Mobility Element

Mobility Element

Purpose

To improve mobility through the development and operation of a balanced, ~~multi-modal~~well-connected, safe, sustainable, and equitable multimodal transportation ~~network~~system for people to safely, conveniently, and enjoyably move around.

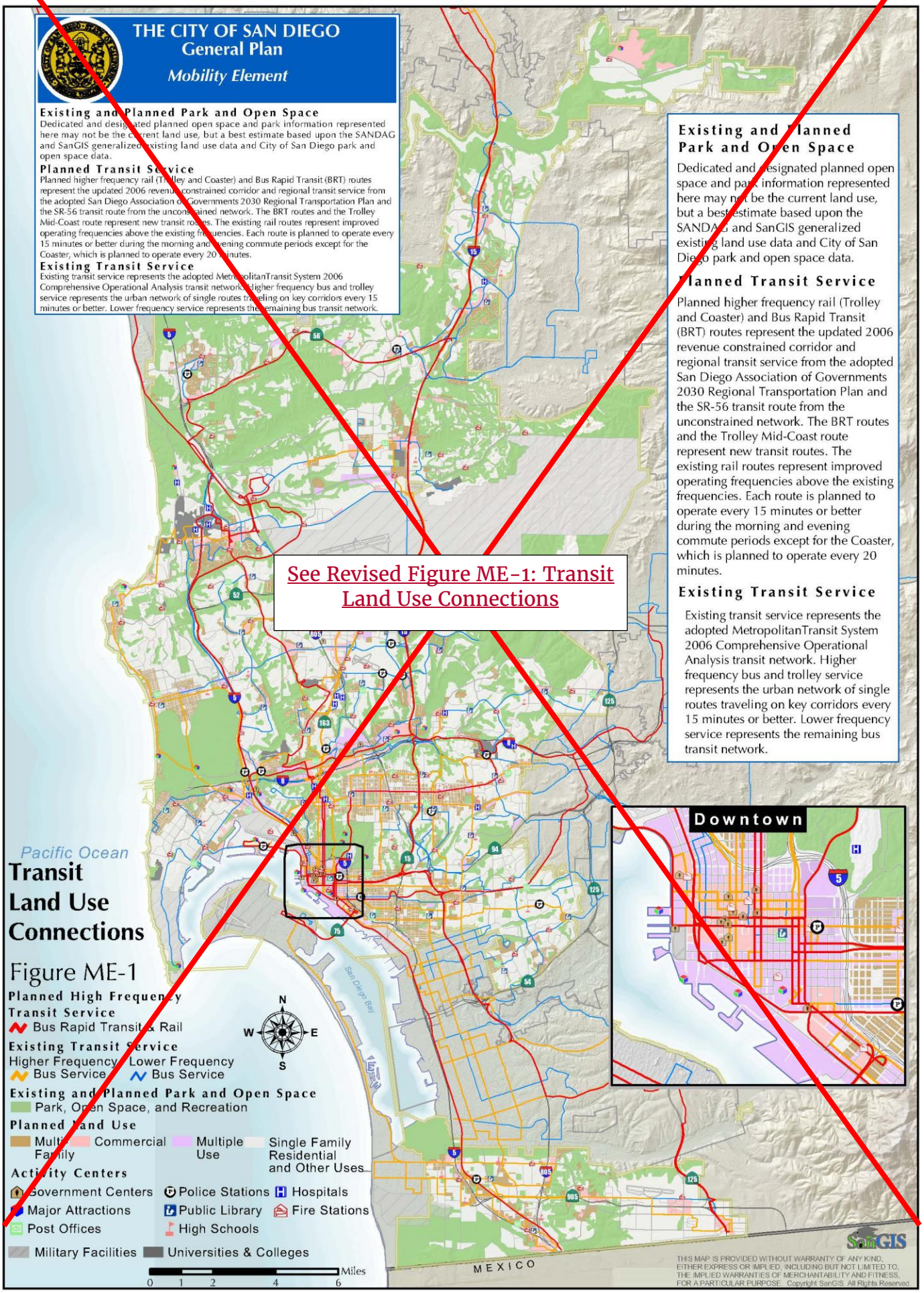
Introduction

An overall goal of the Mobility Element is to ~~further the attainment of a~~ achieve a balanced, ~~multi-modal~~multimodal transportation ~~network~~system that ~~gets us where we want~~allows people to ~~go~~move around safely, conveniently, and ~~minimizes~~enjoyably while minimizing environmental and neighborhood impacts. ~~A~~A balanced ~~network~~system is one in which each mode, or type of transportation, ~~is able to contribute~~contributes to an efficient service network ~~of services~~ meeting varied user needs. ~~For example, the element~~The Mobility Element contains policies that ~~will~~ help walking/rolling, bicycling, and shared mobility devices become more viable for short trips, and for transit to ~~more efficiently~~ link highly frequented destinations~~, while still preserving auto-mobility. In addition to addressing walking,~~ more efficiently. It also includes a vision for improving existing streets~~, and transit, the~~ consistent with Complete Streets planning principles and concepts that will result in dynamic, vibrant corridors that support all modes of travel. The Element also includes policies related to~~:~~ regional collaboration, ~~bicycling,~~ parking, goods movement, and other components of our transportation system. ~~Taken together, these~~ These policies advance a strategy for ~~congestion relief and~~ increased ~~transportation~~ mobility choices in a manner that strengthens the City of Villages land use vision ~~and~~, helps achieve a clean and sustainable environment, and provides equitable access, particularly focusing on improving access to areas with the greatest needs.

~~*Mi Pueblo Pilot Village - Estudio Cruz*~~

~~Hold For Figure ME-1. Transit~~Transportation and land use policies can help to address historic inequities by prioritizing access to social and economic opportunities, such as jobs, affordable homes, healthy food, education, healthcare, and recreation, particularly in areas with the greatest needs. A transportation system that includes affordable multimodal options that are accessible and easy to use will connect people to more resources. The engagement with Communities of Concern during the planning process will help to understand where transportation disparities exist and identify ways to address those disparities to attain equity.

A complete mobility system concept from the Kearny Mesa Community Plan with options for people to walk, ride a bicycle, and take transit. This approach supports the growth of the community and enhances its livability.


THE CITY OF SAN DIEGO
General Plan
Mobility Element
Existing and Planned Park and 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.
Planned Transit Service
Planned higher frequency rail (Trolley and Coaster) and Bus Rapid Transit (BRT) routes represent the updated 2006 revenue constrained corridor and regional transit service from the adopted San Diego Association of Governments 2030 Regional Transportation Plan and the SR-56 transit route from the unconstrained network. The BRT routes and the Trolley Mid-Coast route represent new transit routes. The existing rail routes represent improved operating frequencies above the existing frequencies. Each route is planned to operate every 15 minutes or better during the morning and evening commute periods except for the Coaster, which is planned to operate every 20 minutes.
Existing Transit Service
Existing transit service represents the adopted MetropolitanTransit System 2006 Comprehensive Operational Analysis transit network. Higher frequency bus and trolley service represents the urban network of single routes traveling on key corridors every 15 minutes or better. Lower frequency service represents the remaining bus transit network.
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See Revised Figure ME-1: Transit Land Use Connections
Downtown
Pacific Ocean
Transit Land Use Connections
Figure ME-1
Planned High Frequency Transit Service
Bus Rapid Transit & Rail
Existing Transit Service
Higher Frequency Bus Service
Lower Frequency Bus Service
Existing and Planned Park and Open Space
Park, Open Space, and Recreation
Planned Land Use
Multi-Family
Commercial
Multiple Use
Single Family Residential and Other Uses
Activity Centers
Government Centers
Police Stations
Hospitals
Major Attractions
Public Library
Fire Stations
Post Offices
High Schools
Military Facilities
Universities & Colleges
N
W
E
S
Miles
0 1 2 4 6
MEXICO
San Diego Bay
SanGIS
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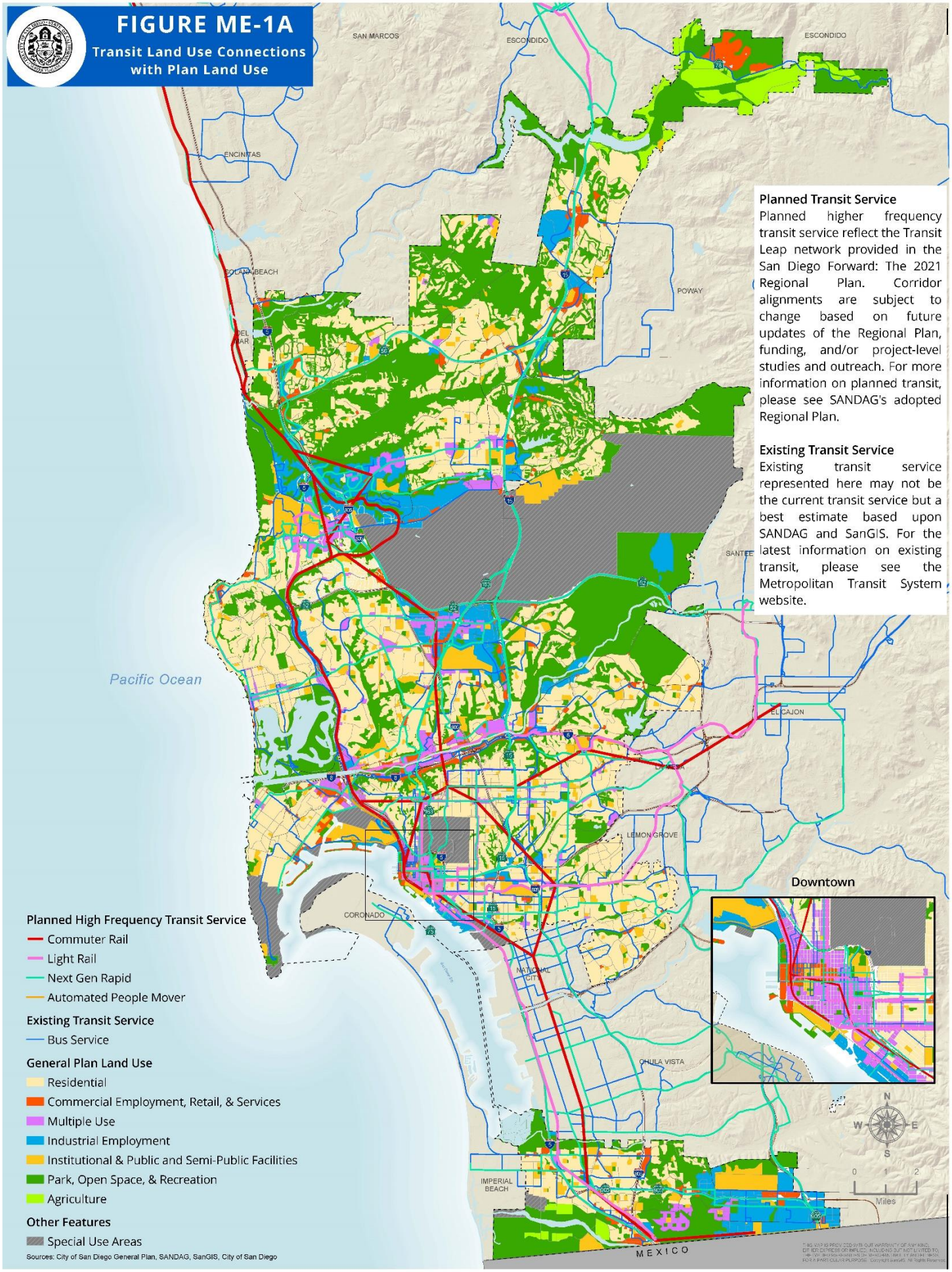
FIGURE ME-1A

Transit Land Use Connections with Plan Land Use



Planned Transit Service

Planned higher frequency transit service reflect the Transit Leap network provided in the San Diego Forward: The 2021 Regional Plan. Corridor alignments are subject to change based on future updates of the Regional Plan, funding, and/or project-level studies and outreach. For more information on planned transit, please see SANDAG's adopted Regional Plan.

Existing Transit Service

Existing transit service represented here may not be the current transit service but a best estimate based upon SANDAG and SanGIS. For the latest information on existing transit, please see the Metropolitan Transit System website.

Planned High Frequency Transit Service

- Commuter Rail
- Light Rail
- Next Gen Rapid
- Automated People Mover

Existing Transit Service

- Bus Service

General Plan Land Use

- Residential
- Commercial Employment, Retail, & Services
- Multiple Use
- Industrial Employment
- Institutional & Public and Semi-Public Facilities
- Park, Open Space, & Recreation
- Agriculture

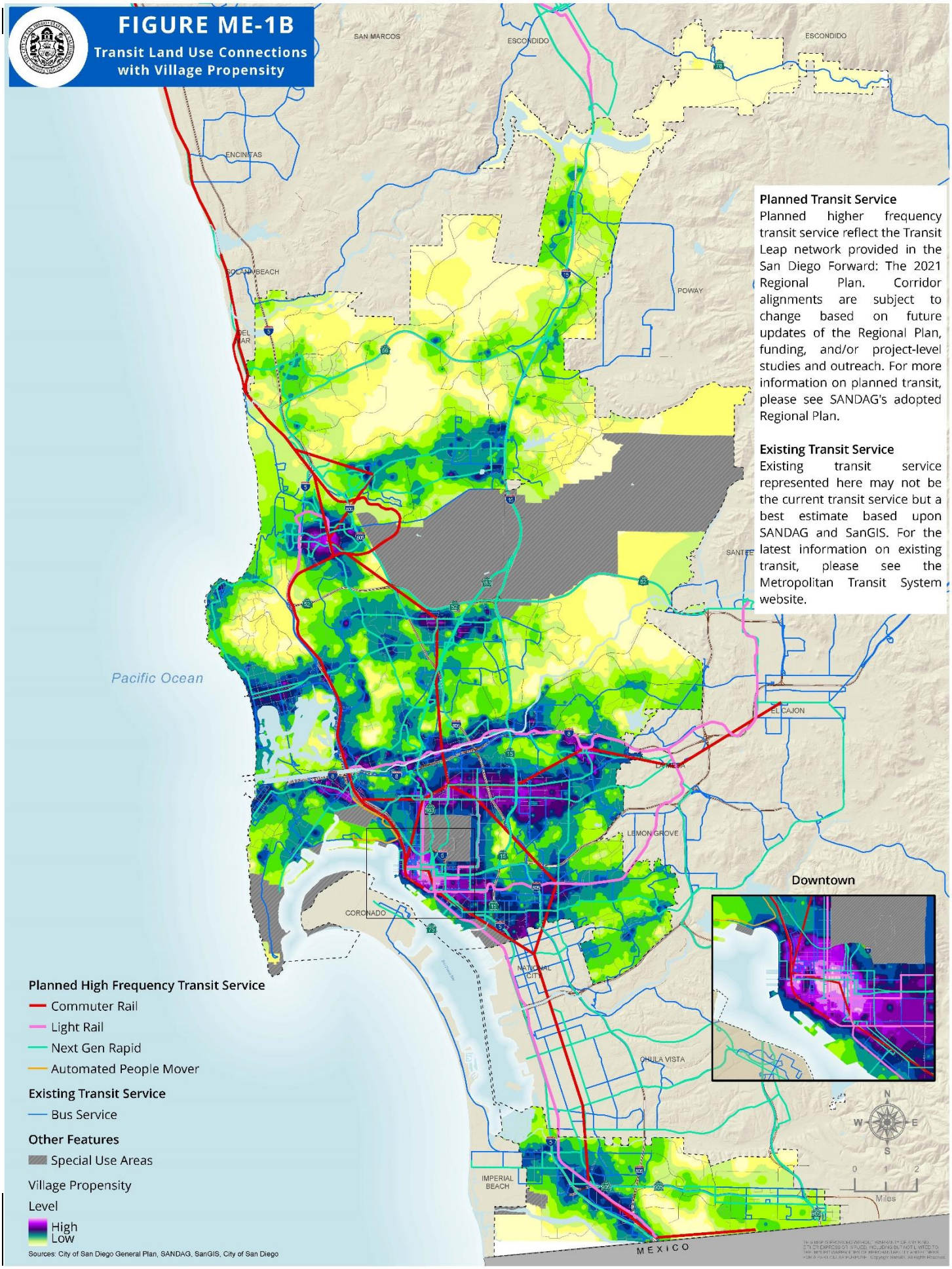
Other Features

- Special Use Areas

Sources: City of San Diego General Plan, SANDAG, SanGIS, City of San Diego

FIGURE ME-1B

Transit Land Use Connections with Village Propensity



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Existing Transit Service

Existing transit service represented here may not be the current transit service but a best estimate based upon SANDAG and SanGIS. For the latest information on existing transit, please see the Metropolitan Transit System website.

Planned High Frequency Transit Service

- Commuter Rail
- Light Rail
- Next Gen Rapid
- Automated People Mover

Existing Transit Service

- Bus Service

Other Features

- Special Use Areas

Village Propensity Level

High
Low

Sources: City of San Diego General Plan, SANDAG, SanGIS, City of San Diego

Mobility of People

Mobility is how people get around. It includes people who walk, people with disabilities using wheelchairs or other assistive devices, people who bike, people who ride transit, and people who drive cars. San Diegans' quality of life is directly tied to the transportation system and a critical measure of mobility is the availability of choices and accessibility. People should have the opportunity to access good jobs, healthcare, education, social services, recreation, and all the unique features San Diego has to offer regardless of their mode choice, location, age, ability, or income. Starting with the construction of freeways, a disproportionate amount of the City's transportation planning efforts focused on infrastructure for automobiles resulting in a system that does not fully address the mobility needs of all users. By prioritizing moving people over cars, investing in high-quality multimodal infrastructure that safely and efficiently moves people of all ages and abilities, as well as incentivizing affordable, reliable alternative modes, the City will not only improve mobility and livability for its community members and visitors alike, but will also support a healthier, more vibrant future.

Prioritizing Sustainable Modes

Shifting from a car-centric transportation system begins with establishing a roadway mobility priority system (also referred to as mobility loading prioritization). This system prioritizes the safety of the most vulnerable users because they are most at risk. People walking/rolling are the top priority on every street, followed by people who ride a bike and use micromobility, then transit riders. The priority system concludes with people using shared, commercial, and personal electric or alternative fuel vehicles (both for personal trips or for the delivery of goods). As these priority modes have historically encountered underinvestment, rebalancing the City's transportation network to better allocate roadway space, amenities, and connections for these modes will address the needs of their users and make them a more convenient choice for how people move around the City.

Relationship Between Land Use ~~*Connections*~~*and Transportation Planning*

The Mobility Element, and Land Use ~~and Community Planning~~ Element of the General Plan are closely linked. ~~-~~The Land Use ~~and Community Planning~~ Element identifies existing ~~uses~~ and planned land uses, and the Mobility Element identifies the proposed transportation ~~network~~system and strategies ~~which have been~~ designed to meet the future ~~transportation~~ mobility needs generated by ~~the~~ planned

~~land uses.~~ new growth. Previous land use decisions emphasized suburban development resulting in longer commutes between homes and jobs. Creating a sustainable framework for growth to support current and future San Diegans requires close coordination between land use changes and transportation planning.

The City of Villages strategy calls for increasing homes and jobs in village areas that are connected to the regional transit system and future transit investments. Homes and jobs adjacent to high-frequency transit helps make transit convenient for more people and allows for a more cost-effective expansion of transit services. Transit-oriented development involves more than just building homes near transit; it is also a mix of land uses that provide opportunities for people to live near their jobs, and helps support the use of neighborhood shops and services. Convenient access to places and resources should also be complemented with walkable/rollable and bikeable public spaces that reduce the need to drive and are supported by a balanced transportation system. Such a growth strategy provides a sustainable framework that enables San Diegans to accomplish everyday tasks locally and more efficiently further improving the quality of life in the City.

The integration of transit and land use planning is illustrated by the Transit/Land Use Connections Map (see Figure ME-~~1). This map identifies~~1B). This map shows areas where future growth could occur and be supported by convenient and affordable opportunities to walk/roll, bike, and ride transit to conduct daily needs. Areas shown in purple and blue demonstrate the greatest likelihood of supporting walking/rolling, biking, and transit usage compared to driving. Most of these areas are already existing and community plan-designated activity centers, commercial centers and corridors, and ~~multifamily~~multi-home residential areas that are along ~~the region's~~ higher frequency existing and planned transit ~~services~~.

~~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 adjacent to transit stops and stations helps make transit convenient for more people, and allows for a more cost-effective expansion of transit services. Housing in mixed-use commercial areas provides opportunities for people to live near their place of work, and helps support the use of neighborhood shops and services. As such, the City of Villages land use pattern is a transportation, as well as a land use strategy.~~

Communities also benefit from ~~the village~~cohesive transportation/land use ~~strategy as a result~~planning because of the overall increase of transit service, street, and freeway

improvements, increased accessibility to regional employment areas, citywide improvements to foster walking/rolling and bicycling, and citywide ~~multi-modal~~multimodal transportation improvements in conjunction with development. In recognition of the diversity of San Diego's communities and the range of transportation issues that exist within them, the Mobility Element contains several "toolboxes" ~~which~~that illustrate the flexibility that exists and many of the options available to implement citywide policies. These toolboxes contain a variety of strategies and potential improvements that may be utilized where appropriate to develop area-specific solutions to community parking and traffic issues.

Relationship with Other Plans and Programs

The Mobility Element is part of a larger body of plans and programs that guide the development and management of our transportation system.

The Regional ~~Transportation~~ Plan ~~(RTP),~~, prepared ~~and adopted~~ by the San Diego Association of Governments (SANDAG) is the region's long-range mobility plan. ~~The RTP~~It plans ~~for~~ and identifies ~~projects for~~ multiple ~~modes of~~modal transportation ~~in order~~projects to achieve ~~a balanced~~an efficient, accessible, and sustainable regional system. ~~It~~The Regional Plan establishes the basis for state funding of local and regional transportation projects~~,~~ and is a prerequisite for federal funding. SANDAG prioritizes and allocates the expenditure of regional, state, and federal transportation funds to implement ~~RTP~~Regional Plan projects. ~~In order to meet~~ The Regional Plan complies with specific state and federal ~~congestion management requirements,~~mandates, including the ~~current RTP includes: performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-single occupancy vehicle analysis, land use impact analysis, the provision of congestion management tools, and integration with the regional transportation improvement program (RTIP). The RTIP~~requirement to develop a Sustainable Communities Strategy that achieves greenhouse gas emission reduction targets. SANDAG monitors performance of its Regional Plan every four years which is included in their Regional Performance Monitoring Report. The Regional Transportation Improvement Program, also prepared by SANDAG, identifies ~~RTP highway, arterial~~regional road, transit, and ~~bikeway~~bike infrastructure projects that are planned for implementation ~~over the next~~every five years.

~~The Mobility Element and the RTP~~The Mobility Element includes policies consistent with the Climate Action Plan. Fuel-powered vehicles are the largest source of greenhouse gas emissions and pollutants impacting our air quality. The Climate Action Plan sets a goal of net zero emissions and at least half of all trips across the City will need to shift to more sustainable, climate-friendly modes like walking/rolling, biking, or taking transit. The Mobility Element is aligned with the Climate Action Plan by planning the transportation system to support the City of Villages strategy, promoting a mobility loading priority for how streets are designed, and providing more mobility choices, which reduces overall citywide vehicular travel (vehicle miles traveled), and therefore greenhouse gas emissions.

The Pedestrian and Bicycle Master Plans build off the goals and policies of the Mobility Element to provide a framework for planning pedestrian and bicycle improvements respectively, as well as to provide specific guidance for achieving an ideal active transportation environment. Active transportation refers to any type of human-powered mobility that engages people in physical activity, such as walking/rolling and biking. Active transportation modes offer low-cost mobility options whether they are personally owned devices or those that are rented. When active transportation directly replaces vehicle trips and reduces vehicular travel, the use of these modes has the added benefits of decreasing the demand on the roadway system, reducing greenhouse gas emissions, as well as improving individual and public health.

The Vision Zero Strategic Plan lays out a course of action to achieve the Vision Zero goal of eliminating all traffic fatalities and severe injuries, along with other considerations to help San Diegans move around safely. The City has committed to the Vision Zero goal as safe travel remains a top priority. In particular, the City strives to improve road safety for all users, especially the most vulnerable, by implementing engineering solutions that address concerns related to traffic speeds, conflicts between different modes, and street quality.

The Mobility Master Plan is intended to efficiently implement transportation improvements, services, and programs that achieve the City's climate, equity, and mobility goals. The Mobility Master Plan will help to establish project priorities and provide detailed actionable steps. These steps will ensure that mobility initiatives improvements advance General Plan goals and policies, support implementation of the Climate Action Plan and Climate Resilient SD, prioritize transportation investments across the entire system to move everyone better, especially in areas with the greatest needs, and remove the barriers that people face when shifting to non-auto travel modes.

Relationship with Other Agencies

The Mobility Element and the Regional Plan both highlight the importance of integrating transportation and land use planning decisions, and using ~~multi-modal~~multimodal strategies to reduce congestion, increase travel choices, and decrease vehicle miles traveled. ~~-~~However, the Mobility Element more specifically plans for the ~~City of San Diego's~~City's transportation goals and needs. The City recognizes that regional planning necessitates close working relationships between City and SANDAG planners and that optimum transportation infrastructure planning must be coordinated through state agencies such as Caltrans~~. To this end, staff participation on SANDAG advisory committees is critical.~~ and the region's transit agencies. The Mobility Element~~, Section K,~~ and Public Facilities Element, ~~Section B,~~ contain policies on how to work effectively with SANDAG to help ensure that City ~~of~~

~~San Diego~~ transportation priorities are implemented.

~~The effectiveness of policies to improve mobility will be measured through monitoring of General Plan and regional plans implementation. The General Plan Monitoring Report measures progress toward reducing traffic congestion through the use of Sustainable Community Indicators that include measurements such as vehicle miles traveled per capita and number of weekday transit riders. SANDAG monitors and evaluates the performance and operation of the region's transportation system using performance indicators that are measured in an annual report.~~

A. Walkable Communities

Goals

- A city where walking/rolling is a viable travel choice, particularly for trips of less than one-half mile.
- A safe and comfortable ~~pedestrian~~ environment for people that walk/roll.
- A complete, functional, and interconnected pedestrian network, that is accessible to pedestrians of all ages and abilities.
- Greater walkability/rollability achieved through pedestrian-friendly street, site, and building design.

Discussion

The pedestrian environment affects us all whether we are walking/rolling to transit, a store, school, or simply walking/rolling from a parked car to a building. Pedestrian activity is more likely in areas where destinations are nearby. People enjoy walking/rolling in places where there are sidewalks shaded with trees, benches, lighting, interesting buildings or scenery to look at, other people outside, neighborhood destinations, and a feeling of safety. Pedestrian improvements in areas with land use~~s~~ that promote pedestrian activities can help to increase walking/rolling as a means of transportation and recreation. Land use and street design recommendations that benefit pedestrians also help promote the use of alternatives to ~~automobile~~vehicular travel and contribute to the overall quality, vitality, and sense of community ~~of our neighborhoods.~~ . Policies designed to support ~~walking and pedestrians~~people who walk/roll are also intended to benefit overall accessibility.

Walkable communities offer public health benefits by providing opportunities for people to be active as a part of their everyday lives. ~~There have been numerous studies that demonstrate a strong link between~~Improved public health ~~and the built~~has a connection to the design of the urban environment~~, with the healthiest~~. Healthy communities ~~exhibiting many of the same types of~~include features that are central to the City of Villages strategy ~~and addressed throughout the General Plan, including~~:

- Compact, mixed-use neighborhoods linked by public transportation[1] (see

[1] Lawrence F, Sallis J, Conway T, et al. *Many Pathways from Land Use to Health.* Journal of the American Planning Association. 2006;72:75-87.

Land Use and Community Planning Element~~, Section A; and ME Sections A and B~~).

- ~~Residences within close proximity of~~Homes near parks, schools, shopping, employment, and transit stops[2] (see Land Use and Community Planning Element~~, Section A;~~ and Recreation Element~~, Section D~~).

- A safe and accessible walking/rolling environment[3] ~~(see ME Section A).~~

- Neighborhood streets designed for pedestrian safety (~~Mobility Element Sections A and C and~~ see Urban Design Element ~~Section B~~);

- Neighborhoods where ~~residents~~community members have easy and convenient access to healthy food choices[4] (see Conservation Element~~, Section L~~).

~~The policies below address safety, accessibility, connectivity, and walkability goals.~~ More specific actions to implement ~~these~~the walkable policies are ~~recommended to be~~ included in ~~a citywide~~the Pedestrian Master Plan ~~(PMP).~~. The ~~PMP will identify~~Pedestrian Master Plan identifies and prioritizes pedestrian improvement projects based on technical analysis and community input. ~~The~~ ~~PMP~~Pedestrian Master Plan is ~~intended to be~~ complementary to the community plans, recognizing that not all community plans ~~currently~~ address pedestrian issues.

Policies

Safety and Accessibility

ME-A.1. Design and operate sidewalks, streets, and intersections to emphasize pedestrian safety and comfort through a variety of street design and traffic management solutions, including but not limited to those described in the Pedestrian Improvements Toolbox, Table ME-1.

[2] McGinnis M, Williams-Russo P, Knickman J. *The Case for more active policy attention to health promotion.* Health Affairs. 2002;21:78.
[3] Saelens BE, Sallis JF, Black JB, et al. *Neighborhood-based differences in physical activity: an environmental scale evaluation.* American Journal of Public Health. 2003;93:1552-8.
[4] Flournoy R, Treuhaft S. *Healthy Food, Healthy Communities: Improving Access and Opportunities Through Food Retailing*. PolicyLink 2005. Accessed at ~~http://www.policylink.org/pdfs/HealthyFoodHealthyCommunities.pdf.~~ http://www.policylink.org/pdfs/HealthyFoodHealthyCommunities.pdf.

ME-A.2. Design and implement safe pedestrian routes.

~~*Safe Routes to Schools*~~

a. Collaborate with appropriate community groups, and other interested private and public sector groups or individuals to design and implement safe pedestrian routes to schools, transit, and other highly frequented destinations. Implement needed improvements and programs such as wider and non-contiguous sidewalks, more visible pedestrian crossings, traffic enforcement, traffic calming, street and pedestrian lighting, pedestrian trails, and educating children on traffic and bicycle safety.

~~a.~~ Promote "Walking School Bus" efforts where parents or other responsible

b. adults share the responsibility of escorting children to and from school by foot or bicycle.

c. When new schools are planned, work with school districts and affected communities to locate schools so that the number of students who can walk to school safely is maximized.

d. Implement Crime Prevention Through Environmental Design ~~(CPTED)~~ measures to reduce the threat and incidence of crime in the pedestrian environment (see also Urban Design Element).

~~(see also Urban Design Element, Policy UD-A.17).~~

e. Ensure that there ~~are~~is adequate law enforcement, code enforcement, and litter and graffiti control to maintain safe and attractive neighborhoods.

f. ~~f.~~ Provide adequate levels of lighting for pedestrian safety and comfort.

ME-A.3. Engage in ~~a~~ public education campaigns to increase drivers' awareness of pedestrians and bicyclists, and to encourage more courteous driving.

ME-A.4. Make sidewalks and street crossings accessible to pedestrians of all abilities.

a. Meet or exceed all federal and state requirements, including compliance with the Americans with Disabilities Act and the California Disabled Person Act.

b. Provide special attention to the needs of children, ~~the elderly~~older adults, and people with disabilities. through the application of universal design principles.

c. Maintain pedestrian facilities to be free of damage, barriers, or trip hazards.

ME-A.5. Provide adequate sidewalk widths and clear path of travel as determined by street classification, adjoining land uses, and expected pedestrian usage.

a. Minimize obstructions and barriers that inhibit pedestrian circulation.

b. Consider pedestrian impacts when designing the width and number of driveways within a street segment.

Connectivity

ME-A.6. Work toward achieving a complete, functional, and interconnected pedestrian network.

a. ~~a.~~ Ensure ~~that~~ pedestrian facilities such as sidewalks, trails, bridges, ~~pedestrian-oriented and~~ street lighting, ramps, curb ramps, stairways, and other facilities are implemented ~~as needed~~ to support pedestrian circulation. Additional examples of pedestrian facilities are provided in the Pedestrian Improvements Toolbox, Table ME-1.

North Park pedestrian breakthroughs

1. Close gaps in the sidewalk and trail network.
2. Provide convenient pedestrian connections between land uses, including shortcuts where possible.
3. Design grading plans to provide convenient and accessible pedestrian connections from new development to adjacent uses and streets.

b. Link sidewalks, pedestrian paths, and multi-purpose trails into a continuous region-wide network where possible (see also Recreation Element~~, Policy RE-D.6~~).

c. Provide and maintain trash and recycling receptacles, and restrooms available to the public where needed.

d. Address pedestrian needs as an integral component of community ~~and~~plan updates and amendments, public facilities financing ~~plan updates and amendments~~/impact fee studies, other planning studies and programs, and the development project review process.

e. Routinely accommodate pedestrian facilities and amenities into private and public plans and projects.

Walkability

ME-A.7. Improve walkability through the pedestrian-oriented design of public and private projects in areas where higher levels of pedestrian activity are present or desired.

a. Enhance streets and other public rights-of-way with amenities such as street trees, wayfinding, benches, plazas, play spaces, public art, or other measures including, but not limited to those described in the Pedestrian Improvement Toolbox, Table ME-1 (see also Urban Design Element~~, Policy UD-A.10~~).

b. Design site plans and structures with pedestrian-oriented features (see also Urban Design Element~~, Policies UD-A.6, UD-B.4, and UD-C.6~~).

c. Encourage the use of non-contiguous sidewalk design where appropriate to help separate pedestrians from auto traffic. In some areas, contiguous sidewalks with trees planted in grates adjacent to the street may be a preferable design.

d. Enhance alleys as secure pathways to provide additional pedestrian connections.

e. Implement traffic calming measures to improve walkability in

accordance with Policy ME-C.~~5~~ 10.

f. When existing sidewalks are repaired or replaced, take care to retain sidewalk stamps and imprints that are indicators of the age of a particular neighborhood, or that contribute to the historic character of a neighborhood.

ME-A.8. Encourage a mix of uses in villages, commercial centers, transit corridors, employment centers and other areas as identified in community plans so that it is possible for a greater number of short trips to be made by walking/rolling.

ME.A.9. Continue to collaborate with regional agencies, school districts, community planning groups, community activists, public health professionals, developers, law and code enforcement officials, and others, to better realize the mobility, environmental, social, and health benefits of walkable communities.

ME-A.10. Create walkable destinations equitably across the City by increasing opportunities for placemaking and community gathering spaces, facilitating outdoor dining, and allowing for the creation of more designated space for active transportation.

ME-A.11. Support opportunities to convert undeveloped right-of-way or underutilized paper streets into trails, enhanced urban pathways, multi-use paths, or public spaces that encourage outdoor activity and active transportation (see also Recreation Element).

TABLE ME-1 Pedestrian Improvement Toolbox

Pedestrian Improvement	Description	Illustration
Accessible Pedestrian Traffic Signal	Accessible Pedestrian Traffic Signals are devices that communicate information about pedestrian timing in a nonvisual format such as audible tones, verbal messages, and/or vibrating surfaces.	  *suggested photo refresh from ADA Team
Connection Pathway for Pedestrians	Connection Pathways for Pedestrians provide a more direct access between streets that do not connect.	
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-1 Pedestrian Improvement Toolbox

Pedestrian Improvement	Description	Illustration
Curb Ramp	A Curb Ramp is a combined ramp and landing that provides an accessible transition between the high and low sides of a curb. Curb ramps provide street and sidewalk access to ~~pedestrians using wheelchairs.~~persons with disabilities using wheelchairs or other assistive devices, as well as caregivers traveling with infants and young children.	 
Education, Encouragement, and Awareness Programs	Education, Encouragement, and Awareness Programs include activities at local schools that teach children about pedestrian safety, programs that encourage walking/rolling to school or work, and traffic safety awareness campaigns.	
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.	
High-Visibility Crosswalk Striping	High Visibility Crosswalk Striping such as zebra, continental, or ladder-style markings ~~improve~~improves the visibility of crosswalks to drivers.	

TABLE ME-1 Pedestrian Improvement Toolbox

Pedestrian Improvement	Description	Illustration
Lead Pedestrian Interval at Traffic Signals	Lead Pedestrian Intervals at Traffic Signals enable pedestrians to establish themselves in the crosswalk before concurrent traffic movements get a green indication. This reduces conflicts between pedestrians and turning vehicles.	
~~Marked Crosswalks with In-Pavement Flashers~~	~~Marked Crosswalks with In-Pavement Flashers are highly visible and warn drivers that pedestrians are present in the crosswalk.~~	
On-Street Parking	On-Street Parking provides a buffer between pedestrians on the sidewalk and moving vehicles and helps people with disabilities reach their services.	
Pedestrian Countdown Display at Traffic Signals	Pedestrian Countdown Displays at Traffic Signals let pedestrians know how much crossing time remains.	

TABLE ME-1 Pedestrian Improvement Toolbox

Pedestrian Improvement	Description	Illustration
Planting Strip/Parkway Planting	A Planting Strip/Parkway Planting along the sidewalk sets the pedestrian path away from the roadway, provides a buffer between pedestrians and moving vehicles, and is aesthetically pleasing.	
Pedestrian-Scale Lighting	Pedestrian-Scale Lighting improves visibility and security.	
Pedestrian Bridge/Grade Separation	Pedestrian Bridges/Grade Separations eliminate conflicts between vehicles and pedestrians.	
Pop-out/Bulb-out/Curb Extension	Bulb-outs, also known as Pop-Outs and Curb Extensions, narrow the width of a street usually at the corners of an intersection by extending the curb into the roadway ~~at the corner(s) of a intersection~~. This reduces the speeds of right-turning vehicles, increases the visibility of pedestrians to drivers, and creates a shorter crossing distance, reducing pedestrians' exposure to moving vehicles. It will also facilitate the installation of dual curb ramps.	

TABLE ME-1 Pedestrian Improvement Toolbox

Pedestrian Improvement	Description	Illustration
Raised Crosswalks	Raised Crosswalks have vehicular ramps on both sides of the flat crosswalk surface. The vertical deflection encourages traffic to slow down while markings increase the 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.	
Rectangular Rapid Flashing Beacons	Rectangular Rapid Flashing Beacons (RRFBs) are pedestrian-actuated conspicuity enhancements used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled, marked crosswalks.	
Sidewalk	Sidewalks are walkways that parallel vehicle roadways. Contiguous sidewalks have the pedestrian path of travel immediately adjacent to the curb. Non-contiguous sidewalks have the pedestrian path of travel separated from the curb by a planting strip.	

TABLE ME-1 Pedestrian Improvement Toolbox

Pedestrian Improvement	Description	Illustration
Street Furnishings for Comfort	Street Furnishings such as benches and other amenities improve the pedestrian environment.	
Trees for Shade	Canopy Trees provide protection from the sun. When trees are located between the sidewalk and the roadway, they provide a buffer between pedestrians and moving vehicles.	
Traffic Controls	Traffic Controls such as stop signs and traffic signals assign right-of--way.	
Turn Restrictions	Turn Restrictions may be used at intersections to reduce or eliminate vehicle conflicts with pedestrians.	
Walkways	Walkways are prepared exterior routes designed to provide pedestrian accessibility. They are general pedestrian routes, including plazas, courts, and sidewalks.	

TABLE ME-1 Pedestrian Improvement Toolbox

Pedestrian Improvement	Description	Illustration
Wayfinding	Pedestrian wayfinding includes signage that guides pedestrians to activity centers and destinations within the community.	

B. Bicycling ~~Transit First~~

Goals

- A city where bicycling is a safe, convenient, and enjoyable 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 bicycle or e-bicycle, provided adequate consideration has been given to cycling infrastructure. Bicyclists need safe bikeways that are connected to activity centers, easy access to public transit, convenient and secure bicycle parking, an educated driving public, and shower and locker facilities. Bicycling is a non-polluting and sustainable form of transportation, and bicycling provides personal fitness and potential savings in transportation expenses.

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

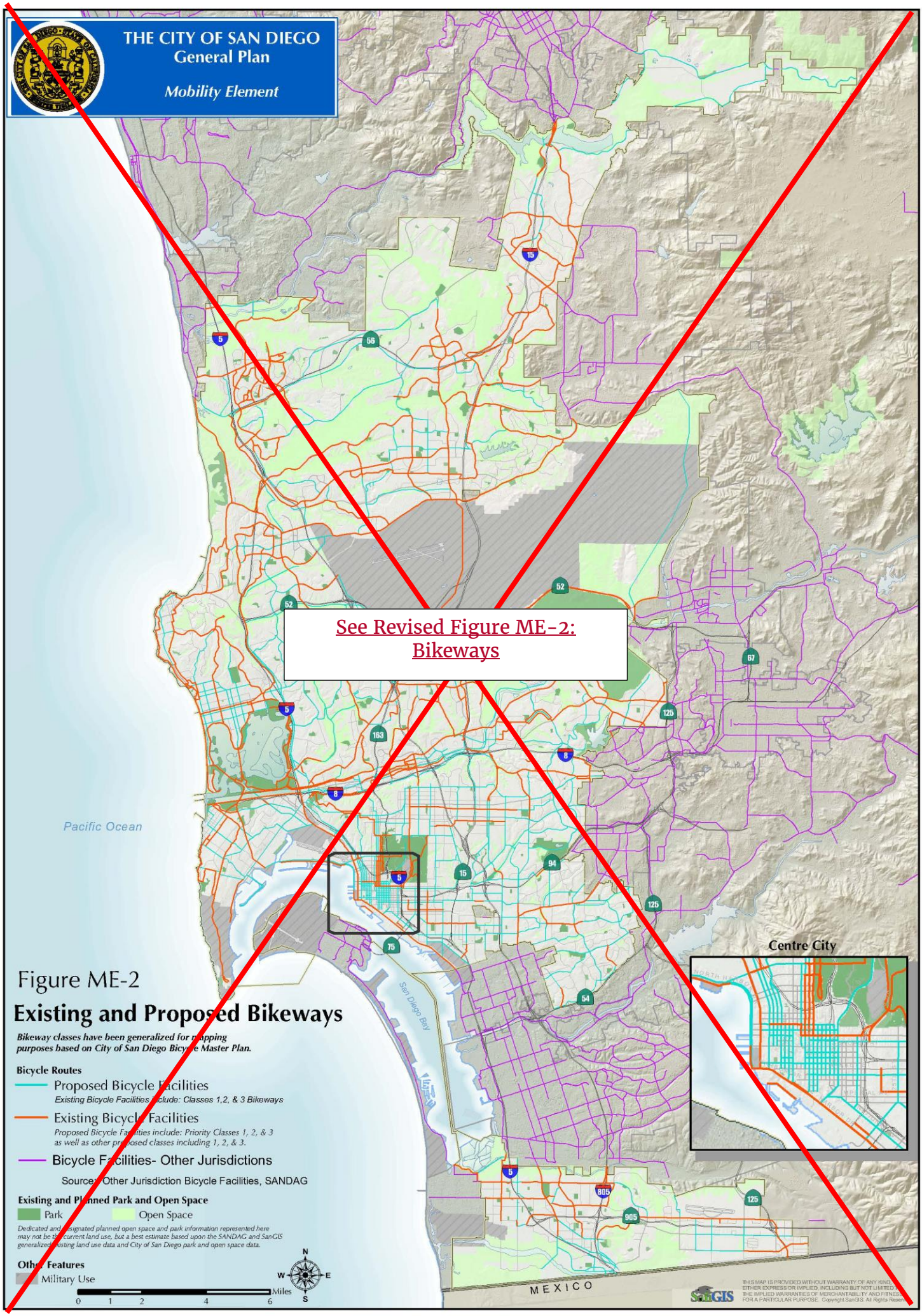
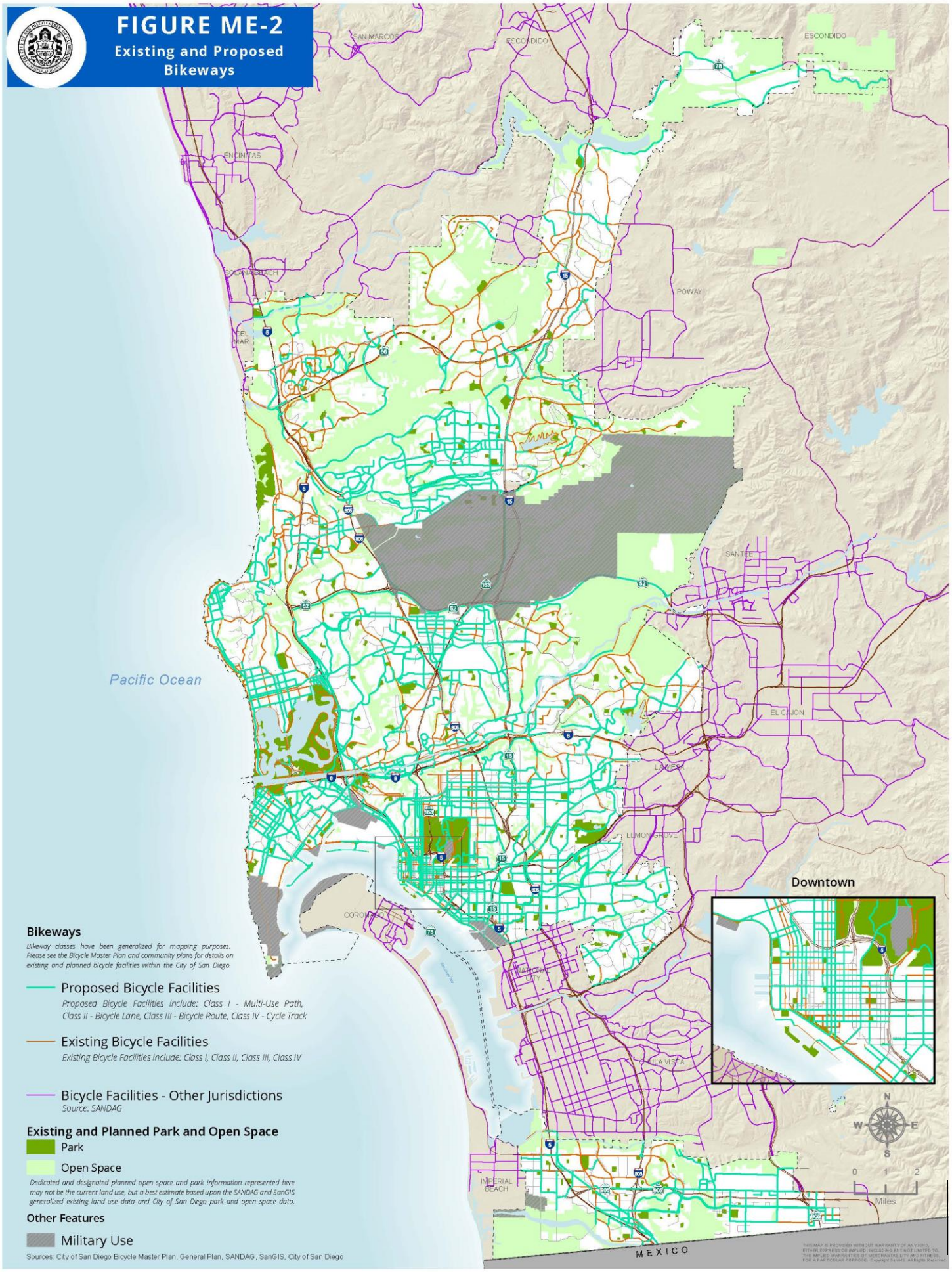

THE CITY OF SAN DIEGO
General Plan
Mobility Element
See Revised Figure ME-2: Bikeways
Pacific Ocean
Centre City
Figure ME-2
Existing and Proposed Bikeways
Bikeway classes have been generalized for mapping purposes based on City of San Diego Bicycle Master Plan.
Bicycle Routes
Proposed Bicycle Facilities
Existing Bicycle Facilities include: Classes 1,2, & 3 Bikeways
Existing Bicycle Facilities
Proposed Bicycle Facilities include: Priority Classes 1, 2, & 3 as well as other proposed classes including 1, 2, & 3.
Bicycle Facilities- Other Jurisdictions
Source: Other Jurisdiction Bicycle Facilities, SANDAG
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.
Other Features
Military Use
Miles
0 1 2 4 6
N
W E
S
San Diego Bay
MEXICO
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.

FIGURE ME-2
Existing and Proposed Bikeways



Bikeways

Bikeway classes have been generalized for mapping purposes. Please see the Bicycle Master Plan and community plans for details on existing and planned bicycle facilities within the City of San Diego.

Proposed Bicycle Facilities

Proposed Bicycle Facilities include: Class I - Multi-Use Path, Class II - Bicycle Lane, Class III - Bicycle Route, Class IV - Cycle Track

Existing Bicycle Facilities

Existing Bicycle Facilities include: Class I, Class II, Class III, Class IV

Bicycle Facilities - Other Jurisdictions

Source: SANDAG

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.

Other Features

Military Use

Sources: City of San Diego Bicycle Master Plan, General Plan, SANDAG, SanGIS, City of San Diego

Policies

ME-B.1. Implement the Bicycle Master Plan and community plan bicycle networks with a 'Class IV First' approach where appropriate and feasible.

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

b. Coordinate with other local jurisdictions, SANDAG, schools, and community organizations to review and comment on bicycle issues.

c. Reference and refine the plan, as needed, in conjunction with community plan updates and proposed regional connections.

d. Improve connectivity of the multi-use trail network, for use by bicyclists and others, as appropriate.

ME-B.2. Identify and implement a network of bikeways that serve bicyclists' needs, especially for travel to employment centers, village areas, schools, commercial districts, transit stations, and institutions.

a. Develop a bikeway network that is continuous, closes gaps in the existing system, improves safety, and serves important destinations.

b. Develop and maintain a comprehensive, integrated system of reduced stress bikeways to help encourage community members to cycle for commuting and daily needs.

c. Implement bicycle facilities based on a priority program that considers existing deficiencies, safety, commuting needs, connectivity of routes, and community input.

d. Recognize that bicyclists use all City roadways.

1. Design future roadways to accommodate bicycle travel; and

2. Upgrade existing roadways to enhance bicycle travel, where feasible.

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

a. Provide buffered or separated bikeways along major roadways where vehicle speeds and volumes are higher.

b. Provide treatments such as wayfinding and markings, colored pavement, bicycle signals, bike boxes, and protected intersections to enhance safety, comfort, and enjoyability for all levels of bicycle riders.

c. Implement high-quality bicycle facilities, treatments, and amenities as roadways are resurfaced and/or rights-of-way become available.

ME-B.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.

a. Continue to require bicycle parking in commercial and multiple unit residential zones.

b. Provide bicycle facilities and amenities to help reduce the number of vehicle trips.

ME-B.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-B.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.

C. Shared Use Mobility

Goals

- A city with affordable, convenient, and sustainable shared use mobility options that replace vehicle trips.
- A city with shared use mobility programs that benefit people in all communities.
- Seamless transfer between shared mobility devices and transit.

Discussion

Shared use mobility includes transportation services and resources that are shared among people, either at the same time or one after another. The broad spectrum of these services can include bikeshare, pedicabs, scooter–share, shuttles, circulators, ~~neighborhood electric vehicles~~, carshare, taxis, and rideshare. Public Transit, while sometimes considered as shared use mobility, is separately included and discussed in the Transit section. Likewise, carpool and vanpool programs are covered under Transportation Demand Management.~~While there are many types of shared use mobility, this section focuses on micromobility which is a general term for small, low-speed, human- or- electric-powered mobility devices like bicycles, electric-assist bicycles, and electric scooters (e-scooters).~~

Microtransit

Shared use mobility services can include fixed or flexible route microtransit options which are sustainable and convenient for short trips. Microtransit are smaller transit vehicles and include lightweight, all-electric vehicles known as Neighborhood Electric Vehicle ~~(NEV)~~ shuttles and can be designed for fixed route service or serve a specific geographical area. These services can be contracted to service providers or directly operated by transit agencies with possible fares ranging from free service to individual ride fares or through daily, weekly, or monthly pass programs. These services can potentially increase transit ridership and improve overall desirability of transit. Also, these services can serve commercial and entertainment districts with convenient neighborhood and intra-community travel options.

Micromobility

Micromobility is a general term for small, low-speed, human- or- electric-powered mobility devices like bicycles, electric-assist bicycles, and electric scooters (e-scooters). Micromobility programs will help the City advance its mobility goals by

providing people the opportunity to use -shared mobility devices. Micromobility programs not only provide increased access to flexible, sustainable, and cost-effective transportation options but also reduce reliance on motor vehicles for short trips. These programs can enhance mobility when paired with transit. For example, shared mobility devices can serve as a "first/last-mile" solution by making it easier for community members and commuters to connect between transit and homes and jobs. Micromobility programs can expand mobility services to those who otherwise may not have access to their own bike or e-scooter. Overall, providing and improving micromobility to people that currently have the most constrained access to convenient mobility choices should be prioritized to provide an affordable, flexible alternative to driving.

Carshare

Carsharing provides access to a network of cars for short-term rentals that can be used by the minute, hour, or offered on a mileage basis. Members are typically pre-screened to utilize the service which also includes the costs of fuel and insurance. Carshare services typically rely on apps and transponders to coordinate and book trips for members and the services can be designed around dedicated parking spaces or can be designed to allow for pick-up and drop-off anywhere within a service area.

Rideshare

Rideshare is a service that connects drivers with passengers who need transportation, often through a transportation network company ~~(TNC)~~ service. Pooled rideshare services can allow users to carpool with other passengers making similar trips, which reduces carbon footprint and the cost burden on each individual and increases vehicle occupancy.

Policies

ME-C.1 Support opportunities to encourage shared mobility services and programs throughout the City, including carshare, bikeshare, micromobility, and information technology resources such as "Mobility as a Service."

ME-C~~D~~.2~~1~~. Strengthen and expand existing microtransit services to complement traditional transit, fill transportation network gaps, facilitate last-mile connections, extend transit reach in underserved areas, and expand mobility options for vulnerable populations, including seniors and people with disabilities.

ME-C.3~~1~~. Expand micromobility program coverage by identifying suitable locations for shared micromobility stations and geographic areas where a program should operate.

a. Ensure that micromobility programs focus on connecting neighborhoods, business districts, and high-demand destinations.

b. Deploy shared mobility devices near active transportation facilities.

c. Improve the convenience and the user experience in accessing visitor destinations via shared mobility devices.

d. Work with public and private entities, such as large employers, colleges, and public agencies, to provide access to shared mobility devices.

ME-C.~~42~~. Designate shared mobility device parking zones or corrals in commercial and recreational areas, schools, transit stations, mobility hubs, activity centers, and visitor destinations.

ME-C.~~53~~. Partner with shared mobility device operators to optimize availability in mobility hubs and near transit and to promote the "first/last-mile" application of these devices, especially during peak hours.

ME-C.~~64~~. Actively invest in equitable micromobility program(s) that allow community members in all communities to access shared mobility devices without any financial, accessibility, technological, or language barriers.

ME-C.~~75~~. Regularly evaluate the success and challenges of the micromobility program(s) and adjust as necessary to ensure utilization benefits are captured while still providing a safe roadway environment.

D. Transit

- An attractive and convenient transit system that is the first choice of travel for many of the trips made in the City.
- ~~Increased~~Infrastructure that allows for reliable, high-quality transit service that is competitive with vehicular travel.
- Land uses that support increased transit ridership.
- Passenger rail that provides improved travel opportunities.

The American Plaza Trolley Station downtown provides an architecturally integrated, "front door" experience for transit patrons.

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

~~*Regional Collaboration*~~

~~The Regional Transit Vision (RTV), adopted as a part of the 2030~~ Transit is the most efficient way of moving the greatest numbers of people within a community and across communities. Regional and citywide planning efforts continue to promote transit as the ideal choice of travel for many trips. Within the region, light rail and bus transit is planned and developed by the metropolitan planning organization, San Diego Association of Governments, and operated by the Metropolitan Transit System (MTS). Locally, buses and the light rail are supported by roadways and traffic signals maintained and operated by the City. The Regional Plan identifies planned transit system improvements including light rail, bus rapid transit, and capacity upgrades, as well as new connections to destinations, neighborhoods and major employment hubs in the San Diego region.

~~*Local bus service improvements are needed to create a high-frequency urban network of transit routes.*~~

The Regional ~~Transportation~~ Plan ~~(RTP),~~ 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 high-capacity, high-speed, and high-frequency transit services~~, and improves the quality of the travel experience for transit patrons. Under this vision, transit~~ that will be easier to access, faster, and more convenient for people. Transit and land use will be tightly linked~~,~~ with transit stations integrated into walkable, transit-oriented neighborhoods and centers. ~~In addition to~~The strategy builds upon the existing ~~and planned light and commuter rail networks the vision~~ transit network and incorporates ~~the use of Bus~~ future Rapid ~~Transit (BRT) vehicles. The BRT vehicles~~ Bus and light and regional rail routes.

Local bus service improvements are needed to create a high-frequency urban network of transit routes.

The Bus Rapid routes will have ~~the flexibility of standard buses, but have the look and feel of rail vehicles.~~ fewer stops, operate in priority travel lanes and separated roadways, get green light priority, and arrive every ten minutes all day with upgraded vehicle and station amenities. Greater use of low-floor transit vehicles ~~and~~along with smart fare cards will allow for easier and speedier passenger boarding. ~~-~~Upgraded stations and real-time information will let patrons know when the next vehicle will be arriving. ~~Continued refinements of the RTV are expected to occur over time as additional transit related research and analysis takes place.~~ Successful implementation of capital, operational, and station area improvements ~~is intended to~~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.

Innovative technologies and strategies will help to prioritize high-frequency transit and can accommodate new modes of transit on City streets. The Sustainable Mobility for Adaptable and Reliable Transportation (SMART) corridor concept will identify roadways for future dedicated lanes for buses, known as flexible lanes, transit priority measures, and other technology upgrades with intelligent transportation systems.

As discussed in the Shared Use Mobility section, e~~E~~merging modes of transit include fixed or flexible route microtransit options which are sustainable and convenient for short trips. Microtransit are smaller transit vehicles and include lightweight, all-

electric vehicles known as Nneighborhood Eelectric Vvehicle (NEV) shuttles. Innovative improvements can improve the potential for transit ridership increases and overall desirability of transit.

Passenger Rail

Regional transit connectivity is to be providedand intercity passenger rail services can help reduce demand on freeways and at airports by providing alternatives to auto and air travel for intercity trips. The Coaster and Amtrak trains provide passenger rail service to San Diego along the coastal rail corridor. Passenger and freight trains share the corridor. The Coaster provides regional rail service between Oceanside and Downtown San Diego. Amtrak provides intercity passenger rail service from downtown San Diego to Los Angeles, and north to San Luis Obispo, which is one of the most heavily traveled intercity passenger rail corridors in the nation.

The Regional Plan identifies projects that would improve rail service and performance and would enable service frequency improvements for regional and intercity passenger rail services. The Regional Plan envisions several new regional rail services with high-speed trains that are fast and convenient.

The California High-Speed Rail Authority has developed a plan for the construction, operation, and financing of a statewide, intercity, high-speed intercity passenger rail system serving the major metropolitan centers. This plan identifies an inland corridor from San Diego through regional, corridor, local, and neighborhood transit services. Local and neighborhood services serve local trips, and may also provide linkages to regional and corridor services.Riverside and San Bernardino Counties connecting to Los Angeles.

Transit Supportive City Land Use Planning

The Transit/Land Use Connections Map (Figure ME-1) shows lines that are a part of the urban network adopted by the Metropolitan Transit System in 2006 and the land uses that these routes serve. Urban Network routes operate with service frequencies of 15 minutes throughout most of the day. Peak hour service frequencies may be greater to handle demand, while late evening service may be less.

The Transit/Land Use Connections Map also shows planned rail and bus rapid transit routes that were adopted in the RTP Mobility 2030 transit network in the City of San Diego. The State Route 56 and Carroll Canyon corridors are shown as areas where the City will continue to work with SANDAG to plan for future transit service for existing andillustrates the planned transit-oriented developments in

~~these corridors.~~

regional transit system in concert with Village Climate Goal Propensity Areas. Transit-supportive land use densities are the foundation for efficient, viable transit. The City of Villages strategy ~~supports expansion of the transit system by calling for~~ guides mixed-use villages~~, employment centers, and other higher-intensity uses~~ to be located in areas that can be served by high-~~-~~quality transit services. ~~This will~~Transit-oriented development with a mix of land uses and pedestrian-friendly streetscape and active transportation facilities allow ~~more~~ people to live and work within walking, rolling, and biking distance of transit. ~~-~~This also allows transit to run frequently and connect people to more places and can be further strengthened by transit routes that include dedicated transit lanes and transit signal priority.

Mobility hubs are places where transit and other shared use mobility services, amenities, and supporting technology converge; mobility hubs are located at transit stations as well as villages, and employment centers. Mobility hubs can range in size, and design and can include a mix of features to support mobility. Overall, mobility hubs help implement first-last mile programs, by providing people with transportation choices, and by facilitating safe, easy connections between choices.

The General Plan also supports transit through policies supportive of transit and pedestrian-oriented design, and implementation of transit priority measures. The General Plan addresses the need to prioritize improvements in areas with the greatest needs and likelihood to encourage transit use, to further align with housing, climate, and equity goals.

~~*Transit-Oriented Development Example of Street and Public Spaces Layout*~~

Policies

Regional Agency Collaboration

ME-~~B~~D.1. Work closely with regional agencies, transit operators, and others to increase transit ridership and mode share through increased transit service accessibility, frequency, connectivity, and availability.

a. Develop an urban network of routes that operate with a base, mid-day service frequency of ten-minute intervals or better.

b. Provide transit routes that offer efficient connections between highly frequented origins and destinations.

c. Enhance overall transit customer experience through attention to safety, station areas, shelters and waiting areas, real-time traveler information, vehicles, seating, and other factors and amenities.

d. Develop City guidance to implement bus shelters based on MTS guidelines.

e. Coordinate with regional agencies, transit operators, private service providers, and others to provide seamless transfers between transit service and other modes (i.e., micromobility) and systems.

ME-~~B~~D.2. Support the provision of higher-frequency transit services and capital investments to benefit higher-density residential or mixed-use areas; higher-intensity employment areas and activity centers; universities and colleges; and community plan-identified neighborhood, community, and urban villages; and transit-oriented development areas.

ME-~~B~~D.3. Design and locate transit stops/stations to provide safe, convenient access to high activity/density areas, respect neighborhood and activity center character, implement community plan recommendations, enhance the users' personal experience of each neighborhood/center, and contain comfortable walk and wait environments for customers (see also Urban Design Element~~,~~). ~~Policy UD-A.9).~~

Transit lane simulation

ME-~~B~~D.4. Collaborate with regional agencies to evaluate the need for, and design of, mobility hubs and park-and-ride spaces at transit stations based on the character of the neighborhood, community plan recommendations, and the ~~stations role~~stations' roles in the regional transit system (see also Urban Design Element~~, Policies UD-A.11 and UD-A.12~~).

ME-~~B~~D.5. Integrate the regional transit system with the ~~intercity~~local bus and rail network.

ME-~~B~~D.6. Work closely with regional agencies to achieve a transit system that is accessible to persons with disabilities.

ME-~~B.7~~D.7. Assess ways to improve the availability of transit and transit access for underserved and transit-dependent populations.

ME-D.8. Support efforts to develop additional transportation options for non-driving older adults and persons with disabilities~~, including:~~.

a) Expansion of the regional database of public and private/nonprofit transportation providers~~;~~ for older adults and persons with disabilities.

b) Development of innovative programs to link a wide range of transportation providers with older adults and persons ~~in need; and~~with disabilities.

c) Identification of transportation providers and programs that could assist in evacuating older adults and persons ~~in need~~with disabilities, as a part of emergency and disaster preparedness plans ~~that are referenced in the Public Facilities Element, Section P (see also.~~

~~Land Use Element, Policy LU-I.10).~~

ME-~~B.8~~D.9. Support efforts to use alternative fuels in transit vehicles to help implement air quality and energy conservation goals.

Passenger Rail

ME-D.10. 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 adverse impacts to communities.

ME-D.11. Support intermodal stations to facilitate the transfer of passengers between mobility modes and expand the convenience, range, and usefulness of transportation systems implemented in the City.

ME-D.12. Locate future stations adjacent to villages with high-density employment or residential uses.

ME-D.13. Ensure that stations are well designed, contain amenities, and are integrated into the community.

ME-D.14. Support increased commuter and intercity passenger rail services.

ME-D.15. Support a stable, multi-year transportation funding policy for passenger rail services that meets the goal of improved rail travel opportunities.

ME-D.16. Coordinate with SANDAG and MTS to prioritize transit connections to universities and businesses in the region and community.

Transit Supportive City Land Use Planning

ME-~~B.9.~~D.17. Make transit planning an integral component of long-~~-~~range planning documents and the development review process.

a. Continue to coordinate with SANDAG and MTS to identify corridors and intersections for dedicated transit lanes and transit signal priority treatments and i~~I~~dentify recommended transit routes and stops/stations as a part of the preparation of community plans and community plan amendments, and through the development review process.

b. Plan for transit-supportive villages, transit corridors, and other higher-intensity uses in areas that are served by existing or planned higher-quality transit services, in accordance with the Land Use and Community Planning Element~~, Sections A and C~~.

c. Proactively seek reservations or dedications of right-of-way along transit routes and stations through the planning and development

review process.

d. Proactively seek opportunities to repurpose rights-of-way and/or installation of interim or pilot improvement projects that support transit operations and can be quickly implemented.

~~d.~~e. Locate new public facilities that generate large numbers of person trips, such as libraries, community service centers, and some recreational facilities in areas with existing or planned transit access.

~~e.~~f. ~~e.~~ Design for walkability in accordance with the Urban Design Element, as pedestrian-~~-~~supportive design also helps create a transit-~~-~~supportive environment.

~~f.~~g. ~~f.~~ Address rail corridor safety in the design of development adjacent to or near railroad rights-of-way.

h. Improve transit resiliency and the ability of transit infrastructure to withstand the effects of climate change, while maintaining services.

ME~~.B.10~~-D.18. Implement transit priority measures to help bypass congested areas and for greater efficiency and reliability. Priority measures include, but are not limited to, transit signal priority, queue jumpers, exclusive transit lanes, transit ways, use of freeway shoulders, and direct access ramps to Managed Lane~~freeway High-Occupancy Vehicle (HOV)~~ facilities.

ME-D.19. Improve transit connections by investing in first-mile/last-mile solutions.

ME-D.20. Support and develop mobility hubs of different scales to provide a diverse set of amenities that encourage multimodal trips, for all trip types, and to serve as connection points between transit, shared micromobility services, and other private transportation services.

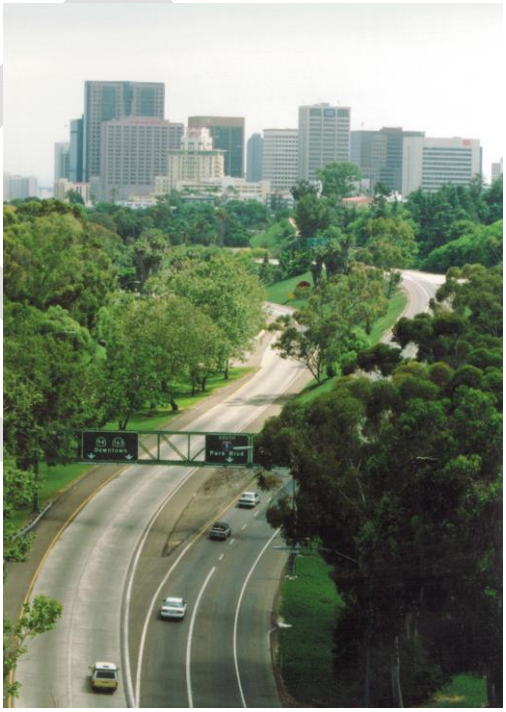
~~ME-D.21. Strengthen and expand existing microtransit services to complement traditional transit, fill transportation network gaps, facilitate last-mile connections, extend transit reach in underserved areas, and expand mobility options for vulnerable populations, including seniors and people with disabilities.~~

~~C. Street and Freeway System~~

E. Complete Streets

Goals

- ~~A street and freeway~~A transportation system that balances the needs of multiple users of the public right-of-way regardless of their age, ability, or mobility choice.
- Streets that are well maintained, safe, equitable, and accessible by all.
- An interconnected street system that provides ~~multiple~~seamless multimodal linkages within and between communities.
- ~~Vehicle congestion relief.~~
- ~~Safe and efficient street design that minimizes environmental and neighborhood impacts.~~
- ~~Well maintained streets.~~
- Streets that prioritize access for alternative modes of transportation
- Streets that integrate Green Street features to address the effects of climate change, such as extreme heat and precipitation, while improving walkability.~~.~~



State Route 163

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~~our quality of life, and influences which mode of travel we choose. The City plays an important role in providing viable travel choices to encourage mode shift beyond the vehicle.

The Mobility Element takes a balanced approach that considers multiple modes of mobility. Complete Streets are streets designed and operated to prioritize safety, comfort, and access to destinations for all users, such as pedestrians, bicyclists, motorists, and transit riders, regardless of their age or ability. The Mobility Element contains policies to support creating a transportation system that encourages San Diegans to use active transportation and transit to access destinations throughout the City.

Planning for a Balanced System

San Diego has a developed street network with limited opportunities to construct or widen streets. The Mobility Element focuses on the management of an efficient, balanced, and multimodal transportation network to support increased demands on streets. Balancing the transportation system entails repurposing existing roadway space with lanes dedicated to multiple modes of travel, which improves efficiency by increasing the capacity to move more people in the same amount of space.

The SMART corridor utilizes both flexible lanes and technology to increase the number of people traveling along major streets to freeways. Flexible lanes are for transit, other pooled services, or connected and automated vehicles. SMART corridors include transit priority measures and signal timing that adapts to changes in congestion and traffic demand in real-time, which improves the flow of traffic and the performance of transit.

Complete Streets prioritizes vulnerable users based on a modal loading priority and enhances transit reliability and performance. Complete Streets not only considers pedestrian, bicycle, and transit networks, but also other alternative modes within all planning efforts and within construction projects to achieve a comprehensive transportation network. ~~Additionally, t~~The application of a Complete Streets approach can also address modal gaps or deficiencies and assess any tradeoffs to create a balance that best meets the needs of all street users.

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~~focuses on improvements to the freeways and ~~state highways, transit services, and~~ regional 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~~expand the region's Managed Lanes/High-~~-~~Occupancy Vehicle ~~(HOV)~~ network ~~that~~which provides priority access for ~~Bus Rapid Transit and ride sharing.~~bus rapid transit, vanpools, carpools, and other ridesharing. 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~~enhancements, the ~~RTP~~Regional Plan calls for efficiency improvements using system and transportation demand management strategies and technologies, transit service improvements, bicycling and walking/rolling 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~~in 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~~. Community plans specify the planned system of classified streets within the ~~local~~ community and can contain a finer level of street system details.

Street Layout, Design, Operations and Maintenance

Vision Zero calls for zero traffic fatalities by designing streets to be "Complete Streets" by prioritizing the needs of pedestrians, children, older adults, and people with disabilities. A "Safe Systems" approach proactively addresses safety through street design, operational improvements, and countermeasures to reduce the potential of collisions.

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 and bicycle design guidelines, and addresses how to create streets that are important public places. The Street Design Manual guidelines apply to ~~newly developing areas~~new streets and, as appropriate, to ~~older areas undergoing redevelopment construction~~existing streets associated with a development project, and whenever improvements are made to existing ~~facilities~~streets. Opportunities for change exist when ~~roadway~~street 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~~important, 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~~transportation system is a critical City function that enhances the 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

Balancing the Transportation System

ME-E.1. Plan, design, operate, and maintain streets using the Complete Streets principles for all types of transportation projects within the City including new construction, retrofit/reconstruction, and maintenance projects.

a. Repurpose roadway spaces (i.e., travel lane, underutilized right-of-way, unneeded pavement) to implement active transportation or other multimodal improvements.

b. Allow for flexible use of the public right-of-way to accommodate all transportation system users while maintaining safety standards.

c. Coordinate with SANDAG, Caltrans, and adjacent cities on projects along shared facilities to ensure the application of the Complete Streets approach and implementation of multimodal facilities.

d. Integrate Complete Streets in a context sensitive manner recognizing that needs vary among neighborhoods and communities.

ME-E.2. Provide integrated transportation planning and land use decisions that enhance the City of Villages strategy and transit-oriented development with Complete Streets, which facilitate multimodal transportation opportunities.

ME-E.3. Include a Complete Streets approach into infrastructure projects, work programs, and other planning documents that address streets.

ME-E.4. Support the temporary closure of streets for communities and commercial activity or other pilot programs to allow for streets as public gathering spaces and/or to promote active transportation.

Transportation System Planning

ME-~~C.1~~E.5. 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, open space, and recreation activities through the planning and development review process.

b. Implement street improvements and ~~multi-modal~~multimodal 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.

f. Identify roadway segments to designate as SMART corridors and/or to include flexible lanes for use by transit, pooled service, or future travel modes. The configuration and specifics of the improvements and technology will be determined at the time of need and based on data and analysis.

ME-~~C.2~~E.6. 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. Work with Caltrans to evaluate access management needs and strategies to better manage traffic operations on roadways located within proximity of freeway on/off-ramps to reduce traffic back-ups and frictions at ramp signals.

~~d.~~e. 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.~~f. Provide rights-of-way for designated ~~HOV~~high-occupancy vehicle facilities and transit facilities on City streets where feasible.

~~f.~~g. Evaluate ~~RTP~~Regional Plan 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.

ME-E.7. Improve the geographic distribution of pedestrian, bicycle, street, and transit infrastructure.

Street Layout, Design, and Operations

ME-~~C.3~~E.8. Design an interconnected street network within and between communities, which includes pedestrian and bicycle access, while minimizing landform and community character impacts.

a. ~~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. ~~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~~areas.

~~b.~~c. Design a street network ~~should also be designed~~ to control traffic volumes and speeds through residential neighborhoods and village areas.

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.~~d. ~~c.~~ Provide direct and multiple street and sidewalk connections within development projects, to neighboring projects, and to the community at large.

~~d.~~e. ~~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~~E.9. 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. ~~b.~~ Adequately maintain the transportation system through regular preventative maintenance and repair, and life cycle replacement.

c. ~~c.~~ Encourage community participation in planning, assessing, and prioritizing the life cycle management of the circulation system.

d. ~~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/rolling, bicycling, use of shared mobility devices, transit, high occupancy vehicles, autos, trucks, automated waste and recycling collection vehicles, and emergency vehicles).

~~occupancy vehicles (HOVs), autos, trucks, automated waste and recycling collection vehicles, and emergency vehicles).~~

e. ~~e.~~ Continue to pursue adequate maintenance of sidewalks by property owners and investigate new approaches to facilitate improved sidewalk maintenance citywide.

ME-~~C.5~~E.10. Install traffic calming measures as appropriate in accordance with site-specific recommendations which may include, but are not limited to, those identified ~~on~~in Table ME-2, to increase the safety and enhance the

livability of communities.

a. Use traffic calming techniques in appropriate locations to reduce vehicle speeds or discourage shortcutting traffic.

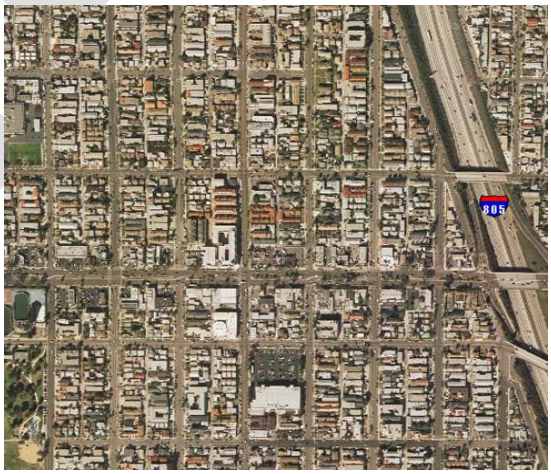
b. Choose traffic calming devices to best fit the situations for which they are intended.

c. 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~~street.

d. Design traffic calming devices appropriately, including consideration for: accessibility; drainage; underground utilities; adequate visibility; the needs of emergency, sanitation, goods movement and deliveries, and transit vehicles; and landscape.

e. 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~~E.11. 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

~~*Greater North Park, interconnected street network*~~

a. Establish general road alignments and grades that respect the natural environment and scenic character of the area traversed. This could be accomplished through the use of a modified or truncated grid system.

b. Design ~~roadways~~streets and ~~road~~street improvements to maintain and enhance neighborhood character.

c. Design streets and highways that incorporate 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 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~~E.12. Preserve and protect scenic vistas along ~~public roadways~~streets.

a. ~~a.~~ Identify state highways where the City desires to preserve scenic qualities and ~~-~~work with Caltrans to pursue official scenic highway designation.

b. ~~b.~~ Designate scenic routes along City streets to showcase scenic vistas and to link points of visitor interest.

c. ~~c.~~ Adopt measures to protect aesthetic qualities within scenic highways and routes.

ME-E.13. Implement street design improvements and operational measures for systemic safety, which account for human error and injury tolerance, and support the Vision Zero program.

a. Continuously evaluate the safety and operation of the City's street system to manage the speed of travel, manage queues at intersections, and develop improvements to increase the safety of all users.

b. Implement appropriate engineering, education, enforcement, and other countermeasures at locations with higher numbers of pedestrian and/or bicycle-involved collisions.

c. Further programs that reduce vehicle speeds and cut-through traffic on local streets, where appropriate.

d. Identify opportunities for innovative intersection design that reduces conflicts between modes, such as roundabouts and protected intersections.

ME-E.14. Develop and implement quick, near-term safety projects, especially on Vision Zero corridors, and streamline the process and delivery of critical traffic safety improvements (e.g., paint, safety posts, temporary sidewalk extensions, and other innovative materials) to City streets, as feasible.

Project Review Considerations

ME-~~C.8~~E.15. Implement Traffic Impact Study Guidelines that address site and community-~~-~~specific issues.

a. ~~a. Give consideration to~~Consider the role of alternative modes of transportation and transportation demand management ~~(TDM)~~ plans in addressing development project traffic impacts.

b. ~~b.~~ Consider the results of site-specific studies or reports that justify vehicle trip reductions (see also ME-~~E~~G.7).

c. ~~c.~~ Implement best practices for ~~multi-modal~~multimodal quality/level of service analysis guidelines and assess vehicle miles traveled to evaluate potential transportation impacts and determine appropriate mitigation measures from a ~~multi-modal~~multimodal perspective.

ME-~~C.9~~E.16. Implement best practices for ~~multi-modal~~multimodal quality/level of service analysis guidelines to evaluate potential transportation improvements from a ~~multi-modal~~multimodal perspective in order to determine optimal improvements that balance the needs of all users of the ~~right of way~~street.

ME-~~C.10~~E.17 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

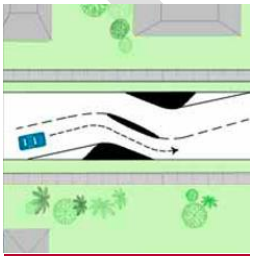
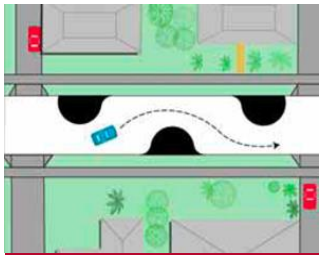
Traffic Calming Tool	Description	Illustration
Speed Control Tools		
Angled Parking	Angled Parking is generally used to increase the number of on-street parking spaces. However, a positive by-product can be a reduction in vehicle speeds due to the narrowing of the travelway and driver anticipation of 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.	

TABLE ME–2 Traffic Calming Toolbox

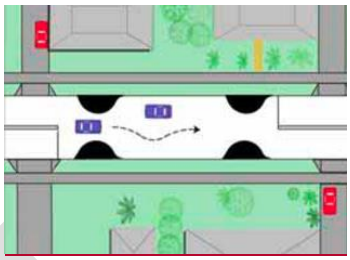
Traffic Calming Tool	Description	Illustration
Choker	Chokers are created by installing curb extensions at opposing locations on a roadway. This narrows the travelway, but maintains two-way traffic. This device works best at mid-block locations that have volumes sufficient enough that opposing traffic 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)

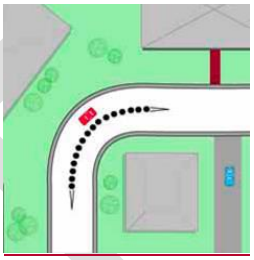
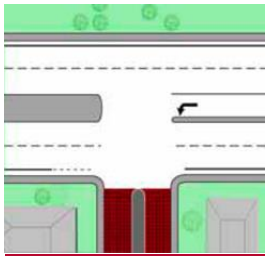
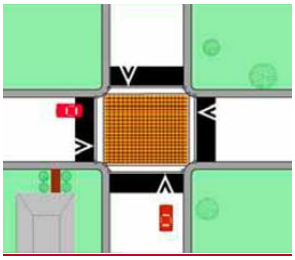
Traffic Calming Tool	Description	Illustration
Speed Control Tools		
Curve Treatment	Curve Treatments such as raised median or raised pavement markers placed along the centerline of a sharp curve will prevent or discourage vehicles from cutting across the centerline and into the opposing travel lane. 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.	

TABLE ME–2 Traffic Calming Toolbox (continued)

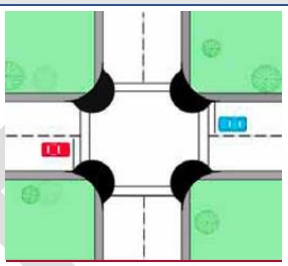
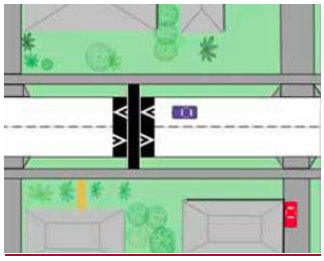
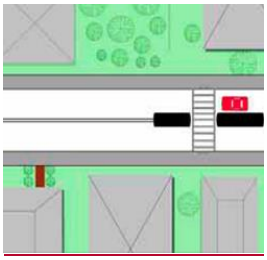
Traffic Calming Tool	Description	Illustration
Speed Control Tools		
Pop-out/Bulb-out/Curb Extension	Bulb-outs, also known as Pop-Outs and Curb Extensions, narrow the width of a street at an intersection by extending the curb into the roadway at the corner(s) of an intersection. This reduces the speed of right-turning vehicles, increases the visibility of pedestrians to drivers, and creates a shorter crossing distance, reducing pedestrians' exposure to moving vehicles.	
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 the 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.	

TABLE ME–2 Traffic Calming Toolbox (continued)

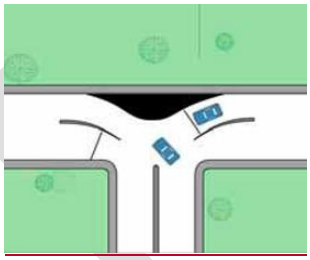
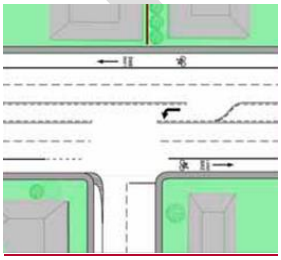
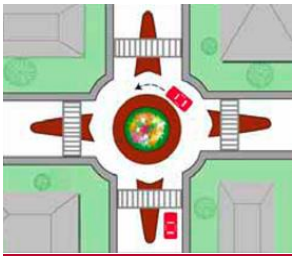
Traffic Calming Tool	Description	Illustration
Speed Control Tools		
Realigned T-Intersection	Realigned T-Intersections have a bulb-out in the intersection to deflect the through movements so they will follow a curvilinear path. Medians may also be installed on the through street approaches to guide traffic 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.	
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.	

TABLE ME–2 Traffic Calming Toolbox (continued)

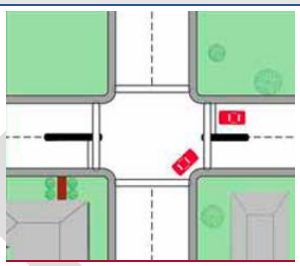
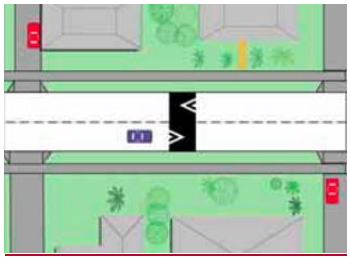
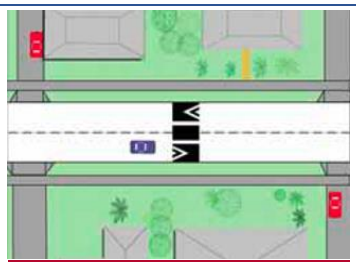
Traffic Calming Tool	Description	Illustration
Speed Control Tools		
Short Intersection Median/Median Slow Point	Short Intersection Medians or Median Slow Points are installed at intersection approaches to prevent turning vehicles from encroaching into opposing travel lanes and to reduce the vehicle turning radius which reduces the 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, and are approximately 3.5 inches high and 12 feet long with a parabolic cross-section.	
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.	

TABLE ME–2 Traffic Calming Toolbox (continued)

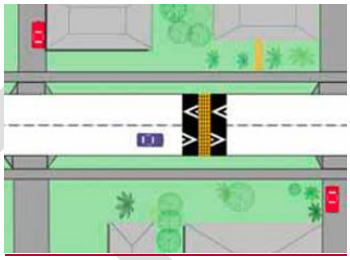
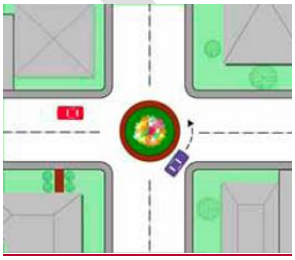
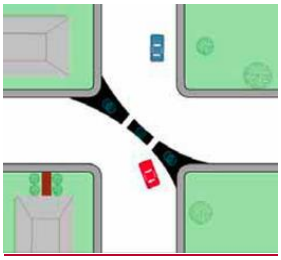
Traffic Calming Tool	Description	Illustration
Speed Control Tools		
Speed Table	Speed Tables are vertical deflection devices that have ramps on both sides of a flat surface. The vertical deflection encourages traffic to slow down.	
Traffic Circle	A Traffic Circle is a circular island placed in the center 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.	
Volume Control Tools		
Diagonal Diverter	Diagonal Diverters are barriers constructed across a four-legged intersection blocking the through movements.	

TABLE ME–2 Traffic Calming Toolbox (continued)

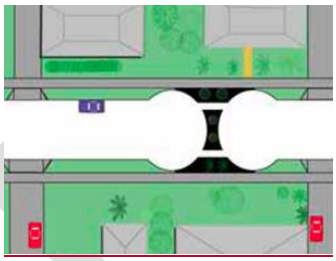
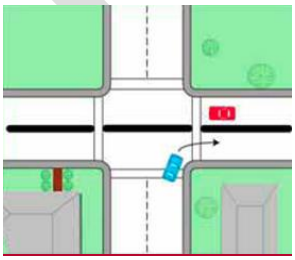
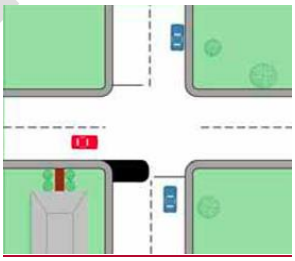
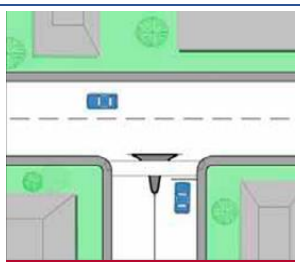
Traffic Calming Tool	Description	Illustration
Volume Control Tools		
Full Street Closure/Cul-De-Sac	A Full Street Closure/Cul-de-Sac is created by constructing a barrier across an entire street, closing the street to all through vehicular traffic with considerations to maintain pedestrian, bicycle, and 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-Diverters 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.	

TABLE ME–2 Traffic Calming Toolbox (continued)

Traffic Calming Tool	Description	Illustration
Volume Control Tools		
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.~~ F. Intelligent Transportation Systems ~~(ITS)~~

Goals

- A transportation system ~~which~~that operates efficiently, saves energy, and reduces negative environmental impacts~~.~~ by improving the flow of traffic.
- 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~~individually or in combination to improve the efficiency or safety of a surface transportation system. ITS include~~s~~ 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~~The City utilizes ITS to improve transportation safety, capacity, travel times, service quality, and enable people to make smart travel choices. ITS is part of a long-range strategy for improving the operational safety and efficiency of the City's mobility system. 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; and real-time transit vehicle location tracking
- **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 City has a Traffic Signal Communications Master Plan, which sets the foundation for upgrading and expanding the City's traffic signal communications network and ITS deployment. The San Diego Regional ITS ~~Strategic Plan~~Architecture is the region's guiding ~~document~~resource for the planning and development of ITS. All local or regional ITS projects that are funded by federal funds must follow the San Diego Regional ITS Architecture, which is included in the SANDAG Regional Plan to help advance the planning and development of ITS projects. 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~~A planned Regional Operations Center~~, to~~ will serve as an intermodal transportation operations/management center for the City and transit operators.

Policies

ME-~~D~~F.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~~F.2. Develop an ITS Plan or Program for the City to facilitate effective implementation and operations of ITS strategies across modes ~~in the City. The proposed ITS Plan should identify~~.

a. Identify and prioritize specific short- and long-term ITS projects. ~~Once identified,~~

~~a.~~b. Implement ITS projects ~~should be~~ strategically ~~implemented~~ as funding becomes incrementally available.

ME-~~D~~F.3. Participate in the design and development of the Regional Operations Center.

ME-~~D~~F.4. Automate the collection of real-time travel information regarding transportation system conditions and make the information available to users and operators.

ME-~~D~~F.5. Monitor and control traffic on City streets and coordinate traffic operations with other local agencies.

ME-~~D~~F.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.

ME-F.7. Coordinate with local, regional, and state partners and agencies to manage the overall performance of both the local and regional transportation systems.

ME-F.8. Support the upgrade of communications systems and signal controllers to improve traffic congestion and safety.

ME-F.9 Support regional efforts to improve Transportation Systems Management and Operations (TSMO) activities that facilitate cross-agency collaboration during the planning, development, and deployment of ITS projects.

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

G. 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, and reach of Transportation Demand Management programs.

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 the use of single-occupant vehicle trips by encouraging alternative modes of travel such as shared use mobility, walking/rolling, bicycling, transit use, ~~carpooling~~d ing, and 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~~childcare 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~~many employees commuting long or very short distances, have a greater potential to benefit from TDM strategies.

Policies

ME-~~E~~G.1. Support and implement TDM strategies including, but not limited to: alternative modes of transportation, alternative work schedules, and telework.

ME-~~E~~G.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~~G.3. Emphasize the movement of people rather than vehicles.

ME-~~E~~G.4. Promote the most efficient use of the City's existing transportation network.

ME-~~E~~G.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~~ME-G.6. Encourage large residential, mixed-use, and employment development to have site designs and on-site amenities that support alternative modes of transportation.

a. Emphasize pedestrian and bicycle-friendly design~~,~~ and amenities and accessibility to transit~~, and provision of amenities that are supportive and conducive to implementing.~~

~~a.~~b. Include TDM ~~strategies~~amenities such as car sharing vehicles and parking spaces, bike lockers, preferred rideshare parking, showers and lockers, on-site food service, and ~~child care~~childcare, where appropriate.

ME-~~E~~G.7. Consider TDM programs with achievable trip reduction goals as partial mitigation for development project traffic and air quality impacts.

ME-~~E~~G.8. Monitor implementation of TDM programs to ensure effectiveness.

ME-G.9 Develop a City employee TDM program that will offer, promote, and implement comprehensive transportation benefits to all City employees and encourage sustainable travel behaviors.

ME-G.10 Support regional efforts to make transit free for riders who are 18 and younger through the youth pass program and support the expansion of the program to include college students and community members in areas with the greatest needs.

ME-G.11 Implement pilot programs and lead by example through City-initiated efforts.

ME-G.12 Encourage employers to establish commute options for employees, such as carpools, shuttle services, and telework options.

~~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~~

~~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 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,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, 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 enhancedmore 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**~~

~~Hold For Figure 2 Existing and Proposed Bikeways~~

Policies

ME-F.1the Bicycle Master Plan, which identifies existing and future needs, and provides specific recommendations for facilities andover the next 20 years.

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

b. Coordinate with other local jurisdictions, 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-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.

a. Develop a bikeway network that is continuous, closes gaps in the existing system, improves safety, 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.

1. 1. Design future roadways to accommodate bicycle travel; and

2. 2. 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.~~

~~a. a. Continue to require bicycle parking in commercial and multiple unit residential zones.~~

~~a. 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. a. Increase public awareness of the benefits of bicycling and the availability of resources and facilities.~~

~~b.~~H. ~~Increase government and public recognition of bicyclists' right to use public roadways.~~

H. Parking and Curb Space Management

Goals

- ~~Parking~~Curb space that is reasonably available when and where it is needed ~~through management of the supply.~~
- Solutions to community-specific parking issues through the implementation of a broad range of ~~parking~~curb management tools, mobility services, and strategies.
- ~~New~~Innovative solutions to manage curb uses and demand.
- Balance new development with adequate parking through the application of innovative citywide parking regulations, while limiting the oversupply of parking.
- Increase~~d~~ land use efficiencies ~~in the provision of~~and locate residential, employment, and entertainment land uses within close proximity to reduce distances users must travel and to reduce parking~~.~~ demand.

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

Discussion

~~Greater management of parking spaces can help achieve mobility, environmental, and community development goals.~~ Curb space activity encompasses uses, which occur simultaneously and can conflict with one another. Activities that could occur within the public space between buildings and travel lanes include: vehicle parking, shared mobility device corrals, passenger pick-up/drop-off, delivery loading/unloading, active transportation, transit service access, and placemaking spaces that provide enhanced opportunities for community members to gather and enjoy the outdoors. Greater management of the curb and parking can help achieve mobility, sustainability, and community development goals. Curb space management is the flexible, efficient, and coordinated use of the curb. The General Plan proposes broad policies that are intended to form the basis for more detailed parking solutions and curb management strategies 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~~.

TABLE ME–3 Parking Strategies Toolbox

Parking Tool	Description
Supply	*Ways to Increase 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 ~~disabled~~ spaces for people with disabilities, 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).
Shared mobility device corrals	Shared mobility device corrals are on-street parking for authorized dockless devices.
Parking Management	*Strategies for more efficient use of parking*
Shared parking	Sharing parking facilities among multiple users including off-site shared parking arrangements.
Parking pricing	Charging motorists directly for parking. Parking pricing could be dynamic to better optimize the supply of curb lane access.
Time limits	Placing time limits on parking to encourage the turnover of convenient spaces.
Parking payment technology	Device to charge for and place time limits on parking.
Valet parking	Parking is 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.

TABLE ME–3 Parking Strategies Toolbox

Parking Tool	Description
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 reduce the demand for parking.*
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/Rolling	Improve walking/rolling conditions.
Bicycling	Improve bicycle transportation and supporting infrastructure (see Bicycling section).
Shared micromobility	Improve coverage of shared mobility devices and supporting infrastructure (see Shared Use Mobility section).
Neighborhood cars	Small, generally non-polluting vehicles (i.e., neighborhood electric vehicles or NEVs) suitable for short trips, that operate on streets and require less space to park.
TDM strategies	Provide incentives for the 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).
Goods movement	Program curb space for deliveries and other loading.

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 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~~Real costs of parking that are passed on directly to drivers~~,~~ can reduce the demand for parking ~~typically drops~~, and cause alternative modes of transportation~~, where available (~~ such as walking/rolling, bicycling, use of shared mobility devices, transit, and carpooling~~, walking, and bicycling)~~ to become more attractive and viable for certain trips.

Parking strategies have focused on vehicular parking and do not typically include the provision of parking for non-vehicular uses such as micro-mobility and bicycling. To address parking and mobility ~~problems~~challenges comprehensively, strategies need to address the supply, management, and demand for ~~spaces.~~ all curb uses within the right-of-way. Strategies including, but not limited to, those listed ~~on~~in Table ME-3 may be tailored for specific applications as needed.

Community Parking Districts can be formed by communities to implement plans and activities designed to alleviate parking impacts specific to the community's needs. Community Parking Districts 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.

Policies

Hillcrest Community Parking District

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

a. ~~a.~~ Where parking deficiencies exist, prepare parking master plans to inventory existing parking (public and private), identify appropriate solutions, and plan needed improvements.

b. ~~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~~in Table ME-3, Parking Strategies Toolbox.

c. ~~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.

d. Implement design standards for the implementation of accessible parking spaces within the right-of-way.

ME-~~G~~H.2. Implement innovative and up-to-date parking regulations that address the vehicular and bicycle parking needs generated by development, and that limit the oversupply of parking.

~~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

a. 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. ~~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~~H.3), while still providing appropriate levels of parking.

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

a. ~~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. ~~b.~~ Implement parking management tools that optimize on-street parking turnover, where appropriate.

c. ~~c.~~ Judiciously limit or prohibit on-~~ ~~~street parking where needed to improve safety, or to implement ~~multi-modal~~multimodal facilities such as bikeways, transit ways, and parkways.

d. Balance the demand for parking with other community goals including safety, affordability, sustainability, and the desire to have enjoyable spaces for people to gather and play outside.

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

ME-~~G~~H.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~~in Table ME-3.

~~H~~ME-H.6 Manage curb space in activity areas, coastal areas, transit-oriented developments, business districts, and corridors to balance the demands of all users or activities that occur within this public space, such as vehicle parking, bicycle and shared mobility device parking, delivery loading/unloading, rideshare pick-up/drop-off, transit service, streetaries/sidewalk cafes, parklets, emergency vehicles, etc.

ME-H.7 Coordinate on-street parking with curb management strategies for optimized use of curb space, as well as flexibility and adaptability with

evolving transportation options and other future parking and mobility technology.

ME-H.8 Acknowledge that curb spaces that are used by people to gather and enjoy public spaces contribute to increased use of the surrounding areas, including access to parks and recreation and enjoyment of shopping of restaurants, and increases the likelihood that people will want to walk/roll and bike to their desired destination in future plans and projects.

I. 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~~multimodal surface transportation system that efficiently moves people and goods.
- An international airport to serve the region's long-term air transportation and economic needs.
- General aviation airport operations that support public safety, law enforcement, and aviation training activities and promote adjacent commercial and industrial uses.
- Military aviation installations that support national defense and ~~the~~ regional economic needs.

Discussion

Civilian and military aviation plays an important role in the regional air transportation system, economy, and national defense. These activities provide important jobs and contribute significantly to San Diego's economy. Airports located within and adjacent to the City of San Diego are listed ~~on~~in Table ME-4 and shown ~~on~~in Figure ME-3. Airport and land use compatibility is discussed in the Land Use Element, Section G, and airport noise issues are discussed in the Noise Element, Section D.

TABLE ME–4 Airports Within and Near the City of San Diego

Name	Uses
Airports Within the City	
San Diego International Airport – Lindbergh Field	Air Carrier, General Aviation
Brown Field - Municipal Airport	General Aviation, Military
Montgomery ~~Field – Municipal~~-Gibbs Executive Airport	General Aviation
Marine Corps Air Station Miramar	Military
Airports Adjacent to the City	
Naval Air Station North Island	Military
Naval Outlying Field Imperial Beach	Military
Gillespie Field	General Aviation
Tijuana International Airport	Air Carrier, General Aviation

San Diego International Airport

San Diego International Airport (SDIA) ~~at Lindbergh Field~~ is the busiest single-runway airport in the nation. ~~The~~In 2018, the San Diego County Regional Airport Authority has forecast passenger traffic at SDIA to increase from ~~17.5 million passengers~~12.1 to ~~32~~26.7 million annual passengers by ~~2030. This growth will result in capacity constraints by 2015. In recognition of long-term capacity constraints at SDIA, the San Diego County Regional Airport Authority proposed a ballot proposition in November 2006 that the voters rejected. To meet this increasing air transportation demand at SDIA, the Airport Authority is updating the~~2050. The SDIA Master Plan ~~to guide~~guides the long-term phased development of SDIA ~~through 2030 by addressing and maximizing~~by improving terminal conditions and capacity, vehicle parking capacity, ~~multi-modal~~multimodal ground connections, and passenger and cargo needs. The City works with the Airport Authority, SANDAG, and other regional agencies in planning efforts to improve ~~multi-modal~~multimodal ground connections and maximize the passenger, cargo, and flight capacity of SDIA.

Municipal Airports

Brown Field and Montgomery ~~Field~~-Gibbs Executive Airport municipal airports provide business, corporate, training, and charter aviation services that support commercial and industrial activities within the region. The airports have the

potential to act as catalysts for future economic development by providing businesses with the option to use charter air services. They serve as locations for public safety and law enforcement agencies to provide services to the region. Both airports help to relieve general aviation congestion at SDIA. Brown Field is a port of entry for private aircraft coming from Mexico. The City enforces aircraft weight and noise level regulations at Montgomery Field to reduce the effect of airport noise on adjacent residential areas.

Airport Master Plans help to identify the challenges and opportunities associated with the development of aviation and aviation-~~-~~related activities, typically over a 20-year period. By identifying the facilities necessary to meet near and long-term aviation demand and providing guidelines for future aviation development, airport master plans help the City receive grant funding assistance from the Federal Aviation Administration (FAA) to maintain and improve airport operations. The Land Use Element, Section G addresses the airport~~s~~ expansions, development, and Master Plans.

Military Aviation Installations

Military aviation has had a long history in San Diego. Marine Corps Air Station (MCAS) Miramar and Naval Air Station (NAS) North Island are essential for national defense purposes. As part of the military's larger presence~~s~~ in the region, these installations help fuel our local economy.

MCAS Miramar serves as a critical location for Marine Corps fixed-wing and helicopter aircraft activities. Aircraft training includes "touch-and-goes"(takeoff and landings with a close-in circuit around the airport); aircraft carrier simulated landings; practice instrument approaches; and normal departures to, and arrivals from, other installations or training areas. ~~In response to concerns about noise and safety, the Marines have changed flight patterns and hours of operation and have updated Miramar's Air Installations Compatible Use Zones Study to address existing and projected aircraft operations.~~

Located in Coronado, NAS North Island is the only west coast installation that provides direct access from an aircraft carrier to an airfield. As a component of North Island, Naval Outlying Field Imperial Beach serves as an important location for naval helicopter training.

Airports Outside of the City

Commercial air carriers and general aviation aircraft operate at the Tijuana International Airport in Mexico adjacent to the international border. The Cross Border Xpress provides a terminal in Otay Mesa with a pedestrian bridge for passengers to board planes at Tijuana International Airport. In addition, general aviation aircraft operate at Gillespie Field in El Cajon.

Heliports and Helipads/Helistops

For information on heliports, refer to the Noise Element, Section D and the Land Use Element, Section G for discussion regarding aircraft operations within the City.

Policies

ME-~~H~~I.1. Participate in the development and implementation of the San Diego International Airport Master Plan. The Master Plan addresses terminal conditions and capacity, vehicle parking capacity, ~~multi-modal~~multimodal ground connections to terminal areas, and ground access needed to support the forecasted demand for passengers and cargo.

ME-~~H~~I.2. Participate in the development and implementation of long-range regional plans that address regional commercial air carrier capacity to accommodate forecasted air passenger and cargo demands and the integration of ~~multi-modal~~multimodal ground connections to the regional aviation system.

ME-~~H~~I.3. Provide general aviation facilities at Montgomery Field and Brown Field in accordance with their respective airport master plans or layout plans, City regulations, and Federal Aviation Administration requirements.

a. Accommodate forecasted general aviation demand within the limitations of federal, state, and local funding, user fees, and environmental and regulatory constraints.

b. Seek federal and state funding assistance to develop, implement, and update Airport Master Plans, as needed, for Montgomery Field and Brown Field to support the forecasted demand for general aviation and public safety operations.

ME-~~H~~I.4. Support training and operation activities at military aviation installations that are essential for national defense and our local economy.

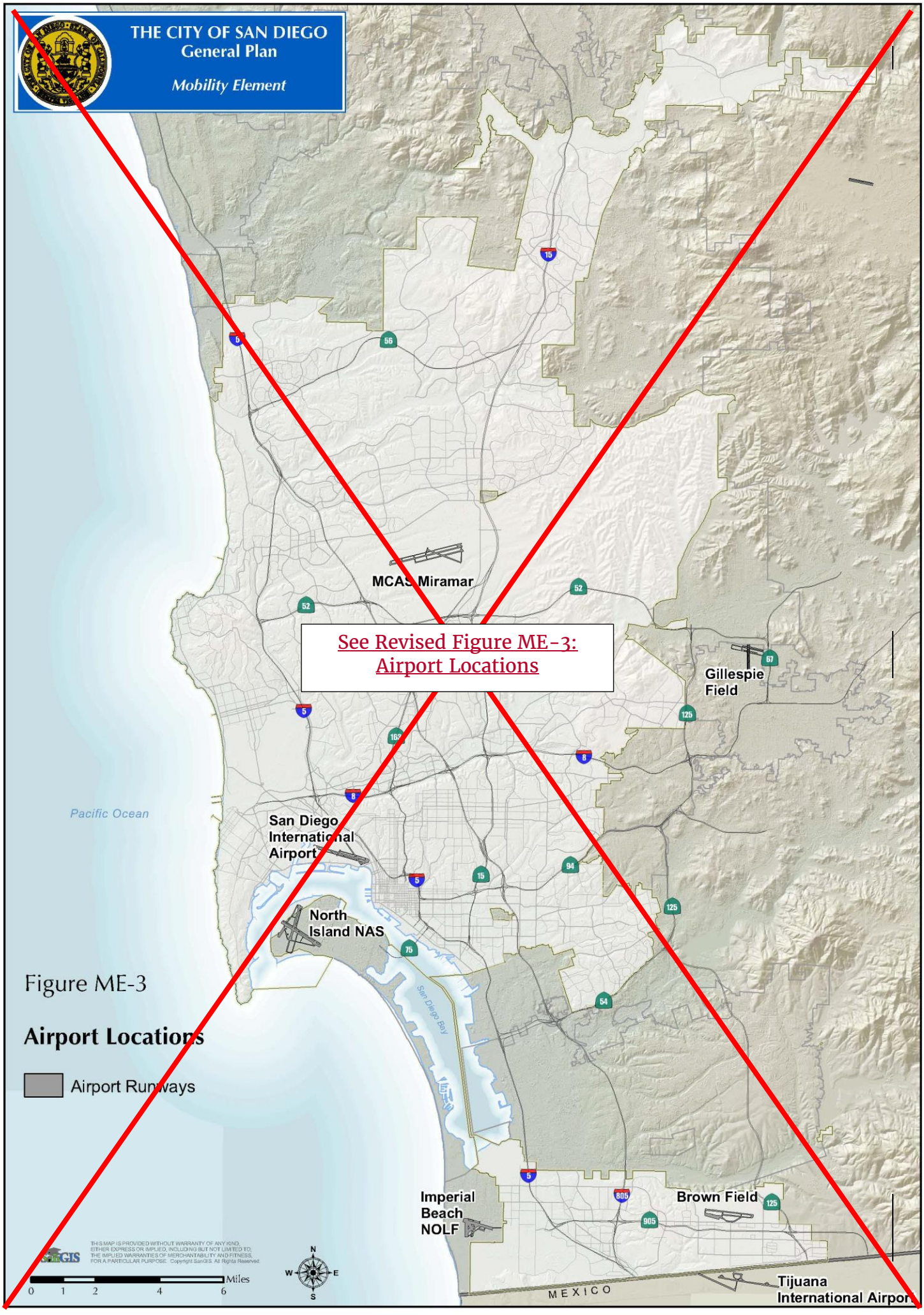

THE CITY OF SAN DIEGO
General Plan
Mobility Element
MCAS Miramar
See Revised Figure ME-3:
Airport Locations
Gillespie
Field
Pacific Ocean
San Diego
International
Airport
North
Island NAS
San Diego Bay
Imperial
Beach
NOLF
Brown Field
MEXICO
Tijuana
International Airport
Figure ME-3
Airport Locations
Airport Runways
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FIGURE ME-3
Airport Locations

~~*Passenger Rail*~~

Goal

~~♦ Improved rail travel opportunities.~~

Discussion

~~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. The Coaster and Amtrak trains provide passenger rail service to the City of San Diego along the coastal rail corridor. Passenger and freight trains share the predominately single-track corridor (see ME Section J, Goods Movement/Freight section). The Coaster provides commuter rail service between Oceanside and Downtown San Diego with stations in the City at Sorrento Valley, Old Town, and the Santa Fe Depot. Amtrak provides intercity passenger rail service from downtown San Diego to Los Angeles, and north to San Luis Obispo, which is the second most heavily traveled intercity passenger rail corridor in the nation.~~

~~The Regional Transportation Plan identifies projects that would provide improved rail service and performance, and would enable service frequency improvements for commuter and intercity passenger rail services. Specific projects include double tracking of the coastal rail corridor and a tunnel under University City (including a new station), and service frequency improvements.~~

~~The California High-Speed Rail Authority has developed a plan for the construction, operation and financing of a statewide, intercity, 700-mile long high-speed passenger rail system capable of speeds in excess of 200 miles per hour on dedicated, fully separated tracks serving the major metropolitan centers of California. The network would provide intercity connections that would be competitive with air and auto travel options. This plan identifies two corridors that would connect San Diego to Los Angeles and Northern California: the coastal rail corridor with high-speed service to Orange County and conventional improvements south of Orange County; and the I-15 inland corridor through Riverside and San Bernardino Counties connecting to Los Angeles. Additional project-level environmental analysis, and other approvals, would take place prior to implementation.~~

~~Policies~~

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

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

~~ME-I.5. Support increased commuter and intercity passenger rail services.~~

~~ME-I.6. Support a stable, multi-year transportation funding policy for passenger rail services that meets the goal of improved rail travel opportunities.~~

J. 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~~The region must optimize commercial goods movement to maintain and improve ~~the~~ San ~~Diego region's~~Diego's economic competitiveness while minimizing potential negative impacts to ~~our~~the transportation system and neighborhoods. Figure ME-4, Intermodal Freight Facilities, shows the location of major facilities that make up the ~~metropolitan~~ region's intermodal goods movement/freight system. Noise impacts that result from goods movement are discussed in the Noise Element, Section B.

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~~. This infrastructure also supports San Diego's role in the nation's supply chain and business of trade. ~~As a result, the~~The majority of ~~San Diego's~~ freight passes through the

City and region to other areas of the state, the nation, and to international destinations. International trade and goods movement is discussed in the Economic Prosperity Element, Section I.

- **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 uses as well as local industry and business 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 trans-load 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~~The San Diego Unified Port District~~. Existing~~ administers the commercial shipping facilities includ~~e~~ing 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 in Los Angeles to~~ as well as the ~~north and Ensenada to the south.~~Downtown Cruise Ship Terminal. 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.~~ Economic Prosperity Element, Sections H, I,

and J contain additional information regarding maritime activities.

- **Air Cargo**: ~~Most air cargo in~~The San Diego County Regional Airport Authority administers the San Diego ~~region is handled through San Diego~~ International Airport which handles most air cargo, with a small percentage handled at general aviation airports. ~~Airport recommendations are found in~~ Section H contains additional information regarding Airports.

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

Last-mile delivery options, which offer people a variety of methods of package delivery, are important within the broader goods movement mobility umbrella. Last-mile opportunities can include vehicles that are semi- or fully automated drones that deliver small goods to homes and smart lockers. Shared vehicle trips can be part of the solutions for last-mile goods movement services and can allow for more flexibility and efficiency through the movement of both people and goods.

Digital infrastructure can allow for specific applications including vehicle routing, parking, and real-time delay information across the City, region, and across the border. Other goods movement infrastructure technology include freight prioritization on roads, real-time information sharing, and management of truck parking and staging areas.

Policies

ME-J.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-J.2. Preserve property for planned roadway and railroad rights-of-way, marine and air terminals, and other needed transportation facilities.

ME-J.3. Support measures to alleviate on-street truck parking and staging and peak period truck usage on freeways. These measures may include, but are not limited to: designating off-street truck staging areas; shared use~~d~~ of park-and-ride lots; and shared use of other public and private parking lots where appropriate.

ME-J.4. Implement measures to minimize the impacts of truck traffic, deliveries, and staging in residential and mixed-use neighborhoods.

ME-J.5. Support alternatives to transporting hazardous materials by truck.

ME-J.6. Support the improvement of inter-regional freight service between San Diego and the rest of the continent.

ME-J.7. 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-J.8. Work with the San Diego Unified Port District, Caltrans, and SANDAG to capitalize on potential economic and mobility benefits, and identify and mitigate potential environmental and public health impacts of goods movement to Port Terminals and other major logistics hubs in the San Diego region.

ME-J.9. Support efforts that facilitate the efficient movement of goods across the U.S.-Mexico Border (see also Economic Prosperity Element, Section J).

ME-J.10. Support the transition of commercial truck vehicle fleets to near-zero/zero-emission vehicles.

ME-J.11. Work with the San Diego Unified Port District, Air Pollution Control District, U.S. Navy, SANDAG, and Caltrans to support the transition of maritime operations and medium and heavy vehicles to near-zero/zero-emissions.

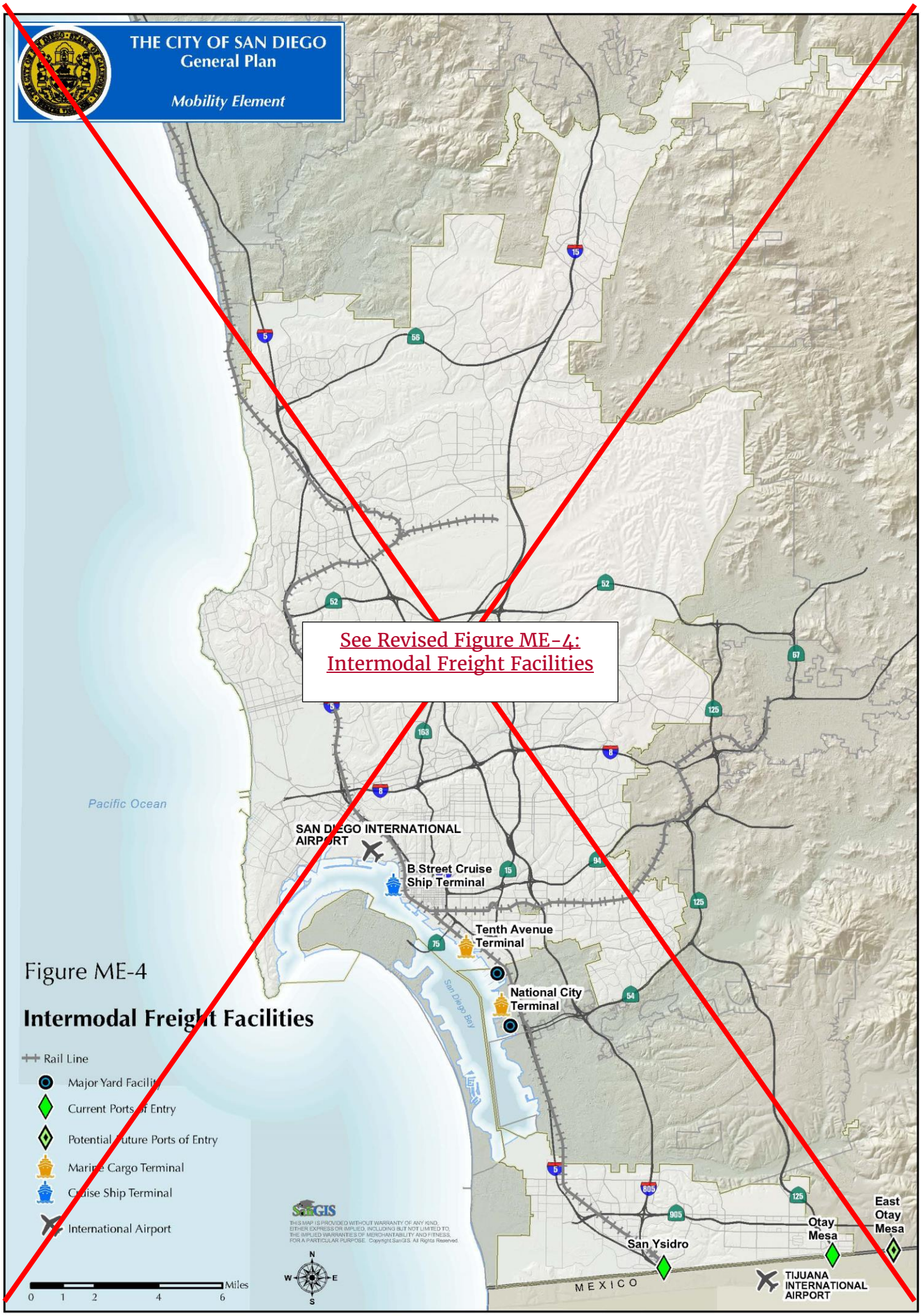
THE CITY OF SAN DIEGO
General Plan
Mobility Element
See Revised Figure ME-4:
Intermodal Freight Facilities
Pacific Ocean
SAN DIEGO INTERNATIONAL AIRPORT
B Street Cruise Ship Terminal
Tenth Avenue Terminal
National City Terminal
San Diego Bay
Otay Mesa
East Otay Mesa
San Ysidro
MEXICO
TIJUANA INTERNATIONAL AIRPORT
Figure ME-4
Intermodal Freight Facilities
Rail Line
Major Yard Facility
Current Ports of Entry
Potential Future Ports of Entry
Marine Cargo Terminal
Cruise Ship Terminal
International Airport
Miles
0 1 2 4 6
SanGIS
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FIGURE ME-4
Intermodal Freight Facilities

Source: SANDAG, SanGIS, City of San Diego

K. Regional Coordination and Financing

Goals

- An objective and data-driven process for prioritization of transportation projects.
- Effective representation of City of San Diego interests in SANDAG decisions.
- Assured revenues to cover the costs of constructing, operating, and maintaining transportation facilities and providing needed transportation services.

Discussion

Transportation funding sources and strategies, and a process for prioritization 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~~businesses 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~~.~~ in the region. The term "transportation" refers to all types of surface transportation,~~-~~ including pedestrian, bicycle, shared use mobility, automobile, and transit and funding for regional projects and programs is derived from the Regional Plan and programmed through the Regional Transportation Improvement Program.

~~The 2030 Regional Transportation Plan (RTP) 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. The RTP identifies revenue sources and estimated transportation project costs.~~

~~SANDAG sets priorities for allocating transportation funding based upon 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. These target areas were adopted by the region as a part of the Regional Comprehensive Plan (RCP).~~

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 uses TransNet revenues and available grant funding, ~~such as Community Development Block Grants, Safe Routes to Schools, and Transportation Development Act grants~~ to fund improvements. At the community level, communities have initiated Maintenance Assessment Districts to fund higher levels of maintenance services on local streets such as pedestrian lighting and landscape.

The funding of necessary improvements to our transportation system is still 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~~There are many desired projects that are unfunded, such as neighborhood-based transit service ~~(circulators and shuttles).~~ The Public Facilities and Safety Element provides policies for public facilities financing, prioritization, and evaluation of new growth that apply to transportation projects. ~~-~~The Public Facilities and Safety Element policies, combined with those listed below, are designed to: provide guidance for the prioritization of projects; position San Diego to compete for available transportation funding; ~~to~~ pursue new funding sources; ~~to~~ maximize the use of funding obtained; and ~~to~~ guide the funding of improvement projects to best meet General Plan goals.

Policies

Prioritization

ME-K.1. Identify and prioritize transportation improvement projects for inclusion in the ~~City of San Diego's~~City's annual Capital Improvements Program ~~(CIP)~~ and ~~to~~ guide ~~the City's~~ applications for regional, state~~,~~ or federal funds, in accordance with ~~Public Facilities Element,~~ Policy PF.B.3.

ME-K.2. Take a leadership role in efforts to increase transportation funding to benefit areas that have the strongest commitment to locating or maintaining higher densities/intensities in areas served by existing or planned transit.

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

Provision of Transportation Facilities with Growth

ME-K.4. Determine necessary transportation improvements to serve new development at the community plan level, and where necessary, at the project level.

ME-K.5. 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~~impact fee studies, as appropriate.

ME-K.6. Require development proposals to provide a mix of ~~multi-modal~~multimodal transportation facilities, where needed and as appropriate, in accordance with the Transportation Study Manual and policies established in the Public Facilities and Safety Element, Section C.

L. Emerging Technologies

Goal

- Maximize efficiency of service and movement of people and goods throughout the City with the use of transportation technology.

Discussion

Transportation technology will transform how people and goods move around the City. New technologies can support the goals and vision of the General Plan and enhance safety, mobility, access, and equity in the City for community members, workers, and visitors. These emerging technologies may impact people's transportation decisions and could increase the accessibility and connectivity of different areas within the City.

The network of electric vehicle charging stations is expected to grow as the number of electric passenger vehicles, electric medium-duty electric vehicles, and electric heavy-duty vehicles increases. To support the growing need for vehicle charging, wireless in-road electric vehicle charging will need to be considered at a regional level. The expansion of charging infrastructure and implementation of in-road electric vehicle charging has the potential to support the City's overall shift to electric vehicles.

Active Transportation and Demand Management can help provide real-time information to the public and reduce congestion. It also enables transportation operators to change how infrastructure and services are used as traffic conditions change. Roads can have capacity maximized through technology instead of being widened or building new roadways. This technology provides real-time travel information to help people decide how, where, and when to travel. Digital infrastructure can allow people to connect to transportation services and create a digital platform that can enable dynamic management of roadways and transit services.

"Mobility as a Service" is a consolidated on-demand digital platform that integrates various forms of transportation options and programs into one application. It can include an integrated payment system that covers all transportation services which can include transit information and passes, scooter or shared mobility device rental and booking, bike routes and bike rental, managed lane payments, transportation network company services, and on-demand or shared services.

Driverless vehicle technology will evolve over the next few decades. Autonomous Vehicles can reduce or eliminate collisions~~accidents~~ and increase mobility options. As autonomous vehicle use increases, the number of single-occupancy vehicle trips could increase which could affect congestion and curb utilization. Pooled ownership programs and programs to support autonomous vehicle use for rideshare and delivery services may need to be developed as driverless technology expands.

Policies

ME-L.1. Support efforts to accelerate electric vehicle adoption, including flexible fleets, circulators, and electric bicycles, focusing on barriers to ownership and charging for community members in areas with the greatest needs.

ME-L.2 Support pilot efforts to further sustainable mobility efforts surrounding Mobility as a Service, Active Transportation Demand Management, and autonomous vehicle adoption and implementation.

ME-L.3 Develop infrastructure to support zero-emission transportation technologies and services.

ME-L.4 Consider the use of City-owned surplus land that cannot be used for housing or housing-related uses for electric vehicle charging sites prior to review for sale or other dispensation.

ME-L.5 Maximize efficiency of services, while increasing person throughput, reducing congestion and parking demand, and providing quality information to the traveling public

ME-L.6 Embrace emerging technologies that improve movement throughout the City, enhance transportation safety, and/or support the electrification of fleet and privately owned vehicles.

ME-L.7 Monitor, evaluate, and address the effects that autonomous vehicles may have on mobility and transportation networks.

ME-L.8 Work with SANDAG, Caltrans, and transit agencies to pilot emerging technologies in the City and evaluate the functionality of these technologies especially as it relates to the City's Vision Zero goal.