,022	$ 64,865	$ 339,246
S WABASH AV				0.29	0.29		0.29	$ 14,194	$ 228,930	$ 1,197,303
CORRIDOR: LITTLE DALTON WASH			**3.60**		**3.60**		**3.60**	**$ 590,529**	**$ 9,470,532**	**$ 49,573,239**
Little Dalton Wash To E Alosta Ave										
Off Street			3.60		3.60		3.60	$ 590,529	$ 9,470,532	$ 49,573,239
Industry	**4.90**		**12.44**		**17.35**	**2.18**	**19.52**	**$ 2,193,001**	**$ 35,183,842**	**$ 184,157,927**
CORRIDOR: AZUSA AVE	**2.54**				**2.54**		**2.54**	**$ 78,578**	**$ 1,267,393**	**$ 6,628,465**
San Gabriel River To Colima Rd										
AZUSA AV	0.44				0.44		0.44	$ 13,531	$ 218,246	$ 1,141,426
S AZUSA AV	2.11				2.11		2.11	$ 65,047	$ 1,049,147	$ 5,487,039
CORRIDOR: COLIMA RD	**0.97**				**0.97**		**0.97**	**$ 29,862**	**$ 481,650**	**$ 2,519,028**
Telegraph Rd To Orange County Line										
BREA CANYON RD	0.97				0.97		0.97	$ 29,862	$ 481,650	$ 2,519,028
CORRIDOR: GLENDORA-GRAND	**0.15**				**0.15**		**0.15**	**$ 4,524**	**$ 72,961**	**$ 381,585**
Little Dalton Wash To Sp Rr										
N GRAND AV	0.15				0.15		0.15	$ 4,524	$ 72,961	$ 381,585
CORRIDOR: MISSION-SPRR-UPRR			**9.75**		**9.75**	**0.72**	**10.47**	**$ 1,599,318**	**$ 25,648,853**	**$ 134,258,216**
San Gabriel River To San Antonio Wash										
Off Street			9.75		9.75	0.72	10.47	$ 1,599,318	$ 25,648,853	$ 134,258,216
CORRIDOR: MISSION-VALLEY	**0.13**		**0.37**		**0.51**		**0.51**	**$ 65,388**	**$ 1,049,025**	**$ 5,490,795**
E Cesar E Chavez Ave To La Puente Creek										
Off Street			0.37		0.37		0.37	$ 61,292	$ 982,960	$ 5,145,275
VALLEY BLVD	0.13				0.13		0.13	$ 4,096	$ 66,065	$ 345,520
CORRIDOR: PECK RD	**0.25**				**0.25**		**0.25**	**$ 7,752**	**$ 125,036**	**$ 653,940**
Huntington Dr To Whittier Blvd										
PECK RD	0.25				0.25		0.25	$ 7,752	$ 125,036	$ 653,940
CORRIDOR: SAN GABRIEL RIVER						**1.45**	**1.45**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						1.45	1.45	$ -	$ -	$ -
CORRIDOR: SAN JOSE-THOMPSON-LA PUENTE			**2.32**		**2.32**		**2.32**	**$ 380,919**	**$ 6,108,930**	**$ 31,977,028**
Puente Creek To San Antonio Dam										
Off Street			2.32		2.32		2.32	$ 380,919	$ 6,108,930	$ 31,977,028
CORRIDOR: SUNSET AVE	**0.86**				**0.86**		**0.86**	**$ 26,660**	**$ 429,994**	**$ 2,248,869**
Foothill Blvd To Puente Creek										
7TH AV	0.66				0.66		0.66	$ 20,266	$ 326,874	$ 1,709,549
N SUNSET AV	0.21				0.21		0.21	$ 6,393	$ 103,121	$ 539,320
Irwindale	**11.87**		**1.22**		**13.09**	**8.18**	**21.27**	**$ 566,981**	**$ 9,126,493**	**$ 47,745,924**
CORRIDOR: ARROW-BONITA	**3.87**				**3.87**		**3.87**	**$ 119,710**	**$ 1,930,812**	**$ 10,098,145**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
Live Oak Ave To San Antonio Wash										
ARROW HWY	2.03				2.03		2.03	$ 62,770	$ 1,012,426	$ 5,294,987
LIVE OAK AV	1.84				1.84		1.84	$ 56,940	$ 918,386	$ 4,803,157
CORRIDOR: BIG DALTON WASH			**1.22**		**1.22**		**1.22**	**$ 200,313**	**$ 3,212,489**	**$ 16,815,685**
Big Dalton Debris Dam To Walnut Creek										
Off Street			1.22		1.22		1.22	$ 200,313	$ 3,212,489	$ 16,815,685
CORRIDOR: COLORADO-FOOTHILL	**0.95**				**0.95**		**0.95**	**$ 29,427**	**$ 474,635**	**$ 2,482,342**
La River To San Antonio Wash										
E FOOTHILL BLVD	0.14				0.14		0.14	$ 4,172	$ 67,295	$ 351,955
FOOTHILL BLVD	0.44				0.44		0.44	$ 13,636	$ 219,933	$ 1,150,248
HUNTINGTON DR	0.38				0.38		0.38	$ 11,619	$ 187,407	$ 980,139
CORRIDOR: LOS ANGELES-LOWER AZUSA	**1.59**				**1.59**		**1.59**	**$ 49,172**	**$ 793,102**	**$ 4,147,925**
Rosemead Blvd To Big Dalton Wash										
LOS ANGELES ST	0.65				0.65		0.65	$ 20,138	$ 324,804	$ 1,698,726
LOWER AZUSA RD	0.94				0.94		0.94	$ 29,034	$ 468,298	$ 2,449,199
CORRIDOR: MAIN ST	**2.74**				**2.74**		**2.74**	**$ 84,815**	**$ 1,367,976**	**$ 7,154,517**
Huntington Dr N To Arrow Hwy										
ARROW HWY	1.92				1.92		1.92	$ 59,380	$ 957,748	$ 5,009,020
LIVE OAK AV	0.82				0.82		0.82	$ 25,434	$ 410,229	$ 2,145,496
CORRIDOR: PECK RD	**0.61**				**0.61**		**0.61**	**$ 18,816**	**$ 303,489**	**$ 1,587,249**
Huntington Dr To Whittier Blvd										
MYRTLE AV	0.41				0.41		0.41	$ 12,812	$ 206,640	$ 1,080,728
PECK RD	0.19				0.19		0.19	$ 6,005	$ 96,849	$ 506,521
CORRIDOR: SAN GABRIEL RIVER						**8.18**	**8.18**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						8.18	8.18	$ -	$ -	$ -
CORRIDOR: SUNSET AVE	**2.09**				**2.09**		**2.09**	**$ 64,727**	**$ 1,043,989**	**$ 5,460,063**
Foothill Blvd To Puente Creek										
IRWINDALE AV	2.09				2.09		2.09	$ 64,727	$ 1,043,989	$ 5,460,063
La Canada Flintridge	**0.27**				**0.27**		**0.27**	**$ 8,255**	**$ 133,149**	**$ 696,370**
CORRIDOR: ARROYO-VERDUGO	**0.27**				**0.27**		**0.27**	**$ 8,255**	**$ 133,149**	**$ 696,370**
Van Nuys Blvd To York Blvd										
HIGHLAND DR	0.27				0.27		0.27	$ 8,255	$ 133,149	$ 696,370
La Verne	**4.84**				**4.84**		**4.84**	**$ 149,631**	**$ 2,413,403**	**$ 12,622,098**
CORRIDOR: ARROW-BONITA	**2.12**				**2.12**		**2.12**	**$ 65,606**	**$ 1,058,156**	**$ 5,534,153**
Live Oak Ave To San Antonio Wash										
BONITA AV	1.85				1.85		1.85	$ 57,098	$ 920,935	$ 4,816,489
E BONITA AV	0.28				0.28		0.28	$ 8,508	$ 137,221	$ 717,664
CORRIDOR: COLORADO-FOOTHILL	**2.39**				**2.39**		**2.39**	**$ 73,765**	**$ 1,189,761**	**$ 6,222,451**
La River To San Antonio Wash										
FOOTHILL BLVD	2.39				2.39		2.39	$ 73,765	$ 1,189,761	$ 6,222,451
CORRIDOR: FAIRPLEX-RIDGEWAY	**0.33**				**0.33**		**0.33**	**$ 10,260**	**$ 165,486**	**$ 865,494**
Bonita Ave To San Jose Wash										
E ST	0.33				0.33		0.33	$ 10,260	$ 165,486	$ 865,494
Monrovia	**3.48**				**3.48**		**3.48**	**$ 107,540**	**$ 1,734,513**	**$ 9,071,502**
CORRIDOR: COLORADO-FOOTHILL	**1.97**				**1.97**		**1.97**	**$ 60,925**	**$ 982,659**	**$ 5,139,305**
La River To San Antonio Wash										
E HUNTINGTON DR	0.85				0.85		0.85	$ 26,118	$ 421,256	$ 2,203,170
W HUNTINGTON DR	1.13				1.13		1.13	$ 34,807	$ 561,403	$ 2,936,135
CORRIDOR: PECK RD	**1.51**				**1.51**		**1.51**	**$ 46,615**	**$ 751,854**	**$ 3,932,197**
Huntington Dr To Whittier Blvd										
S MYRTLE AV	1.18				1.18		1.18	$ 36,523	$ 589,085	$ 3,080,915
S PECK RD	0.33				0.33		0.33	$ 10,092	$ 162,769	$ 851,282
Monterey Park	**10.47**				**10.47**		**10.47**	**$ 323,476**	**$ 5,217,349**	**$ 27,286,737**
CORRIDOR: ALTADENA-LONG BEACH	**2.62**				**2.62**		**2.62**	**$ 80,896**	**$ 1,304,768**	**$ 6,823,939**
Loma Alta Dr To La River										
N GARFIELD AV	0.51				0.51		0.51	$ 15,862	$ 255,835	$ 1,338,019
S GARFIELD AV	2.10				2.10		2.10	$ 65,034	$ 1,048,933	$ 5,485,920
CORRIDOR: CHAVEZ-SUNSET-RIGGIN	**3.08**				**3.08**		**3.08**	**$ 95,322**	**$ 1,537,448**	**$ 8,040,854**
N Fairfax Ave To Alhambra Wash										
AVD CESAR CHAVEZ	0.66				0.66		0.66	$ 20,483	$ 330,373	$ 1,727,849
POTRERO GRANDE DR	1.48				1.48		1.48	$ 45,881	$ 740,017	$ 3,870,291
W RIGGIN ST	0.94				0.94		0.94	$ 28,958	$ 467,058	$ 2,442,714
CORRIDOR: FREMONT-PASADENA	**1.49**				**1.49**		**1.49**	**$ 45,996**	**$ 741,878**	**$ 3,880,020**
E Union St To Whittier Blvd										
MONTEREY PASS RD	1.49				1.49		1.49	$ 45,996	$ 741,878	$ 3,880,020
CORRIDOR: GARVEY-RAMONA	**3.28**				**3.28**		**3.28**	**$ 101,262**	**$ 1,633,255**	**$ 8,541,925**
Whittier Blvd To Sp Rr										
E GARVEY AV	0.91				0.91		0.91	$ 28,076	$ 452,833	$ 2,368,319
RAMONA RD	0.57				0.57		0.57	$ 17,502	$ 282,284	$ 1,476,345
W GARVEY AV	1.80				1.80		1.80	$ 55,685	$ 898,138	$ 4,697,261
Pasadena	**38.73**		**2.69**	**8.40**	**49.83**		**49.83**	**$ 2,049,040**	**$ 33,008,503**	**$ 172,666,178**
CORRIDOR: ALLEN AVE	**2.31**				**2.31**		**2.31**	**$ 71,273**	**$ 1,149,560**	**$ 6,012,198**
E Altadena Dr To Orlando Rd										
N ALLEN AV	1.67				1.67		1.67	$ 51,746	$ 834,615	$ 4,365,036
S ALLEN AV	0.63				0.63		0.63	$ 19,527	$ 314,945	$ 1,647,162
CORRIDOR: ALTADENA-LONG BEACH	**4.00**			**0.37**	**4.37**		**4.37**	**$ 141,855**	**$ 2,287,980**	**$ 11,966,133**
Loma Alta Dr To La River										
N MARENGO AV				0.37	0.37		0.37	$ 18,288	$ 294,960	$ 1,542,643
N RAYMOND AV	2.00				2.00		2.00	$ 61,899	$ 998,374	$ 5,221,495
S MARENGO AV	2.00				2.00		2.00	$ 61,668	$ 994,645	$ 5,201,995
CORRIDOR: ARDEN-WILSON	**0.11**			**2.25**	**2.36**		**2.36**	**$ 113,124**	**$ 1,824,584**	**$ 9,542,574**
E Orange Grove Blvd To S El Molino Ave										
ARDEN RD				0.56	0.56		0.56	$ 27,438	$ 442,555	$ 2,314,562
N WILSON AV				0.70	0.70		0.70	$ 34,383	$ 554,557	$ 2,900,331
S LAKE AV				0.00	0.00		0.00	$ 190	$ 3,063	$ 16,019
S WILSON AV				0.98	0.98		0.98	$ 47,689	$ 769,179	$ 4,022,806
WILSON AV	0.11				0.11		0.11	$ 3,424	$ 55,231	$ 288,856
CORRIDOR: ARROYO-VERDUGO	**5.03**		**0.05**		**5.07**		**5.07**	**$ 162,830**	**$ 2,625,602**	**$ 13,732,435**
Van Nuys Blvd To York Blvd										
ARROYO BLVD	0.89				0.89		0.89	$ 27,576	$ 444,771	$ 2,326,152

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
LINDA VISTA AVE	0.12				0.12		0.12	$ 3,800	$ 61,283	$ 320,512
Off Street	2.82		0.05		2.87		2.87	$ 94,633	$ 1,525,662	$ 7,979,745
S ARROYO BLVD	0.52				0.52		0.52	$ 15,963	$ 257,471	$ 1,346,571
S GRAND AV	0.41				0.41		0.41	$ 12,719	$ 205,137	$ 1,072,868
SAN PASCUAL AV	0.06				0.06		0.06	$ 1,845	$ 29,765	$ 155,672
W CALIFORNIA BLVD	0.20				0.20		0.20	$ 6,294	$ 101,513	$ 530,916
CORRIDOR: COLORADO-FOOTHILL	**4.16**			**1.90**	**6.05**		**6.05**	**$ 220,987**	**$ 3,564,303**	**$ 18,641,304**
La River To San Antonio Wash										
E COLORADO BLVD	2.35				2.35		2.35	$ 72,479	$ 1,169,012	$ 6,113,932
E UNION ST				1.68	1.68		1.68	$ 82,244	$ 1,326,514	$ 6,937,670
N HILL AV	0.14				0.14		0.14	$ 4,369	$ 70,465	$ 368,533
W COLORADO BLVD	1.67				1.67		1.67	$ 51,621	$ 832,598	$ 4,354,488
W UNION ST				0.21	0.21		0.21	$ 10,274	$ 165,713	$ 866,679
CORRIDOR: EATON WASH			**2.65**		**2.65**		**2.65**	**$ 434,637**	**$ 6,970,427**	**$ 36,486,506**
New York Dr To Rio Hondo										
Off Street			2.65		2.65		2.65	$ 434,637	$ 6,970,427	$ 36,486,506
CORRIDOR: FREMONT-PASADENA	**1.51**			**0.03**	**1.54**		**1.54**	**$ 48,153**	**$ 776,668**	**$ 4,061,972**
E Union St To Whittier Blvd										
COLUMBIA ST				0.03	0.03		0.03	$ 1,609	$ 25,950	$ 135,716
S PASADENA AV	1.50				1.50		1.50	$ 46,269	$ 746,282	$ 3,903,053
W DEL MAR BLVD	0.01				0.01		0.01	$ 275	$ 4,436	$ 23,203
CORRIDOR: LAKEWOOD-ROSEMEAD	**0.85**				**0.85**		**0.85**	**$ 26,139**	**$ 421,595**	**$ 2,204,941**
E Orange Grove Blvd To Pch										
N ROSEMEAD BLVD	0.85				0.85		0.85	$ 26,139	$ 421,595	$ 2,204,941
CORRIDOR: MAPLE-CORSON	**6.21**			**1.83**	**8.04**		**8.04**	**$ 281,438**	**$ 4,539,321**	**$ 23,740,650**
W Colorado Blvd To Eaton Wash										
CORSON ST	0.65				0.65		0.65	$ 19,955	$ 321,855	$ 1,683,304
E CORSON ST	1.14			1.67	2.81		2.81	$ 116,819	$ 1,884,180	$ 9,854,261
E FOOTHILL BLVD	0.11				0.11		0.11	$ 3,451	$ 55,656	$ 291,080
E MAPLE ST	3.22				3.22		3.22	$ 99,520	$ 1,605,164	$ 8,395,008
E SIERRA MADRE BLVD	0.00				0.00		0.00	$ 142	$ 2,291	$ 11,981
LA TIERRA ST	0.13				0.13		0.13	$ 4,090	$ 65,968	$ 345,011
MAPLE ST	0.44				0.44		0.44	$ 13,519	$ 218,051	$ 1,140,408
N PASADENA AV				0.16	0.16		0.16	$ 7,901	$ 127,442	$ 666,521
SAINT JOHN AV	0.27				0.27		0.27	$ 8,379	$ 135,145	$ 706,811
SUNNYSLOPE AVE	0.06				0.06		0.06	$ 1,906	$ 30,747	$ 160,807
TIERRA RD	0.19				0.19		0.19	$ 5,755	$ 92,822	$ 485,460
CORRIDOR: ORANGE GROVE BLVD	**5.16**				**5.16**		**5.16**	**$ 159,590**	**$ 2,574,037**	**$ 13,462,214**
W Colorado Blvd To Rosemead Blvd										
E ORANGE GROVE BLVD	4.03				4.03		4.03	$ 124,379	$ 2,006,118	$ 10,491,996
N ORANGE GROVE BLVD	1.14				1.14		1.14	$ 35,211	$ 567,919	$ 2,970,218
CORRIDOR: PASADENA-YORK	**3.45**			**2.02**	**5.47**		**5.47**	**$ 205,202**	**$ 3,309,705**	**$ 17,309,758**
Oak Grove To Eagle Rock Blvd										
ALPINE ST				0.09	0.09		0.09	$ 4,240	$ 68,380	$ 357,627
ARLINGTON DR	0.21				0.21		0.21	$ 6,426	$ 103,638	$ 542,027
E GLENARM ST	0.69				0.69		0.69	$ 21,387	$ 344,944	$ 1,804,055
MADELINE DR				0.28	0.28		0.28	$ 13,701	$ 220,985	$ 1,155,752
N EL MOLINO AV	2.30				2.30		2.30	$ 71,035	$ 1,145,718	$ 5,992,103
OAK GROVE DR				0.30	0.30		0.30	$ 14,653	$ 236,336	$ 1,236,035
S EL MOLINO AV				1.13	1.13		1.13	$ 55,350	$ 892,748	$ 4,669,071
S MADISON AV				0.13	0.13		0.13	$ 6,127	$ 98,824	$ 516,847
S ORANGE GROVE BLVD				0.09	0.09		0.09	$ 4,618	$ 74,486	$ 389,559
W GLENARM ST	0.25				0.25		0.25	$ 7,666	$ 123,648	$ 646,682
CORRIDOR: SAN GABRIEL-SIERRA MADRE	**1.76**				**1.76**		**1.76**	**$ 54,380**	**$ 877,092**	**$ 4,587,189**
Eaton Wash To Valley Blvd										
E SIERRA MADRE BLVD	0.21				0.21		0.21	$ 6,424	$ 103,610	$ 541,879
N SIERRA MADRE BLVD	1.23				1.23		1.23	$ 37,953	$ 612,153	$ 3,201,558
S SIERRA MADRE BLVD	0.32				0.32		0.32	$ 10,002	$ 161,329	$ 843,752
CORRIDOR: WASHINGTON BLVD	**4.19**				**4.19**		**4.19**	**$ 129,433**	**$ 2,087,630**	**$ 10,918,304**
Woodbury Rd To Woodlyn Rd										
E WASHINGTON BLVD	2.51				2.51		2.51	$ 77,452	$ 1,249,228	$ 6,533,462
N ARROYO BLVD	0.76				0.76		0.76	$ 23,421	$ 377,761	$ 1,975,688
W WASHINGTON BLVD	0.92				0.92		0.92	$ 28,560	$ 460,642	$ 2,409,155
Pomona	**13.13**		**9.35**	**2.64**	**25.11**		**25.11**	**$ 2,068,117**	**$ 33,216,123**	**$ 173,830,336**
CORRIDOR: ARROW-BONITA	**1.38**				**1.38**		**1.38**	**$ 42,673**	**$ 688,272**	**$ 3,599,660**
Live Oak Ave To San Antonio Wash										
E BONITA AV	0.93				0.93		0.93	$ 28,739	$ 463,527	$ 2,424,249
W BONITA AV	0.45				0.45		0.45	$ 13,934	$ 224,744	$ 1,175,411
CORRIDOR: COLORADO-FOOTHILL	**0.83**				**0.83**		**0.83**	**$ 25,700**	**$ 414,520**	**$ 2,167,938**
La River To San Antonio Wash										
E FOOTHILL BLVD	0.68				0.68		0.68	$ 21,081	$ 340,015	$ 1,778,278
W FOOTHILL BLVD	0.15				0.15		0.15	$ 4,619	$ 74,505	$ 389,661
CORRIDOR: FAIRPLEX-RIDGEWAY	**1.11**			**2.34**	**3.45**		**3.45**	**$ 148,657**	**$ 2,397,686**	**$ 12,539,897**
Bonita Ave To San Jose Wash										
FAIRPLEX DR	0.82			1.32	2.13		2.13	$ 89,439	$ 1,442,560	$ 7,544,591
MURCHISON AV				0.71	0.71		0.71	$ 34,610	$ 558,233	$ 2,919,559
RIDGEWAY ST				0.32	0.32		0.32	$ 15,531	$ 250,500	$ 1,310,114
W FAIRPLEX DR	0.29				0.29		0.29	$ 9,076	$ 146,393	$ 765,634
CORRIDOR: MISSION-SPRR-UPRR	**3.95**		**2.65**	**0.30**	**6.90**		**6.90**	**$ 571,578**	**$ 9,179,114**	**$ 48,037,979**
San Gabriel River To San Antonio Wash										
E MISSION BLVD	1.50				1.50		1.50	$ 46,467	$ 749,462	$ 3,919,687
MISSION BLVD	0.17				0.17		0.17	$ 5,122	$ 82,618	$ 432,090
Off Street			2.65		2.65		2.65	$ 435,131	$ 6,978,355	$ 36,528,009
S HUMANE WY				0.30	0.30		0.30	$ 14,404	$ 232,316	$ 1,215,013
W MISSION BLVD	2.28				2.28		2.28	$ 70,455	$ 1,136,363	$ 5,943,181
CORRIDOR: SAN JOSE-THOMPSON-LA PUENTE	**0.32**		**6.70**		**7.02**		**7.02**	**$ 1,108,570**	**$ 17,779,454**	**$ 93,065,343**
Puente Creek To San Antonio Dam										
Off Street			6.70		6.70		6.70	$ 1,098,600	$ 17,618,651	$ 92,224,346
TEMPLE AV	0.32				0.32		0.32	$ 9,970	$ 160,803	$ 840,997
CORRIDOR: TOWNE AVE	**5.53**				**5.53**		**5.53**	**$ 170,939**	**$ 2,757,078**	**$ 14,419,518**
Base Line Rd To San Bernardino County Line										

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
N TOWNE AV	2.80				2.80		2.80	$ 86,390	$ 1,393,381	$ 7,287,385
S TOWNE AV	2.74				2.74		2.74	$ 84,549	$ 1,363,697	$ 7,132,133
Rosemead	**6.42**		**2.69**	**0.41**	**9.52**	**0.45**	**9.97**	**$ 660,257**	**$ 10,608,804**	**$ 55,515,736**
CORRIDOR: ALHAMBRA WASH			**1.84**		**1.84**		**1.84**	**$ 301,785**	**$ 4,839,836**	**$ 25,333,987**
Sprr San Gabriel To Rio Hondo										
Off Street			1.84		1.84		1.84	$ 301,785	$ 4,839,836	$ 25,333,987
CORRIDOR: CHAVEZ-SUNSET-RIGGIN				**0.41**	**0.41**		**0.41**	**$ 20,164**	**$ 325,222**	**$ 1,700,910**
N Fairfax Ave To Alhambra Wash										
RUSH ST				0.41	0.41		0.41	$ 20,164	$ 325,222	$ 1,700,910
CORRIDOR: GARVEY-RAMONA	**2.27**				**2.27**		**2.27**	**$ 70,015**	**$ 1,129,275**	**$ 5,906,111**
Whittier Blvd To Sp Rr										
E GARVEY AV	0.24				0.24		0.24	$ 7,539	$ 121,604	$ 635,988
GARVEY AV	2.02				2.02		2.02	$ 62,476	$ 1,007,672	$ 5,270,123
CORRIDOR: LAKEWOOD-ROSEMEAD	**1.91**				**1.91**		**1.91**	**$ 59,016**	**$ 951,875**	**$ 4,978,307**
E Orange Grove Blvd To Pch										
ROSEMEAD BLVD	1.91				1.91		1.91	$ 59,016	$ 951,875	$ 4,978,307
CORRIDOR: LOS ANGELES-LOWER AZUSA	**0.40**				**0.40**		**0.40**	**$ 12,375**	**$ 199,596**	**$ 1,043,887**
Rosemead Blvd To Big Dalton Wash										
LOWER AZUSA RD	0.40				0.40		0.40	$ 12,375	$ 199,596	$ 1,043,887
CORRIDOR: MISSION-VALLEY	**1.84**				**1.84**		**1.84**	**$ 56,884**	**$ 917,490**	**$ 4,798,471**
E Cesar E Chavez Ave To La Puente Creek										
VALLEY BLVD	1.84				1.84		1.84	$ 56,884	$ 917,490	$ 4,798,471
CORRIDOR: RIO HONDO						**0.45**	**0.45**	**$ -**	**$ -**	**$ -**
Peck Rd To La River										
Off Street						0.45	0.45	$ -	$ -	$ -
CORRIDOR: SAN GABRIEL-SIERRA MADRE			**0.85**		**0.85**		**0.85**	**$ 140,017**	**$ 2,245,511**	**$ 11,754,065**
Eaton Wash To Valley Blvd										
Off Street			0.85		0.85		0.85	$ 140,017	$ 2,245,511	$ 11,754,065
San Dimas	**14.11**				**14.11**		**14.11**	**$ 435,950**	**$ 7,031,444**	**$ 36,774,453**
CORRIDOR: ARROW-BONITA	**2.67**				**2.67**		**2.67**	**$ 82,364**	**$ 1,328,455**	**$ 6,947,817**
Live Oak Ave To San Antonio Wash										
E BONITA AV	0.89				0.89		0.89	$ 27,558	$ 444,478	$ 2,324,618
W ARROW HWY	1.05				1.05		1.05	$ 32,423	$ 522,949	$ 2,735,024
W BONITA AV	0.72				0.72		0.72	$ 22,384	$ 361,028	$ 1,888,175
CORRIDOR: BADILLO-RAMONA	**2.43**				**2.43**		**2.43**	**$ 75,096**	**$ 1,211,233**	**$ 6,334,749**
Mission-Valley Sprr To W Bonita Ave										
E BADILLO ST	0.67				0.67		0.67	$ 20,785	$ 335,249	$ 1,753,352
S CATARACT AV	0.37				0.37		0.37	$ 11,579	$ 186,752	$ 976,711
W COVINA BLVD	1.38				1.38		1.38	$ 42,732	$ 689,233	$ 3,604,687
CORRIDOR: COLORADO-FOOTHILL	**1.10**				**1.10**		**1.10**	**$ 34,030**	**$ 548,872**	**$ 2,870,600**
La River To San Antonio Wash										
E FOOTHILL BLVD	0.83				0.83		0.83	$ 25,507	$ 411,405	$ 2,151,648
W FOOTHILL BLVD	0.28				0.28		0.28	$ 8,523	$ 137,467	$ 718,952
CORRIDOR: SAN DIMAS AVE	**3.74**				**3.74**		**3.74**	**$ 115,680**	**$ 1,865,805**	**$ 9,758,158**
E Foothill Blvd To Via Verde										
N SAN DIMAS AV	1.24				1.24		1.24	$ 38,348	$ 618,517	$ 3,234,842
S SAN DIMAS AV	2.50				2.50		2.50	$ 77,332	$ 1,247,288	$ 6,523,316
CORRIDOR: WALNUT CREEK	**4.17**				**4.17**		**4.17**	**$ 128,779**	**$ 2,077,080**	**$ 10,863,128**
San Gabriel River To Fairplex Dr										
PUENTE ST	1.00				1.00		1.00	$ 30,936	$ 498,969	$ 2,609,606
VIA VERDE	3.17				3.17		3.17	$ 97,843	$ 1,578,111	$ 8,253,522
San Gabriel	**4.13**		**2.55**	**1.09**	**7.77**		**7.77**	**$ 599,119**	**$ 9,624,846**	**$ 50,367,966**
CORRIDOR: ALHAMBRA WASH	**0.31**		**0.77**	**0.94**	**2.03**		**2.03**	**$ 181,783**	**$ 2,920,424**	**$ 15,282,859**
Sprr San Gabriel To Rio Hondo										
HOVEY AV				0.14	0.14		0.14	$ 6,884	$ 111,038	$ 580,727
Off Street			0.77		0.77		0.77	$ 126,070	$ 2,021,837	$ 10,583,252
S DEL MAR AV	0.31				0.31		0.31	$ 9,733	$ 156,979	$ 821,002
S RAMONA ST				0.80	0.80		0.80	$ 39,095	$ 630,569	$ 3,297,878
CORRIDOR: MAIN ST	**2.09**				**2.09**		**2.09**	**$ 64,461**	**$ 1,039,689**	**$ 5,437,574**
Huntington Dr N To Arrow Hwy										
E LAS TUNAS DR	1.29				1.29		1.29	$ 39,856	$ 642,833	$ 3,362,019
W LAS TUNAS DR	0.80				0.80		0.80	$ 24,605	$ 396,856	$ 2,075,556
CORRIDOR: MISSION-VALLEY	**1.17**				**1.17**		**1.17**	**$ 36,029**	**$ 581,113**	**$ 3,039,219**
E Cesar E Chavez Ave To La Puente Creek										
E VALLEY BLVD	0.66				0.66		0.66	$ 20,541	$ 331,303	$ 1,732,715
W VALLEY BLVD	0.50				0.50		0.50	$ 15,488	$ 249,810	$ 1,306,504
CORRIDOR: SAN GABRIEL-SIERRA MADRE	**0.56**		**0.56**	**0.14**	**1.27**		**1.27**	**$ 116,662**	**$ 1,873,188**	**$ 9,803,392**
Eaton Wash To Valley Blvd										
E HERMOSA DR	0.14				0.14		0.14	$ 4,322	$ 69,705	$ 364,557
E LONGDEN DR				0.13	0.13		0.13	$ 6,334	$ 102,160	$ 534,296
HERMOSA DR				0.01	0.01		0.01	$ 670	$ 10,812	$ 56,549
N SAN GABRIEL BLVD	0.20				0.20		0.20	$ 6,054	$ 97,648	$ 510,698
Off Street			0.56		0.56		0.56	$ 92,266	$ 1,479,699	$ 7,745,443
S SAN GABRIEL BLVD	0.23				0.23		0.23	$ 7,016	$ 113,164	$ 591,849
CORRIDOR: SPRR-SAN GABRIEL			**1.22**		**1.22**		**1.22**	**$ 200,185**	**$ 3,210,433**	**$ 16,804,923**
Fremont Ave To Eaton Wash										
Off Street			1.22		1.22		1.22	$ 200,185	$ 3,210,433	$ 16,804,923
San Marino	**5.08**			**1.05**	**6.13**		**6.13**	**$ 208,227**	**$ 3,358,500**	**$ 17,564,954**
CORRIDOR: ALLEN AVE	**0.27**				**0.27**		**0.27**	**$ 8,444**	**$ 136,188**	**$ 712,266**
E Altadena Dr To Orlando Rd										
S ALLEN AV	0.27				0.27		0.27	$ 8,444	$ 136,188	$ 712,266
CORRIDOR: ALTADENA-LONG BEACH				**0.90**	**0.90**		**0.90**	**$ 43,772**	**$ 705,992**	**$ 3,692,339**
Loma Alta Dr To La River										
LOS ROBLES AV				0.90	0.90		0.90	$ 43,772	$ 705,992	$ 3,692,339
CORRIDOR: HUNTINGTON-MAIN	**2.92**				**2.92**		**2.92**	**$ 90,194**	**$ 1,454,747**	**$ 7,608,328**
E Huntington Dr To E Imperial Hwy										
HUNTINGTON DR	2.92				2.92		2.92	$ 90,194	$ 1,454,747	$ 7,608,328
CORRIDOR: MISSION ST				**0.16**	**0.16**		**0.16**	**$ 7,624**	**$ 122,966**	**$ 643,110**
Arroyo Dr To Los Robles Ave										
MISSION ST				0.16	0.16		0.16	$ 7,624	$ 122,966	$ 643,110
CORRIDOR: SAN GABRIEL-SIERRA MADRE	**1.88**				**1.88**		**1.88**	**$ 58,194**	**$ 938,607**	**$ 4,908,913**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
Eaton Wash To Valley Blvd										
DEL MAR AV	0.72				0.72		0.72	$ 22,317	$ 359,951	$ 1,882,544
S SIERRA MADRE BLVD	0.06				0.06		0.06	$ 1,957	$ 31,568	$ 165,102
SAN MARINO AV	0.02				0.02		0.02	$ 533	$ 8,602	$ 44,986
SIERRA MADRE BLVD	1.08				1.08		1.08	$ 33,386	$ 538,486	$ 2,816,280
South El Monte	**2.70**				**2.70**	**0.12**	**2.83**	**$ 83,480**	**$ 1,346,456**	**$ 7,041,963**
CORRIDOR: GARVEY-RAMONA	**0.69**				**0.69**		**0.69**	**$ 21,457**	**$ 346,080**	**$ 1,809,998**
Whittier Blvd To Sp Rr										
E GARVEY AV	0.69				0.69		0.69	$ 21,457	$ 346,080	$ 1,809,998
CORRIDOR: LAKEWOOD-ROSEMEAD	**0.99**				**0.99**		**0.99**	**$ 30,536**	**$ 492,521**	**$ 2,575,886**
E Orange Grove Blvd To Pch										
N ROSEMEAD BLVD	0.84				0.84		0.84	$ 25,955	$ 418,631	$ 2,189,441
ROSEMEAD BLVD	0.15				0.15		0.15	$ 4,581	$ 73,890	$ 386,446
CORRIDOR: PECK RD	**1.02**				**1.02**		**1.02**	**$ 31,487**	**$ 507,855**	**$ 2,656,079**
Huntington Dr To Whittier Blvd										
PECK RD	0.94				0.94		0.94	$ 29,185	$ 470,721	$ 2,461,869
RUSH ST	0.07				0.07		0.07	$ 2,302	$ 37,134	$ 194,211
CORRIDOR: RIO HONDO						**0.12**	**0.12**	**$ -**	**$ -**	**$ -**
Peck Rd To La River										
Off Street						0.12	0.12	$ -	$ -	$ -
South Pasadena	**2.45**		**0.56**	**4.25**	**7.26**		**7.26**	**$ 374,623**	**$ 6,033,952**	**$ 31,564,111**
CORRIDOR: ALTADENA-LONG BEACH	**0.07**				**0.07**		**0.07**	**$ 2,032**	**$ 32,780**	**$ 171,437**
Loma Alta Dr To La River										
GARFIELD AV	0.07				0.07		0.07	$ 2,032	$ 32,780	$ 171,437
CORRIDOR: ARROYO SECO			**0.56**	**0.36**	**0.92**		**0.92**	**$ 108,986**	**$ 1,749,480**	**$ 9,156,324**
San Pascual Ave To Ave 19										
Off Street			0.56		0.56		0.56	$ 91,207	$ 1,462,726	$ 7,656,597
STONEY DR				0.36	0.36		0.36	$ 17,779	$ 286,755	$ 1,499,726
CORRIDOR: ARROYO-VERDUGO	**0.18**				**0.18**		**0.18**	**$ 5,689**	**$ 91,757**	**$ 479,889**
Van Nuys Blvd To York Blvd										
SAN PASCUAL AV	0.18				0.18		0.18	$ 5,689	$ 91,757	$ 479,889
CORRIDOR: COLLIS-HILL	**0.05**				**0.05**		**0.05**	**$ 1,477**	**$ 23,820**	**$ 124,577**
N Figueroa St To Huntington Dr S										
HILL DR	0.05				0.05		0.05	$ 1,477	$ 23,820	$ 124,577
CORRIDOR: FREMONT-PASADENA				**1.77**	**1.77**		**1.77**	**$ 86,234**	**$ 1,390,878**	**$ 7,274,294**
E Union St To Whittier Blvd										
FREMONT AV				1.77	1.77		1.77	$ 86,234	$ 1,390,878	$ 7,274,294
CORRIDOR: HUNTINGTON-MAIN	**1.48**				**1.48**		**1.48**	**$ 45,710**	**$ 737,263**	**$ 3,855,885**
E Huntington Dr To E Imperial Hwy										
HUNTINGTON DR	0.18				0.18		0.18	$ 5,581	$ 90,009	$ 470,746
HUNTINGTON DR N	1.30				1.30		1.30	$ 40,130	$ 647,254	$ 3,385,139
CORRIDOR: MISSION ST				**1.52**	**1.52**		**1.52**	**$ 74,433**	**$ 1,200,527**	**$ 6,278,755**
Arroyo Dr To Los Robles Ave										
MISSION ST				1.52	1.52		1.52	$ 74,433	$ 1,200,527	$ 6,278,755
CORRIDOR: PASADENA-YORK	**0.67**			**0.60**	**1.27**		**1.27**	**$ 50,062**	**$ 807,448**	**$ 4,222,952**
Oak Grove To Eagle Rock Blvd										
ARROYO DR				0.60	0.60		0.60	$ 29,247	$ 471,718	$ 2,467,087
PASADENA AV	0.67				0.67		0.67	$ 20,815	$ 335,729	$ 1,755,865
Temple City	**4.47**		**3.06**		**7.52**		**7.52**	**$ 639,582**	**$ 10,269,857**	**$ 53,747,328**
CORRIDOR: DUARTE-EL MONTE	**0.86**				**0.86**		**0.86**	**$ 26,505**	**$ 427,505**	**$ 2,235,851**
W Huntington Dr To Rio Hondo										
EL MONTE AV	0.86				0.86		0.86	$ 26,505	$ 427,505	$ 2,235,851
CORRIDOR: EATON WASH			**2.55**		**2.55**		**2.55**	**$ 419,082**	**$ 6,720,965**	**$ 35,180,708**
New York Dr To Rio Hondo										
Off Street			2.55		2.55		2.55	$ 419,082	$ 6,720,965	$ 35,180,708
CORRIDOR: LAKEWOOD-ROSEMEAD	**1.60**				**1.60**		**1.60**	**$ 49,391**	**$ 796,621**	**$ 4,166,329**
E Orange Grove Blvd To Pch										
ROSEMEAD BLVD	1.60				1.60		1.60	$ 49,391	$ 796,621	$ 4,166,329
CORRIDOR: LOS ANGELES-LOWER AZUSA	**0.58**				**0.58**		**0.58**	**$ 17,855**	**$ 287,980**	**$ 1,506,136**
Rosemead Blvd To Big Dalton Wash										
LOWER AZUSA RD	0.58				0.58		0.58	$ 17,855	$ 287,980	$ 1,506,136
CORRIDOR: MAIN ST	**1.43**				**1.43**		**1.43**	**$ 44,293**	**$ 714,405**	**$ 3,736,337**
Huntington Dr N To Arrow Hwy										
LAS TUNAS DR	1.43				1.43		1.43	$ 44,293	$ 714,405	$ 3,736,337
CORRIDOR: SPRR-SAN GABRIEL			**0.50**		**0.50**		**0.50**	**$ 82,456**	**$ 1,322,381**	**$ 6,921,967**
Fremont Ave To Eaton Wash										
Off Street			0.50		0.50		0.50	$ 82,456	$ 1,322,381	$ 6,921,967
Unincorporated	**32.28**		**19.58**	**3.68**	**55.54**	**9.10**	**64.64**	**$ 4,389,236**	**$ 70,499,672**	**$ 368,943,687**
CORRIDOR: ALHAMBRA WASH			**0.76**		**0.76**		**0.76**	**$ 124,901**	**$ 2,003,081**	**$ 10,485,074**
Sprr San Gabriel To Rio Hondo										
Off Street			0.76		0.76		0.76	$ 124,901	$ 2,003,081	$ 10,485,074
CORRIDOR: ALLEN AVE	**1.41**				**1.41**		**1.41**	**$ 43,706**	**$ 704,934**	**$ 3,686,803**
E Altadena Dr To Orlando Rd										
N ALLEN AV	1.41				1.41		1.41	$ 43,706	$ 704,934	$ 3,686,803
CORRIDOR: ALTADENA-LONG BEACH	**0.11**			**1.60**	**1.72**		**1.72**	**$ 81,753**	**$ 1,318,597**	**$ 6,896,260**
Loma Alta Dr To La River										
N MARENGO AV				1.60	1.60		1.60	$ 78,200	$ 1,261,289	$ 6,596,542
N RAYMOND AV	0.11				0.11		0.11	$ 3,553	$ 57,308	$ 299,718
CORRIDOR: ARROW-BONITA	**3.45**				**3.45**		**3.45**	**$ 106,470**	**$ 1,717,258**	**$ 8,981,261**
Live Oak Ave To San Antonio Wash										
E ARROW HWY	3.45				3.45		3.45	$ 106,470	$ 1,717,258	$ 8,981,261
CORRIDOR: AZUSA AVE	**0.49**				**0.49**		**0.49**	**$ 15,267**	**$ 246,240**	**$ 1,287,838**
San Gabriel River To Colima Rd										
AZUSA AV	0.49				0.49		0.49	$ 15,267	$ 246,240	$ 1,287,838
CORRIDOR: BADILLO-RAMONA	**0.92**				**0.92**		**0.92**	**$ 28,382**	**$ 457,779**	**$ 2,394,184**
Mission-Valley Sprr To W Bonita Ave										
E BADILLO ST	0.15				0.15		0.15	$ 4,485	$ 72,340	$ 378,340
W BADILLO ST	0.77				0.77		0.77	$ 23,897	$ 385,439	$ 2,015,844
CORRIDOR: BIG DALTON WASH			**1.54**		**1.54**		**1.54**	**$ 252,128**	**$ 4,043,466**	**$ 21,165,413**
Big Dalton Debris Dam To Walnut Creek										
Off Street			1.54		1.54		1.54	$ 252,128	$ 4,043,466	$ 21,165,413

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	Not Usable As Built MetroStudy Metro Regional ATN	Not Usable As Built Off-Street Metro Regional ATN	Not Usable As Built Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
CORRIDOR: CHAVEZ-SUNSET-RIGGIN	**0.81**				**0.81**		**0.81**	**$ 25,045**	**$ 403,954**	**$ 2,112,680**
N Fairfax Ave To Alhambra Wash										
POTRERO GRANDE DR	0.81				0.81		0.81	$ 25,045	$ 403,954	$ 2,112,680
CORRIDOR: COLIMA RD	**7.74**				**7.74**		**7.74**	**$ 239,238**	**$ 3,858,676**	**$ 20,180,874**
Telegraph Rd To Orange County Line										
COLIMA RD	7.74				7.74		7.74	$ 239,238	$ 3,858,676	$ 20,180,874
CORRIDOR: COLORADO-FOOTHILL	**0.84**				**0.84**		**0.84**	**$ 25,892**	**$ 417,610**	**$ 2,184,100**
La River To San Antonio Wash										
E COLORADO BLVD	0.62				0.62		0.62	$ 19,284	$ 311,031	$ 1,626,693
E FOOTHILL BLVD	0.21				0.21		0.21	$ 6,608	$ 106,579	$ 557,407
CORRIDOR: EATON WASH			**1.87**		**1.87**		**1.87**	**$ 306,968**	**$ 4,922,960**	**$ 25,769,101**
New York Dr To Rio Hondo										
Off Street			1.87		1.87		1.87	$ 306,968	$ 4,922,960	$ 25,769,101
CORRIDOR: GLENDORA-GRAND	**1.54**				**1.54**		**1.54**	**$ 47,639**	**$ 768,372**	**$ 4,018,587**
Little Dalton Wash To Sp Rr										
N GLENDORA AV	0.24				0.24		0.24	$ 7,538	$ 121,588	$ 635,904
S GRAND AV	1.30				1.30		1.30	$ 40,101	$ 646,784	$ 3,382,682
CORRIDOR: HACIENDA BLVD	**2.46**				**2.46**		**2.46**	**$ 76,144**	**$ 1,228,134**	**$ 6,423,140**
Sp Rr To Colima Rd										
S HACIENDA BLVD	2.46				2.46		2.46	$ 76,144	$ 1,228,134	$ 6,423,140
CORRIDOR: HUNTINGTON-MAIN	**1.37**				**1.37**		**1.37**	**$ 42,250**	**$ 681,459**	**$ 3,564,032**
E Huntington Dr To E Imperial Hwy										
HUNTINGTON DR	1.37				1.37		1.37	$ 42,250	$ 681,459	$ 3,564,032
CORRIDOR: LAKEWOOD-ROSEMEAD	**3.45**				**3.45**	**1.46**	**4.91**	**$ 106,597**	**$ 1,719,301**	**$ 8,991,943**
E Orange Grove Blvd To Pch										
N ROSEMEAD BLVD	1.45				1.45		1.45	$ 44,710	$ 721,126	$ 3,771,487
ROSEMEAD BLVD	1.93				1.93		1.93	$ 59,623	$ 961,654	$ 5,029,449
S ROSEMEAD BLVD	0.07				0.07	1.46	1.53	$ 2,264	$ 36,521	$ 191,006
CORRIDOR: LOS ANGELES-LOWER AZUSA	**0.01**				**0.01**		**0.01**	**$ 267**	**$ 4,310**	**$ 22,542**
Rosemead Blvd To Big Dalton Wash										
LIVE OAK AV	0.01				0.01		0.01	$ 267	$ 4,310	$ 22,542
CORRIDOR: MAIN ST	**0.70**				**0.70**		**0.70**	**$ 21,534**	**$ 347,327**	**$ 1,816,522**
Huntington Dr N To Arrow Hwy										
E LIVE OAK AV	0.70				0.70		0.70	$ 21,534	$ 347,327	$ 1,816,522
CORRIDOR: MISSION-SPRR-UPRR			**1.47**		**1.47**	**1.37**	**2.85**	**$ 241,754**	**$ 3,877,098**	**$ 20,294,563**
San Gabriel River To San Antonio Wash										
Off Street			1.47		1.47	1.37	2.85	$ 241,754	$ 3,877,098	$ 20,294,563
CORRIDOR: MISSION-VALLEY	**2.76**				**2.76**		**2.76**	**$ 85,329**	**$ 1,376,282**	**$ 7,197,955**
E Cesar E Chavez Ave To La Puente Creek										
E VALLEY BLVD	1.08				1.08		1.08	$ 33,410	$ 538,879	$ 2,818,337
VALLEY BLVD	1.68				1.68		1.68	$ 51,919	$ 837,403	$ 4,379,618
CORRIDOR: PASADENA-YORK				**2.03**	**2.03**		**2.03**	**$ 99,054**	**$ 1,597,639**	**$ 8,355,653**
Oak Grove To Eagle Rock Blvd										
E WOODBURY RD				0.87	0.87		0.87	$ 42,590	$ 686,934	$ 3,592,666
OAK GROVE DR				0.13	0.13		0.13	$ 6,477	$ 104,461	$ 546,331
W WOODBURY RD				1.02	1.02		1.02	$ 49,987	$ 806,244	$ 4,216,656
CORRIDOR: PECK RD	**1.02**				**1.02**		**1.02**	**$ 31,472**	**$ 507,609**	**$ 2,654,796**
Huntington Dr To Whittier Blvd										
PECK RD	0.54				0.54		0.54	$ 16,634	$ 268,298	$ 1,403,199
S MYRTLE AV	0.48				0.48		0.48	$ 14,837	$ 239,311	$ 1,251,598
CORRIDOR: RIO HONDO						**3.08**	**3.08**	**$ -**	**$ -**	**$ -**
Peck Rd To La River										
Off Street						3.08	3.08	$ -	$ -	$ -
CORRIDOR: SAN ANTONIO WASH			**10.01**		**10.01**		**10.01**	**$ 1,641,567**	**$ 26,326,414**	**$ 137,804,890**
San Antonio Dam To Riverside Dr										
Off Street			10.01		10.01		10.01	$ 1,641,567	$ 26,326,414	$ 137,804,890
CORRIDOR: SAN GABRIEL RIVER						**2.52**	**2.52**	**$ -**	**$ -**	**$ -**
Old San Gabriel Cyn To Coyote Creek										
Off Street						2.52	2.52	$ -	$ -	$ -
CORRIDOR: SAN GABRIEL-SIERRA MADRE	**0.31**		**0.63**		**0.95**		**0.95**	**$ 113,580**	**$ 1,822,412**	**$ 9,538,669**
Eaton Wash To Valley Blvd										
Off Street			0.63		0.63		0.63	$ 103,936	$ 1,666,866	$ 8,725,165
S SIERRA MADRE BLVD	0.31				0.31		0.31	$ 9,644	$ 155,546	$ 813,503
CORRIDOR: SAN JOSE-THOMPSON-LA PUENTE	**0.77**		**2.43**		**3.20**	**0.66**	**3.86**	**$ 422,370**	**$ 6,775,888**	**$ 35,466,477**
Puente Creek To San Antonio Dam										
Off Street			2.43		2.43	0.66	3.09	$ 398,514	$ 6,391,109	$ 33,454,087
TEMPLE AV	0.77				0.77		0.77	$ 23,856	$ 384,778	$ 2,012,390
CORRIDOR: SPRR-SAN GABRIEL			**0.87**		**0.87**		**0.87**	**$ 142,432**	**$ 2,284,237**	**$ 11,956,776**
Fremont Ave To Eaton Wash										
Off Street			0.87		0.87		0.87	$ 142,432	$ 2,284,237	$ 11,956,776
CORRIDOR: SUNSET AVE	**1.12**				**1.12**		**1.12**	**$ 34,483**	**$ 556,185**	**$ 2,908,846**
Foothill Blvd To Puente Creek										
7TH AV	0.13				0.13		0.13	$ 4,006	$ 64,614	$ 337,934
IRWINDALE AV	0.64				0.64		0.64	$ 19,642	$ 316,812	$ 1,656,926
N SUNSET AV	0.35				0.35		0.35	$ 10,835	$ 174,758	$ 913,986
CORRIDOR: WASHINGTON BLVD	**0.99**			**0.05**	**1.04**		**1.04**	**$ 33,012**	**$ 532,449**	**$ 2,784,709**
Woodbury Rd To Woodlyn Rd										
E WASHINGTON BLVD	0.91				0.91		0.91	$ 28,223	$ 455,206	$ 2,380,727
N ARROYO BLVD	0.08				0.08		0.08	$ 2,435	$ 39,282	$ 205,443
N WINDSOR AV				0.05	0.05		0.05	$ 2,354	$ 37,962	$ 198,539
Walnut	**6.46**				**6.46**		**6.46**	**$ 199,608**	**$ 3,219,482**	**$ 16,837,888**
CORRIDOR: GLENDORA-GRAND	**2.56**				**2.56**		**2.56**	**$ 79,188**	**$ 1,277,226**	**$ 6,679,893**
Little Dalton Wash To Sp Rr										
N GRAND AV	2.56				2.56		2.56	$ 79,188	$ 1,277,226	$ 6,679,893
CORRIDOR: SAN JOSE-THOMPSON-LA PUENTE	**3.90**				**3.90**		**3.90**	**$ 120,420**	**$ 1,942,255**	**$ 10,157,995**
Puente Creek To San Antonio Dam										
AMAR RD	3.04				3.04		3.04	$ 93,975	$ 1,515,726	$ 7,927,245
TEMPLE AV	0.86				0.86		0.86	$ 26,445	$ 426,530	$ 2,230,750
West Covina	**9.50**		**4.31**		**13.81**	**1.61**	**15.42**	**$ 1,001,066**	**$ 16,081,366**	**$ 84,156,292**
CORRIDOR: AZUSA AVE	**3.88**				**3.88**		**3.88**	**$ 119,789**	**$ 1,932,081**	**$ 10,104,784**
San Gabriel River To Colima Rd										

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	Not Usable As Built MetroStudy Metro Regional ATN	Not Usable As Built Off-Street Metro Regional ATN	Not Usable As Built Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
AZUSA AV	0.41				0.41		0.41	$ 12,635	$ 203,785	$ 1,065,794
N AZUSA AV	0.89				0.89		0.89	$ 27,501	$ 443,557	$ 2,319,805
S AZUSA AV	2.58				2.58		2.58	$ 79,654	$ 1,284,739	$ 6,719,185
CORRIDOR: BADILLO-RAMONA	**0.87**				**0.87**		**0.87**	**$ 26,744**	**$ 431,355**	**$ 2,255,985**
Mission-Valley Sprr To W Bonita Ave										
BADILLO ST	0.19				0.19		0.19	$ 5,846	$ 94,288	$ 493,124
E BADILLO ST	0.51				0.51		0.51	$ 15,623	$ 251,981	$ 1,317,860
W BADILLO ST	0.17				0.17		0.17	$ 5,275	$ 85,086	$ 445,001
CORRIDOR: BIG DALTON WASH			**0.28**		**0.28**		**0.28**	**$ 45,998**	**$ 737,689**	**$ 3,861,412**
Big Dalton Debris Dam To Walnut Creek										
Off Street			0.28		0.28		0.28	$ 45,998	$ 737,689	$ 3,861,412
CORRIDOR: GLENDORA-GRAND	**0.48**				**0.48**		**0.48**	**$ 14,701**	**$ 237,118**	**$ 1,240,128**
Little Dalton Wash To Sp Rr										
N GRAND AV	0.22				0.22		0.22	$ 6,827	$ 110,120	$ 575,927
S GRAND AV	0.25				0.25		0.25	$ 7,874	$ 126,998	$ 664,201
CORRIDOR: SAN JOSE-THOMPSON-LA PUENTE	**1.20**				**1.20**		**1.20**	**$ 37,006**	**$ 596,875**	**$ 3,121,658**
Puente Creek To San Antonio Dam										
E AMAR RD	1.20				1.20		1.20	$ 37,006	$ 596,875	$ 3,121,658
CORRIDOR: SUNSET AVE	**3.09**				**3.09**		**3.09**	**$ 95,327**	**$ 1,537,532**	**$ 8,041,291**
Foothill Blvd To Puente Creek										
N SUNSET AV	1.00				1.00		1.00	$ 31,038	$ 500,606	$ 2,618,168
S SUNSET AV	2.08				2.08		2.08	$ 64,289	$ 1,036,926	$ 5,423,123
CORRIDOR: WALNUT CREEK			**4.03**		**4.03**	**1.61**	**5.64**	**$ 661,500**	**$ 10,608,716**	**$ 55,531,034**
San Gabriel River To Fairplex Dr										
Off Street			4.03		4.03	1.61	5.64	$ 661,500	$ 10,608,716	$ 55,531,034
La Puente	**0.77**		**3.10**		**3.88**		**3.88**	**$ 533,165**	**$ 8,552,749**	**$ 44,767,402**
CORRIDOR: SAN JOSE-THOMPSON-LA PUENTE			**3.10**		**3.10**		**3.10**	**$ 509,235**	**$ 8,166,793**	**$ 42,748,855**
Puente Creek To San Antonio Dam										
Off Street			3.10		3.10		3.10	$ 509,235	$ 8,166,793	$ 42,748,855
CORRIDOR: SUNSET AVE	**0.77**				**0.77**		**0.77**	**$ 23,929**	**$ 385,955**	**$ 2,018,547**
Foothill Blvd To Puente Creek										
N SUNSET AV	0.77				0.77		0.77	$ 23,929	$ 385,955	$ 2,018,547
South Bay	**168.11**		**22.02**	**2.53**	**192.66**	**16.58**	**209.25**	**$ 8,931,079**	**$ 143,718,448**	**$ 751,906,645**
Carson	**22.97**		**10.09**		**33.06**	**0.61**	**33.68**	**$ 2,365,466**	**$ 38,000,913**	**$ 198,863,531**
CORRIDOR: 223RD-WARDLOW	**3.38**				**3.38**		**3.38**	**$ 104,386**	**$ 1,683,639**	**$ 8,805,431**
Vermont Ave To Long Beach Blvd										
E 223RD ST	2.74				2.74		2.74	$ 84,675	$ 1,365,727	$ 7,142,750
W 223RD ST	0.64				0.64		0.64	$ 19,711	$ 317,912	$ 1,662,681
CORRIDOR: ALAMEDA			**0.19**		**0.19**		**0.19**	**$ 30,985**	**$ 496,917**	**$ 2,601,100**
Spring St To La River										
Off Street			0.19		0.19		0.19	$ 30,985	$ 496,917	$ 2,601,100
CORRIDOR: ALAMEDA-UPRR	**3.33**				**3.33**		**3.33**	**$ 102,764**	**$ 1,657,485**	**$ 8,668,646**
La River To Harry Bridges Blvd										
S ALAMEDA ST	2.23				2.23		2.23	$ 68,861	$ 1,110,669	$ 5,808,799
UP RR	1.10				1.10		1.10	$ 33,903	$ 546,816	$ 2,859,847
CORRIDOR: ARTESIA-HERONDO	**1.97**				**1.97**		**1.97**	**$ 60,871**	**$ 981,793**	**$ 5,134,779**
Coast To Orange County Line										
VICTORIA ST	1.97				1.97		1.97	$ 60,871	$ 981,793	$ 5,134,779
CORRIDOR: AVALON BLVD	**6.04**				**6.04**		**6.04**	**$ 186,507**	**$ 3,008,183**	**$ 15,732,797**
E Imperial Hwy To Harry Bridges Blvd										
AVALON BLVD	6.04				6.04		6.04	$ 186,507	$ 3,008,183	$ 15,732,797
CORRIDOR: BNSF-CARSON			**4.22**		**4.22**		**4.22**	**$ 691,866**	**$ 11,095,702**	**$ 58,080,147**
Avalon Blvd To W Sepulveda Blvd										
Off Street			4.22		4.22		4.22	$ 691,866	$ 11,095,702	$ 58,080,147
CORRIDOR: Del Amo Blvd	**4.58**				**4.58**		**4.58**	**$ 141,470**	**$ 2,281,773**	**$ 11,933,673**
Coast To Coyote Creek										
E DEL AMO BLVD	4.31				4.31		4.31	$ 133,090	$ 2,146,615	$ 11,226,798
W DEL AMO BLVD	0.27				0.27		0.27	$ 8,380	$ 135,158	$ 706,875
CORRIDOR: DOMINGUEZ CHANNEL			**5.69**		**5.69**	**0.61**	**6.30**	**$ 932,773**	**$ 14,959,227**	**$ 78,303,662**
S Vermont Ave To Pch										
Off Street			5.69		5.69	0.61	6.30	$ 932,773	$ 14,959,227	$ 78,303,662
CORRIDOR: SEPULVEDA-WILLOW	**3.68**				**3.68**		**3.68**	**$ 113,844**	**$ 1,836,194**	**$ 9,603,295**
Torrance Blvd To Coyote Creek										
E SEPULVEDA BLVD	2.99				2.99		2.99	$ 92,498	$ 1,491,908	$ 7,802,679
W SEPULVEDA BLVD	0.69				0.69		0.69	$ 21,346	$ 344,286	$ 1,800,616
El Segundo	**4.16**		**2.90**	**0.51**	**7.56**	**0.82**	**8.38**	**$ 628,842**	**$ 10,099,011**	**$ 52,851,946**
CORRIDOR: AVIATION-BNSF-LAX			**2.33**		**2.33**		**2.33**	**$ 382,581**	**$ 6,135,583**	**$ 32,116,541**
W Manchester Ave To Manhattan Beach Blvd										
Off Street			2.33		2.33		2.33	$ 382,581	$ 6,135,583	$ 32,116,541
CORRIDOR: BNSF-SOUTH BAY			**0.57**		**0.57**		**0.57**	**$ 93,071**	**$ 1,492,606**	**$ 7,813,003**
Bnsf Rr To Crenshaw Blvd										
Off Street			0.57		0.57		0.57	$ 93,071	$ 1,492,606	$ 7,813,003
CORRIDOR: EL SEGUNDO BLVD	**2.15**			**0.51**	**2.66**		**2.66**	**$ 91,342**	**$ 1,473,262**	**$ 7,705,161**
Coast To Alameda St										
BINDER PL				0.06	0.06		0.06	$ 3,161	$ 50,989	$ 266,673
E EL SEGUNDO BLVD	2.15				2.15		2.15	$ 66,551	$ 1,073,400	$ 5,613,884
LOMA VISTA ST				0.14	0.14		0.14	$ 6,967	$ 112,375	$ 587,724
W EL SEGUNDO BLVD				0.27	0.27		0.27	$ 13,156	$ 212,189	$ 1,109,748
WHITTING ST				0.03	0.03		0.03	$ 1,507	$ 24,308	$ 127,132
CORRIDOR: SEPULVEDA-PCH	**2.00**				**2.00**		**2.00**	**$ 61,849**	**$ 997,560**	**$ 5,217,240**
Santa Monica Blvd To Palos Verdes Blvd										
N SEPULVEDA BLVD	1.00				1.00		1.00	$ 30,973	$ 499,563	$ 2,612,713
S SEPULVEDA BLVD	1.00				1.00		1.00	$ 30,876	$ 497,998	$ 2,604,527
CORRIDOR: COASTAL ROUTE-BEACH PATH						**0.82**	**0.82**	**$ -**	**$ -**	**$ -**
Ventura County Line To La River										
Off Street						0.82	0.82	$ -	$ -	$ -
Gardena	**6.67**				**6.67**	**1.04**	**7.71**	**$ 206,060**	**$ 3,323,548**	**$ 17,382,154**
CORRIDOR: CRENSHAW-ARDEN						**1.04**	**1.04**	**$ -**	**$ -**	**$ -**
Highland Ave To Pch										
Off Street						1.04	1.04	$ -	$ -	$ -
CORRIDOR: REDONDO BEACH BLVD	**2.12**				**2.12**		**2.12**	**$ 65,546**	**$ 1,057,194**	**$ 5,529,124**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
Flagler Ln To Salt Lake- Up-Pe Rr Row										
W REDONDO BEACH BLVD	2.12				2.12		2.12	$ 65,546	$ 1,057,194	$ 5,529,124
CORRIDOR: WESTERN AVE	**3.50**				**3.50**		**3.50**	**$ 108,097**	**$ 1,743,504**	**$ 9,118,528**
Imperial Hwy To W Anaheim St										
WESTERN AV	3.50				3.50		3.50	$ 108,097	$ 1,743,504	$ 9,118,528
CORRIDOR: ARTESIA-VERMONT	**1.05**				**1.05**		**1.05**	**$ 32,417**	**$ 522,849**	**$ 2,734,502**
Coast To S Vermont Ave										
W ARTESIA BLVD	1.05				1.05		1.05	$ 32,417	$ 522,849	$ 2,734,502
Hawthorne	**6.96**		**0.73**		**7.69**	**0.50**	**8.19**	**$ 334,928**	**$ 5,391,070**	**$ 28,203,896**
CORRIDOR: BNSF-SOUTH BAY			**0.73**		**0.73**		**0.73**	**$ 119,927**	**$ 1,923,305**	**$ 10,067,489**
Bnsf Rr To Crenshaw Blvd										
Off Street			0.73		0.73		0.73	$ 119,927	$ 1,923,305	$ 10,067,489
CORRIDOR: CRENSHAW-ARDEN	**0.21**				**0.21**	**0.50**	**0.71**	**$ 6,419**	**$ 103,528**	**$ 541,453**
Highland Ave To Pch										
120TH ST	0.02				0.02		0.02	$ 568	$ 9,161	$ 47,914
CRENSHAW BLVD	0.16				0.16		0.16	$ 5,011	$ 80,822	$ 422,698
Off Street						0.50	0.50	$ -	$ -	$ -
W 120TH ST	0.03				0.03		0.03	$ 840	$ 13,545	$ 70,841
CORRIDOR: EL SEGUNDO BLVD	**2.70**				**2.70**		**2.70**	**$ 83,295**	**$ 1,343,460**	**$ 7,026,298**
Coast To Alameda St										
W EL SEGUNDO BLVD	2.70				2.70		2.70	$ 83,295	$ 1,343,460	$ 7,026,298
CORRIDOR: HILLCREST-HAWTHORNE	**2.21**				**2.21**		**2.21**	**$ 68,265**	**$ 1,101,048**	**$ 5,758,481**
Slauson Blvd To Palos Verdes Dr										
HAWTHORNE BLVD	1.66				1.66		1.66	$ 51,165	$ 825,242	$ 4,316,017
S HAWTHORNE BLVD	0.55				0.55		0.55	$ 17,100	$ 275,806	$ 1,442,464
CORRIDOR: IMPERIAL HWY	**1.85**				**1.85**		**1.85**	**$ 57,023**	**$ 919,728**	**$ 4,810,175**
Coast To Orange County Line										
W IMPERIAL HWY	1.85				1.85		1.85	$ 57,023	$ 919,728	$ 4,810,175
Hermosa Beach	**1.89**				**1.89**	**1.81**	**3.71**	**$ 58,455**	**$ 942,819**	**$ 4,930,945**
CORRIDOR: SEPULVEDA-PCH	**1.26**				**1.26**		**1.26**	**$ 38,878**	**$ 627,058**	**$ 3,279,512**
Santa Monica Blvd To Palos Verdes Blvd										
PACIFIC COAST HWY	1.26				1.26		1.26	$ 38,878	$ 627,058	$ 3,279,512
CORRIDOR: ARTESIA-VERMONT	**0.63**				**0.63**		**0.63**	**$ 19,577**	**$ 315,762**	**$ 1,651,433**
Coast To S Vermont Ave										
27TH ST	0.18				0.18		0.18	$ 5,593	$ 90,214	$ 471,822
GOULD AV	0.45				0.45		0.45	$ 13,984	$ 225,547	$ 1,179,611
CORRIDOR: COASTAL ROUTE-BEACH PATH						**1.81**	**1.81**	**$ -**	**$ -**	**$ -**
Ventura County Line To La River										
Off Street						1.81	1.81	$ -	$ -	$ -
Inglewood	**9.56**		**0.25**	**1.19**	**11.00**		**11.00**	**$ 393,905**	**$ 6,349,610**	**$ 33,211,359**
CORRIDOR: AVIATION-BNSF-LAX	**0.51**				**0.51**		**0.51**	**$ 15,660**	**$ 252,579**	**$ 1,320,990**
W Manchester Ave To Manhattan Beach Blvd										
AVIATION BLVD	0.51				0.51		0.51	$ 15,660	$ 252,579	$ 1,320,990
CORRIDOR: CRENSHAW-ARDEN	**2.81**				**2.81**		**2.81**	**$ 86,945**	**$ 1,402,335**	**$ 7,334,214**
Highland Ave To Pch										
CRENSHAW BLVD	2.76				2.76		2.76	$ 85,372	$ 1,376,967	$ 7,201,540
CRENSHAW DR	0.05				0.05		0.05	$ 1,573	$ 25,368	$ 132,674
CORRIDOR: FIRESTONE-MANCHESTER	**2.85**			**0.69**	**3.54**		**3.54**	**$ 121,679**	**$ 1,962,559**	**$ 10,264,183**
Culver Blvd To La River										
E MANCHESTER BLVD				0.69	0.69		0.69	$ 33,626	$ 542,352	$ 2,836,501
W MANCHESTER BLVD	2.85				2.85		2.85	$ 88,053	$ 1,420,207	$ 7,427,682
CORRIDOR: FLORENCE AVE	**0.12**				**0.12**		**0.12**	**$ 3,661**	**$ 59,053**	**$ 308,847**
Bnsf Railroad To Alameda St										
E FLORENCE AV	0.12				0.12		0.12	$ 3,661	$ 59,053	$ 308,847
CORRIDOR: HILLCREST-HAWTHORNE	**2.21**		**0.25**	**0.50**	**2.96**		**2.96**	**$ 133,122**	**$ 2,143,422**	**$ 11,212,996**
Slauson Blvd To Palos Verdes Dr										
E FLORENCE AV	0.76				0.76		0.76	$ 23,549	$ 379,824	$ 1,986,481
E HILLCREST BLVD	0.26				0.26		0.26	$ 8,057	$ 129,950	$ 679,641
N HILLCREST BLVD				0.44	0.44		0.44	$ 21,387	$ 344,954	$ 1,804,108
Off Street			0.25		0.25		0.25	$ 40,392	$ 647,773	$ 3,390,752
S HAWTHORNE BLVD	0.25				0.25		0.25	$ 7,681	$ 123,889	$ 647,939
S HILLCREST BLVD				0.06	0.06		0.06	$ 3,112	$ 50,189	$ 262,488
S LA BREA AV	0.79				0.79		0.79	$ 24,547	$ 395,917	$ 2,070,648
S MARKET ST	0.14				0.14		0.14	$ 4,397	$ 70,925	$ 370,939
CORRIDOR: IMPERIAL HWY	**1.06**				**1.06**		**1.06**	**$ 32,839**	**$ 529,661**	**$ 2,770,129**
Coast To Orange County Line										
W IMPERIAL HWY	1.06				1.06		1.06	$ 32,839	$ 529,661	$ 2,770,129
Lawndale	**3.57**		**1.15**		**4.72**		**4.72**	**$ 298,970**	**$ 4,804,796**	**$ 25,142,623**
CORRIDOR: BNSF-SOUTH BAY			**1.15**		**1.15**		**1.15**	**$ 188,799**	**$ 3,027,833**	**$ 15,849,107**
Bnsf Rr To Crenshaw Blvd										
Off Street			1.15		1.15		1.15	$ 188,799	$ 3,027,833	$ 15,849,107
CORRIDOR: HILLCREST-HAWTHORNE	**1.87**				**1.87**		**1.87**	**$ 57,654**	**$ 929,899**	**$ 4,863,373**
Slauson Blvd To Palos Verdes Dr										
HAWTHORNE BLVD	1.87				1.87		1.87	$ 57,654	$ 929,899	$ 4,863,373
CORRIDOR: MANHATTAN BEACH BLVD	**0.99**				**0.99**		**0.99**	**$ 30,636**	**$ 494,121**	**$ 2,584,255**
Coast To Crenshaw Blvd										
MANHATTAN BEACH BLVD	0.99				0.99		0.99	$ 30,636	$ 494,121	$ 2,584,255
CORRIDOR: REDONDO BEACH BLVD	**0.71**				**0.71**		**0.71**	**$ 21,882**	**$ 352,942**	**$ 1,845,889**
Flagler Ln To Salt Lake- Up-Pe Rr Row										
REDONDO BEACH BLVD	0.71				0.71		0.71	$ 21,882	$ 352,942	$ 1,845,889
Los Angeles	**36.31**		**3.04**	**0.06**	**39.42**	**1.97**	**41.39**	**$ 1,624,287**	**$ 26,152,390**	**$ 136,812,824**
CORRIDOR: 223RD-WARDLOW	**0.22**				**0.22**		**0.22**	**$ 6,851**	**$ 110,507**	**$ 577,951**
Vermont Ave To Long Beach Blvd										
E 223RD ST	0.22				0.22		0.22	$ 6,851	$ 110,507	$ 577,951
CORRIDOR: ALAMEDA-COAST	**0.84**		**1.40**		**2.25**		**2.25**	**$ 256,281**	**$ 4,112,458**	**$ 21,524,671**
Harry Bridges Blvd To N Harbor Blvd										
CHANNEL ST	0.10				0.10		0.10	$ 3,207	$ 51,726	$ 270,529
N FRONT ST	0.46				0.46		0.46	$ 14,243	$ 229,733	$ 1,201,502
N PACIFIC AV	0.28				0.28		0.28	$ 8,550	$ 137,895	$ 721,193
Off Street			1.40		1.40		1.40	$ 230,281	$ 3,693,103	$ 19,331,448
CORRIDOR: ALAMEDA-UPRR	**4.01**				**4.01**		**4.01**	**$ 123,910**	**$ 1,998,541**	**$ 10,452,371**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
La River To Harry Bridges Blvd										
ALAMEDA ST	2.30				2.30		2.30	$ 71,183	$ 1,148,108	$ 6,004,603
HARRY BRIDGES BLVD	1.33				1.33		1.33	$ 40,984	$ 661,040	$ 3,457,240
UP RR	0.38				0.38		0.38	$ 11,742	$ 189,394	$ 990,529
CORRIDOR: ANAHEIM ST	**5.23**				**5.23**		**5.23**	**$ 161,472**	**$ 2,604,390**	**$ 13,620,957**
S Western Ave To Pch										
E ANAHEIM ST	2.45				2.45		2.45	$ 75,699	$ 1,220,953	$ 6,385,582
W ANAHEIM ST	2.78				2.78		2.78	$ 85,773	$ 1,383,437	$ 7,235,375
CORRIDOR: ARTESIA-HERONDO	**1.67**				**1.67**		**1.67**	**$ 51,688**	**$ 833,684**	**$ 4,360,169**
Coast To Orange County Line										
VICTORIA ST	0.59				0.59		0.59	$ 18,094	$ 291,838	$ 1,526,314
W 190TH ST	1.09				1.09		1.09	$ 33,594	$ 541,846	$ 2,833,855
CORRIDOR: AVALON BLVD	**1.93**				**1.93**		**1.93**	**$ 59,513**	**$ 959,889**	**$ 5,020,220**
E Imperial Hwy To Harry Bridges Blvd										
AVALON BLVD	0.07				0.07		0.07	$ 2,237	$ 36,080	$ 188,696
N AVALON BLVD	1.85				1.85		1.85	$ 57,276	$ 923,810	$ 4,831,524
CORRIDOR: BNSF-CARSON			**0.52**		**0.52**		**0.52**	**$ 84,536**	**$ 1,355,727**	**$ 7,096,513**
Avalon Blvd To W Sepulveda Blvd										
Off Street			0.52		0.52		0.52	$ 84,536	$ 1,355,727	$ 7,096,513
CORRIDOR: Del Amo Blvd	**0.39**		**0.39**	**0.06**	**0.83**		**0.83**	**$ 78,086**	**$ 1,253,649**	**$ 6,561,121**
Coast To Coyote Creek										
DENKER AV				0.01	0.01		0.01	$ 361	$ 5,817	$ 30,422
S NORMANDIE AV				0.05	0.05		0.05	$ 2,457	$ 39,626	$ 207,244
TORRANCE BLVD	0.39				0.39		0.39	$ 11,993	$ 193,439	$ 1,011,688
UP RR			0.39		0.39		0.39	$ 63,275	$ 1,014,767	$ 5,311,768
CORRIDOR: DOMINGUEZ CHANNEL						**0.84**	**0.84**	**$ -**	**$ -**	**$ -**
S Vermont Ave To Pch										
Off Street						0.84	0.84	$ -	$ -	$ -
CORRIDOR: EL SEGUNDO BLVD	**0.54**				**0.54**		**0.54**	**$ 16,605**	**$ 267,829**	**$ 1,400,743**
Coast To Alameda St										
W EL SEGUNDO BLVD	0.54				0.54		0.54	$ 16,605	$ 267,829	$ 1,400,743
CORRIDOR: FIGUEROA ST	**1.41**				**1.41**		**1.41**	**$ 43,474**	**$ 701,197**	**$ 3,667,259**
W Pch To Harry Bridges Blvd										
FIGUEROA ST	1.41				1.41		1.41	$ 43,474	$ 701,197	$ 3,667,259
CORRIDOR: GAFFEY-FRONT	**4.34**				**4.34**		**4.34**	**$ 134,011**	**$ 2,161,462**	**$ 11,304,448**
W Anaheim St To W 26Th St										
N GAFFEY ST	2.79				2.79		2.79	$ 86,351	$ 1,392,751	$ 7,284,090
S GAFFEY ST	1.54				1.54		1.54	$ 47,660	$ 768,711	$ 4,020,358
CORRIDOR: IMPERIAL HWY	**0.52**				**0.52**		**0.52**	**$ 16,137**	**$ 260,276**	**$ 1,361,246**
Coast To Orange County Line										
W IMPERIAL HWY	0.52				0.52		0.52	$ 16,137	$ 260,276	$ 1,361,246
CORRIDOR: PALOS VERDES DRIVE	**0.50**		**0.74**		**1.24**	**0.66**	**1.90**	**$ 136,825**	**$ 2,195,733**	**$ 11,492,387**
Palos Verdes Blvd To S Figueroa St										
L ST	0.38				0.38		0.38	$ 11,603	$ 187,152	$ 978,807
Off Street			0.74		0.74	0.66	1.40	$ 121,338	$ 1,945,948	$ 10,186,011
W L ST	0.13				0.13		0.13	$ 3,883	$ 62,633	$ 327,570
CORRIDOR: PCH	**4.66**				**4.66**		**4.66**	**$ 143,853**	**$ 2,320,211**	**$ 12,134,704**
Esplanade To San Gabriel River										
E PACIFIC COAST HWY	2.08				2.08		2.08	$ 64,386	$ 1,038,485	$ 5,431,275
W PACIFIC COAST HWY	2.57				2.57		2.57	$ 79,467	$ 1,281,726	$ 6,703,428
CORRIDOR: REDONDO BEACH BLVD	**0.51**				**0.51**		**0.51**	**$ 15,633**	**$ 252,153**	**$ 1,318,759**
Flagler Ln To Salt Lake- Up-Pe Rr Row										
W REDONDO BEACH BLVD	0.51				0.51		0.51	$ 15,633	$ 252,153	$ 1,318,759
CORRIDOR: SEPULVEDA-WILLOW	**0.76**				**0.76**		**0.76**	**$ 23,543**	**$ 379,721**	**$ 1,985,940**
Torrance Blvd To Coyote Creek										
E SEPULVEDA BLVD	0.11				0.11		0.11	$ 3,386	$ 54,613	$ 285,626
W SEPULVEDA BLVD	0.65				0.65		0.65	$ 20,157	$ 325,108	$ 1,700,314
CORRIDOR: VERMONT	**1.21**				**1.21**		**1.21**	**$ 37,481**	**$ 604,527**	**$ 3,161,676**
Los Feliz Blvd To W Anaheim St										
S NORMANDIE AV	0.21				0.21		0.21	$ 6,434	$ 103,767	$ 542,699
S VERMONT AV	1.00				1.00		1.00	$ 31,047	$ 500,760	$ 2,618,977
CORRIDOR: WESTERN AVE	**3.35**				**3.35**		**3.35**	**$ 103,438**	**$ 1,668,351**	**$ 8,725,476**
Imperial Hwy To W Anaheim St										
S WESTERN AV	3.35				3.35		3.35	$ 103,438	$ 1,668,351	$ 8,725,476
CORRIDOR: COASTAL ROUTE-BEACH PATH	**4.24**				**4.24**	**0.47**	**4.70**	**$ 130,949**	**$ 2,112,086**	**$ 11,046,212**
Ventura County Line To La River										
N HARBOR BLVD	0.45				0.45		0.45	$ 13,904	$ 224,255	$ 1,172,856
Off Street						0.47	0.47	$ -	$ -	$ -
S HARBOR BLVD	0.96				0.96		0.96	$ 29,741	$ 479,699	$ 2,508,827
S PACIFIC AV	0.25				0.25		0.25	$ 7,753	$ 125,041	$ 653,964
W 22ND ST	0.20				0.20		0.20	$ 6,162	$ 99,388	$ 519,799
W 25TH ST	2.09				2.09		2.09	$ 64,679	$ 1,043,206	$ 5,455,966
W 26TH ST	0.28				0.28		0.28	$ 8,711	$ 140,497	$ 734,801
Manhattan Beach	**6.45**				**6.45**	**2.11**	**8.57**	**$ 199,372**	**$ 3,215,671**	**$ 16,817,958**
CORRIDOR: AVIATION-BNSF-LAX	**1.59**				**1.59**		**1.59**	**$ 49,194**	**$ 793,457**	**$ 4,149,781**
W Manchester Ave To Manhattan Beach Blvd										
N ARDMORE AV	1.59				1.59		1.59	$ 49,194	$ 793,457	$ 4,149,781
CORRIDOR: MANHATTAN BEACH BLVD	**1.96**				**1.96**		**1.96**	**$ 60,592**	**$ 977,289**	**$ 5,111,220**
Coast To Crenshaw Blvd										
MANHATTAN BEACH BLVD	1.96				1.96		1.96	$ 60,592	$ 977,289	$ 5,111,220
CORRIDOR: SEPULVEDA-PCH	**2.01**				**2.01**		**2.01**	**$ 62,162**	**$ 1,002,618**	**$ 5,243,694**
Santa Monica Blvd To Palos Verdes Blvd										
N SEPULVEDA BLVD	1.55				1.55		1.55	$ 47,949	$ 773,368	$ 4,044,715
PACIFIC COAST HWY	0.31				0.31		0.31	$ 9,470	$ 152,746	$ 798,862
S SEPULVEDA BLVD	0.15				0.15		0.15	$ 4,743	$ 76,504	$ 400,117
CORRIDOR: ARTESIA-VERMONT	**0.89**				**0.89**		**0.89**	**$ 27,423**	**$ 442,307**	**$ 2,313,263**
Coast To S Vermont Ave										
ARTESIA BLVD	0.89				0.89		0.89	$ 27,423	$ 442,307	$ 2,313,263
CORRIDOR: COASTAL ROUTE-BEACH PATH						**2.11**	**2.11**	**$ -**	**$ -**	**$ -**
Ventura County Line To La River										
Off Street						2.11	2.11	$ -	$ -	$ -

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
Palos Verdes Estates	**5.82**				**5.82**		**5.82**	**$ 179,956**	**$ 2,902,520**	**$ 15,180,180**
CORRIDOR: PALOS VERDES DRIVE	**1.71**				**1.71**		**1.71**	**$ 52,786**	**$ 851,390**	**$ 4,452,772**
Palos Verdes Blvd To S Figueroa St										
PALOS VERDES DR N	1.71				1.71		1.71	$ 52,786	$ 851,390	$ 4,452,772
CORRIDOR: COASTAL ROUTE-BEACH PATH	**4.12**				**4.12**		**4.12**	**$ 127,170**	**$ 2,051,130**	**$ 10,727,408**
Ventura County Line To La River										
PALOS VERDES DR W	4.09				4.09		4.09	$ 126,527	$ 2,040,755	$ 10,673,148
VIA CORONEL	0.02				0.02		0.02	$ 643	$ 10,375	$ 54,259
Rancho Palos Verdes	**6.81**				**6.81**		**6.81**	**$ 210,351**	**$ 3,392,753**	**$ 17,744,096**
CORRIDOR: COASTAL ROUTE-BEACH PATH	**6.81**				**6.81**		**6.81**	**$ 210,351**	**$ 3,392,753**	**$ 17,744,096**
Ventura County Line To La River										
PALOS VERDES DR S	5.22				5.22		5.22	$ 161,295	$ 2,601,526	$ 13,605,978
PALOS VERDES DR W	1.59				1.59		1.59	$ 49,056	$ 791,227	$ 4,138,117
Redondo Beach	**10.81**		**1.15**	**0.54**	**12.50**	**2.76**	**15.26**	**$ 549,202**	**$ 8,840,776**	**$ 46,250,814**
CORRIDOR: ARTESIA-HERONDO	**2.62**		**0.04**		**2.66**		**2.66**	**$ 87,876**	**$ 1,416,730**	**$ 7,409,986**
Coast To Orange County Line										
190TH ST	1.40				1.40		1.40	$ 43,131	$ 695,658	$ 3,638,290
ANITA ST	0.75				0.75		0.75	$ 23,158	$ 373,516	$ 1,953,491
FLAGLER LN	0.04				0.04		0.04	$ 1,311	$ 21,141	$ 110,565
HERONDO ST	0.43				0.43		0.43	$ 13,437	$ 216,729	$ 1,133,495
Off Street			0.04		0.04		0.04	$ 6,839	$ 109,685	$ 574,145
CORRIDOR: BNSF-SOUTH BAY			**1.11**		**1.11**		**1.11**	**$ 182,181**	**$ 2,921,698**	**$ 15,293,550**
Bnsf Rr To Crenshaw Blvd										
Off Street			1.11		1.11		1.11	$ 182,181	$ 2,921,698	$ 15,293,550
CORRIDOR: Del Amo Blvd	**0.87**				**0.87**		**0.87**	**$ 27,024**	**$ 435,864**	**$ 2,279,570**
Coast To Coyote Creek										
TORRANCE BLVD	0.87				0.87		0.87	$ 27,024	$ 435,864	$ 2,279,570
CORRIDOR: MANHATTAN BEACH BLVD	**1.00**				**1.00**		**1.00**	**$ 30,886**	**$ 498,155**	**$ 2,605,351**
Coast To Crenshaw Blvd										
MANHATTAN BEACH BLVD	1.00				1.00		1.00	$ 30,886	$ 498,155	$ 2,605,351
CORRIDOR: PCH				**0.33**	**0.33**		**0.33**	**$ 16,145**	**$ 260,408**	**$ 1,361,936**
Esplanade To San Gabriel River										
AVE I				0.33	0.33		0.33	$ 16,145	$ 260,408	$ 1,361,936
CORRIDOR: REDONDO BEACH BLVD	**1.23**			**0.21**	**1.43**		**1.43**	**$ 47,954**	**$ 773,455**	**$ 4,045,170**
Flagler Ln To Salt Lake- Up-Pe Rr Row										
GRANT AVE				0.21	0.21		0.21	$ 10,031	$ 161,792	$ 846,173
RIPLEY AV	1.23				1.23		1.23	$ 37,923	$ 611,663	$ 3,198,997
CORRIDOR: SEPULVEDA-PCH	**2.57**				**2.57**		**2.57**	**$ 79,470**	**$ 1,281,772**	**$ 6,703,668**
Santa Monica Blvd To Palos Verdes Blvd										
N PACIFIC COAST HWY	0.94				0.94		0.94	$ 28,902	$ 466,165	$ 2,438,042
S PACIFIC COAST HWY	1.64				1.64		1.64	$ 50,568	$ 815,607	$ 4,265,626
CORRIDOR: SEPULVEDA-WILLOW	**0.93**				**0.93**		**0.93**	**$ 28,660**	**$ 462,255**	**$ 2,417,596**
Torrance Blvd To Coyote Creek										
CM REAL	0.93				0.93		0.93	$ 28,660	$ 462,255	$ 2,417,596
CORRIDOR: ARTESIA-VERMONT	**1.59**				**1.59**		**1.59**	**$ 49,007**	**$ 790,437**	**$ 4,133,988**
Coast To S Vermont Ave										
ARTESIA BLVD	1.59				1.59		1.59	$ 49,007	$ 790,437	$ 4,133,988
CORRIDOR: COASTAL ROUTE-BEACH PATH						**2.76**	**2.76**	**$ -**	**$ -**	**$ -**
Ventura County Line To La River										
Off Street						2.76	2.76	$ -	$ -	$ -
Rolling Hills Estates	**0.36**				**0.36**	**3.96**	**4.32**	**$ 11,116**	**$ 179,286**	**$ 937,666**
CORRIDOR: HILLCREST-HAWTHORNE	**0.36**				**0.36**	**0.45**	**0.81**	**$ 11,116**	**$ 179,286**	**$ 937,666**
Slauson Blvd To Palos Verdes Dr										
HAWTHORNE BLVD	0.36				0.36		0.36	$ 11,116	$ 179,286	$ 937,666
Off Street						0.45	0.45	$ -	$ -	$ -
CORRIDOR: PALOS VERDES DRIVE						**3.51**	**3.51**	**$ -**	**$ -**	**$ -**
Palos Verdes Blvd To S Figueroa St										
Off Street						3.51	3.51	$ -	$ -	$ -
Torrance	**31.31**		**2.48**		**33.79**	**0.31**	**34.10**	**$ 1,374,894**	**$ 22,138,342**	**$ 115,812,765**
CORRIDOR: ARTESIA-HERONDO	**2.56**				**2.56**		**2.56**	**$ 79,016**	**$ 1,274,448**	**$ 6,665,365**
Coast To Orange County Line										
190TH ST	2.56				2.56		2.56	$ 79,016	$ 1,274,448	$ 6,665,365
CORRIDOR: BNSF-SOUTH BAY			**2.48**		**2.48**		**2.48**	**$ 407,602**	**$ 6,536,858**	**$ 34,217,006**
Bnsf Rr To Crenshaw Blvd										
Off Street			2.48		2.48		2.48	$ 407,602	$ 6,536,858	$ 34,217,006
CORRIDOR: CRENSHAW-ARDEN	**6.42**				**6.42**		**6.42**	**$ 198,242**	**$ 3,197,453**	**$ 16,722,679**
Highland Ave To Pch										
CRENSHAW BLVD	6.42				6.42		6.42	$ 198,242	$ 3,197,453	$ 16,722,679
CORRIDOR: Del Amo Blvd	**3.85**				**3.85**		**3.85**	**$ 119,104**	**$ 1,921,028**	**$ 10,046,975**
Coast To Coyote Creek										
TORRANCE BLVD	3.85				3.85		3.85	$ 119,104	$ 1,921,028	$ 10,046,975
CORRIDOR: HILLCREST-HAWTHORNE	**5.64**				**5.64**		**5.64**	**$ 174,349**	**$ 2,812,080**	**$ 14,707,177**
Slauson Blvd To Palos Verdes Dr										
HAWTHORNE BLVD	5.64				5.64		5.64	$ 174,349	$ 2,812,080	$ 14,707,177
CORRIDOR: PCH	**3.97**				**3.97**		**3.97**	**$ 122,549**	**$ 1,976,592**	**$ 10,337,576**
Esplanade To San Gabriel River										
PACIFIC COAST HWY	3.37				3.37		3.37	$ 104,200	$ 1,680,652	$ 8,789,810
S PACIFIC COAST HWY	0.59				0.59		0.59	$ 18,348	$ 295,940	$ 1,547,765
CORRIDOR: SEPULVEDA-WILLOW	**3.75**				**3.75**		**3.75**	**$ 115,992**	**$ 1,870,840**	**$ 9,784,493**
Torrance Blvd To Coyote Creek										
SEPULVEDA BLVD	3.75				3.75		3.75	$ 115,992	$ 1,870,840	$ 9,784,493
CORRIDOR: WESTERN AVE	**2.08**				**2.08**		**2.08**	**$ 64,423**	**$ 1,039,088**	**$ 5,434,428**
Imperial Hwy To W Anaheim St										
WESTERN AV	2.08				2.08		2.08	$ 64,423	$ 1,039,088	$ 5,434,428
CORRIDOR: ARTESIA-VERMONT	**2.49**				**2.49**		**2.49**	**$ 76,989**	**$ 1,241,765**	**$ 6,494,431**
Coast To S Vermont Ave										
ARTESIA BLVD	1.74				1.74		1.74	$ 53,859	$ 868,686	$ 4,543,228
W ARTESIA BLVD	0.75				0.75		0.75	$ 23,131	$ 373,079	$ 1,951,202
CORRIDOR: COASTAL ROUTE-BEACH PATH	**0.54**				**0.54**	**0.31**	**0.85**	**$ 16,628**	**$ 268,190**	**$ 1,402,635**
Ventura County Line To La River										
	0.17				0.17		0.17	$ 5,384	$ 86,846	$ 454,207

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
CL DE SIRENAS	0.10				0.10		0.10	$ 3,165	$ 51,050	$ 266,990
CM D ENCANTO	0.23				0.23		0.23	$ 6,999	$ 112,892	$ 590,425
Off Street						0.31	0.31	$ -	$ -	$ -
PAS PLAYA	0.03				0.03		0.03	$ 1,079	$ 17,402	$ 91,013
Unincorporated	**13.39**		**0.22**	**0.24**	**13.85**		**13.85**	**$ 461,866**	**$ 7,446,092**	**$ 38,945,697**
CORRIDOR: 223RD-WARDLOW	**0.18**				**0.18**		**0.18**	**$ 5,591**	**$ 90,174**	**$ 471,611**
Vermont Ave To Long Beach Blvd										
W 223RD ST	0.18				0.18		0.18	$ 5,591	$ 90,174	$ 471,611
CORRIDOR: ALAMEDA			**0.02**		**0.02**		**0.02**	**$ 3,260**	**$ 52,278**	**$ 273,648**
Spring St To La River										
Off Street			0.02		0.02		0.02	$ 3,260	$ 52,278	$ 273,648
CORRIDOR: CRENSHAW-ARDEN	**1.32**				**1.32**		**1.32**	**$ 40,716**	**$ 656,705**	**$ 3,434,566**
Highland Ave To Pch										
CRENSHAW BLVD	1.32				1.32		1.32	$ 40,716	$ 656,705	$ 3,434,566
CORRIDOR: Del Amo Blvd	**0.38**		**0.20**	**0.24**	**0.82**		**0.82**	**$ 56,878**	**$ 914,312**	**$ 4,784,253**
Coast To Coyote Creek										
			0.20		0.20		0.20	$ 33,471	$ 536,780	$ 2,809,758
W DEL AMO BLVD	0.38			0.24	0.62		0.62	$ 23,407	$ 377,533	$ 1,974,495
CORRIDOR: EL SEGUNDO BLVD	**2.30**				**2.30**		**2.30**	**$ 70,957**	**$ 1,144,466**	**$ 5,985,555**
Coast To Alameda St										
W EL SEGUNDO BLVD	2.30				2.30		2.30	$ 70,957	$ 1,144,466	$ 5,985,555
CORRIDOR: HILLCREST-HAWTHORNE	**0.57**				**0.57**		**0.57**	**$ 17,729**	**$ 285,959**	**$ 1,495,567**
Slauson Blvd To Palos Verdes Dr										
S HAWTHORNE BLVD	0.57				0.57		0.57	$ 17,729	$ 285,959	$ 1,495,567
CORRIDOR: IMPERIAL HWY	**1.50**				**1.50**		**1.50**	**$ 46,320**	**$ 747,104**	**$ 3,907,355**
Coast To Orange County Line										
W IMPERIAL HWY	1.50				1.50		1.50	$ 46,320	$ 747,104	$ 3,907,355
CORRIDOR: MANHATTAN BEACH BLVD	**1.00**				**1.00**		**1.00**	**$ 30,928**	**$ 498,843**	**$ 2,608,949**
Coast To Crenshaw Blvd										
MANHATTAN BEACH BLVD	1.00				1.00		1.00	$ 30,928	$ 498,843	$ 2,608,949
CORRIDOR: REDONDO BEACH BLVD	**1.07**				**1.07**		**1.07**	**$ 32,939**	**$ 531,276**	**$ 2,778,575**
Flagler Ln To Salt Lake- Up-Pe Rr Row										
REDONDO BEACH BLVD	1.07				1.07		1.07	$ 32,939	$ 531,276	$ 2,778,575
CORRIDOR: SEPULVEDA-WILLOW	**0.71**				**0.71**		**0.71**	**$ 21,890**	**$ 353,059**	**$ 1,846,500**
Torrance Blvd To Coyote Creek										
W SEPULVEDA BLVD	0.71				0.71		0.71	$ 21,890	$ 353,059	$ 1,846,500
CORRIDOR: VERMONT	**3.36**				**3.36**		**3.36**	**$ 103,716**	**$ 1,672,845**	**$ 8,748,980**
Los Feliz Blvd To W Anaheim St										
S VERMONT AV	3.36				3.36		3.36	$ 103,716	$ 1,672,845	$ 8,748,980
CORRIDOR: WESTERN AVE	**1.00**				**1.00**		**1.00**	**$ 30,942**	**$ 499,070**	**$ 2,610,137**
Imperial Hwy To W Anaheim St										
S WESTERN AV	1.00				1.00		1.00	$ 30,942	$ 499,070	$ 2,610,137
Lomita	**1.08**				**1.08**	**0.67**	**1.75**	**$ 33,409**	**$ 538,851**	**$ 2,818,192**
CORRIDOR: PALOS VERDES DRIVE						0.67	0.67	$ -	$ -	$ -
Palos Verdes Blvd To S Figueroa St										
Off Street						0.67	0.67	$ -	$ -	$ -
CORRIDOR: PCH	**1.08**				**1.08**		**1.08**	**$ 33,409**	**$ 538,851**	**$ 2,818,192**
Esplanade To San Gabriel River										
PACIFIC COAST HWY	1.08				1.08		1.08	$ 33,409	$ 538,851	$ 2,818,192
Westside Cities	**89.64**		**14.58**	**7.57**	**111.78**	**20.77**	**132.55**	**$ 5,531,081**	**$ 88,991,715**	**$ 465,598,235**
Beverly Hills	**6.29**				**6.29**		**6.29**	**$ 194,238**	**$ 3,132,865**	**$ 16,384,886**
CORRIDOR: BEVERLY-TEMPLE	**0.34**				**0.34**		**0.34**	**$ 10,506**	**$ 169,459**	**$ 886,271**
Santa Monica Blvd To La River										
BEVERLY BLVD	0.34				0.34		0.34	$ 10,506	$ 169,459	$ 886,271
CORRIDOR: BROADWAY-FOUNTAIN-SANTA MONICA	**1.83**				**1.83**		**1.83**	**$ 56,416**	**$ 909,941**	**$ 4,758,992**
Ocean Ave To W Sunset Blvd										
SANTA MONICA BLVD	1.83				1.83		1.83	$ 56,416	$ 909,941	$ 4,758,992
CORRIDOR: CULVER-ROBERTSON	**0.94**				**0.94**		**0.94**	**$ 29,066**	**$ 468,813**	**$ 2,451,892**
Santa Monica Blvd To Lincoln Blvd										
N ROBERTSON BLVD	0.26				0.26		0.26	$ 8,051	$ 129,854	$ 679,139
S ROBERTSON BLVD	0.68				0.68		0.68	$ 21,015	$ 338,959	$ 1,772,753
CORRIDOR: SAN VICENTE BLVD	**0.62**				**0.62**		**0.62**	**$ 19,296**	**$ 311,218**	**$ 1,627,670**
Santa Monica Blvd To Venice Blvd										
	0.62				0.62		0.62	$ 19,296	$ 311,218	$ 1,627,670
CORRIDOR: WILSHIRE-SAN VICENTE	**2.56**				**2.56**		**2.56**	**$ 78,953**	**$ 1,273,434**	**$ 6,660,060**
Ocean Ave To Central Ave										
WILSHIRE BLVD	2.56				2.56		2.56	$ 78,953	$ 1,273,434	$ 6,660,060
Culver City	**4.30**		**1.02**		**5.32**	**3.10**	**8.42**	**$ 300,770**	**$ 4,835,732**	**$ 25,302,930**
CORRIDOR: BALLONA CREEK			**0.30**		**0.30**	**2.44**	**2.74**	**$ 48,907**	**$ 784,344**	**$ 4,105,625**
Pacific Ave To Venice Blvd										
Off Street			0.30		0.30	2.44	2.74	$ 48,907	$ 784,344	$ 4,105,625
CORRIDOR: BUNDY-CENTINELA-INGLEWOOD	**0.27**				**0.27**		**0.27**	**$ 8,220**	**$ 132,589**	**$ 693,438**
San Vicente Blvd To S Centinela Ave										
S CENTINELA AV	0.27				0.27		0.27	$ 8,220	$ 132,589	$ 693,438
CORRIDOR: CULVER-JEFFERSON	**0.24**				**0.24**		**0.24**	**$ 7,283**	**$ 117,467**	**$ 614,350**
S Sepulveda Blvd To Coast										
W CENTINELA AV	0.24				0.24		0.24	$ 7,283	$ 117,467	$ 614,350
CORRIDOR: CULVER-ROBERTSON	**1.40**				**1.40**	**0.66**	**2.06**	**$ 43,382**	**$ 699,710**	**$ 3,659,484**
Santa Monica Blvd To Lincoln Blvd										
CULVER BLVD	1.40				1.40		1.40	$ 43,382	$ 699,710	$ 3,659,484
Off Street						0.66	0.66	$ -	$ -	$ -
CORRIDOR: SEPULVEDA-PCH	**2.39**				**2.39**		**2.39**	**$ 73,828**	**$ 1,190,781**	**$ 6,227,786**
Santa Monica Blvd To Palos Verdes Blvd										
	0.11				0.11		0.11	$ 3,466	$ 55,908	$ 292,398
OVERLAND AV	1.93				1.93		1.93	$ 59,665	$ 962,346	$ 5,033,070
PLAYA ST	0.35				0.35		0.35	$ 10,697	$ 172,527	$ 902,319
CORRIDOR: WESTWOOD-SPRR-JEFFERSON			**0.73**		**0.73**		**0.73**	**$ 119,149**	**$ 1,910,841**	**$ 10,002,247**
Le Conte Ave To S Figueroa St										
Off Street			0.73		0.73		0.73	$ 119,149	$ 1,910,841	$ 10,002,247
Los Angeles	**59.14**		**8.45**	**1.92**	**69.50**	**12.59**	**82.09**	**$ 3,306,446**	**$ 53,202,763**	**$ 278,349,833**
CORRIDOR: BALLONA CREEK			**1.60**		**1.60**	**4.14**	**5.74**	**$ 262,683**	**$ 4,212,743**	**$ 22,051,488**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
Pacific Ave To Venice Blvd										
Off Street			1.60		1.60	4.14	5.74	$ 262,683	$ 4,212,743	$ 22,051,488
CORRIDOR: BROADWAY-FOUNTAIN-SANTA MONICA	**3.57**				**3.57**		**3.57**	**$ 110,172**	**$ 1,776,964**	**$ 9,293,521**
Ocean Ave To W Sunset Blvd										
OHIO AV	0.35				0.35		0.35	$ 10,823	$ 174,559	$ 912,942
SANTA MONICA BLVD	3.22				3.22		3.22	$ 99,349	$ 1,602,405	$ 8,380,579
CORRIDOR: BUNDY-CENTINELA-INGLEWOOD	**6.09**				**6.09**		**6.09**	**$ 188,032**	**$ 3,032,768**	**$ 15,861,378**
San Vicente Blvd To S Centinela Ave										
INGLEWOOD BLVD	0.64				0.64		0.64	$ 19,772	$ 318,908	$ 1,667,890
S BUNDY DR	3.20				3.20		3.20	$ 98,936	$ 1,595,746	$ 8,345,750
S CENTINELA AV	2.24				2.24		2.24	$ 69,323	$ 1,118,114	$ 5,847,738
CORRIDOR: CULVER-JEFFERSON	**2.68**		**0.27**	**1.32**	**4.26**		**4.26**	**$ 190,843**	**$ 3,074,110**	**$ 16,080,727**
S Sepulveda Blvd To Coast										
CULVER BLVD				0.91	0.91		0.91	$ 44,546	$ 718,478	$ 3,757,642
N JEFFERSON BLVD	0.13				0.13		0.13	$ 4,011	$ 64,686	$ 338,309
Off Street			0.27		0.27		0.27	$ 43,623	$ 699,591	$ 3,661,988
PACIFIC AV				0.41	0.41		0.41	$ 19,952	$ 321,814	$ 1,683,085
S CENTINELA AV	0.57				0.57		0.57	$ 17,494	$ 282,154	$ 1,475,666
W JEFFERSON BLVD	1.98				1.98		1.98	$ 61,218	$ 987,387	$ 5,164,036
CORRIDOR: CULVER-ROBERTSON	**2.84**		**0.69**		**3.52**	**1.38**	**4.91**	**$ 200,383**	**$ 3,221,650**	**$ 16,857,313**
Santa Monica Blvd To Lincoln Blvd										
CULVER BLVD	0.78				0.78		0.78	$ 24,181	$ 390,012	$ 2,039,765
McKonnel			0.69		0.69		0.69	$ 112,726	$ 1,807,825	$ 9,463,009
Off Street						1.38	1.38	$ -	$ -	$ -
ROBERTSON PL	0.06				0.06		0.06	$ 1,937	$ 31,238	$ 163,375
S ROBERTSON BLVD	1.99				1.99		1.99	$ 61,540	$ 992,575	$ 5,191,165
CORRIDOR: EL SEGUNDO BLVD	**0.39**				**0.39**		**0.39**	**$ 12,007**	**$ 193,654**	**$ 1,012,809**
Coast To Alameda St										
GRAND AV	0.39				0.39		0.39	$ 12,007	$ 193,654	$ 1,012,809
CORRIDOR: FAIRFAX	**0.47**				**0.47**		**0.47**	**$ 14,532**	**$ 234,388**	**$ 1,225,850**
Hollywood Blvd To Ballona Creek										
N FAIRFAX AV	0.47				0.47		0.47	$ 14,532	$ 234,388	$ 1,225,850
CORRIDOR: FIRESTONE-MANCHESTER	**4.28**				**4.28**		**4.28**	**$ 132,342**	**$ 2,134,548**	**$ 11,163,686**
Culver Blvd To La River										
PERSHING DR	0.49				0.49		0.49	$ 15,204	$ 245,219	$ 1,282,498
W MANCHESTER AV	3.79				3.79		3.79	$ 117,138	$ 1,889,329	$ 9,881,188
CORRIDOR: IMPERIAL HWY						**0.60**	**0.60**	**$ -**	**$ -**	**$ -**
Coast To Orange County Line										
Off Street						0.60	0.60	$ -	$ -	$ -
CORRIDOR: LINCOLN BLVD	**4.11**		**0.11**		**4.23**		**4.23**	**$ 145,498**	**$ 2,345,050**	**$ 12,265,929**
San Vicente Blvd To W Manchester Ave										
LINCOLN BLVD	4.11				4.11		4.11	$ 127,099	$ 2,049,988	$ 10,721,437
Off Street			0.11		0.11		0.11	$ 18,398	$ 295,062	$ 1,544,492
CORRIDOR: MONTANA AVE	**0.96**				**0.96**		**0.96**	**$ 29,513**	**$ 476,010**	**$ 2,489,530**
Ocean Ave To Sin Vicente Blvd										
MONTANA AV	0.96				0.96		0.96	$ 29,513	$ 476,010	$ 2,489,530
CORRIDOR: MOTOR-SPRR-COLORADO	**0.85**		**2.88**		**3.73**		**3.73**	**$ 498,852**	**$ 8,002,676**	**$ 41,887,900**
Ocean Ave To Venice Blvd										
MOTOR AV	0.85				0.85		0.85	$ 26,166	$ 422,030	$ 2,207,215
Off Street			2.88		2.88		2.88	$ 472,687	$ 7,580,646	$ 39,680,685
CORRIDOR: OCEAN-MAIN-VENICE	**1.20**			**0.60**	**1.80**		**1.80**	**$ 66,193**	**$ 1,067,633**	**$ 5,583,720**
San Vicente Blvd To Ballona Creek										
MAIN ST	0.88				0.88		0.88	$ 27,135	$ 437,668	$ 2,289,005
MILDRED AV				0.58	0.58		0.58	$ 28,117	$ 453,498	$ 2,371,796
OCEAN AV				0.02	0.02		0.02	$ 1,018	$ 16,414	$ 85,845
VENICE WY	0.32				0.32		0.32	$ 9,923	$ 160,052	$ 837,073
CORRIDOR: OHIO AVE	**1.00**				**1.00**		**1.00**	**$ 30,771**	**$ 496,313**	**$ 2,595,715**
Federal Ave To Westwood Blvd										
OHIO AV	1.00				1.00		1.00	$ 30,771	$ 496,313	$ 2,595,715
CORRIDOR: PICO-GATEWAY-OCEAN PARK	**0.90**				**0.90**		**0.90**	**$ 27,837**	**$ 448,984**	**$ 2,348,189**
Barnard Way To Central Ave										
GATEWAY BLVD	0.54				0.54		0.54	$ 16,775	$ 270,567	$ 1,415,068
OCEAN PARK BLVD	0.36				0.36		0.36	$ 11,062	$ 178,417	$ 933,121
CORRIDOR: SEPULVEDA	**4.41**				**4.41**		**4.41**	**$ 136,238**	**$ 2,197,391**	**$ 11,492,356**
Rinaldi St To Venice Blvd										
S SEPULVEDA BLVD	4.41				4.41		4.41	$ 136,238	$ 2,197,391	$ 11,492,356
CORRIDOR: SEPULVEDA-PCH	**6.87**				**6.87**		**6.87**	**$ 212,266**	**$ 3,423,642**	**$ 17,905,647**
Santa Monica Blvd To Palos Verdes Blvd										
OVERLAND AV	2.85				2.85		2.85	$ 88,100	$ 1,420,967	$ 7,431,655
S SEPULVEDA BLVD	4.02				4.02		4.02	$ 124,166	$ 2,002,675	$ 10,473,992
CORRIDOR: VENICE BLVD	**9.51**				**9.51**		**9.51**	**$ 293,729**	**$ 4,737,568**	**$ 24,777,482**
Ocean Front Walk To Crenshaw Blvd										
N VENICE BLVD	1.29				1.29		1.29	$ 39,825	$ 642,334	$ 3,359,404
VENICE BLVD	8.22				8.22		8.22	$ 253,905	$ 4,095,235	$ 21,418,078
CORRIDOR: WILSHIRE-SAN VICENTE	**4.36**				**4.36**		**4.36**	**$ 134,772**	**$ 2,173,746**	**$ 11,368,689**
Ocean Ave To Central Ave										
FEDERAL AV	0.52				0.52		0.52	$ 15,979	$ 257,732	$ 1,347,937
SAN VICENTE BLVD	1.77				1.77		1.77	$ 54,626	$ 881,069	$ 4,607,993
WILSHIRE BLVD	2.08				2.08		2.08	$ 64,167	$ 1,034,944	$ 5,412,759
CORRIDOR: COASTAL ROUTE-BEACH PATH	**0.84**		**2.09**		**2.94**	**6.47**	**9.40**	**$ 369,327**	**$ 5,925,414**	**$ 31,014,536**
Ventura County Line To La River										
Off Street			2.09		2.09	6.47	8.56	$ 343,290	$ 5,505,461	$ 28,818,183
WASHINGTON BLVD	0.84				0.84		0.84	$ 26,037	$ 419,953	$ 2,196,354
CORRIDOR: WESTWOOD-SPRR-JEFFERSON	**3.83**		**0.81**		**4.63**		**4.63**	**$ 250,457**	**$ 4,027,512**	**$ 21,073,366**
Le Conte Ave To S Figueroa St										
NATIONAL BLVD	0.45				0.45		0.45	$ 13,970	$ 225,327	$ 1,178,461
NATIONAL PL	0.53				0.53		0.53	$ 16,463	$ 265,540	$ 1,388,775
Off Street			0.81		0.81		0.81	$ 132,169	$ 2,119,643	$ 11,095,212
WESTWOOD BLVD	2.84				2.84		2.84	$ 87,854	$ 1,417,002	$ 7,410,918
Santa Monica	**13.74**		**4.98**	**4.02**	**22.74**	**3.03**	**25.77**	**$ 1,438,259**	**$ 23,122,805**	**$ 120,990,901**
CORRIDOR: 17TH ST SANTA MONICA			**0.46**	**2.59**	**3.05**		**3.05**	**$ 202,151**	**$ 3,253,569**	**$ 17,021,590**

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
San Vicente Blvd To Ocean Park Blvd										
			0.46	0.25	0.71		0.71	$ 87,958	$ 1,411,744	$ 7,388,845
17TH ST				2.34	2.34		2.34	$ 114,193	$ 1,841,825	$ 9,632,745
CORRIDOR: BROADWAY-FOUNTAIN-SANTA MONICA	**2.43**				**2.43**		**2.43**	**$ 74,970**	**$ 1,209,186**	**$ 6,324,043**
Ocean Ave To W Sunset Blvd										
ARIZONA AV	0.46				0.46		0.46	$ 14,157	$ 228,333	$ 1,194,182
BROADWAY	1.97				1.97		1.97	$ 60,813	$ 980,853	$ 5,129,861
CORRIDOR: LINCOLN BLVD	**3.00**				**3.00**		**3.00**	**$ 92,543**	**$ 1,492,636**	**$ 7,806,486**
San Vicente Blvd To W Manchester Ave										
7TH ST	1.62				1.62		1.62	$ 50,047	$ 807,210	$ 4,221,710
LINCOLN BLVD	1.38				1.38		1.38	$ 42,496	$ 685,426	$ 3,584,776
CORRIDOR: MONTANA AVE	**2.20**				**2.20**		**2.20**	**$ 67,950**	**$ 1,095,966**	**$ 5,731,904**
Ocean Ave To Sin Vicente Blvd										
MONTANA AV	2.20				2.20		2.20	$ 67,950	$ 1,095,966	$ 5,731,904
CORRIDOR: MOTOR-SPRR-COLORADO	**0.12**		**2.47**		**2.58**		**2.58**	**$ 408,265**	**$ 6,547,831**	**$ 34,274,177**
Ocean Ave To Venice Blvd										
COLORADO AV	0.11				0.11		0.11	$ 3,280	$ 52,906	$ 276,697
Off Street			2.47		2.47		2.47	$ 404,632	$ 6,489,225	$ 33,967,672
PALISADES BEACH RD	0.01				0.01		0.01	$ 353	$ 5,700	$ 29,809
CORRIDOR: OCEAN-MAIN-VENICE	**1.32**			**1.43**	**2.76**		**2.76**	**$ 110,853**	**$ 1,787,950**	**$ 9,350,981**
San Vicente Blvd To Ballona Creek										
MAIN ST	1.32				1.32		1.32	$ 40,938	$ 660,298	$ 3,453,358
OCEAN AV				1.43	1.43		1.43	$ 69,914	$ 1,127,653	$ 5,897,623
CORRIDOR: PICO-GATEWAY-OCEAN PARK	**2.62**				**2.62**		**2.62**	**$ 80,921**	**$ 1,305,171**	**$ 6,826,045**
Barnard Way To Central Ave										
OCEAN PARK BLVD	2.62				2.62		2.62	$ 80,921	$ 1,305,171	$ 6,826,045
CORRIDOR: WILSHIRE-SAN VICENTE	**2.05**		**2.05**		**4.11**		**4.11**	**$ 400,607**	**$ 6,430,496**	**$ 33,655,673**
Ocean Ave To Central Ave										
SAN VICENTE BIKE PATH			2.05		2.05		2.05	$ 337,116	$ 5,406,458	$ 28,299,953
SAN VICENTE BLVD	2.05				2.05		2.05	$ 63,490	$ 1,024,038	$ 5,355,720
CORRIDOR: COASTAL ROUTE-BEACH PATH						**3.03**	**3.03**	**$ -**	**$ -**	**$ -**
Ventura County Line To La River										
Off Street						3.03	3.03	$ -	$ -	$ -
Unincorporated	**1.70**		**0.13**		**1.83**	**2.05**	**3.87**	**$ 73,489**	**$ 1,183,388**	**$ 6,190,620**
CORRIDOR: OCEAN-MAIN-VENICE			**0.13**		**0.13**	**2.05**	**2.17**	**$ 20,940**	**$ 335,825**	**$ 1,757,867**
San Vicente Blvd To Ballona Creek										
FIJI WY						0.75	0.75	$ -	$ -	$ -
Off Street			0.13		0.13	1.30	1.43	$ 20,940	$ 335,825	$ 1,757,867
CORRIDOR: SEPULVEDA	**0.60**				**0.60**		**0.60**	**$ 18,562**	**$ 299,392**	**$ 1,565,821**
Rinaldi St To Venice Blvd										
S SEPULVEDA BLVD	0.60				0.60		0.60	$ 18,562	$ 299,392	$ 1,565,821
CORRIDOR: WILSHIRE-SAN VICENTE	**1.10**				**1.10**		**1.10**	**$ 33,987**	**$ 548,171**	**$ 2,866,933**
Ocean Ave To Central Ave										
SAN VICENTE BLVD	0.25				0.25		0.25	$ 7,805	$ 125,889	$ 658,401
WILSHIRE BLVD	0.85				0.85		0.85	$ 26,181	$ 422,281	$ 2,208,532
West Hollywood	**4.48**			**1.63**	**6.11**		**6.11**	**$ 217,878**	**$ 3,514,162**	**$ 18,379,066**
CORRIDOR: BEVERLY-TEMPLE	**0.63**				**0.63**		**0.63**	**$ 19,539**	**$ 315,149**	**$ 1,648,231**
Santa Monica Blvd To La River										
BEVERLY BLVD	0.63				0.63		0.63	$ 19,539	$ 315,149	$ 1,648,231
CORRIDOR: BROADWAY-FOUNTAIN-SANTA MONICA	**1.87**			**1.63**	**3.49**		**3.49**	**$ 137,046**	**$ 2,210,415**	**$ 11,560,472**
Ocean Ave To W Sunset Blvd										
FOUNTAIN AV				1.63	1.63		1.63	$ 79,415	$ 1,280,888	$ 6,699,046
N DOHENY DR	0.02				0.02		0.02	$ 643	$ 10,377	$ 54,273
SANTA MONICA BLVD	1.84				1.84		1.84	$ 56,987	$ 919,150	$ 4,807,153
CORRIDOR: CULVER-ROBERTSON	**0.53**				**0.53**		**0.53**	**$ 16,442**	**$ 265,190**	**$ 1,386,941**
Santa Monica Blvd To Lincoln Blvd										
N ROBERTSON BLVD	0.53				0.53		0.53	$ 16,442	$ 265,190	$ 1,386,941
CORRIDOR: FAIRFAX	**0.51**				**0.51**		**0.51**	**$ 15,613**	**$ 251,821**	**$ 1,317,021**
Hollywood Blvd To Ballona Creek										
N FAIRFAX AV	0.51				0.51		0.51	$ 15,613	$ 251,821	$ 1,317,021
CORRIDOR: MELROSE AVE	**0.95**				**0.95**		**0.95**	**$ 29,238**	**$ 471,587**	**$ 2,466,400**
Santa Monica Blvd To W Sunset Blvd										
MELROSE AV	0.95				0.95		0.95	$ 29,238	$ 471,587	$ 2,466,400
Palmdale Regional Airport	**3.55**				**3.55**		**3.55**	**$ 109,742**	**$ 1,770,033**	**$ 9,257,273**
Unincorporated	**3.55**				**3.55**		**3.55**	**$ 109,742**	**$ 1,770,033**	**$ 9,257,273**
CORRIDOR: AVE P	**3.55**				**3.55**		**3.55**	**$ 109,742**	**$ 1,770,033**	**$ 9,257,273**
30Th St W To 50Th St E										
AVE P	3.55				3.55		3.55	$ 109,742	$ 1,770,033	$ 9,257,273
LAX	**4.25**	**1.96**			**6.21**		**6.21**	**$ 131,344**	**$ 2,118,448**	**$ 11,079,484**
Los Angeles	**4.25**	**1.96**			**6.21**		**6.21**	**$ 131,344**	**$ 2,118,448**	**$ 11,079,484**
CORRIDOR: AVIATION-BNSF-LAX	**1.50**				**1.50**		**1.50**	**$ 46,477**	**$ 749,630**	**$ 3,920,563**
W Manchester Ave To Manhattan Beach Blvd										
AVIATION BLVD	1.50				1.50		1.50	$ 46,477	$ 749,630	$ 3,920,563
CORRIDOR: IMPERIAL HWY	**2.75**				**2.75**		**2.75**	**$ 84,867**	**$ 1,368,819**	**$ 7,158,921**
Coast To Orange County Line										
E IMPERIAL HWY	1.86				1.86		1.86	$ 57,563	$ 928,433	$ 4,855,704
W IMPERIAL HWY	0.88				0.88		0.88	$ 27,304	$ 440,386	$ 2,303,218
CORRIDOR: METRO STUDY - LAX		**1.96**			**1.96**		**1.96**	**$ -**	**$ -**	**$ -**
W Manchester Ave To Manhattan Beach Blvd										
		1.96			1.96		1.96	$ -	$ -	$ -
Port of Los Angeles	**1.97**				**1.97**		**1.97**	**$ 61,005**	**$ 983,959**	**$ 5,146,103**
Los Angeles	**1.97**				**1.97**		**1.97**	**$ 61,005**	**$ 983,959**	**$ 5,146,103**
CORRIDOR: COASTAL ROUTE-BEACH PATH	**1.97**				**1.97**		**1.97**	**$ 61,005**	**$ 983,959**	**$ 5,146,103**
Ventura County Line To La River										
FERRY ST	0.02				0.02		0.02	$ 554	$ 8,935	$ 46,730
N SEASIDE AV	0.90				0.90		0.90	$ 27,883	$ 449,721	$ 2,352,040
VINCENT THOMAS BRDG	1.05				1.05		1.05	$ 32,569	$ 525,303	$ 2,747,333
Long Beach Municipal Airport	**2.94**				**2.94**		**2.94**	**$ 90,847**	**$ 1,465,268**	**$ 7,663,350**
Long Beach	**2.94**				**2.94**		**2.94**	**$ 90,847**	**$ 1,465,268**	**$ 7,663,350**
CORRIDOR: LAKEWOOD-ROSEMEAD	**2.94**				**2.94**		**2.94**	$ 90,847	$ 1,465,268	$ 7,663,350
E Orange Grove Blvd To Pch										

Subregion:City:Corridor:Corridor Span:Segment	Not Usable As Built Dedicated Metro Regional ATN	MetroStudy Metro Regional ATN	Off-Street Metro Regional ATN	Shared Metro Regional ATN	Not Usable As Built Metro Regional ATN	Usable As Built Metro Regional ATN	Total Metro Regional ATN	Total Low Cost	Total Med Cost	Total High Cost
N LAKEWOOD BLVD	2.94				2.94		2.94	$ 90,847	$ 1,465,268	$ 7,663,350
Port of Long Beach	**2.55**		**0.18**		**2.73**		**2.73**	**$ 108,905**	**$ 1,753,781**	**$ 9,174,431**
Long Beach	**2.55**		**0.18**		**2.73**		**2.73**	**$ 108,905**	**$ 1,753,781**	**$ 9,174,431**
CORRIDOR: COASTAL ROUTE-BEACH PATH	**2.55**		**0.18**		**2.73**		**2.73**	$ 108,905	$ 1,753,781	$ 9,174,431
Ventura County Line To La River										
OCEAN BLVD	0.55				0.55		0.55	$ 17,122	$ 276,161	$ 1,444,324
Off Street			0.18		0.18		0.18	$ 30,061	$ 482,094	$ 2,523,510
W OCEAN BLVD	2.00				2.00		2.00	$ 61,723	$ 995,525	$ 5,206,597
Total	**1385.87**	**14.91**	**297.20**	**55.33**	**1753.31**	**216.61**	**1969.92**	**$ 94,282,934**	**$ 1,516,222,738**	**$ 7,933,342,350**

APPENDIX

I INNOVATIVE BIKEWAY DESIGN PRIMER

DRAFT

REGIONAL ACTIVE TRANSPORTATION NETWORK

Innovative Bikeway Design Primer

February 2016

Prepared by:
Alta Planning + Design

617 W. 7th St., Suite 505
Los Angeles, CA
90017

Photo by Adam Coppola Photography

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01 Purpose

The Active Transportation Strategic Plan includes a countywide *Regional Active Transportation Network* (Regional Network) that designates a set of spine routes, forming a top-level system akin to a freeway network for people walking and bicycling.

The Regional AT Network provides connectivity between population centers and major destinations throughout Los Angeles County and is informed by the following guiding principles:[1]

- Connect cities and communities
- Serve desire lines
- Serve Main Street
- Harness continuous rights-of-way
- Link to transit
- Address existing safety problems
- Design for all ages and abilities

Over the course of network build-out, Metro and local jurisdictions in Los Angeles County will encounter challenges ranging from design and engineering to politics and finance. This primer features design tactics that can help communities overcome design challenges in the build-out of the Regional Active Transportation Network.

For analysis of partnerships and implementation strategies, reference Volume 1 of the Active Transportation Strategic Plan.

This primer emphasizes innovative designs because the standard toolbox of bikeway facilities (Caltrans, 2012) is not always sufficient to satisfy the principles stated above (however, bikeway standards are currently being updated to include Separated Bikeways / Cycle Tracks) (Caltrans, 2015). For instance, standard Class II bicycle lanes may be ill-suited to a Main Street context, where the presence of on-street parking, multi-lane streets, transit services, pedestrian crossings and commercial loading can make riding a bicycle a stressful experience. Similarly, neither Class II bicycle lanes nor Class III bicycle routes are accessible if they are constructed on a high-stress roadway. Both have been found to be ineffective at attracting users for this reason (Winters and Teschke, 2010).

This guidance serves a reference point for planners and facility designers to encourage innovative solutions to active transportation design challenges, helping communities in Los Angeles County to realize construction of the Regional Active Transportation Network.

Design challenges requiring innovative solutions:

- Constrained rights-of-way
- Compatibility of bicycle access with high-volume, high-speed vehicle traffic
- Complex and difficult-to-navigate intersections
- Signal delay for all road users
- Bicycle lane capacity and speed limitations
- Conflicts between people walking and bicycling on Class I paths
- Physical barriers (freeways, railroads and rivers)
- Topographic constraints
- Emerging technologies, such as e-bikes

[1] Further information regarding the network development process, including guiding principles, assumptions and applicable facility types, is available in the accompanying *Regional Active Transportation Network Methodology*.

02 Guidance Basis

The sections that follow serve as an inventory of bicycle design treatments and provide guidelines for their development. These treatments and design guidelines are important because they represent the tools for creating a bicycle-friendly, safe, accessible Regional Active Transportation Network. The guidelines are not, however, a substitute for a more thorough evaluation by a landscape architect or engineer prior to implementation of facility improvements. The following standards and guidelines are referred to in this guide.

National Guidance

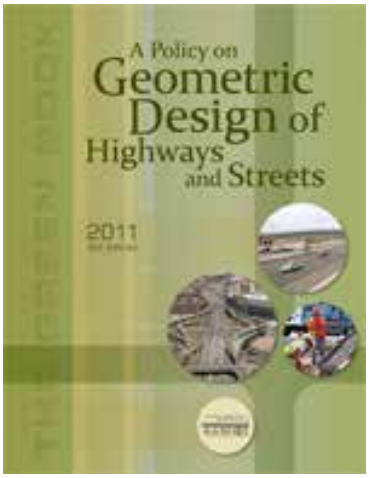
The American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets (AASHTO, 2011), commonly referred to as the "Green Book," contains the current design research and practices for highway and street geometric design.

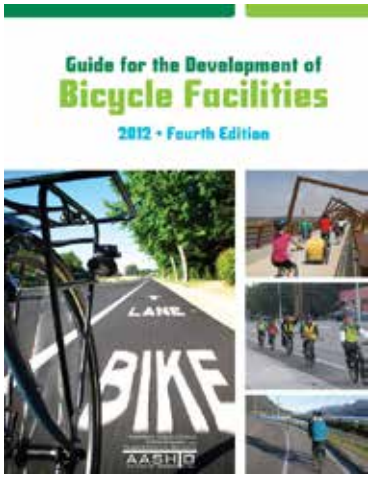
The AASHTO Guide for the Development of Bicycle Facilities (AASHTO, 2012) provides guidance on dimensions, use, and layout of specific bicycle facilities.

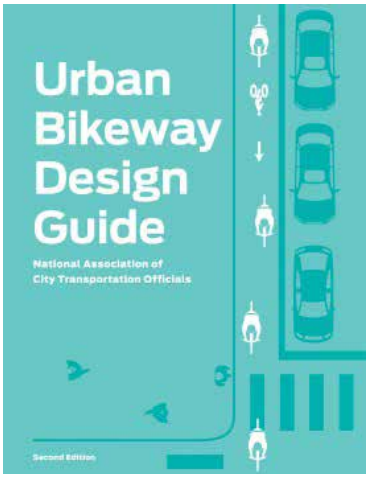
The National Association of City Transportation Officials Urban Bikeway Design Guide (NACTO, 2012) and Urban Street Design Guide (NACTO, 2013) are nationally recognized street design guides that offer guidance on the current state of the practice.

"DOT encourages transportation agencies to go beyond the minimum requirements, and proactively provide convenient, safe, and context-sensitive facilities that foster increased use by bicyclists and pedestrians of all ages and abilities..."

Federal Highway Administration (FHWA, 2010)







California Guidance

The California Manual on Uniform Traffic Control Devices (CAMUTCD) is the guide to markings and signs used for traffic control on California's streets.

The California Highway Design Manual (Caltrans, 2012) establishes uniform policies and procedures to carry out highway design functions for the California Department of Transportation.

Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians (Caltrans, 2010) is a reference guide that presents information and concepts related to improving conditions for people bicycling and walking at major intersections and interchanges. The guide can be used to inform minor signage and striping changes to intersections, as well as major changes and designs for new intersections.

The Protected Bikeways Act of 2014 (AB 1193) established a new category of bikeway in California called Class IV. This bikeway type was made available for statewide implementation with the 2015 publication of Caltrans Design Information Bulletin 89: Class IV Bikeway Guidance (Separated Bikeways / Cycle Tracks) (Caltrans, 2015) and will be integrated into the next iteration of the Highway Design Manual.

Assembly Bill No. 1096 was passed in 2015. It defines e-bike classes, outlines licensing requirements and introduces access restrictions for e-bikes capable of 28 miles per hour.

Design Flexibility

The Caltrans Memo: Design Flexibility in Multimodal Design (Caltrans, 2014b) encourages flexibility in highway design. The memo stated that "Publications such as the National Association of City Transportation Officials (NACTO) "Urban Street Design Guide" and "Urban Bikeway Design Guide," ... are resources that Caltrans and local entities can reference when making planning and design decisions on the State highway system and local streets and roads."

Experimentation Process

Use and study of new facility types and configurations is encouraged by FHWA and Caltrans. New designs, devices, or applications not covered in or not in compliance with the MUTCD should seek approval for experimentation and study.

Section 1A.10 of the CAMUTCD describes the process of submitting a Request to Experiment. This involves approval by FHWA and subsequent approval by the California Traffic Control Devices Committee (CTCDC).

The dimensions, design details, recommendations, and findings in this document are based on accepted guidelines and conceptual analysis and design. In developing the document's recommendations, the authors utilized prior experience, professional judgment, and industry standards where available. Engineering judgment should always be used in site-specific street and intersection design.

03 Protected Bicycle Lane (Class IV)

A protected bicycle lane (also called a separated bicycle lane or cycle track) is an exclusive facility for people bicycling that is located within or directly adjacent to the roadway and that is physically separated from motor vehicle traffic with a vertical element (FHWA, 2015b).

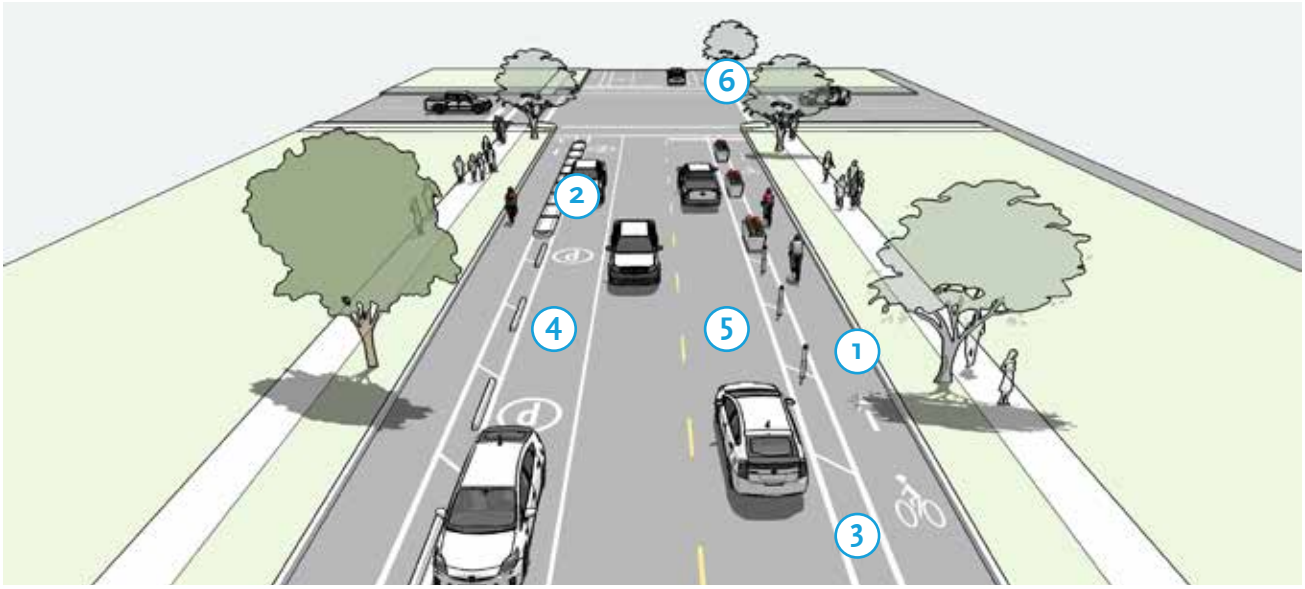
Hermosa Beach, CA - A two-way protected bicycle lane provides a safe, separated space for users of all ages and abiltiies.

Benefits

- Physically separated space for people bicycling makes it an attractive facility for riders of all levels and ages.
- Reduces or eliminates risk and fear of collisions with opening parked car doors and overtaking vehicles.
- Discourages double parking in the bicycle lane.
- Contributes to the streetscape when constructed with permanent, high-quality materials.

Typical Application

- To provide an on-street connection in the Regional Active Transportation Network.
- Appropriate for high bicycle volumes and speeds when designed with appropriate dimensions.
- Along streets with high motor vehicle volumes (9,000-30,000 Average Daily Traffic (ADT)) and relatively high speeds (>25 mph).
- Along streets with high levels of truck or bus traffic (10 percent of total ADT) (NCHRP, 2015).
- Areas of high parking turnover.



Design Guidelines

1. Desired width of the bicycle travel area is 10 feet in areas with high bicycle volumes or uphill sections to facilitate safe passing behavior.
2. Vertical separation treatments such as bollards, movable planters or raised curbs or raised grade separation may be used. Buffer type may impact cost, drainage, operating width, and aesthetics of the protected bicycle lane.
3. Preferred buffer area width is generally 3 feet, with a minimum of 2 feet. Next to parking lanes, the minimum is 3 feet (5 feet next to accessible parking). For further details, consult Caltrans, 2015.
4. Channelizing devices should be placed in the buffer area (Caltrans, 2014a, 3H.01).
5. If painted buffer area is 4 feet or wider, white chevron or diagonal markings should be used (Caltrans, 2014a, 9C.04).
6. Where possible, physical barriers should be positioned to provide as much operating space as possible for bicycle use.

Long Beach, CA - Protected bicycle lanes can combine various physical separation methods, such as parking stops, flexible bollards, planters and motor vehicle parking.

Further Considerations

Protected bicycle lane buffers and barriers are covered in the CAMUTCD as preferential lane markings and channelizing devices. Curbs may be used as a channelizing device; see the CAMUTCD section on islands.

With new roadway construction a raised protected bicycle lane can be less expensive to construct due to reduced trenching, fill and load requirements. A retrofit protected bicycle lane has a relatively low implementation cost compared to road reconstruction by making use of existing pavement and drainage and by adding a physical barrier.

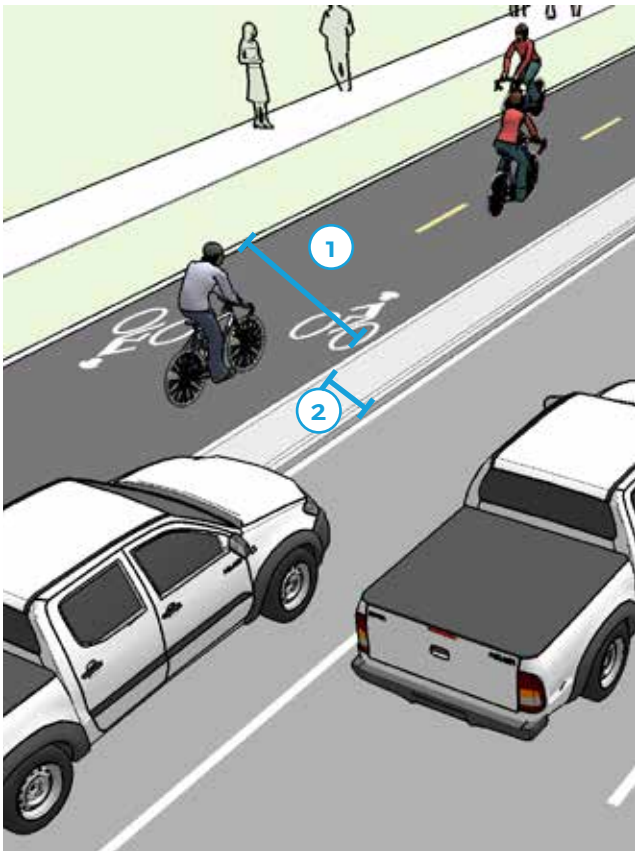
Parking should be prohibited within 30 feet of the intersection to improve visibility. Special consideration should be given at transit stops to manage interactions between people walking and people riding bikes.

For protected bicycle lane design strategies around bus stops, including bypasses, reference the NACTO Urban Street Design Guide (NACTO, 2013).

Two-Way Operation

Two-way protected bicycle lanes allow bicycle movement in both directions on one side of the road. Two-way protected bicycle lanes share some of the same design characteristics as one-way protected bicycle lanes, but may require additional considerations at driveway and side-street crossings.

A two-way protected bicycle lane may be configured at street level or as a raised protected bike lane with grade separation from the adjacent travel lane.



Application

- To connect a separated two-way facility such as a trail.
- Along streets with few conflicts such as driveways or cross-streets on one side of the street.
- Along streets where there is not enough room for a one-way protected lane on both sides of the street.
- Along one-way streets by incorporating a contraflow lane to create a two-way facility.
- Along streets where more destinations are on one side thereby reducing the need to cross the street.

Design Guidelines

1. 2-way protected lane dimensions: desired width is 12 feet in areas with high bicycle volumes or uphill sections to facilitate safe passing behavior (8 feet minimum)
2. Buffer dimension: desired minimum width for a protected bicycle lane buffer adjacent to motor vehicle parking is 3 feet to allow for passenger loading and to prevent door conflicts. In constrained conditions or when not adjacent to a parking lane, the minimum width for a buffer is 1 foot 8 inches.
3. Two-way protected bicycle lanes on two-way streets are not as desirable due to challenges for roadway user expectancy at intersections and driveways.
4. Two-way protected bicycle lanes function best on one-way streets, preferably on the left side of the road.

Barrier Types

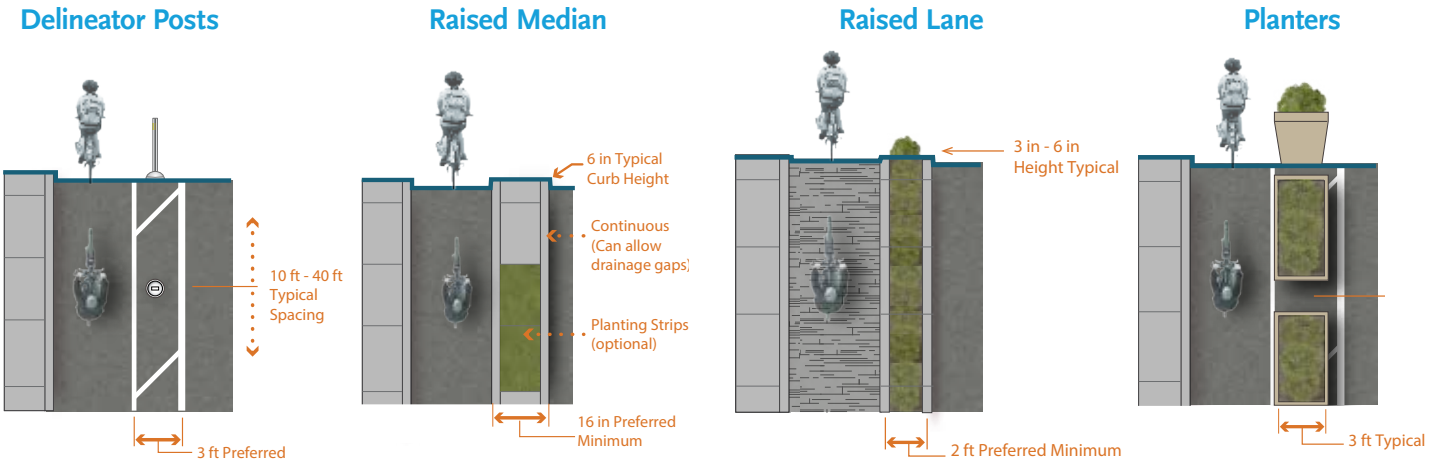
Protected bicycle lanes may use a variety of vertical elements to physically separate the bikeway from adjacent travel lanes. Barriers may be robust constructed elements such as curbs, or may be more interim in nature, such as flexible delineator posts. Each of these barrier types is compatible with adjacent motor vehicle parking, which can provide an additional buffer.

Barrier types appropriate for retrofit projects:

- Flexible delineators
- Bollards
- Planters
- Parking stops

Barrier types appropriate for reconstruction projects:

- Curb separation
- Medians
- Raised protected bicycle lane with vertical or mountable curb
- Pedestrian safety islands



Source: FHWA Separated Bike Lane Planning and Design Guide, 2015.

Design Guidelines

1. **Maximize effective operating space**
   Place curbs or delineator posts as far from the through bikeway space as practicable. Allow for adequate shy distance from vertical elements to maximize useful space.

2. **When next to parking, accommodate opening doors**
   Allow for 3 feet of space in the buffer space to allow for opening doors and passenger unloading.

3. **Integrate landscaping**
   The presences of landscaping in medians, planters and safety islands increases comfort for users and enhances the streetscape environment.

4. **Consider maintenance needs**
   In constrained conditions, the barrier type may need to be removable to allow for regular maintenance.

5. **Provide drainage infrastructure**
   When a physical barrier is used to separate the bikeway from traffic, install drains in both the barrier and at curbside to allow for water infiltration.

04 Protected Intersection

A protected intersection uses a collection of intersection design elements designed to maximize user comfort within the intersection and promote a high rate of yielding to people bicycling. The design is based on a setback bikeway crossing using physical separation within the intersection to define the turning paths of motor vehicles, slow motor vehicle turning speed, and offer a comfortable refuge for people bicycling while waiting at a red signal.

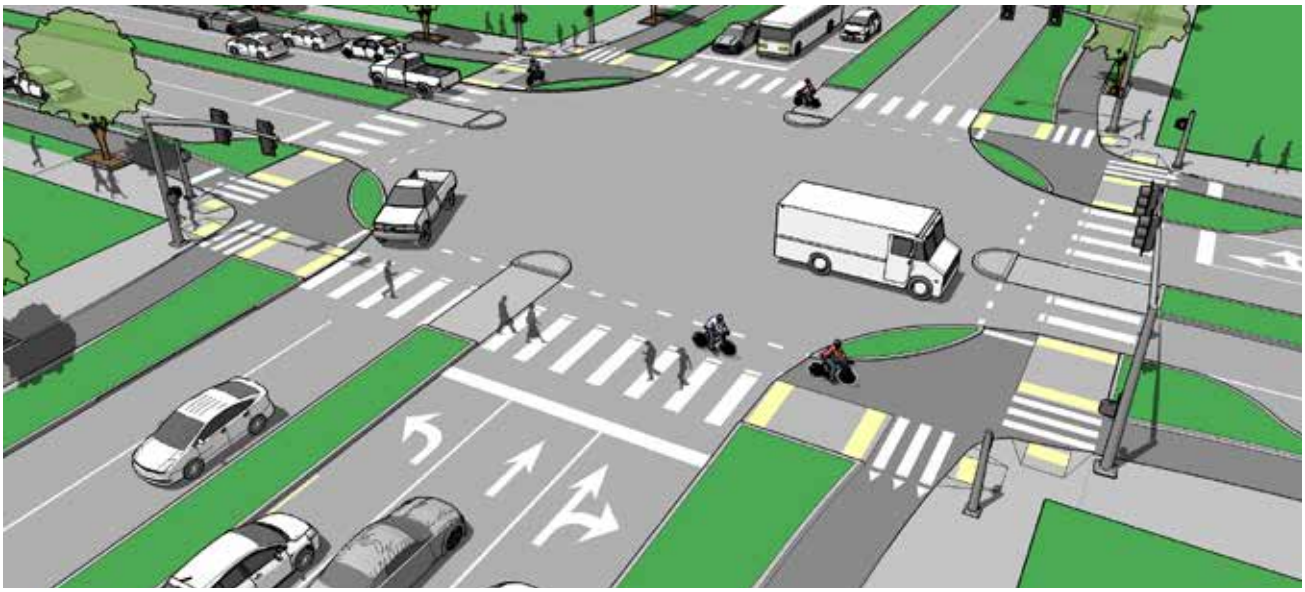
Davis, CA - The protected intersection connects buffered bicycle lanes and conventional bicycle lanes.

Benefits

- Slows driver turning speed.
- Improves driver sightlines of people bicycling.
- Provides a deceleration zone for yielding drivers.
- Provides a physically separated space for people waiting at an intersection on a red signal.
- Shortens crossing distances for people walking and riding bicycles.

Typical Application

- At signalized intersections along streets with protected bicycle lanes.
- At signalized intersections along streets with other bikeway types, provided that the bikeway transitions into a protected bicycle lane just upstream of the intersection
- Connecting two or more Regional Active Transportation Network facilities.
- Along crossings of major or minor streets to slow vehicles and increase yielding.
- At corner locations where pedestrian curb extensions are desired.



Design Guidelines

1. Setback bicycle crossing of 20 feet allows for one passenger car to queue while yielding. A larger setback is desired in high speed areas (> 35 mph). Smaller setback distance is possible in slow-speed, space constrained conditions.
2. Corner safety island with a 15-20 foot corner radius slowsmotor vehicle speeds. Larger radius designs may be possible when paired with a deeper setback or a protected signal phase.
3. A forward stop bar should indicate the area for people bicycling to wait at a red signal.
4. If a permissive left turn is allowed, a median island extending into the intersection should be used to channelize and direct left turning motor vehicles.
5. Intersection crossing markings should be used to identify the bicycle crossing. Consider green pavement to highlight the crossing area.

Salt Lake City, UT - The protected intersection is used to improve safety and circulation at an intersection where two protected bicycle lanes cross.

Further Considerations

Colored pavement may be used within the corner refuge area to clarify use by people bicycling and discourage use by people walking or driving.

Intersection approaches with high volumes of right turning vehicles should provide a dedicated right turn only lane paired with a protected signal phase to separate the right turn movements from through bicycle movements (Stanek and Alexander, 2015).

May be paired with bicycle specific signal phasing to offer further priority for bicyclists. Protected signal phasing may allow different design dimensions than are described here.

05 Bicycle Boulevard

Bicycle boulevards are low-volume, low-speed streets modified to enhance bicycle safety and comfort by using physical traffic devices and signage. These treatments encourage through movements of people bicycling while discouraging similar through-trips by motorized traffic (NACTO, 2012).

Bicycle boulevards create high quality, low-stress facilities for people bicycling without physical separation because the roadway design itself creates a calm traffic environment where people bicycling and people driving can comfortably share the road.

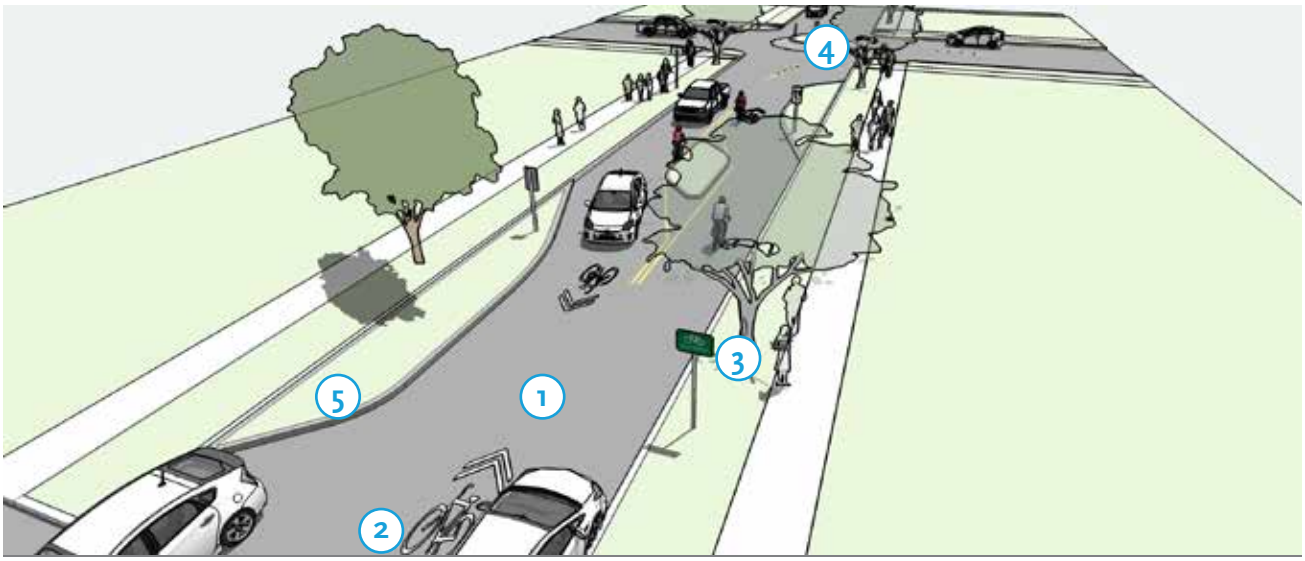
Long Beach, CA - Bicycle boulevards use speed and volume management techniques to create comfortable conditions for bicycling in mixed traffic. Alternating parking creates a chicane to slow traffic speeds.

Benefits

- Provide comfortable and attractive places to bicycle, attracting people of all ages and abilities.
- Signage and pavement markings serve as wayfinding for bicycle riders and also brings awareness to the street's status as a bikeway.
- Can benefit people walking, residents and other users through crossing improvements, traffic calming, landscaping, and reduced impact from motor vehicle volumes such as noise, air quality, and traffic safety.

Typical Application

- Parallel with and in close proximity to major thoroughfares (1/4 mile or less).
- Follow a desire line for bicycle travel that is ideally long and relatively continuous (2-5 miles). The bikeway should have less than 10 percent out of direction travel compared to shortest path of primary corridor.
- Reduce traffic volumes down to 1,500 cars per day (2,000 cars per day maximum).
- Use traffic calming to maintain an 85th percentile speed at or below 20 mph.
- Selection of major street crossing treatments based on cross street volumes, lane configurations, turning restrictions, presence of medians and traffic control devices.



Design Features

1. No centerline should be used on the roadway to promote full user of roadway by people bicycling.
2. Bicycle boulevard markings or shared lane markings (Caltrans, 2014a, 9C-9) should be placed frequently along the route to identify the bicycle boulevard.
3. Class III bike route wayfinding signs should be used to identify bikeway network connections and direct users to nearby destinations (Caltrans, 2014a).
4. Minimal use of stop signs along the route allow for fast bicycle travel.
5. Speed management methods avoid creating narrow pinch points for people bicycling.
6. Volume management methods should always allow through access for people bicycling.
7. At offset intersections, treatments should reduce exposure to fast vehicles and may concentrate bicycle crossings at one location to permit the use of robust crossing treatments.

Long Beach, CA - Bicycle boulevard or shared lane markings should be used to identify the local bikeway to all users.

Further Considerations

Stop signs should not be oriented to the bicycle boulevard route. This improves bicycle travel time but may attract motor vehicle traffic. Monitor conditions over time to determine if additional volume control measures may be needed.

See the NACTO Urban Bikeway Design Guide for detailed guidance on bicycle boulevards.

06 Advisory Bicycle Lanes

Advisory bicycle lanes (also called dashed bicycle lanes) provide a bicycle-priority space on a two-lane street too narrow for conventional bicycle lanes. Similar in appearance to bicycle lanes, advisory bicycle lanes are distinct in that they are temporarily shared with motor vehicles during head-on approaching maneuvers and turning movements. (FHWA, 2015a)

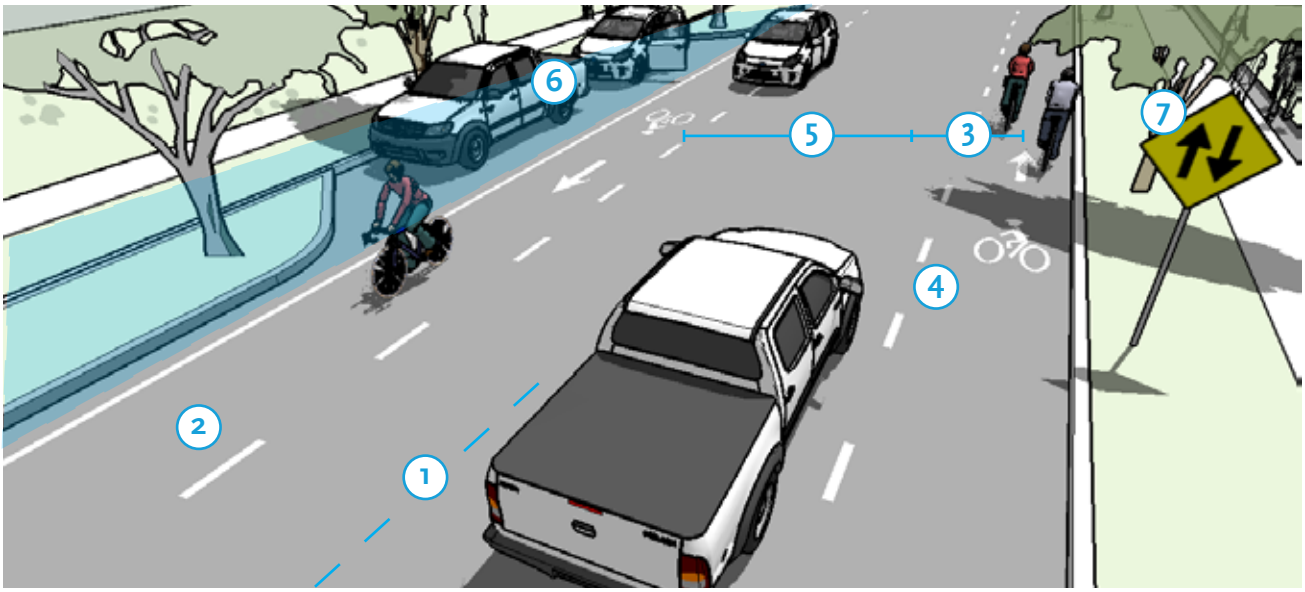
Minneapolis, MN - This downtown street is too narrow for both conventional bicycle lanes and parking. Advisory bicycle lanes allow the road to continue to serve parking and motor vehicle access, while providing a prioritized space for people to ride.

Benefits

- Creates priority for people bicycling in what would otherwise be a shared-roadway condition.
- Increases predictability and clarifies positioning between people bicycling and people driving.
- Encourages increased separation while passing.

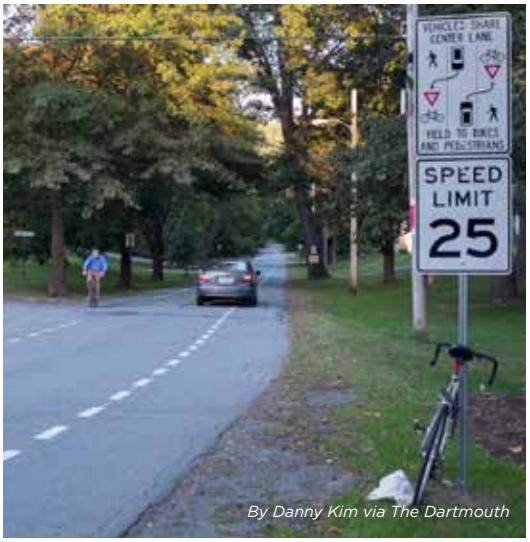
Typical Application

- This treatment may be most appropriate on roadways with low volumes if the road is straight with few bends, inclines or sightline obstructions.
- Motor vehicle traffic volumes are low-moderate (1,500-4,500 ADT). May function on streets with up to 6,000 ADT.
- Narrow two-lane streets where there is insufficient room for conventional bicycle lanes.
- Streets with a travel lane area of 20-30 feet. Streets with travel area wider than 30 feet can support conventional bike lanes.



Design Features

1. No centerline on roadway to promote safe passing distances.
2. Bicycle lane delineated with white broken line to permit encroachment when necessary.
3. Advisory bicycle lane width of 5 to 7 feet.
4. Bicycle lane markings should be used to clarify the designated use of the lane.
5. Recommended two-way motor vehicle travel lane width of 16 feet. Some installations have worked with center lane as narrow as 10 feet.
6. If a parking lane is present it should be highly utilized or feature frequent curb extensions to clearly define the edge of the travelled way. Parking is prohibited within the advisory bicycle lane.
7. Two-Way Traffic warning sign (W6-3) may be used to clarify two-way operation of the road.



Hanover, NH - Advisory lanes used to provide a bicycling and walking space on a street without sidewalks or room for bicycle lanes.

Further Considerations

This treatment is considered experimental by FHWA and may require a Request to Experiment as described in section 1A.10 of the CAMUTCD. Specific design detail should conform to CAMUTCD and CTCDC experimentation requirements.

Consider the use of colored pavement within the advisory bicycle lane area to discourage unnecessary encroachment by motorists or parked vehicles.

Advisory bicycle lanes may be appropriate on low volume streets in freight districts. Required passing widths for truck or emergency vehicles should be considered on routes where such vehicles are anticipated.

07 Bicycle Priority at Signals

Bikeway crossings of signalized intersections can be accomplished through the use of a **Protected Bicycle Phase,** which reduces conflicts with motor vehicles by separating bicycle movements from any conflicting motor vehicle movements, or through a **Leading Bicycle Interval,** which offers a head start crossing for people riding bicycles.

Portland, OR - A bike lane adjacent to double right turn lanes normally requires a stressful, difficult maneuver to avoid conflict. With a bicycle signal, conflict is regulated and the conditions are improved.

Benefits

- Bicycle signals simplify bicycle movements through complex intersections and clarify operations for all road users.
- A **protected bicycle phase** eliminates conflicting movements at signalized intersections.
- A **leading bicycle interval** reduces conflict by prioritizing bicycle movements with a head start over motor vehicle traffic.

Typical Application

Protected Phase

- Two-way or contra-flow (opposite direction) bicycle lanes where unconventional bicycle movement or increased conflict points warrant protected operation.
- Used where right-turn volumes are typically over 150 per hour.

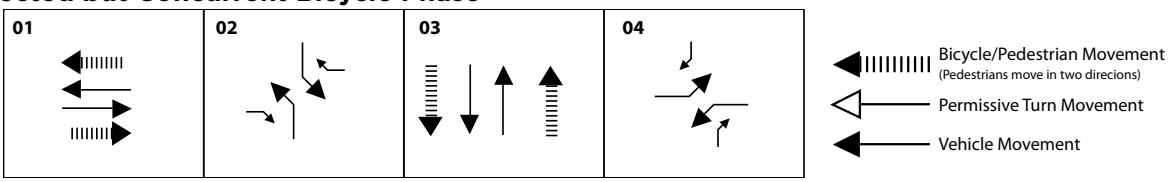
Leading Interval

- Appropriate in large intersections.
- Pairs with what would otherwise be permissive conflicting movements.
- 2-3 seconds leading interval allow people riding bicycles to take a primary position within the intersection.

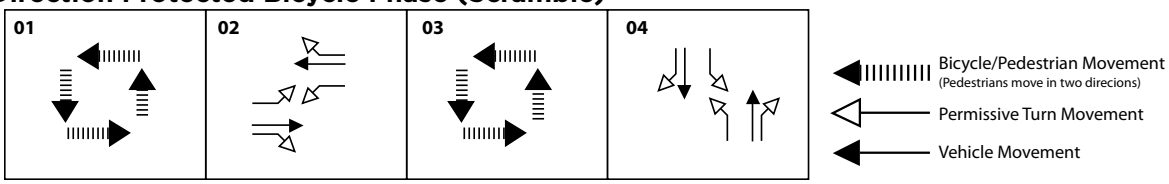
Signal Phase Diagrams

The diagrams below are examples of signal cycle patterns to accommodate protected or leading bicycle signal phases. These are simple examples that may be combined and overlapped in a variety of ways in response to site specific conditions.

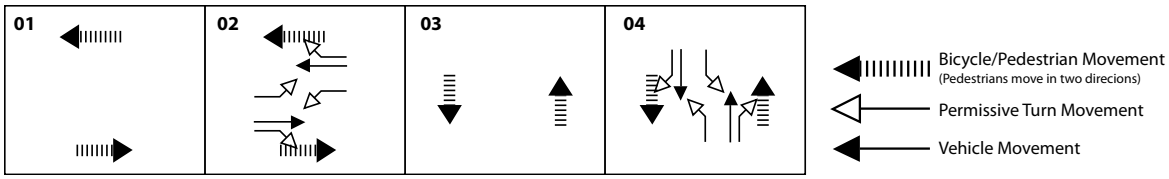
Protected but Concurrent Bicycle Phase



All-Direction Protected Bicycle Phase (Scramble)



Leading Bicycle Interval



Bicycle Signal Design Features

- Bicycle signal head shall be placed in a location clearly visible to people approaching by bicycle.
- Supplemental "bicycle signal" sign (MUTCD R10-10b) is required.
- "No Turn on Red" (MUTCD R10-11) is necessary when bicycle signal is green to prevent conflicts and to meet FHWA regulations.
- Signal detection should be reliable, in the form of well placed loop detection, pushbutton or microwave detectors.
- Consider the use of a countdown signal (shown at right) or a detection indicator light for positive indication of bicycle detection.

Portland, OR - A countdown signal beside the bicycle signal head informs waiting bicyclists of the timing remaining until a green signal.

Further Considerations

Bicycle signal heads are permitted by FHWA per Interim Approval 16 (IA-16). This approval is compatible with exclusive or protected-but-concurrent bicycle signals, but does not permit leading bicycle intervals or all-direction bicycle phases.

Provide at least 5-7 seconds of green time for bicycle movements. Yellow signals should be between 3-6 seconds, with longer yellows recommended for wider intersections so that people crossing by bicycle are not as worried about being in conflict with cross-traffic.

08 Sub-Grade Bicycle Intersection

Sub-grade bicycle intersections are subterranean shared use path or bicycle freeway systems that allow people bicycling to avoid interacting with motor vehicles at a large intersection or freeway interchange. These connections help save time and distance and reduce conflicts by allowing non-motorized traffic to proceed through the middle of the intersection without having to circumnavigate the facility.

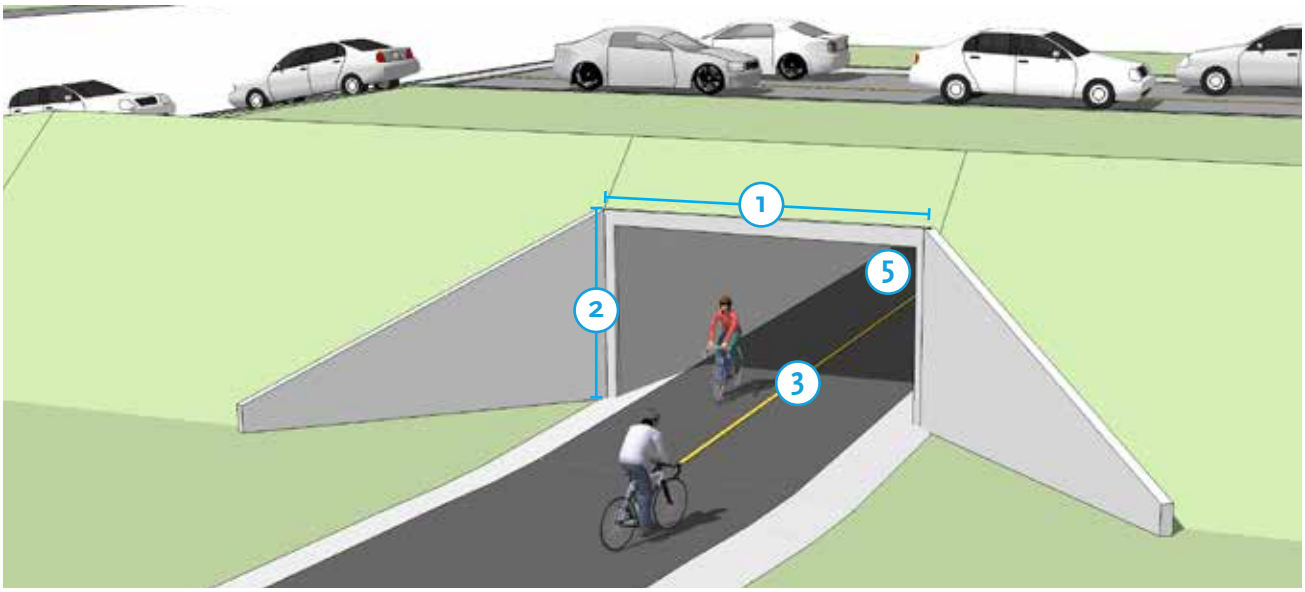
Woodbury, MN - Shared-Use Paths connect below a large, high-speed suburban intersection.

Benefits

- Allows bicycle riders to navigate busy intersections with high traffic volumes.
- Shallow grades are possible.
- Completely separated from motor vehicles and reduces conflicts compared to typical large intersections or roundabouts (Twin Cities Streets for People, 2011).
- Eliminates signal delay for people walking and bicycling.
- Offers low aesthetic impacts.

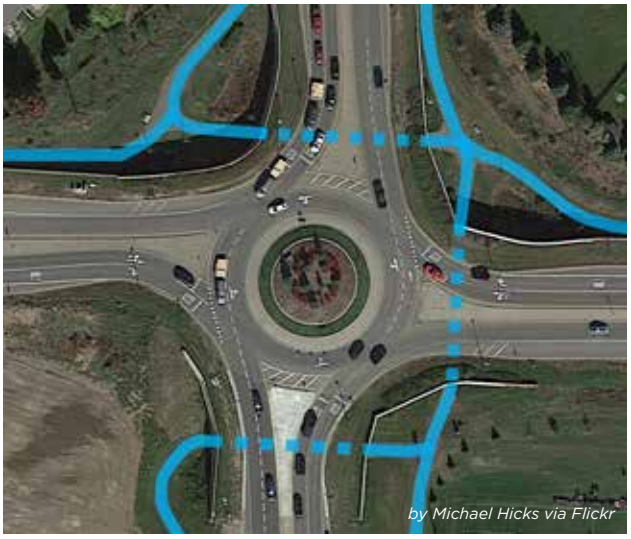
Typical Application

- At large intersections or multi-lane roundabouts.
- Connecting two or more Regional Active Transportation Network facilities.
- Most suitable in suburban or rural environments where sufficient right of way (ROW) is available.



Design Features

1. 14 foot minimum width; greater widths preferred for undercrossing lengths over 60 feet.
2. 10 foot minimum height.
3. The undercrossing area should have a centerline stripe to clarify direction of travel.
4. Wayfinding signage should be used to direct facility users to connecting bikeways.
5. The undercrossing area should be well lit.
6. Clear sightlines for bicycle users are necessary to avoid conflicts.
7. Gradient of the ramps to access subgrade network should be 3.5 percent (5.0 percent max).



Woodbury, MN - Shared-Use Paths connect below a large, high-speed suburban intersection.

Further Considerations

Lighting should be considered during the design process for any undercrossing with high anticipated use or where safety is a major concern. Shared use path users may be temporarily out of sight from public view and may experience poor visibility themselves. To mitigate safety concerns, an undercrossing should be designed to be spacious, well-lit, equipped with emergency telephones at each end and completely visible for its entire length from end to end.

A high level of activity should be anticipated for bicycle undercrossings.

Potential problems include conflicts with utilities, drainage, flood control and vandalism.

09 Floating Bicycle Path

Floating bicycle paths are cantilevered structures that transition into floating dock pathways to serve part of a continuous shared use path or bicycle freeway system across or along a body of water. They are built to accommodate fluctuations in water level and are most applicable when sufficient right-of-way is not available to construct the path on land.

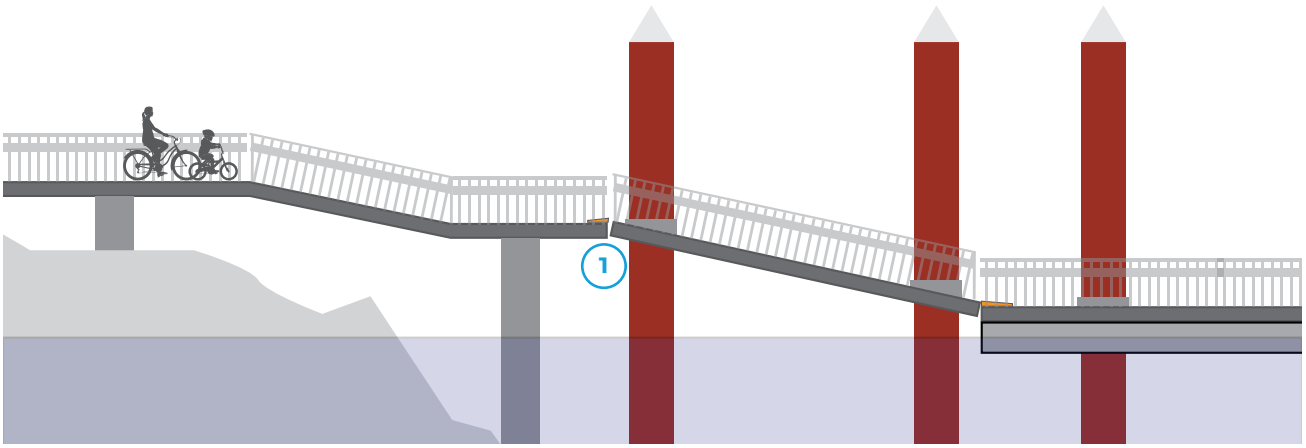
Portland, OR - a floating path fills a gap in the Eastside Esplanade shared use path corridor.

Benefits

- Provides a non-motorized connection when ROW is unavailable along a river bank.
- Designed for Americans with Disabilities Act (ADA)-compliant grades and landings.
- Can accommodate fluctuations in river level.
- Separated from motor vehicles.
- Connects neighborhoods to the river, provides access and scenic views.m

Typical Application

- Harbors with limited dock activity.
- Reservoirs.
- Slow-moving river waterfronts.
- shared use path or bicycle path networks.
- Where ROW is limited along the waterfront.
- When river level is expected to fluctuate seasonally.



Design Features

1. Ensure a smooth transition between floating portion and land portion and ADA compliant grades and landings.
2. Minimum 12 feet wide path. Separate treads should be provided in areas with scenic vistas or high volumes of people walking.
3. Can include amenities such as boat docks, canoe launch points, artwork, landscaping, historic markers, interpretive displays and lighting.

Philadelphia, PA - The Schuylkill Banks path is elevated over the Schuylkill River.

Further Considerations

A floating path can only support a range of water levels. In extreme water flow events due to rain, snow or drought, be prepared to close the path.

The pathway must consider all kinds of users and avoid constraints that reduce usability.

Brisbane's floating path was destroyed by a flood in 2011 and rebuilt using a fixed structure (Briscycle, 2015).

Waterfront access can serve as an economic catalyst.

Can require mitigation measures in permitting process, including riparian mitigation, bioengineering, and slope stabilization.

10 Bicycle Freeway

Bicycle freeways are high-speed, high-capacity, long-distance bikeways, ideally located in independent corridors and grade-separated from the street network. They provide safe, fast travel into city centers and should be the quickest route for bicycle commuting.

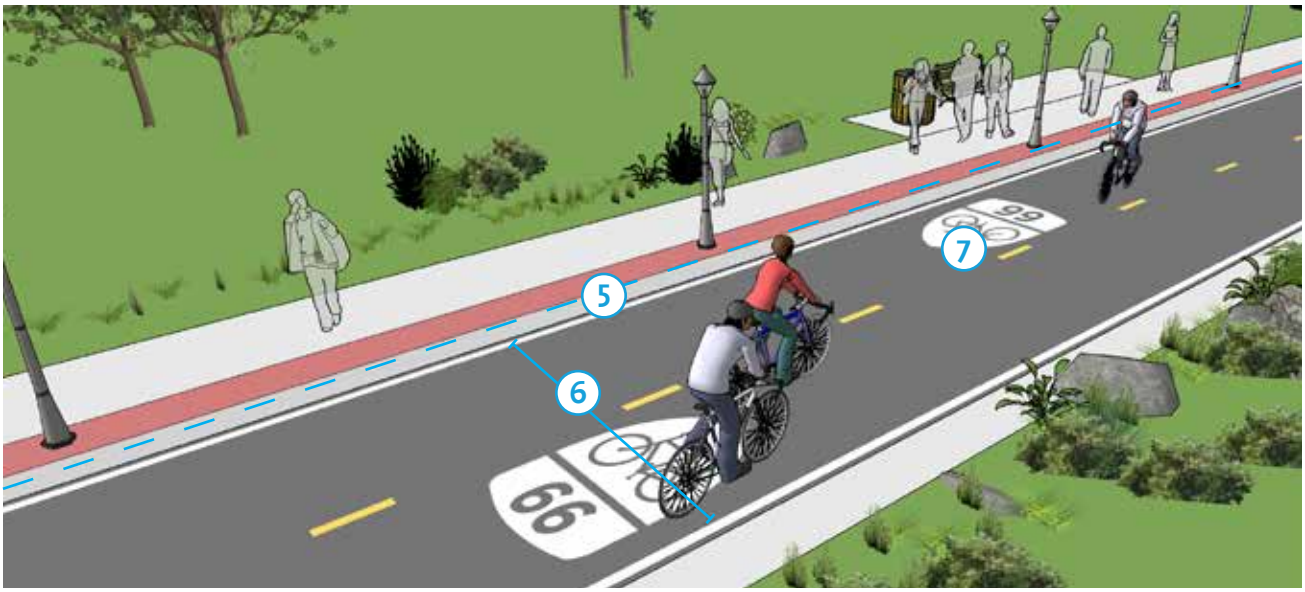
Minneapolis, MN - The Cedar Lake Trail offers tread separation by mode and direction.

Benefits

- Optimized for high-speed travel (up to 25 mph) over long distances (>5 miles).
- Limited interruptions at intersections and crossings.
- Separated from motor vehicles and people walking.
- Highly visible routes with distinctive design, markings and signs.

Typical Application

- Follow a desire line for bicycle travel that is ideally long (>5 miles) and relatively continuous.
- High demand corridors connecting cities and population centers together.
- Along existing or abandoned rail and utility corridors and waterways (e.g., rivers).
- Below, adjacent or cantilevered to the side of an elevated transit structure, bridge or freeway.
- Elevated if necessary to provide efficient travel.
- May connect to Protected Bicycle Lanes or Bicycle Boulevards to fill gaps or serve as routes into neighborhoods.



Design Features

1. Right of way for people bicycling at all uncontrolled crossings.
2. At grade crossings of minor and collector streets must provide priority to the bicycle freeway (TfL, 2015).
3. Access to the bicycle freeway should use ramp-style geometry to allow riders to enter and exit at speed.
4. Smooth surface.
5. Must not be shared with people walking, jogging, skating or other uses.
6. Must permit passing and paired riding (TfL,2014):
    - Two way: 14 feet wide minimum
    - One way: 8 feet wide minimum
7. Route wayfinding and signs along with route numbering and route shield markings (Caltrans, 2014a).

Netherlands - This bicycle freeway is for bicycling only, and is physically separated from the motor vehicle roadway network - allowing high speed, long distance travel with minimum delay.

Further Considerations

While routes on independent corridors are preferred, some on-street alignments may be necessary. These routes should be optimized for bicycle priority travel, with an emphasis on reducing delay at intersections and crossings of other streets.

At crossings of minor streets, the bicycle freeway should have priority over the cross street. On minor streets, crossings should be raised, and feature geometric design features to slow drivers and encourage yielding.

At crossings of major streets, the bicycle freeway should actuate traffic signals or hybrid beacons to stop motor vehicle traffic. The signal phasing should be short and have no more than 30 seconds of delay for bicycle users (60 seconds max).

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APPENDIX

J BICYCLE PARKING ANALYSIS

DRAFT

Metro Active Transportation Strategic Plan

Bicycle Parking & Multi-Modal Interface Recommendations

alta PLANNING + DESIGN

Table of Contents

1. The Role of Bicycle Parking and Multi-Modal Interface Improvements

While bicycling as a mode of transportation is consistently on the rise in the United States, this increase is primarily occurring in places that have invested time and resources into improving bicycle access (Pucher et al., 2011). Transit agencies around the country are recognizing the need to accommodate people who ride bicycles. Harnessing this growing demographic is a means to encourage new transit ridership by extending the range of the transit network. Bicycle parking at transit stations and bicycles on transit vehicles both play essential roles in improving bicycle access to transit.

Bicycle access mode share

The percentage of transit riders accessing the transit system via bicycle

Bicycle access to transit is particularly efficient for rail transit. Compared to bus services, rail services have limited geographic coverage and fewer stops, often requiring travelers to make connections by modes other than walking. Metro's Spring 2015 Customer Survey found that, compared with bus riders, more train riders connect to stations by modes other than walking, by a difference of 15 percentage points (83 percent walk access mode share for bus services versus 68 percent walk access mode share for train services). These figures include the 23 percent of train riders (but only 10 percent of bus riders) driving to stops or stations, along with higher numbers of people riding bicycles and skateboards to rail transit. Reducing the number of train riders who access the transit system by private motor vehicle benefits Metro (reducing parking demand at stations) and the transportation system as a whole (removing vehicles from the roadway network), in addition to the other economic, health, environmental and safety benefits associated with decreasing vehicle-miles traveled (VMT). Research reveals that provision of high-quality bicycle parking at transit stations is associated with increased bicycle trips to transit (TCRP, 2012).

Metro has already made significant strides in improving the multi-modal interface of its system. With an accommodating "Bikes on Metro" policy, one Bike Hub in operation (with two more coming soon) and bicycle parking in place at high-demand stations, Metro is taking the initiative to encourage bicycling as a component of transit. Its website features an entire section dedicated to bicycles, which includes information on the policy for taking bicycles on transit, the different types of bicycle parking, and a printable "Bike Pocket Guide" with bicycle safety tips and a map of bicycle parking locations. For all of these reasons, Metro is encouraging more people to access transit by bicycle and, as a result, there will be more demand for bicycle parking in the near future. With sufficient access to secure bicycle parking, more people will be able to access Metro and existing Metro users will be able to incorporate bicycling as part of their transit experience.

Bicycle parking improves the multi-modal interface and increases transit ridership by:

- Extending the effective range of the transit network to larger areas and greater numbers of potential riders
- Increasing flexibility and solving first- and last-mile connection issues
- Encouraging mode-shifts (TCRP, 2012).

Extending the range of the transit network

Studies show that most transit riders will walk one-half of a mile – about ten minutes – to a station. In this same amount of time, one can travel over two miles by bicycle (four times the distance). With a radius four times longer, the catchment area for bicycle-to-transit trips (the bikeshed) is about 16 times larger than that of walk-to-transit trips (TCRP, 2012).

Bicycles and transit are complementary modes. Transit is most effective for moderate- and long-distance trips along busy corridors, and is less effective at serving point-to-point trips within local neighborhoods or across sprawling suburban areas. Bicycling, meanwhile, is most effective for shorter trips but is often not practical for longer commutes involving significant time, preparation and potential traffic stress. Therefore, combining transit with bicycling enhances both modes, resulting in high levels of mobility: deep reach into communities combined with fast and frequent service along key corridors.

Increasing flexibility and solving first- and last-mile connection issues

Bicycle parking and bicycles-on-board enable more people to access transit more easily. With the assurance of bicycle parking at transit stops or the option to take their bicycle on-board, users have more travel options for the first and last miles of their trips. The Mineta Transportation Institute conducted a comprehensive study in 2014 that measured bicycle-friendly policies and their impacts on accessibility to transit. People who combined bicycles with transit (Cycle-Transit Users, or CTUs) were surveyed in Philadelphia and San Francisco. CTUs indicated that bicycles and transit serve as access modes for one another. Respondents said the most common reasons for being a CTU were: 1) it was faster than using either mode on its own, 2) their trips were too long to travel by bicycle alone, 3) using both modes together eliminated biking in the dark or in bad weather, and 4) a bicycle was needed to reach their final destination. In almost all cases, respondents noted bicycle parking as a key factor in their decision to bicycle to transit. If CTUs could not easily find secure bicycle parking (or take their bicycle on transit), 15 percent said that they would drive a car instead (MTI, 2014).

Encouraging mode shifts

New or improved bicycle access facilities can lead to a mode shift. People who drive may see the combination of bicycle and transit as a convenient alternative, while people who usually bicycle may take advantage of bicycle parking or the option to take a bicycle on-board as a way to fit transit into one portion of their trip. Overall, then, the multi-modal interface sees improvements and transit ridership increases.

When bicycle parking is provided at transit stations, people use it. In 2012, the Massachusetts Bay Transportation Authority inventoried bicycle parking spaces and the number of parked bicycles at each of the system's rapid transit stations, commuter rail stations, and some commuter boat terminals and bus stops. When compared to the 2009-2011 inventory, staff noted a 48 percent increase in parked bicycles and a 30 percent increase in parking spaces. This indicates that people who were not previously riding bicycles as part of their commute decided to do so in response to the installation of more bicycle parking. These findings led to a recommendation to install more short-term and long-term bicycle parking (CTPS, 2014).

In addition to the provision of bicycle parking, accommodating bicycles on transit is another way to integrate bicycle travel with transit. Every Metro bus is equipped with two or three bicycle racks on the front. Folding bicycles with wheels that are 20 inches or smaller can be taken on board at all times. Metro also allows for standard-sized bicycles on Metro Rail trains at all times, provided that there is space to fit a bicycle. Metro provides designated open areas for bicycles on train cars on the Red, Purple, Green, Gold, Blue and Expo Lines (Metro, 2016). This policy is more accommodating to people with bicycles than that of many transit agencies, where bicycles are only permitted during non-peak times. However, on-board accommodation cannot substitute for secure bicycle parking. The capacity for trains to accommodate an increasing number of bicycles over time is limited by physical space. Moreover, a lack of secure bicycle parking at rail stations tends to result in more bicycles on board trains: in the Bay Area, approximately 25 percent of people who brings their bicycles on board transit do so because of a lack of secure bicycle parking (BART, 2012). Improving bicycle parking at stations can improve service for transit customers and enhance on-board bicycle access for those who prefer to use it, simply by freeing up space on transit vehicles.

Bicycle share systems can support transit in the same way that bicycle parking can. A study from the National Center for Smart Growth Research and Education found a statistically significant association between Washington D.C.'s Capital Bikeshare ridership and Metrorail ridership. The study predicts that a 10 percent increase in bicycle sharing ridership will likely lead to a 2.8 percent increase in transit ridership (Ma et al., 2014). Metro has already taken steps in this direction. With a new bicycle share pilot program coming summer 2016, Metro has committed to making bicycle share a key part of the public transportation system. The pilot program will feature 80 stations and nearly 1,000 bicycles. With the new bicycle share system and increased bicycle parking, Metro is significantly improving its multi-modal interface and enabling people to more effectively use transit.

This memorandum outlines policy approaches and design techniques to improve the multi-modal interface in Los Angeles County and enable more people to access transit more easily.

2. Existing Bicycle Parking Requirements and Guidance

Existing Requirements

It is important to recognize the existing bicycle parking requirements within Los Angeles County before moving forward with bicycle parking infrastructure. It is still relatively uncommon for cities to have bicycle parking ordinances, but the following places are some of those in LA County that include requirements for bicycle parking supply in their Municipal Codes:

1. Los Angeles County
2. City of Los Angeles
3. City of Santa Monica
4. City of West Hollywood
5. City of Glendale
6. City of Burbank
7. City of Inglewood
8. City of Lancaster
9. City of Whittier
10. City of South Gate

Among these leaders, several jurisdictions have gone further, incorporating innovative ways to utilize bicycle parking as a transportation demand management (TDM) tool:

- Los Angeles County
    - Reduction in Required Vehicle Parking Spaces When Bicycle Parking Provided: "For every two bicycle parking spaces provided above the minimum number of such spaces required…the required number of vehicle parking spaces required may be reduced by one, with a maximum reduction in vehicle parking spaces of five percent of the total number of such spaces otherwise required."
- City of Santa Monica
    - Bicycle Parking Ordinance: One vehicle space can be replaced by four bicycles for up to 30 percent of the required number of spaces for commercial developments near transit lines and for up to 10 to 20 percent at other types of developments.
- City of South Gate
    - Density Bonus Incentive: 15 percent density bonus with the "provision of a transportation system management plan, which describes the full set of facilities and services to be provided by a development project, proposed to reduce the number of employee commute trips to the site; plus any other facilities, amenities, or services intended to encourage carpool, vanpool, transit, bicycle, or pedestrian commuting."
    - The Density Bonus Incentive also includes a one percent bonus for every five bicycle lockers installed (up to five percent), a five percent bonus for constructing an on-site internal walk/bikeway network, a two percent bonus for connecting to an existing or future regional bike trail, and a one percent bonus for every shower and locker facility (up to five percent).

- Combining these multi-modal interface incentives can result in a density bonus of more than 30 percent, with transit, carpool and alternative vehicle provisions accounting for an additional 20 percent.

State Bicycle Parking Guidance

The State of California separates bicycle parking into two classes. Class One bicycle parking is long-term, secure parking. This includes bicycle lockers, bicycle rooms or cages. Long-term bicycle parking usually serves employees, students, residents, commuters, and others who stay at a particular site for over two hours. People who park a bicycle somewhere for a longer period of time expect a secure, sheltered space (SFPD, 2013), and this is generally the case for transit trips (although short-term parking can still play a role in the bicycle-transit interface).

Class Two bicycle parking is meant for short-term use, designed to serve visitors who stay at a site for less than two hours (typically shoppers, customers, and guests). Bicycle racks are the most common form of Class Two parking and these should be convenient, easy to use, and visible (SFPD, 2013).

Site Design

To encourage maximum utilization rates and to ensure that bicycling complements transit, bicycle facilities must be carefully designed at each transit station. Short-term parking and long-term parking require different site plans and different design considerations. Regardless of the type of parking, users must be able to easily access the facilities. For example, sidewalk bicycle racks that are placed adjacent to curbside vehicle parking should be located between the parking spaces and in line with existing objects in the furnishing zone, such as trees and parking meters, to avoid conflicts with opening car doors or other sidewalk users. Conflicts with moving vehicles can generally be mitigated by providing dedicated access routes to the transit station for people walking and/or bicycling and avoiding reliance on parking lots as access routes. The station site's design should have intuitive circulation and wayfinding, so as to encourage the use of both short-and long-term bicycle parking facilities.

Spacing and layout of bicycle parking facilities should be consistent with Metro's AS-103 Standard Drawing and Rail Design Criteria (Metro, 2012). Relevant site design requirements are summarized below.

Short-Term (Free) Bicycle Parking

Short-term bicycle parking should be:

- In the form of an inverted-U rack with capacity for two bicycles
- Placed no more than 50 feet from the station entrance
- Located in a highly-trafficked area with natural, passive surveillance

Long-Term (Paid-Secure) Bicycle Parking

Long-term bicycle parking is designed primarily for safety of users and their bicycles. Whereas short-term parking takes the form of bicycle racks, long-term parking can consist of a wider variety of facilities. These can be located indoors or outdoors and can include bicycle lockers or high-capacity bicycle rooms (also known as Secure Parking Areas or SPAs). Long-term

bicycle parking may be located more than 50 feet from the station entrance, but no further than the nearest car parking space. Long-term bicycle parking should be:

- Adequately lit
- Visible through natural surveillance and cameras
- Weather-protected
- Access-controlled through:
    - Leased or on-demand lockers that use either keys or smartcards
    - Keycard/code access to a garage cage or bicycle room

Lockers for personal items and showers are occasionally provided at long-term bicycle parking locations. However, these features are typically best-suited to privately-managed facilities. Further consideration of business models and operating arrangements is required before installing such facilities at public transit stations.

3. Bicycle Parking Supply for Metro Rail Stations

For bicycle parking to be effective, there must be a sufficient supply of spaces to accommodate current and future demand. There are a variety of ways to approach such an analysis, but most estimates of bicycle parking demand at transit stations incorporate the following variables:

- Transit ridership
- Bicycle ridership (at the station and/or in the community)
- Existing bicycle parking supply

This memo presents four alternative approaches. Methodology 1 comes directly from Metro's Bicycle Parking Baseline Specifications (Metro 2012b); Methodology 2 is from the Transit Cooperative Research Program (TCRP, 2011); Methodology 3 is drawn from the Association of Pedestrian and Bicycle Professionals (APBP, 2015); and Methodology 4 is an adjusted version of Metro's methodology that incorporates aspects of the TCRP and APBP models. This memo recommends Methodology 4 as the preferred framework for calculating bicycle parking supply at Metro Rail stations going forward. [1]

Table 1 provides the parking supply results from the preferred methodology for all Metro Rail Stations. The calculations provided in Table 1 represent an estimate of parking need for each station, based on transit ridership and bicycle access mode share. Recommended supplies for each station should be vetted by Metro staff and adjusted to reflect unique characteristics at each station, such as community-wide bicycle mode share, land use context, population density, transit dependency and available right of way.

Table 2, located in the Appendix, summarizes the results generated by each of these alternative methodologies.

Methodology 1: Metro Bicycle Parking Baseline Specifications

The first methodology is found in Section 12 93 12 of Metro's Bicycle Parking Ordinance. This approach uses a single variable:

1. Number of daily peak-period boardings for each station[2]

Two constants are also used in the Metro methodology:

2. 1.25 percent – called "current demand," Metro's estimated system-wide bicycle access mode share, circa 2012.
3. 60:40 – Metro's recommended ratio of short-term to long-term bicycle parking spaces at Metro Rail.

The peak-period boardings at each station were multiplied by the average bicycle access mode share (1.25 percent) to find the total required bicycle parking supply, which was then divided into short-term and long-term at a ratio of 60:40. Existing bicycle parking at each station was

[1] These approaches all focus specifically on Metro-supplied bicycle parking at Metro Rail stations; while there may be supplementary municipal-supplied parking available in the station area, those parking spaces are not included in this assessment.
[2] For the purposes of this analysis, daily peak-period boardings are estimated as 50 percent of average daily boardings.

then subtracted to find the deficiency in bicycle parking. These deficits form the basis of recommendations for additional short-term and long-term bicycle parking spaces (Tables 1 and 2).

Metro specifies that each station must have a minimum of six free, short-term bicycle rack spaces and eight paid-secure bicycle parking spaces. Therefore, if the methodology yielded recommendations of less than six short-term or eight long-term bicycle parking spaces at any station, the number of recommended spaces was automatically raised to these minimums.

Methodology 1 has the advantage of being straightforward, as it only requires one data input (peak period boardings). However, as Table 2 indicates, Methodology 1 generates parking requirements that are substantially lower than the other models, by a factor of two to four times.

Metro's Bicycle Parking Baseline Specifications peg "current demand" at 1.25 percent of peak ridership and "future demand" at 2.5 percent of peak ridership. Both of these inputs are technically variables that can be adjusted over time – as Methodology 4 has done – but the Bicycle Parking Baseline Specifications present these inputs as constants in the bicycle parking formula. This creates ambiguity about whether these inputs should be updated to current values before running the model. Moreover, the 1.25 and 2.5 percent values themselves are not defined, and could therefore represent either bicycle access mode share (more likely) or community-wide bicycle commute mode share (less likely). As a result, the Bicycle Parking Baseline Specifications, as written, do not provide the practitioner with guidance that is readily adaptable to different transit modes (e.g. bus stops) or to changing conditions over time (e.g. increased bicycle usage).

Methodology 2: Transit Cooperative Research Program (TCRP)

The second approach is the TCRP methodology. This method uses the Station Access Planning Tool (TCRP, 2012) and is spreadsheet-based. The tool is extensive, covering other aspects of transit access (such as motor vehicle parking demand), but for this analysis only the following variables were considered:

1. Number of total daily boardings at each station
2. The bicycle commute mode share in each station area[3]

In addition, two constants were used for all stations:

3. Assumed bicycle access mode share (set to 4 percent in consultation with Metro)[4]
4. 60:40 – Metro's recommended ratio of short-term to long-term bicycle parking spaces at Metro Rail stations

With these inputs, the spreadsheet's built-in formulas then yielded a recommended minimum number of bicycle spaces for each station. Again using Metro's 60:40 ratio of short-term to long-term bicycle parking, the total number of recommended spaces were divided into short-term spaces and long-term spaces. The existing bicycle parking inventory was again used to calculate a net amount of additional recommended short-term and long-term spaces. Metro's

[3] The percent of workers who commute by bicycle, within a three-mile travel shed.
[4] Metro's average bicycle access mode share for train riders is four percent (Metro, 2015).

minimum requirements of six short-term spaces and eight long-term spaces were also applied at any station where recommended bicycle parking supply fell below these thresholds.

Methodology 2 generates parking requirements that are two to four times as large as Methodology 1 and broadly consistent with Methodology 3, in terms of total spaces required. This is primarily due to increasing the assumed bicycle access mode share to four percent from 1.25 percent.

The TCRP model is the most complex of the four methodologies assessed. It contains advanced features, such as "effectiveness ratios," but the usefulness of these features is constrained by the quality of the available input data. The effectiveness ratio compares a station's bicycle access mode share with the bicycle commute mode share in the surrounding community, reasoning that bicycle parking improvements will be most effective at stations where the bicycle access mode share is significantly outstripped by the bicycle commute mode share in the surrounding community (in other words, where a latent demand for bicycle-transit access exists). The rationale of the effectiveness ratio is sound, but without bicycle access mode share data for each station, the utility of these calculations is limited and can even be misleading. The average systemwide bicycle access mode share used for this exercise (four percent) is substantially higher than the average bicycle commute mode share in Los Angeles County, which is less than half this number. As a result, the TCRP model produced unfavorable effectiveness ratios for many Metro Rail stations, since the average bicycle access mode share used (four percent) overstates the actual bicycle access mode share at many stations (which is likely closer to the bicycle commute mode share in the surrounding community). In short, the TCRP model has potentially useful features, but these features are only powerful if the input data is extremely detailed.

The complexity of the TCRP model also makes it ill-suited to handle projections of future conditions. The TCRP model's focus on existing conditions – and particularly the comparison between bicycle access mode share and bicycle commute mode share – means that assessing future conditions would require at least three assumed inputs: future transit ridership, future bicycle access mode share, and future bicycle commute mode share. This add layers of complexity to the projection process and introduces the potential for error. Moreover, it hinges upon a comparison (between bicycle access mode share and bicycle commute mode share) that is not particularly relevant for future conditions, as it may be assumed that these two percentages will approach one another over time as conditions for bicycling improve (both at transit stations and in general).

Methodology 3: Association of Pedestrian and Bicycle Professionals (APBP) Guidelines

The third methodology comes from the Sample Parking Requirements for Transit developed by the Association of Pedestrian and Bicycle Professionals' (APBP) and found in their Bicycle Parking Guide. These guidelines call for short-term parking spaces to equal two percent and long-term parking spaces equal to seven percent of A.M. peak period daily ridership. These rates are based on best practices throughout North America and are intended to meet current demand but also scale up for future mode shares. In order to calculate A.M. peak period daily ridership, each station's total daily peak ridership was divided in half. This number was

multiplied by two percent to yield the recommended short-term parking spaces, and seven percent for long-term parking spaces.

Methodology 3 generates parking requirements that are two to four times as large as Methodology 1 and broadly consistent with Methodology 2, in terms of total spaces required. The key differences between the APBP model and the TCRP model are:

- the APBP model is more streamlined, with only a single input required
- the APBP model is heavily weighted toward long-term parking. For instance, at Grand Station (Blue Line), the TCRP and APBP models require 98 and 100 spaces, respectively, but APBP requires 77 of these spaces to be long-term, as opposed to 39 in the TCRP model.

Methodology 4: Metro Bicycle Parking Baseline Specifications (Modified)

Recommended Methodology

The fourth and final approach is a modified version of Metro's guidelines. Instead of using a bicycle access mode share of 1.25 percent, the analysis was run again using an updated "current demand" input of four percent. Four percent was selected because it represents Metro's best estimate of average bicycle access mode share for train trips as of 2015 (Metro, 2015).

This final approach yielded recommendations that are broadly consistent with – but about ten percent lower than – both the TCRP and APBP models. The recommendations are significantly greater than those generated using Methodology 1, as a result of a higher assumed bicycle access mode share.

The subsequent section makes further comparisons between the Methodologies and explains why Methodology 4 is the Recommended Methodology.

Bicycle Parking Recommendations

The purpose of a bicycle parking supply model is to accurately estimate the demand for bicycle parking spaces at a given location. As this analysis has demonstrated, at least three models are available that produce broadly similar results (Methodologies 2, 3 and 4). However, these models have vastly different input requirements and rely upon different assumptions. An effective bicycle parking supply model is one which:

- is intuitive
- uses readily accessible data
- is adjustable and scaleable

Based on these criteria, Methodology 4 (Metro Bicycle Parking Baseline Specifications – Modified) is the recommended bicycle parking supply model for future use by Metro. Both Methodology 4 and 3 (APBP) are intuitive and use readily available data. However, the Metro model has an edge when it comes to being adjustable and scaleable. The APBP model calculates parking demand as a direct function of ridership (two percent and seven percent of A.M. peak ridership for short-term and long-term parking, respectively) and does not consider bicycle usage as a variable. This means that the APBP methodology is unable to model a scenario in which bicycle use increases (e.g. a future condition) and cannot account for differences in bicycle parking demand between communities with similar transit ridership. In other words, where the TCRP model includes too many bicycle usage variables to be intuitive and readily accessible, the APBP model includes too few to be adjustable and scaleable; as a result, neither methodology is as powerful as the Metro model.

The Metro model essentially relies upon the two most critical variables in estimating bicycle parking demand at transit stations: level of transit use and level of bicycle use. It does so in a way that is intuitive (simply multiplying the bicycle access mode share against transit boardings), with minimal data requirements and the ability to adjust either key variable to model alternative scenarios (e.g. future conditions or other transit modes).

Detailed recommendations for the implementation of Methodology 4 are described below.

Bicycle Parking Supply Methodology Recommendations

In order to implement appropriate amounts of bicycle parking and continue to update bicycle parking stock over time, Metro should make the following adjustments to its Metro Rail Design Criteria (Metro, 2012a):

1. Adjust the Bicycle Parking Formula to clearly define peak boardings and bicycle access mode share.
2. Specify that peak boardings may be assumed to represent 50 percent of daily boardings.
3. Clarify that bicycle access mode share is a variable, not a constant, and that it may be updated over time or adjusted to model other conditions. For analyses of Metro Rail and Metro Bus services, calibrate bicycle access mode shares to the latest known (2015) system-wide averages: four percent and three percent, respectively.
4. Adjust the Bicycle Parking Formula over time as ridership and bicycle access mode shares change.

5. Conduct parking inventory assessments and bicycle user surveys at Metro Rail stations to determine parking utilization rates and bicycle access mode shares for each station. Parking inventories should be conducted during clear, mild weekdays that are not holidays. In Los Angeles County, spring and fall are best suited to data collection, as weather is typically mild and schools are in session.
6. Consider adjusting the default ratio of short-term to long-term bicycle parking to include a greater share of long-term parking. The current ratio is 60:40, but APBP (2015) recommends a 30:70 split.
7. Re-assess the methodology for estimating bicycle parking demand every three to five years.
8. Further observe bicycle access patterns and use this information to calibrate bicycle parking supplies at each station. For instance, in some communities, bicycle riders may prefer to bring their bicycles on board transit vehicles rather than park their bicycles in a secure area, either due to first-last mile connection needs or financial constraints. At these stations, a smaller (or lower-cost) supply of secure bicycle parking may be appropriate. At stations serving multiple Metro Rail lines, bicycle access mode share may include a significant proportion of people making transfers between transit lines while carrying their bicycles. This scenario justifies a lower supply of bicycle parking than would otherwise be recommended based on the Bicycle Parking Formula. Other adjustment factors to consider include community-wide bicycle mode share, land use context, population density, transit dependency and available right of way.
9. At short-term bicycle parking locations, use messaging (in the form of a decal or placard) to encourage proper bicycle locking procedures, such as using a U-lock, securing the frame and wheels, and removing any accessories.

Multi-Modal Interface Recommendations

Beyond the recommended updates to Metro's Bicycle Parking formula, the following actions should be implemented to improve the multi-modal interface:

10. Continue to implement the site design, CPTED and rack type standards contained in the Metro Rail Design Criteria (Metro, 2012a).
11. Continue to construct Bike Hubs at key transit stations, beginning with the stations ranked highest in Table 1.
12. Construct linear facilities, such as sidewalks and paths, to link transit stations with the surrounding active transportation network. People walking and riding bicycles should not be expected to travel through uncontrolled parking lot areas.
13. Work with municipal partners and private land owners to identify funding, develop access, operations and maintenance agreements to provide secure bicycle parking where right of way constraints exist.
14. Consider space-efficient, self-serve, modular secure bicycle parking.
15. Provide ADA ramps, and consider the provision of wheel runnels on stairs, to allow people with wheelchairs and bicycles to access train platforms. Further study of wheel runnel design issues is required.
16. Enhance bicycle areas on trains with bicycle hooks and clothing hangers.
17. Maintain the policy of permitting bicycles on board Metro Rail without peak-period restrictions.

18. Maintain the existing supply of bike racks and lockers.
19. Conduct a regular bicycle parking review every three to five years (as resources permit), to assess ridership and bicycle access mode share on a station-by-station basis.

This memo has discussed the many benefits of integrating bicycling with transit. A complete, multi-modal interface allows people to reach transit stations from further distances; increases travel flexibility and help resolve first-last mile issues; and plays a role in encouraging a mode shift (away from driving and towards transit and/or bicycling). Implementation of the above recommendations will enable Metro to achieve greater integration between transit and active modes and to strengthen this integration over time.

Table 1: Bicycle Parking Supply Requirements for Metro Rail Stations

		Existing Conditions						Recommended Metro Model				
Station	**Line**	**Bicycle Mode Share (%)[a]**	**Daily Boardings[b]**	**Peak Boardings[c]**	**AM Peak Boardings[d]**	**Existing Short-Term Spaces[e]**	**Existing Long-Term Spaces[e]**	**Total Spaces Req'd**	**Short-Term Spaces Req'd**	**Add. Short-Term Spaces**	**Long-Term Spaces Req'd**	**Add. Long-Term Spaces**
7th Street / Metro Center	Red/Purple/ Blue/Expo	0.90	48,829	24,414	12,207	0	0	977	586	586	391	391
Union Station	Gold/Red/ Purple	0.92	33,775	16,888	8,444	16	300	676	405	389	270	0
North Hollywood	Red/Orange	1.03	24,232	12,116	6,058	101	200	485	291	190	194	0
Willowbrook (Rosa Parks)	Blue/Green	0.69	13,942	6,971	3,485	14	6	279	167	153	112	106
Wilshire / Vermont	Red/Purple	0.55	12,472	6,236	3,118	8	16	249	150	142	100	84
Pershing Square	Red/Purple	1.09	10,803	5,401	2,701	4	0	216	130	126	86	86
Westlake / McArthur Park	Red/Purple	0.65	9,218	4,609	2,305	18	0	184	111	93	74	74
Harbor Gateway Transit Center	Silver	0.61	9,146	4,573	2,287	0	0	183	110	110	73	73
Hollywood / Highland	Red	1.23	8,877	4,438	2,219	0	0	178	107	107	71	71
Long Beach Blvd	Green	0.45	8,673	4,337	2,168	8	0	173	104	96	69	69
Universal City	Red	0.46	7,806	3,903	1,951	16	32	156	94	78	62	30
Hollywood / Vine	Red	1.31	6,507	3,253	1,627	12	72	130	78	66	52	0
Civic Center	Red/Purple	1.03	6,415	3,208	1,604	10	8	128	77	67	51	43
Pico	Blue	2.96	6,392	3,196	1,598	0	0	128	77	77	51	51
El Monte Busway	Silver	1.47	6,386	3,193	1,597	26	56	128	77	51	51	0
Vermont / Santa Monica	Red	0.96	6,286	3,143	1,571	26	4	126	75	49	50	46

Wilshire / Western	Purple	0.77	5,677	2,839	1,419	12	16	114	68	56	45	29
Hollywood / Western	Red	1.27	5,249	2,625	1,312	36	2	105	63	27	42	40
Vermont / Sunset	Red	0.82	4,805	2,402	1,201	10	4	96	58	48	38	34
Florence	Blue	0.74	4,745	2,373	1,186	12	0	95	57	45	38	38
Compton	Blue	0.56	4,653	2,326	1,163	4	0	93	56	52	37	37
Vermont / Beverly	Red	0.62	4,599	2,300	1,150	24	0	92	55	31	37	37
Grand	Blue	3.31	4,422	2,211	1,106	0	0	88	53	53	35	35
Culver City	Expo	1.35	4,179	2,090	1,045	20	72	84	50	30	33	0
Willow	Blue	1.40	4,119	2,059	1,030	16	8	82	49	33	33	25
Artesia	Blue	0.09	4,051	2,026	1,013	6	0	81	49	43	32	32
Hawthorne / Lennox	Green	0.88	3,767	1,883	942	4	0	75	45	41	30	30
103rd Street / Watts Towers	Blue	0.65	3,635	1,817	909	0	0	73	44	44	29	29
Van Nuys	Orange	0.62	3,488	1,744	872	12	8	70	42	30	28	20
DT Long Beach/ Transit Mall	Blue	2.03	3,408	1,704	852	0	62	68	41	41	27	0
Del Amo	Blue	0.14	3,353	1,676	838	10	12	67	40	30	27	15
Wilshire / Normandie	Purple	0.75	3,350	1,675	838	0	0	67	40	40	27	27
Harbor Freeway	Green	0.46	3,321	1,660	830	10	0	66	40	30	27	27
Anaheim	Blue	1.84	3,203	1,601	801	0	0	64	38	38	26	26
Firestone	Blue	0.59	3,156	1,578	789	8	0	63	38	30	25	25
Vermont / Athens	Green	0.38	3,120	1,560	780	0	0	62	37	37	25	25
Lakewood	Green	0.29	3,099	1,550	775	22	12	62	37	15	25	13
Avalon	Green	0.58	3,057	1,528	764	12	0	61	37	25	24	24
PCH	Blue	1.72	2,978	1,489	744	0	0	60	36	36	24	24
Vernon	Blue	1.27	2,939	1,470	735	0	0	59	35	35	24	24
Crenshaw	Green	0.86	2,811	1,405	703	12	4	56	34	22	22	18
Sierra Madre Villa	Gold	0.18	2,784	1,392	696	10	16	56	33	23	22	6
Slauson	Blue	0.90	2,681	1,341	670	4	0	54	32	28	21	21
Norwalk	Green	0.42	2,654	1,327	663	36	40	53	32	0	21	0

Little Tokyo / Arts District	Gold	0.93	2,626	1,313	656	12	2	53	32	20	21	19
Highland Park	Gold	0.76	2,594	1,297	649	10	16	52	31	21	21	5
Reseda	Orange	0.95	2,540	1,270	635	6	16	51	30	24	20	4
San Pedro	Blue	2.91	2,507	1,254	627	0	0	50	30	30	20	20
Expo / Vermont	Expo	2.80	2,408	1,204	602	10	0	48	29	19	19	19
Memorial Park	Gold	3.62	2,327	1,164	582	8	16	47	28	20	19	3
Expo / Western	Expo	1.59	2,313	1,156	578	10	0	46	28	18	19	19
Expo / Crenshaw	Expo	0.28	2,180	1,090	545	10	0	44	26	16	17	17
Atlantic	Gold	0.58	2,031	1,016	508	12	8	41	24	12	16	8
Warner Center Transit Hub	Orange	1.60	1,836	918	459	0	0	37	22	22	15	15
Washington	Blue	1.64	1,829	915	457	0	0	37	22	22	15	15
Sepulveda	Orange	0.77	1,795	898	449	12	12	36	22	10	14	2
Chatsworth	Orange	0.17	1,772	886	443	16	16	35	21	5	14	0
Lake	Gold	2.83	1,753	876	438	18	0	35	21	3	14	14
Pierce College	Orange	1.39	1,752	876	438	12	8	35	21	9	14	6
Soto	Gold	0.55	1,741	871	435	12	4	35	21	9	14	10
Wardlow	Blue	0.71	1,688	844	422	8	16	34	20	12	14	0
South Pasadena	Gold	0.54	1,668	834	417	14	0	33	20	6	13	13
La Cienega / Jefferson	Expo	0.50	1,659	829	415	12	8	33	20	8	13	5
Chinatown	Gold	0.64	1,616	808	404	6	0	32	19	13	13	13
Del Mar	Gold	4.47	1,599	800	400	26	0	32	19	0	13	13
Valley College	Orange	0.52	1,585	793	396	8	8	32	19	11	13	5
Expo / La Brea	Expo	0.30	1,581	791	395	20	0	32	19	0	13	13
Balboa	Orange	0.87	1,575	788	394	12	20	32	19	7	13	0
Expo Park / USC	Expo	3.17	1,575	787	394	10	0	31	19	9	13	13
23rd St	Expo	3.47	1,552	776	388	10	0	31	19	9	12	12
Fillmore	Gold	4.55	1,528	764	382	6	0	31	18	12	12	12
Indiana	Gold	0.65	1,484	742	371	12	0	30	18	6	12	12
Aviation / LAX	Green	0.95	1,455	728	364	24	20	29	17	0	12	0

Allen	Gold	2.00	1,444	722	361	28	0	29	17	0	12	12
Canoga	Orange	2.36	1,442	721	361	32	24	29	17	0	12	0
Pacific	Blue	1.95	1,402	701	351	0	0	28	17	17	11	11
Laurel Canyon	Orange	0.84	1,373	687	343	8	8	27	16	8	11	3
Lincoln Heights / Cypress Park	Gold	0.66	1,327	663	332	10	0	27	16	6	11	11
Jefferson / USC	Expo	3.23	1,219	609	305	10	0	24	15	5	10	10
Douglas	Green	0.78	1,180	590	295	6	12	24	14	8	9	0
Redondo Beach	Green	0.85	1,162	581	291	12	6	23	14	2	9	3
Sherman Way	Orange	2.22	1,119	560	280	12	16	22	13	1	9	0
Pico / Aliso	Gold	0.57	976	488	244	6	0	20	12	6	8	8
Roscoe	Orange	2.25	974	487	244	12	8	19	12	0	8	0
Woodman	Orange	0.61	933	467	233	12	8	19	11	0	7	0
Farmdale	Expo	0.26	916	458	229	10	0	18	11	1	7	7
Mariachi Plaza / Boyle Heights	Gold	0.66	902	451	225	6	0	18	11	5	7	7
5th Street	Blue	1.84	892	446	223	0	0	18	11	11	7	7
Mariposa	Green	0.72	878	439	219	4	0	18	11	7	7	7
Southwest Museum	Gold	1.00	867	433	217	6	0	17	10	4	7	7
Woodley	Orange	0.88	829	415	207	8	8	17	10	2	7	0
El Segundo	Green	0.59	821	411	205	10	0	16	10	0	7	7
Heritage Square / Arroyo	Gold	0.78	821	410	205	4	0	16	10	6	7	7
East LA Civic Center	Gold	0.24	807	403	202	20	0	16	10	0	6	6
De Soto	Orange	2.41	693	347	173	12	8	14	8	0	6	0
Tampa	Orange	0.98	587	294	147	12	8	12	7	0	5	0
1st Street	Blue	1.90	541	270	135	0	0	11	6	6	4	4
Nordhoff	Orange	1.38	532	266	133	12	8	11	6	0	4	0

Future Stations													
4th / Colorado	Expo 2	2.57	n/a	n/a	n/a	10	320	--	--	--	--	--
Colorado / 17th	Expo 2	2.30	n/a	n/a	n/a	10	32	--	--	--	--	--
Olympic / 26th	Expo 2	1.98	n/a	n/a	n/a	6	8	--	--	--	--	--
Expo / Bundy	Expo 2	1.82	n/a	n/a	n/a	10	16	--	--	--	--	--
Expo / Sepulveda	Expo 2	1.14	n/a	n/a	n/a	10	16	--	--	--	--	--
Expo / Westwood	Expo 2	1.03	n/a	n/a	n/a	6	8	--	--	--	--	--
National / Palms	Expo 2	1.36	n/a	n/a	n/a	6	8	--	--	--	--	--
Arcadia	Gold Foothill	0.61	n/a	n/a	n/a	20	24	--	--	--	--	--
Monrovia	Gold Foothill	1.38	n/a	n/a	n/a	20	24	--	--	--	--	--
Duarte / City of Hope	Gold Foothill	0.23	n/a	n/a	n/a	20	24	--	--	--	--	--
Azusa Downtown	Gold Foothill	0.48	n/a	n/a	n/a	10	24	--	--	--	--	--
APU/Citrus	Gold Foothill	0.90	n/a	n/a	n/a	10	24	--	--	--	--	--
Irwindale	Gold Foothill	0.16	n/a	n/a	n/a	10	24	--	--	--	--	--

[a] The percent of workers who commute by bicycle, within a three-mile travel shed
[b] Aggregate boardings are used for stations serving multiple Metro Rail lines
[c] Peak period boardings are assumed to represent 50% of daily boardings
[d] AM peak period boardings are assumed to represent 50% of peak period boardings

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Table 2: Bicycle Parking Supply Requirements for Metro Rail Stations, by Model

		Existing Conditions						Metro Model					TCRP Model					APBP Model					Adjusted Metro Model					Notes
Station	Line	Bicycle Mode Share (%)[a]	Daily Boardings[b]	Peak Period Boardings[c]	AM Peak Period Boardings[d]	Existing Short-Term Spaces[e]	Existing Long-Term Spaces[e]	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	
7th Street / Metro Center	Red/Purple/ Blue/Expo	0.90	48,829	24,414	12,207	0	0	305	183	183	122	122	750	450	450	300	300	1099	244	244	855	855	977	586	586	391	391	
Union Station	Gold/Red/ Purple	0.92	33,775	16,888	8,444	16	300	211	127	111	84	0	300	180	164	120	0	760	169	153	591	291	676	405	389	270	0	Planned Metro Bike Hub. Bike parking will be phased over 3 years; initial hub will open with ~100 spaces; additional spaces installed as demand grows
North Hollywood	Red/Orange	1.03	24,232	12,116	6,058	101	200	151	91	0	61	0	646	388	287	258	58	545	121	20	424	224	485	291	190	194	0	Planned Metro Bike Hub. Bike parking will be phased; initial hub will open with ~80-100 spaces; additional spaces provided in the expansion in conjunction with Joint Development property
Willowbrook (Rosa Parks)	Blue/Green	0.69	13,942	6,971	3,485	14	6	87	52	38	35	29	295	177	163	118	112	314	70	56	244	238	279	167	153	112	106	
Wilshire / Vermont	Red/Purple	0.55	12,472	6,236	3,118	8	16	78	47	39	31	15	333	200	192	133	117	281	62	54	218	202	249	150	142	100	84	
Pershing Square	Red/Purple	1.09	10,803	5,401	2,701	4	0	68	41	37	27	27	288	173	169	115	115	243	54	50	189	189	216	130	126	86	86	
Westlake / McArthur Park	Red/Purple	0.65	9,218	4,609	2,305	18	0	58	35	17	23	23	246	148	130	98	98	207	46	28	161	161	184	111	93	74	74	
Harbor Gateway Transit Center	Silver	0.61	9,146	4,573	2,287	0	0	57	34	34	23	23	244	146	146	98	98	206	46	46	160	160	183	110	110	73	73	
Hollywood / Highland	Red	1.23	8,877	4,438	2,219	0	0	55	33	33	22	22	237	142	142	95	95	200	44	44	155	155	178	107	107	71	71	
Long Beach Blvd	Green	0.45	8,673	4,337	2,168	8	0	54	33	25	22	22	231	139	131	92	92	195	43	35	152	152	173	104	96	69	69	
Universal City	Red	0.46	7,806	3,903	1,951	16	32	49	29	13	20	0	208	125	109	83	51	176	39	23	137	105	156	94	78	62	30	
Hollywood / Vine	Red	1.31	6,507	3,253	1,627	12	72	41	24	12	16	0	174	104	92	70	0	146	33	21	114	42	130	78	66	52	0	Planned Metro Bike Hub
Civic Center	Red/Purple	1.03	6,415	3,208	1,604	10	8	40	24	14	16	8	171	103	93	68	60	144	32	22	112	104	128	77	67	51	43	
Pico	Blue	2.96	6,392	3,196	1,598	0	0	40	24	24	16	16	126	76	76	50	50	144	32	32	112	112	128	77	77	51	51	
El Monte Busway	Silver	1.47	6,386	3,193	1,597	26	56	40	24	0	16	0	170	102	76	68	12	144	32	6	112	56	128	77	51	51	0	Planned Metro Bike Hub
Vermont / Santa Monica	Red	0.96	6,286	3,143	1,571	26	4	39	24	0	16	12	168	101	75	67	63	141	31	5	110	106	126	75	49	50	46	
Wilshire / Western	Purple	0.77	5,677	2,839	1,419	12	16	35	21	9	14	0	151	91	79	60	44	128	28	16	99	83	114	68	56	45	29	
Hollywood / Western	Red	1.27	5,249	2,625	1,312	36	2	33	20	0	13	11	140	84	48	56	54	118	26	0	92	90	105	63	27	42	40	
Vermont / Sunset	Red	0.82	4,805	2,402	1,201	10	4	30	18	8	12	8	128	77	67	51	47	108	24	14	84	80	96	58	48	38	34	
Florence	Blue	0.74	4,745	2,373	1,186	12	0	30	18	6	12	12	127	76	64	51	51	107	24	12	83	83	95	57	45	38	38	
Compton	Blue	0.56	4,653	2,326	1,163	4	0	29	17	13	12	12	124	74	70	50	50	105	23	19	81	81	93	56	52	37	37	
Vermont / Beverly	Red	0.62	4,599	2,300	1,150	24	0	29	17	0	11	11	123	74	50	49	49	103	23	0	80	80	92	55	31	37	37	
Grand	Blue	3.31	4,422	2,211	1,106	0	0	28	17	17	11	11	98	59	59	39	39	100	22	22	77	77	88	53	53	35	35	
Culver City	Expo	1.35	4,179	2,090	1,045	20	72	26	16	0	10	0	111	67	47	44	0	94	21	1	73	1	84	50	30	33	0	Planned Metro Bike Hub
Willow	Blue	1.40	4,119	2,059	1,030	16	8	26	15	0	10	2	110	66	50	44	36	93	21	5	72	64	82	49	33	33	25	
Artesia	Blue	0.09	4,051	2,026	1,013	6	0	25	15	9	10	10	108	65	59	43	43	91	20	14	71	71	81	49	43	32	32	
Hawthorne / Lennox	Green	0.88	3,767	1,883	942	4	0	24	14	10	9	9	100	60	56	40	40	85	19	15	66	66	75	45	41	30	30	
103rd Street / Watts Towers	Blue	0.65	3,635	1,817	909	0	0	23	14	14	9	9	97	58	58	39	39	82	18	18	64	64	73	44	44	29	29	
Van Nuys	Orange	0.62	3,488	1,744	872	12	8	22	13	1	9	1	93	56	44	37	29	78	17	5	61	53	70	42	30	28	20	
DT Long Beach/ Transit Mall	Blue	2.03	3,408	1,704	852	0	62	21	13	13	9	0	91	55	55	36	0	77	17	17	60	0	68	41	41	27	0	52 upstairs spaces. 10 downstairs spaces are shared with rental bicycles and occasionally occupied.
Del Amo	Blue	0.14	3,353	1,676	838	10	12	21	13	3	8	0	89	53	43	36	24	75	17	7	59	47	67	40	30	27	15	
Wilshire / Normandie	Purple	0.75	3,350	1,675	838	0	0	21	13	13	8	8	89	53	53	36	36	75	17	17	59	59	67	40	40	27	27	
Harbor Freeway	Green	0.46	3,321	1,660	830	10	0	21	12	2	8	8	89	53	43	36	36	75	17	7	58	58	66	40	30	27	27	
Anaheim	Blue	1.84	3,203	1,601	801	0	0	20	12	12	8	8	85	51	51	34	34	72	16	16	56	56	64	38	38	26	26	
Firestone	Blue	0.59	3,156	1,578	789	8	0	20	12	4	8	8	84	50	42	34	34	71	16	8	55	55	63	38	30	25	25	
Vermont / Athens	Green	0.38	3,120	1,560	780	0	0	20	12	12	8	8	83	50	50	33	33	70	16	16	55	55	62	37	37	25	25	
Lakewood	Green	0.29	3,099	1,550	775	22	12	19	12	0	8	0	83	50	28	33	21	70	15	0	54	42	62	37	15	25	13	
Avalon	Green	0.58	3,057	1,528	764	12	0	19	11	0	8	8	82	49	37	33	33	69	15	3	53	53	61	37	25	24	24	
PCH	Blue	1.72	2,978	1,489	744	0	0	19	11	11	7	7	79	47	47	32	32	67	15	15	52	52	60	36	36	24	24	
Vernon	Blue	1.27	2,939	1,470	735	0	0	18	11	11	7	7	78	47	47	31	31	66	15	15	51	51	59	35	35	24	24	
Crenshaw	Green	0.86	2,811	1,405	703	12	4	18	11	0	7	3	75	45	33	30	26	63	14	2	49	45	56	34	22	22	18	
Sierra Madre Villa	Gold	0.18	2,784	1,392	696	10	16	17	10	0	7	0	74	44	34	30	14	63	14	4	49	33	56	33	23	22	6	
Slauson	Blue	0.90	2,681	1,341	670	4	0	17	10	6	7	7	71	43	39	28	28	60	13	9	47	47	54	32	28	21	21	
Norwalk	Green	0.42	2,654	1,327	663	36	40	17	10	0	7	0	71	43	7	28	0	60	13	0	46	6	53	32	0	21	0	
Little Tokyo / Arts District	Gold	0.93	2,626	1,313	656	12	2	16	10	0	7	5	70	42	30	28	26	59	13	1	46	44	53	32	20	21	19	
Highland Park	Gold	0.76	2,594	1,297	649	10	16	16	10	0	6	0	69	41	31	28	12	58	13	3	45	29	52	31	21	21	5	
Reseda	Orange	0.95	2,540	1,270	635	6	16	16	10	4	6	0	68	41	35	27	11	57	13	7	44	28	51	30	24	20	4	
San Pedro	Blue	2.91	2,507	1,254	627	0	0	16	9	9	6	6	48	29	29	19	19	56	13	13	44	44	50	30	30	20	20	
Expo / Vermont	Expo	2.80	2,408	1,204	602	10	0	15	9	0	6	6	45	27	17	18	18	54	12	2	42	42	48	29	19	19	19	
Memorial Park	Gold	3.62	2,327	1,164	582	8	16	15	9	1	6	0	56	34	26	22	6	52	12	4	41	25	47	28	20	19	3	
Expo / Western	Expo	1.59	2,313	1,156	578	10	0	14	9	0	6	6	62	37	27	25	25	52	12	2	40	40	46	28	18	19	19	
Expo / Crenshaw	Expo	0.28	2,180	1,090	545	10	0	14	8	0	5	5	58	35	25	23	23	49	11	1	38	38	44	26	16	17	17	
Atlantic	Gold	0.58	2,031	1,016	508	12	8	13	8	0	5	0	54	32	20	22	14	46	10	0	36	28	41	24	12	16	8	
Warner Center Transit Hub	Orange	1.60	1,836	918	459	0	0	11	7	7	5	5	49	29	29	20	20	41	9	9	32	32	37	22	22	15	15	
Washington	Blue	1.64	1,829	915	457	0	0	11	7	7	5	5	49	29	29	20	20	41	9	9	32	32	37	22	22	15	15	
Sepulveda	Orange	0.77	1,795	898	449	12	12	11	7	0	4	0	48	29	17	19	7	40	9	0	31	19	36	22	10	14	2	
Chatsworth	Orange	0.17	1,772	886	443	16	16	11	7	0	4	0	47	28	12	19	3	40	9	0	31	15	35	21	5	14	0	

		Existing Conditions						Metro Model					TCRP Model					APBP Model					Adjusted Metro Model					Notes
Station	Line	Bicycle Mode Share (%)[a]	Daily Boardings[b]	Peak Period Boardings[c]	AM Peak Period Boardings[d]	Existing Short-Term Spaces[e]	Existing Long-Term Spaces[e]	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	Total Spaces Req'd	Short-Term Spaces Req'd	Add. Short-Term Spaces	Long-Term Spaces Req'd	Add. Long-Term Spaces	
Lake	Gold	2.83	1,753	876	438	18	0	11	7	0	4	4	33	20	2	13	13	39	9	0	31	31	35	21	3	14	14	
Pierce College	Orange	1.39	1,752	876	438	12	8	11	7	0	4	0	47	28	16	19	11	39	9	0	31	23	35	21	9	14	6	
Soto	Gold	0.55	1,741	871	435	12	4	11	7	0	4	0	46	28	16	18	14	39	9	0	30	26	35	21	9	14	10	
Wardlow	Blue	0.71	1,688	844	422	8	16	11	6	0	4	0	45	27	19	18	2	38	8	0	30	14	34	20	12	14	0	
South Pasadena	Gold	0.54	1,668	834	417	14	0	10	6	0	4	4	44	26	12	18	18	38	8	0	29	29	33	20	6	13	13	
La Cienega / Jefferson	Expo	0.50	1,659	829	415	12	8	10	6	0	4	0	44	26	14	18	10	37	8	0	29	21	33	20	8	13	5	
Chinatown	Gold	0.64	1,616	808	404	6	0	10	6	0	4	4	43	26	20	17	17	36	8	2	28	28	32	19	13	13	13	
Del Mar	Gold	4.47	1,599	800	400	26	0	10	6	0	4	4	48	29	3	19	19	36	8	0	28	28	32	19	0	13	13	
Valley College	Orange	0.52	1,585	793	396	8	8	10	6	0	4	0	42	25	17	17	9	36	8	0	28	20	32	19	11	13	5	
Expo / La Brea	Expo	0.30	1,581	791	395	20	0	10	6	0	4	4	42	25	5	17	17	36	8	0	28	28	32	19	0	13	13	
Balboa	Orange	0.87	1,575	788	394	12	20	10	6	0	4	0	42	25	13	17	0	35	8	0	28	8	32	19	7	13	0	
Expo Park / USC	Expo	3.17	1,575	787	394	10	0	10	6	0	4	4	33	20	10	13	13	35	8	0	28	28	31	19	9	13	13	
23rd St	Expo	3.47	1,552	776	388	10	0	10	6	0	4	4	36	22	12	14	14	35	8	0	27	27	31	19	9	12	12	
Fillmore	Gold	4.55	1,528	764	382	6	0	10	6	0	4	4	46	28	22	18	18	34	8	2	27	27	31	18	12	12	12	
Indiana	Gold	0.65	1,484	742	371	12	0	9	6	0	4	4	40	24	12	16	16	33	7	0	26	26	30	18	6	12	12	
Aviation / LAX	Green	0.95	1,455	728	364	24	20	9	5	0	4	0	39	23	0	16	0	33	7	0	25	5	29	17	0	12	0	
Allen	Gold	2.00	1,444	722	361	28	0	9	5	0	4	4	39	23	0	16	16	32	7	0	25	25	29	17	0	12	12	
Canoga	Orange	2.36	1,442	721	361	32	24	9	5	0	4	0	38	23	0	15	0	32	7	0	25	1	29	17	0	12	0	
Pacific	Blue	1.95	1,402	701	351	0	0	9	5	5	4	4	37	22	22	15	15	32	7	7	25	25	28	17	17	11	11	
Laurel Canyon	Orange	0.84	1,373	687	343	8	8	9	5	0	3	0	37	22	14	15	7	31	7	0	24	16	27	16	8	11	3	
Lincoln Heights / Cypress Park	Gold	0.66	1,327	663	332	10	0	8	5	0	3	3	35	21	11	14	14	30	7	0	23	23	27	16	6	11	11	
Jefferson / USC	Expo	3.23	1,219	609	305	10	0	8	5	0	3	3	26	16	6	10	10	27	6	0	21	21	24	15	5	10	10	
Douglas	Green	0.78	1,180	590	295	6	12	7	4	0	3	0	31	19	13	12	0	27	6	0	21	9	24	14	8	9	0	
Redondo Beach	Green	0.85	1,162	581	291	12	6	7	4	0	3	0	31	19	7	12	6	26	6	0	20	14	23	14	2	9	3	
Sherman Way	Orange	2.22	1,119	560	280	12	16	7	4	0	3	0	30	18	6	12	0	25	6	0	20	4	22	13	1	9	0	
Pico / Aliso	Gold	0.57	976	488	244	6	0	6	4	0	2	2	26	16	10	10	10	22	5	0	17	17	20	12	6	8	8	
Roscoe	Orange	2.25	974	487	244	12	8	6	4	0	2	0	26	16	4	10	2	22	5	0	17	9	19	12	0	8	0	
Woodman	Orange	0.61	933	467	233	12	8	6	3	0	2	0	25	15	3	10	2	21	5	0	16	8	19	11	0	7	0	
Farmdale	Expo	0.26	916	458	229	10	0	6	3	0	2	2	24	14	4	10	10	21	5	0	16	16	18	11	1	7	7	
Mariachi Plaza / Boyle Heights	Gold	0.66	902	451	225	6	0	6	3	0	2	2	24	14	8	10	10	20	5	0	16	16	18	11	5	7	7	
5th Street	Blue	1.84	892	446	223	0	0	6	3	3	2	2	24	14	14	10	10	20	4	4	16	16	18	11	11	7	7	
Mariposa	Green	0.72	878	439	219	4	0	5	3	0	2	2	23	14	10	9	9	20	4	0	15	15	18	11	7	7	7	
Southwest Museum	Gold	1.00	867	433	217	6	0	5	3	0	2	2	23	14	8	9	9	20	4	0	15	15	17	10	4	7	7	
Woodley	Orange	0.88	829	415	207	8	8	5	3	0	2	0	22	13	5	9	1	19	4	0	15	7	17	10	2	7	0	
El Segundo	Green	0.59	821	411	205	10	0	5	3	0	2	2	22	13	3	9	9	18	4	0	14	14	16	10	0	7	7	
Heritage Square / Arroyo	Gold	0.78	821	410	205	4	0	5	3	0	2	2	22	13	9	9	9	18	4	0	14	14	16	10	6	7	7	
East LA Civic Center	Gold	0.24	807	403	202	20	0	5	3	0	2	2	22	13	0	9	9	18	4	0	14	14	16	10	0	6	6	
De Soto	Orange	2.41	693	347	173	12	8	4	3	0	2	0	18	11	0	7	0	16	3	0	12	4	14	8	0	6	0	
Tampa	Orange	0.98	587	294	147	12	8	4	2	0	1	0	16	10	0	6	0	13	3	0	10	2	12	7	0	5	0	
1st Street	Blue	1.90	541	270	135	0	0	3	2	2	1	1	14	8	8	6	6	12	3	3	9	9	11	6	6	4	4	
Nordhoff	Orange	1.38	532	266	133	12	8	3	2	0	1	0	14	8	0	6	0	12	3	0	9	1	11	6	0	4	0	
Maravilla	Gold	0.15	515	258	129	12	0	3	2	0	1	1	14	8	0	6	6	12	3	0	9	9	10	6	0	4	4	
FUTURE STATIONS																												
4th / Colorado	Expo 2	2.57	n/a	n/a	n/a	10	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Bike Hubs operated independently. 555 2nd St: 154 spaces. 1502 4th St: 166 spaces. Short-term spaces are planned.
Colorado / 17th	Expo 2	2.30	n/a	n/a	n/a	10	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Olympic / 26th	Expo 2	1.98	n/a	n/a	n/a	6	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Expo / Bundy	Expo 2	1.82	n/a	n/a	n/a	10	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Expo / Sepulveda	Expo 2	1.14	n/a	n/a	n/a	10	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Expo / Westwood	Expo 2	1.03	n/a	n/a	n/a	6	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
National / Palms	Expo 2	1.36	n/a	n/a	n/a	6	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Arcadia	Gold Foothill	0.61	n/a	n/a	n/a	20	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Monrovia	Gold Foothill	1.38	n/a	n/a	n/a	20	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Duarte / City of Hope	Gold Foothill	0.23	n/a	n/a	n/a	20	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Azusa Downtown	Gold Foothill	0.48	n/a	n/a	n/a	10	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
APU/Citrus	Gold Foothill	0.90	n/a	n/a	n/a	10	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.
Irwindale	Gold Foothill	0.16	n/a	n/a	n/a	10	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Planned spaces only.

[a] The percent of workers who commute by bicycle, within a three-mile travel shed
[b] Aggregate boardings are used for stations serving multiple Metro Rail lines
[c] Peak period boardings are assumed to represent 50% of daily boardings
[d] AM peak period boardings are assumed to represent 50% of peak period boardings
[e] Existing bicycle parking supply includes planned parking, as available (i.e. for planned stations and Bike Hubs