Includes Updates Adopted by City Council September 2015 and January 2020
Resolutions 2015-38 and 2020-01

CHAPTER VI

CIRCULATION ELEMENT

GOALS:

The City of Brisbane will be a place…

Where there is an established rational relationship between land use and circulation in place to guide the City into the future;

Where all users of the transportation network can travel safely and comfortably throughout Brisbane;

Where Complete Streets are integrated into the transportation network to provide for a balanced, connected, safe and convenient multi-modal network;

Where reliable public transit services are promoted and expanded, creating viable transportation alternatives to the automobile;

Where parking needs have been reasonably balanced to encourage walkable neighborhoods, economic vitality, safety and convenience; and

Where the transportation network serves the needs of residents as well as commercial and industrial businesses.

CIRCULATION

Chapter Index

CHAPTER VI

CIRCULATION ELEMENT

This circulation element addresses how the City of Brisbane will maintain, enhance and expand its circulation system to best meet the needs of its residents, business community, and visitors travelling to, from or through Brisbane.

Key considerations in Brisbane's circulation system planning are to recognize the land use context within the various areas of the City and the existing geographic or physical constraints in those areas, while at the same time recognizing opportunities for improvements and potential connections within the larger regional circulation network that will best serve the community. These considerations are reflected in Brisbane's circulation element goals, as detailed on the previous page, as well as through the policies and programs that follow.

In working to enhance both the local function of the circulation network and its regional connections, Brisbane will continue in its collaborative efforts with other local and regional agencies and will continue to seek various regional, state, and federal funding resources for projects which are of local and regional concern.

Brisbane's goals are consistent with the state and regional goals which are expressed through the Bay Area's Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments' (ABAG's), "Plan Bay Area" and the intent of the California Complete Streets Act of 2008 (AB 1358, Leno), codified in Sections 65040.2 and 65302 of the Government Code.

This element is organized as follows:

VI.6 Parking

VI.7 Circulation and Land Use

VI.8 Green Streets

VI.9 Alternative Transportation Modes

VI.10 San Francisco-San Mateo Bi-County Transportation Study

Certain aspects of this element address broad policy issues while others are more detailed implementation programs. Given the technical nature of transportation issues, engineering analysis and judgment are integral to the implementation of the element. Where policies or programs refer to a City action, they may include tasks or decisions involving City Council and potentially multiple City departments, and/or professional engineering work under the responsible charge of the City Engineer. This is determined on a case-by-case basis, by the City, consistent with state law regulating the work to be done by qualified, licensed engineering professionals.

Figures C.1 and C.2 show the circulation system within the planning area, including the major thoroughfares as well as the local street network. Figure C.3 illustrates changes to the circulation system in the planning area.

VI.1 DESCRIPTION OF CIRCULATION SYSTEM

Streets and Highways

The San Francisco Bay and San Bruno Mountain are the major determinants of the geographic layout of the street and highway system serving the planning area, with Highway 101 and Bayshore Boulevard serving as the main transportation corridors to, through and within the City. The following provides a brief outline of the major streets and highways. Streets or highways are assigned a functional classification, based on a hierarchy of the function and vehicular travel movement capacity.

1. Regional Routes: Regional Routes are roadways and highways that cross county boundaries and/or carry large volumes of through traffic to and from locations outside of Brisbane that does not have a destination within the City other than the Bayshore Caltrain station. The need to distinguish mobility issues and policies along Regional Routes from issues and policies facing other roadways within the City is demonstrated by:

    - Increased vehicular congestion that will occur within Brisbane along these routes due to the large amount of development being approved in cities to the north and south of Brisbane;

    - Adoption of SB 743, which calls for balancing the need for infill residential, commercial, employment-generating, and mixed use development in proximity to transit and the need for reducing greenhouse gas and air pollutant emissions with the need for addressing vehicular traffic congestion;

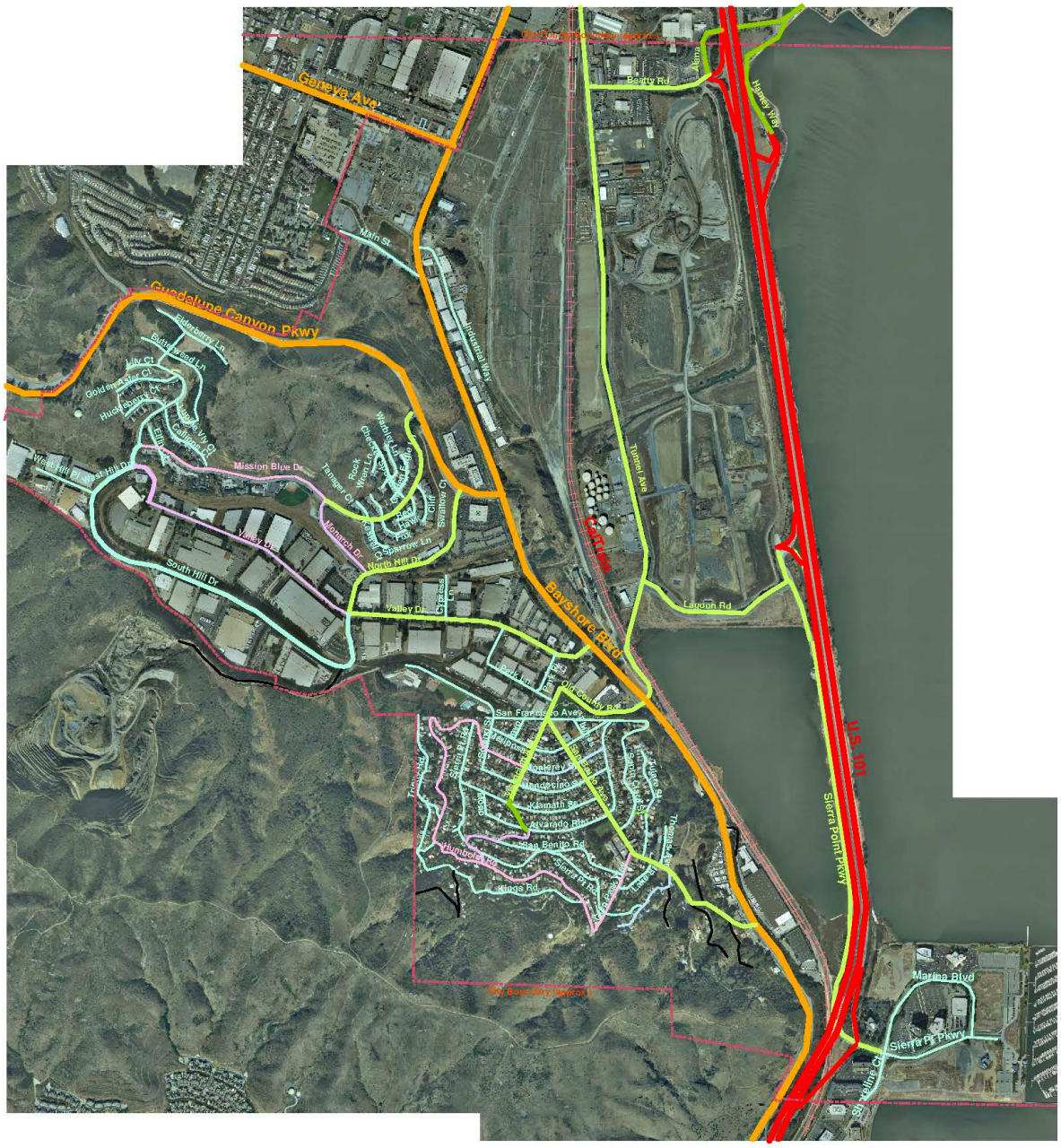

Figure C-1
Existing Street Classification

Figure C-2
Existing Street Classification
Central Brisbane Area

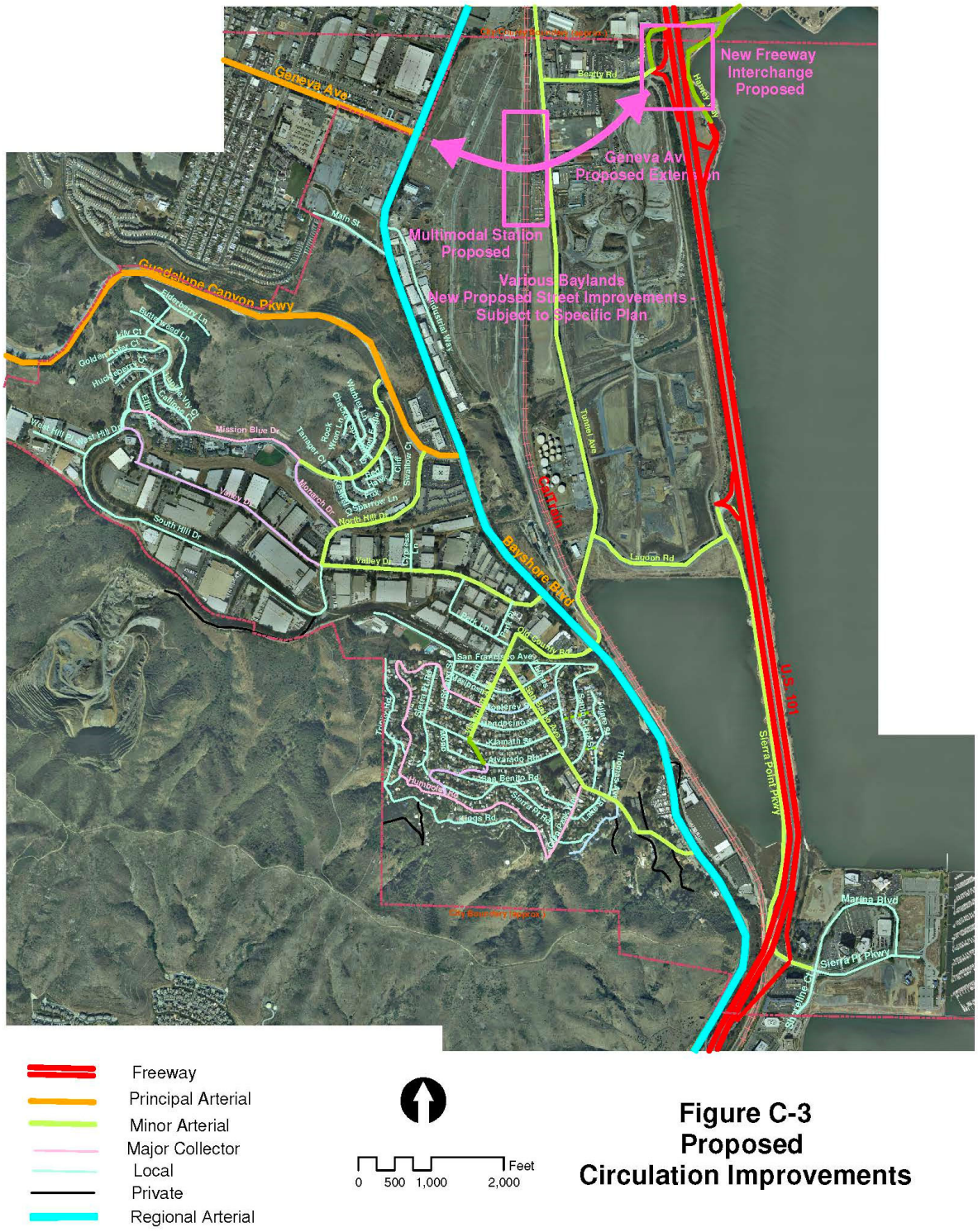

Figure C-3
Proposed
Circulation Improvements

- SB 743 CEQA Guidelines, approved in December 2018 that eliminate traffic congestion as a significant impact under CEQA;

- The US 101 freeway is owned, operated, and maintained by the State of California. Changes to the freeway and its interchanges are subject to review and approval by Caltrans. In practice, physical modifications to the freeway and its interchanges are more influencded by regional traffic patterns and regional organizations such as MTC and C/CAG than by local needs; and

- Limited capacity for widening of the 101 freeway and Bayshore Boulevard to accommodate vehicular traffic generated outside of the City, along with the limited ability of the City of Brisbane to make meaningful freeway improvements.

Two types of Regional Routes occur within Brisbane:

a. Freeways: Freeways are limited access, high-speed travel-ways, which are included in the state and federal highway systems. They carry regional through traffic, and access is provided at interchanges, generally at intervals of one mile or greater. Brisbane has one freeway, U.S. Highway 101, along its eastern edge.

b. Regional Arterials: Regional Arterials are major streets, such as Bayshore Boulevard and the Geneva Avenue extension that serve regional functions and carry large volumes of traffic generated from outside of Brisbane that does not have a destination within the City.

2. Principal and minor arterials: Arterials are major streets that primarily serve through traffic and on a limited basis they may provide access to abutting properties. They are generally designed with 4 to 6 lanes and major intersections are usually signalized. Brisbane has both principal and minor arterials, with the minor arterials in Brisbane being only two lanes, except for the eastern portion of Valley Drive, which is four lanes.

3. Major and Minor collectors: Collector streets connect arterial streets and local streets with reduced traffic volumes and generally narrower roadways than the arterials. They generally have two travel lanes, parking lanes, sidewalks, and street trees or planting strips.

4. Local: Local streets provide access to individual abutting properties as their primary function. Local streets have no more than two travel lanes.

The street classifications within Brisbane are generally described as follows:

Regional Routes

U.S. Highway 101- Freeway: The U.S. 101 freeway traverses the eastern edge of Brisbane and is the main corridor serving north-south traffic along the San Francisco Peninsula between the Santa Clara Valley and San Jose to the south and San Francisco to the north. Highway 101 on- and off-ramps within Brisbane are currently limited to those at Beatty Avenue and the north and south ends of Sierra Point Parkway.

Bayshore Boulevard: Bayshore Boulevard is a decommissioned State Highway and is now a City owned and maintained arterial roadway. Bayshore Boulevard serves as the City's primary north-south

transportation route, connecting Brisbane to San Francisco, Daly City, and South San Francisco. Together with its connecting minor arterial streets, Bayshore Boulevard also provides linkages to and from Highway 101. As a result, Bayshore Boulevard's performance affects all traffic access and circulation through the City.

Bayshore Boulevard functions primarily as a regional roadway through the City of Brisbane. Peak hour congestion along Highway 101 causes traffic to be diverted from the freeway onto Bayshore Boulevard through the City of Brisbane as motorists attempt to avoid congested freeway traffic. Depending on the time of day and location, regional through traffic makes up 60 to 80 percent of traffic on Bayshore Boulevard. On a daily basis, only 10 to 15 percent of all trips on Bayshore Boulevard are generated from Brisbane's residential neighborhoods and 15 to 20 percent are generated by Brisbane's employment centers. The majority of traffic on Bayshore Boulevard within Brisbane is between San Francisco and cities to the south, with a smaller amount (approximately 15 percent of all trips) traveling between Daly City and the cities to the south.

A principal challenge for the City is maintaining vehicular mobility for Brisbane residents and businesses along Bayshore Boulevard. As large-scale developments occur in cities to the north and south of Brisbane, regional through traffic and congestion on Bayshore Boulevard is projected to increase. It is also important that Bayshore Boulevard provide safe access and egress for sites located along its frontage while maintaining its ability to move vehicles through the City. Another issue is providing for safe and comfortable access for bicyclists and pedestrians. In 2008 and 2011, bikeways were completed on both sides of Bayshore Boulevard, in part with funding obtained by the City through the California Transportation Development Act. These bikeways include 6 foot wide striped bike shoulders and rumble strips, which have enhanced their function within the regional bikeway network and have helped address bicycle access and safety.

Questions for the future remain regarding the function and design of Bayshore Boulevard and how it to best address the way this roadway is being used by regional through traffic, while meeting the mobility needs of the local community.

Geneva Avenue: Geneva Avenue is currently an east-west arterial within the jurisdiction of Daly City with its current eastern terminus at Bayshore Boulevard, providing a link between Brisbane and Daly City. Upon development of the Baylands, an extension of Geneva Avenue will be constructed through the Baylands. The Geneva Avenue extension will serve as the primary east-west connection through the Baylands and as an important connection to Highway 101 for traffic generated within both Brisbane and Daly City. A new interchange for Geneva Avenue at Highway 101 would be constructed to replace the current Highway 101 on- and off-ramp interchange at Alana Way and Harney Way with a new more efficient interchange configuration known as the Candlestick Interchange.

Principal Arterials

Guadalupe Canyon Parkway: Guadalupe Canyon Parkway is an east-west principal arterial with its eastern terminus at Bayshore Boulevard, providing links to Daly City.

Alana Way & Harney Way: Short segments of Alana Way and Harney Way are within Brisbane and serve as principal arterials connecting to Highway 101 from Beatty Ave. in Brisbane and Harney Way at Candlestick Point.

Minor Arterials

Visitacion and San Bruno Avenues connect with Old County Road in Central Brisbane and all three streets serve as minor arterials for this area. Old County Road becomes Tunnel Avenue as it crosses over Bayshore Boulevard, and connects with Beatty Avenue and Lagoon Way. Lagoon Way then connects with Sierra Point Parkway. All of these are classified as minor arterials. Similarly, Valley Drive (eastern portion), North Hill Drive and the eastern portion of Mission Blue Drive serve as minor arterials in the Crocker Park and Northeast Ridge subareas.

Tunnel Avenue provides an alternative to Bayshore Boulevard, while Sierra Point Parkway provides access/egress for the Sierra Point subarea. The Tunnel Avenue railroad overpass was replaced in 2007 to meet current seismic safety standards, to improve the geometry of the crossing, and to provide bike and pedestrian lanes. These improvements haveadded significantly to the viability of Tunnel Avenue as an alternative to Bayshore Boulevard. The remaining portions of Tunnel Avenue and its connecting streets will also be further improved upon development of the Baylands.

Lagoon Way serves as the east-west connection between Central Brisbane and access to southbound Highway 101, via Tunnel Avenue. Beatty Avenue likewise serves as a connection to and from the northeast corner of the City, from Tunnel Avenue to access to north and southbound Highway 101.

The challenge facing Brisbane for minor arterial streets is to evaluate these on a case-by-case basis relative to the goals, policies and programs, to define how they can be modified to enhance and provide alternative modes of transportation and to secure funding sources to implement improvements that are determined to be a priority by the City.

Major Collector Streets

Major collector streets include Humboldt Road, Glen Parkway, a portion of Monterey Street and a portion of Visitacion Avenue, which connect several local streets within the residential area of Central Brisbane. The western portions of both Valley Drive in Crocker Park and Mission Blue Drive in the Northeast Ridge are also classified as major collectors, as is Monarch Drive and the eastern portion of West Hill Drive, which connect Crocker Park and the Northeast Ridge subareas.

The challenges for the major collector streets are, as stated above for the minor arterials, to define how they can be modified to enhance and provide alternative modes of transportation and to secure funding sources to implement improvements.

Local Streets

Local streets serve most of the residential areas of Central Brisbane and the Northeast Ridge. While the Northeast Ridge is a recent development and the streets were built to meet modern standards, Central Brisbane's existing development pattern poses significant challenges in providing separation between vehicles, bicycles, and pedestrians, due to existing street widths and steep topography. These challenges increase from the lower Central Brisbane streets to the very steep and narrow upper streets. While

separate travel lanes are limited along those streets, the roadway geometry necessitates low vehicle speeds on these shared roadways, thus mitigating some of the need for wider roadway sections.

TRANSIT SYSTEMS

Brisbane is served by the following transit systems connecting to regional destinations:

- San Mateo County Transit District (SamTrans)
- Caltrain
- Local shuttle service

Currently in Brisbane, SamTrans runs bus routes along Bayshore Boulevard seven days a week, and the Bayshore Caltrain station is located at the northern border of the City. Both the bus line and train lines generally run north-south. Transfers to reach other destinations off these north-south lines generally involve long wait times and often there are disconnects between the different modes of transportation. For example, the Bayshore Caltrain station is approximately 1-½ miles from Central Brisbane, and the SamTrans bus line serving Central Brisbane currently does not connect to the Caltrain station. The stops between SamTrans and Caltrain at the north end of Brisbane are approximately ½-mile walking distance apart. Improvement of these connections and development of a multi-modal station at the northern end of Brisbane are proposed to be implemented as part of the Baylands development.

San Francisco's Muni Metro Light Rail System extends to Bayshore Boulevard and Sunnydale Avenue near the northern border of Brisbane. Connectivity to a multi-modal transit facility is anticipated under the Baylands development.

Private and public commuter shuttles provide service to and from Brisbane's commercial areas of Sierra Point and Crocker Park and along Old County Road and San Bruno Avenue to regional transit connections and to the Daly City Bayshore neighborhood. While these shuttle services pick up some of the slack in the local transit system, significant improvements are needed on a regional basis to begin to meet the goals outlined in "Transportation 2030" and Brisbane's own General Plan. Shuttle scheduling information may be found on the websites www.commute.org and/or www.samtrans.org

VI. 2 TRAFFIC FLOW, CONVENIENCE AND ACCESS

Roadway Performance

Historically, vehicular traffic congestion and roadway performance standards such as level of service (LOS) have been used in three different ways.

1. For roadway and freeway planning as part of a City's General Plan or a regional transportation plan to determine the number of lanes needed along roadways or freeways to accommodate anticipated traffic volumes consistent with the applicable LOS standard.

2. For roadway or freeway improvements undertaken by a public agency to determine when a roadway or freeway needs to be widened or when additional turn lanes or through lanes are needed at an intersection to meet the applicable LOS standard.

3. To analyze in a CEQA document how the traffic generated by a proposed development project would cause or increase congestion. At intersections where a proposed project would cause LOS standards to be exceeded, mitigation measures in the form of adding capacity at intersection(s), widening roadway(s), or providing signalization would then be required to mitigate the traffic impacts of the development project and thereby maintain applicable LOS standards.

Thus, the use of level of service standards has aimed at expanding the capacity of roadway and highway systems to accommodate projected increasing volumes of vehicular traffic.

In recent years, however, climate change has become a matter of critical concern as greenhouse gas (GHG) levels in the atmosphere have increased dramatically due to human activity with the transportation sector (including private automobiles) being one of the largest producers of GHG emissions. In California, targets for GHG emission reductions have been established and substantial regulatory efforts are underway to ensure that these reduction targets are met. Reducing the amount of automobile travel throughout the state is one of the major strategies being put forth to reduce GHG emissions.

Policy C.1 Design the City's roadway system to emphasize mobility for Brisbane residents and businesses, accommodate bicycle and pedestrian in addition to vehicular movement, and provide for comfortable and safe travel within the community to shopping, employment, and recreation, as well as to transit and the Highway 101 freeway.

Program C.1.a Consult with Caltrans, the Metropolitan Transportation Commission, San Francisco Transportation Authority, San Mateo County Transportation Authority, C/CAG, and others to develop and fund programs including physical improvements, enhanced use of transit, and transportation demand management, to maximize the ability of the 101 freeway to accommodate regional through traffic.

Program C.1.b Develop design plans for Bayshore Boulevard, the Geneva Avenue extension, and interchanges along the 101 freeway that address the effects of regional through traffic within Brisbane and enhances mobility for Brisbane residents and businesses through a combination of roadway and intersection, transit, bicycle, and pedestrian facility improvements that would not cause a substantial increase in vehicle miles travelled (VMT) on Bayshore Boulevard or other routes through the City. As part of this design plan, evaluate (1) whether changes in design speeds along Bayshore Boulevard could improve mobility within the City; (2) the feasibility of shifting a portion of regional through traffic from Bayshore Boulevard onto other routes, such as Sierra Point Parkway by extending that roadway north to the 101 freeway interchange at Beatty Avenue, and (3) appropriate routing of trucks to and from the Crocker Park area.

Program C.1.c Prepare, adopt, and implement a mobility improvement fee program to fund the multi-modal improvements called for in the design plan for Bayshore Boulevard and interchanges along the 101 freeway.

Program C.1.d Rather than undertake multiple traffic impact analyses to evaluate individual intersections along Bayshore Boulevard, Geneva Avenue, and at intersections along the 101 freeway, require new development projects that would generate 50 or more peak hour trips at any intersection along Bayshore Boulevard, Geneva Avenue, or at intersections along the 101 freeway to comply with the design plan developed pursuant to Program C.1.c and either provide physical improvements consistent with the plan or pay established traffic impact fees as directed by the Public Works Director .

Policy C.2 The level of service objective for principal and minor arterial streets within the City is LOS "D."

Program C.2a Require development projects that would generate 50 or more peak hour trips at an arterial street intersection to prepare a traffic impact analysis.
Program C.2.b In lieu of requiring individual development projects to prepare traffic impact analyses to evaluate intersections and require mitigation measures for impacts at intersections along principal and minor arterials streets, consider developing a program of impact fees to fund multi-modal improvements and reduce automobile traffic generation in coordination with the San Mateo County Congestion Management Plan, as applicable.

Policy C.3 Design turning movements and traffic signal timing at intersections so as to avoid the queueing of vehicles at intersection from backing up and adversely affecting operations at another intersection. Design turning movements and traffic signal timing at freeway interchanges cause queueing of vehicles from the intersection onto the freeway mainline.

North-South and East-West Corridors

Policy C.4 Plan for an additional east-west corridor to redirect non-destination traffic away from Bayshore Boulevard and to provide more direct access to Highway 101.

Program C.4.a Pursue an extension of Geneva Avenue, connecting with the Candlestick Highway 101 Interchange that provides for bus rapid transit and connection to the Bayshore Caltrain station.

Program C.4.b Consult with Caltrans in the design of the Candlestick Highway 101 Interchange to assure the best connection with the Geneva Avenue Extension.

Program C.4.c Require that all east-west corridor rail crossings are grade-separated (i.e., not at-grade) to the extent permitted by law.

Policy C.5 Continue to upgrade north-south arterial and collector streets while providing the appropriate level of service.

Program C.5.a Require the upgrade of Tunnel Avenue to current codes and safety standards.

Policy C.6 Investigate and pursue alternative means of access to and egress from Sierra Point and investigate additional emergency access alternatives.

Policy C.7 Investigate and pursue traffic calming features for Visitacion Avenue, Old County Road and San Bruno Avenue to provide for greater pedestrian comfort and safety at street crossings.

Street Standards

Policy C.8 Implement established City street standards to provide for adequate traffic flow and safe vehicular, bicycle, and pedestrian movement along both existing and new streets.

Program C.8.a Consult with Caltrans in regard to street standards when a City street is a connector or ramp to a State route.

Policy C.9 For local residential streets in Central Brisbane, continue to require a minimum unobstructed street width of 20 feet, as required by the Uniform Fire Code.

Program C.9.a Permit exceptions that meet the required findings set forth in the Municipal Code.

Policy C.10 The City Engineer shall consider the following factors during plan review as they apply to residential, residential hillside, and commercial streets:

- **grade**
- **topography**
- **average lot frontage size**
- **number of lots and potential intensity of development**
- **maximum block length**
- **maximum length of cul-de-sac streets**
- **length of street in relation to number of units served**
- **turnarounds**
- **parking**
- **secondary access**

Program C.10.a Continue to implement street development standards that establish requirements for right-of -way dedication, street width, length, turnarounds, and access to parcels.

Program C.10.b Continue to implement street engineering design and construction standards that establish requirements for horizontal alignment and vertical alignment, pavement and pavement crown, concrete curb, and structural section design.

Program C.10.c Continue to implement standards for sidewalks, bikeways, signalization, striping, and street lighting.

Policy C.11 Require designs for hillside streets to reflect the topography and to minimize grading and large retaining walls.

Program C.11.a Consider incorporation of small scale parking bays, rolled curbs, and other means of including parking and providing safe clearance on hillside streets.

VI. 3 TRAFFIC SAFETY

Local Residential Streets

Policy C.12 Maintain and improve local residential streets to accommodate safe access for emergency vehicles and evacuation routes for residents.

Policy C.13 As a part of the budget and capital improvement planning process, consider opportunities to incorporate safety standards and/or widen hillside streets to current city adopted standards.

Policy C.14 Develop a prioritized program for improvements to existing substandard City streets to include such things as street widening, turnarounds and the feasibility of secondary emergency access, and improving on-street parking.

Program C.14.a Investigate the feasibility of undergrounding utilities to mitigate potential traffic hazards, such as downed lines in a fire.

Program C.14.b Consider opportunities and funding to enhance safety on steep streets.

Policy C.15 Post and actively enforce the 25-mile per hour (mph) maximum speed limit in Central Brisbane and 15 mph on identified street segments near the schools, and investigate creating speed limit zones lower than 25 mph in other areas of Central Brisbane where appropriate.

Policy C.16 Promote a public awareness campaign regarding speed limits.

Arterial Streets

Policy C.17 Maintain traffic flow and continue to improve arterial streets to accommodate vehicular, bicycle, and pedestrian movement.

Program C.17.a Limit and control the number and location of driveways into arterial streets as needed to maintain mobility within the City. Encourage adjacent properties to develop common access. See also Program C.22.2 in Complete Streets section.

Program C.17.b Use landscaped medians and islands to direct and channel traffic, where needed to provide for mobility for Brisbane residents and businesses, as well as to provide safe separation and visual respite.

Truck Routes

Policy C.18 Maintain truck routes to avoid impacts on residential areas.

Program C.18.a. In conjunction with design planning for Bayshore Boulevard and the Geneva Avenue extension, undertake a review of appropriate truck routes within Brisbane, including truck routes to serve Crocker Park.

Street Signage

Policy C.19 Provide adequate signage on all streets including street names on at least one corner of every intersection and advance warning signs for major entries.

Improvements Funding

Policy C.20 Identify and pursue funding sources to implement circulation improvements.

Program C.20.a Encourage creation of assessment districts where appropriate, for needed circulation improvements.

Program C.20.b Utilize gas tax, sales tax and other funding sources to implement circulation improvements.

VI.4 COMPLETE STREETS

The state legislature passed The California Complete Streets Act in 2008, which requires that jurisdictions plan for "Complete Streets" to address the needs of all users.

Brisbane's roadway infrastructure has largely already been built, with the notable exception of the Baylands, which will require the preparation and approval of a specific plan. This Complete Streets section focuses on completing existing streets to meet the needs of bicycles, pedestrians, and transit users. New streets will also be required to be consistent with the element and provide for Complete Streets, as appropriate to the context.

Complete Streets Applicability and Design Standards

Policy C.21 The City shall provide for the development of Complete Streets consistent with Government Code Sections 65040.2 and 65302 and subsequent applicable Complete Streets legislation) to meet the needs of all users of "streets, roads and highways". Such users include bicyclists, children, youth, families, persons with disabilities,

motorists, movers of commercial goods, pedestrians, users of public transportation, seniors, and first responders.

Policy C.22 Integrate Complete Streets infrastructure and design features, such as sidewalks, bikeways and transit stops, into street design and construction to create safe and inviting environments for people to walk, bicycle and use public transportation.

Program C.22.a Review and where needed, update the City's engineering design standards to implement Complete Streets infrastructure elements.

Program C.22.b Incorporate Complete Streets infrastructure elements into new streets, street retrofits and certain maintenance projects to encourage multiple modes of travel, as appropriate to the context and determined reasonable and practicable by the City. Depending on the context, these elements may include:

- Infrastructure that promotes a safe means of travel for all users along the public right-of-way, such as sidewalks, shared use of paths, bicycle lanes, and paved shoulders;

- *Infrastructure that facilitates safe pedestrian crossings of the right of way, such as accessible curb ramps, crosswalks, refuge islands, and signals to meet the needs of children, people with disabilities and the elderly;*

- *Street design features that promote safe and comfortable travel by pedestrians, bicyclists and users of public transportation, such as traffic calming features and physical buffers between vehicular traffic and other users;*

- *Inclusion of amenities that improve the comfort and addresses the safety needs of pedestrians and bicyclists, such as, but not limited to, signs, pavement markings, pedestrian-scale lighting, benches, seat walls, bike lockers and racks;*

- *Improvements to public transit and multi-modal connections, to enhance City-wide transit access and connections to regional destinations;*

- *Minimizing vehicular ingress and egress points on major arterials and consolidating private driveway entries to enhance bicycle, pedestrian and automobile safety along these arterials;*

- *Inclusion of street trees and other landscaping features, to enhance the appearance of the streetscape and to encourage pedestrian and bicycle use. Landscaping should use San Bruno Mountain native plants where feasible. In any case, plants should be non-invasive and drought resistant. (See also the Green Streets section of this element.)*

- *Balance on-street parking as appropriate to the context, to promote the Complete Streets Act goals and encourage economic vitality. (See also the Parking section of this element.)*

Program C.22.c Where possible, work with MTC to secure regional funding for Complete Streets projects.

Policy C.23 Seek to retrofit existing roadways to create Complete Streets.

Program C.23.a Identify roadways where retrofits may reasonably be accomplished in balance with existing and planned land uses, giving priority to arterial and collector streets and to projects that would provide greater connectivity between key areas of the City, such as, but not limited to, between the Northeast Ridge, Sierra Point and Central Brisbane.

Program C.23.b Identify roadways where Complete Streets retrofits may provide for enhanced place-making and contribute to the City's vitality.

Program C.23.c Seek regional, state, and/or federal funding sources to retrofit roadways to create Complete Streets.

Policy C.24 For new multifamily, mixed use or commercial development projects subject to discretionary review that would affect the public right-of-way, incorporate and implement Complete Streets elements at each stage of the development process as determined reasonable and practicable by the City.

Program C.24.a As part of the design review permit process, require documentation of how the routine accommodation of bicyclists and pedestrians will be satisfied.

Program C.24.b As part of the project design review process, ensure that the project objectives and purpose are consistent with current MTC directives on Complete Streets and Routine Accommodation.

Bicycles and Pedestrians

Bicycle and pedestrian travel have become increasingly popular in recent years in the San Francisco Bay Area, where the weather is mild, and where there has been an increased accommodation of these modes into circulation networks throughout the region. These are typically modes used for recreation, school trips, and short- to moderate-distance commute trips. Since they are non-polluting, require relatively low cost facilities, and contribute to individual health, they are increasingly becoming valuable alternatives to automobiles and are critical components in the circulation network in contributing to sustainability. They are also critical modes for incorporation in the circulation network in providing a sense of place, especially within city centers.

Given the ties of pedestrian and bicycle access to land use, Brisbane's General Plan includes the policies and programs that follow in this section as well as companion policies and programs within the land use and subareas elements.

Brisbane is currently in the process of creating a bicycle and pedestrian master plan that would enhance its existing network of bikeways and walkways and where possible provide greater connectivity, or improve existing bikeways and walkways that are tied to the regional network.

Regional Connections

Policy C.25 Provide input to the City and County of San Francisco and San Mateo County in regional planning efforts to enhance and expand the regional bicycle and pedestrian networks, including, where appropriate, amendments to regional bicycle and pedestrian plans.

Policy C.26 Continue to connect Brisbane's bikeway and pedestrian system to the County and regional networks.

Program C.26.a Continue to apply for Transportation Development Act (TDA), successors to TDA, and other funding sources.

Safe Routes to School

Policy C.27 Work with the County Congestion Management Agency, C/CAG, and local schools to develop priorities and implement Safe Routes to School projects consistent with state and federal legislation.

Program C.27.a Continue to identify improvement projects and seek funding for Safe Routes to School infrastructure improvements.

Program C.27.b Continue non infrastructure-related activities that encourage walking and bicycling to school, through outreach on the City's website, informational articles in the local City news publications, communications through community leaders, partnering with non-profit entities, promoting walk and bike to school days, and supporting partnerships with the schools to provide education directly to students and parents on the benefits of walking and bicycling to school.

Program C.27.c Develop and promote a traffic safety education program for the schools.

Program C.27.d Continue to provide a crossing guard program.

Bicycles

Policy C.28 Maximize bicycle access to all areas of the City, as practicable.

Program C.28.a Identify areas of the City where bikeways may be constructed, as both recreational and transportation amenities, with the aim of connecting all areas of the City with a network of bikeways.

Program C.28.b Design and install bikeways to meet best current engineering practices.

Policy C.29 Provide for the safety of bicyclists by dedicating bikeways where practicable, by installing appropriate signing and striping, and by maintaining the pavement.

Program C.29.a Install as many bikeways as can safely be accommodated and are economically feasible.

Policy C.30 Require new development and redevelopment to plan for and construct bikeways and/or bicycle parking facilities, as determined reasonable and practicable by the City.

Policy C.31 All new arterial streets and any existing arterials that are improved should provide for bicycle transportation.

Program C.31.a As a part of the budget and Capital Improvement Program development, seek opportunities to upgrade existing bikeways and to install new bikeways.

Policy C.32 Provide or require bicycle parking facilities at major destination points.

Program C.32.a Include bicycle lockers in park-and-ride facilities.

Program C.32.b Encourage business and employment centers to provide bicycle-parking facilities for their employees.

Program C.32.c Design and install bicycle-parking facilities to meet best current engineering practices.

Policy C.33 Provide public information on bicycle transportation.

Program C.33.a Promote bicycle use through a public information program, at special events, and through City publications.

Program C.33.b Establish an educational program on safe bicycle use.

Program C.33.c Make bicycle network maps available.

Pedestrians

Policy C.34 Maximize safe pedestrian facilities and access to all areas of the City, as reasonable and feasible.

Program C.34.a Identify sidewalks, walkways, and trails throughout the City to improve with pedestrian amenities as funds are made available; and continue to apply for new grant funding.

Program C.34.b Consider opportunities to enhance and expand pedestrian access between Central Brisbane, the Caltrain station, Sierra Point Marina and other regional destinations and transit connections.

Program C.34.b As part of the budget and Capital Improvement Program preparation, seek funding to upgrade and expand the system of pedestrian sidewalks, walkways and trails, especially in conjunction with street improvement projects.

Program C.34.c For newly designed and constructed sidewalks, disallow automobile parking thereon; and for existing sidewalks adjacent to rolled or vertical curbs, encourage residents to park such that sidewalks are kept clear for pedestrians in accordance with the Americans with Disabilities Act (ADA) width standards.

Program C.34.d Where practicable and where funds are available, establish and improve mid-block and block-end, public right-of-way pedestrian paths, in order to provide direct off-street pedestrian access between the upper and lower parts of Central Brisbane.

Policy C.35 Require pedestrian amenities with new development and expansion of existing uses, as appropriate.

Program C.35.a Adopt standard requirements for sidewalk improvements along property frontages, taking into consideration constraints imposed by topography, and where

sidewalks are not appropriate, consider in-lieu fees for new development for funding pedestrian amenities elsewhere in the City.

Policy C.35.b Consider accepting sidewalk improvements beyond the frontage of a development site as a means to help mitigate traffic and parking impacts.

Transit

Brisbane has limited transit service, provided by regional agencies. This includes San Mateo County Transit District (SamTrans), Caltrain, and local shuttle service.

Given the high cost to construct new, fixed, mass transit systems such as BART, Caltrain and even light rail, there is an emphasis in this element on seeking to develop improved facilities and connections and improving the service network on the peninsula, with greater Brisbane service. However, the Baylands site includes the Bayshore Caltrain station and the opportunity exists to expand this facility into a multi-modal transit hub along the proposed extension of Geneva Avenue. This could potentially accommodate connections for Caltrain, SF Muni light rail, SamTrans, Bus Rapid Transit and various shuttles.

Transit is a regional issue and Brisbane fully supports and is involved with the regional agencies to promote and enhance transit, as reflected in the policies and programs below.

Policy C.36 Seek opportunities to install and improve transit facilities, establish multi-modal connections and increase the service network.

Program C.36.a Continue active participation in the implementation of the San Mateo County-wide Transportation Plan to improve circulation systems, to develop alternatives to automobile dependence and to make transportation-sensitive land use decisions.

Program C.36.b Request more frequent scheduling of Caltrain stops at the Bayshore station as warranted by demand.

Program C.36.c Support, improve, and expand transit to serve the business and residential communities and provide connections to major transportation hubs.

Program C.36.d Cooperate with San Mateo County Transit District (SamTrans), and other appropriate agencies, to establish bus rapid transit (BRT) systems where practicable.

Program C.36.e Cooperate with and provide input to transit agencies to provide increased bus scheduling to a greater network of destinations (especially to regional destinations, such as work, shopping, entertainment centers and medical facilities).

Program C.36.f Cooperate with and provide input to transit agencies to provide more comprehensive transfer connections with other bus routes outside of Brisbane and with other transit systems, such as Caltrain and BART.

Program C.36.g Work with SamTrans to install improvements at existing bus stops and designated routes.

Program C.36.h Provide information to citizens on the availability of transit.

Program C.36.i Require new development that are subject to the City's transportation demand measures (TDM) ordinance to also incorporate measures that facilitate Complete Streets compliance measures, such as transit stops, shuttle stops, and bicycle facilities.

Policy C.37 Plan for park-and-ride facilities at the Caltrain Station and other major transit stops.

VI.5 TRANSPORTATION MANAGEMENT

Transportation management includes both transportation systems management (TSM) and transportation demand management (TDM). TSM is an approach to congestion mitigation that seeks to identify improvements to enhance the capacity of existing systems through operational measures. TDM includes strategies and measures that influence travel behaviors to improve the use of transportation system resources and the mobility and access for users. The underlying aim is to reduce single-occupant vehicle trips by offering more and better choices. This is especially effective for large employers to provide such things as shuttle and carpooling services to employees, offering incentives for employees to take transit, and incorporating physical infrastructure features, such as bike storage and shower and locker facilities, in the construction of new buildings or improvements to existing buildings.

Policy C.38 Continue participation in the efforts of subregional and regional transportation agencies to manage transportation systems.

Program C.38.a Continue active participation in the Congestion Management Program.

Program C.38.b Continue active participation in the Peninsula Traffic Congestion Relief Alliance Joint Powers Authority (Commute.org), as a means to cooperatively encourage residents and employees to reduce demand on transportation infrastructure.

Program C.38.c Provide information to citizens, employers, and employees on the alternatives to the single-occupant commute vehicle and the benefits of using the alternatives.

Program C.38.d Provide local incentives for participation in Transportation System Management (TSM) and Transportation Demand Management (TDM) programs and continue to implement same.

Program C.38.e Require Transportation System Management and Transportation Demand Management measures to help mitigate the traffic and parking impacts of development projects.

VI.6 PARKING

The availability of parking in Brisbane varies by the area and time of day. Drivers seeking to park in some areas of Central Brisbane may experience difficulties due to narrow roads where street parking is limited by the width of the street, relatively high density of development, and in certain cases a high level of automobile ownership, or lack of available on-site parking. On the other hand, some of the commercial areas may be considered to have an over-abundance of parking, especially during off-peak times. Accordingly, the policies in the section are aimed at achieving the appropriate balance of parking, given the uses and the locations.

Included in this section is the continuation of minimum parking standards for new development throughout Brisbane, but also the establishment of maximum parking standards. This is intended to minimize paving to address stormwater runoff concerns, heat island effects, glare, and aesthetic concerns.

Policy C.39 Maintain as much on-street parking in residential Brisbane as can be accommodated safely.

Program C.39.a Periodically review residential parking requirements in the Zoning Ordinance, to maintain parking availability in Brisbane's residential districts and to ensure consistency with the latest adopted Housing Element.

Program C.39.b Seek means to encourage residents to use their garages for vehicles rather than other purposes.

Policy C.40 Improve public parking opportunities in the Central Brisbane business district and other commercial areas, as appropriate.

Program C.40.a Consider opportunities to add public parking to underserved areas and investigate establishing a public parking lot or lots.

Program C.40.b Pursue, as feasible and needed, a downtown parking assessment district.

Policy C.41 Maintain an appropriate amount of off-street parking in commercial areas.

Program C.41.a Review the parking regulations for office, commercial and industrial uses and consider setting minimum and maximum parking standards where transit alternatives are readily available.

Policy C.42 Consider opportunities to add public parking to underserved areas and to provide parking/staging areas at public trailheads.

Policy C.43 Consider updates to the Brisbane Municipal Code to require parking lot solar canopies for energy generation and/or parking lot shade trees to reduce heat island effects on commercial development projects.

VI.7 CIRCULATION AND LAND USE

State law recognizes that circulation and land use are closely related and requires that these two components of a City's General Plan be correlated. Through coordinated transportation and land use planning, the City will provide mobility Brisbane residents and businesses, including roadway capacity enhancements to accommodate traffic generated by planned future development within the City. Because the correlation of land use and transportation planning required by State law also encompasses considerations of energy efficiency and the need to reduce emissions of greenhouse gas and air pollutant emissions, the City's Circulation Element policies are also intended to support efficient land use patterns that facilitate convenient access to regional transit facilities as well as bicycle and pedestrian connectivity through the City.

The land use and circulation policies in this General Plan also focus on ways to reduce the negative effects of automobile traffic at the local level on the City's residents and businesses. In essence, the policies are aimed at:

- Providing for a mix of jobs, housing and commercial services in the City to reduce the number of trips Brisbane residents are required to make outside the community to obtain essential services.

- Providing for opportunities for pedestrians and bicyclists to reach all areas of the City and thus reduce dependence on the automobile for local trips.

- Generating a mix of uses to support transit facilities.

- Accommodating uses with differing peak hour trips, to minimize impacts on existing and new streets and highways.

- Linking the development capacity of vacant lands to potential for provision of local transportation and circulation, the provision of transit facilities and participation in transportation systems management programs.

- Assuring adequate and safe access to properties.

The following policies address the relationship between land use and circulation:

Policy C.44 Consider potential effects on mobility and emergency evacuation in making land use decisions.

Policy C.45 For vacant subareas without existing infrastructure, require circulation plans and multi-modal transportation analyses to be submitted as a part of any development application.

Policy C.46 Consider transit use and facilities as well as Transportation Demand Management Programs in making land use decisions.

Policy C.47 Ensure legal access to properties in making land use decisions.

Program C.47a In reviewing building permit, subdivision and other development applications, distinguish whether the subject property has access from public streets, private streets, or easements. Obtain from applicants, evidence of a legal right of access to their properties. Require that such access meet applicable standards.

Policy C.48 In conjunction with new development and expansion of existing uses, require that new streets and any existing private streets serving the property be improved to City standards and offered for dedication as public streets.

Program C.48.a Continue to accept offers to dedicate existing private roadways as public streets, where they meet City standards.

Program C.48b Where appropriate, require exactions or impact fees for new development and improvements to property to improve substandard streets to minimum safety standards.

Program C.48.c Investigate requiring secondary access for long cul-de-sac streets.

Program C.48.d Investigate requiring mid-block turnarounds on all streets with cul-de-sacs longer than 500 feet.

Program C.48.e Investigate requiring that substandard intersections be improved, in conjunction with new development, to provide adequate turning radius.

Program C.48.f Consider an impact fee program to fund acquisition of additional rights-of-way, widening of existing streets to provide additional on-street parking and construction of other safety improvements.

Program C.48.g Continue to require parking and safety improvements in conjunction with new residential development and major additions or remodels that meet defined thresholds.

Program C.48.h Encourage the formation of assessment districts where appropriate, for needed circulation improvements.

Policy C.49 Monitor land use decisions under consideration by adjacent jurisdictions and their potential effect on Brisbane's streets. Comment through the public process and request mitigations as appropriate.

Policy C.50 Monitor regional developments and their effects on Highway 101, interchanges along the freeway, and Bayshore Boulevard to evaluate vehicular congestion from through traffic caused by developments approved by cities to the north and south of Brisbane. Comment through the public process and request appropriate improvements to be provided within Brisbane from those developments.

VI.8 GREEN STREETS

Green Streets refers to the inclusion of landscape elements into the street right-of-way to help reduce storm water runoff by both interception and infiltration of rainwater and biological treatment of storm water by those landscape elements. The intended results are to help ease the burden, or flow volume, on storm water systems and to provide for improved water quality for that water that does enter the storm water systems. The specific landscape elements may take a variety of forms including, but not limited to, bio-treatment planters, rain gardens, street trees and other plantings.

Since the intent is to address stormwater quality, Green Streets elements may also be used in demonstrating compliance with the State Water Board provisions for low impact development (LID) and "Green Infrastructure", subject to specific state provisions and design criteria where applicable. Low impact development is aimed at mimicking predevelopment hydrology by minimizing impervious cover, then bio-treating and infiltrating stormwater close to its source.

Green Streets are also a means to enhance the pedestrian experience of streetscapes and may be used in conjunction with "road diets", to reduce existing, excessively wide roadways to provide for traffic calming and overall safer roadways. Given that, depending on the context, Green Streets may be a component of Complete Streets, in that these landscape features enhance the pedestrian and bicycle experience and thereby encourage all modes of travel.

Finally, Green Streets provide other ecological benefits, such as reduced heat island effects, improved air quality and wildlife islands or corridors.

The following policies and programs address Green Streets and are intended to integrate Green Streets principles and designs into the roadway network when possible:

Policy C.51 Incorporate Green Streets best practices, as appropriate to the context, for new streets and street retrofits, to enhance the pedestrian and bicyclist experience, to promote low impact development (LID) consistent with state water board initiatives to reduce the impacts of development on storm water resources and to enhance the natural environment. (See also the Complete Streets section)

Program C.51.a Continue to evaluate and update the approved plant species list and standards for streetscape plantings.

Program C.51.b Consider where Green Streets retrofits may be incorporated into capital improvement projects and seek funding sources for Green Streets projects.

Policy C.52 For new multifamily, mixed use or commercial development projects subject to discretionary review, as part of the design review permit process, incorporate Green Streets, as determined reasonable and practicable by the City.

Policy C.53 In the design and approval of a specific Green Street, the following factors will be considered, as may be applicable:

- **Context and design intent for the area or site;**
- **Site and environmental constraints such as soil type, sun and wind exposure, presence of utilities, view sight lines and view corridors;**
- **On-going water needs and drought tolerance;**
- **Diversity of plantings to reduce the potential for mass die-offs due to pests or disease which may impact specific species;**
- **Adequate soil volume and location of the species within a storm water treatment unit, where applicable.**

VI.9 ALTERNATIVE TRANSPORTATION MODES

Alternative transportation modes in this section refer to alternatives to fossil-fuel vehicles which have not already been addressed in the Complete Streets section, under the traditional categories of public transit, biking and walking. Use of alternative transportation modes has a historical precedent in Brisbane with such things as rail-spur lines for goods movement and the more recent City-sponsored car sharing service. The programs in this section address continuation of the historic technology of rail lines for goods movement as well as incorporation of more recent and emerging technologies and sharing-based services into Brisbane's circulation network.

Policy 54 Maintain existing and incorporate new alternative transportation modes and infrastructure into the circulation network as reasonable and practicable.

Program 54.a Consider revisions to the Brisbane Municipal Code to require vehicle charging stations for development projects.

Program 54.b Encourage the use of electric, fuel cell and other clean energy vehicles and provide charging stations at public facilities and encourage installation of charging stations at existing private sites, as reasonable and feasible.

Program 54.c Seek grant funding opportunities and other funding sources to install publicly accessible vehicle charging stations and other infrastructure to support and enhance alternative means of transportation.

Program 54.d Encourage the maintenance of existing rail-spur lines to continue their use in transporting goods. (See also policies and programs under the Transit section for public transportation)

Program 54.e Monitor and consider new technological advances such as driverless shuttles and how sharing based transportation (car and bike sharing) can be accommodated in the City's circulation system.

VI.10 SAN FRANCISCO-SAN MATEO BI-COUNTY TRANSPORTATION STUDY

The Bi-County Transportation Study was undertaken by the San Francisco County Transportation Authority (SFCTA) and the City/County Association of Governments of San Mateo County, along with the City of Brisbane, City/County of San Francisco, Peninsula Corridor Joint Powers Board (Caltrain), and others to assess the transportation improvements needed to support development of approximately 15,000 new housing units and over 14 million square feet of new employment uses proposed within the southeastern corner of San Francisco and the northeastern corner of San Mateo County. The study includes a listing of transportation projects along the San Francisco/San Mateo county line and a funding strategy.

The final report for the Bi-County Study, which was prepared in 2013, recommended the following transportation improvements:

- US 101 Candlestick Interchange Re-Configuration
- Geneva Avenue Extension from Bayshore Boulevard to the US 101 freeway
- Harney-Geneva Bus Rapid Transit Line
- T-Third Light Rail Extension (Segment "S")
- Bayshore Station Re-Configuration
- Bicycle-Pedestrian Connections
- Area-Wide Traffic Calming Program

In 2019, the City of Brisbane began working with the other agencies involved in the Bi-County Transportation Study to update the land use and development assumptions used in the 2013 study and

review the report's recommendations to determine whether any revisions to the list of transportation improvements might be appropriate.

REFERENCES

1. See also, Brisbane *Traffic Management and Capacity Study Update*. Wilbur Smith Assoc., April 1993.

2. See Chapter X, Community Health and Safety, for more information on circulation-related safety and utility issues.

3. See Brisbane Baylands Draft Environmental Impact Report, Chapter 4.N, State Clearinghouse #2006022136, ESA, June 2013.