Agenda Item #:_____

Staff Report
City of Manhattan Beach

TO: Honorable Mayor Wilson and Members of the City Council

THROUGH: Geoff Dolan, City Manager

FROM: Richard Thompson, Director of Community Development
Rob Osborne, Management Analyst

DATE: February 1, 2005

SUBJECT: Consideration of the City Council's 2004-2005 Work Plan Item Regarding Creation of a Citywide Bikeway System

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RECOMMENDATION:
It is recommended that the City Council discuss this issue and approve a City-wide Bikeway Plan for incorporation as part of the South Bay Sub-Regional Bicycle Transportation Plan.

FISCAL IMPLICATION:
There is no cost associated with approving a City-wide bikeway system. Installation of signs and striping to designate bikeways throughout the City as depicted in the Draft Citywide Bikeway Plan, would cost approximately $5,000. A reduced Bikeway Plan, as recommended by the PPIC, would cost approximately $3,000. The Public Works Department has indicated that the labor could be provided through existing programs & budgets. Material costs could be appropriated from the Council Contingency Fund. Approving a bikeway plan would make the City eligible to pursue grant funding for bicycle-related projects.

BACKGROUND:
The City Council's 2004-2005 Work Plan includes a task to determine if a City-wide bikeway system should be implemented in Manhattan Beach. Staff compiled a variety of information regarding such systems and presented it to the Parking and Public Improvements Commission for consideration at public meetings on October 28 and November 30, 2004. At their January 4, 2005, meeting, the City Council reviewed the PPIC's recommendations and directed staff to further investigate possibilities for bikeways, particularly in the east-west direction. The Council also requested more information that was previously presented to PPIC, which is attached.

DISCUSSION:
A "Bikeway" is defined as a facility that provides primarily for bicycle travel. There are three types:

Class I Bikeway (Bike Path) - A completely separated right of way for the exclusive use of bicycles and pedestrians with minimized crossflow, such as the pathway through the City west of the Strand. State guidelines require a width of at least eight feet for two-way bicycle movement.

Class II Bikeway (Bike Lane) - A striped lane for one-way bike travel on a street or highway. The minimum width required is four feet where there is no curb parking and five feet adjacent to curb parking.

Class III Bikeway (Bike Route) - A shared use unstriped lane with bicycle and motor vehicle traffic with design criteria and uniform symbols. No minimum widths are required, but routes should only be designated after considering such factors such as surface condition, obstructions, curb parking, and connections to other bikeways.

Bike Paths are preferred for greatest overall safety and efficiency, but are difficult to achieve in built-out cities. Bike Lanes provide generally safer riding conditions than Bike Routes, but require a dedicated area on the street. Bike Routes require the least amount of right-of-way and have fewer design requirements. The complexity of implementing a bikeway system can range from installing a number of "Bike Route" signs up to major capital improvement projects involving land acquisition and construction of off-street paths.

While designating Bikeways along routes with existing bike volumes is one method, it has also been found that Bikeways along new alignments will also encourage new or expanded bike use. It is important that the Bikeways have connections and do not terminate without reaching a destination or another Bikeway so the bicyclist is not stranded in an area hostile to bicycles. It is also important to realize that the California Vehicle Code defines bicycles as vehicles, and as such, may travel on any road open to the public, but not on sidewalks.

General Plan Issues

The City's General Plan includes several bicycle-oriented policies, including the following:

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

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

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

Policy I-6.8: Encourage the development of Bikeways to link recreation areas and schools.

To be eligible for certain bicycle-oriented state and federal grants, the City must have an adopted Bicycle Transportation Plan (BTP) that complies with State requirements and has been approved by the Metropolitan Transportation Authority (Metro). A local BTP does not need to be part of the City's General Plan, but it should support and complement General Plan goals and policies regarding bicycle facility planning. A BTP must contain many elements such as maps and descriptions of existing land use patterns, existing proposed bicycle parking, transfer and other related facilities, as well as a summary of bicycle safety and education programs, community and

regional coordination, local funding history and proposed bicycle projects.

Metro and South Bay Cities Council of Governments (COG) have recently begun the process to update the sub-regional bicycle transportation strategic plan, last updated in 1994. This sub-regional plan will include all of the elements of a BTP, and cities that participate can adopt all or a portion of the Plan as its own local BTP. Staff will work cooperatively with Metro to incorporate any adopted Bikeway system into the South Bay sub-regional plan. The City Council can then adopt all or a portion of the Sub-Regional BTP which would include the City's bikeway system.

Traffic Engineer Findings

There are many factors to consider when determining if and what type of Bikeway is appropriate for a particular corridor. Among some of the more common parameters are:

NO	BIKEWAY FACTORS	OBJECTIVE
1	Existing or Projected Bicycle Volume	Encourage streets with existing or expected bicycle use.
2	Vehicular Volume	Lower volume streets preferred over higher.
3	Number of Vehicle Lanes	Fewer lanes preferred.
4	Roadway Width	Bike Lanes-Minimum design widths required. Bike Routes-Wider streets preferred over narrow.
5	Curb Parking	Bike Lanes-No curb parking preferred. Bike Routes-Low curb parking demand preferred
6	Regional and Local Destinations	Connect destinations with Bikeways.
7	Recreational Venues	Connect recreational activities with Bikeways.
8	Common Commuter Routes	Encourage bicycling on existing commuter routes
9	Collision History	Enhance bicycle facilities at locations with bicycle collisions or re-route to safer streets.
10	Surrounding Land Use	Lower density residential, fewer driveways and low curb parking demand preferred.
11	Bicyclist Visibility	Wider parkways and building setbacks preferred.
12	Proximity to Roadway Hazards	Greater distance to curbside obstructions.
13	Location of existing Bikeways and bike facilities	Connect new bikeways to existing routes and facilities.
14	Vehicle-Bicycle Conflicts	Fewer intersections and stops preferred.

Due to the high cost of street reconstruction, streets and areas with "Proposed Bikeways" should be wide enough to accommodate Bike Lanes or Bike Routes within the existing roadway. Commuter and recreational factors should be emphasized, so that the Bikeways serve the user. Since the City is essentially built-out, Bike Lanes and Bike Routes would be more common and feasible than Bike Paths. The system should complement the existing and proposed Bikeways designated within the South Bay Region. For example, there is a planned bikeway for the unused Southern Pacific railroad right-of-way in El Segundo north of Rosecrans Avenue and east of Sepulveda Boulevard. Also, an existing Bike Path stretches along The Strand through Hermosa Beach, Manhattan Beach and El Segundo. The City of Redondo Beach also has an

existing Bikeway Plan.

The only Bikeway designated in the City's General Plan is The Strand Bike Path. The California Supplement to the Manual of Uniform Traffic Control Devices has specific guidelines for the installation of Bike Lanes and Bike Paths. Bike Lane guidelines require a minimum width of four feet (4') where there is no curb parking and five feet (5') adjacent to curb parking. Bike Path guidelines require at least eight feet (8') for two-way bicycle movement. Bike Routes do not have specific minimum widths, but should be designated after considering bicycle sensitive factors such as surface condition, obstructions, curb parking, and connections to other Bikeways.

Bicycle collisions were studied in a six-year period between January 1, 1995 and December 31, 2001 to identify any high collision locations. The majority of bicycle collisions occurred along proposed bikeways. The highest collision rate was on Manhattan Beach Boulevard between Highland Avenue and the Pier. A map is attached to the PPIC report that identifies all bicycle collision locations.

Proposed and Future City Bikeways

The City Traffic Engineer has compiled a list of candidate streets that may be designated as Bikeways. Wider streets and those classified as collector streets were chosen over narrow and discontinuous streets. Streets that did not have adequate lane widths were not considered (i.e. minimum width for two-lanes with curb parking must be at least 36 feet). Subsequent to the January 4, 2005, City Council meeting, the Traffic Engineer reviewed the proposed plan to determine if any additional bikeways could be added to the original list. The following streets are recommended for bikeways and are depicted on the attached Draft Citywide Bikeway Plan.

STREET	LIMITS	TYPE
Valley Drive	Citywide	Proposed Bike Route (SB)
Ardmore Avenue	Citywide	Proposed Bike Route (NB)
Highland Avenue	Citywide	Proposed Bike Route
Manhattan Avenue	Manhattan Beach Blvd. to 1st St.	Proposed Bike Route/Lanes
Rosecrans Avenue	The Strand to Aviation Blvd.	Proposed Bike Route/Lane (WB)
Marine Avenue	Sepulveda Blvd. to Aviation Blvd.	Proposed Bike Route/Lane (WB)
Pacific Avenue	Rosecrans Ave. to 5th St./Ardmore Ave.	Proposed Bike Route
Redondo Avenue	Marine Ave. to Manhattan Beach Blvd.	Proposed Bike Route
Peck Avenue	2nd St. to Artesia Blvd.	Proposed Bike Route
1st Street	The Strand to Valley Dr.	Future Bike Route*
2nd Street	Ardmore Ave. to Peck Ave.	Proposed Bike Route*
8th Street	Ardmore Ave. to Sepulveda Blvd.	Future Bike Route*
15th Street	Highland Ave. to Valley Dr.	Proposed Bike Lanes*
Marine Ave./Blanche Rd.	The Strand to Valley Dr.	Future Bike Route*
Sepulveda Blvd.	Citywide	Future Regional Bike Lanes
Manhattan Beach Blvd.	Citywide	Future Regional Bike Lanes
Artesia Boulevard	Citywide	Future Regional Bike Lanes

*-Added subsequent to January 4, 2005 City Council Meeting.

"Proposed" bikeways can be implemented immediately, while "Future" bikeways require

physical changes to the street, such as removal of parking or roadway widening. Any Proposed Class III Bike Routes could be upgraded to Class II Bile Lanes if parking were removed on one side. The following streets have been identified as future bike lanes in the Coastal Corridor Transportation Study conducted by the South Bay Council of Governments:

- Sepulveda Boulevard - Citywide
- Manhattan Beach Blvd. - Citywide
- Artesia Blvd. - Citywide

Pursuant to the City Council's direction, all east-west streets were evaluated for possible Bikeways. Very few would qualify for Bikeways, since street widths are less than 36 feet wide with curb parking on both sides. The widest street between 2nd Street and Rosecrans Avenue not already identified for bikeways is 8th Street between Ardmore Avenue and Sepulveda Boulevard. While it is only 30 to 32 feet wide, it also has the widest right-of-way at 60 feet wide. 8th Street was therefore added as a "Future" Bike Route until such time as the street is widened or curb parking is removed on one side. 1st Street between The Strand and Valley Drive was also added as a "Future" Bike Route, since it would connect the 2nd Street Bike Route to The Strand and has a wider Right-of-Way than surrounding streets. 15th Street between Highland Avenue and Valley Drive can also become a Bike Route after the street is re-striped with two lanes and parking is removed on the south side as part of the Civic Center improvements.

Other Departments Comments

The Traffic Engineer's suggested system was reviewed by a team comprised of staff members from the Police, Parks & Recreation and Public Works Departments. Comments received were as follows:

- With the City being essentially built out, there are limits on what can be done in implementing bikeways. Realistically there are no places to add bike paths and few if any areas with room to designate striped lanes. Emphasis should be on identifying bike routes.
- Safety must take precedent over enhancements to the transportation system.
- Removing parking to accommodate bike facilities is not appropriate in Manhattan Beach.
- The Public Works Department does not have any significant budget/maintenance concerns about installing signage for bike routes or limited striping & signage for bike lanes.
- The Police Department is opposed to creating bike lanes on Sepulveda Blvd. or Manhattan Beach Blvd. because of safety concerns related to high traffic volumes.
- The Police Department questions if Highland is an appropriate route because of its close proximity to The Strand bike path and high traffic/pedestrian activity.
- There are no significant enforcement-related concerns, although some form of driver education would be useful if striped lanes are created.
- The Parks & Recreation Department feels the suggested system provides reasonable access to major recreational facilities.

PPIC Review

As stated previously the PPIC reviewed this issue at public meetings on October 28 and November 30, 2004. They are generally supportive of the proposed system, with several modifications. They feel few if any City streets are wide enough to accommodate marked lanes, so any initial City-wide system should include only bike routes. They are also opposed to designating Highland Avenue as a bike route because of its high pedestrian and traffic activity. They have similar concerns about Sepulveda and Manhattan Beach Boulevards but suggested these streets be considered as potential future Bike Routes in deference to the Coastal Corridor Study. They voted (3-0, Osterhout & Ackland absent) to recommend approval of an initial bikeway system as follows:

Street	**Type**
Valley Drive – Citywide	Proposed Route
Ardmore Avenue - Citywide	Proposed Route
Highland Avenue - Rosecrans to 45th Street	Future Route
Manhattan Avenue - Manhattan Beach Blvd to 1st Street	Proposed Route
Rosecrans Avenue - The Strand to Sepulveda Blvd	Proposed Route
Marine Avenue - Sepulveda Blvd to Aviation Blvd	Proposed Route
Marine Avenue - Pacific Avenue to Sepulveda Blvd	Future Route
Pacific Avenue - Rosecrans Ave to 5th Street/Ardmore Ave	Proposed Route
Redondo Avenue - Marine Ave to Manhattan Beach Blvd	Proposed Route
Peck Avenue - 2nd Street to Artesia Boulevard	Proposed Route
2nd Street - Ardmore Ave to Peck Ave	Proposed Route
Sepulveda Blvd – Citywide	Future Route
Manhattan Beach Blvd – Citywide	Future Route
Artesia Blvd. - Citywide	Future Route

The PPIC's recommendations are illustrated in the attached map.

CONCLUSION:

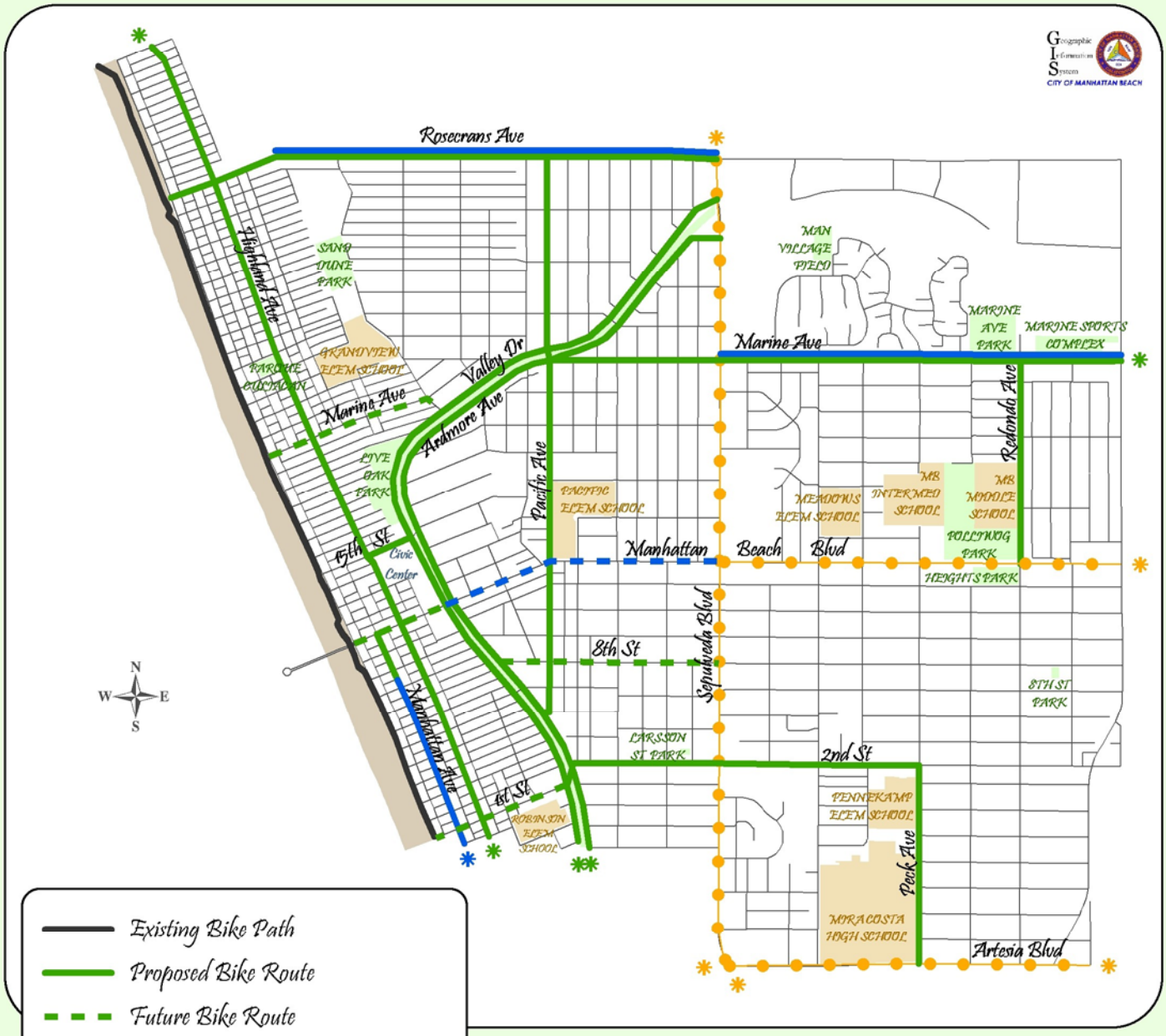
The Citywide Bikeway Plan drafted by the Traffic Engineer contains additional candidate streets including some Class II Bike Lanes while the PPIC recommendations are limited to Proposed and Future Class III Bike Routes. If approved by the City Council, a Citywide Bikeway Plan will be forwarded to Metro to become part of the sub-regional Bicycle Transportation Plan. Staff would then return at a subsequent meeting with the completed sub-regional BTP for consideration and approval of a local BTP for the City for possible implementation.

Attachments:
- A. Draft Citywide Bikeway Plan
- B. Citywide Bikeway Plan as recommended by the PPIC
- C. City Council Report dated January 4, 2005, with minutes
- D. PPIC report dated November 30, 2004, with attachments and minutes

Agenda Item : _____

Draft

City-wide Bikeway Plan



City-wide Bikeway Plan

As Recommended by the P.P.I.C.

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12/21/04

Geographic Information System
CITY OF MANHATTAN BEACH

05/0104.13 Consideration of the City Council's 2004-2005 Work Plan Item Regarding Creation of a Citywide Bikeway System

Traffic Engineer Erik Zandvliet addressed Council with a PowerPoint presentation on a City Council Work Plan Item proposal for a City-wide bikeway system, which he explained is basically a series of streets labeled for bike routes, bike lanes or bike paths. He reported that the proposed plan was reviewed by the Parking and Public Improvements Commission (PPIC) on two different occasions prior to recommending it to Council; that the approved plan will ultimately be integrated into the South Bay Region Bikeway Transportation Plan; and that the designation of a bikeway system in the City would make the City eligible to pursue grant funding for bicycle-related projects. He pointed out that while there is no cost associated with approving the plan, the installation of necessary signage to designate bike routes throughout the City, as recommended by the PPIC, would cost approximately $4,000. He also reviewed the definition of the three types of "bikeways" as identified in the staff report: Class I - Bike Path (separate roadway); Class II - Bike Lane (striped lane on the street); and Class III - Bike Route (shared roadway with sign).

After reviewing the PowerPoint map of the proposed bikeway plan, Traffic Engineer Zandvliet responded to Council questions by explaining that the designation of future bike routes will become part of the South Bay Region Bikeway Transportation Plan; that while bike paths are preferred for greatest overall safety and efficiency, they are difficult to achieve in "built-out" cities; that while the recommendation does not include any bike paths or bike lanes in addition to the existing bike path that parallels the Strand, it does include signage for several bike routes; that signage would be installed on existing poles, where feasible; that it is estimated that less than 50 signs would be needed, at key turning locations, to help bicyclists find their route; and that 8th Street should be reviewed to determine if it is wide enough to be included in the plan.

In response to Councilmember Aldinger's request to see a map showing the width of the streets and a layout of each route, Traffic Engineer Zandvliet explained that the PPIC was presented with a map showing the width of the proposed streets and actually downgraded some of the proposed bike lanes to bike routes. He also emphasized that the intent of the designated routes is to connect schools, parks and the existing bikeway along the beach, as well as other city bike destinations.

The following individual spoke on this item:

- **Patrick McBride, No Address Provided**

Councilmember Napolitano expressed concern that the proposal basically puts up signs indicating that the area in which people are already riding their bikes is okay or directing them to routes that are possibly less safe. He suggested that Council review the plan that was presented to the PPIC to get a better understanding as to why some of the bike lanes were downgraded to bike routes and asserted that if the City is serious about bicycle transportation, there should be dedicated bike lanes.

Commenting that there is a benefit to having a bike plan and participating in the regional discussion, Mayor Pro Tem Fahey conveyed support of a bike plan if it creates funding

for bike lanes. She expressed concern that the proposed plan doesn't address how families can safely ride their bikes from east of Sepulveda to the beach; that the smaller streets are safer to consider for bike lanes; and that crossing at 2nd or 8th Streets is the only way to cross the greenbelt.

Councilmember Ward agreed with both Councilmember Napolitano and Mayor Pro Tem Fahey, however, expressed concern that there will be too many signs with very little benefit. He said he was hoping to see recommendations for designated lanes where bikes ride alongside cars and areas that are "bike friendly". He concluded by stating that he understands that this is an effort to expand into a larger program, however, he doesn't think that this is the way to go.

Councilmember Aldinger commented that, while this is a good first step, he was also hoping to see a proposal for bike lanes. He agreed with Mayor Pro Tem Fahey that getting from the east side of Sepulveda to downtown is the number one reason for a bike plan; asserted that 8th Street is less traveled than 2nd Street and should be included in the plan; stressed that he is not in favor of more signs; and reiterated that he would like to see the layout of the streets to help determine how many streets could be designated with bike lanes.

Commenting that this proposal is long overdue, Mayor Wilson agreed that she would also like to see some bike paths in the City and that this serves as a first step toward getting the necessary funding.

Councilmember Napolitano suggested continuing the item to a future City Council meeting in order to receive a presentation of the same "street layout" that was presented to the PPIC. He stressed that he has a hard time imagining that there isn't room for some designated bike lanes in the City.

Mayor Pro Tem Fahey suggested that staff look at Marine Avenue, in front of Manhattan Village, as a potential bike path.

Summarizing Council comments, Mayor Wilson concurred that this item should be brought back to the Council with more detailed information of what was presented to the PPIC, taking into consideration comments made this evening, and including an east-west route, if possible.

City Manager Geoff Dolan thanked Council for their input and stated that this item will be reviewed by staff and placed on a future agenda for further consideration.

Agenda Item #:_____

Staff Report
City of Manhattan Beach

TO: Honorable Mayor Wilson and Members of the City Council

THROUGH: Geoff Dolan, City Manager

FROM: Richard Thompson, Director of Community Development
Rob Osborne, Management Analyst

DATE: January 4, 2005

SUBJECT: Consideration of the City Council's 2004-2005 Work Plan Item Regarding Creation of a Citywide Bikeway System

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RECOMMENDATION:
It is recommended that the Council discuss this issue and approve a City-wide bikeway system.

FISCAL IMPLICATION:
There is no cost associated with approving a City-wide bikeway system. Installation of signage to designate bike routes throughout the City, as recommended by the PPIC, would cost approximately $4,000. The Public Works Department has indicated that the labor could be provided through existing programs & budgets. The materials cost of approximately $4,000 could be appropriated from the Council Contingency Fund. Approving a bikeway plan would make the City eligible to pursue grant funding for bicycle-related projects.

BACKGROUND:
The City Council's 2004-2005 Work Plan includes a task to determine if a City-wide bikeway system should be implemented in Manhattan Beach. Staff compiled a variety of information regarding such systems and presented it to the Parking and Public Improvements Commission for consideration at public meetings on October 28 and November 30, 2004.

DISCUSSION:
A "Bikeway" is defined as a facility that provides primarily for bicycle travel. There are three types:

Class I Bikeway (Bike Path) - A completely separated right of way for the exclusive use of bicycles and pedestrians with minimized crossflow, such as the pathway through the City west of the Strand. State guidelines require a width of at least eight feet for two-way bicycle movement.

Class II Bikeway (Bike Lane) - A striped lane for one-way bike travel on a street or highway. The minimum width required is four feet where there is no curb parking and five feet adjacent to curb parking.

Class III Bikeway (Bike Route) - Provides for shared use with pedestrian or motor vehicle traffic with design criteria and uniform symbols. No minimum widths are required, but routes should only be designated after considering such factors such as surface condition, obstructions, curb parking, and connections to other bikeways.

Bike Paths are preferred for greatest overall safety and efficiency, but are difficult to achieve in built-out cities. Bike lanes provide generally safer riding conditions than Bike Routes, but require a dedicated area on the street. Bike Routes require the least amount of right-of-way and have fewer design requirements. The complexity of implementing a bikeway system can range from installing a number of "Bike Route" signs up to major capital improvement projects involving land acquisition and construction of off-street paths.

General Plan Issues

The City's General Plan includes several bicycle-oriented policies, including the following:

Goal 6: Create well-marked pedestrian and bicycle networks that facilitate these modes of circulation.
Policy I-6.6: Incorporate bikeways and pedestrian ways as part of the City's circulation system where safe and appropriate to do so.
Policy I-6.7: Encourage features that accommodate the use of bicycles in the design of new development, as appropriate.
Policy I-6.8: Encourage the development of Bikeways to link recreation areas and schools.

The only Bikeway designated in the City's General Plan is The Strand Bikeway. If the City adopts a Citywide Bikeway Plan, several grant programs may become available for funding bicycle-related projects.

Traffic Engineer Findings

As described in detail in the attached report, the Traffic Engineer evaluated the possibility of creating a bikeway system in Manhattan Beach. Based on various criteria analyzed he suggested a preliminary system that could be considered for implementation. As the system is comprised almost entirely of bike routes, its primary function would be to identify the more bicycle-friendly and appropriate streets throughout the City and encourage their use. The suggested system is as follows:

Street	**Type**
Valley Drive - Citywide	Route (southbound)
Ardmore Avenue - Citywide	Route (northbound)
Highland Avenue - Citywide	Route

Manhattan Avenue - Manhattan Beach Blvd. to 1st St.	Route
Highland Avenue - Citywide	Route
Rosecrans Avenue - Strand to Aviation Blvd.	Route/Lane
Marine Avenue - Sepulveda Blvd. to Aviation Blvd.	Route/Lane (westbound)
Pacific Avenue - Rosecrans Ave. to 5th St./Ardmore Ave	Route
Redondo Avenue - Marine Ave. to Manhattan Beach Blvd.	Route
Peck Avenue - 2nd St. to Artesia Blvd.	Route
2nd Street - Ardmore Ave. to Peck Ave.	Route
The Strand - Citywide	Existing Path

The following streets have been identified as potential future bike lanes in the Coastal Corridor Transportation Study conducted by the South Bay Council of Governments:

Street
Sepulveda Boulevard - Citywide
Manhattan Beach Blvd. - Citywide
Artesia Blvd. - Citywide

Other Departments Comments

The Traffic Engineer's suggested system was reviewed by a team comprised of staff members from the Police, Parks & Recreation and Public Works Departments. Comments received were as follows:

- With the City being essentially built out, there are limits on what can be done in implementing bikeways. Realistically there are no places to add bike paths and few if any areas with room to designate striped lanes. Emphasis should be on identifying bike routes.

- Safety must take precedent over enhancements to the transportation system.

- Removing parking to accommodate bike facilities is not appropriate in Manhattan Beach.

- The Public Works Department does not have any significant budget/maintenance concerns about installing signage for bike routes or limited striping & signage for bike lanes.

- The Police Department is opposed to creating bike lanes on Sepulveda Blvd. or Manhattan Beach Blvd. because of safety concerns related to high traffic volumes.

- The Police Department questions if Highland is an appropriate route because of its close proximity to The Strand bike path and high traffic/pedestrian activity.

- There are no significant enforcement-related concerns, although some form of driver education would be useful if striped lanes are created.

- The Parks & Recreation Department feels the suggested system provides reasonable access to major recreational facilities.

PPIC Review

As stated previously the PPIC reviewed this issue at public meetings on October 28 and November 30, 2004. They are generally supportive of the proposed system, with several modifications. They feel few if any City streets are wide enough to accommodate marked lanes, so any initial City-wide system should include only bike routes. They are also opposed to designating Highland Avenue as a bike route because of its high pedestrian and traffic activity. They have similar concerns about Sepulveda and Manhattan Beach Boulevard but suggested these streets be considered as potential future routes in deference to the Coastal Corridor Study.

They voted (3-0, Osterhout & Ackland absent) to recommend approval of an initial bikeway system as follows:

Street	**Type**
Valley Drive – Citywide	Route
Ardmore Avenue - Citywide	Route
Highland Avenue - Rosecrans to 45th Street	Future Route
Manhattan Avenue - Manhattan Beach Blvd to 1st Street	Route
Rosecrans Avenue - The Strand to Sepulveda Blvd	Route
Marine Avenue - Sepulveda Blvd to Aviation Blvd	Route
Marine Avenue - Pacific Avenue to Sepulveda Blvd	Future Route
Pacific Avenue - Rosecrans Ave to 5th Street/Ardmore Ave	Route
Redondo Avenue - Marine Ave to Manhattan Beach Blvd	Route
Peck Avenue - 2nd Street to Artesia Boulevard	Route
2nd Street - Ardmore Ave to Peck Ave	Route
Sepulveda Blvd – Citywide	Future Route
Manhattan Beach Blvd – Citywide	Future Route
Artesia Blvd. - Citywide	Future Route

This recommended system is illustrated in the attached map. The Traffic Engineer has no objection to the modifications made by the Commission.

CONCLUSION:

The bikeway systems suggested by the Traffic Engineer and the PPIC are strictly conceptual at this point. Should the Council decide to approve a system, staff would report back at a subsequent meeting with further analysis regarding issues such as alternatives for implementation, possibilities for obtaining grant funding and General Plan implications.

The Los Angeles County Metropolitan Transportation Authority (MTA) and South Bay Cities Council of Governments (COG) are currently working to develop a county-wide bicycle

transportation strategic plan. Staff will work with these agencies to ensure that any system considered for Manhattan Beach is consistent with the county-wide plan. The next MTA/COG Plan workshop will be held in Torrance on January 13, 2005.

Attachments:
A. PPIC recommended bikeway system
B. Excerpt from PPIC minutes of 11/30/04
C. PPIC report dated 11/30/04, with attachments

CITY OF MANHATTAN BEACH

DEPARTMENT OF COMMUNITY DEVELOPMENT

TO: Parking and Public Improvements Commission

FROM: Richard Thompson, Director of Community Development
Robert D. Osborne, Management Analyst

BY: Erik Zandvliet, Traffic Engineer

DATE: November 30, 2004

SUBJECT: **Citywide Bikeway System**

BACKGROUND:

The City Council's Annual Work Plan includes a task to determine if and where bikeways should be designated on the city's streets. On October 28, 2004, the Commission reviewed the initial evaluation of some possible bikeways for adoption as a Citywide Bikeway System and requested staff to gather additional information from other departments and surrounding cities. The initial evaluation was sent to the Cities of El Segundo, Redondo Beach, Hermosa Beach and Hawthorne for their comments. It was also sent to the local schools and school district, as well as all City departments. This report includes comments obtained by these entities.

DISCUSSION:

"Bikeway" means all facilities that provide primarily for bicycle travel. There are three types of bikeways:

1. Class I Bikeway (Bike Path). Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.
2. Class II Bikeway (Bike Lane). Provides a striped lane for one-way bike travel on a street or highway.
3. Class III Bikeway (Bike Route). Provides for shared use with pedestrian or motor vehicle traffic with design criteria and uniform symbols.

Bike Paths are preferred for greatest overall safety and efficiency, but off-street paths are difficult to achieve in built-out cities. Bike lanes provide generally safer riding conditions than Bike Routes, but require a dedicated area on the street. Class III Bike Routes require the least amount of right-of-way and have fewer design requirements. Construction costs can be as little as a few "Bike Route" signs up to tens of thousands of dollars to acquire land and build off-street Bike Paths.

While designating Bikeways along routes with existing bike volumes is one method, it has also been found that Bikeways along new alignments will also encourage new or expanded bike use.

It is important that the Bikeways have connections and do not terminate without reaching a destination or another Bikeway so the bicyclist is not stranded in an area hostile to bicycles.

Bikeway System Guidelines

There are many factors to consider when determining if and what type of Bikeway is appropriate for a particular corridor. Among some of the more common parameters are:

- Existing or Projected Bicycle Volume
- Vehicular Volume
- Number of Vehicle Lanes
- Roadway width
- Curb Parking
- Regional and Local Destinations
- Recreational Venues
- Common Commuter Routes
- Collision History
- Surrounding Land Use
- Bicyclist Visibility
- Proximity to Roadway Hazards
- Location of existing Bikeways and bike facilities

Due to the high cost of street reconstruction, candidate streets and areas should be wide enough to accommodate Bike Lanes or Bike Routes within the existing roadway. Commuter and recreational factors should be emphasized, so that the Bikeways serve the user. Since the City is essentially built-out, Bike Lanes and Bike Routes would be more appropriate and feasible than Bike Paths. The system should complement the existing and proposed Bikeways designated within the South Bay Region. For example, there is a planned bikeway for the unused Southern Pacific railroad right-of-way in El Segundo north of Rosecrans Avenue and east of Sepulveda Boulevard. Also, an existing Bike Path stretches along The Strand through Hermosa Beach, Manhattan Beach and El Segundo. The City of Redondo Beach has an existing Bikeway Plan.

The City's General Plan includes several bicycle-oriented policies, including the following:

> Goal 6: Create well-marked pedestrian and bicycle networks that facilitate these modes of circulation.
> Policy I-6.6: Incorporate bikeways and pedestrian ways as part of the City's circulation system where safe and appropriate to do so.
> Policy I-6.7: Encourage features that accommodate the use of bicycles in the design of new development, as appropriate.
> Policy I-6.8: Encourage the development of Bikeways to link recreation areas and schools.

The only Bikeway designated in the City's General Plan is The Strand Bikeway. Once a Citywide Bikeway Plan is adopted, several Grant programs become available for funding bicycle

projects. Often a Citywide Bikeway Plan or inclusion in a Countywide Bikeway Plan is a prerequisite for these funding programs.

The California Supplement to the Manual of Uniform Traffic Control Devices has specific guidelines for the installation of Bike Lanes and Bike Paths. Bike Lane guidelines generally require a minimum width of four feet (4') where there is no curb parking and five feet (5') adjacent to curb parking. Bike Path guidelines require at least eight feet (8') for two-way bicycle movement. Bike Routes do not have specific minimum widths, but should only be designated after considering such bicycle sensitive factors such as surface condition, obstructions, curb parking, and connections to other Bikeways.

Bicycle collisions were studied in a six-year period between January 1, 1995 and December 31, 2001 to identify any high collision locations. The majority of collisions occurred along proposed bikeways. The highest collision rate was on Manhattan Beach Boulevard between Highland Avenue and the Pier. A map is attached that identifies all bicycle collision locations.

Staff compiled a list of 10 candidate streets that may be designated as Bikeways. Narrow and discontinuous streets were not considered. These locations are not prioritized and are only to be used as a starting point for creating a Citywide Bikeway System. A discussion of each street in no particular order is provided below.

1. Valley Drive

Valley Drive is a two-lane residential collector street in a mixed commercial-residential area with a volume of 4,500 to 7,900 vehicles per day. It is a one-way street between 15th Street and 1st Street. The street is generally 32 feet wide with parking on one side. This street width would permit designation of a one-way Bike Route with two existing lanes and curb parking on one side, or two-way Bike Lanes with two existing lanes and no curb parking along its entire length. Most side streets are stopped along Valley Drive with one signalized and some stopped intersections. If used in conjunction with Ardmore Avenue, a one-way Bike Route couplet could be created to connect the southeast end of the proposed Bike Path in El Segundo with the beach and shopping destinations in Downtown. In the future it could possibly provide access under Sepulveda Boulevard to the Manhattan Village mall. Live Oak Park, the Civic Center, and Robinson Elementary School are also along this alignment. It could also provide a continuous Bikeway through the City into Hermosa Beach. If Bike Lanes are designated instead of Bike Route signs only, then southbound Ardmore Avenue/northbound Valley Drive markings are preferred due to significantly fewer cross streets to be negotiated by the bicyclist. As an alternate, a Bike Path could be designated within the Veterans Parkway in a meandering design or along either street. Due to topography changes, a Bike Path along either edge of the Parkway would be considerably more expensive than in the center, but there would be more pedestrian/bicycle conflicts with parallel Bike/Pedestrian facilities. Also, pedestrians may prefer to use the Bike Path instead of the unpaved pedestrian path for walking and running, which would decrease both bicyclist and pedestrian safety.

2. Ardmore Avenue

Ardmore Avenue is a two-lane residential collector street in a mixed commercial-residential area with a volume of 3,200 to 6,700 vehicles per day. It is a one-way street between 15th Street and 2nd Street. The street is generally 30 feet wide with parking on one side. This street width would permit designation of a one-way Bike Route with two existing lanes and curb parking on one side, or two-way Bike Lanes with two existing lanes and no curb parking along its entire length. Most side streets are stopped along Ardmore Avenue with some signalized and stopped intersections. See Valley Drive for similar conditions.

3. Highland Avenue

Highland Avenue is a two-lane collector street in a mixed commercial-residential area with a volume of 7,500 to 26,500 vehicles per day. The street is generally 39 feet wide with parking on both sides. It goes directly through Downtown. The street width would permit designation of a two-way Bike Route with two existing lanes and curb parking on both sides, or two-way Bike Lanes with two existing lanes and curb parking on one side along its entire length. Most side streets are stopped along Highland Avenue with some signalized and stopped intersections. This street would provide a parallel bikeway to The Strand in a north-south direction. It would link the downtown commercial area, civic center and North End commercial area with other recreational uses and bikeways.

4. Manhattan Avenue – Manhattan Beach Boulevard to 1st Street

Manhattan Avenue is a two-lane collector street in a mixed commercial-residential area with a volume of 9,800 vehicles per day. The street is generally 50 feet wide with parking on both sides between Manhattan Beach Boulevard and 1st Street. The street width would permit designation of a two-way Bike Lane with two existing lanes and curb parking on both sides south of the diagonal parking zone and a two-way Bike Route with two existing lanes and curb parking on both sides through the downtown. Most side streets are stopped along Manhattan Avenue along with some stopped intersections. This street would provide a parallel bikeway to The Strand in a north-south direction. It would link the downtown commercial area center with other recreational uses as well as Hermosa Beach to the south.

5. Rosecrans Avenue – The Strand to Sepulveda Boulevard

Rosecrans Avenue is a three to four-lane minor arterial street in a residential area with a volume of 17,500 to 20,000 vehicles per day. The street is generally 84 feet wide between Highland Avenue and Sepulveda Boulevard with a center left turn pocket/medians and parking on the south side. The street width would permit designation of a Bike Route on the south side and a Bike Lane on the north side with four existing through lanes and no curb parking on the north side within in the City of El Segundo. All side streets are stopped along Rosecrans Avenue along with the exception of three signalized intersections. This street would provide an east-west bikeway through the north end of the City and connect the planned Bike Path along the RR easement in El Segundo to the beach in the west. It would link Sepulveda Boulevard with other business and recreational uses along the beach via Highland Avenue and The Strand.

6. Marine Avenue – Sepulveda Boulevard to Aviation Boulevard

Marine Avenue is a four-lane minor arterial street in a mixed commercial-residential area with a volume of 20,500 vehicles per day. The street is generally 76 feet wide between Sepulveda Boulevard and Aviation Boulevard with a center left turn pocket/medians and parking on both sides. The street width would permit designation of a Bike Route on the south side and a Bike Lane on the north side with four existing through lanes and no curb parking adjacent to Manhattan Village. All side streets are stopped along Marine Avenue with the exception of five signalized intersections. This street would provide an east-west bikeway through most of the City. It would link Sepulveda Boulevard with other recreational uses such as Marine Avenue Park, AdventurePlex and the Youth Sports Complex.

7. Pacific Avenue – Rosecrans Avenue to 5th Street/Ardmore Avenue

Pacific Avenue is a two-lane major local street in a residential area with a volume of 1,000 to 4,500 vehicles per day. The street is generally 38 to 40 feet wide between Rosecrans Avenue and 5th Street/Ardmore Avenue with parking on both sides. The street width would permit designation of a two-way Bike Route with two through lanes and curb parking on both sides. Most side streets are stopped along Pacific Avenue except for some stopped intersections. This street would provide a north-south bikeway through the midportion of the City. It would link Rosecrans Avenue with other bicycle generators such as Pacific Elementary School and Valley/Ardmore to the south.

8. Redondo Avenue – Marine Avenue to Manhattan Beach Boulevard

Redondo Avenue is a two-lane major local street in a residential area with a volume of 3,000 to 4,000 vehicles per day. The street is generally 40 feet wide between Marine Avenue and Manhattan Beach Boulevard with parking on both sides. The street width would permit designation of a two-way Bike Route with two through lanes and curb parking on both sides. Most side streets are stopped along Pacific Avenue except for some stopped intersections. This street would provide a north-south bikeway through the easterly portion of the City. It would link the Marine Avenue Park and AdventurePlex with other bicycle generators such as Manhattan Middle School and Polliwog Park to the south.

9. Peck Avenue – 2nd Street to Artesia Boulevard

Peck Avenue is a two-lane major local street in a residential area with a volume of 4,200 vehicles per day. The street is generally 42 feet wide between 2nd Street and Artesia Boulevard with parking on both sides. The street width would permit designation of a two-way Bike Route with two through lanes and curb parking on both sides. Most side streets are stopped along Peck Avenue except for some stopped intersections. This street would provide a north-south bikeway through the easterly portion of the City. It would link several school sites including Mira Costa High School and Pennekamp Elementary School with beach destinations to the west via 2nd Street.

10. 2nd Street – Ardmore Avenue to Peck Avenue

2nd Street is a two-lane major local street in a residential area with a volume of 3,000 to 4,000 vehicles per day. The street is generally 36 to 40 feet wide between Ardmore Avenue and Peck Avenue with parking on both sides. The street width would permit designation of a two-way Bike Route with two through lanes and curb parking on both sides. Most side streets are stopped along 2nd Street except for some stopped intersections and a traffic signal at Sepulveda Boulevard. This street would provide an east-west bikeway to connect the southerly portion of the City. It would link several school sites including Mira Costa High School and Pennekamp Elementary School with beach destinations to the west via Peck Avenue.

Planned Bikeways – Sepulveda Boulevard, Manhattan Beach Boulevard and Artesia Boulevard

While there is insufficient right-of-way to designate a continuous Bikeway on these streets at this time, these streets serve as major links to Bikeways and destinations in adjacent cities. Therefore, a planned Bike Route or Bike Lane could be designated on these streets for future implementation as development occurs. Manhattan Beach Boulevard has been identified as a long-term future Bike Lane in the Coastal Corridor Transportation Study conducted by the South Bay Council of Governments, of which Manhattan Beach is a part. Sepulveda Boulevard and Artesia Boulevard are identified in the City of Hermosa Local Bikeway Plan as proposed bike routes.

COMMENTS FROM OTHER CITY DEPARTMENTS

General thoughts

- With the City being more or less fully built out we're limited in what can be done. There are no places to add bike paths and few, if any, areas with room to designate striped lanes. Emphasis has to be on identifying bike routes.
- Safety must always take precedent over transportation enhancement.
- Removing parking to accommodate bike facilities may not be realistic in most areas.

Public Works

- No significant budget/maintenance concerns about signage for bike routes or limited striping & signage for bike lanes.

Police

- The Police Department is generally opposed to bike lanes on Sepulveda Boulevard. There are too many safety issues related to high traffic volume.
- Similar concerns about Manhattan Beach Blvd.
- They are not sure Highland is an appropriate route. This route would be in close proximity to the existing bike path and has high traffic & pedestrian activity.
- There are no significant enforcement-related concerns. Some driver education would be helpful if striped lanes are created.

Parks & Recreation.

- The suggested system provides reasonable access to major recreational facilities.

CONCLUSION:

Based on criteria analyzed on all candidate streets, staff feels a Citywide Bikeway System could be designated on the following street segments:

STREET	LIMITS	TYPE
Valley Drive	Citywide	Bike Route (SB)
Ardmore Avenue	Citywide	Bike Route (NB)
Highland Avenue	Citywide	Bike Route
Manhattan Avenue	Manhattan Beach Blvd. to 1st St.	Bike Route/Lane
Rosecrans Avenue	The Strand to Aviation Blvd.	Bike Route/Lane (WB)
Marine Avenue	Sepulveda Blvd. to Aviation Blvd.	Bike Route/Lane (WB)
Pacific Avenue	Rosecrans Ave. to 5th St./Ardmore Ave.	Bike Route
Redondo Avenue	Marine Ave. to Manhattan Beach Blvd.	Bike Route
Peck Avenue	2nd St. to Artesia Blvd.	Bike Route
2nd Street	Ardmore Ave. to Peck Ave.	Bike Route
Sepulveda Boulevard	Citywide	Future Bike Lane
Manhattan Beach Boulevard	Citywide	Future Bike Lane
Artesia Boulevard	Citywide	Future Bike Lane
The Strand	Citywide	Existing Bike Path

It is requested that the Commission review the material provided and provide input regarding the possibility of creating a bikeway system. The matter will ultimately be presented to the City Council for consideration.

ATTACHMENTS
State and Federal Guidelines (Excerpts)
Draft Bikeway Plan
Bicycle Collision History
2001 Long Range Transportation Plan (Metro)
Bicycle Transportation Master Plan Update (Metro)
Metro Bicycle Transportation Strategic Plan
City Of Manhattan Beach General Plan (Excerpts)
City Of Redondo Beach General Plan (Excerpts)
City Of El Segundo General Plan (Excerpts)
South Bay Cites Infrastructure and Services Capacity Assessment (Excerpts)
Coastal Corridor Transportation Study (Excerpts) (SBCOG)

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STATE AND FEDERAL GUIDELINE EXCERPTS

MUTCD 2003
Section 9A.03 Definitions Relating to Bicycles

Standard:
The following terms shall be defined as follows when used in Part 9:

1. Bicycle Facilities—a general term denoting improvements and provisions that accommodate or encourage bicycling, including parking and storage facilities, and shared roadways not specifically defined for bicycle use.

2. Bicycle Lane—a portion of a roadway that has been designated by signs and pavement markings for preferential or exclusive use by bicyclists.

3. Bikeway—a generic term for any road, street, path, or way that in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

4. Designated Bicycle Route—a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route signs, with or without specific bicycle route numbers. Bicycle routes, which might be a combination of various types of bikeways, should establish a continuous routing.

5. Shared-Use Path—a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent alignment. Shared-use paths are also used by pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers) and other authorized motorized and non-motorized users.

CALTRANS HIGHWAY DESIGN MANUAL
Index 1001.1 - Definitions

"Bikeway" means all facilities that provide primarily for bicycle travel.
(1) Class I Bikeway (Bike Path). Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.
(2) Class II Bikeway (Bike Lane). Provides a striped lane for one-way bike travel on a street or highway.
(3) Class III Bikeway (Bike Route). Provides for shared use with pedestrian or motor vehicle traffic with design criteria and uniform symbols.

MINIMUM STREET WIDTHS FOR BIKE LANES

	MINIMUM STREET WIDTH			
LANES	NO PARKING	PARKING 1 SIDE	PARKING 2 SIDES	NOTES
1 (ONE WAY)	14’	23’	31’	One way bike lane
2	24’	34’	41’	One-way bike lane
2	28’	37’	46’	Two-way bike lane
2+LEFT TURN	34’	44’	51’	One-way bike lane
2+LEFT TURN	38’	47’	56’	Two-way bike lane
4	44’	54’	61’	One-way bike lane
4	48’	57’	66’	Two-way bike lane
4+LEFT TURN	58’	67’	76’	Two-way bike lane

DRAFT BIKEWAY PLAN

BICYCLE COLLISION HISTORY

2001 LONG RANGE TRANSPORTATION PLAN

(Excerpts)

(METRO)

BICYCLE TRANSPORTATION MASTER PLAN UPDATE (METRO)

METRO BICYCLE TRANSPORTATION STRATEGIC PLAN

CITY OF MANHATTAN BEACH GENERAL PLAN

(EXCERPTS)

CITY OF REDONDO BEACH GENERAL PLAN

(EXCERPTS)

CITY OF EL SEGUNDO GENERAL PLAN

(EXCERPTS)

SOUTH BAY CITES INFRASTRUCTURE AND SERVICES CAPACITY ASSESSMENT
June 30, 2003

COASTAL CORRIDOR TRANSPORTATION STUDY

(EXCERPTS)

(SBCOG)