CIRCULATION ELEMENT



View of Venta Spur Bridge

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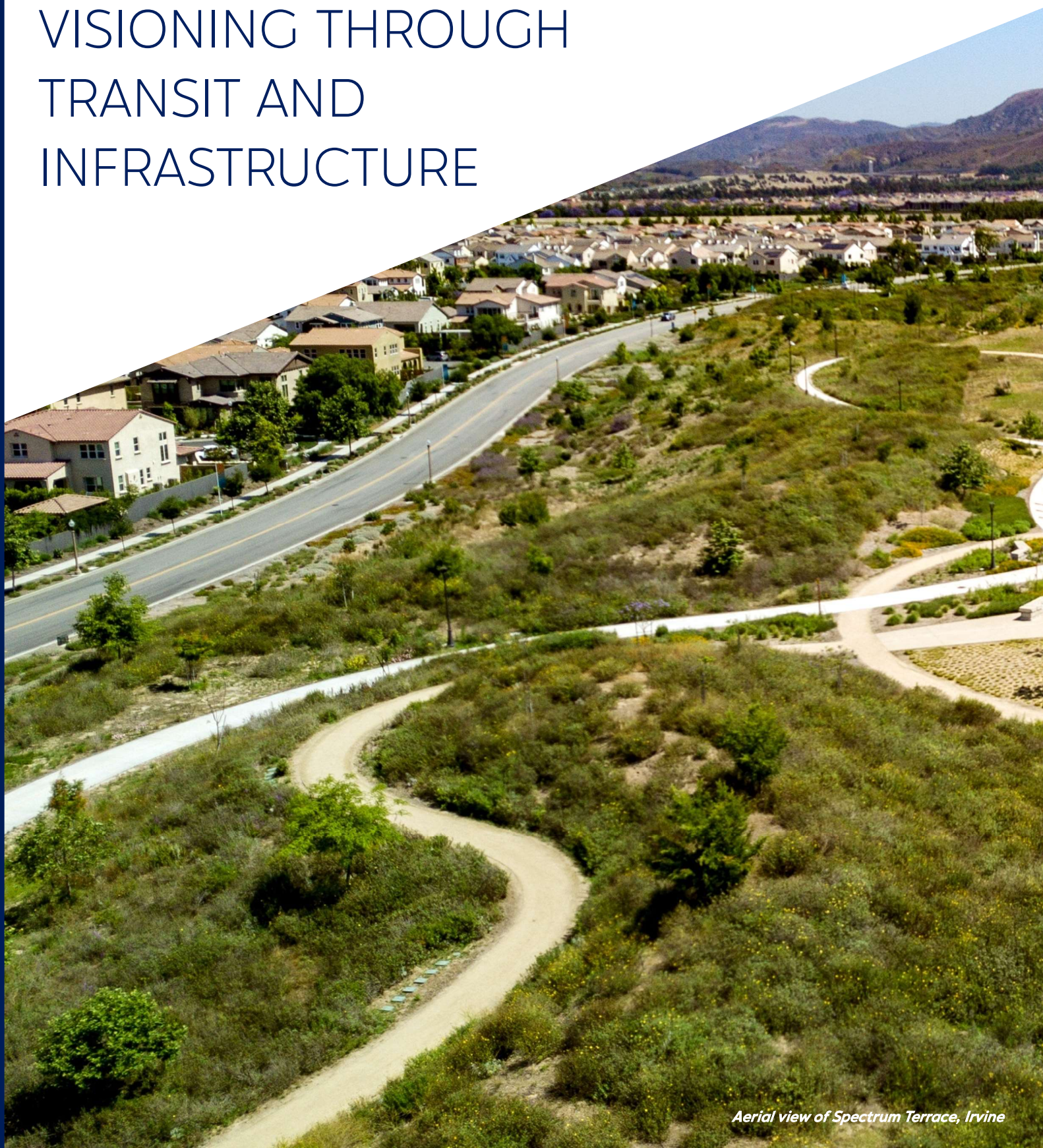
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As one of the most vibrant and forward-thinking municipalities in Southern California, Irvine is committed to fostering a sustainable and e fficient transportation network that enhances accessibility, promotes connectivity, and prioritizes the safety and mobility of all residents, workers, and visitors. This document serves as a blueprint for the continued development and enhancement of our transportation system, ensuring that they evolve in harmony with our City's growth, economic vitality, and environmental stewardship.



Aerial view of Woodbridge

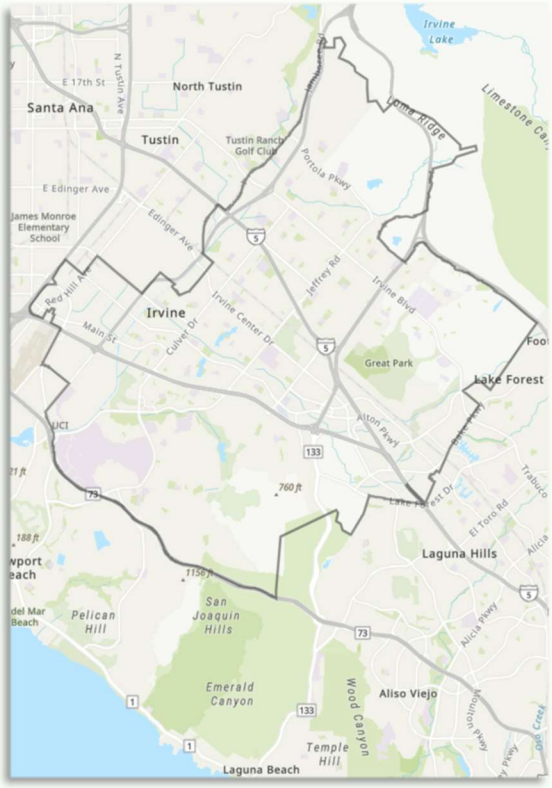
VISIONING THROUGH TRANSIT AND INFRASTRUCTURE



Aerial view of Spectrum Terrace, Irvine

The City of Irvine, nestled in the heart of Orange County, California, boasts a reputation for meticulous urban planning and a commitment to enhancing the quality of life for its residents. Central to this ethos is the City's approach to infrastructure, which places residents at the forefront of every decision. From the initial stages of planning to the ongoing maintenance and enhancement of infrastructure and transit systems, Irvine prioritizes the needs and preferences of its diverse population.

Irvine places a strong emphasis on sustainability and innovation in its transit and infrastructure initiatives. The City prioritizes environmentally friendly modes of transportation, such as biking, walking, and public transit, to reduce carbon emissions and alleviate traffic congestion. Additionally, Irvine leverages innovative technologies and smart infrastructure solutions to enhance efficiency and improve the overall quality of life for residents. By investing in sustainable and forward-thinking infrastructure, the City aims to create a more livable and resilient community for generations to come.

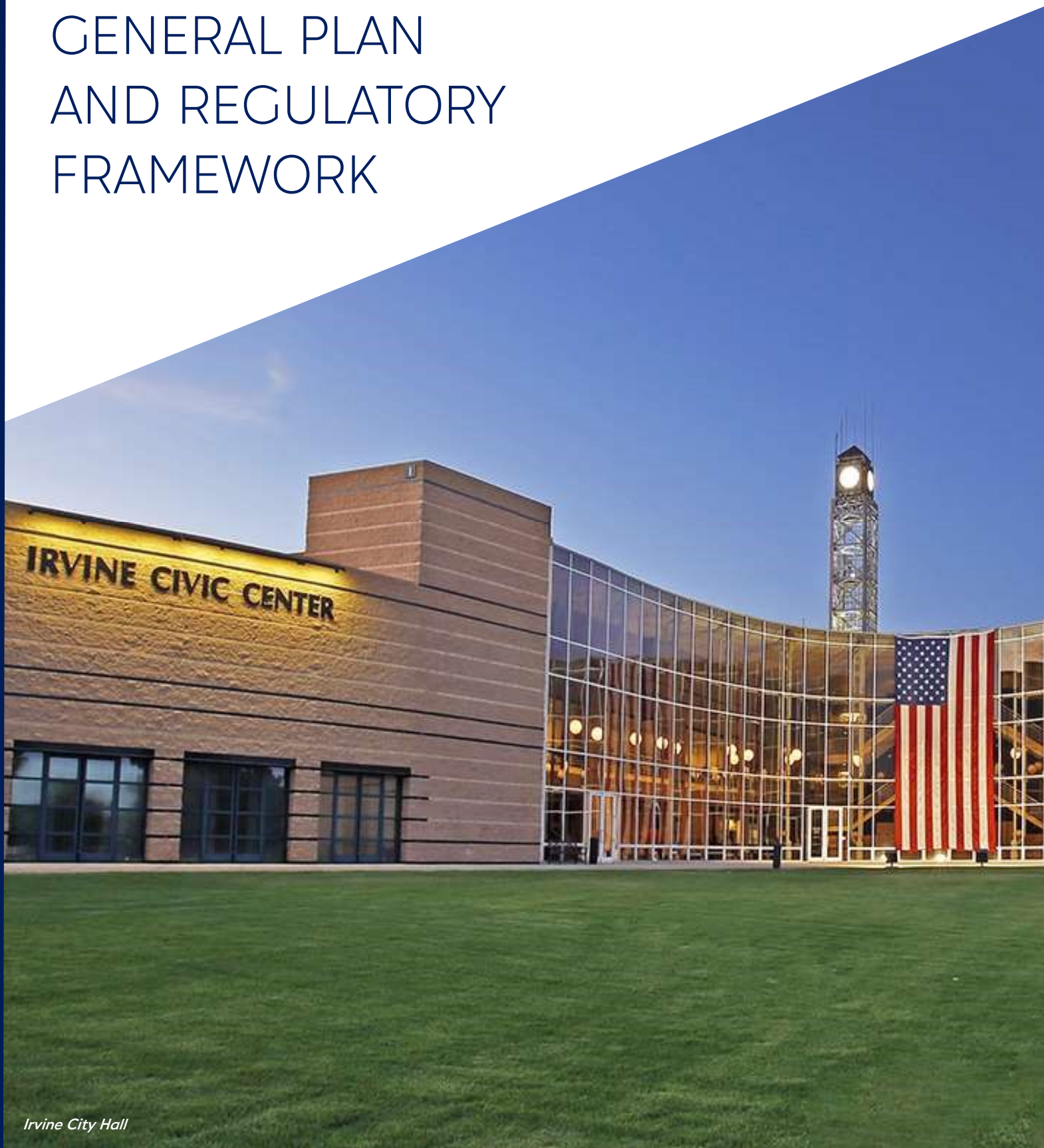


Furthermore, Irvine is committed to ongoing maintenance and improvement of its infrastructure and transit systems to ensure they continue to meet the evolving needs of residents. The City regularly assesses the condition of its infrastructure and invests in upgrades and repairs as needed to enhance safety, reliability, and accessibility. Irvine places a strong emphasis on sustainability and innovation in its transportation initiatives.

The City approaches transit and infrastructure with a steadfast commitment to putting residents first. Through extensive community engagement, a focus on sustainability and innovation, and a dedication to ongoing maintenance and improvement, Irvine strives to create a vibrant and inclusive community where residents can thrive. By prioritizing the needs and preferences of its diverse population, Irvine continues to set a benchmark for responsible urban development and infrastructure planning.

With the adoption of the certified 2021-2029 Housing Element in May 2022, the City is obligated to revise relevant sections of the General Plan to accommodate the residential site inventory outlined in the Housing Element. This includes preparing for the addition of up to 57,656 new housing units within the City, primarily concentrated in three main focus areas: Focus Area 1 (Greater Irvine Business Complex Area), Focus Area 2 (Greater Irvine Spectrum Area), and Focus Area 3 (Great Park Neighborhood Transit Village). As part of this planning process, the City must also address circulation improvements to facilitate future growth and development within Irvine.

GENERAL PLAN AND REGULATORY FRAMEWORK



Irvine City Hall

The City of Irvine's Circulation Element has been drafted in alignment with the below discussed considerations.

STATE GENERAL PLAN REQUIREMENTS

The Office of Planning and Research (OPR) requires a Circulation Element to cover various aspects related to transportation and mobility within a jurisdiction. This includes addressing the development and improvement of major thoroughfares, identifying the location and necessity of public utilities and facilities, considering the location and design of major thoroughfares in new developments, analyzing street patterns and multi-modal use, and considering the relationships between intended users of streets.

Additionally, OPR mandates that the Circulation Element should incorporate airports, seaports, bus and train stations, and other terminals into transportation discussions and involve their operators in the General Plan process.

RELATIONSHIP TO OTHER ELEMENTS

This section outlines objectives, policies, and programs aimed at integrating circulation considerations into City decisions. Furthermore, different parts of the General Plan detail the City's approach to addressing circulation issues across important domains including land use, housing, conservation, safety, environmental protection, and climate action.

A summary of circulation-related considerations in the 2045 General Plan is provided below:

- Land Use Element – The Circulation Element in a General Plan aligns transportation infrastructure with land use by considering factors like population growth and employment centers to determine needs such as roads and public transit. It influences land use decisions by recommending transportation improvements that support specific development patterns, integrates various transportation modes with land use, addresses transportation impacts associated with land use changes, and maintains a feedback loop with the Land Use Element to inform decision-making.



- **Housing Element** – The Circulation Element in a General Plan ensures that housing developments are well-connected and accessible by considering factors such as proximity to transit stops, promoting transit-oriented development (TOD) to reduce car reliance, identifying transportation constraints for affordable housing locations, facilitating infrastructure financing for new housing developments, and promoting active transportation modes like walking and biking within neighborhoods.
- **Conservation and Open Space Element** – The Circulation Element in a General Plan ensures that transportation infrastructure provides access to conservation and open space areas, while also addressing potential environmental impacts near these areas. It promotes active transportation modes like walking and biking, integrates pedestrian and bike paths to connect residential areas with parks and trails, identifies and preserves scenic corridors, and involves collaboration with environmental agencies to align transportation planning with conservation goals.
- **Environmental Protection and Climate Action (EPCA) Element** – The Circulation Element in a General Plan aims to mitigate climate change by promoting sustainable transportation modes such as public transit, walking, biking, and electric vehicles, which reduce greenhouse gas emissions. It also encourages active transportation to improve air quality and public health, supports transit-oriented development to reduce vehicle miles traveled, integrates resilience measures to address climate impacts on infrastructure, and collaborates with environmental agencies to align transportation planning with environmental protection goals.
- **Safety** – The Circulation Element integrates various measures to enhance road safety for all users, including motorists, pedestrians, and cyclists. This includes recommending traffic calming measures, promoting pedestrian and bicycle safety through dedicated infrastructure such as sidewalks and enhanced bikeway facilities, supporting Safe Routes to Schools programs to ensure safe travel for students, addressing emergency response access by designing roads for efficient emergency vehicle access, and collaborating with public safety agencies to address transportation-related safety concerns through audits, enforcement measures, and emergency response planning.
- **Noise Element** – The Circulation Element interacts collaboratively with the Noise Element to address the impacts of transportation-related noise on the community's quality of life and overall mobility. By coordinating strategies for sound mitigation and traffic management, these elements aim to minimize noise pollution along transportation corridors and within residential areas, enhancing both roadway safety and environmental comfort for residents and commuters alike. Additionally, the Circulation Element may incorporate measures to mitigate noise impacts from transportation infrastructure, such as implementing noise-reducing pavement or sound walls, ensuring a harmonious integration of transportation systems with surrounding land uses.

General Plan Element objectives related to the Circulation Element are as follows:

EPCA Element: EPCA-1, EPCA-2, EPCA-3, EPCA-4, EPCA-5, EPCA-6, EPCA-7, EPCA-8, EPCA-9, EPCA-10, EPCA-11	**Conservation and Open Space Element: COS-2, COS-3, COS-4, COS-5, COS-6, COS-8, COS-9, COS-10**
Safety Element: S-1, S-2, S-3, S-4, S-5, S-7	**Land Use Element: LU-1, LU-2, LU-3, LU-4, LU-6, LU-7, LU-8, LU-9, LU-10, LU-11, LU-12, LU-14**

ADDITIONAL REGULATORY CONSIDERATIONS

Roadways

- Federal Highway Administration – The Federal Highway Administration (FHWA) manages federal funds allocated for the construction and upkeep of the national highway network, which includes Interstate-405 and Interstate-5 in Irvine. Additionally, FHWA provides funding to state transportation agencies for a range of infrastructure enhancements, including bridges and overpasses essential for the national highway system.



Aerial view of I-405 in Irvine

- Caltrans Highway Design Manual (HDM) – The California Department of Transportation (Caltrans) enforces a Highway Design Manual to govern the design of circulation facilities within its jurisdiction. This manual establishes engineering guidelines for state-owned highways, intersections, freeway interchanges, bridges, drainage structures, and other transportation infrastructure. Chapter 1000 of the HDM provides standards for designing bicycle facilities, encompassing signage, markings, and signals, while also including pedestrian facilities such as sidewalks.
- California Complete Streets Act – The California Complete Streets Act, enacted in 2008, requires Circulation Elements in General Plans to address transportation systems from a multimodal perspective. This means streets, roads, and highways must accommodate all users, including pedestrians, cyclists, drivers, and public transit riders, across different community types. The law emphasizes the inclusion of diverse user groups, such as children, adults, seniors, and individuals with disabilities. Compliance guidance is available in the Office of Planning and Research publication "Complete Streets and the Circulation Element."
- Regional Transportation Plan – The Southern California Association of Governments (SCAG) conducts regional transportation planning through its Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), updated every four years. This comprehensive plan addresses various transportation aspects, including active transportation, aviation, congestion management, goods movement, highways, transit, and safety. The planning process involves prioritizing projects such as freeway improvements and new transit lines, considering economic trends, land use patterns, and community input, with cost estimates for transportation expenditures forecasted.

- **Congestion Management Plan** – The Orange County Transportation Authority (OCTA) is responsible for overseeing the County's Congestion Management Program (CMP) to support regional mobility and air quality goals. The CMP's objectives include alleviating traffic congestion, coordinating land use planning, and assessing gas tax fund eligibility. Policies within the program aim to monitor and improve system performance, with the 2015 CMP highlighting 11 intersections in Irvine for targeted attention, including segments of State Route-133, State Route-261, Interstate-405, Interstate-5, MacArthur Boulevard, and Jamboree Road.
- **Master Plan of Arterial Highways** – The Orange County Master Plan of Arterial Highways (MPAH), managed by the Orange County Transportation Authority (OCTA), is a comprehensive transportation plan aiming to balance regional mobility with local access. It establishes an intercommunity arterial highway system to manage current and projected traffic, with detailed road classifications provided in Section 5.2.2.1. The plan's alignment with Irvine's General Plan's Circulation Element is crucial for projects to qualify for Measure M2 funding, approved by voters in 2006, which allocates half-cent sales tax revenue for transportation initiatives. The City meets this requirement.
- **Traffic Fee Programs** – The City operates two traffic fee programs: Irvine Business Complex (IBC) and North Irvine Transportation Mitigation (NITM). These programs aim to finance circulation-related infrastructure improvements in their respective zones. The IBC Development Fee Program funds circulation enhancements necessitated by IBC development, with fees assessed based on new construction or land use changes. Collected fees are dedicated to circulation improvements and transportation monitoring within the IBC area. Similarly, the NITM Fee Program funds phased traffic improvements required by previous CEQA documents. Project applicants must pay fees allocated based on planning area. The City maintains a list of NITM-funded improvements financed by collected fees.
- **City of Irvine Standard Plans** – The City has developed a standardized set of street design plans to ensure uniformity throughout Irvine. These plans cover a range of street types, including major arterials and cul-de-sacs, and are intended to complement the City's Design Manual and Municipal Code. They offer detailed diagrams and specifications for right-of-way dimensions, drainage design, turning radii, and materials, with the goal of preserving consistency and quality across the City's street infrastructure.
- **City Design Guidelines** – The City has a set of guidelines for Signing and Striping as well as Traffic Control Plans.
- **Manual of Uniform Traffic Control Devices (MUTCD), State and National** – The MUTCD establishes uniform criteria for the use of traffic control devices (including signs, signals, markings and all other devices for communicating regulatory, warning, and guidance to road users) that meet the needs and expectancy of road users on all streets, highways, pedestrian and bicycle facilities, and areas of public travel. This is achieved with objectives that promote safety, inclusion, and mobility for all users of the roadway network; promote efficiency through uniformity of traffic control devices; promote consistency in the use, installation, and operation of traffic control devices; and provide engineering principles for the use, installation, operation, and maintenance of such devices.
- **City of Irvine Traffic Study Guidelines** – The City has adopted a set of guidelines to ensure uniformity in evaluation of traffic impacts that may result from development projects. These

guidelines provide a set of performance criteria and thresholds to identify impacts, potential roadway improvements and mitigation measures that may result from the application of both Level-of-Service (LOS) criteria as well as Vehicle Miles Traveled (VMT) criteria.

- **City of Irvine Transportation Design Procedures** – The City has developed a set of guidelines and procedures to assist with the design and review of transportation-related operational features associated with development projects. Such procedures include parameters applied for evaluation of left-turn and right-turn pocket lengths, adequacy of driveway lengths and stacking queue lengths, as well as other operational analyses.
- **Active Transportation Plan** – The City of Irvine's Strategic Active Transportation Plan (2020) offers a set of recommendations to boost walking and bicycling in the City. It proposes a combination of programs and infrastructure improvements to support these activities, addressing barriers such as long crossing distances and high speeds. The plan suggests enhancements to bicycle and pedestrian infrastructure and promotes the utilization of the existing network of trails, paths, and bike lanes.
- **OCTA Commuter Bikeways Strategic Plan** – OCTA's Commuter Bikeways Strategic Plan aims to enhance Orange County's regional bikeways network, making bicycle commuting more appealing and addressing community challenges related to bicycling options. The plan includes strategies for network improvement, eligibility for state Bicycle Transportation Account funds, clarification of OCTA's roles and responsibilities regarding bikeways, and documentation of current and planned bikeways in Orange County. Funding for these projects is not restricted to the OCTA Call for Projects.
- **Municipal Code and Zoning Ordinances** – The municipal code and zoning ordinance of Irvine incorporate various incentives aimed at promoting bicycling for both recreational and work purposes, with the goal of creating a more bicycle-friendly environment accessible to bicyclists of all ages and skill levels.

Public Transit

- **Metrolink Rail Plan** – Managed by the Southern California Regional Rail Authority (SCRRA), Metrolink serves seven routes spanning six counties, including a section in northern San Diego County. SCRRA, governed by an 11-member board representing various transportation commissions, has devised a 10-year strategic plan. This plan focuses on enhancing rail system infrastructure and service quality to sustain and grow ridership while addressing funding strategies for operational and capital improvements to alleviate capacity constraints.


Metrolink Irvine Train Station

- **Orange County Long Range Transportation Plan (2022)** – The OCTA Long Range Transportation Plan (LRTP) presents a vision for enhancing multimodal transportation across Orange County. The LRTP serves as local input for the RTP/SCS crafted by the Southern California Association of Governments (SCAG), influencing future transportation planning. It incorporates OCTA policies, transportation studies, and input from local jurisdictions, business and community leaders, county residents, and transportation planning experts to address forthcoming transportation needs.

- **Orange County Transit Master Plan (2024)** – OCTA is crafting a Transit Master Plan (TMP) to unify bus, rail, and paratransit services. This comprehensive plan will envision Orange County's transit future by addressing long-term needs and crucial connections to projects by other local transit agencies. The TMP will highlight corridors for potential public transportation experiences through options like bus rapid transit and fixed-guideway alternatives such as streetcars.
- **LOSSAN Rail Corridor Agency** – The Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor Agency (Agency) is a joint powers authority (JPA) formed in 1989 that works to increase ridership, revenue, capacity, reliability, coordination, and safety on the rail corridor between San Diego, Los Angeles, and San Luis Obispo. As required by SB 1225, and per the terms of the Inter Transfer Agreement, the LOSSAN Agency must submit an annual business plan to identify the major goals and objectives for the LOSSAN Agency's management of the Pacific Surfliner intercity passenger rail service, as well as the budget necessary to administer, market, and operate the Pacific Surfliner service during the upcoming two-year period. The business plan summarizes operations, service levels, budget, and capital improvements that have contributed to the success of the LOSSAN Business Plan service and identifies improvements to sustain and grow its success moving forward.

Goods Movement

- **Municipal Code** – In Irvine, regional goods transportation predominantly utilizes rail and the three local freeways via truck-trailers. Local truck routes are strategically planned to bypass residential areas, instead utilizing major freeways and arterial highways within the City for efficient movement.

Air System

- **Federal Air Regulations** – The Federal Aviation Administration (FAA) oversees construction near airports to maintain safe navigation and protect the National Airspace System. Federal Air Regulations (FAR) Part 77 is designed to mitigate risks posed by tall structures, buildings, cranes, and cell towers near airports, setting standards for assessing potential obstructions to airspace, imposing notice requirements for specific construction projects and facilitating studies to evaluate their impact on aircraft operations.
- **State Regulations** – The State Aeronautics Act mandates airport land use compatibility planning, with guidelines outlined in the California Airport Land Use Planning Handbook. Compliance is shown through the airport environs land use plan (AELUP) for John Wayne Airport, a 20-year strategy crafted by the Orange County Airport Land Use Commission. The AELUP aims to protect nearby residents and ensure smooth airport operations by addressing aircraft noise, accident potential zones, and building height regulations through planning guidelines, maps, and compatibility standards.
- **Zoning Ordinance** – Chapter 3-37 (Zoning District Land Use Regulations and Development Standards) of the Irvine Zoning Ordinance mandates that proposed developments exceeding 200 feet in height must obtain approval from the Federal Aviation Administration (FAA) and the Orange County Airport Land Use Commission (ALUC). Additionally, standards within the Irvine Business Complex Residential Mixed-Use Overlay District establish maximum building heights, taking into account their proximity to the airport.



Aerial view of Irvine Business Complex

IRVINE BUSINESS COMPLEX

Development within the Irvine Business Complex (IBC) is addressed in the Land Use Element, which emphasizes sustainable development and economic vitality within the business district, focusing on circulation and transportation. It underscores the significance of robust transportation infrastructure to facilitate movement within the complex, advocating for diverse transportation modes such as roads, public transit, biking, and walking. The element promotes transit accessibility through the development of transit-oriented infrastructure. Additionally, it emphasizes sustainable transportation practices to reduce environmental impacts, highlighting the integration of transportation planning with broader economic development goals for a vibrant and accessible business environment in Irvine. The Goals, Objectives, Policies, and Implementation Measures section of this element identifies proposed actions to address circulation needs and considerations unique to the IBC.

GROWTH MANAGEMENT

As the City of Irvine continues to grow, the Circulation Element will be used to protect and enhance the quality of life of its population by providing a holistic, forward-thinking plan for maintaining and further developing a transportation system that balances the City's air, road, public transit, and trail systems. The Circulation Element seeks to allow the City to maximize the value, efficiency, and safety of each transportation system to minimize congestion, the production of transportation-related greenhouse gas emissions, and vehicular accidents while meeting increased user demand from an expanding residential and employee population base. The Goals, Objectives, Policies, and Implementation Measures section of this element identifies proposed actions to help the City obtain its goal of effectively managing future growth.

EXISTING CONDITIONS



West Peltason Intersection, Irvine

Irvine stands at a strategic juncture in the region, serving as a pivotal point for major freeways. Anchored by the El Toro "Y" to the east, where the Santa Ana (I-5) and San Diego (I-405) freeways intersect, and on its western edge by the convergence of the I-405 and SR-55 freeways, Irvine's size and location make it a crucial hub for various modes of transportation. Its well-connected network of internal arterials facilitates the movement of people and goods, accommodating public transportation, commercial air travel, goods transportation, cyclists, pedestrians, and automobile traffic on arterial surface streets.

Reflecting its development as a master-planned community, Irvine's circulation system has been intricately designed. Its phased growth as a series of "villages" has led to a circulation system with a clear hierarchy: smaller roads facilitate movement within each village, while larger roads connect the villages to one another. This design is directly influenced by the sequential addition of new neighborhoods, resulting in a grid of large arterial roadways linking them together. Furthermore, as Irvine has expanded northward and eastward, local bus services have expanded geographically to accommodate the growing population.



Aerial view of Irvine tra ffic

AIR SYSTEM

John Wayne Airport (SNA) stands as one of California's busiest commercial airports. Serving as a crucial transportation hub, SNA accommodates flights from over seven major airlines and features 20 commercial gates alongside two smaller commuter passenger terminals. Additionally, the airport hosts two cargo airlines and supports a thriving general aviation community with nearly 500 aircraft. Despite its vital role, airport safety remains paramount, with potential hazards stemming from aircraft movements both on the ground and in the air. Factors such as weather conditions, pilot skills, and bird flight patterns contribute to the complexity of ensuring safety.

To mitigate safety risks, several measures are employed, including maintaining clear lighting and runway markings to aid aircraft navigation in all weather conditions. Population-intensive developments beneath flight paths are restricted to minimize potential casualties in the event of an aircraft crash. Furthermore, efforts are made to minimize visual and physical obstructions around the airport, such as tall buildings and drones, to facilitate safe aircraft maneuvering. Over the past decade, residential developments have emerged along Jamboree Boulevard, altering the surrounding landscape traditionally dominated by office and airport-oriented commercial establishments. Despite this residential expansion, areas directly beneath the flight path predominantly comprise office parks, maintaining compliance with height restrictions to preserve a midrise urban character, with a concentrated high-rise corridor flanking the I-405 freeway between Jamboree Road and MacArthur Blvd.



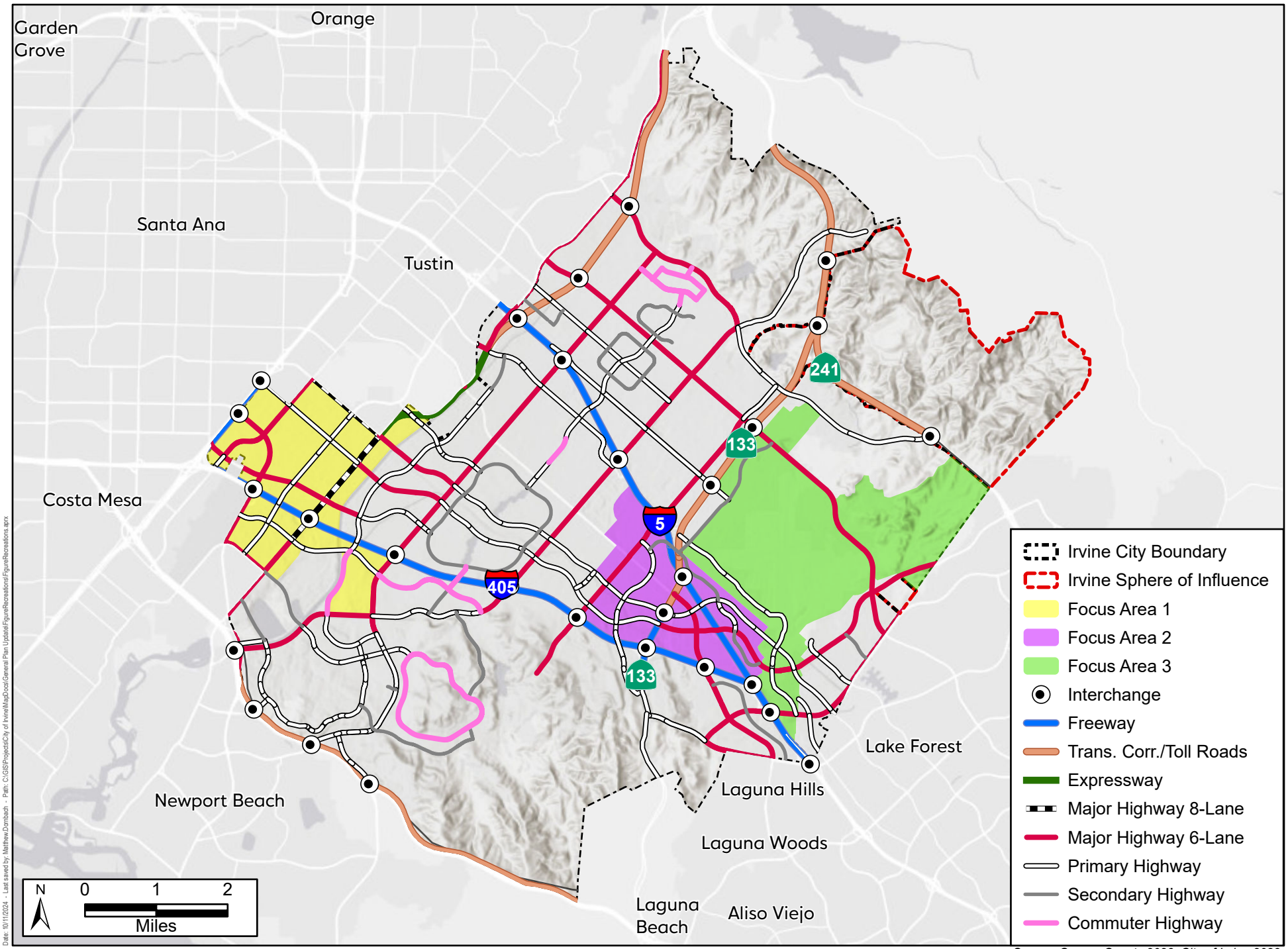
I-5 (I-405 to SR-55) Irvine Tustin

ARTERIAL HIGHWAYS

Arterial highways are designed to handle significant traffic volumes and/or high speeds. The General Plan categorizes types of arterial highways based on criteria set by the Orange County Master Plan of Arterial Highways (MPAH), overseen by OCTA. **Figure 1. Master Plan of Arterial Highways** provides an overview of the City's Master Plan of Arterial Highways. The defined categories are outlined as follows:

- **Freeway**: A divided state highway with restricted access solely through grade-separated interchanges, efficiently accommodating high volumes of traffic between cities. In Irvine, examples include the I-5 and I-405, forming the "El Toro Y" interchange, and the SR-55 extending along the City's western border.
- **Transportation Corridor**: A multi-use facility with controlled access, featuring a wide median suitable for fixed rail or high occupancy vehicle lanes, alongside general-purpose lanes, facilitating traffic flow between cities. In Irvine, toll roads like SR-241 (Foothill Transportation Corridor), SR-261, and SR-133 (part of Eastern Transportation Corridor), and SR-73 (San Joaquin Hills Transportation Corridor) serve this purpose.
- **Expressway**: An arterial highway with divided lanes and grade-separated intersections or access ramps, such as Jamboree Road in Irvine, linking the IBC to northern neighborhoods and passing through former Marine Corps Air Station (MCAS) - Tustin.
- **Major Highway**: A divided arterial highway with six to eight through lanes, connecting planning areas and providing access to freeways or transportation corridors. Examples in Irvine include Irvine Boulevard, Irvine Center Drive, and parts of Jamboree Road, Jeffrey Road, and Sand Canyon Avenue.
- **Primary Highway**: A divided arterial highway with four through lanes, connecting planning areas and activity centers within them, as well as serving as conduits to and from freeways or transportation corridors. Examples in Irvine include Barranca Parkway, Bryan Avenue, Trabuco Road, and Walnut Avenue.
- **Secondary Highway:** An undivided arterial highway with four through lanes, facilitating traffic movement between planning areas and activity centers within them. Examples in Irvine include Yale Loop, Ridgeline Drive, Research Drive, and Shady Canyon Drive.
- **Collector Highway:** A two-lane undivided highway mainly serving as a collector road for through-traffic movements between arterials. Examples in Irvine include Harvard Avenue, Michelson Drive, and Turtle Rock Drive.

Figure 1. Master Plan of Arterial Highways



Source: Orange County 2023; City of Irvine 2023.



CicloIrvine Open Street Event, May 2024

ROADWAYS

Irvine's roadway system stands out for its well-defined hierarchy, contrasting with the typical layout seen in many large California cities. Unlike the scattered networks of streets often found elsewhere, Irvine's major arterial roads follow a predetermined master plan. Similarly, Irvine's minor streets, alleys, and trails are meticulously designed to serve specific land uses rather than adhering to a simple grid pattern. Collector streets may feature landscaped areas and offer views into public spaces, while residential streets often form curvilinear networks with cul-de-sacs. This deliberate layout reflects Irvine's segmented land use pattern, characterized by distinct enclaves, which contrasts with the continuous urban fabric seen in other cities.

Local Streets: In Irvine, local streets are characterized by their low speed and traffic volume, primarily serving as access routes to residential, business, and adjacent properties. These streets often accommodate parking and witness significant pedestrian traffic. Examples are abundant in single-family residential neighborhoods, facilitating access to individual driveways and garages. Adjacent sidewalks may run parallel to the road or be separated by landscaping features.

Alleys: Narrow, linear roadways behind buildings in Irvine, alleys link two or more local streets and offer direct access to garages or carports. Unlike older urban areas, Irvine has relatively few traditional alleys due to its post-World War II development.

Driveways/Drive Aisles: Off-street roadways providing direct access to garages, carports, or parking lots are termed driveways, while those leading to multiple garages or parking spaces are drive aisles. In Irvine, multifamily residential complexes use internal drive-aisle networks to connect individual units to streets and provide guest parking, often landscaped with paths or gates.

Private Ways and Private Courts : Irvine has several private ways and private courts, which are slow-speed roads within neighborhoods providing access to residential units, garages, and parking areas. Private courts are low-traffic dead-end lanes serving the same function but accommodating fewer daily vehicle trips.

PUBLIC TRANSIT



Irvine TRIPS Shuttle

As operating costs for private autos rise, roadway congestion grows, and certain groups, such as older adults, people with disabilities, and underprivileged, face challenges in accessing private vehicles, public transit becomes a more attractive transportation option. As Irvine and the surrounding region continue to develop, regional transit providers are enhancing their services to meet the growing demand. **Figure 2. Transit Services** provides an overview of Transit Services in the City.

Rail Transit: Irvine enjoys convenient access to multiple rail transit options, including Amtrak and Metrolink. The Amtrak Pacific Surfliner provides regional passenger rail service with stops in key cities such as Fullerton, Anaheim, Santa Ana, Irvine, San Juan Capistrano, and San Clemente. Positioned between San Diego and Los Angeles, Irvine serves as a central stop in Orange County, boasting one of the nation's busiest Amtrak stations.

Metrolink operates trains along the Los Angeles to San Diego (LOSSAN) railroad corridor, including the Orange County Line and the Inland Empire-Orange County Line, offering weekday and weekend rail service. The Irvine Station, one of Orange County's busiest, serves approximately one million commuters annually and offers connections to express, local, and rail-feeder bus services operated by OCTA and iShuttle. The station provides free parking in a 1,500-space structure, with extended parking options available for Amtrak customers through registration with on-site security.

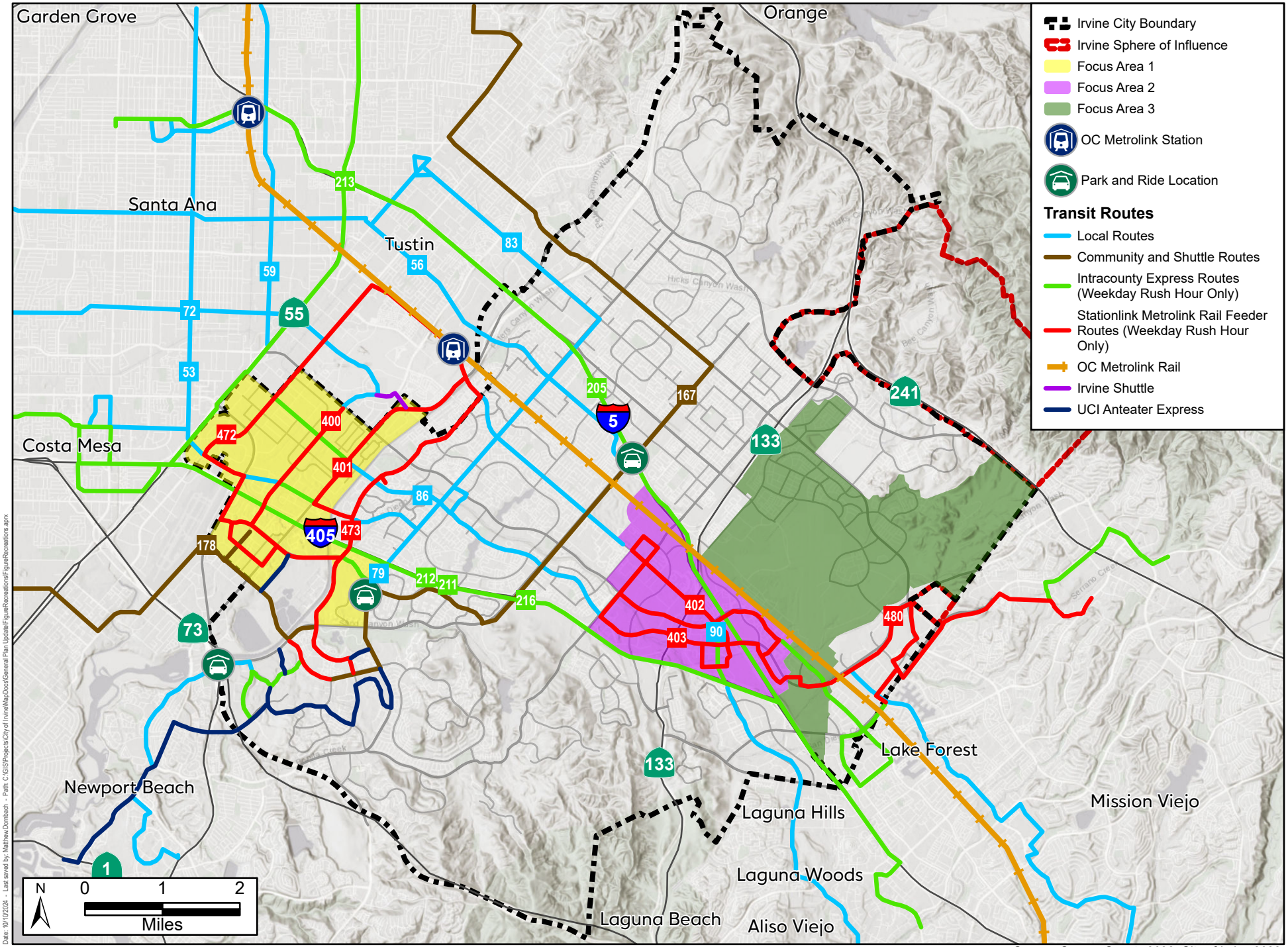
Local Transit: OCTA provides comprehensive transit services throughout Orange County, including Irvine, with routes catering to various needs, from regional commuters to local shuttles. In 2016, OCTA assumed operation and maintenance of Irvine's iShuttle program. The City offers Transportation for Irvine Residents with Disabilities (TRIPS) service, providing door-to-door transportation for residents aged 18 and above with permanent physical and/or cognitive disabilities. TRIPS operates during evenings, weekends, and holidays based on demand.

Shuttle Service: The iShuttle, a clean-fuel, rubber-tire shuttle bus, operates exclusively within Irvine during weekday peak commute hours. The Irvine Transit Vision, completed in 2022, recommended a Yale-Barranca shuttle route to connect residents in the heart of the City with parks, schools, community centers, hospitals, shopping centers and the Irvine Station. A pilot of the Irvine CONNECT service began in Spring 2024.

Anteater Express: Managed by UC Irvine, the Anteater Express connects the campus with nearby neighborhoods, housing complexes, and destinations. While some routes are free, others require a limited fare.

Additional Public Transit: Irvine provides various transit options for older adults and individuals with disabilities, including free transportation for older adults to medical appointments through the Senior Service Program. Non-emergency medical transportation funded through the Orange County Office on Aging is available in south Orange County and other select locations. The American Cancer Society provides complimentary transport for cancer treatments, and services are accessible for American veterans with disabilities. The City's Mobility Guide serves as a comprehensive directory of transit services tailored to older adults and individuals with disabilities.

Figure 2: Transit Services



Source: Orange County 2023; City of Irvine 2023.

GOODS MOVEMENT

In Irvine, goods movement is essential for the region's economic vitality. Situated strategically in Orange County, Irvine functions as a bustling hub for transporting commodities and products. The City's arterial roadways, rail networks, and local airport collectively form a comprehensive infrastructure network facilitating efficient goods movement within and beyond City limits. Arterial roads like Irvine Boulevard and Jeffrey Road provide smooth access to industrial zones, commercial centers, and residential areas, ensuring swift delivery of goods. Freeway connections like the I-5 and I-405 integrate Irvine into the broader transportation network of Southern California, enabling seamless transit of goods. Rail lines, such as Metrolink and Amtrak routes, play a significant role in transporting bulk commodities over longer distances, connecting Irvine to neighboring cities and distant markets. Moreover, John Wayne Airport serves as a crucial gateway for air cargo shipments, facilitating rapid movement of high-value goods. Overall, goods movement is integral to Irvine's economic prosperity, supported by robust transportation infrastructure and synergies between different transportation modes.



Residents enjoying a bike ride on a trail



Venta Spur Bicycle-Pedestrian

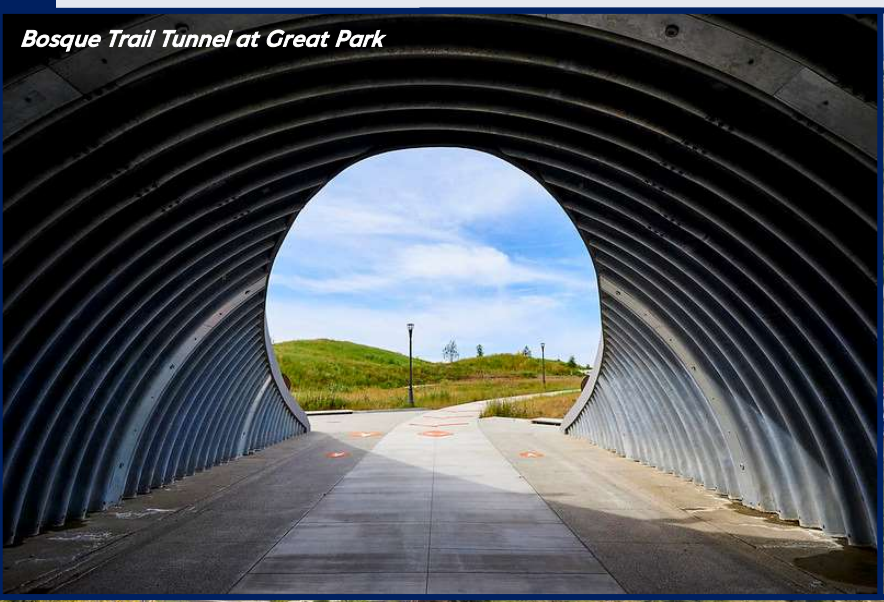
PEDESTRIAN AND BICYCLE SYSTEMS

Southern California is recognized for its heavy reliance on cars, often resulting in goods and services being distant from residential areas and limited accessibility within neighborhoods for accessing local amenities. However, owing to Irvine's meticulous master planning, the City boasts a robust network of multi-use paths. This well-constructed system of paths has been strategically developed to facilitate movement for both pedestrians and cyclists throughout the community. **Figure 3. Pedestrian Facilities** provides an overview of Pedestrian Facilities in the City and **Figure 4. Bicycle Facilities** provides an overview of Bicycle Facilities in the City.

Sidewalks: Irvine boasts an extensive pedestrian-friendly sidewalk network, designed to enhance accessibility, and promote an active lifestyle. Informal trails in nature preserves like Quail Hill Preserve provide outdoor recreation opportunities. Most residential neighborhoods have well-served sidewalks, with parks conveniently located within walking distance. However, areas like the IBC, which was developed under County authority, historically lacked sidewalks due to their focus on commerce and industry, though recent residential development has spurred demand for pedestrian infrastructure constructed bridges like Venta Spur Bridge. These bridges are funded by area-wide fees and public benefit improvement funds.

Pedestrian and Bicycle Bridges: Irvine's circulation system features numerous bridges and grade-separated crossings, enhancing safety and accessibility for cyclists and pedestrians. Notable examples include bridges within the Woodbridge community, along the Jeffrey Open Space Trail, planned bridges over Irvine Boulevard and Jamboree Road, and constructed bridges like Venta Spur Bridge. These bridges are funded by area-wide fees and public benefit improvement funds.

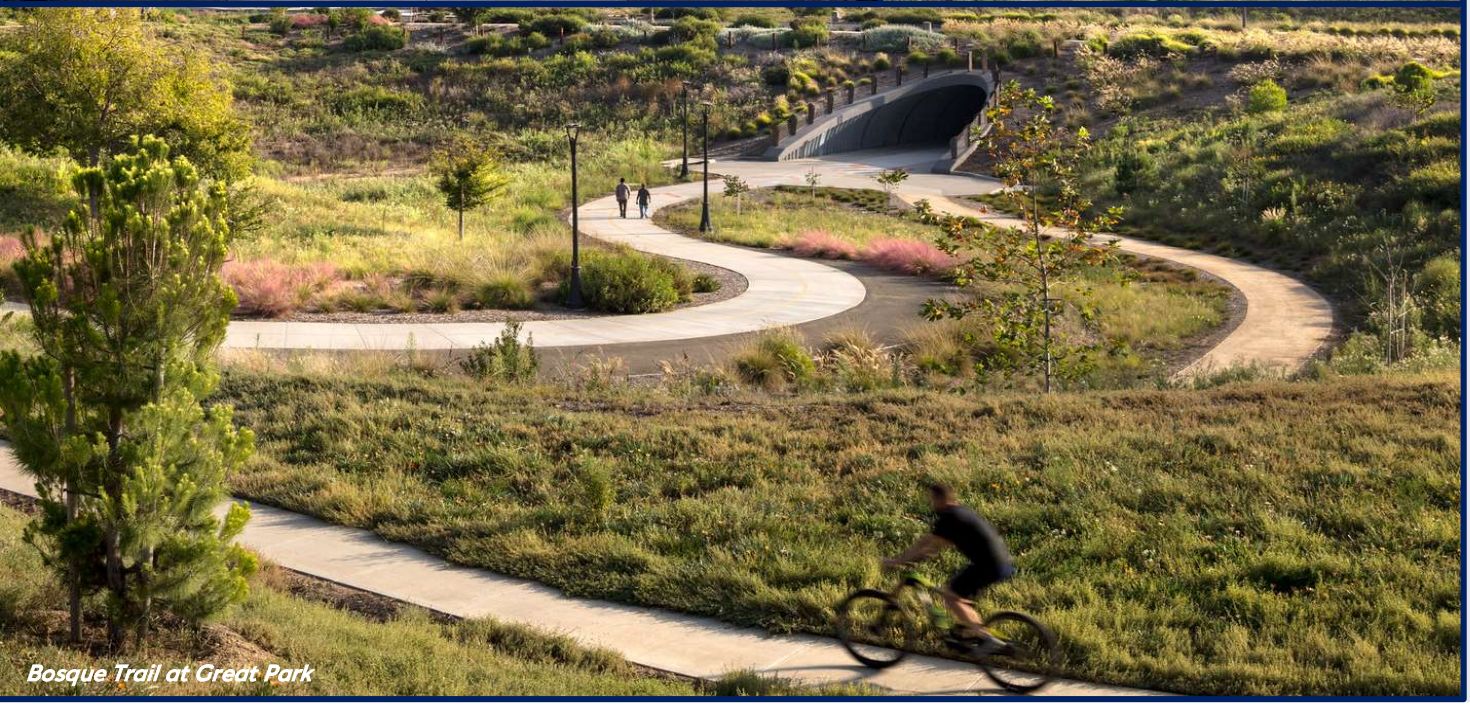
Shared Trails: Irvine's bicycle infrastructure includes Class I, II, and III bikeways, offering shared bike and pedestrian paths, marked lanes on streets, and shared routes with pedestrians or vehicles. With more than 100 miles of off-street shared paths and 301 miles of on-street bikeways, Irvine provides extensive cycling opportunities along named routes like West Irvine Trail, Peters Canyon Trail, Jeffrey Open Space Trail, Sand Canyon Trail, and Portola Trail.



Bosque Trail Tunnel at Great Park

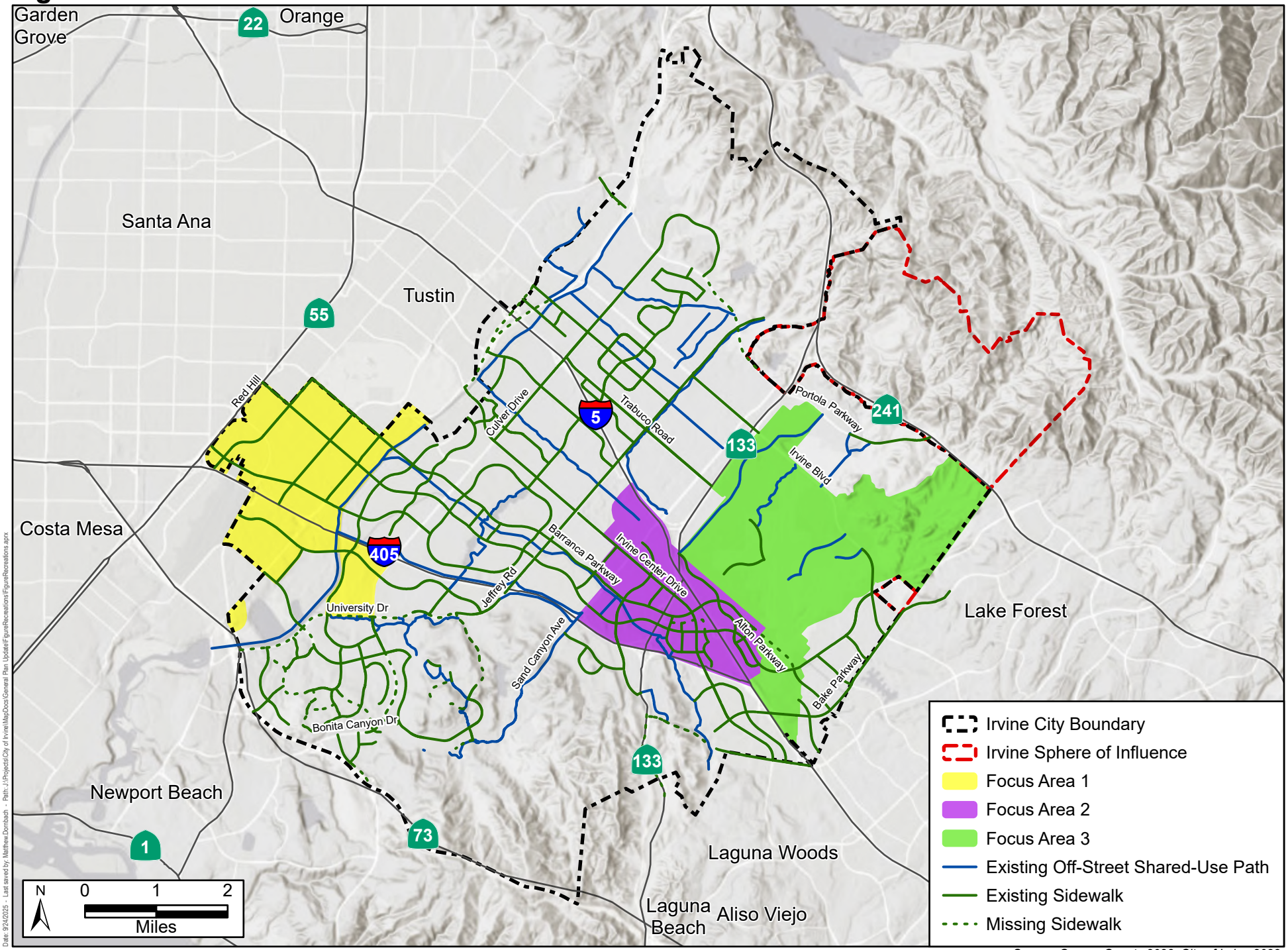


Hiking Bosque Trail at Great Park



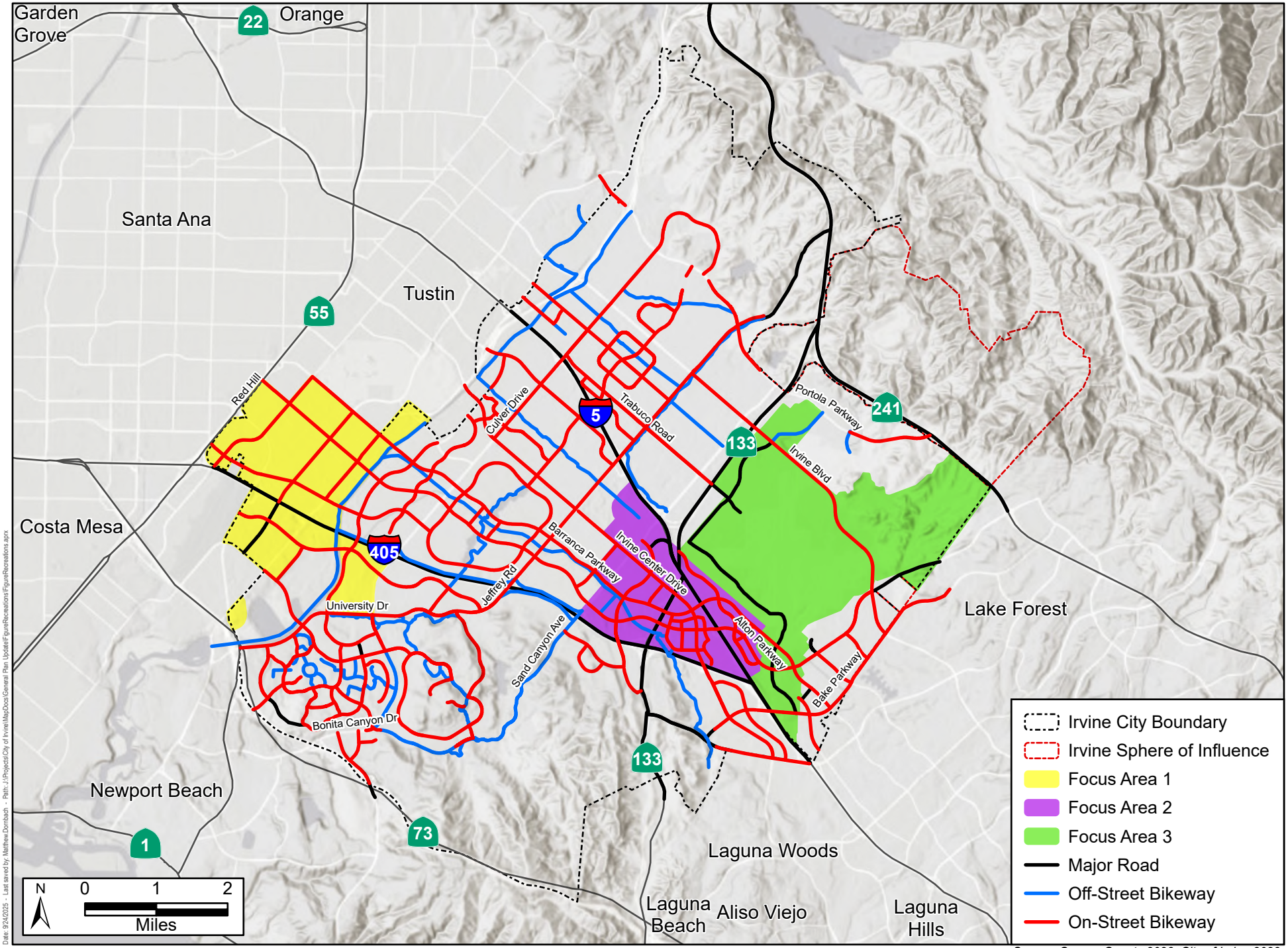
Bosque Trail at Great Park

Figure 3. Pedestrian Facilities



Source: Orange County 2023; City of Irvine 2023.

Figure 4. Bicycle Facilities



Source: Orange County 2023; City of Irvine 2023.

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MILITARY AIRPORTS AND PORTS

While the City was previously occupied by the Marine Corps Air Station (MCAS) El Toro and is adjacent to MCAS Tustin, these two facilities have been closed for decades. As such, the City does not have any Military Airports or Ports.

PUBLIC UTILITIES AND FACILITIES

Public facilities and services are essential components that cater to the fundamental needs of residents, fostering a sustainable, vibrant, and cohesive community. Irvine distinguishes itself through the exceptional quality of its public amenities, serving as a significant draw for residents and businesses alike. The City prioritizes not only the provision of these facilities but also ongoing investments to maintain them in excellent condition, ensuring their continued contribution to the City's well-being. A more in-depth discussion of public utilities and facilities within the City can be found in the Land Use Element of the 2045 General Plan. **Table 1. Public Facilities Infrastructure** provides an overview of existing facilities within the City.

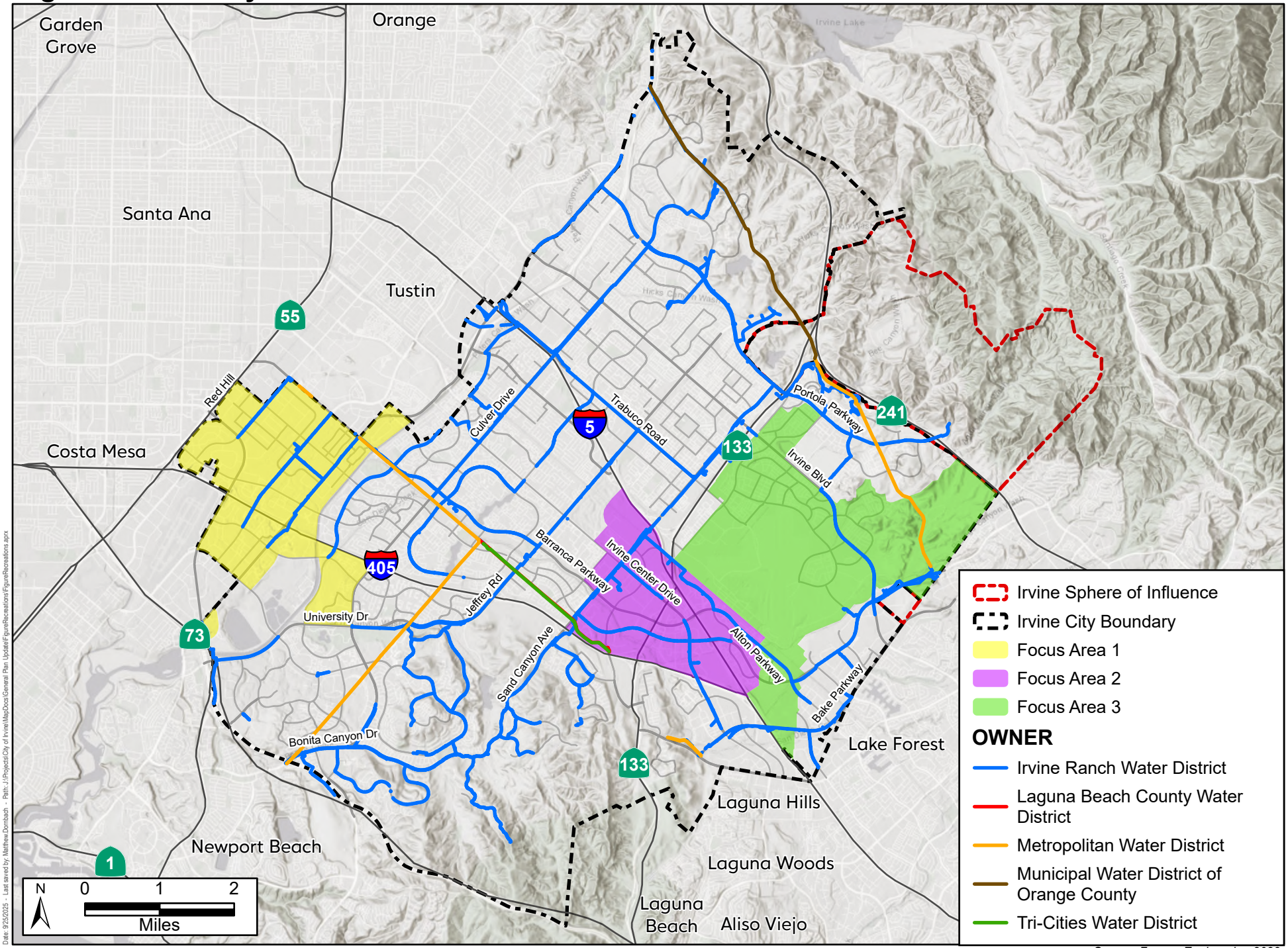
Table 1. Public Facilities Infrastructure

Public Facility Type	Number of Facilities	Description
Hospitals	4	Hoag and Kaiser serve as Full-Service Hospitals UCI Health Hospital (2024/2025) City of Hope Hospital
Urgent Care Facilities	12	Hoag Medical Center, UCI, and Memorial Care facilitate a number of these in the City with more facilitated by other healthcare providers.
Fire Stations	11	Stations managed by Orange County Fire Authority.
Police Stations	1	The City has 1 main headquarter with additional substations.

Source: City of Irvine, 2024

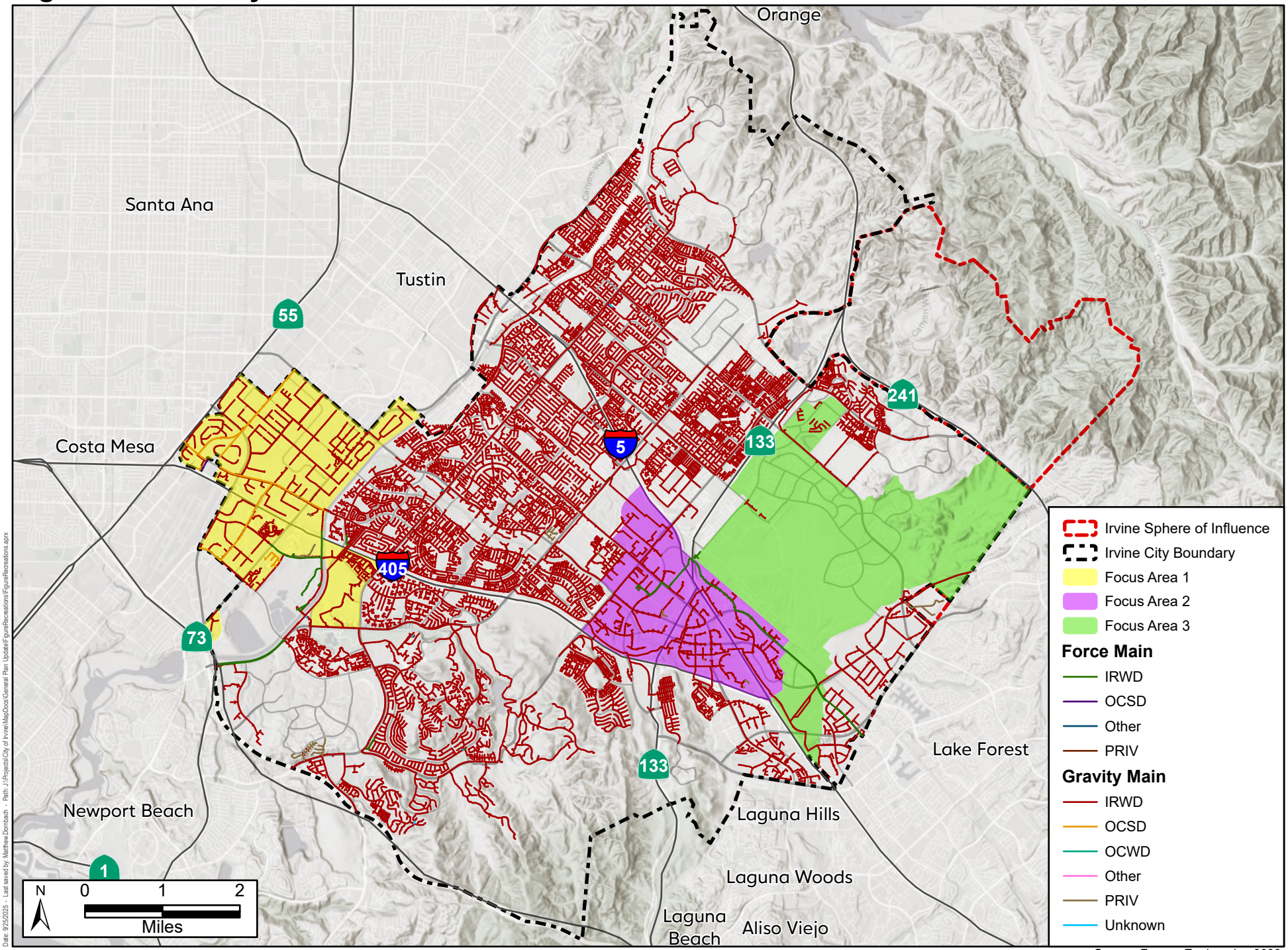
The City considers the integration of public utilities and facilities to optimize infrastructure efficiency and minimize disruptions to the community. This involves coordinating the location, design, and expansion of transportation networks with the placement and maintenance of utilities such as water, sewers, storm-water systems, telecommunications, electric vehicle charging stations, electricity, and natural gas lines. By aligning circulation planning with public utility and facility development, Irvine can enhance accessibility, reduce environmental impact, and improve overall quality of life for residents. **Figures 5 – 8** provide an overview of Water, Sewer, Storm Drainage, and Public Services within the City.

Figure 5: Water System



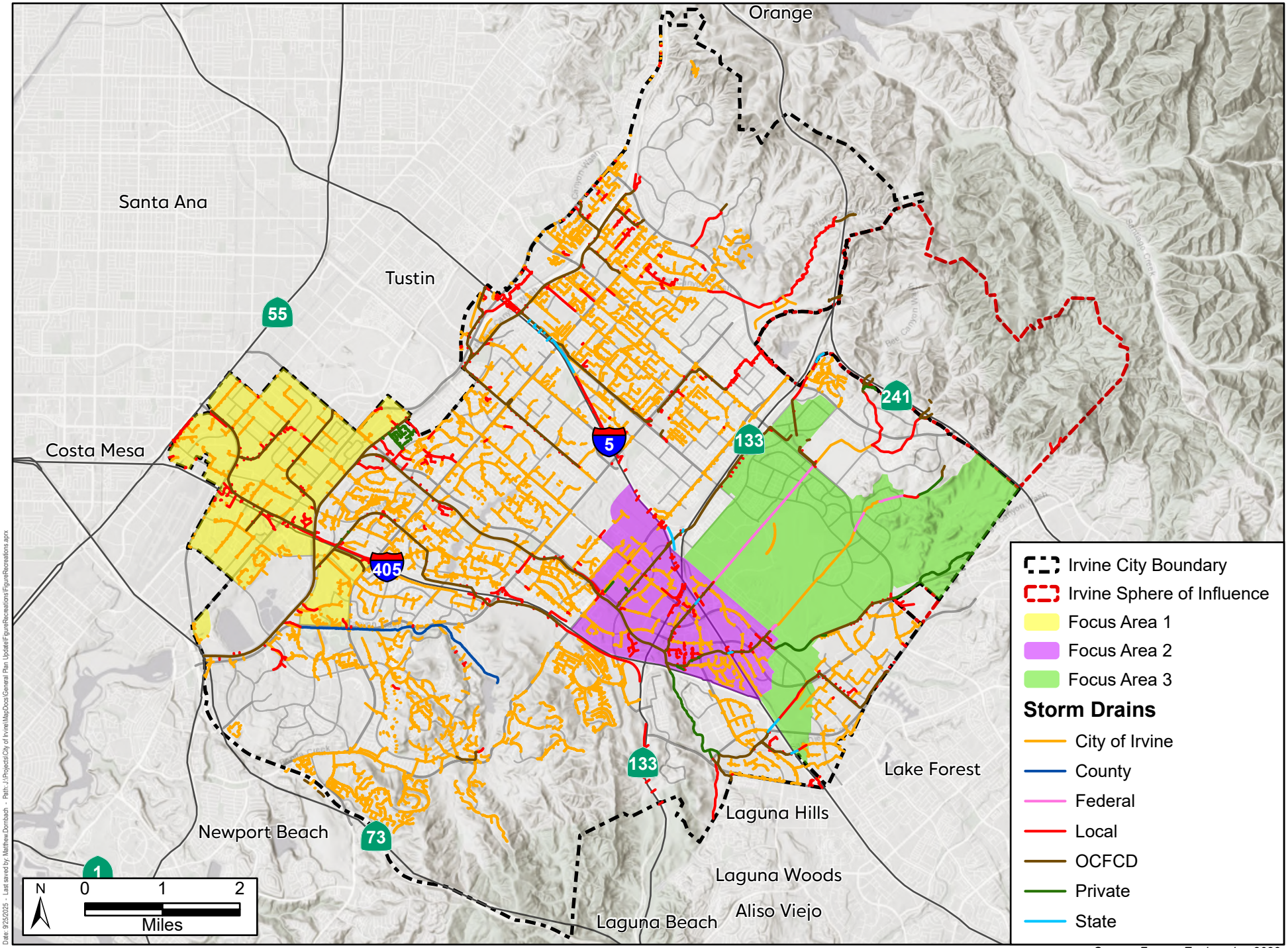
Source: Fuscoe Engineering 2023.

Figure 6: Sewer System



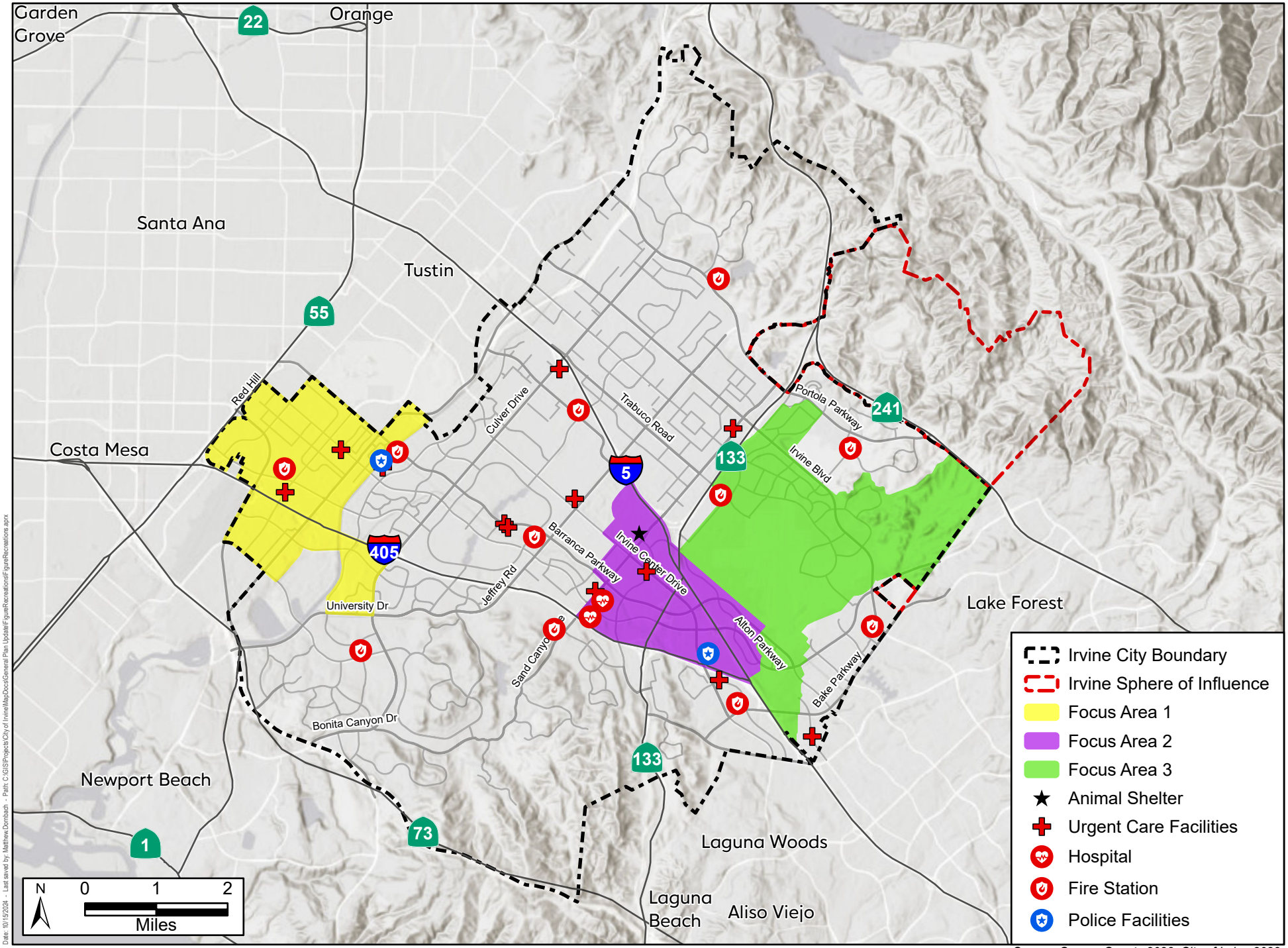
Source: Fuscoe Engineering 2023.

Figure 7. Storm Drainage System



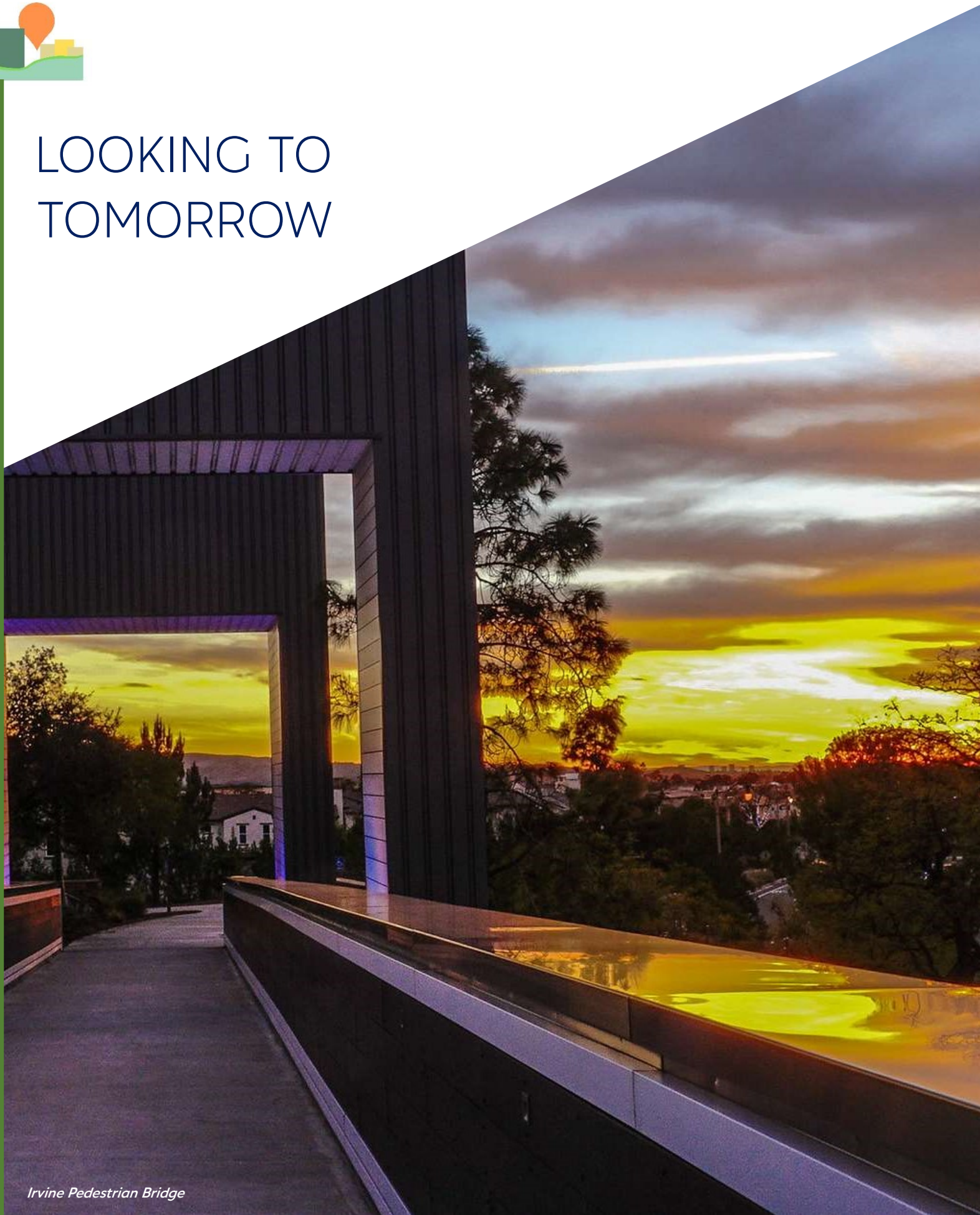
Source: Fuscoe Engineering 2023.

Figure 8. Public Services



Source: Orange County 2023; City of Irvine 2023.

LOOKING TO TOMORROW



Irvine Pedestrian Bridge

POPULATION GROWTH

Anticipated population growth in Irvine will lead to increased demand for transportation services, including roads, public transit, and active transportation modes like walking and biking. The Circulation Element must address strategies to manage this heightened demand while maintaining efficient mobility. Plans may involve expanding roadway capacity , enhancing public transit services, promoting active transportation infrastructure, and aligning transportation efforts with land use planning to support sustainable growth.

RESIDENTIAL DEVELOPMENT

Under the certified 2021–2029 6th Cycle Housing Element, the City expects to add the capacity for up to 57,656 housing units. The addition of more houses will lead to increased traffic on roadways, necessitating strategies in the Circulation Element to manage congestion and ensure efficient mobility. This will involve addressing infrastructure needs such as new road construction and widening, along with implementing traffic management measures. Furthermore, the growing population may result in higher demand for public transit services, requiring plans for expanding routes and improving connectivity. Additionally, there may be a greater emphasis on promoting active transportation modes like walking and biking, increasing the need for additional development of pedestrian and bike infrastructure to enhance safety and encourage alternative transportation options.



Centerpointe at Irvine Spectrum

ECONOMIC DEVELOPMENT



Aerial view of Irvine Spectrum

Population and household growth, as well as commercial real estate market trends, will result in a changing and increasing need for retail. The surge in businesses in the City will heighten transportation demand, especially during peak hours for employee commutes and customer travel. Additionally, shifts in remote work and technology are changing lifestyle and shopping preferences which influences mobility preferences within the City. This will prompt the Circulation Element to devise strategies for managing traffic flow and ensuring efficient mobility for residents and visitors. Additionally, the rise in commercial activities may elevate commercial vehicle traffic, warranting measures like designated loading zones. Furthermore, the increase in businesses may necessitate expanded public transit services and improved connectivity to accommodate demand and promote alternative transportation modes. Overall, the growth in businesses will significantly impact the Circulation Element, requiring comprehensive planning to address transportation needs and ensure accessibility and safety citywide.

EDUCATION

The increase in educational system utilization in Irvine will significantly affect the Circulation Element update. Rising student enrollment will lead to heightened transportation demand during peak hours, potentially causing congestion near schools. To manage this, adjustments in traffic strategies and infrastructure will be necessary for smooth traffic flow and pedestrian safety. Moreover, the update must focus on enhancing connectivity and transportation options for students and staff, possibly involving improvements to public transit routes, pedestrian infrastructure, and parking facilities. Additionally, considerations for managing traffic during school events is important.

Overall, the Circulation Element must carefully consider the transportation needs of the educational community while ensuring safe and efficient mobility citywide.



Cyclists on an Irvine trail

OPEN SPACE

Preservation of open space influences the Circulation Element by necessitating provisions for access to recreational areas through trails, bike paths, and pedestrian routes. The Circulation Element prioritizes sustainable mobility, promoting mixed-use development near open spaces to encourage active transportation for daily activities, ultimately aiming to enhance accessibility and quality of life.

REGIONAL COLLABORATION

Regional collaboration significantly impacts the Circulation Element update by fostering coordination and cooperation among neighboring jurisdictions and transportation agencies. Through collaboration, shared transportation challenges can be addressed comprehensively, leading to more effective and efficient solutions.

Regional collaboration enables the alignment of transportation plans, policies, and investments across jurisdictional boundaries, ensuring connectivity and consistency in transportation networks. Additionally, collaborative efforts allow for the pooling of resources and expertise, enabling the implementation of large-scale transportation projects that benefit the entire region.

By working together, stakeholders can leverage collective strengths to address common transportation issues, such as traffic congestion, air quality, and sustainable mobility. Overall, regional collaboration plays a vital role in shaping the Circulation Element update by promoting integrated and holistic approaches to transportation planning and decision-making.

GOALS, OBJECTIVES, POLICIES, AND IMPLEMENTATION MEASURES



Cyclists in Quail Hill.

The goals, objectives, policies, and implementation measures outlined in the Circulation Element serve as a comprehensive framework for managing transportation infrastructure and promoting efficient mobility within the City of Irvine.

In considering the goals, objectives, policies, and implementation measures of this element, the City has considered the following:

- **How can the City plan for a vehicular circulation system which accommodates both local and regional land use and circulation needs?**
- **How can the City reduce, eliminate, or mitigate negative environmental impacts of the circulation system?**
- **How can the City encourage the use of a more balanced multi-modal circulation system?**
- **How can the City preserve opportunities for future advanced rapid transit systems?**
- **How can the City maximize the positive attributes of the existing air facilities within and adjacent to the City, while minimizing the negative or potentially negative impacts?**
- **How can the City enhance alternative transit modes?**

In consideration of these questions, this document addresses various aspects of circulation, including roadways, public transit, active transportation modes, and land use planning, with the overarching aim of enhancing accessibility, safety, and sustainability for residents, businesses, and visitors alike. Through careful planning and coordination, these guidelines aim to meet the evolving transportation needs of the community while supporting economic growth, environmental stewardship, and quality of life for all stakeholders.

Goal 1: To facilitate the planning, provision, and maintenance of a well-integrated roadway network that effectively meets the anticipated demands of both local communities and the broader regional transportation system.

Objective C-1. Plan, provide, and maintain an integrated vehicular circulation system to accommodate projected local and regional needs and growth.

POLICIES:

Policy (a): Use the Circulation and Land Use Elements to determine roadway sizing and phasing while striving to maintain a balanced multi-modal transportation system.

Policy (b): Develop, on an incremental basis, a motor vehicular circulation system responding to local and regional access requirements. Such access requirements and associated improvements shall be determined, in part, through an evaluation of impacts in terms of traffic congestion (measured in terms of Level of Service). The following Level of Service (LOS) Standards shall be the goal applied to arterial highways, as shown in Figure 1, which are in the City of Irvine or its sphere of influence, and which are under the City's jurisdiction.



Cyclist on an Irvine street

- LOS "E" or better shall be considered acceptable within the Irvine Business Complex (IBC)(Planning Area (PA) 36), Irvine Spectrum Center (PA 33), and at the following two intersections: Bake Parkway and the I-5 northbound off-ramp and Bake Parkway and Marine Way. In conjunction with traffic studies for development proposed within the Residential and Residential Mixed-Use Overlay Zone in Great Park (PA 51), a LOS "E" standard or better would be considered acceptable for application to intersections impacted in Planning Areas 13, 31, 32, 34, 35 and 39 and a portion of 51 subject to the following:
    - Preparation, submittal, processing, and approval of a traffic study for the specific subdivision map must occur.
    - Participation/funding to an upgraded traffic signal system as defined in the Traffic Management Systems Operations Study (TMSOS) and/or a parking and mobility fund as applicable and in place at the time of processing of the individual traffic study must occur. The City, in conjunction with the specific traffic study, shall determine the level of participation/funding using criteria and processes developed concurrently.
    - The intersection location must not contain a residential quadrant unless the residential development has a net density of 30 DUs/acre or greater.

- No Level of Service "E" will be accepted along Sand Canyon Avenue except at Sand Canyon/I-5 Interchange ramp/intersection if above conditions are met.
- LOS "D" or better shall be considered acceptable within all other areas.

- In conjunction with traffic studies for development proposed within the Residential and Residential Mixed-Use Overlay Zone in Great Park (PA 51), a LOS "E" standard or better would be considered acceptable for application to intersections impacted in Planning Areas 13, 31, 32, 34, 35 and 39 and a portion of 51 subject to the following:
  - Preparation, submittal, processing, and approval of a traffic study for the specific subdivision map must occur.
  - Participation/funding to an upgraded traffic signal system as defined in the Traffic Management Systems Operations Study (TMSOS) and/or a parking and mobility fund as applicable and in place at the time of processing of the individual traffic study must occur. The City, in conjunction with the specific traffic study, shall determine the level of participation/funding using criteria and processes developed concurrently.
  - Compliance with all otherwise applicable requirements of the NITM Ordinance.
  - The intersection location must not contain a residential quadrant unless the residential development has a net density of 30 DUs/acre or greater.
  - No Level of Service "E" will be accepted along Sand Canyon Avenue except at Sand Canyon/I-5 Interchange ramp/intersection if above conditions are met.
  - LOS "D" or better shall be considered acceptable within all other areas.

Policy (c): Evaluate transportation impacts in terms of vehicle miles traveled (VMT) to ensure compliance with Senate Bill 743 and to minimize trip lengths to, from, and within the City.

Policy (d): Evaluate the incremental additions to the roadway system through use of the City transportation forecasting model.

Policy (e): Support programs and infrastructure that promote non-vehicular travel (e.g., walking/biking), increase vehicle occupancy, and/or reduce VMT.

Policy (f): Cooperate with state, county, and local governments to assure orderly development.

Policy (g): Work with the county, landowners, and other agencies in developing compatible land use and circulation plans for areas neighboring the City sphere of influence, recognizing that new developments can have a significant impact on the existing City circulation system.

Policy (h): Coordinate with state, county, and local agencies to plan and construct public utilities including, but not limited to, cell towers and data/wi-fi monitoring devices, to prevent impact on the existing or planned transportation network.

Policy (i): Actively lobby with appropriate state commissions, committees, and legislators for funding to upgrade toll roads and the Costa Mesa (SR-55), San Diego (I-405) and Santa Ana (I-5) Freeways.

Policy (j): Traffic studies completed for proposed developments shall demonstrate that the proposed circulation is adequate to accommodate traffic demand at build out of the General Plan. As part of any traffic evaluation, travel demand reduction measures shall be analyzed to determine if they can be implemented and/or provide funding towards a mitigation program in lieu of any arterial augmentation. Arterial augmentations may include, but not limited to, additional intersection through or turn lanes, signal synchronization, auxiliary lanes, or intersection grade separations.



Policy (k): Travel reduction measures and augmentation proposals shall be evaluated and approved by the Transportation Commission and/if required, the Planning Commission.

Policy (l): Continue support for Transportation Demand Management (TDM) programs to decrease vehicular travel, particularly in the IBC and Irvine Spectrum areas, as well as within Planning Area 51.

Policy (m): City to coordinate with UC Irvine's (University of California, Irvine) Long-Range Development Plan (LRDP) on envisioned development under the plan and partner with UC Irvine on mobility improvements where deemed appropriate and applicable.

Policy (n): Monitor and update ITAM (Irvine Transportation Analysis Model) Trip Generation Rates as required to maintain consistency with changes in development, as well as with changes in any pertinent regional traffic model.

Policy (o): Pursue local and outside funding for the implementation of the circulation system.

Policy (p): Pursue and implement the use of new technology to improve mobility.

Policy (q): Prioritize safety improvements to reduce traffic collisions.

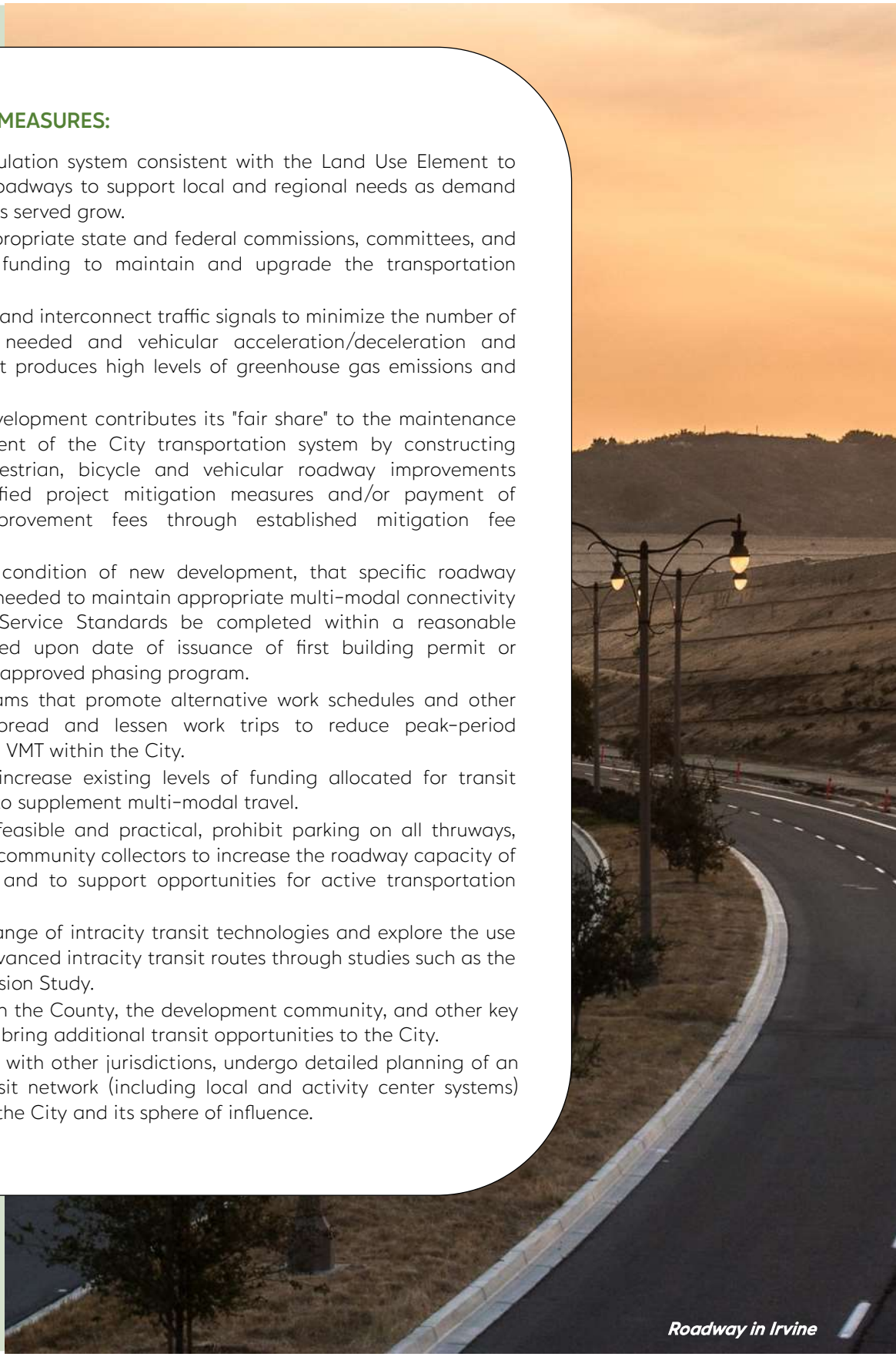


Traffic signal on Shady Canyon Dr


Aerial view of roads near the Gateway Preserve

IMPLEMENTATION MEASURES:

- Develop a circulation system consistent with the Land Use Element to correctly size roadways to support local and regional needs as demand and populations served grow.
- Lobby with appropriate state and federal commissions, committees, and legislators for funding to maintain and upgrade the transportation system.
- Properly space and interconnect traffic signals to minimize the number of traffic signals needed and vehicular acceleration/deceleration and congestion that produces high levels of greenhouse gas emissions and road noise.
- Ensure new development contributes its "fair share" to the maintenance and improvement of the City transportation system by constructing necessary pedestrian, bicycle and vehicular roadway improvements through identified project mitigation measures and/or payment of circulation improvement fees through established mitigation fee programs.
- Require, as a condition of new development, that specific roadway improvements needed to maintain appropriate multi-modal connectivity and Level of Service Standards be completed within a reasonable timeframe based upon date of issuance of first building permit or pursuant to an approved phasing program.
- Support programs that promote alternative work schedules and other methods to spread and lessen work trips to reduce peak-period congestion and VMT within the City.
- Maintain and increase existing levels of funding allocated for transit improvements to supplement multi-modal travel.
- To the extent feasible and practical, prohibit parking on all thruways, parkways, and community collectors to increase the roadway capacity of these arterials and to support opportunities for active transportation expansion.
- Explore a full range of intracity transit technologies and explore the use of potential advanced intracity transit routes through studies such as the Irvine Transit Vision Study.
- Coordinate with the County, the development community, and other key participants to bring additional transit opportunities to the City.
- In coordination with other jurisdictions, undergo detailed planning of an advanced transit network (including local and activity center systems) encompassing the City and its sphere of influence.



Roadway in Irvine

Goal 2: To design a circulation system that adheres to the highest standards of transportation engineering safety while considering the surrounding land uses and their sensitivities.

Objective C-2: Maintain and enhance a circulation system consistent with high standards for transportation engineering safety and with sensitivity to adjoining land uses.

POLICIES:

Policy (a): Design alignment, intersections, and classification of roadways to facilitate the development of neighboring land uses while minimizing noise, emissions, and visual impacts of the proposed development.

Policy (b): Consider noise attenuation in the design of the transportation network through possible mitigation measures like physical barriers, such as berms, soundwalls, or landscaping, which could permit residential units to be effectively screened from excessive noise.

Policy (c): Design the transportation network to follow the natural terrain and minimize impact to the environment e.g., particularly in hillside areas.

Policy (d): Ensure roadways are designed to complement circulation networks and minimize the need to complete major reconstruction on the existing network.



Residents walking in Northwood in Irvine

Policy (e): Ensure safe and efficient traffic flow while providing adequate and convenient access.

Policy (f): Design the transportation network to:

- Discourage through automobile traffic in residential neighborhoods (e.g., avoid redirecting traffic within residential neighborhoods)
- Limit parking within right of way based on considerations of safety, street width, visibility, and access to properties.
- Limit truck routes and direct truck operations away from noise- and emission- sensitive residents.
- Ensure that bus routes and infrastructure are sited in a manner that supports the neighboring land uses and promotes connectivity to schools, attractions, retail, commercial, and industrial development.
- Ensure applicability to all roadway users including non-motorized users.

Policy (g): Visually enhance the appearance of roadways and parking areas through design techniques and landscaping. Particular attention should be paid to streetscape design and the creation of new, and preservation of existing, view corridors.

Policy (h): Proposed developments shall include measures to minimize negative impacts of additional vehicular traffic and aim to reduce vehicle miles traveled (VMT).

Policy (i): Encourage intersections and public right of ways to be designed to provide adequate and safe access for all users including pedestrians, bicyclists, and motorists of all ages and abilities.

Policy (j): Aim to balance commercial goods movement with health and quality of life by routing heavy truck traffic away from residential zones and promoting safety at rail crossings.

Policy (k): Explore the development of travel demand management programs to reduce peak-hour traffic congestion and help reduce regional vehicle miles traveled.

Policy (l): Incorporate American with Disabilities Act (ADA) requirements throughout the City, and especially within high-volume pedestrian areas.

Policy (m): Encourage safe and accessible routes to school for children and families walking, bicycling, and taking public transportation to schools in the community. Improvements may include but are not limited to, high visibility crosswalks, island refuges, pavement markings, rapid flashing beacons, pedestrian signals, traffic delineators, enhanced bikeways, defined bus stops, and roundabouts.

Policy (n): Encourage development projects to support the principles of the Complete Streets principles and engage stakeholders and local community affected by proposed design.

Policy (o): City to continue to support the IBC objectives in which proposed developments within the IBC shall:

- Continue to collaborate with the various stakeholders per the IBC Vision Plan and incorporate area-wide changes per IBC Vision Plan traffic studies when developing projects in and near the IBC. This is a mutual effort of the affected agencies (e.g. Caltrans, Orange County Transportation Commission, school districts, etc.)
- Where possible, enhance connectivity within and between existing parcels through street and access patterns and utilize smaller blocks to improve vehicular and emergency (fire and police) access, trash pick-up, access to parking areas, and increase pedestrian mobility.
- Continue to create, provide, and maintain pedestrian and bicycle linkages (e.g., bridge connections over freeways similar to the planned Jeffrey Open Space Trail bridge connection), shared paths, trails, open space, and activity centers that facilitate improved resident and employment access to existing and future local services (food, childcare), recreation facilities, and transit services. New developments to make positive contributions towards these efforts with connected street systems, secured pedestrian friendly walking paths and expanded transit opportunities.
- Create attractive, safe, and well landscaped pedestrian environments by encouraging pedestrian paseos, trees or other methods to provide shade, separated sidewalks buffering pedestrians from vehicular traffic, parkways (8-foot wide), and wide sidewalks (5-foot minimum) to achieve a balanced walkable neighborhood supporting the work, live, play urban environment.
- Further support the growth, development, and maintenance of shared use networks, (i.e., the "Creekwalk" system or "Mountains to the Sea" trail) by providing trail connections (pedestrian and bicycles) to urban open space, the City Civic center, and other facilities, as applicable.

- Support the proposed distinct characteristics of the IBC (e.g., streetscape design, bicycle lanes, on/off street parking) to assist in the co-existence of industrial and residential neighborhoods and balance of land uses within the community.
- Support development and maintenance of gateways by including new pedestrian bridges and enhancing existing bridges with monumental designs, plazas, street lighting, hardscape, public art, and connections to the overall trail system.
- Enhance intersection treatments and pavement.
- Support proposed roadway capacity changes in arterial streets (e.g., widening, or downgrading number of operatable lanes) per traffic study updates.
- Provide parking solutions and strategies to re-use existing under-utilized structures, consider shared parking strategies use by workers during day and residents at night, while encouraging employer transit subsidies to reduce employee parking demands.



Irvine City Hall parking lot

Policy (p): List Yale Avenue between University Drive on the south and Yale Loop on the north on the General Plan Operational Characteristics diagram as a "collector" and as a "commuter" (two-lane roadway) on the Arterial Highway Designation diagram. The cross section of Yale Avenue across the San Diego (I-405) Freeway shall provide for two travel lanes (one in each direction), bicycle lanes, and sidewalks. The roadway may widen to meet the existing cross section of Yale Avenue at the Michelson and University intersections. The existing roadway between Yale, Michelson, and University may be narrowed, or a median installed, to limit the roadway to two lanes, plus turning lanes.

Policy (q): Construct noise walls (where needed) on Yale Avenue between University and Yale Loop so that no residences along Yale Avenue between Yale Loop and University are exposed to noise levels in excess of City standards.

Policy (r): Construct noise walls (where needed) on Yale Avenue between Deerfield and Winvale so that no residences along Yale Avenue between Irvine Center Drive and Walnut Avenue are exposed to noise levels in excess of City standards.

Policy (s): Landscape Yale Avenue between Deerfield and Winvale such that off site views of the project are mitigated to City standards.

Policy (t): Install traffic signals at the intersection of Yale and Deerfield prior to opening Yale Avenue between Deerfield and Winvale.

Irvine Ballot Measure "B"

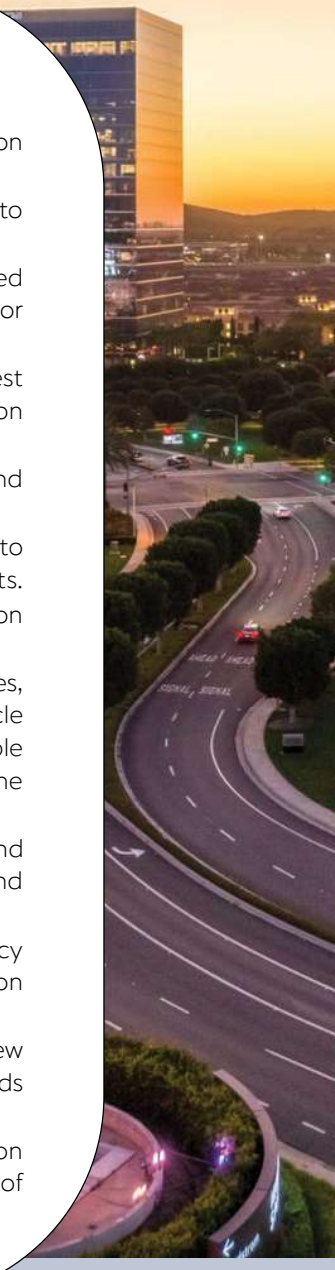
On June 5, 1990, the residents of the City approved Ballot Measure "B" which amended the General Plan for vehicular overcrossings of Yale Avenue at the AT&SF railroad and the San Diego Freeway (I-405). To date, the vehicular overcrossing at the AT&SF railroad has been constructed according to the following provisions of Measure "B":

- Between Deerfield and Edgemere, Yale is shown as a collector on the MPAH and as a commuter on the Operational Characteristics diagram. The section at the AT&SF crossing provides for one vehicle lane in each direction, bicycle lanes and sidewalks.
- Yale between Winvale and Deerfield must contain noise walls so that no residences along Yale are exposed to noise in excess of City standards.
- Yale between Deerfield and Winvale must be landscaped so that off-site views of the project are mitigated to City standards.

Policies p, q, r, s, t must remain in the General Plan unless repealed by a Citywide vote. Implementing actions associated with policies p, q, r, s, t have been completed. However, they are required to remain in the General Plan due to a voter initiative, Measure B.



Jamboree-Michelson Pedestrian Bridge Rendering



IMPLEMENTATION MEASURES:

- Continue to evaluate transportation safety to identify existing hazards, collision hotspots, and safety deficiencies within the circulation system.
- Implement traffic calming measures in residential areas and near sensitive land uses to reduce vehicle speeds and enhance pedestrian safety.
- Designate suggested routes to schools and establish school zones with reduced speed limits, enhanced signage, and roadway improvements to protect children walking or biking to school.
- Coordinate with traffic engineers and transportation planners to incorporate best practices for transportation safety into street design, signalization, and intersection layouts.
- Conduct regular safety audits and inspections of the circulation system to identify and address emerging safety concerns and maintenance issues promptly.
- Provide adequate lighting along roadways, pedestrian paths, and intersections to improve nighttime visibility and enhance safety for motorists, pedestrians, and cyclists.
- Enhance signage, pavement markings, and wayfinding systems to improve navigation and reduce confusion for drivers, pedestrians, and cyclists.
- Implement pedestrian and cyclist infrastructure and enhancements to existing facilities, including sidewalks, crosswalks, bike lanes, bicycle parking and storage, electric bicycle charging facilities (where feasible), and multi-use paths to promote safe and accessible active transportation options throughout the City, with a specific emphasis on the Irvine Business Complex and Irvine Spectrum areas.
- Collaborate with law enforcement agencies to enforce traffic laws, deter speeding, and address reckless driving behaviors through targeted enforcement campaigns and educational initiatives.
- Engage with community stakeholders, neighborhood associations, and advocacy groups to gather input, address concerns, and prioritize safety improvements based on local needs and priorities.
- Integrate safety considerations into land use planning and development review processes to ensure that new developments adhere to transportation safety standards and mitigate potential traffic impacts.
- Provide ongoing safety training and education programs for transportation professionals, public works staff, and community members to raise awareness of transportation safety issues and promote a culture of safety within the community.

Goal 3: To establish a pedestrian circulation system that supports and promotes walking as a viable mode of transportation within the community.

Objective C-3. Maintain and enhance the pedestrian circulation system to support and encourage walking as a mode of transportation.

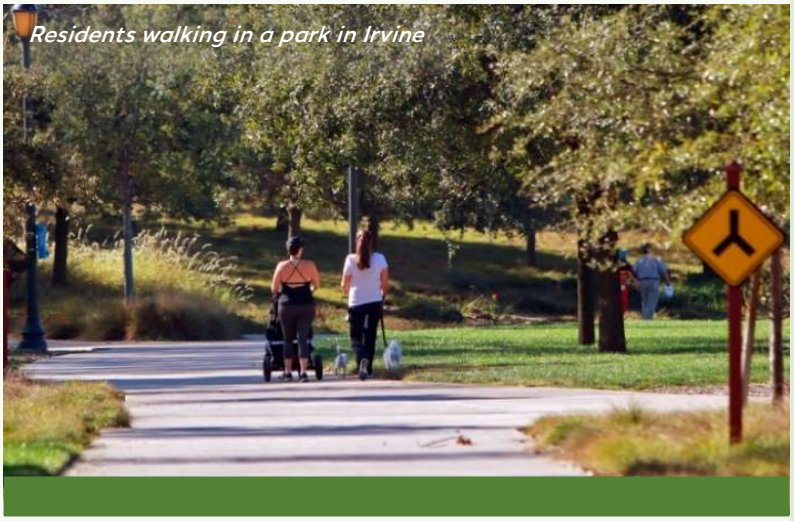
POLICIES:

Policy (a): Link residences with schools, job centers, shopping centers, parks, and other public facilities/destination centers, both within a planning area and to adjacent planning areas, through an internal system consisting of pedestrian facilities (e.g., sidewalks and/or shared-use paths).

Policy (b): Encourage proposed developments to provide safe, convenient, and direct pedestrian access to surrounding land uses, on-street parking, and transit stops, as applicable, emphasizing active transportation and supporting the Complete Streets Act.

Policy (c): Design and locate land uses that facilitate access by non-automotive means (e.g., walking and/or bicycling).

Policy (d): Continue to implement the existing sidewalk improvement program and enhance standards for improved active transportation and connectivity to create an interconnected system of pedestrian-friendly boulevards, avenues, and streets.



Residents walking in a park in Irvine



Residential street in Irvine



Pedestrian Hybrid Beacon Crosswalk, City of Irvine

IMPLEMENTATION MEASURES:

- Continue to evaluate areas with high pedestrian traffic, safety concerns, inadequate sidewalks, crosswalks, lighting, and amenities.
- Develop a pedestrian circulation plan that outlines priority areas for pedestrian infrastructure improvements, such as sidewalk expansions, crosswalk enhancements, pedestrian bridges, pedestrian priority signals at crosswalks, and wayfinding signage.
- Allocate dedicated funding sources and secure grants to finance pedestrian infrastructure projects, prioritizing areas with the greatest need and potential for increasing walkability.
- Collaborate with transportation agencies, City departments, neighborhood associations, and advocacy groups to solicit input, gather feedback, and garner support for pedestrian circulation initiatives.
- Implement pedestrian-friendly design standards and guidelines in the planning, design, and construction of new developments, streetscapes, and public spaces to prioritize pedestrian safety and comfort, including using trees and other facilities that provide shade.
- Install pedestrian infrastructure enhancements, including curb ramps, tactile paving, pedestrian islands, countdown timers, and traffic calming measures, to improve accessibility and reduce pedestrian-vehicle conflicts.
- Enhance pedestrian access and amenities at transit stops, commercial districts, schools, parks, and recreational areas to promote walking as a viable transportation option and encourage active lifestyles.
- Promote pedestrian safety education and awareness campaigns to educate residents, motorists, and pedestrians about pedestrian rights-of-way, traffic laws, and best practices for safe walking.
- Continue to encourage pedestrian-friendly policies, such as complete streets ordinances, pedestrian-oriented design standards, and pedestrian priority zones, to integrate walking into the transportation planning process.
- Monitor pedestrian usage, safety data, and community feedback to evaluate the effectiveness of pedestrian circulation improvements and adjust strategies accordingly to enhance walkability and pedestrian connectivity.



Aerial view of residential street in Irvine

Goal 4: To develop and maintain a comprehensive bicycle network that encourages increased bicycle usage for both commuting and recreational purposes.

Objective C-4. Plan, provide, maintain, and enhance a comprehensive bicycle network that encourages increased use of bicycles.

POLICIES:

Policy (a): Encourage proposed developments to provide connectivity to the existing bicycle circulation network, both on- and off-street, and within the proposed planning area. The on-street and off-street trails shall be designed for the safety of all users per approved City plans and documents.

Policy (b): Accommodate cyclists of all levels of experience and provide for both recreation and functional transportation when designing shared-use pathways.

Policy (c): Enhance the existing bicycle network to improve connectivity between residential areas, employment areas, schools, parks, community facilities, commercial centers, and transit facilities.

Policy (d): Encourage new developments to include detailed circulation plans for pedestrian and bicycle trails providing access to the subject property, adjacent properties, and community facilities, as applicable.

Policy (e): Bicycle trip destinations, including community facilities, commercial centers, and transit facilities, shall be encouraged to be equipped with appropriate bicycle facilities/amenities including, but not limited to, the provision of universal bike racks, shade trees, drinking fountains, benches, and showers, where feasible.



Cyclist in the City of Irvine

Policy (f): Encourage grade-separated crossings for pedestrians and cyclists, wherever feasible, to increase safety and efficiency.

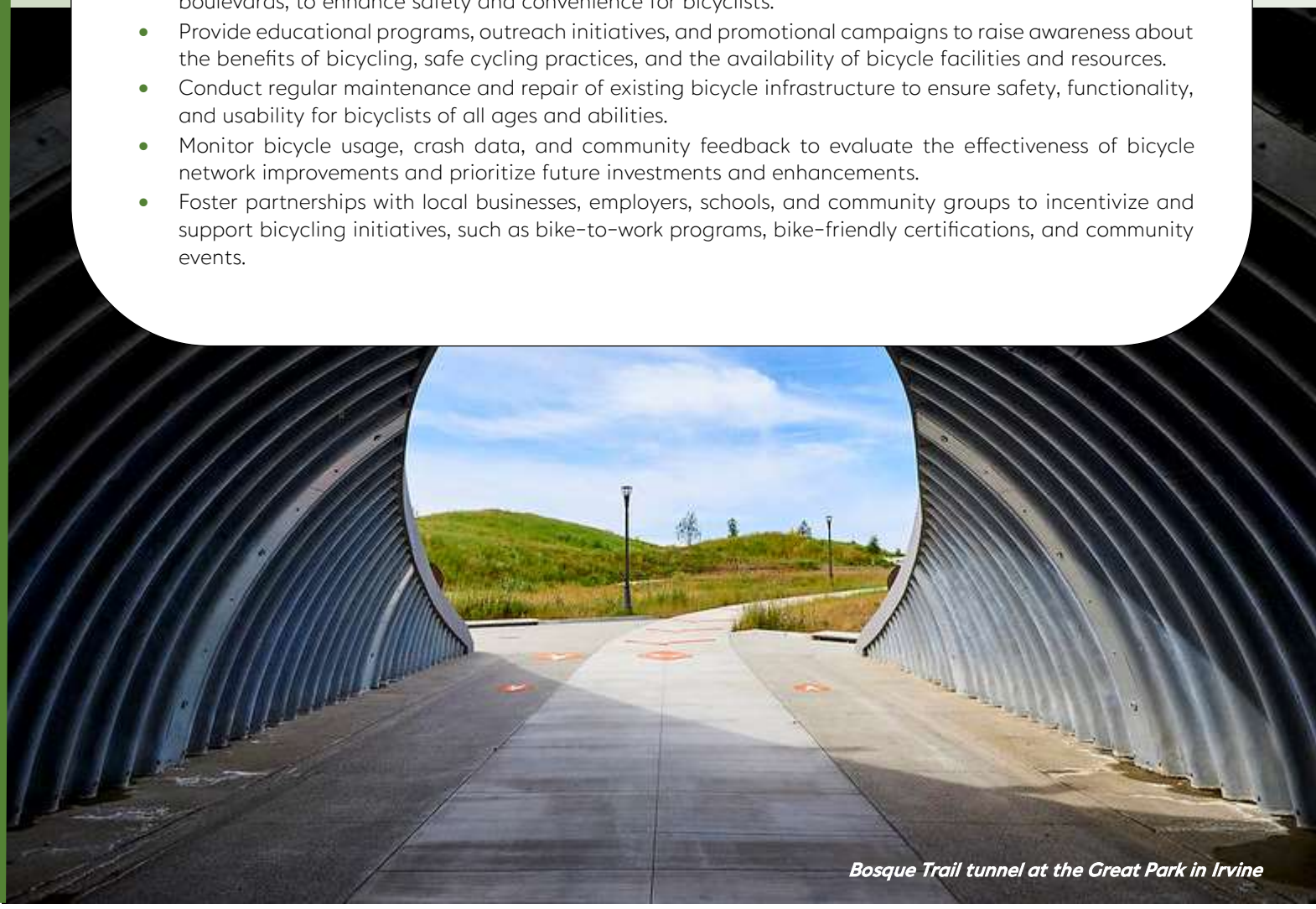
Policy (g): Encourage separated, off-street bicycle trails and shared-use paths in areas with minimal cross traffic, such as open space spine, flood control and utility easements, where feasible.

Policy (h): Support programs and engage the community to increase public awareness of bicycle safety and bicycling as an alternative mode of transportation.

Policy (i): Incorporate, where appropriate, school and park locations within the design of the bicycle network system.

IMPLEMENTATION MEASURES:

- Continue to evaluate existing bicycle infrastructure, including bike lanes, bike paths, shared roadways, and bike parking facilities, to identify gaps and opportunities for improvement.
- Monitor and update the prioritized plan for expanding and enhancing the bicycle network to create interconnected routes that accommodate various skill levels and travel purposes, such as commuting, recreation, and access to key destinations.
- Collaborate with transportation agencies, City departments, community organizations, and bicycle advocacy groups to secure funding and support for bicycle network development projects.
- Implement bicycle-friendly design standards and guidelines in the planning, design, and construction of roadways, projects, and developments to integrate bicycle facilities seamlessly into the transportation system. For example, explore preventing vehicle parking in bicycle lanes.
- Install bicycle infrastructure improvements, such as enhanced bike lanes, bike paths, bike parking and storage, bike maintenance/repair tools and kits along bike routes, protected bikeways, and bike boulevards, to enhance safety and convenience for bicyclists.
- Provide educational programs, outreach initiatives, and promotional campaigns to raise awareness about the benefits of bicycling, safe cycling practices, and the availability of bicycle facilities and resources.
- Conduct regular maintenance and repair of existing bicycle infrastructure to ensure safety, functionality, and usability for bicyclists of all ages and abilities.
- Monitor bicycle usage, crash data, and community feedback to evaluate the effectiveness of bicycle network improvements and prioritize future investments and enhancements.
- Foster partnerships with local businesses, employers, schools, and community groups to incentivize and support bicycling initiatives, such as bike-to-work programs, bike-friendly certifications, and community events.



Bosque Trail tunnel at the Great Park in Irvine

Goal 5: Foster a culture of active transportation by prioritizing walking, cycling, and other non-motorized modes of travel to improve public health, reduce greenhouse gas emissions, and enhance the quality of life for residents and visitors in Irvine.

Objective C-5. Enhance the City's infrastructure to support and encourage walking, cycling, and other forms of active transportation by developing safe, accessible, and interconnected networks of pathways, bike lanes, and multi-use trails throughout Irvine.

POLICIES:

Policy (a): Implement Complete Streets design principles to ensure that all roadway projects accommodate the needs of pedestrians, cyclists, and transit users, in addition to motorized vehicles, by incorporating features such as widened sidewalks, dedicated bike lanes, pedestrian crossings, and traffic calming measures.



Cycling on a park trail in the City of Irvine

Policy (b): Develop a comprehensive network of active transportation facilities, including sidewalks, enhanced bikeways, and multi-use paths, to provide safe and convenient routes for walking and cycling within neighborhoods, commercial areas, employment centers, and recreational destinations.

Policy (c): Implement Safe Routes to Schools programs and infrastructure improvements to promote walking and cycling to schools, enhance pedestrian safety, and reduce traffic congestion around school zones through measures such as sidewalk enhancements, crosswalk upgrades, and traffic calming measures.



Venta Spur Bicycle-Pedestrian Bridge aerial view

Policy (d): Provide secure and convenient bicycle parking facilities, such as bike racks, bike parking and storage, and bike shelters, at key destinations, including transit stops, commercial centers, parks, and employment hubs, to encourage cycling as a viable transportation option and support active commuting.

Policy (e): Integrate active transportation planning considerations into land use decisions, transportation projects, and development approvals to prioritize pedestrian and cyclist safety, accessibility, and comfort, and ensure that new developments are designed to support active transportation modes.

Policy (f): Collaborate with community organizations, schools, businesses, and advocacy groups to support and promote active transportation initiatives, leverage resources, and engage stakeholders in the planning and implementation of active transportation projects.

IMPLEMENTATION MEASURES:

- Utilize the Strategic Active Transportation Plan and Sustainable Mobility Plan to guide the planning, design, and implementation of pedestrian and bicycle infrastructure projects, prioritize investments in active transportation facilities, and establish performance metrics to track progress towards active transportation goals.
- Allocate dedicated funding sources, such as local transportation funds, grants, and impact fees, for the planning, design, construction, and maintenance of active transportation infrastructure projects identified in the Strategic Active Transportation Plan.
- Implement pilot projects and temporary demonstrations of innovative active transportation infrastructure, such as protected bikeways, pedestrian plazas, and pedestrian-friendly streetscapes, to evaluate their effectiveness, gather public feedback, and inform future design decisions.
- Conduct safety audits and assessments of pedestrian and cyclist infrastructure to identify potential hazards, prioritize safety improvements, and implement targeted measures to enhance pedestrian and cyclist safety.
- Monitor and evaluate usage patterns, mode share, and user satisfaction with active transportation facilities through surveys, user counts, and data collection efforts to assess the effectiveness of implemented projects, identify areas for improvement, and inform future planning decisions.
- Conduct educational programs and public outreach initiatives to raise awareness about the benefits of active transportation, promote safe walking and cycling practices, and encourage residents of all ages and abilities to incorporate walking and cycling into their daily routines.



Aerial view of residential street in Irvine

Goal 6: To plan, develop, and maintain a comprehensive trail network that caters to the needs of cyclists, equestrian riders, and hikers, ensuring accessibility and enjoyment for all.

Objective C-6. Plan, develop and maintain a trail network to support facilities that support the needs of cyclists, equestrian riders, and hikers.



Hiking trail in the City of Irvine

POLICIES:

Policy (a): Phase expansion and improve the existing trail network consistent with the City's growth, incorporating the needs of the equestrian and hiking community.

Policy (b): Continue to maintain, support, and evolve the non-paved trails in areas identified as permanent open space, scenic highway corridors, agricultural edges, public utility rights of way and easements, flood control channels, and areas designated for rural and estate density.

Policy (c): Encourage the development of trail facilities that minimize impacts on existing or planned development and wildlife preservation areas.

Policy (d): Continue to provide and maintain staging areas, rest stops, and boarding centers at locations which provide easy access to the trail system and are away from high-density urban areas.

Policy (e): Continue to encourage developer dedication and final improvements to the trail system.

Policy (f): Monitor and seek funds for trail system development and maintenance from all available sources.



Open Space Celebration – Quail Hill



Hikers participating in Irvine's Open Space Celebration at Quail Hill

IMPLEMENTATION MEASURES:

- Assess the existing non-paved trails in the City to establish inventory of their condition, connectivity, and usage patterns.
- Engage with stakeholders, including equestrian organizations, hiking clubs, residents, and landowners, to gather input and identify priorities for trail development and maintenance.
- Collaborate with landowners, agencies, and organizations to secure necessary permits, easements, and funding for trail construction, maintenance, and improvement projects.
- Implement sustainable trail design practices to minimize erosion, protect natural habitats, and ensure long-term viability of the trail network.
- Regularly inspect and maintain existing trails to address safety hazards, erosion, vegetation encroachment, and other maintenance needs.
- Install signage, trail markers, maps, and amenities (such as rest areas and water stations) along the trail network to enhance user experience and safety.
- Establish partnerships with volunteer groups, youth organizations, and community service programs to engage in trail maintenance and stewardship activities.
- Monitor trail usage, user feedback, and environmental impacts to inform adaptive management strategies and future trail development efforts.
- Promote public awareness and appreciation of the trail network through educational programs, interpretive signage, and recreational events aimed at encouraging responsible trail use and conservation ethic.

Goal 7: Foster collaboration and coordination with regional transportation agencies to improve connectivity, accessibility, and efficiency of transportation networks serving Irvine and neighboring communities.

Objective C-7. Maintain a public transit system for trips within the City and to/from adjacent areas.


Irvine CONNECT

POLICIES:

Policy (a): Plan residential, commercial, and industrial areas to enable effective use of public transit.

Policy (b): Consider designating excess right-of-way areas on arterial highways for potential public transit corridors or for emergency parking lanes.

Policy (c): Continue to expand the bus service network as an alternative mode of transportation through the following:

- Pursue additional transit service to and within the City, increase frequency and/or provide service to new developments.

- Provide infrastructure at transit stops for convenience and safety (e.g., proper lighting, covered shelter and safe crossings) to encourage commuting to work.
- Incorporate public art and green infrastructure to enhance existing and future transit stops.
- Continue to expand the bus service network within the City.



Bus Shelter – Creative Portland
Source: Michael D. Wilson

Policy (d): Continue planning efforts as necessary to further develop the advanced transit network providing connection to all local and activity center systems encompassing the City and its sphere of influence.

Policy (e): Coordinate the development of intracounty and regional transit stops with Irvine's intracity transit system.

Policy (f): Encourage the short-term use of rights of way reserved for the various circulation systems for other uses, such as special events (i.e. temporary closure of portions of public roadways for non-vehicular events).

Policy (g): Consider the use of railroad rights of way as transportation corridors.

Policy (h): Explore the use of technology to communicate transit patterns, promote safety, and attract passengers.

Policy (i): Consider implementing and supporting proposed guidelines for near- and long-term improvements to transit infrastructure within the City limits.

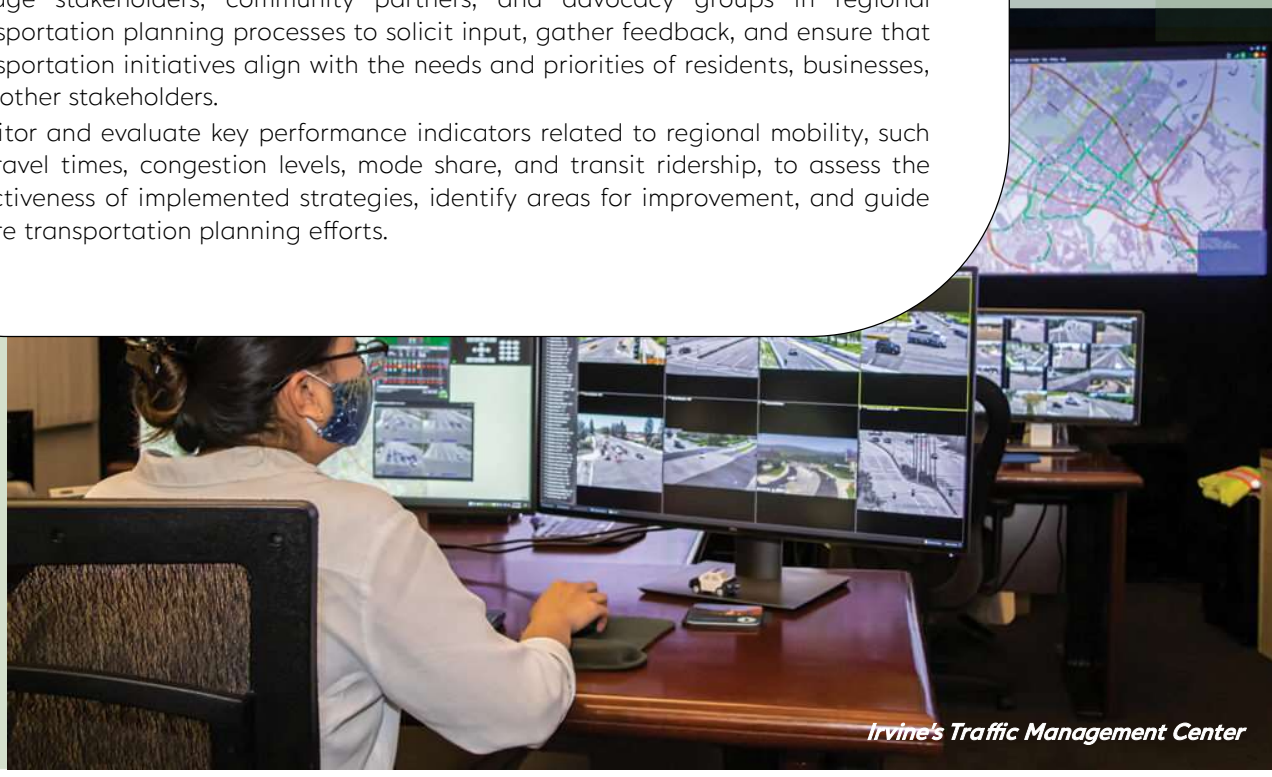
Policy (j): Deploy intelligent transportation systems (ITS) and innovative technologies to improve traffic management, enhance traveler information systems, and optimize transportation operations, reducing congestion, improving safety, and enhancing overall mobility within the region.



View of street near Irvine Business Complex

IMPLEMENTATION MEASURES:

- Plan nonresidential and residential areas so that the use of transit systems could be implemented if, and where deemed viable.
- Provide convenient pedestrian access from the interior of planning areas to public transit stops.
- Collaborate with transit authorities to assess public transit routes and services within the City and neighboring areas.
- Conduct regular meetings to discuss the performance of existing transit routes, identify areas for improvement, and plan future enhancements.
- Actively participate in regional transportation planning forums, such as Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs), to advocate for Irvine's transportation priorities, secure funding for regional mobility projects, and coordinate efforts with neighboring jurisdictions.
- Collaborate with regional transportation agencies, including Orange County Transportation Authority (OCTA), Southern California Association of Governments (SCAG), and neighboring cities, to jointly plan and implement multi-agency transportation projects aimed at improving regional mobility and addressing regional transportation challenges.
- Support regional transit initiatives, such as transit expansion projects (which may include bus rapid transit and/or light rail where feasible), service enhancements, and fare integration programs, to improve connectivity, increase ridership, and promote sustainable transportation options within the region.
- Engage stakeholders, community partners, and advocacy groups in regional transportation planning processes to solicit input, gather feedback, and ensure that transportation initiatives align with the needs and priorities of residents, businesses, and other stakeholders.
- Monitor and evaluate key performance indicators related to regional mobility, such as travel times, congestion levels, mode share, and transit ridership, to assess the effectiveness of implemented strategies, identify areas for improvement, and guide future transportation planning efforts.



Irvine's Traffic Management Center

Goal 8: Promote improved air transportation for Orange County while minimizing noise and air pollution.

Objective C-8. Enhance air transportation infrastructure and services in Irvine and neighboring jurisdictions while implementing measures to mitigate noise and air pollution impacts on surrounding communities.



John Wayne Airport

POLICIES:

Policy (a): Coordinate public and local transit with planning for air transportation.

Policy (b): Support expansion of service at John Wayne Airport as long as all environmental impacts such as noise, air pollution, and traffic congestion can be mitigated.

Policy (c): Explore opportunities, in cooperation with the City of Newport Beach, to improve the transportation system to alleviate the ground access congestion related to John Wayne Airport.



Jeffrey Open Space Trail Pedestrian Overcrossing

IMPLEMENTATION MEASURES:

- Collaborate with relevant authorities to implement noise abatement measures, such as flight path adjustments and operational restrictions during sensitive hours.
- Support investments in advanced technology and equipment to reduce aircraft emissions and noise levels.
- Work with the Airport Land Use Commission to implement community outreach programs to raise awareness about air transportation initiatives and gather feedback from residents on noise and pollution concerns.
- Monitor air quality and noise levels in surrounding areas to assess the effectiveness of noise and pollution mitigation efforts.
- Coordinate with neighboring jurisdictions to develop joint strategies for managing air transportation impacts on shared communities.
- Encourage the use of alternative transportation modes, such as public transit and carpooling, to reduce reliance on air travel and associated environmental impacts.
- Advocate for policies and regulations at the state and federal levels that support sustainable aviation practices and environmental stewardship.

Goal 9: Improve transportation efficiency and accessibility by optimizing the circulation system to provide convenient, reliable, and inclusive transportation options for all residents and visitors in the City of Irvine.

Objective C-9. Maximize transportation efficiency by streamlining traffic flow, reducing congestion, and enhancing connectivity between different transportation modes to facilitate seamless movement within the City.

POLICIES:

Policy (a): Enhance transit connectivity by expanding public transit routes, increasing frequency of service, and improving last-mile connections to transit stops to enhance accessibility and encourage greater transit ridership.

Policy (b): Promote active transportation modes such as walking and biking by developing pedestrian- and bicycle-friendly infrastructure, creating and enhancing bike lanes and trails, and implementing traffic calming measures to improve safety and encourage non-motorized travel.

Policy (c): Optimize traffic management through the use of intelligent transportation systems (ITS), including traffic signal synchronization, dynamic traffic management, and real-time traffic monitoring, to reduce delays, minimize congestion, and improve overall traffic efficiency.

Policy (d): Prioritize accessibility by ensuring that transportation infrastructure and services are accessible to all residents, including those with disabilities or limited mobility, through the provision of ADA-compliant facilities, accessible transit options, and inclusive transportation planning.

Policy (e): Coordinate land use and transportation planning efforts to ensure that transportation infrastructure aligns with development patterns, promoting mixed-use development, transit-oriented development (TOD), and pedestrian-friendly design to enhance transportation efficiency and accessibility.

Policy (f): Support multimodal connectivity by integrating various transportation modes, including public transit, walking, biking, and shared mobility options, to provide residents and visitors with diverse and convenient transportation choices that meet their needs and preferences.

Policy (g): Foster equity and inclusion in transportation planning by addressing transportation disparities, improving access to transportation services in underserved communities, and engaging diverse stakeholders in decision-making processes to ensure that transportation solutions are equitable and inclusive.

IMPLEMENTATION MEASURES:

- Continue to assess transportation needs and priorities to identify areas for improvement, establish performance metrics, and guide decision-making in transportation planning and investment.
- Implement complete streets policies that prioritize the needs of all road users, including pedestrians, cyclists, motorists, and public transit riders, in street design and redevelopment projects to create safer, more accessible, and user-friendly streetscapes.
- Implement transit-oriented development (TOD) strategies to promote compact, mixed-use development around transit hubs, enhancing access to public transit and reducing dependency on personal vehicles.
- Enhance first and last mile connectivity by improving pedestrian and bicycle infrastructure, implementing transit and ridesharing services, and providing secure bike parking facilities to facilitate convenient access to transit stops and destinations.
- Engage stakeholders, community members, and advocacy groups in transportation planning processes through public outreach, workshops, and participatory forums to gather input, build consensus, and foster collaboration in achieving transportation goals and objectives.

Goal 10: Foster the transition towards cleaner and more sustainable transportation options to reduce greenhouse gas emissions, improve air quality, and enhance the overall environmental sustainability of the transportation system in Irvine.

Objective C-10. Reduce emissions from transportation activities by encouraging the adoption of clean and alternative fuel vehicles, promoting the use of non-motorized transportation modes, and implementing measures to mitigate vehicle emissions.



Electric Vehicle (EV) Charging Stations

POLICIES:

Policy (a): Encourage the adoption of electric vehicles (EVs) by expanding EV charging infrastructure throughout the City, providing incentives for EV purchases, and facilitating partnerships with private stakeholders to increase accessibility to charging stations.

Policy (b): Promote the use of alternative fuel vehicles by incentivizing their purchase, supporting the development of refueling infrastructure, and integrating alternative fuel fleets into municipal and commercial operations.

Policy (c): Invest in renewable energy sources to power transportation infrastructure, such as EV charging stations and public transit systems, to reduce reliance on fossil fuels and lower greenhouse gas emissions associated with transportation activities.

Policy (d): Enhance public transit services by investing in zero-emission transit vehicles, expanding transit routes and frequency of service, and improving accessibility to transit stops and stations to encourage greater ridership and reduce reliance on single-occupancy vehicles.

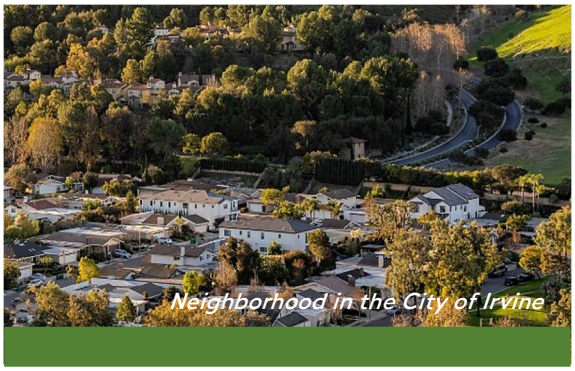
Policy (e): Implement green freight strategies to reduce emissions from freight transportation activities, such as promoting the use of low-emission vehicles, optimizing freight routing and delivery schedules, and incentivizing the adoption of sustainable freight practices among businesses and logistics providers.

Policy (f): Promote eco-driving practices among motorists through public education campaigns, driver training programs, and the adoption of eco-driving technologies to improve fuel efficiency, reduce vehicle emissions, and minimize environmental impacts associated with driving.

IMPLEMENTATION MEASURES:

- Develop incentive programs to encourage the adoption of clean transportation technologies for implementing sustainable transportation initiatives.
- Expand EV charging infrastructure by installing and/or encouraging the installation of charging stations at public facilities, workplaces, multi-family residential complexes, and commercial centers to increase accessibility and convenience for EV owners.
- Collaborate with private sector partners, such as electric utility companies, automobile manufacturers, and technology firms, to leverage resources, share best practices, and implement innovative solutions for advancing clean transportation goals.
- Establish green transportation standards for municipal fleets, public transit agencies, and commercial operators to prioritize the use of clean vehicles, reduce emissions, and promote sustainable transportation practices.
- Conduct community outreach and education campaigns to raise awareness about the environmental benefits of clean transportation, provide information on available incentives and resources, and encourage behavioral changes that support sustainable mobility choices.
- Monitor and evaluate progress towards clean transportation goals by tracking key performance indicators, assessing the effectiveness of implemented measures, and adjusting strategies as needed to ensure continuous improvement and attainment of desired outcomes.

Goal 11: Align transportation planning with land use and design strategies to foster sustainable development, bolster mobility, and realize broader community objectives within Irvine.


Neighborhood in the City of Irvine

Objective C-11. Continue to ensure that transportation planning efforts are aligned with land use and design strategies to create compact, walkable, and transit-oriented developments that minimize automobile dependency, reduce greenhouse gas emissions, and enhance the overall quality of life for residents and visitors.

POLICIES:

Policy (a): Promote transit-oriented development (TOD) by concentrating higher-density, mixed-use development around transit hubs, such as rail stations, bus stops, and transportation centers, to maximize access to public transit, reduce automobile trips, and encourage active transportation modes.

Policy (b): Implement Complete Streets design standards and guidelines to integrate transportation and land use planning considerations into street design, ensuring that streets accommodate the needs of all users, including pedestrians, cyclists, motorists, and transit riders, while fostering vibrant and accessible communities.


Irvine's Traffic Management Center (TMC)

Policy (c): Encourage mixed-use zoning and development patterns that integrate residential, commercial, and recreational uses within close proximity to promote walkability, reduce trip lengths, and enhance access to goods, services, and amenities, thereby reducing reliance on single-occupancy vehicles.

Policy (d): Implement Transportation Demand Management (TDM) strategies, such as telecommuting/remote work, carpooling, ridesharing, and flexible work schedules, to reduce peak-hour traffic congestion, optimize roadway capacity, and minimize the environmental impacts of transportation-related activities.

Policy (e): Explore incentives such as density bonuses, expedited permitting, and fee reductions, for developments that incorporate sustainable transportation features, such as bike parking facilities, pedestrian amenities, and transit access improvements, to encourage the adoption of alternative transportation modes.

Policy (f): Apply smart growth principles, such as compact development, infill development, and mixed-use development, to guide land use and design decisions that support sustainable transportation objectives, enhance urban vitality, and preserve open space and natural resources.

Policy (g): Foster collaboration and engagement among transportation planners, land use planners, developers, community stakeholders, and residents to integrate transportation and land use considerations into the planning process, solicit input and feedback on proposed projects, and ensure that transportation investments align with community values and priorities.

Policy (h): Align circulation enhancement efforts with the Objective LU-12 from the Land Use Element, which aims to implement the use of proximity villages through a range of policies that promote sustainable and community-oriented development.



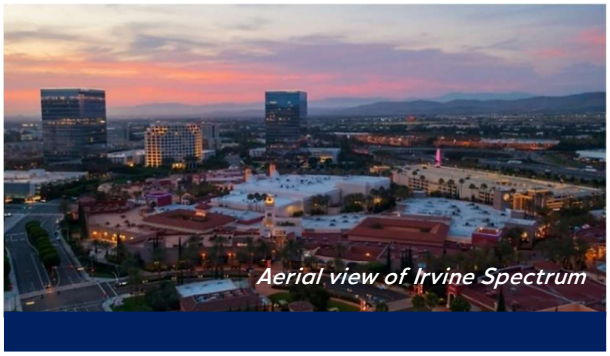
Irvine Connect Shuttle

IMPLEMENTATION MEASURES:

- Integrate transportation and land use planning efforts, such as joint planning commissions, interdepartmental task forces, and collaborative decision-making processes, to facilitate coordination and alignment between transportation and land use policies and initiatives.
- Develop and adopt criteria and guidelines for evaluating the compatibility between transportation and land use proposals, including factors such as proximity to transit, walkability, connectivity, accessibility, and environmental sustainability, to inform land use decisions and project approvals.
- Conduct transportation-land use impact assessments for proposed developments to evaluate their potential effects on transportation infrastructure, traffic congestion, air quality, public health, and community livability, and identify mitigation measures and design strategies to address identified impacts.
- Coordinate transportation infrastructure investments with land use and development patterns to ensure that transportation facilities are strategically located, adequately sized, and properly designed to accommodate projected growth, support sustainable development objectives, and enhance connectivity and accessibility within the community.

Goal 12: Ensure Sustainable Transportation Design for Enhanced Mobility and the support of Environmental Conservation.

Objective C-12. Integrate sustainable transportation principles into the City's planning and development initiatives to reduce environmental impact, enhance livability, and improve mobility for all residents.



Aerial view of Irvine Spectrum

POLICIES:



Utility cabinet in the City of Irvine

Policy (a): Require the incorporation of sustainable transportation features in all new development projects, including bike lanes, pedestrian walkways, and transit-oriented designs. Prioritize the use of environmentally friendly transportation modes, such as electric vehicles, public transit, and active transportation options, in City planning and infrastructure development.

Policy (b): Implement zoning regulations and design standards that encourage mixed-use development and compact, walkable neighborhoods to minimize reliance on automobiles.

Policy (c): Encourage the use of green infrastructure and innovative transportation technologies to reduce carbon emissions and mitigate the City's ecological footprint.

Policy (d): Collaborate with public and private stakeholders to promote sustainable transportation practices, including carpooling, ridesharing, and telecommuting/remote work, among the City's workforce.

IMPLEMENTATION MEASURES:

- Assess the existing transportation infrastructure to identify opportunities to expand on and implement sustainable design improvements.
- Develop incentive programs and grants to support the adoption of sustainable transportation technologies and initiatives by businesses and residents.
- Educate the community about the benefits of sustainable transportation and provide resources to encourage behavior change and mode shift.
- Establish partnerships with regional agencies, non-profit organizations, and academic institutions to research and implement innovative transportation solutions.
- Monitor and evaluate the effectiveness of sustainable transportation initiatives through performance metrics and stakeholder feedback to guide future planning and decision-making.

Goal 13: Maintain a comprehensive circulation network that integrates the planning and placement of public utilities infrastructure to maximize circulation efficiency and minimize community impacts.

Objective C-13. To strategically coordinate and plan the placement of public utilities infrastructure, including water, sewers, storm-water systems, telecommunications and broadband, electricity, and natural gas lines, in a manner that optimizes circulation patterns and minimizes disruptions to the community.



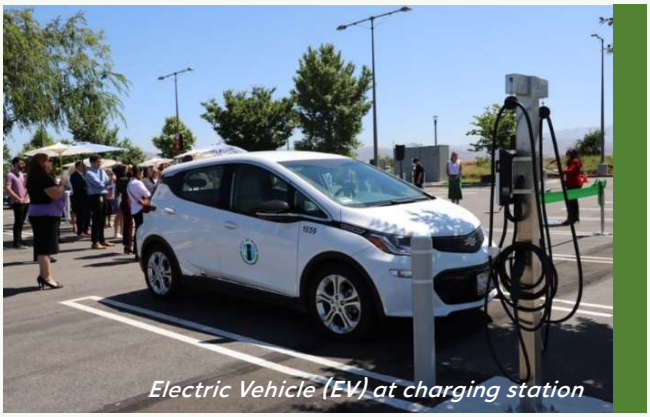
One Irvine Event, Environmental Program Booth

POLICIES:

Policy (a): Coordinate with utility providers and relevant agencies to identify optimal locations for the placement of public utilities infrastructure based on projected demand and future development patterns.

Policy (b): Prioritize the use of existing rights-of-way and corridors for the installation of public utilities infrastructure to minimize the need for new construction and reduce environmental impacts.

Policy (c): Integrate public utilities infrastructure planning with transportation planning efforts to ensure compatibility and efficiency in the use of public rights-of-way.


Electric Vehicle (EV) at charging station

Policy (d): Consider innovative technologies and alternative energy sources when planning the placement of public utilities infrastructure to promote sustainability and resilience.

Policy (e): Promote the use of telecommunications and broadband infrastructure by Irvine residents, employers, employees, and students to reduce air and noise pollution generated by automobile traffic.

Policy (f): Incorporate public input and community feedback into the planning process to address concerns related to the placement of public utilities infrastructure and ensure alignment with community values and priorities.

IMPLEMENTATION MEASURES:

- Establish coordination mechanisms with utility providers, local agencies, and community stakeholders to facilitate collaboration in the planning and placement of public utilities infrastructure.
- Explore funding opportunities and partnerships to support the implementation of public utilities infrastructure projects, including grants, public–private partnerships, and infrastructure financing mechanisms.
- Encourage the private sector to participate in, and to be the primary provider of, telecommunications and broadband infrastructure and services for the community.
- Ensure that leading edge telecommunications and broadband services are available to all businesses and residents within the community and are considered in the planning of future development and infrastructure improvements.
- Encourage productive communications between public and private sector agencies with regard to broadband and telecommunications issues and services.



One Irvine Community Resource Fair