

TRAIL DESIGN STANDARDS

As illustrated in **Figures 1 through 22** hereafter in this Chapter, prototypical design components include the following:

1. **Typical Trail Section (Figures 1 - 3)**

- A. The trail would be developed within the following right-of-way or easement areas:
 - 1) Where easements are sought from adjoining landowners (as described previously), easement widths of 30-feet (20-feet minimum, if required).
 - 2) Where the municipality would be in clear ownership of the right-of-way for the trail, the widths of said rights-of-way could range from 30-feet to 60-feet.
- B. The 8-15 foot wide trail surface, itself, will consist of the following:
 - 1) From the northeastern corner of the Warwick Township Municipal Campus to the bridge crossing the Conestoga Creek: unpaved surface. A compacted stone dust surface is recommended.
 - 2) From the bridge crossing the Conestoga Creek to the Akron Borough municipal boundary: unpaved surface. A compacted stone dust surface is recommended for most of this section with a small portion paved with bituminous material.
 - 3) Within the Borough of Akron: bituminous paved surface with the westernmost portion unpaved. Primarily a bituminous paved surface is recommended, with small portion of the trail being composed of a compacted stone dust on the western side of the Borough limits, as it leading back into a more rural section of trail.
 - 4) The second Ephrata Township portion (between Akron Borough and Ephrata Borough): unpaved surface. Primary surfacing is recommended to consist of a compacted stone dust surface.
 - 5) From the Ephrata Borough municipal boundary to the east, the trail surface is recommended to be a compacted stone dust surface until its intersection with Rothsville Road. From Rothsville Road to where this Study concludes (at the proposed Ephrata Borough Rail/Trail), a bituminous paved surface is recommended.

- 6) At activity nodes (seating and interpretation areas): paved trail surface with textured paving, “rumble strips” to slow bicyclists.
- C. Signage will be provided throughout the corridor in conformance with the noted setback distances.
- D. Landscaping within the corridor will consist of the following:
 - 1) Clearing of woody volunteer growth within 10-feet of the trail’s centerline and replacement of same with turf seeding and wildflower mixes.
 - 2) Selective clearing of the remainder of the easement or right-of-way in order to preserve natural buffers and encourage their healthy growth.
 - 3) New tree planting will be limited to those areas where the trail is not adjacent to farm fields that could be affected by shade cast by new trees.
 - 4) New foundation plantings will be utilized to augment activity nodes, to provide privacy/screening, and as otherwise required.

2. **Crossings (Figure 4)**

- A. Each trail crossing will consist of bituminous paving, textured paving, an entrance sign, gates to restrict vehicle traffic, and directional signage. Some, depending on importance and/or location may have interpretive or trailhead signage.

3. **Trail Connections (Figure 5)**

- A. Each trail connection will consist of bituminous paving, textured paving, an entrance sign, and directional signage.
- B. Major trail connections will be complemented by a bike rack, two benches, and a trash receptacle. Minor connections will be complemented with two benches and a trash receptacle as deemed necessary.

4. **Interpretative Areas (Figure 5)**

- A. Seating and interpretation areas will consist of bituminous paving, textured paving, a bike rack, two benches, and a trash receptacle. In certain areas, a small roof structure will protect the bench seating.

- B. Interpretation areas will also be provided with appropriate signage describing the projects impact on community, etc. (stream habitat) and landmarks (Fig. 11) along the course of the trail.

5. **Crossing Gates (Figures 6 -7)**

- A. Gates will be located at all road crossings and be appointed with the necessary signage. It is recommended that they be red in color.

6. **Typical Signage (Figures 8 - 11)**

- A. Each major entrance and connection point will be provided with a large entrance sign (as shown in Figure 8). Each sign will identify the Trail, acknowledge the cooperative effort that the Trail represents, welcome its users to use the park responsibly, and list the rules and regulations of the Trail. These major entrance areas would be considered as where there is parking for trail users, at trailheads and as otherwise deemed necessary.
- B. Each entrance/road crossing and connection point will be provided with a smaller, metal sign that outlines the rules and regulations of the Trail (Figure 9).
- C. Several crossings, most likely those of high-speed roads, will be marked on either side, for the safety of the users, with a flashing cross alert system to alert vehicular traffic of pedestrians.
- D. Miscellaneous signage will include those shown in Figures 10-11. These include directional signs, signs to warn against trespass, signs to warn of farming activities on and adjacent to the trail, signs of caution at the crossing of roads, signs indicating the preservation of farms, and mileage posts.
- E. The above-described signs are proposed to be constructed of treated wood materials and/or painted metal and vinyl.
- F. In addition to typical signage, interpretive signage will be provided consistent with the messages to be conveyed.

7. **Accessory Structures (Figure 12)**

- A. At designated locations along the trail, a timber structure may be installed to provide the trail user a place of respite. This canopy is proposed to accompany interpretation areas, or be placed where deemed desirable.

8. Road Crossings (Figures 13-21)

A. East Newport Road Crossing (Figure 13)

- 1) Initially, the crossing of E. Newport Road will be via at-grade means. Additionally, crosswalk treatment will be employed within the cartway. Future development may include the construction of an elevated pedestrian bridge.
- 2) As the rail bed is +/- 4 feet above the road grade, cut will be necessary to maintain accessibility.
- 3) Pavement surfaces at trail entrances will include textured paving, and bituminous paving. The trail surfacing will consist of compacted crushed gravel.
- 4) Twin trash receptacle groupings along with animal waste bag dispensers, will flank the trail. Gates and bollards will be installed to prohibit unauthorized vehicular access.
- 5) Safety and directional signage will provide information for Trail users.
- 6) Foundation landscaping will complete the design.

B. Rothsville Station Road Crossing (Figure 14)

- 1) The crossing of Rothsville Station Road will be via at-grade means. The paved trail approach from the west will shift to the north side of the corridor, as there is currently a structure located within the right-of-way. The actual crossing will contain a treatment to define the crosswalk and slow vehicles. On the Eastern side of the crossing, the paved trail will be continued between a relocated hedge row and building as part of a shared service drive/trail. This hedgerow will be moved to provide adequate space for this shared use and thus safety for trail goers and motorists.
- 2) Safety and directional signage will be provide information for Trail users.
- 3) Trailheads flanking Rothsville Station road will be bituminous and contain an inset pattern or stamped surface as detailed on Fig. 4). Additional foundation plantings may be added to define boundaries and visual interest. A set of gates/bollards will be installed to restrict vehicular access.

C. Picnic Woods Road Crossing (Figure 15)

- 1) An at-grade crossing will intersect roadway. A paved approach will adjoin cartway on each side of the road. Paved approaches will contain an inset or stamped pattern (Fig. 4) and bollards/gates.
- 2) Safety and directional signage will be provide information for Park users.

D. Meadow Valley Road Crossing (Figure 16)

- 1) Roadway crossing will be at-grade and consist of paved approaches on each side of the cartway. Paved approaches will contain an inset or stamped pattern (Fig. 4) and bollards/gates.
- 2) Trail alignment will have to be shifted to the southern portion of the rail corridor to provide an improved sight distance and safety to the pedestrians and motorists at the roadway crossing.
- 3) On the Eastern approach, the trail will adjoin the existing Farfield parking lot. Wheel stops will have to be added to parking spaces to prevent intrusion of vehicles onto the trail. Also, a curb has been added to the trailhead to provide greater definition of spaces and greater safety for trail users.
- 4) Twin trash receptacle groupings, along with animal waste bag dispensers, will flank the trail.
- 5) As this approach directly adjoins residential properties, additional measures to provide security to adjacent landowners may be needed, such as fence and foundation plantings.

E. Rothsville Road (PA 72) Crossing (Figure 17)

- 1) The rail bed is at-grade. Bituminous approaches will adjoin each side of the highway. An existing guiderail must be modified in order to provide uninhibited access for pedestrians, bikers, etc.
- 2) Paved approaches will contain an inset or stamped pattern (Fig. 4) and bollards/gates.
- 3) Speed of automobile traffic is of major concern at this intersection, so adequate signage marking the trail is to be in place. It is recommended that a flasher be installed that signals only when pedestrians are in the trail. In addition to this, a textured or

luminescent crosswalk should be incorporate delineate the crosswalk.

F. Conestoga Creek Bridge (Figure 18)

- 1) Minimal repairs, if any, would be required in order to prepare the bridge for pedestrian use.
- 2) Hand railing as well as bridge decking will be installed on the bridge. Railing/fencing will extend east and west from the bridge along the abutments.
- 3) Each approach to the bridge will be paved and will contain an inset or stamped pattern, to provide a small interpretation/ seating area.
- 4) Twin trash receptacle and bench groupings along with animal waste bag dispensers, will flank the trail.
- 5) Interpretive signage will concentrate on the history of the railroad, wildlife to be found on the trail, examples of architecture North and South of the corridor, and the importance of water to the environment, agriculture, and community development.

G. Millway Road Crossing (Figure 19)

- 1) Current configuration of the trail is that at this crossing, the trail is grade separated.
- 2) The crossing will be via below-grade means. An option (shown) is to provide a long, continuous ramp to provide access to Millway Road. A future expansion of one berm to the side of the road for a pedestrian lane would add connection to a local farm market and historic feature.
- 3) The below-grade crossing will consist of a concrete box culvert of sufficient width and height to provide for two-way traffic as well as drainage.

H. Main Street Crossing (Figure 20)

- 1) The crossing of Main Street in Akron Borough will be via below-grade means.
- 2) Accessibility to street level will be an option to be considered. Like the prior Millway Road crossing, a long, continuous ramp will be

necessary to provide immediate street access. Due to limited space because of adjoining residences, means of providing access to street level may only be an option on the eastern side of Main Street.

- 3) Improvements to this portion of the trail will be a bit more complicated as the swale in which the trail occupies also is used for conveyance of stormwater. Defining a swale able to hold the volume of stormwater for a 100 year storm event is recommended to prevent washout of the trail.

I. Fulton Street Crossing (Akron Borough) (Figure 21)

- 1) The crossing of Fulton Street will be via at-grade means. The paved trail approach from the west will shift to the south side of the corridor due to an existing stone parking lot. Some improvements to the existing sidewalks and curbs will be needed.
- 2) The trail entrance to the West of Fulton Street will be a shared use with vehicles to access the existing parking lot from Front Street. Paving material will be concrete with either a stamped or inset paver pattern. A series of bollards, fences and gates will prevent vehicles from accessing the trail and entering/exiting parking lot onto Fulton Street. Another potential design consideration would be to relocate the vehicular access to the parking lot to another location.
- 3) An existing fence East of Fulton Street will have to be relocated, as it currently crosses the entire rail bed.

J. Park View Heights Road (Figure 22)

- 1) The crossing of Park View Heights Road will be via at-grade means. Existing sections of curbing will need to be removed to install depressed curb.
- 2) Paved trail approaches will contain an inset or stamped pattern (Fig. 4) and bollards/gates. Twin trash receptacle groupings, along with animal waste bag dispensers, will flank the trail.

K. Trailheads

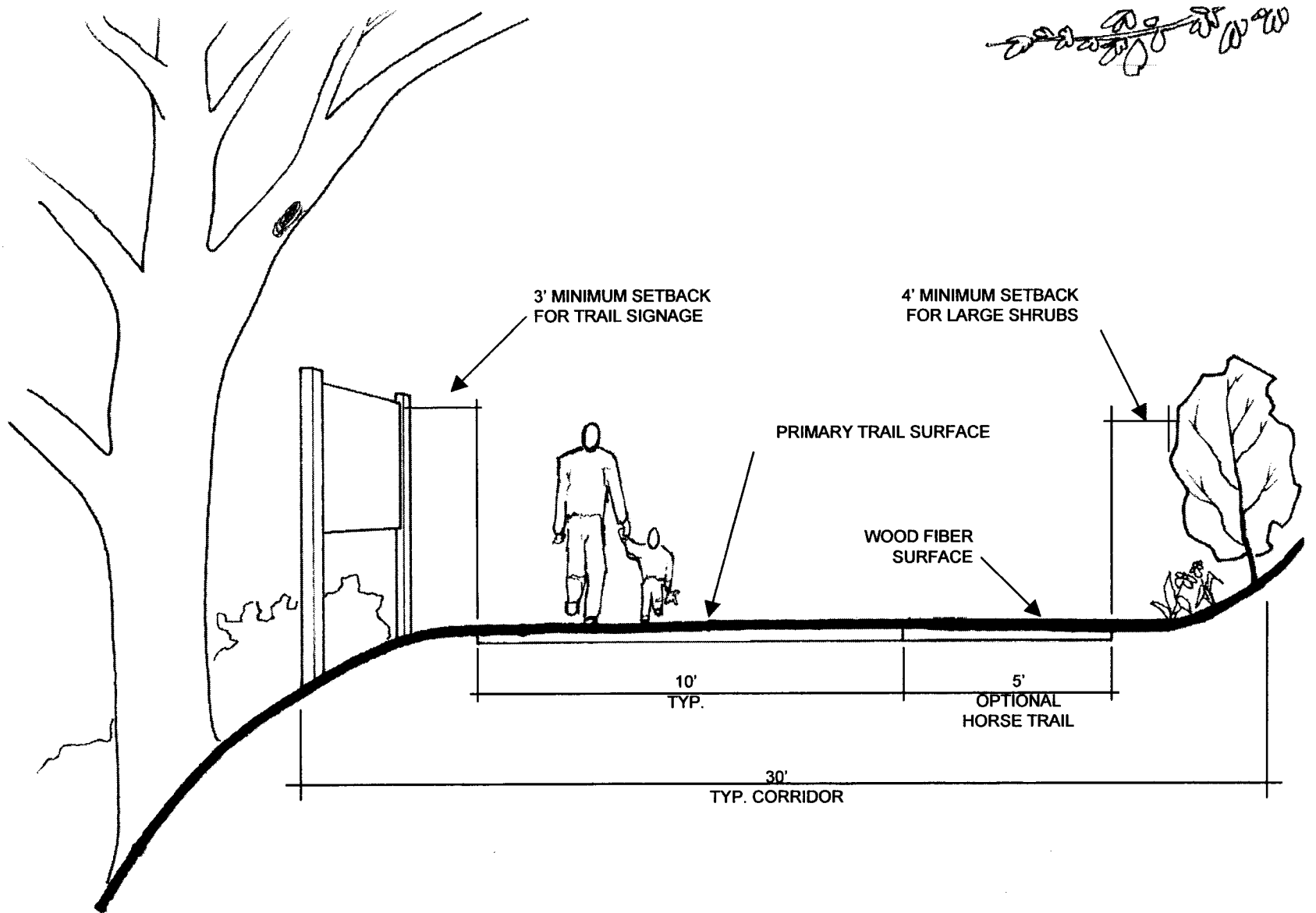
- 1) Formal:
 - a. Warwick Township Municipal Campus

- Public off-street parking
 - Restrooms
- b. Ephrata Township Municipal Building
- Public off-street parking
 - Restrooms
 - Police facilities
- 2) Informal:
- a. Along corridor where on-street parking occurs

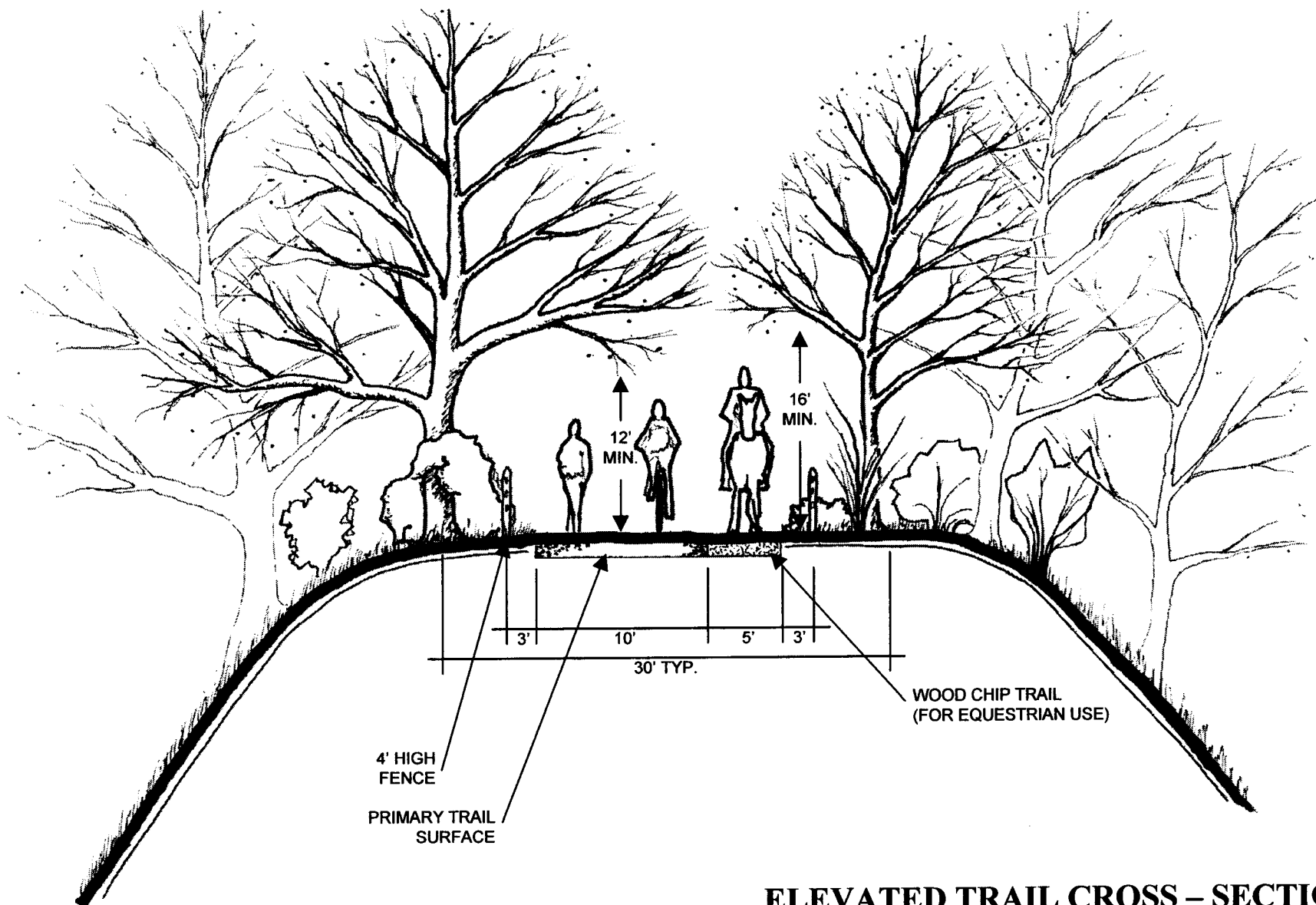
MAINTENANCE STANDARDS

The ongoing maintenance of the trail will consist of the following procedures:

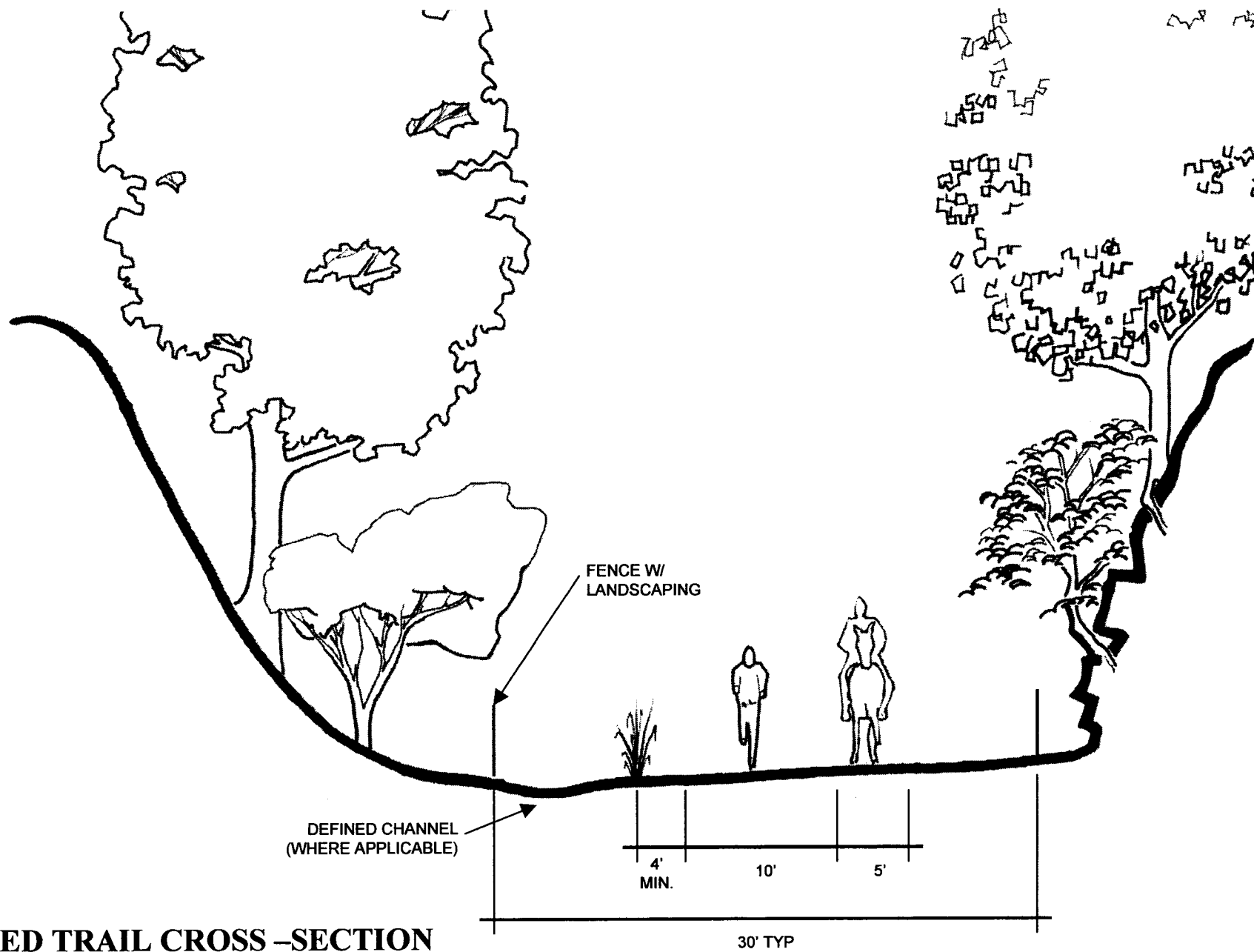
1. Weekly mowing of the grass edges of the corridor and inspection of the trail surface, structures, and signage for emergency repair work that may be needed. Keep records.
2. Twice weekly (or more frequently) trash removal and blown-litter retrieval.
3. Seasonal maintenance of lawns, landscaping, and unpaved trail surfacing. In areas of wildflower seeding, trimming is generally only necessary bi-annually.
4. Plowing and/or blowing of snow if required to maintain serviceable transportation or cross-country skiing route.



TRAIL SETBACKS CROSS-SECTION
FIGURE 1)

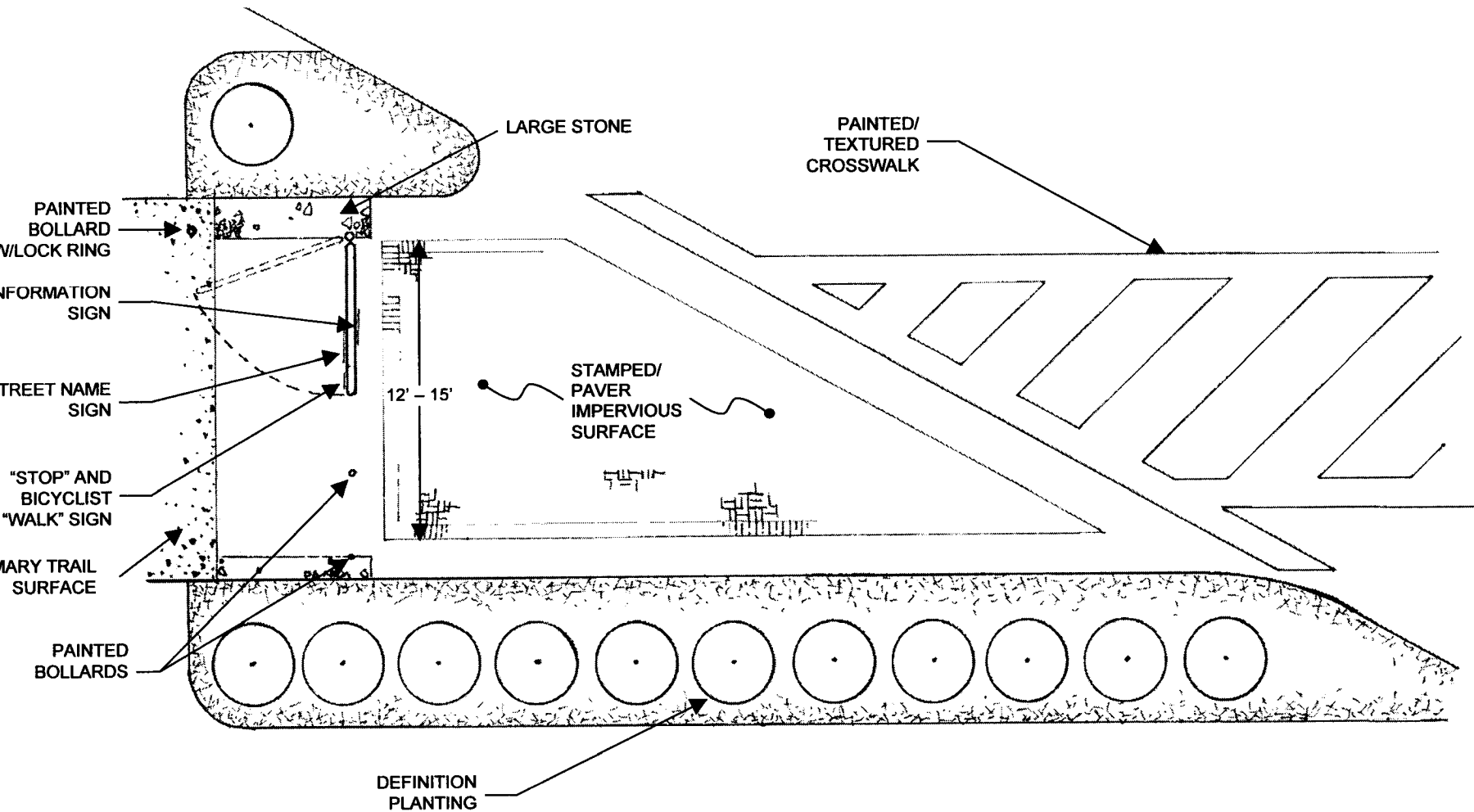


ELEVATED TRAIL CROSS – SECTION
(FIGURE 2)

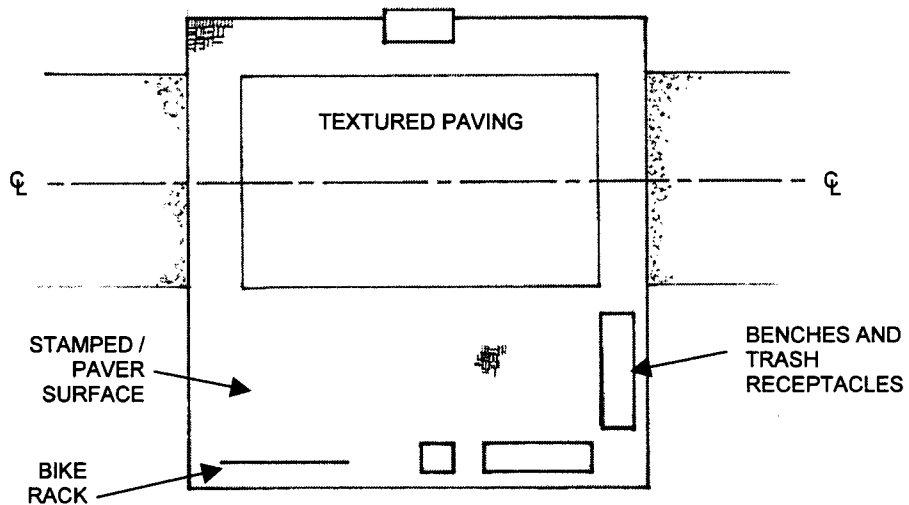
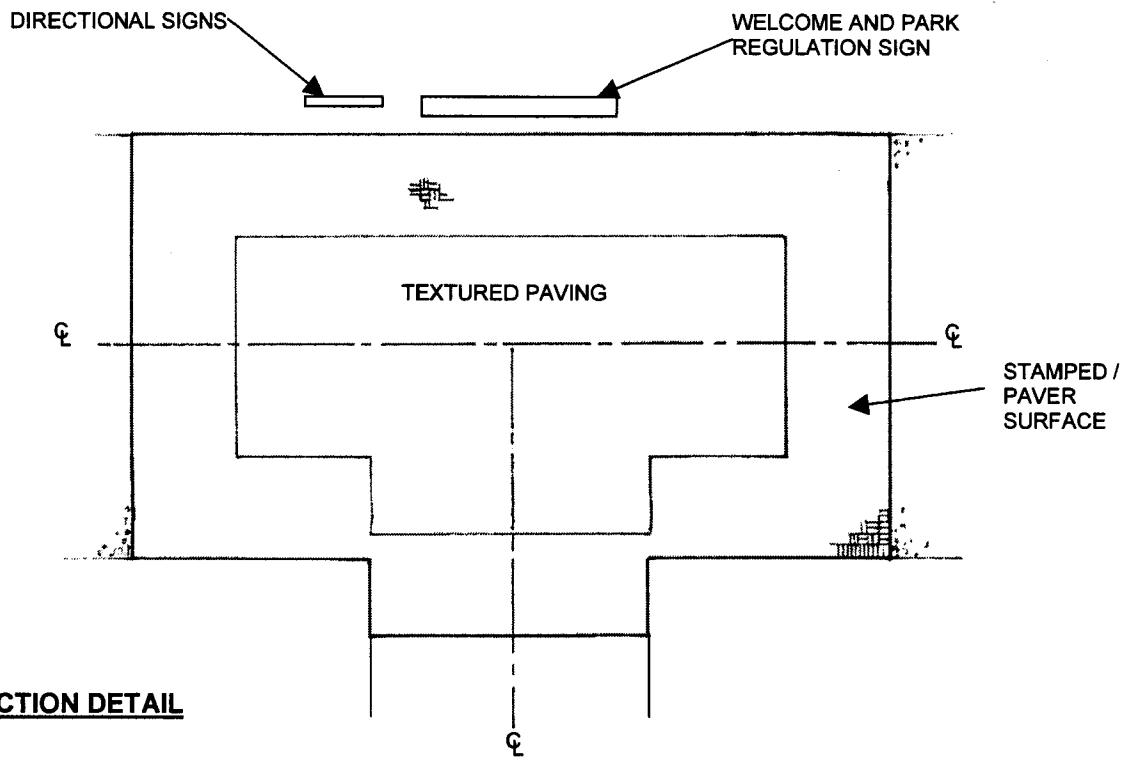


DEPRESSED TRAIL CROSS-SECTION

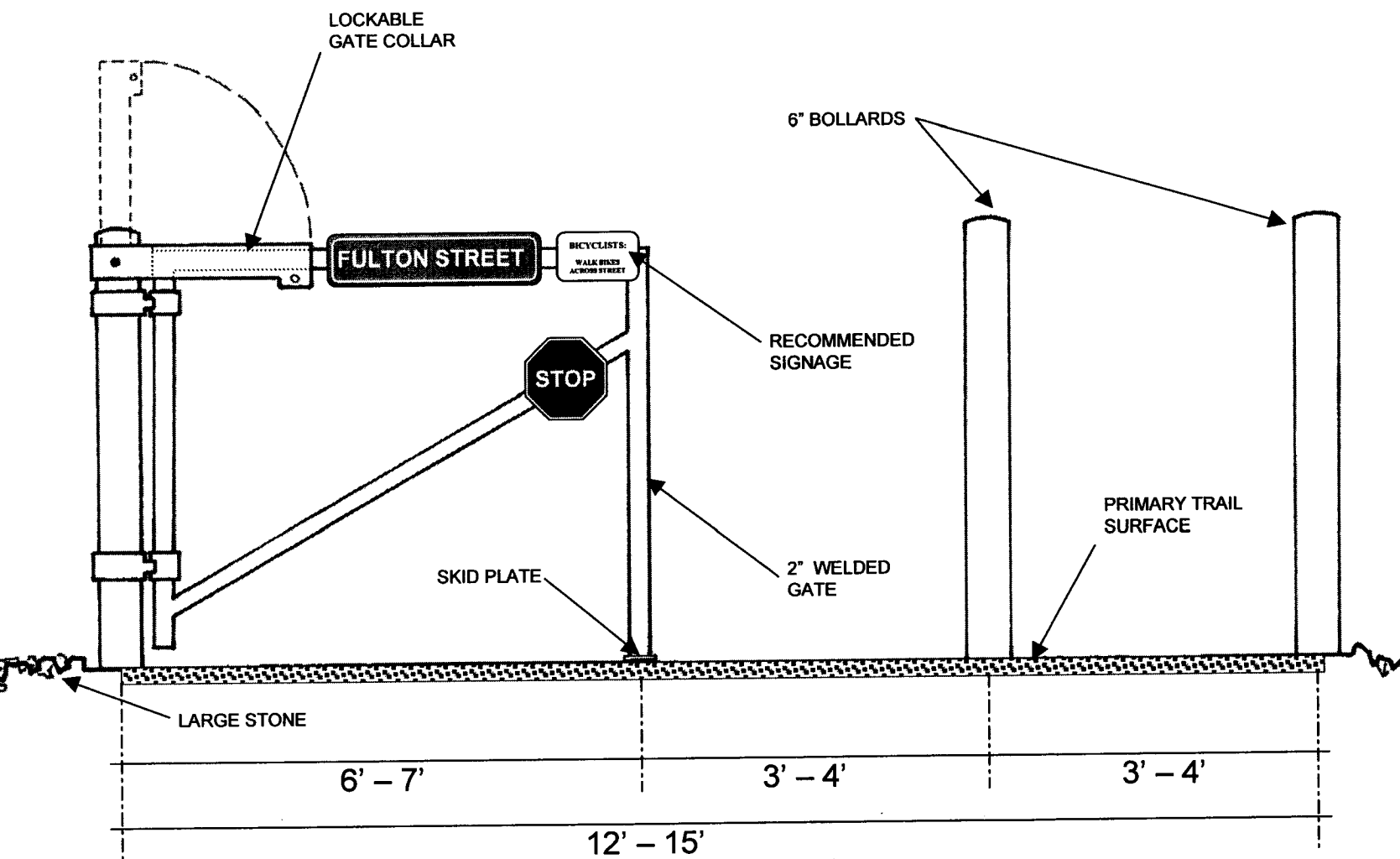
FIGURE 3)



DETAILED PEDESTRIAN CROSSING
(FIGURE 4)

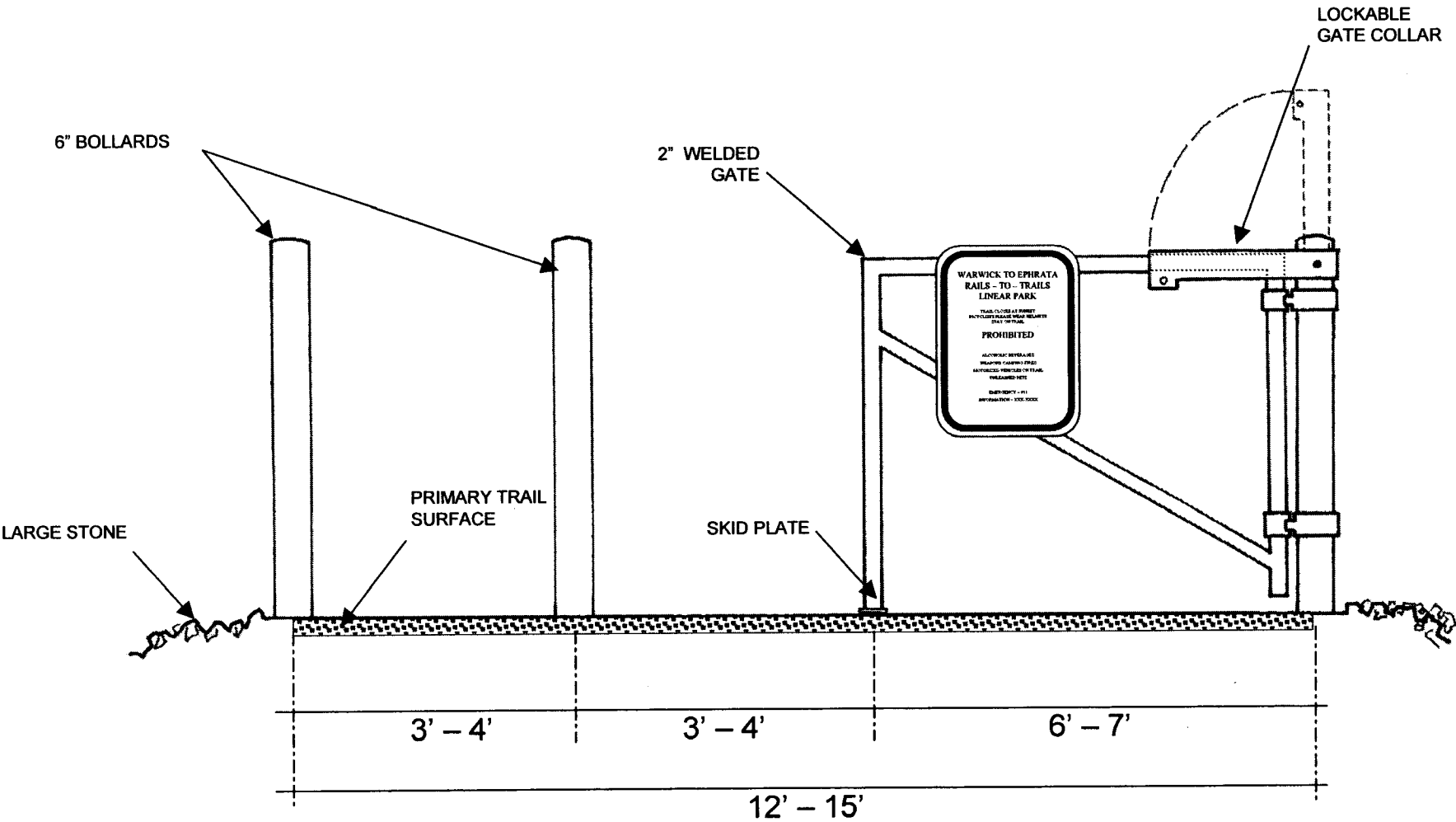


DETAILED INTERPRETIVE / CONNECTION AREAS
(FIGURE 5)



ENTRY GATE (TRAIL SIDE)
(FIGURE 6)

ENTRY GATE (ROAD SIDE)
(FIGURE 7)



WELCOME

WARWICK – TO – EPHRATA RAILS – TO – TRAILS PARK
A COOPERATIVE EFFORT BETWEEN:
WARWICK AND EPHRATA TOWNSHIPS
AKRON AND EPHRATA BOROUGHES

PLEASE USE AND ENJOY THIS PARK FACILITY RESPONSIBLY

RULES AND REGULATIONS

HOURS OF OPERATION: DUSK TO DAWN

NO HUNTING, SHOOTING, OR FISHING PERMITTED

NO MOTORIZED VEHICLES ARE PERMITTED

WALK, JOG, RUN, RIDE BICYCLES, AND ROLLER
SKATE ONLY ON THE TRAIL

DOGS MUST BE KEPT ON LEASHES, CLEAN UP AFTER YOUR DOG

HORSEBACK RIDING IS ONLY ALLOWED IF PERMITTED BY THE
APPLICABLE MUNICIPALITY

NO GAMBLING PERMITTED

NO ALCOHOLIC BEVERAGES PERMITTED

VANDALISM AND TRESPASS ONTO NEIGHBORING LANDS
WILL NOT BE PERMITTED

LITTERING IS NOT PERMITTED. TRASH CANS HAVE BEEN PROVIDED

NO SOLICITING, POSTING OF SIGNS, OR ERECTION OF STRUCTURES
IS PERMITTED

CAMPING IS NOT PERMITTED

PARKING, ABANDONMENT, AND WASHING OF VEHICLES WITHIN THE
PARK ARE PROHIBITED

PERFORMING OF ENTERTAINMENT, CONDUCT OF EXHIBITS, AND
MEETING AS GROUPS ONLY ALLOWED IF NECESSARY PERMITS
HAVE BEEN OBTAINED

NO LOITERING OR OBJECTIONABLE BEHAVIOR WILL BE TOLERATED

WELCOME & PARK REGULATIONS SIGN
FOR TRAIL HEADS AS APPLICABLE
(FIGURE 8)

**WARWICK TO EPHRATA
RAILS – TO – TRAILS
LINEAR PARK**

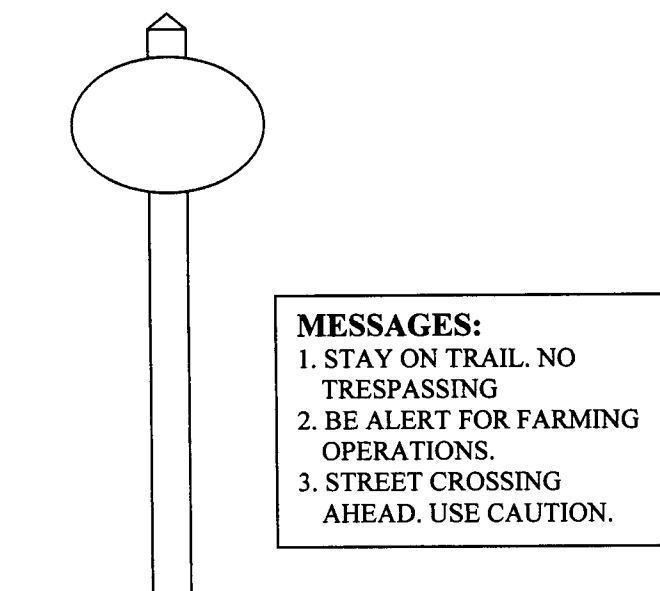
**TRAIL CLOSES AT SUNSET
BICYCLISTS PLEASE WEAR HELMETS
STAY ON TRAIL**

PROHIBITED

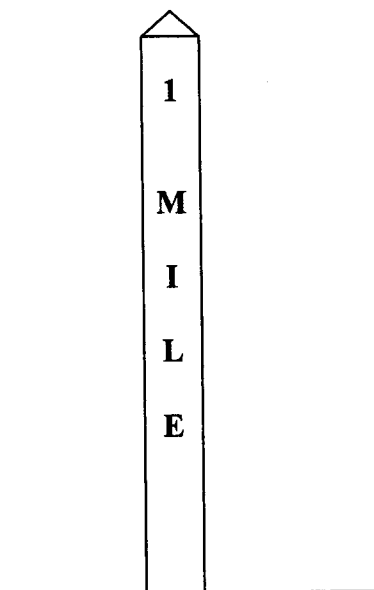
**ALCOHOLIC BEVERAGES
WEAPONS-CAMPING-FIRES
MOTORIZED VEHICLES ON TRAIL
UNLEASHED PETS**

**EMERGENCY – 911
INFORMATION – XXX-XXXX**

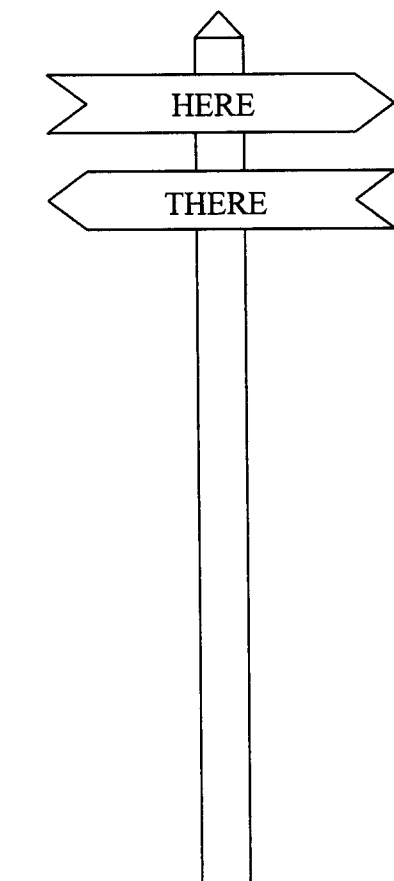
MISCELLANEOUS SIGNAGE
(FIGURE 9)



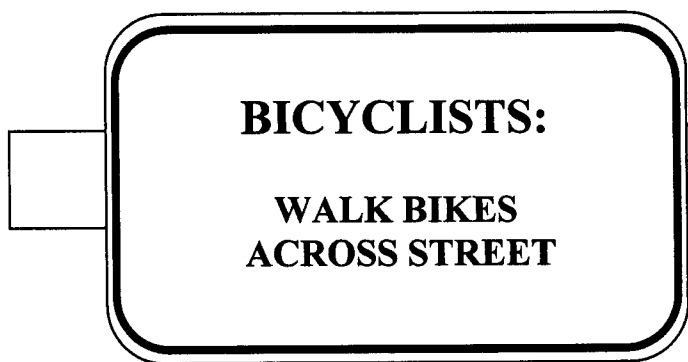
WARNING SIGN



DISTANCE MARKER
(FRONT AND BACK)



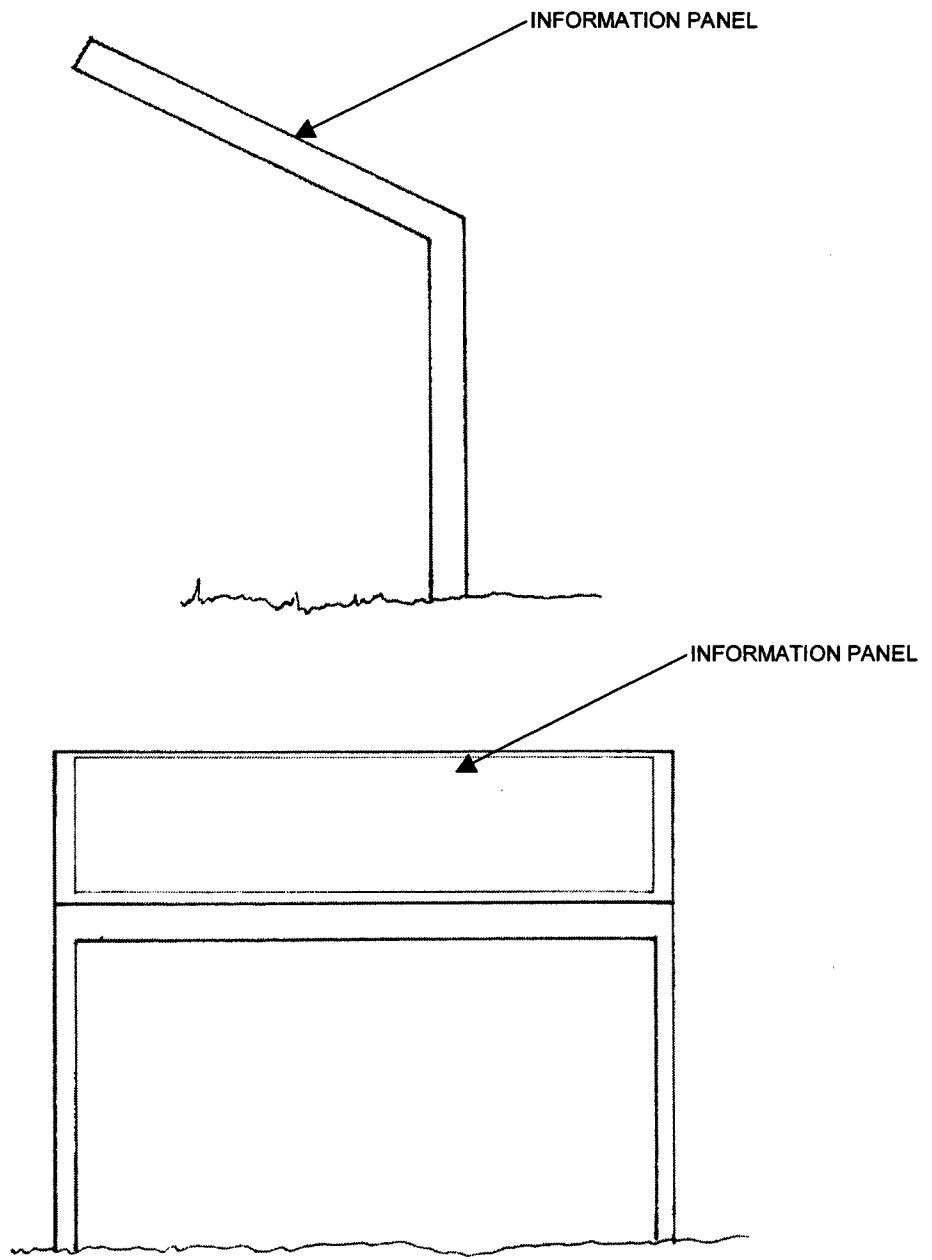
DIRECTIONAL SIGN



CROSSING WARNING SIGN

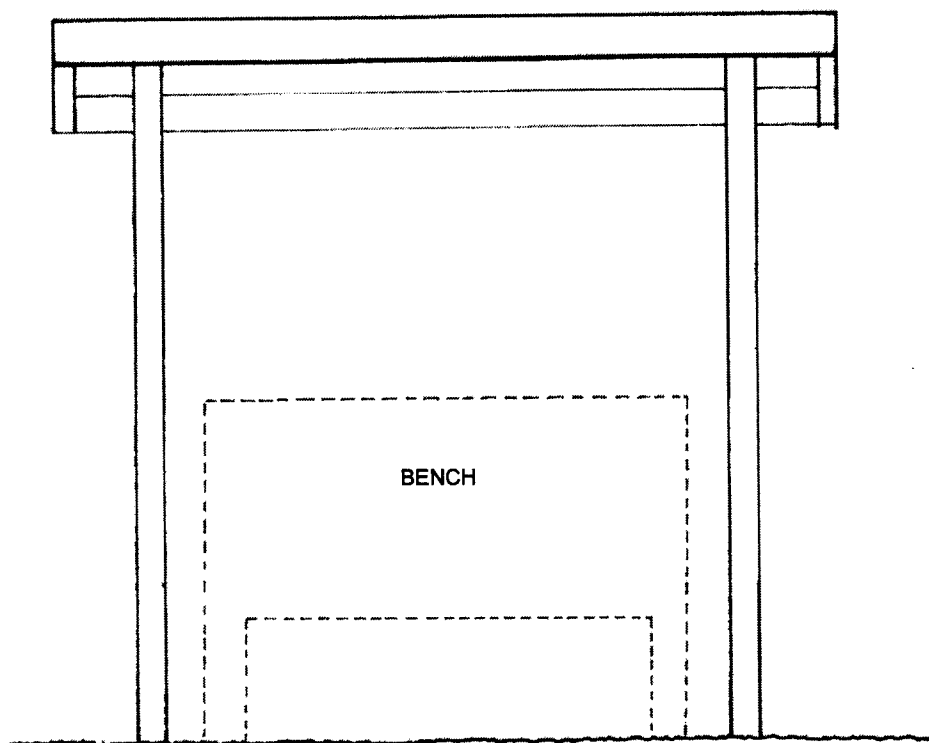
MISCELLANEOUS SIGNAGE

(FIGURE 10)

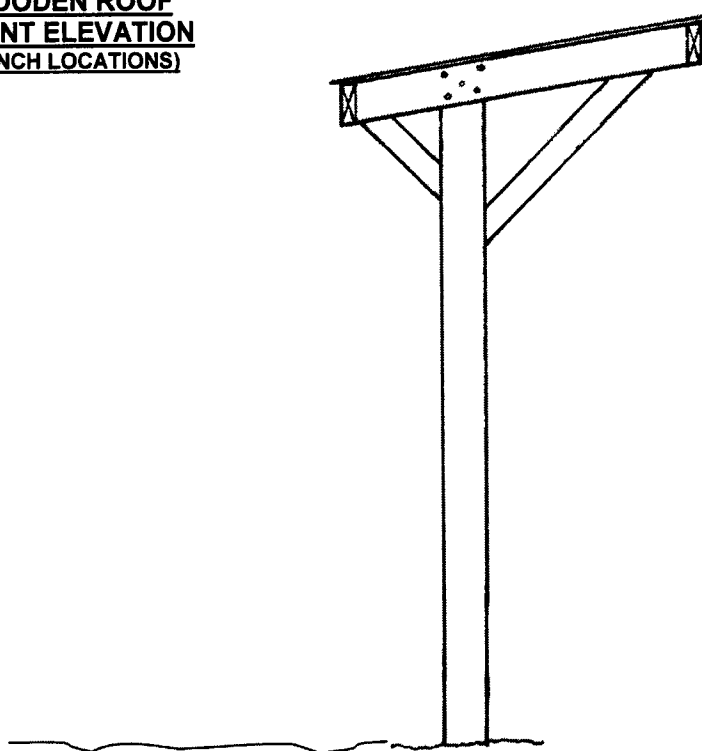


INTERPRETIVE SIGNAGE

MISCELLANEOUS SIGNAGE
(FIGURE 1)

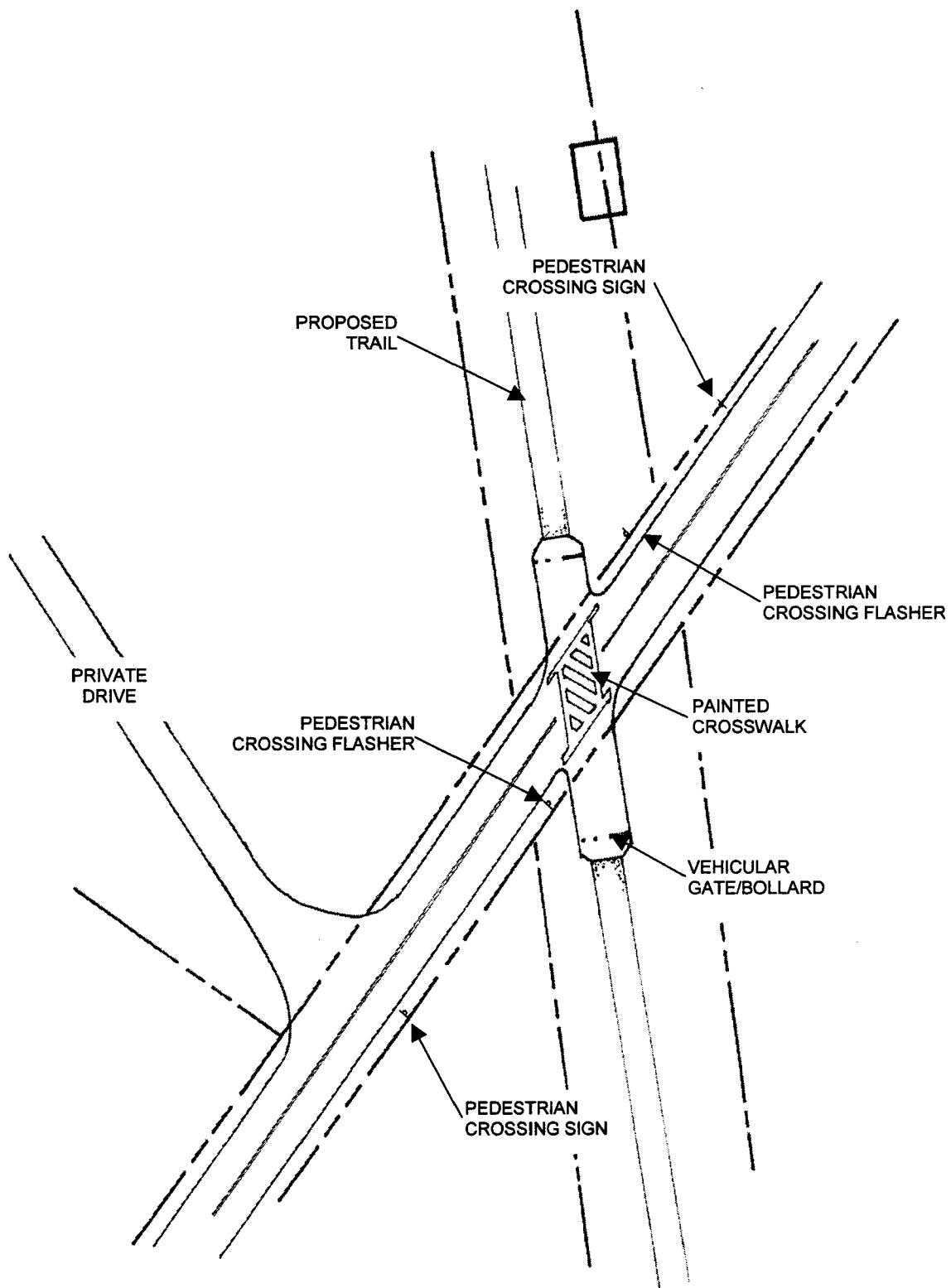


WOODEN ROOF
FRONT ELEVATION
(BENCH LOCATIONS)



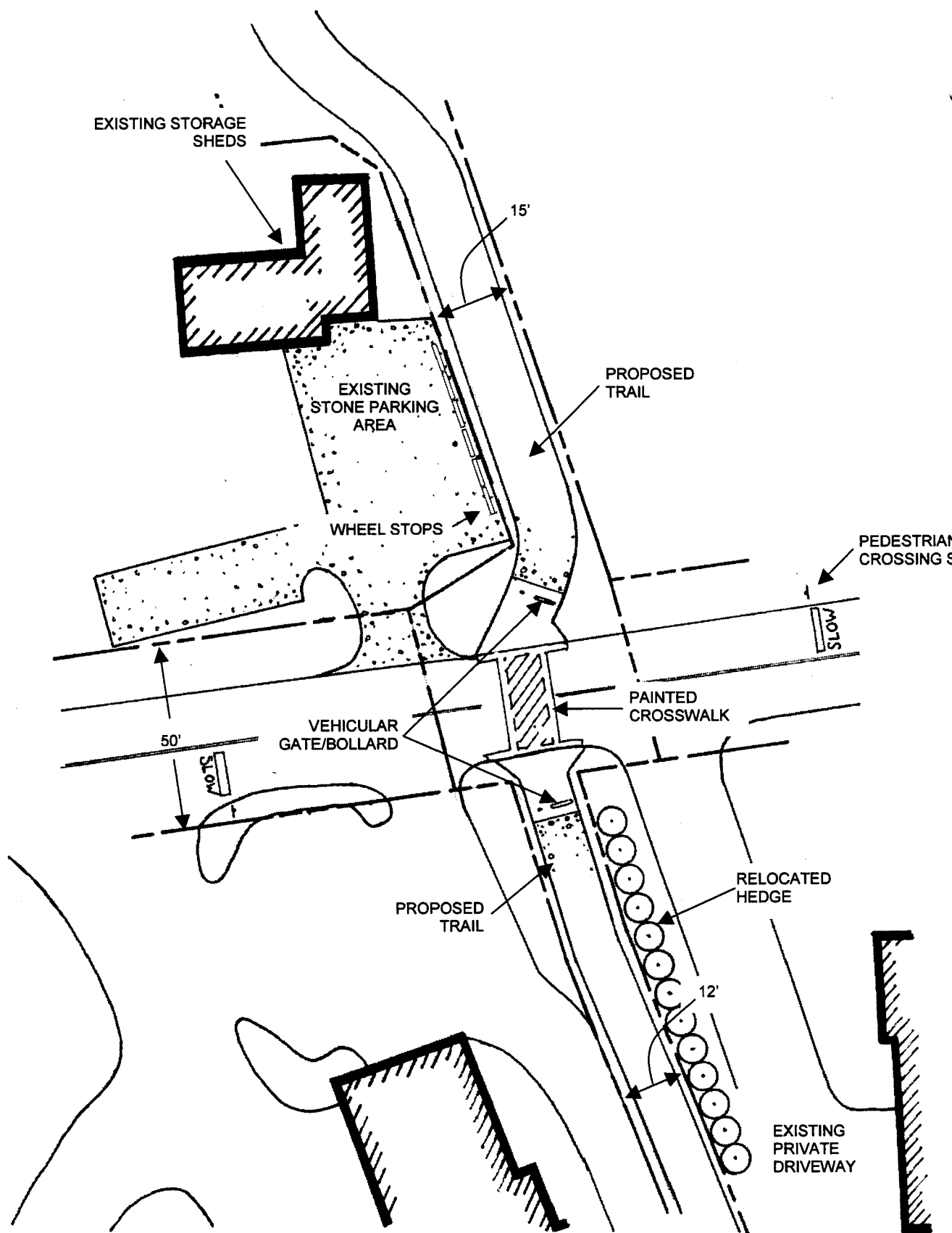
WOODEN ROOF
SIDE ELEVATION
(BENCH LOCATIONS)

ACCESSORY STRUCTURE
 (FIGURE



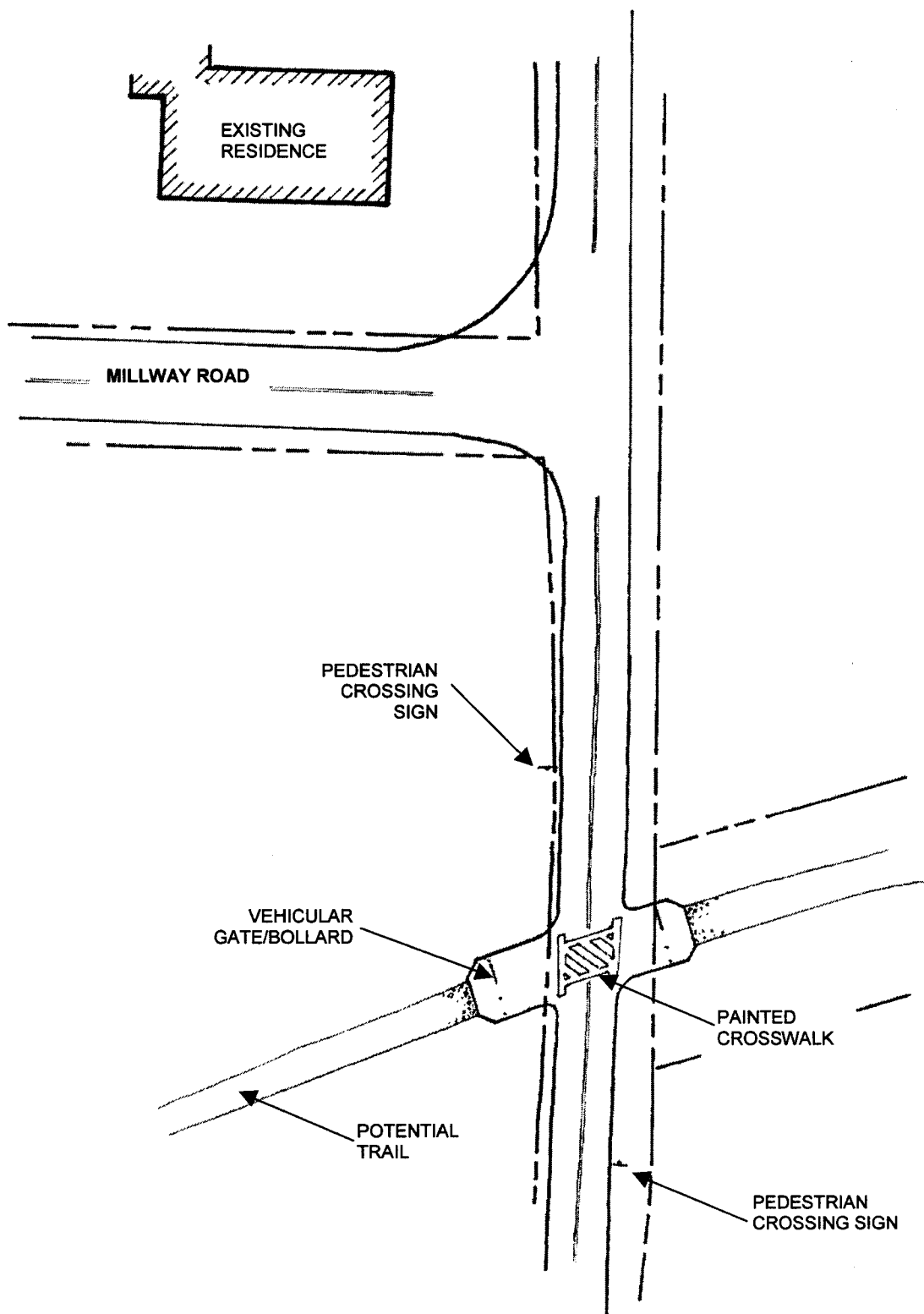
EAST NEWPORT ROAD CROSSING
(FIGURE 1)



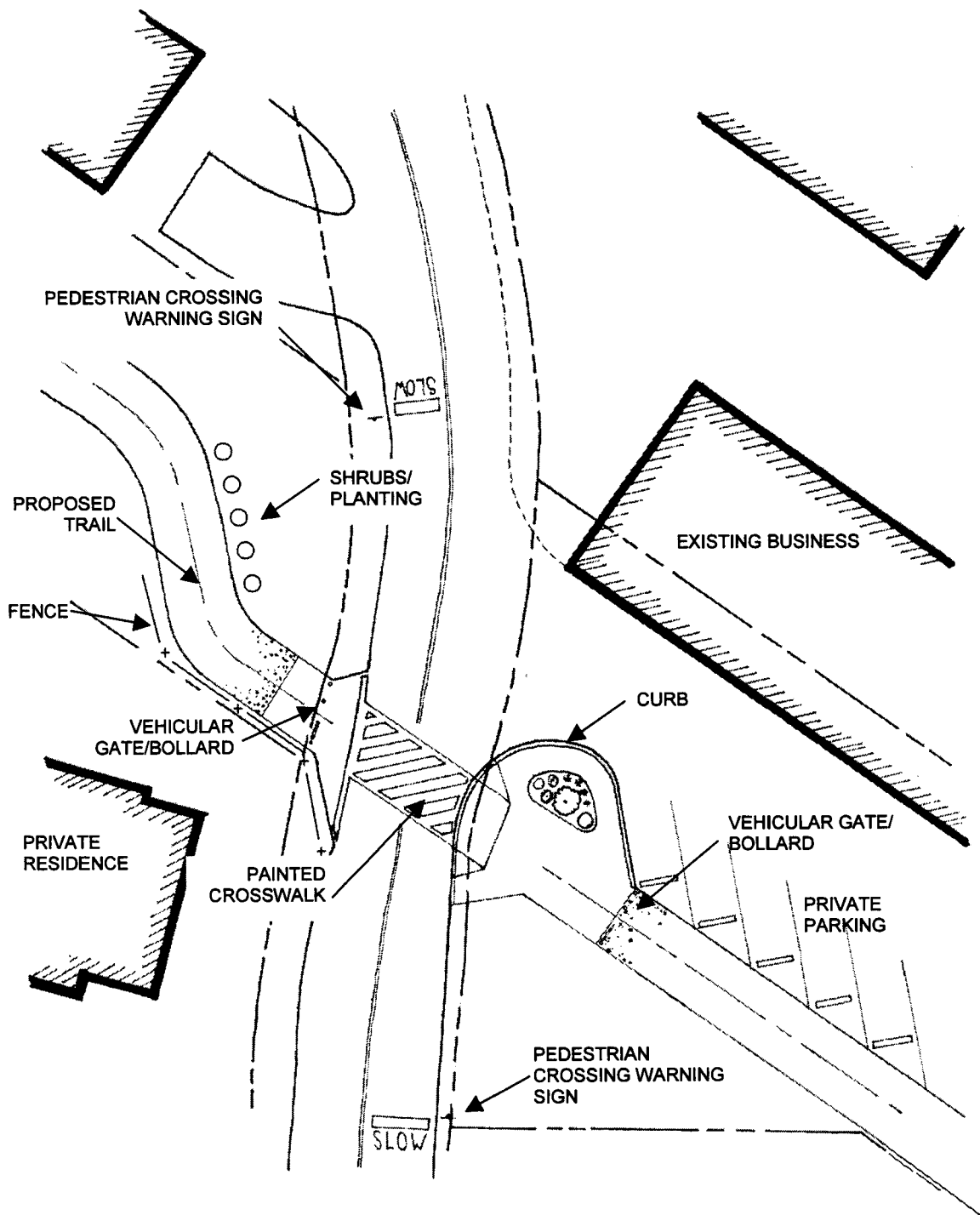


ROTHSVILLE STATION ROAD CROSSING
(FIGURE 14)

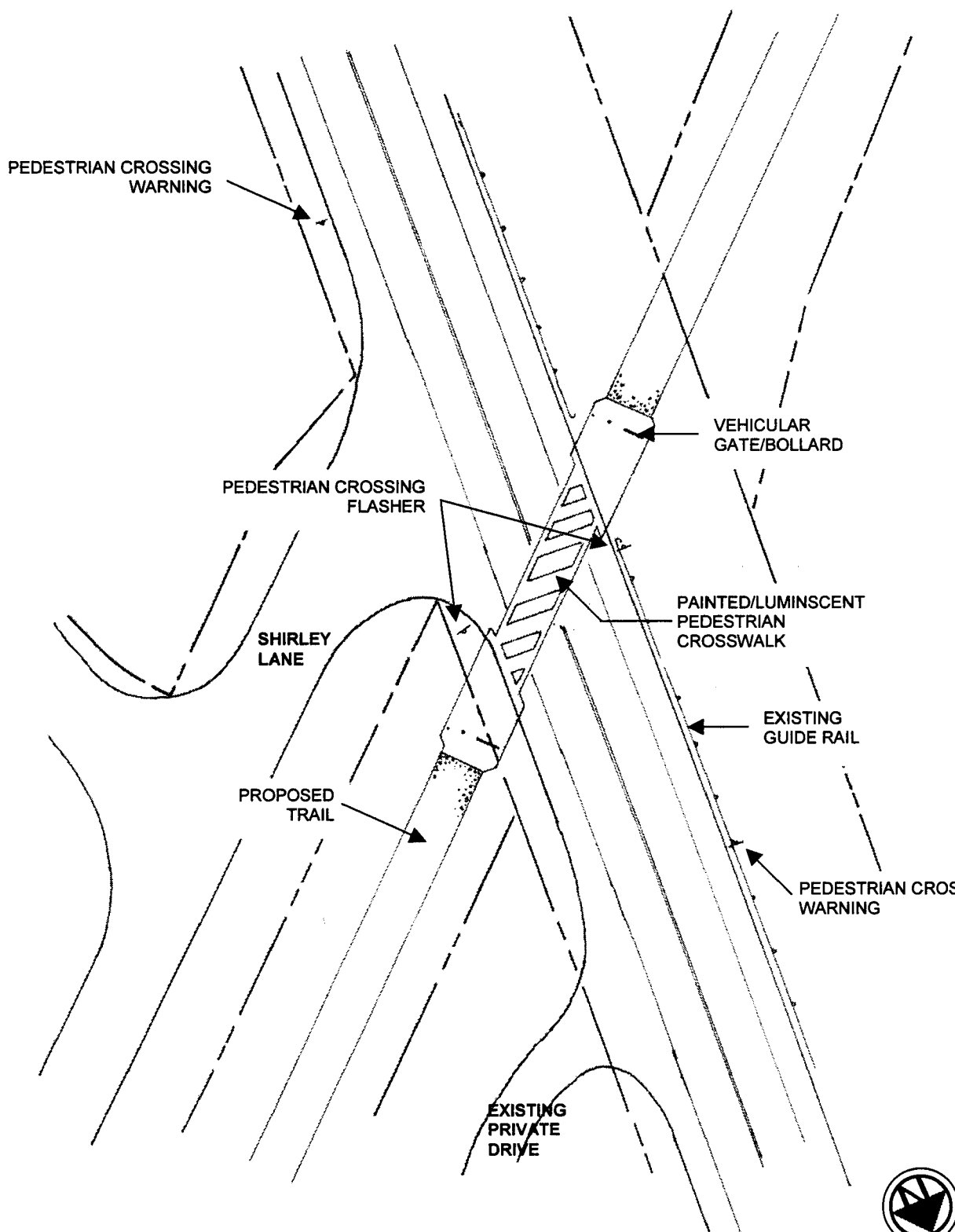




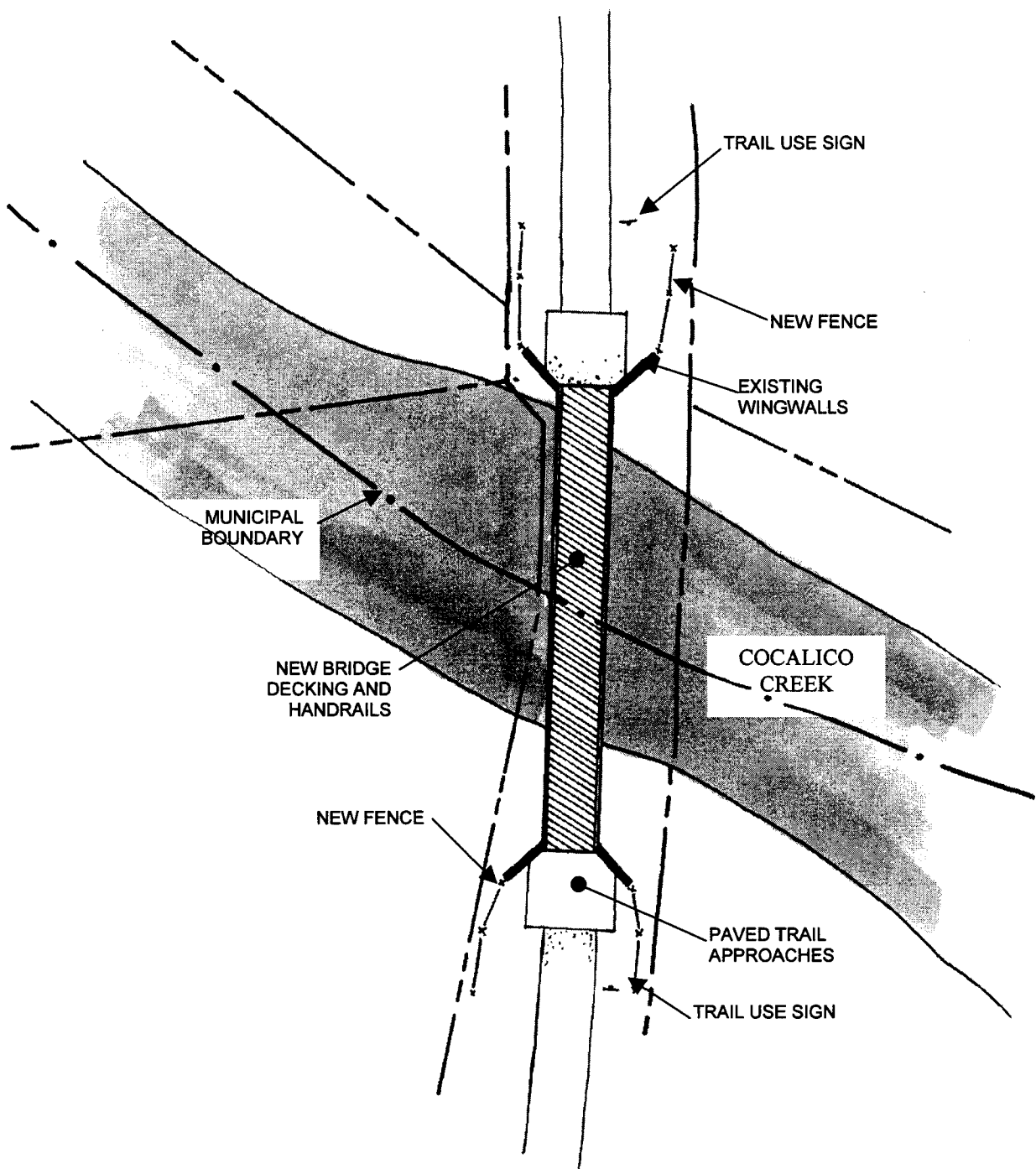
PICNIC WOODS ROAD CROSSING
(FIGURE 1)



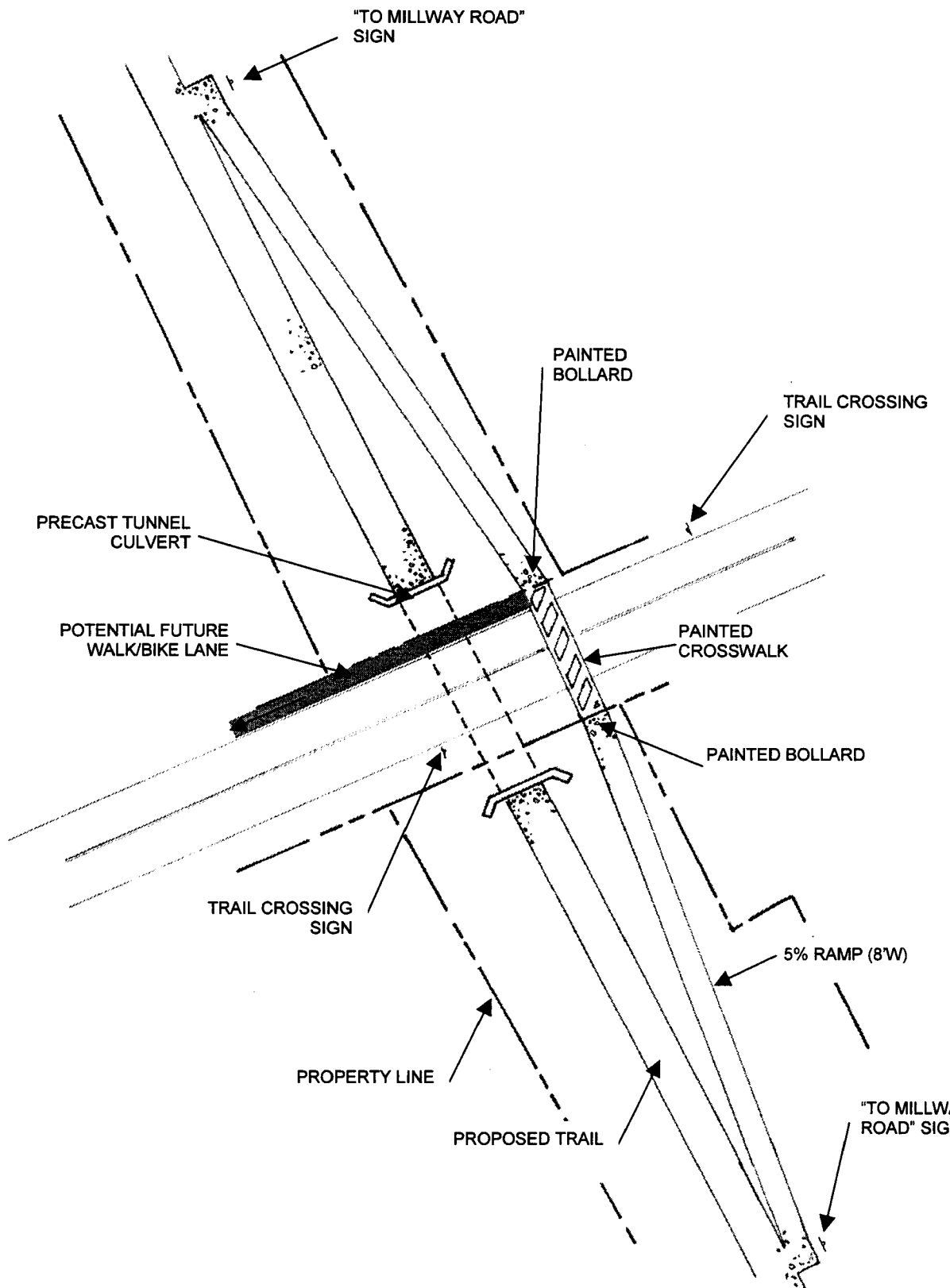
MEADOW VALLEY ROAD CROSSING
 (FIGURE 16)



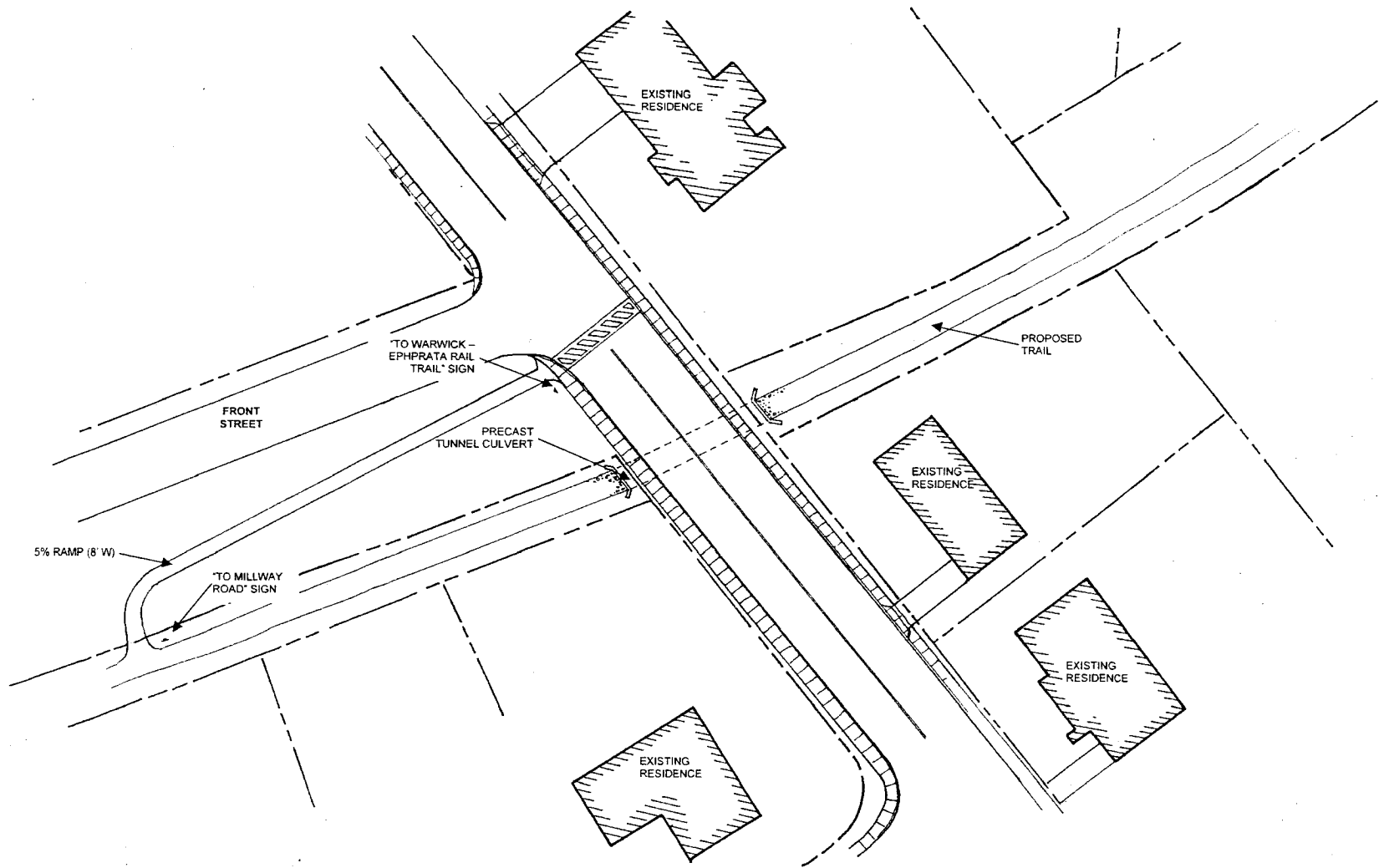
ROTHSVILLE ROAD CROSSING
 (FIGURE 17)



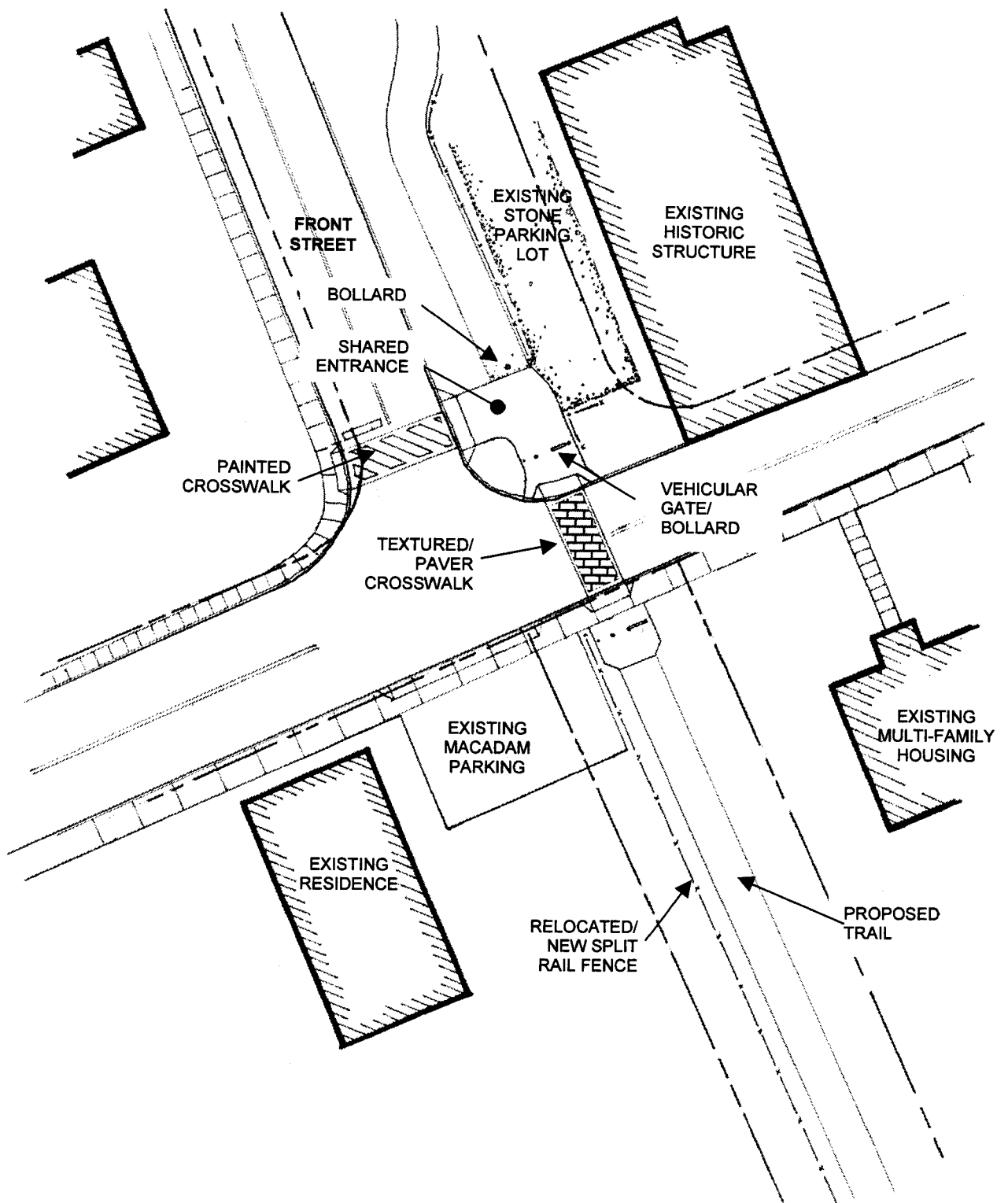
COCALICO CREEK CROSSING
(FIGURE)



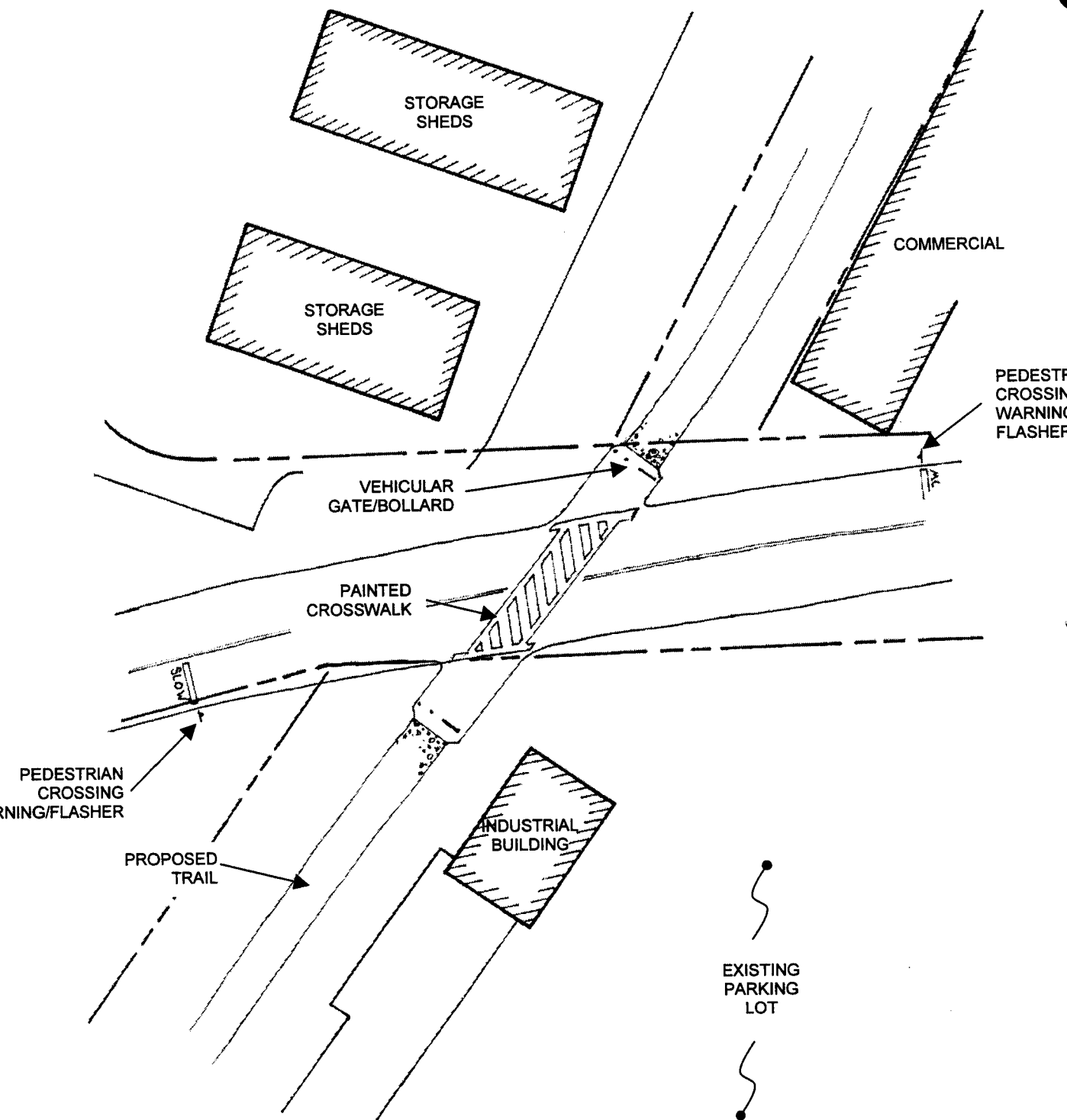
MILLWAY ROAD CROSSING
 (FIGURE)



MAIN STREET CRO



FULTON STREET CROSSING
(FIGURE)



PARKVIEW HEIGHTS ROAD CROSSING
(FIGURE 1)