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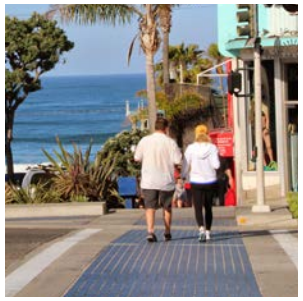
City of Manhattan Beach Mobility Plan






Submitted to:

June 4, 2014

Innovation for better mobility

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FEHR & PEERS

MANHATTAN BEACH
MOBILITY PLAN

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INTRODUCTION

In its effort to plan, maintain and operate the City's mobility system consistent with the principles of Complete Streets, active living and sustainable community design, as well as address the concerns of residents regarding congestion and safety, the City of Manhattan Beach has updated the 2003 Circulation Element of its General Plan. In recent years, there has been a general shift in the prioritization of various modes of transportation in cities, with a focus on providing a well-balanced, connected, safe, and convenient multi-modal transportation network, as opposed to a mostly auto-centric plan that focuses on building and widening roads. This shift in thought has come about for many reasons but partially as a result of State of California Assembly Bill (AB) 1358, which is The California Complete Streets Act. SB 1358 requires cities and counties to integrate multi-modal transportation network policies into their General Plan, and plan for, design and build transportation networks that allow all users to effectively travel by motor vehicle, foot, bicycle, or transit.

The General Plan "Circulation Element" has been relabeled as the "Mobility Plan" for the City of Manhattan Beach and it seeks to provide for a balanced, multi-modal transportation system for the movement of people and goods within, to and from the City. In keeping with state and Federal laws and regulations, a balanced system is required and it must meet the needs of all users including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods and users of public transportation. This updated plan reflects the City's greater emphasis on non-motorized modes of transportation (bicycling and walking) as well as implementing Complete Streets and emphasizing "Living Streets by providing high quality pedestrian, bicycling, and transit access to all destinations throughout the city, as appropriate, and design streets to be inviting places for all users, with beauty and amenities. The legislative changes at the state and Federal level support Complete Streets and Living Streets and they were adopted in response to greenhouse gas emissions issues as well as the recognition that not all travel occurs via automobile and some people prefer other modes for certain trips.

The popular pedestrian pathway along "The Strand" offers a beautiful, scenic route along the Pacific Ocean.

Pursuant to the Regional Transportation Plan (developed by the Southern California Association of Governments - SCAG), "mobility" refers to the movement of people, goods and

resources within or beyond a city or region. Effective and efficient mobility allows residents to access daily needs, including work, school, shopping, and recreation, without undue burdens of cost, time, or physical danger.[1] When considering mobility in Manhattan Beach, we think of both physical infrastructure systems, such as roadways, sidewalks and trails, as well as varying methods of getting around – by foot, on bike, on transit, or in a car. The physical infrastructure system includes sidewalks, local street network, unique walkstreets, Veterans Parkway, and several streets of regional significance: Sepulveda Boulevard, Manhattan Beach Boulevard, Rosecrans Avenue, Aviation Boulevard, and Artesia Boulevard. While these roadways afford residents with ready access to surrounding destinations, they also experience significant traffic congestion during peak travel times.

Walkstreet in downtown Manhattan Beach. A very walkable community.

Traffic congestion and parking scarcity has been and continues to be one of the most pressing concerns for Manhattan Beach residents. Congestion in Manhattan Beach is a result of several factors, driven primarily by the presence of large regional arterial roadways, proximity to major employment centers, the Los Angeles International Airport, and visitors to the City. The Mobility Plan therefore continues to include key improvements such as spot arterial street improvements to relieve points of congestion, enhance safety and reduce motorist delay. But as mentioned, it goes beyond those measures to specifically include detailed recommendations for enhancing other modes of travel to meet the needs of its residents and visitors.

With this Mobility Plan, Manhattan Beach is rethinking how to plan for and design travel options within the City. The need to improve roadways to relieve congestion and maintain safety is still paramount and is addressed in addition to the other modes of travel. This ensures that all users of the transportation system are served. The updated Mobility Plan establishes the vision, goals, policies and implementation measures required to improve and enhance the City's local and regional transportation system.

VISION FOR THE FUTURE OF TRANSPORTATION IN MANHATTAN BEACH

Today's transportation system is about more than just highways," said Caltrans Director Malcolm Dougherty recently. "Active

transportation projects are a good investment and will help achieve mobility, safety, and greenhouse gas reduction goals for California."

The recent California Household Travel Survey – the largest and most complex review of its kind – underscores the need for active transportation. The survey shows that the percentage of California residents walking, biking, or using public transportation on a typical day has more than doubled since 2000. Nearly 23 percent of household trips were taken by walking, biking, and public transportation. In 2000, that share was only 11 percent. This increase includes a dramatic increase in walking trips, which nearly doubled from 8.4 percent to 16.6 percent of trips. For many reasons, transportation systems within and connecting to Manhattan Beach are also expected to change in the future. Key factors include:

- Changing trends in auto ownership and transportation choices by the "millennial generation"
- Complete Streets/Livable Streets Initiatives
- Emphasis on multi-modalism and other travel choices
- Advancing technology in transportation and communications
- Environmental sensitivity and the need to reduce carbon emissions. Many of these changes and initiatives are addressed in this Mobility Plan and others will occur over time as technology and local and regional policies related to transportation evolve

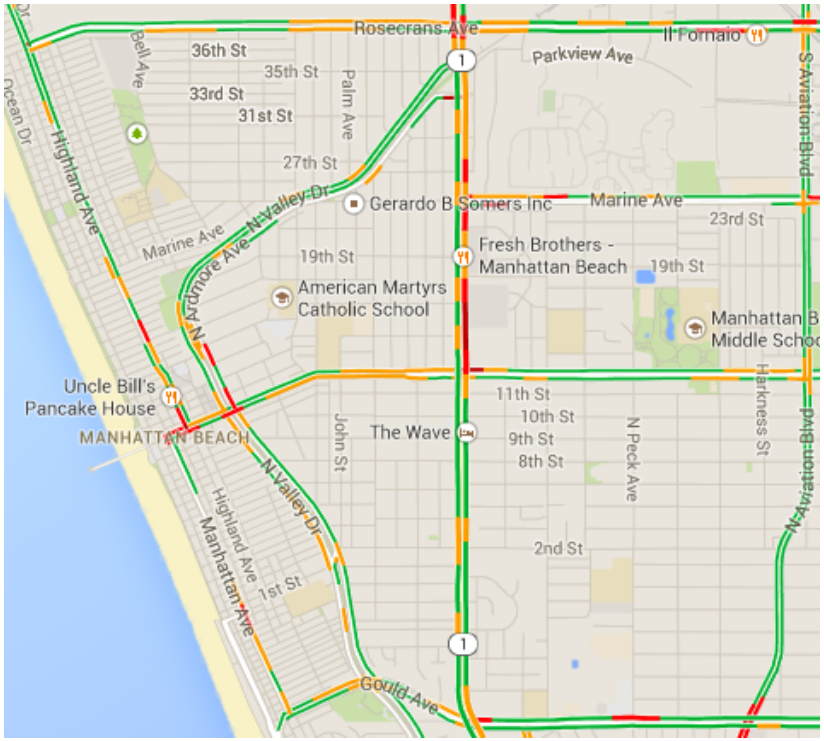
VISION OF THE MOBILITY PLAN

- Offers flexible, convenient, energy efficient alternative transportation options.
- Maintains and enhances safety while strengthening community, sense of place and preserves the environment.
- Considers all users of the transportation system on all viable and safe modes of travel.
- Maintains professional standards in traffic engineering design and operations and transportation planning.
- Integrates land use planning with multi-modal transportation network.
- Plans, maintain and operates mobility systems consistent with the principles of Complete Streets, active living and sustainable community design.
- Recognizes and utilizes new technology in transportation and communications to provide improved travel choices for residents and visitors.
- Emphasizes the use of non-motorized modes of transportation

TECHNOLOGY AND COMMUNICATIONS

Recent advances in communications technology and other changes are reshaping how we get around. For example, real time traveler information is now available in many forms including speeds and congestion on the freeway and arterial system, advanced parking space availability information, real time transit information, technology enabled ride sharing (Uber, Kyft, SideCar, others), car sharing (zipcar, Car2Go), and even "connected vehicles" (vehicle to vehicle communications and vehicle to infrastructure communications). It has been estimated that car sharing can reduce new vehicles sales by up to 32 new vehicles not sold for every vehicle added to a car sharing fleet. The shared car, unlike the personal car, does not sit idle all day while we are at work. Recently a Liberty Village resident stated "Uber is my solution to all things Downtown Manhattan Beach in the summer when parking and traffic are challenging. It's cost effective, easy to use, and the drivers are on time. The best solution ever after 20 years in Manhattan Beach! I love this app!" This is only one example of rapidly changing transportation options.

"Big Data" will also drive changes in how we get around. We now can track vehicle speeds on nearly all roadways using data collected from mobility sources (GPS, smart phones, cellular phones, vehicle fleets). This enables us to better plan travel choices, routes, time of day and mode of travel. New sources of data that relate to transportation are coming on line every day – Twitter, Yelp reviews, Cloud computing, crowd sourcing of data and many similar things not even thought of yet. Over time, we will have more data, better data, and cheaper data in the future to make transportation choices. Unlike in the past, it is not all about building more and more infrastructure for cars; it is about using what we have more efficiently, re-purposing the transportation system and rethinking how we travel.



Example of a Google Traffic map in Manhattan Beach.

Source: www.google.com/maps

How can these advances and changes in transportation technology and policy specifically affect Manhattan Beach in the future?

- Fewer cars owned by residents – Fewer trips, fewer parking spaces used, less congestion

- Better information on transit – More willingness to use transit thereby reducing auto trips

- More options – Complete Streets/Livable Streets policies and implementation actions will result in more thoughtful integration of other modes into the City's street system and will develop more emphasis on bicycle and pedestrian travel and create better bike and pedestrian systems

- Advanced transportation technology – The City can work with Caltrans and Metro to investigate things like advanced lane management strategies on Sepulveda Boulevard and other congested routes to reduce congestion, install advanced traffic signal systems to increase efficiency. Connected Vehicles will further increase system efficiency and safety.

- Parking communications and technology – As an example, San Francisco's SFPARK uses demand-responsive pricing to open up parking spaces on each block and reduce circling and double-parking. Beach communities like Manhattan Beach are among the most parking impacted locations during summer months and are perfectly suited to the application of advanced technology and pricing.

There is no doubt that transportation choices and options will significantly change in the next 15 to 20 years in Southern California as well as in Manhattan Beach. So called "autonomous vehicles" that help the driver be more efficient and safer are already here and will continue to evolve. Big Data will influence route choice and mode choice for Manhattan Beach residents for their trips to work and elsewhere. Real time information and the ability to change parking pricing and provide accurate parking information will affect how we operate our parking systems. All of these changes and many more will reduce the use of single passenger autos, make other modes of travel more desirable, increase the efficiency of all modes and provide much more information to travelers so that more informed and better travel decisions can be made within and through the City.

Uber, a new hybrid taxi/car service, allows you get a quote, pick the type of vehicle you need, and set up a pick-up location all on your smart phone. Photo Source: seejuliago.com

BALANCING THE TRANSPORTATION SYSTEM

The City has historically supported alternative modes of travel and the 2003 Circulation Element discusses all modes in its goals and policies. This Mobility Plan takes an even more balanced and complete approach to transportation planning with specific recommendations for changes and updates to goals and policies and implementation programs for pedestrians, bicycles and users of transit.

Class III bike route on Pacific Avenue overlooking the Pacific Ocean

WHAT DOES THIS MEAN FOR THE PUBLIC?

More Convenience and Choices:

Walking, bicycling and transit will become more convenient and desirable modes of transportation

More Complete Streets:

Various street corridors will be improved to encourage and accommodate walking, bicycling and/or transit. Improvements will include enhanced pedestrian crossings, new and enhanced bicycle lanes or routes and enhanced transit system amenities or routes

More Mobility for Everyone:

Children, families, the disabled and seniors will have more mobility options in the future to and from destinations such as schools, parks and community centers

Better Bicycle Access:

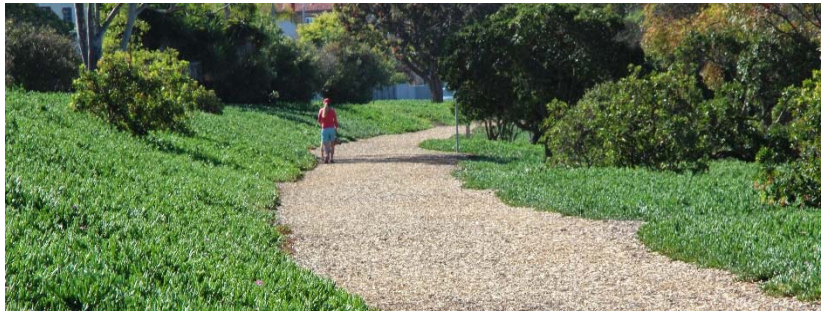
More bike routes and bike lanes will be added to provide better bicycle access to key points in the City as well as to other cities around Manhattan Beach

Pedestrian-Friendly Improvements:

Improvements will create a more attractive and pedestrian friendly environment featuring better visibility for pedestrians, enhanced crossings and less impediments to walking

TRANSPORTATION HISTORY OF MANHATTAN BEACH

The first railroad tracks were installed in 1888 through the undeveloped, sandy landscape of Manhattan Beach with the introduction of the Santa Fe Railroad connecting Los Angeles to Redondo Beach Wharf. This line included both freight and passenger services. Santa Fe eventually terminated passenger service in 1918 because it could not compete with the Pacific Electric Red Car passenger rates. The tracks were removed 98 years later in 1986 and replaced by Veterans Parkway.



The old Santa Fe Railroad Right-of-Way was replaced by Veterans Parkway and is currently being used as a jogging and pedestrian path.

The Electric Trolley, built by Los Angeles Pacific in 1903, had five stops in Manhattan Beach and connected Hill Street Station in Downtown Los Angeles to Redondo Beach. The tracks were installed just west of The Strand where the Marvin Braude bicycle path is today. Los Angeles Pacific later merged with Pacific Electric Red Car in 1910. A Red Car depot was built in 1914 on Marine Avenue. The main selling point of this line was the view of the ocean from the passenger train. The Red Cars would run on this line until May 12, 1940.

Starting in the 1920s, the Santa Fe railroad tracks were used to carry clay and other supplies to the Metlox Manufacturing Plant at Center Street (Manhattan Beach Boulevard) and Railroad Drive (Valley Drive).

With a transportation system in place, development and a new roadway system soon followed. Most of the early buildings were beach cottages built along the beach west of the Santa Fe Railroad tracks. Manhattan Beach was advertised as a summer vacation resort.

Manhattan Beach's current street system was then taking shape as land was subdivided into smaller lots. The streets of Manhattan Beach evolved from paths to wooden planks, to dirt roads, to oil, to asphalt, and to concrete paving. Street paving directly followed land development. Eucalyptus-lined roadways were developed in the City, including Center Street (Manhattan Beach Boulevard), Rosecrans Avenue, and other minor roadways.

The period from 1914 to 1916 saw much activity with transportation projects. The Strand project (from 1st Street to 37th Street), including lighting and other citywide sidewalk projects, was completed in 1914. Marine Avenue and Highview Avenue were paved, Manhattan Avenue widened, and Highland Avenue paved from the southern boundary of the City to its terminus just north of Marine Avenue. Ocean Boulevard was a

coastal "country road" connecting Manhattan Beach to Venice and other coastal cities to the north.

Since Railroad Drive (Valley Drive/Ardmore Avenue) lacked connections between Marine Avenue and Palm Avenue, and 15th Street and 10th Street, until 1967 the east-west connections from Manhattan Beach to the region were Manhattan Beach Boulevard and Marine Avenue.

A map of the City from 1923 shows that west of Sepulveda Boulevard, the development and street patterns were well established and similar to what we see today. About half of the land east of Sepulveda Boulevard had been subdivided for residential development, with the major streets established.

The paving of Sepulveda Boulevard (formerly Camino Real) was completed in April of 1931, marking a milestone in Manhattan Beach's roadway system. In 1934, Sepulveda Boulevard connected into the City of El Segundo, replacing a previous detour used during construction.

In the 1950s post-war era, as new home construction boomed, major road construction projects (widening, grading, curbs, and resurfacing) occurred throughout the City. In 1957, Interstate 405 (San Diego Freeway) was completed, providing regional freeway access to the South Bay. The I-105 freeway was completed in 1993, and Metro's Green Line opened in 1995, making rail transit available to Manhattan Beach residents once again over 60 years later.

Rosecrans Avenue shown in 1940 (top) and 2014 (bottom)

TRANSPORTATION ACHIEVEMENTS SINCE THE 2003 CIRCULATION ELEMENT

Since the adoption of the 2003 Circulation Element, several significant mobility-related improvements have been achieved and continue to be implemented throughout the City:

Metlox Plaza Downtown – Added a 460-space underground parking structure, hotel, retail spaces, and restaurants, totaling 64,000 SF with outdoor dining options surrounding an open public plaza (2005).

Bell Avenue and 33rd Street Traffic Circle Improvements Projects – The City constructed a traffic circle through the Sand Park area to help with circulation through the adjacent neighborhood (2003).

The Metlox Plaza in downtown Manhattan Beach has an inviting public square that is a popular destination for parents to bring their children to socialize.

13th Street and Morningside Drive Crosswalk Installation Project – A crosswalk was added to help with the pedestrian movement (2008).

City of Manhattan Beach Bicycle Transportation Plan – A City approved plan consisting of an interconnected system of existing and proposed bikeways throughout the City. The Plan complemented the existing and proposed bikeways in the South Bay region as well as helped achieve the goals and policies of the City's General Plan. It was ultimately incorporated into the South Bay Regional Bicycle Transportation Plan (2005).

Safe Routes to School – City was awarded three Safe Routes to School Grants (Federal and State) to improve and implement infrastructure to encourage school aged children to walk and bike to school (2009, 2010, 2011).

Safe Routes to School Pedestrian Countdown Signal Retrofit Project – Construction of pedestrian countdown signals were retrofit into existing signals throughout the City adjacent to schools to aid the crossing of students at intersections and school routes (2010).

Safe Routes to School Reflective Signs and Crosswalk Replacement Project – In order to enhance the safety of the pathway and routes for schools, reflective signs and replacement of crosswalks were constructed throughout the City (2011).

2010 Citywide Engineering and Traffic Survey – Identified speed limit "zones" where the posted speed limits should be adjusted – increased or decreased – or maintained as is, so as to provide drivers with a safe and reasonable speed limit and allow for continued radar enforcement by local law enforcement (2010, Updated in 2013).

North Manhattan Beach Street Improvements – Decorative sidewalks, wayfinding signs, and sidewalk bulbouts were added to northern Manhattan Beach as part of the North Manhattan Beach Street Improvement Project.

South Bay Cities Bicycle Master Plan – Multijurisdictional bike plan that identifies the possibility of approximately 30 miles of bikeway in Manhattan Beach and provides connections to neighboring cities (2011).

Blue Zones/Vitality City Livability Plan – Plan to improve the quality of life and how the built environment impacts health, well-being and happiness. This report encourages planning decisions that make cities more walkable and bikeable (2011).

Blue Zones Power 9 include strategies to live longer and be healthier.

PhotoSource: Bluzonesproject.com

HSIP Pedestrian Improvement Plan – Grant for pedestrian and bicycle improvements at 22 locations citywide (2012).

Additional Bikeways in Manhattan Beach:

- Valley Drive Class III Bike Route (2010) Manhattan Avenue
- Ardmore Avenue Class III Bike Route (2010), Class II Bike Lane and Sharrow (2014)
- Pacific Avenue Class III Bike Route (2012)
- Redondo Avenue Class III Bike Route (2012)

Residential Parking Permit Program – Implementation of a parking permit program for surrounding neighborhoods adjacent to Mira Costa High School (2005) and Downtown Residential Override Parking Permit Program for select block segments east of Ardmore Avenue (2010).

Downtown Parking Management Plan – Evaluated the overall parking situation in the downtown area and developed strategies for optimizing usage of public parking lots and on-street parking spaces (2010).

The Downtown Parking Management Plan evaluated ways to alleviate the high parking demand in and around the downtown area's specialty shops, restaurants, and beach area.

RELATIONSHIP BETWEEN ADOPTED 2003 CIRCULATION ELEMENT AND NEW MOBILITY PLAN

The 2003 Infrastructure Element of the City's General Plan included seven categories; Circulation, Neighborhood Traffic Intrusion, Parking, Pedestrian and Bicycle Networks, Water, Sewer, and Storm Drain Systems, Energy and Communications, and Solid Waste and Recycling.

While the City of Manhattan Beach has always supported alternative modes of transportation, such as walking, biking, and transit, the 2003 Circulation Element was largely focused on the movement of cars and the effect cars had on the community. The revised Mobility Plan encompasses a more balanced, multi-modal approach to the movement of people and goods throughout the City, and incorporates the vision and goals of the City to support all users of the roadway. Potential benefits associated with planning a multi-modal transportation network include:

- **Improved Safety** – Designing streets and travel routes that consider safe travel for all modes can reduce the occurrence and severity of vehicular collisions with pedestrian and bicyclists. [2]

- **Health** – Multi-modal transportation networks that allow people to walk or bicycle as a viable transportation option can promote an active lifestyle. [3]

- **Increased Transportation Choices** – Multi-modal transportation networks provide options and increased mobility for people who cannot drive. This is especially important for people with disabilities and for seniors.

- **Economic Revitalization** – Creating multi-modal transportation networks can improve economic conditions for both business owners and residents. A network of complete streets can be safer and more appealing to residents and visitors, which can benefit retail and commercial development. Multi-modal transportation networks can improve conditions for existing businesses by helping revitalize an area and attracting new economic activity. [4]

- **Better Air Quality** – Land use patterns and the existing transportation infrastructure play a direct role in the rate and growth of vehicle miles traveled (VMT); influencing the distance people travel and the model of travel they chose. Reducing the number of automobile trips can reduce fuel consumption and greenhouse gas (GHG) emissions. [5]

Manhattan Beach, looking toward El Segundo.

REGULATORY CONTEXT

Since the last 2003 General Plan update, a number of legislative acts have been passed that directly affect the development of transportation and mobility plans in California. The following legislative initiatives have been reviewed and incorporated into the City's updated Mobility Plan.

GLOBAL WARMING AND CLIMATE CHANGE

In 2006, the Legislature passed and Governor Schwarzenegger signed the Global Warming Solutions Act (Assembly Bill 32), which required the California Air Resources Board (CARB) to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance of the program. In addition, AB 32 requires the CARB to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by the year 2020.

To support this goal, the State of California passed the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375), requiring the CARB to set regional emissions reduction targets for the purpose of reducing greenhouse gas emissions from passenger vehicles. The bill also requires regions with a metropolitan planning organization (MPO) to adopt a Sustainable Communities Strategy (SCS), as part of its Regional Transportation Plan (RTP), to integrate transportation, land-use and housing policies to plan for achieving certain goals for the reduction of greenhouse gas emissions from automobiles and light trucks in a region. If the Sustainable Communities Strategy falls short of meeting the targets, the region must prepare an Alternative Planning Strategy that, if implemented, would meet the targets.

Neither the Sustainable Communities Strategy, nor the Alternative Planning Strategy, supersede a city's or county's General Plan, nor must a local agency's planning policies be consistent with either strategy. Rather, these strategies help determine the eligibility of residential or transportation planning projects for SB 375's California Environmental Quality Act (CEQA) streamlining incentives.[6]

Auto emissions are a large contributor to Southern California air quality problems. Photo Source; www.csmonitor.com

COMPLETE STREETS

The California Complete Streets Act (Assembly Bill 1358), signed into law by Governor Schwarzenegger in 2008, states: "In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from short trips in the automobile to biking, walking and use of public transit."[7]

Berlin Parklet, Long Beach, CA. Parklets are a small extension of the sidewalk and can either be a privately owned space, such as a restaurant patio, or a public space. In this case, two on-street parking spaces were removed and replaced with an extended outdoor dining area.

Photo Source: www.momentummag.com

AB 1358 impacts local general plans by adding the following language to Government Code Section 65302(b)(2)(A) and (B):

> *(A) Commencing January 1, 2011, upon any substantive revision of the circulation element, the legislative body shall modify the circulation element to plan for a balanced, multi-modal transportation network that meets the needs of all users of streets, roads, and highways, for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan.*
>
> *(B) For the purposes of this paragraph, "users of streets, roads, and highways" means bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.*

In response to the Complete Streets Act, the California Department of Transportation (Caltrans) released a revised version on Deputy Directive 64 (DD-64-R1): Complete Streets – Integrating the Transportation System in 2008. DD-64-R1 states that Caltrans will:

- *"Provide for the needs of travelers of all ages and abilities in all planning, programming, design construction, operations, and maintenance activities and products on the State Highway System;*
- *View transportation system improvements (new and retrofit) as opportunities to improve safety, access, and mobility for all travelers and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system;*
- *Develop integrated multi-modal projects in balance with community goals, plans, and values; addressing the safety and mobility needs of bicyclists, pedestrians and transit users in all projects, regardless of funding;*

- *Facilitate bicycle, pedestrian, and transit travel by creating 'complete streets' beginning early in system planning and continuing through project delivery and maintenance and operations; and,*
- *Collaborate among all Caltrans department functional units and stakeholders to develop a network of complete streets."*[8]

The complete streets concepts outlined in AB 1358 and Deputy Directive 64 support the goals of AB 32 and SB 375 by utilizing multi-modal transportation planning tools as a means of reducing greenhouse gas emissions.

LIVING STREETS

Due to the growing trend toward multi-modal transportation choices, healthy living, and vibrant public spaces, the concept of "living streets" has emerged. Like complete streets, the goal of living streets is to repurpose city streets to accommodate all users of the roadway, including bicyclists, children, persons with disabilities, motorists, pedestrians, users of transit, and seniors However, living streets takes it a step beyond the concepts embraced by complete streets, and incorporates elements related to social and economic vitality, health and quality of life, aesthetically pleasing landscaping and street furniture, and the restoration of the urban ecosystem.[9] According to the *Model Design Manual for Living Streets*, the goals of designing living streets are to:

- Serve the land uses that are adjacent to the street; mobility is a means, not an end
- Encourage people to travel by walking, bicycling, and transit, and to drive less
- Provide transportation options for people of all ages, physical abilities, and income levels
- Enhance the safety and security of streets, from both a traffic and personal perspective
- Improve peoples' health
- Create livable neighborhoods
- Reduce the total amount of paved area
- Reduce street water runoff into watersheds
- Maximize infiltration and reuse of storm water
- Reduce greenhouse gas emissions and other air pollution
- Reduce energy consumption
- Promote the economic well-being of both businesses and residents
- Increase civic space and encourage human interact

The street elements and policies listed below in Table 1 aligns living streets policies with the 10 elements for complete streets. Manhattan Beach is considering a Living Streets policy and participates in South Bay Living Streets initiatives. The City is committed to the concepts embraced by the Living Streets policies, and will continue to strive toward planning, maintaining and operating its mobility system in accordance with the principles set forth in both Complete Streets and Living Streets.

TABLE 1: COMPLETE STREETS ELEMENTS VS. LIVING STREETS POLICIES

Complete Streets Elements	Living Streets Policies
Vision	The vision of living streets starts with the premise that any changes or improvements to streets should add value to the adjacent land and neighborhoods.
All Users and Modes	Cities will incorporate the full range of appropriate living streets elements when planning and designing their transportation networks.
	Cities will enhance the safety, access, convenience, and comfort of users of all ages and abilities. Cities understand that children, elderly adults, and persons with disabilities will require special accommodations.
	Cities will plan, design, and build high quality access and mobility for pedestrians, bicyclists, and transit passengers.
Connectivity	Cities will design, operate, and maintain a transportation system that provides a highly connected network of streets that accommodate all modes of travel.
	Cities will seek opportunities to repurpose rights-of-way, and to add new rights-of-way to enhance connectivity for pedestrians, bicyclists, and transit.
	Cities will prioritize non-motorized connectivity improvements to services, schools, parks, civic uses, regional connections, and commercial uses.
	Cities will require large, new developments to provide interconnected street networks with small blocks that connect to existing or planned streets on the perimeter of the development.
Jurisdiction	A city's living streets policy document is intended to cover all roads, streets, and alleys in the city.
	Every city agency, including public works, planning, redevelopment, street services, and others will follow the policies in this document.
	Cities will require all developers to obtain and comply with their standards.
Phases	Cities will apply their living streets policy document to all roadway projects including those involving operations, maintenance, new construction, reconstruction, retrofits, repaving, rehabilitation, or changes in the allocation of pavement space on an existing roadway. This also includes privately built roads intended for public use.
	Living streets may be achieved through single projects or incrementally through a series of smaller improvements or maintenance activities over time.
	Cities will draw on all sources of transportation funding to implement living streets.
Exceptions	Living streets will be included in all street construction, reconstruction, repaving, and rehabilitation projects, except under one or more of the following conditions:
	A. A project involves only ordinary maintenance activities designed to keep assets in serviceable condition, such as mowing, cleaning, sweeping, spot repair, concrete joint repair, or pothole filling, or when interim measures are implemented on temporary detour or haul routes.
	B. The city council exempts a project due to an excessively disproportionate cost of establishing a bikeway, walkway, or transit enhancement as part of a project.
	C. The city engineer and the director of the planning department jointly determine that the construction is not practically feasible or cost effective because of significant or adverse environmental impacts to waterways, flood plains, remnants of native vegetation, wetlands, mountainsides, or other critical areas, or due to impacts on neighboring land uses, including from right of way acquisitions.
	D. The director of transportation issues a documented exception that application of living streets principles is unnecessary or inappropriate.
	E. The director of the planning department issues a documented exception where changes to the street may detract from the historical or cultural nature of the street or neighborhood.

Complete Streets Elements	Living Streets Policies
Design	Cities will adopt new living streets design guidelines to guide the planning, funding, design, construction, operation, and maintenance of new and modified streets while remaining flexible to the unique circumstances of different streets where sound engineering and planning judgment will produce context-sensitive designs.
	Cities will incorporate the street design guidelines' principles into all city plans, manuals, rules, regulations, and programs as appropriate. As new and better practices evolve, cities will incorporate those as well.
	Cities will keep street pavement widths to the minimum necessary.
	Cities will provide well-designed pedestrian accommodation in the form of sidewalks or shared-use pathways on all arterial and collector streets and on local streets.
	Cities will provide frequent, convenient and safe street crossings. These may be at intersections designed to be pedestrian friendly, or at mid-block locations where needed and appropriate.
	Cities will provide bicycle accommodation along all avenues, boulevards, and connector streets.
	Where physical conditions warrant, cities will plant trees and manage streetwater whenever a street is newly constructed, reconstructed, or relocated.
Context Sensitivity	Cities will plan their streets in harmony with the adjacent land uses and neighborhoods.
	Cities will design their streets with full input from local stakeholders.
	Cities will design their streets in harmony with natural features such as waterways, slopes, and ravines.
	Cities will design their streets with a strong sense of place. They will use architecture, landscaping, streetscaping, public art, signage, etc. to reflect the community, neighborhood, history, and natural setting.
	Cities will coordinate with merchants along Main Street corridors to develop vibrant retail districts.
Performance Measures	Street fatalities and injuries decrease for all age groups.
	The number of trips by walking, cycling, and transit increases.
	Vehicle travel is reduced.
	Prevailing speeds of vehicles on local streets decrease.
	Streetwater runoff is reduced.
	Water quality in rivers and the ocean improves.
	Retail sales and tourism increase.
	Resident satisfaction increases.
Implementation Plan	Cities will adopt and apply this design manual.
	Cities will incorporate living streets concepts into the next circulation element of their general plans.
	Cities will either implement living streets designs on every street, or initiate the process by preparing and adopting bicycle plans, pedestrian plans, green streets plans, Safe Routes to School plans, and an Americans with Disabilities Act transition plan.
	Cities will prepare and adopt a storm water mitigation plan that aims to capture streetwater runoff on site.

Source: Model for Living Streets Design Manual, Los Angeles County, 2011.

SAFE ROUTES TO SCHOOL

In 2005 the United States Congress passed the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU). This transportation reauthorization bill included funding for the Federal Safe Routes to School (SRTS) program. The objective of the SRTS program is to support the use of safe, active transportation modes (i.e. walking and bicycling) for children to and from schools. The SRTS program is administered by the Federal Highway Administration, which distributes program funds to individual State Departments of Transportation. In California, Caltrans distributes the federal grant funding to eligible cities and counties for local SRTS projects. In addition to the federally operated SRTS program, Caltrans also administers its own Safe Routes to School program, known as SR2S. Funds for both programs are available on a competitive basis, with each Caltrans District having a fixed amount available for cities and counties. [10]

MAP-21 AND THE CALIFORNIA ACTIVE TRANSPORTAITON PROGRAM

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 establishes a new program to provide for a variety of alternative transportation projects, including many that were previously eligible activities under separately funded programs. The Transportation Alternatives Program (TAP) replaces the funding from pre-MAP-21 programs including Transportation Enhancements, Recreational Trails, Safe Routes to School, and several other discretionary programs, wrapping them into a single funding source.[11]

In 2013, California enacted a new state program to fund Safe Routes to School, pedestrian, and bicycle projects - the Active Transportation Program (ATP). The ATP combines federal Transportation Alternatives funding with state funds to focus on increasing walking and bicycling, improving safety and public health, and advancing social equity. In 2014, $360 million will be awarded competitively as grants to communities across California for Safe Routes to School, walking, and bicycling projects and programs. [12]

Lead by the Beach Cities Health District (BCHD), the Walking School Bus program in the Beach Cities area allows children within a mile radius of school to meet up with classmates and BCHD-trained parent volunteers once per week at designated "bus stops" and safely walk to campus.

REGIONAL TRANSPORTATION PROGRAMS

Although the City's Mobility Plan is specific to Manhattan Beach, it is part of a larger regional set of plans and programs that guide the development of Southern California's transportation system. Key plans and programs include:

SCAG Regional Transportation Plan (RTP)

The Regional Transportation Plan (RTP) is developed, maintained, and updated by the Southern California Association of Governments (SCAG), Southern California's Metropolitan Planning Organization, every four years. It encompasses the six counties in Southern California including Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. The RTP project list is divided into three sections. At the center is the Federal Transportation Improvement Program (FTIP), which forms the foundation of the RTP project investment strategy and represents the first six years of already-committed funding. The RTP incorporates the adopted 2011 FTIP. The RTP also contains an additional financially constrained set of transportation projects above and beyond the FTIP. Finally, the Strategic Plan represents an unconstrained, illustrative list of potential projects that the region would pursue given additional funding and commitment.

On April 2, 2012 the Regional Council of the SCAG adopted the 2012-2035 RTP/SCS. It represents a multi-year effort involving stakeholders in the SCAG region.

Los Angeles County Metro Long Range Transportation Plan

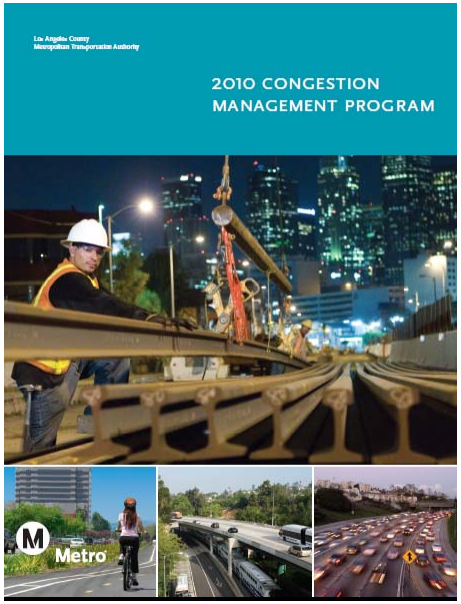
LACMTA's 2009 Long Range Transportation Plan (LRTP) looks ahead about 30 years to determine what the county's residents will need in terms of mobility options. The 2009 LRTP updates changes that have occurred since the 2001 LRTP, including growth patterns, the latest technical assumptions, climate change issues and incorporates Measure R projects. It recommends transportation projects that can be implemented through 2040, and other projects that could be funded if new revenue sources become available.

In addition to the 2009 LRTP, the LRTP Technical Document presents detailed information on sub-regional needs, climate change and sustainability, financial modeling, travel demand modeling and performance analysis.

The Regional Congestion Management Program (CMP)

State statute requires that a Congestion Management Program (CMP) be developed, adopted and updated biennially for every county that includes an urbanized area, and shall include every city and the county government within that county. As the Congestion Management Agency for Los Angeles County, Metro is responsible for implementing the CMP. The goal of the CMP is to link local land use decisions with their impacts on regional transportation and air quality, and to develop a partnership among transportation decision makers on devising appropriate transportation solutions that includes all modes of travel.[13]

On October 28, 2010 the Metro Board adopted the 2010 CMP for Los Angeles County. The 2010 CMP summarizes the results of 18 years of CMP highway and transit monitoring and 15 years of monitoring local growth. The CMP guidelines for local jurisdictions are also in the 2010 CMP.



Los Angeles County Measure R

Measure R is a half-cent sales tax for Los Angeles County that would finance new transportation projects and programs, and accelerates many of those already in the pipeline – everything from new rail and/or bus rapid transit projects, commuter rail improvements, LACMTA rail system improvements, highway projects, improved countywide and local bus operations, and local city sponsored transportation improvements. The measure garnered the minimum two-thirds vote in the November 2008 election and became law January 2, 2009 with the tax taking effect in July 2009. The highway, bus and rail projects identified in the expenditure plan are spread throughout Los Angeles County. In addition, each of the individual cities and unincorporated areas within Los Angeles County will receive a share of the revenue to use at their discretion for local transportation needs. There are four Metro Measure R-funded transit projects in the South Bay region; the Crenshaw/LAX Transit Corridor Project, the Green Line Extension to Los Angeles International Airport, the Regional Connector: Transit Corridor, and the South Bay Green Line Extension. The South Bay Cities Council of Governments (SBCCOG) also has Measure R funds available to improve local and regional arterial highways and some of these funds are being used in Manhattan Beach.

MEASURE R TRANSIT PROJECTS THAT AFFECT MANHATTAN BEACH'S REGIONAL CONNECTIVITY

Crenshaw/LAX Transit Corridor (Final Design Stage)

The Metro Crenshaw/LAX Line will extend 8.5 miles from the existing Metro Exposition Line at Crenshaw and Exposition Boulevards to the Metro Green Line and will serve the cities of Los Angeles, Inglewood and El Segundo, and portions of unincorporated Los Angeles County. The closest station to Manhattan Beach will be located at Aviation Boulevard and Century Boulevard. The Metro Crenshaw/LAX Line is scheduled to open in 2019.

Regional Connector: Transit Corridor (Preliminary Engineering Phase)

The Regional Connector will connect the Metro Gold Line, Blue Line, and Expo Line, eventually enabling passengers to travel on Metro's LRT system north/south from Claremont to Long Beach and east/west from the Eastside to Santa Monica without the need to transfer at 7th St/Metro Center. By providing continuous through service between these lines, the Regional Connector will improve access to both local and regional destinations – and greatly improve the connectivity of the transportation network for the region.

Green Line Extension to Los Angeles International Airport (Alternatives Analysis Study)

In cooperation with Los Angeles World Airports (LAWA), Metro is examining ways to connect the growing Metro Rail system with LAX. The study is focusing on a five square mile area bounded by La Cienega Blvd on the east, Manchester Av on the north, Mariposa Av on the south and the LAX airport terminals on the west. Metro and LAWA are now continuing to study four possible locations for the connection between light rail and the automated people mover (APM) to complete travel to the LAX terminals; an Aviation/Century Connection, an Aviation/96th Street Connection, an Intermodal Transportation Facility Connection, and a Central Terminal Area Connection.

South Bay Green Line Extension (Environmental Impact Report/ Environmental Impact Statement Draft Phase)

The South Bay Green Line Extension Study will examine options for extending rail service in the South Bay using an existing railroad right-of-way known as the Harbor Subdivision. This extension will provide congestion relief along the busy I-405 corridor. It will also improve mobility in southwestern LA County by accessing the regional rail network through connections to the Metro Blue Line and the proposed Crenshaw/LAX Transit Corridor. Three alternatives are currently being reviewed and analyzed; a light rail alternative, a no build alternative, and a transportation systems management (TSM) alternative.

CURRENT CONDITIONS

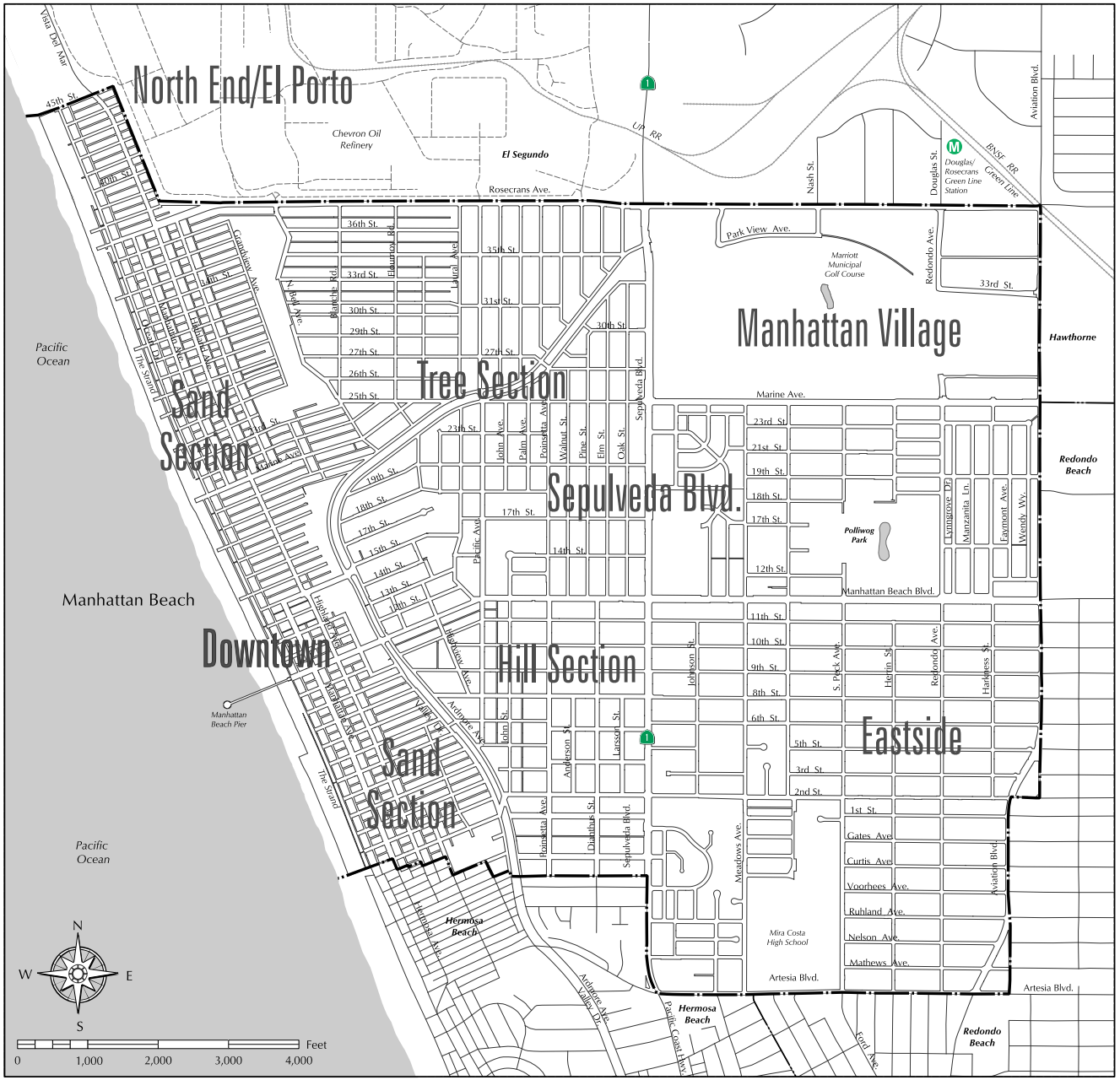
PEDESTRIAN NETWORK

Manhattan Beach's high residential density, walkstreets, narrow streets, and lively street frontages in downtown and the North End all make it a very "walkable" community. A map of the various neighborhoods in Manhattan Beach is provided in Figure 1. Walking from some residential neighborhoods down to the beach can be accomplished easily and quickly. Parking shortages and traffic congestion during the summer months also make walking a desirable alternative for accessing the beach and activity centers.

Walkability, access, and connections are necessary components of a circulation system that easily and specifically accommodates pedestrians. Walkability includes adequate sidewalks, safe street crossings, features that encourage cautious driving, and a pleasant and safe walking environment. Walkways, mid-block crossings, pathways, and pedestrian short-cuts allow people to get from one destination to another with ease. Dedicated pedestrian paths can provide safe access between residential, beach, and retail areas. Pedestrian connections should be provided primarily to and from commercial activity centers such as the downtown, the North End, and transit stops, as well as schools. Disabled access strategies, which also accommodate strollers and other wheeled transportation, should be incorporated into all street and pathway plans.

The pedestrian network in Manhattan Beach is comprised of sidewalks, The Strand, walkstreets, and the pedestrian-only path through Veterans Parkway. Figure 2 identifies the major pedestrian networks in Manhattan Beach.

Manhattan Beach Boulevard is a very popular pedestrian destination with an abundance of coffee shops, beachfront bars and restaurants, unique shops, and beach access.



Legend

City Boundary

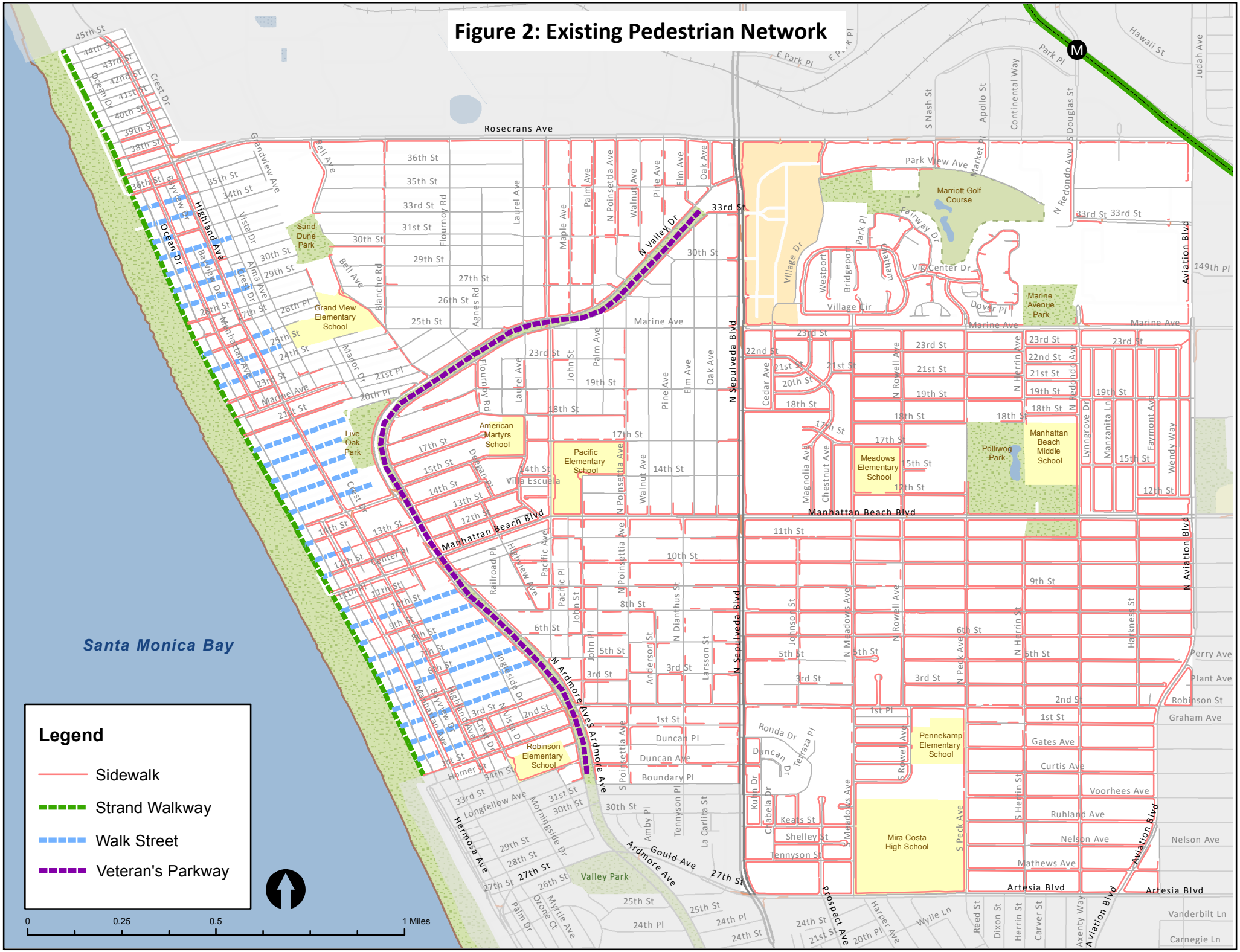
MANHATTAN BEACH GENERAL PLAN

Figure LU-1

Neighborhoods Map

MANHATTAN · BEACH · GENERAL · PLAN

Figure 2: Existing Pedestrian Network



SIDEWALKS

Sidewalks – The sidewalk network in Manhattan Beach can be defined into three categories;

1) Areas with sidewalk coverage on most streets,

2) Areas with virtually no sidewalks, and

3) Areas with an intermittent sidewalk system.

Areas in the city with no sidewalks or an intermittent sidewalk are primarily residential in nature, and are located in the north-west quadrant of the City. In areas with no sidewalks, some residents have expressed concern citing safety issues, difficulty distinguishing between lot lines, yards, bushes and patios encroaching into walking/biking space, and the abundance of parked cars blocking the pedestrian travel-way.

THE STRAND

"The Strand" – The Pedestrian Walkway, also known as "The Strand", is a paved pedestrian path that runs mostly along the Pacific Ocean shoreline just east of the Marvin Braude Bike Path. Though Manhattan Beach, "The Strand" is a walking path that provides two miles of continual pedestrian access along the beach.

WALKSTREETS

Walkstreets - Walkstreets are unique pedestrian features in Manhattan Beach that provide safe, attractive paths to the beach and surrounding areas. Walkstreets are pedestrian-only streets perpendicular to the beach between The Strand and Alma Avenue in the North and Valley Drive in the south. Walkstreets generally front residential units with alleys providing vehicular access. Walkstreets also create visual corridors framing the ocean and fosters a friendly neighborhood environment for residents and visitors.

VETERANS PARKWAY

Veterans Parkway – Veterans Parkway is a 21 acre park that crosses the city from north to south along Valley Drive and Ardmore Avenue from Sepulveda Boulevard to the border of Hermosa Beach. It includes a 1.5 mile jogging trail and wheelchair accessible par course with four workout stations between the intersection of 10th and 11th Streets. The trail was once the right-of-way for the Atchison Topeka and Santa Fe railway.

BICYCLE NETWORK

With rain falling less than 30 days a year and moderate temperatures most of the year, the Southern California climate is perfect for bicycling. Cycling to work or school is a popular means of transportation for short distances. Allowing bicycles on buses or providing secure bicycle parking facilities can encourage bicycling for longer trips, provided safe routes are established. Bikeways in Manhattan Beach are categorized into four categories, bike paths, bike lanes, bike routes, and Sharrows. A map of the existing bicycle network provided in Figure 3.

The City's only Class I Bike Path west of The Strand near the Manhattan Beach Pier.

Bike Paths (Class I) – Bike paths are paved facilities designated for bicycle use that are physically separated from roadways by space or a physical barrier and are referred to as Class I bike paths. Currently, the only Class I bike path in Manhattan Beach is located on the Marvin Braude Bikeway west of The Strand.

Bike Lanes (Class II) – Bike lanes are lanes on the outside edge of roadways reserved for the exclusive use of bicycles, and designated with special signage and pavement markings. Bike lanes are referred to as Class II bike lanes. An example of a Class II bike lane is located on Manhattan Avenue between 1st Street and 8th Street.

Bike Routes (Class III) - Bike routes are roadways recommended for bicycle use and often connect to bike lanes and bike paths. Routes are designated with signs only (no on-street striping) and may not provide additional pavement width for bikes. Bike routes are referred to as Class III bike routes. Examples of Class III bike routes are located on the following roadways:

- Valley Drive from 15th Street to Oak Avenue
- Ardmore Avenue from 17th Street to Oak Avenue
- Redondo Avenue from Artesia Boulevard to Marine Avenue
- Pacific Avenue from 5th Street to Rosecrans Avenue

Sharrows – A shared-lane marking, or "sharrow", is a street marking in the center of a travel lane to indicate that a lane should be shared between motor vehicles and bikes. Sharrows are also intended to alert drivers of the presence of bicyclists in the roadway and encourage caution. Manhattan Beach implemented its first pilot sharrow in 2014 on Manhattan Avenue between 8th Street and 15th Street.

Figure 3: Existing Bicycle Network

CURRENT BICYCLE ACTIVITY

As part of the South Bay Cities Bicycle Master Plan, bicycle counts were conducted to assess bicycling levels at different locations throughout the City. Bicycle counts were taken at select intersections in 2010 on a weekday between 3:00 PM and 6:00 PM, and on a Saturday between 10:30 AM and 1:30 PM. The days and times were meant to capture the volume of bicyclists on a typical weekday and weekend day. The results are listed in Tables 2A and 2B and graphically shown in Figures 4A and 4B.

As shown, of the six weekday count locations, the intersection with the highest volume of bicyclists was Manhattan Beach Boulevard and Manhattan Avenue, with 75 bicyclists during the three hour count period. The intersection with the highest number of weekend bicyclists was Manhattan Beach Boulevard and The Strand with 589 bicyclists during the three hour count period. The high count discrepancy suggests that bicyclists in Manhattan Beach often ride their bicycle for recreational purposes, as opposed to commuting to work, on the weekend, especially near the beach.

Overall, during both the weekday and Saturday count periods, approximately three-quarters of bicyclists were male, and 54 percent of weekday bicyclists and 49 percent of Saturday bicyclists rode on the sidewalk. Riding on the sidewalk can be an indicator of a lack of bicycle facilities and a poor perception of safety.[14]

Manhattan Beach is a popular destination for cycling club rides.

TABLE 2A: WEEKDAY BICYCLE COUNTS

Count Location	Male	Female	On Sidewalk	Wrong Way	Total
Artesia Boulevard / Peck Avenue	10	3	8	0	**13**
Highland Avenue / Rosecrans Avenue	18	2	12	0	**20**
Manhattan Beach Boulevard / Redondo Avenue	34	3	18	0	**55**
Manhattan Beach Boulevard / Manhattan Avenue	58	15	50	4	**75**
Marine Avenue / Redondo Avenue	28	2	18	1	**30**
Valley Drive / Pacific Avenue	22	4	15	1	**29**
Total	**170**	**29**	**121**	**6**	**199**

Source: South Bay Bicycle Master Plan, August 2010.
Thursday, November 4, 2010. 3:00 PM – 6:00 PM

TABLE 2B: WEEKEND BICYCLE COUNTS

Count Location	Male	Female	On Sidewalk	Wrong Way	Total
Artesia Boulevard / Peck Avenue	11	6	10	0	**17**
Highland Avenue / Rosecrans Avenue	111	26	21	0	**137**
Manhattan Beach Boulevard / Redondo Avenue	31	5	19	0	**36**
Manhattan Beach Boulevard / Manhattan Avenue	149	45	107	8	**223**
Marine Avenue / Redondo Avenue	18	3	13	0	**23**
Valley Drive / Pacific Avenue	19	5	15	0	**27**
Manhattan Beach Boulevard / The Strand	433	124	335	38	**589**
Total	**772**	**214**	**520**	**46**	**986**

Source: South Bay Bicycle Master Plan, August 2010.
Saturday, November 6, 2010. 10:30 AM – 1:30 PM

Figure 4A: Existing Weekday Bicycle Counts

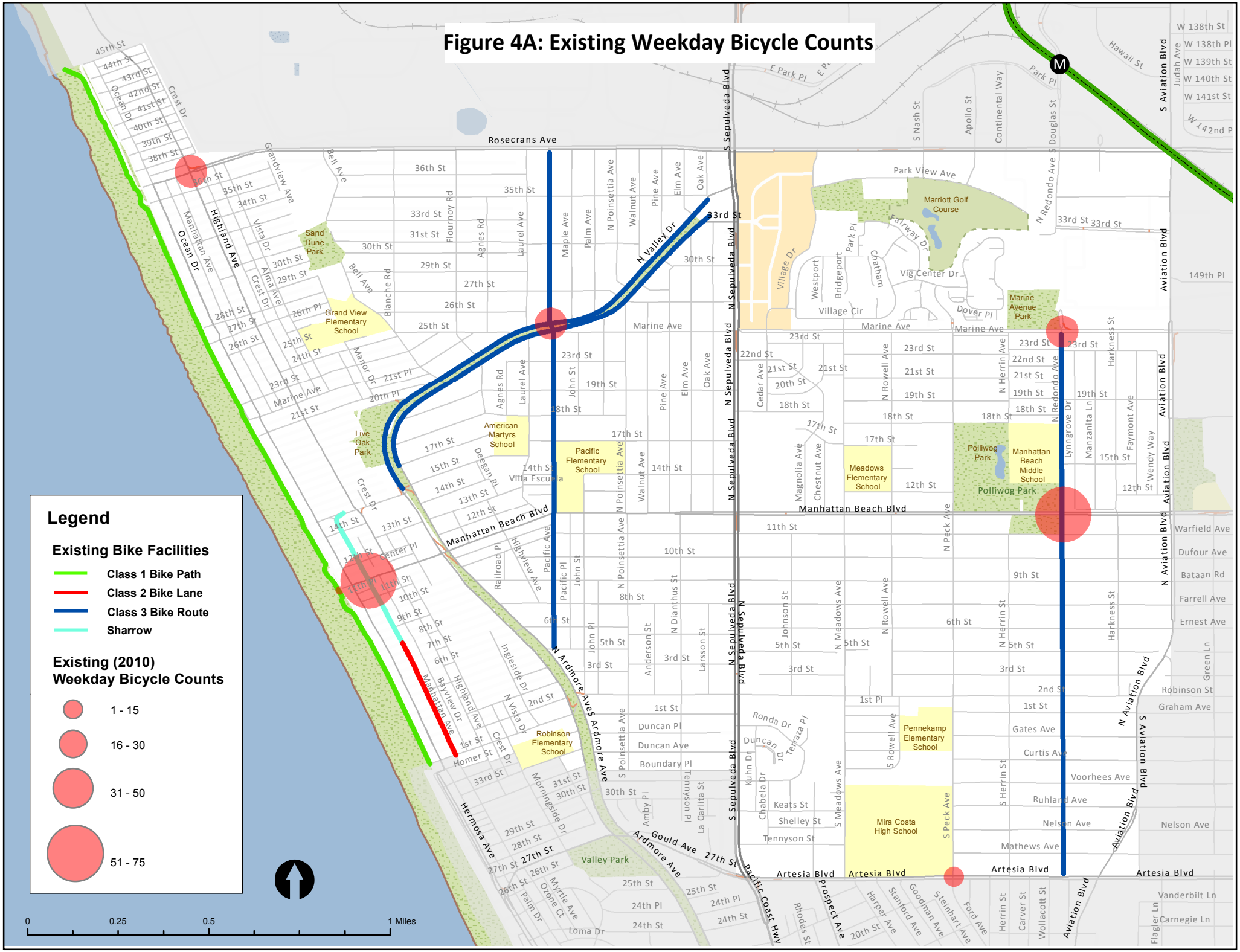
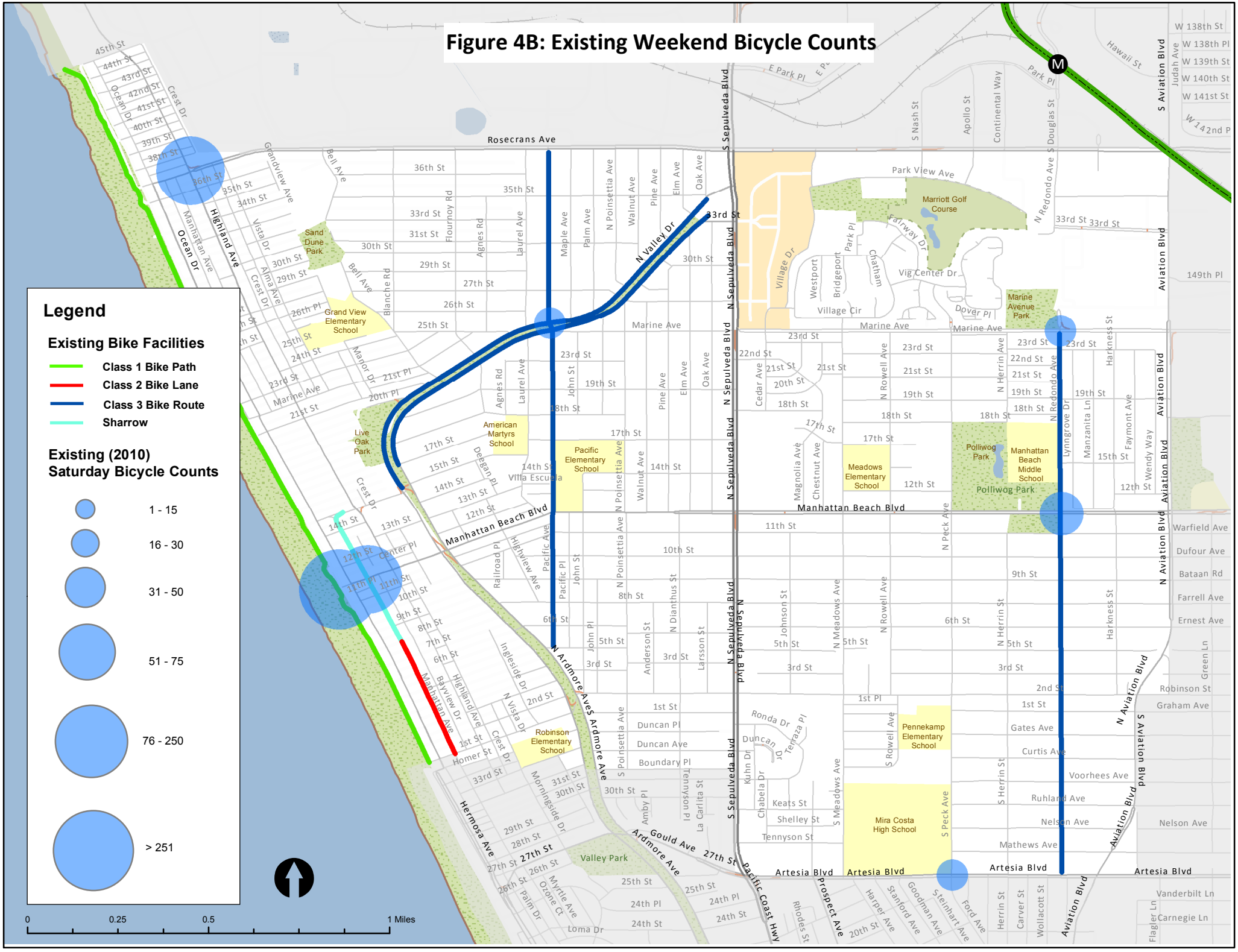


Figure 4B: Existing Weekend Bicycle Counts



TRANSIT SERVICES

BUS NETWORK

Public transit plays a crucial role in the development of a multi-modal transportation network. High quality public transit increases the mobility of residents who are unable or prefer not to drive, and gives residents who do drive the option of taking alternative forms of transportation. Transit service in Manhattan Beach is provided by several transit operators; Los Angeles County Metro, Beach Cities Transit (BCT), Municipal Area Express (MAX), Los Angeles Department of Transportation (LADOT), Torrance Transit, and the Ocean Express. All BCT, MAX, MTA, Torrance Transit and LADOT buses are equipped with front-loading bike racks, making public transit a viable option for commuters in Manhattan Beach. Regional transit service to areas outside the City is provided primarily via Sepulveda Boulevard, Rosecrans Avenue, Manhattan Beach Boulevard, and Artesia Boulevard, while local service is provided via Highland Avenue, Aviation Boulevard and Marine Avenue, as shown in Figure 5.

Beach Cities Transit (BCT) provides community-based transit by linking Redondo Beach, Hermosa Beach, Manhattan Beach, El Segundo, the Metro Aviation Green Line Station, and the LAX City Bus Center. Line 109 serves Rosecrans Avenue, Highland Avenue and Manhattan Avenue in Manhattan Beach.

LADOT Commuter Express bus turning onto Manhattan Beach Boulevard

Municipal Area Express (MAX) is a commuter bus service serving the El Segundo employment center. Lines 2 and 3 serve Aviation Boulevard in Manhattan Beach.

Los Angeles County Metro (MTA) Lines 125, 126, 130 and 232 serve Sepulveda Boulevard, Rosecrans Avenue, Manhattan Beach Boulevard, and Artesia Boulevard in Manhattan Beach.

Torrance Transit Line 8 serves Aviation Boulevard and Artesia Boulevard in Manhattan Beach.

LADOT Commuter Express bus turning onto Manhattan Beach Boulevard

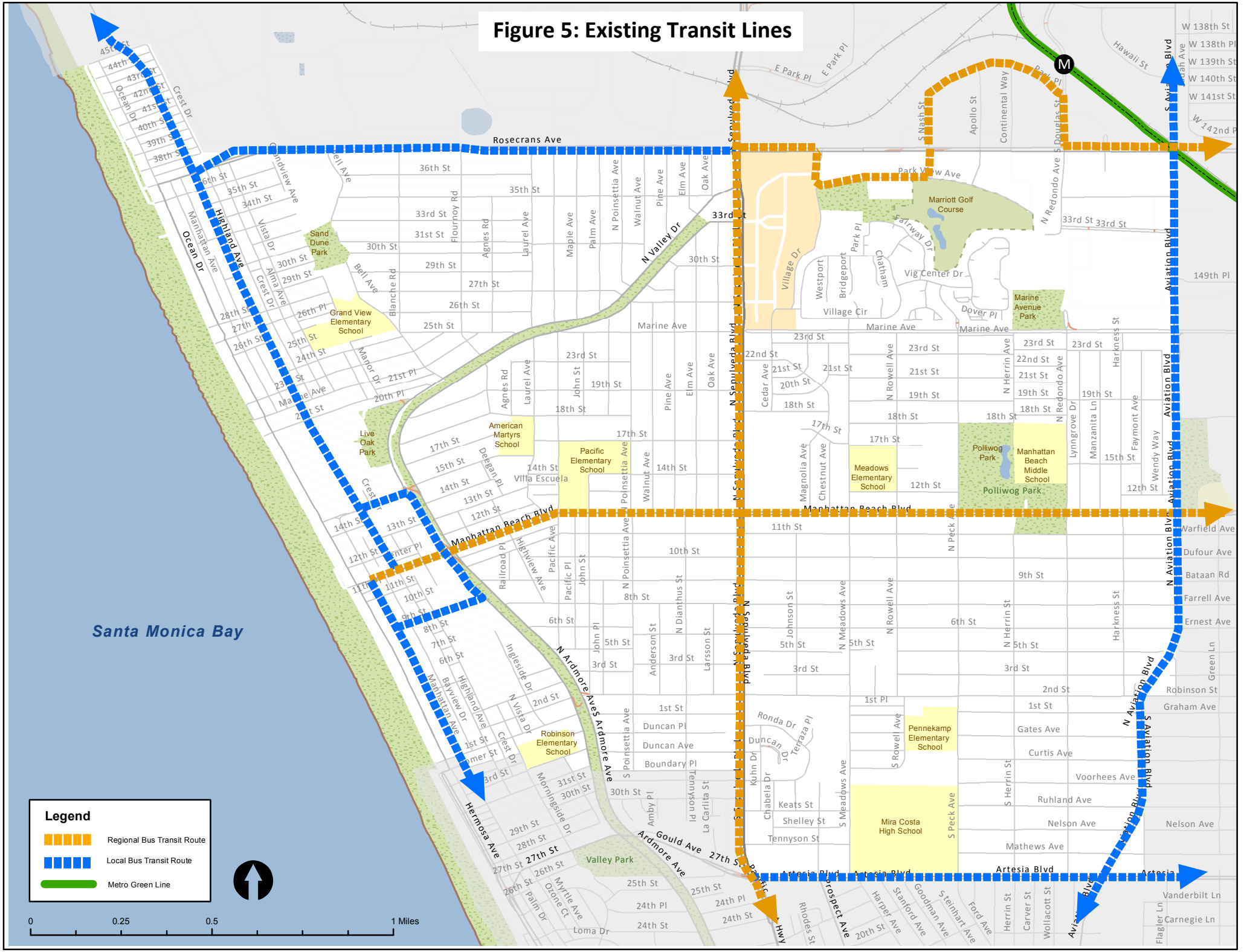
Los Angeles Department of Transportation (LADOT) Commuter Express links South Bay commuters to the Downtown Los Angeles Financial Center via Line 438. Line 438 serves Highland Avenue and Manhattan Avenue in Manhattan Beach.

The Ocean Express Trolley connects the hotels on Century Boulevard near LAX with Downtown Manhattan Beach and the Manhattan Village Shopping Center. Round trip tickets are $5 (free for children 5 years and younger).

Manhattan Beach Dial-A-Ride Program To address localized transit needs, Manhattan Beach also operates a city-run Dial-A-Ride program. The Dial-A-Ride program is a shared ride, curb-to-curb bus service for Manhattan Beach residents who are 55+ years old or disabled (all ages). Riders who have a short-term disability are also eligible to ride by providing a letter from their physician. All buses are equipped with a wheelchair lift. Drivers provide boarding and disembarking assistance as needed. Dial-A-Ride will provide transportation to any destination within the City of Manhattan Beach seven days a week and to most medical facilities in Torrance, Redondo Beach and Hermosa Beach Monday through Friday. Dial-A-Ride also makes special trips to a variety of shopping destinations outside of the City on designated days of the week.[15]

The City's Dial-a-Ride program is a very successful and highly utilized program that give seniors and persons with disabilities an alternative mobility option. Photo Source: www.citymb.info.

Figure 5: Existing Transit Lines



RAIL NETWORK

In addition to Manhattan Beach's local and regional bus network, the City is also served by the Metro Green Line light rail system. The Metro Green Line is a fully grade-separated 20 mile light rail line that extends from the City of Hawthorne east along the I-105 to the City of Norwalk and links to the Blue Line, providing connections to downtown Los Angeles and Long Beach. Although there are no Green Line stations in Manhattan Beach, there are stations within close proximity in Redondo Beach and El Segundo. The closest Green Line stations are the Redondo Beach, Douglas and El Segundo Stations. The Redondo Beach station is located less than a mile from the Manhattan Beach City limit on Marine Avenue. All three stations serve as a connection point for local transit operators, and have parking, bicycle racks and bicycle lockers for commuters. A summary of the Green Line stations serving the Manhattan Beach area is provided in Table 3.

According to Metro, in March of 2014, the Green Line system had an average of 42,100 weekday boardings, 25,400 Saturday boardings, and 19,200 Sunday and holiday boardings, for a total calendar monthly boarding average of over 1.1 million riders.[16]

TABLE 3: GREEN LINE STATION SUMMARY

Station	City	Connections	Parking	Bike Racks	Bike Lockers
Redondo Beach Station	Redondo Beach	Metro Local; LADOT Commuter Express, Lawndale Beat, BCT	403 Spaces	12	5
Douglas Station	El Segundo	Metro Local; Amtrak Motorcoach	30 Spaces	6	4
El Segundo Station	El Segundo	Gardena Transit, LADOT Commuter Express, MAX, Torrance Transit	90 Spaces	4	7

Metro Green Line.

Photo Source: http://light-rail-big.blogspot.com

STREET NETWORK

Regional access to and from the City of Manhattan Beach is provided by a well-developed surface street network, as well as the San Diego Freeway (Interstate 405) and the Glen Anderson/Century Freeway (Interstate 105). The two freeways closest to Manhattan Beach are described below.

San Diego Freeway (I-405) – I-405 is located less than one mile from the easterly City limit and provides regional access throughout and beyond the western portion of Los Angeles County. Near Manhattan Beach, I-405 is a north/south freeway that provides four mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction. To the south, I-405 passes through Long Beach and Orange County to the City of Irvine, where it merges with I-5; the I-5 then extends to San Diego County. I-405 also provides direct access to other freeways near Manhattan Beach, including an interchange with the Century Freeway (I-105) to the north, and with the Harbor Freeway (I-110) to the south. Access to and from the surface street network immediately surrounding Manhattan Beach is provided by northbound and southbound freeway on-and off-ramps located at Rosecrans Avenue, Inglewood Avenue, Hawthorne Boulevard (SR-107), and Artesia Boulevard.

Glen Anderson/Century Freeway (I-105) – I-105 is an east/west freeway north of Manhattan Beach. I-105 begins at Sepulveda Boulevard (SR-1) near Los Angeles International Airport (LAX) and extends east to Norwalk, terminating just east of the San Gabriel River Freeway (I-605). I-105 typically provides four lanes in each direction near Manhattan Beach, with the Metro Green Line operating in the median between Redondo Beach and Norwalk.

MASTER PLAN OF ROADWAYS

The City of Manhattan Beach's Master Plan of Roadways is based on a conventional hierarchy of roads established in the 2003 Circulation Element of the General Plan. The Master Plan of Roadways will not change as a result of this Mobility Plan update. The Master Plan of Roadways includes six sub-categories; Regional Arterial, Major Arterial, Minor Arterial, Collector Street, Residential Collector, and Major Local. All other roads are either classified as a local roadway and/or "walkstreet". Figure 6 identifies roadways utilizing these classifications. A brief description of the main arterial roadways in Manhattan Beach is provided below.

Artesia Boulevard – Artesia Boulevard is an east-west roadway that extends along the southern boundary of Manhattan Beach. It is classified as a Major Arterial in the City's General Plan and provides two travel lanes (westbound) within the City.

Aviation Boulevard – Aviation Boulevard is a north-south roadway that extends along the eastern boundary of Manhattan Beach. It is classified as a Major Arterial in the City's General Plan and provides two to three travel lanes (southbound) within the City, with a large portion of its

northbound lanes in the Cities of Redondo Beach and Hawthorne.

Manhattan Beach Boulevard – Manhattan Beach Boulevard is an east-west roadway that extends through the middle portion of Manhattan Beach. It is classified as a Collector west of Highland Avenue, a Minor Arterial between Highland Avenue and Sepulveda Boulevard, and a Major Arterial east of Sepulveda Boulevard in the City's General Plan. It provides one to three travel lanes in each direction within the City.

Manhattan Beach Boulevard at Highland Avenue looking west.

Marine Avenue – Marine Avenue is an east-west roadway that extends through the northern portion of Manhattan Beach. It is classified as a Residential Collector between Ardmore Avenue and Sepulveda Boulevard, and a Major Arterial east of Sepulveda Boulevard in the City's General Plan. It provides one to two travel lanes in each direction within the City.

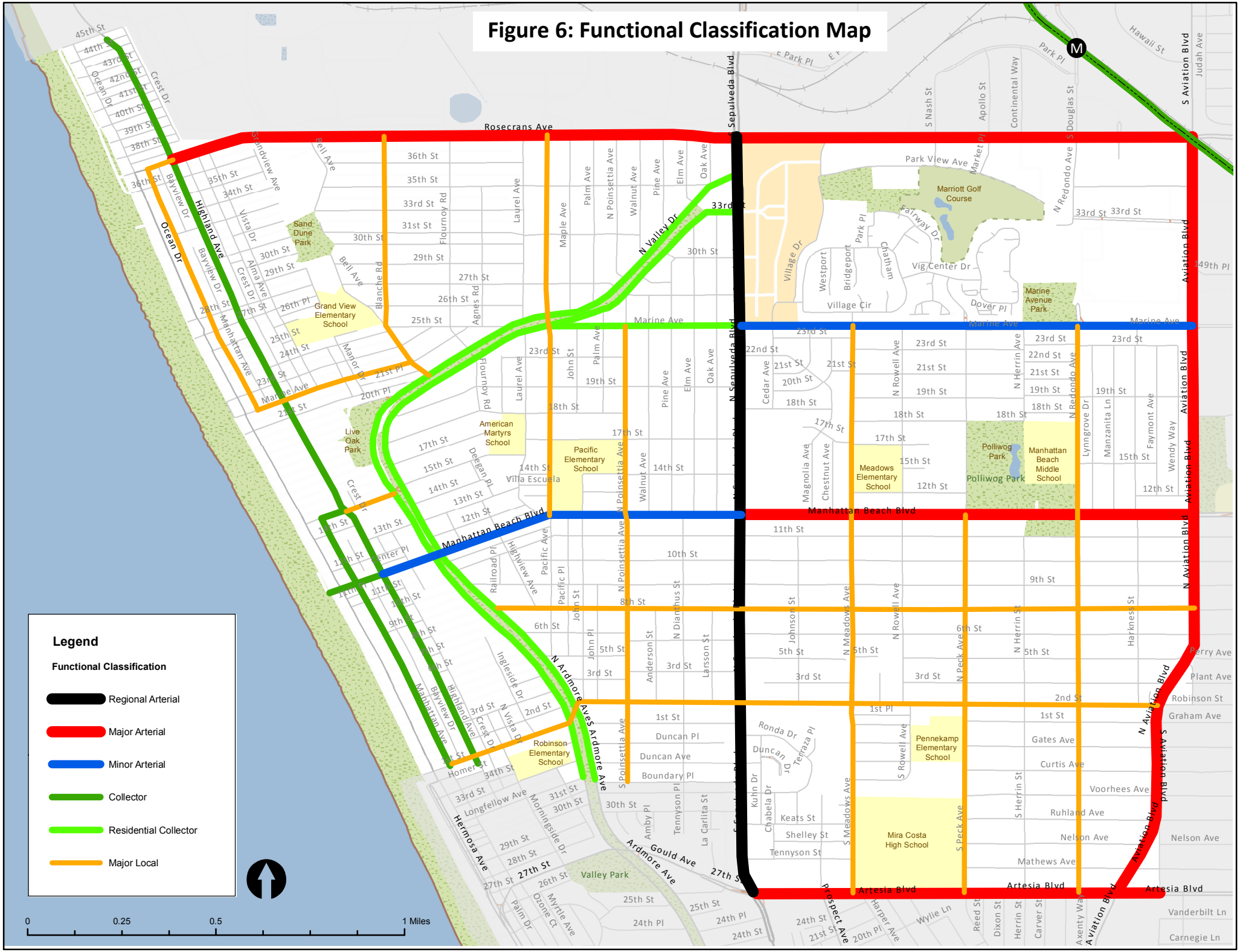
Rosecrans Avenue – Rosecrans Avenue is an east-west roadway that extends along the northern boundary of Manhattan Beach. It is classified as a Major Local between Manhattan Avenue and Highland Avenue, and a Major Arterial east of Highland Avenue in the City's General Plan. It provides one to four travel lanes in each direction within the City, with a large portion of its westbound lanes in El Segundo.

Sepulveda Boulevard - Sepulveda Boulevard is a north-south roadway that extends along the middle portion of Manhattan Beach. It is classified as a Regional Arterial in the City's General Plan and provides three to four travel lanes in each direction within the City. Sepulveda Boulevard is part of the State Highway System (State Route 1). The California Department of Transportation (Caltrans) has authority over the State Highway System and must be involved in and approve the planning and design of improvements for State Highway facilities.

Sepulveda Boulevard looking south toward Manhattan Beach Boulevard.

Photo Source: www.google.com/maps

Figure 6: Functional Classification Map



MASTER PLAN OF ROADWAYS

Regional Arterial

Sepulveda Boulevard (State Route 1) is the only Regional Arterial in Manhattan Beach. Regional Arterials are State-designated facilities that are relatively high-speed, high capacity routes serving intercity and interregional circulation needs. Regional Arterials connect major City streets with other regional routes. Local access is intended to be limited to major streets via signal-controlled intersections, although given that Sepulveda Boulevard functions as a major business district, access has been granted to retail business and shopping centers along Sepulveda Boulevard. Left turns should be prohibited or restricted to signalized intersections where feasible. Curbside parking is either prohibited all day or during the peak hours to facilitate the movement of traffic.

Major Arterial

Major Arterials provide for through movement between areas of Manhattan Beach and across the City, and to provide access to Minor Arterials and limited access to Collector streets. Access to abutting land uses should be limited where possible, or consolidated to minimize curb cuts to avoid interference with the through-traffic function of these routes. Major Arterials generally provide four to six lanes for through travel within a 60- to 100-foot right-of-way, depending on local land use conditions. Major Arterials have single or double left-turn lanes at intersections, left-turn signal phases where necessary, and other enhancements to help the efficient movement of larger volumes of traffic. Curbside parking may be prohibited all day or during the peak hours to facilitate the most efficient movement of through traffic. Major Arterials include Artesia Boulevard, Aviation Boulevard, Rosecrans Avenue, and Manhattan Beach Boulevard, east of Sepulveda Boulevard.

Minor Arterial

Minor Arterials are similar to Major Arterials in function, providing some through movements and movements across the City. In contrast to Major Arterials, Minor Arterials allow additional access to abutting land uses. While they function similarly to Major Arterials and have similar right-of-way width (70 to 90 feet), they generally have lower capacities and may have lower speeds. Curbside parking is allowed, although it may be prohibited in selected locations to facilitate traffic movement. Minor Arterials typically provide four lanes for through traffic. Intersections generally have left-turn lanes (or dual left-turn lanes in selected locations). Minor Arterials include Marine Avenue east of Sepulveda Boulevard and Manhattan Beach Boulevard west of Sepulveda Boulevard to Ardmore Avenue.

Collector Street

Collector Streets serve an area or neighborhood, and they function as collectors or distributors of traffic from the local and major local streets to the Minor or Major Arterial or Regional Arterial streets. Collector Streets are lower speed streets with lower capacity than Arterials, but carry more traffic than either Local or Major Local streets. Collector streets have a mixture of single-family residential, multi-family residential, and some commercial land uses. Some of the adjacent land uses may have direct driveway access, while some may have side yards on the collector street. Collector streets often have curbside parking and one or two through lanes in each direction.

MASTER PLAN OF ROADWAYS

Residential Collector

Residential Collector Streets are similar to Collector streets in function; however, they primarily have residential land uses adjacent to them, with very limited commercial traffic (usually near selected intersections). Residential Collectors are intended to serve an area or neighborhood by collecting or distributing traffic from the Local and Major Local streets to the Collector, Minor Arterial, Major Arterial, or Regional Arterial system. Although similar in character to Collector Streets, Residential Collectors should carry a lower volume of traffic than Collectors, reflecting their residential character. Curbside parking is generally allowed, and adjacent land uses often have direct driveway access. Residential Collectors generally have one lane in each direction.

Major Local

Major Local streets provide for circulation within and between residential neighborhoods. Major Local streets are designed to discourage longer distance through trips and higher speeds (posted speed limit of 25 miles per hour or slower). Major Local streets generally have a maximum of one lane in each direction, and curbside parking is generally allowed where the street width is sufficient to support both moving traffic and parking lanes.

Local Street

Local streets are the lowest functional classification and are intended solely for access to adjacent residential land uses. They provide for circulation within a residential neighborhood, including bicycle and pedestrian access. Any through traffic, including through traffic from one residential neighborhood to another, is discouraged. Local streets have one lane in each direction and have speed limits of 25 miles per hour or slower. Curbside parking is generally allowed where the street width is sufficient to support both moving traffic and parking lanes.

Walkstreet

Walkstreets are intended and designed to provide local access solely for pedestrians. Motorized vehicles of all kinds are prohibited. Walkstreet right-of-way width ranges from 25 to 60 feet. The Land Use Element establishes policies for the use of Walkstreets beyond their basic mobility function.

AVERAGE DAILY TRAFFIC VOLUMES

As residents have expressed, traffic congestion continues to be a leading issue affecting the quality of life in Manhattan Beach. Not only is local congestion a concern, but regional traffic that passes through the City compounds the issue, especially for businesses located along Sepulveda Boulevard, Manhattan Beach Boulevard, Artesia Boulevard, Rosecrans Avenue, Highland Avenue and some other major streets. The beach and downtown area draw many visitors, bringing in additional traffic and parking demands especially during the summer months. Although Manhattan Beach will experience only very limited growth in the future, regional influences and the popularity of the beach will continue to contribute to increases in traffic congestion. The 2013 average daily traffic volume counts are provided in Table 4.

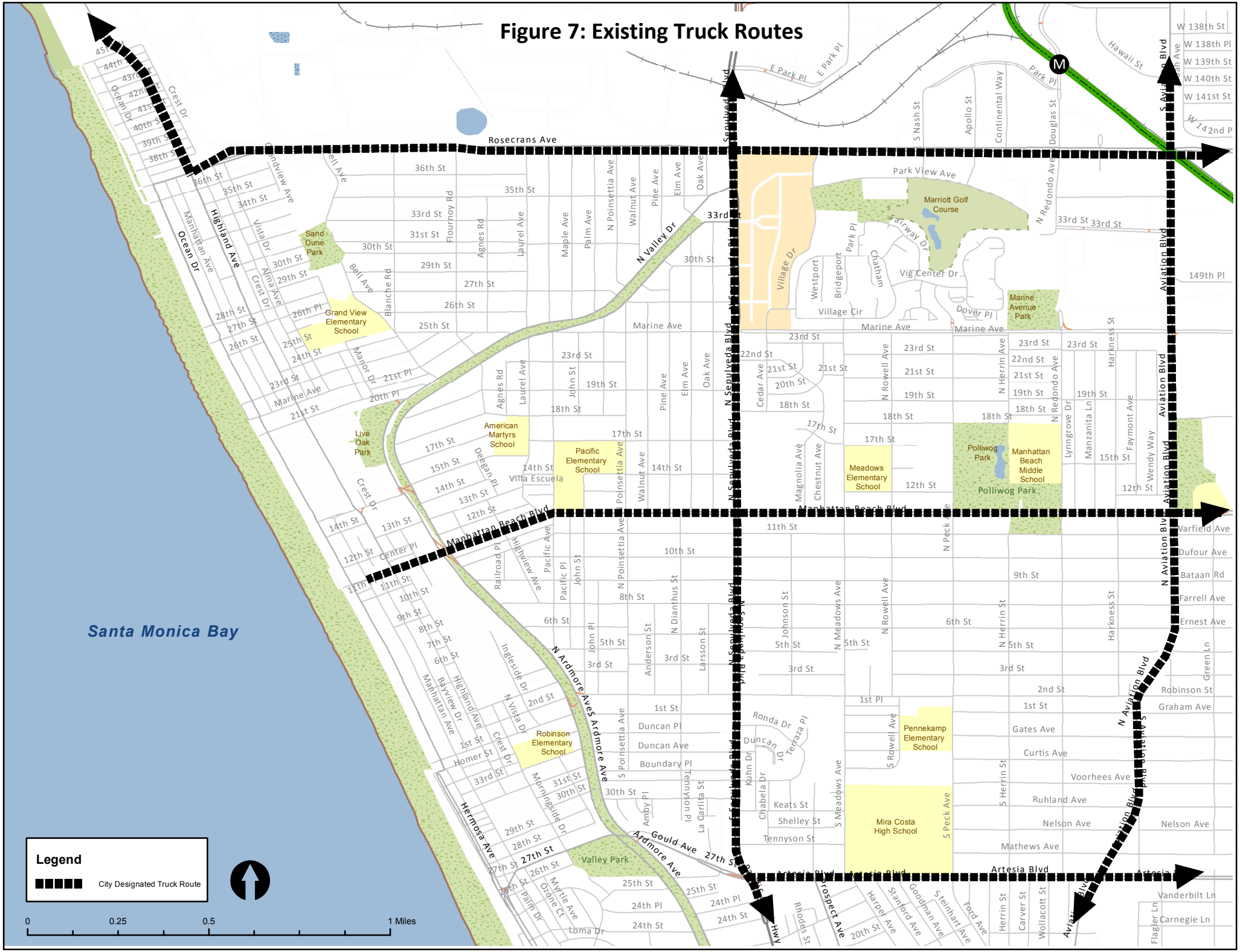
TRUCK ROUTES

Truck routes have been designated for use by heavy trucks to access most commercial areas in the City, including downtown Manhattan Beach and north Manhattan Beach. These roadways are primarily Major Arterial roadways, with the exception of Highland Avenue in the North End, which is designated as a Collector, and Manhattan Beach Boulevard from Highland Avenue to Manhattan Avenue (Collector) and from Manhattan Avenue to Sepulveda Boulevard (Minor Arterial). No trucks are allowed on other streets unless they are on a direct route for the purpose of making special pick-ups or deliveries. The intent of the truck route system is to protect residential areas from the impacts of heavy non-local "through" truck traffic, noise, and vibration (see Figure 7 for map).

TABLE 4: 2013 ADT VOLUMES

Location	ADT
Manhattan Beach Boulevard between Poinsettia and Walnut Avenue	22,360
Manhattan Beach Boulevard East of Peck Avenue	24,680
Manhattan Beach Blvd west of Valley Drive	12,630
Marine Avenue Between Poinsettia Avenue and Walnut Avenue	7,020
Marine Avenue Between Rowell Avenue and Peck Avenue	17,520
Rosecrans Avenue Between Pacific Avenue and Maple Avenue	20,960
Rosecrans Avenue Between Village Drive and Park Way	40,760
Aviation Boulevard South of 33rd Street	44,380
Aviation Boulevard Between 5th Street and 6th Street	38,650
Highland Avenue Between Manhattan Beach Boulevard and 9th Street	7,200
Highland Ave south of 40th Street	10,560
Artesia Boulevard East of Meadows Avenue	28,420
Valley Drive south of Manhattan Beach Blvd	6,220
Valley Drive north of 15th Street	2,900
Ardmore Ave south of 11th Street	6,680
Ardmore Ave north of 15th Street	3,470
Pacific Ave south of 27th Street	1,910
Pacific Ave north of 14th Street	2,010
Manhattan Avenue south of 9th Street	3,850

Figure 7: Existing Truck Routes



MOBILITY PLAN
PUBLIC OUTREACH

Public outreach is one of the most important elements of the entire mobility planning effort because the public (residents, people who work and visit the City and elected officials) are the ones who will live with the Mobility Plan for years to come. Also they are the ones who most closely know the community's transportation needs. The goals of the public outreach effort are as follows:

- Provide information to the public regarding the adopted Mobility Plan (adopted in 2003 and at that time called the "Circulation Element").
- Inform the public regarding the proposed direction of the update toward a more multi-modal focus which incorporates Complete Streets requirements per California Assembly Bill 32: Global Warming Solutions Act and Senate Bill 375: Sustainable Communities Act and other initiatives that are intended to emphasize all modes of travel, serve all persons, reduce the use of single occupant motor vehicles, and also reduce their impact on the community.
- Obtain public comments regarding mobility in general and specifically regarding other modes of travel in the City including bicycles, walking, transit, and autos.
- Present a draft Mobility Plan to the public for review and comment.
- Work with the public and elected officials to respond to comments and finalize the Mobility Plan update for adoption.

Engaging the public in development of the Mobility Plan builds support and allows City staff to identify any concerns that the public may have early in the process. In addition, valuable opinions regarding various transportation modes and options are developed through the outreach process. During past public outreach programs such as for the development of prior General Plan Circulation Elements and environmental studies for proposed development projects, residents and business owners have often been asked about traffic congestion issues, but they may be less familiar with dialogue about other modes of transportation such as walking and biking as well as Complete Streets concepts. Thus, the public outreach for this Mobility Plan update was important not only to engage the public in the development of the Element but also to portray that the element is not "business as usual" with respect to primarily accommodating the automobile within the City's General Plan.

A comprehensive public outreach program was undertaken for the update of the Mobility Plan. It included the following key initiatives to reach out to the public and stakeholders:

- **Public Workshop Number 1** – This first open public workshop was held at the beginning of the process to present an introduction to the public on the purpose for the update, background on the prior Circulation Element and most importantly to solicit public opinions on transportation in Manhattan Beach including movement of people and goods via bicycle, walking, transit, in cars and even truck movements.
- **Stakeholder Meetings** – These meetings were held at City Hall with key stakeholder groups from the community. A wide range of interested groups were invited to attend to provide their thoughts on transportation opportunities and options in Manhattan Beach in a working group format to allow more interaction and communication than is possible in an open public meeting, as well as to focus on particular issues of interest. More information about the stakeholder

groups who attended the meetings and the results are provided in this chapter.

- **Parking and Public Improvements Commission (PPIC)/City Council Joint Meeting** – Preliminary scoping of the Mobility Plan.
- **City Council Meetings** – Presentation of Draft Pedestrian and Bicycle Project List, and presentation of Draft Mobility Plan and Complete Streets.
- **Planning Commission and Parking and Public Improvements Commission (PPIC) Joint Meeting** – Present the draft Mobility Plan and receive comments from the two commissions.
- **Other Focused meetings** – Other outreach meetings were held with key groups including Beach Cities Transit and Metro to solicit ideas regarding improving transit opportunities in the City.
- **City Council Meeting** – Presentation of the final report for City Council review and adoption.

PUBLIC WORKSHOP 1 SUMMARY

The first public workshop was held in February 2013. The workshop provided an overview presentation which included the following information:

- Overview of Mobility Plan update and background on the purpose of the element and its context within the City's General Plan
- Process for updating the Plan
- Discussion on current emphasis on all modes of transportation as compared to past Elements which largely focused on the automobile

The public was invited to participate in four breakout stations on the following focused topics:

- People on Wheels
- People on Foot
- People using Transit
- People in Cars

QUESTIONS?

- Where do you feel uncomfortable or unsafe riding your bike or other wheeled transportation?
- Where do you feel it is especially good for biking/skating, etc.?
- Where can walking conditions be improved?
- What is the overall reliability or convenience of transit?

At each breakout station, maps showing key information regarding that mode of travel, written questionnaires, and moderators were on hand to answer questions and take notes. The members of the public were then engaged to provide opinions regarding the transportation mode discussed at that station. For example, at the People on Foot station, the public

was asked to provide any and all comments and questions regarding walking in Manhattan Beach, and similarly for bike travel, taking transit and driving at the other three stations.

Participants were encouraged to verbally give opinions, ask questions, write thoughts directly on maps, fill in the questionnaire or even to provide comments later via email. These multiple ways to comment were provided so that each person could express their opinions in the way that is most comfortable to them. Some people prefer to write their thoughts, others prefer to discuss the ideas out loud and others like to write on the maps to identify specific locations of transportation issues or suggestions for improvements.

The results of the public workshop were summarized on maps and were also tabulated so that every comment was documented for use as the technical analysis proceeded. The appendix includes summary maps with comments, and a summary table. Because so many varied thoughts and opinions were received, it is not possible to consolidate them into just a few themes within the report. However, every comment received was reviewed and cataloged and is included in Appendix A.

STAKEHOLDER GROUP MEETINGS SUMMARY

A series of six group meetings with key stakeholders were held for purposes of obtaining focused and detailed mobility related comments in a small group setting (from four to eight people attended each meeting). In these stakeholder meetings the participants were able to focus on their unique transportation issues of interest. This not only provided a wealth of information, but also provided the key stakeholders the opportunity to be part of the process in a more detailed manner. The stakeholder meetings were held at City Hall over a three day period, and stakeholders were strategically chosen to represent a wide cross section of transportation users including residents, businesses, schools, seniors, bike enthusiasts, health advocates, commissioners, and others.

Representatives from the following stakeholder groups attended the meetings and provided input:

- Blue Zones Project/Vitality City
- South Bay Bicycle Coalition
- Manhattan Beach Historical Society
- Walking School Bus
- Manhattan Village Shopping Center Management
- Manhattan Village Homeowners Association
- Manhattan Beach Downtown Business and Professional Association
- Manhattan Beach Chamber of Commerce
- Dealer.com, Local Business
- Senior Advisory Committee
- Parks & Recreation Older Adults Program
- Parking and Public Improvements Commission
- Planning Commission
- Board of Building Appeals
- Parks and Recreation Commission
- Cultural Arts Commission
- Library Commission
- American Martyrs School
- Beach Cities Heath District
- Pennekamp Elementary School
- Dial-a-Ride

Similar to the information and opinions on mobility received in the first public workshop, a range of ideas on all topics was obtained via the stakeholder meetings. The meetings tended to be more focused than the public workshop and they did result in some common themes, including but not limited to, the following:

Bicycling and Walking in Manhattan Beach

- Need for east-west bike way to get from east end of City to downtown and the beach
- Need family friendly bicycling options
- Focus new bicycle routes around middle school since it is more likely that middle school age children can bike to school with parents' permission – on the other hand such facilities are not as needed at elementary schools because many kids are too young to bike to school
- Suggestion for bicycle staging areas away from schools, then "riding school" bus to school for purposes of separating kids on bikes from auto congestion at schools
- Parked cars block pedestrian path/sidewalks in parts of the City
- Need greater parking regulations and enforcement
- Need higher visibility signage and markings for pedestrians
- General support for bike access to Manhattan Village Shopping Center
- General support for some type of bicycle connection along Valley/Ardmore corridor, but recognizing that it should not interfere with the current walking path
- Need education and enforcement of bikers that are too aggressive, especially along Highland Avenue

Using Transit in Manhattan Beach

- General support for a "circulator" system that would connect to various key locations in the City and serve as a connection across Sepulveda Boulevard
- Key connecting points could include the high school, downtown, Manhattan Village, the beach, Green Line Metro station, and other locations where people would likely use transit to visit.
- A circulator shuttle could be considered only during peak times such as summer weekends since that is when congestion is the highest. Some residents avoid downtown and the beach during those peak times due to lack of parking and congestion. So, a circulator would serve their access needs
- Senior access to the beach is very limited; look for ways to get seniors to Downtown and the beach and also onto the beach
- Consider volunteer drive program for older adults

JOINT CITY COUNCIL/PPIC MEETING

The City hosted a joint City Council/Parking and Public Improvements Commission (PPIC) Preliminary scoping of the Mobility Plan. The purpose of the meeting was to provide a summary of the Mobility Plan update process, public outreach efforts, technical studies, findings and recommendations. The public also was able to attend and comment at the meeting.

CITY COUNCIL MEETINGS

Presentations were given at several City Council meetings to present an overview of the Mobility Plan update as well as potential pedestrian and bicycle improvement projects. A follow-up presentation on the Draft Mobility Plan, supporting documents and an overview of Complete Streets was also provided to the City Council to obtain feedback before moving forward on additional public outreach.

JOINT PPIC/PLANNING COMMISSION MEETING

Tentatively scheduled for Summer 2014.

WEBSITE

The City utilized its website to provide current information on the Mobility Plan update. Outreach meeting agendas, minutes, and presentation materials were posted for review. The public was encouraged to comment on various aspects of the program during its formation, and was provided with a contact at the City to email questions, comments, and/or concerns.

MISCELLANEOUS OUTREACH

- Utility Bill Inserts (2013)
- Sharrows on Pacific Town Hall Meeting (August/September 2013)
- Table at SBCCOG General Assembly Meeting (February 2014)

COMPLETE STREETS BEST PRACTICES AND APPLICATION TO MANHATTAN BEACH

In 2008, California enacted the *California Complete Streets Act* (AB 1358) which requires that any city preparing a substantive revision to its general plan circulation element/mobility plan must plan for a balanced multi-modal transportation network that "meets the needs of all users of streets, including motorists, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation…" The California Complete Streets Act does not specifically articulate how this balanced approach to planning a multi-modal transportation network should be implemented. While specifically required in new updates to circulation elements by the State of California, the complete streets concept is also gaining popularity across the nation as a way to improve quality of life in communities and bring activity beyond vehicular traffic back onto the streets. This chapter of the Mobility Plan summarizes best practices from other communities that are relevant to both the development of Mobility Plan goals and policies in the City of Manhattan Beach, as well implementation and funding strategies following the adoption of the Mobility Plan that will meet the intent of the *California Complete Streets Act.*

This summary of best practices is divided into four categories that make up all of the elements necessary to implement a strong network of complete streets: legal and policy framework, design innovations, funding, and operation and maintenance.

Policies that support a multi-modal approach to streets or flexibility in design standards enhance a jurisdiction's ability to develop a complete streets program. Implementing roadway designs or developing new standards beyond generally accepted ones can yield innovative solutions for making streets more livable. Implementing new streets projects – particularly projects that go beyond maintaining existing roadways – require funding, so finding novel ways to fund these projects is essential. Lastly, developing an approach to maintain complete streets is important at the forefront of the project, so that the roads stay livable. The strategies detailed in this summary are the key elements of the best practices review that are applicable to the City of Manhattan Beach.

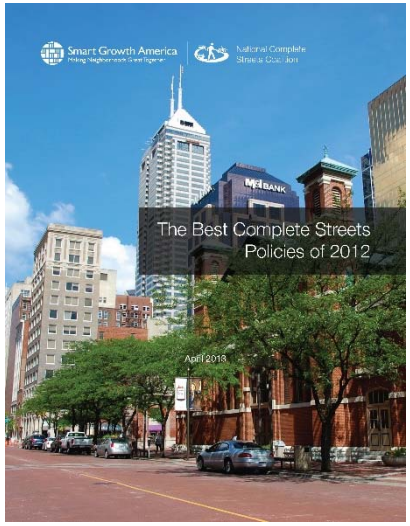
The full Manhattan Beach Mobility Plan – Complete Street Best Practices Review, with more specific details about the programs, policies and projects in the communities that were reviewed may be found in Appendix B.

BEST PRACTICES IN LEGAL & POLICY

The practices highlighted in this section came from adopted award-winning policies and/or legal documents related to complete streets, from communities that have developed innovative approaches to policy and legislation to aid in implementing complete streets. The communities that were reviewed for this section include Hermosa Beach, California, Arlington County, Virginia, Redwood City, California, Fort Collins, Colorado, and Minneapolis, Minnesota.

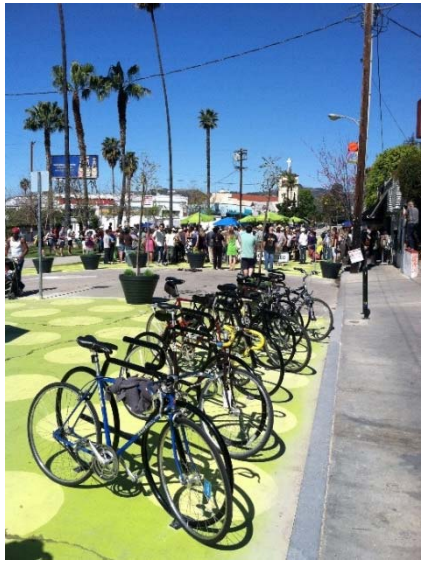
The Best Complete Streets Policies of 2012 Report highlights exemplary policy language, and provides ideas for how to create strong Complete Streets policies..

Photo Source: www.smartgrowthamerica.org



BEST PRACTICES IN DESIGN INNOVATIONS

The practices described in this category highlight innovative physical changes to the public realm as part of their complete streets framework. These include changes that go beyond traditional roadway designs and improve streets for multiple modes. This section discusses how Manhattan Beach can apply these innovative design elements into their own designs that supports and promotes complete streets. The communities that were reviewed for this section include Charlotte, North Carolina, and New York, New York.



Sunset Triangle Plaza in Los Angeles is the first street-to-plaza conversion project in LA and stretches by a grassy median at Sunset Boulevard and Griffith Park Boulevard.

Photo Source: www.la.curbed.com

BEST PRACTICES IN FUNDING

Cost is a major component of program implementation. The practices evaluated in this category describe various techniques to successfully secure funding using unconventional approaches, such as partnerships, revising local spending, tax levies, and securing commitments for ongoing maintenance. This section discusses how Manhattan Beach can apply these techniques to fund its complete streets implementation. The communities that were reviewed for this section include Boulder, Colorado, Austin, Texas, and Carlsbad, California.

BEST PRACTICES IN MAINTENANCE AND OPERATIONS

The practices described in this category highlight various maintenance and operation programs that help promote complete streets. Maintenance and operations includes partnerships, coordination, and routine accommodation involved in implementing complete streets. This section discusses how Manhattan Beach can tie in routine maintenance and operations projects with complete streets goals. The communities that were reviewed for this section include Seattle, Washington, Denver, Colorado, and San Francisco, California.

Partnerships and coordination is key to implementing, operating and maintaining Complete Streets.

Photo Source: www.productivesynergy.com.

The following tables summarize the key takeaways in terms of legal and policy, design innovations, funding, and maintenance and operations practices applicable to the City of Manhattan Beach.

COMPLETE STREETS BEST PRACTICES SUMMARY OF KEY TAKEAWAYS - LEGAL & POLICY

- *The Mobility Plan is the ideal opportunity to implement a complete streets vision for the City and align planned mobility policies and projects with that vision. Complete streets goals can be incorporated into the Mobility Plan, but a specific complete streets/living streets policy should be incorporated by reference to allow for changes and updates to the policy without triggering a general plan amendment.*
- *Adopting a complete streets policy can generate positive attention and press for the City and the Mobility Plan, which can help better position the City for potential funding opportunities.*
- *Partnering with an advocacy groups like those involved in the Blue Zones Project can help maintain momentum to ensure implementation and accountability.*
- "Complete streets" do not necessarily mean that every street must serve each mode equally well. The Mobility Plan looks at the Manhattan Beach street network holistically, relying on parallel corridors to serve different modes, rather than prioritizing every mode on every street to ensure a balanced transportation network that serves all modes holistically.
- Auto LOS standards have typically been applied in many cities in a "one size fits all" approach. However, cities typically have neighborhoods and districts with very different characteristics. For example, Downtown Manhattan Beach is very different from the Sepulveda Boulevard corridor. Context sensitive LOS policies can allow diminished auto LOS in locations with high pedestrian activity (such as Downtown), where priorities are different than along auto focused corridors. The City's approach to conducting traffic impact studies could be realigned to support the Mobility Plan and the Complete Streets Policy to recognize the diversity of characteristics in the City.
- Establishing regular reporting periods and specifying performance indicators is a useful tool to track the implementation and progress of the Mobility Plan.

COMPLETE STREETS BEST PRACTICES SUMMARY OF KEY TAKEAWAYS – DESIGN INNOVATION

- Context sensitive design for the transportation network leads to the best outcomes. The character, and opportunities and constraints for implementing complete streets facilities along Sepulveda Boulevard are very different than in Downtown, the Sand Section, etc. The Mobility Plan identifies potential projects that reflect this context sensitivity. In locations where design standards, such as statewide design standards (in the case of Sepulveda Boulevard as a Caltrans facility) may hinder the optimal implementation of complete streets facilities, identifying parallel corridors for complete streets emphasis to ensure a complete and balanced transportation network is an important strategy.

- Excess pavement provides opportunities to quickly add more public open space, or other complete streets treatments. The City of New York is a well-known leader in this strategy, but local examples, such as the City of Los Angeles' Sunset Triangle and the Parklets program also illustrate the benefits of how quickly implemented projects can serve as catalysts. The Mobility Plan addresses potential pilot projects of this nature, such as adding Parklets and repurposing alleys in Downtown Manhattan Beach.

- Monitoring to track the success of a project is important. Installing demonstration projects allows quick implementation and easy removal, if monitoring suggests the project is not working as intended, or is negatively impacting other modes (such as significant increase in auto delay).

COMPLETE STREETS BEST PRACTICES SUMMARY OF KEY TAKEAWAYS – FUNDING

- Funding for complete streets projects can come from a variety of sources and fees, market based strategies, etc., including the City's Capital Improvement Program (CIP), Measure R local return funds from Metro.
- Engaging stakeholder input on the approach to funding and prioritization is an effective means to garner greater support for a complete streets project.
- For complete streets facilities funded by development, establishing design standards can lead to better outcomes, and provides developers clarity on the types of improvements that they will be expected to fund with their projects.
- Parking revenue is an important funding source to support complete streets improvements to districts. Old Town Pasadena has funded much of the streetscape improvements in the district through parking revenue, a strategy that could be considered in detail in a Downtown specific plan.
- There are significant grant opportunities available for complete streets projects. Identifying local matching funds, and having an adopted plan are two key elements that can be leveraged to apply for grant funding. Key grant funding sources the City can leverage include the state Active Transportation Program (ATP) grants, Metro Call for Projects grants, SCAG Sustainability grants.

COMPLETE STREETS BEST PRACTICES SUMMARY OF KEY TAKEAWAYS

MAINTENANCE & OPERATIONS

- Regularly scheduled street maintenance projects (resurfacing, etc.) provides an excellent opportunity to implement complete streets projects, such as bicycle lanes more cost effectively.
- Reviewing all CIP projects through the lens of complete streets is important to ensure that there are no projects that would hinder the advancement of complete streets concepts, and no missed opportunities for cost-effective implementation.
- Interdepartmental coordination on street projects is critical, so that departmental responsibilities are clearly defined, and there is accountability and a feedback loop to avoid missing opportunities to implement complete streets.
- Outlining clear responsibilities among multiple departments and convening regular coordination meetings can ensure that there are no missed opportunities to implement complete streets projects as part of the City's typical maintenance and operation.
- Engaging staff from all City departments can address conflicts and ensure coordinated implementation for complete streets.

MODAL PRIORITIES AND PROJECTS

This section of the Mobility Plan describes and prioritizes the modal projects and plans aimed at implementing the City's mobility goal of providing a well-balanced, connected, safe, and convenient multi-modal transportation network. The projects are defined in four sub-categories; pedestrian projects, bicycle projects, transit projects, and auto-related projects. The projects presented in this chapter are a product of various sources, including but not limited to, technical studies, public outreach and input, department staff input, numerous stakeholder meetings with residents, bicycle advocates, business representatives, seniors, commissioners, school representatives, City Council, and the Parking and Public Improvements Commission. These projects represent the steps the City will take to achieve the goals of this multi-modal Mobility Plan.

Downtown Manhattan Beach attracts many pedestrians.

PEDESTRIAN

Pedestrian travel is extremely important in Manhattan Beach. With its walkstreets, Manhattan Beach has a long history or recognizing the importance of the walking environment. The pedestrian facilities vary significantly depending on where you are walking in the City. Some of the key issues associated with the pedestrian environment include the following:

KEY PEDESTRIAN THEMES

- Provide safe and convenient pedestrian crossings throughout the City.
- Improve the pedestrian environment along the Valley/Ardmore corridor at several intersections.
- Improve the walking experience in downtown area.
- Prioritization – Determine the best and most appropriate locations for pedestrian related improvements at currently uncontrolled locations.
- Need to address the issue of discontinuous sidewalks for pedestrians. In some parts of the City, pedestrians are forced to walk on street.

PHASE I & II PEDESTRIAN RECOMMENDATIONS

PHASE I:

- Develop and incorporate pedestrian facility selection process & design guidelines
- Enhance locations where walk streets cross vehicle streets
- Improve pedestrian crossings/intersections that access Veterans Parkway

PHASE II:

- Review and revise policies for streets without sidewalks during residential development process
- Prepare Downtown Specific Plan that addresses pedestrian flow on sidewalks in Downtown, implement recommended improvements

PEDESTRIAN CROSSINGS AT INTERSECTIONS AND MID-BLOCK

Pedestrian crossings, both at intersections and also mid-block locations between intersections are a critical part of the pedestrian network. At these locations the pedestrian crosses vehicular traffic and faces many issues associated with safety, visibility and convenience. There are many design standards associated with design and implementation of pedestrian crossings, and the City of Manhattan Beach has always been dedicated to providing safe crossings that meet professional engineering standards. However, the options for pedestrian enhancements continues to evolve and change and every pedestrian crossing location is unique and warrants a unique and customized review.

Phasing and Selection of Pedestrian Improvements

Pedestrian facilities are located nearly everywhere in the City, with sidewalks adjacent to most streets and hundreds of pedestrian crossings throughout the City. Pedestrian travel, of course, also occurs throughout Manhattan Beach as people walk to and from their destinations; whether on a walk trip, connecting to transit, walking after a bike ride or walking to and from their parked car. Because pedestrian facilities are so numerous, the improvements must be prioritized and funded over time based on priority, level of importance and available funds.

The recommendations for improving the pedestrian environment have thus been separated into two phases for

near term and longer term implementation. Under Phase I the first step is to incorporate the recommended pedestrian facility selection process and design guidelines into the City's Capital Improvements program so that the most appropriate locations for pedestrian improvements can be selected and prioritized. Phase I includes implementation of pedestrian system enhancements at locations where walkstreets meet vehicle streets as well as implementation of measures for the key pedestrian crossings that access Veterans Parkway, a vital pedestrian amenity in Manhattan Beach. Under Phase II, the city will address streets with no sidewalks, and do a more detailed study and implementation of pedestrian improvements in Downtown. These two elements of the pedestrian plan are recommended under Phase II because they will necessarily be longer term measures that will likely also be more costly to plan, design and implement than the Phase I recommendations.

Example of a raised pedestrian crossing

The recommendations to improve the pedestrian environment in Manhattan Beach begins with a "Pedestrian Crossings Enhancement Policy" document. The Policy includes a series of "toolbox" actions for various types of pedestrian facilities. From the list of toolbox actions, the City can choose the most appropriate type of enhancement for each location. Appendix C covers the following topics:

- Uncontrolled Crossing Toolbox Measures
- Stop-Controlled Crossing Toolbox Measures
- Traffic Signal Controlled Toolbox Measures

The toolbox measures fall into various categories including:

Measures to Enhance Visibility

These include measures that enhance the visibility of the crosswalk, the signage and also the visibility of pedestrians in the crosswalk.

Physical Enhancements/Modifications

These include measures to physically change the crosswalk such as to shorten the crossing distance or change the pavement surface as a way to notify the driver about the crossing

Traffic Control Enhancements

These include modifications to the traffic signal or pedestrian indications such as "count down" pedestrian signal heads that have become more common in recent years, and other measures that control the pedestrian flow.

Other Design Features and Enhancements

Design changes may include changes to the intersection, roadway, or crossing, such as changing driveway location/design, changing the curb return radius, or modifying the on-street markings. Design enhancements may include leading pedestrian intervals at signalized crossings, repurposing alleys, parklets, and evaluation through a Downtown Specific Plan.

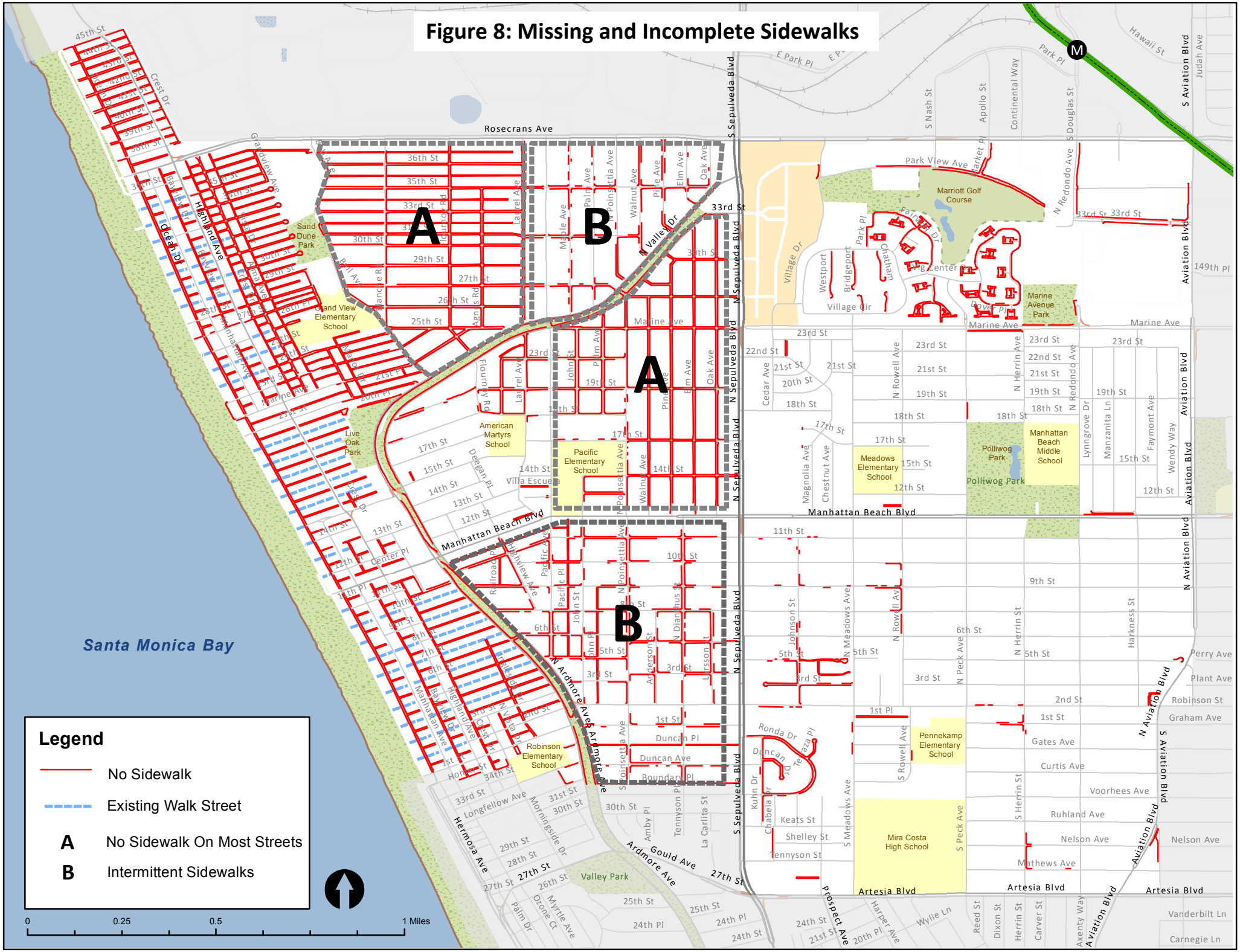
MISSING SIDEWALKS

Some parts of the City of Manhattan Beach have streets with full sidewalks on both sides of the street throughout the entire block, some parts of the City have streets with discontinuous sidewalks and some portions of the City have many streets with no sidewalks at all. Each of these parts of Manhattan Beach have their own character and history.

Example of a discontinuous sidewalk along Pacific Avenue.

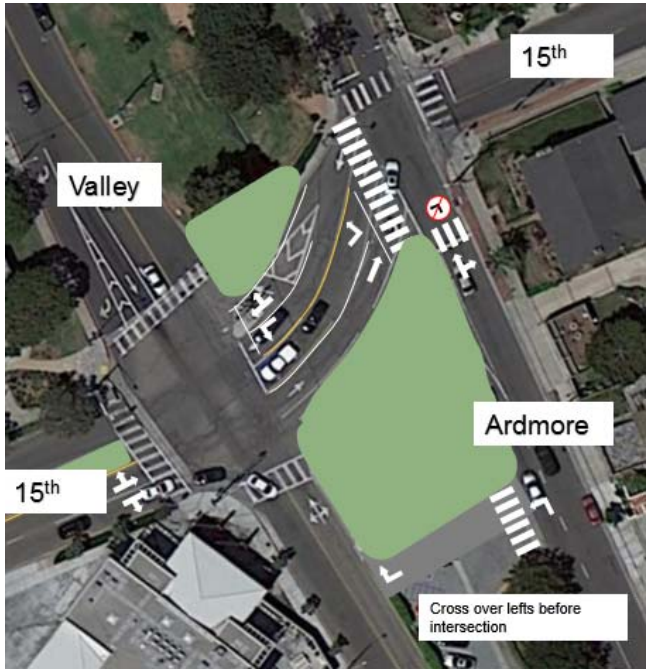
Figure 8 shows the areas of the City with no sidewalks on most streets (A) and also areas with intermittent sidewalks (B). For areas with intermittent sidewalks, the priority must be on implementing sidewalks over time as the adjacent properties develop or turnover and also focusing on streets and paths leading to schools and other pedestrian destinations. In the areas with virtually no sidewalks, it is not proposed to universally add sidewalks, but rather to take each street on a case by case basis. Many residents in these areas like the character of the street and in fact may have chosen to live there partially because of the unique street design. However, in these areas it will be important to closely monitor the street right-of-way and effectively enforce encroachments into the street by parked cars, vegetation and even structures/patios. In these areas, the street itself is also the pedestrian walkway. The encroachment by autos and other impediments forces the walkers further into the street and this can be mitigated without necessarily adding new sidewalks, which would create a major change in the character of the neighborhood.

Figure 8: Missing and Incomplete Sidewalks



VALLEY/ARDMORE CORRIDOR INTERSECTIONS

Some of the intersections along the Valley/Ardmore corridor are the most challenging intersections for pedestrians in the City. This is due to the complex intersections and crossings, and in some locations, lack of crossings or confusing crossing areas that exist. As a part of the Mobility Plan update, a series of possible conceptual improvements have been developed for consideration. Conceptual improvement diagrams are included in Appendix C for the intersections of Valley Drive/Ardmore Avenue with 1st Street/2nd Street, Manhattan Beach Boulevard, 15th Street, and Pacific Avenue. The next steps will be to take these concept designs to the next level. In addition, the City has considered the idea of traffic circles or roundabouts at some of these same locations. As a follow up to the Mobility Plan, the City will conduct more detailed review of possible circulation and pedestrian improvements at these locations, building on the concepts in Appendix C, considering other concepts (possibly including roundabouts) and taking these ideas to the public and stakeholders for further review and comment.



This conceptual improvement at Valley Drive/Ardmore Avenue and 15th Street reduces conflict points, crossing distance and intersection skew by reducing lanes and shifting turn locations.

DOWNTOWN PEDESTRIAN ENVIRONMENT

Downtown Manhattan Beach is already a vibrant environment for walking for many reasons. However, due to seasonal congestion during the summer months, walking is not always easy. A number of recommendations have been developed for improving the pedestrian environment within the downtown area. Those improvements are listed below.

1. Conduct Downtown Specific Plan Study to review in detail all streets and sidewalk areas to determine a specific list of improvements

2. Other improvements to consider:

    a. Leading pedestrian intervals at signals

    b. Repurpose/upgrade alleys to be more walkable

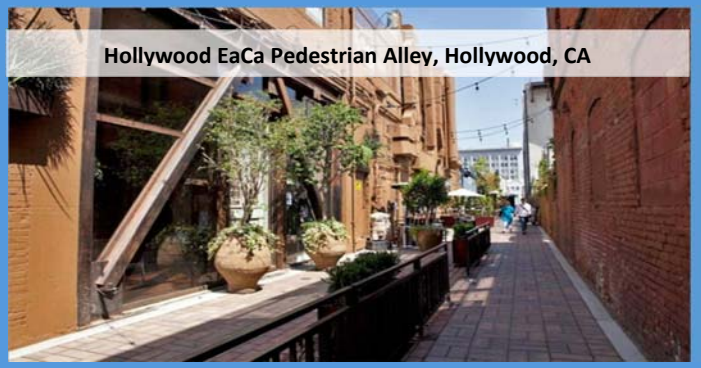
    c. Consider "parklets" for downtown dining and open up sidewalks for walking

    d. Reconfigure landscaping to provide for pedestrian queuing space at congested locations

    e. Consider median refuge islands at Manhattan Beach Boulevard / Morningside Drive. Along with this improvement, consider installing a significant gateway entry element at this location to further inform motorists that they are entering a congested downtown environment and they need to be more cautious and expect pedestrians.

EXAMPLES OF PEDESTRIAN ENHANCEMENTS

Repurposed Alley



Parklets

BICYCLING

Improving the City's bicycle network and connectivity to adjacent bike facilities and popular destinations in and around the City is a key piece of the puzzle to achieve the multi-modal goals set forth in this Mobility Plan. After talking to the community and various stakeholder groups, several key themes began to emerge regarding bicycling in Manhattan Beach.

The goal of this bicycle component of the Mobility Plan is to bridge the gap between the City's multi-modal goals and the bicycle-related desires of the community, and to build a convenient and safe bicycle network for users of all ages and abilities. It is the City's hope that the needs of existing cyclists in the City will be met and exceeded, and new riders will venture out and discover the benefits and joys of bicycling in Manhattan Beach.

Marvin Braude Class I Bike Path

KEY BICYCLING THEMES

- Use South Bay Bike Plan as starting point for the Mobility Plan bicycle recommendations.
- The community wants a bicycle system for families (recreational and transportation cyclists), not only experienced cyclists
- How do we address the terrain in the City (steep grades)?
- East/West Connections - Sepulveda Boulevard divides the City
- Need to educate bicyclists on safety and the rules associated with biking on the road
- Bicycle facilities are not in demand at elementary schools – City needs to focus on improving bicycle facilities around middle and high schools
- Highland Avenue - Bikes conflict with cars
- Need some type of bike facility along Veterans Parkway alignment, but not at the expense of the current trail.
- Need more bike racks in key places

THE SOUTH BAY BICYCLE MASTER PLAN

The South Bay Bicycle Master Plan (SBBMP) is the result of a joint-partnership between the Los Angeles Bicycle Coalition (LACBC) and the local bike advocates of the South Bay Bicycle Coalition (SBBC). The goal of the Master Plan is intended to guide the development and maintenance of a comprehensive bicycle network and set of programs and policies throughout the South Bay region. Seven of the 16 South Bay cities within the South Bay Cities Council of Governments (SBCCOG) area participated in the exercise, including Manhattan Beach. As part of the Master Plan, several roadways in Manhattan Beach were recommended for inclusion in the City's bicycle network. The SBBMP recommended two new Class I bicycle paths (0.2 total miles) on Bell Avenue and Marine Avenue Park, four Class II bicycle lanes (7.0 total miles) on Manhattan Beach Boulevard, Rosecrans Avenue, Marine Avenue, and Aviation Boulevard, and 10 Class III bicycle routes (7.1 total miles) spread throughout the City.

The City has adopted the South Bay Cities Bicycle Master Plan, in concept, and has taken each proposed bicycle path, lane and route into consideration. However, some routes identified in The Plan are difficult to implement due to lack of adequate roadway width, public opposition to some routes, and/or route redundancy. For these reasons, the Mobility Plan prioritizes the suggested bike facilities from The Plan into three categories; Phase 1, Phase 2, and Future, implementing the most desirable and feasible routes first, followed by a Phase 2 plan and a long-term future long-term recommendations.

South Bay Bicycle Master Plan Proposed Bikeways

BICYCLE RECOMMENDATIONS

Using the overarching bicycle-related themes presented by the community, a three phase implementation plan is recommended, plus a plan to implement a family-friendly bicycle network. Overall, once all three phases are implemented, the City will add 0.1 miles of bike paths, 8.6 miles of bike lanes, 7.0 miles of bike routes, and 6.3 miles of sharrows/bike-friendly streets to the existing bicycle network (Table 5).

TABLE 5: NET NEW MILEAGE OF BICYCLE FACILITIES

	Existing	Existing + Project	Net Increase
Bike Path	2.1	2.2	0.1
Bike Lane	0.4	9.0	8.6
Bike Route	2.9	9.9	7.0
Sharrows / Bike-Friendly Street	0.3	6.6	6.3

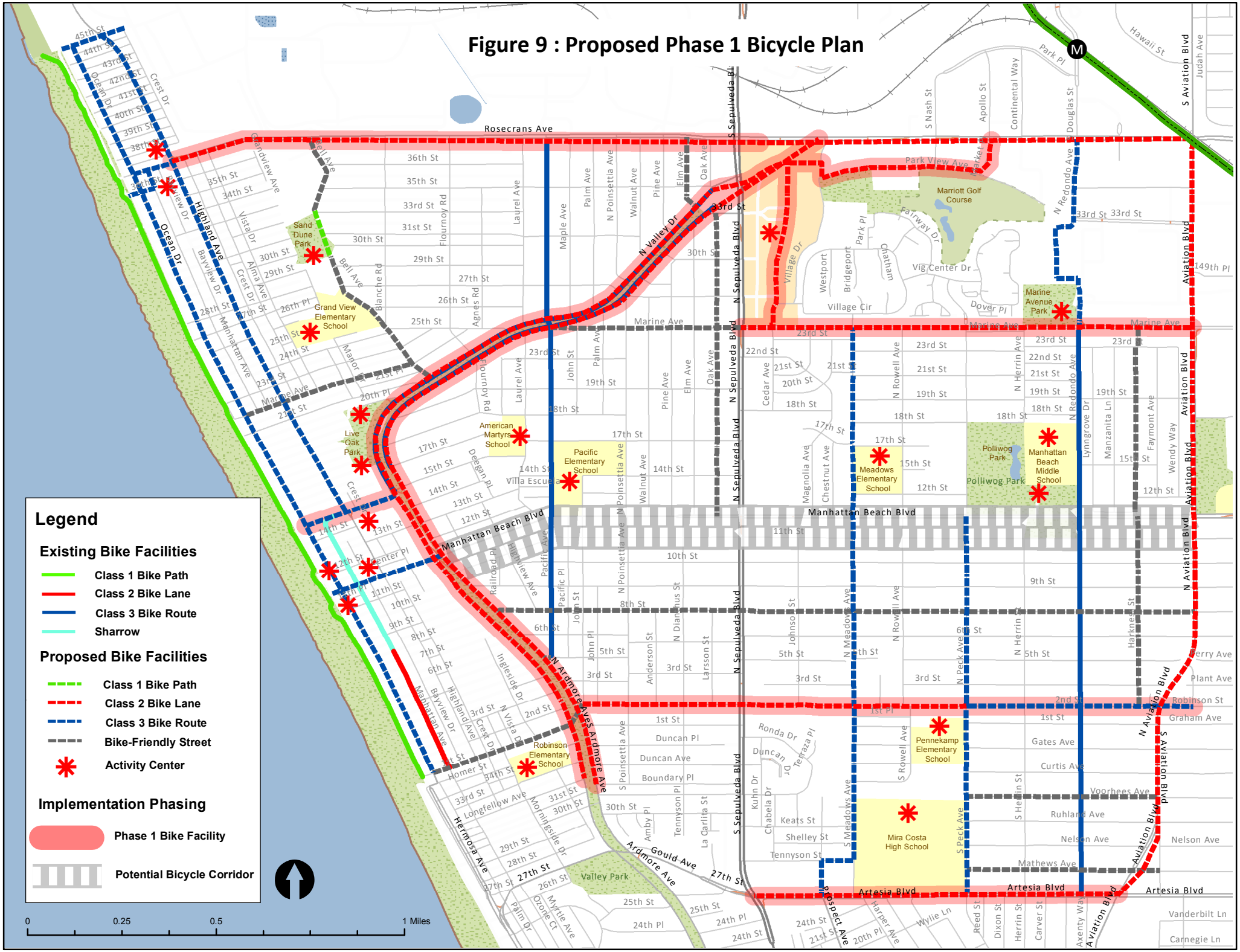
PHASE 1 BICYCLE SYSTEM RECOMMENDATIONS

The goal of the first phase of the City's Bicycle recommendations is to form "backbone" connections to serve key activity centers, and provide much needed east-west connectivity through the City and to the adjacent cities of El Segundo, Hawthrone, Hermosa Beach and Redondo Beach. Key activity centers the City aimed to accommodate by the Phase I system include the Manhattan Village Mall, Manhattan Beach Middle School/Polliwog Park, Mira Costa High School, Manhattan Beach Pier, downtown Manhattan Beach, Live Oak Park/Joslyn Center, and Marine Sports Park. The Phase 1 bike plan is listed in Table 6 and shown graphically in Figure 9.

TABLE 6: PHASE 1 BIKE PLAN

Roadway	From	To	Proposed Classification
Rosecrans Avenue	Highland Avenue	Sepulveda Boulevard	Class II Bike Lane
Valley Drive/Ardmore Avenue	Rosecrans Avenue	Southern City Limits	Class II Bike Lane
Parkview Avenue	Village Drive	Market Place	Class II Bike Lane
Marine Avenue	Sepulveda Boulevard	Aviation Boulevard	Class II Bike Lane
Artesia Boulevard	Sepulveda Boulevard	Eastern City Limits	Class II Bike Lane
15th Street	Ocean Drive	Valley Drive	Class III Bike Route
2nd Street	John Street	Peck Avenue	Class II Bike Lane
2nd Street	Peck Avenue to	Eastern City Limits	Class III Bike Route
Manhattan Village Shopping Center Connections	Veterans Parkway to Manhattan Village Pedestrian/Bicycle Connection as part of the Manhattan Village Project		Class II Bike Lane
	Cedar Way Bike Lane (Southbound) / Sharrow (Northbound)		Class II Bike Lane
	Bike route from Marine Ave to Manhattan Village as part of Manhattan Village project		

Figure 9 : Proposed Phase 1 Bicycle Plan



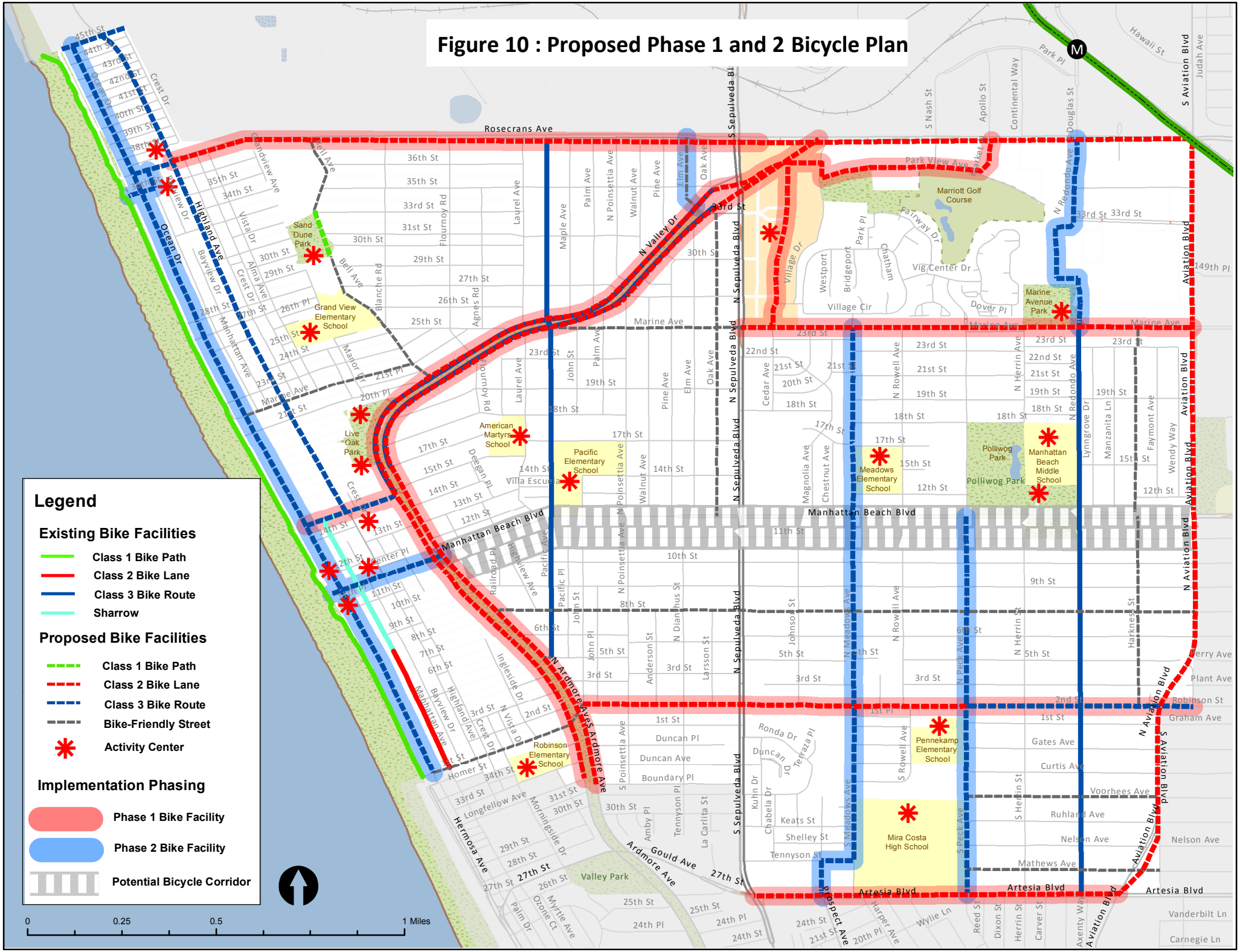
PHASE 2 BICYCLE SYSTEM RECOMMENDATIONS

The second phase of the City's Bike recommendations seeks to improve connectivity to other activity centers, beyond those established in the first phase. These include a connection through the downtown area and the Civic Center, a second connection to Mira Costa High School, a connection to Meadows Elementary School, a connection between Valley Drive/Ardmore Avenue to Rosecrans Avenue, a gap closure through the Northrop Grumman property, a second coastal route parallel to the beach path, and improved connectivity to El Segundo and Hermosa Beach. The Phase 2 bike plan is listed in Table 7 and shown graphically in Figure 10.

TABLE 7: PHASE 2 BIKE PLAN

Roadway	From	To	Proposed Classification
Ocean Drive	45th Street	1st Street	Class III Bike Route
Manhattan Beach Boulevard	Ocean Drive	Valley Drive	Class III Bike Route
Meadows Avenue/Tennyson Street/Prospect Avenue	Marine Avenue	Artesia Boulevard	Class III Bike Route
Peck Avenue	Manhattan Beach Boulevard	Artesia Boulevard	Class III Bike Route
Elm Avenue	Rosecrans Avenue	Valley Drive	Bike-Friendly Street
Manhattan Avenue/36th Street	Rosecrans Avenue	Ocean Drive	Class III Bike Route
Redondo Avenue	Through Northrop Grumman/Raleigh Studios		Class III Bike Route

Figure 10 : Proposed Phase 1 and 2 Bicycle Plan



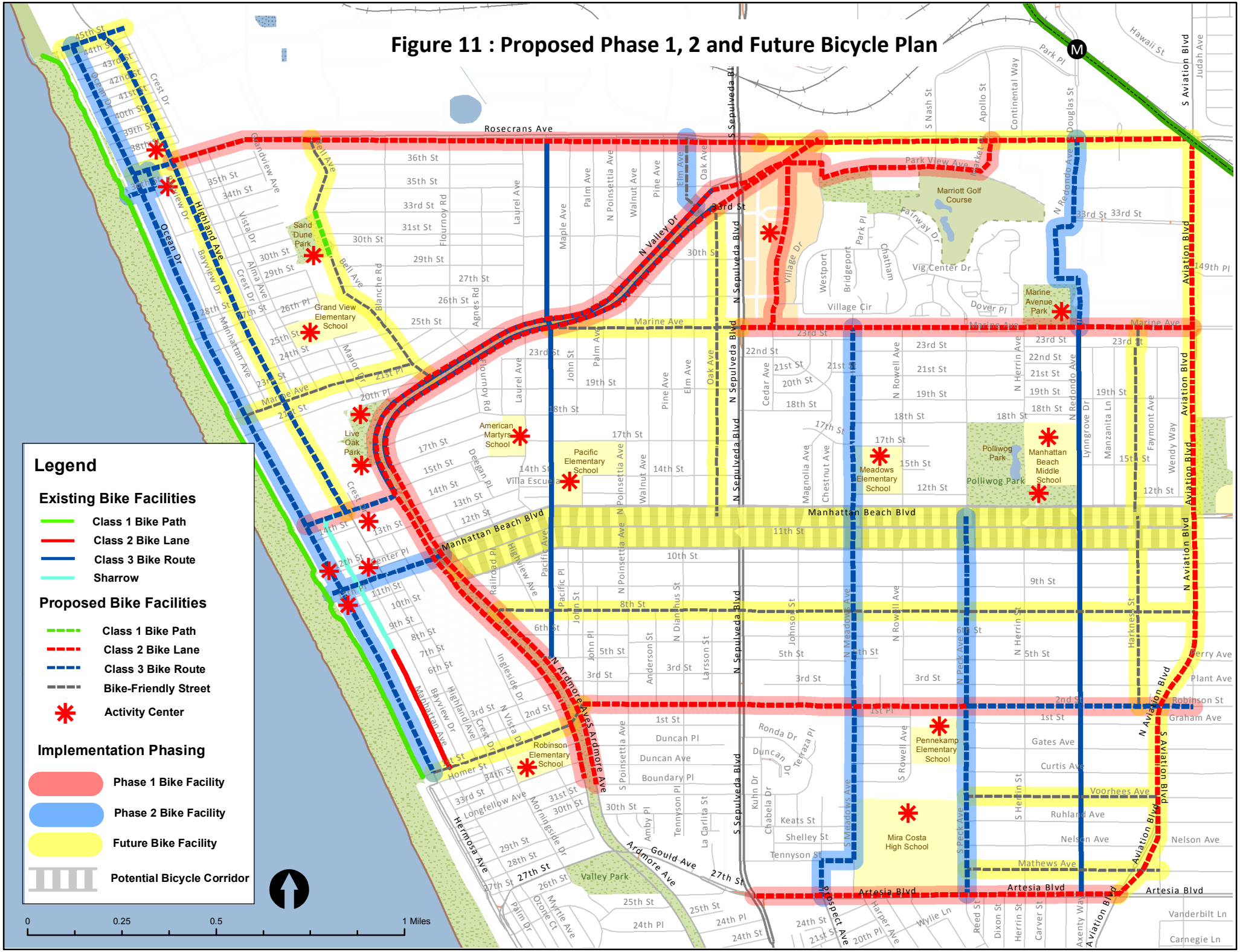
FUTURE LONG-TERM BICYCLE SYSTEM RECOMMENDATIONS

The future long-term bicycle system recommendations would mostly complete the South Bay Bicycle Master Plan and would only be completed after the proposed Phase I and Phase II recommended bicycle improvements are complete. The future long-term recommendations include a future east/west corridor that could be on Manhattan Beach Boulevard or another parallel route. All future long-term bicycle facilities will need additional research and outreach, as some may not be feasible due to physical or cost constraints. The future long-term bicycle facilities serve secondary activity centers, and are parallel routes to the facilities identified in Phases I and II. The future long-term bike plan is listed in Table 8 and shown graphically in Figure 11.

TABLE 8: FUTURE LONG-TERM BIKE PLAN

Roadway	From	To	Proposed Classification
Highland Avenue	45th Street	15th Street	Class III
Bell Avenue	Rosecrans Avenue	Valley Drive	Bicycle-Friendly Street (Class I Through Sand Dune Park)
Oak Avenue	Ardmore Avenue	Manhattan Beach Blvd	Bike-Friendly Street
Harkness Street	Marine Avenue	2nd Street	Bike-Friendly Street
Aviation Boulevard	Rosecrans Avenue	Artesia Boulevard	Class II
45th Street	West of Ocean Drive	Crest Drive	Class III
Rosecrans Avenue	Sepulveda Boulevard	Aviation Boulevard	Class II
Marine Avenue	Ocean Drive	Bell Avenue	Bike-Friendly Street
Marine Avenue	Ardmore Avenue	Sepulveda Boulevard	Bike-Friendly Street
8th Street	Ardmore Avenue	Aviation Boulevard	Bike-Friendly Street
1st Street	Ocean Drive	John Street	Bike-Friendly Street
Voorhees Avenue	Peck Avenue	Aviation Boulevard	Bike-Friendly Street
Mathews Avenue	Peck Avenue	Aviation Boulevard	Bike-Friendly Street

Figure 11 : Proposed Phase 1, 2 and Future Bicycle Plan



FAMILY-FRIENDLY RECOMMENDATIONS

With its mild climate and year-around sunshine, Manhattan Beach offers the perfect opportunity for families to get out and ride their bikes together. However, with relevant safety concerns, many parents are hesitant to ride on some streets with young, novice riders who may not be accustomed to the biking rules of the road.

The family-friendly bicycle facilities in Manhattan Beach are geared toward the group of riders that fall in the "Interested, but Concerned" category. All of the four designated family-friendly bicycle facilities are either Class II or Class III bike lanes or routes. These corridors offer riders of all ages and experience levels a safe and comfortable biking environment, and were selected because they provide the most level terrain in the City, relatively low traffic volumes and travel speeds for the Class III corridors (Redondo Avenue, Meadows Avenue, and Peck Avenue), minimal major intersection crossings, and have higher potential to implement greater level of protection for cyclists in on-street facilities (Valley Drive/Ardmore Avenue). To further enhance these facilities, the family friendly facilities would be upgraded with additional traffic calming elements (potentially including mini-traffic circles and curb extensions) to further calm vehicle traffic, and in the case of Valley Drive/Ardmore Avenue, evaluating the feasibility of installing upgraded lanes, such as on-street cycle tracks, by utilizing a modest amount of the curbside right of way in Veterans Parkway. A map of the recommended family-friendly routes in Manhattan Beach is shown in Figure 12.

BICYCLE PARKING

In addition to an attractive bicycle network, cyclists must have a secure and convenient place to park their bicycles, when needed. While the City has several existing bicycle racks, this Plan identifies nine new locations where the City aims to either add or enhance existing bike parking options in the future. These locations were strategically chosen, and represent key activity centers that generate bicycle activity. The goal of implementing these new or enhanced bike parking facilities is also to minimize or eliminate the use of unapproved bicycle parking on nearby railings, light poles, trees, or parking meters, which have the potential to create safety issues for pedestrians.

Inadequate bicycle parking can often lead to bikes being locked to parking meters, trees, newspaper stands, or benches that may block pedestrian flow.

Traditional Bicycle Parking

There are many different types of traditional bike parking. The most common types of traditional bike parking in Manhattan Beach include U-racks, wave racks and grid-style racks. The choice of rack will depend on the characteristics of each area.

U-Racks – U-racks are U-shaped bicycle racks that are commonly used in urban areas because they can be placed along sidewalks without taking too much space away from pedestrians.

Wave Racks – Wave racks are an extension of the U-rack and can accommodate more bicycles than a single U-Rack.

Grid-Style – Grid-style racks consist of vertical bars that connect larger upper and lower metal tubing.

Enhanced Bicycle Parking

Enhanced bike parking comes in the form of decorative racks, bike shelters/canopies, and bike lockers. Decorative racks can often double as a bike rack and eclectic piece of art, while bike shelters/canopies and bike lockers offer additional protection from the elements as well as added security.

Decorative Racks - Decorative racks incorporate both utility and style. Many existing bike racks on Manhattan Beach Pier are decorative/innovative bike racks.

Bike Shelter/Canopy – Bike shelters or bike canopies are covered bike racks, usually protecting both the bicyclist and bicycle from rain.

Bike Locker – Bike lockers are a box in which a single bicycle can be placed and locked. They are usually provided in high volume locations where cyclists need bicycle parking for extended periods of time, such as a transit stop.

SCAG recently awarded the South Bay Bicycle Coalition (SBBC) and the three beach cities, Manhattan Beach, Redondo Beach, and Hermosa Beach, a grant to assess mini-bicycle corrals. The assessment is tentatively scheduled for completion by Summer 2015.

It is recommended that bicycle parking be added or enhanced at the following locations (as shown by the "P" on the map).

- Downtown (Corner of Highland Avenue and Manhattan Beach Boulevard)
- Civic Center/Library
- Pier parking lots
- Live Oak Park/Joslyn Center
- Marine Ave Park
- Polliwog Park
- North Manhattan Beach
- Mira Costa High School

A map of the proposed/enhanced bicycle parking locations is provided in Figure 13.

TRADITIONAL BIKE PARKING

U-Racks

Wave Racks

Grid-Style

ENHANCED BIKE PARKING

Decorative Racks

Bike Shelters/Bike Canopy

Bike Lockers

Figure 12 : Family-Friendly Bicycle Facilities

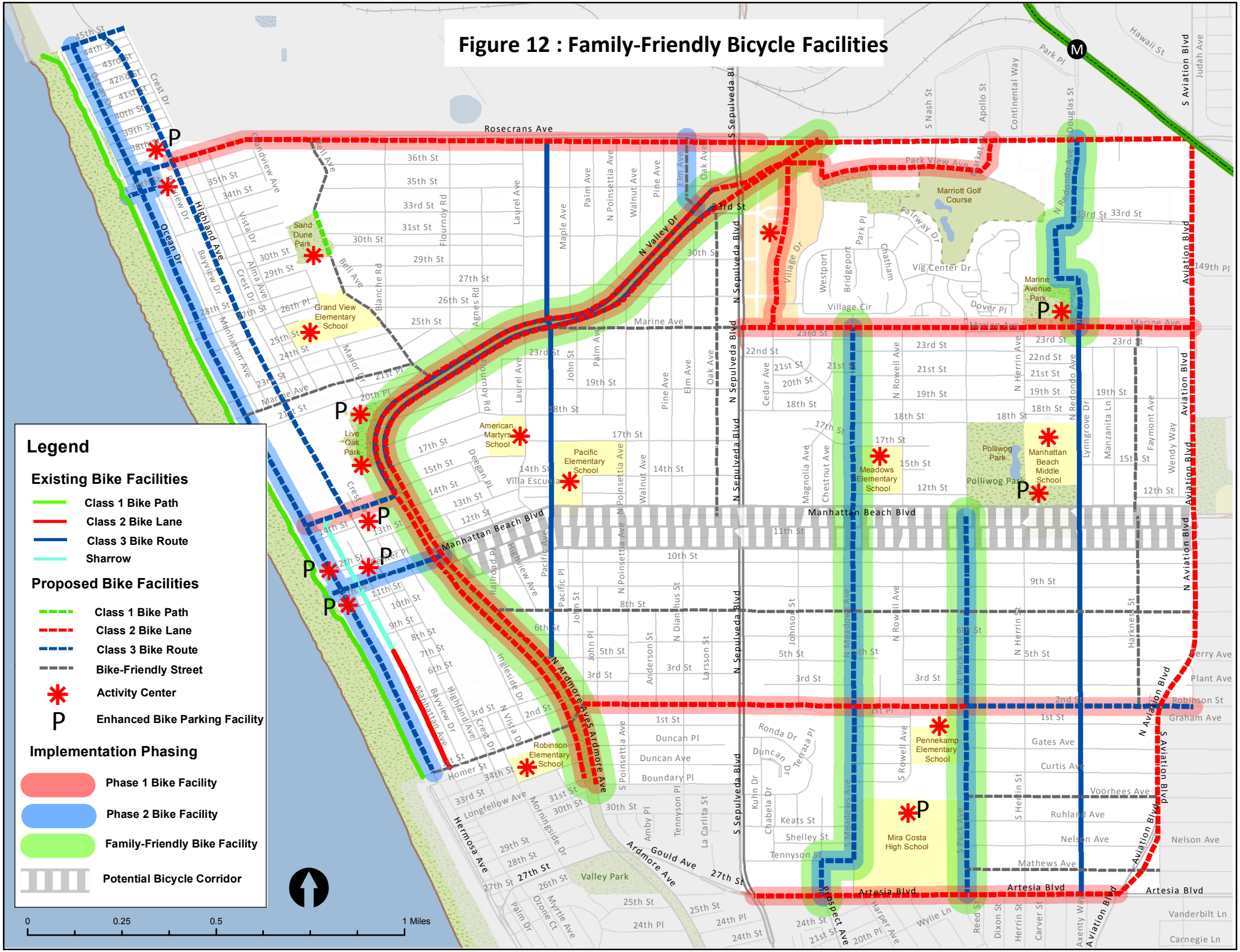
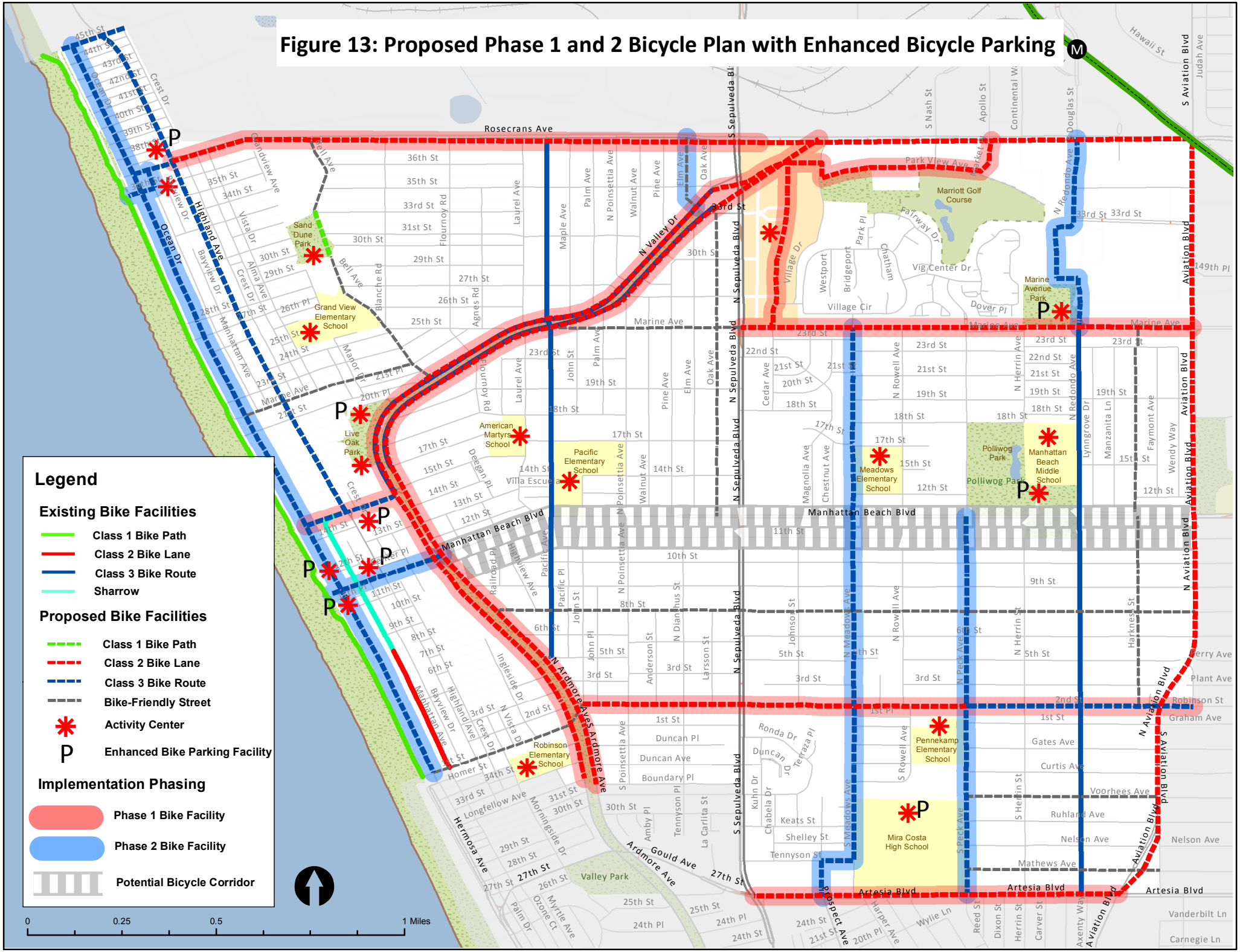


Figure 13: Proposed Phase 1 and 2 Bicycle Plan with Enhanced Bicycle Parking



TRANSIT

Transit availability and accessibility will play a crucial role in the City's effort toward building a convenient, efficient, and safe multi-modal transportation network in Manhattan Beach. Improving the City's transit system will not only give residents the opportunity to get out of their car and use alternative modes of transportation, but it will also enhance the mobility of residents who are dependent on transit due to age, ability and/or access to a vehicle. After talking to the community and various stakeholder groups, several key transit themes began to emerge:

In an effort to address the comments and concerns of the community, the City has developed the following set of transit improvements.

Beach Cities Transit

Photo Source: www.surfsidesam.com

KEY TRANSIT THEMES

- The senior community needs improved mobility options
- The disabled community needs improved mobility options
- Seniors would benefit from additional services that would improve their feelings of safety
- Maintain the Dial-a-Ride services
- Need an east-west circulator to connect the City to key activity centers
- Make public transit information more accessible
- Publish a transit map on the City's website (not only text) and links to providers
- Improve public education on transit options
- Provide convenient and frequent transit service to the beach/downtown
- Improve bus stops – Most only have a sign and/or trash can

ENHANCED TRANSIT OPTIONS

The City of Manhattan Beach is committed to enhancing the mobility options for all users of public transit to help facilitate

independence and ensure that the community has the tools necessary to remain productive and active. In addition to the City's popular dial-a-ride program, a shared ride, curb-to-curb bus service for senior or disabled Manhattan Beach residents, other options that the City could evaluate that would improve or enhance the transit experience include group travel training sessions, trip planning assistance websites, and system maps and rider information for the visually impaired.

Travel Training Sessions

Travel training sessions are an excellent way to help the community familiarize themselves with the local and regional transit system. Travel training sessions may be held by the City and may include information related to reduced fare options and transit access pass (TAP) cards, route and schedule information, bus stop location information, accessibility features, and instructions on how to use various trip planner systems on the internet.

Enhanced City Website

Summarizing the transit information available from various transit providers that operate within the City (Metro, Beach Cities Transit, LADOT, Municipal Area Express, and Torrance Transit) could help minimize confusion and expedite the process of trip planning. Regular maintenance of the website would be required to provide the most up-to-date information as possible.

EAST-WEST CONNECTOR/CIRCULATOR

During public outreach for the Mobility Plan many participants noted the division between the areas of the City east and west of Sepulveda Boulevard in terms of access and mobility. This includes difficulty crossing heavy traffic on Sepulveda Boulevard on foot, via bicycle and even in a car due to congestion. There was also the general feeling that the western parts of the City in downtown and near the beach are very congested during summer months both in terms of traffic and parking, thus making resident access from other parts of Manhattan Beach difficult during the peak season.

In an effort to address the need for a connection between the east and west side of Manhattan Beach, the City has considered options to implement a full-time or part-time circulator bus route. This east-west route would travel around the community and provide access to popular destinations such as shopping centers, medical centers, markets, the beach, the north end and the downtown area. Implementation of an east-west circulator route would complement the existing Beach Cities Transit circulators through Manhattan Beach, which provides east-west transit service via Rosecrans Avenue, and north-south via Highland Avenue and Manhattan Avenue through the City. Potential destinations along an east-west circulator route could include the UCLA Medical Group, Manhattan Village Mall, the Redondo Beach Green Line station, the Manhattan Beach City Hall and Library, and the Performing Arts Center, Metlox Plaza, North Manhattan Beach, as well as the Manhattan Beach Pier and downtown area.

SUMMER-TIME CIRCULATOR

During the summer months, Manhattan Beach is booming with outdoor enthusiasts all flocking to the beach, popular ocean-front bicycle and pedestrian paths, weekend summer events, and outdoor dining options. With such high summer demand and limited beach parking, the City is looking into options to provide a summer-time circulator that would connect various neighborhoods around the City with popular destinations along the beach. This would be similar to the east-west connector/circulator, but would focus on the peak months and peak activity locations during the summer.

During the summer months the City draws a considerable number of tourists to their beaches and popular outdoor dining restaurants.

UPGRADE TRANSIT STOPS

Upgrading transit stops can increase the convenience, comfort and perception of safety for public transit riders. There are several factors to consider when evaluating a transit stop. These factors may include weather protection, sense of security, comfort, accessibility, universal design, and availability of user information (see Table 9 for a complete list). Improvements that may be implemented include:

- Bus Shelters/Roofs
- Adequate Seating
- Lighting
- Improved Signage/Information
- Ensure ADA Accessibility
- Real-Time Bus Arrival Information

Example of a new downtown transit kiosk in the City of Bellevue, WA.

Photo Source:

www.downtown Bellevue.com

TABLE 9: TRANSIT STOP QUALITY CONTROL FACTORS

Feature	Description	Indicators
Weather protection	User protected from sun and rain.	Bus shelters and covered platforms.
		Shade trees and awnings.
		Enclosed waiting rooms.
Sense of Security	Perceived threats of accidents, assault, theft or abuse.	Perceived transit passenger security.
		Accidents and injuries.
		Reported security incidents.
		Visibility and lighting.
		Official response to perceived risks.
Comfort	Passenger comfort.	Seating availability and quality.
		Space (lack of crowding).
		Quiet (lack of excessive noise).
		Fresh air (lack of unpleasant smells).
		Temperature (neither too hot or cold).
		Cleanliness of stations and nearby areas.
		Washrooms and refreshments.
Accessibility	Ease of reaching transit stations and stops.	Distance from transit stations and stops to destinations.
		Walkability in areas serviced by transit.
		Automobile Park & Ride availability.
		Bicycle parking availability.
Universal Design	Accommodation of diverse users including people with special needs.	Accessible design for stations and nearby areas.
		Ability to carry baggage.
		Ability to accommodate people who cannot read or understand the local language.
User information	Ease of obtaining information on transit routes, schedules, fares, connections, and destinations.	Availability, accuracy and understandability of information at stops, stations, destinations, Internet, telephone, and transit staff.
		Real-time transit vehicle arrival information.
		Availability and quality of wayfinding signs, maps and other information for navigating within the station and to nearby destinations.
		Quality of announcements.
		Availability of information for people with special needs (audio or visual disabilities, inability to read or understand the local language, etc.).
		Availability of pay telephones.

Source: Victoria Transport Policy Institute, Transit Station Improvements – Improving Public Transit Waiting Conditions.[17]

Taking these factors into consideration, the City will evaluate existing transit stops to identify deficiencies, and will work to upgrade the stops when funding becomes available. Possible upgrades that would enhance the experience of riding transit in Manhattan Beach could include the installation of benches and bus shelters at highly utilized transit stops within the City.

POSSIBLE TRANSIT UPGRADES

Installation of Benches

Bus Shelters

AUTO

Although this Mobility Plan focuses on multi-modal opportunities, such as making walking and bicycling more attractive in the City, a large majority of people will still drive cars to get to work, to go shopping, and to travel within and around the City. Several key auto and street-related themes emerged from the community during the outreach process.

Autos used to access downtown Manhattan Beach via Manhattan Beach Boulevard

KEY AUTO THEMES

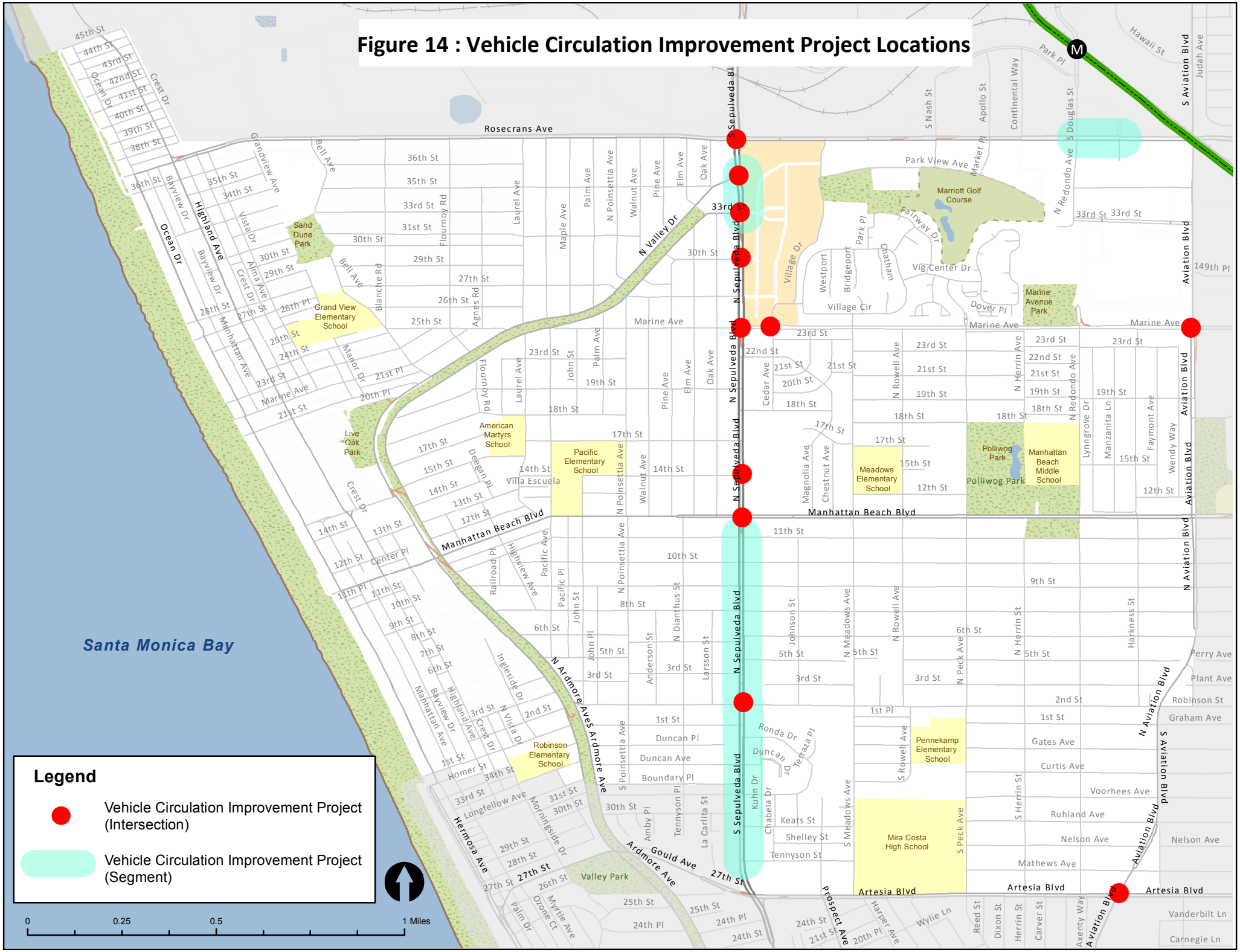
- Safety Concerns at Valley Drive and Ardmore Avenue
    - One way between 2nd Street and 14th Street – Creates complex intersections and driver confusion
- Safety at Ardmore Avenue and 18th Street - Sight distance issue
- Congestion at key intersections along Sepulveda Blvd and Highland Ave and some other locations
- Continue to implement key capacity improvements at congested intersections
- Continue Traffic Calming Program
- Protect local residential neighborhoods from commuter traffic
- Provide sufficient parking for residential and commercial needs
- Pursue funding for other roadway improvements (Metro, State, etc.)

The City continuously monitors traffic congestion and traffic safety and seeks ways to improve vehicular travel. The City has a list of roadway and intersection improvements that are planned to occur as part of the current or future Capital Improvements Program (CIP). Those are listed in Table 10 and the locations are shown in Figure 14. These include measures to reduce bottlenecks, smooth traffic flow and decrease motorist delay. Improvements include adding lanes for travel (exclusive left and right turn lanes), lengthening existing turn lanes to avoid vehicles spilling over into traffic lanes, and other similar measures. As shown, many of the improvements are along the Sepulveda Boulevard corridor. This is not surprising as Sepulveda Boulevard is the major regional travel route, carries the most traffic volume in the City and has the most congestion. The City will continue to seek funding through Metro, Caltrans, the South Bay Cities Association of Governments and other sources to pay for other warranted traffic related improvements.

TABLE 10: VEHICLE CIRCULATION IMPROVEMENT PROJECTS

	Location	Improvement	Schedule
1	Sepulveda Boulevard-33rd Street to Valley Drive	Bridge Widening	Spring 2015
2	Sepulveda Boulevard at Manhattan Beach Boulevard	Dual Eastbound, Westbound and Northbound Left Turn Lanes	2016
3	Sepulveda Boulevard at Marine Avenue	Dual Westbound Left Turn Lanes	Summer 2014
4	Rosecrans Avenue - Redondo Ave. to Gateway	4th Eastbound Lane	Fall 2014
5	Aviation Boulevard at Marine Avenue	Dual southbound Left Turn Lanes	Summer 2016
6	Aviation Boulevard at Artesia Boulevard	Southbound Right Turn Lane	Summer 2016
7	Sepulveda Boulevard at Rosecrans Avenue	Lengthen northbound, southbound and eastbound left turn lanes	Unknown
8	Sepulveda Boulevard at Valley Drive	Remove eastbound left turn and northbound left turns	Unknown
9	Sepulveda Boulevard at 33rd Street	Lengthen southbound left turn lane	Unknown
10	Sepulveda Boulevard at 30th Street	Lengthen southbound left turn lane	Unknown
11	Marine Avenue at Cedar Avenue	Convert to half-signal with free eastbound lanes	Unknown
12	Sepulveda Boulevard at 14th Street	Lengthen southbound left turn lane into Target	Unknown
13	Sepulveda Boulevard at 2nd Street	Lengthen eastbound left turn lane	Unknown
14	Sepulveda Boulevard-11th St. to Tennyson Street	Convert raised median to two-way left turn lane	Unknown
15	Sepulveda Boulevard at 8th Street	Protected left turn Phasing	Spring 2015

Figure 14 : Vehicle Circulation Improvement Project Locations

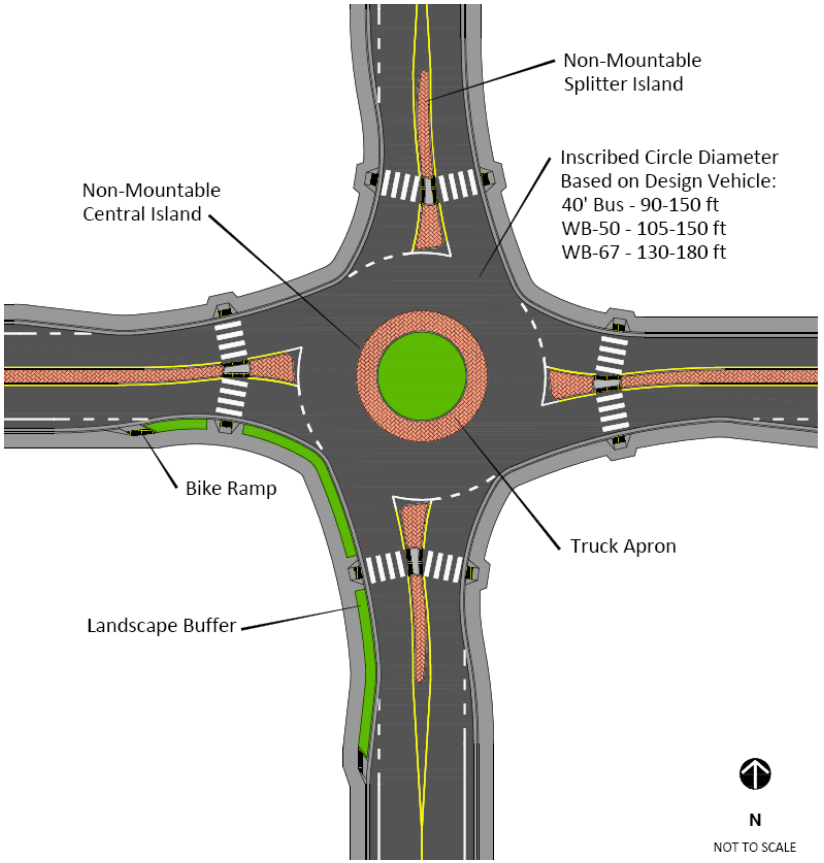


ROUNDABOUTS

The City of Manhattan Beach has considered roundabouts at several intersections along Valley Drive/Ardmore Avenue as a potential solution to various traffic operations issues associated with the unique parallel streets of Valley and Ardmore which create complex and sometimes confusing intersections. The City is considering further detailed study of converting some of the intersections along the Valley Drive/Ardmore Avenue corridor from typical intersections controlled by stop signs to roundabouts. This would be investigated as one possible solution to address the key traffic operations issues. The following section summarizes roundabouts, their advantages and disadvantages and some issues associated with their use in Manhattan Beach.

What is a Roundabout?

A modern roundabout is a circular intersection with yield control on entry and splitter islands to direct traffic through the intersection. Travel speeds through the roundabout are generally less than 20 mph. Incoming traffic yields to vehicles circulating within the roundabout. Roundabouts are typical have one lane, or a maximum of two lanes on each approach. Pedestrian crossings are typically accommodated around the perimeter of the roundabout, and the splitter islands typically provide a mid-crossing pedestrian refuge.



Typical compact roundabout

Photo Source: Fehr & Peers, 2011.

Roundabout Benefits

Research indicates that roundabouts can reduce collisions and improve efficiency when replacing t than conventional intersection controls (e.g., traffic signals or stop signs). The following benefits have been realized and are supported by extensive research on U.S. roundabouts:

- **Safety** – Research indicates that collisions occur less frequently and are less severe than at signalized intersections.
    - The number of possible conflict points between vehicles decreases from 32 at a four-way intersection, to 8 at a roundabout.
    - Vehicle speeds at roundabouts are much lower, generally less than 20mph. Lower speeds equate to shorter required braking distances.
    - Roundabout design eliminates right angle and head-on collisions, which are typically the most severe.
- **Reduced Delay** – By yielding at the entry rather than stopping, vehicle delay is typically reduced. A one-lane roundabout general has less vehicle delay than a signal or stop controlled intersection on roadways with less than 20,000 average daily traffic volumes (ADT). At intersections with five or more legs, roundabouts can help improve operations and reduce complexity.
- **Capacity** – A roundabout may accommodate more vehicles than a signal given the same right-of-way. In particular, intersections with a high volume of left turns may be accommodated better by a roundabout than a multi-phased traffic signal.
- **Environment** – Roundabouts generally operate with fewer delays. A reduction in delay corresponds to a decrease in fuel consumption, air pollution, and greenhouse gases.

Roundabout Impacts/Constraints

- Roundabouts can require substantially more right of way than a standard intersection. Single lane roundabout diameters range from 80 to 130 feet , but are typically 120 feet
- Significant grade changes through an intersection may make a roundabout infeasible. Generally, a grade change of more than 4% precludes the implementation of a roundabout.
- While vehicles slow through a roundabout, and mid-block pedestrian refuge is provided, roundabouts typically do not provide signalized pedestrian crossings, which in particular can be difficult for pedestrians with vision impairments
- Bicycle lanes are not recommended through a roundabout due to safety considerations. Cyclists may exit a bicycle facility and cross as a pedestrian would through a roundabout, or can travel as a motor vehicle would through a lane.

APPLICABILITY TO MANHATTAN BEACH

The City of Manhattan Beach has considered roundabouts at several intersections along Valley Drive/Ardmore Avenue, including at:

- Manhattan Beach Boulevard
- 15th Street
- Pacific Avenue

Grade, available right-of-way, and pedestrian and bicycle safety would be primary considerations at these and other potential locations in the City. Because of the width of Veterans Parkway, a typical circular roundabout would likely not be feasible, so two smaller roundabouts, or one large "dog bone" roundabout would need to be implemented. Pedestrian and bicycle crossings would be directed to the outer edges of the roundabout facility, which would result in substantial out of direction travel for users of Veterans Parkway.

Existing intersection of Valley Drive/Ardmore Avenue and 15th Street.

Photo Source: www.google.com/maps

GOALS AND POLICIES

REVISED GOALS AND POLICIES

The Goals and Policies from the City's 2003 adopted Circulation Element have been reviewed and updated to match the multi-modal focus of the current Mobility Element. They have also been "modernized" to reflect the most current regional and statewide legislation and initiatives in transportation. Finally, presented at the end are some possible new goals and policies to consider adding to further strengthen the policy direction of the City with respect to enhancing non-motorized transportation while preserving a safe and efficient roadway system.

GOALS AND POLICIES: ENSURING A BALANCED TRANSPORTATION SYSTEM

Goal I-1: Provide a balanced, safe, and efficient multi-modal transportation system that serves the mobility needs of all community members, including children, seniors, and the disabled, in accordance with the City's Living Streets Policy.

Policy I-1.1: Review the safety and functioning of the street system on a regular basis to identify problems and develop solutions.

Policy I-1.2: Improve street signage citywide, to enhance safety and visibility, especially at pedestrian crossings, and ensure that street signs are not obscured or obstructed by vegetation or structures.

Policy I-1.3: Encourage the development of Transportation Demand Management (TDM) plans for all major developments or facility expansions to encourage ride-sharing and other improvements, thereby reducing vehicle trips.

Policy I-1.4: Work with neighboring communities and other South Bay cities, as well as state and other agencies including Metro and Caltrans, to develop regional solutions to traffic problems that are regional in nature, and to mitigate impacts of development in neighboring communities that impact the City of Manhattan Beach.

Policy I-1.5: Investigate and encourage the use of alternative transportation systems such as intra/inter-city shuttle or trolley systems to connect key areas of the city together including linking the areas east and west of Sepulveda Boulevard and including connections to the schools.

Policy I-1.6: Support Dial-A-Ride or other para-transit systems for the senior and disabled members of the community.

Policy I-1.7: Consider emergency vehicle access needs when developing on-street parking and other public right-of-way development standards.

Policy I-1.8: Require property owners, at the time new construction is proposed, to either improve abutting public right-

of-way to its full required width per the street master plan or to pay in-lieu fees for improvements, as appropriate.

Policy I-1.9: Require property owners, at the time of new construction or substantial remodeling to dedicate land for roadway or other public improvements such as wider sidewalks and/or bicycle lanes, as appropriate and warranted by the project.

Policy I-1.10: Continue to implement standards for public street right-of-way use for private purposes, with particular attention to streets without adjacent sidewalks.

Policy I-1.11: Monitor the use of public walkstreets for private purposes consistent with City standards.

Policy I-1.12: Monitor and minimize traffic issues associated with construction activities.

Policy I-1.13: Consider implementing a development impact fee program to collect funds from developers constructing new projects. Such fees would fund "fair-share" costs of circulation improvement projects required to mitigate project impacts.

GOALS AND POLICIES: PREVENTING NEIGHBORHOOD TRAFFIC INTRUSION

Goal I-2: Move commuter traffic through the City primarily on arterial streets, and on collector streets as appropriate, to protect other streets from the intrusion of commuter traffic.

Policy I-2.1: Encourage the use of the Neighborhood Traffic Management Program and utilize neighborhood traffic management tools to mitigate neighborhood intrusion by commuter traffic, and improve conditions for pedestrians and bicyclists.

Policy I-2.2: Establish priorities and determine funding available for implementing the Neighborhood Traffic Management Program.

Policy I-2.3: Monitor all major intersections and arterial streets and pursue capital projects as needed to minimize traffic diversion into local streets, improve pedestrian and bicycle conditions as well as to implement the bicycle and pedestrian projects in the plan, and to keep traffic moving efficiently.

Policy I-2.4: Minimize vehicular access for new developments on local residential streets, and in locations with high pedestrian and bicycle activity, and design access and egress to avoid traffic intrusion on local streets to the maximum extent possible.

Policy I-2.5: Work with neighboring cities and regional and sub-regional agencies including Metro and Caltrans to enhance major intersections and associated street segments within the City and adjacent jurisdictions where such improvements will relieve traffic bottlenecks, address safety and also improve transit, pedestrian, and bicycle modes of travel

Policy I-2.6: Encourage the use of Intelligent Transportation Systems (ITS), such as advanced traffic signalization, motorist information, advanced transit, advanced emergency vehicle access, and intelligent parking systems, as well as other

appropriate communication technologies, to efficiently and safely move traffic.

Policy I-1.7: Monitor and minimize traffic parking and truck loading issues associated with construction activities.

GOALS AND POLICIES: MEETING COMMUNITY PARKING NEEDS

Goal I-3: Ensure that adequate parking and loading facilities are available to support both residential and commercial needs.

Policy I-3.1: Periodically review the existing Downtown Parking Management Program measures, re-evaluate parking and loading demands, and modify programs as needed, including revised regulations, to address parking issues.

Policy I-3.2: Explore opportunities for creating peripheral parking lots to serve the Downtown and North End.

Policy I-3.3: Periodically evaluate the adequacy of parking standards in light of vehicle ownership patterns and vehicle sizes in the City to ensure that "right sized" parking facilities are provided, to encourage the efficient use of land, support economic vitality, and enhance all modes of transportation.

Policy I-3.4: Review development proposals to ensure potential adverse parking impacts are minimized or avoided, and pedestrian and bicycle circulation are not negatively impacted.

Policy I-3.5: Encourage joint-use and off-site parking where appropriate and develop procedures and templates for use in shared parking arrangements.

Policy I-3.6: Evaluate parking and loading demands in the North End, and develop and implement a comprehensive program to address these needs.

Policy I-3.7: Require private development to provide public on-street parking in the public right-of-way according to Public Works standards in compliance with the street master plan.

Policy I-3.9: Work to retain on-street parking in the Beach Area, particularly on Highland Avenue.

Goal I-4: Protect residential neighborhoods from the adverse impacts of traffic and parking from adjacent non-residential uses.

Policy I-4.1: Review on-street parking in neighborhoods adjacent to commercial areas where neighbors have requested such review, and develop parking and traffic solutions for those neighborhoods which are or which could potentially be adversely impacted by spillover parking and traffic.

Policy I-4.2: Carefully review commercial development proposals with regard to parking, loading and planned ingress/egress, and enforce restrictions as approved.

Policy I-4.3: Require on-site parking for employees in accordance with City codes.

Policy I-4.4: Ensure that required parking and loading spaces are available and maintained for parking.

Goal I-5: Reduce the adverse parking and traffic impacts that schools create on surrounding residential neighborhoods.

Policy I-5.1: Encourage the school district and private schools to promote active modes of transportation for students and employees as a means of reducing peak-hour traffic.

Policy I-5.2: Work with the school district and private schools to improve pedestrian and bicycle routing and safety around schools. Focus pedestrian access to the elementary schools and bicycle and pedestrian access to the middle and high schools.

Policy I-5.3: Coordinate after-school, weekend, and community activities on school grounds with consideration of potential traffic and parking impacts on neighborhoods.

Policy I-5.4: Discourage parking associated with schools, particularly at Mira Costa High School, within surrounding neighborhoods.

Policy I-5.5: Work with the school district and private schools to address high traffic volumes during the morning and afternoon peak school hours, and improve drop-off and pick-up circulation.

GOALS AND POLICIES: ACCOMMODATING PEDESTRIANS AND BICYCLISTS

Goal I-6: Create well-marked pedestrian and bicycle networks that facilitate these modes of circulation.

Policy I-6.1: Implement those components of the Downtown Design Guidelines that will enhance the pedestrian-oriented environment.

Policy I-6.2: Protect and enhance the walkstreets as important pedestrian access to the beach. Implement enhanced/improved crossings where the walkstreets connect to the street system.

Policy I-6.3: Monitor City standards regarding the use of public walkstreets for private purposes.

Policy I-6.4: Consider and protect the character of residential neighborhoods in the design of pedestrian access.

Policy I-6.5: Develop and implement standards to encourage pedestrian-oriented design for commercial properties consistent with Complete Streets and/or Living Streets Policies.

Policy I-6.6: Incorporate bikeways and pedestrian ways as part of the City's circulation system where safe and appropriate.

Policy I-6.7: Encourage features that accommodate the use of bicycles in the design of new development.

Policy I-6.8: Encourage the development of bicycle routes per the Mobility Plan to link residential, schools, and recreational

areas east of Sepulveda Boulevard with the Marvin Braude bike path.

POSSIBLE NEW GOALS AND POLICIES

The following new goals and policies are provided for review and consideration. Some are directly oriented to concepts such as Complete Streets or multi-modal transportation initiatives, some are oriented to address specific comments received during the public outreach process for the Mobility Plan, and some reflect new policies adopted by other cities in Southern California that also may apply in Manhattan Beach.

New Goal: Incorporate Complete Streets methods into planning and design, considering walking, bicyclists, public transportation users, those with mobility constraints and various other modes of mobility in parallel.

New Policy: Consider every street in Manhattan Beach as a street that bicyclists and pedestrians will use.

New Policy: Allow for flexible use of public rights of way to accommodate all users of the street system, while maintaining safety standards

New Policy: Use universal design techniques to accommodate pedestrians of all ages and ability and ensure compliance with the American with Disabilities Act.

New Policy: Where streets are too narrow to accommodate all modes of travel, consider parallel routes working together to accommodate all modes in a "complete corridors" strategy

New Policy: Improve auto-oriented streets (such as Sepulveda Boulevard, Rosecrans Avenue and Manhattan Beach Boulevard) so pedestrians using the adjacent businesses or services can walk comfortably and feel safer navigating the thoroughfare.

New Policy: In areas with no sidewalks, review parking and other forms of intrusion (such as patios and landscaping) into the public right of way that interferes with walking paths and bicycle paths and develop solutions to reduce and minimize those impacts on walking and biking in these areas.

New Policy: Enhance and maintain all bus stops to provide clean and attractive facilities.

New Policy: Support the temporary closure of streets for community and commercial activity that encourages residents to see their streets as public spaces and promote biking and walking.

New Policy: Continue to use innovative designs to expand and enhance the bikeway network and increase public safety.

New Policy: Work with the South Bay Bicycle Coalition and other stakeholders to implement bicycle facilities identified in the City's Mobility Plan and the South Bay Bicycle Master Plan. Promote safe and attractive bikeways and supporting facilities for both transportation and recreation via bicycle.

New Policy: Implement family friendly bicycle routes and facilities per the Mobility Plan so that people of all ages can enjoy bicycling in Manhattan Beach.

New Policy: Seek ways to improve connections between the portions of the City east and west of Sepulveda Boulevard via transit, bicycling and walking.

New Policy: Seek methods to enhance non-automobile connectivity between neighborhoods and the Downtown.

New Policy: Make strategic improvements to intersections and corridors to improve the flow of traffic, but not at the expense of other modes.

New Policy: Establish a more flexible level of service approach to traffic analysis and improvements that considers modes other than only automobile.

New Policy: Consider impacts on overall mobility and various travel modes when evaluating transportation impacts of new developments or infrastructure projects.

New Policy: Develop a new multi-modal level of service methodology that includes the following components:

- Emphasis on pedestrian and bicycle access and circulation
- Support for reduced vehicle miles traveled
- Maintenance of appropriate emergency vehicle access and response time

New Policy: Incorporate "green infrastructure" design and similar low impact development principles for storm water management and landscaping of streets.

New Policy: Reduce Vehicle Miles Traveled (VMT) through the use of alternative modes of transportation and transportation demand management.

New Policy: Promote car-sharing and neighborhood electric vehicles as important means to reduce traffic congestion.

New Policy: Support innovative parking solutions that reduce the required space needed for parking such as automated parking lifts and elevators.

New Policy: Investigate using parking supply and pricing as a strategy to encourage use of non-automobile modes where feasible.

New Policy: Routinely incorporate Complete Streets/Living Streets features into all street redesign and repaving projects.

New Policy: Continue to support and enhance Sate Routes to School programs such as Walking School Bus, walk audits, classroom safety instruction and promotional events.

New Policy: Seek ways to incorporate a bike facility in or adjacent to Veterans Parkway while maintaining the existing walking path.

New Policy: Continually implement new and proven technology to improve the pedestrian environment including

higher visibility signage and street markings in high priority locations.

New Policy: When certain capital improvement projects are constructed at intersections, vehicle detection and actuation for traffic signals must include bicycle detection.

New Policy: Identify and analyze locations with higher number of pedestrian and/or bicycle involved collisions and implement appropriate engineering, education, enforcement and other countermeasures at these locations.

New Policy: Implement pedestrian safety improvements in accordance with the City's Pedestrian Enhancement Policy.

New Policy: Conduct periodic bicycle counts, walk audits and other data collection efforts related to active modes of travel for program evaluation and to support grant applications.

New Policy: Participate in and support City-wide events to promote bicycling such as National car-free day, bike-to-work day and other similar programs.

New Policy: Routinely integrate the financing, design and construction of pedestrian facilities and pedestrian improvements with street projects and build pedestrian improvements at the same time as improvements for vehicular circulation.

New Policy: Improve connectivity for residents and employees to the Green Line Station.

New Policy: Improve multi-modal connections including bike-to-transit and walk-to-transit to make transit more effective.