



## C. Street and Freeway System

### Goals

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

### Discussion

Streets and freeways comprise the framework of our transportation system and play a major role in shaping the form of the City. The quality of the roadway system affects us whether we travel by automobile, transit, bicycle, or foot, and influences which mode of travel we choose.



State Route 163

#### *Transportation System Planning*

The Regional Transportation Plan (RTP) is a comprehensive plan for major transportation projects in the San Diego region. The RTP places a high priority on improvements to the freeways and state highways, transit services, and arterial roads that accommodate the largest volumes of regional trips. Freeway improvements are planned or underway for segments of Interstates 5, 15, and 805, State Routes 52, 54, 56, 94, and 125, as well as the construction of Routes 905 and 11 along the U.S. - Mexico Border. The RTP includes an extensive Managed Lanes/High Occupancy Vehicle (HOV) network that provides priority access for Bus Rapid Transit and ride sharing. The California Department of Transportation (Caltrans) manages California's highway and freeway lanes among other responsibilities. Work on state freeways and highways is to be done in accordance with Caltrans standards. In addition to freeway construction, the RTP calls for efficiency improvements using system and transportation demand management strategies, transit service improvements, bicycling and walking infrastructure improvements, and support for transit-oriented design and development.



Streets and freeways within the City of San Diego are shown on the General Plan Land Use and Street System map (Land Use Element, Figure LU-2). This map includes the freeways, expressways, and arterial, major and collector streets needed to serve vehicular transportation demand resulting from the buildout of the City of San Diego in accordance with this General Plan. A finer level of street system details may be provided at the community plan level. As part of community plan updates, land use and street network alternatives are analyzed using transportation models and software to estimate traffic generation, forecast traffic volumes and evaluate levels of service on the transportation system for each alternative. Adopted community plans specify the planned system of classified streets within the local community.

#### *Street Layout, Design, Operations and Maintenance*

Street design (and redesign) affects how streets look and function in communities and in the City as a whole. The City of San Diego's Street Design Manual (2002) contains guidelines for the physical design of streets that consider the needs of all users of the public right-of-way. The manual includes provisions for street trees, traffic calming, and pedestrian design guidelines, and addresses how to create streets that are important public places. The Street Design Manual guidelines apply to newly developing areas and, as appropriate, to older areas undergoing redevelopment construction and whenever improvements are made to existing facilities. Opportunities for change exist when roadway improvement plans are designed to serve development projects (new growth, infill or redevelopment) and through capital improvement projects.

Travel choices and routes are affected by the connectivity of the overall street network, in addition to the design of individual streets. A high degree of connectivity is desirable as it allows for shorter travel distances between destinations and greater dispersal of traffic. Travelers benefit from shorter trips and multiple route options, and are more likely to walk or bicycle if distances are short.

While vehicle congestion relief is an overall goal of the Mobility Element, the degree of acceptable vehicle congestion will vary in different locations based on the function of the roadway and the desired community character. Decisions that must balance the benefits and impacts of designing our transportation system for multiple modes of transportation will need to be made at the community plan or project level.

Maintenance of the City's circulation system is a critical City function that enhances safety, efficiency, and capacity of the circulation system thus enhancing mobility. Established industry metrics and benchmarking with similar municipalities, and regular assessment of system conditions form the basis for determining the level of City resources that are allocated to maintain baseline standards.

The quality of our traveling experience is also influenced by the scenic quality of the area traversed. San Diego enjoys many scenic vistas of our coastline, canyons, and other open spaces. Scenic highways and routes provide an opportunity for people to experience these views while traveling through the City.



## Policies

### *Transportation System Planning*

- ME-C.1. Identify the general location and extent of streets, sidewalks, trails, and other transportation facilities and services needed to enhance mobility in community plans.
- a. Protect and seek dedication or reservation of right-of-way for planned transportation facilities through the planning and development review process.
  - b. Implement street improvements and multi-modal transportation improvements as needed with new development and as areas redevelop over time.
  - c. Identify streets or street segments where special design treatments are desired to achieve community goals.
  - d. Identify streets or street segments, if any, where higher levels of vehicle congestion are acceptable in order to achieve vibrant community centers, increase transit-orientation, preserve or create streetscape character, or support other community-specific objectives.
  - e. Increase public input in transportation decision-making, including seeking input from multiple communities where transportation issues cross community boundaries.
- ME-C.2. Provide adequate capacity and reduce congestion for all modes of transportation on the street and freeway system.
- a. Identify the City of San Diego's priorities for transportation infrastructure projects.
  - b. Provide the City's identified priorities for transportation infrastructure projects to SANDAG and Caltrans for funding purposes.
  - c. Work with SANDAG and Caltrans towards the implementation of the City's identified priorities for transportation infrastructure projects (see also Public Facilities Element, Policy PF-B.3).
  - d. Collaborate with SANDAG and Caltrans to ensure that relevant General Plan policies and community plan-identified street networks are reflected in regional and state plans and programs.
  - e. Provide rights-of-way for designated HOV facilities and transit facilities on City streets where feasible.
  - f. Evaluate RTP proposals for new or redesigned streets and freeways on the basis of demonstrated need and consistency with General Plan policies and community plan facility recommendations.



*Street Layout, Design and Operations*

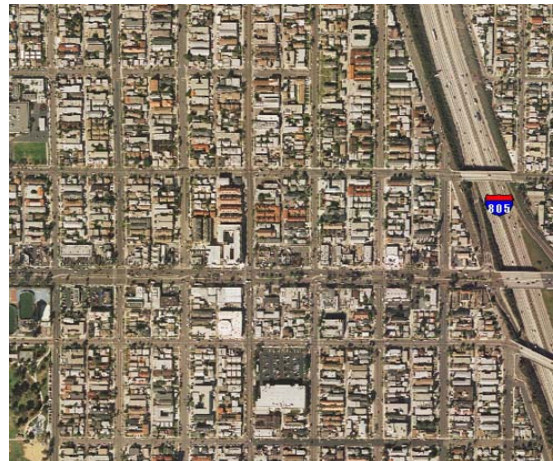
- ME-C.3. Design an interconnected street network within and between communities, which includes pedestrian and bicycle access, while minimizing landform and community character impacts.
- a. Identify locations where the connectivity of the street network could be improved through the community plan update and amendment process, the Regional Transportation Plan update process, and through discretionary project review (see also Urban Design Element, Policy UD-B.5).
  - b. Use local and collector streets to form a network of connections to disperse traffic and give people a choice of routes to neighborhood destinations such as schools, parks, and village centers. This network should also be designed to control traffic volumes and speeds through residential neighborhoods.
    1. In newly developing areas or in large-scale redevelopment/infill projects, strive for blocks along local and collector streets to have a maximum perimeter of 1,800 feet.
    2. When designing modifications/improvements to an existing street system, enhance street or pedestrian connections where possible.
  - c. Provide direct and multiple street and sidewalk connections within development projects, to neighboring projects, and to the community at large.
  - d. Where possible, design or redesign the street network, so that wide arterial streets do not form barriers to pedestrian traffic and community cohesiveness.
- ME-C.4. Improve operations and maintenance on City streets and sidewalks.
- a. Regularly optimize traffic signal timing and coordination to improve circulation. Implement new signal and intersection technologies that improve pedestrian, bicycle, and vehicular safety while improving overall circulation.
  - b. Adequately maintain the transportation system through regular preventative maintenance and repair, and life cycle replacement.
  - c. Encourage community participation in planning, assessing, and prioritizing the life cycle management of the circulation system.
  - d. When new streets and sidewalks are built and as existing streets and sidewalks are modified - design, construct, operate, and maintain them to accommodate and balance service to all users/modes (including walking, bicycling, transit, high occupancy vehicles (HOVs), autos, trucks, automated waste and recycling collection vehicles, and emergency vehicles).
  - e. Continue to pursue adequate maintenance of sidewalks by property owners and investigate new approaches to facilitate improved sidewalk maintenance citywide.



## Mobility Element

- ME-C.5. Install traffic calming measures as appropriate in accordance with site-specific recommendations which may include, but are not limited to, those identified on Table ME-2, to increase the safety and enhance the livability of communities.
- Use traffic calming techniques in appropriate locations to reduce vehicle speeds or discourage shortcutting traffic.
  - Choose traffic calming devices to best fit the situations for which they are intended.
  - Place traffic-calming devices so that the full benefit of calming will be realized with little or no negative effect upon the overall safety or quality of the roadway.
  - Design traffic calming devices appropriately, including consideration for: accessibility; drainage; underground utilities; adequate visibility; the needs of emergency, sanitation, and transit vehicles; and landscape.
  - Weigh any potential undesired effects of traffic calming devices (such as increased travel times, emergency response times, noise, and traffic diversion) against their prescribed benefits.

- ME-C.6. Locate and design new streets and freeways and, to the extent practicable, improve existing facilities to: respect the natural environment, scenic character, and community character of the area traversed; and to meet safety standards.



*Greater North Park, interconnected street network*

- Establish general road alignments and grades that respect the natural environment and scenic character of the area traversed. This could be accomplished through use of a modified or truncated grid system.
- Design roadways and road improvements to maintain and enhance neighborhood character.
- Design streets and highways that incorporate physical elements to improve the visual aspects of roadways.
- Provide adequate rights-of-way for scenic lookouts, and obtain scenic easements to ensure the preservation of scenic views.
- Preserve trees and other aesthetic and traffic calming features in the median and along the roadside.
- Avoid or minimize disturbances to natural landforms.
- Contour manufactured slopes to blend with the natural topography.
- Promptly replant exposed slopes and graded areas to avoid erosion.





- i. Employ landscaping to enhance or screen views as appropriate.
  - j. Select landscape designs and materials on the basis of their aesthetic qualities, compatibility with the surrounding area, and low water demand and maintenance requirements.
  - k. Utilize signs, lights, furniture, and other accessories suitable for the location.
  - l. Place utility lines underground.
  - m. Emphasize aesthetics and noise reduction in the design, improvement, and operation of streets and highways.
  - n. Avoid frequent driveway curb cuts that create conflict points between autos and pedestrians.
- ME-C.7. Preserve and protect scenic vistas along public roadways.
- a. Identify state highways where the City desires to preserve scenic qualities and work with Caltrans to pursue official scenic highway designation.
  - b. Designate scenic routes along City streets to showcase scenic vistas and to link points of visitor interest.
  - c. Adopt measures to protect aesthetic qualities within scenic highways and routes.

*Project Review Considerations*

- ME-C.8. Implement Traffic Impact Study Guidelines that address site and community specific issues.
- a. Give consideration to the role of alternative modes of transportation and transportation demand management (TDM) plans in addressing development project traffic impacts.
  - b. Consider the results of site-specific studies or reports that justify vehicle trip reductions (see also ME-E.7).
  - c. Implement best practices for multi-modal quality/level of service analysis guidelines to evaluate potential transportation impacts and determine appropriate mitigation measures from a multi-modal perspective.
- ME-C.9. Implement best practices for multi-modal quality/level of service analysis guidelines to evaluate potential transportation improvements from a multi-modal perspective in order to determine optimal improvements that balance the needs of all users of the right of way.
- ME-C.10 Provide transportation facilities to serve new growth in accordance with Policies ME-K.4-K.6, and Public Facilities Element, Sections A-C.



**TABLE ME-2 Traffic Calming Toolbox**

Traffic Calming Tool	Description	Illustration
<i>Speed Control Tools</i>		
Angled Parking	Angled Parking is generally used to increase the number of on-street parking spaces. However, a positive by-product can be a reduction in vehicle speeds due to narrowing of the travelway and driver anticipation of vehicles backing out of parking spaces.	
Angled Slow Point	Angled Slow Points are created by installing triangular curb extensions on opposite sides of the road. This creates a narrow travelway between the extensions that deflects approaching vehicles' paths of travel. Drivers must slow down to maneuver through the curves to negotiate this device.	
Chicane	Chicanes are created by installing a series of two or more curb extensions, alternating from one side of the roadway to the other. This creates an S-shaped path of travel for vehicles. To reduce speeds, chicanes rely on a curvilinear path and potential conflicts between opposing traffic.	
Choker	Chokers are created by installing curb extensions at opposing locations on a roadway. This narrows the travelway, but maintains two-way traffic. This device works best at mid-block locations that have volumes sufficient enough that opposing traffic would be approaching or passing through the choker at the same time.	
Curb Radius Reduction	Curb Radius Reductions provide tighter corner radii at intersections. This treatment reduces the speeds of right-turning vehicles, increases the visibility of pedestrians to drivers, and reduces the crossing distance for pedestrians.	



**TABLE ME-2 Traffic Calming Toolbox (continued)**

Traffic Calming Tool	Description	Illustration
<i>Speed Control Tools</i>		
Curve Treatment	Curve Treatments such as raised median or raised pavement markers placed along the centerline of a sharp curve will prevent or discourage vehicles from cutting across the centerline and into the opposing travel lane. Vehicle speeds are generally reduced due to the shorter radius of the vehicle path around the curve.	
Enforcement	Enforcement requires the presence of police officers to monitor and enforce speed limits and other traffic regulations. Enforcement is used to improve compliance with traffic laws.	
Gateway/Entrance Treatment	Gateway/Entrance Features may be used on local streets at their intersections with collector, major, or arterial streets. They alert the driver that they are entering a residential neighborhood. A typical gateway treatment may include a center median with a specimen tree or neighborhood sign and textured roadway pavement.	
Intersection Table/Raised Intersection	Intersection Tables/Raised Intersections are created by raising the roadway within the intersection to be level with the sidewalks. Ramped edges on all approaches and exits encouraging drivers to slow down as they drive through the intersection.	
Pop-out/Bulb-out/Curb Extension	Bulb-outs, also known as Pop-Outs and Curb Extensions, narrow the width of a street at an intersection by extending the curb into roadway at the corner(s) of an intersection. This reduces the speed of right-turning vehicles, increases the visibility of pedestrians to drivers, and creates a shorter crossing distance, reducing pedestrians' exposure to moving vehicles.	



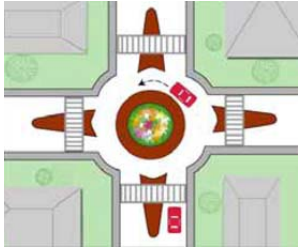
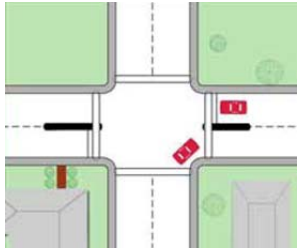


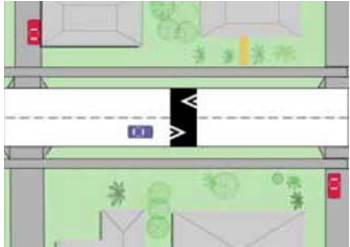


**TABLE ME-2 Traffic Calming Toolbox (continued)**

Traffic Calming Tool	Description	Illustration
<i>Speed Control Tools</i>		
Radar Speed Trailer	Radar Speed Trailers are used to make drivers aware of their speeds, usually as they travel on residential streets. Radar speed trailers are mobile and can be used as a temporary measure to reduce speeding.	
Raised Crosswalk	Raised Crosswalks have ramps on both sides of the flat crosswalk surface. The vertical deflection encourages traffic to slow down while markings increase visibility of the crosswalk to drivers.	
Raised Median Pedestrian Refuge	Raised Median Pedestrian Refuges are used to reduce pedestrian exposure to moving vehicles and provide a refuge in the middle of the street. This allows the pedestrian to identify a safe gap and cross one direction of traffic at a time.	
Realigned T-Intersection	Realigned T-Intersections have a bulb-out in the intersection to deflect the through movements so they will follow a curvilinear path. Medians may also be installed on the through street approaches to guide traffic through the intersection.	
Roadway Striping	Roadway Striping changes the appearance of the roadway, encouraging drivers to remain in designated travel lanes. Striping an existing roadway to delineate bicycle lanes, on-street parking areas, or shoulders along curves, also narrows the vehicle travel lanes which may reduce speeds.	



**TABLE ME-2 Traffic Calming Toolbox (continued)**

Traffic Calming Tool	Description	Illustration
<i>Speed Control Tools</i>		
Roundabout	A Roundabout is a type of intersection in which traffic flows counter-clockwise around a circular raised center island. Drivers entering the roundabout yield to traffic already circulating within the intersection. Vehicle speeds are reduced due to the curvilinear path of travel. Pedestrian crosswalks are set back from the intersection and use splitter islands to provide a pedestrian refuge.	
Short Intersection Median/Median Slow Point	Short Intersection Medians or Median Slow Points are installed at intersection approaches to prevent turning vehicles from encroaching into opposing travel lanes and to reduce the vehicle turning radius which reduces speeds of turning vehicles.	
Signage	Signage comes in various forms to provide regulations, warnings, and guidance information for road users.	
Speed Feedback Signs	Permanent Speed Feedback Signs are used to make drivers aware of their speeds. These signs are set up permanently for a more lasting effect than is provided by the temporary radar speed trailer.	
Speed Hump	Speed Humps are vertical deflection devices placed on top of the roadway to reduce speeding. They generally span the width of the road, are approximately 3.5 inches high and 12 feet long with a parabolic cross section.	



**TABLE ME-2 Traffic Calming Toolbox (continued)**

Traffic Calming Tool	Description	Illustration
<i>Speed Control Tools</i>		
Speed Lump	Speed Lumps are vertical deflection devices placed on top of the roadway to reduce speeding similar to Speed Humps. Speed lumps have two tire cut-outs to allow an emergency vehicle's tire path to traverse the lump virtually unimpeded.	
Speed Table	Speed Tables are vertical deflection devices that have ramps on both sides of a flat surface. The vertical deflection encourages traffic to slow down.	
Traffic Circle	A Traffic Circle is a circular island placed in the center of an intersection. Traffic flows counter-clockwise around the island with drivers yielding to vehicles already circulating within the intersection. Vehicle speeds are reduced due to the horizontal deflection required to drive through the intersection.	
<i>Volume Control Tools</i>		
Diagonal Diverter	Diagonal Diverters are barriers constructed across a four-legged intersection blocking the through movements.	



**TABLE ME-2 Traffic Calming Toolbox (continued)**

Traffic Calming Tool	Description	Illustration
<i>Volume Control Tools</i>		
Full Street Closure/Cul-De-Sac	A Full Street Closure/Cul-de-Sac is created by constructing a barrier across an entire street, closing the street to all through vehicular traffic with considerations to maintain pedestrian, bicycle, and emergency vehicle access.	
Median Barrier	Median Barriers/Channelization help prevent cut-through traffic in residential neighborhoods. The raised median is used on the major street, restricting traffic from continuing from one residential neighborhood to the next. The median barrier also restricts left-turns to and from the major street.	
Partial Street Closure/Semi-Diverter	Partial Street Closures/Semi-Diverter are barriers that block one direction of travel to restrict vehicular access to or from a street while maintaining pedestrian and bicycle access.	
Right-In/Right-Out Island	Right-In/Right-Out Islands restrict left-turns into and out of a particular street. Rather than relying on a sign to discourage drivers from turning left, right-in/right-out islands force drivers to make the desired movement using a raised island.	
Turn Restriction	Turn Restrictions can help reduce cut-through traffic or eliminate turning movement conflicts. Turn restrictions, such as "No Right Turns 6AM-9AM" may help reduce traffic from cutting through a residential neighborhood to avoid a congested arterial.	



## D. Intelligent Transportation Systems (ITS)

### Goals

- ◆ A transportation system which operates efficiently saves energy and reduces negative environmental impacts.
- ◆ A safe transportation system.
- ◆ A transportation system that effectively uses appropriate technologies.

### Discussion

Intelligent Transportation Systems (ITS) is defined as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system. ITS include a broad range of applications in areas ranging from collision warning and commercial vehicle operations systems to freeway, transit, and arterial management systems. Some examples of ITS applications most relevant to transportation planning for the City of San Diego include:

- **Arterial Management Systems** - parking management, traffic control, transit priority measures, and information dissemination
- **Freeway Management Systems** - ramp control, lane management and information dissemination
- **Transit Management Systems** - fleet management, safety and security, and real-time information dissemination
- **Incident Management Systems** - surveillance and detection, mobilization and response, and information dissemination
- **Emergency Management Systems** - emergency operations and hazardous materials cleanup
- **Electronic Payment** - toll collection and transit off-vehicle and Smart Card fare payment
- **Traveler Information** - pre-trip and en-route information and tourism and event services
- **Crash Prevention and Safety** - intersection detection systems, pedestrian safety and bicycle warning systems

The San Diego Region ITS Strategic Plan is the region's guiding document for development of ITS. The City, with various partners, has been involved in successful ITS projects including dozens of traffic signal systems and communications projects, and the Mission Valley Event Management System that helps manage traffic during stadium events. Work is also proceeding on a Regional Arterial Management Systems project to allow cross-jurisdictional coordination of traffic signals, and sharing control of other traffic control devices. In addition, preliminary planning is underway for a Regional Operations Center, to serve as an intermodal transportation operations/management center for the City and transit operators.





## Policies

- ME-D.1. Utilize the substantial regional Intelligent Transportation Systems (ITS) investments to achieve cost-effective improvements in transportation system performance and operations wherever possible.
- ME-D.2. Develop an ITS Plan for the City to facilitate effective implementation and operation of ITS in the City. The proposed ITS Plan should identify and prioritize specific short- and long-term ITS projects. Once identified, ITS projects should be strategically implemented as funding becomes incrementally available.
- ME-D.3. Participate in the design and development of the Regional Operations Center.
- ME-D.4. Automate the collection of real-time travel information regarding transportation system conditions and make the information available to users and operators.
- ME-D.5. Monitor and control traffic on City streets and coordinate traffic operations with other local agencies.
- ME-D.6. Support the use of technology to improve transit services through tracking vehicles, maintaining schedules, predicting demand, facilitating fare payment, and operating fleets more efficiently.



*Transportation safety and efficiency can be improved through ITS measures such as providing drivers with real-time road condition information.*



## E. Transportation Demand Management

### Goals

- ◆ Reduced single-occupant vehicle traffic on congested streets and freeways.
- ◆ Improved performance and efficiency of the street and freeway system, by means other than roadway widening or construction.
- ◆ Expanded travel options and improved personal mobility.

### Discussion

Building additional street and freeway capacity to accommodate more vehicles will provide only partial relief to our traffic congestion problem. Transportation Demand Management (TDM) is a general term for strategies that assist in reducing the demand by single-occupant vehicles to increase the efficiency of existing transportation resources. TDM strategies are also a part of the City's overall effort to reduce vehicle emissions that degrade air quality and contribute to global climate change. These strategies are primarily directed at weekday commuters and are structured to:

- Improve transportation options and reduce use of single-occupant vehicle trips by encouraging alternative modes of travel such as carpooling, vanpooling, transit use, bicycling, and walking;
- Support the use of alternative modes of travel by encouraging on-site amenities, programs, and incentives such as the use of car sharing vehicles, bicycle lockers, food and child care services, guaranteed ride home programs, and commuter benefits;
- Alter the timing of travel to less congested time periods, through strategies such as alternative work schedules; or
- Reduce the number of commute trips through strategies such as telework, and alternative work schedules.

Vehicle trips and traffic congestion are regional and do not respect jurisdictional boundaries. A successful TDM program must be comprehensive and regional in scope with a clear, widely shared vision of potential benefits. SANDAG's regional TDM program establishes partnerships with employers to develop and implement employer commuter plans and programs. The City can support TDM through land use and parking strategies that require development project designs and features that are conducive to supporting alternative transportation options and development review policies that offer incentives to projects that implement TDM plans and programs. Employment areas that have large employers with a high concentration of employees, access to alternative modes of transportation and High Occupancy Vehicle (HOV) lanes, and a large number of employees commuting long or very short distances, have a greater potential to benefit from TDM strategies.



## Policies

- ME-E.1. Support and implement TDM strategies including, but not limited to: alternative modes of transportation, alternative work schedules, and telework.
- ME-E.2. Maintain and enhance personal mobility options by supporting public and private transportation projects that will facilitate the implementation of Transportation Demand Management (TDM) strategies.
- ME-E.3. Emphasize the movement of people rather than vehicles.
- ME-E.4. Promote the most efficient use of the City's existing transportation network.
- ME-E.5. Support SANDAG's efforts to market TDM benefits to employers and identify strategies to reduce peak period employee commute trips.
- ME-E.6. Require new development to have site designs and on-site amenities that support alternative modes of transportation. Emphasize pedestrian and bicycle-friendly design, accessibility to transit, and provision of amenities that are supportive and conducive to implementing TDM strategies such as car sharing vehicles and parking spaces, bike lockers, preferred rideshare parking, showers and lockers, on-site food service, and child care, where appropriate.
- ME-E.7. Consider TDM programs with achievable trip reduction goals as partial mitigation for development project traffic and air quality impacts.
- ME-E.8. Monitor implementation of TDM programs to ensure effectiveness.



## F. Bicycling

### Goals

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

### Discussion

Of all trips taken by all transportation modes, the average length is five miles - about a 30-minute bicycle ride. Many of these trips could be taken by bicycling, provided adequate consideration has been given to cycling infrastructure. Cyclists need safe bikeways that are connected to activity centers, easy access on public transit, convenient and secure bicycle parking, an educated driving public, and shower and locker facilities. Bicycling offers benefits to society as a whole as it is a non-polluting and sustainable form of transportation, and individual cyclists enjoy personal fitness and potential savings in gasoline and other auto-related expenses.

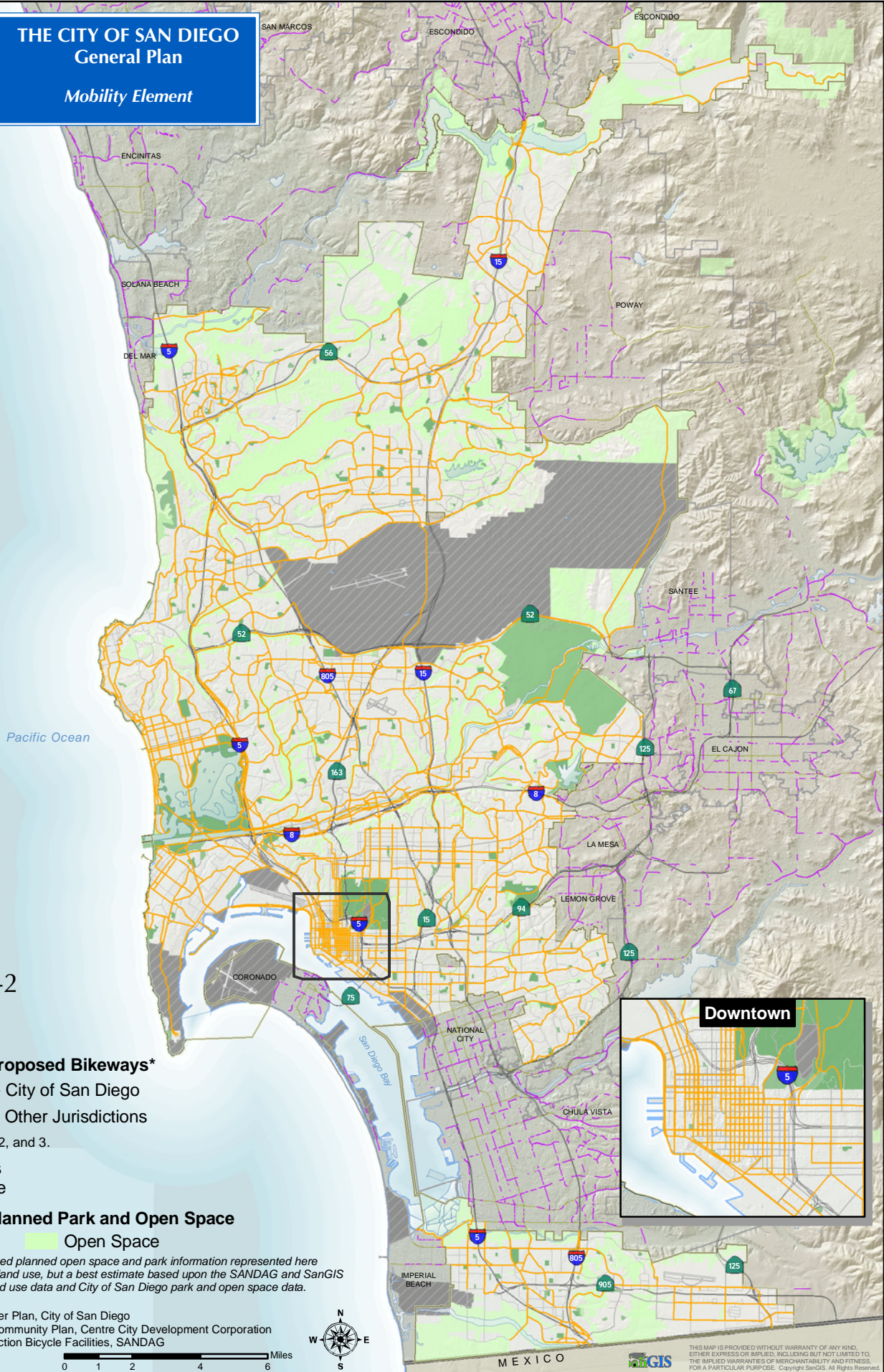


Development, maintenance, and support of the bicycle network are guided by the City's Bicycle Master Plan (BMP). The BMP contains detailed policies, action items, and network maps, and addresses issues such as bikeway planning, community involvement, facility design, bikeway classifications, multi-modal integration, safety and education, and support facilities (see Figure ME-2). The BMP is intended to provide a citywide perspective that is enhanced with more detailed community plan level recommendations and refinements. The BMP also identifies specific bicycling programs and addresses network implementation, maintenance and funding strategies. Key bicycling policies are stated below, and complementary policies can be found in Sections A, C, and E. In addition, the City of San Diego Street Design Manual outlines bikeway design requirements.





**THE CITY OF SAN DIEGO**  
**General Plan**  
**Mobility Element**



**Figure ME-2**  
**Bikeways**

**Existing and Proposed Bikeways\***

- Bikeways- City of San Diego
- Bikeways- Other Jurisdictions

\*Includes classes 1, 2, and 3.

**Other Features**

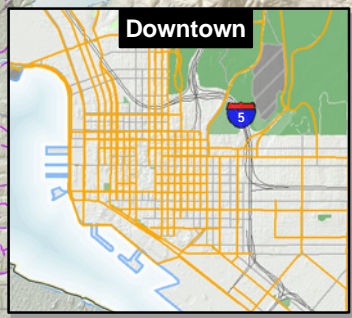
- Military Use

**Existing and Planned Park and Open Space**

- Park
- Open Space

*Dedicated and designated planned open space and park information represented here may not be the current land use, but a best estimate based upon the SANDAG and SanGIS generalized existing land use data and City of San Diego park and open space data.*

Sources: Bicycle Master Plan, City of San Diego  
 Downtown Community Plan, Centre City Development Corporation  
 Other Jurisdiction Bicycle Facilities, SANDAG



THIS MAP IS PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, FOR A PARTICULAR PURPOSE. Copyright SanGIS. All Rights Reserved.





## Policies

- ME-F.1. Implement the Bicycle Master Plan, which identifies existing and future needs, and provides specific recommendations for facilities and programs over the next 20 years.
- Update the plan periodically as required by Caltrans, in a manner consistent with General Plan goals and policies.
  - Coordinate with other local jurisdictions, SANDAG, schools, and community organizations to review and comment on bicycle issues of mutual concern.
  - Reference and refine the plan, as needed, in conjunction with community plan updates.
  - Improve connectivity of the multi-use trail network, for use by bicyclists and others as appropriate.
- ME-F.2. Identify and implement a network of bikeways that are feasible, fundable, and serve bicyclists' needs, especially for travel to employment centers, village centers, schools, commercial districts, transit stations, and institutions.
- Develop a bikeway network that is continuous, closes gaps in the existing system, improves safety, and serves important destinations.
  - Implement bicycle facilities based on a priority program that considers existing deficiencies, safety, commuting needs, connectivity of routes, and community input.
  - Recognize that bicyclists use all City roadways.
    - Design future roadways to accommodate bicycle travel; and
    - Upgrade existing roadways to enhance bicycle travel, where feasible.
- ME-F.3. Maintain and improve the quality, operation, and integrity of the bikeway network and roadways regularly used by bicyclists.
- ME-F.4. Provide safe, convenient, and adequate short- and long-term bicycle parking facilities and other bicycle amenities for employment, retail, multifamily housing, schools and colleges, and transit facility uses.
- Continue to require bicycle parking in commercial and multiple unit residential zones.
  - Provide bicycle facilities and amenities to help reduce the number of vehicle trips.





- ME-F.5. Increase the number of bicycle-transit trips by coordinating with transit agencies to provide safe routes to transit stops and stations, to provide secure bicycle parking facilities, and to accommodate bicycles on transit vehicles.
- ME-F.6. Develop and implement public education programs promoting bicycling and bicycle safety.
  - a. Increase public awareness of the benefits of bicycling and the availability of resources and facilities.
  - b. Increase government and public recognition of bicyclists' right to use public roadways.

## G. Parking Management

### Goals

- ◆ Parking that is reasonably available when and where it is needed through management of the supply.
- ◆ Solutions to community-specific parking issues through implementation of a broad range of parking management tools and strategies.
- ◆ New development with adequate parking through the application of innovative citywide parking regulations.
- ◆ Increased land use efficiencies in the provision of parking.

### Discussion

Greater management of parking spaces can help achieve mobility, environmental, and community development goals. The General Plan proposes broad policies that are intended to form the basis for more detailed parking solutions that will be tailored to meet the needs of specific communities or areas. Parking design is addressed in the Urban Design Element, Policies UD-A.11 and UD-A.12.

Motorists are accustomed to “free” parking at many destinations, but in reality no parking is without cost. The real cost of parking is paid by all of us through higher rents, lower salaries, higher costs of goods and services, or taxes – regardless of how many cars we own or how much we drive. This



*This public parking lot in Ocean Beach serves many uses and is enhanced with public art.*



**TABLE ME-3 Parking Strategies Toolbox**

<b>Parking Tool</b>	<b>Description</b>
<i>Supply</i>	<i>Ways to Increase parking availability</i>
Public parking facilities	Provides spaces for multiple users or purposes.
In-lieu fees	A fee paid by developers instead of providing parking spaces. Helps finance public or shared parking facilities.
Angle parking	Where street width is adequate and driveway configuration permits, increase the number of spaces by restriping for angle spaces.
Curb utilization	Re-evaluate curb-parking restrictions (red/yellow/white) to increase parking inventory where appropriate. Evaluate driveway locations and spacing when reviewing development proposals.
Minimum and maximum parking regulations	Requires specified amounts and dimensions of parking spaces, including disabled spaces, to accompany development.
Tandem parking (enclosed)	Parking space design where one car is parked behind another car in a garage or parking structure; uses approximately 25 percent less space than conventional design.
Car stackers/mechanized garages	Mechanical lifts that allow for the vertical storage of automobiles.
Bicycle parking	Provision of convenient, secure parking for bicycles (see Bicycling section).
<i>Parking Management</i>	<i>Strategies for more efficient use of parking</i>
Shared parking	Sharing parking facilities among multiple users including off-site shared parking arrangements.
Parking pricing	Charging motorists directly for parking.
Time limits	Placing time limits on parking to encourage turnover of convenient spaces.
Parking payment technology	Device to charge for and place time limits on parking.
Valet parking	Parking provided to and done for patrons.
Permit parking districts	Addresses transient and spillover parking problems by restricting on street parking within a specified area to those with a valid parking permit.
Community Parking Districts	Geographic areas that implement community-specific plans and activities designed to alleviate parking impacts. Community Parking Districts also allow for direct investment and benefit of the parking management revenue generated within its boundaries.
Parking information and wayfinding	Provide information on parking availability and price.
Code enforcement	Increase usable supply of parking by enforcing: the use of garages for cars (not storage), time limit parking, and other parking restrictions.
<i>Demand</i>	<i>Ways to reduce the demand for parking.</i>
Transit service	Improve and promote public transit.
Car sharing	Hourly vehicle rental services that can complement or supplement the use of alternative transportation modes and reduce the need for private vehicle ownership.
Walking	Improve walking conditions.
Bicycling	Improve bicycle transportation and supporting infrastructure (see Bicycling section).
Neighborhood cars	Small, generally non-polluting vehicles suitable for short trips, that operate on streets and require less space to park.
TDM strategies	Provide incentives for use of alternatives to single-occupant vehicle use (see TDM section).
Land Use strategies	Improve accessibility; reduce the need to travel (see Land Use and Transportation section)



system of “bundling” parking costs with other goods and services lowers the out-of-pocket expenses of driving and makes other types of travel seem expensive by comparison. Research done throughout the nation suggests that when the real costs of parking are passed on directly to drivers, the demand for parking typically drops, and alternative modes of transportation, where available (such as transit, carpooling, walking, and bicycling) become more attractive and viable for certain trips.

To address parking and mobility problems comprehensively, strategies need to address the supply, management, and demand for spaces. Strategies including, but not limited to, those listed on Table ME-3 may be tailored for specific applications as needed.

## Policies

ME-G.1. Provide and manage parking so that it is reasonably available when and where it is needed.

- a. Where parking deficiencies exist, prepare parking master plans to inventory existing parking (public and private), identify appropriate solutions, and plan needed improvements.
- b. Implement strategies to address community parking problems using a mix of parking supply, management, and demand solutions, including but not limited to those described on Table ME-3, Parking Strategies Toolbox.
- c. Optimize parking prices to reflect an equilibrium between supply and demand. Consider the positive and negative implications of parking pricing when developing solutions to parking problems.



*Hillcrest Community Parking District*

ME-G.2. Implement innovative and up-to-date parking regulations that address the vehicular and bicycle parking needs generated by development.

- a. Adjust parking rates for development projects to take into consideration access to existing and funded transit with a base mid-day service frequency of ten to fifteen



minutes, affordable housing parking needs, shared parking opportunities for mixed-use development, provision of on-site car sharing vehicles and parking spaces and implementation of TDM plans.

- b. Strive to reduce the amount of land devoted to parking through measures such as parking structures, shared parking, mixed-use developments, and managed public parking (see also ME-G.3), while still providing appropriate levels of parking.

ME-G.3. Manage parking spaces in the public rights-of-way to meet public need and improve investment of parking management revenue to benefit areas with most significant parking impacts.

- a. Continue and expand the use of Community Parking Districts (CPD). The CPDs can be formed by communities to implement plans and activities designed to alleviate parking impacts specific to the community's needs. The CPDs also improve the allocation and investment of parking management revenue by providing the Community Parking Districts with a portion of the revenue generated within their boundaries for the direct benefit of the district.
- b. Implement parking management tools that optimize on-street parking turnover, where appropriate.
- c. Judiciously limit or prohibit on street parking where needed to improve safety, or to implement multi-modal facilities such as bikeways, transit ways, and parkways.

ME-G.4. Support innovative programs and strategies that help to reduce the space required for, and the demand for parking, such as those identified in Section E.

ME-G.5. Implement parking strategies that are designed to help reduce the number and length of automobile trips. Reduced automobile trips would lessen traffic and air quality impacts, including greenhouse gas emissions (see also Conservation Element, Section A). Potential strategies include, but are not limited to those described on Table ME-3.

## H. Airports

### Goals

- ◆ An air transportation system that fosters economic growth.
- ◆ Adequate capacity to serve the forecasted passenger and cargo needs at existing airports.
- ◆ An air transportation system that is integrated with a multi-modal surface transportation system that efficiently moves people and goods.
- ◆ An international airport to serve the region's long-term air transportation and economic needs.