Mobility Element

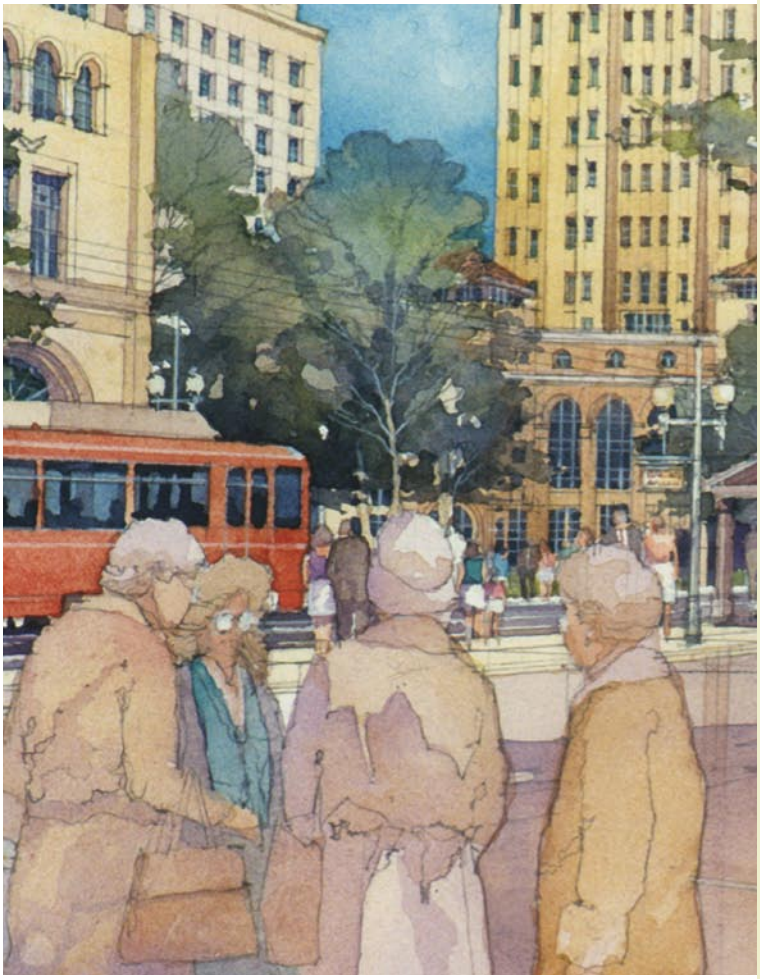
Introduction

Our transportation system moves people and goods, creates boundaries, provides linkages, consumes land, and serves development. An overall goal of the Mobility Element is to further the attainment of a balanced, multi-modal transportation network that gets us where we want to go and minimizes environmental and neighborhood impacts. The Element includes a wide range of policies addressing: walkable communities, streets and freeways, transit, bicycling, parking, goods movement, and others. Taken together, these policies advance a strategy for congestion relief and increased transportation choices in a manner that strengthens the City of Villages land use vision.

Transportation and land use coordination is an integral part of the City of Villages strategy and the Mobility Element, as future growth is to be targeted into villages served by the regional transit system and away from areas without transit services. Villages are designed to minimize the impact of growth on the transportation system through design that is amenable to greater travel by transit, foot, and bicycle. The increased availability of transportation choices and linkages benefits the broader community, in addition to village residents.

Automobiles are used to make the greatest number of trips in our region. Over the years, there has been a tremendous public investment in our street and freeway system at all levels of government; investment designed to help satisfy the demand for automobile travel which continues to grow with increased population, economic prosperity, and auto-oriented development patterns. However, as we mature as a city and land becomes more constrained, it is becoming increasingly difficult and expensive to find the space to build new or wider roads. We are faced with the quandary of wanting to preserve our automobile mobility, but not at the cost of roadway "improvements" that may compromise our neighborhoods and open spaces. As a result, efforts are beginning to shift from an era of widespread new road construction to one of optimizing the efficiency of what we have and adding key new facilities.

A graphic summary of the Mobility Element is shown as Figure ME-1.



Courtesy of Fehlman LaBarre

The Mobility Element is a part of a larger body of plans and programs that guide the evolution of our transportation system. The draft California Transportation Plan (CTP) 2025 is a statewide, long-range transportation plan designed to help guide public and private transportation decisions and investment. The Regional Transportation Plan (RTP or Mobility 2030), prepared and adopted by the San Diego Association of Governments (SANDAG), is the region's blueprint for transportation. The RTP contains policies and projects designed to meet the region's long-term mobility needs. SANDAG prioritizes and allocates the expenditure of regional, state and federal transportation funds to implement RTP projects. Future updates to the RTP will take into account the CTP. The region's Congestion Management Program (CMP), also prepared by SANDAG, serves as a short-term element of the RTP. CMP strategies focus on actions that can be implemented in advance of the longer range transportation solutions contained within the RTP.

City of San Diego interests are represented in the development and adoption of SANDAG documents through the votes of our elected officials serving on the SANDAG Board of Directors, direct citizen participation in the process, and staff collaboration. The city's Mobility Element, the RTP, the CMP and the CTP all highlight the importance of integrating transportation and land use planning decisions, and using multi-modal strategies to reduce congestion. However, the Mobility Element more specifically plans for the city's transportation goals and needs, and provides guidance on how to implement regional plans in the City of San Diego.

Figure ME-1
Mobility Element graphic summary.

A. Land Use and Transportation

Goals

- The city's highest density housing, jobs, and services located within a ten minute walk of transit services

- An integrated network of transportation facilities designed to meet the needs of existing and future growth

Discussion

The Mobility and Strategic Framework/Land Use elements of the General Plan are closely linked. The Land Use Element identifies existing and planned land uses, and the Mobility Element identifies the proposed transportation network and strategies which have been designed to meet the future transportation needs generated by the land uses. The integration of transportation and land use planning is illustrated by the City of Villages Transit/Land Use Connections Map (see fold-out map). This map identifies existing or potential village and transit corridor areas that are within walking distance of existing or planned high quality transit. Walking distance is generally considered to be about a 1/4-mile, depending on topography, the pedestrian environment, and the quality of the transit service offered.

Implementation of the City of Villages growth strategy is dependent upon the close coordination of land use and transportation planning. The strategy calls for redevelopment, infill, and new growth to be targeted into compact, mixed-use, and walkable villages that are connected to the regional transit system. Villages should increase personal transportation choices and minimize transportation impacts through design that pays attention to the needs of people traveling by transit, foot, and bicycle, as well as the automobile. Focused development and density helps make transit convenient for more people, and allows for a more cost-effective expansion of transit services. Village housing in centers of commerce provides opportunities for people to live near where they work, and helps ensure the livelihood of a rich mix of neighborhood shops and services. As such, the City of Villages land use pattern is a transportation, as well as a land use strategy.

Areas outside of villages should also benefit from the village transportation/land use strategy as a result of: the overall expansion of the transit network, street and freeway improvements, the preservation of lower densities in areas without transit service, increased accessibility to subregional employment districts and neighborhood centers, citywide improvements to foster walking and bicycling, and citywide multi-modal transportation improvements in conjunction with development.

Policies

ME-A.1. Transit/Land Use Connections.

Locate new medium and higher-density residential and employment uses in areas served by existing or planned transit services and as designated in appropriate community plans.

a. Design projects to be pedestrian and transit-oriented (see sections B and C of this Element and the Urban Design Element).
b. Locate lower density uses in areas without existing or planned transit.

ME-A.2. Transportation Facilities With Growth.

Provide adequate transportation facilities and services to support development.

a. Coordinate with regional transit planners and operators to help ensure that village areas identified on the City of Villages Transit/Land Use Connections Map are connected to the regional transit system.
b. Determine necessary transportation improvements to serve new development at the community plan level, and where necessary, at the project level.
c. Determine project traffic impacts based on the number of projected automobile trips, with credits given for trips projected to be taken by other travel modes, or through Transportation Demand Management (TDM) plans.
d. When determining street designs (e.g., local, collector, major), consider impacts to walkability, pedestrian safety, neighborhood character, and other factors in addition to traffic volumes.
e. Include transit improvements in traffic mitigation plans where appropriate.
f. Phase development with transportation improvements, including transit improvements.

ME-A.3. Walkable Destinations.

Provide walkable destinations.

a. Encourage a mix of uses in commercial centers and corridors so that local trips can be made by walking and bicycling.
b. Design grading plans to provide convenient and accessible pedestrian connections from new development to adjacent uses and streets.
c. Design private and public developments to be accessible by foot, bicycle and transit, as well as by automobile. Provide multiple pedestrian access paths and pedestrian-friendly design.
    1) Provide convenient and secure bicycle parking facilities.
    2) Provide “front door” access for transit patrons, so that transit riders do not have to cross large parking lots before entering a building.

d. Make existing or future/planned transit access a high priority when determining the location of new public facilities.
e. Work with school districts and affected communities to locate schools so that the number of students who can walk to school safely is maximized.

ME-A.4. Promote design accessibility for all, with special attention to the needs of children, the elderly, and people with disabilities.

Mi Pueblo Pilot Village
Estudio Cruz

B. Walkable Communities

Goals

- A safe, efficient, accessible, and attractive pedestrian street environment
- A city where children can walk to school safely
- A system of open space trails, sidewalks, and paths through neighborhoods and open space areas.

Discussion

The pedestrian environment affects us all whether we are walking to transit, a store, or simply getting from a parked car to a building. People enjoy walking in places where there are sidewalks shaded with trees, interesting buildings or scenery to look at, other people outside, neighborhood destinations, and a feeling of safety. With improved pedestrian conditions we can expect to see an increase in walking as a means of transportation and recreation. In addition, many of the land use and street design recommendations that benefit pedestrians also help promote bicycling (see the Bicycling section of this Element for more specific bicycling recommendations). More walking and bicycling trips help to reduce the number of automobile trips, which in turn, reduces air and water pollution, conserves energy, and contributes to a healthy active lifestyle. Public health research shows that inactivity represents a huge public health risk. In addition, the types of improvements that benefit pedestrians also contribute to the quality, vitality, and sense of community of our neighborhoods.

A more specific goal is to design and retrofit our city so that children can walk to school safely. Children walking and bicycling to school used to be a common sight, but has declined dramatically in the past 30 years in large part because of real and perceived dangers from traffic and crime. Children suffer multiple risks from our automobile-centered society. They make up a high proportion of all injuries and deaths from pedestrian accidents, yet in trying to protect our children we drive them around so much that many are becoming overweight and physically unfit. A skyrocketing rate of childhood obesity is resulting in young people contracting health problems such as diabetes and high blood pressure in greater numbers than ever before. In addition, children's respiratory systems are especially vulnerable to air pollution.

There are many ways to design and retrofit our neighborhoods for better safety and walkability. New projects can be sensitively designed, and in existing neighborhoods there are opportunities for incremental change through infill or redevelopment and public facilities investments. Implementation of the following policies, in addition to the recommendations under the Land Use and Transportation and Streets and Freeways sections of this Element, can help to make our streets safer and more comfortable for walking. The recommendations apply to new construction as well as to street retrofit/redesign projects and infill development.

Policies

ME-B.1. Pedestrian Design.

Design and operate streets to maximize pedestrian safety, comfort, and connectivity.

Walking Facts

- *Between 1977 & 1995, trips made by walking declined 50 percent while driving trips increased.*
- *One-fourth of all trips people make are one mile or less, but three-fourths of these short trips are made by car.*
- *Among children between the ages of 5 and 15, walking and bicycling declined 40 percent from 1977 to 1995.*
- *For school trips of one mile or less, only 31 percent are made by walking; within 2 miles, just 2 percent of school trips are made by bicycling.*
- *70 percent of people surveyed would walk (or bike) up to 1/2 mile for shopping or personal business if the journey was safe and pleasant.*
- *As a mode of transportation, walking is second only to the automobile, but last in funding.*
- *In San Diego, walking trips are second in number only to the automobile, but last in funding.*

Source: Walk San Diego. Click here for more information.

a. Design new intersections and redevelop existing intersections to maximize pedestrian convenience, accessibility, and safety as a priority over maintaining high levels of service for vehicles. For example, pedestrians should be able to cross at all four corners of an intersection.

b. Consider pedestrian crossing distances when evaluating the need for turn lanes at intersections.

c. Improve the pedestrian environment through the appropriate use of: street trees, landscaped medians, reduced street widths, median refuges, adequate sidewalk widths, street furniture, improved pedestrian crossings, traffic calming, pedestrian-oriented lighting, and other measures to make neighborhoods safer and more pleasant for pedestrians. (See the Street Design Guidelines at http://www.sandiego.gov/planning/pdf/peddesign.pdf for details.)

d. Reduce trip length for pedestrians by striving for direct routes between activity centers and to transit.

e. Strive to achieve greater connectivity in the street system through implementing a grid or modified-grid street system. Site plans for private development should bring the street grid into the project.

f. Use traffic management techniques that consider pedestrians, such as appropriate speed limits and limited right turns on red in busy pedestrian areas.

ME-B.2. Pedestrian Improvements.

Address pedestrian needs through the development and implementation of land use, transportation, recreation, and capital improvement plans.

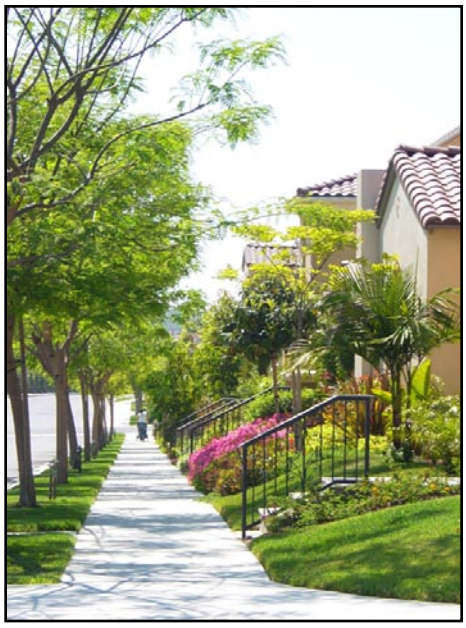
a. Develop a citywide pedestrian master plan, or similar tool, to identify needed improvements to the pedestrian network.

b. In programming capital improvements, prioritize those that provide safe and accessible routes to schools, transit, and village centers.

c. Routinely accommodate pedestrian facilities and amenities into private and public projects. Include the cost of implementing pedestrian improvements into project budgets.
d. Link pedestrian paths and trails into a continuous, interconnected region-wide network where possible.
e. Increase opportunities to walk on trails through canyons and other open spaces where consistent with the provisions and recommendations of the Multiple Species Conservation Plan (MSCP), the Recreation Element, and community plans.
f. Develop a citywide trails master plan.

ME-B.3. Pedestrian Environment.
Recognize that the quality of the walking environment is linked to the overall quality of the urban environment.

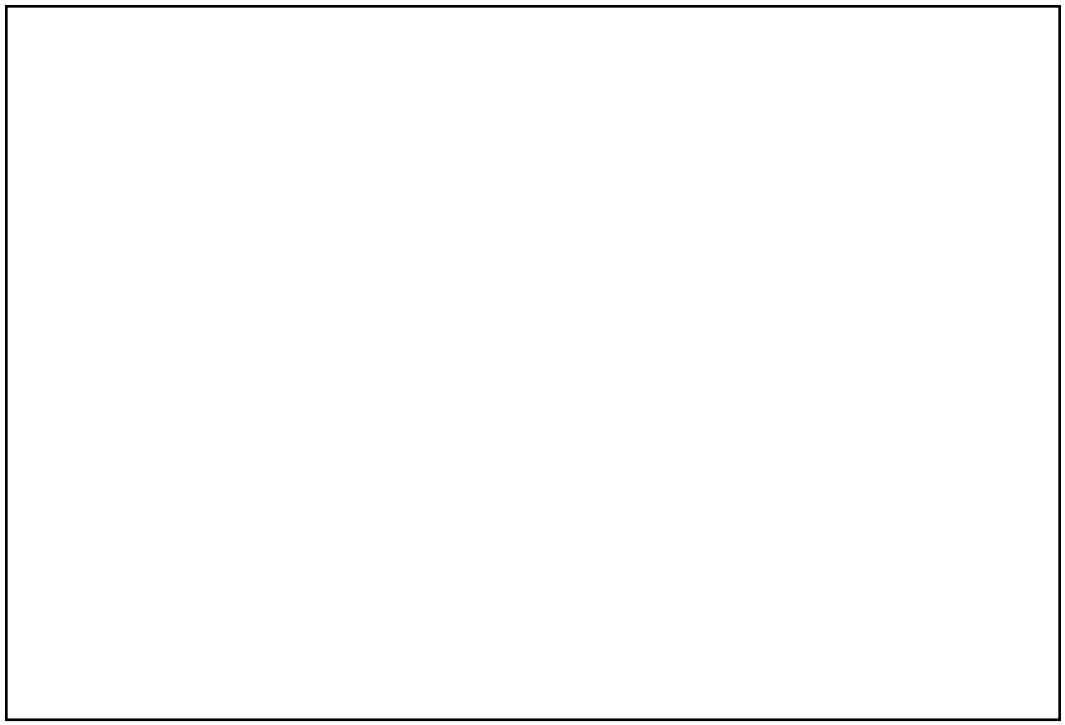
a. Work with community groups to ensure that there is adequate law enforcement, code enforcement, and litter and graffiti control to maintain safe and attractive neighborhoods.
b. Provide and maintain pedestrian and neighborhood amenities such as street trees, benches, public art, and plazas.
c. Design for walkability in accordance with policies contained in the Urban Design Element.
d. Provide and maintain trash and recycling receptacles, and restrooms available to the public.



ME- B-4 Recognize the role of walking as a mode of transportation. Work with SANDAG to increase funding for pedestrian improvements as a significant percentage of regional transportation funds and to monitor pedestrian mode split.

ME -B.5. Safe Routes to Schools.
Collaborate with appropriate agencies/groups to design and implement safe pedestrian routes to schools and transit.

a. Consider a range of improvements such as wider sidewalks, more visible pedestrian crossings, traffic enforcement, traffic calming, pedestrian lighting, bicycle lanes, pedestrian trails, and educating children on traffic safety.
b. Promote "Walking School Bus" efforts where parents or other responsible adults share the responsibility of escorting children to and from school by foot or bicycle.



ME-B.6 Continue to collaborate with regional agencies, school districts, community planning groups, community activists, public health professionals, developers, law enforcement officials, and others to better realize the mobility, environmental, and health benefits of walkable communities (see also ME-B.5).

ME-B.7 Engage in a public education campaign to increase drivers' awareness of pedestrians and bicyclists, and to encourage more courteous driving. Such a campaign could include special signage and other means.

C. Transit First

Goals

- An attractive and convenient transit system that is the first choice of travel for many of the trips made in the city

- Attainment of mobility, neighborhood quality, and environmental goals through increased transit ridership

Discussion

A primary strategy of the General Plan is to reduce dependence on the automobile in order to achieve multiple and inter-related goals including: increasing mobility, preserving and enhancing neighborhood character, improving air quality, reducing storm water runoff, reducing paved surfaces, and fostering compact development and a more walkable city. Expanding transit services is an essential component of this strategy.

To this end, the City of San Diego endorsed a Regional Transit Vision (RTV) that was adopted as a part of the 2030 Regional Transportation Plan (RTP). This vision calls for development of a fast, flexible, reliable and convenient transit system that connects the region's major employment and activity centers with a rich network of transit services. Under this vision, transit and land use will be tightly linked, with transit stations integrated into our neighborhoods and activity centers. Land use design will be pedestrian and bicycle-friendly and serve as pleasant walk and wait environments for customers. Over the long term, the proposed transit services would take advantage of a new generation of advanced design vehicles which have the flexibility of buses and the look and feel of rail. Additional anticipated future improvements include greater use of low-floor vehicles and smart fare cards to allow for easier and speedier passenger boarding. Upgraded stations and real-time information will let patrons know when the next vehicle will be arriving.

Implementation of the RTV will result in a transit system that is so attractive and convenient that transit will become the first choice of travel for many of the trips made in the region. Transit would become a better travel option for all including older adults, youth, disabled persons, commuters, and visitors. Regional transit connectivity is to be provided through Regional, Corridor, Local, and Neighborhood transit services.

The Transit/Land Use Connections Map includes the RTP Mobility 2030 transit network in the City of San Diego, as well as other lines that the city believes are needed to support the City of Villages land use/transportation strategy. The Transit/Land Use Connections Map identifies the following types of transit corridors and stations:

- **Existing Routes** - the entire existing transit system.

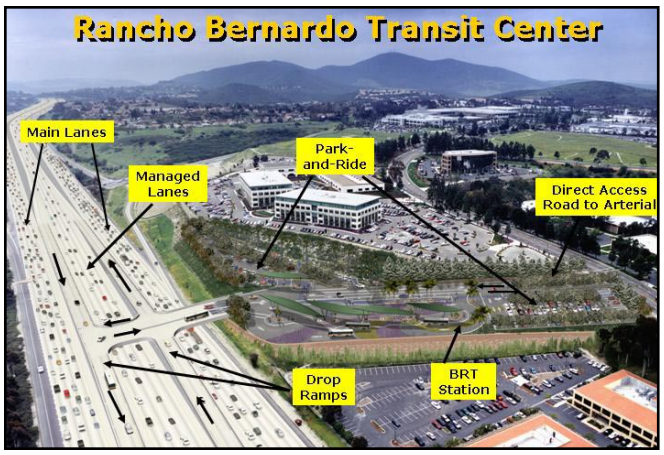
- **Established High Frequency Service Routes** - existing single and multiple transit routes operating within a corridor with service provided approximately every 15 minutes during the morning and evening commute periods. Established high frequency service also includes Light Rail Transit (LRT) and Bus Rapid Transit (BRT) routes that are under construction, or are programmed for construction within the next five years.

- **Emerging Routes** - routes that provide important transit links to potential village sites, that have not yet attained high frequency levels of service.

- **Future Routes** - routes that are not a part of the RTP Mobility 2030 network, that are needed to serve existing and potential village areas.

- **High quality transit** is defined as the Established High Frequency Service Routes.

Policies



Managed lane concept - Rancho Bernardo Transit Center
Source: SANDAG

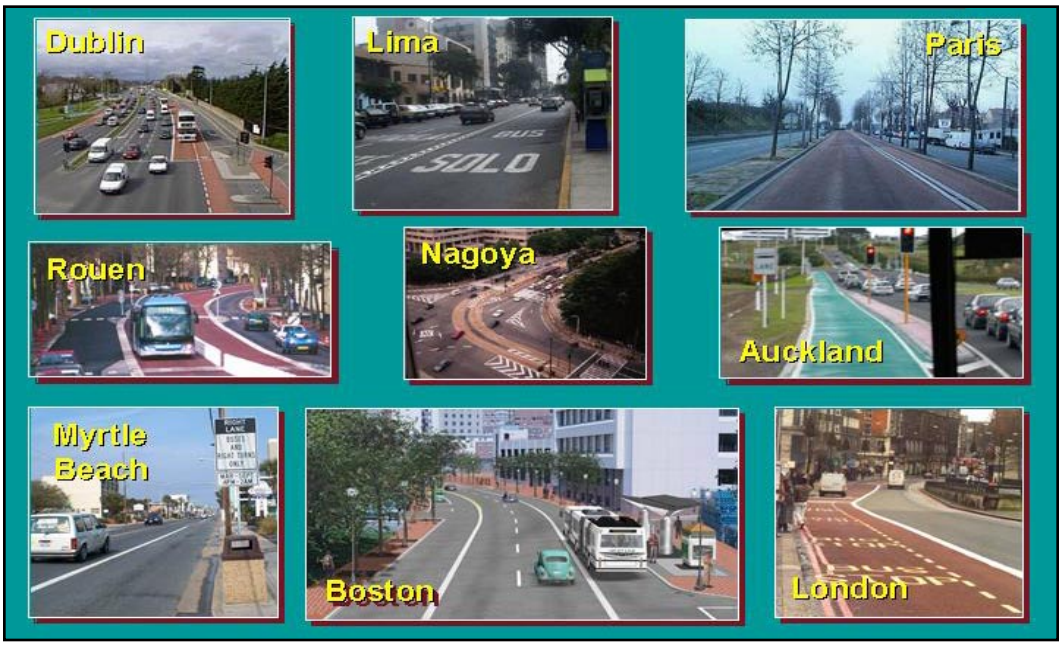
ME-C.1. Encourage and support implementation of the Regional Transit Vision to provide a transit system that takes people where they want to go in a safe, timely, comfortable, and efficient manner.

a. Increase transit accessibility and availability citywide through enhanced regional, corridor, local, and neighborhood transit services.
b. Specify community specific transit recommendations in community plans.

ME-C.2. Transit and Land Use Planning.
Use the City of Villages Transit/Land Use Connections map (see fold-out) as the basis for long range transit planning, and transit/land use coordination efforts.

a. Require transit and pedestrian-oriented development in village and corridor areas.
b. Seek reservations or dedications of right-of-way to support transit as needed.

c. Offer incentives to transit-oriented developments served by high quality transit.
d. Provide more detailed guidance in community plans as necessary.



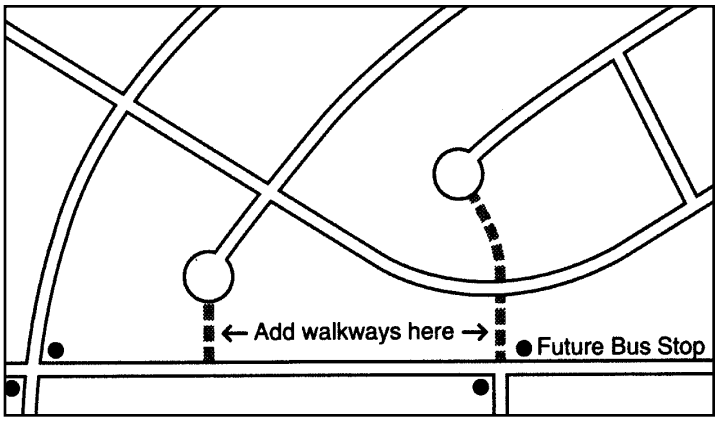
Transit lane examples
Source: SANDAG

ME-C.3. Implement transit priority measures to help make transit travel times more competitive with the automobile. Priority measures include, but are not limited to, transit signal priority, queue jumpers, exclusive transit lanes, transitways, and direct access ramps to freeway High Occupancy Vehicle (HOV) facilities.

ME-C.4. Where appropriate, support the region's use of advanced design vehicles or "trains on tires" which have the flexibility of buses and the look and feel of rail.

ME-C.5. Work with SANDAG to pursue funding sources to implement the Regional Transit Vision.

ME-C.6. Integrate transit into neighborhoods and activity centers. Ensure that the design and location of transit stations respect neighborhood and activity center character, enhance the users' personal experience of each neighborhood/center, and offer comfortable walk and wait environments for customers. Locate transit stops/stations so that riders may conveniently board and exit at the front of buildings or centers, rather than at the edges of parking lots and secondary entrances.



Pedestrian Walkways inprove access to transit.
Source: MTDB Designing for Transit Manual (1993)

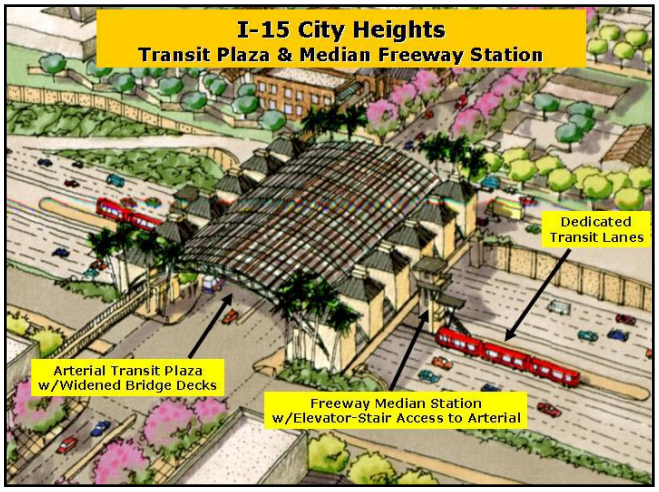
ME-C.7. Support the use of low-floor vehicles along with smart cards or other innovative technologies to allow for easier and speedier passenger boarding.

ME-C.8. Evaluate the need for park-and-ride spaces at transit stations based on the character of the neighborhood, and the station's role in the regional transit system (see the Urban Design Element for guidance on parking facility design).

ME-C.9. Work with transit planners and providers to achieve a transit system that is 100 percent accessible in accordance with the Americans With Disabilities Act.

ME-C.10. Provide safe, convenient, and attractive pedestrian and bicycle connections to transit, and facilities to support these modes such as secure bicycle parking facilities. Evaluate existing station areas and retrofit where possible to improve access.

ME-C.11. Proactively protect and seek dedications or reservations of rights-of-way for designated transit routes and stations as development occurs and new roads are designed.



ME-C.12. Prioritize transit service investments in existing or proposed villages where the greatest number of commuters and residents would benefit.

ME-C.13. Integrate the Transit First system with the intercity rail network.

D. 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

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, bus, bicycle, or foot, and influences which mode of travel we choose. Travel choices and routes are also affected by the connectivity of the street network. 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.

Streets and freeways within the City of San Diego are shown on the General Plan Land Use Map (see fold-out). This map includes the freeways, expressways, and arterial, major and collector streets needed to serve vehicular transportation demand resulting from the build-out of the City of San Diego in accordance with this General Plan. Community plans may specify a more refined system of streets within the local community. Freeways and regional arterials in the City of San Diego are also identified as a part of the Regional Transportation Plan (RTP).

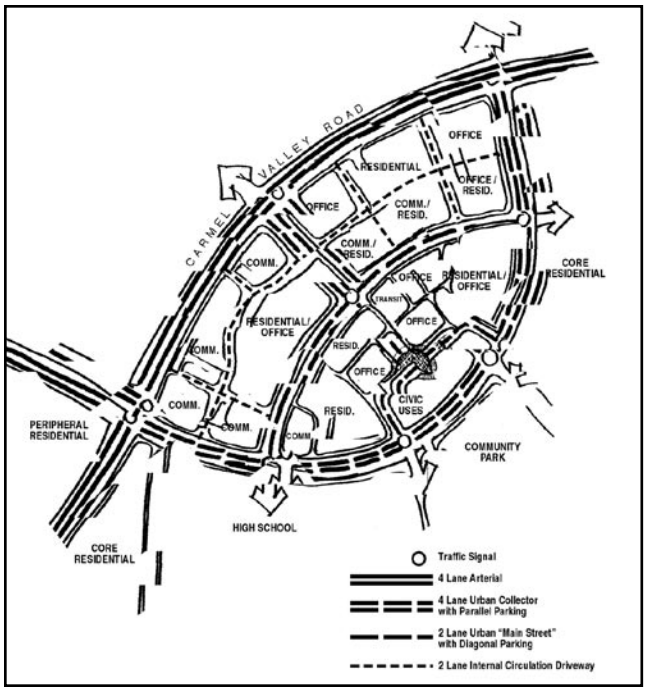
The RTP places a high priority on improvements to the freeways and state highways, transit services, and arterial roads that accommodate the largest volumes of regional trips. New highway construction is proposed or underway for segments of Interstates 5, 15, and 805, State Routes 52, 54, 56, 94, 125, and 241 as well as Routes 905 and 11 along the U.S. - Mexico Border. The RTP includes an extensive high occupancy vehicle (HOV) managed lane network with bus

and carpool lanes, and direct freeway and carpool connectors. Any work on State facilities (freeways and highways) will need to be done in accordance with Caltrans (engineering and other) standards. Click here for the latest version of the RTP.

A traffic model was performed by SANDAG as a part of the environmental review for the Strategic Framework Element/City of Villages strategy. The model runs indicated a high use of the planned HOV facilities on I-5 and I-15, and an increase in the average number of persons per vehicle from 1.1 in the year 2000 to 1.35 persons per vehicle in the year 2020. This expected driver behavioral change combined with HOV and freeway improvements resulted in the modeled decrease of 77 miles of deficient freeways in 2000 to 29 miles in 2020. The implementation of transit improvements would also contribute to this decrease. The modeling indicated that 18.1 percent of all home-work, peak hour trips would be transit and walking compared to a 6.7 percent mode split in 2000. Transit is ideally suited to provide service in key home-to-work travel corridors, during peak periods, because there are many people traveling the same route at the same time. For a more complete discussion of the traffic projections and modeling, see the Strategic Framework Element Final Environmental Impact Report LDR EIR No. 40-1027.

In addition to new construction, the RTP calls for efficiency improvements using system and demand management strategies, extensive transit improvements, bicycling and walking infrastructure, and support for transit-oriented design and development. These strategies are discussed in the relevant sections of the Mobility Element.

Street design (and redesign) must be held to a high standard to maximize mobility benefits, while minimizing potential neighborhood character and environmental impacts. 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 new 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.



Interconnected streets
Source: Pacific Highland Ranch Subarea Plan

Policies

ME-D.1. System Improvements.

Increase capacity and reduce congestion on the street and freeway system.

a. Collaborate with SANDAG and Caltrans to ensure that the policies and facilities included in the city's General Plan are reflected in the Regional Transportation Plan and Caltrans standards.
b. Work with Caltrans and SANDAG to plan, design and construct mutually beneficial freeway, roadway, and other transportation infrastructure projects in accordance with the Regional Transportation Plan and the General Plan,
c. Provide rights-of-way for designated HOV facilities and transit facilities on city streets and freeways.
d. Expand use and application of congestion pricing strategies as appropriate.
e. Give priority to transit vehicles in the design, improvement, and operational management of city streets and freeways, where appropriate.
f. Evaluate RTP proposals for new or redesigned streets and freeways on the basis of demonstrated need and consistency with General Plan policies.

ME-D.2. Interconnected Streets.

Design an interconnected street network within and between communities, which includes pedestrian and bicycle access, while minimizing landform impacts.

a. 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.
b. Design blocks along local and collector streets to have a maximum perimeter of 1,800 feet. When retrofitting an existing street system, provide new street or pedestrian connections where possible. Ideally, block lengths, would be 380-440 feet long.
c. Connect signalized major and arterial streets to the surrounding street network with intersections every 600 to 1,000 feet, with additional pedestrian connections provided where possible to increase pedestrian accessibility.
d. Integrate internal streets and drive aisles to extend or enhance the public street pattern within the project. Provide direct and multiple street and sidewalk connections within the project, to neighboring projects, and to the community at large.

ME- D. 3 Street Operations.

Improve operations on city streets.

a. Regularly optimize traffic signal timing and coordination to reduce travel time and delay and implement new signal and intersection technologies that improve pedestrian safety and traffic flow.
b. Adequately maintain the transportation system.
c. Design, construct, and operate city streets to accommodate and balance service to all users/modes (including walking, bicycling, transit, High Occupancy Vehicles, autos, trucks, automated waste and recycling collection vehicles, or emergency vehicles). Existing streets may be retrofitted over time.

ME D.4 Community Mobility Planning.

a. Identify streets, sidewalks,trails, and other transportation facilities and services needed to enhance mobility through community plan updates/amendments and discretionary project review.
b. Protect and seek dedication or reservation of right-of-way for planned transportation facilities through community plan updates/amendments and discretionary project review.
c. Phase street improvements and multi-modal transportation improvements as needed with development/redevelopment.
d. Increase public input in transportation decision-making, including seeking input from multiple communities where transportation issues cross community boundaries.

ME-D.5. Revise the city's Traffic Impact Study Guidelines to give greater consideration to the role of alternative modes of transportation in addressing development project traffic impacts, as appropriate.

ME-D.6. Traffic Calming.

Where appropriate, use traffic calming to reduce vehicle speeds or discourage shortcutting traffic in accordance with the following guidelines:

- Consider the needs of emergency, sanitation, and transit vehicles.
- Design plans to minimize potential impacts caused by traffic diversion.
- Meet state and federal accessibility requirements.
- Preserve or improve the mobility of non-motorized users of the street.
- Address drainage, sight distance, and location of underground utilities.
- Include a landscape element that includes trees and shrubs.

ME-D.7. Environmentally Sensitive Design.

Respect the natural environment, scenic character, and community character of the area traversed. Observe the following guidelines where consistent with safety standards, in the location and design of new streets and freeways and, to the extent practicable, for improvements to existing facilities:

a. Establish general road alignments and grades that respect the natural environment and scenic character of the area traversed.
b. Design roadways and road improvements to maintain and enhance neighborhood character.
c. Design streets and highways incorporating physical elements to improve the visual aspects of roadways.
d. Provide adequate rights-of-way for scenic lookouts, and obtain scenic easements to ensure the preservation of scenic views.
e. Preserve trees and other aesthetic and traffic calming features in the median and along the roadside.
f. Avoid or minimize disturbances to natural landforms.
g. Contour manufactured slopes to blend with the natural topography.
h. 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 their location.
l. Place utility lines underground, and sensitively site those that must be placed above ground.
m. Emphasize aesthetics and noise reduction in the design, improvement, and operational management of streets and highways.

ME-D.8. Work with Caltrans to pursue official scenic highway designation on recommended state highways, designate scenic routes along proposed city thoroughfares, and adopt measures to protect aesthetic qualities within scenic corridors.

E. Intelligent Transportation Systems (ITS)

Goals

- Improved operational efficiency of the transportation system
- Improved safety, along with energy savings and reduced negative environmental impacts
- 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 includes 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:

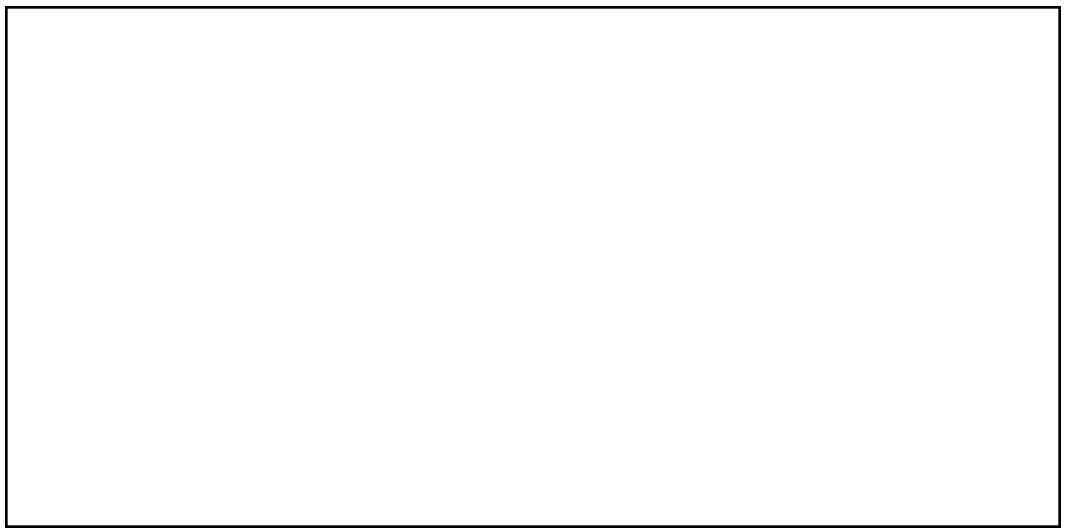
- **Arterial Management Systems** - parking management, traffic control, and information dissemination
- **Freeway Management Systems** - ramp control, lane management and information dissemination
- **Transit Management Systems** - fleet management, safety and security, and information dissemination
- **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 fare payment
- **Traveler Information** - pre-trip and enroute 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 (SANDAG, 1997) is the region's guiding document for development of ITS. The city, with various partners, has already 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 Regional Arterial Management Systems project that will allow cross-jurisdictional coordination of traffic signals, and sharing of control of other traffic control devices. In

addition, preliminary planning is underway for a Joint Transportation Operations Center, which will serve as an intermodal transportation operations/management center for the city and transit operators.

Policies

ME-E.1. Take advantage of the substantial regional Intelligent Transportation System (ITS) investments to achieve cost-effective improvements in transportation system performance and operations wherever possible.



ME-E.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-E.3. Take an active role in the design and development of the Joint Transportation Operations Center.

ME-E.4. Automate the collection of real-time traffic information regarding transportation system conditions and make the information available to users and operators.

ME-E.5. Monitor and control traffic on city streets and coordinate traffic operations with other local agencies.

ME-E.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.

F. Transportation Demand Management (TDM)

Goals

- Reduced single-occupant vehicular 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

With the expected population growth in the San Diego region there is a growing awareness that building additional street and freeway infrastructure to accommodate more vehicles will provide only partial relief to our traffic congestion problem. Transportation Demand Management (TDM) is a system of strategies that assist in alleviating traffic congestion through improved management of vehicle trip demand, and increased efficiency in the use of existing transportation infrastructure. These strategies are primarily directed at commuter travel and are structured to:

- Reduce the dependence on, and use of single-occupant vehicles by encouraging alternative modes of travel such as carpooling, vanpooling, transit use, bicycling, and walking;
- 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 gridlock 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. By working in concert with SANDAG and other agencies, the city can facilitate establishing partnerships with employers to develop and implement employer commuter programs that support alternatives to driving alone. The city will provide development regulations to require project designs and features that are conducive to implementing TDM measures, and shape development review policies to offer incentives to projects that implement TDM 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-F.1. Support transportation projects that will facilitate implementation of Transportation Demand Management (TDM) strategies.

ME-F.2. Emphasize the movement of people rather than vehicles.

ME-F.3. Maintain and enhance personal mobility by providing alternatives to driving alone.

ME-F.4. Promote the most efficient use of the city's existing transportation network.

ME-F.5. Establish partnerships with employers to identify demand-based commute solutions aimed at minimizing peak period traffic congestion by reducing peak period employee commute trips.

ME-F.6. Focus on three sectors for TDM partnerships: private (employers and developers), institutional (colleges, universities, and schools) and public (city and other government employers).

ME-F.7. Target geographic areas with the following characteristics for implementing TDM measures: high employment concentrations, availability of alternative modes of transportation, access to HOV facilities, significant number of employees, and long distance commutes.

ME-F.8. Coordinate with SANDAG and other agencies on efforts to market TDM benefits to large employers.

ME-F.9. Promote alternative modes of transportation, alternative work schedules, and telework.

ME-F.10. Require new developments to have 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 bike lockers, preferred rideshare parking, showers and lockers, on-site food service, and child care, where appropriate.

ME-F.11. Consider TDM programs with achievable trip reduction goals as partial mitigation for development project traffic impacts, and as potential alternatives to roadway expansions that are infeasible, or detrimental to the urban environment.

G. Bicycling

Goals

- A city where bicycling is a viable travel choice, particularly for trips of less than five miles
- An improved local and regional bikeway network
- Environmental quality, public health 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 gas 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. Figure ME-2 shows existing and proposed bicycle routes, based on the BMP. 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 the Walkable Communities, and Streets and Freeways sections of the Mobility Element. In addition, the City of San Diego Street Design Manual outlines bikeway design requirements.

Policies

ME-G.1. Bicycle Master Plan.

Implement the Bicycle Master Plan, which identifies existing and future needs, and provides specific recommendations for facilities and programs over the next 20 years.

a. Update the plan periodically as required by Caltrans, in a manner consistent with General Plan goals and policies.

b. Coordinate with other cities, SANDAG, schools, and community organizations to review and comment on bicycle issues of mutual concern.
c. Reference and refine the plan, as needed, in conjunction with community plan updates.
d. Improve connectivity of the multi-use trail network, for use by bicyclists and others as appropriate.

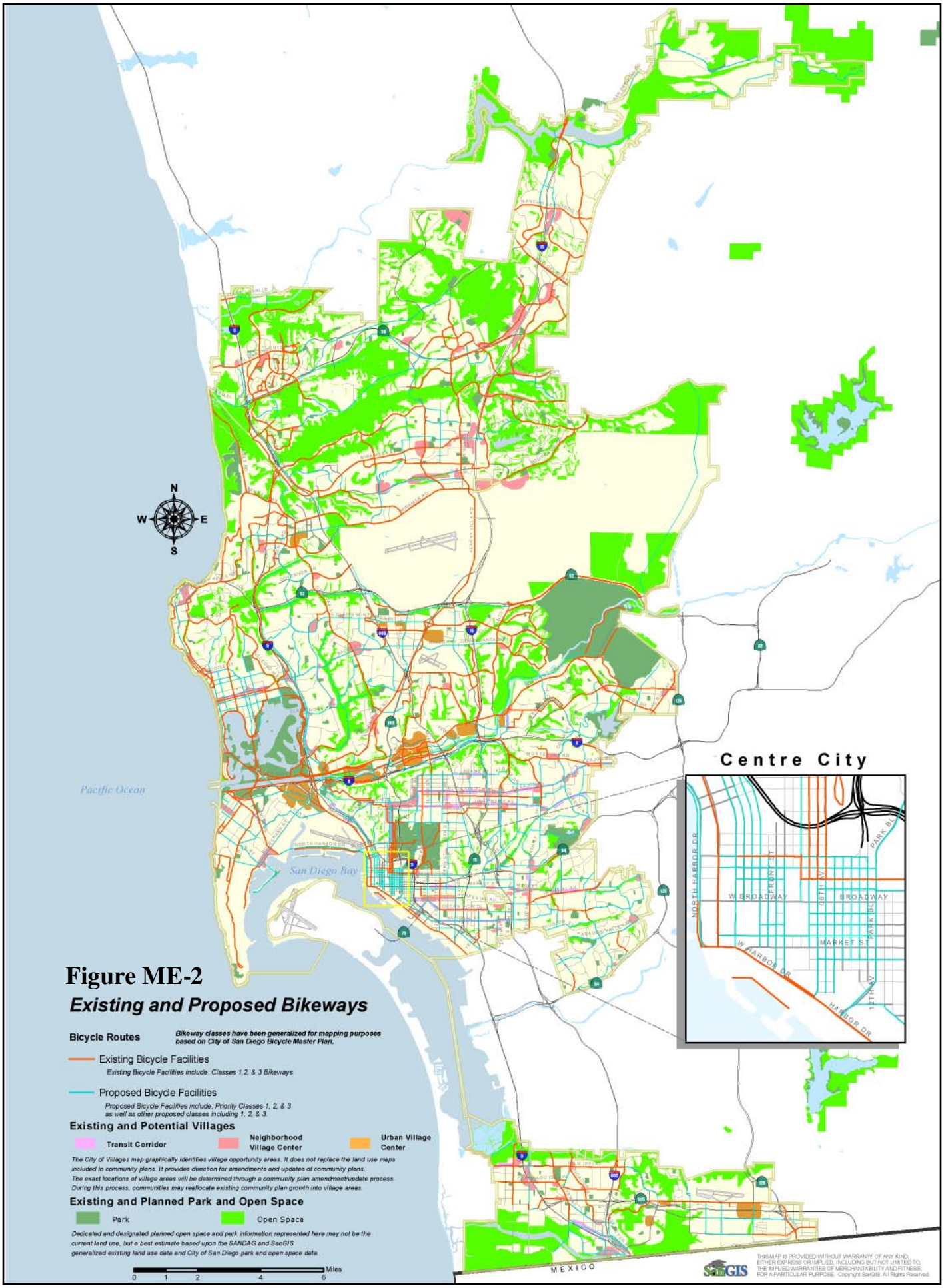
ME-G.2. Bikeway Network.
Identify and implement a network of bikeways that are feasible, fundable, and serve bicyclists' needs, especially for travel to employment centers, village centers, schools, commercial districts, transit stations, and institutions.
a. Develop a bikeway network that is continuous, closes gaps in the existing system, and serves important destinations.
b. Implement bicycle facilities based on a priority program that considers existing deficiencies, safety, commuting needs, connectivity of routes, and community input.
c. Recognize that bicyclists use all city roadways. Design future roadways to accommodate bicycle travel, and attempt to upgrade existing roadways to enhance bicycle travel.

ME-G.3. Maintain and improve the quality, operation, and integrity of the bikeway network and roadways regularly used by bicyclists.

ME-G.4. Provide safe, convenient, and adequate short- and long-term bicycle parking facilities and other bicycle amenities for employment, retail, multi-family housing, schools and colleges, and transit facility uses.

ME-G.5. Increase the number of bicycle-transit trips by coordinating with transit agencies to provide safe routes to transit stops/stations and to accommodate bicycles on transit vehicles.

ME-G.6. Public Education.
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.


N
W
E
S
Pacific Ocean
San Diego Bay
MEXICO
Centre City
NORTH HARBOR DR
W BROADWAY
BROADWAY
MARKET ST
W HARBOR DR
HARBOR DR
PARK BL
1ST AV
16TH ST
Figure ME-2
Existing and Proposed Bikeways
Bicycle Routes
Bikeway classes have been generalized for mapping purposes based on City of San Diego Bicycle Master Plan.
Existing Bicycle Facilities
Existing Bicycle Facilities include: Classes 1,2, & 3 Bikeways
Proposed Bicycle Facilities
Proposed Bicycle Facilities include: Priority Classes 1, 2, & 3 as well as other proposed classes including 1, 2, & 3.
Existing and Potential Villages
Transit Corridor
Neighborhood Village Center
Urban Village Center
The City of Villages map graphically identifies village opportunity areas. It does not replace the land use maps included in community plans. It provides direction for amendments and updates of community plans. The exact locations of village areas will be determined through a community plan amendment/update process. During this process, communities may reallocate existing community plan growth into village areas.
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.
0 1 2 4 6 Miles
SanGIS
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.

H. Parking Management

Goal

- Implementation of a broad range of parking management tools and strategies to develop community-specific parking solutions
- Application of innovative citywide parking regulations that meet the parking need generated by new development
- Increased land use efficiencies in the provision of parking

Discussion

There are many strategies and policies available to better manage vehicle parking and address community parking problems.[1] New development must provide parking that meets the needs that it generates, but cannot be expected to remedy existing deficiencies. Existing problems must be addressed through strategies that are tailored to meet the needs of specific communities or areas. For example, the demand for, and strategies developed to address parking in a business district would be different from solutions proposed for problem areas by the beach, or in a residential area near a college or university.

While each community faces unique challenges, as a city we share a need to implement parking strategies and regulations that address parking demand and supply and concurrently help implement General Plan goals for reducing storm water runoff and urban sprawl, and supporting walkable communities, transit, equitable development, and affordable housing. Parking facility design also plays a significant role in attaining walkable community goals. Design issues are addressed in the Urban Design Element.

Motorists are accustomed to "free" parking at many destinations, but in reality no parking is without cost. For example, if a parking structure were to be built in the Old Town community, the cost has been estimated at $25 - $31,000 per space (2002).[2] The real cost of parking is paid for 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 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.

[1] The report prepared by the City of San Diego Parking Task Force (March 2004) and Todd Litman's "Online TDM Encyclopedia" http://www.vtpi.org/tdm/ (updated 2003) served as valuable references for this section.
[2] City of San Diego Visitor Oriented Parking Facilities Study of the Old Town Community, Wilbur Smith Associates, 2002.

Table ME-1 Parking Strategies Toolbox

Parking Tool	Description
Supply	***Increasing parking availability***
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 handicapped spaces, to accompany development.
Tandem parking	Parking space design where one car is parked behind another car; 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).
Parking Management	***Strategies for more efficient use of parking***
Shared parking	Sharing parking facilities among multiple users.
Parking pricing	Charging motorists directly for parking.
Time limits	Placing time limits on parking to encourage turnover of convenient spaces.
Parking Meter	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.
Parking information	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.
Demand	***Ways to travel that reduce the demand for parking.***
Transit Service	Improve and promote public transit.
Car sharing	Hourly vehicle rental services that can complement/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).

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 in Table ME-1 may be tailored for specific applications as needed.

Policies

ME-H.1. Community Parking Strategies.
Consider parking facilities as part of the community infrastructure necessary to support existing and planned land uses.

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 in Table ME-1.

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

a. Adjust parking rates to take into consideration access to high quality transit, affordable housing parking needs, shared parking opportunities for mixed use development, and implementation of TDM plans.
b. Strive to reduce the amount of land devoted to parking while still providing appropriate levels of parking.

ME-H.3. On-street Parking Management.
Manage parking spaces in the public rights-of-way to meet the public's needs.

a. Continue and expand the use of parking management districts.
b. Implement parking management tools that maximize on-street parking turnover, where appropriate.
c. Judiciously limit or prohibit on-street parking where needed to improve safety, and multi-modal mobility with facilities such as bikeways, transitways, and parkways.

ME-H.3. Support innovative programs designed to reduce the space required for, and the demand for parking, such as those described in the Transportation Demand Management section of this Element.

I. Airports

Goals

- Protection of the health, safety, and welfare of persons residing, working, or visiting near airports
- An air transportation system that is integrated with a multi-modal surface transportation system that efficiently moves people and goods while maximizing positive economic impacts
- A reduction in land use impacts achieved through improved coordination between land use and air transportation system planning.
- Adequate airport capacity to serve the long-term economic and service needs of San Diego.

Discussion

Aviation plays an essential role in supporting the economic growth and vitality of the metropolitan region and contributes to the mobility of society. Each month, more than a million business travelers, tourists and residents arrive or depart from the San Diego International Airport (SDIA or Lindbergh Field), which connects San Diego to the world. In addition, more than a hundred thousand total tons of freight and cargo essential to our local industries and businesses are shipped via air each year. These activities provide important jobs and contribute significantly to San Diego's international trade capacity. The city is also home to Marine Corps Air Station (MCAS) Miramar as well as the city's two municipal general aviation airports Brown Field and Montgomery Field. In total, air transportation services result in significant financial benefits for both the city and the region (approximately $4.5 billion as of 2001). Airports within the City of San Diego are listed in Table ME-2 and shown on Figure ME-3.

Table ME-2
Airports in the City of San Diego

Name	Use
San Diego International Airport – Lindbergh Field	Public
Brown Field - Municipal Airport	Public
Montgomery Field - Municipal Airport	Public
Miramar Marine Corps Air Station	Military

Aviation activities will increase as the region's population continues to grow and as high technology industries evolve. Specifically, passenger traffic at Lindbergh Field is forecast to grow from 15.3 million passengers in 2003 to between 27.1 million and 32.7 million annual passengers in 2030, at what is already the busiest single-runway airport in the nation. This growth will result in capacity constraints beginning between 2015 and 2022. In addition, Lindberg Field's night-time opera-

tions are restricted to minimize impacts to neighboring noise-sensitive land uses. In recognition of these limitations, a renewed search for a long term solution to address our regional air transportation needs began in earnest in 2001. Upon its creation in 2003, the San Diego County Regional Airport Authority absorbed the task and operates as the Airport Site Selection Program. Lindbergh Field will be replaced or supplemented/augmented, depending on the results of various technical and feasibility studies, a November 2006 ballot measure, and Airport Authority decisions. Even upon selection, it could take up to fifteen years before a new international airport could begin flight operations.

The state law that established the Airport authority also requires the Airport Authority serving as the Airport Land use commission (ALUC) to prepare an airport land use compatiblity plan (ALUCP) to direct the orderly growth of the airport over a twenty-year horizon, and to minimize the public's exposure to excessive noise and safety hazards within areas around airports. Each compatibility plan addresses noise, overflight, safety, and airspace protection concerns. The ALUCP contains both countywide policies and specific policies that address each of the sixteen airports within San Diego County, including the four within the city limits and three others with influence areas that overlap city boundaries. Airports in the city are Lindbergh Field, MCAS Miramar, Montgomery Field and Brown Field. Land use within the city is also affected by Naval Air Station-North Island, Naval Outlying Field-Imperial Beach, Gillespie Field, and Tijuana International Airport (not regulated by the ALUC). The types of airport compatible land uses depend on the location and size of the airport, as well as the type and volume of aircraft using the facility. Though the goals for all airport-affected areas are the same, policies must be specific to each airport and each unique community plan area. Appropriate land uses around each airport will be designated in the affected community plans, to the extent that the areas are not already devoted to incompatible uses.

Since the ALUC does not have land use authority, the implementation of the ALUCP rests upon the city. State law requires the ALUC to coordinate with the city by working toward developing and adopting land use measures that are consistent with the ALUCP policies. To achieve this, the city and the ALUC must work together to strike a balance between air transportation requirements and public health, safety, and general welfare goals.

Upon adoption of the ALUCP by the Airport Land Use Commission, the city is required to submit the General Plan, specific plans, airport master plans, development regulations, and zoning ordinances to the ALUC. The ALUC will determine if they are consistent with the ALUCP. If they are determined not to be consistent, the ALUC will request the city to revise them, unless the City Council votes by a two-thirds majority at a public hearing to adopt specific findings to overrule the ALUC determination. The same applies to future amendments to the General Plan, development regulations, and zoning ordinances.

The city's Airport Environs Overlay Zone (Municipal Code section 132.0301) helps implement the compatibility plans by providing supplemental regulations for property surrounding the aviation facilities, along with a mechanism to provide noise and safety information to affected property owners. In addition, the city's Airport Approach Overlay Zone (Municipal Code section 132.0201) applies to property surrounding the Lindberg Field approach path. The Federal Aviation Administration (FAA) also reviews development plans to determine if a proposed structure would be an obstruction to air navigation, and, if so, whether the obstruction would create a hazard.

Airport access is an important component of airport planning. Given the increasing demand for air travel, the city must continue to work with the Airport Authority and SANDAG to provide and expand multi-modal transportation facilities and roads serving Lindberg Field and other airports.

Policies

ME-I.1. Consider the Airport Land Use Compatibility Plans in the General Plan and affected community plans.

ME-I.2. Provide a mechanism whereby property owners receive information regarding the noise impacts and safety hazards associated with their property's proximity to aircraft operations.

ME-I.3. Implement measures to minimize aviation-related impacts to noise-sensitive land uses including residential and mixed-uses.

ME-I.4. Implement land use plans and development regulations to address future uses that may constrain airport operations and to protect public safety.

ME-I.5. Continue to provide general aviation facilities at Montgomery Field and Brown Field in accordance with their respective master plans in order to accommodate forecasted general aviation demand within the limitations of federal, state, and local funding, user fees and environmental constraints.

ME-I.6. Support improved multi-modal connections and access to the existing and future terminal areas of SDIA and to any other identified future commercial airport site.

ME-I.7. Support and assist in the planning and development of a long-range solution for a commercial airport with the capacity to accommodate forecasted air passenger and cargo demands.

ME-I.8. Evaluate proposed airports and heliports on the basis of demonstrated need; effect on air safety; and their noise, safety, and other impacts on surrounding land uses.

ME-I.9. Develop public/private partnerships to improve the region's access to domestic and international markets by accommodating future passenger and cargo capacity.

ME-I.10. Develop land use policies consistent with state and federal regulations/ guidelines and designate land uses that balance public health and safety with equally important public welfare goals such as the provision of: a range of housing opportunities, walkable communities, transit and pedestrian friendly design, civic space and employment opportunities in airport affected areas.

ME-I.11. Airport Operations.

Recognizing that maintenance, and the potential expansion, of airport operations at individual airports may preclude the designation of certain new land uses that are not compatible with the ALUCP, airport operators are encouraged to make all efforts to:

a. Ensure safe operations and to minimize noise and safety concerns to the extent practicable
b. Purchase sufficient land within the vicinity of the air carrier airport; and/or
c. Obtain avigation easements from affected property owners.

ME-I.12. In determining when it may be appropriate of override a decision of the ALUC, the City Council should determine if proposed amendment is consistent with the General Plan, community plan, specific plan, development regulations, or zoning ordinance with the overall goals of the General Plan, especially as delineated in the City of Villages growth and development strategy.

Figure ME-3
Airport Locations

J. Passenger Rail

Goal

- Improved rail travel opportunities

Discussion

The Coaster, "Coast Rail Express" and Amtrack trains operate along our coastal rail corridor and serve the City of San Diego. Coaster stations in the city are Sorrento Valley, Old Town, and the Santa Fe Depot in downtown San Diego. Service is also planned for the Nobel Drive Coaster Station.

Amtrak passenger rail service along the coastal rail corridor begins at the Santa Fe Depot and continues to stops in North San Diego County, Orange County, Los Angeles, and north to San Luis Obispo. Referred to as Amtrak's Pacific Surfliner corridor, it is the second most heavily traveled intercity passenger rail corridor in the nation, carrying more than two million passengers per year. Commuter rail and freight services also share the predominately single-track railway along coastal San Diego County (see Goods Movement/Freight section).

The Regional Transportation Plan identifies projects that would provide improved rail service and performance, and increase the capacity for commuter and intercity passenger rail services. Specific projects include: double tracking of the coastal rail corridor, curve-straightening via a tunnel under University City (including a new station), partial or full grade separation between State Route 52 and downtown San Diego, and service frequency improvements. Amtrak's long range plan is to provide hourly service between San Diego and Los Angeles.

The California High-Speed Rail Authority was created by the state Legislature in 1996 to develop a plan for the construction, operation and financing of a statewide, intercity, high-speed passenger rail system. The draft statewide environmental document describes a proposed 700-mile-long high-speed train system capable of speeds in excess of 200 miles per hour on dedicated, fully separated tracks serving the major metropolitan centers of California. This document identifies two corridors that would connect San Diego to Los Angeles and Northern California. One is via Orange County (along the Los Angeles - San Diego - San Luis Obispo "LOSSAN" Corridor) with high-speed service to Orange County, and conventional improvements to the coastal rail corridor south of Orange County. The other identified high-speed rail corridor runs from Los Angeles to San Diego via the Inland Empire (along I-15).

The proposed network would provide intercity connections that would be competitive with air and auto travel options. For example, express travel times between San

Diego and Los Angeles would be just over one hour and between Los Angeles and San Francisco would be just under two hours and 30 minutes. Commuter, intercity and high-speed passenger rail services can help reduce demand on our freeways and at our airports by providing alternatives to auto and air travel for intercity trips.

Policies

ME-J.1. Support commuter, intercity and high-speed passenger rail transportation projects that will provide travel options and improve the quality of service for intercity travel while minimizing impacts to communities.

ME-J.2. Support intermodal stations to facilitate transfer of passengers between modes and expand the convenience, range, and usefulness of transportation systems implemented in the city.

ME-J.3. Locate future stations adjacent to villages with high density employment or residential uses.

ME-J.4. Ensure that stations are well designed, contain amenities and are integrated into the community.

ME-J.5. Support increased commuter and intercity passenger rail services along both the coastal rail corridor and future I-15 high-speed rail corridor.

ME-J.6. Support a stable and long-term state and federal rail funding policy for intercity passenger services.

K. Goods Movement/Freight

Goal

- Safe and efficient movement of goods with minimum negative impacts

Discussion

Virtually all of San Diego's goods are imported from outside the region. Additionally, San Diego's location in the far southwestern United States, historically at the "end-of-the-line," makes it even more significant for local, national, and international trade. The movement of goods in San Diego and the region is supported by an integrated intermodal freight infrastructure consisting of the use of trucks/roadways, rail/railroads, ports and maritime shipping, and air cargo/airports. We must optimize commercial goods movement to maintain and improve the San Diego region's economic competitiveness while minimizing potential negative impacts to our transportation system and neighborhoods. Figure ME-4 shows the location of major facilities that make up the metropolitan region's intermodal goods movement/freight system.

The overall intermodal freight system and infrastructure is owned and operated by public agencies and private businesses. While the system is intended to support the goods movement/freight requirements for the City of San Diego and the San Diego region, it is important to note that this infrastructure also supports San Diego's role in the nation's supply chain and the business of trade. As a result, the majority of San Diego freight passes through the city and region to other areas of the state, the nation, and to international destinations.

- **Trucks**: The majority of goods in the San Diego region are transported by trucks using state and interstate highways with access provided by regional arterials and local streets. In the San Diego region, Interstates 5 and 15 are the two major north-south corridors that accommodate significant volumes of commercial trucks, while I-8, State Routes 94/125, and SR 905/Otay Mesa Road are the region's primary east-west truck corridors. These north-south and east-west corridors serve both domestic cargo as well as international trade. The city's arterials and major streets also carry significant volumes of trucks that serve local retail and commercial, as well as local industry and businesses needs. City streets also allow for the transition of freight from the marine and air terminals to the major state and interstate corridors.

- **Freight Rail Service**: Freight rail service is operated by the Burlington Northern Santa Fe (BNSF) Railroad along the coastal rail corridor from San Diego to Los Angeles and points north and east. Freight service within this corridor is focused in the areas of auto transload service, lumber, fly ash, cement, and local freight service (east to Miramar and Escondido).

- **Freight** is also transported between San Diego and Arizona via the San Diego & Arizona Eastern (SD&AE) railway (this service is operated by the Carrizo Gorge Railway). Rail traffic must pass through northern Mexico along this route before reaching Arizona. Freight movements in recent years have included agriculture and food products, steel and aluminum, liquefied petroleum gas, lumber, paper and building materials, transformers, generators and heavy machinery.

- **Maritime**: Activities in San Diego Bay and the adjoining tidelands are administered by the San Diego Unified Port District. Existing commercial shipping facilities include fresh fruit cargo facilities at the Tenth Avenue Marine Terminal, and lumber and automobile import and export facilities at the National City Marine Terminal. It should be noted that there are larger, more competitive, and better connected regional ports of Los Angeles to the north and Ensenada to the south. Further increases in trade and shipping in San Diego will necessitate further capital investment in ship and cargo facilities and improved rail and highway transfer facilities. Further expansion of the cruise terminal offers potential for even greater use as both a port-of-call, and a base for cruise ship operations.

- **Air Cargo**: Most air cargo in the San Diego region is handled through San Diego International Airport, with a small percentage handled at general aviation airports. Airport recommendations are found in the Airports section of the element.

The following policy recommendations, together with the recommendations in the Economic Prosperity Element, support the needs of existing and expanding businesses and industries while protecting general mobility and neighborhood quality of life.

Policies

ME-K.1. Support infrastructure improvements and use of emerging technologies that will facilitate the clearance, timely movement, and security of domestic and international trade, including facilities for the efficient intermodal transfer of goods between truck, rail, marine, and air transportation modes.

ME-K.2. Preserve property for future planned roadways, railroads, marine terminals, air terminals, and other needed transportation facilities.

ME-K.3. Implement measures to minimize the impacts of truck traffic, deliveries, and staging in residential and mixed-use neighborhoods. These measures may include restricting hours of operation and establishing truck traffic and parking prohibitions.

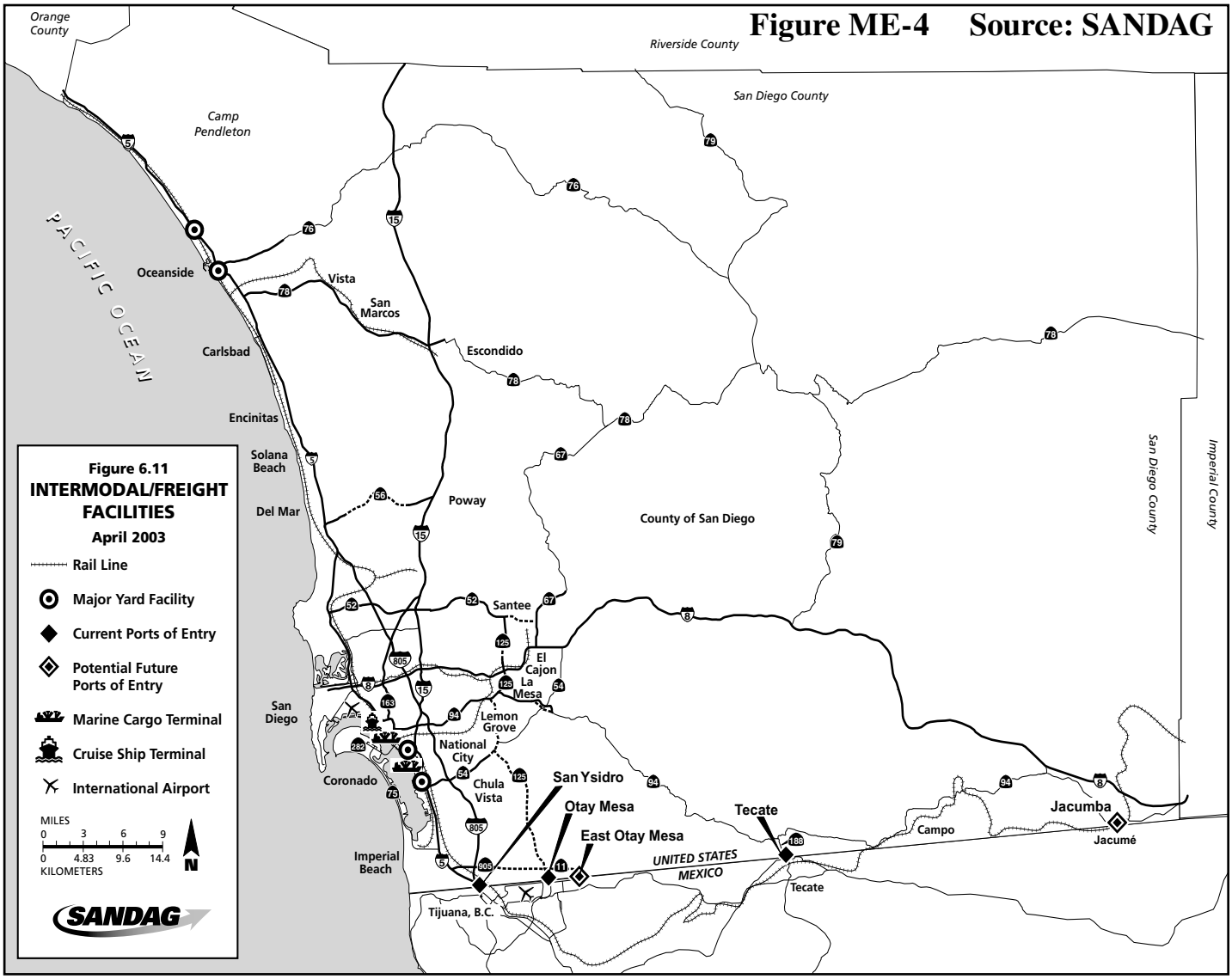
ME-K.4. Support alternatives to transporting hazardous materials by truck.

ME-K.5. Support improvement of inter-regional freight service between San Diego and the rest of the continent, through implementation of the Mobility 2030 Plan.

ME-K.6. Support preparation and implementation of plans, in cooperation with railroad operators and owners, for providing freight service to major industrial areas in San Diego.

ME-K.7. Continue to collaborate with the San Diego Unified Port District and SANDAG to implement the Port Master Plan and Port Compass Strategic Plan. Seek to maximize potential economic and mobility benefits to the San Diego region.

Figure ME-4 Source: SANDAG



L. Environmental Quality

Goals

- A transportation system designed and operated to minimize environmental harm

- Reduced pollution resulting from motor vehicles

Discussion

Driving offers many benefits to our quality of life but is very damaging to the environment. Fossil fuel consumption and the resulting pollution has local, national, and world-wide implications related to public health, climate change, and air and water quality, as well as national security (see also the Conservation Element). Diesel fuel emissions are especially harmful to public health, as it contains particulate matter that is a known toxic air contaminant. The noise impact from transportation is another growing problem. As a nation we have made great technological progress in engineering cleaner cars, but the increase in the number of miles traveled per capita, and the popularity of large, noisy, low fuel efficiency vehicles means that our environmental quality is at risk. From a land use perspective, roadways link us together, but when poorly planned they also can divide neighborhoods, encourage sprawl, and damage habitat areas.

Many environmental policies and solutions are best addressed at the state and federal levels of government, but there are also many policies the City of San Diego can adopt or influence at the local level. The following recommendations supplement the Conservation Element with transportation-based policies designed to improve environmental quality and sustainability. Policies elsewhere in the Mobility Element that aim to reduce driving trips also contribute to environmental goals. In addition, the Noise Element contains policies related to the noise impacts from transportation.

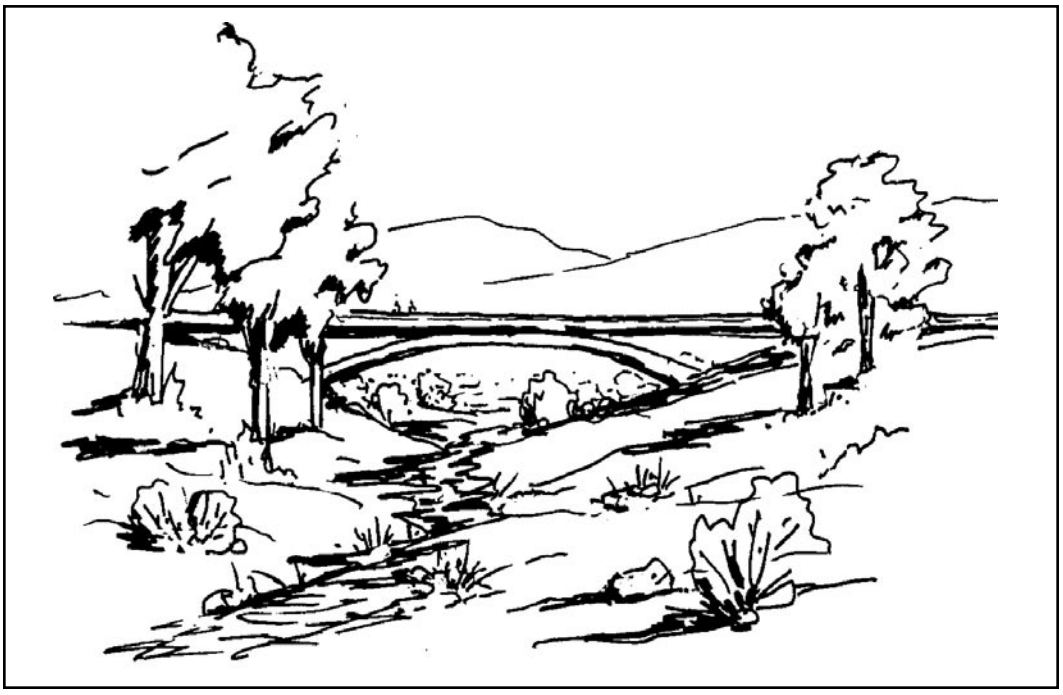
Policies

ME-L.1. Design roadways to minimize adverse impacts to sensitive habitat, and water and air quality. Strive for road alignments that minimize impacts. Consider reducing roadway width, softscaping sides, and providing wildlife crossings among other measures.

ME-L.2. As a part of all types of transportation and development projects, incorporate the infrastructure, amenities, and operating plans needed to make walking, bicycling, transit use and ridesharing safe, attractive and convenient transportation options.

ME-L.3. Credit development project contributions to a pedestrian and transit-friendly urban form as partial mitigation for localized traffic impacts.

ME-L.4. Adjust standard vehicle trip generation rates to reflect mode shift potential attributed to transit, bicycle, and pedestrian trips as appropriate for developments that are: within walking distance of high quality transit (about a 1/4-mile), are pedestrian-oriented and mixed-use, or include an approved Transportation Demand Management (TDM) program.



Design Roadways to minimize environmental impacts.
Source: Pacific Highlands Ranch Subarea Plan

ME-L.5. Focus, and if necessary redirect transportation funds to projects that are consistent with the city's air quality, water quality, energy, and land use goals and policies.

ME-L.6. Support programs and legislation to improve motor vehicle fuel efficiency and emission performance as a part of the city's strategy to conserve energy and improve air quality (see also the Conservation Element).

ME- L.7 Consider the health risks associated with diesel particulate matter in residential and school siting decisions.

ME-L.8. Continue to form partnerships with environmental, transportation, and public health organizations to increase public awareness of the interrelationships among automobile dependence, environmental quality, public health, focused density, and transit use.

M. Financing Policies

Goal

- Assured revenues to cover the costs of constructing, operating, and maintaining transportation facilities and providing needed transportation services

Discussion

Transportation funding sources and strategies must be in place to assure that needed transportation facilities will be provided in a manner that supports General Plan policies. Because jobs, homes, and stores are linked by transportation corridors that cross city boundaries, major transportation funding decisions occur at the regional, rather than the city level. In the San Diego region, SANDAG, with participation from all 18 cities and the county, is mandated to make those decisions.

The 2030 RTP, prepared by SANDAG recommends implementation of a $42 billion transportation improvement plan that would be funded by a "Reasonably Expected Revenue" scenario. Local, state, and federal revenue sources are identified, and actions are recommended to obtain the revenues necessary to implement the RTP-planned improvements. The "Reasonably Expected Revenue" scenario includes TransNet revenues. TransNet is the region's half-cent local sales tax for transportation, originally approved by the voters in 1987, and reauthorized in 2004 to continue through 2048. More than half of the future expenditures identified in the RTP are earmarked for capital expenditures. The remainder is set aside for operating and maintenance costs. **Click here for the most current listing of revenue sources and estimated transportation project costs.**

How projects are prioritized to receive transportation funding is addressed in the SANDAG Regional Comprehensive Plan (RCP). The RCP recommends that all transportation projects be evaluated based upon a uniform set of criteria, and that those criteria should address the following seven target areas: 1) implement the adopted RTP 2030 Mobility Network in an efficient and cost-effective manner; 2) enhance transportation systems by improving connectivity between inter-related modes of transportation; 3) provide adequate funding to meet both the capital, and operational and maintenance needs of our transportation systems; 4) facilitate coordination through subregional planning among jurisdictions where corridors cross jurisdictional boundaries; 5) consider regional and local mobility objectives in planning and approving new land uses; 6) design development to reduce auto dependency; and 7) align the timing of related transportation and land use development.

The City of San Diego exercises additional discretion in transportation financing through allocation of locally controlled funds for the maintenance, management, and operation of streets and the management of Capital Improvements Program

(CIP), Facilities Benefit Assessments (FBA), and Development Impact Fee (DIF) programs (see the Public Facilities Element for more discussion on these programs). In addition, the city competes for grant funds, such as Safe Routes to Schools and streetscape improvement grants. At the community level, some communities have initiated self-assessments, such as Landscape Maintenance Districts, to improve the appearance of local streets.

The funding of necessary improvements to our transportation system is a major challenge. The reauthorization of TransNet and the implementation of the RTP will result in a more extensive and multi-modal regional transportation system. However, there are still many desired projects that are unfunded, such as neighborhood-based (circulators and shuttles) transit service. The policies below are designed to position San Diego to compete for transportation funding, to pursue new funding sources, to maximize the use of every dollar obtained, and to guide investment to best meet General Plan goals.

Policies

ME-M.1. Work with SANDAG to make smart growth planning and implementation a basic prerequisite to receiving regional transportation funding.

ME-M.2. Work with SANDAG to prioritize expenditures of regional transportation and enhancement funds in smart growth areas where the greatest potential numbers of people can attain mobility benefits.

ME-M.3. Work with SANDAG to continue to increase the share of regional funding (over the 2030 RTP levels) allocated to pedestrian, bicycle, and transportation systems management projects.

ME-M.4. Take a leadership role to develop broad-based local funding sources for transportation infrastructure and operations improvements.

ME-M.5. Work with elected officials at all levels of government to increase the amount of federal and state transportation funds that are allocated to the San Diego region, and where possible, to increase local flexibility and discretion in the use of such funds.

ME-M.6. Use local funds strategically to leverage state and federal funds.

ME-M.7. Support legislation to increase financing for transportation improvements that are linked to smart growth policies.

ME-M.8. Support legislation to increase transportation user and benefit fees, including congestion pricing programs.

ME-M.9. Aggressively pursue all potential sources of funding, including private sector participation or user fees to finance the construction, operation, and maintenance of needed transportation facilities and services.

ME-M.10. Require the dedication and/or improvement of transportation facilities in conjunction with the subdivision of land, negotiated development agreements, discretionary permits, and facilities financing plans.

ME-M.11. Establish community-based phasing thresholds that link development potential to the availability of transportation facilities (including transit, bicycle, and pedestrian facilities as well as streets) and services.

ME-M.12 Support the implementation of financing mechanisms described in Policy PF-C.1.

ME-M.13 Where the City of San Diego has discretion over the use of transportation funds, prioritize projects based on population served, congestion relief, implementation of Walkable Communities and Environmental Justice goals, and overall citywide facilities priority guidelines described in PF-A.1