

Planning  
Urban Design  
Landscape Architecture

## Walker & Macy

111 SW Oak, Suite 200  
Portland, Oregon 97204  
Phone: 503-228-3122  
Fax: 503-273-8878

June 30, 1991

Ms. Arlene Johnson, Director  
Skamania County  
PO Box 1037  
Stevenson, Wa. 98648

Dear Arlene:

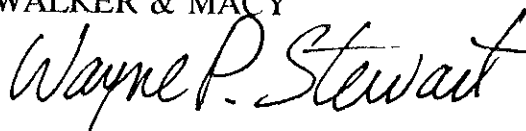
We are pleased to submit the Pedestrian and Bicycle Links portion of our report to the City of Stevenson. Implementation of this system is important to enhance the vitality and economic growth of Stevenson. The Phase I system will provide easy and enjoyable pedestrian and bicycle routes between the proposed Skamania Lodge and downtown. The "secondary" and "future" systems will encourage access to the many potential scenic and recreational destinations along the Columbia River and Rock Creek Cove. In addition, the system will benefit those pedestrians and bicyclists who visit the county fairgrounds, Rock Creek Park/Community Center, and other public facilities in the area.

As you know, several areas along the proposed route include challenging obstacles to the proposed walkway system. We believe that we have identified cost effective solutions that provide the user with a pleasant experience directed toward the natural amenities. Physical impact upon natural areas, including wetlands and wildlife habitat, will be minimal.

The existing walkway system in Stevenson, while adequately serving existing needs, will require expansion and improvement to accommodate future growth. We have identified how such improvements would complete a comprehensive system of links within the downtown core. In addition, downtown sidewalk improvements would further encourage walking within the City, and improve access to parking, retail and riverfront areas.

In all, this package offers the City of Stevenson a major step toward the realization of a much needed circulation system. Undoubtedly, the Pedestrian and Bicycle Link system, if done well, will do much to assist Stevenson in creating a lively and successful downtown.

Very truly yours,  
WALKER & MACY



Wayne P. Stewart

WPS/ch

**STEVENSON, WASHINGTON  
PEDESTRIAN AND BICYCLE LINKS  
SYSTEM DESCRIPTION**

**Prepared by Walker & Macy  
June 30, 1991**

I. Comprehensive Diagram (Figure 1)

This diagram illustrates the entire system of pedestrian and bicycle links that connect downtown Stevenson to existing and anticipated destination points. The priority system is the Phase I Bicycle and Pedestrian Links because it connects the proposed Skamania Lodge to downtown with the most efficient route. Several conditions are identified on this plan.

- A. Condition "A" (Figure 2) occurs along the south side of Second Street Extension across from the Skamania Lodge path connection. Linkage construction here will require modification of the existing landform to allow sufficient width for the bicycle lane, planting buffer and pedestrian path. The new slope will then need to be stabilized as necessary.
- B. Condition "B" (Figure 3) occurs northeast of Condition "A" and consists of a steep embankment down from the existing road level. Construction here will involve filling over the embankment enough to achieve the required width as shown in Figure 3. The new embankment will require stabilization and a safety handrail along the path edge.
- C. Condition "C" (Figure 4) occurs along the north edge of Rock Creek Cove where a steep embankment connects the water level to the road edge. Due to physical constraints of this condition, the construction of bicycle and pedestrian paths through this area will involve relatively high construction costs. Careful study of this condition has led to the solution as illustrated in Figure 4. Realignment of Second Street Extension to the north will minimize the amount of construction required to retain a pedestrian esplanade along the embankment. This solution allows safe pedestrian passage through a pleasant walkway that capitalizes upon the orientation to the cove and views to the gorge beyond.

D. The Typical Condition of the Phase I path (Figure 5) occurs wherever there are no physical constraints. Pathway construction here includes asphalt paving over a crushed stone base, and grading as necessary to provide positive drainage.

## II. Phase I Pedestrian Links (Figure 6)

The Phase I system identifies the above mentioned pathway and new sidewalks required to most efficiently connect Skamania Lodge to the existing sidewalk system of downtown Stevenson. See Figure 7 for typical curb and sidewalk detail.

## III. Secondary Pedestrian Links (Figure 8)

Secondary pedestrian links provide connections to scenic and recreational amenities. These paths connect to the Phase I system around the cove and to existing or proposed sidewalk systems within the downtown and riverfront areas. Alternative materials used to surface secondary paths could be constructed of a variety of materials including asphalt or compacted fine aggregate (Figure 9).

Future paths located on the plan identify important linkages that are not currently feasible due to physical or ownership restrictions. The future path located along SR-14 would complete a "loop" around the cove and connect to other secondary paths. Future modification to SR-14 and the Rock Creek Bridge should include provision for pedestrian (and bicycle) circulation.

Due to the excellent orientation and views of the existing Port of Skamania property, a Riverfront Esplanade (Figure 10) would serve as an important riverfront edge. The esplanade should be wide enough to accommodate larger numbers of people anticipated from future commercial development. Other development along this edge may include boat docks and recreation uses.

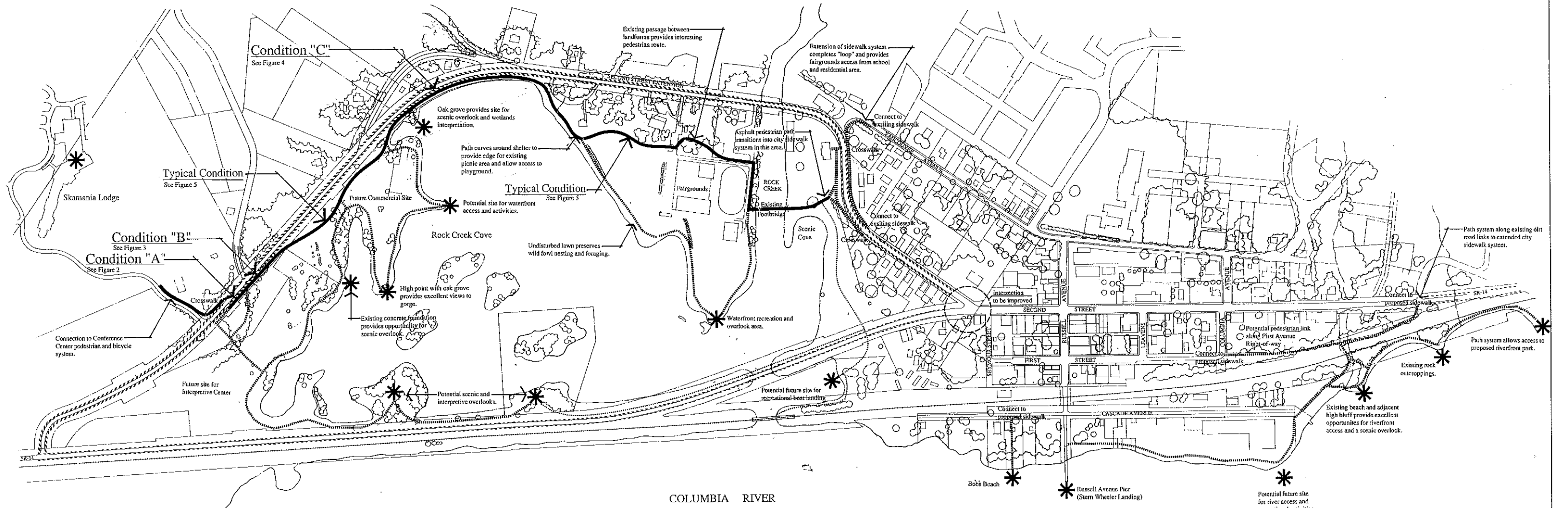
## IV. Sidewalk Improvements (Figure 11)

This diagram identifies areas requiring sidewalk improvements that would connect proposed pedestrian routes to the existing downtown sidewalks. The new sidewalks would provide alternative routes to improve downtown access to retail, parking, and recreational areas. See Figure 7 for typical curb and sidewalk detail.

V. Bicycle Links (Figure 12)

Second Street extension and SR-14 are major roadways that could provide bicycle access into and out of downtown Stevenson. The Second street Extension route is identified as Phase I. Portions of this work could be implemented concurrently with Phase I Pedestrian Links. See Conditions "A", "B", and "C" for constraints. Typical construction of the bicycle route would include extending the width of the existing roadway to allow a 4 foot lane on both sides of the existing road. As Second Street Extension enters the downtown area, bicycle traffic would merge into vehicular travel lanes.

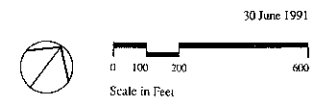
Future routes, identified east and west of town along SR-14, should be implemented during future modifications of the highway and Rock Creek Bridge.



**LEGEND**

- Phase I Pedestrian Link
- Phase I Bicycle Route
- Phase I New Curb and Sidewalk
- Future Bicycle Route
- Secondary Pedestrian Path
- Potential Scenic or Recreational Destinations
- Future Pedestrian Path

**COMPREHENSIVE DIAGRAM  
PEDESTRIAN and BICYCLE LINKS**

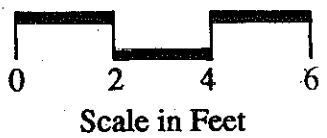
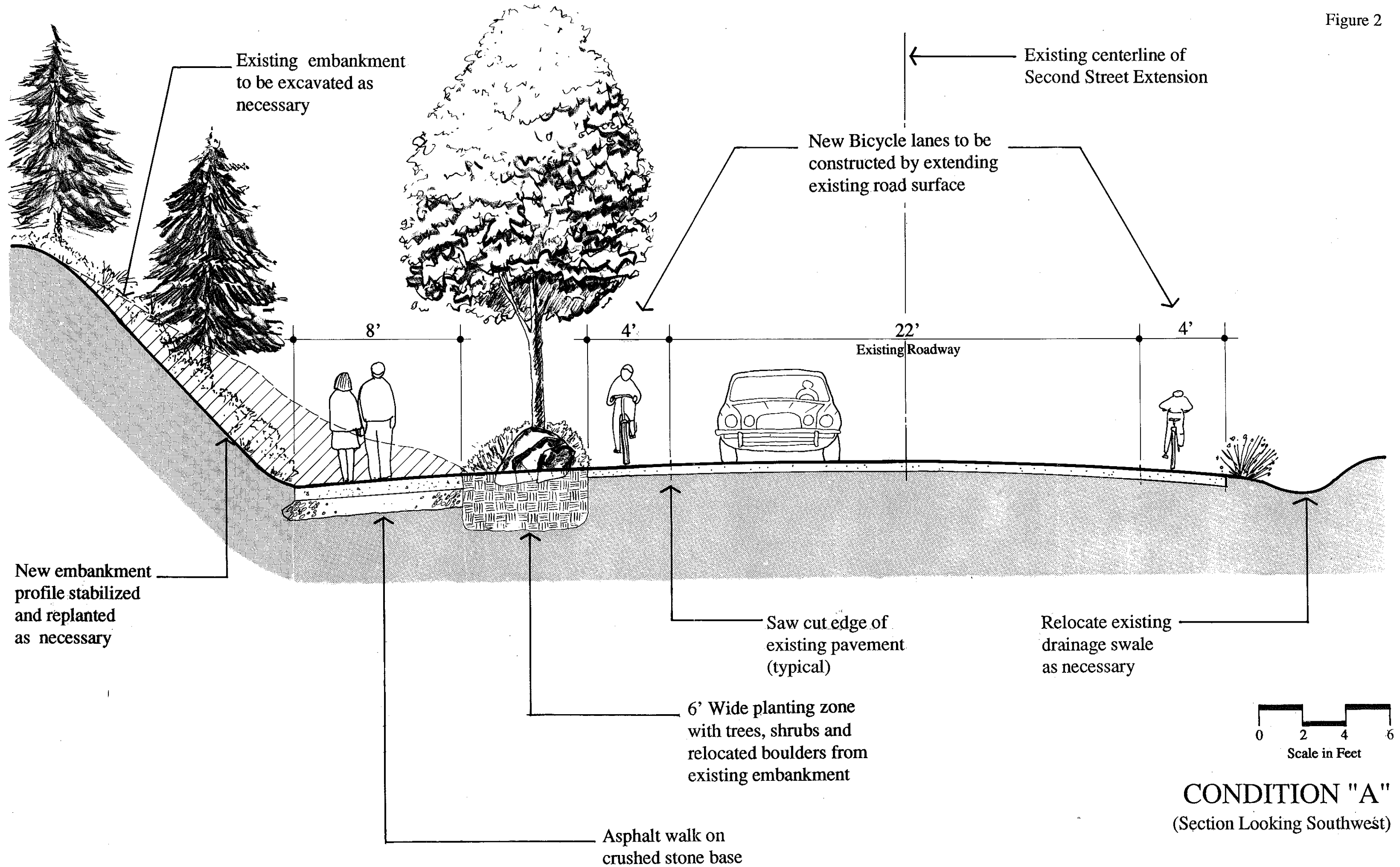


**Downtown Revitalization and Access Plan**  
Stevenson, Washington

Walker&Macy · Landscape Architects and Planners  
John Kyle · Architect  
E.D. Hovee & Company · Economic Consultants

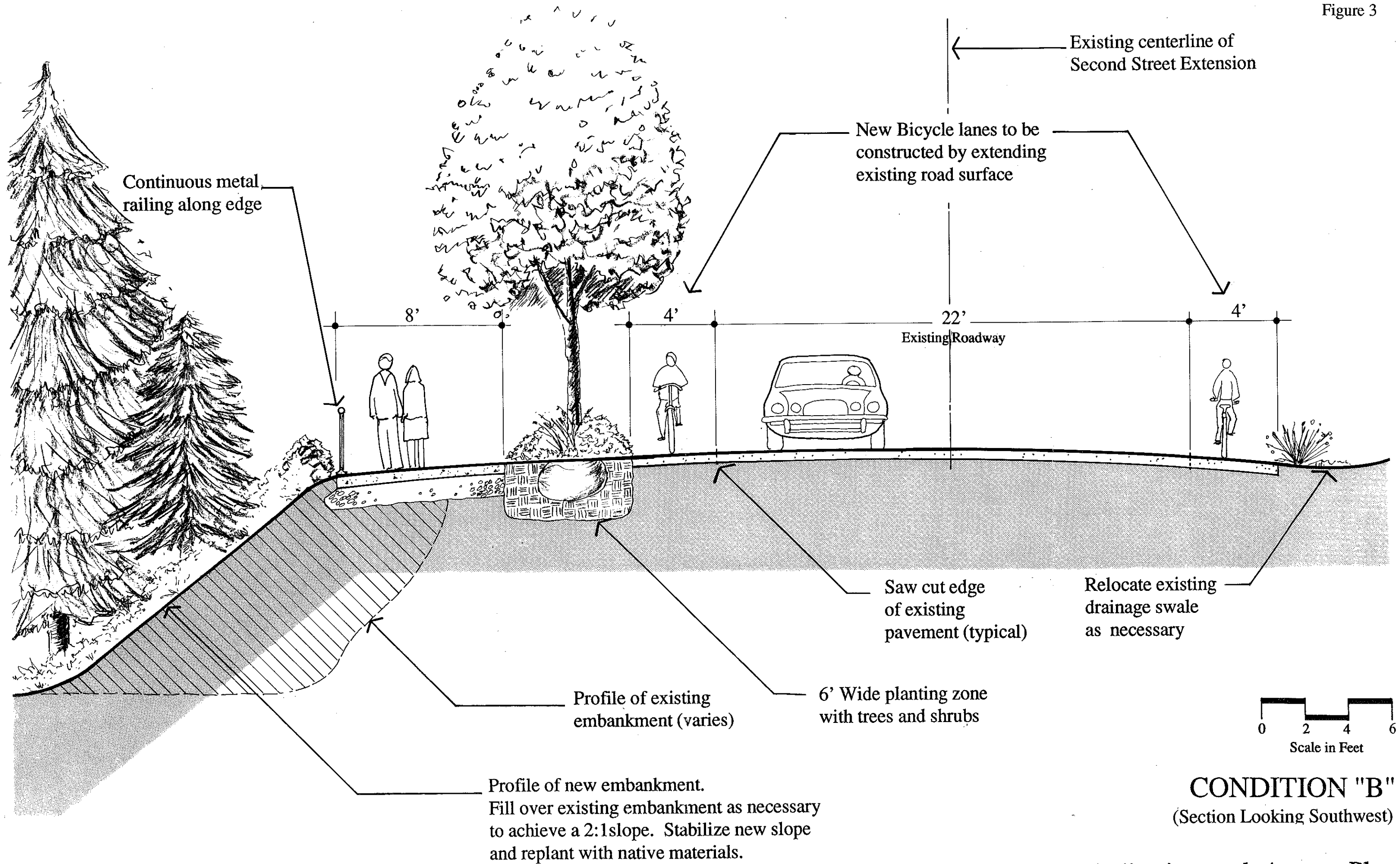
30 June 1991

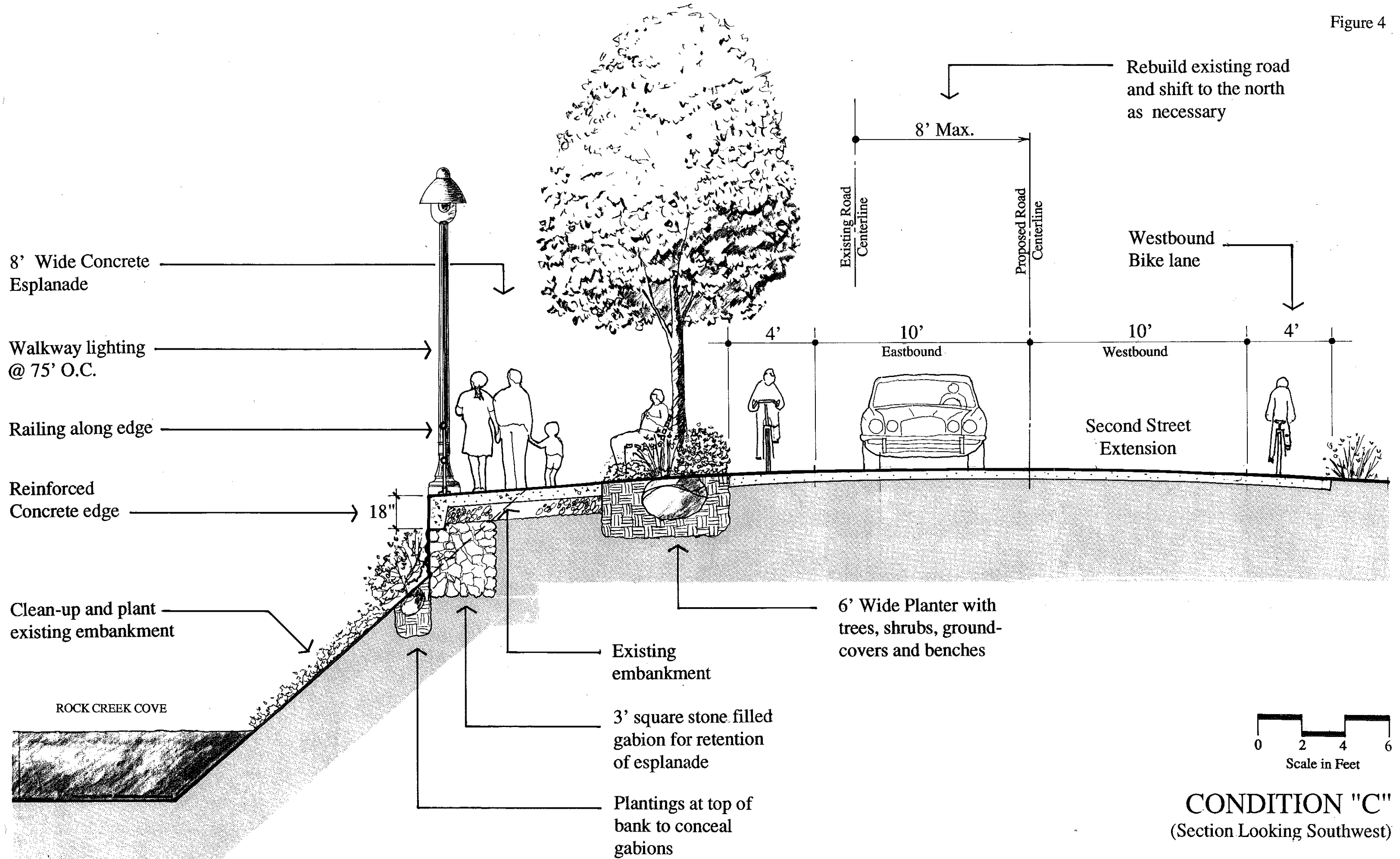
Figure 2



**CONDITION "A"**  
(Section Looking Southwest)

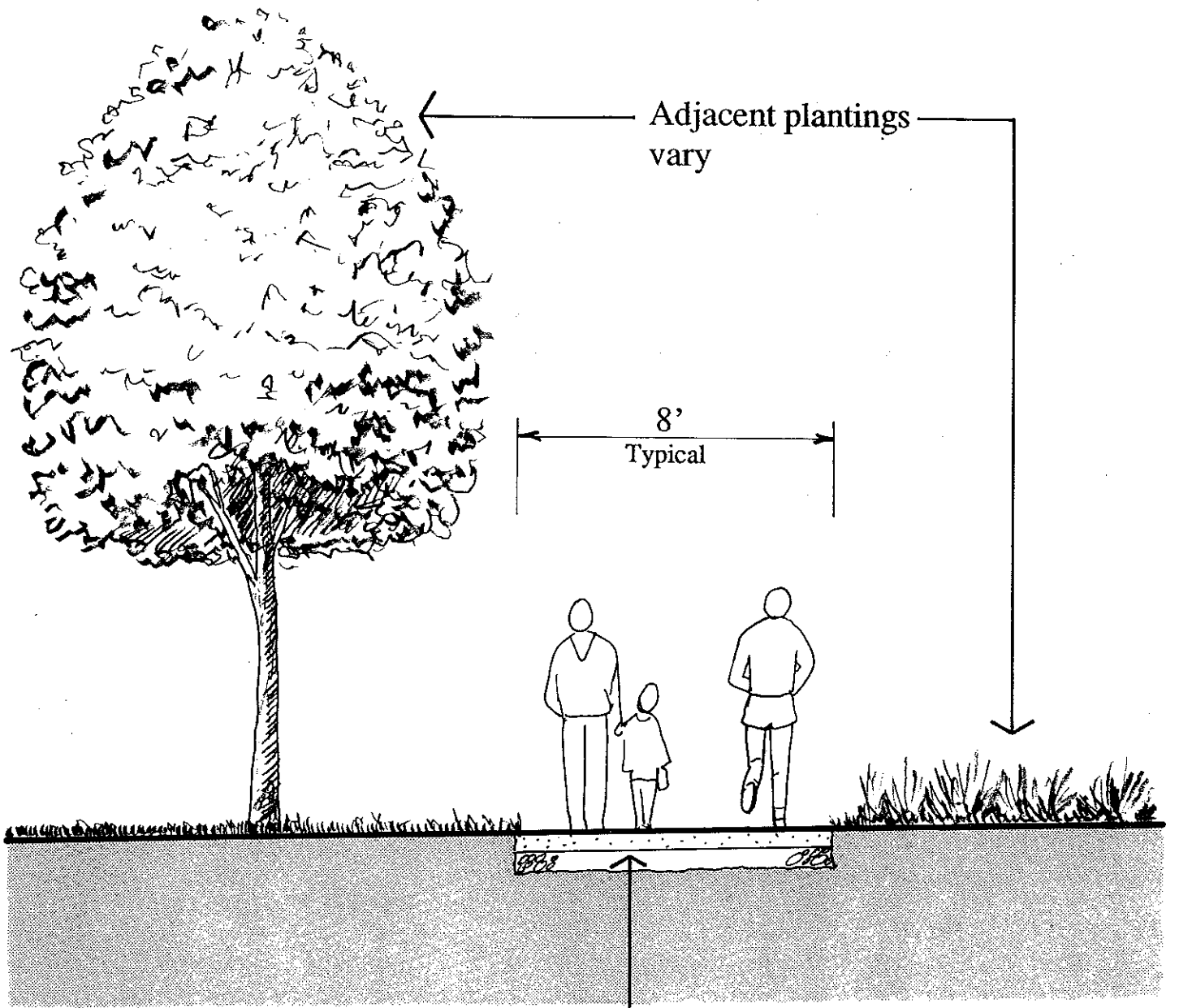
Figure 3



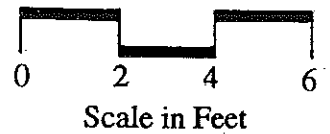


CONDITION "C"  
(Section Looking Southwest)

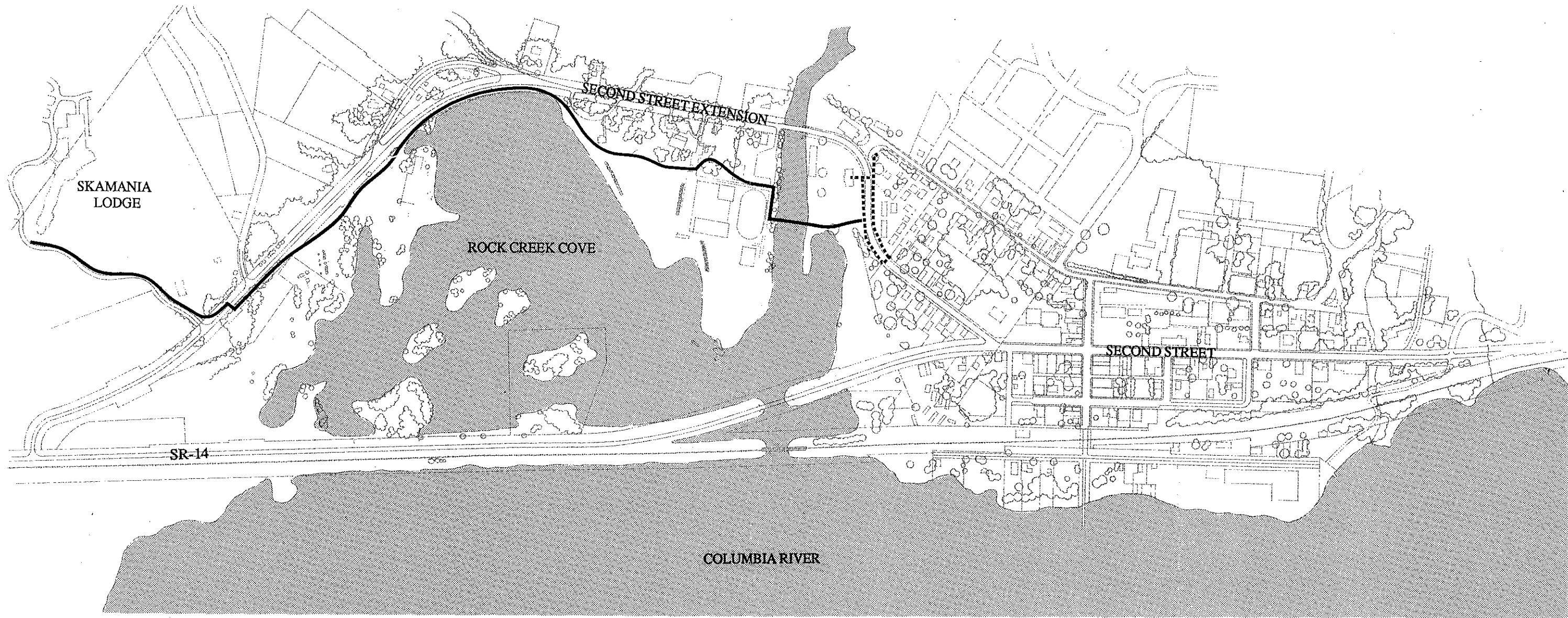






3" Asphalt path on  
4" crushed stone base.  
Pitch surface to drain



## PHASE I PATH (Typical)

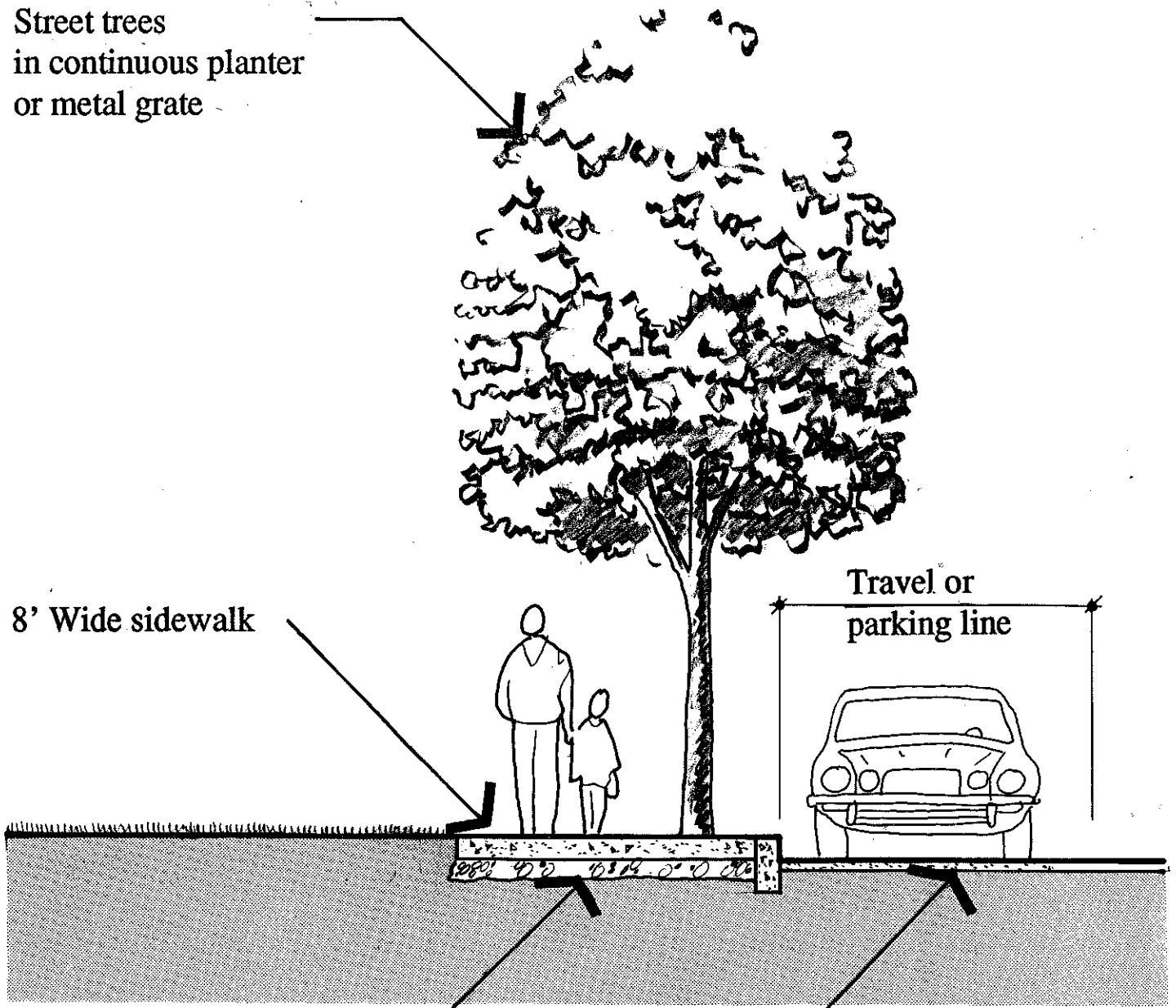


**LEGEND**

-  Pedestrian Path System
-  New Curb and Sidewalk

**PHASE I PEDESTRIAN LINKS**





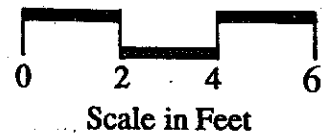
Street trees  
in continuous planter  
or metal grate

8' Wide sidewalk

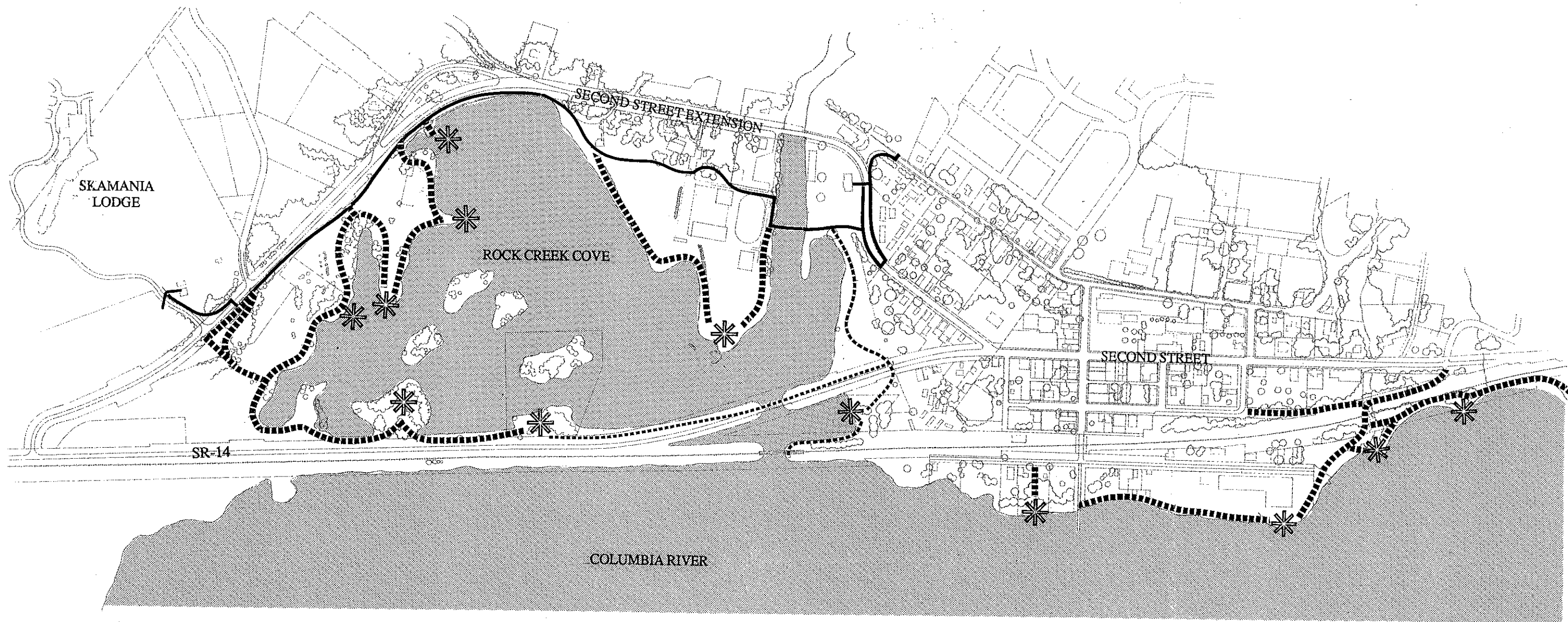
Travel or  
parking line

New concrete curb  
and sidewalk on  
crushed stone base

New asphalt  
as necessary



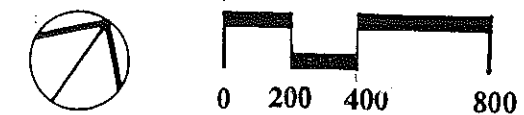
### Phase I Sidewalk (Typical)

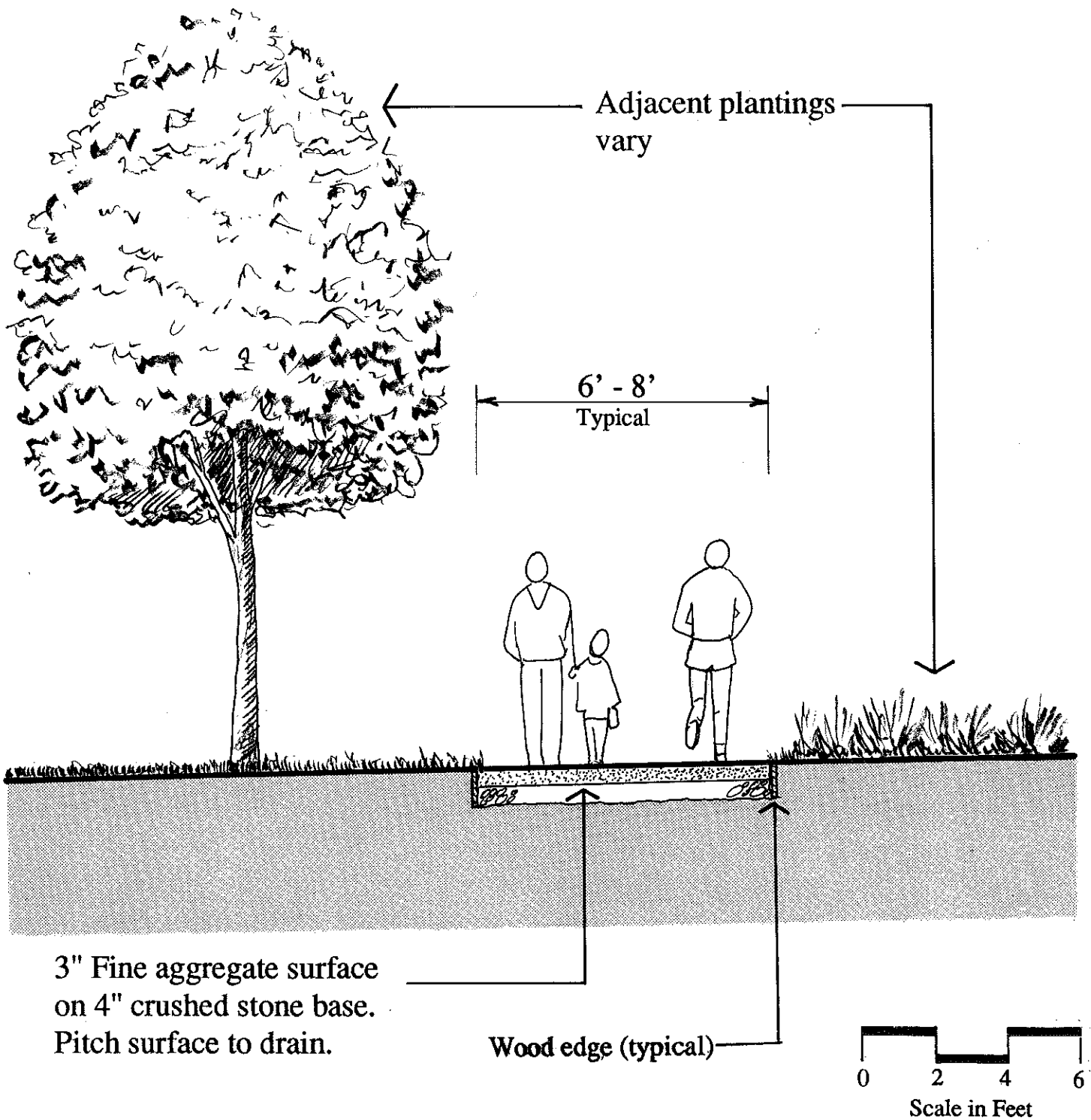


**LEGEND**

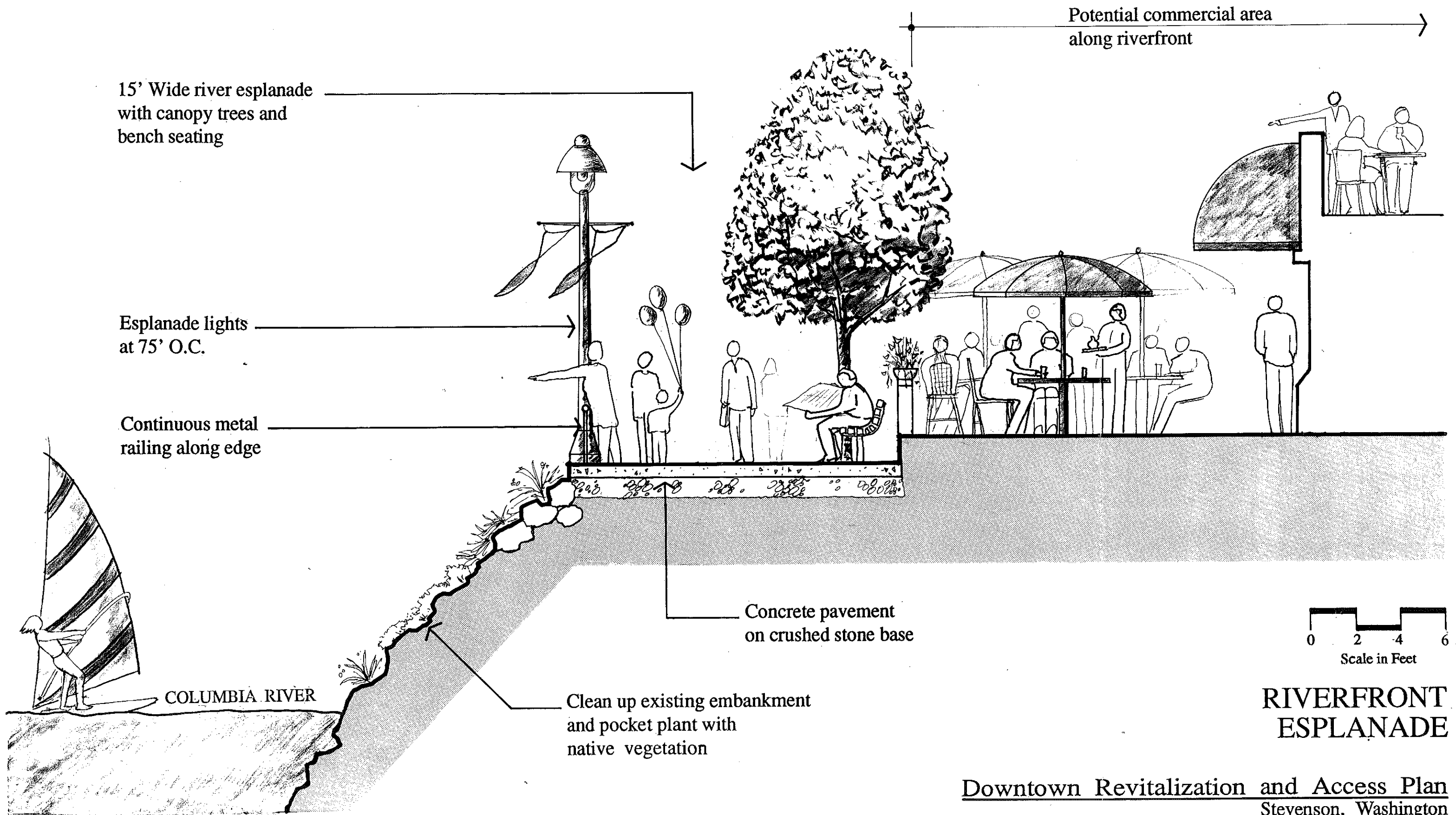
- Phase I Pedestrian Link
- Future Path System
- ..... Secondary Path System
- \* Potential Scenic or Recreational Destination

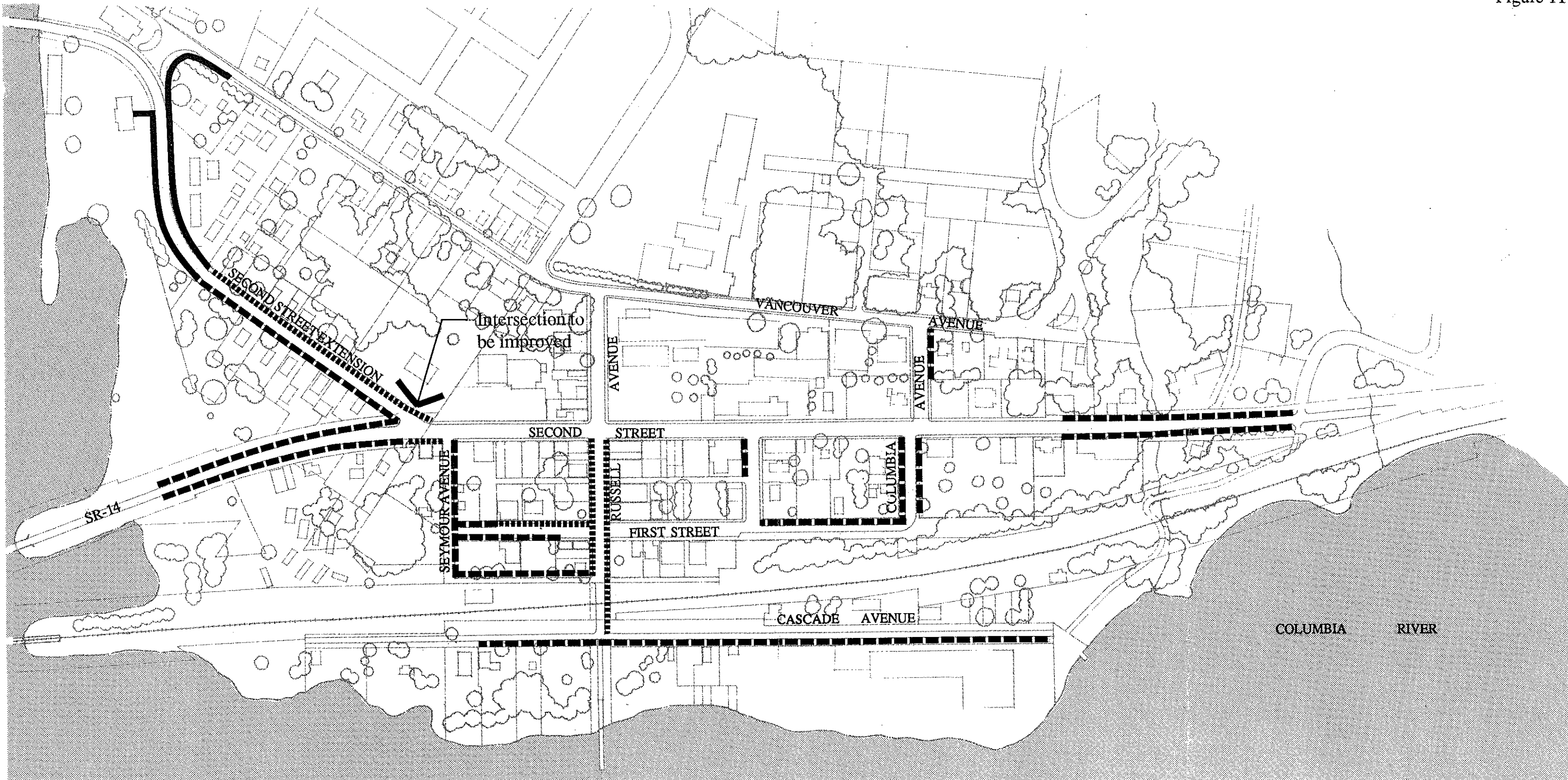
**SECONDARY PEDESTRIAN LINKS**








## SECONDARY PATH (Alternative Paving)

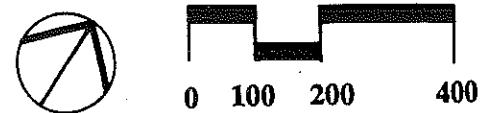


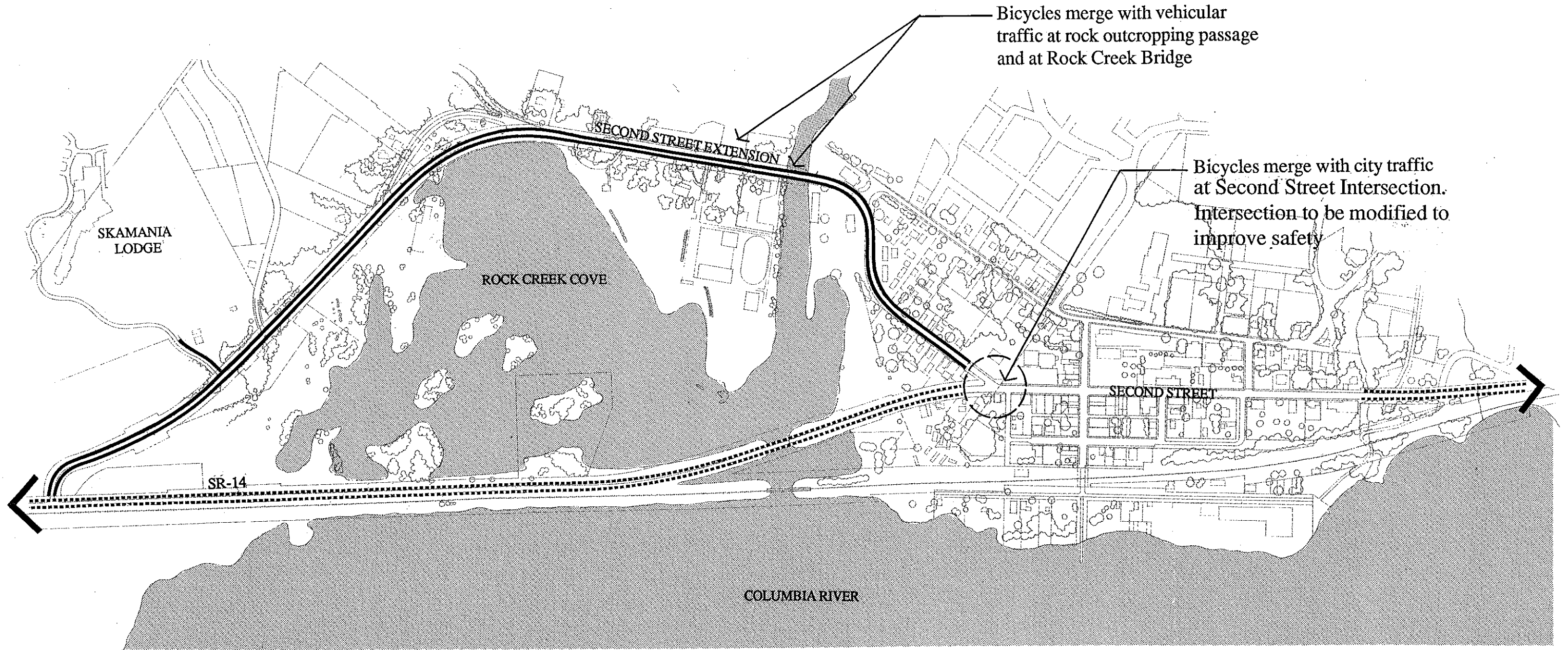


**LEGEND**



-  Phase I Curb and Sidewalk
-  Future Curb and Sidewalk
-  Existing Sidewalks to be Improved

**SIDEWALK IMPROVEMENTS**





**LEGEND**

-  Phase I Bicycle Route
-  Future Bicycle Route

**BICYCLE LINKS**





**STEVENSON, WASHINGTON  
PEDESTRIAN AND BICYCLE LINKS  
OUTLINE SPECIFICATIONS**

**Prepared by Walker & Macy  
30 June 1991**

SECTION 01530	TREE AND PLANT PROTECTION
SECTION 02111	CLEARING, GRUBBING, AND DEMOLITION
SECTION 02200	EARTHWORK
SECTION 02300	SITE DRAINAGE
SECTION 02511	ASPHALT PAVING AND CRUSHED STONE BASE
SECTION 02528	CONCRETE CURBS AND SIDEWALKS
SECTION 02545	FINE AGGREGATE PATH SURFACING
SECTION 02870	SITE FURNISHINGS (OPTIONAL)
SECTION 02920	SOIL PREPARATION
SECTION 02930	LAWNS AND GRASSES
SECTION 02950	TREES, PLANTS, AND GROUNDCOVERS
SECTION 05500	HANDRAILS
SECTION 16600	SITE LIGHTING (OPTIONAL)

## SECTION 01530 - TREE AND PLANT PROTECTION

1. Description of Work: Preserve and protect all existing vegetation such as trees, shrubs and groundcover on or adjacent to the construction zone which are not to be removed.
2. Materials: Temporary fencing

## SECTION 02111 - CLEARING, GRUBBING, AND DEMOLITION

1. Description of Work: Perform selected demolition work including removal of trees, vegetation, and stumps in designated areas and as shown on Drawings. Remove materials from the site or to designated disposal areas on site. Dispose of in a lawful manner in accordance with county and state regulations.
2. Materials: Not used.

## SECTION 02200 - EARTHWORK

1. Description of Work: Bring the site to desired grades in accordance with site Drawings. Work includes preparation of subgrade for roads, modification of existing embankments, stone filled gabion retention system, walks, miscellaneous pavement, and general site grading. Import specified materials and spread as indicated. Remove excess materials to specified locations on site and spread and compact as directed. Provide adequate compaction effort to achieve required soil densities as shown on Drawings.
2. Materials:
  - A. Earth Fill: Site excavated silt and granular materials, free from roots over 1 inch in diameter, rubbish, construction debris, vegetation and rocks more than 3 inches in diameter.
  - B. Structural Fill: Pit-run gravel or crushed rock material with a maximum particle size not exceeding 3 inches.

- C. Stone Fill: 3" -6" angular or subrounded rock free of organic materials, fines and debris.
- D. Topsoil: Fertile, friable natural loam, free of subsoil, stones and other deleterious material.

#### SECTION 02300 - SITE DRAINAGE

- 1. Description of Work: Furnish labor, materials, and equipment necessary to install the subsurface drainage system.
- 2. Materials:
  - A. Polyethylene drain pipe conforming to ASTM-F-810; or corrugated polyethylene pipe conforming to ASTM-F-405; or polyvinyl chloride drainpipe conforming to ASTM-D-2729.
  - B. Geotextile fabric pipe wrap, Fibertex 150 grade, or approved equal.
  - C. Drain rock, 2-1/2 inch maximum size.

#### SECTION 02511 - ASPHALT PAVING AND CRUSHED STONE BASE

- 1. Description of Work: Furnish necessary labor, materials, and equipment for the installation of pedestrian paths and bicycle lanes as indicated on the Drawings. Provide required survey and layout work to ensure that all grades, cross slopes, and required elevations and thicknesses are achieved.
- 2. Materials:
  - A. Base Course Crushed Stone: Crushed rock sized 3/4 inch minus or 1 inch minus with not more than 5% fines passing a No. 200 sieve.
  - B. Asphaltic Concrete Paving: Class "B" or "C" mix. Asphalt shall meet Washington State Highway Division specifications.
  - C. Tack Coat: RS-1 emulsified asphalt.

- D. Weed Killer: Chipman Company polybor chlorate 40, or equal.
- E. Geotextile fabric: Fibertex 200 grade, or equal.

#### SECTION 02528- CONCRETE CURBS AND SIDEWALKS

- 1. Description of Work: Furnish labor, materials, and equipment necessary to construct concrete curbs, sidewalks, and wheelchair ramps.
- 2. Materials:
  - A. Transit mix concrete with a maximum 4 inch slump and providing a minimum of 3500 psi at 28 day testing.
  - B. Joint filler conforming to ASTM-D-1751.
  - C. Portland Cement shall be ASTM-C-150, Type I.
  - D. Aggregates shall meet ASTM-C-33. Provide aggregates from a single source for all concrete.

#### SECTION 02545 - FINE AGGREGATE PATH SURFACING

- 1. Description of Work: Furnish necessary labor, materials, and equipment for the installation of fine aggregate walks as shown on the Drawings.
- 2. Materials:
  - A. Base Course Aggregate: Crushed rock sized 3/4 inch minus with not more than 5% fines passing a No. 200 sieve.
  - B. Fine Aggregate Path Surfacing: Crushed rock sized 1/4 inch minus.
  - C. Edging: 1" x 4" or 1/2" x 4" pressure treated wood edging, common grade or better.
  - D. Weed Killer: Chipman Company polybor chlorate 40, or equal.

## SECTION 02870 - SITE FURNISHINGS (OPTIONAL)

1. Description of Work: Furnish labor, materials, and equipment necessary to install trash receptacles, benches, bicycle racks and miscellaneous items.
2. Materials:
  - A. Benches: To be selected by Landscape Architect.
  - B. Trash receptacles: To be selected by Landscape Architect.
  - C. Bicycle racks: To be selected by Landscape Architect.

## SECTION 02920 - SOIL PREPARATION

1. Description of Work: Furnish labor, materials and equipment for the installation and preparation of planting soils.
2. Materials:
  - A. Topsoil: Use topsoil specified in Section 02200.
  - B. Humus: Well-rotted horse or cow manure containing no more than 40% straw or litter and free from fresh manure, sawdust, wood chips, or other extraneous material.
  - C. Fertilizer: A commercial fertilizer uniform in composition, dry and free flowing, with an organic base formula of 10-6-4 applied to lawn areas as specified by the manufacturer. Osmocote 18-6-12 granular fertilizer, or approved equal, applied to trees, shrubs and ground cover as specified by the manufacturer.
  - D. Lime: Dolomite limestone containing not less than 85% of total carbonates, ground so that 50% will pass a 100 mesh screen and 90% will pass a 30 mesh screen.

## SECTION 02930 - LAWNS AND GRASSES

1. Description of Work: Furnish labor, materials, and equipment necessary to install seeded lawn areas.

2. Materials:
  - A. Fertilizer: Use commercial fertilizer specified in Section 02920.
  - B. Grass Seed: Proportion by weight for general lawn areas shall be 50% Red Fescue (variety "Pennlawn"), 25% Perennial Ryegrass (variety "Manhattan"), and 25% Perennial Ryegrass (variety "Pennfine").

#### SECTION 02950 - TREES, PLANTS AND GROUNDCOVERS

1. Description of Work: Install trees, shrubs, and groundcovers as shown on the Drawings; include fertilization, mulching, staking, and maintenance as specified.
2. Materials:
  - A. Topsoil: Use topsoil as specified in Section 02200.
  - B. Mulch: Shredded hemlock or fir bark, free of wood chips, maximum size to pass 1" mesh screen.
  - C. Plant Materials: (Note: plant materials have not been selected; but will be primarily chosen from the palette of indigenous Northwest plants.) Materials provided shall conform to "American Standards for Nursery Stock." Large deciduous trees shall be 2-1/2 inch caliper; small deciduous trees shall be 1-1/2 inch caliper. Large coniferous trees shall be 8-10 feet tall; small coniferous trees shall be 4-6 feet tall.

#### SECTION 05500 - HANDRAILS

1. Description of Work: Furnish labor, materials, and equipment necessary to install handrails as shown on Drawings.
2. Materials:
  - A. Handrails: To be selected by Landscape Architect.
  - B. Bases: Install handrails in accordance with manufacturer requirements.

## SECTION 16600 - SITE LIGHTING (OPTIONAL)

1. Description of Work:
  - A. Furnish labor, materials, and equipment necessary to install the complete site lighting system.
  - B. Do all work in accordance with regulations of the serving utility, National Electrical Code, National Fire Codes, and all other applicable codes.
2. Materials:
  - A. All materials to be new and bear manufacturer's name, model number, electrical characteristics, and other identification. All equipment to be U.L. approved, if applicable.
  - B. Lights: To be selected by Landscape Architect. Pole bases shall be as required by the pole manufacturer.
  - C. Conduit shall be rigid galvanized or Schedule 40 PVC. PVC may not be used above grade.
  - E. Conductors shall be copper with a minimum size of No. 12 AWG, unless otherwise noted on Drawings.
  - F. Panels shall be factory pre-assembled and certified for indoor or outdoor use as appropriate.

**STEVENSON, WASHINGTON  
PEDESTRIAN AND BICYCLE LINKS  
PHASE I - COST ESTIMATE (Preliminary)  
Prepared by Walker & Macy  
June 30, 1991**

**PHASE I PATH - (TYPICAL)**

<u>Item</u>	<u>Const. Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Subtotal</u>	<u>Total</u>
Clearing & grubbing	Allow	2,000.00		2,000	
Asphalt path	SF	1.50	25,000	37,500	
Lawn repair	SF	.07	16,000	1,120	
Total					<u>\$ 40,620</u>

**CONDITION 'A'**

<u>Item</u>	<u>Const. Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Subtotal</u>	<u>Total</u>
Tree protection	Allow	250.00		250	
Clearing and grubbing	Allow	1,000.00		1000	
Earthwork - cut	CY	2.50	100	250	
Slope Stabilization	SF	.25	960	240	
Asphalt path	SF	1.50	960	1,440	
Planting Bed	SF	2.00	720	1,440	
Planting restoration	SF	1.00	960	960	
					<u>\$5,580</u>

**CONDITION 'B'**

<u>Item</u>	<u>Const. Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Subtotal</u>	<u>Total</u>
Tree protection	Allow			300	
Clearing and grubbing	Allow			1,200	
Earthwork - fill	CY	5.00	300	1,500	
Asphalt path	SF	1.50	2,000	3,000	
Planting bed	SF	2.00	1,500	3,000	
Planting restoration	SF	1.00	2,000	2,000	
Handrail	LF	25.00	150	3,750	
					<u>\$ 14,750</u>



**CONDITION 'C'**

<u>Item</u>	<u>Const. Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Subtotal</u>	<u>Total</u>
Tree Protection	Allow			200	
Asphalt removal	SF	.40	4,000	1,600	
Guard rail removal	LF	1.50	1,000	1,500	
Earthwork-cut	CY	2.50	500	1,250	
Earthwork-fill	CY	2.50	500	1,250	
Gabion retention	CY	120.00	300	36,000	
Concrete walk	SF	2.50	8,000	20,000	
Concrete edge	LF	8.00	800	6,400	
Planting bed	SF	2.00	5,000	10,000	
Handrail	LF	50.00	800	40,000	
Asphalt roadway	SF	3.50	4,000	14,000	
					<u>\$ 132,200</u>
Lights (optional)	EA.	2000.00	15	30,000	
Benches (optional)	EA.	500.00	10	5,000	
Receptacles (optional)	EA.	300.00	10	3,000	

**CURB & SIDEWALK**

<u>Item</u>	<u>Const. Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Subtotal</u>	<u>Total</u>
Clearing and grubbing	Allow			1,000	
Earthwork - fill	CY	5.00	20	100	
Concrete sidewalk	SF	2.25	10,000	22,500	
Concrete curb	LF	7.50	1,000	7,500	
Road repair	SF	3.50	1,000	3,500	
Planting Restoration	SF	1.00	500	500	
Lawn repair	SF	.07	10,000	700	
					<u>\$ 35,800</u>
Street trees (optional)	EA.	200.00	20	4,000	

**BICYCLE LANES**

<b>Item</b>	<b>Const. Unit</b>	<b>Unit Cost</b>	<b>Quantity</b>	<b>Subtotal</b>	<b>Total</b>
Saw cut asphalt	LF	1.00	10,000	10,000	
Ditch reconstruction	LF	2.00	5,000	10,000	
Asphalt paving	SF	3.50	92,000	322,000	
					<u>\$ 342,000</u>

Total Construction Cost\* (not including optionals) 570,950

Construction Contingency @ 20% 114,190

**TOTAL PROJECT COST\* (not including optionals) \$ 685,140**

\* Based on assumed 1991 Construction Costs