TITLE: Complete and Lively Streets: Fostering Accessibility and Vibrant Streets for Walking and Biking

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1. Introduction and Background
1.1 Purpose of Project

The intent of this project is to foster and create an active downtown. In promoting an active downtown the project will look at creating streets and spaces in the downtown area that are safe, walkable, bikeable, and contribute positively to the community. This is aided by looking at and creating efficient connections and networks that enhance accessibility, by looking at street design. Additionally looking at and creating at public spaces for multiple uses, to promote activities. The proposed project will mainly focus on the Mission Plaza and examine Chorro and Monterey Streets. Additionally, this project will look at bicycle networks surrounding the downtown area. This project is in conjunction to the update of Downtown Concept Plan and Mission Plaza Master Plan, and correlates to the Bicycle Transportation Plan and General Plan. The goal of this project is to create and proposal that reflects the community and helps envision the future of downtown, while maintaining the characteristics of San Luis Obispo.

This project can assist with the update of the Downtown Concept Plan, the Mission Plaza Master Plan, and supports ideas in the General Plan and Bicycle Transportation Plan, all while creating an active downtown.
1.2 Relevance to Planning

Downtown San Luis Obispo is a vital area to the city. With the update of the Downtown Concept Plan and creation of the Mission Plaza Master Plan, there are many planning opportunities, and areas for enhancement. The Downtown Concept Plan and the Mission Plaza Master Plan are both listed as Specific & Area Plans, thus they shall follow the City’s General Plan. In creating these plans, it is crucial to assess the area for conditions, character, and environmental factors. In creating these plans, it is also important to get feedback from the community. The city has held numerous workshop events to gage the community’s input, feedback, and concerns on the two plans.

The proposed project offers urban design, development and development projects, transportation planning, placemaking, and community planning opportunities. Additionally the project focuses on enhancing accessibility, designing efficient streets and public space, and creating a sustainable community, which are all key planning concepts. The proposed project is supported by the visions and goals of The City’s General Plan, Bicycle Transportation Plan, and Climate Action Plan.
1.3 Methodology

The initial focus for this project was to design and create ideas for Complete Streets. In reading case studies, the focus drifted to accessibility and designing streets and places for pedestrians and bicyclists. In keeping my project local, I assessed streets and areas in San Luis Obispo. While assessing, I wanted to make sure streets and areas would maximize walkability and bikeability. During this process, I learned the City was updating the Downtown Concept Plan and creating the Mission Plaza Master Plan. In conjunction with these two, I decided to add more and have the focus of the project be on creating active downtowns. This would be support by various elements and features, such as accessibility. I narrowed down streets to focus on by looking at the City’s General Plan and Bicycle Transportation Plan. In conjunction with the current work on updating the Downtown Concept Plan and creating The Mission Plaza Master Plan, the streets and area I chose to focus on, were Chorro and Monterey Streets and the Mission Plaza. Additionally I looked at streets that serve as networks into the downtown area.

Once developing my project area and streets to focus on, I had to research how various elements would contribute to creating an active downtown. I reviewed case studies for ideas and further description of the elements. In reviewing elements that contribute to an active downtown, I made sure they fit the scope of the project, while supporting the main intent.

With the features in mind for the project, I created concept designs, a proposal and recommendations, that serve as a proposal. The concept designs, recommendations, and proposal are based off the information and final outcome of the case studies. Furthermore, I extensively reviewed City documents to assure that what I was creating complied with the City. The city documents included the General Plan, Bicycle Transportation Plan, and Climate Action Plan. These documents address aspects of connectivity, design features/ elements, and projects, which are relevant to pedestrians and bicyclist. These aspects are also relevant to accessibility. The aspects are further examined by various policies of each document in appendices A-D.
As part of my research, I also participated in a workshop (February 20th, 2016) the City held for the update of the Downtown Concept Plan and the Mission Plaza Master Plan. People could make comments, voice concerns, or ideas surrounding downtown or the Mission Plaza as shown in figures 1 and 2 below.

One booth had people design their ideal downtown street (looking at Higuera Street as an example), using the program StreetMix. This allowed them to see how streets could look and be designed. From the workshop, I was able to gage how the community felt about both plans, as well as view comments, concerns, and ideas they had. I also observed and analyzed all the results from Street mix, which allowed me to see what features people liked and wanted on their ideal streets. In congruence with City documents and plans, the case studies, research and information collected at the workshop have provided the basis for this project.
1.4 Existing Characteristics and Conditions

Character

As the “Happiest Place on Earth,” the city of San Luis Obispo offers many opportunities. The Central Coast town sits midway between Los Angeles and San Francisco and serves as the perfect tourist spot, with historic attractions, a major university, and various activities. Although small and quaint, downtown San Luis Obispo is viewed as the community’s urban center, as it serves the city’s 45,119 population (2010 Census). A major historic attraction of the City is the Mission San Luis Obispo de Tolosa, which is still active and is a huge asset to downtown. As a point of interest, the Mission attracts many visitors to the downtown area, and many would say it is the heart of downtown.
Along with attractions, many activities bring visitors and locals downtown. Thursday Night Farmers Market is one of the City’s most popular activities and draws many people to the downtown area. With attractions and activities, downtown serves as a pivotal area of the community and function of the City. As stated in the Land Use section of the City’s General Plan, “The City wants its urban core to be economically healthy, and realizes that private and public investments in the Downtown support each other,” (General Plan, 2015, p. 1-59). To support and maintain that vision, the City must prioritize the needs of downtown.

As San Luis Obispo continues to draw in visitors, it is critical the City focuses on creating an active downtown. In looking at accessibility, it is critical that surrounding neighborhoods to downtown have well design and maintained networks that cater to pedestrians and bicyclist. Additionally, it is important to create networks to and from California Polytechnic State University, since many students utilize downtown. As stated in Census Data, 7.5% of the City’s population bike as a means of transportation to work, while 6.7% walk. The Circulation section of the General Plan states that for both bicyclist and pedestrians there should be continuous networks. By creating efficient continuous networks, people will utilize them, allowing more people to access downtown. In addition to creating efficient networks, active downtowns should promote and encourage walkability. A policy in the Land Use section of the General Plan states “the City shall plan and manage Downtown to include safe, interesting places for walking and pleasant places for sitting,” (General Plan, 2014, p.1-60). This also includes creating spaces for multiple uses and activities to attract people to the area. Networks, accessibility and activity are all important elements in creating an active downtown.
There are opportunities to create an active downtown with the update of the Downtown Concept Plan and creating the Mission Plaza Master Plan. The Downtown Concept Plan will assess and update the present development, vision, goals and concepts related to downtown. The main goal of the Mission Plaza Master Plan is to revitalize and important community area. These two plans can guide visions, and goals for future public projects and private development in the downtown and surrounding areas.

**Conditions**

In updating the Downtown Concept Plan and creating the Mission Plaza Master Plan, the city is currently assessing present conditions, uses, and policies. This is to determine any impacts of the adjacent residential neighborhoods, businesses, Old Mission Church, and San Luis Obispo Creek. Figure 5 is the original and most current Downtown concept plan from 1993.

*Figure 5: Original Downtown Concept Plan 1993*
*Source: City of San Luis Obispo, http://www.slocity.org/home/showdocument?id=10098*
Downtown San Luis Obispo is the center of activity for the city, and therefore should accommodate the needs and activities associated with it. The downtown area is primarily made up of mixed-use developments that consist of retail, restaurants, offices, and residential.
The zoning that makes up the downtown area (shown in figure 9 below), are Downtown-Commercial (C-D), Retail-Commercial (C-R), and Office (O). Additionally there is Public Facility (PF), and Medium, Medium-High, and High Residential (R-2, R-3, and R-4).

Figure 9: Downtown Zoning
Source Camille Jackson
Downtown is generally bound by Highway 101, Pacific Street, High Street, and Johnson Avenue, (shown in figure 10 below). While the “downtown core” is bound by Santa Rosa Street, Mill Street, Nipomo Street and Marsh Street. The main streets that run through downtown are

Figure 10: Downtown Core
Source: Camille Jackson
Although downtown is relatively walkable and bikeable, there is still a large amount of vehicular traffic. This is due to several arterial streets that run through downtown. The right of way for most of the downtown streets is 69 or 70 feet. The average speed limit downtown is 25 to 30 mph; however, I have noticed that cars tend to travel faster on streets closes to the freeway. Higuera and Marsh Street are the two streets downtown that are one-way with three lanes of traffic. This is a method to control traffic, as they serve as connections to the Highway 101. There are minimal street design elements that deal with traffic calm, except for crosswalk material change and a flashing pedestrian alert signs on Higuera and Marsh Street. However, I have experienced and observed cars that do not slow down or stop at those crosswalks.

Sidewalks downtown are roughly about eight feet wide. Higuera and Marsh Street have bulb-outs at a few intersections that make the corner area roughly 10-12 feet wide. Additionally many restaurants have outdoor seating, which should have a minimum eight-foot clearance for pedestrians In terms of street conditions; the streetscape downtown is simple with the exception of Higuera Street. Most of the streets downtown are aligned with trees on the sidewalk that create some barrier or separation from the street. A few of the sidewalks have pedestrian amenities such as benches and planter boxes. However, some of the placements of benches do not seem to serve the pedestrians adequately.

The Mission Plaza is a historic attraction, while it also serves as public space. There is seating, grass areas, creek side views, and an open area that holds events and activities. Additionally there are many restaurants and shops in walking distance, thus promoting an active area.
As an active community, the League of American Bicyclists has noted San Luis Obispo as a Bicycle Friendly Community since 2007. In 2015, the City was recognized at a Gold level, greatly due to the amount of extensive bicycle networks, paths, lanes and on street facilities along with parking spaces shown in figure 11. Bicycle networks existing downtown currently consist of bike boulevards, bikeway access, Class II lanes, Class III lanes and streets with sharrows. Additionally the City has proposed to add Class I, II, and III bike lanes and more bike boulevards to downtown and surrounding area shown in figure 12. Table1 below from the Bicycle Transportation Plan shows the existing and proposed types of bicycle networks. The City has also proposed the Bike Connections program, which will provide access between biking facilities and City’s roadway networks.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Existing Mileage</th>
<th>Proposed Mileage</th>
<th>Total Mileage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I: Bike Paths</td>
<td>7.2 (22%)</td>
<td>26.1</td>
<td>33.3</td>
</tr>
<tr>
<td>Class II: Bike Lanes</td>
<td>29.7 (62%)</td>
<td>17.9</td>
<td>47.6</td>
</tr>
<tr>
<td>Class III: Routes</td>
<td>20.6 (100%)</td>
<td>0</td>
<td>20.6</td>
</tr>
<tr>
<td>Sharrows</td>
<td>2.9 (58%)</td>
<td>2.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Boulevards</td>
<td>0.5 (8%)</td>
<td>5.9</td>
<td>6.4</td>
</tr>
<tr>
<td>Subtotal</td>
<td>24.0 (75%)</td>
<td>8.0</td>
<td>32.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60.9 (54%)</strong></td>
<td><strong>52.0</strong></td>
<td><strong>112.9</strong></td>
</tr>
</tbody>
</table>

Table 1: Existing and Proposed Bicycle Transportation Network Mileage (as of December 2012)
Figure 11: Bicycle Transportation Map
Source: City of San Luis Obispo,
http://slocity.maps.arcgis.com/apps/Viewer/index.html?appid=26dbd38b9b46474a9f067ace6a453fe4

Figure 12: Bicycle Transportation Proposed
Source: City of San Luis Obispo,
http://slocity.maps.arcgis.com/apps/Viewer/index.html?appid=798ac2f5ca70486d9c5c2eb59ba8da4b
In terms of circulation, the project’s focus is pedestrians and bicyclist. Pedestrians and bicyclist should heavily utilize the downtown area, thus it is crucial that there is accessibility. The Circulation Element indicates that the City “encourage and promote walking as a means of transportation, as well as complete a continuous pedestrian network connecting residential areas with major activity centers,” (Circulation Element, p.2-18, 2014). Therefore, streets in residential neighborhoods surrounding downtown, should facilitate walkability. The Circulation Element also states, “The City shall expand the bicycle network and provide end-of-trip facilities to encourage bicycle use and to make bicycling safe, convenient and enjoyable,” (Circulation Element, p. 2-16, 2014). Additionally the city has proposed grade separations (see figure 39 in appendix C), since the only one is the Jennifer Street Bridge, which is part of the Railroad Safety Trail. Grade separation facilitates connection in areas that may not connect easily. Therefore, bicycle networks should be proposed and created to facilitate safe connections around the city.

As previously mentioned, the downtown area serves as the community’s urban center. It provides a cultural, social, entertainment, political and historic center. In ensuring a vibrant thriving downtown area, there are enhancements that could be made. Some elements that contribute to enhancing downtown include street design, networks in and surrounding downtown, pedestrian amenities, and public spaces. While keeping downtown active, it is also crucial to keep the City’s character. The downtown is known for its quaint small town feel, filled with mission revival architecture, and surrounding scenic hillside views.
The City’s Community Design Guideline helps the City maintains its character. Some objectives from the Design Guideline that promote the City’s character include: “Keep San Luis Obispo architecturally distinctive, Design to create and maintain pedestrian scale wherever appropriate, and Protect natural resources and integrate the natural environment into building and site planning, where appropriate,”(Community Design Guideline, 2010, p.7-8). Additionally a goal from the Community Design Guideline for downtown states, “downtown design guidelines is to preserve and enhance its attractiveness to residents and visitors as a place where: people prefer to walk rather than drive; and where the pleasant sidewalks, shading trees, and variety of shops, restaurants, and other activities encourage people to spend time, slow their pace, and engage one another,” (Community Design Guideline, 2010, p. 41). While maintaining the character of downtown area, there are opportunities to expand and enhance it.
1.5 Opportunity & Constraints

Downtown is a multiplex area, that provides cultural, economic, and social opportunities. Various existing land uses make up the downtown area. They primarily include Downtown-Commercial (C-D), Retail-Commercial (C-R), and Office (O). Additionally there is Public Facility (PF), and Medium, Medium-High, and High Residential (R-2, R-3, R-4). The land use of the project area, consist of Downtown-Commercial (C-D) and Public Facility (PF). The Mission Plaza defines the Public Facility (P-F). Downtown Commercial (C-D) consists of Chorro and Monterey Streets, and the general area around the Mission Plaza. Chorro and Monterey Street are aligned with shops and restaurants that lead right to the Mission Plaza.

Opportunities

The proposed project area is an ideal place for making enhancements, due to its location and function. The Mission Plaza is a major attraction in the city, and serves as an anchor point in the core of downtown. The streets adjacent to the Plaza are filled with shops and restaurants and promote activity. Additionally, these streets facilitate connections into downtown. Due to the lack of public spaces in the city, the plaza provides public space and can be used for a variety of activities. In addition to the project area, the proposed bicycle networks help facilitate more connectivity and accessibility into the downtown area.
With the update of the Downtown Concept Plan and creation of the Mission Plaza Master Plan, there are many opportunities to create an active downtown. These opportunities range from new development and redevelopment projects, to street improvements and redesigns. Additionally, there are plans, policies, projects programs, and strategies stated in multiple City documents (see Appendices A-D) that support these opportunities and promote enhancement to downtown.

Constraints

There are both physical and social factors that constrain the project area. The main constraints with the project area and bicycle networks are; space for expansion, altering/ reconfiguring streets and sidewalks and possible alterations in traffic routes.

A physical factor that poses a constraint is zoning. The City’s jurisdiction on Zoning Regulations is strict and limiting. They intend to provide specific regulations that guide land and building uses. Since the Downtown Concept Plan, and Mission Plaza Master Plan are Specific Plans, a Specific Plan Overlay zone may have to be made for the project area. Additionally any new development in the project area will have to comply with the zoning type, which is mainly Downtown -Commercial (C-D), with Public-Facility (PF) for the Mission Plaza. In relation to Zoning Regulation, there are City ordinances they may constrain or limit what can be done. Another physical constraint is the environment. If the Mission Plaza is to expand, there is San Luis creek, which is adjacent to the Plaza. An Environmental Impact Assessment and Report will have to be made, and may state that there is significant impact to the area. This may limit or permit what can be built in the area.

Social factors that pose constraints can also be viewed as internal (local) issues the City has. These social factors can to be economic, political, and environmental. Additionally, constraints can be viewed as treats or weakness, as they may be disadvantage to the area or city.
2. Case Studies
The focus of this project is creating an active downtown. Features that contribute to an active downtown include street design/infrastructure with pedestrian amenities, public spaces, and pedestrian and bicycle networks.
2.1 Literature in Review

In order to create and develop an active downtown, it is first important to know the City’s typo-morphology, and distinguish features that contribute to an active downtown. In addition, it is important to look at the functional dimension, which "relates to how places work and how urban designers can make 'better' places or more precisely, increase the potential for them to develop," (Carmona, Heath, Tiesdell, Oc, 2010, p.201). In relation to functional dimension, many key features make up and create character to cities. They include movement, design of ‘people places’, environmental design, design for healthier environments, and infrastructure to support daily life. In looking at these features (from an urban design point of view), it is important to look and understand visual perception, social and environmental behavior. These features are also key parts of the "New Urbanism" movement, which promotes environmental habits and walkability through design. In distinguishing those features, it is essential to review and analyze literature of each feature. This will provide a more comprehensive overview and explanation of each feature, and their function in the project.
2.1.1 Streets

“Streets make up more than 80% of all public spaces in cities,” (NACTO). As the foundation for city infrastructure and form, and should be suitable for many uses and support multi-modal transportation. Although street networks vary around the world, and are continuously changing as cities develop, they are a crucial element to cities. Not only do streets provide a safe place for people to get around, but also serve as the foundation of our urban economies, with potential to foster business activity. Streets contain much physical and social activity in the built environment. The vitality of a thriving downtown requires a design approach sensitive to the multi-faceted role streets play in our cities. As Jane Jacob once stated, “streets and their sidewalks, the main public places of a city, are its most vital organs,” (Larice & Macdonald, 2013, p.429).

Streets traditionally have provided city infrastructure, molded city form, and created a means of navigating through a city. More recently, streets in urban areas have become more multi-functional and cities are creating and using streets as space. A common example of this is Farmers Markets. The City of San Luis Obispo has a weekly Farmers Market, which is held on the main strip of downtown on Higuera Street. Vendors and booths line the street for several blocks, which is completely blocked off from vehicle traffic, allowing people to freely walk in the streets. This is just one example of how streets can be used as space and how activities can bring life to streets and sidewalks. In creating great streets as spaces, “it takes collaboration and partnerships between local businesses, institutions, and individuals,”(Project for Public Spaces, 2016). Creating streets that are multi-functional allow more opportunities for activities, thus attracting more people to utilize the area.
2.1.2 Street Design & Type

Efficient functioning streets are developed through good design. This entails street and design elements/features and various street types. Design can influence activity and use of the street, “streets are important design elements and have a tremendous influence on the basic fabric of any place, whether urban or suburban,” (Larice & Macdonald, 2013, p.429). The National Association of City Transportation Officials (NACTO) came up with some design principles for fostering good streets. They include; streets are public space, great streets are great for businesses, design for safety, and streets are ecosystems. In addition to these principles, there are various elements that contribute to design, such, lane and sidewalk width, curb extensions, speed control and traffic calming components, transit components, and sustainable components. Along with design there various street types that support various roles and functions. There are streets types that are designed specific areas such as Commercial, Residential, Neighborhoods, and Downtown. In addition, there are streets types designed for function, such as Complete, Sustainable, and Living or shared streets. Complete Streets, as shown in figure 13, are designed to operate and enable safe access across all modes of transportation (pedestrians, bicyclist, motorist, and transit).

Figure 13: Complete Street, Saint Germain, Paris
Source: https://upload.wikimedia.org/wikipedia/commons/4/4b/Boulevard_Saint-Germain,_Paris_June_2010.jpg
Sustainable streets incorporate living/natural elements that deliver environmental benefits while attaining mobility and safety elements.

Figure 14: Sustainable Street, Cermak Road, Chicago
Source: https://www.flickr.com/photos/centerforneighborhoodtechnology/14443581570/in/photolist-o1k8As-iD-ZUu3-rnm99u-6cbEDV-dDZBnN-bAPFeH-rnk4uu-oEA5M3-rBBPnG-8fsMWX-7mPZxo-bvAgPt-kqbdCc-rRb-fuz-dv3Wyc-qH7ZMr-czGBjq-j8nmjF-9dwaTS-q4g1SZ-8fsMK8-maYjg2-hQU3qM-dalPCMC-9QyYh7-8fsLDZ-dgbvCnx-eaNDzrb-7b9QV-aeH1BM-5kV1zf-5kQIYT-bMWHER-7mL6TB-9ebp74-bEFVwd-kq3JUr8-maZYS3-9bbjMK-dcjr2T-fM6zhi-gFkEai-8fsRfc-p1FLSM-fsfrfm-p8xCAH-91nhWm-fvP663-feCtCf-8fwiof
Living streets or shared space/streets are designed with the approach to minimize segregation between pedestrians and vehicles. This is typically done by removing street features such as curbs, surface road, and traffic signs and lights.

When designing streets it is crucial to understand and knowhow and who will use them. With the main intent for streets to be design for functionality, it is also important that there is an aesthetic factor.
2.1.3. Networks & Connectivity

In the context of cities, networks are the arrangement of intersecting horizontal and vertical lines, referring to the streets. The configuration of streets and networks varies from city to city, and is largely based on how they city was built and its form, most of which emerged organically. Looking back at street networks there were distinct gridiron or organic curvilinear streets. With the presence of streetcars, automobiles and other forms of transportation, street networks have become modified. As cities grow and develop, networks change and are created how the city evolves.

While complex, urban street networks provide the framework for the city. Networks should have permeability in which there are a variety of activities and streets are designed to accommodate all modes of transportation. Additionally, they should be designed to fit the character of the city and its land use patterns, all while promoting walkability and bikeability (Riggs2015). Connectivity is a crucial element in creating active successful networks. Well-planned street networks help create sustainable cities that support the environmental, social, and economic needs of their residents. Sustainable street networks increase the number of people walking and bicycling and reduce vehicle miles traveled. Many cities in an effort to improve networks, connectivity and project the surrounding environment have built greenways.

2.1.3. A Pedestrians Networks

As more cities move forward in becoming sustainable, there is a large focus on planning and designing for pedestrians. Good pedestrian networks should be attractive, comfortable, and convenient. Thus, it is crucial to plan and design networks that pertain and meet pedestrian needs. Pedestrian networks can range in size and function, and are often times shared and combined with bike paths. As mentioned before, connectivity for urban networks is important, and also improves safety for pedestrians. Well-planned and designed street networks can enhance communities so less people drive, there is higher transportation use, and live healthier sustainable lifestyles.
2.1.3. B Bicycle Networks

In relation to pedestrian networks, bicycle networks have also become a large focus in creating sustainability. Many cities are now planning and designing bicycle networks and paths, in hopes of making it safer, easier and more convenient for people to bike. There are many types of bike paths, but there four major classifications. The figures below illustrate the various classifications.

Class I Bike Paths are non-motorized facilities, that are physically separated from vehicle traffic by open space or barrier. They are also called Bike Trails or Multi-Purpose Trails.

Figure 16: Class I-Bike Path
Source: Camille Jackson
Class II Bike Lanes are designated by striping, signing and pavement on streets or highways, adjacent to vehicle traffic. The strip is generally six – eight feet wide.

Figure 17: Class II-Bike Lane
Source :Camille Jackson
Class III-Bike Routes are shared with pedestrian and vehicle traffic. There are directional and information markers and signs, but no striping or barriers.

Figure 18: Class III-Bike Route
Source: Camille Jackson
Class IV Separated Bikeways contain appropriate bicycle-friendly design standards such as wide-curb lanes, barriers, and some that are raised.

Another type of bike path that is common, are bike boulevards. They are designed with the intent to give bicycle travel priority, so they are generally on streets with low motorized traffic volumes and speeds. This includes the use signs, pavement markings, and speed and volume management measures to create safe, convenient bicycle crossings of busy streets. Additionally many streets will have the “sharrow” markings, to indicate bike travel. Overall, by having dense connected bicycle networks, that are well designed, it could encourage bike ridership in cities.
2.1.4 Pedestrian Amenities

In relation to street design and understanding how and who will use the space, pedestrian amenities foster pedestrian friendly streets. Pedestrian amenities are desirable features for places, spaces and streets. They provide comfort, points of interaction, and can add aesthetic to an area. Adding amenities to well-planned and designed streets can promote and encourage walkability. Having communities and cities where more people walk creates health, social and economic benefits. In an article done by the Urban Land Use Institute, the researched at looked at whether there was economic value of pedestrian amenities and infrastructure. They concluded that, “in general, the studies show positive economic returns resulting after pedestrian infrastructure is upgraded, and that there is correlation between active walking districts and economic success of business located in those areas,” (Hammerschmidt, 2014). Pedestrian amenities vary and can range from types of wayfinding maps to different types of seating.

2.1.5 Public Spaces

Space plays a major role in city design and layout. In looking at space, “site design is important for physical activity patterns in that sites contribute to the basic attractiveness of the street as a place for physical activity,” (Larice & Macdonald, 2013, p.436). Public spaces serve various functions and are defined in number of ways. In creating successful public spaces, there are key factors to address. They include accessible (linkages) which is the most important, comfort and image, uses and activities, and sociability. When designing public spaces it is important to think and consider the built environment and behavioral themes. The built environment facilitates social behavior patterns, thus social relations are mediated by space. They also facilitate how we interact with the space itself. As suggested by Del Rio (2014) some themes for designing social space include; social interaction (basic human needs), personal space, safety & territory, and wayfinding.
In general, you can state how successful a public space is based on the presence of people. In a Habitat for Humanities conference, Clos (2016) stated, “We can’t discuss cities without discussing public spaces, because the public space is the city and we have to move forward [to] more participative, inclusive, and sustainable urban sceneries.” Thus, it is crucial for cities to maintain existing public spaces, and design ones that serve and benefit the community.

Plazas (squares) are a great example of public spaces, as they serve as the anchor and points of activity for many cities. Additionally they provide physical, social, and economic features for a city. Additionally plazas (squares) hold historic context, especially in many Europe countries, where many severe as landmarks. Although they vary from cities and countries, plazas today are more commonly used as gathering places. Example the Mission Plaza in San Luis Obispo acts as a historic icon/landmark as well as a social anchor for the downtown area.

2.1.6 Active Downtowns

In looking at active downtown, most think of downtown areas in major cities, such as New York, San Francisco, or Chicago. Although there is no single definition for an active downtown, all the features previously mentioned contribute and are key elements in creating an active downtown. A useful approach in planning and creating active downtowns is placemaking. With the focus on public space and realm, placemaking refers to “a collaborative process by which we can shape our public realm in order to maximize shared value. More than just promoting better urban design, Placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution,” (Projects for Public Spaces, 2015). In aiding placemaking, there are suggested principles and characteristics that promote active downtowns.
The following principles and characteristics were taken from research done by Gary Ferguson. In an article by Kent Robertson (2001), he stated eight principles for successful downtown development. They include:

1. The need for public private partnership
2. Development of a vision/strategic plan for downtown
3. Downtowns should be multi-functional, embracing many different uses
4. Downtowns must take advantage of their own particular heritage
5. Downtowns should be linked to waterfronts whenever possible
6. Downtowns should be pedestrian friendly and walkable
7. Downtowns should have established design guidelines
8. The importance of parking should not be overstated

In looking at downtowns of the 21st century, Richard Florida identifies characteristics for a creative downtown. They include:

1. Cultural diversity
2. Night life
3. Networking opportunities
4. Technology infrastructure
5. Mixed-use development
6. Compactness
7. Density
In creating viable downtowns, an Urban Models Task force of Tulsa Oklahoma created eight principles after reviewing other literature and cities. The eight principles include:

1. Take a broad, regional approach on metropolitan development
2. City planning should be long-ranged and comprehensive and encompass need policies and financial incentives to encourage people to live, work, and play downtown
3. Cultivate a downtown atmosphere as a place for diversity of uses activities and residential neighbors
4. Encourage development that contributes to a distinct and attractive sense of place
5. Support downtown development with a transportation network that maximizes access and mobility and reduces dependence on automobiles
6. Support mixed land uses and density in the downtown areas
7. Build on the unique assets of downtown
8. Establish guidelines for quality design

All these principles and characters promote active thriving downtowns. Many cities will include these ideas in Master Plans, Specific Plans, Design Guidelines and General Plans.
2.2 Case Studies

The case studies reviewed focus on the features previously listed, and best illustrate the functionality and intent of each feature. Additionally, the review of a case study on an active downtown provides a more comprehensive insight to how the features fit and function in a downtown area. These case studies are from local to international cities, thus giving a broad perspective of how the various project features function. However, it is important to note that not all methods and practices reviewed in the case studies can be used the same way everywhere. Various methods or practices may be specific to an area or better used in that area. Nevertheless, the purpose of the case studies was to help with research and analyze key features that foster an active downtown. In addition, the case studies help support my project idea.
2.2.1 Street Design

As mentioned before, there are various street types and elements. An example of a street type are Complete Streets, which are “streets are for everyone,” (Smart Growth America). In addition, Complete Streets improve traffic safety by making it easier for pedestrians to cross the street, all while encouraging walking and biking. According to Smart Growth America Complete Streets make “travel choices more convenient, attractive, and safe means people do not need to rely solely on automobiles. They can replace congestion-clogged trips in their cars with swift bus rides or heart-healthy bicycle trips.” Overall Complete Streets make streets more efficient and productive.

San Francisco is one of many walkable cities in the United States. With historic sites, parks, and landmarks, the city offers a lot to explore and see. However “over 800 people are hit by cars every year. Annually over 100 people are either seriously injured or die as a result of traffic violence,” (WalkSF). As a busy city with many modes of transit, it is crucial to make sure all modes are cohesive and safe. There are many programs, organizations, and policies whose mission is to make walking and biking in San Francisco safer and more accessible.

As part of the City of San Francisco’s Vision Zero goal, SF Municipal Transportation Agency (SFMTA) has implemented safety improvements along 2nd street. The complete street will be constructed on 2nd street from Market to King street stretching from downtown San Francisco to the SOMA district, as part of the 2nd street improvement project. 2nd street serves as a primary pedestrian, bicycle, and transit thoroughfare and “green connector” for the area, so it was important to improve street conditions. Thus, the goal for creating a complete street was to provide pedestrian safety along corridor, provide a separate bicycle lane for added safety, create a more attractive public realm, and add to the economic vitality of the project corridor with increase foot traffic. This project correlates with the intent of the Complete Streets Act(2008), by implementing Complete Streets policies as part City and County general plans.
Some safety elements that SFMTA will include are painted new bike lanes on 2nd Street between Market and Howard Streets and restrict left turns from Second Street onto Mission, Folsom, and eastbound Harrison Streets. Prohibiting left turns will increase safety on this high-injury corridor by reducing conflicts between turning motorists and people crossing the street. Some street improvements include a new northbound bike lane between King and Townsend Street, new right-turn lanes at the Mission and Howard intersection, relocation of some loading zones onto side streets, high-visibility crosswalks across alleys, and green “sharrow” markings along the corridor from Howard Street to King Street. Additionally, some proposed changes include wider sidewalks, separated bike lanes (in both directions), paved roadways, ADA-compliant curb ramps, and enhanced landscaping. “This project will work towards implementing that vision by transforming 2nd Street into a pleasant multi-modal corridor that improves safety and access for pedestrians, bicyclists, and transit as well as drivers,” (San Francisco Department of Public Works).

Figure 20: Second Street Improvement Project
Source: http://sfdpw.org/sites/default/files/FileCenter/Documents/3319-Design%20Details.pdf
Although the 2nd street improvement project is in progress and shows potential, city of Portland Oregon has successfully implemented a Complete Streets. In recognizing a lack of poor transportation and areas being under served, especially in East Portland, the City Council adopted the final plan called Portland Bicycle Plan for 2030 in 2010. In correlation with the Portland Bicycle Plan, the city created and updated other documents to help foster better transportation and set guidance for transportation projects. East Portland has seen more active transportation projects, since the creating and updating plans.
2.2.2 Networks & Connectivity

Networks facilitate the connection and ease of access throughout the city. In designing efficient networks, it is important to consider who and how they will be used. Therefore, there are design elements/features to consider. In evaluating the state of pedestrian and bicycle networks, the Federal Highway Administration (FHWA) adapted some network principles. The principles include cohesion, directness, alternative routes, safety and comfort.

In creating efficient networks, there is a conception that one-way streets provide safer conditions for pedestrians and bicyclist. While some one-way streets incorporate road diets to mitigate traffic, many have multiple lanes and cars tend to travel faster. This creates unsafe crossing conditions, and puts pedestrians and bicyclist at a higher risk of being hit. As stated by Riggs & Gilderdbloom (2015), “traffic flow increased after implementation of two-way flow, but traffic accidents decreased. These results provide evidence that conversions can promote mobility, safety, and livability.” In designing and implementing networks, it is important to look and consider the conditions and characteristics of the area. Well-designed networks should enhance accessibility.

2.2.2. A Pedestrian Networks

The Indianapolis Cultural Trail was created with the intent of making it easier for people to explore to the city’s cultural districts, which was disconnected to downtown. In 2007 the project’s pilot phase was done, and included the city’s first set of on-road bicycle facilities. Over the next six years, the project went through seven phases, all in which were supported by public engagement. In May of 2013, the eight-mile long trail was constructed, forming a loop around downtown. It connects the cities six cultural districts and neighborhoods, in addition to the city’s greenway.
In addition, the trail helped connect an existing trail network that is over 85 miles of bike lanes. Additionally, the trail has, “enhances access to many destinations within Indianapolis by walking and biking, and its proximity to neighborhoods and commercial districts provides users with a broad range of amenities from which to choose,” (Federal Highway Administration, 2015, p.15).

Figure 22: Indianapolis Cultural Trail
2.2.2 B Bicycle Networks

London is one of the many European cities that is well known for its walkability and high bike ridership. Since 1960s, there has been a decline in ridership as an everyday mode of transport and a slow regrowth since the 1970s. However, an increase in ridership grew in the 21st century. The increase in usage can be attributed to Mayor Livingstone’s push to increase bicycle usage, and the launch of the Barclays Cycle Hire system (Santander Cycles), by the Transport of London in 2010. The Santander Cycles are a self-service bike share program, with docking stations throughout London. They are convenient for commuting, and allow people who do not own bikes to have access to one. They generally placed in bust active locations, making it easy and convenient to get one. Another reason there has been a shift and increase in biking in London is due to the congestion into central London along. With new congestion charges for entering (with an automobile) at peak times, people may consider alternatives for getting into the city.

With the increase of bike ridership and Barclays Cycles, there has been a safety concern for bicyclist. In 2013, City Hall said they could spend about £1 billion on improvements, to make biking safer and easier. In 2015, February 2015 Mayor approved “Crossrail for Bikes” (Cycle superhighways), which will make streets safer and accessible for bicyclist, (see figure 23).

Cycle Superhighways “are cycle routes running from outer London into and across Central London. They give you safer, faster and more direct journeys into the city and could be your best and quickest way to get to work,” (Transport for London). There are currently about 18+ miles of cycle superhighways and about eight major cycle superhighways. They run from East to West and North to South through London, passing major locations and landmarks.
The purposes for the Cycle superhighways and Crossrails are to provide bikes safety from riding with other vehicles on the road and create networks that take them throughout the city. The hope is to also improve junctions and provide more traffic signals for bicyclists so that there is a more presence and awareness of bicyclists on the road. In addition, with safer conditions for using bikes, the hope is to relieve and reduce road pressure, congestion, and cut pollution output.
2.2.3 Pedestrian Amenities

As mentioned before pedestrian amenities promote pedestrian friendly streets, thus enhancing the experience for them and the area. Amenities not only benefit pedestrian, but also benefit businesses in the area, by attracting and creating activity. A new, but growing example of a pedestrian amenity are Parklets. Parklets are an extension of the sidewalk, which intend to provide more space for people using the sidewalk (see figure 24). They typically use parking lanes and replace several parking spaces. San Francisco is the home of the first parklet, but since then many cities are creating and implementing them. The organization Pavements to Parks has collaborated with the San Francisco Planning Department, Department of Public Works, and the Municipal Transportation Agency to put up Parklets throughout the city. “San Francisco’s streets and public rights-of-way make up 25% of the city’s land area; more space than all the public parks combined. Many of San Francisco streets are excessively wide and contain large underutilized areas, especially at intersections. San Francisco’s “Pavement to Parks” program seeks to test the possibilities of these underused areas of land by quickly and inexpensively converting them into new pedestrian spaces.” (Pavement to Parks).

Figure 24: Parklet, San Francisco
Source: https://www.flickr.com/photos/sdot_photos/16007306503
The creation and implementation of parklets in San Francisco was started by an event called Park(ing) Day. Created in 2005, the City still holds the event, and it has spread worldwide. The purpose of Park(ing) Day was to bring attention to the need for more open space, and the debate and politics on how public space is created and allocated, thus to improve the quality of life in the urban setting. How it works, is people would pay for a parking meter spot that lasted two hours, and transform the parking spot into a temporary open public space with art installations and/or greenery. Park(ing) Day has brought light to a variety to social issues in an urban context. Some examples of projects created have ranged from health clinics to free bike repair shops, to just a space with activities and art installations. Although the projects from Park(ing) Day are temporary, they inspire and promote permanent features to the urban landscape of cities.

Figure 25: Park(ing) Day
Source: https://i.vimeocdn.com/video/369200169_1280x720.jpg
The purpose and intent of parklets are to provide public space for passersby to relax and enjoy the area. They are designed and intended for pedestrians, in that they provide and offer amenities that include seating, a place to rest and socialize. Many parklets also include visual amenities like greenery and artwork in hopes to engage a passerby. In addition, some parklets accommodate bikes, with parking space for them. More recently many restaurants have incorporated parklets as part of their outside seating. With lacking sidewalks, urban parks, and pedestrian amenities, less people feel inclined to walk. Parklets bring life back to the streets and communities, and create a destination or place someone may want to stop by. Parklets promote walkability and interaction with the community.

2.2.4 Public Spaces

Public spaces provide a social space for people and add character to a city. Federation Square in Melbourne Australia was created in 1996 as the result of an international design competition to create a new city center. Since Federation Square was the first large public square or gathering place in Melbourne, the intent in creating the site was to accommodate up to thousands of people in an open amphitheater style. Additionally the square would support an array of civic, cultural, and commercial activities, “the site functions as a street-like space with varying uses,” (Lindgren Wimble, 2008). This would include housing The Australian Centre for the Moving Image (ACMI), The Ian Potter Centre: National Gallery of Victoria, Australia, The BMW Edge Amphitheater, Headquarters of the Special Broadcasting Service (SBS) (public television), Australian Racing Museum and Hall of Fame, National Design Centre, and The Melbourne Tourist Information Centre. Not only does Federation Square serve as an active cultural hub, but is also serves as a connector. It is a link between the city’s historic central district and surrounding landscapes. It is located near Melbourne’s transportation hub and is built above the Jolimont rail yards. The “Deck,” which is beneath the square is one of the largest expanses of railway decking ever built in Australia.
This is why Federation Square is also known as “New civic gateway,” (Lindgren Wimble, 2008), since it serves as a transition into the city.

The square consists of a public plaza with individual spaces with cafes and restaurants shown in figure 26. “Creating spaces that can function for different purposes. The whole plaza balances the need for intimacy and security with openness without feeling too empty or deserted,” (Lindgren Wimble, 2008). In addition to the plaza are buildings, which provide a gallery space, performance space and facilities for cafes. Federation Square’s “distinctive facade and design of surface geometries allow for the individual buildings within Federation Square to be differentiated from each other. However, the building still maintains an overall coherence. Federation Square’s visitors are both locals and tourists; however, visitors are not drawn by the cultural centers or museum, but by factors including the public square.
2.2.5 Streets as Space

Although there are set spaces intended on public space, there has been a shift into making streets become multi-functional and purposed. Farmers markets are a common example of how streets have multiple functions. Another example is temporary events, in which streets are temporary blocked off from traffic, and allows pedestrians to use them.

Raahgiri Day was India’s first sustained car-free citizen initiative that began in Gurgaon on November 17, 2013. The intent was to create a public space and encourage activity for the community. With the support of local organizations, Raahgiri Day has been made possible. For four to five hours every Sunday roads are blocked off from motorized vehicles, and are open for the public to bike, skate, run and walk. There are leisure activities such as street games, street dancing, Yoga, aerobics and Zumba class, for the community to partake in. The vision of Raahgiri Day is to encourage people to develop living streets, or streets that encourage pedestrians, bicyclists and other non-motorized transport modes. Currently the Raahgiri Day movement is being done in 15 cities in India. The purpose behind Raahgiri day is to address pedestrian safety, environmental quality, and promote social activity.

![Raahgiri Day Movement](https://www.flickr.com/photos/embarg/12742759774)
With the creation and implementation of Raahgiri day, Gurgaon has seen many beneficial outcomes. This includes the installation of eight-kilometers of cycle tracks a 10% reduction in traffic accidents, 49% in air and noise pollution, and more inclusiveness in the community.

2.2.6 Active Downtowns

When talking about active downtowns many think about places such as New York City or San Francisco. Although these are major urban cities, there are small and mid-sized downtowns that are just as active and thriving. Boulder Colorado is an example of a small/ mid-sized successful downtown. With its historic root, beautiful scenery and variety of activities, attractions, and events, downtown Boulder is “an integral part of community life,” and serves as a venue for the community, (Ferguson, 2005, p.23). Boulder holds various characteristics and elements that contribute to making it an active downtown. It has varying ways to provide needed services, such as Downtown Advocacy, Strategic Planning, Environmental Management, and Business Attraction. The downtown Business Improvement District (BID) provided ambassador programs and services for things like landscaping. Another element is having multiple traffic generators. This is means to pull and attract people into the downtown area, or there is heavy flow of people moving through the area. The University of Colorado Boulder is five to ten blocks away from downtown, which has a significant impact. Due to the proximity of the University, many will walk and take trips to downtown. This promotes and encourages walkability, which is another key element in active downtowns.

In the heart of downtown in Pearl Street, is a four block pedestrian mall. Pearl Street is car free, and there is only cross traffic, so the four blocks cater to pedestrians. The mall is filled with restaurants, shops, hotels, entertainment and pedestrian amenities. Additionally there are events, local artists and vendors that along the strip.
Pearl Street is a major attraction for downtown that pulls in both locals and tourists. Not only does it provide a safe place for pedestrians to walk and socialize, but also is a huge contributor to the economy of the city. Although Boulder is small to mid-sized, the downtown area has much to offer and is an important part of the city.

Figure 28: Pearl Street Mall
Source: https://www.flickr.com/photos/kenlund/15397300333
2.3 Lessons Learned

From the reviewed case studies, the lessons learned regard elements that contribute to thriving functional downtowns. These elements include streets and street design, networks, pedestrian amenities, and public space, which facilitate active downtowns. Streets are a fundamental part of cities and should be designed accordingly. Additionally, they should serve all modes of travel. Networks and connectivity are crucial into how people move around a city. They too should be designed accordingly and fit the functions and patterns of the city. Having pedestrian amenities not only add character to the city, but enhance pedestrian experience. Thus, they encourage walkability. In relation, public spaces also add character and enhance pedestrian experience. They also offer places for activity, which can attract more people to the area.

In looking at these case studies, whether local or international, the various elements addressed provide a key part of how the city functions. A lack of poor planning and design greatly affect a city, and their functionality. Some other lessons learned were; facilitate and listen to the community’s needs, provide a variety of opportunities (amenities, activities, mix uses), build with character of the city, and prototype things and experiment with ideas. Cities that do not listen or facilitate to the needs of the community cannot provide a downtown the community will want to use. Thus by creating various opportunities, there are many activities and uses for people in the downtown area.
An active downtown not only adds to the city’s character but greatly impacts and benefits the community. By providing a mix of activities and use of spaces, that are easily and safely accessibility, people will use and interact in the downtown area. Thus, streets, networks and public space are elements that should be reviewed. These elements should be planned and design accordingly to aid the functionality of the area.
3. Project Proposal
This section focuses on design ideas and proposal of the project. It is aided by concepts and visuals. The design processes and methodology started with looking at streets and area blocks in downtown San Luis Obispo that could use potential enhancement. Additionally streets and neighborhoods surrounding downtown were looked at for potential bicycle networks, to foster connectivity into downtown. Once the project site and bicycle networks were established, concept designs of streets were created. Additionally digital images from Streetmix were made, which better capture and illustrate the street design of the project. Along with visuals, recommendations were made. In conjunction with the current update of the Downtown Concept Plan and Mission Plaza Master Plan, these designs and concepts comply with community feedback and the City Design Guidelines and General Plan.
3.1 Site Maps

The site plans are created to visualize where the proposed elements are to be placed on site, and the proposed bicycle networks. As stated in methodologies, research of streets and areas was done, when picking the site and networks. Figure 29 is the location of the project site. The project site is located in the red area, which consist of Mission Plaza, Monterey street(from Chorro to Santa Rosa street) and Chorro street(from Palm to Higuera street). This figure allows one to visualize where the sites is in the context of downtown. Figure 30, is of the proposed bicycle network. The blue lines indicate the networks, and the light blue area indicates the downtown core. This figure allows one to visualize the various networks into downtown, from the surrounding neighborhoods.

Figure 29: Site Plan of Proposed Project
Source: Camille Jackson

Figure 30: Proposed Bicycle Networks
Source: Camille Jackson
3.2 Concept Proposal

The proposed project consists of two components that include the Mission Plaza Area and bicycle networks. The proposed project site and main focus, is the Mission Plaza area shown in figure 29. It includes Chorro Street from Palm to Higuera Street and Monterey Street from Chorro to Osos Street and potentially to Santa Rosa Street. Since these streets border the Plaza, and serve as networks into downtown, they offer many opportunities. Also included in the project site is the Mission Plaza, which offers opportunities with the creation if the Master Plan. The Mission Plaza serves as an anchor and attraction for the downtown area. With heavy pedestrian traffic, and multiple uses for the plaza, the proposed site offers opportunity for improvement and enhancement.

The second component of the proposed project is addressing bicycle networks. Some proposed bike network include Garden Street from Higuera to Upham, Osos-Santa Barbara Street from Walnut to Upham Street, Palm Street from Pepper to Nipomo Street, Pacific Street from Santa Rosa to Higuera, and extend the bike boulevard on Morro Street from Upham to Walnut and Chorro Street from Walnut to Upham street, (refer to figure 30). These proposed networks are in residential areas that surround the downtown area, and provide a means of safe, quick and easy connections and transitions to the downtown area. Additionally, these networks could include intersection treatments, signals, and traffic calming elements, which aid safe and easy accessibility for bikes.

Many streets proposed in the City’s Bicycle Transportation Plan foster connectivity into downtown. Those proposed street too could incorporate intersection treatments, signals, and traffic calming elements. These elements should be considered on arterial streets that connect into the downtown, which include Monterey, Santa Rosa, Broad, Marsh and Higuera Streets. In conjunction with the update of the Downtown Concept Plan, the Mission Plaza Master Plan, and Bike Plan, the proposed project offers the ability to facilitate the community’s and city’s needs and wants.
Although the City is already in the process in updating the Downtown Concept Plan, creating the Master Plan for the Mission Plaza, and has a Bike Plan, this proposal can further assist in any further action or decision. As a vital part of the city, it is crucial to keep the character of downtown, while enhancing and improving it. As the city continues to grow it will be important to make necessary changes that comply with the communities needs and abide by City documents. The overall proposal consists of multiple elements that provide key roles that work and come together as a whole. The proposed project is facilitated by the following elements and their function:

Streets and Street Design/ Type- Streets provide the fundamental structure (backbone) of cities, in which they move people throughout the city. Street design and type provide aesthetics and dictate functionality of a street.

Networks- Along with streets, networks provide connection and accessibility throughout the city.

Public Spaces - Public spaces provide a place for to socialize, and activities for the community, while also adding potential aesthetics.

Pedestrian Amenities- Pedestrians amenities primarily serve to pedestrian needs, but also offer activities and aesthetics for an area.
3.3. Visioning & Proposal

**Vision Statement**

The vision for the proposed project and site is to foster an active downtown. The proposed and recommended elements are to enhance and increase activity in and to the downtown area. Creating an active comprehensive downtown, will help increase community’s use and bring visitors into the area. Overall, the proposed projects provides social, aesthetic, and economic vitality for the city. The proposed project and recommendations provide the city with opportunities for implementations and projects in the future that serve the community and city.

**Proposal Statement**

The main focus of the project is the Mission Plaza area. This area will look and address street design, type and pedestrian amenities on Chorro and Monterey Street. The intent with these two streets is to make them pedestrian and bike friendly. Design elements would include street conditions and intersections. Some proposed street conditions include curb extensions such as bulb-outs and pinch points, pervious pavements, and widening sidewalks. Some proposed intersection conditions include a gateway, scramble, raised crosswalks, raised intersection (change in pavement), pedestrian islands crosswalk blockers, and roundabout. These conditions are designed to create walking and biking safer, easier, and more accessible. Potential street types include living or shared streets, pedestrian and bike only streets, or streets with segments that are partially blocked off from vehicles.

The Mission Plaza area will look and address public space and use along with pedestrian amenities. The plaza offers opportunities for many activities/events and uses. The intent of the bicycle networks are to increase accessibility into downtown.

Although the city has proposed some bicycle networks, the idea is to create more networks that specifically surround the downtown area. Additionally these networks should include street design and elements that facilitate bike safety.
3.4 Concept Designs

The following are renderings of concept ideas for the streets in the proposed project. They include street design elements, street types, and pedestrian amenities.

Figure 31: Chorro Street-Shared  
Source: Camille Jackson
This design features Class II bike lanes, with no parking lanes, a parklet and a widen sidewalks.

Figure 32: Chorro Street- Car free  
Source: Camille Jackson
This design is for pedestrians and bicycles only. It features Class II bike lanes, a parklet and widen sidewalks.
Figure 33: Monterey Street-No Parking
Source: Camille Jackson
This design features a Class II bike lanes, with no parking lanes, and a parklet.

Figure 34: Monterey Street- with Parking
Source: Camille Jackson
This design features a Class II bike lanes with parking on one side, a parklet and widen sidewalks.
This design features a shared street design, with a Class III bike routes, a parklet, and widen sidewalks.

This design features a shared street design, with a Class III bike routes, a parklet, widen sidewalks, with parking on one side.
This design is for pedestrians and bicycles only. It features Class II bike lanes, parklets and widen sidewalks.
4. Conclusion and Recommendations
San Luis Obispo’s downtown, is a vital part of the city and community, as it serves as an economic center with many activities. It is important to keep the city’s character, and historic roots when making alterations. The proposed project was created to provide the City of San Luis Obispo with ideas and elements about how to foster an active downtown. Since the city is currently taking steps in enhance the downtown area with new projects and plans, the proposed project can act as an aid and guide for envisioning the future of downtown.
Recommendations

The following recommendations are based off research, case studies, city documents and plans and input from the community. The recommendations primarily have to do with enhancing streets (for pedestrians and bicyclist) and public space.

From the outcome of the Downtown Concept Plan and Mission Plaza workshop, many community members believe in enhancing the Downtown and the Mission Plaza. The proposed project site offers many opportunities to make enhancements. In relation to the site, Chorro and Monterey Street act as connections into the downtown. They should be open to people, and facilitate high volumes of people and function. Thus, the streets should be designed to foster multi-function/purposes. This can be done by converting the pavement to the people, and opening streets to new programing. This can include temporary closing down the street and holding events and activities, like farmers market. Chorro and Monterey could be designed as shared streets, Complete Streets, or streets for pedestrians and bicyclists only. Recommended design elements for these streets include wide sidewalks, curb extensions (bulb-outs), raised intersections/crosswalks, different pavement for crosswalks, scrabbles and mid-blocks.

Additionally, amenities can be added to these streets, such as parklets, planter boxes, open space/greenery, outside dining, and a variety of seating. The Mission Plaza could add more amenities, such as seating and outside dining, and hold more events and activities.

In terms of bicycle networks, the City’s Bicycle Transportation Plan has proposed many streets for bike pathways. The recommendations for the bicycle networks primarily look at design elements. The networks could be protected and buffered, varying on the street. There could be more signs, markings and signals so bicyclists are made more apparent. Additionally interactions treatments should be made along with traffic calming measures. Figure 38, demonstrates traffic calming elements, on a bike boulevard on Morro Street in San Luis Obispo.
A way to test these ideas, is through a method called ‘tactical urbanism,’ or pilot projects. Most of projects are cheap, temporary, and heavily community driven, with the hopes of becoming implemented. The intent of tactical urbanism is make small parts of the more lively.

In implementing these recommendations, the City can emphasize pedestrian and bicyclist needs. This can be done by encourage placemaking, zoning ordinances and form based codes. Through Public Works, the city can include improvements (amenities for the sidewalk, or conditions to the street), when they do street maintenances. Additionally, with new projects going into downtown, it can be required that they make some enhancements to the street or sidewalk.
References


Habitat III Thematic Meeting on Public Spaces Kicks Off Today in Barcelona. (2016, April 4). Retrieved April 09, 2016, from


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Appendices
Appendix A: Policy Review of Land use Element

4.5. Walking Environment.
This policy promotes the creation of vibrant streets in the downtown area, and suggests elements to add through design. This can help foster and promote walkability in the downtown area.

4.11. Downtown Green Space.
This policy promotes green spaces downtown, which includes adding pocket parks, parklets and open spaces. This is a great way to enhance and create vibrant streets. There are also environmental benefits with adding green space. The policy provides project opportunities.

10.4. Encouraging Walkability.
This policy encourages projects that support pedestrian movement. With more projects that foster to pedestrian, it will enhance accessibility. This can encourage and promote more to walk.
Appendix B. Policy Review of Circulation Element

4.1.1. Bicycle Use.
This policy enhances bicycle networks in the city, while promoting and increasing ridership.

4.1.4. New Development.
This policy will provide more bicycle networks and amenities with new development. This provides opportunities for projects design features to enhancing biking.

4.1.5. Bikeway Design and Maintenance.
This policy will enhance current bicycle networks, with opportunities to create more networks. Additionally with maintained streets, it will encourage people to bike make it more enjoyable. This also presents design, project and connectivity opportunities.

4.1.6. Bikeway Development with Road Improvements.
This policy provides opportunities to create and improve bike facilities. Thus, this can enhance networks/connectivity, and promote biking. This presents project and design opportunities.

5.1.2. Sidewalks and Paths.
This policy will enhance streets and paths, while also creating better accessibility and connectivity. The presents design and project opportunities.

5.1.5. Pedestrian Crossings:
This policy will improve pedestrian crossing, in areas of heavy traffic, making it safer it walk. This will enhance the walking experience, by making it safer.

5.1.6. Downtown Commercial Core.
This policy, will create better pedestrian accessibility in the downtown, and enhance the walking experience. Additionally this can promote walkability in and around downtown. This presents design and projects opportunities.

This policy supports travel by all users in a safe way. Additionally it encourages walkability and bikeability. This presents design and projects opportunities.
Appendix C. Policy Review of Bicycle Transportation Plan

1.2 Neighborhood traffic management projects.
This policy promotes creating safe bicycle networks throughout neighborhoods. With creating safe networks that are easy to access, encouraging more people to bike. This presents design, and connectivity opportunities.

1.3 Traffic Calming.
This policy helps enhance streets to make them more bike friendly. This may encourage more people bike, with safer streets. This presents design opportunities

1.4 The City shall include small scale projects.
By adding elements that cater to bikes, this creates safer streets for bikes, making people more aware of them.

1.8 Development shall provide bicycle facilities.
Adding and incorporating bicycle facilities creates amenities and accessibility for bicyclist. More facilities could encourage more biking. This presents connectivity and project opportunities.

1.13.
This policy adds design elements to streets to complex traffic corridors. Adding the various design elements create safety for the bicyclist, and make them more apparent. More streets with safety elements could encourage more people to ride. This presents design and project opportunities.

Figure 39: Proposed Grade Separation

![Proposed Grade Separation](http://slocity.maps.arcgis.com/apps/Viewer/index.html?appid=798ac2f5ca70486d95c2eb59ba8da4b)

This image shows the proposed grade separation. The grade separation will help with accessibility and connectivity throughout the city, while making it safer to get around.
Appendix D. Implementation Review of City of San Luis Obispo Climate Action Plan

TLU 4.1
This implementation looks at developing Complete Streets, which cater to all modes of transportation. This can help create and facilitate a sustainable city, while encouraging walkability and bikeability.

TLU 4.2.
This implementations looks at developing and adopting a Downtown Pedestrian Plan. Developing a plan specifically towards pedestrians, the city can address their needs more closely. In complying with the General Plan, more projects and enhancements can be made for pedestrians.