

CHAPTER 3 CIRCULATION ELEMENT

COMMUNITY-WIDE STREET SYSTEM

The Carmel Valley Community street system consists of a hierarchy of arterial, major and collector streets. This system accesses Interstate 5 at two existing interchanges, Carmel Valley Road and Del Mar Heights Road. The freeway provides regional access from Carmel Valley to the San Diego metropolitan area.

Development Unit Seven is bounded by two important streets: Del Mar Heights Road, designated as a six-lane primary arterial; and El Camino Real, planned as a four-lane primary arterial. These roads will provide vehicular access from the neighborhood to the larger community. The alignment of El Camino Real in the northwestern corner of the precise plan may be adjusted as a result of design studies. Such an adjustment would result in some modification of residential acreages in that area with some corresponding revisions of dwelling unit totals.

Community bicycle and pedestrian paths are proposed paralleling these arterial streets and tying into the neighborhood bicycle and pedestrian routes. Signals are required along Del Mar Heights Road at El Camino Real, the neighborhood entrance west of Torrey Pines High School and at the entrance to Torrey Pines High School. Signals on El Camino Real will be provided at both neighborhood intersections with Neighborhood Three entries.

Del Mar Heights Road has the additional role of linking the community of Del Mar and Interstate 5 to Carmel Valley and points east. The Del Mar Heights Road interchange with Interstate 5 was designed and constructed to accommodate future expansion. A second bridge and ramp modification will increase the capacity of the interchange to Carmel Valley traffic.

In order to insure adequate access to Unit Seven, the following improvements to the community circulation system must be completed in compliance with the Carmel Valley Transportation Phasing Plan, as traffic warrants.

- Relocation and signalization of the high school access road from Del Mar Heights Road.
- Extension and improvement of Del Mar Heights Road easterly from the interchange to the easterly access to Unit Seven.
- Realignment and improvement of El Camino Real to the northern boundary of Unit Seven. A temporary connection to the existing roadway to the north must be maintained until the new highway can be constructed and a new connection provided to "old" Camino Real.

- Signalization of the neighborhood entrances along El Camino Real and Del Mar Heights Road, as well as the intersection of these arterials.

NEIGHBORHOOD STREET SYSTEM

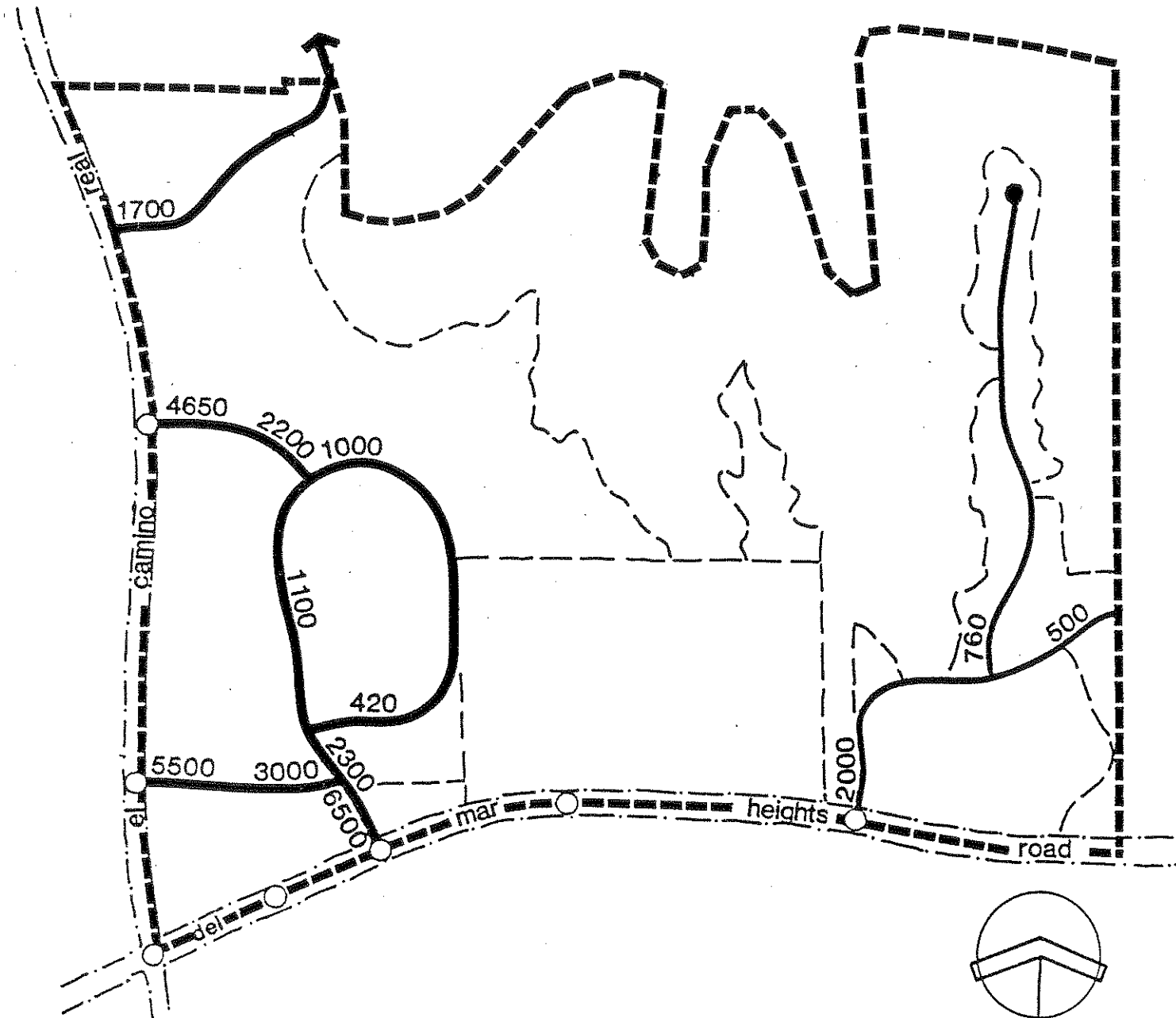
Street Classifications

The proposed street system within Unit Seven is depicted in Figure 10. This system consists of the following street classifications:

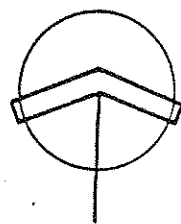
- A collector street system, including internal loops and three connections to the perimeter arterial streets.
- Local streets to access detached residential projects, including conventional streets and cul-de-sacs.
- Project streets (not shown) to access attached residential projects, which may be privately maintained.

The internal road system has been designed to meet objectives set forth in the Carmel Valley Community Plan:

- The neighborhood contains only collector and local streets. Through traffic is diverted to perimeter arterials and is discouraged within the neighborhood by the design of the collector road system.
- Only collector streets intersect with the perimeter primary arterials; local streets feed into the collector system, not the arterials. Neighborhood access from arterials is restricted to four neighborhood entrances.
- Individual residential lots receive access from local streets or private project streets, not from collector streets.
- Access to and parking along the collector roads is restricted in order to provide minimum friction points between automobile, pedestrian, and bicycle traffic and to enhance the visual quality of streetscapes.
- The collector street system functionally links the various land uses within the neighborhood while providing controlled access points to community facilities, the future town center, the employment center, and neighborhood facilities within Unit Three.



- arterial
- collector
- local
- traffic signal



Traffic Volume

Figure 10 also shows the estimated average daily traffic (ADT) along Unit Seven streets. These volumes represent the anticipated number of vehicles expected in a 24-hour period under full build-out of the neighborhood. The street system is designed with adequate capacity to accommodate the projected ADT.

Signalization

Traffic signals will be required at collector street and arterial street intersections along Del Mar Heights Road and El Camino Real. These articulated intersections will improve the movement of traffic along major streets and between neighborhood and community functions. The neighborhood entrances are designed to accommodate relatively high volumes of movements at the neighborhood collectors.

Street Vacations

The vacation of segments of existing Black Mountain Road should be undertaken when such segments are no longer needed in the precise plan area. One section lying along the north side of the City fire station site could be vacated when improvements are made to Del Mar Heights Road and the collector extending north from the Carmel Country Road intersection. A portion of Black Mountain, east of the high school, could be relinquished for pedestrian and bicycle use when development of an alternative routing of traffic can be effected. The vacation of Black Mountain Road should be coordinated with future subdivision and improvement plans.

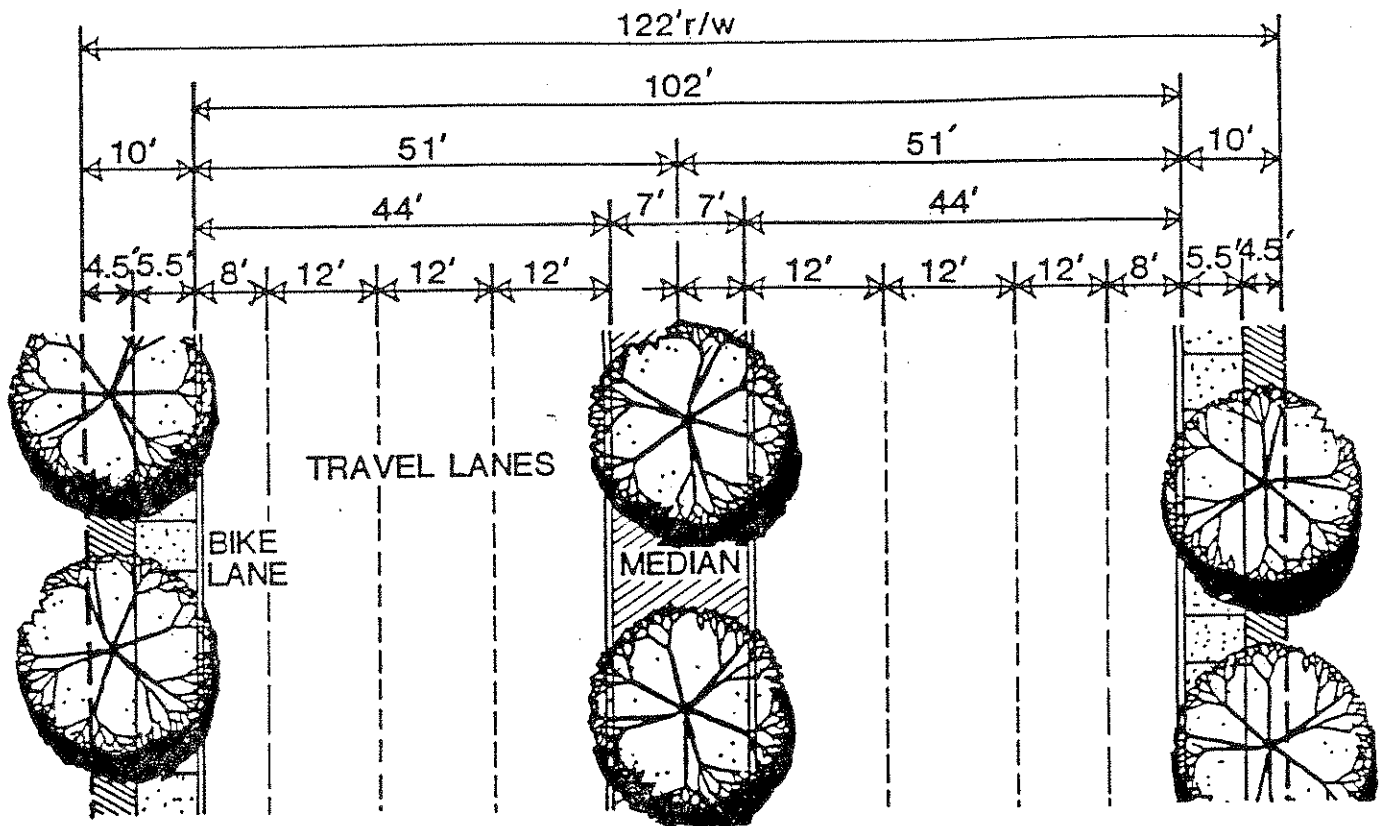
Vacation of a segment of existing El Camino Real should be undertaken when the road is no longer needed in the precise plan area due to the improvement of new El Camino Real and the provision of a new connection between the existing road and new El Camino Real.

STREET DESIGN

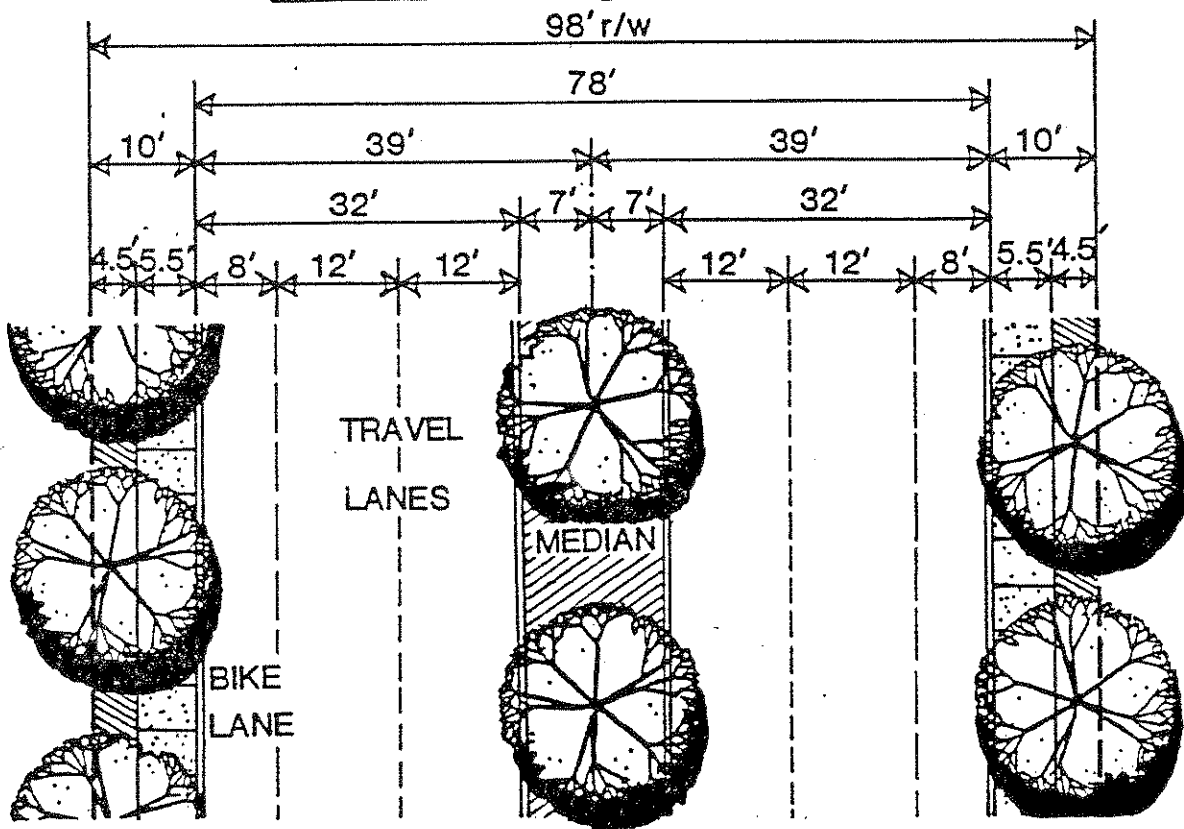
Typical street sections for the perimeter arterials of Del Mar Heights Road and El Camino Real are shown in Figure 11.

Both roads will be improved to full width, providing travel lanes and a landscaped median. Bicycle travel is accommodated in a marked lane next to the curb, while pedestrians are provided a sidewalk parallel to the roadway.

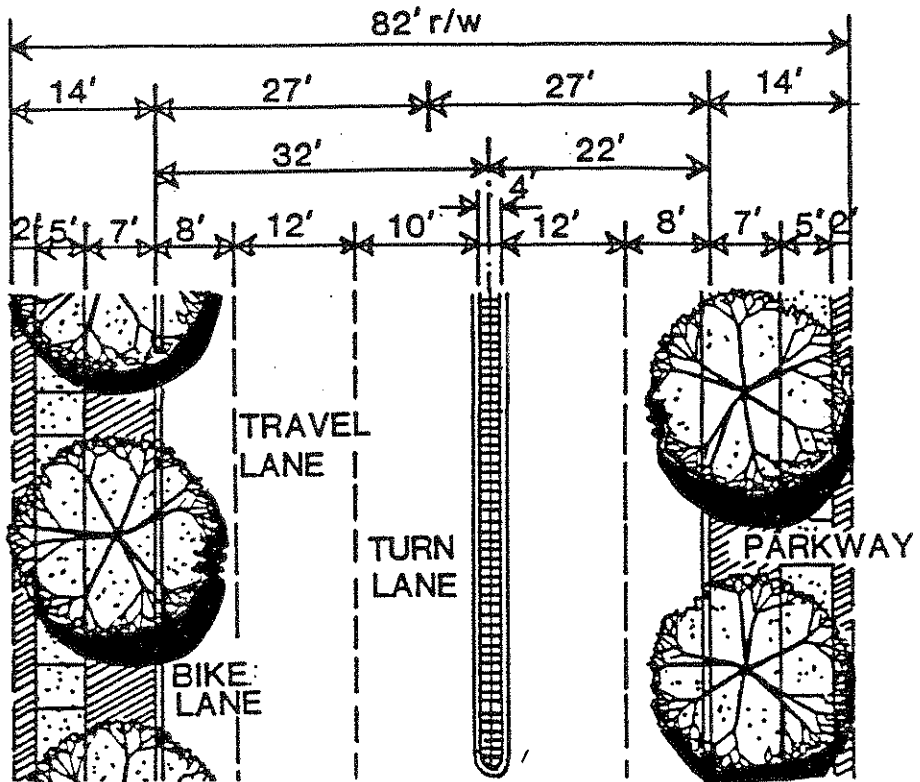
Figures 12 and 13 show the design of the three collector entrances into the precise plan area, while Figure 14 depicts typical conditions along the interior loop collectors.

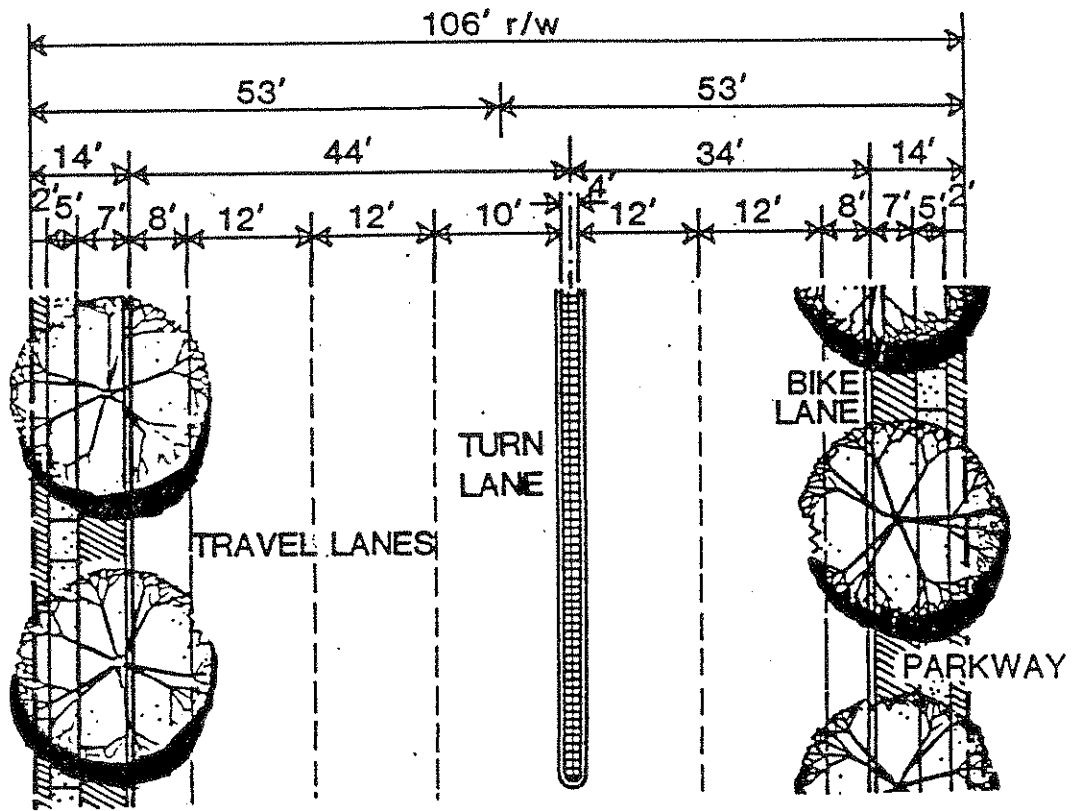


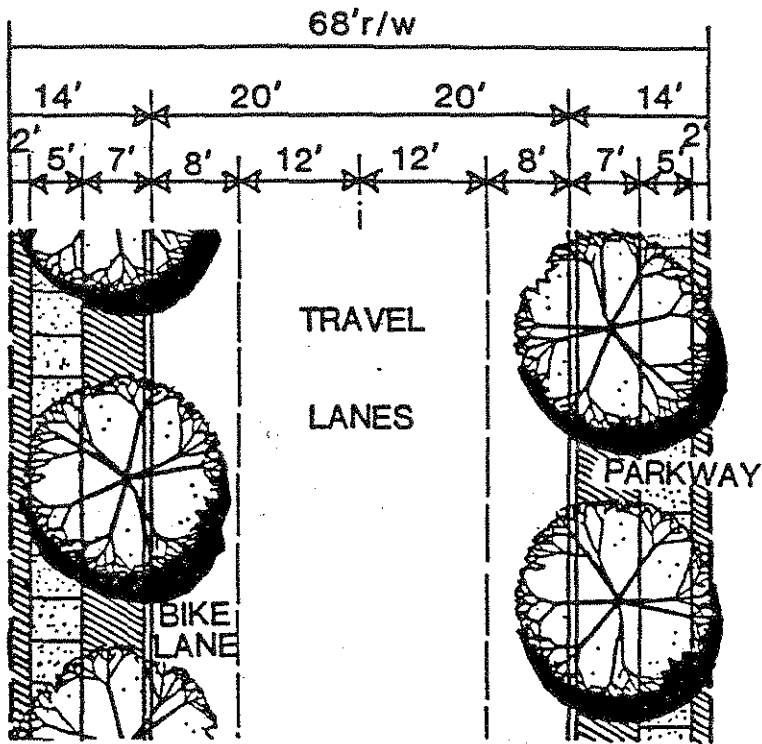
del mar heights road



el camino real







The neighborhood entrance sections are designed to accommodate relatively high volumes of traffic, permitting turning movements as required. The collector roads provide for two travel lanes, one in each direction, except for the four-lane, east-west collector serving the higher-density, attached areas. All the collector sections include bicycle lanes next to the curb, with no parking permitted. Pedestrian paths are provided within the right-of-way on both sides of the road. For a discussion of the design treatment of the collector system as a parkway, see Chapter 4.

Figure 15 depicts typical local street sections within detached residential areas. Two types are shown: a residential street and a residential cul-de-sac. Sidewalks are provided as needed next to the curb.

ALTERNATIVE TRANSPORTATION MODES

The Carmel Valley Community Plan stresses the importance of transportation alternatives to the private automobile, including public transit, bicycle travel, and pedestrian movement. Complete transit, bikeway, and pathway systems are proposed for the community. The automobile, transit, bicycle, and pedestrian facilities are to be developed in an integrated network, providing a "balanced transportation system" assuring mobility and access to all parts of the community. Reflecting Community Plan objectives, the Unit Seven Precise Plan provides neighborhood transit, bicycle, and pedestrian alternatives related to the community circulation network.

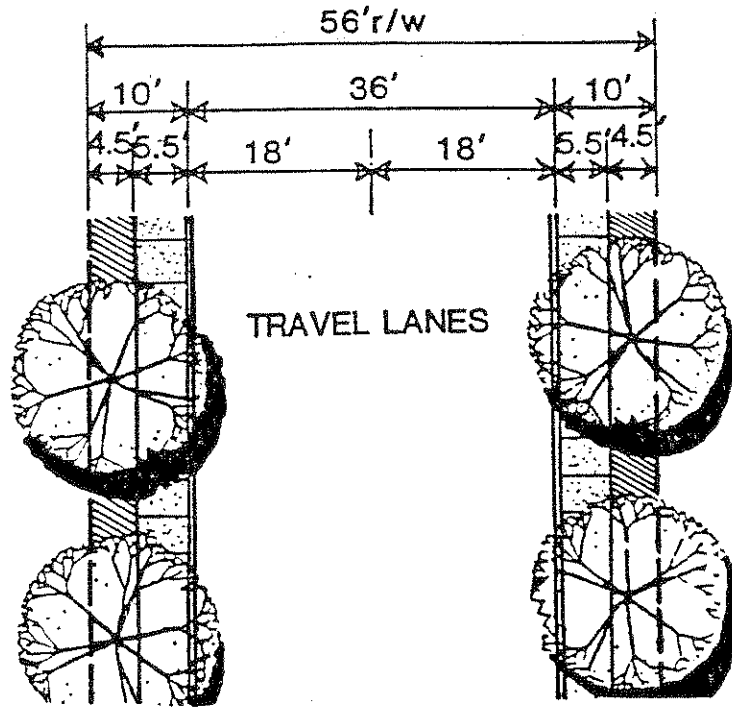
Transit

Unit Seven is located northerly of the Carmel Valley Town Center. A transportation terminal is proposed in the Community Plan within or adjacent to the town center. Regional and subregional transit in the form of buses is expected to travel on Del Mar Heights Road from the freeway to the terminal.

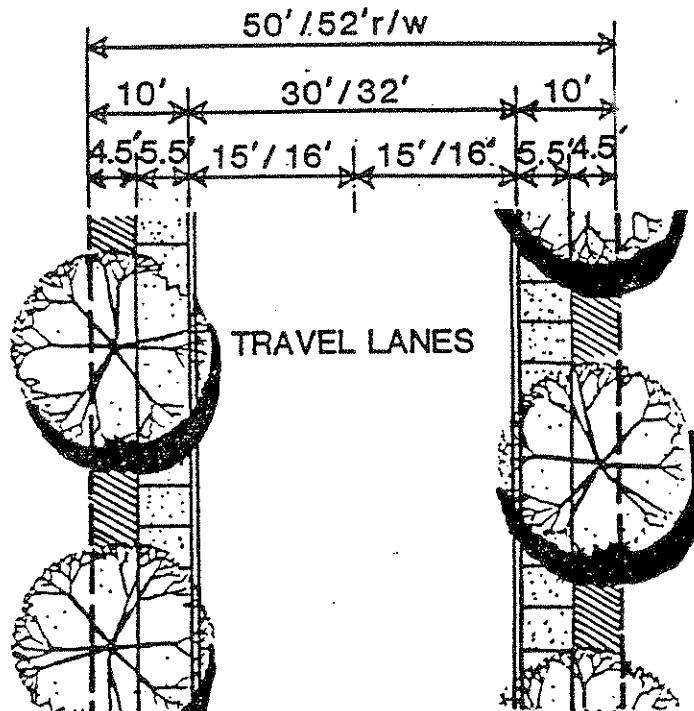
Aside from its proximity to the town center terminal, via motorized, pedestrian, and bicycle linkages, Unit Seven may be provided local transit service. The neighborhood collector streets can accommodate local buses and para-transit. Any permanent stops required should be sited along the loop. One possible transit routing within Unit Seven is shown in Figure 16; other routings are possible.

Bicycle Circulation

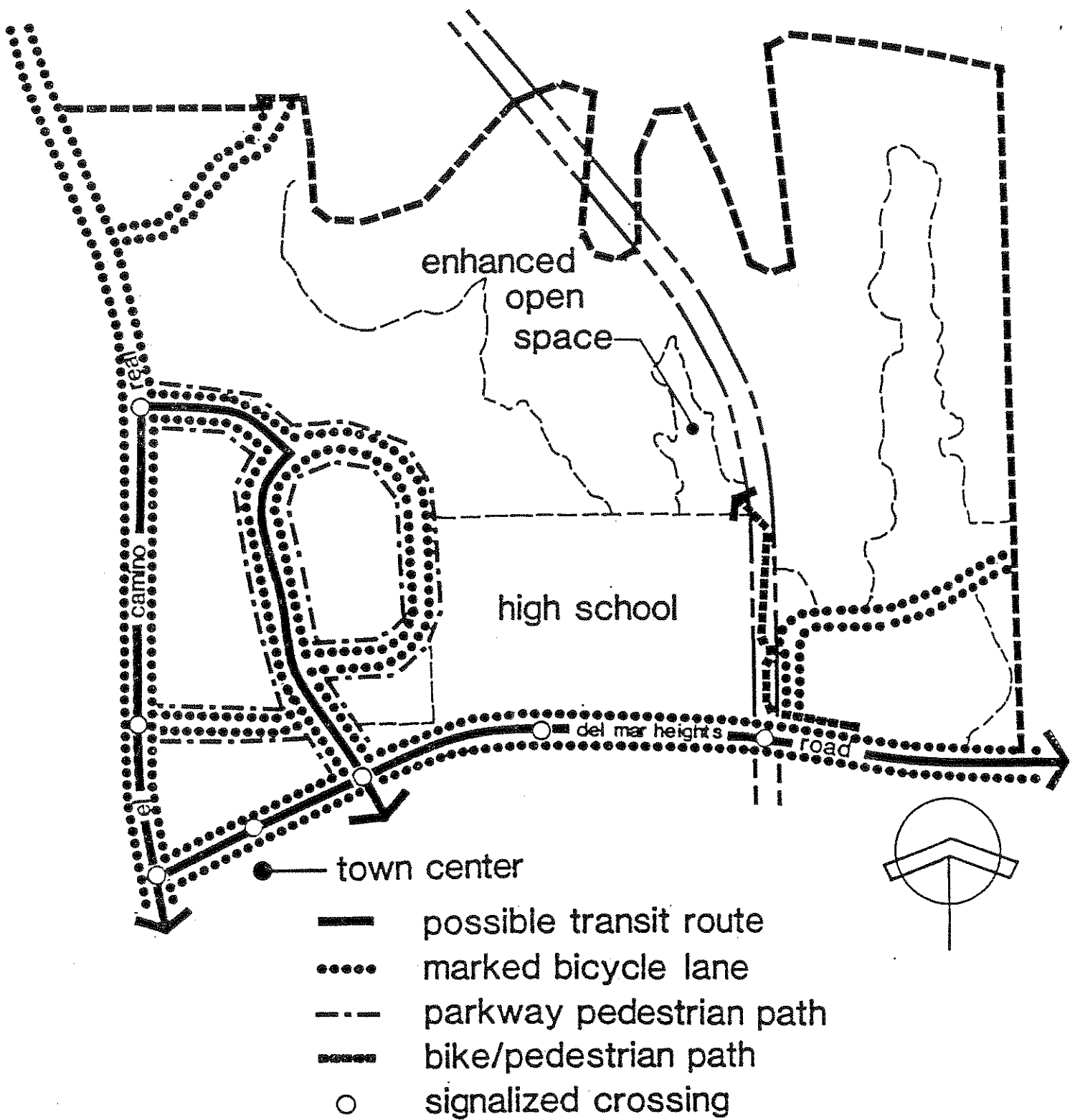
A neighborhood bikeway system for Unit Seven is depicted in Figure 16. This system provides internal bicycle circulation, while linking the neighborhood to the community bike route network and community activity centers. All bikeways should meet the requirements of the City Street Design Manual, Section VII, as well as Caltrans Design Standards.



residential street



residential cul-de-sac



The neighborhood system should incorporate the following bicycle facilities:

- Marked bicycle lanes within the roadbed of the collector streets, including linkages to the community bike routes along Del Mar Heights Road and El Camino Real.
- Pass-throughs at certain residential culs-de-sac to allow the bicyclist convenient access to the collector bike path, eliminating circuitous routes along local streets.
- Extension of the Unit One bike path within the power easement lying along the east side of Torrey Pines High School, arriving at athletic facilities and play fields and the enhanced open space area.
- A combined bicycle-pedestrian route on a portion of existing Black Mountain Road, east of Torrey Pines High School. Following vacation of the right-of-way due to realignment of roads in the area, the existing roadway will be reserved for a barrier-free bike/pedway. This will provide the single-family project a convenient connection to the community bicycle network.

Bicycle Parking Facilities

Bicycle parking facilities should consist of bicycle racks and bicycle lockers. Bicycle racks should not require the use of chains or cables to secure the bicycles, as chains and cables are easily cut. The racks should be capable of securing bicycles by using U-shaped, high-security locks (e.g., Kryptonite, Citadel, Gorilla brands). Bicycle lockers should be provided for employees arriving by bicycle at major activity centers. Bicycle racks should be provided for visitors to major activity centers arriving by bicycle. A combination of bike racks and lockers should be provided at transit centers.

Bicycle parking facilities should be identified by bicycle parking signs. Such signs, with directional arrows, should be used to guide bicyclists to bicycle facilities when the facilities are not visible to arriving cyclists. A standard bicycle parking directional sign shall be used for this application.

Bicycle parking facilities should be located closer to the entrance of the activity center than the nearest motor-vehicle parking space. The placement of bicycle parking facilities should not block pedestrian traffic.

Pedestrian Movement

A pedestrian path network for Unit Seven is also shown in Figure 16. This system of paths links the various residential projects and community facilities within the precise plan area. In

addition, ties are provided to the community-wide pathway network and to the Unit Three pathway system feeding into the neighborhood park and elementary school.

The neighborhood path system incorporates the following elements:

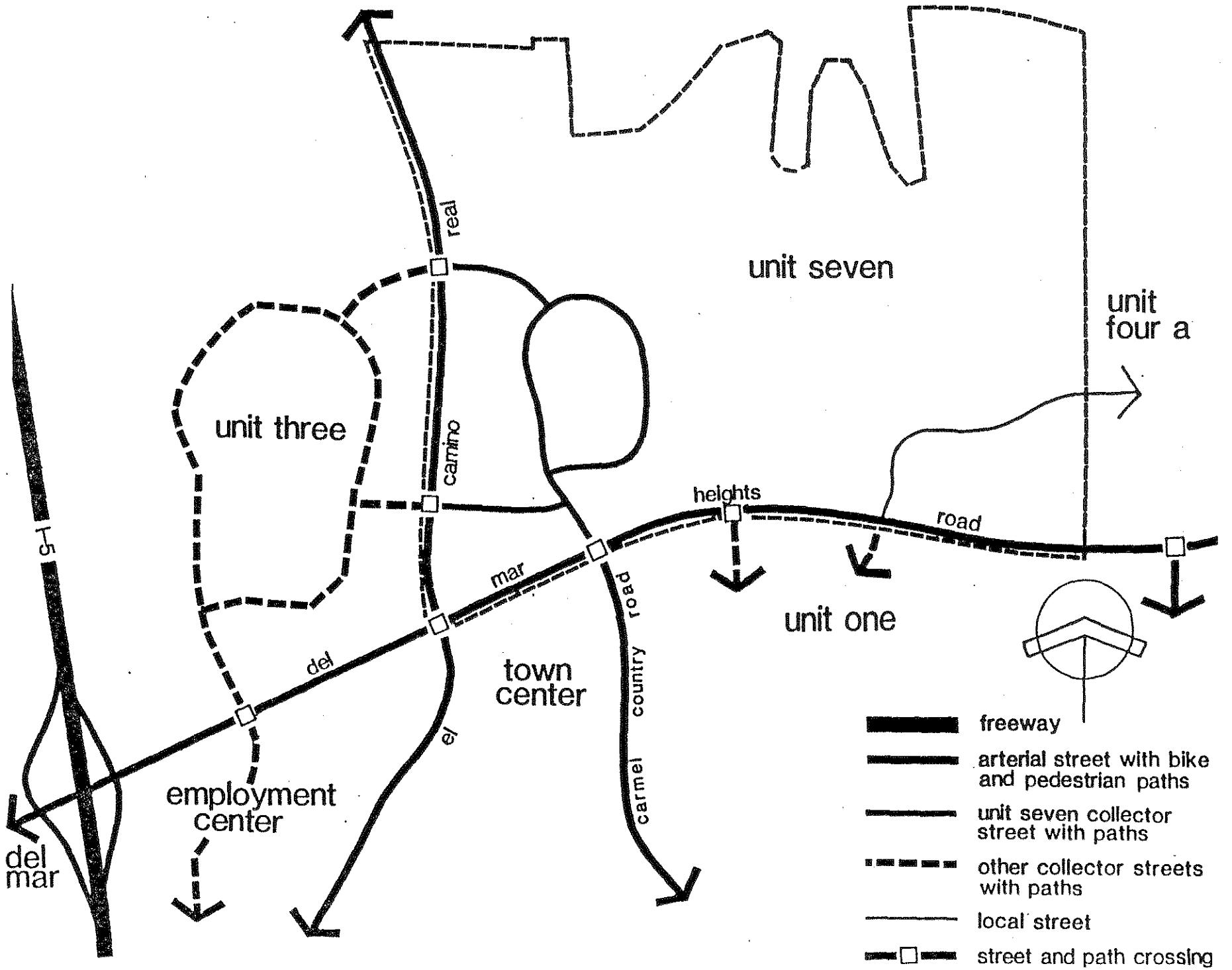
- Sidewalks within the collector parkways connecting to the community pedestrian paths along Del Mar Heights Road and El Camino Real.
- Limited local street access from the collector loop enclosing the interior "small-lot," single-family complex, thus encouraging strolling and jogging along the collector loop parkway.
- Cul-de-sac "pass-throughs" from local street sidewalks to the collector parkway paths.
- Standard sidewalks along local residential streets and pathways within attached housing projects (not shown).
- Signalized crosswalks at neighborhood entrances and crosswalks at key points in the collector system to channel pedestrian movements.
- A combined pedestrian and bicycle path along a portion of Black Mountain Road and the power easement (as discussed above).







COMMUNITY AND UNIT INTERFACE

Figure 17 depicts schematic circulation linkages between Unit Seven and the surrounding Carmel Valley Community. These connections particularly ensure effective access between Unit Seven and key activity centers, such as the town center and employment center. In addition, direct access is provided to Unit Three neighborhood facilities, such as the elementary school and park.

The linkages between the neighborhood and surrounding community consist of streets, parallel bicycle routes, and pedestrian walks. The Unit Seven collector street system and its pedestrian paths connect to perimeter arterial streets and paths. Crosswalks and signals, where necessary, are provided at street intersections. These crossings, in combination with other development unit crossings, provide ease of access to the employment center and town center to the south, and residential neighborhoods to the east, west, and south. Transit service may be provided connecting the neighborhood to the town center transportation terminal and other portions of the Carmel Valley Community. In addition to linkages to the surrounding community, Unit Seven will have good access to the San Dieguito River Valley via El Camino Real and bicycle and pedestrian routes.

COMMUNITY LINKAGES



-  freeway
-  arterial street with bike and pedestrian paths
-  unit seven collector street with paths
-  other collector streets with paths
-  local street
-  street and path crossing