



BROAD STREET CORRIDOR STREETSCAPE DESIGN PLAN

Creating a Walkable Pedestrian Oriented Community

Abstract

The Broad Street Corridor Streetscape Enhancement Design Plan is a preliminary overview to guide the future development of the streetscape of the project area. The purpose of this project is to revitalize the visual quality of this area of San Luis Obispo into a pedestrian-oriented 'Walkable' community using Urban Design Standards to create a cohesive 'sense of place' and enrich the connectivity of the site to promote economic activity on the east side businesses.

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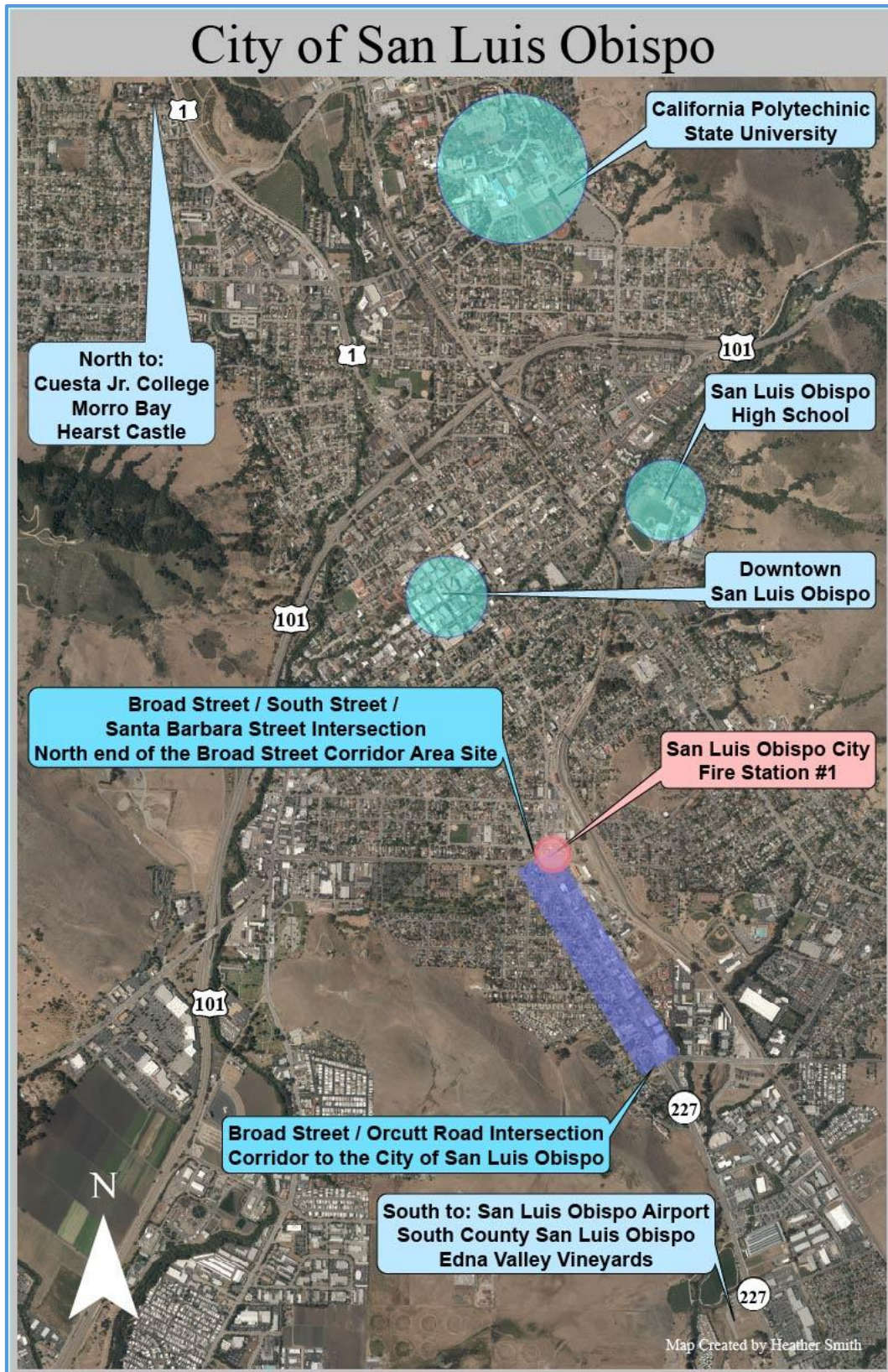


Figure 1. Aerial Photo of the City of San Luis Obispo showing Broad Street Corridor Area highlighted & in context

1. INTRODUCTION

The Broad Street Corridor (State Route 227) of San Luis Obispo is viewed as a significant city gateway. This is the south entrance of the city, which links San Luis Obispo to Arroyo Grande and other cities located in South County. It is utilized by visitors and residents arriving from the San Luis Obispo Airport and also by those traveling along SR 227 through Edna Valley's Wine Country. The SR 227 meets San Luis Obispo and turns into the Broad Street Corridor when it crosses Orcutt Road intersection (at the Crossroads shopping center). The one-mile stretch of Broad Street between Orcutt Road and the Santa Barbara Street / South Street intersection (location of San Luis Obispo Fire station #1), will be the focal area of this Senior Project (Figure 1).

Currently on the west side of Broad Street the area is characterized by all Residential neighborhoods (Zoned R-1 & R-2). The sidewalk, only 3-feet-wide is uneven and cracked throughout the area with overgrown vegetation and is seldom used for leisure activity. The street allows for on-street parking adjacent to the sidewalk and between the on-street parking and Broad Street traffic flow is a 6-foot-wide bike lane. Through observation I noticed that most cyclist use the sidewalk instead of the bike lane and on-street parking blocks the view of oncoming traffic.

On the east side of Broad Street the area is currently Zoned Service-Commercial (C-S) and Manufacturing (M) with integrated residential and adjacent to the Historic Railroad District. Some of the present buildings are antiquated and out of date. There has recently been an addition of new developments such as: the Fresh and Easy grocery center and South Broad Street Village neighborhood. The area is due for a makeover.

1.1 Proposed Project

The Broad Street Corridor Streetscape Enhancement Design Plan is a preliminary overview to guide the future development of the streetscape of the project area. The purpose of this project is to revitalize the visual quality of this area of San Luis Obispo into a pedestrian-oriented 'Walkable' community using *Urban Design Standards* to create a cohesive 'sense of place' and enrich the connectivity of the site to promote economic activity on the east side businesses.

1.2 Significance to Planning

Broad Street is a four-lane route entrance to the City of San Luis Obispo. The lanes are 11-feet-wide with a 12-foot-wide center turning lane, no median present and a 6-foot-wide bike lane on each side of traffic. The area is currently described as unattractive and vehicle dominated due to the overload of pavement and the lacking vegetation and pedestrian amenities. There is no pedestrian connection between the residential west side of Broad Street and the commercial-retail on the east side. The speed limit is posted at 40mph with speeds actually reaching as high as 55-60mph, I noticed through observation. There aren't any traffic calming measures currently present on the site, such as: stop-light, stop-sign, crosswalks or planted median to influence reducing the speed of traffic.

The design is consistent with the vision and goals set forth in the City's *General Plan* and will follow the City's *Community Design Guidelines* to enhance the area's appearance and

connectivity throughout the Broad Street Corridor, creating a ‘*sense of place*’ to encourage a ‘*walkable*’ area and increase pedestrian activity.

1.3 Methodology

Through the guidance of Professor Howard at California Polytechnic University at San Luis Obispo; the scope of the Preliminary Plan includes the collection of important and relevant information and documentation. A variety of resources, including: San Luis Obispo City Planning documents, computer software research, the gathering of background information through literature review and case studies as well as careful observation through fieldwork and visiting the site and recording the existing conditions. After identifying the desirable case study findings and brainstorming ideas paralleling the Community Outreach Workshop results I started drafting alternative design plans for further analysis to finalize the outcome and final preliminary design plan.

The Community Workshop findings were interactive meetings that fostered public participation, goaled towards gathering the desires and concerns of the local residents and business and property owners to help guide future development of the *Broad Street Corridor*.

The *Draft South Broad Street Area Plan* is included in my research pertaining to *The Broad Street Corridor Streetscape Enhancement Design Plan*. The new development is currently under construction and the two sites are directly adjacent and slightly overlapping. Since my plan focuses on the enhancing the physical beauty of the streetscape of Broad Street and to create a more *walkable* “pedestrian-oriented” corridor, the two plans directly relate and should be planned with consistent design guidelines and connectivity throughout the two sites.

1.4 Goal

The goal of creating this project is to develop a preliminary design plan for the landscape and streetscape of the Broad Street Corridor and draft this report to support the findings. Through using *Urban Design Standards* this plan aims to enhance the beauty of one of the main gateways to the City of San Luis Obispo and reestablish the Broad Street Corridor as a pedestrian oriented ‘*walkable*’ area by creating a cohesive and welcoming ‘*sense of place*.’

2.0 LITERATURE REVIEW & CASE STUDIES

I chose three case studies each with very different overall goals in relation to the multiple perspectives of improving the city's corridor aimed to create a more *walkable* pedestrian oriented streetscape providing for connectivity within the site and throughout the community as well as developing a more visually pleasing *sense of place*. Each case study focused on a different feature of *urban design qualities* on which this project is based.

Measuring Urban Design Qualities

Imageability – The Southeast Baltimore Complete Plan allows for the individual neighborhoods each to celebrate their diverse qualities while also being incorporated into a network as a whole. Landmarks were created to define each space and the similar design element throughout the overall area evokes a complete feeling of a *unified yet unique* community.

Linkage – The linkage between neighborhoods and parks and public spaces as well as between the buildings and the streets and sidewalks. Using different materials to texture the crosswalks add a 'clear-cut' separation of traffic enduring pedestrian safety.

Enclosure – The public gathering spaces and parks were revitalized and clearly defined separate from the street to establish a safe haven for children to play and neighbors to join together for entertainment and activities. Even some underutilized alley ways have been transformed into an outdoor public space.

Human Scale – The addition of street furniture, street trees, lighting and traffic calming measures have alleviated the influence of vehicle traffic and have created a safer and more attractive and comfortable environment to walk and enjoy the surroundings at leisure.

The North Nevada Avenue Corridor Improvement Plan case study focused on improving the streetscape of the City's corridor to safely accommodate for all mode of traffic, enhance to physical beauty and create a *sense of place* with the participation of the community residents, business and property owners.

The Third Street Promenade, Santa Monica, CA case study employed *Urban Design Standards* to create a successful *walkable* "pedestrian-oriented" public space. Four Key elements were identified: *Imageability, Enclosure, Human Scale* and *Complexity*.

The Southeast Baltimore, Maryland Complete Streets Plan case study looked at the entire community as a whole, while preserving the unique character of each individual neighborhood within the area. The goal of this plan was to create a visually stimulating community that provides safe, *walkable*, links between neighborhood streets and pocket parks for all modes of transportation throughout the entire community.

Key sources of information offered literature on streetscaping and street design and provided information about the *walkable* median and features such as street trees and benches which add to the appeal of an area to welcome pedestrians to want to use the space. The book also gave several examples of spaces made for pedestrians that were viewed as undesirable and went unused.



Figure 2. Stage One - narrow pedestrian walkways

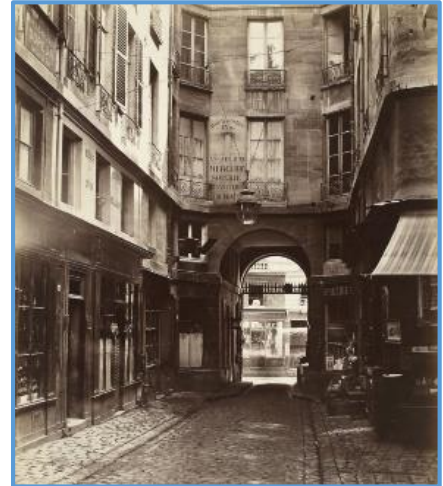


Figure 3. Stage Two - widened to accommodate horse wagons



Figure 4. Stage Three - raised curb and sidewalk



Figure 5. Stage Four - birth of the median



Figure 6. Stage Five - median mall

2.1 History of the Boulevard & Street Classification

The word French word *boulevard* originates from the 16th century English word *bulwark* which describes the raised and reinforced wall surrounding a city for protection. As the need for these defensive walls diminished in the 17th century they were knocked down and replaced with wide tree-lined *walkways* and came to be called *boulevards*. The first city to display this transformation was Paris in 1670 under the reign of Louis XIV and these *boulevards* became public gathering spaces of leisurely enjoyment or otherwise referred to as a *pedestrian promenade*.

In the 19th century, Louis Napoleon and Baron Haussmann remodeled the City of Paris to improve circulation and communication and enhance the public hygiene by alleviating human and animal waste through an underground sewage system built beneath the new boulevard street network. The boulevards cut through the impossibly congested maze of walkways throughout the disjointed and unorganized neighborhoods to allow added sanitation lines with constant access to neighboring communities (Figures 7 & 8).

There are five sequential historical stages towards the creation of a boulevard. The first stage was characterized by the narrow pedestrian walkways during the earlier periods of walled cities (Figure 2). The second stage, the same narrow streets were accommodating for horses and wagons fighting pedestrians for the same space. With added congestion a decrease in safety and hygiene standards was experienced by the population (Figure 3). The third stage was during the mid-18th century where a raised curb and sidewalk were invented creating a space for pedestrians separate from other modes of transportation, and the filth was eliminated by constructing a sewage system under the new roads to eliminate the exposure of human and animal waste (Figure 4). The fourth stage was the birth of the median. The center roadway employed a raised center median to divide opposite flowing traffic for safety (Figure 5). The fifth and final stage introduced the wide public mall centrally located on the median between the opposite flowing traffic and the purpose of this was to incorporate all mode of traffic into one site creating a more visually stimulating environment as well as enhance the lifestyles of the people in the community by providing them a public gathering space to enjoy leisurely activities (Figure 6).

Boulevards paved the way to *modernization* and created the opportunity for *expansion* with the goal of enhancing the physical beauty of the City as well as provide an essential infrastructure for goods to move into, out of and throughout the City. The connectivity between the neighborhoods

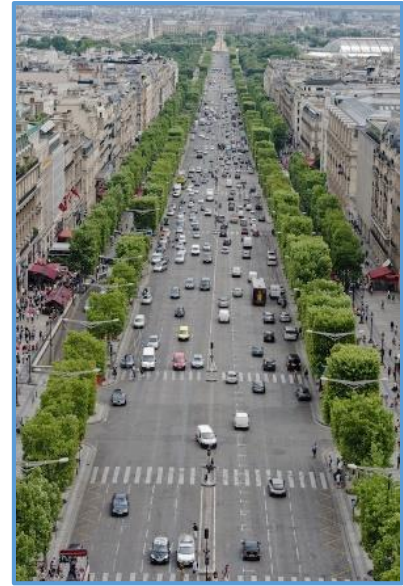


Figure 7. Paris



Figure 8. Paris

also gave structure to the community and supplied for the evolution of new development sites to progress.

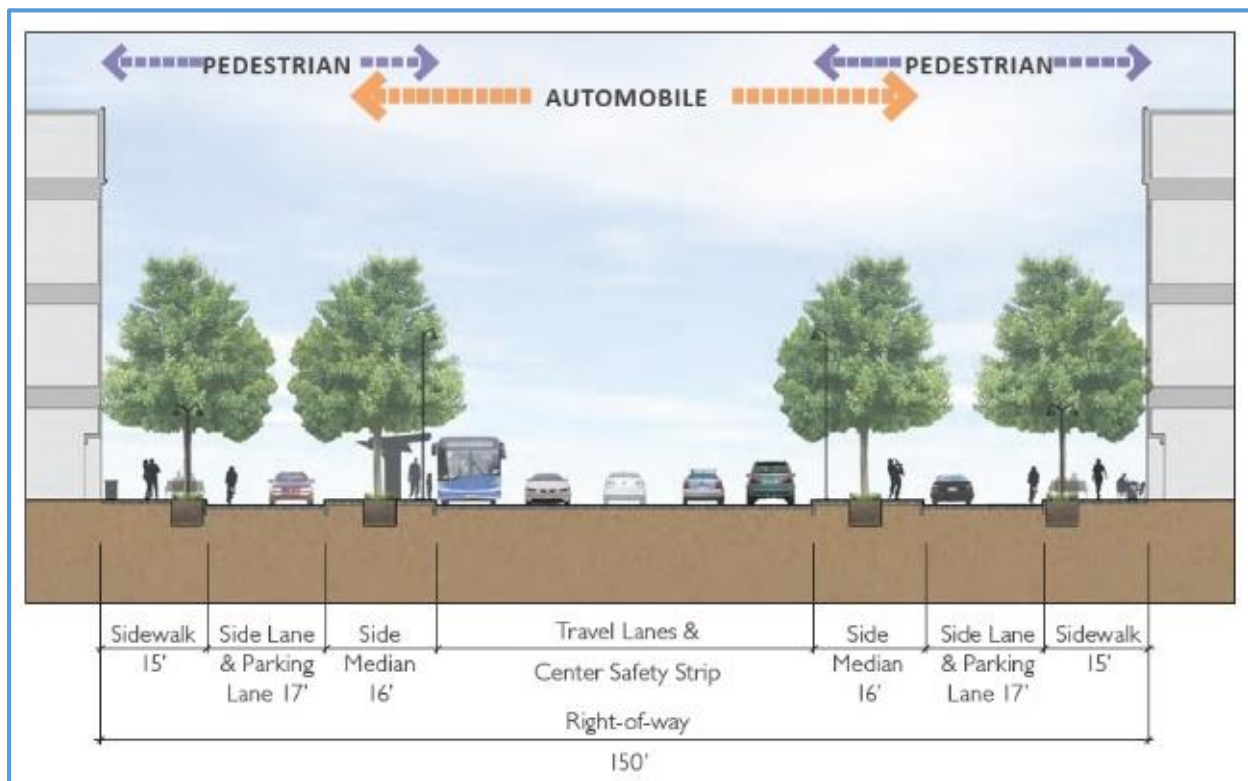


Figure 9. Section Cut - Multiway Boulevard

There are three general *boulevard* types: (1) *Center Median Boulevard* - a generously wide central median, with trails and vegetation to encourage pedestrian activity and lined with trees acting as a protective barrier from the fast moving traffic on both sides of the *promenade*. (2) *Boulevard street* - is a wide center roadway for vehicles traveling both and lined with street-trees on both side separating the center roadway from the wide pedestrian walkways. (3) *Multiway boulevard* - designed to separate high speed, through traffic from lower speed, local traffic and separate the mode of transportation as well. This street is characterized by a wide center roadway with a tree-lined sidewalk on each side acting as a median separating the large center roadway from a smaller one-way street running parallel along center roadway (Figure 9). (A book called *Les Promenades de Paris*, written by Haussmann's landscape architect Adolphe Alphand and published in 1867 - 1873. (reprinted ed., Princeton, N.J.: Princeton Architectural Press, 1984).

Brooklyn was the first U.S. city to employ the *multiway boulevard*, influenced by European boulevards but incorporating the green suburban form desired by Americans. Frederick Law Olmsted and Calvert Vaux were professionals responsible for the development of Eastern Parkway and Ocean Parkway (Figure 10). In 1860 the Brooklyn, NY community wanted a park similar to Central Park located in the heart of Manhattan, NYC and the vision of these boulevards

was to act as a grand gateway to each entrance of Prospect Park as well as connect Prospect Park with Central Park and other parks and neighborhoods yet to be built throughout the region.



Figure 10. Ocean Parkway, Brooklyn NY



Figure 11. Grand Concourse, Bronx NY

Boulevards were receiving less support by planners and developers by the 20th century. American engineers started planning a highway network separate completely from any pedestrian activity aimed primarily for the automobile and designed to handle much higher volumes and speed of traffic. Pedestrian safety was entirely overlooked providing access only for vehicular traffic to move through an area with no need to stop. By 1910, parkways were redefined as a limited access thoroughfare for fast-moving traffic and were serving as a connection from the city to the suburbs as well as open up access to the countryside and rural areas for scenic pleasures and enjoyment.

Street Classification

The automobile guided the growth of cities in the U.S. and the link between them. In the 1930's, following World War II, the automobile changed the game of transportation in the U.S. influencing the shape of development and inspiring the desire to live in the country and work in the city. American engineers were planning street systems on a large scale. Multiway boulevards were reconfigured and central roadways were widened into urban highways or arterial streets. As the need to resolve the conflict between fast moving traffic with accessing local connecting street "the *functional classification* of streets" was emerged. (Institute of Traffic Engineers)

Freeway – High speeds with major traffic flow with fully controlled access with divided roadway and no at-grade intersections.

Expressway – May have at-grade intersections at major intersections but generally very similar to a freeway.

Arterial – Allows at-grade intersection and access to abutting properties but typically no closer than one-half to one-mile intervals.

Collector Street – *Serving local traffic as well as adjacent properties, it acts as a linkage between local and arterial streets.*

Local Street – *Primary purpose is access to adjacent land uses, short local trips.*

A streets safety can generally be estimated by a calculation to determine the probability of an accidents occurrence in comparison with the number of automobiles using the street. This result is based on the number of vehicles present on the street daily (average daily volume of traffic, ADT), or depending what aspect of safety you are studying, the number of pedestrians, then find the yearly accident count and calculate the mean accident rate, which is the average yearly number of accidents. Take the ADT and divided it by 1000 and then divide the average yearly number of accident by the ADT/1000. [Average yearly accident rate/ (ADT/1000)]. [Jacob's, MacDonald & Rofo, pp.99]. With this equation being applied to *multiway boulevards* in comparison to other classification of streets *multiway boulevards* have not been proven any less safe than other types of streets with fewer turning options at every intersection. It has been observed that when the intersection is described as being more complicated because it has more turning possibilities, drivers tend to exercise more caution and drive safer being more aware of the other vehicles on the road. [p.97-103]

The design of the physical form has a determinable influence on human behavior and creating a *pedestrian realm*. A perfect example of this is the comparison between: the Grand Concourse in the Bronx and Ocean Parkway in Brooklyn, two boulevards located in New York City. Studying the differences in the widths of the access roadways and medians and how the access road is regulated can have a strong impact on the character and use of the boulevard. The Grand Concourse has wider access roads with further apart intersections and with only one lane for parking, allowing two moving lanes of traffic (Figure 11). Whereas, Ocean Parkway has narrower access lanes with shorter intervals between intersections and only one moving lane of traffic with parking on both sides. This influences drivers to move at a slower speed and to operate with more vigilance. Another characteristic of Ocean Parkway is the wider regularly planted median which includes pedestrian amenities such as: a bike path and benches. Another difference is Ocean Parkway uses stop signs at the intersections versus the Grand Concourse which uses stop lights allowing for swifter flowing traffic through the intersections. Where this can be viewed as a positive aspect for traffic flow it decreases safety and access for pedestrians and diminishes the pleasurable *walkable* quality of the area and reduces the desire for pedestrians to utilize the medians as an enjoyable public gathering promenade. (Jacob's, MacDonald & Rofo, Physical Form and Human Behavior [p.104] & Pedestrian Realm [p.108])

2.2 Corridor Streetscape Improvement - North Nevada Avenue Corridor Improvement Plan {March 2009}, Colorado Springs, CO

The reason I chose North Nevada Avenue, Colorado Springs, CO as a case study is because it focuses on the streetscape improvement of the City's corridor. Serving as a main gateway into the City of Colorado Springs, the streetscape of North Nevada Avenue is lacking in beauty, character and safety. The street is dominated by high speed vehicular traffic without providing any traffic calming measures such as: stop lights, stop signs, crosswalks, a median, sidewalks or bike paths. The area is visually vanquished by pavement and dirt shoulders providing no curbs or signage to guide traffic to use point of access driveways to parking lots of the adjacent businesses. The businesses currently located on the corridor also lack design continuity and visual appeal (Figure 12). Similar to my site this City corridor was needing attention towards safety and aesthetic revitalization and was a very suitable candidate for a remodel utilizing visual pleasing *Urban Design Standards* focusing on creating a uniform and 'walkable' corridor to the community.

North Nevada Avenue (the portion from Lilac Street to I-25) is considered an important city "gateway" into Colorado Springs, CO. Classified as a Principal and Minor Arterial, it is the highway to Denver, CO as well as the main route into downtown Colorado Springs. This street is heavily utilized by all modes of traffic including auto, bus, truck, bike and pedestrian; however is primarily dominated by vehicular traffic and is lacking in any pedestrian features such as: pedestrian furniture and bike and transit amenities and facilities.

The Corridor Improvement Plan focused on *Access Management* and *Design Standards* of the area and set out to accomplish several primary goals: 1) Safety – define each mode of transportation and organize each mode into a separate designated place of their own. 2) Develop "urban design standards" to give order and guide future development. 3) Gateway – revitalize the landscape to create a sense of place at the entrance of the city (Figure 13). 4) Enhance the visual quality of the area and improve circulation and operation. 5) Improve the economic vitality of the existing businesses.

The reconstruction of the corridor became a concern of the City of Colorado Springs after 729 accidents were report between 1998 and 2008, including 2 deaths. This highway is visually undefined with very little access control to the adjacent business parking lots or separation between motorist and pedestrians, providing no raised medians, curbs or sidewalks. The City's comprehensive plans major goal is to provide a transportation network that promotes the safe and efficient movement of people, goods and services throughout the City.

The City of Colorado Springs held many City-sponsored workshops and meetings involving over 300 property/business owners fronting Nevada Avenue Corridor to encourage public involvement and hear their ideas and concerns. The participants received the draft corridor improvement plan illustrating the proposed number of lanes, bike lanes, sidewalks, raised median, traffic signal locations and the location of points of access to owners' parking lots for commentary of their concerns and improvement recommendations. Revisions were made based on the feedback received and follow-up meetings were held to discuss the changes. Through the

development of the plan and after much public input, many meetings and even several individuals meetings and correspondences through mail, telephone and email the process



Figure 12. North Nevada Avenue (before)



Figure 13. Public Art added to North Nevada Avenue



Figure 14. North Nevada Avenue Corridor, Colorado Springs, CO (after)

deemed successful and was a key element in the creation of the *North Nevada Avenue Corridor Improvement Plan*.

The final adoption of the plan provides for additional opportunity for public scrutiny, requiring a presentation to the Citizens' Transportation Advisory Board (CTAB) and City Planning Commission with recommendations of approval to City Council. And once the plan receives final approval from the City Council the City can then move forward with the design and construction of the project.

The *Urban Design Standards* set out to regulate uniformity of the streetscape and create a harmonious character providing rhythm and continuity throughout the corridor at *Human Scale*. The landscaping and street trees act as a noise buffer and simultaneously define space between pedestrian and motorist by creating a visual separation. The sidewalks and bike lanes will connect to all existing and future trails and bike lanes of Colorado Springs serving as a linkage throughout the community to accommodate recreational bicycle users and pedestrian travel. The urban elements include a standard color, consistent overhead street lighting, edge trees, benches, sign poles, traffic sign poles and trash receptacles. The median design considers long-term maintenance which includes native grasses and wild flowers to add color, the median also accommodates designated left-turn lanes to maintain a steady traffic flow. Installation of local artwork and pedestrian furniture at the north and south end of the corridor welcoming visitors to the area is encouraged and recommended. With regard to parking and property point of access, the main goal is to improve safety and traffic operations while also accommodating access to adjacent businesses protecting the economic vitality of the area (Figure 14).

Lessons Learned

Careful research of traffic studies and accident history, as well as community involvement is essential in developing a successful corridor improvement plan that pleases the majority of the residents and property/business owners of the community. *Urban Design Standards* establish an overall character to an area by creating a *sense of* place with a cohesive look as well as guide future development to have a unified integrated feel. Also when an area possesses a visual stimulating attractiveness and provides a safe atmosphere with human scale lighting, sidewalks and pedestrian amenities this draws interest to an area and is inviting to residents and visitors to enjoy walkable activities in this area and enriches the economic vitality. And, linkages throughout the community with existing and future trails and bike paths provide connectivity to the area and encourages pedestrians to travel towards the corridor businesses creating a more '*walkable*' community.



Figure 15. Third Street Promenade Perspective Bird's Eye View

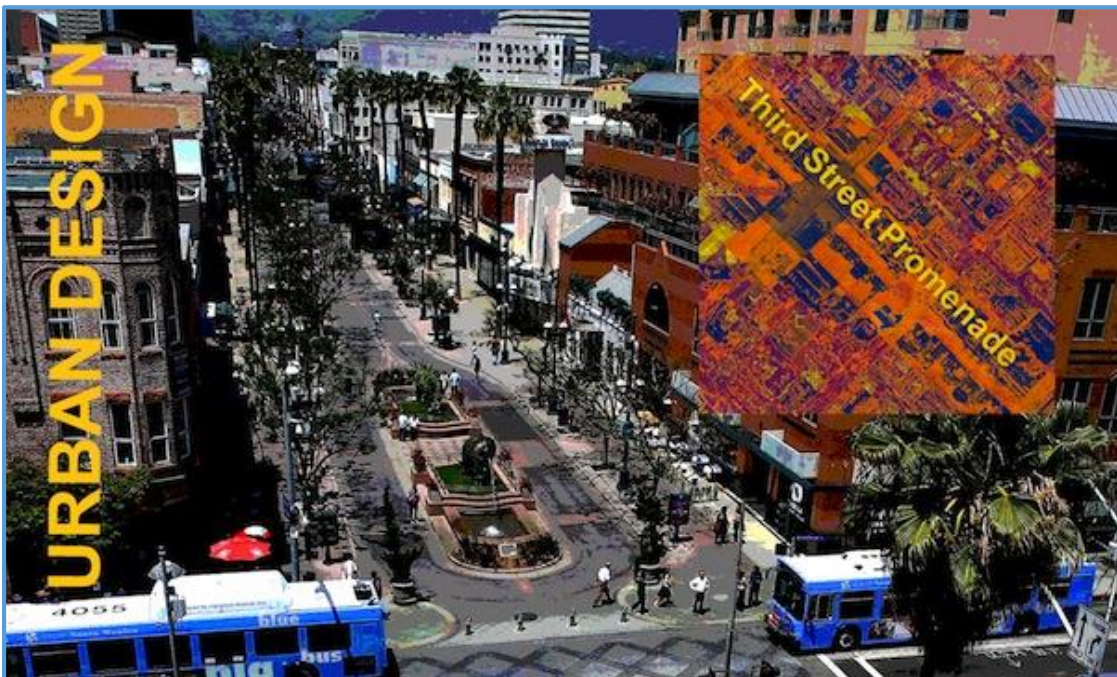


Figure 16. Urban Design

2.3 “Walkability” Pedestrian Oriented - *Third Street Promenade, Downtown Santa Monica, CA*

The reason I chose the Third Street Promenade, Downtown Santa Monica, CA as a case study is because I wanted to study a successful public gathering space and analyze the features that draw people to use and enjoy the area. The Third Street Promenade is the center of business, located right in the heart of downtown Santa Monica, CA, which is a beautiful beachfront city just West of LA. The City has a long-standing goal to promote residential and mixed-use developments throughout the commercial zones as well as cater to the tourist economy, accommodating for travelers to take pleasure in the copious amounts of recreation and entertainment. The promenade is a 3-story, outdoor, enclosed shopping center, 3-blocks long (Wilshire Blvd to Broadway); it safely provides shelter from vehicular traffic, giving pedestrians a place to escape from the fast-paced streets and feel comfortable to shop or enjoy a casual stroll.

I personally have visited the City of Santa Monica and enjoyed leisurely walking along the Third Street Promenade and observing the lively activity and casual enjoyment of the ample outside dining and many spaces provided for seating to enjoy the local art and surroundings. Street performers also frequent the site adding to the vast degree of amusement that gives character and charm to the area.

The relationship between the built environment and the walking behavior of a pedestrian has been carefully observed and studied through measuring several key elements. These elements have been identified and used to measure the general way in which people perceive and interact with their surroundings. Professional urban designers have developed a qualitative way of measuring urban design qualities related to ‘walkability’ by introducing key design elements. I will focus on the following 4 elements: 1) *Imageability* – the quality of a place that makes it distinct, recognizable and memorable. A place could be considered to have a high Imageability when it evokes emotion and leaves a last impression (Figure 17). 2) *Human Scale* – the strategy of physical elements to match the size and proportions of humans also in correspondence of equal speeds. Street furniture gives the appeal of human interest in leisure time and an area dominated by pedestrian traffic encourages a slower pace (Figure 18). 3) *Enclosure* – defining a space by edges creating a room-like feel. This could be a space walled off by trees or pedestrian amenities (Figure 15 & 19). 4) *Complexity* – the visual richness of a place and variety of physical environment, diversity, ornamentation, signage, landscape elements and human activity (Figure 16 & 20). A Farmer’s Market would satisfy complexity and also serve as a walkable environment.

Imageability – The Third Street Promenade is characterized primarily by pedestrian traffic. The area is safe to walk and enjoyable at a leisure pace. The area is diverse in activity and clearly defined as a separate pedestrian-oriented public space for residents and visitors to appreciate.

Human Scale – The street furniture and public art are compatible with the size of a human. And being a pedestrian dominated promenade the flow of traffic moves at a very slow, relaxed pace.

Enclosure –The wide walkable promenade is sheltered by trees and tall building edges from vehicles and the rest of the faster-paced downtown. The entire area gives the impression of being one, large, safe, pedestrian-oriented enclosure.

Complexity – The public art, street furniture and landscaping provide for much to look at as well as promote a dynamic and functional gathering space for pedestrians.

Lessons Learned

Providing a defined promenade oriented only towards pedestrian activity creates a sense of place to the overall character of the City and will leave a lasting impression with visitors to the area. The buildings lining each side of the promenade evokes the feeling of an enclosure providing separation from vehicular traffic giving people a sense of security and safety. Human scale furniture gives pedestrians an inviting place to sit and relax and enjoy the visual surroundings, such as the public art, window shop or people watch or take pleasure in any of the surrounding versatile entertainment. An area designed for the ‘walkability’ of a pedestrian encourages people to use this public space for enjoyable activities and revisit the area to stimulate the local economy.



Figure 17. Imageability



Figure 18. Human Scale Street Furniture & Public Art



Figure 19. Enclosure



Figure 20. Complexity

2.4 Southeast Baltimore Complete Streets Plan - Southeast Baltimore, Maryland

I chose to focus one of my case studies on a ‘*Complete Streets*’ plan as a “collective goal” of integrating a revitalized pedestrian-oriented streetscape, while focusing on providing for the safety of all modes of traffic with trail and bike path connectivity throughout the area, making neighborhood streets enjoyable ‘places’ rather than just a route from one location to another. I wanted to look at the overall cohesive network, which incorporates the needs of all modes of transportation including pedestrian, cyclists, vehicular, bus, etc. while integrating a *Human Scale* building design and wide sidewalks with vegetation and pedestrian amenities, to invite pedestrian activity while also focusing on the interconnectivity throughout the diverse neighborhoods Figures 21 – 26).

Southeast Baltimore is characterized by a network of unique neighborhoods each with their own special ambiance. A great concern of the community was how to develop an urban design plan to address the desire to create an overall connected character for the City while simultaneously protecting the diverse feel of each distinct neighborhood.

The Complete streets Plan is a way for Southeast Baltimore to resolve a number of key issues and adopt strategies to implement these design concepts as a whole. Through several public meetings and workshops the concerns of the community and possible solutions were discussed and a comprehensive street plan was developed.

The primary issues were, and similar to the issues concerning the *Broad Street Corridor Streetscape Enhancement Plan*:

Multi-modalism – the balance between maintaining traffic flow while providing a safe inviting environment for pedestrian and cyclist transit

Beautification – adding trees and vegetation to enhance the visual aesthetics of an area to encourage new investors and increase the property value

Traffic Calming – slow traffic speeds

Shared Outdoor Space – utilize opportunities for pocket park on neighborhood streets

Urban Greenway/Wayfinding - linkage and connectivity throughout the area

Parking – better manage parking supply

The *Street Network* of Southeast Baltimore is arranged in a basic ‘orthogonal’ grid pattern, originally built wide to accommodate horse-drawn carriage. The liberal width of the street allow for excessive speeds of traffic and discourages pedestrians and cyclists to share the streets. However, this was seen as an opportunity to enhance the pedestrian orientation of the area by using the extra room to widen the sidewalks and create a more ‘walkable’ environment.

Automobile Traffic Accident data was collected between 2004 and 2008 to display several ‘hot spots’ throughout southeast Baltimore drawing attention to the possible need to install additional traffic calming measures to improve the overall safety of the travelers of the community.

Bicycle and Pedestrian Accidents were recorded between 2007 and 2010 displaying higher amounts of accidents on the arterial streets and major streets with faster speeds of traffic



Figure 21. Public Space - Human Scale



Figure 22. One-Way Street with On-Street Parking



Figure 23. Outdoor Dining



Figure 24. Outdoor Dining



Figure 25. Public Gathering Space John Street Park

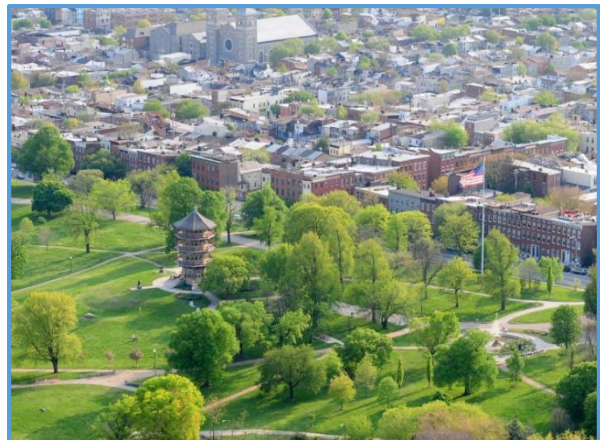


Figure 26. Public Gathering Space Patterson Park

surrounding the perimeter of Southeast Baltimore, comparatively to the slower traffic streets transecting throughout the local neighborhoods indicating a need to improve the safety on the busy corridors streets.

The layout of Southeast Baltimore consists of a variety of recreational parks accessibly placed throughout the area no further than one-mile's walk from any local neighborhood. This draws attention for the necessity to assemble an effective linkage system between neighborhood and recreational areas for pedestrian and cyclists to enjoy. When designing *Pedestrian Crossings* there are a set of principles that should be included into the design (adapted from the Los Angeles County Model design Manual for Living Streets), for example "the safety of all street users, such as children, the elderly, and those with disabilities, and more vulnerable modes, such as walking and bicycling, must be considered... every crossing is different and should be selected and designed to fit its unique environment." (*Southeast Baltimore Complete Streets Plan p.23*)

Traffic Calming Measures are simple devices that are integrated throughout an area to slow traffic speeds. Using these techniques such as narrowing a roadway or adding canopied street trees or an accentuated crosswalk with signage and textured paving can alter the character of a place and discourage dangerous traffic speeds. The *corner radii* can also effect the safety of a corner; if a corner has a tighter radii then traffic has to reduce their speed more to make a sharper turn as well as it decreases the amount of street the pedestrian is required to cross to get to the other corner.

Shared Spaces have been traditionally viewed as being unsafe when utilized by the dominating vehicle and communal with pedestrians and cyclists. In Europe, on streets where they give all pedestrian activity the 'right-of-way' and then blur the lines between the modes of travel and the neighborhood is characterized with a more lively atmosphere and improved safety. These streets, referred to as *Woonerfs*, are usually designed with textured pavement, lots of street tree and vegetation and a lack of curbs and sidewalks.

Green Streets are a wonderful way to enhance the visual quality of an area as well as create a more inviting atmosphere for pedestrians but they are clever way to reduce extensive hot weather during the summer

Lessons Learned

The Southeast Complete Streets Plan can help guide a lot of the same concepts in developing the *Draft Broad Street Corridor Enhanced Streetscape Preliminary Design Plan*. When looking to alter the streetscape of an area it is important to consider the area in relation to the rest of the community to assure the modifications will enhance the value of the area pragmatically to the entire community as a whole. Keeping the *uniqueness* of each neighborhood while collectively creating an overall 'sense of place' was a key concern of the community. Holding Public Workshops to include the input of the local residents and business/property owners is an essential step in collecting key data towards forming a comprehensive plan to benefit the future development of the community. Traffic studies of the *Accident History* of a site draw notice to the particular intersections that are more dangerous and 'need' more attention; and, *Traffic*

Calming Measures are a great way to decrease the speed of traffic and enhance the safety standards. Creating a network of connecting trails and bike lanes throughout the community encourage pedestrians and cyclists to enjoy this mode of transportation and increases the use of these areas.

3. BACKGROUND INFORMATION

Before the initial Site Analysis was prepared, it was essential to research background information relating to the Broad Street Corridor Area. In 2004 there were a series of Community Workshops involving city government employees and local community residents and property/ business owners regarding any concerns, issues or ideas they had in a collaborative effort to guide future development to this area. There is also a project that been approved and is currently in construction on this site: The South Broad Street Village Area Plan. It was vital to get familiarized with both of these documents in preparing a future design plan for the streetscape of the Broad Street Corridor.

3.1 Community Workshop Findings {2004}

Hosted by the City of San Luis Obispo and California Department of Transportation District 5 (Caltrans), there were two interactive public community workshops held in 2004 aimed to gather local community residents and business owners to discuss their problems and concerns, or any ideas or suggestions they may have to help guide the direction of any future development to the Broad Street Corridor. The goal was to gain commentary of a preferred vision for the area summarizing the types of enhancements deemed the highest priority.



Figure 27. Community Workshop

There was a turnout of over 80 participants at both meetings (Figure 27). The first meeting focused primarily on identifying the constraints and opportunities and prioritizing these main areas of interest by using maps to illustrate context-sensitive areas and develop concepts to mitigate these concerns. The follow-up meeting further analyzed their concerns and established their top community values and were rated on a list from highest to lowest priority.

- 1) Improve circulation by adding traffic calming measures and left-hand turning opportunities
- 2) Decrease the speed of traffic and noise pollution
- 3) Increase access and safety for pedestrians and cyclist activity, linkage to existing trails and bike paths
- 4) Create a 'sense of place' by preserving historical resources, expanding pedestrian amenities, adding trees and landscaping and elevating the overall visual quality of the area
- 5) Protect and enhance the existing Residential character
- 6) Encourage private in-fill Mixed-Use developments
- 7) Improve transit services and facilities
- 8) Protect viewsheds and environmental quality

Several of these map illustrations indicated a desire to add traffic signal or crosswalks along Broad Street as well as the need for adding a pedestrian bridge/bike path over the railroad to improve pedestrian/cyclist connectivity throughout the community. The elimination of on-street parking

BROAD STREET CORRIDOR STREETSCAPE DESIGN PLAN

to widen the sidewalk on the west side of Broad was shown. One map proposed a change in the current Zoning on the east side of Broad Street to accommodate Mixed-Use, Commercial-Retail, Office Space and even outdoor restaurant dining. Also, a desire to improve the visual quality of the area by adding street trees and a planted median was drawn (Figure 28 & 29).



Figure 28. Community Workshop Group Activity

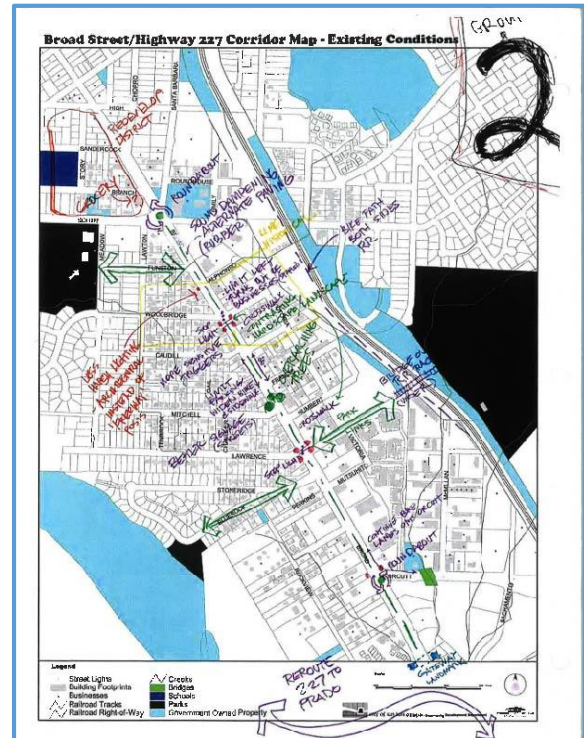


Figure 29. Community Workshop Group Activity

3.2 Draft South Broad Street Area Plan {September 2013}

The South Broad Street neighborhood is adjacent to and slightly overlapping this project's Broad Street Corridor site. This area is currently "a neighborhood in transition" with "funky" non-conforming uses and a diverse variety of industrial, commercial and residential buildings being transformed into a *Mixed-Use* community integrated with a few *Single-Family*-"Historical"-*Residential* homes preserved and refurbished (Figure 35), medium-high density *Residential (R-3)* (Figure 34), *Service-Commercial (CS)* (Figure 31 & 33) and preserve the character of the historically significant *Light-Manufacturing (M)* (Figure 30 & 32), abutting the railroad and throughout the City's oldest residential neighborhood dating back to the 1880's, historically referred to as "Little Italy." (Draft South Broad Street Area Plan p.7)



Figure 30. Manufacturing Use

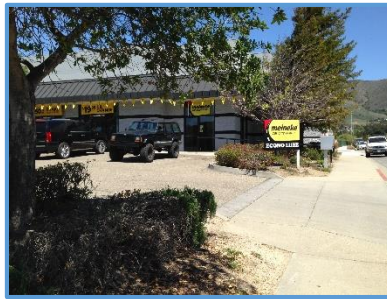


Figure 31. Auto Repair Shop



Figure 32. Beef Jerky Factory



Figure 33. San Luis Obispo Co-Op



Figure 34. High-Density Residential



Figure 35. Single Family Residential

The purpose of the South Broad Street Area Plan is to revitalize the area creating a safer neighborhood with a compatible variety of mixed-uses and affordable housing to encourage pedestrian activity, improve the areas circulation and transportation and enhance the visual aesthetics of the City's "gateway." Guided by the General Plan goals, policies and standards the Area Plan will aim to implement: a new land use vision applying form-based codes (FBC's) and higher-density housing and mixed-use infill development to satisfy the area. FBC's regulate new construction of a site to follow an allowable unified physical form guiding new land uses and development in relation to the streetscape design and surrounding communities.

The area is currently under construction enriching the pedestrian orientation by adding a continuous sidewalk with crosswalks, benches, *human scale* lighting and street trees (Figures 36 – 38). The revitalization of the area aims to protect the once historical industrial character

integrated with railroad worker homes on traditionally small parcels, originally developed as a residential subdivision geared towards *manufacturing* and *services* around the boom of the railroad era.

Broad Street is a regional arterial street designed for high volumes of traffic entering the City of San Luis Obispo and heading into the *Historical Downtown District*. This site is presently home to roughly 5,500 residents of the City as well as provides for local businesses and services, shopping and community facilities. There is a sidewalk and bike lane on both sides of the street with transit stops. The center lane has no median allowing for unguided left hand turns into the access driveways of the local businesses or the residential streets. The connectivity of the area is a missed opportunity, lacking crosswalks across Broad Street to link the residential neighborhood to the businesses and experiencing limited accessibility due to the placement of the railroad tracks. Currently running along the east side of the tracks *The Railroad Safety Trail* links the *Historic Downtown* with the *Railroad Historic District* and will eventually link up with Cal Poly.



Figure 36. Street Tree



Figure 37. New Construction – High-Density Residential



Figure 38. Street Lighting

During the Community Outreach Workshops it was unanimously supported to improve the connectivity throughout the area and the linkage with the City's current trails. Local residents and business/property owners agreed and stated their decision as a necessity to the advancement of the plan, was the placement of crosswalks all throughout the site and across Broad Street as well as the extension of Victoria Avenue, which will serve as a local, low speed parallel route to Broad Street. The Area Plan is also proposing a pedestrian bridge to extend over the railroad tracks to replace the existing substandard undercrossing.

The South Broad Street Area Plan touches on five key elements: (1) Street Types, (2) Zoning, (3) Development Standards, (4) Design Guidelines and (5) Streetscape Standards. The *Street Type* is defined by the different traffic modes and patterns, as well as land uses and building form. Broad Street, classified as “one of the City's most heavily traveled thoroughfares... 100 feet wide... supports regional commercial and office land uses and serves as a neighborhood connector.” (Draft South Broad Street Area Plan p.18)

The *Street Types* are the foremost determining factor on building forms and placement and are generally classified based on a on the different modes of traffic and traffic patterns, as well as land uses. There are five types of streets identified and discussed: *corridor streets*, *entry streets*, *village streets*, *service streets* and *private streets*.

Corridor streets are the most heavily traveled thoroughfares and usually an entrance to the city of some sort. The site only has one; 100 feet wide with 4 lanes of vehicular traffic, a large center median with unguided left hand turns a bike lane and narrow sidewalk on each side with on-street parking on the west side adjacent to the *low density Residential* housing. This corridor supports access to local businesses and neighborhoods.

Entry streets are 60 feet wide with 2 lanes of vehicular travel with sidewalks and on-street parking on both sides of the street. Generally the buildings display reduced setbacks and lower heights with mostly commercial uses along the ground floor with residential above.

Village streets are roughly the same width as *entry streets*, also with 2 lanes of vehicular traffic and on-street parking on both sides of the street, but rather emphasize the “pedestrian orientation” of the area with increased building setbacks, wider sidewalks with mid-block crosswalks and *human scale* building design and lighting. The environment is also characterized with a more welcoming appeal such as outdoor dining and visually attractive landscaping.

Service streets are designed to provide for basic pedestrian uses as well as accommodate commercial activities and long-standing light-industrial and office uses too. The streets are 60 feet wide with 2 lanes of vehicular traffic and sidewalks, bike paths and on-street parking on each side of the street. Potentially a street where resident live and work.

Village Court (Woonerf) is a small residential street with lower speeds and with textured paving and no curb grade difference separating the different modes of transport promoting a multiuser friendly environment. Typically this is where pedestrians and cyclists have the same priority with vehicles as pertaining to sharing the road and creates a safe haven for block parties and children to play.

Zoning for the South Broad Street Village Area was discussed above at the beginning of this Section 3.2.

Development standards ensure any future growth is consistent with the character and form identified by the communities General Plan along with the application of form-base codes (FBC’s) to guide an amicable temperament to the surrounding environment creating a harmonious public realm. The *development standards* will also control *density*, *nonconforming lots*, *building types* by *street type* and *parking requirements*.

Design guidelines relate to public improvement ensuring the plan meets the goals of the General Plan and desires of the community to create a visually pleasing, high quality, sustainable and historically compatible development. This includes *general standards* and specific guidelines.

Streetscape standards direct visual elements to form a streets character, which includes: *street design standards, traffic management, street trees and landscaping features, outdoor lighting and street furniture*. The “Street Design Standards” include: *street configuration, street design, appropriate street widths, bulb-outs, medians and bicycle infrastructure*. “Traffic Management” includes: *signals, turn lanes and traffic calming measures*. “Street Trees and Landscaping Features” guide: *trees species, tree gates, tree guards, landscape plant materials and stormwater control*. “Outdoor Lighting” controls: *street lights, entries, village streets, village courts, corridor streets, service streets, pedestrian and bike path lighting*. “Street Furniture” includes: *newspaper racks, bike racks, trash receptacles, planters, benches, drinking fountains, etc.*

3.3 Existing Conditions

The Broad Street Corridor is a main gateway to the City of San Luis Obispo’s Historic Downtown from San Luis Obispo Airport and serves as a central connector to the Beach Cities located in South County and Edna Valley’s Wine Country. The site is slightly less than a one-mile stretch of Broad Street beginning at the South St/Santa Barbara St Intersection (the location of the *Public Facility*, City of San Luis Obispo’s Fire Station #1) and ends at Orcutt Rd Intersection (the location of Crossroads shopping center and Chevron).

3.3.1 Zoning

On the west side of Broad Street are all *Residential* neighborhoods (*R-1*) *Low-Density Residential* & (*R-2*) *Low-Medium Density Residential* lining Broad Street adjacent to the narrow sidewalk and on-street parking and a small section dedicated to (*O*) *Office* at the north end and (*C-S*) *Service Commercial* at the south end. On the east side of Broad Street the area is characterized by “*Mixed-Use*” developments, (*R-4*) *High-Density Residential* abutting the railroad tracks and the rest of east side is composed of (*M*) *Light-Manufacturing* and (*C-S*) *Service Commercial*, inter-dispersed with historic (*R-1*) *Low-Density “Single Family” Residential* and then a chunk of (*C-N*) *Neighborhood Commercial*, recently developed at the north end of the site (Figure 39).

3.3.2 Streetscape This site is primarily dominated by vehicular traffic. The speed limit is posted at 40mph and I have commonly observed higher speeds of traffic flow throughout the area. There are 2 lanes of traffic traveling in both directions and no *traffic calming measures* present; between the two stop lights present at each end of the site the flow of traffic doesn’t not stop. There is no median present acting as a separation between the opposite flows of traffic, instead there is a 12’-14’ center lane to allow for left-hand turns into the *Residential (R-1 & R-2)* neighborhoods on the west side and the “mixed-use” *Service Commercial (C-S), Neighborhood Commercial (C-N) and Manufacturing (M)* on the east side, to not disrupt the flow of traffic.

The Broad Street Corridor has 4 lanes of vehicular traffic flowing north and south, 2 lanes in each direction 11-feet wide, separated physically by a 12-foot wide center turning lane, cosmetically

concrete is the dominant component. The street 'right-of-way' is 100-feet with a sidewalk and bike lane on each side.

On the west side of Broad Street, adjacent to the *Residential* neighborhoods, the sidewalk is only 3 feet wide with cracks and overgrown, unmanaged vegetation. There are trees planted along the sidewalk, in no particular order or pattern, separating the pedestrian realm from vehicles and on-street parking, as well as the bike lane. At the intersections, the sidewalk is accentuated with a bright yellow, bump-textured sidewalk ramp. The bike lane is located between the high-speed, heavy traffic flow of Broad Street and the on-street parking and is not accentuated with any colored or textured paving or additional signage for added safety. The bike lane on Broad Street on both sides of the street is underutilized and unsafe. I personally observed cyclist using the sidewalks away from traffic to transport themselves.

On the east side of Broad Street there is no on-street parking the traffic flows directly adjacent to the 6-foot wide conventional bike lane; which is the only separation between the pedestrian sidewalk and the vehicles, other than the sporadically placed trees providing some aesthetically pleasing attributes to the area but not consistently placed enough to serve any physical barrier for pedestrians from vehicles to increase the feeling of safety.

Currently, there are 2 stop lights on the Broad Street Corridor, one at each end of the site. There are no *traffic calming measures* present on the site and as well as no safe 'connectivity' provided for pedestrians and cyclist to cross Broad Street throughout the site.

There are trees currently located along the sidewalks of the Broad Street Corridor and do not appear to be guided by any particular pattern or type. Currently the trees provide shade and add to the aesthetic appeal of the area; and on the west side shields pedestrians from vehicle activity and enhance the *sense of place* atmosphere. Street trees add to the safety and physical visual beauty of the site. There is landscaping throughout the site around the *residential* neighborhoods and the businesses decorating their parking lot entrances and signage.

Transit stops are located throughout the Broad Street Corridor and are provided with benches, trash receptacles and information signs. Typically along the Broad Street Corridor this is the only pedestrian furniture available. The only public art is located directly off the site, and any benches provided for uses other than waiting for the bus. There is one historical marker located next to the Fire Station at the north edge of the site.

Project Area Zoning Designations

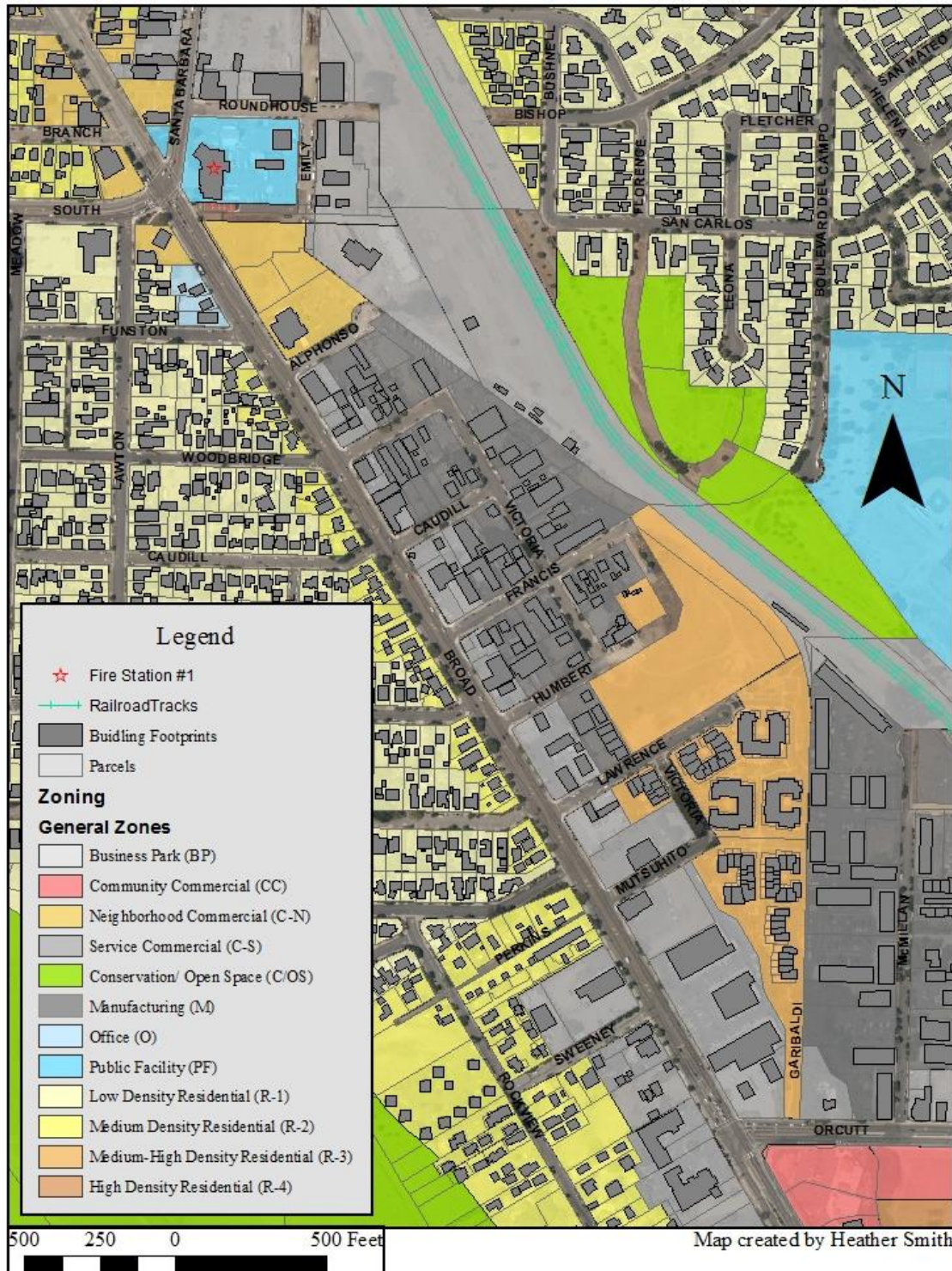


Figure 39. Broad Street Corridor Zoning Designation

3.3.3 Sidewalks

The sidewalk on the west side of Broad Street is very narrow at 2'-4' wide throughout the site. It is inconsistent, cracked and overgrown with vegetation. There are street trees randomly spaced with minimal street lighting and no pedestrian benches for leisure, except at the bus stops, and the area doesn't display any local or public art. The sidewalk on the east side of Broad Street is consistent throughout the site and much wider at 8 feet. The street trees are randomly placed and there is minimal street lighting. On both sides of the street I observed cyclists riding on the sidewalks (Figure 40).



Figure 40. Sidewalk on west side of Broad Street

3.3.4 Bike Lane

There is a 5-foot wide Bike Lane on each side of Broad Street, classified as: Class II Bike Lane, providing a separate lane with a solid white stripe, adjacent to vehicle lanes and/or parking for one-way bike travel. Currently on the west side of Broad Street the bike lane is between on-street parking and vehicle lanes of high speed traffic. On the east side of Broad Street there is no on-street parking so the bike lane is placed directly next to the sidewalk but also adjacent to vehicular traffic (Figure 41).



Figure 41. Bike Lane on west side of Broad Street

3.3.5 Circulation

The current Broad Street Corridor design allows high speeds of traffic with uncontrolled left-hand turns. Because of its location as a city entrance it experiences high volumes of vehicular traffic, roughly 29,100 vehicles a day on average. Broad Street is dominated by vehicles and is described as an unsafe street for pedestrians with no traffic calming measures of connectivity. There are 6 bus stops on the Broad Street Corridor site, 3 on each side. On the west side of Broad Street the bus is on route 1, heading Downtown, to the County Health Services and University Square and they are located between South Street and Funston Avenue, between Woodbridge Street and Caudill Street and at the south end of the site between Perkins Street and Sweeney Lane, in front of Enterprise Car Rental. On the east side of Broad Street the bus is on route 3 which also goes Downtown, to the County Health Service but it also stops at the Marigold Shopping Center as well. The bus stops are located between Santa Barbara Street and north of Alphonso Street, south Humbert Avenue and north of Lawrence Drive and south of Mutsuhito Avenue in front of Staples (Figure 42).



Figure 42. Bus Stop bench and trash receptacle

3.3.6 Character

The west side of Broad Street is a low to medium-low density *Residential (R-1 & R-2)* neighborhood. There is a neighborhood park close by providing the community a place to enjoy

leisurely activities. The residences fronting Broad Street are directly facing the street with an unkempt and uneven sidewalk, only 3-feet wide, and it is overgrown and cracked in several spots (Figure 40). There is on-street provided for the residents of the area between the sidewalk and the bike lane. Even though there is a 6-foot bike lane provided for cyclists, I observed most cyclist riding on the sidewalk not leaving much room for pedestrians (Figure 44). There are street trees accompanying the residential neighborhoods fronting Broad Street proving for shade as well as creating a barrier for pedestrians from the different modes of traffic, however exposing cyclist to vehicle traffic.

The east side of Broad Street is integrated with residential homes, *Neighborhood Commercial (C-N)* at the northeast corner of the site (The Village at Broad Street Figure 43) and medium-high density *Residential (R-3)* at the south adjacent to the Historic Railroad District but primarily composed of commercial businesses and small to medium-sized light-manufacturing companies such as auto repair shops, glass replacement, a thrift shop, a gas station, liquor store, etc. (Figures 45 – 49) . This area was developed as a residential subdivision in the 1880's associated with the railroad. And currently several of these historical homes still remain lived in and kept up as for and some are abandoned and dilapidated. The San Luis Garbage Co. used to be located at the north end of this site and is now an abandoned piece of land.

This area lacks safety and connectivity. There are no *traffic calming measures* located within this site to reduce the speed of vehicles and promote a more comfortable walking environment for pedestrians. There are no crosswalks to encourage connectivity between the two sides of Broad Street (Figure 50). Cyclists commonly ride their bikes on the sidewalk sharing it with pedestrians and away from vehicular traffic leaving the bike lane underutilized. The center lane has arrows but no median, it is open and wide throughout the length of the site allowing for unguided left hand turns and unsafe driving in the center lane.



Figure 43. Fresh and Easy groceries



Figure 44. Cyclist riding on the sidewalk on Broad Street



Figure 45. Budget located on Broad Street



Figure 46. Shops located on Broad Street



Figure 47. Thrift Store located on Broad Street



Figure 48. CFN Gas Station & Superior Automotive Repair



Figure 49. Quick Stop Liquor Store located on Broad Street



Figure 50. View of Broad Street facing south

Broad Street Corridor Streetscape

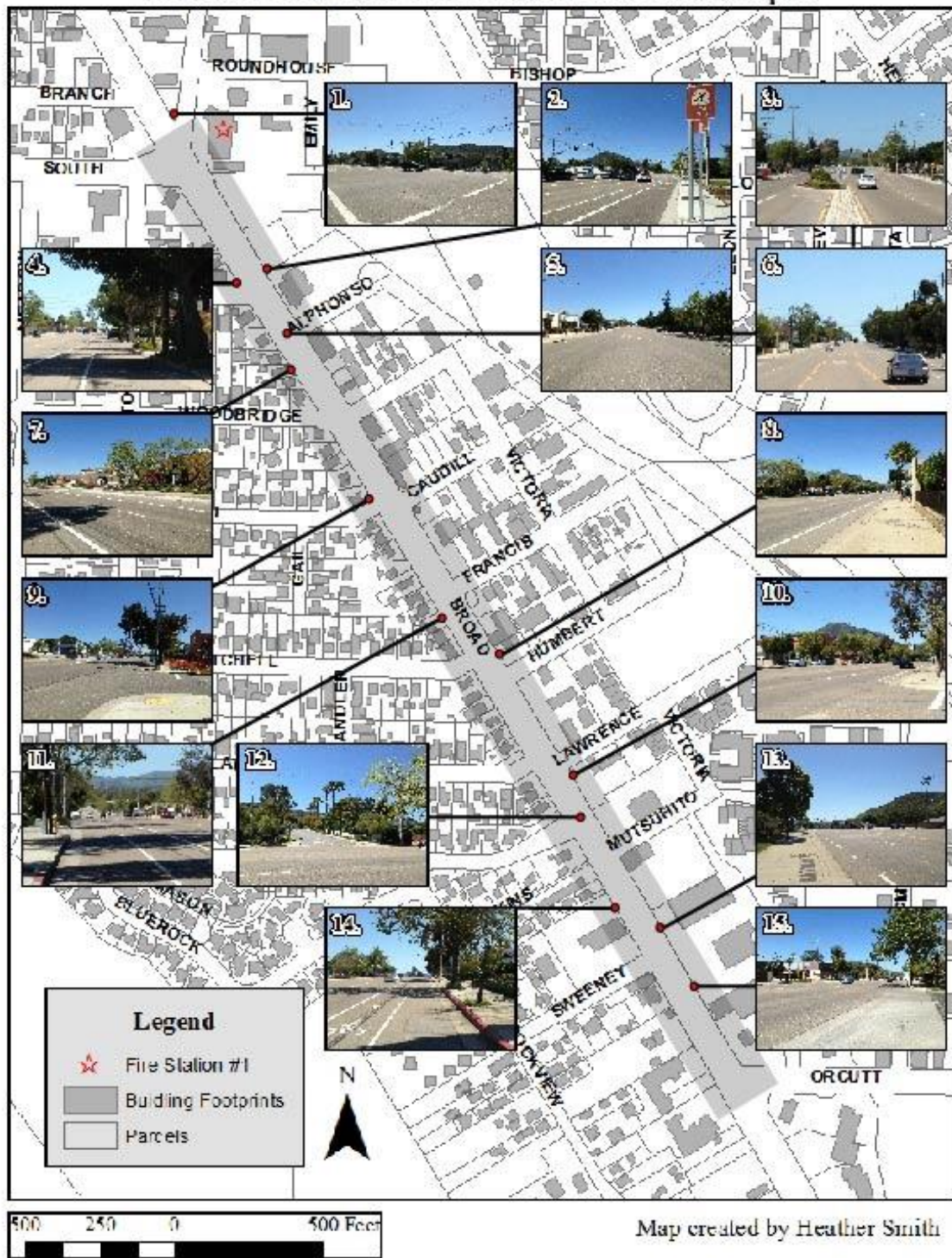


Figure 51. Site Analysis - Streetscape Broad Street Corridor

Broad Street Corridor Streetscape Existing Conditions (Figure 51)

- Picture 1. Broad Street/ South Street/ Santa Barbara Street intersection, facing south.
- Picture 2. View of Broad Street/ South Street/ Santa Barbara Street intersection, facing north – located on the east side of Broad Street, north of Rabo Bank adjacent to the new Broad Street Village shopping center and *Mixed-Use* development.
(Opportunity: preserve the surround mountainous viewsheds)
- Picture 3. View of Broad Street/ South Street/ Santa Barbara Street intersection and recently added center median, facing north – located in the middle of Broad Street at the Alphonso Street intersection.
- Picture 4. Streetscape, Bike Lane and On-Street Parking, facing south – west side of Broad Street, south of Funston Avenue, north of Woodbridge Street. This picture shows Broad Street directly next to the bike lane and the on-street parking on the other side of the bike lane closest to the pedestrian sidewalk separated by a row of unevenly spaced street trees.
(Opportunity: eliminate on-street parking, widen and enhance the visual appearance of the sidewalk and move the bike lane next to the sidewalk and separate the sidewalk and bike lane from Broad Street with a row of evenly spaced street trees with added *human scale* street lighting)
- Picture 5 & 6. Streetscape with a wide center turning lane, no median, facing south – Broad Street/ Funston Avenue intersection.
(Opportunity: add a planted center median to control left hand turns and calm traffic speeds as well as add to the visual quality of the Broad Street Corridor.)
- Picture 7. Streetscape with Broad Street Village shopping center in the back ground – west side of Broad Street between Funston Avenue and Woodbridge Street, facing northeast.
- Picture 8. Streetscape, Bike Lane and Sidewalk – between Francis Avenue and Humbert Avenue in front of Mission Thrift Store, facing north.
- Picture 9. Broad Street/ Caudill Street intersection, facing south.
- Picture 10. Broad Street/ Lawrence Drive intersection, facing north.
(Opportunity: preserve the mountainous viewsheds and realign Lawrence on the east side of Broad Street to create a lined up intersection with accentuated pedestrian crosswalks.)
- Picture 11. Streetscape, On-Street Parking and Bike Lane – located on the west side of Broad Street just south of Mitchell Drive, facing north.
- Picture 12. Stoneridge Road/ Broad Street intersection – this is the entrance to a high median income neighborhood off of Broad Street, facing west.
- Picture 13. Streetscape in front of Staples – east side of Broad Street directly north of the bus stop, facing south.
(Opportunity: preserve the mountainous views)
- Picture 14. On-Street Parking and Bike Lane – west side of Broad Street, south of Perkins Street and north of Sweeney Lane, facing south.
- Picture 15. Broad Street/ Sweeney Lane intersection – east side of Broad Street south of Staples, facing north.

(Opportunity: transform this intersection into a four-way stop with accentuated pedestrian crosswalks just south of an improved public gathering area with an enhanced public transit center/ bus stop.)

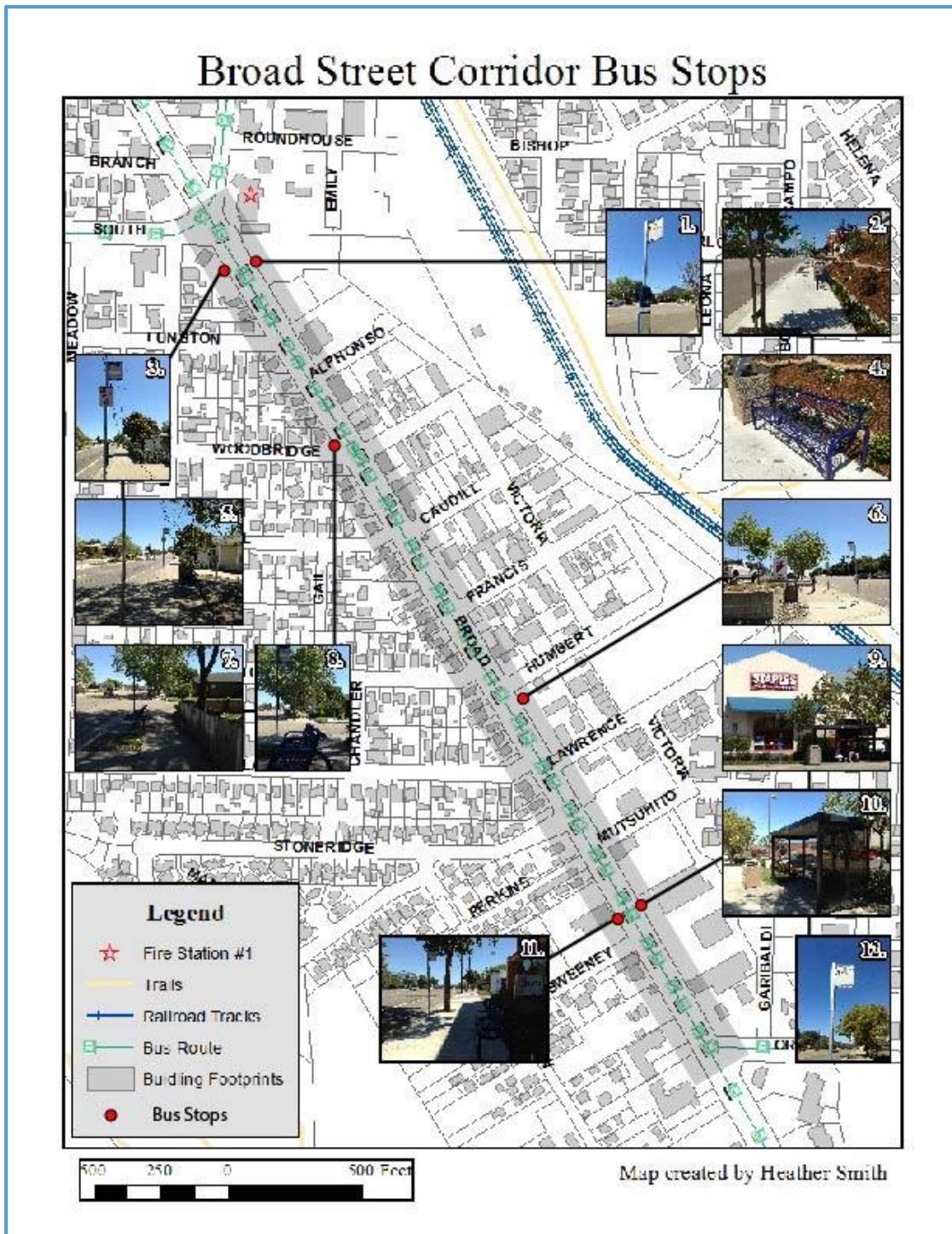


Figure 52. Site Analysis – Bus Stops

Broad Street Corridor Existing Bus Stops (Figure 52)

- Picture 1, 2 & 4. North End Bus Stop – located east side of Broad Street between Santa Barbara Street and Alphonso Street in front of the new development Broad Street Village shopping center.
- Picture 3 & 5. North End Bus stop – located west side of Broad Street between South Street and Funston Avenue in just south of the Gas Station.
- Picture 6. Center Bus Stop – east side of Broad Street between Humbert Avenue and Lawrence Drive in front of the CFN Gas Station.
- Picture 7 & 8. Center Bus Stop – west side of Broad Street between Woodbridge Street and Caudill Street adjacent to residential housing.
- Picture 9, 10 & 12. South End Bus Stop – east side of Broad Street between Mutsuhito Avenue and Orcutt Road, in front of Staples.
- Picture 11. South End Bus Stop – west side of Broad Street between Perkins Street and Sweeney Lane, in front of Enterprise Car Rental and the Car Wash.

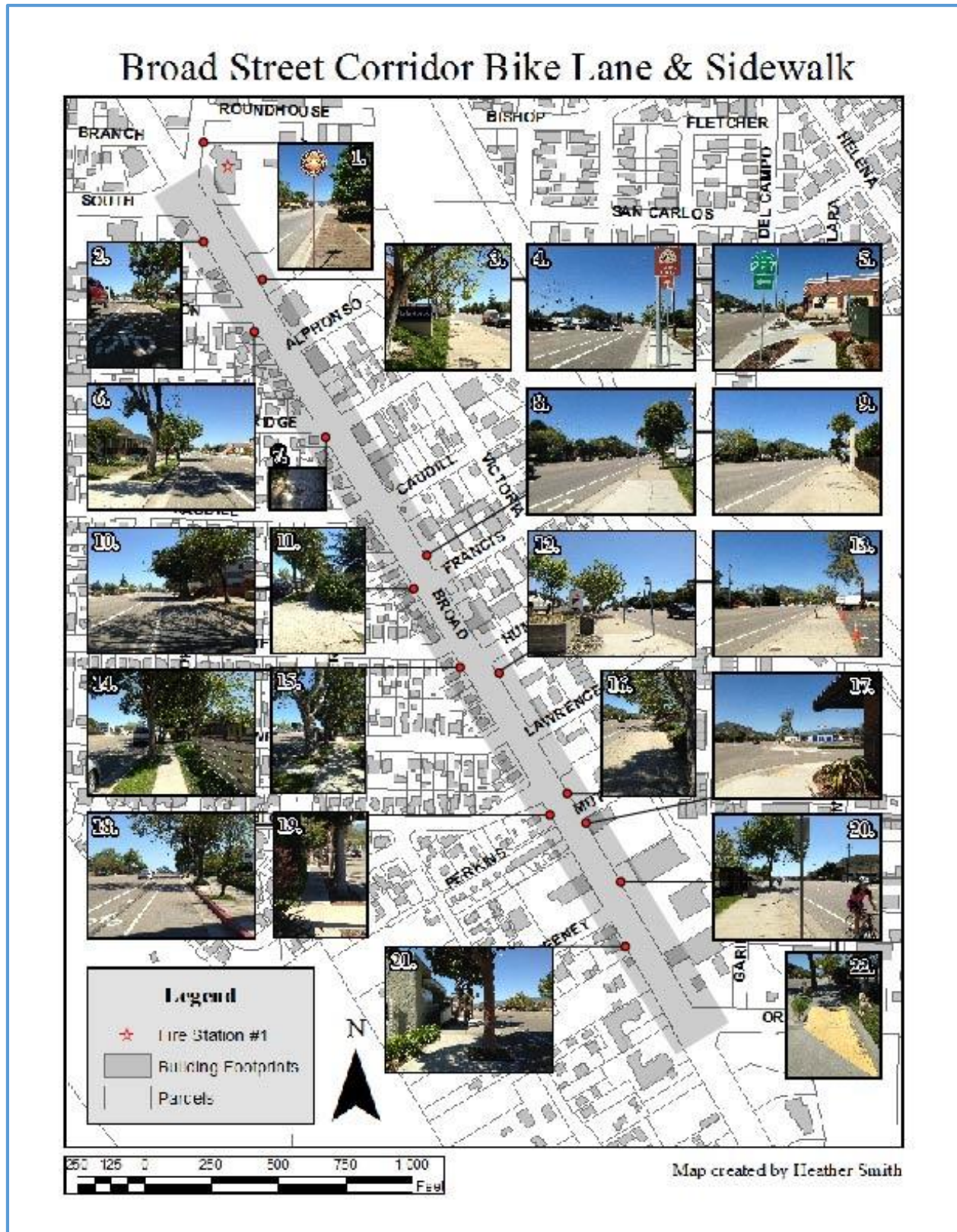


Figure 53. Site Analysis – Bike Lane & Sidewalk

Broad Street Corridor Bike Lane and Sidewalk Existing Conditions (Figure 53)

- Picture 1. Railroad Historic District – located in front of Fire Station #1, just north of the Broad Street Corridor off Santa Barbara Street, facing north.
Opportunity: create a linkage to the adjacent preserved historical character.
- Picture 2. Bike Lane – located on the west side of Broad Street north of Funston Avenue before the introduction of on-street parking, facing south.
- Picture 3. Rabo Bank – located in the new Broad Street Village shopping center at the north end of the site on the east side of Broad Street, north of Alphonso Street, facing south.
- Picture 4 & 5. Same location as Picture 3 (above), facing north towards the Broad Street/ South Street/ Santa Barbara Street intersection.
(Opportunity: preserve the views of surrounding mountains)
- Picture 6. Bike Lane and Sidewalk – located on the west side of Broad Street next to *Residential* (R-2) housing, facing north. The view in the background is Broad Street Village shopping center.
(Opportunity: widen the sidewalk adjacent to the residential neighborhood and protect the sidewalk and bike lane with a row of street trees to separate the pedestrian space from high levels of traffic and help create a welcoming *sense of place* for pedestrian activity and cyclist modes of transportation.)
- Picture 7. Crack in the sidewalk. All along the sidewalk on the west side of Broad Street.
(Opportunity: When widening and repaving the sidewalk use materials with texture to visually enhance the separate space for pedestrians.)
- Picture 8. Sidewalk and Bike Lane – located on the east side of Broad Street, between Caudill Street and Francis Avenue in front of the Mattress Store, facing north.
(Opportunity: move the bike lane on the east side of Broad Street and merge it with an enhanced bike lane on the west side of Broad Street and widen the sidewalk to provide for a row of trees to line the street and separate the pedestrian sidewalk from high speed vehicular traffic on the highly utilized Broad Street Corridor.)
- Picture 9. Sidewalk and Bike Lane –located on the east side of Broad Street between Francis Avenue and Humbert Avenue in front of Mission Thrift Store, one block down from picture 8 (above), facing north.
- Picture 10. Bike Lane and On-Street Parking – located on the west side of Broad Street between Caudill Street and Mitchell Drive.
- Picture 11. Sidewalk – located on the west side of Broad Street displaying more cracks in the uneven pavement and overgrown bushes obstructing the already very narrow sidewalk.
- Picture 12. Bus Stop and Sidewalk – located on the east side of Broad Street between Humbert Avenue and Lawrence Street in front of the CFN Gas Station.
(Opportunity: Realign Lawrence Drive to match up, design a break in the planned planted median and insert crosswalks for pedestrian connectivity across Broad Street. Widen the sidewalk and enhance the bus stop to create more of a public node in this location by adding pedestrian furniture and signage and vegetation. Push the bus stop back from the street a bit so the stopping of the bus doesn't obstruct traffic.)

Picture 13. Sidewalk and Bike Lane – east side of Broad Street between Lawrence Drive and Mutsuhito Avenue in front of The Grange (a public meeting building for events and a Farmers Market on Tuesdays), one block down from picture 12 (above), facing north.

(Opportunity: Develop this area into a public gathering place for the community. It is located one block from a bus stop in both directions and one block from residences in both directions.)

Picture 14 & 15. Sidewalk – west side of Broad Street between Mitchell Drive and Stoneridge Road displaying the narrow sidewalk adjacent to on-street parking.

Picture 16 & 17. Sidewalk and Outdoor Dining Restaurant – east side of Broad Street north of Mutsuhito Avenue.

(Opportunity: preserve the outdoor dining and incorporate it into the public gathering place and adjacent bus stop to enhance the pedestrian character.)

Picture 18. Bike Lane and On-Street Parking – west side of Broad Street north of Stoneridge Drive, facing south.

Picture 19. Sidewalk – Same location as picture 18 (above), facing south. Displaying how cyclists ride on the narrow sidewalks rather than utilize the bike lane provided on the other side of the on-street parking adjacent high speed vehicular traffic.

Picture 20. Sidewalk and Bike Lane – east side of Broad Street, north of Mutsuhito Avenue and Taste the outdoor dining restaurant and in front of Staples and the bus stop, facing south. This picture shows cyclists using the bike lane located right next to the sidewalk.

Picture 21. Sidewalk – west side of Broad Street at the south end of the site, south of Sweeney Lane. This is another picture illustrating cyclists using the sidewalk instead of the bike lane on the west side of Broad Street.

(Opportunity: expand and enhance the bike lane to be safer and increase its use.)

Picture 22. Sidewalk Crossing – east side of Broad Street just north of Staples, facing north. This shows the enhanced crossings already existing on Broad Street to increase awareness of pedestrian activity and safety.

(Opportunity: Incorporate this idea into increasing the safety and utilization of this Corridor for pedestrian activity.)

4. BROAD STREET CORRIDOR PROPOSAL PLAN

The goal of the Broad Street Corridor Design Plan is to create a visually pleasing *walkable* “pedestrian-oriented” enhanced community with connectivity throughout the site and improved bus stops. Overall the purpose of this plan aims towards establishing a *sense of place* to one of the main entrances to the City of San Luis Obispo (Figure 54, 65 & 66).

The existing Broad Street Corridor is dominated by high levels of vehicular traffic with one stop light at each end of the site. The area possesses no connectivity between the two sides of Broad Street or traffic calming measures to provide safety for pedestrian and cyclist activity.

4.1 On-Street Parking

Currently there is on-street parking on the west side of Broad Street adjacent to the (R-2) *Residential* housing. The plan proposes to eliminate the on-street parking. There will be a consolidated parking lot offered on the east side of Broad Street with safe and accessible connectivity provided with accentuated pedestrian crosswalks at the Woodbridge Street, Lawrence Drive and Sweeney Lane intersections throughout the site.

4.2 Sidewalks

On the east side of Broad Street adjacent to the *Commercial/ Retail* shopping the plan proposes to preserve the existing trees and add more landscaping. The bike lane will be removed and the sidewalk will be widened to 10 feet with an additional 5 foot planter to allow for a row of street trees and *human scale* lighting inter-dispersed every 20 feet separating the pedestrian sidewalk from the vehicular traffic. On the west side of Broad Street the sidewalk will be widened to 15 feet the entire length of the site from the Broad Street/ Santa Barbara Street/ South Street intersection to Orcutt Road intersection, and the sidewalk will meander for 7 blocks beginning at Funston Avenue down to Sweeney Lane, preserving as many existing trees as possible. On the west side of Broad Street between Perkins Lane and Sweeney Lane in front of Enterprise Car Rental at the location of the bus stop, the sidewalk will maneuver west aligning with the bus pull-in lane and remain 15 feet wide. On the east side of Broad Street, between Mutsuhito Avenue and the Sweeney Lane intersection, in front of Staples and Taste Restaurant, at the location of the bus stop, the sidewalk will maneuver east aligning with the bus pull-in lane and remain 10 feet wide (Figures 55 – 58).

4.3 Bike Lane

As mentioned above in Section 4.2, the bike lane will be removed on the east side of Broad Street and consolidated to the west side of Broad Street adjacent to the widened and enhanced meandering sidewalk and separated from vehicular traffic by a row of planted street trees inter-dispersed with *human scale* pedestrian lighting every 25 feet. The ‘Class I’ Bi-Directional bike path will be 10 feet wide, providing for a protected and separate right-of-way exclusive for bicycles with minimal cross-flow, two lanes of opposite flowing cyclists, accentuated with green paving materials and safely linked with existing bike trails throughout the City of San Luis Obispo (Figures 57 & 58).



Figure 54. Broad Street Corridor Site Plan Proposal – with planted median, added accentuated pedestrian crosswalks, widened sidewalks, enhanced bike lane and bus stops



Figure 55. Perspective View North - Existing



Figure 56. Perspective View North - Proposal



Figure 57. Perspective View South - Existing



Figure 58. Perspective View South - Proposal

4.4 Center Median

There is currently a short center median at the very north end of the site, from Alphonso Street north to the Broad Street/ South Street/ Santa Barbara Street intersection, texturized with rocks and other vegetation and flowers, no trees. The rest of the site is characterized by a 12 foot wide center turning lane for unguided left-hand turns. The plan proposes to add a planted center median with trees and landscaping to enhance the visual appearance of the corridor as well as separate the opposite flowing lanes of vehicular traffic to improve traffic flow and increase safety. There will be a break in the median at Woodbridge Street with accentuated pedestrian crosswalks, at Lawrence Drive with accentuated pedestrian crosswalks and a bus stop heading north and also at Sweeney Lane with accentuated pedestrian crosswalks and adjoining a public transit stop with a bus stops on each side of the street heading north and south and a pedestrian gathering space with outdoor dining and neighboring a park and public meeting building (The Grange).

4.5 Street Trees & Landscaping

The current trees located throughout the Broad Street Corridor will be preserved as much as possible. Street Trees will be added to both sides of Broad Street lining the street separating the vehicular traffic from pedestrian and cyclist activity, as well as added to the center median with landscaping. There will be 2 dominant species of tree: London Plane (*Platanus acerifolia*) and Chinese Elm (*Ulmus pavifolia*), as listed in the City's Tree Regulations, which were selected to create a large canopy with consistent height, color and texture. To ornament the Broad Street Corridor 3 species of tree were selected to be less dominant and sporadically placed throughout the site to add some striking hues of purple and red: Jacaranda (*Jacaranda mimosifolia*), Chinese Pistache (*Pistacia chinensis*) and Red Maple (*Acer rubrum*) (Figures 59 – 63).

Aiming to keep the character and charm of the *Broad Street Corridor Design Plan* consistent the *South Broad Street Area Plan* the preferred trees will be the same in both area plans to establish a harmonious ambiance. On the west side of Broad Street the new street trees will be placed every 20 feet alternating with *human scale* street lights located between the bike lane and vehicular traffic lanes. On the east side of Broad Street the trees will also be placed every 20 feet alternated with *human scale* lighting separating the pedestrian sidewalk from traffic lanes. The center median will have planted trees inter-dispersed with Street Lighting every 20 feet and intermingled with flowers and vegetation. Trees will be planted and left natural without the presence of a grate or guard to preserve the environmental impression. Sidewalks and walkways should always integrate landscaping into the ornamental design and to act as a buffer.



Figure 59. London Plane - (*Platanus acerifolia*)



Figure 60. Chinese Elm - (*Ulmus pavifolia*)



Figure 62. Jacaranda - (*Jacaranda mimosifolia*)



Figure 61. Red Maple - (*Acer rubrum*)



Figure 63. Chinese Pistache - (*Pistacia chinensis*)

4.6 Bus Stops

The Broad Street Corridor area has 6 bus stop locations throughout the site, 3 on the east side of Broad Street (route 3) heading north, stopping Downtown, French Hospital and Marigold shopping center, in front of Staple at Sweeney Lane, in front of the CFN Gas Station at Humbert Avenue and in front of the new Broad Street Village development in front of Fresh and Easy. There are also 3 bus stops on the west side of Broad Street (route 1) heading south, stopping Downtown, County Health Services and University Square, just south of the Gas Station north of Funston Avenue, on the corner of Woodbridge Street and on the corner of Sweeney Lane in front of Enterprise Car Rental. The current location of each will be preserved but redeveloped to be pushed back from the vehicular traffic flow and will enhanced with a cover, bench, trash receptacle and signage (Figure 52).

4.7 Pedestrian Furniture & Lighting

Public spaces shall be enhanced with pedestrian furniture such as: benches, trash receptacles, newspaper racks, bicycle racks, planters and public art to create a more inviting and *walkable* environment for pedestrians. A standard shelter approved by the ARC, a bench, a bike rack, a trash receptacle and an information board will be present at every bus stop and newspaper racks and public art will be spaced out throughout the area.

Public Art aims to enhance the cultural heritage and visual setting and must follow requirements made by the City's public art ordinance (Ordinance No. 1372, adopted in 2000).

Benches at each bus stop shall match the rest of the blue benches provided at every bus stop throughout the City of San Luis Obispo (Figure 42). Other benches provided for pedestrian leisure are encouraged to be integrated throughout the site in conjunction with the ambiance of the area as a primary feature.

Trash Receptacles are essential at every bus stop (Figure 42) and will also be provided throughout the site and in any public gathering space and maintaining an overall cohesive visual quality to the area.

Newspaper Racks shall be conveniently placed throughout the area and will utilize visually soft materials to maintain the cultural and aesthetic quality of the site.



Figure 64. Human Scale - Pedestrian Street Lighting

Bike Racks should be constructed with a durable material and be stable with two vertical contact points for a bicycle frame and sit a minimum of 30 inches from ground level and is subject to approval by the Public Works Director. They must be installed in safe, convenient, visible locations and add the visual attractiveness of the area.

Lighting shall be *human scale* and comply with the City of San Luis Obispo's *Community Design Guidelines* and serve the purpose of providing light and safety to pedestrians and cyclists to the area, as well as add decoration and charm to the atmosphere of the area. Lighting fixtures and their operation shall be downward facing reducing glare and shielding the starry night, following with the City's Night sky Preservation standards, Ch. 17.23 of the Zoning Regulations. (City Engineering Standard # 7915 [Downtown Pedestrian Lighting], 7910, 7905) (Figure 64).

4.8 Woodbridge Street intersection

The plan proposes at the Woodbridge Street/ Broad Street intersection to install a stop light and accompanying 4 accentuated pedestrian crosswalks to provide a safe crossing for pedestrians and cyclist across Broad street and create connectivity between the residential housing on the west side of Broad Street and the proposed pedestrian bridge crossing over the Railroad located at Francis Street to link the existing bike path on the east side of the railroad tracks. The center median will provide for a guided left-hand turn coming from both directions to facilitate a smooth flow of traffic (Figure 67).

4.9 Lawrence Drive intersection

The plan proposes a repositioning of Lawrence Drive on the east side of Broad Street for the intersection to align. This intersection will insert a stop light along with 4 accentuated pedestrian crosswalks to calm traffic and provide safe connectivity for pedestrians and cyclist across Broad Street. The center median will guide left-hand turns from both the north and south directions to avoid impeding traffic and aid circulation throughout the site.

4.10 Sweeney Lane intersection

The plan proposes this intersection to have 1 accentuated pedestrian crosswalk across Broad Street at the south side of the Sweeney Lane intersection to increase pedestrian connectivity and calm traffic speeds. This intersection is uniquely located directly adjacent to 2 bus stops, one on each side of Broad Street. Each bus stop will be renovated to be pushed back from vehicle lanes to refrain from disrupting traffic flow. This will promote additional pedestrian activity to this area of this the site and will motivate people to occupy the public gathering space The Grange and local Public Park as well as encourage them to utilize the existing outdoor dining at Taste.

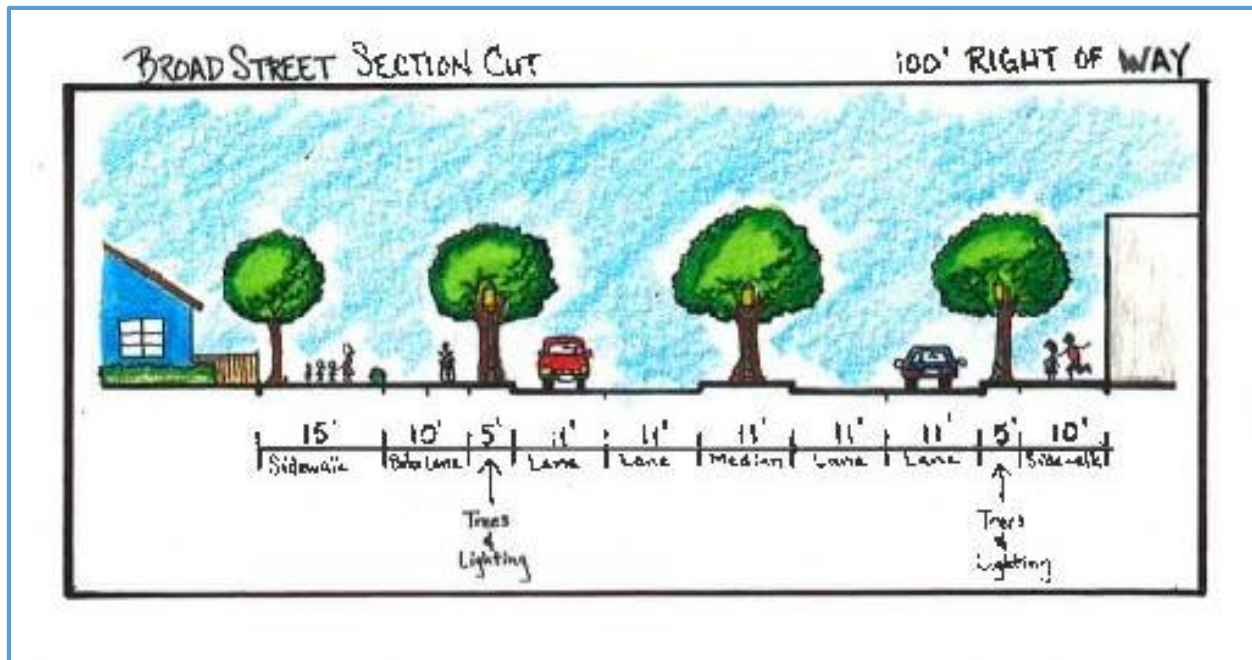


Figure 65. Broad Street Section Cut

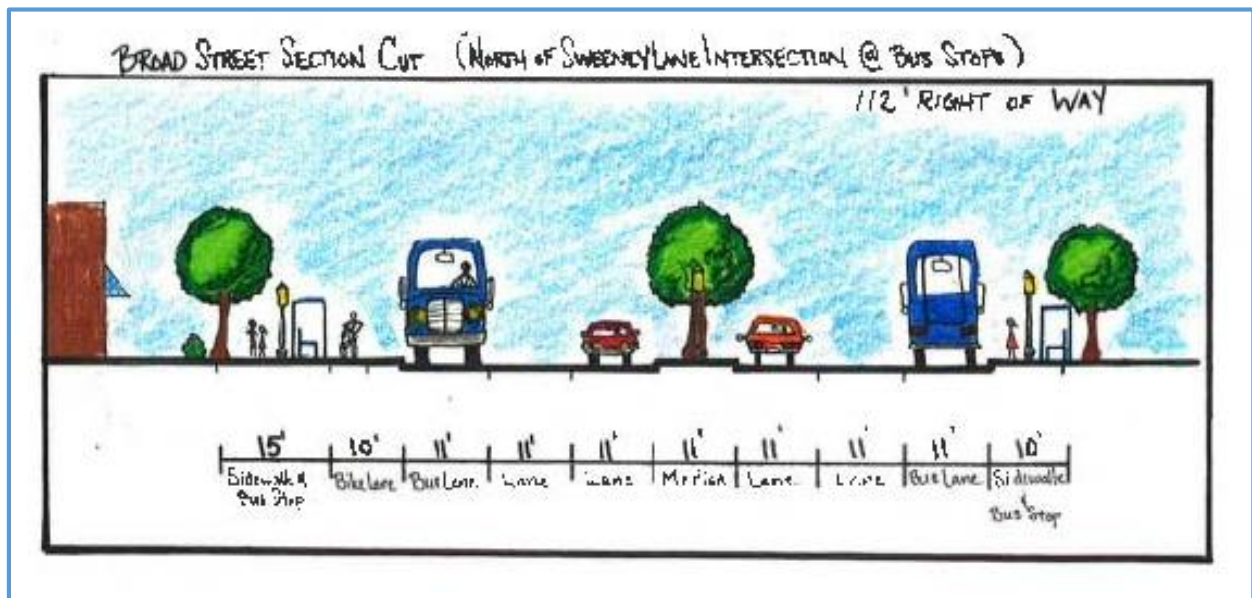


Figure 66. Broad Street Section Cut – Location of Public Transit Stop between Perkins Street & Sweeney Lane



Figure 67. Bird's Eye View – Woodbridge Street / Broad Street Intersection Proposal



Figure 68. Bird's Eye View - Sweeney Lane /Broad Street Intersection & location of Public Transit stop with pull-in

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