

# 6. *East 14th Street South Area Streetscape Improvements*

Making improvements to the character of the East 14th Street public right-of-way is an integral component of the South Area Development Strategy. This notion is supported by the emphasis placed on creating a pedestrian-friendly environment by San Leandro's General Plan. A positive streetscape image and environment are also important assets from a developer's point of view and could contribute to creating momentum for future residential and retail development envisioned by the General Plan and desired by residents of the area. Design elements favored by a majority of participants in the planning process include the introduction of a tree-lined median, wider sidewalks (both south of 135th Avenue), and safer, more frequent pedestrian crosswalks at intersections. This chapter of the East 14th Street Development Strategy presents recommended corridor-wide design concepts for a redistribution of available right-of-way width to better accommodate the needs of pedestrians and transit users, while still maintaining acceptable service levels for vehicular travel. It also illustrates design concepts for intersection and crosswalk improvements that can be used in applications for funding of improvements through a variety of sources, and that can be implemented after further analysis and design development.

## *6.1 Streetscape and Transportation-related Community Goals*

The Consultant Team, City staff, and the community engaged in an incremental goal setting and a design process to determine a preferred and suitable set of streetscape improvements for East 14th Street throughout the South Area. In the first part of the process, a set of preliminary goals was established based on the General Plan and through input from the community. The Consultant Team then prepared illustrations of

several design alternatives for community review and comment. The approach to establishing a preferred design concept applicable to the entire Corridor and its varying conditions consisted of the following key steps:

1. Identification of desired improvements and design elements based on the evaluation of existing shortcomings (as described in the "Transportation Assessment" Section above), functional requirements (such as continued use as a truck route and major transit corridor), and preliminary community goals;
2. Preparation of alternatives, illustrative corridor concepts and cross section design alternatives;
3. Evaluation of cross section and intersection design alternatives based on feasibility relative to right-of-way constraints, California Department of Transportation standards, and effectiveness in handling traffic, as well as performance relative to community goals and selected tradeoffs;
4. Identification of desired improvements based on final community goals; and
5. Selection of preferred alternative that best balanced operational requirements and community goals.

While Chapter 2 discusses all the goals and policies for the East 14th Street South Area, those most critical to transportation and streetscape design are listed below:

- Create a distinctive overall design for the East 14th Street Corridor, its public right-of-way and public open spaces;
- Incorporate urban design elements such as bollards, pavers, fountains, signage, street furniture and tree lighting to establish a stronger design identity along East 14th Street (See General Plan Policy 42.03);
- Ensure a safe, attractive and efficient design of transportation facilities within the East 14th Street Corridor that balance the needs of all modes of transportation;
- Enhance the access for East 14th Street businesses and improve access for all types of transportation to better serve businesses and residents, while protecting adjacent neighborhoods from overflow traffic and parking; and
- Create a safe and attractive pedestrian-oriented streetscape environment along East 14th Street that will better link the Corridor to adjacent neighborhoods, help attract desired businesses and services, and beautify and enliven the street overall.

It should be noted that the general intention of these goals are also

supported by goals and policies recently established by Caltrans, which is a key point, as East 14th Street is a state highway under Caltrans jurisdiction. This correlation of goals may also be beneficial for future funding efforts by the City for the eventual implementation of the recommended improvements. Caltrans' goals and policies are addressed in greater detail in *Appendix 6: Recommended Improvements in the Context of Caltrans' Goals and Design Standards*.

The goals listed above aim to improve the pedestrian environment throughout the corridor, assuming that the attractiveness of the corridor for both the local and city-wide population will increase if the corridor better accommodates the needs pedestrians and transit users. Improvements include functional aspects, such as safety, access and mobility, as well as streetscape aesthetics. According to statements by developers interviewed for this project (see *Appendix 1: Results of the Developer Symposium*), pursuing such improvements will also increase the Corridor's attractiveness for potential future investors in new residential, retail and mixed-use development.

Through discussions with the advisory committee and through input from public workshops, the following design elements and design criteria were identified as desirable and important for the East 14th Street Corridor:

- Maintain sufficient traffic capacity to accommodate growth as forecast by the San Leandro General Plan and by this study;
- Provide left-turn lanes where needed and appropriate;
- Maintain or add on-street parking where needed for businesses along the street;
- Create wider sidewalks for pedestrian and business activity;
- Add corner curb extensions (bulb-outs) and other design features to create safer crosswalks throughout the Corridor;
- Implement median refuges for slower paced pedestrians, such as the elderly and handicapped;
- Provide raised, tree-lined medians;
- Install pedestrian lighting along East 14th Street to increase pedestrian safety and enhance the pedestrian experience; and
- Do not duplicate bicycle facilities and level of bicycle accommodation on East 14th Street that are already provided on Bancroft Avenue.

## ***Recommended Redesign for the East 14th Street Corridor***

The recommended changes and improvements to the public-right-of-way are intended to create a synergy with the goals and actions described in other sections of the South Area Development Strategy in order to bring about a positive change in the character of East 14th Street. This includes a transformation from a highway designed primarily for motor vehicles to a multi-modal urban thoroughfare with improved safety and convenience for pedestrians, and to a center of community activity rather than a barrier between activities on either side of the street. At the same time the proposed improvements are intended to maintain mobility and improve the overall safety for transit, trucks, automobiles, bicycles, and pedestrians.

The overall approach for the redesign of South East 14th Street can be characterized as a re-balancing of needs of different users of the street, including drivers, pedestrians, transit riders, and bicyclists. The proposed cross sections and intersection improvements generally reallocate portions of the limited available right-of-way in a way that creates improved conditions for non-motorized users of the street while maintaining vehicular mobility and safety.

It should be noted that all recommendations have been developed to a schematic design level and therefore require further refinement and technical analysis as they are taken through design development and construction document phases.

Based on the goals discussed above and particular design elements desired by the community, the following overall concepts are recommended for implementation in the South East 14th Street Corridor (See Figure 6.1 for an overview of all suggested improvements).

## ***Improvements of East 14th Street North of 135th Avenue***

1. Reconfigure lanes from two southbound travel lanes and one northbound travel lane to one lane in each direction with a center two-way-left-turn lane. Sidewalk (9 feet) and parking lane (7 feet) width would remain constant (Figure 6.2).
2. Introduce curb extensions at street corners of East 14th Street and its side streets (where feasible) to facilitate a shortening of pedestrian crossing distances and to increase pedestrian circulation space in this constrained pedestrian environment.

*INSERT*

*Figure 6.1: Proposed new crosswalks*

11x17

Front

11x17  
Back

3. Introduce pedestrian refuges and some landscaping at T-intersections within the two-way-left-turn lane where such a configuration is feasible, based on traffic movements and intersection geometry (Figure 6.3).
4. Shift the current location of the transition zone (transition between three-lane and five-lane configuration of East 14th Street) between Blossom Way and 135th Avenue to a new location between 135th Avenue and San Leandro Boulevard. Reconfigure the previous transition zone to a cross section with one lane in each direction and a center two-way-left-turn lane (similar to the cross section described under item #1 above, but with wider sidewalks or additional landscaping, which are possible due to the wider right-of-way available in this area).

### ***Improvements of East 14th Street South of 135th Avenue***

- Replace existing 12-foot wide two-way-left-turn lane in this segment with a raised, tree-lined center median of equal width. (See Figure 6.16).
- Introduce pedestrian refuges at the center median whenever feasible.
- Generally widen sidewalks from 10 to 13.5 feet (some variations may occur based on local conditions).
- Introduce curb extensions at street corners of East 14th Street and its side streets (where feasible), and at the opposite end of crosswalks at T-intersections to facilitate a shortening of pedestrian crossing distances.

### ***Other Key Improvements***

- Reconfigure the right-of-way in two locations along East 14th Street where block-long commercial storefronts are separated from the street by a narrow planting area, a local access lane and parking (at the Storm Block between 143rd and 144th Avenue – west and at Eden Center, 146th and 148th Avenues – east). The redesign in these two locations will better accommodate pedestrian activities and traffic flows improving multi-modal safety and access in these active commercial areas.
- Introduce additional crosswalks and traffic signals in various locations throughout the corridor.

### ***Recommended Design Concepts in the Context of State Design Standards***

East 14th Street is an arterial with State Highway designation, therefore any improvements within the right-of-way are governed by

Caltrans' Highway Design Manual. Through this document, Caltrans establishes standards for roadway design elements of a street within its jurisdiction and controls where and when exceptions to these standards may occur. Within the last few years, the agency has become slightly more flexible in how it applies its standards, engaging in more contextually sensitive design as well as the promotion of non-motorized forms of transportation. *Appendix 6: Recommended Improvements in the Context of Caltrans' Goals and Design Standards* addresses in greater detail how the design elements contained in the recommended cross sections and crosswalk improvements relate to standards of the Highway Design Manual and recent Caltrans decisions with respect to the granting of design exceptions. It is the intention of the South Area Development Strategy to provide recommendations for streetscape and transportation improvements that will not meet with insurmountable disapproval by Caltrans. In order to assure that this would not occur, a meeting between City Engineers and Department staff, consultants and Caltrans representatives was conducted as well as further coordination with and review by members of the Caltrans review team.

It should also be pointed out that several of the changes proposed for the redesign of East 14th Street (median, wider sidewalks, curb extensions) have been approved by Caltrans for implementation in the portion of East 14th Street south of 150th Avenue (in unincorporated Alameda County).

## ***6.2 Recommended Street and Intersection Treatments***

### ***Recommended Cross Section and Intersection Treatment North of 135th Avenue***

Figure 6.2 illustrates the recommended cross section for the segment of East 14th Street north of 135th Avenue, including the change in lane configuration from two travel lanes southbound and one travel lane northbound to one lane in each direction with a center two-way-left-turn lane. Due to the limited available right-of-way width of 66 feet in this area it was impossible to add to the existing sidewalk width of 9 feet. However, the zoning ordinance will be amended as a part of this Development Strategy to require a 4-foot sidewalk easement (setback) for future development in this area. Such setback would, over time, create segments of sidewalk that are 13

feet wide and more conducive to pedestrian activities.

The proposed reconfiguration of travel lanes would provide the following operational advantages:

- Providing a turn lane would reduce delays in both directions, particularly for northbound traffic, which is currently impeded by left-turning vehicles. This would also reduce the likelihood of rear-end collisions.
- Pedestrian safety would be improved, as the center turn-lane could also function as a median refuge for pedestrians in certain locations.

Using Estabrook Street as an example, Figures 6.3 and 6.4 and the photo simulation in Figures 6.5 and 6.6 illustrate the typical proposed design for T-intersections in the area. It should be emphasized that most intersections along this segment of East 14th Street are T-intersections. The illustrated treatment can easily be adapted to conditions at one of the few four-leg intersections should be configured similarly. The installation of pedestrian refuges in this segment of East 14th Street is only possible on the side of the T-intersection where no turn movements occur. Because of their close proximity to one another, some T-intersections cannot be improved with pedestrian refuges. See Figure 6.1 for an overview where the implementation of pedestrian median refuges is believed to be possible.

### ***Recommended Relocation and Treatment of the Transition Zone***

It is proposed that the transition zone between the three and the proposed four-lane section of East 14th Street be relocated from its current location between Blossom Way and 135th Avenue to between 135th Avenue and San Leandro Boulevard (see Figure 6.1). Relocating this transition area to the south would not be expected to negatively impact traffic operations, since delays to traffic primarily occur at signalized intersections. The transition area for northbound traffic merging from two travel lanes to one travel lane should be designed to standards acceptable to Caltrans guidelines (see discussion of lane transition formula below). The shorter length of the transition zone and its more southerly location will create the following benefits:

1. Locating the beginning/end of the transition zone just north of the easily recognizable "landmark" intersection of East 14th Street and San Leandro Boulevard puts this critical change in roadway conditions at a logical "breaking point".

### East 14th Street North of 135th Avenue Recommended Street Sections

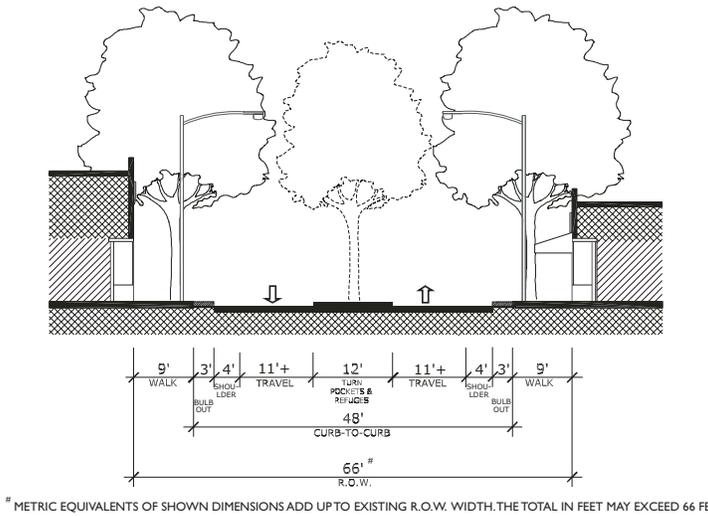


Figure 6.2: Recommended Section

- Eliminate second southbound travel lane and replace with two-way turn lane with pedestrian refuges (see below).

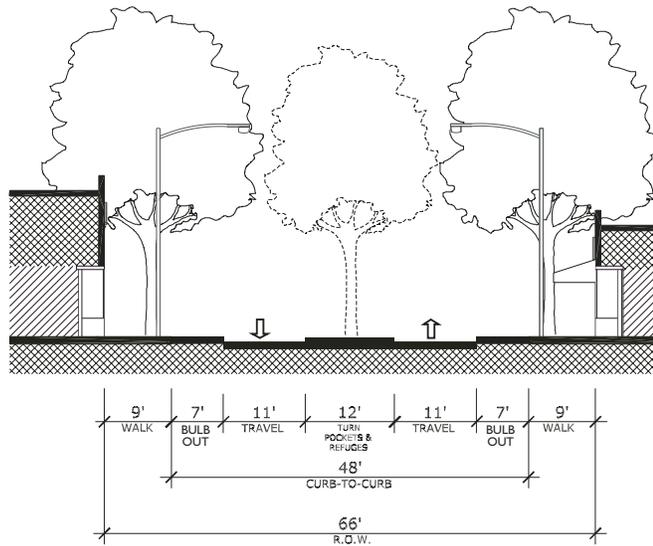


Figure 6.3: Recommended at T-Intersection

- Build pedestrian refuges at center of roadway opposite left turn pocket (where feasible).
- Plant tree/other landscaping in short (approximately 65' long) median.
- Build corner bulb-outs (where feasible).

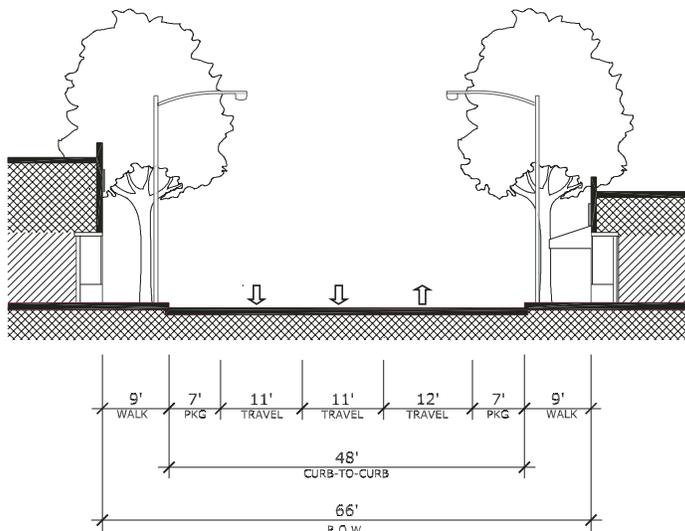


Figure 6.4: Existing North of Blossom Way

**Pros:**

- Pedestrian safety improved through introduction of pedestrian refuges and corner bulb-outs.
- Northbound traffic flow improved by new turn lane;
- Greater safety given increased separation between north and southbound traffic
- Beautification through added landscaping.

**Cons:**

- none identified



Figure 6.5: Existing conditions at the East 14th Street / Estabrook intersection.



Figure 6.6: Photo simulation of the recommended crosswalk and streetscape improvements.



Figure 6.7: Examples of tree-lined center medians: International Boulevard, Oakland, San Pablo Avenue, Berkeley

2. Residential uses currently fronting on the transition zone will in the future front onto a segment of East 14th Street that is less dominated by automobile traffic.
3. Potential reduction of impacts from cut-through traffic at Blossom Way (if combined with other measures).
4. The relocation provides opportunity for the use of some of the "freed up" right-of-way for:
  - the widening of sidewalks in the area,
  - additional landscaping to screen some of the unattractive walls and fencing that currently exist on the western side of the area,
  - additional landscaping within the furnishings zone to give greater separation between residential uses and traffic, or
  - additional space that could be added to private development on adjacent opportunity sites where this is beneficial for the public good.

It is not expected that shifting of the transition zone into the proposed new location will adversely impact traffic flows and signal operation. However, a future traffic study conducted prior to the final design stage should further study the traffic conditions under the proposed configuration.

### **Recommended Cross Section and Intersection Treatment of the Segment South of 135th Avenue**

For the segment south of 135th Avenue, the community expressed a preference for the design option that replaces the existing 12-foot wide two-way-left-turn lane in this segment of East 14th Street with a raised, tree-lined center median of equal width (see examples of similar existing tree-lined medians in Figure 6.7 and recommended street sections in Figure 6.16). Left-turn lanes would generally be provided at all intersections with side streets. The left-turn pockets and breaks in the proposed median of to give access to individual businesses will have to be determined on a case-by-case basis as part of the final design process for the proposed improvements.

The widening of sidewalks from 10 to 13.5 feet is the second key component of the preferred alternative for the redesign of this portion of the Corridor. A 13.5-foot sidewalk provides adequate accommodation for essential pedestrian and business activity as desired for a multi-modal street at the heart of numerous neighborhoods.

During the planning process, the SAAC expressed the clear preference that possible future Bus Rapid Transit service on East 14th

Street take place in a travel lane shared by automobiles and buses rather than a dedicated lane at the cost of the desired median. Some concerns were also expressed with respect to cost of the preferred alternative due to the needed extensive rebuilding of curbs and gutters and possible conflicts with underground utilities and existing street trees. A design study showed that existing street trees could remain, if properly protected during construction, and that significant portions of curbs and gutters along the street would need to be rebuilt in order to implement other desired improvements, mostly curb extensions at intersections recommended for upgrading. The additional length of new curb and gutter specifically needed for wider sidewalks is relatively minor. The undergrounding of existing overhead utilities, planned to take place along the corridor from 2005 to 2007, should be closely coordinated with the recommended cross section to avoid conflicts between future utility and curb alignments. Potential conflicts with existing underground utilities were not specifically analyzed for this study and need to be coordinated as part of the final design and construction plans for the improvements. Finally it should be noted that the County of Alameda Fire Department reviewed the recommended plans and sections and concluded that there were no major concerns with respect to emergency vehicle access throughout the corridor, with the exception of design details (such as curb radii) that could be fully addressed during the final design stages for any of the recommended improvements.

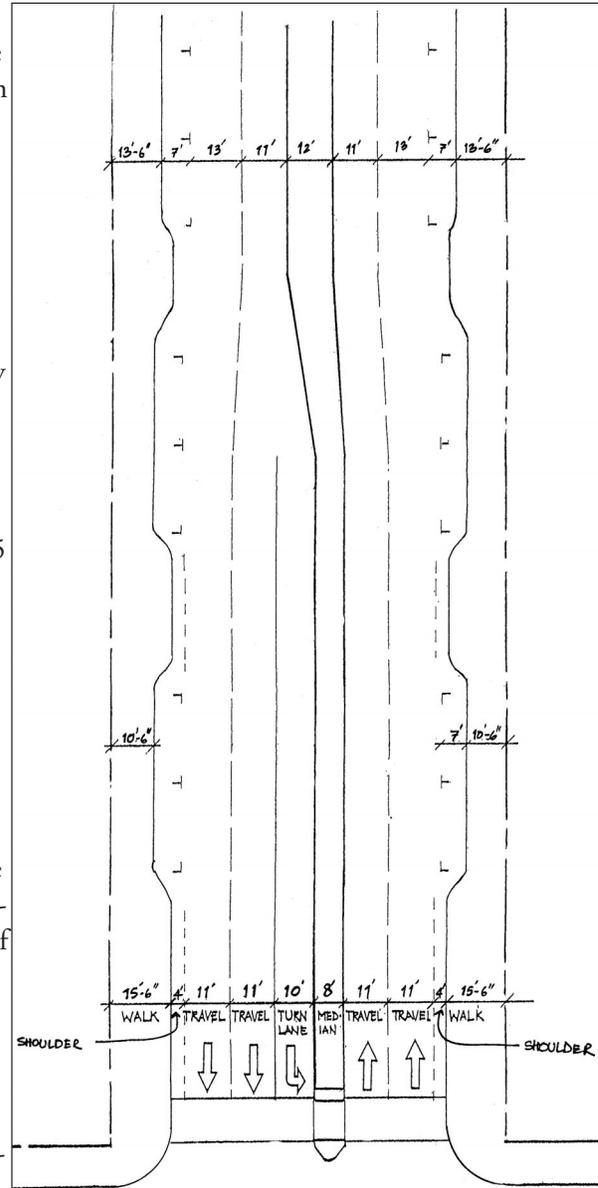


Figure 6.8: Example of lane shifts and possible parking accommodation along turn lanes south of San Leandro Boulevard.

Figures 6.11 and 6.13 as well as the photo simulations in Figures 6.19 and 6.20 illustrate how pedestrian crossings, pedestrian median refuge, and curb extensions would typically be applied at the many T-intersections. The illustrated treatment can easily be adapted to conditions at one of the few four-leg intersections should be configured similarly. Figure 6.8 illustrates how a turn lane and an 8-foot wide pedestrian refuge would be accommodated within the right-of-way by shifting lanes out toward the sidewalk curb. Although several options exist with respect to how on-street parking can be accommodated (parking on one side only, no parking on both sides for the length of the turn lane), shown here are parking spaces in optional parking pockets. If implemented as illustrated, the average loss of parking stalls per left turn pocket is limited to four stalls.

A cross section alternative that retained the existing sidewalk width was initially also considered for this segment of East 14th Street but



Figure 6.9: Existing conditions at the East 14th Street and 143rd Avenue Intersection.



Figure 6.10: Photo simulation of the recommended tree-lined median and crosswalk improvements.

not elected as the preferred option. For reference purposes, this option is illustrated in *Appendix 7: Alternative Street Cross-Section for South of 135th Avenue*.

Because of their unique character and importance to the International and Cultural District, site specific schematic design solutions were created for the 'Storm Block' (between 143rd and 144th Avenues) and the Eden Center (between 146th and 148th Avenues). Both sets of schematic designs include suggestions for improvements to pedestrian and vehicular circulation, parking, intersection improvements, and cross sections of East 14th Street in the two areas. Please refer to *Appendix 8: Site-Specific Design Solutions for Storm Block and Eden Center*, for a more in-depth discussion and illustrations of these recommendations.

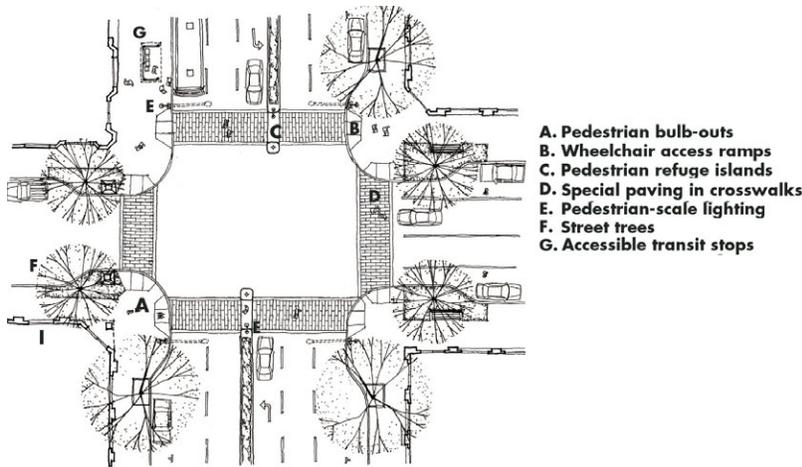


Figure 6.11: Prototypical set of intersection improvements.

### **Design Characteristics of Typical Crosswalk Improvements at Intersections**

Figure 6.11 illustrates a prototypical set of crosswalk improvements for use throughout the East 14th Street corridor (also see Figures 6.13 - Recommended Improvements at T-Intersection South of 135th Avenue, and 6.14 - Recommended Improvements at T-Intersection North of Blossom Way).

All marked crosswalks at signalized and unsignalized locations should be maintained and be upgraded to include the following features:

1. The width of crosswalks should be a minimum of 12 feet;
2. Four-foot corner bulb-outs (curb extensions) to shorten crossing distance (See Figure 6.12)s;
3. Special paving material such as (colored) concrete brick pavers for crosswalks with higher pedestrian crossing volumes;
4. Eight-foot pedestrian refuge protected by the median and an 8-foot by 4-foot wide concrete curb on the ‘intersection’ side (south of 135th Avenue);
5. Two in-pavement light fixtures mounted on the 8-foot by 4-foot concrete curb to provide a wash of light on the pedestrian refuge at night. In addition, a single pedestrian-scale fixture should be located on the median side to provide general lighting of the refuge;
6. New combined roadway and pedestrian-scale light fixtures at all intersection corners; and
7. Ladder-type striping of pedestrian crossings (Figures 6.18) to increase the visibility of crosswalks at unsignalized intersections. (Markings should be of 70% color contrast from the adjoining walking surface to meet ADA standards.)

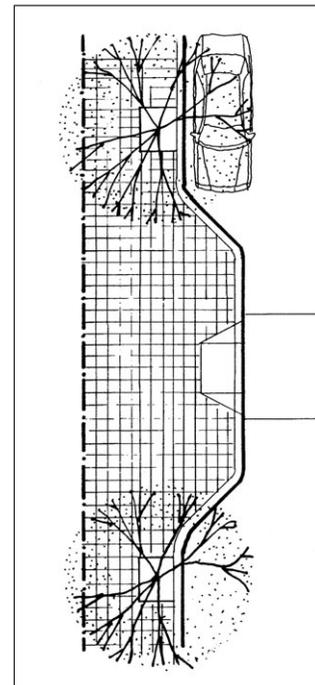


Figure 6.12: Bulbouts can be used with T-intersections.

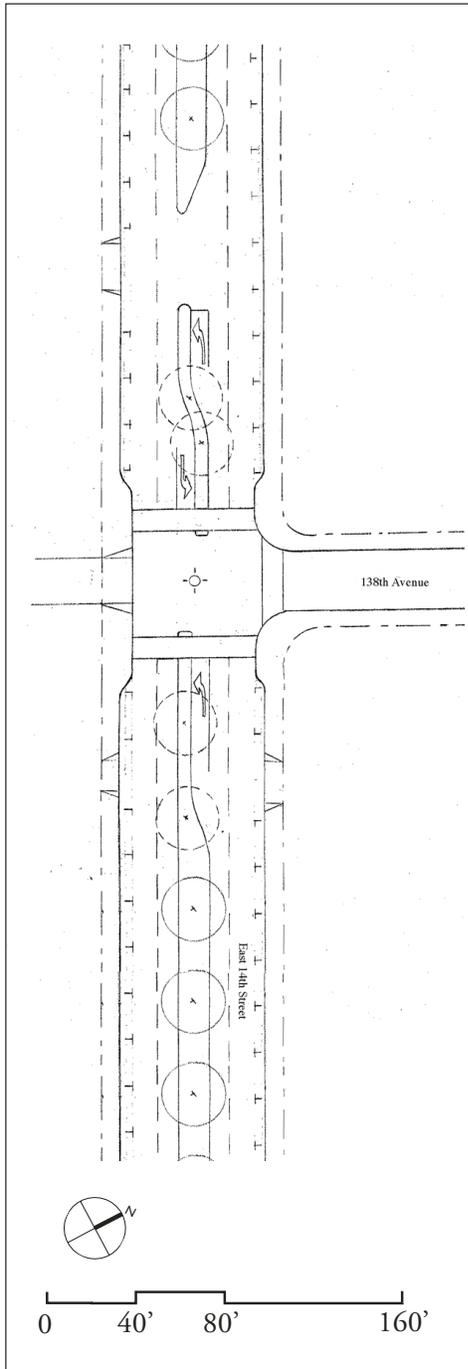


Figure 6.13: Recommended Treatment of T-Intersection south of 135th Avenue (Typical)

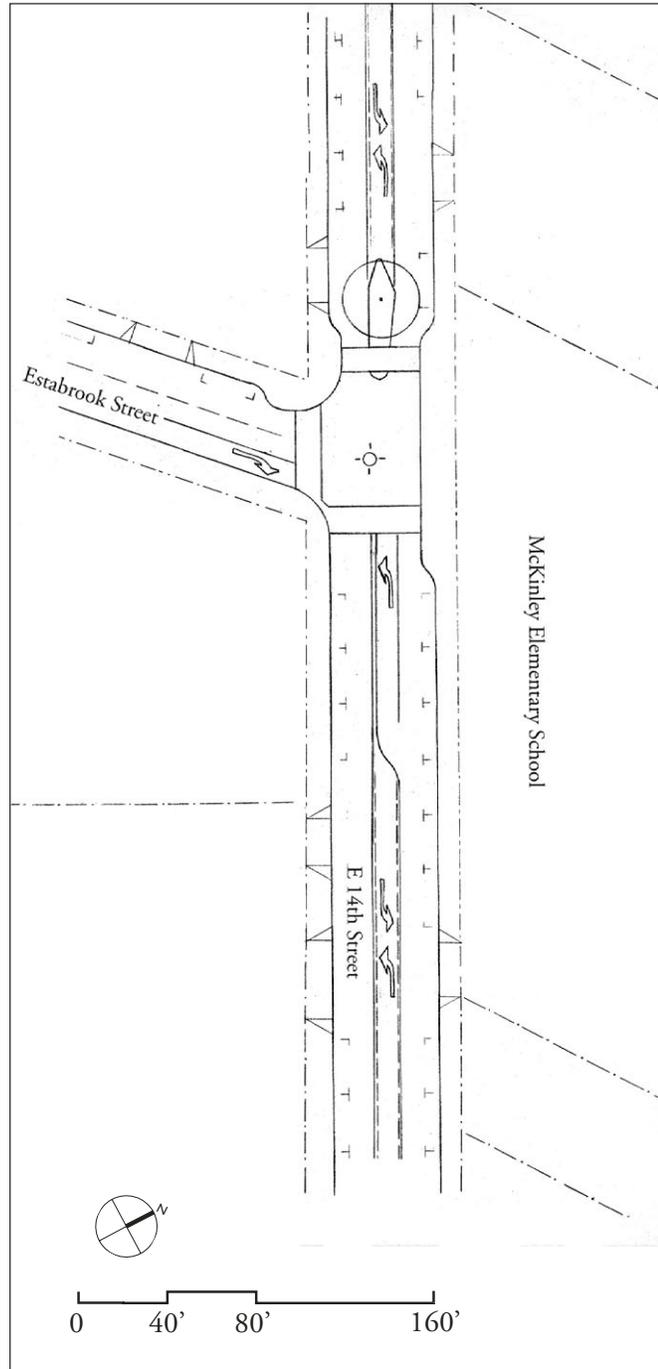


Figure 6.14: Suggested Improvements of T-Intersections north of 135th Avenue (Typical)

## 6.3 Signalization Improvements and Additional Crosswalk Locations

### Recommended Locations for Potential New Signals and New Crosswalk

A key goal of the San Leandro General Plan and the East 14th Street South Area Development Strategy is to improve pedestrian circulation along the East 14th Street Corridor and facilitate creation of a pedestrian-oriented street environment. This goal will need to be balanced with competing objectives for East 14th Street, which is a major arterial and State highway. In the past, automobile circulation along a corridor has often been given priority over pedestrian improvements. A key goal of this Development Strategy is to balance objectives for vehicular, pedestrian, and bicycle traffic, as well as transit, by creating policies and guidelines intended to enhance circulation for all modes.

This section outlines where additional crosswalks could be installed in unsignalized locations (north of 135th Avenue only) and where the addition of traffic signal might be required in order to provide crosswalks. All recommendations for additional crosswalk locations are based on guidelines published by the Federal Highway Administration (FHWA). These guidelines, and their application to conditions in the East 14th Street Corridor, are discussed in greater detail in *Appendix 8: Discussion of Federal Highway Administration Guidelines for Crosswalk Locations*.

Locations for possible additional crosswalks and/or traffic lights are illustrated in Figure 6.1. The recommended improvements have been prioritized (A = high priority and B = long-term) according to the need for mitigating the impact of large distances between existing crosswalks and short-term feasibility.

It is expected that some of the recommended new traffic signals south of 135th Avenue can be warranted by Caltrans in the future on the basis of new development occurring in proximity to such locations. However, in early negotiations with Caltrans and as part of the project study report for the major street improvements, it should be argued that current distances between signalized crosswalks are simply unacceptable and should be addressed even if pedestrian volumes alone cannot warrant implementation of a signal. Observed jaywalking in parts of the corridor probably occurs because of the long spacing between marked crossings.

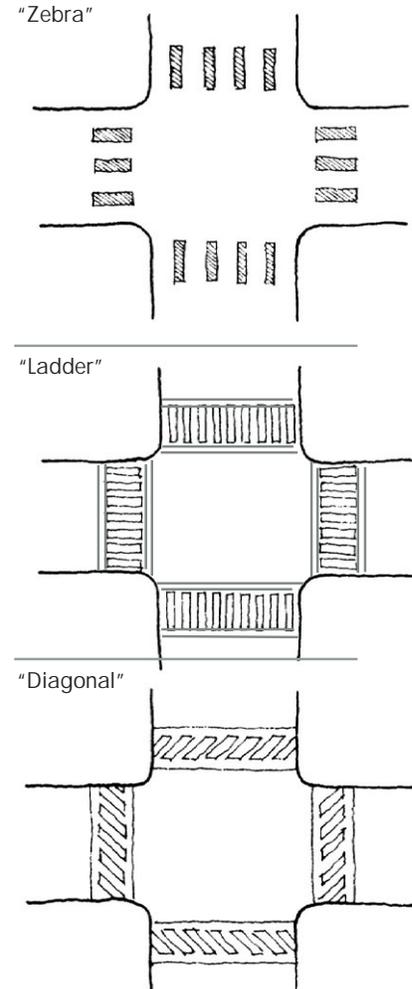


Figure 6.15: Possible striping patterns for marked crosswalks.

## East 14th Street South of 135th Avenue Recommended Street Sections

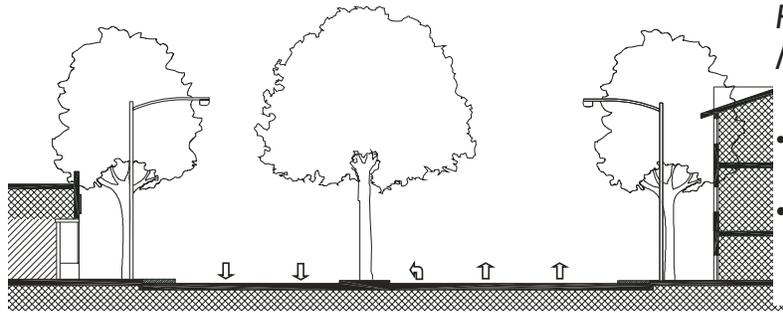


Figure 6.16: Recommended 12' Median and Sidewalks

- Replace two-way left-turn lane with 18'-wide, tree-lined median.
- Increase sidewalk width by 3' to 13.5'.

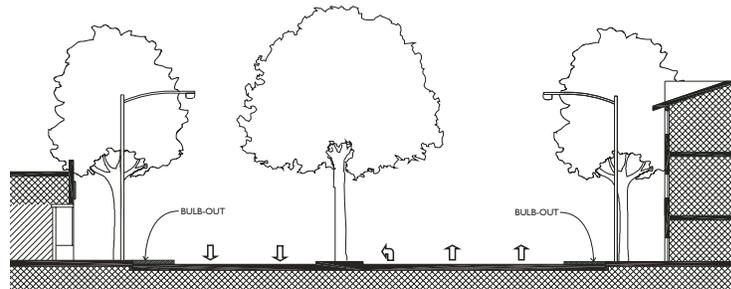
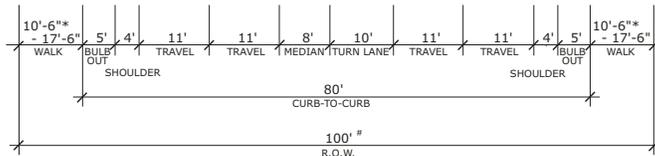
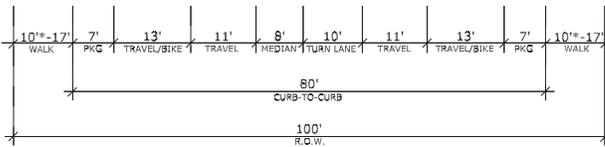


Figure 6.17: Recommended with Turn Lane

- Build 8'-wide median refuges at crosswalks.
- Build corner bulb-outs at crosswalks to shorten pedestrian crossing distance at intersection.
- Depending on local conditions, some parking spaces may be lost near intersections.



\* Optional Parking Pocket

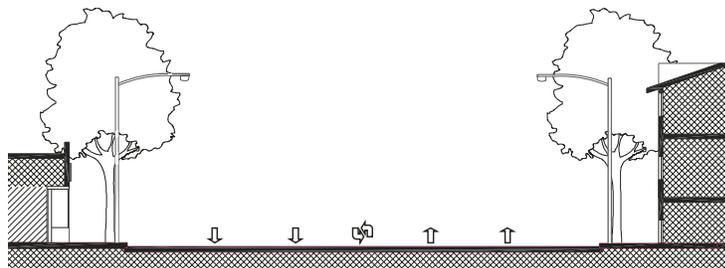
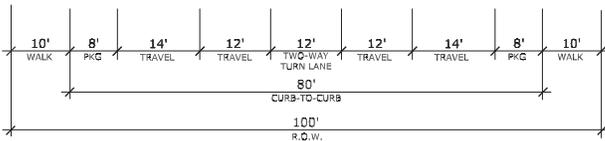


Figure 6.18: Existing South of 135th Avenue



Pros:	Cons:
<ul style="list-style-type: none"> <li>• Pedestrian safety improved through introduction of pedestrian refuges;</li> <li>• Crossing distances reduced by corner bulb-outs and pedestrian refuges; and</li> <li>• Improved safety through greater separation between north- and southbound traffic and greater regulation of left-turn movement.</li> </ul>	<ul style="list-style-type: none"> <li>• Median imposes some limits on accessibility of individual properties;</li> <li>• Range of pedestrian/business activities limited by sidewalk width; and</li> <li>• Narrower sidewalks could adversely effect street trees;</li> <li>• Minimum bicycle accommodation.</li> </ul>



Figure 6.19: Existing Conditions at the East 14th Street / 138th Avenue intersection.



Figure 6.20: Photo simulation of the recommended crosswalk and streetscape improvements.

### **Signalized Intersections**

All existing and future proposed signalized intersections – including T-intersections – should be considered for providing two crosswalks across East 14th Street. A determination on this should occur on a case-by-case basis and under consideration of local traffic and geometric conditions.

### Further Traffic Studies

It should be noted that further traffic studies will need to be conducted prior to the final corridor redesign stage and as part of individual applications for the warranting of additional signals and crosswalks, as required by Caltrans. Such studies should include simulations of future traffic volumes and the calculation of potential travel delays that may arise from the introduction of new traffic signals. However, it should be emphasized that even if travel delays would occur, these should be evaluated in the context of the General Plan goals for East 14th Street and the pedestrian safety and speed management benefits that result from additional crosswalks and traffic signals.

## 6.4 Bicycles on East 14th Street

The City’s Bikeway Plan (1997) identifies Bancroft Avenue as the designated north-south bicycle corridor in the vicinity of this study area. However, a portion of East 14th Street, between 136th and 143rd Avenues is designated as a bicycle route to provide connectivity to the proposed bicycle route on 143rd Avenue. A shared 13.5-foot wide travel lane is proposed on this section of East 14th Street to accommodate the bicycle route. Throughout the remainder of the corridor south of 135th Avenue, bicyclists would travel in a 13-foot wide shared travel lane (see Figure 6.21).



Figure 6.21: San Leandro Bicycle Plan

While a 14-foot lane width would be preferable to accommodate shared travel by bicyclists and motor vehicles, the desire to develop wider sidewalks and accommodate minimum requirements for medians, travel lanes and parking lanes limits the available width to 13 feet for the outside lanes south of 135th Avenue, while the inside travel lanes would be limited to 11 feet. North of San Leandro Boulevard, the outside travel lanes are currently 11-12 feet, and would be 11 feet under the proposed conditions. In the four lane sections of the street south of San Leandro Boulevard, vehicles can pass bicycles relatively easily given the ability to ‘shy’ into the adjacent lane. North of 135th Avenue the redesign of the street into a 3 lane configuration allows vehicles to ‘shy’ into the continuous center turn lane, if needed, to pass bicycles.

In addition, the speed management techniques used in the redesign of East 14th Street will make the street safer for bicyclists.

Overall, the proposed configurations are consistent with the bicycle plan, which designates a bike route on Bancroft Avenue, parallel to East 14th Street and with the desire of the South Area Advisory Committee not to duplicate bicycle facilities on East 14th Street already provided on Bancroft Avenue. However, it should be noted that by State law, bicycles could not be prohibited from using East

14th Street, nor would this be desirable or necessary, as many skilled bicyclists can be expected to feel comfortable using East 14th Street in its proposed configuration.

## 6.5 Other Streetscape Improvements

### **Recommendations for Pedestrian-Scaled Lighting and Street Furnishings**

The previous sections of the East 14th Street South Area Strategy have focused on the improvements of intersections for pedestrians as well as typical cross sections that would make the desired transformation of the street feasible. There are, however, streetscape design elements that so far have not been addressed in greater detail. These include street lighting, street furnishings, and public art. Without proper consideration of these design elements, a redesign of East 14th Street would fall short of its full potential. It should be emphasized that this consideration can most efficiently occur during the design development and detail design phases of the project.

However, the following paragraphs summarize some recommendation with regard to design and selection criteria for these above mentioned important streetscape design elements.

#### **Street Lighting**

Second only to the impact of street trees, the installation of new roadway and pedestrian-scaled lighting has the most significant potential of any design element to positively impact function and visual appearance of a street ( Figure 6.22).

As described in Chapter 3, Summary of the Existing Conditions Assessment, the only lighting provided along East 14th Street today



*Figure 6.22: Street trees and pedestrian-scaled lighting positively impacts the visual appearance of a street*

is roadway lighting coming from "cobra-head" light fixtures. It is strongly recommended that, as part of a future redesign of the street, the entire lighting system along the street be changed to include new roadway and sidewalk lighting. Fixtures of different styles and designs are available for this purpose. Following are a few general comments and recommendations with regard to the selection of light fixtures:

- Pedestrian-scale light fixtures should be installed along the entire length of the corridor.
- It is recommended to replace the existing cobra-head type roadway lighting along East 14th Street with a lighting fixture system that is decorative in style, includes pedestrian-scale fixtures of the same style, and allow for the possible combination of roadway and pedestrian fixtures on the same post. If the existing cobra-head roadway lighting needs to be retained in the future, post-top pedestrian-scaled light fixtures can be added between cobra-head pole locations. It could also be considered to specify a light fixture whose fixture head can be mounted on both existing roadway light poles and on new pedestrian-scaled fixture posts.
- Pedestrian-scale fixtures should be provided 35 to 40 feet. The spacing of the new light fixtures should be coordinated with that of existing trees. In addition, the spacing of fixtures should be closely correlated to that of the existing street trees. This will maximize the aesthetic coherence of the streetscape and minimize the potential conflict between tree crowns and the efficiency of the lighting system. Additional spatial and lighting coordination is required if the existing cobra-head fixtures are retained in the future.
- Light sources of the pedestrian-scale fixtures should not be mounted between 12 and a maximum of 14 feet to maximize the light provided for pedestrian below the tree canopy. This dimension is derived from the 14-foot minimum clearance required by Caltrans between the roadway surface and the lowest branches of street trees. Strong consideration should also be given to installing new roadway light fixtures in both sidewalk and median locations to ensure proper lighting of the roadway. If fixtures are provided in sidewalk locations only, the canopies of the proposed London Plane trees in the medians may block some of the light from sidewalk fixtures that otherwise would contribute to lighting levels on the opposite side of the roadway. A lighting study should be conducted during the final design phase in order to determine the best configuration of fixtures for East 14th

Street.

- The design and color of traffic signal masts and mast arms throughout the Corridor should be coordinated with the design and color scheme for roadway/pedestrian-scale fixtures. Examples of the effect of such approach are illustrated in the photo simulations of streetscape and crosswalks improvements in this report(Figure 6.23).
- Low in-pavement fixtures should be installed to provide a "wash of light" on the pavement of the median refuge. To add to the general lighting in the pedestrian refuge area, one pedestrian-scale fixture should be provided, where this is feasible based on the width of the adjacent median.



Figure 6.23: Coordinated design and color scheme for roadway/pedestrian-scale fixtures

### Street ‘Furnishings’

Street furnishings such as bus shelters, benches, bollards, trash receptacles and others, have the potential to greatly enhance the experience of the street afforded particularly to pedestrians, bicyclists, and transit users. Following are a few general comments and recommendations with regard to the selection of street furnishings:

- A street furnishing vocabulary should be selected which considers the street design as a whole. The selected elements should form a group or "family" of furnishings. This does not imply that all furnishings have to come from one manufacturer or need to be of exactly the same style. Rather is it important for all elements to complement one another, to speak one design "language".
- In this context of creating a “family” of furnishings, it is recommended that one color scheme be generated which then can be applied to all furnishings selected for use in the Corridor. The color scheme may involve more than one color, but should be coherently applicable for all streetscape elements. The color scheme should include all lighting fixtures and signal masts and mast arms.

It is essential that throughout the selection process, applicable ADA guidelines be consulted in order to assure compliance to avoid the need for later costly modifications.

### Seating/Benches

Benches or other forms of seating should be an integral part of any improvements throughout the Corridor, both at future bus stop and at areas of high pedestrian activity. Local examples of public seating on University Avenue in Palo Alto (Figure 6.24), on Santa Cruz Avenue in Menlo Park, and on Castro Street in Mountain View, can



Figure 6.24: Public seating on University Avenue in Palo Alto

serve as a model. Although these streets have more of a main street character they still can serve as a model for particular locations on East 14th Street where present and future pedestrian volumes make such amenities desirable and feasible. Following are a few general comments and recommendations with regard to the seating:

- Provide seating in locations throughout the Corridor segments with higher pedestrian activities. Seating could be accommodated in the additional space provided by curb bulb-outs or in the ‘furnishings zone’ of the widened sidewalks, if space allows.
- Although loitering is not a necessary consequence of installation of seating within the public right-of-way, it is advised that benches/seating not be installed without prior consultation of residents of adjacent neighborhood streets.

It should be noted that the new ADA draft guidelines require that benches/seating comply with new regulations on height and depth of the seating surface as well as the back of the bench. Fifty percent of all benches in a given location have to be compliant with these new standards. Where only one bench is provided, it has to be compliant.



Figure 6.25 & 6.26: Bollards used in areas of downtown Berkeley

### ***Bollards***

The use of bollards can enhance the pedestrian experience if their location is coherently applied throughout the pedestrian circulation system of the Corridor. Following are a few general comments and recommendations with regard to the selection of bollards:

- Bollards should be used to not only direct and/or limit vehicle activity, but signify areas of priority for pedestrians. For instance, curb ramps of crosswalks at T-intersections located at the opposite side from the intersecting street could be highlighted by placements of bollards on either side of the ramp( See figures 6.25 and 6.26 ).
- Placement of one bollard each at the center of the two edges to the proposed pedestrian median-refuges should also be considered. The bollards would prevent drivers from making U-turns or other turning maneuvers through this area.

### ***Trash Receptacles***

The frequent placement of trash receptacles provides a place for trash that might otherwise be discarded in the street. Following are a few general comments and recommendations with regard to the seating:

- Trash receptacles should have side doors for content removal. This feature is already required by many municipalities and intended to make content removal more ergonomic. If recycling is desired this could either occur by selecting a combined trash/recycling receptacle or by installing one separate recycling receptacle at per intersection in areas of higher pedestrian volumes (Figure 6.27) .
- Trash receptacles should be installed at all street corners of intersections in areas with higher pedestrian activity. In all other areas, one receptacle each should be located at corners diagonally across from one another.
- At T-intersections with one crosswalk, one receptacle should be installed on either side of the crosswalk. Where two crosswalks are present, one receptacle each, located on opposite sides of the street, should be installed per crosswalk.



Figure 6.27: Decorative trash receptacle

### Bicycle Parking

- To enhance the bicycle experience on East 14th Street, it is recommended to install bicycle parking facilities where this is desired by individual shop owners or warranted by generally high commercial or employment activity.
- Uniformly designed bicycle parking should be incorporated in the furnishing zone of the sidewalk or in bulb-outs where such facilities are desired or needed. Different designs for bicycle parking are available and the final selection should occur with involvement of San Leandro’s bicycling community (See Figure 6.22).



Figure 6.28: An example of innovative bicycle parking that does not impede the pedestrian realm

### Tree Grates and Tree Guards

In the long-term it is recommended to install tree grates in all sidewalk tree locations where no tree grates exist today or where new street trees are planted in the future (Figure 6.29).

- Key criteria in the selection and installation process should be the durability and accuracy of installation with respect to the connection between concrete, steel frame and the grate itself. This connection should remain flush with the surrounding walking surface for many years after the initial installation and therefore warrants particular attention in product selection and installation. Openings in the tree grates should be ADA compliant (less or equal to 1/4 inch).
- The use of decomposed granite or mulch is not recommended, as this application often leads to less untidy and



Figure 6.29: An example of a flushed tree grate

potentially less safe conditions around tree wells.

- It is recommended that the use of tree guards be reserved to commercial and pedestrian activity nodes. Although the use of tree guards is not a necessity where there is proper tree staking, they can lend additional character to the streetscape of a particular area. It is therefore recommended that the use of tree guards be reserved to commercial and pedestrian activity nodes.



Figure 6.30: An improved bus stop with seating, shelter and trash receptacle.

### Bus Stop Improvements

Bus stop improvements for Bus Rapid Transit and/or local bus stops along East 14th Street are a long-term goal for AC Transit, largely depending on the future availability of funding.

- San Leandro should approach AC Transit with the request for close cooperation on the design of bus stop improvements including shelters, seating, trash receptacles, and potential information kiosks( Figure 6.30).



Figure 6.31: Public art can add playful twists to utilitarian functions such as public seating

### Public Art

Public art provides the opportunity to further enhance the experience of all users of the East 14th Street Corridor and should therefore be an integral part of the final designs for the streetscape. Many of the individual design elements of a street present opportunities for the integration of public art, including special paving at crosswalk locations, within bulb-outs, or at bus stop design, shelters, seating, tree grates and tree guards, special signage, newsrack pedestals or corrals, walls in conjunction with seating and others (See Figure 6.23).

- Public art should be used to further highlight the more pedestrian active parts of the Corridor and perhaps distinguish between different district (i.e. the Palma District and the International District) from one another. Doing so will lend another level of detail to the sense of place along the Corridor, a fact that would also aid people's overall orientation within the Corridor.
- Whenever special paving is designed and implemented this should occur in coordination with representatives of the disabled community, as there are increasing concerns about some surface treatments not being compatible with special needs of the blind.