A Concept Development Plan for Redwood City

Greg Vine | Spring 2014
Title: Broadway Central: A Concept Development Plan for Redwood City

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THE PROJECT

The proposed Broadway Central development is located in Redwood City, Ca. The site is located between two major anchors within the City, the downtown core and the future Stanford in Redwood City development. Its location along Broadway, a major arterial road that runs east/west adjacent to major connectors, makes the project site a prime location for development.

Of the approximate 14 acres that the proposed plan encompasses, much of that currently is underutilized. However, the Broadway Central development plan will foster a community that can live near their work while supporting activities through new shopping, business, and recreational opportunities. The physical form of future development will complement the existing businesses while activating the public realm. Storefronts will be close to the sidewalk and have ample visibility into the businesses to make the area more comfortable and interactive.

The Redwood City General Plan, Redwood City Downtown Precise Plan, Stanford in Redwood City Precise Plan, and the Broadway Corridor Study: Land Use and Circulation Alternatives were used as both references and a guide for the creation of the proposed Broadway Central plan. History and existing conditions of the area were adapted from the fourth-year community planning studio’s research in the fall and winter of 2013-2014 at California Polytechnic State University’s City and Regional Planning department, for creation of the Broadway Corridor Study. Case studies were then used to determine best practices for design development including a neo-traditional downtown center for Boca Raton, Florida intitled “Mizner Park” and the Southborough mixed-use urban village project for Charlotte, North Carolina.
As the oldest city on the San Francisco Peninsula, Redwood City has an extensive and diverse history. Originally a lumber port town during the Gold Rush, Redwood City became the county seat of San Mateo County in 1856. For close to a century, logging, shipping, and farming were the major industries throughout the city.

Redwood City was named for the giant redwood trees which were logged from the forests in the hills to the west. Cut lumber was dragged by oxen teams down to the wharves at the Redwood embarcadero.

In 1851, a deep-water channel that ran inland to what is now downtown Redwood City was discovered off of San Francisco Bay. Named Redwood Creek, this channel was used by the lumber companies to ship wood and logs from the redwood forest in the peninsula hills to San Francisco.

Before the turn of the century, lumbermen also doubled as longshoremen when they arrived with wagons of lumber at the Redwood City port.

The county courthouse building is shown to the right of the photograph, and the high school and grammar school buildings are across Broadway at left.
In the 1920s, as development continued, the hub of commercial activity shifted west to El Camino and Broadway. Following WWII, Redwood City saw large growth and many new industries began to emerge. Technological companies started to locate to Redwood City, beginning with Ampex, the developer of audio and videotape, in the 1950’s to Oracle, a computer software company, in the 1980’s. From here, Downtown grew into a vital center for commerce, government, and manufacturing.

Many large industries located in Redwood City after World War II, including world-renowned Ampex Corp., the developer of magnetic tape and recording equipment.

As Redwood Creek gradually silted in, a plan for a modern deep-water port was developed farther east towards the bay entrance.

The slogan that is still present today was chosen in 1925 and was submitted by Wilbur H. Doxsee for a prize of $10. Doxsee got his idea from the US and German governments determination (prior to WWII) that Redwood City was at the center of one of the world’s three best climates.
In the late ‘90s and early 2000s, Redwood City began redevelopment of many of its major downtown parcels as well as updates to its streetscaping, and has seen a very successful revitalization that continues and is expanding into other areas.
THE PEOPLE

Population data is important to understand the current population and their locations within the city as well as population projections to determine future conditions. According to data from 2007, Redwood City had the fifth largest population in San Mateo County. This is most likely due to the fact that Redwood City is the San Mateo County seat. Therefore this location concentrates more jobs and people within the city.
THE PEOPLE - POPULATION

According to the 2010 United States Census, Redwood City’s population was 76,815 with 29,167 housing units. To compare with overall county data, San Mateo County had a population of 739,311 with 271,031 housing units. Table 1 shows the population increased only 2% from 2000-2007, demonstrating that Redwood City has most likely reached its build out capacity in terms of supplying additional housing. The lack of housing will need to be a priority for any future development project within the City. Due to lack of available space, infill housing may be appropriate for the Broadway Central development proposal.

Population gender data shows that the female and male populations are nearly equal, with a 0.4 percent difference (see Table 2 below). This data is important in understanding that the needs of varying genders are balanced.

Table 1: Population in San Mateo County by City

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>2000</th>
<th>2007</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redwood City</td>
<td>75,447</td>
<td>77,269</td>
<td>2%</td>
</tr>
<tr>
<td>Belmont</td>
<td>25,138</td>
<td>26,078</td>
<td>4%</td>
</tr>
<tr>
<td>Daly City</td>
<td>103,621</td>
<td>106,160</td>
<td>2%</td>
</tr>
<tr>
<td>East Palo Alto</td>
<td>29,450</td>
<td>32,817</td>
<td>12%</td>
</tr>
<tr>
<td>Foster City</td>
<td>28,803</td>
<td>30,308</td>
<td>5%</td>
</tr>
<tr>
<td>Hayward</td>
<td>140,030</td>
<td>147,845</td>
<td>6%</td>
</tr>
<tr>
<td>Menlo Park</td>
<td>30,786</td>
<td>31,490</td>
<td>2%</td>
</tr>
<tr>
<td>Mountain View</td>
<td>70,708</td>
<td>73,262</td>
<td>4%</td>
</tr>
<tr>
<td>San Carlos</td>
<td>27,697</td>
<td>28,857</td>
<td>4%</td>
</tr>
<tr>
<td>San Mateo</td>
<td>92,482</td>
<td>95,776</td>
<td>4%</td>
</tr>
<tr>
<td>South San Francisco</td>
<td>60,552</td>
<td>62,614</td>
<td>3%</td>
</tr>
<tr>
<td>Sunnyvale</td>
<td>117,229</td>
<td>135,721</td>
<td>3%</td>
</tr>
<tr>
<td>San Mateo County</td>
<td>649,623</td>
<td>739,469</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Redwood City Housing Element

Table 2: Population in Redwood City by Gender

<table>
<thead>
<tr>
<th>Population by Gender in Redwood City</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>76,815</td>
<td>100%</td>
</tr>
<tr>
<td>Male Population</td>
<td>38,246</td>
<td>49.80%</td>
</tr>
<tr>
<td>Female Population</td>
<td>38,569</td>
<td>50.20%</td>
</tr>
<tr>
<td>Difference in Population</td>
<td>323</td>
<td>0.40%</td>
</tr>
</tbody>
</table>

Source: 2010 US Census Data

Redwood City residents gather for a little fun in the sun at Courthouse Square located in downtown.
Varying ages contribute to the need for different housing options for all age groups. For example, younger residents may want to live in more active spaces, while senior age residents may need more nearby accommodations available to them to meet their needs. Table 3 portrays the age groups that exist within Redwood City. It shows that the middle age group had the highest increase in percent change from 1990 to 2000. From projections available from the Association of Bay Area Governments (ABAG) and knowledge that the “baby boomer” age group will continue to be a large group will continue the need for additional senior housing. Young adults was the largest age group from age 25 to 44 at 37% of the total population. This information portrays young adults are choosing to live and work in Redwood City and that there are adequate employment and housing services for them.

### Table 3: Age Characteristics

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number 1990</th>
<th>Percent of Total 1990</th>
<th>Number 2000</th>
<th>Percent of Total 2000</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool (0-4 years)</td>
<td>5,249</td>
<td>8%</td>
<td>5,679</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>School Age (5-17 years)</td>
<td>9,204</td>
<td>14%</td>
<td>11,812</td>
<td>16%</td>
<td>28%</td>
</tr>
<tr>
<td>College Age (18-24 years)</td>
<td>6,547</td>
<td>10%</td>
<td>6,302</td>
<td>8%</td>
<td>-4%</td>
</tr>
<tr>
<td>Young Adult (25-44 years)</td>
<td>26,199</td>
<td>40%</td>
<td>28,185</td>
<td>37%</td>
<td>8%</td>
</tr>
<tr>
<td>Middle Age (45-64 years)</td>
<td>11,355</td>
<td>17%</td>
<td>15,733</td>
<td>21%</td>
<td>39%</td>
</tr>
<tr>
<td>Senior Adults (65+ years)</td>
<td>7,518</td>
<td>11%</td>
<td>7,691</td>
<td>10%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>66,072</strong></td>
<td><strong>100%</strong></td>
<td><strong>75,402</strong></td>
<td><strong>100%</strong></td>
<td><strong>14%</strong></td>
</tr>
</tbody>
</table>

Source: Redwood City Housing Element
THE PLACE - HOUSING CHARACTERISTICS

Table 4 below shows the number of housing units from 1990 to 2007. The 2000-2007 percent change in units portrays that multi-unit housing types have seen the biggest increase. This shows that there is a need for additional multi-unit units within Redwood City rather than single family homes.

According to the Redwood City Housing Element, deteriorated buildings were defined as needing one or more major repair and/or extensive maintenance; repairs to damaged building components are critical to prevent further decay or structural deterioration; or rehabilitation is considered necessary for continued occupancy of buildings (Housing Element).

Table 4: Redwood City Housing Trends

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>2000</th>
<th>2007</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Units</td>
<td>Percent of Total</td>
<td>Number of Units</td>
</tr>
<tr>
<td>Single-Unit Detached</td>
<td>13,493</td>
<td>47%</td>
<td>13,554</td>
</tr>
<tr>
<td>Single-Unit Attached</td>
<td>3,653</td>
<td>13%</td>
<td>3,656</td>
</tr>
<tr>
<td>Total Single-Unit</td>
<td>17,146</td>
<td>59%</td>
<td>17,210</td>
</tr>
<tr>
<td>Multi-Unit 2-4 Units</td>
<td>2,596</td>
<td>9%</td>
<td>2,623</td>
</tr>
<tr>
<td>Multi-Unit 5+ Unit</td>
<td>8,346</td>
<td>29%</td>
<td>8,610</td>
</tr>
<tr>
<td>Total Multi-Unit</td>
<td>10,942</td>
<td>38%</td>
<td>11,233</td>
</tr>
<tr>
<td>Mobile Homes, Trailer, and Other</td>
<td>833</td>
<td>3%</td>
<td>833</td>
</tr>
<tr>
<td>Total</td>
<td>28,921</td>
<td>100%</td>
<td>29,276</td>
</tr>
</tbody>
</table>

Source: CA Department of Finance
THE PLACE - COMMUNITY SERVICES

Community Services includes topics such as public safety, parks and recreation, community centers, social services, education, and local governance. In addressing parks, there are two parks in the close surrounding area. There is a neighborhood park at Broadway Street and 2nd Avenue and a community park less than half of a mile away from Broadway, on Woodside Road and Spring Street. According to the General Plan, Redwood City has a goal of 3 acres of park per every 1000 residents. On a citywide scale, this goal has almost been met, however, there are still more parks that need to be created to fully achieve this goal. Based on a Parks and Facilities Needs Assessment conducted in 2008, Redwood City currently provides 2.99 acres of park per 1000 residents. This need will be taken into consideration for the Broadway Central development.

There are currently no community centers near the proposed development. A community center does not match the land use or zoning regulations for the area, as the existing land uses are mainly industrial and residential. However, with a growing population there will be a higher need for community centers in the future. In addition to community centers, there are currently no art related facilities or festivals known to be held specifically near the project site. However, the City wishes to expand public art programs and displays and Broadway is a large area with many opportunities to incorporate art pieces.
THE PLACE - PUBLIC SAFETY, INFRASTRUCTURE, AND NOISE

Broadway Central is directly affected by the U.S. 101 and SR 84 interchange that contributes substantial levels of noise from the high volume of vehicles and traffic. Broadway is also a contributor to the noise levels since it is used as a major arterial connector from Redwood City Downtown and the Stanford Medical Center. On western border of the project site along Chestnut Street, there are railroad tracks that are used for the Harbor to the North, which also can have a significant impact on the noise levels in the area. In addition, adjacent housing and the Summit Charter School are sensitive noise receptors and that must also be addressed for future development.

The City has recycled water lines that run from the SBSA Water Treatment Plant to Redwood Shores as well as the Bayfront area. Currently, the project site is not served by the recycled water system, but it is on the city map of areas that will be served in the future. This means that the Broadway Central development must use water from the potable supply for all water needs, including landscaping and other uses. Low impact landscaping has been added in many areas to reduce the impact on the potable water supply.

Like many cities in California, Redwood City has seismic hazards, liquefaction zones, and expansive soils that must be accounted for with all new development.
THE PLACE - NATURAL RESOURCES

Water resources and quality proved very important to not only the proposed development, but to the expansion of Redwood City’s Recycled Water Service Area. Recycled water could be used to irrigate landscaping and reduce the need to use potable water in situations where it isn't necessary. The soil in the Study Area is characterized by high infiltration rates, which makes this a suitable area for Low-Impact Development techniques.

The project site does not contain any vegetative or animal wildlife because it is fully urbanized. This is a result of the lack of natural habitat within the area, but there is some landscaping in the form of street trees, which provide a type of man-made wildlife. There is a vast amount of underutilized space in the form of vacant structures and parking lots, which can be transformed to incorporate wildlife habitat areas.
THE PLACE - URBAN REALM/PUBLIC FORM

Although the project site is located within close proximity to downtown Redwood City, the urban form of the project site differs greatly from that of the downtown. Within the downtown core, Broadway is the center of commerce and the heart of the downtown. However east of downtown, the street is less appealing for pedestrians, has wide roads, limited streetscapes, and buildings oriented for automobile transportation.

As a mid-point between two vital districts within Redwood City (the downtown and the Stanford in Redwood City development), it is important that the Broadway Central development improve pedestrian, bike, and transit mobility. Currently the area greatly favors automobile users and does not provide incentives to walk or bike. Therefore, it is important to improve upon existing sidewalks, create clearer marked bike lanes, and implement more streetscaping along the street within the limits of the project area.

Implementing new signage like the example above can help improve pedestrian, bike, and transit mobility.
Circulation is a major component in planning the future development of Broadway Central. Redwood City anticipates future development in the city to support multi-modal transportation options. At this time, surrounding roadways not adequately support safe and comfortable multi-modal transportation options, as they are not yet “complete streets.” The existing conditions in the area limit full accessibility to the project site by all modes.

The current pedestrian conditions in Redwood City consist of sidewalks and crosswalks that are provided along many of the major streets in the City. Adjacent to the project site, many of the sidewalks, though adequate in size, are in poor condition, lacking street furniture and lighting. When analyzing public transit options, SamTrans Route 270 is the only route that runs near the proposed development (SamTrans, 2013). In addition, Caltrans plans to realign the SR 84 and 101 interchange, which will enhance access for the heavily trafficked intersection. In this plan, Caltrans is considering removing one of the five entry points into Woodside Road (Caltrans, 2013).
THE PLACE - SITE CHARACTERISTICS

The proposed site for the Broadway Central development consists of approximately 13 acres at the intersection of Broadway and Woodside Road (SR 84) adjacent to Highway 101 in the northern portion of Redwood City. Currently, these parcels are zoned Mixed-Use Corridor and Light Industrial Incubator Overlay (see Figure 1).
Mixed-Use Corridor
(from Redwood City General Plan)

The Mixed Use - Corridor category allows for the reinvention of key corridors to support major transit and complementary commercial and residential uses, encouraging transit use, bicycle use, and pedestrian activity. Development approaches allow for both horizontal and vertical mixed use. Ground-floor retail/service storefronts may be required at designated nodes. Design considerations should include sensitivity to lower-intensity residential neighborhoods behind sections of the corridor, public and private amenities, and transit accessibility features. The height of single use commercial and residential structures is limited to four stories. Combined use commercial-residential structures can extend in height up to six stories, provided privacy concerns of established neighborhoods are adequately addressed through setbacks of upper stories or other design approaches. Structured parking is allowed, provided no parking levels front directly on El Camino Real, Broadway, Veterans Boulevard, or Woodside Road.

Light Industrial Incubator Overlay
(from Redwood City General Plan)

The Light Industrial Incubator Overlay is intended to provide highly flexible space for start-up and expanding light industrial businesses. In particular, the Incubator Overlay provides opportunities for small light industrial businesses to expand to medium-sized businesses, and to continue to function and create new jobs in Redwood City. The Overlay will also allow for the conversion of older out-dated uses, as the market dictates, into needed incubator space for smaller uses supporting health research, clean industrial, green technology, or research/development businesses.
THE PLACE - SITE CHARACTERISTICS

In the fall of 2013, the fourth year community planning studio at Cal Poly San Luis Obispo traveled to Redwood City to survey existing land uses along Broadway. Existing uses for the Broadway Central project site consisted of the City’s Corporation Yard, the US Post Office, CVS Shopping Center, Jack in the Box, Denny’s, Smart and Final, a large variety of light industrial uses, and a 24-hour Fitness Center that was currently under-construction. During discussions with City staff for the community planning studio, staff had mentioned that there were plans to move the location of their Corporation Yard providing an opportunity for development at this major intersection (see Figure 2 below).
Broadway Central will be a distinct area of approximately 14 acres (see Figure 3) with unique characteristics, differentiating it from other neighborhoods in Redwood City. The Corridor will promote economic vitality by preserving existing businesses and revitalizing underutilized land with new shopping, housing and recreational opportunities. Broadway Central will enhance neighborhood interaction and sustainability by serving all modes of transportation, emphasizing new transit options that connect Caltrain to Stanford, improving street and sidewalk infrastructure to support bicycle and pedestrian comfort and safety while increasing commercial activity.

Figure 3: Project Site Area
GOALS

1. Encourage businesses that are complementary to the proposed Stanford in Redwood City complex and compatible with nearby industrial uses
   - Provide open space
   - Provide mixed use centers with shopping, dining, offices, and housing
   - Provide adequate workforce and affordable housing

2. Preserve existing businesses and maintain the light-industrial land uses that are adjacent to the proposed Stanford in Redwood City complex
   - Phase development to prevent displacement of existing businesses

3. Pursue infrastructure and mobility enhancements that will facilitate movement across Woodside Road and that promote walking, bicycling, and transit use, contributing towards City goals of adding a Streetcar network
   - Contribute towards Streetcar infrastructure that connects to existing transit network in Redwood City and to offer a new connection between the proposed Stanford in Redwood City complex and Caltrain Station, downtown
   - Improve street and sidewalk infrastructure to support bicycle and pedestrian comfort and safety

4. Create a sustainable corridor through usage of electric Streetcar, promoting cycling, walking, and implementing low-impact roadways
   - Contribute toward a network of nearby “green streets” that address the environmental impacts of street paving
Mizner Park is a mixed-use development that was designed to appear as a neo-traditional downtown center for Boca Raton, Florida. The land for Mizner Park was purchased by owner and developer, Crocker & Co., in June of 1988 and the construction began in October 1989 utilizing the services of architect, Cooper Carry & Associates. Crocker & Company purchased a site area of 28.7 acres. Phase I of Mizner Park which consisted of 398,000 square feet was completed in December 1990. Phase II of Mizner Park was completed in August 1993 and phase III in August 1996 which concluded the total build-out of the site. The total development cost was $54,544,044.

The main success of Mizner Park is the use of the space. There are no single-use buildings; any use that can be placed on an upper floor—such as offices, housing, or cinemas—has been located there and all ground-floor space is used either for retail or for entrances. The next big success was the parking that is available. The parking structures were built to maximize the amount of parking potential for future users, in a move that should reduce the number of cars required to be parked by more than 25 percent.
The Southborough project located in Charlotte, NC consists of 69 residential units and 30,280 square feet of commercial building space that wraps around a large-format retail store, Lowe’s Home Improvement. This project is a great example of how to incorporate different, and sometimes incompatible uses, successfully into the same area. Wrapping the mixed use development around the large-format retail store provides a seamless transition between density and use. Southborough’s site design is very porous making it very accessible for both residents of the project and visitors to the area. The architectural style differs slightly throughout the site to adapt to the surrounding uses (Bungalow style facing residential, Modern/Industrial design facing commercial corridor). This project is a good example of physical and visual linkages between buildings and spaces.
CONCEPT PLAN PROPOSAL

In the future, Broadway Central will foster a community that can live near their work while supporting activities through new shopping, business, and recreational opportunities (see Table 5). The area will be bustling with activity around businesses during peak, lunch, and after-work hours. It will be a central area for business people to run errands and socialize. It will also be a place that draws people from surrounding areas to its new shopping and recreational activities.

Local business owners and employees will be able to live in the Broadway Central district due to the array of housing types and rates that will accommodate the many different types of business people within the area. There will be adequate workforce housing for the future employees and their families of the Stanford in Redwood City development and other new businesses that develop within the area. Below market rate housing will also be supplied in all housing developments for families and individuals that require affordable housing options.

Table 5: Build-out Potential for Broadway Central
CONCEPT PLAN PROPOSAL (cont.)

The physical form of future development will complement the existing businesses and light industrial while activating the public realm. Storefronts will be close to the sidewalk and have ample visibility into the businesses to make the area more comfortable and interactive. New developments will be articulated with varying facade styles and sizes to create a unique character for the Broadway Central development. The district will have a range of building styles including multi-story and mixed-use multi-story buildings.

The Broadway Central development will be a “complete street” that provides access and new infrastructure to all forms of transportation. The transit routes and stops, as well as general circulation patterns will complement the adjacent land uses within the area. Transportation modes will connect into the existing street network and provide new means for travelling through and within the development and City. Community members will have the luxury of walking, biking, taking transit and driving safely and efficiently within Broadway Central.
RESOURCES


PHOTOS

1 & 9  http://www.redwoodcity.org/about/local_history/exhibits/redwood_city/photo_index.html
2 & 5 & 7  http://bitsofhistory.plsinfo.org/owninglibraryrc.asp
8  http://www.redwoodcity.org/about/local_history/exhibits/climate_best/climate_best.html
11 & 12  http://archinect.com/jaiya/project/century-cinemas-on-broadway
17  http://www.bnjabbaconsulting.com/About-Us.html
19 & 20  from Broadway Corridor Study: Land Use and Circulation Concepts Plan
21  http://redwoodcityparksblog.wordpress.com/2013/05/03/places-to-chill/
22  https://www.google.com/maps/@37.483884,-122.21557,3a,75y,269.8h,83.65t/data=!3m4!1e1!3m2!1sUHYG6S8Wl39BqFjWXC0z7A!2e0
23 & 27  https://www.google.com/maps/@37.486944,-122.21351,3a,75y,166.61h,87.07t/data=!3m4!1e1!3m2!1sQ7mO9LOW96MewoZbQulU7w!2e0
24  http://www.geology.ar.gov/geohazards/expansive_soils.htm
26  https://www.google.com/maps/@37.486944,-122.21351,3a,75y,269.8h,83.65t/data=!3m4!1e1!3m2!1sUHYG6S8Wl39BqFjWXC0z7A!2e0
29 & 30  https://www.google.com/maps/@37.4871275,-122.2147153,564m/data=!3m1!1e3
30  https://redwoodcity.org/phed/planning/generalplan/FinalGP/LandUseMapFinal.pdf
PHOTOS (cont.)

33  http://en.wikipedia.org/wiki/Mizner_Park
35  http://www.city-data.com/picfiles/picc26411.php
37  38  39  40  http://www.conformitycorp.com/
42  http://usa.streetsblog.org/2013/06/04/how-better-traffic-models-can-lead-to-more-mixed-use-development/
44  https://www.flickr.com/photos/pbo31/3475274864/